Data Validation Report for GC/MS Fraction.

Facility: HWMU-5 Monitoring Event: Third Quarter 2023

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: ELLE, Lancaster, PA							
Cobalt	**5W8B**	**1**	**U**	**U**		**5**	**Analyte not detected at or above the DL or QL.**
	5W5B	**1**	**U**	**U**		**5**	**Analyte not detected at or above the DL or QL.**
	5W7B	**6.7**		**6.7**		**5**	**No action taken. Laboratory duplicate result is 6.5 ug/l. RPD is 3.0.**
	5WC21	**27**		**27**		**5**	**No action taken.**
	5WC22	**26**		**26**		**5**	**No action taken.**
	5WC23	**1**	**U**	**U**		**5**	**Analyte not detected at or above the DL or QL.**
	5WDUP	**27**		**27**		**5**	**No action taken. Blind field duplicate of 5WC21. RPD is <1.**
	5W12A	**1**	**U**	**U**		**5**	**Analyte not detected at or above the DL or QL.**

Definitions: QL Denotes permit quantitation limit. Q Denotes data qualifier. U Denotes analyte not detected at or above QL. UA Denotes analyte not detected at or above adjusted sample QL. J Denotes analyte reported at or above QL and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated. **R Denotes result rejected. Target analytes not listed above were not detected at or above QL and no data qualification was required.**

For Appendix IX Wells/Event: Q Denotes data qualifier. U Denotes analyte not detected at or above laboratory detection limit (DL). Associated value is DL/QL. J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation **limit/detection limit is estimated. UA Denotes analyte not detected at or above adjusted sample QL. UN Denotes analyte concentration is less than the quantiation limit and five times the blank concentration.. Analyte was not reliably detected due to blank contamination. R Denotes result rejected. Analytes not listed above were not detected at or above laboratory detection limit and no data qualification was required.**

Appendix IX Events: Fourth Quarter 2003 (10/03), Second Quarter 2004, Second Quarter 2005 (05/05), Third Quarter 2006

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260D							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethene	5W8B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	Analyte not detected at or above the DL or QL.
cis-1,2-Dichloroethene	5W8B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.1	U	U		1	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	Analyte not detected at or above the DL or QL.

Definitions: QL Denotes permit quantitation limit. Q Denotes data qualifier. U Denotes analyte not detected at or above QL. UA Denotes analyte not detected at or above adjusted sample QL. J Denotes analyte reported at or above QL and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated. **R Denotes result rejected. Target analytes not listed above were not detected at or above QL and no data qualification was required.**

For Appendix IX Wells/Event: Q Denotes data qualifier. U Denotes analyte not detected at or above laboratory detection limit (DL). Associated value is DL/QL. J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation **limit/detection limit is estimated. UA Denotes analyte not detected at or above adjusted sample QL. UN Denotes analyte concentration is less than the quantiation limit and five times the blank concentration.. Analyte was not reliably detected due to blank contamination. R Denotes result rejected. Analytes not listed above were not detected at or above laboratory detection limit and no data qualification was required.**

Appendix IX Events: Fourth Quarter 2003 (10/03), Second Quarter 2004, Second Quarter 2005 (05/05), Third Quarter 2006

Data Validation Report for GC/MS Fraction.

Facility: HWMU-5 Monitoring Event: Third Quarter 2023

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
trans-1,2-Dichloroethene	5WC22	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	5WDUP	0.8	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.8	U	U		1	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.8	U	U		1	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	5W5B	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	5W7B	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	5WC21	0.85	J	0.85	J	1	Result < QL.
	5WC22	1.6		1.6		1	No action taken.
	5WC23	1.7		1.7		1	No action taken.
	5WDUP	0.81	J	0.81	J	1	Result < QL. Blind field duplicate of 5WC21. Estimated RPD is 5.
	5W12A	0.3	U	U		1	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.3	U	U		1	Analyte not detected at or above the DL or QL.
Vinyl chloride	5W8B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5W7B	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC21	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC22	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WC23	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	5WDUP	0.2	U	U		1	Analyte not detected at or above the DL or QL. Blind field duplicate of 5WC21.
	5W12A	0.2	U	U		1	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	Analyte not detected at or above the DL or QL.

Definitions: QL Denotes permit quantitation limit. Q Denotes data qualifier. U Denotes analyte not detected at or above QL. UA Denotes analyte not detected at or above adjusted sample QL. J Denotes analyte reported at or above QL and associated result is estimated. When used with a "U" (i.e., "UJ"), denotes analyte not detected at or above QL and QL is estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted QL and adjusted QL is estimated. **R Denotes result rejected. Target analytes not listed above were not detected at or above QL and no data qualification was required.**

For Appendix IX Wells/Event: Q Denotes data qualifier. U Denotes analyte not detected at or above laboratory detection limit (DL). Associated value is DL/QL. J Denotes analyte reported at or above laboratory detection limit and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above laboratory detection limit and project required quantitation **limit/detection limit is estimated. UA Denotes analyte not detected at or above adjusted sample QL. UN Denotes analyte concentration is less than the quantiation limit and five times the blank concentration.. Analyte was not reliably detected due to blank contamination. R Denotes result rejected. Analytes not listed above were not detected at or above laboratory detection limit and no data qualification was required.**

Appendix IX Events: Fourth Quarter 2003 (10/03), Second Quarter 2004, Second Quarter 2005 (05/05), Third Quarter 2006

2200 S. Main Street, Ste. A
Blacksburg, VA 24060

T 540.552.0444
TRCcompanies.com

Data Validation Summary
Third Quarter 2023
Semiannual Compliance Groundwater Monitoring Event for Corrective Action
Semiannual Groundwater Monitoring Event for HWMU 5

Post Closure Care Permit Hazardous Waste Management Unit 5 & 16
Radford Army Ammunition Plant, Radford, Virginia
EPA ID# VA1210020730

TRC Engineers, Inc. (TRC) (formerly Draper Aden Associates), performed data validation of the analytical results for the Third Quarter 2023 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP), in Radford, Virginia.

During Third Quarter 2023, on behalf of BAE Systems, Ordnance Systems Inc. (BAE), TRC completed groundwater monitoring for HWMUs 5 and 16 in accordance with the Final Hazardous Waste Post-Closure Care Permit for HWMUs 5 and 16 (reissued August 16, 2014). The Third Quarter 2023 event served as the semiannual Corrective Action (CA) groundwater monitoring event for HWMU-5 and the semiannual compliance monitoring event for HWMU-16. The Third Quarter 2023 groundwater monitoring event also served as the annual monitoring event under 40 CFR 264 Appendix IX for HWMU-16.

The Third Quarter 2023 groundwater monitoring event was conducted using revised detection limits (DLs) and quantitation limits (QLs), where applicable, as specified in the Class 1 Permit Modification approved by the Virginia Department of Environmental Quality (VDEQ) in electronic correspondence dated May 5, 2021. Additionally, HWMU-16 total cobalt data were evaluated using the revised alternate source demonstration (ASD) for total cobalt in groundwater at HWMU-16 approved by the VDEQ in electronic correspondence dated September 13, 2021.

The following information summarizes the findings of the Third Quarter 2023 semiannual event for HWMU-5 only. Information for HWMU-16 is provided under a separate document.

Sample Collection/Analytical Services

TRC of Blacksburg, Virginia, collected groundwater samples July 25, 2023.

Samples were submitted for laboratory analysis via overnight courier to Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. The laboratory is accredited under the Virginia Environmental Laboratory Accreditation Program (VELAP) for the analytes, methods, and matrix as listed on each certificate of analysis, except if noted below.

Receipt of Monitoring Event Data

On behalf of BAE Systems, Ordnance Systems, Inc., ELLE submitted results to TRC in a final certificate of analysis which included analytical results as well as relevant documentation to verify and validate the results as discussed below. The final certificate of analysis for this event, which included HWMU-16, was received on November 14 ,2023.

Verification Events

No verification event was required.

Summary of Monitoring Event Data by Analytical Method

The certificate of analysis (COA) was received from the laboratory in the following sample delivery group (SDG): 410-136176-1 dated August 7, 2023.

The final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chain of custody (COC) and permit required target analyte lists are provided in the SDG.

Data Analysis and Validation

Samples were analyzed by *SW-846 Method requirements (Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates).* Data, except where noted below, were evaluated in accordance with:

- *Test Methods for Evaluating Solid Wastes - Physical and Chemical Methods*, USEPA SW-846, 3rd edition - Final Update I, II/IIA, III and subsequent updates)
- *USEPA Contract Laboratory Program National Functional Guidelines for Organic Superfund Methods Data Review*, November 2020, where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review*, November 2020, where applicable.

TRC of Blacksburg, Virginia, performed data validation as detailed in the attached data validation reports. Data validation reports and a summary table of data validation results are provided as an attachment.

Reporting of Results

Results were reported to at or above the permit detection limit for the target analytes (constituents) (i.e., five volatile organics and cobalt, total) listed in Appendix J to Permit Attachment 2 of Module VI-Groundwater Corrective Action & Monitoring Program. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. The laboratory QLs and DLs met the Permit required QL and DL. All QLs were at or below the groundwater protection standard (GPS).

Summary of Data Validation Results

The data validation results are summarized below and on the attached report and table. The certificate of analysis was complete in its presentation and the data were of acceptable quality. The chain of custody documentation was complete, except where noted below. The laboratory received the samples on ice and in good condition, with custody seals intact. Technical holding time and preservation criteria were met. The data set demonstrated the laboratory's ability to achieve the permit QL or DL, unless noted.

SW-846 Method 8260D/5030C-Volatile Organic Analytes- 25 ml purge volume

Instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/blind field sample duplicate results, and target analyte identification and quantitation were met, unless noted below. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. A trip blank was analyzed for each day of sample collection. A blind field duplicate was collected and analyzed for the required target analytes. Target analytes detected in the sample/field duplicate sample are noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

Sample/Blind Field Sample Duplicate results - 5WC21/5WDUP - Trichloroethene was reported below the QL in both the sample and blind field duplicate (0.81 J/0.85 J µg/l). RPD is calculated when results are at or greater than the QL.

SW-846 Method 6020B/3005A–Inorganics-total

Calibration, blank, interference check sample, MS/MSD/DUP, LCS, internal standards, serial dilution, sample/field sample duplicate results, and target analyte quantitation were met, unless noted below. MS/MSD analyses were performed on project sample 5WC21 as requested on the chain of custody. Target analytes detected in the sample/field duplicate sample are noted below. No deviations from specific QA/QC criteria were identified during the data review process.

- Sample/Blind Field Sample Duplicate results – 5WC21/5WDUP – Cobalt was reported above the QL in both the sample and blind field duplicate (27/27 µg/l). The relative percent difference (RPD) criteria were met (<1 RPD).

A. QC DELIVERABLES PACKAGE – SAMPLE PAPERWORK:

1.	Was the chain of custody included in the data deliverable package?	☑ YES ☐ NO
2.	Was custody transfer between different parties dated and signed?	☑ YES ☐ NO
3.	Did the chain of custody document sampler signature, sample locations, date and time of sampling and analyses requested?	☑ YES ☐ NO
4.	Were the sample results included for each sample location?	☑ YES ☐ NO
5.	Did the laboratory report the required target analytes?	☑ YES ☐ NO

End of page

DATA EVALUATION FOR SW-846 METHOD 8260D (GC/MS) VOLATILE ORGANICS

A. QC DELIVERABLES PACKAGE:

- ☑ VELAP accredited (matrix, method and analyte)

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Samples received at ≤ 6°C, zero headspace
- ☑ 14-day sample holding time, pH <2
- ☑ Preparation Method 5030C, 25 ml purge volume

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

Instrument performance check solution was analyzed at the beginning of each 12-hour period of standard and/or sample analysis. (Not a requirement for Method 8260D)

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Instrument performance check solution was analyzed at the beginning of each initial calibration
- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or required QL
- ☑ No calibration standards were removed from curve that would negatively impact the data integrity
- ☑ Each target analyte %RSD ≤ 20%
- ☑ Correlation coefficient or coefficient of determination >0.99 for target analytes with ≥ 20% RSD
- ☑ Initial calibration verification analytes have % Difference/Drift within ± 30.0%

E. CALIBRATION VERIFICATION REVIEW CRITERIA:

- ☑ Calibration verification standard analyzed at the beginning of each 12-hour period and prior to the method blank and sample analysis
- ☑ % Difference/Drift of target analytes within ± 20%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis
- ☑ Trip Blank-one per day of collection.

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others as allowed) were used and within the specified range
  - dibromofluoromethane (80-120%), 4-bromofluorobenzene (82-120%)
  - toluene-d_8 (80120%), 1,2-dichloroethane-d_4 (80-120%)

H. MATRIX SPIKE / MATRIX SPIKE DUPLICATE (MS/MSD) / LABORATORY CONTROL SAMPLE (LCS) REVIEW CRITERIA:

- ☑ MS/MSD and LCS analyzed; MS/MSD and LCS within range
- ☑ Project specific analytes -%R 70-130%, RPD ≤20
- ☑ Independent source (confirmed via email from B. Weyandt, ELLE to K. Olsen 1/9/2015)

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ The following internal standards (or others as allowed) were used
  -t-butyl alcohol-d_{10}, fluorobenzene, chlorobenzene-d_5, 1,4-dichlorobenzene-d_4
- ☑ Internal standard areas within ± 50% of last calibration verification
- ☑ Internal standard retention times within ± 30 seconds of last calibration verification

J. TARGET ANALYTE IDENTIFICATION REVIEW CRITERIA:

- ☑ Results were consistent with historical data. New detections evaluated as follows:
- ☑ RRTs of the reported analytes within ± 0.06 RRT units of the standard RRT
- ☑ Sample spectra versus laboratory standard spectra criteria were evaluated:
  - Characteristic ions maximized in the same scan or within one scan of each other
  - Characteristic ions present in the standard spectra were present in the sample spectra for analytes detected above the QL
  - Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results are consistent with historical data. New detections evaluated as follows:
  - If analyte %RSD was 20% or less, use average relative response factor for quantitation.
  - If analyte %RSD was greater than 20%, use first or higher order regression fit of five calibration points (6 calibration points for 2nd order)
- ☑ Results that exceed the initial calibration range were reanalyzed at a higher dilution
- ☑ Analyte concentrations recorded on the sample quantitation reports were accurately transferred to the sample summary sheets (laboratory report)

L. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached data validation report
- ☑ Results reported at or above permit QL (HWMU16)-
- ☑ Results reported at or above permit DL and permit QL (HWMU5)
- ☑ Results reported within instrument calibration range
- ☑ Sample/blind field duplicate RPD <20, where applicable

DATA EVALUATION FOR INORGANICS BY SW-846 METHOD 6020B (ICP/MS)

A. QC DELIVERABLES PACKAGE:

- ☑ Sample results included for sample locations
- ☑ Target analyte QLs reported at permit QL
- ☑ Sample digestion method: 3005A
- ☑ Electronic data file reviewed
- ☑ VELAP accredited (matrix, method, target analyte)

B. TECHNICAL HOLDING TIMES / PRESERVATION REVIEW CRITERIA:

- ☑ 6 month holding time, pH<2 with Nitric Acid (HNO3)

C. INSTRUMENT CALIBRATION/TUNE CRITERIA:

- ☑ Target analytes, 1 calibration blank and at least 1 standard or according to instrument manufacturer's procedure
- ☑ Instrument calibrated for every analytical sequence, r>0.998
- ☑ Instrument tuned prior to analysis:
  - (%RSD <5%),
  - Resolution < 0.9 amu full width at 10% peak height (or lower)
  - Mass calibration </=0.1 amu difference from true value

D. INSTRUMENT CALIBRATION CRITERIA:

- ☑ Standard analyzed at or below the QL (LLQC), digested, analyzed after MDL determination and as needed
- ☑ QL standard recovery 70-130%
- ☑ 10 sample frequency
- ☑ Use of calibration blank and check standard
- ☑ Recovery within 90-110% (ICV/CCV)
- ☑ LLICV prior to analysis and at a concentration at or below LOQ/QL
- ☑ LLCCV within 70-130% recovery

E. BLANK CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank
- ☑ Method/Other Lab Blanks (check only if analyzed)
- ☑ Interference free
- ☑ CCB 10 sample frequency

F. INTERFERENCE CHECK SAMPLES (ICS) CRITERIA:

- ☑ At beginning of analytical run (80-120%)

G. MATRIX SPIKE DUPLICATE (MSD) CRITERIA:

- ☑ One MSD or sample duplicate per batch of 20 samples
- ☑ RPD ≤ 20 between MS and MSD results or sample and duplicate results
- ☑ Control limit is ± QL when sample values are less than 5 times QL (sample duplicate).

H. MATRIX SPIKE (MS) CRITERIA:

- ☑ 75-125% recovery, all analytes
- ☑ All analytes, spiked prior to digestion
- ☑ One matrix spike per analytical batch
- ☑ No more than 20 samples per analytical batch

I. BLIND FIELD SAMPLE DUPLICATE CRITERIA:

- ☑ 20% RPD for concentrations > QL

J. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument linear range

DATA EVALUATION FOR INORGANICS BY SW-846 METHOD 6020B (ICP/MS) (Con't.)

K. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ All target analytes, 1 LCS per 20 samples, (80-120% Recovery)

L. INTERNAL STANDARDS (IS) CRITERIA:

- ☑ IS intensities; 70-125% RI

M. SERIAL DILUTION CRITERIA:

- ☑ Similar matrix
- ☑ If concentration >10 times QL, %Difference must be within 10%

N. REPORTING:

- ☑ Detected analytes or results requiring validation are presented on the attached data validation report
- ☑ Results reported at or above permit QL (HWMU16) (N/A 3W2023)
- ☑ Results reported at or above permit DL and QL (HWMU5)

LIMITATIONS:

TRC Engineers, a TRC Company, prepared this document (which may include drawings, specifications, reports, studies and attachments) in accordance with the agreement between TRC Engineers and the client.

The standard of care for all professional engineering, environmental and surveying and related services performed or furnished by TRC Engineers under this Agreement are the care and skill ordinarily used by members of these professions practicing under similar circumstances at the same time and in the same locality. TRC Engineers makes no warranties, express or implied, under this Agreement in connection with TRC Engineers' services.

Conclusions presented are based upon a review of available information, the results of our field studies, and/or professional judgment. To the best of our knowledge, information provided by others is true and accurate, unless otherwise noted. TRC Engineers' liability, hereunder, shall be limited to amounts due TRC Engineers for services actually rendered, or reimbursable expenses actually incurred.

Any reuse or modification of any of the aforementioned documents (whether hard copies or electronic transmittals) prepared by TRC Engineers without written verification or adaptation by TRC Engineers will be at the sole risk of the individual or entity utilizing said documents and such use is without the authorization of TRC Engineers. TRC Engineers shall have no legal liability resulting from any and all claims, damages, losses, and expenses, including attorney's fees arising out of the unauthorized reuse or modification of these documents. Client shall indemnify TRC Engineers from any claims arising out of unauthorized use or modification of the documents whether hard copy or electronic.

♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦♦

Draper Aden Associates
Engineering ♦ Surveying ♦ Environmental Services

This Report has been prepared by:

Cheryl Daniel ___8/30/2023_____

Cheryl Daniel, Environmental Scientist Date:
2200 South Main Street, Suite A, Blacksburg, Virginia 24060
540-552-0444, cdaniel@trccompanies.com, www.trcccompanies.com

This Report has been subjected to technical and quality review by:

Kathy Olsen 11/29/2023

Kathy Olsen, Senior Project Environmental Scientist Date:
2200 South Main Street, Suite A, Blacksburg, Virginia 24060
540-552-0444, koslen@ trccompanies.com, www.trccompanies.com

Comprehensive Data Validation Report
Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Monitoring Event: Third Quarter 2023

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: ELLE, Lancaster, PA							
Cobalt	**5WC21**	**27**		**27**		**5**	**No action taken.**
	5WDUP	**27**		**27**		**5**	**No action taken. Blind field duplicate of 5WC21. RPD is <1.**

Definitions:

Data Validation Qualifiers:
QL Denotes permit quantitation limit. Q Denotes data qualifier.
J Denotes analyte reported at or above quantitation limit and associated result is estimated.

eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Janet Frazier
TRC, Engineers, Inc.
2200 South Main Street
Suite A
Blacksburg VA 24060

Generated 8/7/2023 10:14 PM

JOB DESCRIPTION

RFAAP, Radford VA HWMU5

JOB NUMBER

410-136176-1

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

See page two for job notes and contact information.

myEOL

Job Notes

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

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

Authorization

Barb Weyandt

Generated
8/7/2023 10:14 PM

Authorized for release by
Barbara Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
Designee for
Barbara A Weyandt, Project Manager
Barbara.Weyandt@et.eurofinsus.com
717 556-7264

Eurofins Lancaster Laboratories Environment Testing, LLC

Compliance Statement

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

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

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

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Table of Contents

Cover Page 1
Data Summaries 6
Definitions 6
Case Narrative 7
Detection Summary 8
Client Sample Results 9
Default Detection Limits 13
Surrogate Summary 14
QC Sample Results 15
QC Association 18
Chronicle 19
Certification Summary 21
Method Summary 22
Sample Summary 23
Manual Integration Summary 24
Reagent Traceability 29
COAs 42
Sample Container Check 123
Organic Sample Data 124
GC/MS VOA 124
Method 8260D Low Level 124
Method 8260D Low Level QC Summary 125
Method 8260D Low Level Sample Data 136
Standards Data 180
Method 8260D Low Level ICAL Data 180
Method 8260D Low Level CCAL Data 388
Raw QC Data 407
Method 8260D Low Level Tune Data 407
Method 8260D Low Level Blank Data 415
Method 8260D Low Level LCS/LCSD Data 422
Method 8260D Low Level MS/MSD Data 428
Method 8260D Low Level Run Logs 440
Method 8260D Low Level Prep Data 442
Inorganic Sample Data 447
Metals Data 447
Met Cover Page 448
Met Sample Data 449
Met QC Data 457
Met ICV/CCV 457
Met CRQL 460
Met Blanks 461

Table of Contents

Met ICSA/ICSAB 464
Met MS/MSD/PDS 466
Met Dup/Trip 469
Met LCS/LCSD 470
Met Serial Dilution 472
Met MDL 473
Met Linear Ranges 475
Met Preparation Log 476
Met Analysis Run Log 477
Met ICP/MS Tune 480
Met Internal Standards 481
Met Prep Data 485
Met Raw Data 486
Shipping and Receiving Documents 1084
Client Chain of Custody 1085
Sample Receipt Checklist 1087

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
410-136176-1

Receipt
The samples were received on 7/26/2023 9:30 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 1.7°C

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

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

Detection Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Client Sample ID: 5W8B — Lab Sample ID: 410-136176-1

No Detections.

Client Sample ID: 5W5B — Lab Sample ID: 410-136176-2

No Detections.

Client Sample ID: 5W7B — Lab Sample ID: 410-136176-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cobalt	6.7		5.0	1.0	ug/L	1		6020B	Total Recoverable

Client Sample ID: 5WC21 — Lab Sample ID: 410-136176-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.85	J	1.0	0.30	ug/L	1		8260D	Total/NA
Cobalt	27		5.0	1.0	ug/L	1		6020B	Total Recoverable

Client Sample ID: 5WDUP — Lab Sample ID: 410-136176-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	0.81	J	1.0	0.30	ug/L	1		8260D	Total/NA
Cobalt	27		5.0	1.0	ug/L	1		6020B	Total Recoverable

Client Sample ID: 5WC22 — Lab Sample ID: 410-136176-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.6		1.0	0.30	ug/L	1		8260D	Total/NA
Cobalt	26		5.0	1.0	ug/L	1		6020B	Total Recoverable

Client Sample ID: 5WC23 — Lab Sample ID: 410-136176-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Trichloroethene	1.7		1.0	0.30	ug/L	1		8260D	Total/NA

Client Sample ID: 5W12A — Lab Sample ID: 410-136176-8

No Detections.

Client Sample ID: Trip Blank 1 — Lab Sample ID: 410-136176-9

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample ID: 5W8B — Lab Sample ID: 410-136176-1

Date Collected: 07/25/23 08:30 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 15:24	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 15:24	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 15:24	1
Trichloroethene	ND		1.0	0.30	ug/L			07/30/23 15:24	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 15:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*07/30/23 15:24*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*07/30/23 15:24*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*07/30/23 15:24*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/30/23 15:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:53	1

Client Sample ID: 5W5B — Lab Sample ID: 410-136176-2

Date Collected: 07/25/23 10:50 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 15:45	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 15:45	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 15:45	1
Trichloroethene	ND		1.0	0.30	ug/L			07/30/23 15:45	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 15:45	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*07/30/23 15:45*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*07/30/23 15:45*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*07/30/23 15:45*	*1*
Toluene-d8 (Surr)	*97*		*80 - 120*		*07/30/23 15:45*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 17:05	1

Client Sample ID: 5W7B — Lab Sample ID: 410-136176-3

Date Collected: 07/25/23 10:05 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 16:05	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 16:05	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 16:05	1
Trichloroethene	ND	F1	1.0	0.30	ug/L			07/30/23 16:05	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 16:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*07/30/23 16:05*	*1*

Client Sample ID: 5W7B — Lab Sample ID: 410-136176-3

Date Collected: 07/25/23 10:05 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*07/30/23 16:05*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*07/30/23 16:05*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/30/23 16:05*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**6.7**		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:29	1

Client Sample ID: 5WC21 — Lab Sample ID: 410-136176-4

Date Collected: 07/25/23 13:25 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 17:06	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 17:06	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 17:06	1
Trichloroethene	**0.85**	**J**	1.0	0.30	ug/L			07/30/23 17:06	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 17:06	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*07/30/23 17:06*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*07/30/23 17:06*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*07/30/23 17:06*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/30/23 17:06*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**27**		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:51	1

Client Sample ID: 5WDUP — Lab Sample ID: 410-136176-5

Date Collected: 07/25/23 13:30 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 17:27	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 17:27	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 17:27	1
Trichloroethene	**0.81**	**J**	1.0	0.30	ug/L			07/30/23 17:27	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 17:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*		*07/30/23 17:27*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*07/30/23 17:27*	*1*
Dibromofluoromethane (Surr)	*107*		*80 - 120*		*07/30/23 17:27*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/30/23 17:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**27**		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:49	1

Client Sample ID: 5WC22 — Lab Sample ID: 410-136176-6

Date Collected: 07/25/23 11:40 — **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 17:47	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 17:47	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 17:47	1
Trichloroethene	**1.6**		1.0	0.30	ug/L			07/30/23 17:47	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 17:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*07/30/23 17:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*07/30/23 17:47*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*07/30/23 17:47*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/30/23 17:47*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	**26**		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:47	1

Client Sample ID: 5WC23 — Lab Sample ID: 410-136176-7

Date Collected: 07/25/23 12:35 — **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 18:08	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 18:08	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 18:08	1
Trichloroethene	**1.7**		1.0	0.30	ug/L			07/30/23 18:08	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 18:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*07/30/23 18:08*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*07/30/23 18:08*	*1*
Dibromofluoromethane (Surr)	*106*		*80 - 120*		*07/30/23 18:08*	*1*
Toluene-d8 (Surr)	*96*		*80 - 120*		*07/30/23 18:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:57	1

Client Sample ID: 5W12A — Lab Sample ID: 410-136176-8

Date Collected: 07/25/23 09:20 — **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 18:28	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 18:28	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 18:28	1
Trichloroethene	ND		1.0	0.30	ug/L			07/30/23 18:28	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*		*07/30/23 18:28*	*1*

Client Sample ID: 5W12A — Lab Sample ID: 410-136176-8

Date Collected: 07/25/23 09:20 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*07/30/23 18:28*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*07/30/23 18:28*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/30/23 18:28*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:55	1

Client Sample ID: Trip Blank 1 — Lab Sample ID: 410-136176-9

Date Collected: 07/25/23 00:00 **Matrix: Water**
Date Received: 07/26/23 09:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 14:23	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 14:23	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 14:23	1
Trichloroethene	ND		1.0	0.30	ug/L			07/30/23 14:23	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 14:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*80 - 120*		*07/30/23 14:23*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*07/30/23 14:23*	*1*
Dibromofluoromethane (Surr)	*109*		*80 - 120*		*07/30/23 14:23*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/30/23 14:23*	*1*

Default Detection Limits

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

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

Analyte	RL	MDL	Units
1,1-Dichloroethene	1.0	0.20	ug/L
cis-1,2-Dichloroethene	1.0	0.10	ug/L
trans-1,2-Dichloroethene	1.0	0.80	ug/L
Trichloroethene	1.0	0.30	ug/L
Vinyl chloride	1.0	0.20	ug/L

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

Prep: 3005A

Analyte	RL	MDL	Units
Cobalt	5.0	1.0	ug/L

Surrogate Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

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

Matrix: Water
Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(80-120)	(80-120)	(80-120)
410-136176-1	5W8B	108	94	106	97
410-136176-2	5W5B	107	93	106	97
410-136176-3	5W7B	108	95	105	96
410-136176-3 MS	5W7B	107	98	105	97
410-136176-3 MSD	5W7B	107	97	105	96
410-136176-4	5WC21	108	94	105	96
410-136176-5	5WDUP	109	95	107	96
410-136176-6	5WC22	107	94	106	96
410-136176-7	5WC23	107	94	106	96
410-136176-8	5W12A	107	92	105	95
410-136176-9	Trip Blank 1	116	94	109	95
LCS 410-402356/4	Lab Control Sample	109	97	106	97
MB 410-402356/6	Method Blank	108	93	105	95

Surrogate Legend

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

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

Lab Sample ID: MB 410-402356/6
Matrix: Water
Analysis Batch: 402356

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1-Dichloroethene	ND		1.0	0.20	ug/L			07/30/23 14:02	1
cis-1,2-Dichloroethene	ND		1.0	0.10	ug/L			07/30/23 14:02	1
trans-1,2-Dichloroethene	ND		1.0	0.80	ug/L			07/30/23 14:02	1
Trichloroethene	ND		1.0	0.30	ug/L			07/30/23 14:02	1
Vinyl chloride	ND		1.0	0.20	ug/L			07/30/23 14:02	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*108*		*80 - 120*		*07/30/23 14:02*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*07/30/23 14:02*	*1*
Dibromofluoromethane (Surr)	*105*		*80 - 120*		*07/30/23 14:02*	*1*
Toluene-d8 (Surr)	*95*		*80 - 120*		*07/30/23 14:02*	*1*

Lab Sample ID: LCS 410-402356/4
Matrix: Water
Analysis Batch: 402356

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1,1-Dichloroethene			5.00	5.57		ug/L		111	80 - 131		
cis-1,2-Dichloroethene			5.00	5.61		ug/L		112	80 - 122		
trans-1,2-Dichloroethene			5.00	5.43		ug/L		109	80 - 122		
Trichloroethene			5.00	5.46		ug/L		109	80 - 120		
Vinyl chloride			5.00	3.62		ug/L		72	60 - 125		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*109*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

Lab Sample ID: 410-136176-3 MS
Matrix: Water
Analysis Batch: 402356

Client Sample ID: 5W7B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1,1-Dichloroethene	ND		5.00	6.30		ug/L		126	80 - 131
cis-1,2-Dichloroethene	ND		5.00	6.04		ug/L		121	80 - 122
trans-1,2-Dichloroethene	ND		5.00	6.02		ug/L		120	80 - 122
Trichloroethene	ND	F1	5.00	6.13	F1	ug/L		123	80 - 120
Vinyl chloride	ND		5.00	3.73		ug/L		74	60 - 125

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*97*		*80 - 120*

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

Lab Sample ID: 410-136176-3 MSD
Matrix: Water
Analysis Batch: 402356

Client Sample ID: 5W7B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		5.00	6.25		ug/L		125	80 - 131	1	30
cis-1,2-Dichloroethene	ND		5.00	5.97		ug/L		119	80 - 122	1	30
trans-1,2-Dichloroethene	ND		5.00	5.97		ug/L		119	80 - 122	1	30
Trichloroethene	ND	F1	5.00	6.10	F1	ug/L		122	80 - 120	1	30
Vinyl chloride	ND		5.00	3.66		ug/L		73	60 - 125	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*80 - 120*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*80 - 120*
Toluene-d8 (Surr)	*96*		*80 - 120*

Method: 6020B - Metals (ICP/MS)

Lab Sample ID: MB 410-401990/1-A
Matrix: Water
Analysis Batch: 405464

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 401990

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cobalt	ND		5.0	1.0	ug/L		07/28/23 11:39	08/07/23 16:19	1

Lab Sample ID: LCS 410-401990/2-A
Matrix: Water
Analysis Batch: 405464

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 401990

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	500	502		ug/L		100	90 - 113

Lab Sample ID: 410-136176-3 MS
Matrix: Water
Analysis Batch: 405464

Client Sample ID: 5W7B
Prep Type: Total Recoverable
Prep Batch: 401990

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Cobalt	6.7		500	507		ug/L		100	80 - 125

Lab Sample ID: 410-136176-3 MSD
Matrix: Water
Analysis Batch: 405464

Client Sample ID: 5W7B
Prep Type: Total Recoverable
Prep Batch: 401990

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Cobalt	6.7		500	501		ug/L		99	80 - 125	1	20

Lab Sample ID: 410-136176-3 DU
Matrix: Water
Analysis Batch: 405464

Client Sample ID: 5W7B
Prep Type: Total Recoverable
Prep Batch: 401990

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cobalt	6.7		6.46		ug/L		4	20

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

Lab Sample ID: LRC 410-405464/9
Client Sample ID: Lab Control Sample
Matrix: Water
Analysis Batch: 405464

Analyte			Spike Added	LRC Result	LRC Qualifier	Unit	D	%Rec	%Rec Limits		
Cobalt			2000	1860		ug/L		93	90 - 110		

GC/MS VOA

Analysis Batch: 402356

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136176-1	5W8B	Total/NA	Water	8260D	
410-136176-2	5W5B	Total/NA	Water	8260D	
410-136176-3	5W7B	Total/NA	Water	8260D	
410-136176-4	5WC21	Total/NA	Water	8260D	
410-136176-5	5WDUP	Total/NA	Water	8260D	
410-136176-6	5WC22	Total/NA	Water	8260D	
410-136176-7	5WC23	Total/NA	Water	8260D	
410-136176-8	5W12A	Total/NA	Water	8260D	
410-136176-9	Trip Blank 1	Total/NA	Water	8260D	
MB 410-402356/6	Method Blank	Total/NA	Water	8260D	
LCS 410-402356/4	Lab Control Sample	Total/NA	Water	8260D	
410-136176-3 MS	5W7B	Total/NA	Water	8260D	
410-136176-3 MSD	5W7B	Total/NA	Water	8260D	

Metals

Prep Batch: 401990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136176-1	5W8B	Total Recoverable	Water	3005A	
410-136176-2	5W5B	Total Recoverable	Water	3005A	
410-136176-3	5W7B	Total Recoverable	Water	3005A	
410-136176-4	5WC21	Total Recoverable	Water	3005A	
410-136176-5	5WDUP	Total Recoverable	Water	3005A	
410-136176-6	5WC22	Total Recoverable	Water	3005A	
410-136176-7	5WC23	Total Recoverable	Water	3005A	
410-136176-8	5W12A	Total Recoverable	Water	3005A	
MB 410-401990/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 410-401990/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
410-136176-3 MS	5W7B	Total Recoverable	Water	3005A	
410-136176-3 MSD	5W7B	Total Recoverable	Water	3005A	
410-136176-3 DU	5W7B	Total Recoverable	Water	3005A	

Analysis Batch: 405464

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
410-136176-1	5W8B	Total Recoverable	Water	6020B	401990
410-136176-2	5W5B	Total Recoverable	Water	6020B	401990
410-136176-3	5W7B	Total Recoverable	Water	6020B	401990
410-136176-4	5WC21	Total Recoverable	Water	6020B	401990
410-136176-5	5WDUP	Total Recoverable	Water	6020B	401990
410-136176-6	5WC22	Total Recoverable	Water	6020B	401990
410-136176-7	5WC23	Total Recoverable	Water	6020B	401990
410-136176-8	5W12A	Total Recoverable	Water	6020B	401990
MB 410-401990/1-A	Method Blank	Total Recoverable	Water	6020B	401990
LCS 410-401990/2-A	Lab Control Sample	Total Recoverable	Water	6020B	401990
LRC 410-405464/9	Lab Control Sample		Water	6020B	
410-136176-3 MS	5W7B	Total Recoverable	Water	6020B	401990
410-136176-3 MSD	5W7B	Total Recoverable	Water	6020B	401990
410-136176-3 DU	5W7B	Total Recoverable	Water	6020B	401990

Client Sample ID: 5W8B — Lab Sample ID: 410-136176-1

Date Collected: 07/25/23 08:30 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 15:24
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:53

Client Sample ID: 5W5B — Lab Sample ID: 410-136176-2

Date Collected: 07/25/23 10:50 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 15:45
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 17:05

Client Sample ID: 5W7B — Lab Sample ID: 410-136176-3

Date Collected: 07/25/23 10:05 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 16:05
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:29

Client Sample ID: 5WC21 — Lab Sample ID: 410-136176-4

Date Collected: 07/25/23 13:25 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 17:06
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:51

Client Sample ID: 5WDUP — Lab Sample ID: 410-136176-5

Date Collected: 07/25/23 13:30 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 17:27
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:49

Client Sample ID: 5WC22 — Lab Sample ID: 410-136176-6

Date Collected: 07/25/23 11:40 **Matrix: Water**
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 17:47

Lab Chronicle

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Client Sample ID: 5WC22
Lab Sample ID: 410-136176-6
Date Collected: 07/25/23 11:40
Matrix: Water
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:47

Client Sample ID: 5WC23
Lab Sample ID: 410-136176-7
Date Collected: 07/25/23 12:35
Matrix: Water
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 18:08
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:57

Client Sample ID: 5W12A
Lab Sample ID: 410-136176-8
Date Collected: 07/25/23 09:20
Matrix: Water
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 18:28
Total Recoverable	Prep	3005A			401990	HUH3	ELLE	07/28/23 11:39
Total Recoverable	Analysis	6020B		1	405464	UCIG	ELLE	08/07/23 16:55

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136176-9
Date Collected: 07/25/23 00:00
Matrix: Water
Date Received: 07/26/23 09:30

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8260D		1	402356	DVW2	ELLE	07/30/23 14:23

Laboratory References:

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

Accreditation/Certification Summary

Client: TRC, Engineers, Inc. Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

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

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

Method Summary

Client: TRC, Engineers, Inc. Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Method	Method Description	Protocol	Laboratory
8260D	Volatile Organic Compounds by GC/MS	SW846	ELLE
6020B	Metals (ICP/MS)	SW846	ELLE
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	ELLE
5030C	Purge and Trap	SW846	ELLE

Protocol References:

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

Laboratory References:

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

Sample Summary

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
410-136176-1	5W8B	Water	07/25/23 08:30	07/26/23 09:30
410-136176-2	5W5B	Water	07/25/23 10:50	07/26/23 09:30
410-136176-3	5W7B	Water	07/25/23 10:05	07/26/23 09:30
410-136176-4	5WC21	Water	07/25/23 13:25	07/26/23 09:30
410-136176-5	5WDUP	Water	07/25/23 13:30	07/26/23 09:30
410-136176-6	5WC22	Water	07/25/23 11:40	07/26/23 09:30
410-136176-7	5WC23	Water	07/25/23 12:35	07/26/23 09:30
410-136176-8	5W12A	Water	07/25/23 09:20	07/26/23 09:30
410-136176-9	Trip Blank 1	Water	07/25/23 00:00	07/26/23 09:30

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Analysis Batch Number: 366140

Lab Sample ID: IC 410-366140/13 Client Sample ID:

Date Analyzed: 04/19/23 21:41 Lab File ID: HA19X12.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorofluoromethane	2.81	Incomplete Integration	K4WN	04/23/23 19:20
Acrolein	3.28	Incomplete Integration	K4WN	04/23/23 19:21
Acetone	3.47	Incomplete Integration	K4WN	04/23/23 19:49
Methyl acetate	3.85	Incomplete Integration	K4WN	04/23/23 19:22
Allyl chloride	3.87	Incomplete Integration	K4WN	04/23/23 19:22
t-Butyl alcohol-d10 (IS)	4.04	Incomplete Integration	K4WN	04/23/23 19:20
Methylene Chloride	4.06	Incomplete Integration	K4WN	04/23/23 19:22
t-Butyl alcohol	4.18	Incomplete Integration	K4WN	04/23/23 19:22
Acrylonitrile	4.39	Incomplete Integration	K4WN	04/23/23 19:22
trans-1,2-Dichloroethene	4.45	Incomplete Integration	K4WN	04/23/23 19:23
n-Hexane	4.89	Incomplete Integration	K4WN	04/23/23 19:23
di-Isopropyl ether	5.18	Incomplete Integration	K4WN	04/23/23 19:23
2-Chloro-1,3-butadiene	5.23	Incomplete Integration	K4WN	04/23/23 19:23
2,2-Dichloropropane	5.97	Incomplete Integration	K4WN	04/23/23 19:24
Propionitrile	6.05	Incomplete Integration	K4WN	04/23/23 19:24
Methacrylonitrile	6.23	Incomplete Integration	K4WN	04/23/23 19:24
Tetrahydrofuran	6.32	Incomplete Integration	K4WN	04/23/23 19:24
1,1,1-Trichloroethane	6.67	Incomplete Integration	K4WN	04/23/23 19:25
Cyclohexane	6.79	Incomplete Integration	K4WN	04/23/23 19:24
Carbon tetrachloride	6.89	Incomplete Integration	K4WN	04/23/23 19:25
Isobutyl alcohol	7.06	Incomplete Integration	K4WN	04/23/23 19:25
Fluorobenzene (IS)	7.56	Incomplete Integration	K4WN	04/23/23 19:26
n-Heptane	7.58	Incomplete Integration	K4WN	04/23/23 19:26
n-Butanol	7.99	Incomplete Integration	K4WN	04/23/23 19:26
1,4-Dioxane	8.40	Incomplete Integration	K4WN	04/23/23 19:27
Dibromomethane	8.50	Incomplete Integration	K4WN	04/23/23 19:27
Bromodichloromethane	8.73	Incomplete Integration	K4WN	04/23/23 19:27
2-Nitropropane	9.00	Incomplete Integration	K4WN	04/23/23 19:27

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Analysis Batch Number: 366140

Lab Sample ID: IC 410-366140/14 Client Sample ID:

Date Analyzed: 04/19/23 22:01 Lab File ID: HA19X13.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.90	Incomplete Integration	K4WN	04/23/23 19:29
1,3-Butadiene	2.20	Incomplete Integration	K4WN	04/23/23 19:29
Acetone	3.45	Incomplete Integration	K4WN	04/23/23 19:50
Methyl acetate	3.86	Incomplete Integration	K4WN	04/23/23 19:30
1,1-Dichloroethane	5.12	Incomplete Integration	K4WN	04/23/23 19:32
2-Butanone	5.93	Incomplete Integration	K4WN	04/23/23 19:30
Propionitrile	6.01	Incomplete Integration	K4WN	04/23/23 19:30
n-Butanol	7.97	Incomplete Integration	K4WN	04/23/23 19:31
Dibromomethane	8.49	Incomplete Integration	K4WN	04/23/23 19:31
Bromodichloromethane	8.74	Incomplete Integration	K4WN	04/23/23 19:31
2-Nitropropane	9.00	Incomplete Integration	K4WN	04/23/23 19:31

Lab Sample ID: IC 410-366140/15 Client Sample ID:

Date Analyzed: 04/19/23 22:21 Lab File ID: HA19X14.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.90	Incomplete Integration	K4WN	04/23/23 19:32
Acetone	3.46	Incomplete Integration	K4WN	04/23/23 19:33
Methyl acetate	3.87	Incomplete Integration	K4WN	04/23/23 19:33
Acrylonitrile	4.38	Incomplete Integration	K4WN	04/23/23 19:33
n-Butanol	7.94	Incomplete Integration	K4WN	04/23/23 19:35
1,4-Dioxane	8.48	Incomplete Integration	K4WN	04/23/23 19:35

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Analysis Batch Number: 366140

Lab Sample ID: IC 410-366140/16 Client Sample ID:

Date Analyzed: 04/19/23 22:41 Lab File ID: HA19X15.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acetone	3.47	Incomplete Integration	K4WN	04/23/23 19:35
Methyl acetate	3.84	Incomplete Integration	K4WN	04/23/23 19:36
1,4-Dioxane	8.48	Incomplete Integration	K4WN	04/23/23 19:36

Lab Sample ID: IC 410-366140/17 Client Sample ID:

Date Analyzed: 04/19/23 23:01 Lab File ID: HA19X16.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.84	Incomplete Integration	K4WN	04/23/23 19:37
1,4-Dioxane	8.49	Incomplete Integration	K4WN	04/23/23 19:38

Lab Sample ID: ICIS 410-366140/18 Client Sample ID:

Date Analyzed: 04/19/23 23:21 Lab File ID: HA19X17.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.84	Incomplete Integration	K4WN	04/23/23 19:39
1,4-Dioxane	8.48	Incomplete Integration	K4WN	04/23/23 19:40

Lab Sample ID: IC 410-366140/19 Client Sample ID:

Date Analyzed: 04/19/23 23:41 Lab File ID: HA19X18.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Dichlorodifluoromethane	1.90	Incomplete Integration	K4WN	04/23/23 19:40
Methyl acetate	3.84	Incomplete Integration	K4WN	04/23/23 19:40
1,4-Dioxane	8.48	Incomplete Integration	K4WN	04/23/23 19:41

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Analysis Batch Number: 366140

Lab Sample ID: ICV 410-366140/21 Client Sample ID:

Date Analyzed: 04/20/23 00:21 Lab File ID: HA19X20.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Acrolein	3.29	Incomplete Integration	K4WN	04/23/23 20:23
Acetone	3.45	Incomplete Integration	K4WN	04/23/23 20:24
Methyl acetate	3.86	Incomplete Integration	K4WN	04/23/23 20:24
1,4-Dioxane	8.48	Incomplete Integration	K4WN	04/23/23 20:25

GC/MS VOA MANUAL INTEGRATION SUMMARY

Lab Name: Eurofins Lancaster Laboratorie Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Analysis Batch Number: 402356

Lab Sample ID: CCVIS 410-402356/3 Client Sample ID:

Date Analyzed: 07/30/23 13:01 Lab File ID: HL30X02.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Methyl acetate	3.87	Incomplete Integration	DVW2	07/30/23 13:23

Lab Sample ID: 410-136176-3 Client Sample ID: 5W7B

Date Analyzed: 07/30/23 16:05 Lab File ID: HL30X11.D GC Column: R-624SilMS 30m ID: 0.25(mm)

COMPOUND NAME	RETENTION TIME	MANUAL INTEGRATION		
		REASON	ANALYST	DATE
Toluene-d8 (Surr)	9.61	Incomplete Integration	DVW2	07/31/23 16:26

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MP_1:1HCl_00029	01/10/24	07/10/23	DI Water, Lot DI07102023	20000 mL	MT_HCl_JT_00011	10000 mL	Hydrogen Chloride	188000 ug/mL
.MT_HCl_JT_00011	04/11/24	J.T.Baker, Lot 22L0562004			(Purchased Reagent)		Hydrogen Chloride	37.6 %
MP_1:1HNO3_00045	01/27/24	07/27/23	DI Water, Lot DI07272023	20000 mL	MT_HNO3_Fishe_00009	2500 mL	Nitric acid	340000 ug/mL
					MT_HNO3_Fishe_00010	7500 mL	Nitric acid	340000 ug/mL
.MT_HNO3_Fishe_00009	06/15/24	Fisher, Lot 226243			(Purchased Reagent)		Nitric acid	68 %
.MT_HNO3_Fishe_00010	06/15/24	Fisher, Lot 230664			(Purchased Reagent)		Nitric acid	68 %
MSV_LCS_VOC#1_00105	05/16/23	04/16/23	Methanol, Lot EG095	25 mL	MSV_M_MIX1SEC_00138	1 mL	1,1-Dichloroethene	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							Trichloroethene	40 ug/mL
.MSV_M_MIX1SEC_00138	04/30/25	Restek, Lot A0184354			(Purchased Reagent)		1,1-Dichloroethene	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							Trichloroethene	1000 ug/mL
MSV_LCS_VOC#1_00120	08/22/23	07/23/23	Methanol, Lot EG095	25 mL	MSV_M_MIX1SEC_00140	1 mL	1,1-Dichloroethene	40 ug/mL
							cis-1,2-Dichloroethene	40 ug/mL
							trans-1,2-Dichloroethene	40 ug/mL
							Trichloroethene	40 ug/mL
.MSV_M_MIX1SEC_00140	04/30/25	Restek, Lot A0184354			(Purchased Reagent)		1,1-Dichloroethene	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							Trichloroethene	1000 ug/mL
MSV_LL_#1_826_00073	05/09/23	04/17/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00121	50 uL	1,1,1,2-Tetrachloroethane	50 ug/mL
							1,1,1-Trichloroethane	50 ug/mL
							1,1,2,2-Tetrachloroethane	50 ug/mL
							1,1,2-Trichloroethane	50 ug/mL
							1,1-Dichloroethane	50 ug/mL
							1,1-Dichloroethene	50 ug/mL
							1,1-Dichloropropene	50 ug/mL
							1,2,3-Trichlorobenzene	50 ug/mL
							1,2,3-Trichloropropane	50 ug/mL
							1,2,4-Trichlorobenzene	50 ug/mL
							1,2,4-Trimethylbenzene	50 ug/mL
							1,2-Dibromo-3-Chloropropane	50 ug/mL
							1,2-Dichlorobenzene	50 ug/mL
							1,2-Dichloroethane	50 ug/mL
							1,2-Dichloropropane	50 ug/mL
							1,3,5-Trimethylbenzene	50 ug/mL
							1,3-Dichlorobenzene	50 ug/mL
							1,3-Dichloropropane	50 ug/mL
							1,4-Dichlorobenzene	50 ug/mL
							2,2-Dichloropropane	50 ug/mL
							2-Chlorotoluene	50 ug/mL
							4-Chlorotoluene	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Isopropyltoluene	50 ug/mL
							Benzene	50 ug/mL
							Bromobenzene	50 ug/mL
							Bromoform	50 ug/mL
							Carbon tetrachloride	50 ug/mL
							Chlorobenzene	50 ug/mL
							Chlorobromomethane	50 ug/mL
							Chlorodibromomethane	50 ug/mL
							Chloroform	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							cis-1,3-Dichloropropene	50 ug/mL
							Dibromomethane	50 ug/mL
							Dichlorobromomethane	50 ug/mL
							Ethylbenzene	50 ug/mL
							Ethylene Dibromide	50 ug/mL
							Hexachlorobutadiene	50 ug/mL
							Isopropylbenzene	50 ug/mL
							m-Xylene & p-Xylene	100 ug/mL
							Methylene Chloride	50 ug/mL
							n-Butylbenzene	50 ug/mL
							N-Propylbenzene	50 ug/mL
							Naphthalene	50 ug/mL
							o-Xylene	50 ug/mL
							sec-Butylbenzene	50 ug/mL
							Styrene	50 ug/mL
							tert-Butylbenzene	50 ug/mL
							Tetrachloroethene	50 ug/mL
							Toluene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							trans-1,3-Dichloropropene	50 ug/mL
							Trichloroethene	50 ug/mL
							1,1,2-Trichloro-1,2,2-trifluoroethane	50 ug/mL
							1,2,3-Trimethylbenzene	50 ug/mL
							1,3,5-Trichlorobenzene	50 ug/mL
							1,4-Dioxane	2500 ug/mL
							1-Chlorohexane	50 ug/mL
							2-Chloro-1,3-butadiene	50 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							2-Nitropropane	250 ug/mL
							3-Chloro-1-propene	50 ug/mL
							Acrylonitrile	125 ug/mL
							Benzyl chloride	50 ug/mL
							Carbon disulfide	50 ug/mL
							Cyclohexane	50 ug/mL
							Ethyl methacrylate	50 ug/mL
							Hexane	50 ug/mL
							Iodomethane	50 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	2500 ug/mL
							Isopropyl ether	50 ug/mL
							Methacrylonitrile	500 ug/mL
							Methyl acetate	50 ug/mL
							Methyl methacrylate	50 ug/mL
							Methyl tert-butyl ether	50 ug/mL
							Methylcyclohexane	50 ug/mL
							n-Butanol	4375 ug/mL
							n-Heptane	50 ug/mL
							Propionitrile	1000 ug/mL
							Tert-amyl methyl ether	50 ug/mL
							Tert-butyl ethyl ether	50 ug/mL
							Tetrahydrofuran	250 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
					MSV_CCV_VOC#3_00121	200 uL	Acrolein	2500.06 ug/mL
							2-Butanone (MEK)	500 ug/mL
							2-Hexanone	500 ug/mL
							4-Methyl-2-pentanone (MIBK)	500 ug/mL
							Acetone	500 ug/mL
					MSV_V_VOA2_00190	150 uL	1,4-Dioxane	2500 ug/mL
							2-Methyl-2-propanol	1000 ug/mL
							Isobutyl alcohol	2500 ug/mL
							Methacrylonitrile	500 ug/mL
							n-Butanol	4375 ug/mL
							Propionitrile	1000 ug/mL
							trans-1,4-Dichloro-2-butene	500 ug/mL
.MSV_CCV_VOC#1_00121	05/09/23	04/16/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00125	1 mL	1,1,1,2-Tetrachloroethane	1000 ug/mL
							1,1,1-Trichloroethane	1000 ug/mL
							1,1,2,2-Tetrachloroethane	1000 ug/mL
							1,1,2-Trichloroethane	1000 ug/mL
							1,1-Dichloroethane	1000 ug/mL
							1,1-Dichloroethene	1000 ug/mL
							1,1-Dichloropropene	1000 ug/mL
							1,2,3-Trichlorobenzene	1000 ug/mL
							1,2,3-Trichloropropane	1000 ug/mL
							1,2,4-Trichlorobenzene	1000 ug/mL
							1,2,4-Trimethylbenzene	1000 ug/mL
							1,2-Dibromo-3-Chloropropane	1000 ug/mL
							1,2-Dichlorobenzene	1000 ug/mL
							1,2-Dichloroethane	1000 ug/mL
							1,2-Dichloropropane	1000 ug/mL
							1,3,5-Trimethylbenzene	1000 ug/mL
							1,3-Dichlorobenzene	1000 ug/mL
							1,3-Dichloropropane	1000 ug/mL
							1,4-Dichlorobenzene	1000 ug/mL
							2,2-Dichloropropane	1000 ug/mL
							2-Chlorotoluene	1000 ug/mL
							4-Chlorotoluene	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							4-Isopropyltoluene	1000 ug/mL
							Benzene	1000 ug/mL
							Bromobenzene	1000 ug/mL
							Bromoform	1000 ug/mL
							Carbon tetrachloride	1000 ug/mL
							Chlorobenzene	1000 ug/mL
							Chlorobromomethane	1000 ug/mL
							Chlorodibromomethane	1000 ug/mL
							Chloroform	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							cis-1,3-Dichloropropene	1000 ug/mL
							Dibromomethane	1000 ug/mL
							Dichlorobromomethane	1000 ug/mL
							Ethylbenzene	1000 ug/mL
							Ethylene Dibromide	1000 ug/mL
							Hexachlorobutadiene	1000 ug/mL
							Isopropylbenzene	1000 ug/mL
							m-Xylene & p-Xylene	2000 ug/mL
							Methylene Chloride	1000 ug/mL
							n-Butylbenzene	1000 ug/mL
							N-Propylbenzene	1000 ug/mL
							Naphthalene	1000 ug/mL
							o-Xylene	1000 ug/mL
							sec-Butylbenzene	1000 ug/mL
							Styrene	1000 ug/mL
							tert-Butylbenzene	1000 ug/mL
							Tetrachloroethene	1000 ug/mL
							Toluene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							trans-1,3-Dichloropropene	1000 ug/mL
							Trichloroethene	1000 ug/mL
					MSV_MegaMix#2_00111	1 mL	1,1,2-Trichloro-1,2,2-trifluoroethane	1000 ug/mL
							1,2,3-Trimethylbenzene	1000 ug/mL
							1,3,5-Trichlorobenzene	1000 ug/mL
							1,4-Dioxane	12500 ug/mL
							1-Chlorohexane	1000 ug/mL
							2-Chloro-1,3-butadiene	1000 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							2-Nitropropane	5000 ug/mL
							3-Chloro-1-propene	1000 ug/mL
							Acrylonitrile	2500 ug/mL
							Benzyl chloride	1000 ug/mL
							Carbon disulfide	1000 ug/mL
							Cyclohexane	1000 ug/mL
							Ethyl methacrylate	1000 ug/mL
							Hexane	1000 ug/mL
							Iodomethane	1000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Isobutyl alcohol	12500 ug/mL
							Isopropyl ether	1000 ug/mL
							Methacrylonitrile	2500 ug/mL
							Methyl acetate	1000 ug/mL
							Methyl methacrylate	1000 ug/mL
							Methyl tert-butyl ether	1000 ug/mL
							Methylcyclohexane	1000 ug/mL
							n-Butanol	12500 ug/mL
							n-Heptane	1000 ug/mL
							Propionitrile	5000 ug/mL
							Tert-amyl methyl ether	1000 ug/mL
							Tert-butyl ethyl ether	1000 ug/mL
							Tetrahydrofuran	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_MegaMIX#1_00125	04/30/24		Restek, Lot A0184527		(Purchased Reagent)		1,1,1,2-Tetrachloroethane	5000 ug/mL
							1,1,1-Trichloroethane	5000 ug/mL
							1,1,2,2-Tetrachloroethane	5000 ug/mL
							1,1,2-Trichloroethane	5000 ug/mL
							1,1-Dichloroethane	5000 ug/mL
							1,1-Dichloroethene	5000 ug/mL
							1,1-Dichloropropene	5000 ug/mL
							1,2,3-Trichlorobenzene	5000 ug/mL
							1,2,3-Trichloropropane	5000 ug/mL
							1,2,4-Trichlorobenzene	5000 ug/mL
							1,2,4-Trimethylbenzene	5000 ug/mL
							1,2-Dibromo-3-Chloropropane	5000 ug/mL
							1,2-Dichlorobenzene	5000 ug/mL
							1,2-Dichloroethane	5000 ug/mL
							1,2-Dichloropropane	5000 ug/mL
							1,3,5-Trimethylbenzene	5000 ug/mL
							1,3-Dichlorobenzene	5000 ug/mL
							1,3-Dichloropropane	5000 ug/mL
							1,4-Dichlorobenzene	5000 ug/mL
							2,2-Dichloropropane	5000 ug/mL
							2-Chlorotoluene	5000 ug/mL
							4-Chlorotoluene	5000 ug/mL
							4-Isopropyltoluene	5000 ug/mL
							Benzene	5000 ug/mL
							Bromobenzene	5000 ug/mL
							Bromoform	5000 ug/mL
							Carbon tetrachloride	5000 ug/mL
							Chlorobenzene	5000 ug/mL
							Chlorobromomethane	5000 ug/mL
							Chlorodibromomethane	5000 ug/mL
							Chloroform	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							cis-1,3-Dichloropropene	5000 ug/mL
							Dibromomethane	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Dichlorobromomethane	5000 ug/mL
							Ethylbenzene	5000 ug/mL
							Ethylene Dibromide	5000 ug/mL
							Hexachlorobutadiene	5000 ug/mL
							Isopropylbenzene	5000 ug/mL
							m-Xylene & p-Xylene	10000 ug/mL
							Methylene Chloride	5000 ug/mL
							n-Butylbenzene	5000 ug/mL
							N-Propylbenzene	5000 ug/mL
							Naphthalene	5000 ug/mL
							o-Xylene	5000 ug/mL
							sec-Butylbenzene	5000 ug/mL
							Styrene	5000 ug/mL
							tert-Butylbenzene	5000 ug/mL
							Tetrachloroethene	5000 ug/mL
							Toluene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							trans-1,3-Dichloropropene	5000 ug/mL
							Trichloroethene	5000 ug/mL
..MSV_MegaMix#2_00111	05/16/23		Restek, Lot A0186885		(Purchased Reagent)		1,1,2-Trichloro-1,2,2-trifluoroethane	5000 ug/mL
							1,2,3-Trimethylbenzene	5000 ug/mL
							1,3,5-Trichlorobenzene	5000 ug/mL
							1,4-Dioxane	62500 ug/mL
							1-Chlorohexane	5000 ug/mL
							2-Chloro-1,3-butadiene	5000 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							2-Nitropropane	25000 ug/mL
							3-Chloro-1-propene	5000 ug/mL
							Acrylonitrile	12500 ug/mL
							Benzyl chloride	5000 ug/mL
							Carbon disulfide	5000 ug/mL
							Cyclohexane	5000 ug/mL
							Ethyl methacrylate	5000 ug/mL
							Hexane	5000 ug/mL
							Iodomethane	5000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Isopropyl ether	5000 ug/mL
							Methacrylonitrile	12500 ug/mL
							Methyl acetate	5000 ug/mL
							Methyl methacrylate	5000 ug/mL
							Methyl tert-butyl ether	5000 ug/mL
							Methylcyclohexane	5000 ug/mL
							n-Butanol	62500 ug/mL
							n-Heptane	5000 ug/mL
							Propionitrile	25000 ug/mL
							Tert-amyl methyl ether	5000 ug/mL
							Tert-butyl ethyl ether	5000 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Tetrahydrofuran	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
.MSV_CCV_VOC#3_00121	05/16/23	04/16/23	Methanol, Lot EG095	5 mL	MSV_CCV_ACR_00010	0.5 mL	Acrolein	12500.3 ug/mL
					MSV_V_Ketones_00114	1 mL	2-Butanone (MEK)	2500 ug/mL
							2-Hexanone	2500 ug/mL
							4-Methyl-2-pentanone (MIBK)	2500 ug/mL
							Acetone	2500 ug/mL
..MSV_CCV_ACR_00010	06/03/23	04/04/23	Methanol, Lot EB679	10 mL	MSV_VACR_STK_00032	8.683 mL	Acrolein	125003 ug/mL
...MSV_VACR_STK_00032	06/03/23	04/04/23	Methanol, Lot EB679	10 mL	MSV_ACROLEIN_00025	1.553 g	Acrolein	143963 ug/mL
....MSV_ACROLEIN_00025	11/30/23	Chem Service, Lot 13892700			(Purchased Reagent)		Acrolein	0.927 g/g
..MSV_V_Ketones_00114	01/31/25	Restek, Lot A0180742			(Purchased Reagent)		2-Butanone (MEK)	12500 ug/mL
							2-Hexanone	12500 ug/mL
							4-Methyl-2-pentanone (MIBK)	12500 ug/mL
							Acetone	12500 ug/mL
.MSV_V_VOA2_00190	05/16/23	04/16/23	Methanol, Lot EG095	5 mL	MSV_V#2B_00318	1 mL	1,4-Dioxane	12500 ug/mL
							2-Methyl-2-propanol	5000 ug/mL
							Isobutyl alcohol	12500 ug/mL
							Methacrylonitrile	2500 ug/mL
							n-Butanol	25000 ug/mL
							Propionitrile	5000 ug/mL
							trans-1,4-Dichloro-2-butene	2500 ug/mL
..MSV_V#2B_00318	04/30/24	Restek, Lot A0184378			(Purchased Reagent)		1,4-Dioxane	62500 ug/mL
							2-Methyl-2-propanol	25000 ug/mL
							Isobutyl alcohol	62500 ug/mL
							Methacrylonitrile	12500 ug/mL
							n-Butanol	125000 ug/mL
							Propionitrile	25000 ug/mL
							trans-1,4-Dichloro-2-butene	12500 ug/mL
MSV_LL_#1_826_00085	07/30/23	07/16/23	Methanol, Lot EG095	1 mL	MSV_CCV_VOC#1_00135	50 uL	1,1-Dichloroethene	50 ug/mL
							cis-1,2-Dichloroethene	50 ug/mL
							trans-1,2-Dichloroethene	50 ug/mL
							Trichloroethene	50 ug/mL
.MSV_CCV_VOC#1_00135	08/15/23	07/16/23	Methanol, Lot EG095	5 mL	MSV_MegaMIX#1_00134	1 mL	1,1-Dichloroethene	1000 ug/mL
							cis-1,2-Dichloroethene	1000 ug/mL
							trans-1,2-Dichloroethene	1000 ug/mL
							Trichloroethene	1000 ug/mL
..MSV_MegaMIX#1_00134	08/15/23	Restek, Lot A0184527			(Purchased Reagent)		1,1-Dichloroethene	5000 ug/mL
							cis-1,2-Dichloroethene	5000 ug/mL
							trans-1,2-Dichloroethene	5000 ug/mL
							Trichloroethene	5000 ug/mL
MSV_LL_#2_826_00081	04/26/23	04/19/23	Methanol, Lot EG095	1 mL	MSV_BCE_00054	25 uL	1-Bromo-2-chloroethane	50 ug/mL
					MSV_CCV_EE_00004	50 uL	Ethyl ether	49.9996 ug/mL
					MSV_V_PentaCL_00032	10 uL	Pentachloroethane	50 ug/mL
.MSV_BCE_00054	04/26/23	Restek, Lot A0177627			(Purchased Reagent)		1-Bromo-2-chloroethane	2000 ug/mL
.MSV_CCV_EE_00004	05/17/23	11/17/22	Methanol, Lot EB679	50 mL	MSV_EE_MISCSK_00011	1.067 mL	Ethyl ether	999.992 ug/mL
..MSV_EE_MISCSK_00011	05/17/23	11/17/22	Methanol, Lot EB679	10 mL	MSV_EE_Neat_00008	0.4686 g	Ethyl ether	46860 ug/mL
...MSV_EE_Neat_00008	12/31/25	Chem Service, Lot 1326900			(Purchased Reagent)		Ethyl ether	1 g/g

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
.MSV_V_PentaCL_00032	04/27/23		Restek, Lot A0184174		(Purchased Reagent)		Pentachloroethane	5000 ug/mL
MSV_LL_GAS826_00145	04/23/23	04/17/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00444	25 uL	1,2-Dichloro-1,1,2-trifluoroethane	50 ug/mL
							Bromomethane	50 ug/mL
							Butadiene	50 ug/mL
							Chloroethane	50 ug/mL
							Chloromethane	50 ug/mL
							Dichlorodifluoromethane	50 ug/mL
							Dichlorofluoromethane	50 ug/mL
							Trichlorofluoromethane	50 ug/mL
							Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00444	04/23/23		Restek, Lot A0184815		(Purchased Reagent)		1,2-Dichloro-1,1,2-trifluoroethane	2000 ug/mL
							Bromomethane	2000 ug/mL
							Butadiene	2000 ug/mL
							Chloroethane	2000 ug/mL
							Chloromethane	2000 ug/mL
							Dichlorodifluoromethane	2000 ug/mL
							Dichlorofluoromethane	2000 ug/mL
							Trichlorofluoromethane	2000 ug/mL
							Vinyl chloride	2000 ug/mL
MSV_LL_GAS826_00162	08/06/23	07/30/23	Methanol, Lot EG095	1 mL	MSV_CCV_GASES_00531	25 uL	Vinyl chloride	50 ug/mL
.MSV_CCV_GASES_00531	08/06/23		Restek, Lot A0197586		(Purchased Reagent)		Vinyl chloride	2000 ug/mL
MSV_LLcentISS_00007	10/05/23	04/05/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00879	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
					MSV_Cus826_IS_00552	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_8260_SS_00879	03/31/25		Restek, Lot A0183565		(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
.MSV_Cus826_IS_00552	04/30/25		Restek, Lot A0184225		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_Cus826_IS_00582	1 mL	1,4-Dichlorobenzene-d4	50 ug/mL
							Chlorobenzene-d5 (IS)	50 ug/mL
							Fluorobenzene (IS)	50 ug/mL
							t-Butyl alcohol-d10 (IS)	250 ug/mL
.MSV_Cus826_IS_00582	04/30/26		Restek, Lot A0197488		(Purchased Reagent)		1,4-Dichlorobenzene-d4	2500 ug/mL
							Chlorobenzene-d5 (IS)	2500 ug/mL
							Fluorobenzene (IS)	2500 ug/mL
							t-Butyl alcohol-d10 (IS)	12500 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
MSV_LLcentISS_00009	01/06/24	07/06/23	Methanol, Lot EG095	50 mL	MSV_8260_SS_00953	1 mL	1,2-Dichloroethane-d4 (Surr)	50 ug/mL
							4-Bromofluorobenzene (Surr)	50 ug/mL
							Dibromofluoromethane (Surr)	50 ug/mL
							Toluene-d8 (Surr)	50 ug/mL
.MSV_8260_SS_00953	02/29/28	Restek, Lot A0195060			(Purchased Reagent)		1,2-Dichloroethane-d4 (Surr)	2500 ug/mL
							4-Bromofluorobenzene (Surr)	2500 ug/mL
							Dibromofluoromethane (Surr)	2500 ug/mL
							Toluene-d8 (Surr)	2500 ug/mL
MSV_QC_Gas826_00135	04/23/23	04/17/23	Methanol, Lot EG095	1 mL	MSV_QC_2K_GAS_00140	20 uL	Vinyl chloride	40 ug/mL
.MSV_QC_2K_GAS_00140	04/23/23	Restek, Lot A0184924			(Purchased Reagent)		Vinyl chloride	2000 ug/mL
MSV_QC_Gas826_00151	07/30/23	07/23/23	Methanol, Lot EG095	1 mL	MSV_QC_2K_GAS_00167	20 uL	Vinyl chloride	40 ug/mL
.MSV_QC_2K_GAS_00167	07/30/23	Restek, Lot A0184924			(Purchased Reagent)		Vinyl chloride	2000 ug/mL
MSV_V_BFB_00011							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00009	0.127 mL	BFB	50.1498 ug/mL
.MSV_VBFB_STK_00009	06/18/23	12/18/22	Methanol, Lot EB679	10 mL	MSV_4BFB_NEAT_00007	0.9872 g	BFB	98720 ug/mL
..MSV_4BFB_NEAT_00007	02/28/25	Chem Service, Lot 13233000			(Purchased Reagent)		BFB	1 g/g
MSV_V_BFB_00012							1,2-Dichloroethene, Total	
							1,3-Dichloropropene, Total	
							Tentatively Identified Compound	
							Xylenes, Total	
					MSV_VBFB_STK_00010	0.096 mL	BFB	49.7971 ug/mL
.MSV_VBFB_STK_00010	12/13/23	06/13/23	Methanol, Lot EG095	10 mL	MSV_4BFB_NEAT_00010	1.2968 g	BFB	129680 ug/mL
..MSV_4BFB_NEAT_00010	05/31/25	Chem Service, Lot 13775500			(Purchased Reagent)		BFB	1 g/g
MT_I_IV_PDS_00018	09/20/23	06/21/23	2% Nitric Acid, Lot 4453602	250 mL	MT_LCS-SPK-A_00023	50 mL	Cobalt	25 ug/mL
.MT_LCS-SPK-A_00023	02/17/24	Inorganic Ventures, Lot U2-MEB728825			(Purchased Reagent)		Cobalt	125 mg/L
MT_LCS-SPK-A_00030	07/17/24	Inorganic Ventures, Lot U2-MEB728825			(Purchased Reagent)		Ag	12.5 mg/L
							Al	1250 mg/L
							As	125 mg/L
							B	125 mg/L
							Ba	125 mg/L
							Be	12.5 mg/L
							Ca	1250 mg/L
							Cd	12.5 mg/L
							Cobalt	125 mg/L
							Cr	125 mg/L
							Cu	125 mg/L
							Fe	1250 mg/L
							K	1250 mg/L
							Li	125 mg/L
							Mg	1250 mg/L

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Mn	125 mg/L
							Na	1250 mg/L
							Ni	125 mg/L
							P	125 mg/L
							Pb	12.5 mg/L
							Se	25 mg/L
							Sr	12.5 mg/L
							Sulfur	1250 mg/L
							Th	125 mg/L
							Tl	25 mg/L
							U	12.5 mg/L
							V	125 mg/L
							Zn	125 mg/L
MT_LCS-SPK-B_00029	07/17/24	Inorganic Ventures, Lot U2-MEB728826			(Purchased Reagent)		Mo	12.5 mg/L
							Sb	25 mg/L
							Si	1250 mg/L
							Sn	25 mg/L
							Ti	125 mg/L
							W	125 mg/L
							Zr	125 mg/L
MT_MJ_CCV_00168	08/26/23	07/27/23	DI Water, Lot DI07272023	5 L	MT_S_MSSPK-A_00001	5 mL	Cobalt	500.2 ppb
.MT_S_MSSPK-A_00001	12/27/23	Inorganic Ventures, Lot T2-MEB716952			(Purchased Reagent)		Cobalt	500.2 ug/mL
MT_MJ_CRI-V_00152	09/03/23	08/04/23	J, Lot 4170412	1 L	MT_S_MWLLC_SC_00005	1 mL	Cobalt	0.504 ug/L
.MT_S_MWLLC_SC_00005	09/30/23	SCP Science, Lot S220721047			(Purchased Reagent)		Cobalt	0.504 ug/mL
MT_MJ_ICSA_00103	08/26/23	07/27/23	J, Lot 3094411	500 mL	MT_S_ICS2A_IV_00015	50 mL	Ag	0.0003 ug/mL
							Al	100 ug/mL
							As	0.0077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.00045 ug/mL
							Cobalt	0.00028 ug/mL
							Cr	0.0036 ug/mL
							Cu	0.00044 ug/mL
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.0006 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.0012 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Se	0.000072 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL
							V	0.00031 ug/mL
							Zn	0.0011 ug/mL
.MT_S_ICS2A_IV_00015	05/04/24	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Ag	0.003 ug/mL
							Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Cobalt	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
MT_MJ_ICSAB_00080	08/20/23	07/21/23	J, Lot 4224585	500 mL	MT_S_ICS2A_IV_00015	50 mL	Ag	0.05032 ug/mL
							Al	100 ug/mL
							As	0.1077 ug/mL
							Ba	0.0004 ug/mL
							Be	0.000011 ug/mL
							Ca	298.8 ug/mL
							Cd	0.10045 ug/mL
							Cobalt	0.20038 ug/mL
							Cr	0.2037 ug/mL
							Cu	0.20054 ug/mL

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Fe	260.1 ug/mL
							K	100 ug/mL
							Mg	100 ug/mL
							Mn	0.2007 ug/mL
							Mo	2.001 ug/mL
							Na	260.1 ug/mL
							Ni	0.2013 ug/mL
							Pb	0.000093 ug/mL
							Sb	0.00012 ug/mL
							Se	0.100072 ug/mL
							Sn	0.00017 ug/mL
							Sr	0.0018 ug/mL
							Ti	2.001 ug/mL
							Tl	0.000062 ug/mL
							U	0.00011 ug/mL
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
					MT_S_ICS2B_IV_00011	5 mL	Ag	0.05032 ug/mL
							As	0.1077 ug/mL
							Cd	0.10045 ug/mL
							Cobalt	0.20038 ug/mL
							Cr	0.2037 ug/mL
							Cu	0.20054 ug/mL
							Mn	0.2007 ug/mL
							Ni	0.2013 ug/mL
							Se	0.100072 ug/mL
							V	0.20041 ug/mL
							Zn	0.1011 ug/mL
.MT_S_ICS2A_IV_00015	05/04/24	Inorganic Ventures, Lot T2-MEB714677			(Purchased Reagent)		Ag	0.003 ug/mL
							Al	1000 ug/mL
							As	0.077 ug/mL
							Ba	0.004 ug/mL
							Be	0.00011 ug/mL
							Ca	2988 ug/mL
							Cd	0.0045 ug/mL
							Cobalt	0.0028 ug/mL
							Cr	0.036 ug/mL
							Cu	0.0044 ug/mL
							Fe	2601 ug/mL
							K	1000 ug/mL
							Mg	1000 ug/mL
							Mn	0.006 ug/mL
							Mo	20.01 ug/mL
							Na	2601 ug/mL

REAGENT TRACEABILITY SUMMARY

Lab Name: Eurofins Lancaster Laboratories Envir Job No.: 410-136176-1

SDG No.:

Reagent ID	Exp Date	Prep Date	Dilutant Used	Reagent Final Volume	Parent Reagent		Analyte	Concentration
					Reagent ID	Volume Added		
							Ni	0.012 ug/mL
							Pb	0.00093 ug/mL
							Sb	0.0012 ug/mL
							Se	0.00072 ug/mL
							Sn	0.0017 ug/mL
							Sr	0.018 ug/mL
							Ti	20.01 ug/mL
							Tl	0.00062 ug/mL
							U	0.0011 ug/mL
							V	0.0031 ug/mL
							Zn	0.011 ug/mL
.MT_S_ICS2B_IV_00011	10/25/23	Inorganic Ventures, Lot S2-MEB711470			(Purchased Reagent)		Ag	5.002 ug/mL
							As	10 ug/mL
							Cd	10 ug/mL
							Cobalt	20.01 ug/mL
							Cr	20.01 ug/mL
							Cu	20.01 ug/mL
							Mn	20.01 ug/mL
							Ni	20.01 ug/mL
							Se	10 ug/mL
							V	20.01 ug/mL
							Zn	10 ug/mL
MT_MJ_ICV_00088	08/21/23	07/22/23	J, Lot 4170412	1 L	MT_S_ICVSPK-A_00005	2 mL	Cobalt	500 ppb
.MT_S_ICVSPK-A_00005	04/03/24	High-Purity Standards, Lot U2-MEB728821			(Purchased Reagent)		Cobalt	250 ug/mL
MT_MJ_LRC_00094	09/03/23	08/04/23	J, Lot 4119918	0.5 L	MT_I_CCVSPK-A_00005	10 mL	Cobalt	2000 ppb
.MT_I_CCVSPK-A_00005	04/12/24	Inorganic Ventures, Lot T2-MEB720690			(Purchased Reagent)		Cobalt	100 mg/L
MT_MJ_S1_00108	08/26/23	07/28/23	J, Lot 4072374	500 mL	MT_S_MSSPK-A_00001	1 mL	Cobalt	1000.4 ppb
.MT_S_MSSPK-A_00001	12/27/23	Inorganic Ventures, Lot T2-MEB716952			(Purchased Reagent)		Cobalt	500.2 ug/mL

Reagent

MSV_4BFB_NEAT_00007

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

CERTIFICATE OF ANALYSIS

4-Bromofluorobenzene

CATALOG NUMBER	N-10809-1G
LOT NUMBER	13233000
DATE CERTIFIED	05/12/22
EXPIRATION DATE	05/31/25
CAS NUMBER	460-00-4
MOLECULAR FORMULA	C6H4BrF
MOLECULAR WEIGHT	175.00
STORAGE	Store at room temperature (20 - 25 °C).
HANDLING	See Safety Data Sheet
INTENDED USE	For laboratory use only.

Analytical Test	Value
FT-IR SPECTROSCOPY	CONFORMS TO STRUCTURE
% PURITY (GC/FID)	99.5
GC/MS SPECTRA ID	MATCHES NIST LIBRARY

Chem Service, Inc. guarantees the purity to be +/- 0.5% deviation prior to the expiration date shown on the label and exclusive of any customer contamination.

Certified By:

Mary Beth O'Donnell
CSM/TC

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

COA Form
Revision 3 (3/2015)

660 Tower Lane • P.O. Box 599 • West Chester, PA 19381-0599
1-800-452-9994 • 1-610-692-3026 • Fax 1-610-692-8729
info@chemservice.com • www.chemservice.com

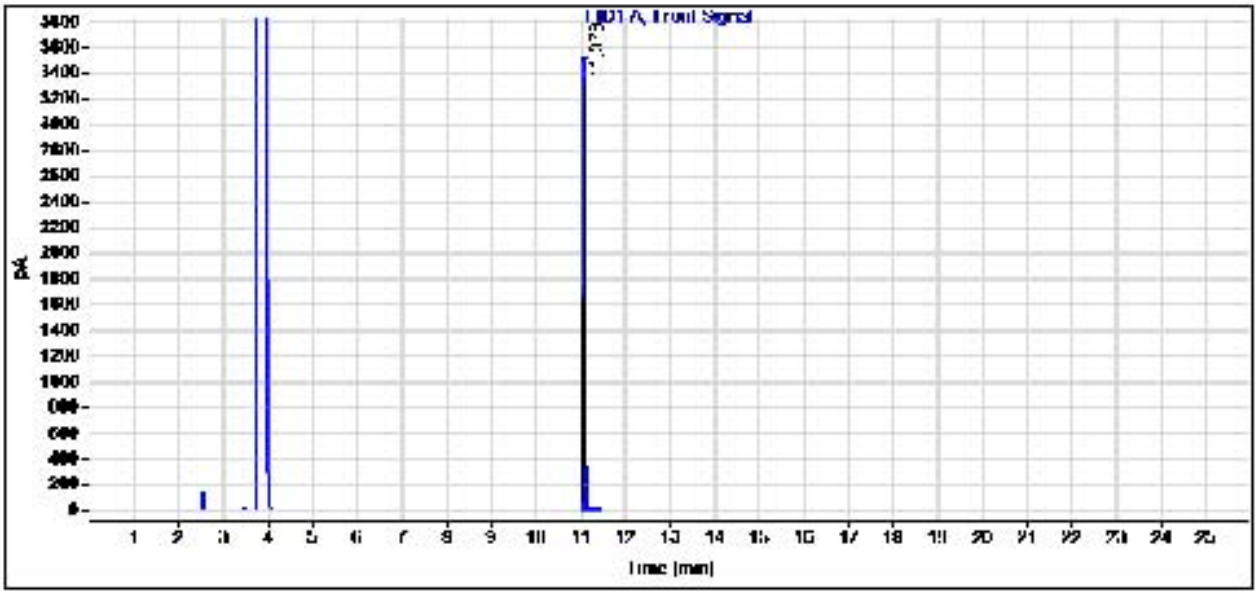
CERTIFICATE OF ANALYSIS

Gas Chromatography / Flame Ionization Detector (GC/FID)

Data file: C:\CHEM32\1\DATA\2022 DATA\0522\FID010615.D

Sample name: N-10809

Instrument:	GC 1	**Sample type:**	Sample
Injection date:	5/12/2022 11:36:15 AM	**Location:**	Vial 43
Acq. method:	MIX1.M	**Injection volume:**	1.0uL
Column name:	DB-624 (30m x 0.53mm x 3.0um)		



Signal: FID1 A, Front Signal

RT [min]	Type	Width [min]	Area	Height	Area%
11.078	BB	0.0355	7895.3311	3478.6162	100.0000
		Sum	7895.3311		

Chem Service, Inc. is accredited to ISO 17034:2016, ISO/IEC 17025:2017 and certified to ISO 9001:2015.

PJLA Testing

PJLA Reference Material Producer

Reagent

MSV_BCE_00054

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ACCREDITED
ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ACCREDITED
ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

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

Description : 1-Bromo-2-chloroethane Standard

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

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

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

Ship: Ambient

CERTIFIED VALUES

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

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

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

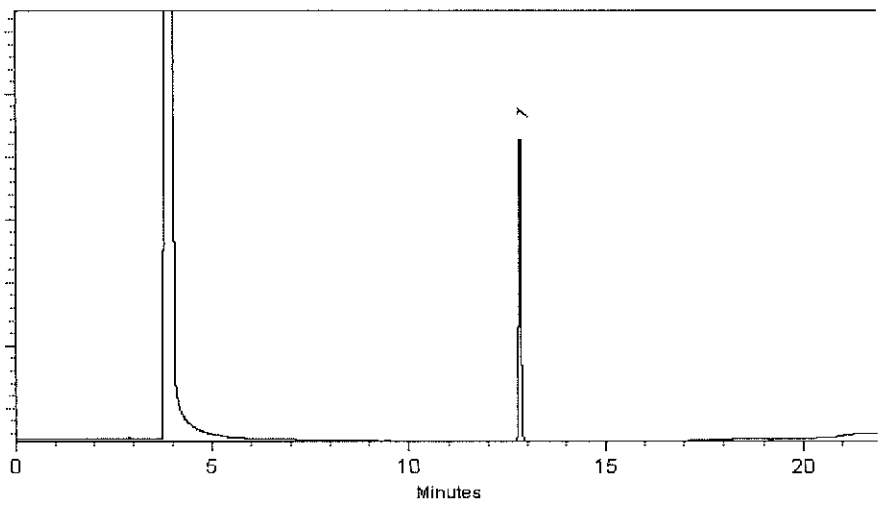
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Cathleen Soltis - Mix Technician

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

Alexis Shelow - Operations Tech I

Date Passed: 22-Oct-2021

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_MegaMix#2_00111

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 577487 **Lot No.:** A0186885

Description : Custom VOC MegaMix® #2 Standard

Custom VOC MegaMix® #2 Standard 5000-62500µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : June 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

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

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	n-Pentane (C5) **CAS #** 109-66-0 (Lot SHBN6009) **Purity** 99%	5,031.0 µg/mL	+/- 35.9016 µg/mL +/- 249.7418 µg/mL +/- 255.9092 µg/mL	Gravimetric Unstressed Stressed
2	2-Propanol (isopropanol) **CAS #** 67-63-0 (Lot SHBN6065) **Purity** 99%	25,031.0 µg/mL	+/- 146.5620 µg/mL +/- 1,238.3511 µg/mL +/- 1,269.1379 µg/mL	Gravimetric Unstressed Stressed
3	1,1,2-Trichlorotrifluoroethane (CFC-113) **CAS #** 76-13-1 (Lot 00016133) **Purity** 99%	5,009.5 µg/mL	+/- 35.7482 µg/mL +/- 248.6745 µg/mL +/- 254.8156 µg/mL	Gravimetric Unstressed Stressed
4	tert-Butanol (TBA) **CAS #** 75-65-0 (Lot 101619K21F-1) **Purity** 99%	25,112.0 µg/mL	+/- 147.0363 µg/mL +/- 1,242.3584 µg/mL +/- 1,273.2448 µg/mL	Gravimetric Unstressed Stressed
5	Methyl acetate **CAS #** 79-20-9 (Lot SHBM1320) **Purity** 99%	5,011.0 µg/mL	+/- 35.7589 µg/mL +/- 248.7490 µg/mL +/- 254.8919 µg/mL	Gravimetric Unstressed Stressed
6	Iodomethane (methyl iodide) **CAS #** 74-88-4 (Lot RD220125) **Purity** 99%	5,012.0 µg/mL	+/- 35.7660 µg/mL +/- 248.7986 µg/mL +/- 254.9428 µg/mL	Gravimetric Unstressed Stressed
7	Allyl chloride (3-chloropropene) **CAS #** 107-05-1 (Lot RP220405A) **Purity** 99%	5,021.7 µg/mL	+/- 35.8350 µg/mL +/- 249.2785 µg/mL +/- 255.4345 µg/mL	Gravimetric Unstressed Stressed

8	Carbon disulfide		5,017.2	µg/mL	+/-	35.8029	µg/mL	Gravimetric
	CAS # 75-15-0	(Lot N28F701)			+/-	249.0551	µg/mL	Unstressed
	Purity 99%				+/-	255.2056	µg/mL	Stressed
9	Acrylonitrile		12,534.0	µg/mL	+/-	73.3893	µg/mL	Gravimetric
	CAS # 107-13-1	(Lot SHBK4954)			+/-	620.0908	µg/mL	Unstressed
	Purity 99%				+/-	635.5069	µg/mL	Stressed
10	Methyl-tert-butyl ether (MTBE)		5,014.5	µg/mL	+/-	35.7839	µg/mL	Gravimetric
	CAS # 1634-04-4	(Lot SHBN6497)			+/-	248.9227	µg/mL	Unstressed
	Purity 99%				+/-	255.0699	µg/mL	Stressed
11	n-Hexane (C6)		5,014.7	µg/mL	+/-	35.7850	µg/mL	Gravimetric
	CAS # 110-54-3	(Lot STBG6381)			+/-	248.9310	µg/mL	Unstressed
	Purity 99%				+/-	255.0784	µg/mL	Stressed
12	Diisopropyl ether (DIPE)		5,021.0	µg/mL	+/-	35.8302	µg/mL	Gravimetric
	CAS # 108-20-3	(Lot STBK3450)			+/-	249.2454	µg/mL	Unstressed
	Purity 99%				+/-	255.4006	µg/mL	Stressed
13	Chloroprene (2-chloro-1,3-butadiene)		5,026.3	µg/mL	+/-	35.8683	µg/mL	Gravimetric
	CAS # 126-99-8	(Lot 220304JEAN)			+/-	249.5101	µg/mL	Unstressed
	Purity 99%				+/-	255.6718	µg/mL	Stressed
14	Ethyl-tert-butyl ether (ETBE)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 637-92-3	(Lot MKCN9957)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
15	Propionitrile		25,070.0	µg/mL	+/-	146.7904	µg/mL	Gravimetric
	CAS # 107-12-0	(Lot BCCF4167)			+/-	1,240.2806	µg/mL	Unstressed
	Purity 99%				+/-	1,271.1153	µg/mL	Stressed
16	Methacrylonitrile		12,539.0	µg/mL	+/-	73.4186	µg/mL	Gravimetric
	CAS # 126-98-7	(Lot 1012014)			+/-	620.3382	µg/mL	Unstressed
	Purity 99%				+/-	635.7604	µg/mL	Stressed
17	Isobutanol (2-Methyl-1-propanol)		62,525.0	µg/mL	+/-	366.0976	µg/mL	Gravimetric
	CAS # 78-83-1	(Lot SHBM4836)			+/-	3,093.2805	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1827	µg/mL	Stressed
18	Tetrahydrofuran		25,065.0	µg/mL	+/-	146.7611	µg/mL	Gravimetric
	CAS # 109-99-9	(Lot SHBP0039)			+/-	1,240.0332	µg/mL	Unstressed
	Purity 99%				+/-	1,270.8617	µg/mL	Stressed
19	Cyclohexane		5,008.5	µg/mL	+/-	35.7410	µg/mL	Gravimetric
	CAS # 110-82-7	(Lot EA003-US)			+/-	248.6249	µg/mL	Unstressed
	Purity 99%				+/-	254.7647	µg/mL	Stressed
20	1-Butanol		62,524.0	µg/mL	+/-	366.0918	µg/mL	Gravimetric
	CAS # 71-36-3	(Lot SHBN6854)			+/-	3,093.2311	µg/mL	Unstressed
	Purity 99%				+/-	3,170.1320	µg/mL	Stressed
21	tert-Amyl methyl ether (TAME)		5,009.2	µg/mL	+/-	35.7458	µg/mL	Gravimetric
	CAS # 994-05-8	(Lot HMBG7745V)			+/-	248.6580	µg/mL	Unstressed
	Purity 99%				+/-	254.7986	µg/mL	Stressed
22	n-Heptane (C7)		5,016.7	µg/mL	+/-	35.7993	µg/mL	Gravimetric
	CAS # 142-82-5	(Lot SGBL9221)			+/-	249.0303	µg/mL	Unstressed
	Purity 99%				+/-	255.1801	µg/mL	Stressed
23	tert-Amyl ethyl ether (TAEE)		5,010.8	µg/mL	+/-	35.7577	µg/mL	Gravimetric
	CAS # 919-94-8	(Lot 76U3A)			+/-	248.7407	µg/mL	Unstressed
	Purity 99%				+/-	254.8834	µg/mL	Stressed

24	Methylcyclohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 108-87-2	(Lot SHBL0078)			+/-	249.3116	µg/mL	Unstressed
	Purity 99%				+/-	255.4684	µg/mL	Stressed
25	Methyl methacrylate		5,011.5	µg/mL	+/-	35.7625	µg/mL	Gravimetric
	CAS # 80-62-6	(Lot MKCQ2755)			+/-	248.7738	µg/mL	Unstressed
	Purity 99%				+/-	254.9173	µg/mL	Stressed
26	1,4-Dioxane		62,598.0	µg/mL	+/-	366.5251	µg/mL	Gravimetric
	CAS # 123-91-1	(Lot SHBN5929)			+/-	3,096.8920	µg/mL	Unstressed
	Purity 99%				+/-	3,173.8840	µg/mL	Stressed
27	2-Nitropropane		25,086.1	µg/mL	+/-	146.8849	µg/mL	Gravimetric
	CAS # 79-46-9	(Lot BCCB9352)			+/-	1,241.0791	µg/mL	Unstressed
	Purity 97%				+/-	1,271.9336	µg/mL	Stressed
28	Ethyl methacrylate		5,017.7	µg/mL	+/-	35.8065	µg/mL	Gravimetric
	CAS # 97-63-2	(Lot MKCL0907)			+/-	249.0799	µg/mL	Unstressed
	Purity 99%				+/-	255.2310	µg/mL	Stressed
29	1-Chlorohexane		5,022.3	µg/mL	+/-	35.8398	µg/mL	Gravimetric
	CAS # 544-10-5	(Lot BCBS3368V)			+/-	249.3117	µg/mL	Unstressed
	Purity 98%				+/-	255.4685	µg/mL	Stressed
30	trans-1,4-dichloro-2-butene		12,586.6	µg/mL	+/-	73.6970	µg/mL	Gravimetric
	CAS # 110-57-6	(Lot RD220405A)			+/-	622.6906	µg/mL	Unstressed
	Purity 95%				+/-	638.1714	µg/mL	Stressed
31	1,2,3-Trimethylbenzene		5,012.4	µg/mL	+/-	35.7687	µg/mL	Gravimetric
	CAS # 526-73-8	(Lot 8776.10-36)			+/-	248.8172	µg/mL	Unstressed
	Purity 98%				+/-	254.9617	µg/mL	Stressed
32	1,3-Diethylbenzene		5,012.0	µg/mL	+/-	35.7664	µg/mL	Gravimetric
	CAS # 141-93-5	(Lot BCBT8967)			+/-	248.8009	µg/mL	Unstressed
	Purity 98%				+/-	254.9451	µg/mL	Stressed
33	Benzyl chloride		5,020.8	µg/mL	+/-	35.8291	µg/mL	Gravimetric
	CAS # 100-44-7	(Lot SHBH2102V)			+/-	249.2371	µg/mL	Unstressed
	Purity 99%				+/-	255.3921	µg/mL	Stressed
34	1,4-Diethylbenzene		5,011.7	µg/mL	+/-	35.7636	µg/mL	Gravimetric
	CAS # 105-05-5	(Lot 1135.72-1)			+/-	248.7821	µg/mL	Unstressed
	Purity 99%				+/-	254.9258	µg/mL	Stressed
35	1,2-Diethylbenzene		5,011.3	µg/mL	+/-	35.7613	µg/mL	Gravimetric
	CAS # 135-01-3	(Lot ECH2970181)			+/-	248.7655	µg/mL	Unstressed
	Purity 99%				+/-	254.9088	µg/mL	Stressed
36	1,3,5-Trichlorobenzene		5,013.2	µg/mL	+/-	35.7743	µg/mL	Gravimetric
	CAS # 108-70-3	(Lot 11319AS)			+/-	248.8565	µg/mL	Unstressed
	Purity 99%				+/-	255.0021	µg/mL	Stressed
37	2-Methylnaphthalene		5,013.1	µg/mL	+/-	35.7740	µg/mL	Gravimetric
	CAS # 91-57-6	(Lot STBK0259)			+/-	248.8542	µg/mL	Unstressed
	Purity 96%				+/-	254.9997	µg/mL	Stressed

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

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

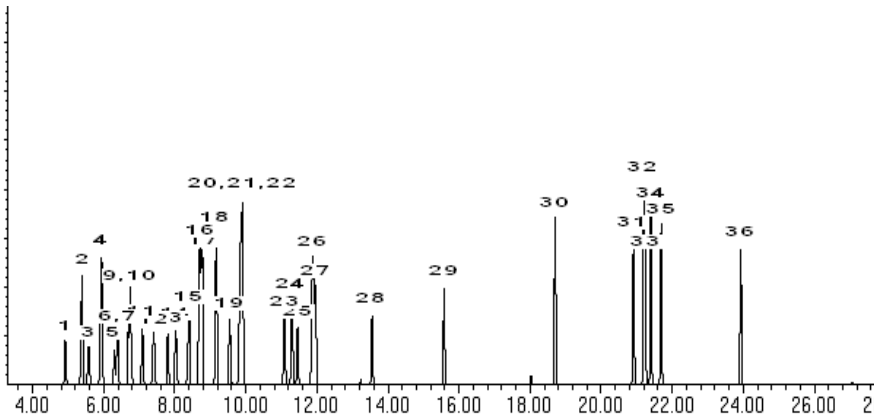
Carrier Gas:
helium-constant pressure 30 psi

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Miranda Kline

Miranda Kline - Operations Technician I

Date Mixed: 30-Jun-2022 **Balance:** B707717271

Christie Mills

Christie Mills - Operations Tech II - ARM QC

Date Passed: 07-Jul-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_QC_2K_GAS_00140

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 577488.SEC **Lot No.:** A0184924

Description : Custom Gases.SEC Standard

Custom Gases.SEC Standard 2,000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

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

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Dichlorodifluoromethane (CFC-12)	2,000.3 µg/mL	+/- 17.8749 µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 112.9722 µg/mL	Unstressed
	Purity 99%		+/- 115.5779 µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,002.3 µg/mL	+/- 19.9305 µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 113.4254 µg/mL	Unstressed
	Purity 99%		+/- 116.0260 µg/mL	Stressed
3	Vinyl chloride	2,002.4 µg/mL	+/- 21.8874 µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 113.7916 µg/mL	Unstressed
	Purity 99%		+/- 116.3843 µg/mL	Stressed
4	1,3-Butadiene	2,003.4 µg/mL	+/- 24.0683 µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 114.2862 µg/mL	Unstressed
	Purity 99%		+/- 116.8705 µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,007.9 µg/mL	+/- 17.0860 µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 113.2712 µg/mL	Unstressed
	Purity 99%		+/- 115.8898 µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,002.2 µg/mL	+/- 20.1773 µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 113.4619 µg/mL	Unstressed
	Purity 98%		+/- 116.0614 µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,000.0 µg/mL	+/- 11.7371 µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 112.1494 µg/mL	Unstressed
	Purity 99%		+/- 114.7730 µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	112.1494	µg/mL	Unstressed
	Purity 99%				+/-	114.7730	µg/mL	Stressed
9	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)		2,000.5	µg/mL	+/-	25.4843	µg/mL	Gravimetric
	CAS # 354-23-4 *	(Lot Q9B-64)			+/-	114.4324	µg/mL	Unstressed
	Purity 99%				+/-	117.0060	µg/mL	Stressed

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

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

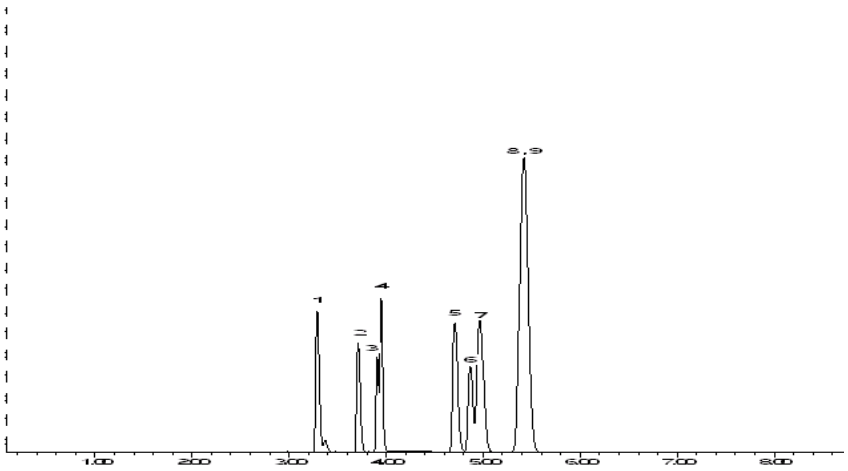
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Brandon Reish - Mix Technician

Date Mixed: 05-May-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 10-May-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_QC_2K_GAS_00167

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 577488.SEC **Lot No.:** A0184924

Description : Custom Gases.SEC Standard

Custom Gases.SEC Standard 2,000µg/mL, P&T Methanol, 1mL/ampul

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

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

Ship: Ambient

CERTIFIED VALUES

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)		
1	Dichlorodifluoromethane (CFC-12)	2,000.3 µg/mL	+/- 17.8749	µg/mL	Gravimetric
	CAS # 75-71-8.SEC (Lot 27545)		+/- 112.9722	µg/mL	Unstressed
	Purity 99%		+/- 115.5779	µg/mL	Stressed
2	Chloromethane (methyl chloride)	2,002.3 µg/mL	+/- 19.9305	µg/mL	Gravimetric
	CAS # 74-87-3.SEC (Lot 18343)		+/- 113.4254	µg/mL	Unstressed
	Purity 99%		+/- 116.0260	µg/mL	Stressed
3	Vinyl chloride	2,002.4 µg/mL	+/- 21.8874	µg/mL	Gravimetric
	CAS # 75-01-4.SEC (Lot MKBK6872V)		+/- 113.7916	µg/mL	Unstressed
	Purity 99%		+/- 116.3843	µg/mL	Stressed
4	1,3-Butadiene	2,003.4 µg/mL	+/- 24.0683	µg/mL	Gravimetric
	CAS # 106-99-0.SEC (Lot 26996)		+/- 114.2862	µg/mL	Unstressed
	Purity 99%		+/- 116.8705	µg/mL	Stressed
5	Bromomethane (methyl bromide)	2,007.9 µg/mL	+/- 17.0860	µg/mL	Gravimetric
	CAS # 74-83-9.SEC (Lot 00017022)		+/- 113.2712	µg/mL	Unstressed
	Purity 99%		+/- 115.8898	µg/mL	Stressed
6	Chloroethane (ethyl chloride)	2,002.2 µg/mL	+/- 20.1773	µg/mL	Gravimetric
	CAS # 75-00-3.SEC (Lot 00004202)		+/- 113.4619	µg/mL	Unstressed
	Purity 98%		+/- 116.0614	µg/mL	Stressed
7	Dichlorofluoromethane (CFC-21)	2,000.0 µg/mL	+/- 11.7371	µg/mL	Gravimetric
	CAS # 75-43-4 * (Lot 12841600)		+/- 112.1494	µg/mL	Unstressed
	Purity 99%		+/- 114.7730	µg/mL	Stressed

8	Trichlorofluoromethane (CFC-11)		2,000.0	µg/mL	+/-	11.7371	µg/mL	Gravimetric
	CAS # 75-69-4.SEC	(Lot 00010739)			+/-	112.1494	µg/mL	Unstressed
	Purity 99%				+/-	114.7730	µg/mL	Stressed
9	1,2-Dichloro-1,1,2-trifluoroethane (CFC-123a)		2,000.5	µg/mL	+/-	25.4843	µg/mL	Gravimetric
	CAS # 354-23-4 *	(Lot Q9B-64)			+/-	114.4324	µg/mL	Unstressed
	Purity 99%				+/-	117.0060	µg/mL	Stressed

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

*** Restek is unable to identify a reliable and/or acceptable second source for this material - the same batch of neat material may have been used to produce both the primary and secondary standard. The primary and secondary standards were prepared using different equipment and personnel.**

Tech Tips:
Raw material may contain trace amounts of tert-Butanol.

Column:
60m x 0.25mm x 1.4µm
Rtx-502.2 (cat.#10916)

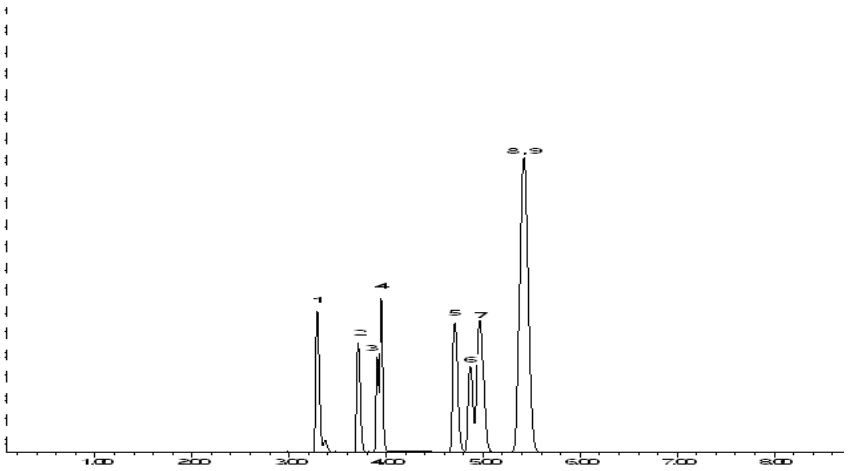
Carrier Gas:
helium-constant flow 2.0 mL/min.

Temp. Program:
40°C (hold 6 min.) to 100°C
@ 6°C/min.

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
MSD



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

Brandon Reish - Mix Technician

Date Mixed: 05-May-2022 **Balance:** 1127510105

Marlina Cowan - Operations Tech I

Date Passed: 10-May-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_Ketones_00114

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 569721 **Lot No.:** A0180742

Description : 8260 List 1/ Std #2 Ketones (2015)

8260 List 1/ Std #2 Ketones (2015) 12,500µg/mL, P&T Methanol/Water (90:10), 1mL/ampul

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

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

Ship: Ambient

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

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Acetone	12,524.0 µg/mL	+/- 73.3308 µg/mL	Gravimetric
	CAS # 67-64-1 (Lot MKCP0755)		+/- 755.6782 µg/mL	Unstressed
	Purity 99%		+/- 757.4721 µg/mL	Stressed
2	2-Butanone (MEK)	12,529.5 µg/mL	+/- 73.3630 µg/mL	Gravimetric
	CAS # 78-93-3 (Lot SHBN2844)		+/- 756.0101 µg/mL	Unstressed
	Purity 99%		+/- 757.8048 µg/mL	Stressed
3	4-Methyl-2-pentanone (MIBK)	12,541.5 µg/mL	+/- 73.4332 µg/mL	Gravimetric
	CAS # 108-10-1 (Lot SHBN3601)		+/- 756.7342 µg/mL	Unstressed
	Purity 99%		+/- 758.5305 µg/mL	Stressed
4	2-Hexanone	12,548.0 µg/mL	+/- 73.4713 µg/mL	Gravimetric
	CAS # 591-78-6 (Lot MKCL1599)		+/- 757.1264 µg/mL	Unstressed
	Purity 99%		+/- 758.9237 µg/mL	Stressed

Solvent: P&T Methanol/Water (90:10)
CAS # 67-56-1/7732-18-5
Purity 99%

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

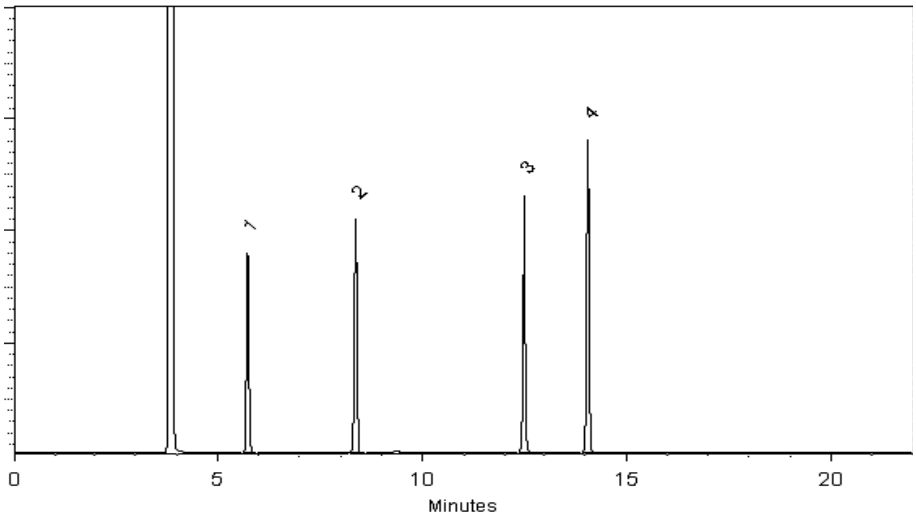
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Penelope Riglin - Operations Tech I

Date Mixed: 18-Jan-2022 **Balance:** B707717271

Marlina Cowan - Operations Tech I

Date Passed: 20-Jan-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MSV_V_PentaCL_00032

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

www.restek.com

CERTIFIED REFERENCE MATERIAL

Certificate of Analysis

ISO 17034 Accredited
Reference Material Producer
Certificate #3222.01

ISO/IEC 17025 Accredited
Testing Laboratory
Certificate #3222.02

FOR LABORATORY USE ONLY-READ SDS PRIOR TO USE.

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

Catalog No. : 577491 **Lot No.:** A0184174

Description : Custom Pentachloroethane Standard

Custom Pentachloroethane Standard 5,000µg/mL, P&T Methanol, 1mL/ampul

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

Expiration Date : April 30, 2025 **Storage:** 0°C or colder

Ship: Ambient

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

Elution Order	Compound	Grav. Conc. (weight/volume)	Expanded Uncertainty (95% C.L.; K=2)	
1	Pentachloroethane	5,022.0 µg/mL	+/- 29.4719 µg/mL	Gravimetric
	CAS # 76-01-7 (Lot 10518800)		+/- 281.6071 µg/mL	Unstressed
	Purity 99%		+/- 288.1950 µg/mL	Stressed

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

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

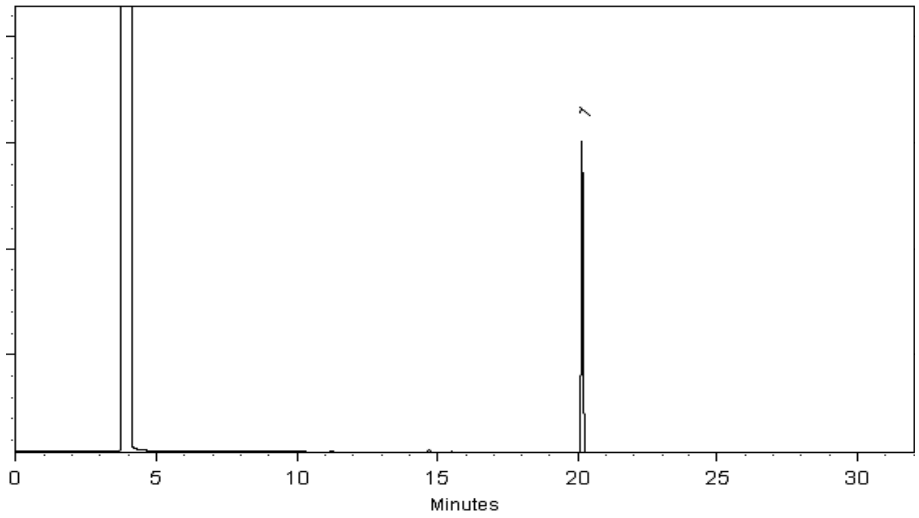
Carrier Gas:
hydrogen-constant pressure 11.0 psi.

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

Inj. Temp:
200°C

Det. Temp:
250°C

Det. Type:
FID



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

Nick Yaw - Operations Tech I

Date Mixed: 15-Apr-2022 **Balance:** B707717271

Christie Mills - Operations Technician II

Date Passed: 20-Apr-2022

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

General Certified Reference Material Notes

Expiration Notes:

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

Purity Notes:

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

Certified Uncertainty Value Notes:

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

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

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

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

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

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

Manufacturing Notes:

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

Handling Notes:

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

Reagent

MT_HCl_JT_00011

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004
Manufactured Date: 2022-10-25
Retest Date: 2027-10-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6 %
ACS - Color (APHA)	≤ 10	5
ACS - Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS - Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS - Free Chlorine (as Cl_2)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO_4)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO_4)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO_3)	≤ 0.8 ppm	0.5 ppm
Ammonium (NH_4)	≤ 3 ppm	< 1 ppm
Trace Impurities - Arsenic (As)	≤ 0.010 ppm	< 0.010 ppm
Trace Impurities - Aluminum (Al)	≤ 10.0 ppb	0.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities - Barium (Ba)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities - Boron (B)	≤ 20.0 ppb	2.3 ppb
Trace Impurities - Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Calcium (Ca)	≤ 50.0 ppb	43.0 ppb
Trace Impurities - Chromium (Cr)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities - Gallium (Ga)	≤ 1.0 ppb	0.4 ppb
Trace Impurities - Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities - Gold (Au)	≤ 4.0 ppb	0.2 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities - Iron (Fe)	≤ 15 ppb	1 ppb

>>> Continued on page 2 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004

Test	Specification	Result
Trace Impurities - Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities - Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Magnesium (Mg)	≤ 10.0 ppb	4.7 ppb
Trace Impurities - Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities - Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities - Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities - Nickel (Ni)	≤ 4.0 ppb	0.5 ppb
Trace Impurities - Niobium (Nb)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities - Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities - Silicon (Si)	≤ 100.0 ppb	2.0 ppb
Trace Impurities - Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities - Sodium (Na)	≤ 100.0 ppb	6.5 ppb
Trace Impurities - Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Tantalum (Ta)	≤ 1.0 ppb	< 0.9 ppb
Trace Impurities - Thallium (Tl)	≤ 5.0 ppb	2.0 ppb
Trace Impurities - Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities - Titanium (Ti)	≤ 1.0 ppb	0.3 ppb
Trace Impurities - Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities - Zinc (Zn)	≤ 5.0 ppb	< 0.3 ppb
Trace Impurities - Zirconium (Zr)	≤ 1.0 ppb	< 0.1 ppb

>>> Continued on page 3 >>>

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

Material No.: 9530-33
Batch No.: 22L0562004

Test	Specification	Result

For Laboratory,Research,or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone 610.386.1700

Reagent

MT_HNO3_Fishe_00009

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A200	Quality Test / Release Date	02/01/2023
Lot Number	226243		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Jan/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.6
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

ZINC (Zn)	ppm	<= 0.3	<0.3

Dudhatra chetan.

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_HNO3_Fishe_00010

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	A200	Quality Test / Release Date	04/20/2023
Lot Number	230664		
Description	NITRIC ACID, CERTIFIED ACS		
Country of Origin	Canada	Suggested Retest Date	Apr/2028
Chemical Origin	Inorganic-non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless free from suspended matter
ALUMINUM	ppm	<= 0.2	<0.2
ARSENIC (As)	ppm	<= 0.004	<0.004
ASSAY	w/w %	Inclusive Between 68.0 - 70.0	69.5
BORON (B)	ppm	<= 0.1	<0.1
CALCIUM (Ca)	ppm	<= 0.2	<0.2
CHLORIDE	ppm	<= 0.08	<0.08
CHROMIUM (Cr)	ppm	<= 0.1	<0.1
COLOR	APHA	<= 10	<10
COPPER (Cu)	ppm	<= 0.05	<0.05
GOLD (Au)	ppm	<= 0.3	<0.3
HEAVY METALS (as Pb)	ppm	<= 0.2	<0.2
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
IRON (Fe)	ppm	<= 0.2	<0.2
LEAD (Pb)	ppm	<= 0.1	<0.1
MAGNESIUM (Mg)	ppm	<= 0.3	<0.3
NICKEL (Ni)	ppm	<= 0.05	<0.05
PHOSPHATE (PO4)	ppm	<= 0.2	<0.2
POTASSIUM (K)	ppm	<= 0.3	<0.3
RESIDUE AFTER IGNITION	ppm	<= 2	<2
SODIUM (Na)	ppm	<= 0.3	<0.3
SULFATE (SO4)	ppm	<= 0.5	<0.5
TIN (Sn)	ppm	<= 0.3	<0.3
TITANIUM (Ti)	ppm	<= 0.3	<0.3

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

ZINC (Zn)	ppm	<= 0.3	<0.3

Dudhatra chetan.

Chetan Dudhatra - Quality Control Supervisor - Bridgewater

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.
*Based on suggested storage condition.

Reagent

MT_I_CCVSPK-A_00005

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	35-TSPEURF-CCV-A
Lot Number:	T2-MEB720690
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

100 µg/mL ea:

Selenium, Strontium,
Thorium, Thallium,
Vanadium, Zinc,
Silver, Nickel,
Phosphorus, Lead,
Manganese, Lithium,
Cadmium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium, Beryllium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	100.0 ± 0.9 µg/mL
Barium, Ba	100.0 ± 0.5 µg/mL	Beryllium, Be	100.0 ± 0.7 µg/mL
Boron, B	100.0 ± 0.6 µg/mL	Cadmium, Cd	100.0 ± 0.4 µg/mL
Calcium, Ca	4 999 ± 22 µg/mL	Chromium, Cr	100.0 ± 0.8 µg/mL
Cobalt, Co	100.0 ± 0.6 µg/mL	Copper, Cu	100.0 ± 0.5 µg/mL
Iron, Fe	5 000 ± 21 µg/mL	Lead, Pb	100.0 ± 0.6 µg/mL
Lithium, Li	100.0 ± 0.4 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	100.0 ± 0.5 µg/mL	Nickel, Ni	100.0 ± 0.6 µg/mL
Phosphorus, P	100.0 ± 0.4 µg/mL	Potassium, K	5 000 ± 22 µg/mL
Selenium, Se	100.0 ± 0.6 µg/mL	Silver, Ag	100.0 ± 0.4 µg/mL
Sodium, Na	5 000 ± 22 µg/mL	Strontium, Sr	100.1 ± 0.4 µg/mL
Sulfur, S	5 000 ± 25 µg/mL	Thallium, Tl	100.0 ± 0.7 µg/mL
Thorium, Th	100.0 ± 0.5 µg/mL	Vanadium, V	100.0 ± 0.6 µg/mL
Zinc, Zn	100.0 ± 0.5 µg/mL		

Density: 1.127 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

June 27, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **June 27, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

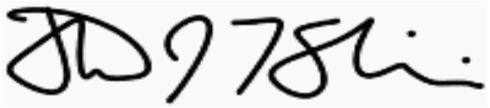
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-A_00023

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	U2-MEB728825
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 4 µg/mL	Arsenic, As	125.0 ± 1.0 µg/mL
Barium, Ba	125.0 ± 0.6 µg/mL	Beryllium, Be	12.50 ± 0.08 µg/mL
Boron, B	125.0 ± 0.7 µg/mL	Cadmium, Cd	12.51 ± 0.05 µg/mL
Calcium, Ca	1 250 ± 6 µg/mL	Chromium, Cr	125.0 ± 0.9 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.05 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.5 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 250 ± 5 µg/mL
Selenium, Se	25.00 ± 0.16 µg/mL	Silver, Ag	12.50 ± 0.05 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.05 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.00 ± 0.18 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.50 ± 0.06 µg/mL
Vanadium, V	125.0 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
U	ICP Assay	traceable to 3164	R2-U689597
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

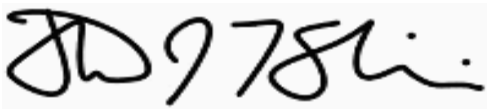
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-A_00030

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-A
Lot Number:	U2-MEB728825
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	1 250 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,
Sulfur,

125 µg/mL ea:

Thorium, Vanadium,
Zinc, Nickel,
Phosphorus, Manganese,
Lithium, Cobalt,
Chromium, Copper,
Arsenic, Boron,
Barium,

25 µg/mL ea:

Thallium, Selenium,

12.5 µg/mL ea:

Strontium, Uranium,
Silver, Beryllium,
Cadmium, Lead

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	1 250 ± 4 µg/mL	Arsenic, As	125.0 ± 1.0 µg/mL
Barium, Ba	125.0 ± 0.6 µg/mL	Beryllium, Be	12.50 ± 0.08 µg/mL
Boron, B	125.0 ± 0.7 µg/mL	Cadmium, Cd	12.51 ± 0.05 µg/mL
Calcium, Ca	1 250 ± 6 µg/mL	Chromium, Cr	125.0 ± 0.9 µg/mL
Cobalt, Co	125.0 ± 0.6 µg/mL	Copper, Cu	125.0 ± 0.5 µg/mL
Iron, Fe	1 250 ± 5 µg/mL	Lead, Pb	12.50 ± 0.05 µg/mL
Lithium, Li	125.0 ± 0.5 µg/mL	Magnesium, Mg	1 250 ± 5 µg/mL
Manganese, Mn	125.0 ± 0.5 µg/mL	Nickel, Ni	125.0 ± 0.6 µg/mL
Phosphorus, P	125.0 ± 0.6 µg/mL	Potassium, K	1 250 ± 5 µg/mL
Selenium, Se	25.00 ± 0.16 µg/mL	Silver, Ag	12.50 ± 0.05 µg/mL
Sodium, Na	1 250 ± 6 µg/mL	Strontium, Sr	12.50 ± 0.05 µg/mL
Sulfur, S	1 250 ± 6 µg/mL	Thallium, Tl	25.00 ± 0.18 µg/mL
Thorium, Th	125.0 ± 0.6 µg/mL	Uranium, U	12.50 ± 0.06 µg/mL
Vanadium, V	125.0 ± 0.6 µg/mL	Zinc, Zn	125.0 ± 0.6 µg/mL

Density: 1.057 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
B	ICP Assay	3107	190605
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Li	ICP Assay	3129a	100714
Li	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
P	ICP Assay	3139a	060717
P	Acidimetric	84L	84L
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
S	Acidimetric	84L	84L
S	ICP Assay	traceable to 3154	P2-S680745
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Th	EDTA	928	928
Tl	ICP Assay	3158	151215
U	ICP Assay	traceable to 3164	R2-U689597
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Low Silver Note: This solution contains “LOW” levels of Silver. Please store this entire bottle inside a sealed glass jar.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

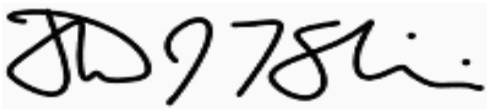
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_LCS-SPK-B_00029

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-62801-B
Lot Number:	U2-MEB728826
Matrix:	5% (v/v) HNO3 1.5% (v/v) HF
Value / Analyte(s):	1 250 µg/mL ea: Silicon, 125 µg/mL ea: Titanium, Tungsten, Zirconium, 25 µg/mL ea: Tin, Antimony, 12.5 µg/mL ea: Molybdenum

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Antimony, Sb	**25.04 ± 0.19 µg/mL**	**Molybdenum, Mo**	**12.51 ± 0.07 µg/mL**
Silicon, Si	**1 252 ± 8 µg/mL**	**Tin, Sn**	**25.03 ± 0.16 µg/mL**
Titanium, Ti	**125.2 ± 0.9 µg/mL**	**Tungsten, W**	**125.2 ± 0.7 µg/mL**
Zirconium, Zr	**125.2 ± 1.0 µg/mL**		

Density: 1.033 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Mo	ICP Assay	3134	130418
Sb	ICP Assay	3102a	140911
Si	ICP Assay	Traceable to 3150	S2-SI702546
Sn	ICP Assay	3161a	140917
Ti	ICP Assay	3162a	130925
W	ICP Assay	3163	140606
Zr	ICP Assay	3169	130920

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

HF Note: This standard should not be prepared or stored in glass.

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

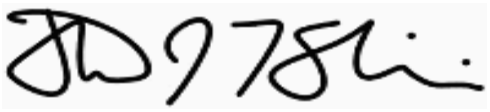
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_ICVSPK-A_00005

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED
Testing Laboratory
Certificate 883.01

ACCREDITED
Reference Material Producer
Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-69496
Lot Number:	U2-MEB728821
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	2 500 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

250 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

25 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	2 500 ± 9 µg/mL	Arsenic, As	250.0 ± 2.1 µg/mL
Barium, Ba	250.0 ± 1.2 µg/mL	Beryllium, Be	25.00 ± 0.16 µg/mL
Cadmium, Cd	25.00 ± 0.10 µg/mL	Calcium, Ca	2 500 ± 11 µg/mL
Chromium, Cr	250.0 ± 1.8 µg/mL	Cobalt, Co	250.0 ± 1.2 µg/mL
Copper, Cu	250.0 ± 1.0 µg/mL	Iron, Fe	2 500 ± 10 µg/mL
Lead, Pb	25.00 ± 0.11 µg/mL	Magnesium, Mg	2 500 ± 11 µg/mL
Manganese, Mn	250.0 ± 1.0 µg/mL	Nickel, Ni	250.0 ± 1.1 µg/mL
Potassium, K	2 500 ± 11 µg/mL	Selenium, Se	24.99 ± 0.20 µg/mL
Silver, Ag	25.00 ± 0.13 µg/mL	Sodium, Na	2 500 ± 11 µg/mL
Strontium, Sr	25.01 ± 0.10 µg/mL	Thallium, Tl	25.00 ± 0.13 µg/mL
Uranium, U	25.01 ± 0.15 µg/mL	Vanadium, V	250.0 ± 1.1 µg/mL
Zinc, Zn	250.0 ± 1.1 µg/mL		

Density: 1.074 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	992212
Ag	Volhard	999b	999b
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	060531
Cd	EDTA	928	928
Co	EDTA	928	928
Co	ICP Assay	traceable to 3113	M2-CO661665
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	Traceable to 3152A	S2-NA700842
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	3153a	990906
Tl	ICP Assay	3158	151215
U	ICP Assay	3164	891509
U	Calculated		See Sec. 4.2
V	ICP Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.6 ± 0.1
Uranium 235U	0.42 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale, https://www.inorganicventures.com/terms-and-conditions-sale. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

January 25, 2023

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **January 25, 2028**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

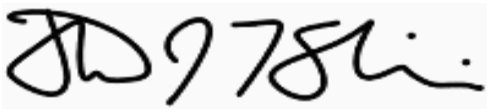
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MSSPK-A_00001

INORGANIC VENTURES™
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Custom Grade Solution
Catalog Number:	IV-66048-A
Lot Number:	T2-MEB716952
Matrix:	5% (v/v) HNO3
Value / Analyte(s):	5 000 µg/mL ea:

Aluminum, Calcium,
Iron, Potassium,
Magnesium, Sodium,

500 µg/mL ea:

Nickel, Manganese,
Cobalt, Chromium,
Copper, Arsenic,
Barium, Vanadium,
Zinc,

50 µg/mL ea:

Silver, Beryllium,
Cadmium, Lead,
Selenium, Strontium,
Thallium, Uranium

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Aluminum, Al	5 000 ± 18 µg/mL	Arsenic, As	499.9 ± 4.1 µg/mL
Barium, Ba	500.0 ± 2.3 µg/mL	Beryllium, Be	49.98 ± 0.26 µg/mL
Cadmium, Cd	49.99 ± 0.22 µg/mL	Calcium, Ca	4 998 ± 22 µg/mL
Chromium, Cr	499.9 ± 3.7 µg/mL	Cobalt, Co	500.2 ± 2.4 µg/mL
Copper, Cu	500.0 ± 2.0 µg/mL	Iron, Fe	5 000 ± 21 µg/mL
Lead, Pb	50.00 ± 0.22 µg/mL	Magnesium, Mg	5 000 ± 20 µg/mL
Manganese, Mn	500.2 ± 2.0 µg/mL	Nickel, Ni	499.9 ± 2.2 µg/mL
Potassium, K	5 001 ± 19 µg/mL	Selenium, Se	50.01 ± 0.35 µg/mL
Silver, Ag	50.00 ± 0.22 µg/mL	Sodium, Na	5 000 ± 18 µg/mL
Strontium, Sr	49.97 ± 0.22 µg/mL	Thallium, Tl	50.02 ± 0.32 µg/mL
Uranium, U	50.00 ± 0.25 µg/mL	Vanadium, V	500.0 ± 2.2 µg/mL
Zinc, Zn	500.1 ± 2.2 µg/mL		

Density: 1.128 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Ag	ICP Assay	3151	160729
Ag	Volhard	999c	999c
Al	ICP Assay	3101a	140903
Al	EDTA	928	928
As	ICP Assay	3103a	100818
Ba	ICP Assay	3104a	140909
Ba	Gravimetric		See Sec. 4.2
Be	ICP Assay	3105a	090514
Be	Calculated		See Sec. 4.2
Ca	ICP Assay	3109a	130213
Ca	EDTA	928	928
Cd	ICP Assay	3108	130116
Cd	EDTA	928	928
Cd	Calculated		See Sec. 4.2
Co	ICP Assay	3113	190630
Co	EDTA	928	928
Cr	ICP Assay	3112a	170630
Cu	ICP Assay	3114	121207
Cu	EDTA	928	928
Fe	ICP Assay	3126a	140812
Fe	EDTA	928	928
K	ICP Assay	3141a	140813
K	Gravimetric		See Sec. 4.2
Mg	ICP Assay	3131a	140110
Mg	EDTA	928	928
Mn	ICP Assay	3132	050429
Mn	EDTA	928	928
Na	ICP Assay	3152a	120715
Na	Gravimetric		See Sec. 4.2
Ni	ICP Assay	3136	120619
Ni	EDTA	928	928
Pb	ICP Assay	3128	101026
Pb	EDTA	928	928
Pb	Calculated		See Sec. 4.2
Se	ICP Assay	3149	100901
Sr	EDTA	928	928
Sr	ICP Assay	Traceable to 3153a	K2-SR650985
Sr	Calculated		See Sec. 4.2
Tl	ICP Assay	3158	151215
Tl	Calculated		See Sec. 4.2
U	ICP Assay	3164	080521
U	Calculated		See Sec. 4.2
V	IC Assay	3165	160906
V	EDTA	928	928
Zn	ICP Assay	3168a	120629
Zn	EDTA	928	928

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)\,(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Certified Abundance:

IV's Certified Abundance

Isotope	Atom %
Uranium 238U	99.8 ± 0.1
Uranium 235U	0.19 ± 0.05

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 TRACE METALLIC IMPURITIES (TMI) DETERMINED BY ICP-MS AND ICP-OES (µg/mL)

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

Note: This solution contains Silver (Ag), please refer to our Sample Preparation Guide for more information.

https://www.inorganicventures.com/sample-preparation-guide/samples-containing-silver

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 24, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 24, 2027**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

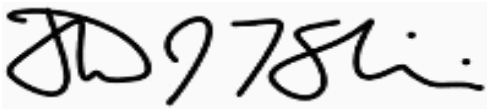
- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

Reagent

MT_S_MWLLC_SC_00005

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

Certificate of Analysis

1.0 DESCRIPTION : ***Plasma*** **CAL – Custom Standard**

Catalogue Number : **AQ0-154-615** **MW-LLC**

Lot Number : **S220721047**

Matrix: **2.0% HNO3 Tr. HF**

Expiration Date (End of month): **September 2023**

2.0 CERTIFIED VALUES AND ASSOCIATED UNCERTAINTY:

Method of Analysis: Inductively Coupled Plasma Atomic Emission Spectroscopy (ICP-AES)

Traceability: Applicable NIST Standard Reference Materials (see list below):

3101a	Al	3109a	Ca	3117a	Eu	3126a	Fe	3134	Mo	3142a	Pr	3151	Ag	3159	Th	3167a	Y
3102a	Sb	3110	Ce	3118a	Gd	3127a	La	3135a	Nd	3143	Re	3152a	Na	3160a	Tm	3168a	Zn
3103a	As	3111a	Cs	3119a	Ga	3128	Pb	3136	Ni	3144	Rh	3153a	Sr	3161a	Sn	3169	Zr
3104a	Ba	3112a	Cr	3120a	Ge	3129a	Li	3137	Nb	3145a	Rb	3154	S	3162a	Ti		
3105a	Be	3113	Co	3121	Au	3130a	Lu	3138	Pd	3147a	Sm	3155	Ta	3163	W		
3106	Bi	3114	Cu	3122	Hf	3131a	Mg	3139a	P	3148a	Sc	3156	Te	3164	U		
3107	B	3115a	Dy	3123a	Ho	3132	Mn	3140	Pt	3149	Se	3157a	Tb	3165	V		
3108	Cd	3116a	Er	3124a	In	3133	Hg	3141a	K	3150	Si	3158	Tl	3166a	Yb		

Certified Concentrations:

Ag*	0.496 ± 1%	µg/ml	K	199.5 ± 1.5	µg/ml	Ti	10.05 ± 0.06	µg/ml
Al	24.81 ± 0.14	µg/ml	Mg	50.3 ± 0.4	µg/ml	Tl*	0.500 ± 1%	µg/ml
As*	2.02 ± 0.01	µg/ml	Mn*	2.00 ± 0.02	µg/ml	U*	1.01 ± 0.01	µg/ml
Ba*	1.99 ± 0.01	µg/ml	Mo*	0.497 ± 1%	µg/ml	V*	0.501 ± 1%	µg/ml
Be*	0.499 ± 1%	µg/ml	Na	198.6 ± 1.9	µg/ml	Zn	10.00 ± 0.06	µg/ml
Ca	100.3 ± 1.0	µg/ml	Ni*	1.00 ± 0.01	µg/ml			
Cd*	0.496 ± 1%	µg/ml	Pb*	0.503 ± 1%	µg/ml			
Co*	0.504 ± 1%	µg/ml	Sb*	1.01 ± 0.01	µg/ml			
Cr*	2.00 ± 0.01	µg/ml	Se*	1.00 ± 0.01	µg/ml			
Cu*	0.999 ± 1%	µg/ml	Sn*	2.00 ± 0.02	µg/ml			
Fe	49.92 ± 0.28	µg/ml	Sr*	0.992 ± 1%	µg/ml			

ACCREDITED
Reference Material Producer
CERTIFICATE #2085.02

*Concentration value derived from v/v dilutions of certified, NIST-traceable starting materials

Note: The uncertainty of the certified value has been calculated from applicable uncertainty contributors (u_i) such as the SRM inherited uncertainty, weighing and dilution errors and instrument variability. The combined uncertainty ($uc= v\Sigma u_i^2$) has been multiplied by a coverage factor (k) of 2 to provide a 95% confidence interval.

3.0 REFERENCE VALUES:

Density: **1.010 g/ml** @ **23.0 °C**

4.0 APPROVAL AND DATE OF CERTIFICATION:

Certification Approval: Yaling Sui, Chemist

Certification Date: **August 23, 2022**

Yaling Sui

SCP SCIENCE

Providing Innovative Solutions to Analytical Chemists

5.0 INTENDED USE:

- ICP Standards: For the calibration of, including but not limited to: ICP-AES, ICP-MS, FAAS, GFAA, XRF and DCP.
- AA Standards: For the calibration of Flame (FAAS) and Graphite Furnace (GFAA) Atomic Absorption Spectrometers.
- Matrix Modifiers: For the optimization of analytical conditions to provide better Graphite Furnace Atomic Absorption (GFAA) instrument response and improved detection limits.
- pH Standards: For the calibrating pH meters or for other wet chemistry applications.
- Conductivity Standards: For electrolytic conductivity measurement as a calibration standard.
- IC Standards: for calibration of, but not limited to IC, HPLC, TLC, ISE, IR, NMR, MS, UV/VIS or other wet chemistry applications.

For any inquiries, please contact **SCP SCIENCE**.

6.0 INSTRUCTIONS FOR USE:

Handling and Storage: Keep product tightly capped when not in use. The solution should be opened for a minimum amount of time necessary to dispense the amount required. Do not pipet or use directly from container. Do not return unused portions back to container. Store under normal laboratory conditions. Avoid exposure to excessive sources of heat and humidity or direct sunlight.

Stability: This Standard is guaranteed to be stable and accurate to within the specified uncertainty of measurement up to the unopened expiry date, if sealed, or up to the opened expiry date (when indicated), whichever comes first, provided the solution is kept tightly capped and stored under the indicated storage conditions. Purchasers will be notified of any significant changes resulting in re-certification or withdrawal of the product prior to the expiration date.

7.0 HAZARDOUS INFORMATION :

Please refer to the associated Material Safety Data Sheet (MSDS) for information regarding this product (available at www.SCPSCIENCE.com).

8.0 HOMOGENEITY:

This solution has been blended according to an in-house procedure and its homogeneity is guaranteed to be fit for purpose when a sample size sufficient for the intended method of analysis is used.

9.0 TRACEABILITY:

This CRM (Certified Reference Material) is traceable to the NIST SRM (Standard Reference Material) indicated in section 2 through an unbroken chain of comparisons. In addition, balances used are regularly calibrated using weights which are traceable to NIST (National Institute of Standards and Technology) or NRC (National Research Council of Canada) standards. All conductivity meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable Thermometer and standards. All pH meters used to analyze this standard have been regularly calibrated using a NIST or NRC traceable thermometer and pH/MV simulator.

10.0 PREPARATION*:*

For the preparation of these solutions, 18 meghom/cm double deionized water, high-purity acids and glassware calibrated to ASTM Class A specifications are used.

11.0 QUALITY SYSTEM CERTIFICATIONS*:*

ISO 9001 Certification: This standard was produced in a facility which operates a **registered** ISO 9001 Quality Management System. Please consult our web site for a copy of the most recent revision of our certificate of registration.

ISO 17025 Accreditation: SCP SCIENCE (Corporate Headquarters) operates an ISO 17025 **accredited** laboratory. Please consult our web site for a copy of the most recent revision of our certificate and scope of accreditation.

ISO 17034 Accreditation: SCP SCIENCE (Corporate Headquarters) is an ISO 17034 accredited Reference Material Producer. Please consult our website for a copy of our most recent certificate and scope of accreditation.

ACCREDITED
Reference Material Producer
CERT# 2885.02

ACCREDITED
Testing Laboratory CERT#2885.01

Corporate Headquarters:

CORPORATE HEADQUARTERS	USA	FRANCE	GERMANY
21800 Clark Graham	3rd Party Distribution Center	12 Ave. de Québec, Bat. IRIS	Alte Marktoberdorfer Straße 14,
Baie D'Urfé (Montréal), Quebec	348 Route 11, Champlain,	91140, Villebon-sur-Yvette	87616, Marktoberdorf
H9X 4B6 Canada	N.Y. 12919-4816		
Phone: +1 (800) 361-6820	Phone: +1 (800) 361-6820	Phone: +33 (0) 1 69 18 71 17	Phone: +49 (0) 8342-89560-61
Fax: +1 (800) 253-5549	Fax: +1 (800) 253-5549	Fax: +33 (0) 1 60 92 05 67	Fax: +49 (0) 8342-89560-69

CORPORATE : Phone: +1 (514) 457-0701 | Fax: +1 (514) 457-4499 www.scpscience.com | sales@scpscience.com

Sample Container Check Report

Client: TRC, Engineers, Inc.
Job ID: 410-136176-1
Project/Site: RFAAP, Radford VA HWMU5

Sample Container Checks and Verifications

Lab Sample ID: 410-136176-1 — Client Sample ID: 5W8B

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-2 — Client Sample ID: 5W5B

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-3 — Client Sample ID: 5W7B

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-4 — Client Sample ID: 5WC21

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-5 — Client Sample ID: 5WDUP

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-6 — Client Sample ID: 5WC22

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-7 — Client Sample ID: 5WC23

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Lab Sample ID: 410-136176-8 — Client Sample ID: 5W12A

Bottle Code	Check Performed	By Employee	Date	Check Result	Expected Result	Adjusted Date	Reagent Lot #	Reagent Expires	Re-check Result	Re-check Date
D	pH Check, 24hr Adjustment Confirmation Required	T7ZN	07/26/2023	<2	<2	N/A	N/A	N/A	N/A	N/A

Method 8260D Low Level

Volatile Organic Compounds (GC/MS) by Method 8260D Low Level

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136176-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): R-624SilMS 3 ID: 0.25 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
5W8B	410-136176-1	106	108	97	94
5W5B	410-136176-2	106	107	97	93
5W7B	410-136176-3	105	108	96	95
5WC21	410-136176-4	105	108	96	94
5WDUP	410-136176-5	107	109	96	95
5WC22	410-136176-6	106	107	96	94
5WC23	410-136176-7	106	107	96	94
5W12A	410-136176-8	105	107	95	92
Trip Blank 1	410-136176-9	109	116	95	94
	MB 410-402356/6	105	108	95	93
	LCS 410-402356/4	106	109	97	97
5W7B MS	410-136176-3 MS	105	107	97	98
5W7B MSD	410-136176-3 MSD	105	107	96	97

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	80-120
DCA = 1,2-Dichloroethane-d4 (Surr)	80-120
TOL = Toluene-d8 (Surr)	80-120
BFB = 4-Bromofluorobenzene (Surr)	80-120

Column to be used to flag recovery values

FORM II 8260D

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Matrix: Water Level: Low Lab File ID: HL30X03.D

Lab ID: LCS 410-402356/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1-Dichloroethene	5.00	5.57	111	80-131	
cis-1,2-Dichloroethene	5.00	5.61	112	80-122	
trans-1,2-Dichloroethene	5.00	5.43	109	80-122	
Trichloroethene	5.00	5.46	109	80-120	
Vinyl chloride	5.00	3.62	72	60-125	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Matrix: Water Level: Low Lab File ID: HL30X12.D

Lab ID: 410-136176-3 MS Client ID: 5W7B MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1-Dichloroethene	5.00	ND	6.30	126	80-131	
cis-1,2-Dichloroethene	5.00	ND	6.04	121	80-122	
trans-1,2-Dichloroethene	5.00	ND	6.02	120	80-122	
Trichloroethene	5.00	ND	6.13	123	80-120	F1
Vinyl chloride	5.00	ND	3.73	74	60-125	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Matrix: Water Level: Low Lab File ID: HL30X13.D

Lab ID: 410-136176-3 MSD Client ID: 5W7B MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1-Dichloroethene	5.00	6.25	125	1	30	80-131	
cis-1,2-Dichloroethene	5.00	5.97	119	1	30	80-122	
trans-1,2-Dichloroethene	5.00	5.97	119	1	30	80-122	
Trichloroethene	5.00	6.10	122	1	30	80-120	F1
Vinyl chloride	5.00	3.66	73	2	30	60-125	

Column to be used to flag recovery and RPD values

FORM III 8260D

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Lab File ID: HL30X05.D Lab Sample ID: MB 410-402356/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: 19094 Date Analyzed: 07/30/2023 14:02

GC Column: R-624SilMS 30m ID: 0.25(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 410-402356/4	HL30X03.D	07/30/2023 13:22
Trip Blank 1	410-136176-9	HL30X06.D	07/30/2023 14:23
5W8B	410-136176-1	HL30X09.D	07/30/2023 15:24
5W5B	410-136176-2	HL30X10.D	07/30/2023 15:45
5W7B	410-136176-3	HL30X11.D	07/30/2023 16:05
5W7B MS	410-136176-3 MS	HL30X12.D	07/30/2023 16:26
5W7B MSD	410-136176-3 MSD	HL30X13.D	07/30/2023 16:46
5WC21	410-136176-4	HL30X14.D	07/30/2023 17:06
5WDUP	410-136176-5	HL30X15.D	07/30/2023 17:27
5WC22	410-136176-6	HL30X16.D	07/30/2023 17:47
5WC23	410-136176-7	HL30X17.D	07/30/2023 18:08
5W12A	410-136176-8	HL30X18.D	07/30/2023 18:28

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Lab File ID: HA19T31.D BFB Injection Date: 04/19/2023

Instrument ID: 19094 BFB Injection Time: 17:40

Analysis Batch No.: 366140

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	17.0	
75	30.0 - 60.0 % of mass 95	46.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.8	(1.0) 1
174	Greater than 50% of mass 95	83.8	
175	5.0 - 9.0 % of mass 174	6.2	(7.4) 1
176	95.0 - 101.0 % of mass 174	82.3	(98.2) 1
177	5.0 - 9.0 % of mass 176	5.4	(6.5) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	IC 410-366140/13	HA19X12.D	04/19/2023	21:41
	IC 410-366140/14	HA19X13.D	04/19/2023	22:01
	IC 410-366140/15	HA19X14.D	04/19/2023	22:21
	IC 410-366140/16	HA19X15.D	04/19/2023	22:41
	IC 410-366140/17	HA19X16.D	04/19/2023	23:01
	ICIS 410-366140/18	HA19X17.D	04/19/2023	23:21
	IC 410-366140/19	HA19X18.D	04/19/2023	23:41
	ICV 410-366140/21	HA19X20.D	04/20/2023	0:21

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Lab File ID: HL30T01.D BFB Injection Date: 07/30/2023

Instrument ID: 19094 BFB Injection Time: 12:22

Analysis Batch No.: 402356

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.0	
75	30.0 - 60.0 % of mass 95	48.8	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.9	(1.0) 1
174	Greater than 50% of mass 95	90.8	
175	5.0 - 9.0 % of mass 174	6.8	(7.5) 1
176	95.0 - 101.0 % of mass 174	87.9	(96.8) 1
177	5.0 - 9.0 % of mass 176	5.8	(6.6) 2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 410-402356/3	HL30X02.D	07/30/2023	13:01
	LCS 410-402356/4	HL30X03.D	07/30/2023	13:22
	MB 410-402356/6	HL30X05.D	07/30/2023	14:02
Trip Blank 1	410-136176-9	HL30X06.D	07/30/2023	14:23
5W8B	410-136176-1	HL30X09.D	07/30/2023	15:24
5W5B	410-136176-2	HL30X10.D	07/30/2023	15:45
5W7B	410-136176-3	HL30X11.D	07/30/2023	16:05
5W7B MS	410-136176-3 MS	HL30X12.D	07/30/2023	16:26
5W7B MSD	410-136176-3 MSD	HL30X13.D	07/30/2023	16:46
5WC21	410-136176-4	HL30X14.D	07/30/2023	17:06
5WDUP	410-136176-5	HL30X15.D	07/30/2023	17:27
5WC22	410-136176-6	HL30X16.D	07/30/2023	17:47
5WC23	410-136176-7	HL30X17.D	07/30/2023	18:08
5W12A	410-136176-8	HL30X18.D	07/30/2023	18:28

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Sample No.: ICIS 410-366140/18 Date Analyzed: 04/19/2023 23:21

Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): HA19X17.D Heated Purge: (Y/N) N

Calibration ID: 49526

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		78513	4.05	1983640	7.57	1451141	11.09
UPPER LIMIT		157026	4.55	3967280	8.07	2902282	11.59
LOWER LIMIT		39257	3.55	991820	7.07	725571	10.59
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-366140/21		80290	4.06	1989207	7.56	1456389	11.10
CCVIS 410-402356/3		81669	4.11	2024876	7.57	1558723	11.08

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Sample No.: ICIS 410-366140/18 Date Analyzed: 04/19/2023 23:21

Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): HA19X17.D Heated Purge: (Y/N) N

Calibration ID: 49526

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
INITIAL CALIBRATION MID-POINT		792309	12.99				
UPPER LIMIT		1584618	13.49				
LOWER LIMIT		396155	12.49				
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 410-366140/21		786971	12.99				
CCVIS 410-402356/3		883701	12.96				

DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Sample No.: CCVIS 410-402356/3 Date Analyzed: 07/30/2023 13:01

Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): HL30X02.D Heated Purge: (Y/N) N

Calibration ID: 49526

		TBAd10		FB		CBZd5	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		81669	4.11	2024876	7.57	1558723	11.08
UPPER LIMIT		163338	4.61	4049752	8.07	3117446	11.58
LOWER LIMIT		40835	3.61	1012438	7.07	779362	10.58
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-402356/4		86799	4.08	2071675	7.57	1578047	11.08
MB 410-402356/6		84866	4.10	2042666	7.57	1568867	11.08
410-136176-9	Trip Blank 1	97888	4.09	2045651	7.57	1586892	11.08
410-136176-1	5W8B	75794	4.08	1933544	7.57	1474815	11.08
410-136176-2	5W5B	82808	4.09	2052228	7.57	1561155	11.08
410-136176-3	5W7B	81658	4.08	1962027	7.57	1498013	11.08
410-136176-3 MS	5W7B MS	74845	4.07	2027091	7.57	1546773	11.08
410-136176-3 MSD	5W7B MSD	82709	4.11	2071457	7.57	1586725	11.09
410-136176-4	5WC21	81936	4.06	2058311	7.56	1570866	11.09
410-136176-5	5WDUP	82690	4.06	2015980	7.57	1547903	11.09
410-136176-6	5WC22	82937	4.06	2030434	7.57	1552090	11.09
410-136176-7	5WC23	79884	4.06	1999379	7.57	1541859	11.09
410-136176-8	5W12A	79226	4.09	2020856	7.57	1558852	11.09

TBAd10 = t-Butyl alcohol-d10 (IS)
FB = Fluorobenzene (IS)
FB = Fluorobenzene (IS)
CBZd5 = Chlorobenzene-d5 (IS)
Area Limit = 50%-200% of internal standard area
CBZd5 = Chlorobenzene-d5 (IS)
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

Sample No.: CCVIS 410-402356/3 Date Analyzed: 07/30/2023 13:01

Instrument ID: 19094 GC Column: R-624SilMS 30m ID: 0.25(mm)

Lab File ID (Standard): HL30X02.D Heated Purge: (Y/N) N

Calibration ID: 49526

		DCBd4					
		AREA #	RT #	#	RT #	#	RT #
12/24 HOUR STD		883701	12.96				
UPPER LIMIT		1767402	13.46				
LOWER LIMIT		441851	12.46				
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 410-402356/4		872242	12.96				
MB 410-402356/6		834870	12.97				
410-136176-9	Trip Blank 1	850232	12.97				
410-136176-1	5W8B	783803	12.97				
410-136176-2	5W5B	846068	12.97				
410-136176-3	5W7B	805497	12.98				
410-136176-3 MS	5W7B MS	865714	12.97				
410-136176-3 MSD	5W7B MSD	889337	12.98				
410-136176-4	5WC21	830425	12.98				
410-136176-5	5WDUP	835869	12.98				
410-136176-6	5WC22	821383	12.98				
410-136176-7	5WC23	808361	12.98				
410-136176-8	5W12A	819515	12.98				

DCBd4 = 1,4-Dichlorobenzene-d4
DCBd4 = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W8B
Lab Sample ID: 410-136176-1

Matrix: Water
Lab File ID: HL30X09.D

Analysis Method: 8260D
Date Collected: 07/25/2023 08:30

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 15:24

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X09.D
Lims ID: 410-136176-A-1
Client ID: 5W8B
Sample Type: Client
Inject. Date: 30-Jul-2023 15:24:30 ALS Bottle#: 9 Worklist Smp#: 10
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-010
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:25:26

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.080	4.105	-0.025	26	75794	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	484833	10.6	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.128	0.007	52	92317	10.8	
* 64 Fluorobenzene (IS)	96	7.573	7.573	0.000	99	1933544	10.0	
68 Trichloroethene	95		8.055				ND	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	1938409	9.66	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1474815	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	93	684543	9.40	
* 141 1,4-Dichlorobenzene-d4	152	12.969	12.963	0.006	95	783803	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

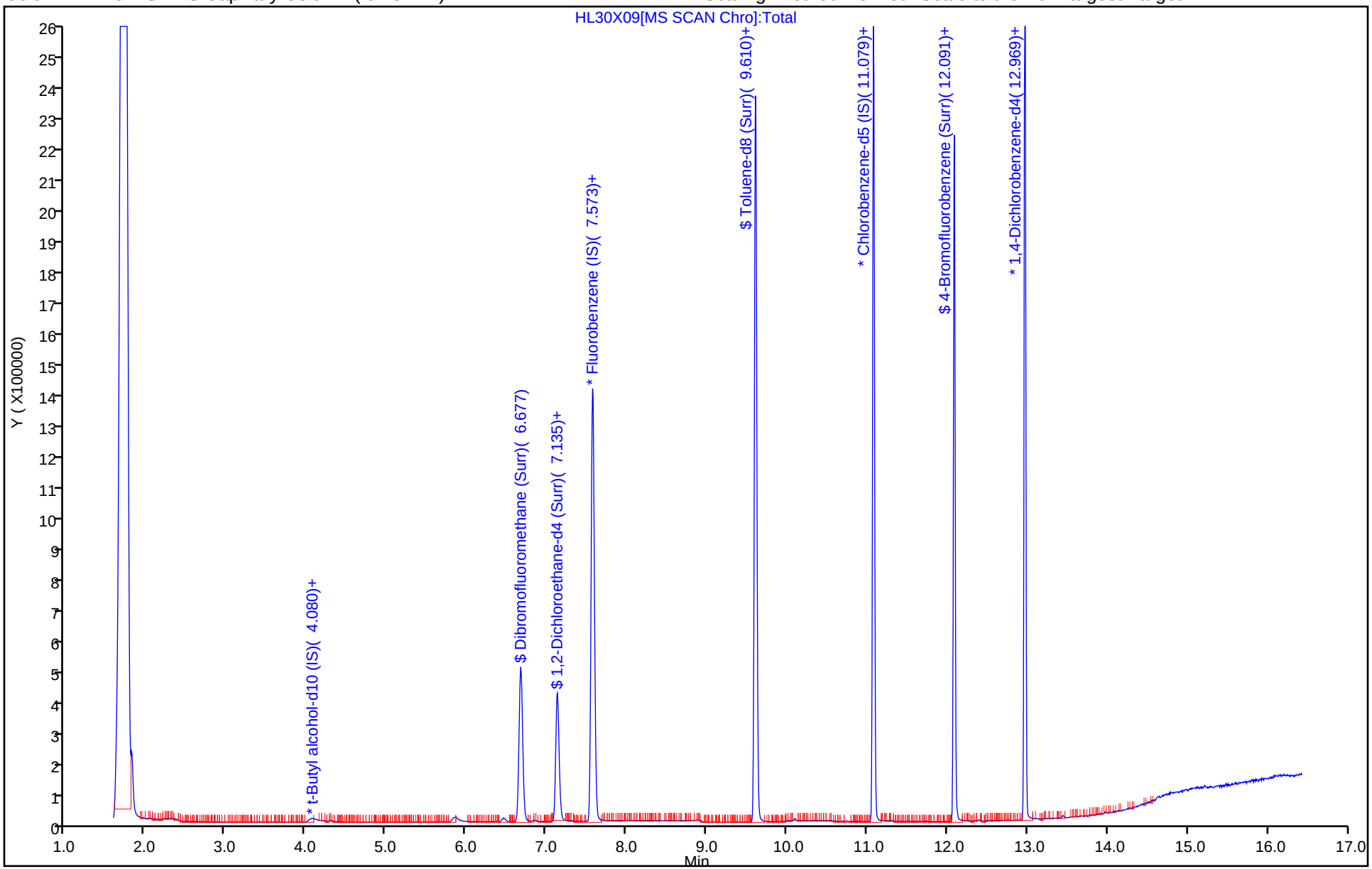
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:33:49 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X09.D				
Injection Date:	30-Jul-2023 15:24:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-1	Lab Sample ID:	410-136176-1	Worklist Smp#:	10
Client ID:	5W8B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	9
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X09.D				
Lims ID:	410-136176-A-1				
Client ID:	5W8B				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 15:24:30	ALS Bottle#:	9	Worklist Smp#:	10
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-010				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:25:26

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.6	105.52
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	107.94
$ 83 Toluene-d8 (Surr)	10.0	9.66	96.58
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.40	94.04

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W5B
Lab Sample ID: 410-136176-2

Matrix: Water
Lab File ID: HL30X10.D

Analysis Method: 8260D
Date Collected: 07/25/2023 10:50

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 15:45

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X10.D
Lims ID: 410-136176-A-2
Client ID: 5W5B
Sample Type: Client
Inject. Date: 30-Jul-2023 15:45:30 ALS Bottle#: 10 Worklist Smp#: 11
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-011
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:25:36

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.093	4.105	-0.012	20	82808	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.671	6.677	-0.006	94	518865	10.6	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.128	0.007	52	97144	10.7	
* 64 Fluorobenzene (IS)	96	7.574	7.573	0.001	99	2052228	10.0	
68 Trichloroethene	95	8.067	8.055	0.012	93	1594	0.0278	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2055798	9.68	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1561155	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	92	719555	9.34	
* 141 1,4-Dichlorobenzene-d4	152	12.969	12.963	0.006	95	846068	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

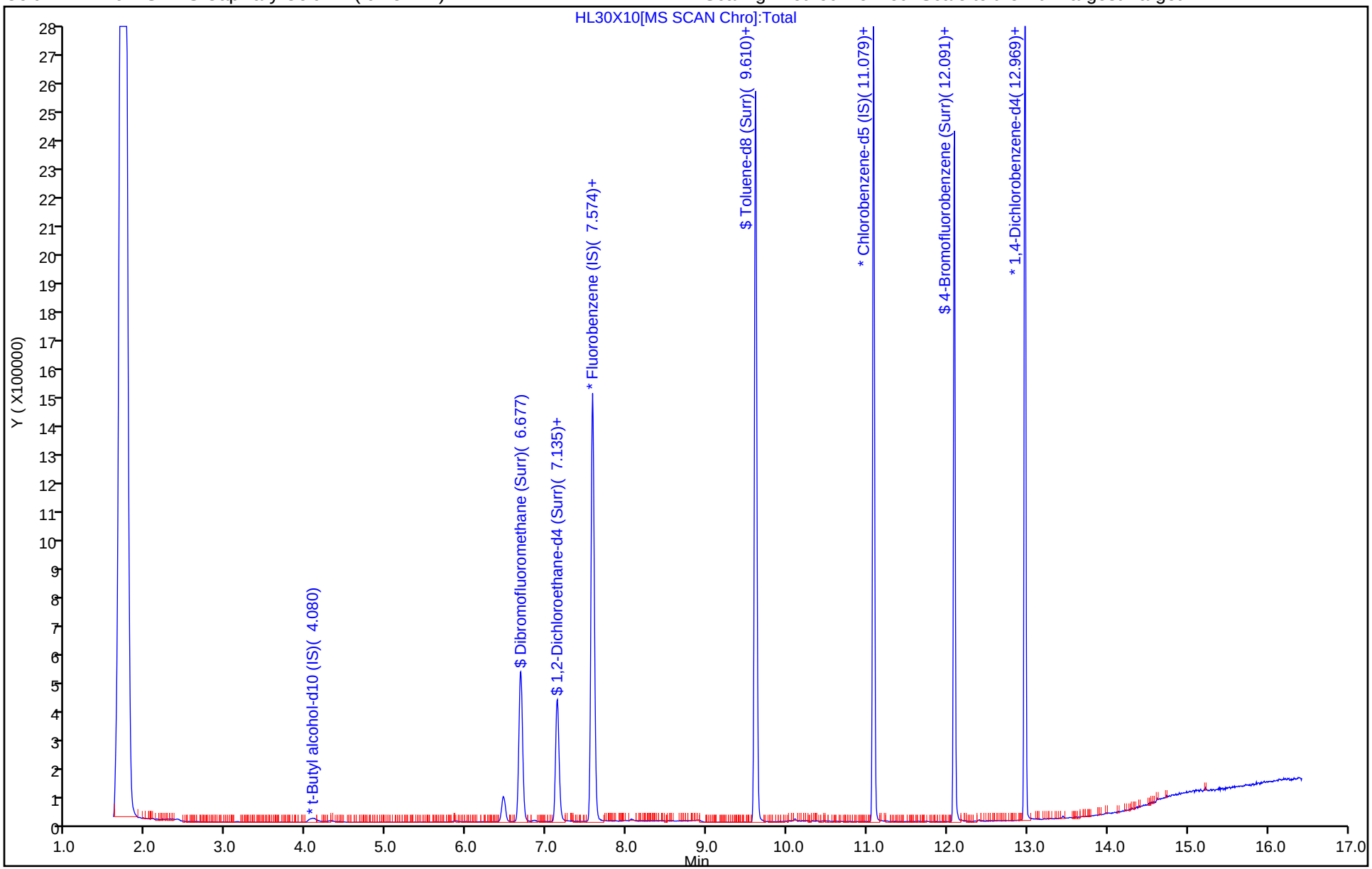
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:33:51 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X10.D				
Injection Date:	30-Jul-2023 15:45:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-2	Lab Sample ID:	410-136176-2	Worklist Smp#:	11
Client ID:	5W5B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	10
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X10.D				
Lims ID:	410-136176-A-2				
Client ID:	5W5B				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 15:45:30	ALS Bottle#:	10	Worklist Smp#:	11
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-011				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:25:36

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.6	106.40
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	107.02
$ 83 Toluene-d8 (Surr)	10.0	9.68	96.76
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.34	93.39

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W7B
Lab Sample ID: 410-136176-3

Matrix: Water
Lab File ID: HL30X11.D

Analysis Method: 8260D
Date Collected: 07/25/2023 10:05

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 16:05

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND	F1	1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X11.D
Lims ID: 410-136176-A-3
Client ID: 5W7B
Sample Type: Client
Inject. Date: 30-Jul-2023 16:05:30 ALS Bottle#: 11 Worklist Smp#: 12
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-012
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:26:54

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	1 Chlorotrifluoroethene	116		1.867				ND	
	2 Dichlorodifluoromethane	85		1.910				ND	
	3 Chlorodifluoromethane	51		1.922				ND	7
	4 Dimethyl ether	45		1.983				ND	7
	5 Chloromethane	50		2.099				ND	7
	7 Butadiene	39		2.215				ND	7
	6 Vinyl chloride	62		2.215				ND	
	8 2-Chloro-1,1,1-Trifluoroethane	118		2.288				ND	
	9 Bromomethane	94		2.544				ND	
	10 Chloroethane	64		2.617				ND	
	11 Dichlorofluoromethane	67		2.843				ND	
	12 Trichlorofluoromethane	101		2.928				ND	
	13 Ethanol	45	3.129	3.111	0.018	50	1867	NC	
	14 Ethyl ether	59	3.135	3.141	-0.006	91	5412	0.1472	
	15 1,2-Dichloro-1,1,2-trifluoroetha	67		3.233				ND	
	16 Acrolein	56		3.306				ND	
T	18 Ethanol TIC	45		3.440				ND	7
	17 1,1-Dichloroethene	96		3.446				ND	
	19 Acetone	43		3.465				ND	U
	20 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.489				ND	
	21 Iodomethane	142		3.641				ND	
	22 Ethyl bromide	108		3.666				ND	
	23 Carbon disulfide	76		3.739				ND	7
	25 Acetonitrile	41		3.849				ND	
	24 Methyl acetate	43		3.867				ND	7
	26 3-Chloro-1-propene	41		3.903				ND	
	27 Methylene Chloride	84		4.086				ND	
*	28 t-Butyl alcohol-d10 (IS)	65	4.080	4.105	-0.025	19	81658	50.0	
T	30 Acetonitrile TIC	41	4.129	4.214	-0.085	6	226	0.001152	7
	29 2-Methyl-2-propanol	59		4.214				ND	
	31 Acrylonitrile	53		4.403				ND	
	32 Methyl tert-butyl ether	73		4.483				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
33 trans-1,2-Dichloroethene	96		4.495				ND	
34 Hexane	57		4.915				ND	
36 1,1-Dichloroethane	63		5.147				ND	
35 Vinyl acetate	43		5.159				ND	
37 Isopropyl ether	45		5.208				ND	
38 2-Chloro-1,3-butadiene	53		5.257				ND	
T 39 Vinyl acetate (TIC)	43		5.537				ND	
40 Tert-butyl ethyl ether	59		5.745				ND	
41 2-Butanone (MEK)	43		5.940				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
43 2,2-Dichloropropane	77		6.001				ND	
44 Propionitrile	54		6.019				ND	
45 Ethyl acetate	43		6.043				ND	
S 46 1,2-Dichloroethene, Total	100		6.155				ND	7
47 Methacrylonitrile	67		6.238				ND	
48 Chlorobromomethane	128		6.312				ND	
49 Tetrahydrofuran	71		6.324				ND	
50 Chloroform	83	6.458	6.464	-0.006	94	34947	0.3873	
51 Methyl acrylate	55		6.482				ND	
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	488212	10.5	
53 1,1,1-Trichloroethane	97		6.696				ND	
54 Cyclohexane	56	6.848	6.799	0.049	69	4242	0.0495	
55 1,1-Dichloropropene	75		6.903				ND	
56 Carbon tetrachloride	117		6.909				ND	
57 Isobutyl alcohol	41		7.055				ND	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.128	0.000	52	93388	10.8	
59 Benzene	78		7.165				ND	7
60 1,2-Dichloroethane	62		7.232				ND	7
62 1-Chlorobutane	56		7.250				ND	
61 Isopropyl acetate	43		7.269				ND	
63 Tert-amyl methyl ether	73		7.366				ND	
* 64 Fluorobenzene (IS)	96	7.573	7.573	0.000	99	1962027	10.0	
65 n-Heptane	43		7.592				ND	
66 t-Amyl alcohol	73		7.842				ND	
67 n-Butanol	56		7.951				ND	7
68 Trichloroethene	95	8.061	8.055	0.006	98	7798	0.1424	
69 Methylcyclohexane	83		8.372				ND	
70 1,2-Dichloropropane	63		8.384				ND	
71 2-ethoxy-2-methyl butane	87		8.403				ND	
72 Methyl methacrylate	69		8.476				ND	
73 1,4-Dioxane	88		8.482				ND	
74 Dibromomethane	93		8.500				ND	
75 n-Propyl acetate	61		8.567				ND	
76 Dichlorobromomethane	83		8.738				ND	
77 2-Nitropropane	41		8.994				ND	
78 2-Chloroethyl vinyl ether	63		9.104				ND	
79 1-Bromo-2-chloroethane	63		9.128				ND	
80 cis-1,3-Dichloropropene	75		9.287				ND	
81 Chloroacetonitrile	75		9.427				ND	
82 4-Methyl-2-pentanone (MIBK)	43		9.463				ND	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	93	1963979	9.63	a
84 Toluene	92		9.683				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
85 trans-1,3-Dichloropropene	75		9.939				ND	
T 92 Nitrobenzene TIC	77	9.963	10.000	-0.037	1	479	0.002441	7
T 100 Ethylene oxide TIC	44	10.042	10.000	0.042	11	459	0.002339	7
T 87 2,3-Dibromo-1-propanol TIC	57	9.616	10.000	-0.384	1	1451	0.007395	7
T 88 2-Bromo-3-chloropropene TIC	75	11.079	10.000	1.079	4	23151	0.1180	7
T 89 Epibromohydrin TIC	57	9.616	10.000	-0.384	12	1451	0.007395	7
T 90 3-Chloro-1,2-propanediol TIC	44	10.042	10.000	0.042	1	459	0.002339	7
T 91 Octamethylcyclotetrasiloxane TIC	281	12.127	10.000	2.127	83	12193	0.0621	7
T 94 Hexachloroethane TIC	117	11.079	10.000	1.079	1	1498013	7.64	
T 93 Methyl acrylate TIC	55	9.652	10.000	-0.348	1	214	0.001091	
T 95 Chloroacetaldehyde TIC	50		10.000				ND	
T 97 2,3-Dibromopropene TIC	119	11.079	10.000	1.079	2	478727	2.44	
T 103 2-Bromoethanol TIC	45	9.951	10.000	-0.049	1	254	0.001295	7
T 102 Epichlorohydrin TIC	57		10.000				ND	
T 101 Vinyl bromide TIC	106	12.085	10.000	2.085	12	2310	0.0118	7
T 86 Decamethylcyclopentasiloxane TIC	73	9.616	10.000	-0.384	1	1275	0.006498	7
T 99 Isopropyl alcohol TIC	45	9.951	10.000	-0.049	1	254	0.001295	7
T 98 2-Chloroethanol TIC	44	10.042	10.000	0.042	1	459	0.002339	7
T 96 Monochloroacetic acid TIC	50	9.604	10.000	-0.396	37	47250	0.2408	7
104 Ethyl methacrylate	69		10.006				ND	
S 105 1,3-Dichloropropene, Total	100		10.060				ND	7
106 1,1,2-Trichloroethane	97		10.152				ND	
107 Tetrachloroethene	166		10.244				ND	
108 1,3-Dichloropropane	76		10.311				ND	
109 2-Hexanone	43		10.366				ND	
110 n-Butyl acetate	43		10.482				ND	
111 Chlorodibromomethane	129		10.530				ND	
112 Ethylene Dibromide	107		10.640				ND	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1498013	10.0	
114 1-Chlorohexane	91		11.085				ND	7
115 Chlorobenzene	112		11.103				ND	
116 1,1,1,2-Tetrachloroethane	131		11.189				ND	
117 Ethylbenzene	91		11.189				ND	
S 118 Xylenes, Total	106		11.245				ND	7
119 m-Xylene & p-Xylene	106		11.304				ND	
120 o-Xylene	106		11.634				ND	
121 Styrene	104		11.652				ND	
122 Bromoform	173		11.810				ND	7
123 Isopropylbenzene	105		11.938				ND	
125 Cyclohexanone	55		12.000				ND	
124 cis-1,4-Dichloro-2-butene	88	12.085	12.067	0.018	98	28648	66.4	E
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	93	699363	9.46	
127 1,1,2,2-Tetrachloroethane	83		12.182				ND	
128 Bromobenzene	156		12.195				ND	
129 trans-1,4-Dichloro-2-butene	53		12.207				ND	
130 1,2,3-Trichloropropane	110		12.225				ND	
131 N-Propylbenzene	91		12.268				ND	
132 2-Chlorotoluene	126		12.341				ND	
133 1,3,5-Trimethylbenzene	105		12.402				ND	
134 4-Chlorotoluene	126		12.432				ND	
135 tert-Butylbenzene	134		12.646				ND	
136 Pentachloroethane	167		12.676				ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
137 1,2,4-Trimethylbenzene	105		12.688				ND	
138 sec-Butylbenzene	105		12.810				ND	
139 1,3-Dichlorobenzene	146		12.908				ND	7
140 4-Isopropyltoluene	119		12.914				ND	7
* 141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	805497	10.0	
142 1,4-Dichlorobenzene	146		12.981				ND	7
143 1,2,3-Trimethylbenzene	120		12.993				ND	7
144 Benzyl chloride	126		13.060				ND	
145 p-Diethylbenzene	119		13.188				ND	
146 n-Butylbenzene	92		13.207				ND	
147 1,2-Dichlorobenzene	146		13.243				ND	
148 Hexachloroethane	201		13.682				ND	
149 1,2-Dibromo-3-Chloropropane	155		13.786				ND	
150 1,3,5-Trichlorobenzene	180		13.914				ND	
151 1,2,4-Trichlorobenzene	180		14.334				ND	
152 Hexachlorobutadiene	225		14.420				ND	
153 Naphthalene	128		14.517				ND	
154 1,2,3-Trichlorobenzene	180		14.657				ND	
155 tert-Butyl Formate	1		0.000				ND	
156 Dodecane	57		0.000				ND	
157 Pentane	43		0.000				ND	
158 1,1-Dichloroacetone	1		0.000				ND	
159 n-Decane	57		0.000				ND	
160 1-Bromo-3-Chloropropane	1		0.000				ND	
161 1-Chloropropane	1		0.000				ND	
162 Propene oxide	1		0.000				ND	
163 1,1-Dichloro-1-fluoroethane	1		0.000				ND	
164 Methylal	1		0.000				ND	
165 2-Bromo-1-chloropropane	1		0.000				ND	

QC Flag Legend

Processing Flags

NC - Not Calibrated

E - Exceeded Maximum Amount

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

a - User Assigned ID

Reagents:

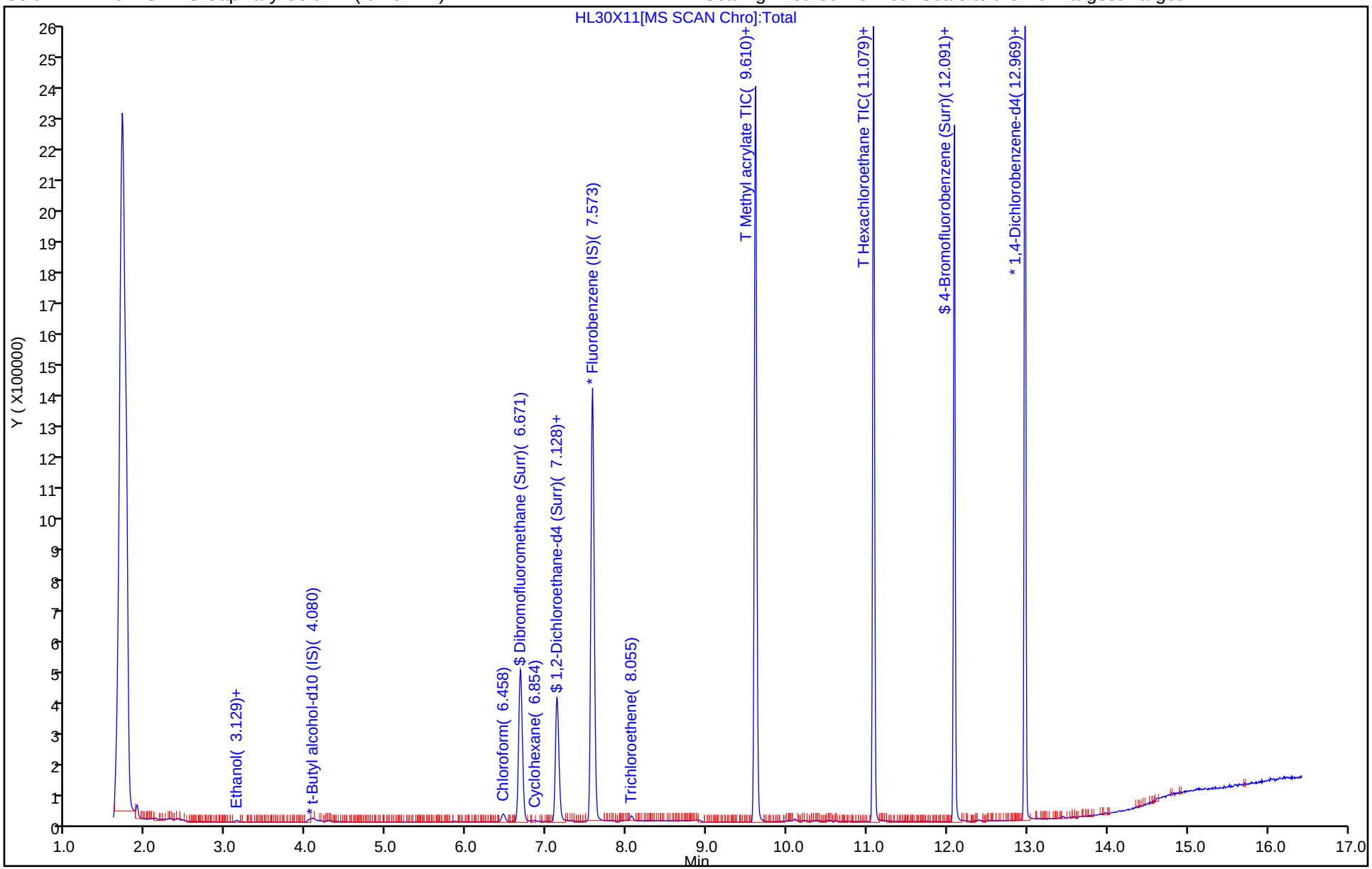
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:33:53 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X11.D				
Injection Date:	30-Jul-2023 16:05:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-3	Lab Sample ID:	410-136176-3	Worklist Smp#:	12
Client ID:	5W7B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	11
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X11.D				
Lims ID:	410-136176-A-3				
Client ID:	5W7B				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 16:05:30	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-012				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:26:54

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	104.71
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	107.61
$ 83 Toluene-d8 (Surr)	10.0	9.63	96.34
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.46	94.59

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

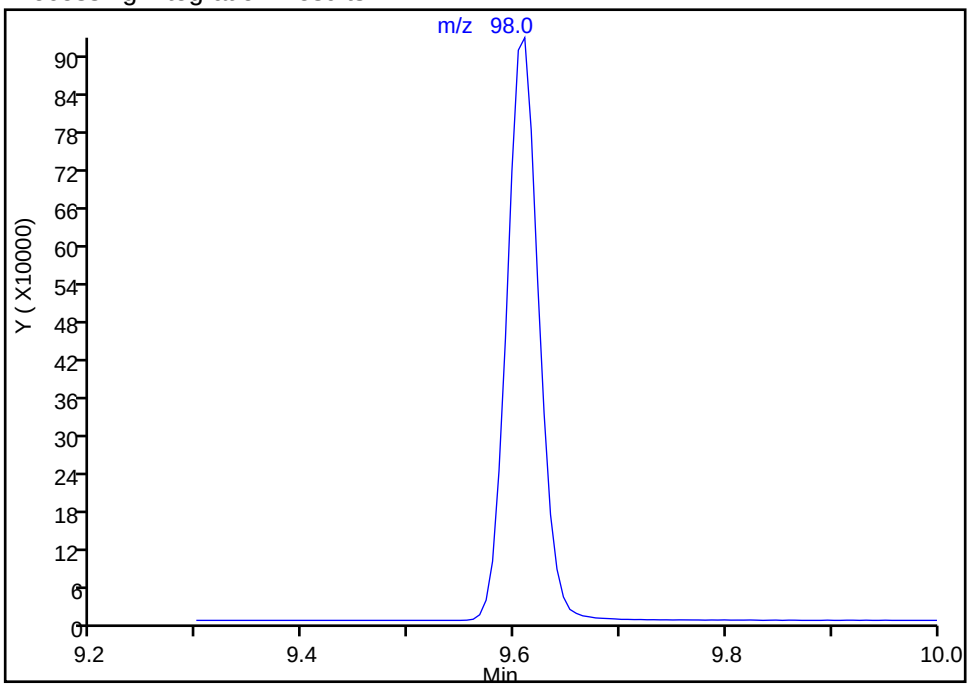
Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X11.D				
Injection Date:	30-Jul-2023 16:05:30	Instrument ID:	19094		
Lims ID:	410-136176-A-3	Lab Sample ID:	410-136176-3		
Client ID:	5W7B				
Operator ID:	knk41612	ALS Bottle#:	11	Worklist Smp#:	12
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

$ 83 Toluene-d8 (Surr), CAS: 2037-26-5

Signal: 1

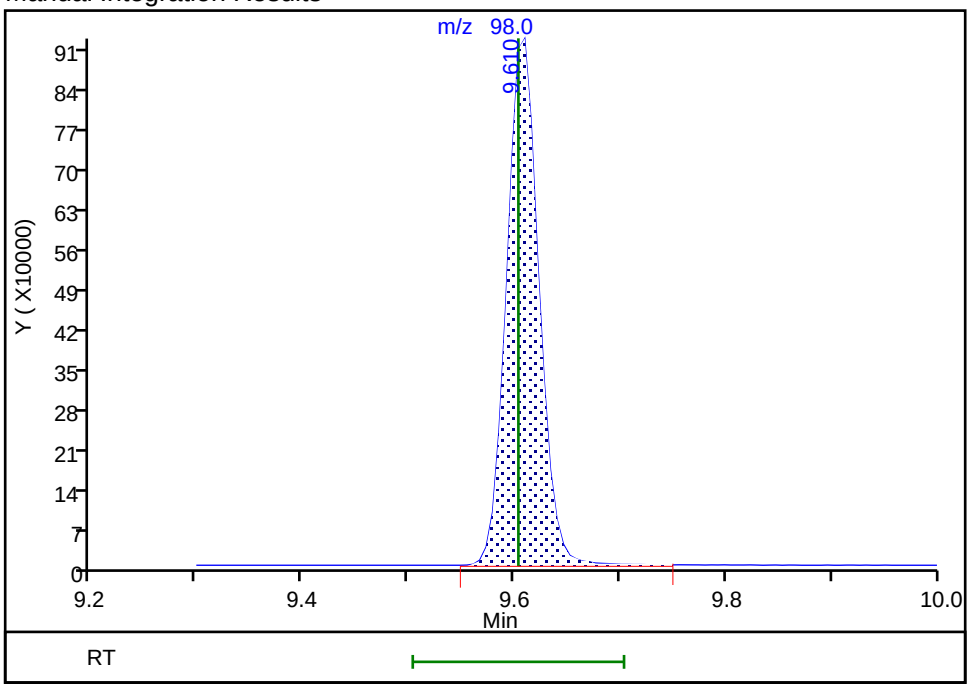
Not Detected
Expected RT: 9.60

Processing Integration Results



Manual Integration Results

RT: 9.61
Area: 1963979
Amount: 9.633647
Amount Units: ug/l



Reviewer: DVW2, 31-Jul-2023 16:26:20 -04:00:00 (UTC)
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5WC21
Lab Sample ID: 410-136176-4

Matrix: Water
Lab File ID: HL30X14.D

Analysis Method: 8260D
Date Collected: 07/25/2023 13:25

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 17:06

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	0.85	J	1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X14.D
Lims ID: 410-136176-A-4
Client ID: 5WC21
Sample Type: Client
Inject. Date: 30-Jul-2023 17:06:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-015
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:22

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.062	4.105	-0.043	26	81936	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.659	6.677	-0.018	94	513847	10.5	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.128	-0.006	52	98710	10.8	
* 64 Fluorobenzene (IS)	96	7.561	7.573	-0.012	99	2058311	10.0	
68 Trichloroethene	95	8.055	8.055	0.000	99	48831	0.8501	
$ 83 Toluene-d8 (Surr)	98	9.604	9.604	0.000	94	2061457	9.64	
* 113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1570866	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	91	732177	9.44	
* 141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	830425	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

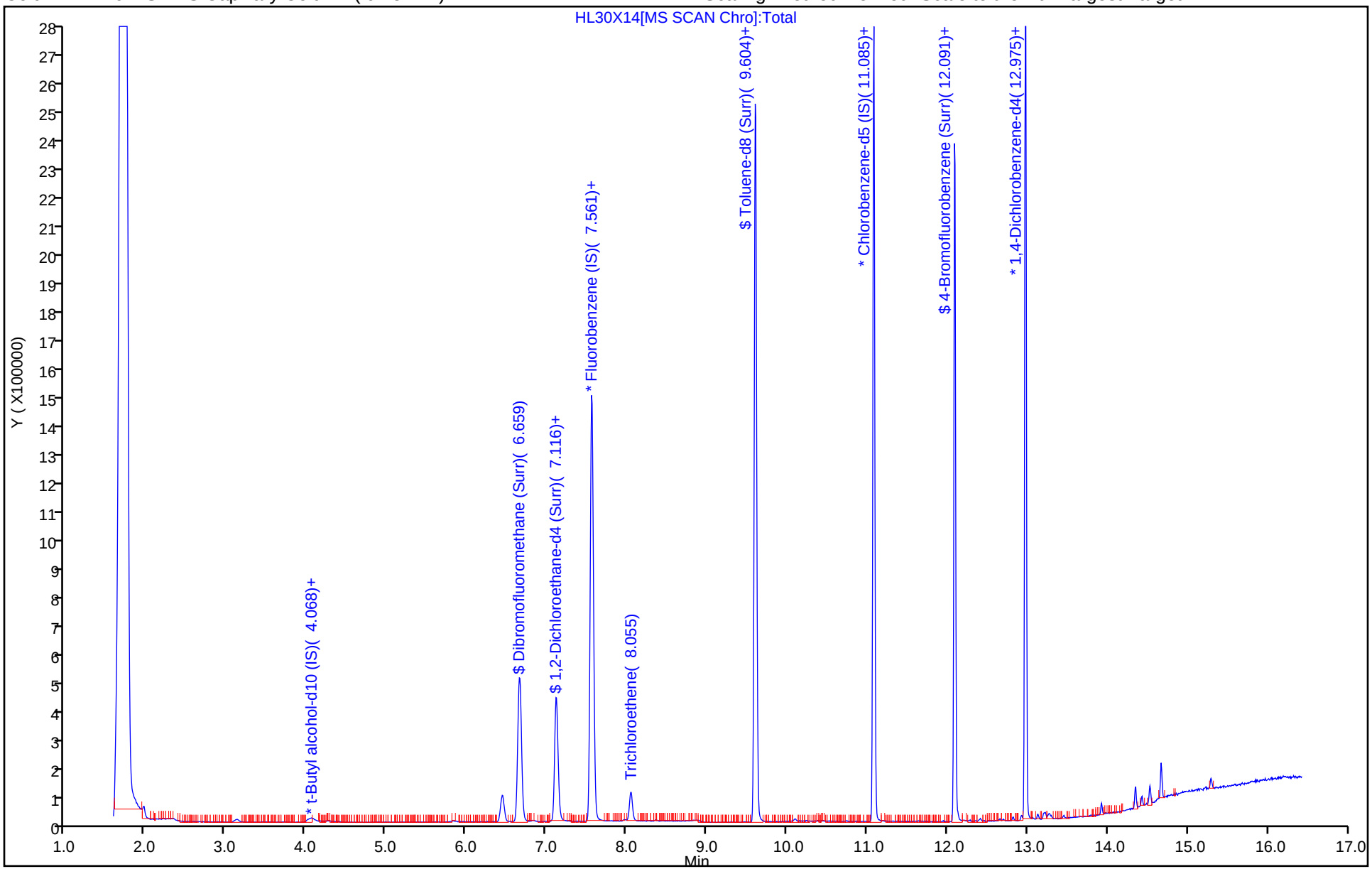
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:34:09 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X14.D				
Injection Date:	30-Jul-2023 17:06:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-4	Lab Sample ID:	410-136176-4	Worklist Smp#:	15
Client ID:	5WC21				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X14.D				
Lims ID:	410-136176-A-4				
Client ID:	5WC21				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 17:06:30	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-015				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:22

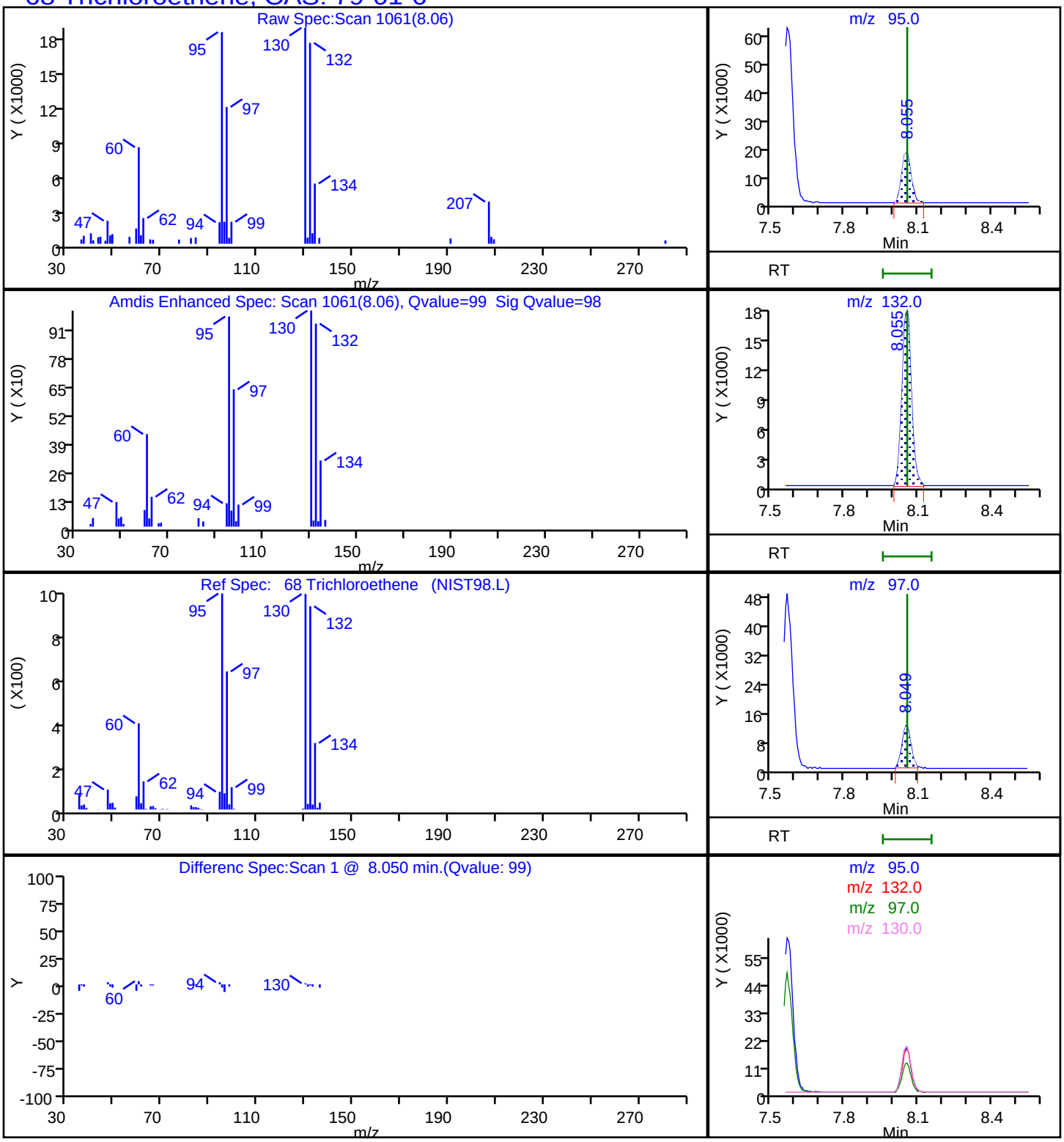
Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	105.05
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.42
$ 83 Toluene-d8 (Surr)	10.0	9.64	96.43
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.44	94.44

Report Date: 31-Jul-2023 16:34:09 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X14.D				
Injection Date:	30-Jul-2023 17:06:30	Instrument ID:	19094		
Lims ID:	410-136176-A-4	Lab Sample ID:	410-136176-4		
Client ID:	5WC21				
Operator ID:	knk41612	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5WDUP
Lab Sample ID: 410-136176-5

Matrix: Water
Lab File ID: HL30X15.D

Analysis Method: 8260D
Date Collected: 07/25/2023 13:30

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 17:27

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	0.81	J	1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	95		80-120
1868-53-7	Dibromofluoromethane (Surr)	107		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X15.D
Lims ID: 410-136176-A-5
Client ID: 5WDUP
Sample Type: Client
Inject. Date: 30-Jul-2023 17:27:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-016
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.056	4.105	-0.049	27	82690	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.677	-0.012	94	511490	10.7	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.128	-0.006	52	97065	10.9	
* 64 Fluorobenzene (IS)	96	7.567	7.573	-0.006	99	2015980	10.0	
68 Trichloroethene	95	8.049	8.055	-0.006	98	45604	0.8106	
$ 83 Toluene-d8 (Surr)	98	9.604	9.604	0.000	94	2031084	9.64	
* 113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1547903	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	91	722297	9.45	
* 141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	835869	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

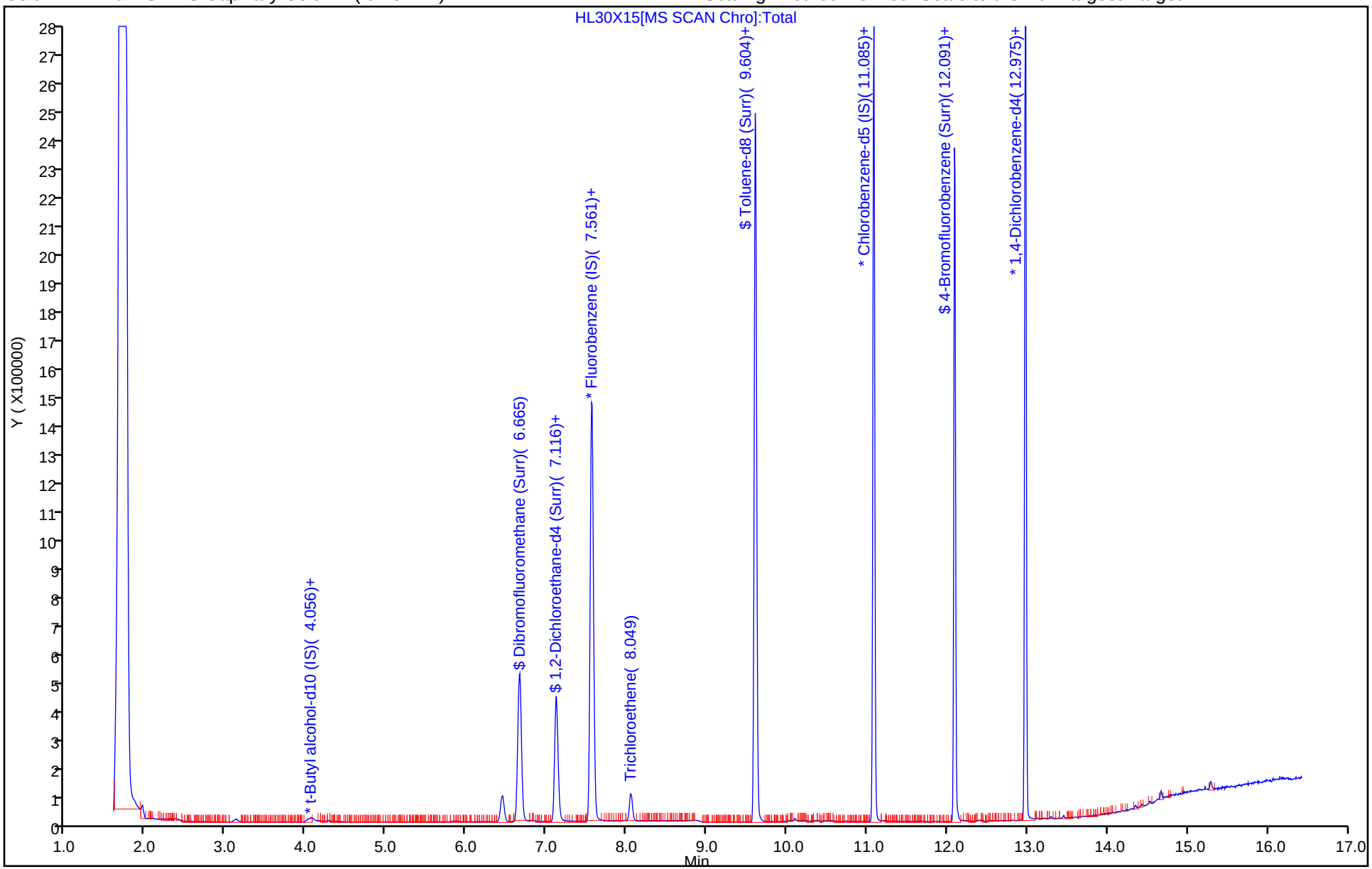
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:34:11 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X15.D				
Injection Date:	30-Jul-2023 17:27:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-5	Lab Sample ID:	410-136176-5	Worklist Smp#:	16
Client ID:	5WDUP				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X15.D				
Lims ID:	410-136176-A-5				
Client ID:	5WDUP				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 17:27:30	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-016				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:30

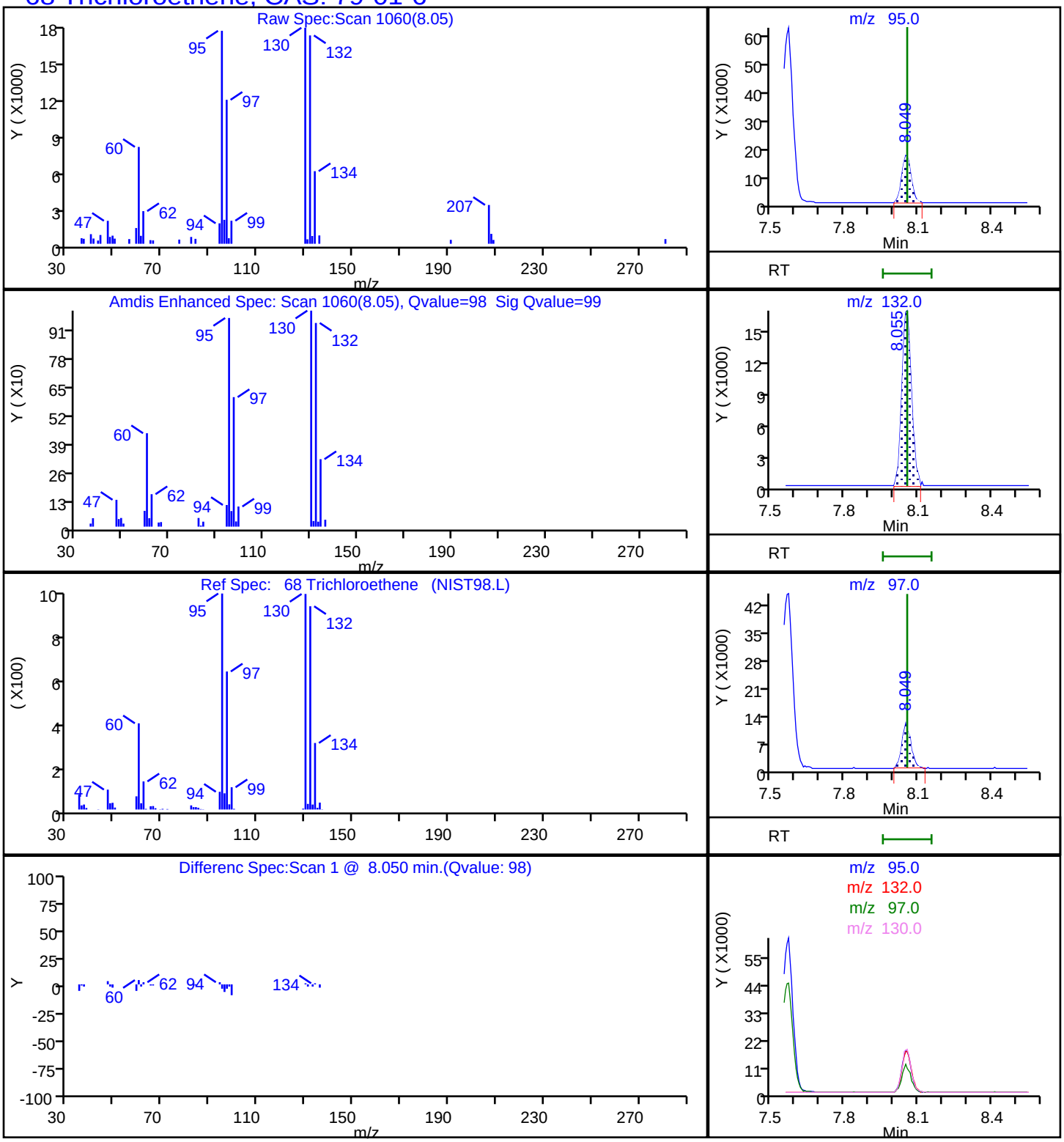
Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.7	106.77
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.85
$ 83 Toluene-d8 (Surr)	10.0	9.64	96.42
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.45	94.55

Report Date: 31-Jul-2023 16:34:11 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X15.D				
Injection Date:	30-Jul-2023 17:27:30	Instrument ID:	19094		
Lims ID:	410-136176-A-5	Lab Sample ID:	410-136176-5		
Client ID:	5WDUP				
Operator ID:	knk41612	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5WC22
Lab Sample ID: 410-136176-6

Matrix: Water
Lab File ID: HL30X16.D

Analysis Method: 8260D
Date Collected: 07/25/2023 11:40

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 17:47

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	1.6		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X16.D
Lims ID: 410-136176-A-6
Client ID: 5WC22
Sample Type: Client
Inject. Date: 30-Jul-2023 17:47:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-017
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:44

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	6 Vinyl chloride	62		2.215				ND	
	17 1,1-Dichloroethene	96		3.446				ND	
*	28 t-Butyl alcohol-d10 (IS)	65	4.062	4.105	-0.043	27	82937	50.0	
	33 trans-1,2-Dichloroethene	96		4.495				ND	
	42 cis-1,2-Dichloroethene	96		5.982				ND	7
$	52 Dibromofluoromethane (Surr)	113	6.671	6.677	-0.006	94	510807	10.6	
$	58 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.128	0.000	53	95901	10.7	
*	64 Fluorobenzene (IS)	96	7.567	7.573	-0.006	99	2030434	10.0	
	68 Trichloroethene	95	8.061	8.055	0.006	99	89500	1.58	
$	83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2035344	9.64	
*	113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1552090	10.0	
$	126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	92	719138	9.39	
*	141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	821383	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

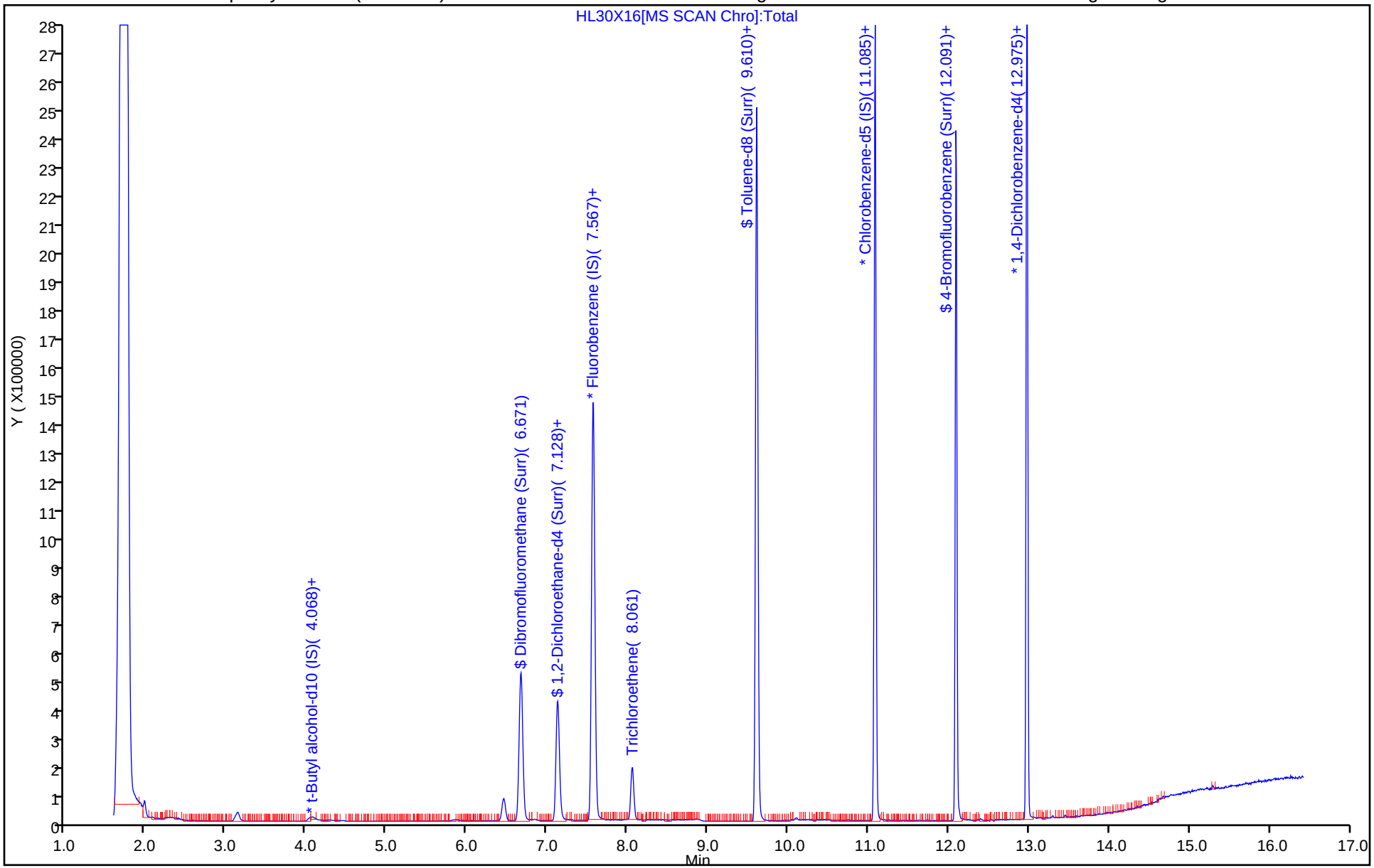
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:34:14 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X16.D				
Injection Date:	30-Jul-2023 17:47:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-6	Lab Sample ID:	410-136176-6	Worklist Smp#:	17
Client ID:	5WC22				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X16.D				
Lims ID:	410-136176-A-6				
Client ID:	5WC22				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 17:47:30	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-017				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

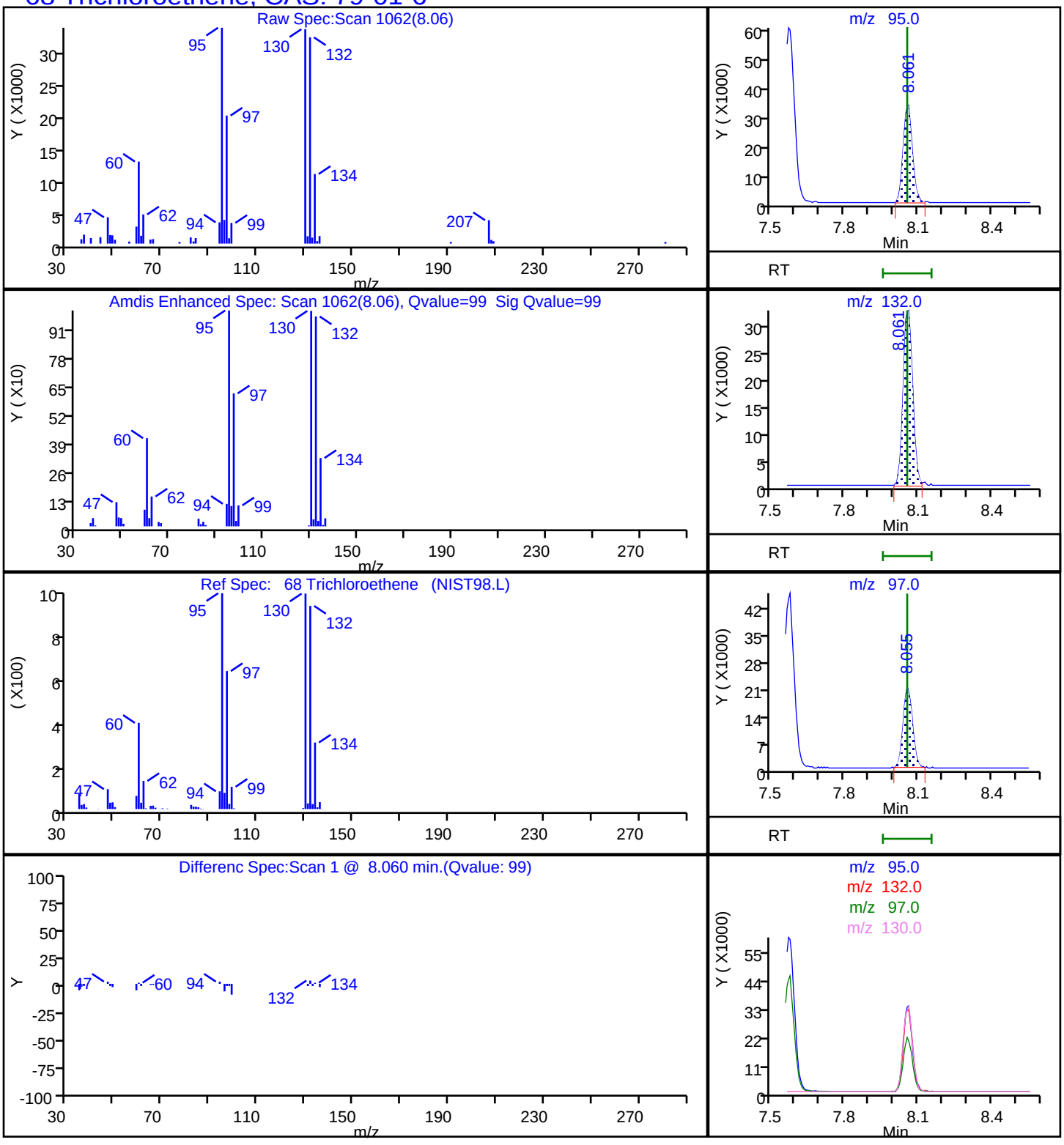
First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:44

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.6	105.87
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.78
$ 83 Toluene-d8 (Surr)	10.0	9.64	96.36
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.39	93.88

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X16.D				
Injection Date:	30-Jul-2023 17:47:30	Instrument ID:	19094		
Lims ID:	410-136176-A-6	Lab Sample ID:	410-136176-6		
Client ID:	5WC22				
Operator ID:	knk41612	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5WC23
Lab Sample ID: 410-136176-7

Matrix: Water
Lab File ID: HL30X17.D

Analysis Method: 8260D
Date Collected: 07/25/2023 12:35

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 18:08

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	1.7		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X17.D
Lims ID: 410-136176-A-7
Client ID: 5WC23
Sample Type: Client
Inject. Date: 30-Jul-2023 18:08:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-018
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:54

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
	6 Vinyl chloride	62		2.215				ND	
	17 1,1-Dichloroethene	96		3.446				ND	
*	28 t-Butyl alcohol-d10 (IS)	65	4.056	4.105	-0.049	28	79884	50.0	
	33 trans-1,2-Dichloroethene	96		4.495				ND	
	42 cis-1,2-Dichloroethene	96		5.982				ND	7
$	52 Dibromofluoromethane (Surr)	113	6.665	6.677	-0.012	94	503878	10.6	
$	58 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.128	-0.012	57	94850	10.7	
*	64 Fluorobenzene (IS)	96	7.567	7.573	-0.006	99	1999379	10.0	
	68 Trichloroethene	95	8.055	8.055	0.000	99	92561	1.66	
$	83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2015213	9.60	
*	113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1541859	10.0	
$	126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	92	713769	9.38	
*	141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	808361	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

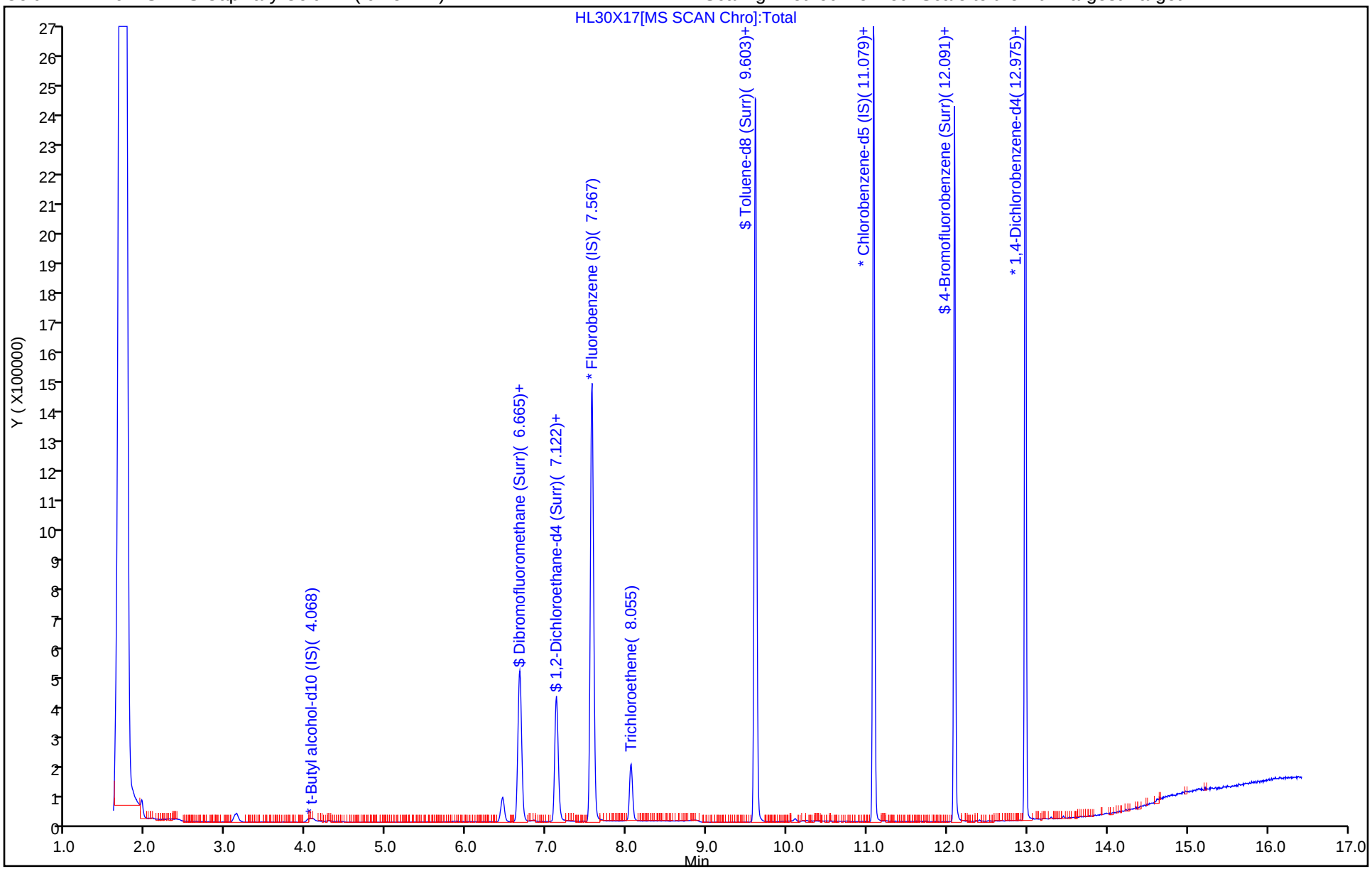
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:34:17 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X17.D				
Injection Date:	30-Jul-2023 18:08:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-7	Lab Sample ID:	410-136176-7	Worklist Smp#:	18
Client ID:	5WC23				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X17.D				
Lims ID:	410-136176-A-7				
Client ID:	5WC23				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 18:08:30	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-018				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:54

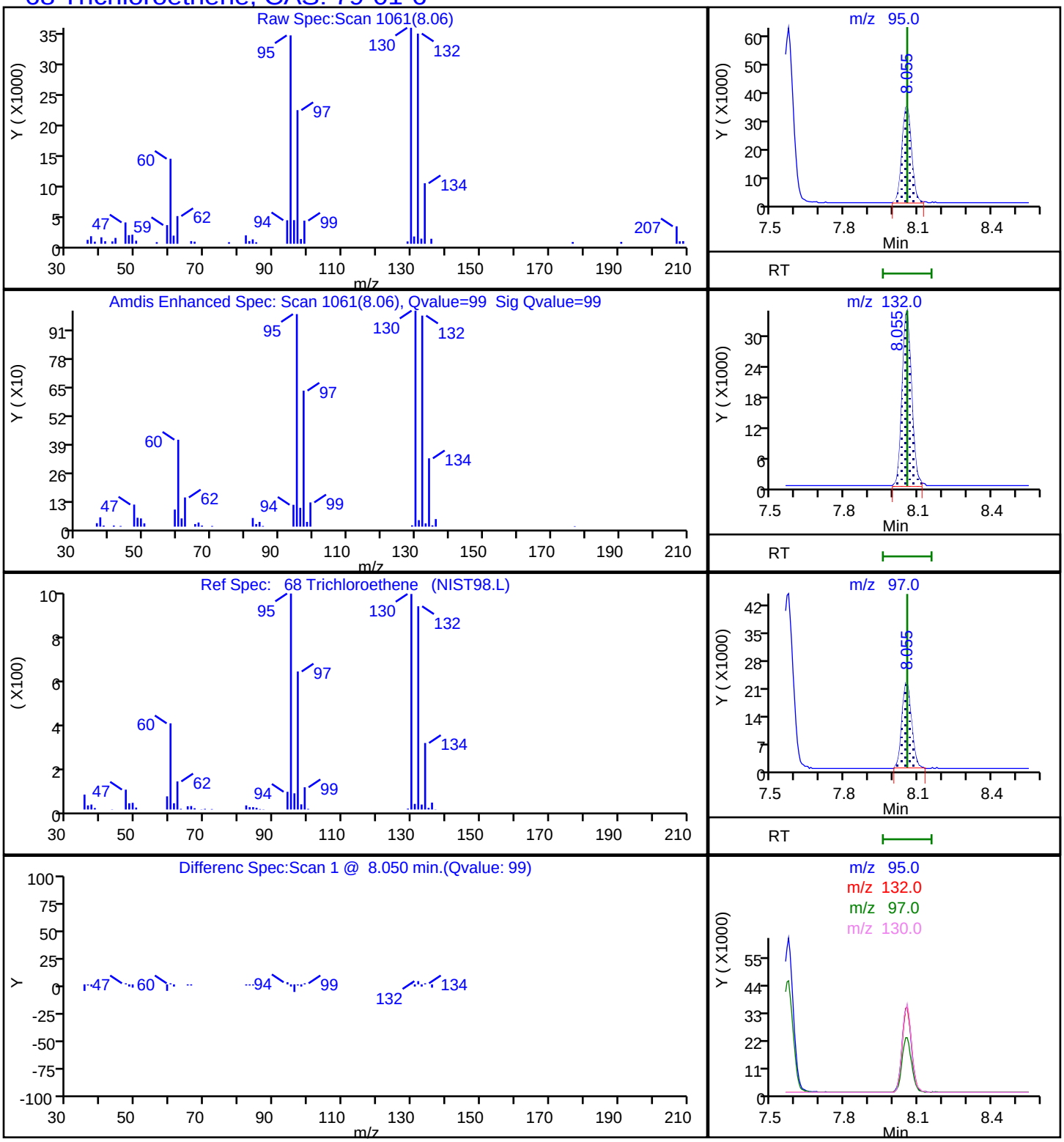
Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.6	106.05
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	107.25
$ 83 Toluene-d8 (Surr)	10.0	9.60	96.04
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.38	93.80

Report Date: 31-Jul-2023 16:34:17 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X17.D				
Injection Date:	30-Jul-2023 18:08:30	Instrument ID:	19094		
Lims ID:	410-136176-A-7	Lab Sample ID:	410-136176-7		
Client ID:	5WC23				
Operator ID:	knk41612	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

68 Trichloroethene, CAS: 79-01-6



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W12A
Lab Sample ID: 410-136176-8

Matrix: Water
Lab File ID: HL30X18.D

Analysis Method: 8260D
Date Collected: 07/25/2023 09:20

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 18:28

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	92		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC

Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X18.D
Lims ID: 410-136176-A-8
Client ID: 5W12A
Sample Type: Client
Inject. Date: 30-Jul-2023 18:28:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-019
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:30:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.086	4.105	-0.019	19	79226	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.671	6.677	-0.006	93	506195	10.5	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.128	-0.006	52	96066	10.7	
* 64 Fluorobenzene (IS)	96	7.574	7.573	0.001	99	2020856	10.0	
68 Trichloroethene	95	8.061	8.055	0.006	96	7086	0.1256	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2025857	9.55	
* 113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1558852	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	92	711009	9.24	
* 141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	819515	10.0	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Reagents:

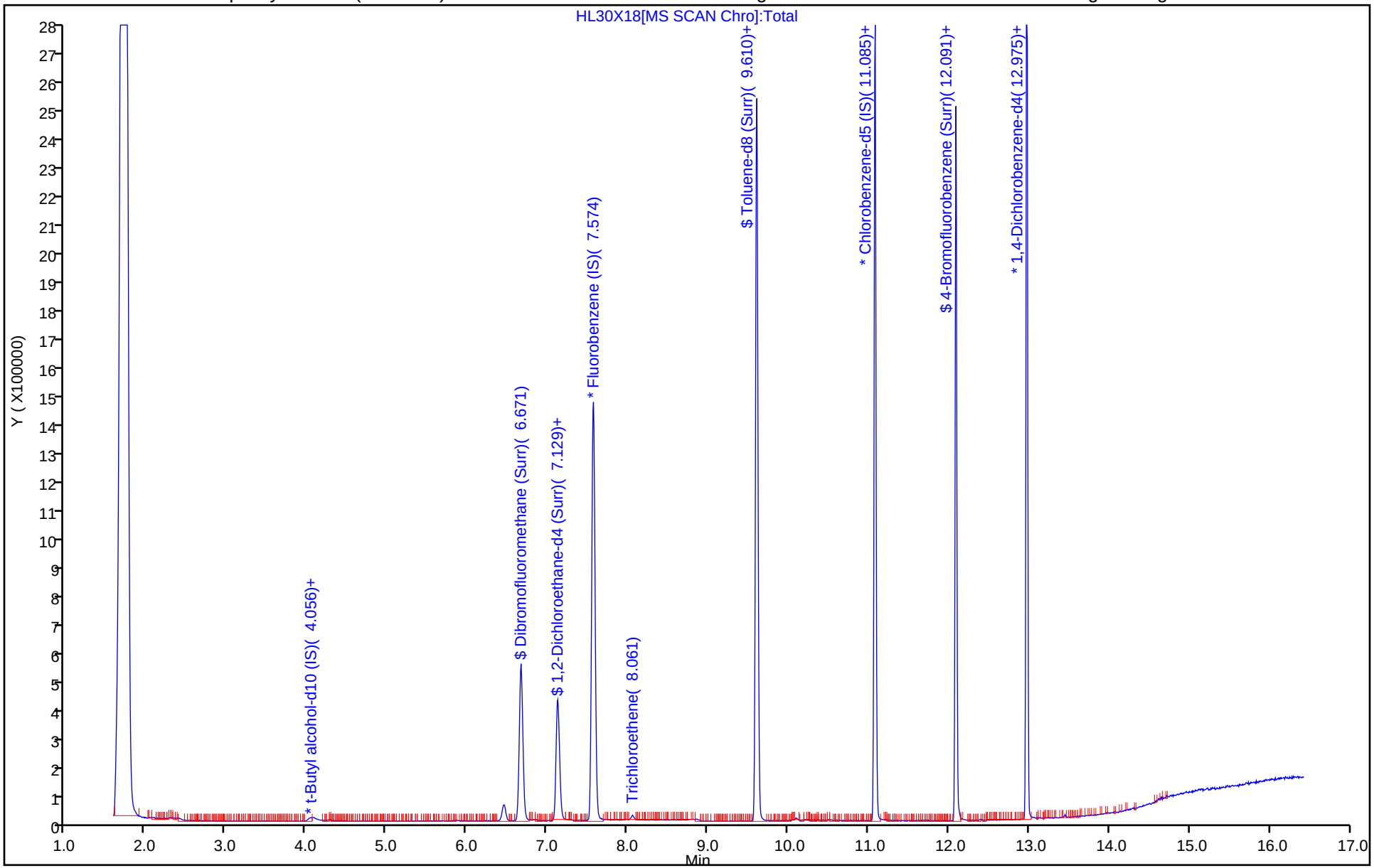
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:34:20 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X18.D				
Injection Date:	30-Jul-2023 18:28:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-8	Lab Sample ID:	410-136176-8	Worklist Smp#:	19
Client ID:	5W12A				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X18.D				
Lims ID:	410-136176-A-8				
Client ID:	5W12A				
Sample Type:	Client				
Inject. Date:	30-Jul-2023 18:28:30	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-019				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:30:05

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	105.41
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	107.47
$ 83 Toluene-d8 (Surr)	10.0	9.55	95.49
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.24	92.41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: Trip Blank 1
Lab Sample ID: 410-136176-9

Matrix: Water
Lab File ID: HL30X06.D

Analysis Method: 8260D
Date Collected: 07/25/2023 00:00

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 14:23

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	116		80-120
460-00-4	4-Bromofluorobenzene (Surr)	94		80-120
1868-53-7	Dibromofluoromethane (Surr)	109		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X06.D
Lims ID: 410-136176-A-9
Client ID: Trip Blank 1
Sample Type: Client
Inject. Date: 30-Jul-2023 14:23:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-007
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:24:10

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	OnCol Amt ug/l	Flags
6 Vinyl chloride	62		2.215				ND	
17 1,1-Dichloroethene	96		3.446				ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.092	4.105	-0.013	19	97888	50.0	
33 trans-1,2-Dichloroethene	96		4.495				ND	7
42 cis-1,2-Dichloroethene	96		5.982				ND	7
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	528342	10.9	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.128	0.006	52	104791	11.6	
* 64 Fluorobenzene (IS)	96	7.573	7.573	0.000	99	2045651	10.0	
68 Trichloroethene	95		8.055				ND	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2053009	9.51	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1586892	10.0	
$ 126 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	92	737465	9.42	
* 141 1,4-Dichlorobenzene-d4	152	12.969	12.963	0.006	95	850232	10.0	

QC Flag Legend

Processing Flags
7 - Failed Limit of Detection

Reagents:

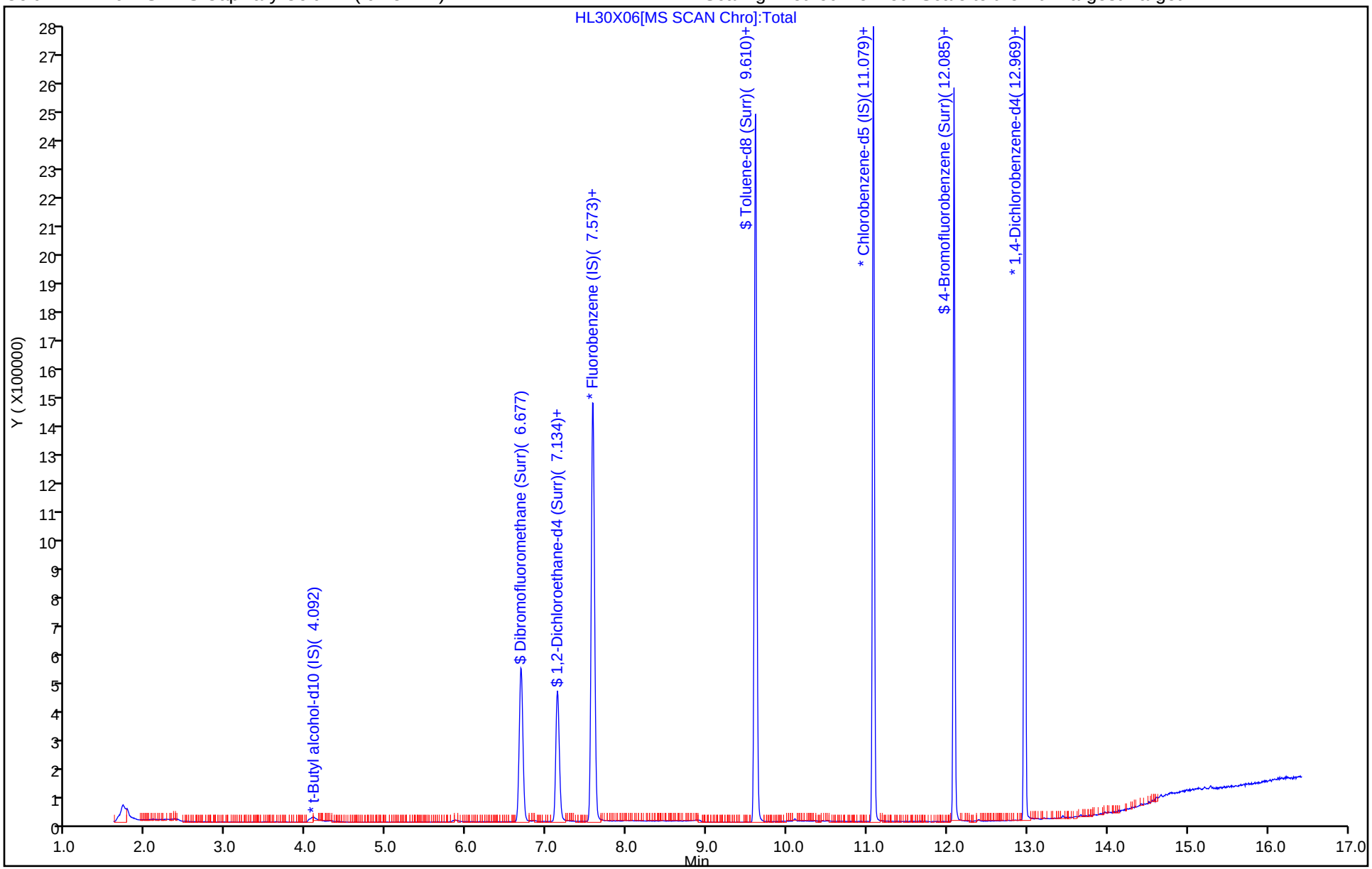
MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

Report Date: 31-Jul-2023 16:33:44 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X06.D				
Injection Date:	30-Jul-2023 14:23:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-9	Lab Sample ID:	410-136176-9	Worklist Smp#:	7
Client ID:	Trip Blank 1				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	6
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X06.D
Lims ID: 410-136176-A-9
Client ID: Trip Blank 1
Sample Type: Client
Inject. Date: 30-Jul-2023 14:23:30 ALS Bottle#: 6 Worklist Smp#: 7
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-007
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:24:10

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.9	108.69
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	11.6	115.81
$ 83 Toluene-d8 (Surr)	10.0	9.51	95.06
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.42	94.16

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-366140/13	HA19X12.D
Level 2	IC 410-366140/14	HA19X13.D
Level 3	IC 410-366140/15	HA19X14.D
Level 4	IC 410-366140/16	HA19X15.D
Level 5	IC 410-366140/17	HA19X16.D
Level 6	ICIS 410-366140/18	HA19X17.D
Level 7	IC 410-366140/19	HA19X18.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	+++++ 0.3211	0.3607 0.3078	0.3678	0.3021	0.3264	Ave		0.3310			0.1000	8.3		20.0			
Chloromethane	0.4982 0.4086	0.4363 0.4041	0.4554	0.4447	0.4151	Ave		0.4375			0.1000	7.5		20.0			
1,3-Butadiene	0.4983 0.3852	0.4351 0.3662	0.4264	0.4201	0.4023	Ave		0.4191				10.1		20.0			
Vinyl chloride	0.4478 0.3943	0.4058 0.3855	0.4341	0.4008	0.3923	Ave		0.4087			0.1000	5.7		20.0			
Bromomethane	0.2793 0.2453	0.2529 0.2406	0.2624	0.2587	0.2467	Ave		0.2551			0.1000	5.1		20.0			
Chloroethane	0.2540 0.2173	0.2326 0.2160	0.2350	0.2274	0.2200	Ave		0.2289			0.1000	5.8		20.0			
Dichlorofluoromethane	0.6541 0.5060	0.5544 0.5005	0.5562	0.5392	0.5257	Ave		0.5480			0.1000	9.4		20.0			
Trichlorofluoromethane	0.5035 0.4660	0.4387 0.4522	0.4775	0.4346	0.4649	Ave		0.4625			0.1000	5.1		20.0			
Ethyl ether	0.1947 0.1804	0.1901 0.1773	0.1790	0.2016	0.1890	Ave		0.1874				4.8		20.0			
Freon 123a	0.4603 0.3266	0.3608 0.3228	0.3844	0.3311	0.3342	Ave		0.3600				13.7		20.0			
Acrolein	3.5549 3.1977	3.6222 2.9242	3.0184	3.2907	3.5078	Ave		3.3023				8.2		20.0			
1,1-Dichloroethene	0.2353 0.2271	0.2401 0.2217	0.2383	0.2090	0.2235	Ave		0.2278			0.1000	4.8		20.0			
Acetone	+++++ 3.1585	4.1717 2.7004	3.2045	3.2571	3.3103	Ave		3.3004			0.1000	14.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Freon 113	0.1774 0.2363	0.2014 0.2303	0.2261	0.2025	0.2243	Ave		0.2141			0.1000	9.8		20.0			
Methyl iodide	0.3713 0.4241	0.4160 0.4143	0.4318	0.3998	0.4182	Ave		0.4108				4.9		20.0			
Carbon disulfide	0.6161 0.6612	0.6636 0.6568	0.6734	0.6084	0.6506	Ave		0.6472			0.1000	3.9		20.0			
Methyl acetate	12.318 10.215	11.889 9.1344	11.167	11.701	10.862	Ave		11.041			0.1000	9.9		20.0			
Allyl chloride	0.3724 0.4104	0.4410 0.4054	0.4102	0.3829	0.4052	Ave		0.4039				5.4		20.0			
Methylene Chloride	0.2357 0.2412	0.2535 0.2344	0.2484	0.2324	0.2433	Ave		0.2413			0.1000	3.2		20.0			
t-Butyl alcohol	0.8178 0.9736	1.1048 0.8644	1.1027	0.9781	0.9122	Ave		0.9648				11.5		20.0			
Acrylonitrile	3.4636 5.0257	5.9166 4.6661	5.0850	5.1597	5.4683	Ave		4.9693				15.5		20.0			
Methyl tertiary butyl ether	0.5013 0.5513	0.5732 0.5290	0.5751	0.5402	0.5571	Ave		0.5467			0.1000	4.8		20.0			
trans-1,2-Dichloroethene	0.2660 0.2509	0.2653 0.2469	0.2697	0.2374	0.2480	Ave		0.2549			0.1000	4.8		20.0			
n-Hexane	0.3412 0.3320	0.2855 0.3230	0.3050	0.2750	0.3111	Ave		0.3104				7.8		20.0			
1,1-Dichloroethane	0.4314 0.4951	0.4923 0.4843	0.5100	0.4628	0.4926	Ave		0.4812			0.2000	5.4		20.0			
di-Isopropyl ether	0.8006 0.8417	0.8701 0.8208	0.8711	0.8125	0.8389	Ave		0.8365				3.3		20.0			
2-Chloro-1,3-butadiene	0.4135 0.4263	0.4369 0.4171	0.4284	0.3894	0.4163	Ave		0.4183				3.6		20.0			
Ethyl t-butyl ether	0.6828 0.7420	0.7905 0.7193	0.7723	0.7176	0.7392	Ave		0.7377				4.9		20.0			
2-Butanone	6.2797 6.3006	7.6307 6.0009	6.4712	6.4969	7.2095	Ave		6.6271			0.1000	8.7		20.0			
cis-1,2-Dichloroethene	0.2807 0.2766	0.2926 0.2690	0.2867	0.2651	0.2725	Ave		0.2776			0.1000	3.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
2,2-Dichloropropane	0.4221 0.3896	0.4284 0.3762	0.4150	0.3656	0.3763	Ave		0.3962				6.4		20.0			
Propionitrile	1.8446 1.6363	2.0237 1.4879	1.5147	1.5558	1.8083	Ave		1.6959				11.8		20.0			
Methacrylonitrile	9.3030 6.8956	8.3617 6.6167	7.1195	7.6300	7.7127	Ave		7.6627				12.1		20.0			
Bromochloromethane	0.0867 0.1079	0.1031 0.1033	0.1117	0.1020	0.1071	Ave		0.1031				7.8		20.0			
Tetrahydrofuran	+++++ 1.7031	+++++ 1.5988	1.9236	1.7963	1.9604	Ave		1.7965				8.4		20.0			
Chloroform	0.4502 0.4548	0.4876 0.4468	0.4800	0.4397	0.4605	Ave		0.4599			0.2000	3.8		20.0			
1,1,1-Trichloroethane	0.4149 0.4088	0.4316 0.3986	0.4237	0.3796	0.3984	Ave		0.4079			0.1000	4.3		20.0			
Cyclohexane	0.4540 0.4561	0.4123 0.4485	0.4590	0.3868	0.4379	Ave		0.4364			0.1000	6.2		20.0			
1,1-Dichloropropene	0.3237 0.3662	0.3637 0.3642	0.3688	0.3309	0.3599	Ave		0.3539				5.2		20.0			
Carbon tetrachloride	0.3101 0.3588	0.3439 0.3542	0.3642	0.3244	0.3470	Ave		0.3432			0.1000	5.7		20.0			
Isobutyl alcohol	0.4910 0.3370	0.4439 0.3214	0.4009	0.3688	0.3461	Ave		0.3870				16.0		20.0			
Benzene	0.9745 1.0744	1.0755 1.0552	1.0794	1.0007	1.0635	Ave		1.0462			0.5000	4.0		20.0			
1,2-Dichloroethane	0.2386 0.2592	0.2705 0.2489	0.2675	0.2413	0.2622	Ave		0.2555			0.1000	4.9		20.0			
t-Amyl methyl ether	0.5683 0.6198	0.6498 0.6052	0.6526	0.6015	0.6244	Ave		0.6174				4.8		20.0			
n-Heptane	0.3064 0.3143	0.2755 0.3035	0.2772	0.2630	0.2915	Ave		0.2902				6.5		20.0			
n-Butanol	+++++ 0.2741	0.2954 0.2652	0.3238	0.2648	0.2602	Ave		0.2806				8.8		20.0			
Trichloroethene	0.2698 0.2841	0.2942 0.2807	0.2893	0.2578	0.2777	Ave		0.2791			0.2000	4.4		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3825 0.4476	0.4070 0.4395	0.4151	0.3728	0.4287	Ave		0.4133			0.1000	6.8		20.0			
1,2-Dichloropropane	0.2426 0.2804	0.2806 0.2746	0.2801	0.2610	0.2789	Ave		0.2712			0.1000	5.3		20.0			
1,4-Dioxane	0.0520 0.0413	0.0528 0.0450	0.0434	0.0408	0.0370	Ave		0.0446			0.0050	13.2		20.0			
Methyl methacrylate	13.201 13.984	16.072 13.869	12.775	14.976	15.360	Ave		14.319				8.3		20.0			
Dibromomethane	0.1077 0.1114	0.1112 0.1081	0.1158	0.1065	0.1126	Ave		0.1105				3.0		20.0			
Bromodichloromethane	0.3224 0.3263	0.3361 0.3202	0.3300	0.3128	0.3192	Ave		0.3239			0.2000	2.4		20.0			
2-Nitropropane	5.6483 3.8807	4.8337 3.6916	4.1071	4.0494	4.2779	Ave		4.3555				15.5		20.0			
1-Bromo-2-chloroethane	0.2536 0.2470	0.2557 0.2435	0.2458	0.2673	0.2602	Ave		0.2533				3.4		20.0			
cis-1,3-Dichloropropene	0.3352 0.4005	0.3891 0.3961	0.4029	0.3733	0.3949	Ave		0.3846			0.2000	6.2		20.0			
4-Methyl-2-pentanone	19.809 17.580	20.817 17.108	18.425	18.899	19.553	Ave		18.884			0.1000	6.9		20.0			
Toluene	0.8384 0.9207	0.9414 0.9014	0.9205	0.8531	0.9067	Ave		0.8975			0.4000	4.2		20.0			
trans-1,3-Dichloropropene	0.3491 0.4389	0.4005 0.4287	0.4402	0.4104	0.4346	Ave		0.4146			0.1000	7.8		20.0			
Ethyl methacrylate	0.2962 0.3301	0.3258 0.3131	0.3174	0.3113	0.3256	Ave		0.3171				3.7		20.0			
1,1,2-Trichloroethane	0.2471 0.2217	0.2416 0.2149	0.2345	0.2199	0.2213	Ave		0.2287			0.1000	5.4		20.0			
Tetrachloroethene	0.3506 0.4187	0.3969 0.4110	0.4156	0.3828	0.4057	Ave		0.3973			0.2000	6.0		20.0			
1,3-Dichloropropane	0.3374 0.3926	0.3939 0.3788	0.4008	0.3792	0.3910	Ave		0.3819				5.5		20.0			
2-Hexanone	11.950 11.898	13.800 11.562	12.502	12.659	13.207	Ave		12.511			0.1000	6.3		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dibromochloromethane	0.2404 0.2911	0.2788 0.2845	0.2896	0.2748	0.2902	Ave		0.2785				6.4		20.0			
1,2-Dibromoethane	0.1886 0.2085	0.2078 0.2025	0.2157	0.2018	0.2098	Ave		0.2050			0.1000	4.2		20.0			
1-Chlorohexane	0.5819 0.5446	0.5585 0.5368	0.5552	0.4918	0.5254	Ave		0.5420				5.3		20.0			
Chlorobenzene	0.8871 0.9961	1.0173 0.9769	1.0125	0.9362	0.9874	Ave		0.9734			0.5000	4.8		20.0			
1,1,1,2-Tetrachloroethane	0.3030 0.3477	0.3421 0.3387	0.3541	0.3230	0.3390	Ave		0.3354				5.1		20.0			
Ethylbenzene	1.5968 1.8192	1.8076 1.7881	1.8552	1.6993	1.7900	Ave		1.7652			0.1000	5.0		20.0			
m&p-Xylene	0.5768 0.6929	0.6824 0.6795	0.6942	0.6338	0.6778	Ave		0.6625			0.1000	6.5		20.0			
o-Xylene	0.5712 0.6687	0.6574 0.6575	0.6701	0.6200	0.6564	Ave		0.6430			0.3000	5.6		20.0			
Styrene	0.9433 1.1033	1.0896 1.0796	1.1059	1.0249	1.0847	Ave		1.0616			0.3000	5.5		20.0			
Bromoform	0.1385 0.1714	0.1615 0.1672	0.1721	0.1608	0.1684	Ave		0.1628			0.1000	7.1		20.0			
Isopropylbenzene	1.5876 1.8002	1.7685 1.7678	1.8111	1.6496	1.7576	Ave		1.7346			0.1000	4.8		20.0			
1,1,2,2-Tetrachloroethane	0.5181 0.5099	0.5859 0.4875	0.5461	0.5103	0.5200	Ave		0.5254			0.3000	6.1		20.0			
Bromobenzene	0.6083 0.7130	0.7187 0.7026	0.7255	0.6771	0.7103	Ave		0.6936				5.9		20.0			
trans-1,4-Dichloro-2-butene	5.5521 5.9399	6.2540 6.0119	5.8681	6.0892	6.3883	Ave		6.0148				4.5		20.0			
1,2,3-Trichloropropane	0.1182 0.1217	0.1333 0.1179	0.1304	0.1211	0.1250	Ave		0.1239				4.8		20.0			
N-Propylbenzene	3.4081 3.9698	3.9217 3.9209	3.9946	3.6543	3.9382	Ave		3.8297				5.7		20.0			
2-Chlorotoluene	0.6224 0.7595	0.7575 0.7572	0.7703	0.7077	0.7604	Ave		0.7336				7.2		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,3,5-Trimethylbenzene	2.3800 2.7849	2.7968 2.7660	2.7427	2.5574	2.7372	Ave		2.6807				5.8		20.0			
4-Chlorotoluene	0.6511 0.7750	0.7820 0.7708	0.7798	0.7212	0.7714	Ave		0.7502				6.4		20.0			
tert-Butylbenzene	0.5265 0.5987	0.6301 0.6006	0.5945	0.5382	0.5731	Ave		0.5802				6.4		20.0			
Pentachloroethane	0.4402 0.4767	0.4702 0.4932	0.4355	0.5054	0.5033	Ave		0.4749				6.0		20.0			
1,2,4-Trimethylbenzene	2.3375 2.8164	2.7195 2.8361	2.8199	2.6073	2.7993	Ave		2.7051				6.7		20.0			
sec-Butylbenzene	3.0742 3.5131	3.3444 3.5428	3.4388	3.1503	3.4207	Ave		3.3549				5.3		20.0			
1,3-Dichlorobenzene	1.2967 1.4701	1.4359 1.4730	1.4728	1.3794	1.4475	Ave		1.4251			0.6000	4.6		20.0			
p-Isopropyltoluene	2.5005 3.0118	2.8911 3.0329	2.9645	2.7142	2.9345	Ave		2.8642				6.7		20.0			
1,4-Dichlorobenzene	1.1850 1.3815	1.4005 1.3868	1.4061	1.3246	1.3767	Ave		1.3516			0.5000	5.8		20.0			
1,2,3-Trimethylbenzene	1.0835 1.1955	1.1944 1.1913	1.2011	1.1197	1.1798	Ave		1.1665				3.9		20.0			
Benzyl chloride	0.1656 0.1921	0.1992 0.1907	0.2022	0.1887	0.1910	Ave		0.1899				6.2		20.0			
n-Butylbenzene	1.1541 1.4668	1.3448 1.4884	1.4082	1.2906	1.4135	Ave		1.3666				8.5		20.0			
1,2-Dichlorobenzene	1.1357 1.2899	1.2900 1.2853	1.3158	1.2345	1.2878	Ave		1.2627			0.4000	4.8		20.0			
1,2-Dibromo-3-Chloropropane	0.0455 0.0648	0.0610 0.0658	0.0658	0.0615	0.0678	Ave		0.0617			0.0500	12.3		20.0			
1,3,5-Trichlorobenzene	0.8095 1.0604	0.9843 1.0754	1.0419	0.9557	1.0392	Ave		0.9952				9.3		20.0			
1,2,4-Trichlorobenzene	0.6493 0.8543	0.7554 0.8698	0.8401	0.7766	0.8333	Ave		0.7970			0.2000	9.7		20.0			
Hexachlorobutadiene	0.2483 0.3202	0.2940 0.3305	0.3142	0.2740	0.3048	Ave		0.2980				9.6		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
CURVE EVALUATION

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD /RSE	#	MAX %RSD /RSE	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Naphthalene	1.0625 1.3729	1.2767 1.3932	1.4185	1.3011	1.3750	Ave		1.3143				9.3		20.0			
1,2,3-Trichlorobenzene	0.5139 0.6783	0.5949 0.6898	0.6680	0.6112	0.6679	Ave		0.6320				10.0		20.0			
Dibromofluoromethane (Surr)	0.2389 0.2370	0.2383 0.2361	0.2364	0.2379	0.2389	Ave		0.2376				0.5		20.0			
1,2-Dichloroethane-d4 (Surr)	0.0448 0.0444	0.0448 0.0430	0.0448	0.0438	0.0440	Ave		0.0442				1.6		20.0			
Toluene-d8 (Surr)	1.3515 1.3641	1.3649 1.3601	1.3731	1.3521	1.3606	Ave		1.3609				0.6		20.0			
4-Bromofluorobenzene (Surr)	0.4904 0.4923	0.4966 0.4930	0.4966	0.4942	0.4918	Ave		0.4936				0.5		20.0			

Note: The M1 coefficient is the same as Ave RRF for an Ave curve type. RSD is calculated for Ave curve types. RSE is used for all other types.

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-366140/13	HA19X12.D
Level 2	IC 410-366140/14	HA19X13.D
Level 3	IC 410-366140/15	HA19X14.D
Level 4	IC 410-366140/16	HA19X15.D
Level 5	IC 410-366140/17	HA19X16.D
Level 6	ICIS 410-366140/18	HA19X17.D
Level 7	IC 410-366140/19	HA19X18.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	+++++ 636955	34429 1534246	70493	116124	318413	+++++ 10.0	0.500 25.0	1.00	2.00	5.00
Chloromethane	FB	Ave	18988 810550	41642 2014037	87280	170957	405000	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Butadiene	FB	Ave	18993 764078	41522 1824970	81722	161491	392467	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Vinyl chloride	FB	Ave	17066 782215	38729 1921148	83205	154080	382745	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromomethane	FB	Ave	10644 486665	24140 1198943	50297	99431	240708	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chloroethane	FB	Ave	9681 430991	22196 1076714	45043	87400	214603	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dichlorofluoromethane	FB	Ave	24929 1003661	52913 2494422	106606	207264	512847	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Trichlorofluoromethane	FB	Ave	19191 924460	41870 2253491	91529	167042	453540	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl ether	FB	Ave	7419 357895	18138 883832	34308	77498	184404	0.200 10.00	0.500 25.0	1.000	2.00	5.00
Freon 123a	FB	Ave	17545 647850	34438 1608567	73676	127261	325993	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acrolein	TBAd 10	Ave	42308 2510655	117548 5624213	226319	453625	1231678	10.0 500	25.0 1250	50.0	100	250
1,1-Dichloroethene	FB	Ave	8967 450439	22916 1104927	45667	80339	218036	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Acetone	TBAd 10	Ave	+++++	27075	48054	89796	232459	+++++	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			495967	1038749				100	250			
Freon 113	FB	Ave	6762 468821	19225 1147974	43330	77826	218851	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl iodide	FB	Ave	14150 841246	39699 2064892	82757	153693	407989	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon disulfide	FB	Ave	23481 1311680	63335 3273647	129064	233851	634668	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methyl acetate	TBAd 10	Ave	2932 160403	7716 351365	16745	32258	76277	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Allyl chloride	FB	Ave	14193 814150	42088 2020271	78620	147182	395258	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylene Chloride	FB	Ave	8984 478473	24190 1168187	47612	89325	237348	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Butyl alcohol	TBAd 10	Ave	3893 305748	14341 664962	33070	53929	128115	4.00 200	10.0 500	20.0	40.0	100
Acrylonitrile	TBAd 10	Ave	2061 197290	9600 448719	19063	35563	96000	0.500 25.0	1.25 62.5	2.50	5.00	12.5
Methyl tertiary butyl ether	FB	Ave	19106 1093526	54709 2636429	110227	207645	543441	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,2-Dichloroethene	FB	Ave	10137 497751	25315 1230308	51694	91248	241965	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Hexane	FB	Ave	13003 658533	27246 1609642	58462	105690	303506	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloroethane	FB	Ave	16441 982112	46987 2413514	97758	177913	480525	0.200 10.0	0.500 25.0	1.00	2.00	5.00
di-Isopropyl ether	FB	Ave	30515 1669640	83037 4090868	166958	312325	818376	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chloro-1,3-butadiene	FB	Ave	15760 845634	41693 2078698	82119	149672	406104	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethyl t-butyl ether	FB	Ave	26025 1471793	75440 3584711	148016	275834	721138	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Butanone	TBAd 10	Ave	14947	49525	97040	179118	506276	2.00	5.00	10.0	20.0	50.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			989354	2308325				100	250			
cis-1,2-Dichloroethene	FB	Ave	10699 548754	27925 1340829	54947	101890	265869	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2,2-Dichloropropane	FB	Ave	16087 772779	40888 1875167	79534	140523	367107	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Propionitrile	TBAd 10	Ave	8781 513896	26268 1144640	45428	85786	253963	4.00 200	10.0 500	20.0	40.0	100
Methacrylonitrile	TBAd 10	Ave	22143 1082796	54269 2545195	106761	210355	541609	2.00 100	5.00 250	10.0	20.0	50.0
Bromochloromethane	FB	Ave	3303 214131	9844 514920	21405	39209	104507	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrahydrofuran	TBAd 10	Ave	+++++ 133716	+++++ 307505	14423	24762	68833	+++++ 50.0	+++++ 125	5.00	10.0	25.0
Chloroform	FB	Ave	17158 902080	46535 2226938	92007	169008	449290	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1-Trichloroethane	FB	Ave	15812 810954	41187 1986785	81215	145917	388654	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Cyclohexane	FB	Ave	17303 904666	39353 2235456	87979	148700	427183	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1-Dichloropropene	FB	Ave	12338 726484	34708 1815287	70685	127188	351085	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Carbon tetrachloride	FB	Ave	11820 711773	32822 1765238	69798	124713	338491	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isobutyl alcohol	TBAd 10	Ave	5843 264560	14404 618236	30058	50843	121519	10.0 500	25.0 1250	50.0	100	250
Benzene	FB	Ave	37141 2131251	102641 5259098	206883	384679	1037536	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloroethane	FB	Ave	9093 514210	25813 1240685	51276	92762	255763	0.200 10.0	0.500 25.0	1.00	2.00	5.00
t-Amyl methyl ether	FB	Ave	21658 1229540	62020 3016082	125084	231229	609166	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Heptane	FB	Ave	11676	26291	53133	101077	284346	0.200	0.500	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
			623465	1512707				10.0	25.0			
n-Butanol	TBAd 10	Ave	+++++ 376542	16774 892759	42491	63870	159856	+++++ 875	43.8 2188	87.5	175	438
Trichloroethene	FB	Ave	10282 563481	28081 1398978	55451	99079	270948	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Methylcyclohexane	FB	Ave	14578 887897	38844 2190578	79553	143298	418179	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichloropropane	FB	Ave	9246 556276	26782 1368707	53692	100335	272090	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dioxane	TBAd 10	Ave	619 32409	1713 86474	3251	5622	12985	10.0 500	25.0 1250	50.0	100	250
Methyl methacrylate	TBAd 10	Ave	3142 219582	10431 533478	19157	41287	107865	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromomethane	FB	Ave	4104 220960	10614 538614	22202	40955	109860	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromodichloromethane	FB	Ave	12287 647350	32077 1595722	63260	120233	311381	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Nitropropane	TBAd 10	Ave	6722 304682	15686 710007	30794	55820	150205	1.00 50.0	2.50 125	5.00	10.0	25.0
1-Bromo-2-chloroethane	FB	Ave	9664 489908	24405 1213607	47103	102767	253838	0.200 10.0	0.500 25.0	1.00	2.00	5.00
cis-1,3-Dichloropropene	FB	Ave	12777 794418	37131 1973868	77227	143484	385246	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Methyl-2-pentanone	TBAd 10	Ave	47149 2760554	135107 6580651	276292	521038	1373060	2.00 100	5.00 250	10.0	20.0	50.0
Toluene	CBZd 5	Ave	23645 1336088	65631 3316926	128686	240802	648649	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,3-Dichloropropene	CBZd 5	Ave	9845 636888	27919 1577560	61538	115846	310893	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
Ethyl methacrylate	CBZd 5	Ave	8353 479093	22711 1152324	44377	87863	232904	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2-Trichloroethane	CBZd 5	Ave	6969 321718	16844 790858	32787	62066	158299	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Tetrachloroethene	CBZd 5	Ave	9888 607647	27671 1512270	58105	108060	290211	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichloropropane	CBZd 5	Ave	9515 569662	27462 1393771	56026	107028	279745	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Hexanone	TBAd 10	Ave	28443 1868352	89565 4447274	187482	349011	927403	2.00 100	5.00 250	10.0	20.0	50.0
Dibromochloromethane	CBZd 5	Ave	6780 422450	19439 1046745	40489	77568	207592	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromoethane	CBZd 5	Ave	5320 302559	14489 745028	30159	56966	150103	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1-Chlorohexane	CBZd 5	Ave	16411 790325	38936 1975227	77621	138814	375882	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Chlorobenzene	CBZd 5	Ave	25017 1445549	70920 3594835	141545	264276	706382	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,1,2-Tetrachloroethane	CBZd 5	Ave	8546 504509	23846 1246196	49504	91175	242526	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Ethylbenzene	CBZd 5	Ave	45031 2639936	126015 6580100	259348	479673	1280561	0.200 10.0	0.500 25.0	1.00	2.00	5.00
m&p-Xylene	CBZd 5	Ave	32534 2011044	95152 5000973	194086	357788	969863	0.400 20.0	1.00 50.0	2.00	4.00	10.0

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
o-Xylene	CBZd 5	Ave	16107 970389	45833 2419441	93674	175003	469615	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Styrene	CBZd 5	Ave	26601 1601100	75960 3972660	154598	289293	776015	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromoform	CBZd 5	Ave	3905 248769	11260 615440	24058	45397	120439	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Isopropylbenzene	CBZd 5	Ave	44771 2612391	123286 6505402	253192	465640	1257363	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,1,2,2-Tetrachloroethane	DCBd 4	Ave	7836 403972	22035 969172	41618	77837	200075	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Bromobenzene	DCBd 4	Ave	9200 564932	27030 1396862	55285	103263	273271	0.200 10.0	0.500 25.0	1.00	2.00	5.00
trans-1,4-Dichloro-2-butene	TBAd 10	Ave	13215 932718	40590 2312520	87995	167876	448606	2.00 100	5.00 250	10.0	20.0	50.0
1,2,3-Trichloropropane	DCBd 4	Ave	1787 96400	5014 234344	9938	18470	48099	0.200 10.0	0.500 25.0	1.00	2.00	5.00
N-Propylbenzene	DCBd 4	Ave	51541 3145301	147502 7795652	304419	557347	1515215	0.200 10.0	0.500 25.0	1.00	2.00	5.00
2-Chlorotoluene	DCBd 4	Ave	9412 601725	28490 1505528	58702	107930	292568	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3,5-Trimethylbenzene	DCBd 4	Ave	35994 2206475	105192 5499441	209016	390053	1053133	0.200 10.0	0.500 25.0	1.00	2.00	5.00
4-Chlorotoluene	DCBd 4	Ave	9847 614053	29413 1532440	59424	109989	296792	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
tert-Butylbenzene	DCBd 4	Ave	7962 474319	23699 1194054	45302	82091	220495	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Pentachloroethane	DCBd 4	Ave	6658 377707	17687 980542	33185	77077	193643	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trimethylbenzene	DCBd 4	Ave	35350 2231472	102286 5638811	214894	397668	1077037	0.200 10.0	0.500 25.0	1.00	2.00	5.00
sec-Butylbenzene	DCBd 4	Ave	46492 2783461	125788 7043767	262058	480487	1316129	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,3-Dichlorobenzene	DCBd 4	Ave	19611 1164783	54008 2928653	112235	210377	556943	0.200 10.0	0.500 25.0	1.00	2.00	5.00
p-Isopropyltoluene	DCBd 4	Ave	37815 2386266	108740 6030062	225919	413962	1129043	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,4-Dichlorobenzene	DCBd 4	Ave	17921 1094581	52676 2757148	107153	202029	529693	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trimethylbenzene	DCBd 4	Ave	16386 947210	44925 2368607	91533	170773	453918	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Benzyl chloride	DCBd 4	Ave	2504 152191	7493 379203	15412	28779	73498	0.200 10.0	0.500 25.0	1.00	2.00	5.00
n-Butylbenzene	DCBd 4	Ave	17454 1162197	50581 2959276	107313	196834	543862	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dichlorobenzene	DCBd 4	Ave	17176 1022011	48521 2555458	100276	188289	495463	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2-Dibromo-3-Chloropropane	DCBd 4	Ave	688 51352	2293 130897	5017	9373	26097	0.200 10.0	0.500 25.0	1.00	2.00	5.00

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
RESPONSE AND CONCENTRATION

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5
1,3,5-Trichlorobenzene	DCBd 4	Ave	12243 840176	37023 2138064	79399	145760	399828	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,4-Trichlorobenzene	DCBd 4	Ave	9819 676839	28411 1729336	64018	118450	320606	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Hexachlorobutadiene	DCBd 4	Ave	3755 253716	11059 657077	23943	41789	117258	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Naphthalene	DCBd 4	Ave	16068 1087740	48021 2770049	108102	198435	529033	0.200 10.0	0.500 25.0	1.00	2.00	5.00
1,2,3-Trichlorobenzene	DCBd 4	Ave	7772 537387	22376 1371466	50904	93224	256958	0.200 10.0	0.500 25.0	1.00	2.00	5.00
Dibromofluoromethane (Surr)	FB	Ave	455187 470051	454822 470672	453126	457231	466155	10.0 10.0	10.0 10.0	10.0	10.0	10.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	85386 88122	85590 85640	85801	84188	85902	10.0 10.0	10.0 10.0	10.0	10.0	10.0
Toluene-d8 (Surr)	CBZd 5	Ave	1905703 1979494	1902986 2002074	1919525	1908364	1946729	10.0 10.0	10.0 10.0	10.0	10.0	10.0
4-Bromofluorobenzene (Surr)	CBZd 5	Ave	691556 714332	692437 725645	694184	697431	703711	10.0 10.0	10.0 10.0	10.0	10.0	10.0

Curve Type Legend
Ave = Average ISTD

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

Calibration Files

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 410-366140/13	HA19X12.D
Level 2	IC 410-366140/14	HA19X13.D
Level 3	IC 410-366140/15	HA19X14.D
Level 4	IC 410-366140/16	HA19X15.D
Level 5	IC 410-366140/17	HA19X16.D
Level 6	ICIS 410-366140/18	HA19X17.D
Level 7	IC 410-366140/19	HA19X18.D

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Dichlorodifluoromethane	+++++ -7.0	9.0	11.1	-8.7	-1.4	-3.0	30	50	30	30	30	30
Chloromethane	13.9 -7.6	-0.3	4.1	1.7	-5.1	-6.6	50 30	30	30	30	30	30
1,3-Butadiene	18.9 -12.6	3.8	1.7	0.2	-4.0	-8.1	50 30	30	30	30	30	30
Vinyl chloride	9.6 -5.7	-0.7	6.2	-1.9	-4.0	-3.5	50 30	30	30	30	30	30
Bromomethane	9.5 -5.7	-0.9	2.9	1.4	-3.3	-3.8	50 30	30	30	30	30	30
Chloroethane	11.0 -5.6	1.6	2.7	-0.7	-3.9	-5.1	50 30	30	30	30	30	30
Dichlorofluoromethane	19.4 -8.7	1.2	1.5	-1.6	-4.1	-7.7	50 30	30	30	30	30	30
Trichlorofluoromethane	8.9 -2.2	-5.1	3.3	-6.0	0.5	0.8	50 30	30	30	30	30	30
Ethyl ether	3.8 -5.4	1.4	-4.5	7.6	0.8	-3.7	50 30	30	30	30	30	30
Freon 123a	27.9 -10.4	0.2	6.8	-8.0	-7.2	-9.3	50 30	30	30	30	30	30
Acrolein	7.7 -11.4	9.7	-8.6	-0.4	6.2	-3.2	50 30	30	30	30	30	30
1,1-Dichloroethene	3.3 -2.7	5.4	4.6	-8.3	-1.9	-0.3	50 30	30	30	30	30	30
Acetone	+++++ -18.2	26.4	-2.9	-1.3	0.3	-4.3	30	50	30	30	30	30
Freon 113	-17.1 7.6	-5.9	5.6	-5.4	4.8	10.4	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Methyl iodide	-9.6 0.9	1.3	5.1	-2.7	1.8	3.2	50 30	30	30	30	30	30
Carbon disulfide	-4.8 1.5	2.5	4.1	-6.0	0.5	2.2	50 30	30	30	30	30	30
Methyl acetate	11.6 -17.3	7.7	1.1	6.0	-1.6	-7.5	50 30	30	30	30	30	30
Allyl chloride	-7.8 0.4	9.2	1.6	-5.2	0.3	1.6	50 30	30	30	30	30	30
Methylene Chloride	-2.3 -2.8	5.1	3.0	-3.7	0.8	0.0	50 30	30	30	30	30	30
t-Butyl alcohol	-15.2 -10.4	14.5	14.3	1.4	-5.4	0.9	50 30	30	30	30	30	30
Acrylonitrile	-30.3 -6.1	19.1	2.3	3.8	10.0	1.1	50 30	30	30	30	30	30
Methyl tertiary butyl ether	-8.3 -3.2	4.8	5.2	-1.2	1.9	0.8	50 30	30	30	30	30	30
trans-1,2-Dichloroethene	4.4 -3.1	4.1	5.8	-6.9	-2.7	-1.5	50 30	30	30	30	30	30
n-Hexane	9.9 4.1	-8.0	-1.7	-11.4	0.2	7.0	50 30	30	30	30	30	30
1,1-Dichloroethane	-10.4 0.6	2.3	6.0	-3.8	2.4	2.9	50 30	30	30	30	30	30
di-Isopropyl ether	-4.3 -1.9	4.0	4.1	-2.9	0.3	0.6	50 30	30	30	30	30	30
2-Chloro-1,3-butadiene	-1.1 -0.3	4.4	2.4	-6.9	-0.5	1.9	50 30	30	30	30	30	30
Ethyl t-butyl ether	-7.4 -2.5	7.2	4.7	-2.7	0.2	0.6	50 30	30	30	30	30	30
2-Butanone	-5.2 -9.4	15.1	-2.4	-2.0	8.8	-4.9	50 30	30	30	30	30	30
cis-1,2-Dichloroethene	1.1 -3.1	5.4	3.3	-4.5	-1.8	-0.3	50 30	30	30	30	30	30
2,2-Dichloropropane	6.5 -5.0	8.1	4.7	-7.7	-5.0	-1.7	50 30	30	30	30	30	30
Propionitrile	8.8 -12.3	19.3	-10.7	-8.3	6.6	-3.5	50 30	30	30	30	30	30
Methacrylonitrile	21.4 -13.7	9.1	-7.1	-0.4	0.7	-10.0	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromochloromethane	-16.0 0.2	0.0	8.3	-1.1	3.9	4.7	50 30	30	30	30	30	30
Tetrahydrofuran	+++++ -11.0	+++++	7.1	0.0	9.1	-5.2	 30		50	30	30	30
Chloroform	-2.1 -2.9	6.0	4.4	-4.4	0.1	-1.1	50 30	30	30	30	30	30
1,1,1-Trichloroethane	1.7 -2.3	5.8	3.9	-6.9	-2.3	0.2	50 30	30	30	30	30	30
Cyclohexane	4.0 2.8	-5.5	5.2	-11.4	0.3	4.5	50 30	30	30	30	30	30
1,1-Dichloropropene	-8.5 2.9	2.8	4.2	-6.5	1.7	3.5	50 30	30	30	30	30	30
Carbon tetrachloride	-9.6 3.2	0.2	6.1	-5.5	1.1	4.5	50 30	30	30	30	30	30
Isobutyl alcohol	26.9 -16.9	14.7	3.6	-4.7	-10.6	-12.9	50 30	30	30	30	30	30
Benzene	-6.9 0.9	2.8	3.2	-4.3	1.7	2.7	50 30	30	30	30	30	30
1,2-Dichloroethane	-6.6 -2.6	5.9	4.7	-5.5	2.6	1.5	50 30	30	30	30	30	30
t-Amyl methyl ether	-8.0 -2.0	5.3	5.7	-2.6	1.1	0.4	50 30	30	30	30	30	30
n-Heptane	5.6 4.6	-5.1	-4.5	-9.4	0.4	8.3	50 30	30	30	30	30	30
n-Butanol	+++++ -5.5	5.3	15.4	-5.6	-7.3	-2.3	 30	50	30	30	30	30
Trichloroethene	-3.3 0.6	5.4	3.7	-7.6	-0.5	1.8	50 30	30	30	30	30	30
Methylcyclohexane	-7.5 6.3	-1.5	0.4	-9.8	3.7	8.3	50 30	30	30	30	30	30
1,2-Dichloropropane	-10.5 1.3	3.5	3.3	-3.7	2.8	3.4	50 30	30	30	30	30	30
1,4-Dioxane	16.6 0.8	18.4	-2.8	-8.5	-17.1	-7.4	50 30	30	30	30	30	30
Methyl methacrylate	-7.8 -3.1	12.2	-10.8	4.6	7.3	-2.3	50 30	30	30	30	30	30
Dibromomethane	-2.5 -2.2	0.7	4.8	-3.6	1.9	0.8	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
Bromodichloromethane	-0.5 -1.1	3.8	1.9	-3.4	-1.4	0.8	50 30	30	30	30	30	30
2-Nitropropane	29.7 -15.2	11.0	-5.7	-7.0	-1.8	-10.9	50 30	30	30	30	30	30
1-Bromo-2-chloroethane	0.1 -3.9	1.0	-3.0	5.5	2.7	-2.5	50 30	30	30	30	30	30
cis-1,3-Dichloropropene	-12.8 3.0	1.2	4.8	-2.9	2.7	4.1	50 30	30	30	30	30	30
4-Methyl-2-pentanone	4.9 -9.4	10.2	-2.4	0.1	3.5	-6.9	50 30	30	30	30	30	30
Toluene	-6.6 0.4	4.9	2.6	-4.9	1.0	2.6	50 30	30	30	30	30	30
trans-1,3-Dichloropropene	-15.8 3.4	-3.4	6.2	-1.0	4.8	5.9	50 30	30	30	30	30	30
Ethyl methacrylate	-6.6 -1.2	2.7	0.1	-1.8	2.7	4.1	50 30	30	30	30	30	30
1,1,2-Trichloroethane	8.0 -6.0	5.6	2.5	-3.9	-3.3	-3.1	50 30	30	30	30	30	30
Tetrachloroethene	-11.8 3.4	-0.1	4.6	-3.7	2.1	5.4	50 30	30	30	30	30	30
1,3-Dichloropropane	-11.7 -0.8	3.1	4.9	-0.7	2.4	2.8	50 30	30	30	30	30	30
2-Hexanone	-4.5 -7.6	10.3	-0.1	1.2	5.6	-4.9	50 30	30	30	30	30	30
Dibromochloromethane	-13.7 2.1	0.1	4.0	-1.3	4.2	4.5	50 30	30	30	30	30	30
1,2-Dibromoethane	-8.0 -1.2	1.4	5.2	-1.5	2.4	1.7	50 30	30	30	30	30	30
1-Chlorohexane	7.4 -1.0	3.0	2.4	-9.3	-3.1	0.5	50 30	30	30	30	30	30
Chlorobenzene	-8.9 0.4	4.5	4.0	-3.8	1.4	2.3	50 30	30	30	30	30	30
1,1,1,2-Tetrachloroethane	-9.6 1.0	2.0	5.6	-3.7	1.1	3.7	50 30	30	30	30	30	30
Ethylbenzene	-9.5 1.3	2.4	5.1	-3.7	1.4	3.1	50 30	30	30	30	30	30
m&p-Xylene	-12.9 2.6	3.0	4.8	-4.3	2.3	4.6	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
o-Xylene	-11.2 2.2	2.2	4.2	-3.6	2.1	4.0	50 30	30	30	30	30	30
Styrene	-11.1 1.7	2.6	4.2	-3.5	2.2	3.9	50 30	30	30	30	30	30
Bromoform	-15.0 2.7	-0.8	5.7	-1.2	3.4	5.3	50 30	30	30	30	30	30
Isopropylbenzene	-8.5 1.9	2.0	4.4	-4.9	1.3	3.8	50 30	30	30	30	30	30
1,1,2,2-Tetrachloroethane	-1.4 -7.2	11.5	3.9	-2.9	-1.0	-3.0	50 30	30	30	30	30	30
Bromobenzene	-12.3 1.3	3.6	4.6	-2.4	2.4	2.8	50 30	30	30	30	30	30
trans-1,4-Dichloro-2-butene	-7.7 0.0	4.0	-2.4	1.2	6.2	-1.2	50 30	30	30	30	30	30
1,2,3-Trichloropropane	-4.7 -4.9	7.6	5.2	-2.3	0.9	-1.8	50 30	30	30	30	30	30
N-Propylbenzene	-11.0 2.4	2.4	4.3	-4.6	2.8	3.7	50 30	30	30	30	30	30
2-Chlorotoluene	-15.2 3.2	3.3	5.0	-3.5	3.7	3.5	50 30	30	30	30	30	30
1,3,5-Trimethylbenzene	-11.2 3.2	4.3	2.3	-4.6	2.1	3.9	50 30	30	30	30	30	30
4-Chlorotoluene	-13.2 2.7	4.2	3.9	-3.9	2.8	3.3	50 30	30	30	30	30	30
tert-Butylbenzene	-9.3 3.5	8.6	2.5	-7.2	-1.2	3.2	50 30	30	30	30	30	30
Pentachloroethane	-7.3 3.8	-1.0	-8.3	6.4	6.0	0.4	50 30	30	30	30	30	30
1,2,4-Trimethylbenzene	-13.6 4.8	0.5	4.2	-3.6	3.5	4.1	50 30	30	30	30	30	30
sec-Butylbenzene	-8.4 5.6	-0.3	2.5	-6.1	2.0	4.7	50 30	30	30	30	30	30
1,3-Dichlorobenzene	-9.0 3.4	0.8	3.3	-3.2	1.6	3.2	50 30	30	30	30	30	30
p-Isopropyltoluene	-12.7 5.9	0.9	3.5	-5.2	2.5	5.2	50 30	30	30	30	30	30
1,4-Dichlorobenzene	-12.3 2.6	3.6	4.0	-2.0	1.9	2.2	50 30	30	30	30	30	30

FORM VI
GC/MS VOA BY INTERNAL STANDARD - INITIAL CALIBRATION DATA
READBACK PERCENT ERROR

Lab Name: Eurofins Lancaster Laboratories Envirc Job No.: 410-136176-1 Analy Batch No.: 366140

SDG No.:

Instrument ID: 19094 GC Column: R-624SilMS 3 ID: 0.25(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2023 21:41 Calibration End Date: 04/19/2023 23:41 Calibration ID: 49526

ANALYTE	PERCENT ERROR						PERCENT ERROR LIMIT					
	LVL 1 # LVL 7 #	LVL 2 #	LVL 3 #	LVL 4 #	LVL 5 #	LVL 6 #	LVL 1 LVL 7	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6
1,2,3-Trimethylbenzene	-7.1 2.1	2.4	3.0	-4.0	1.1	2.5	50 30	30	30	30	30	30
Benzyl chloride	-12.8 0.4	4.9	6.5	-0.7	0.6	1.1	50 30	30	30	30	30	30
n-Butylbenzene	-15.6 8.9	-1.6	3.0	-5.6	3.4	7.3	50 30	30	30	30	30	30
1,2-Dichlorobenzene	-10.1 1.8	2.2	4.2	-2.2	2.0	2.2	50 30	30	30	30	30	30
1,2-Dibromo-3-Chloropropane	-26.3 6.6	-1.3	6.6	-0.5	9.9	5.0	50 30	30	30	30	30	30
1,3,5-Trichlorobenzene	-18.7 8.1	-1.1	4.7	-4.0	4.4	6.6	50 30	30	30	30	30	30
1,2,4-Trichlorobenzene	-18.5 9.1	-5.2	5.4	-2.6	4.6	7.2	50 30	30	30	30	30	30
Hexachlorobutadiene	-16.7 10.9	-1.3	5.4	-8.1	2.3	7.5	50 30	30	30	30	30	30
Naphthalene	-19.2 6.0	-2.9	7.9	-1.0	4.6	4.5	50 30	30	30	30	30	30
1,2,3-Trichlorobenzene	-18.7 9.1	-5.9	5.7	-3.3	5.7	7.3	50 30	30	30	30	30	30
Dibromofluoromethane (Surr)	0.5 -0.6	0.3	-0.5	0.1	0.5	-0.3	50 30	30	30	30	30	30
1,2-Dichloroethane-d4 (Surr)	1.3 -2.9	1.4	1.2	-1.0	-0.5	0.4	50 30	30	30	30	30	30
Toluene-d8 (Surr)	-0.7 -0.1	0.3	0.9	-0.6	0.0	0.2	50 30	30	30	30	30	30
4-Bromofluorobenzene (Surr)	-0.6 -0.1	0.6	0.6	0.1	-0.3	-0.3	50 30	30	30	30	30	30

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Lims ID: IC std1 0.2
Client ID:
Sample Type: IC Calib Level: 1
Inject. Date: 19-Apr-2023 21:41:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-013
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:34:34 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:29:21

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	98	21361	0.2000	0.3387	
5 Chloromethane	50	2.081	2.093	-0.012	99	18988	0.2000	0.2277	
6 Vinyl chloride	62	2.196	2.203	-0.007	95	17066	0.2000	0.2191	
7 Butadiene	39	2.196	2.203	-0.007	95	18993	0.2000	0.2378	
9 Bromomethane	94	2.520	2.526	-0.006	91	10644	0.2000	0.2189	
10 Chloroethane	64	2.581	2.599	-0.018	98	9681	0.2000	0.2219	
11 Dichlorofluoromethane	67	2.812	2.824	-0.012	96	24929	0.2000	0.2387	M
12 Trichlorofluoromethane	101	2.891	2.904	-0.013	93	19191	0.2000	0.2177	
14 Ethyl ether	59	3.129	3.117	0.012	62	7419	0.2000	0.2077	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.202	0.006	89	17545	0.2000	0.2557	
16 Acrolein	56	3.282	3.288	-0.006	97	42308	10.0	10.8	M
17 1,1-Dichloroethene	96	3.410	3.422	-0.012	98	8967	0.2000	0.2065	
19 Acetone	43	3.471	3.446	0.025	42	10984	2.00	2.80	M
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.458	3.465	-0.007	46	6762	0.2000	0.1658	
21 Iodomethane	142	3.599	3.611	-0.012	98	14150	0.2000	0.1808	
22 Ethyl bromide	108	3.623	3.635	-0.012	94	8165	0.2004	0.2003	a
23 Carbon disulfide	76	3.714	3.715	-0.001	97	23481	0.2000	0.1904	
24 Methyl acetate	43	3.849	3.843	0.006	10	2932	0.2000	0.2231	M
26 3-Chloro-1-propene	41	3.873	3.873	0.000	90	14193	0.2000	0.1844	a
27 Methylene Chloride	84	4.056	4.050	0.006	95	8984	0.2000	0.1954	a
* 28 t-Butyl alcohol-d10 (IS)	65	4.038	4.105	-0.067	92	59505	50.0	50.0	a
29 2-Methyl-2-propanol	59	4.178	4.190	-0.012	30	3893	4.00	3.39	Ma
31 Acrylonitrile	53	4.385	4.373	0.012	28	2061	0.5000	0.3485	a
32 Methyl tert-butyl ether	73	4.452	4.452	0.000	94	19106	0.2000	0.1834	
33 trans-1,2-Dichloroethene	96	4.452	4.458	-0.006	95	10137	0.2000	0.2087	a
34 Hexane	57	4.891	4.885	0.006	87	13003	0.2000	0.2198	Ma
36 1,1-Dichloroethane	63	5.123	5.123	0.000	90	16441	0.2000	0.1793	
37 Isopropyl ether	45	5.178	5.178	0.000	86	30515	0.2000	0.1914	a
38 2-Chloro-1,3-butadiene	53	5.232	5.239	-0.007	90	15760	0.2000	0.1977	a
40 Tert-butyl ethyl ether	59	5.708	5.720	-0.012	98	26025	0.2000	0.1851	
41 2-Butanone (MEK)	43	5.958	5.909	0.049	80	14947	2.00	1.90	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	81	10699	0.2000	0.2022	
43 2,2-Dichloropropane	77	5.970	5.976	-0.006	69	16087	0.2000	0.2131	a
44 Propionitrile	54	6.049	5.995	0.054	39	8781	4.00	4.35	M
S 46 1,2-Dichloroethene, Total	100				0			0.4109	
47 Methacrylonitrile	67	6.232	6.220	0.012	89	22143	2.00	2.43	M
48 Chlorobromomethane	128	6.293	6.299	-0.006	47	3303	0.2000	0.1681	
49 Tetrahydrofuran	71	6.318	6.299	0.019	33	6083	1.00	2.85	M
50 Chloroform	83	6.440	6.446	-0.006	92	17158	0.2000	0.1958	
$ 52 Dibromofluoromethane (Surr)	113	6.653	6.665	-0.012	93	455187	10.0	10.1	
53 1,1,1-Trichloroethane	97	6.665	6.677	-0.012	37	15812	0.2000	0.2034	a
54 Cyclohexane	56	6.787	6.781	0.006	93	17303	0.2000	0.2081	M
55 1,1-Dichloropropene	75	6.885	6.897	-0.012	92	12338	0.2000	0.1829	
56 Carbon tetrachloride	117	6.885	6.897	-0.012	94	11820	0.2000	0.1807	a
57 Isobutyl alcohol	41	7.055	7.031	0.024	31	5843	10.0	12.7	M
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	76	85386	10.0	10.1	
59 Benzene	78	7.153	7.159	-0.006	95	37141	0.2000	0.1863	
60 1,2-Dichloroethane	62	7.220	7.226	-0.006	93	9093	0.2000	0.1868	
63 Tert-amyl methyl ether	73	7.348	7.354	-0.006	98	21658	0.2000	0.1841	
* 64 Fluorobenzene (IS)	96	7.561	7.561	0.000	98	1905653	10.0	10.0	a
65 n-Heptane	43	7.580	7.586	-0.006	36	11676	0.2000	0.2111	a
67 n-Butanol	56	7.988	7.927	0.061	24	9717	17.5	29.1	M
68 Trichloroethene	95	8.055	8.049	0.006	97	10282	0.2000	0.1933	
69 Methylcyclohexane	83	8.366	8.366	0.000	81	14578	0.2000	0.1851	
70 1,2-Dichloropropane	63	8.384	8.390	-0.006	80	9246	0.2000	0.1789	
71 2-ethoxy-2-methyl butane	87	8.384	8.397	-0.013	88	12713	0.2000	0.1745	
72 Methyl methacrylate	69	8.488	8.470	0.018	72	3142	0.2000	0.1844	
73 1,4-Dioxane	88	8.396	8.482	-0.086	0	619	10.0	11.7	M
74 Dibromomethane	93	8.500	8.494	0.006	93	4104	0.2000	0.1949	M
76 Dichlorobromomethane	83	8.726	8.732	-0.006	98	12287	0.2000	0.1991	M
77 2-Nitropropane	41	9.000	9.000	0.000	73	6722	1.00	1.30	Ma
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	96	9664	0.2000	0.2002	
80 cis-1,3-Dichloropropene	75	9.299	9.293	0.006	94	12777	0.2000	0.1743	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	96	47149	2.00	2.10	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	93	1905703	10.0	9.93	
84 Toluene	92	9.689	9.689	0.000	98	23645	0.2000	0.1868	
85 trans-1,3-Dichloropropene	75	9.963	9.951	0.012	94	9845	0.2000	0.1684	
104 Ethyl methacrylate	69	10.024	10.018	0.006	85	8353	0.2000	0.1868	
S 105 1,3-Dichloropropene, Total	100				0			0.3427	
106 1,1,2-Trichloroethane	97	10.164	10.165	0.000	87	6969	0.2000	0.2161	
107 Tetrachloroethene	166	10.256	10.256	0.000	96	9888	0.2000	0.1765	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	88	9515	0.2000	0.1767	
109 2-Hexanone	43	10.384	10.378	0.006	96	28443	2.00	1.91	
111 Chlorodibromomethane	129	10.549	10.549	-0.001	88	6780	0.2000	0.1727	
112 Ethylene Dibromide	107	10.664	10.658	0.006	95	5320	0.2000	0.1841	
* 113 Chlorobenzene-d5 (IS)	117	11.091	11.097	-0.006	86	1410045	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	95	16411	0.2000	0.2147	
115 Chlorobenzene	112	11.122	11.122	0.000	97	25017	0.2000	0.1823	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	8546	0.2000	0.1807	
117 Ethylbenzene	91	11.213	11.207	0.006	99	45031	0.2000	0.1809	
S 118 Xylenes, Total	106				0			0.5259	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	99	32534	0.4000	0.3483	
120 o-Xylene	106	11.658	11.658	0.000	96	16107	0.2000	0.1776	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.670	0.006	95	26601	0.2000	0.1777	
122 Bromoform	173	11.835	11.835	0.000	83	3905	0.2000	0.1701	
123 Isopropylbenzene	105	11.957	11.963	-0.006	96	44771	0.2000	0.1830	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	691556	10.0	9.94	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	90	7836	0.2000	0.1972	
128 Bromobenzene	156	12.225	12.219	0.006	96	9200	0.2000	0.1754	
129 trans-1,4-Dichloro-2-butene	53	12.237	12.231	0.006	92	13215	2.00	1.85	
130 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	71	1787	0.2000	0.1907	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	51541	0.2000	0.1780	
132 2-Chlorotoluene	126	12.371	12.365	0.006	96	9412	0.2000	0.1697	
133 1,3,5-Trimethylbenzene	105	12.432	12.426	0.006	94	35994	0.2000	0.1776	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	9847	0.2000	0.1736	
135 tert-Butylbenzene	134	12.670	12.670	0.000	93	7962	0.2000	0.1815	
136 Pentachloroethane	167	12.707	12.707	0.000	81	6658	0.2000	0.1854	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	35350	0.2000	0.1728	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	46492	0.2000	0.1833	
139 1,3-Dichlorobenzene	146	12.938	12.932	0.006	96	19611	0.2000	0.1820	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	98	37815	0.2000	0.1746	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	756163	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.011	13.012	-0.001	91	17921	0.2000	0.1753	
143 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	97	16386	0.2000	0.1858	
144 Benzyl chloride	126	13.085	13.085	0.000	98	2504	0.2000	0.1743	
145 p-Diethylbenzene	119	13.146	13.146	0.000	90	22022	0.2000	0.1727	
146 n-Butylbenzene	92	13.237	13.237	0.000	97	17454	0.2000	0.1689	
147 1,2-Dichlorobenzene	146	13.267	13.268	-0.001	98	17176	0.2000	0.1799	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	76	688	0.2000	0.1474	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	96	12243	0.2000	0.1627	
151 1,2,4-Trichlorobenzene	180	14.365	14.359	0.006	93	9819	0.2000	0.1629	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	95	3755	0.2000	0.1666	
153 Naphthalene	128	14.542	14.542	0.000	98	16068	0.2000	0.1617	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	94	7772	0.2000	0.1626	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00073	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

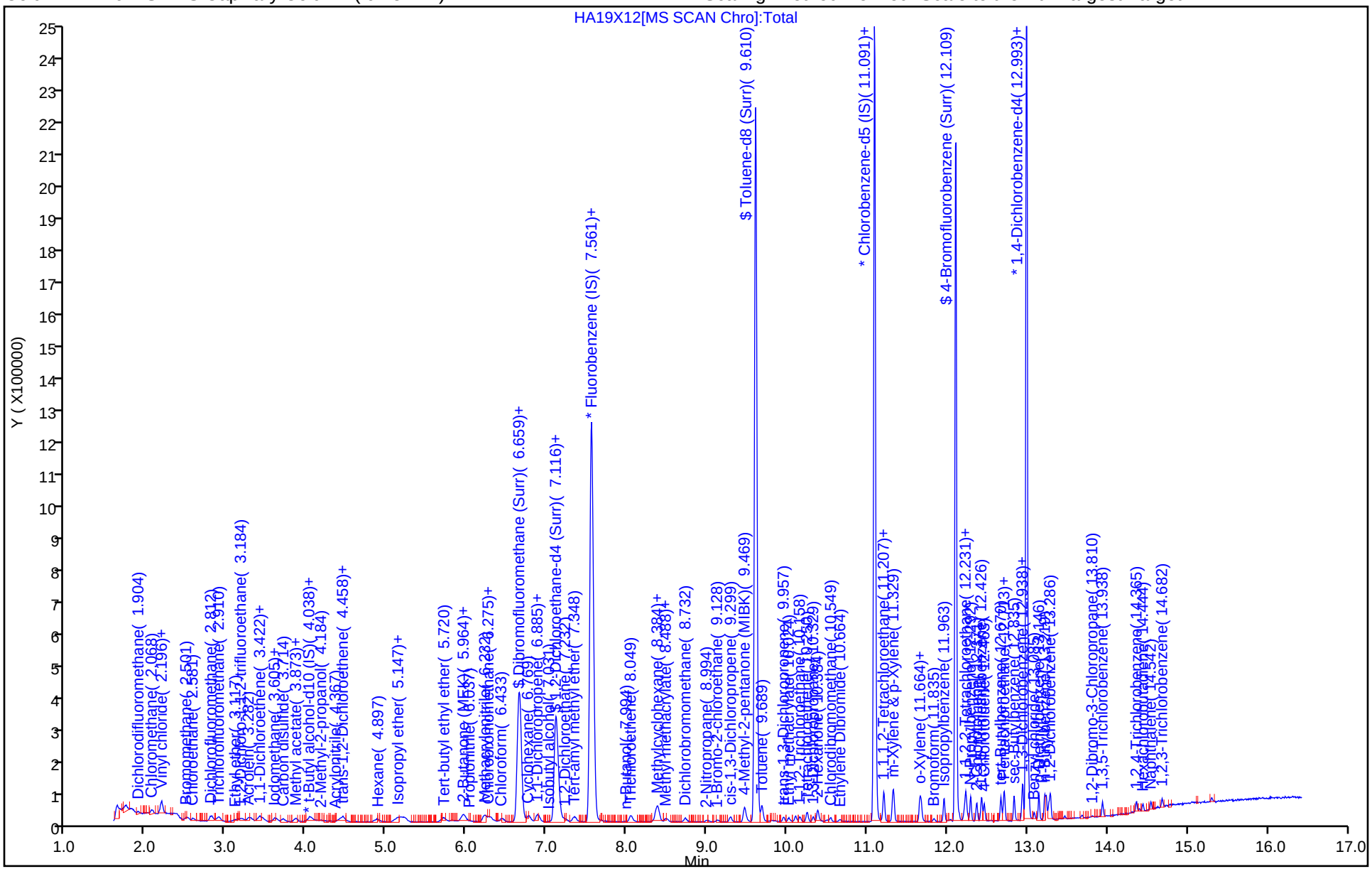
Report Date: 23-Apr-2023 20:34:35 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D

Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std1 0.2			Worklist Smp#:	13
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

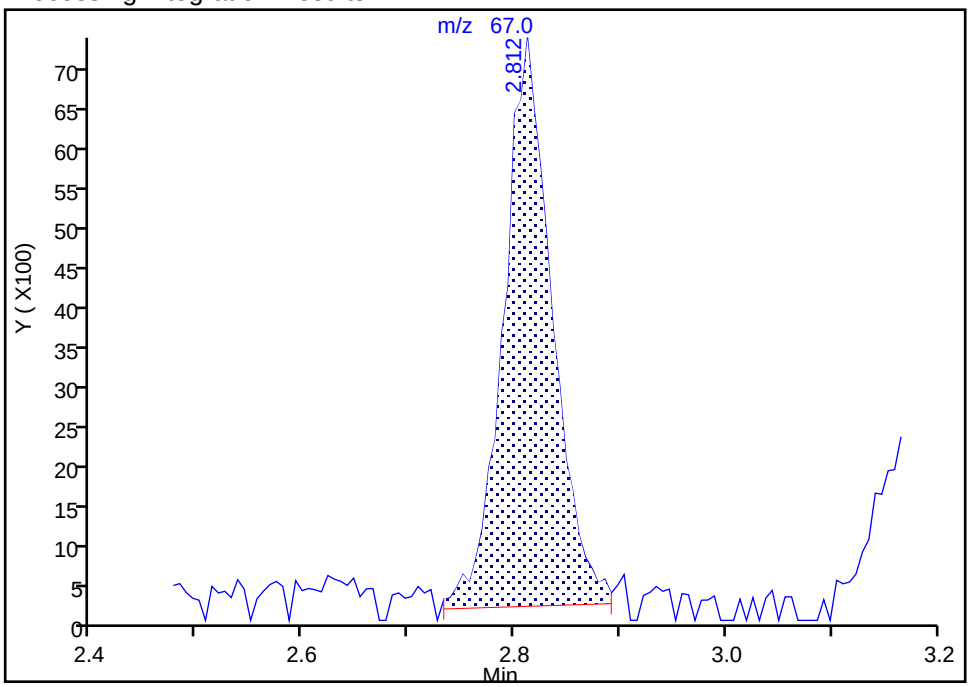
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

11 Dichlorofluoromethane, CAS: 75-43-4

Signal: 1

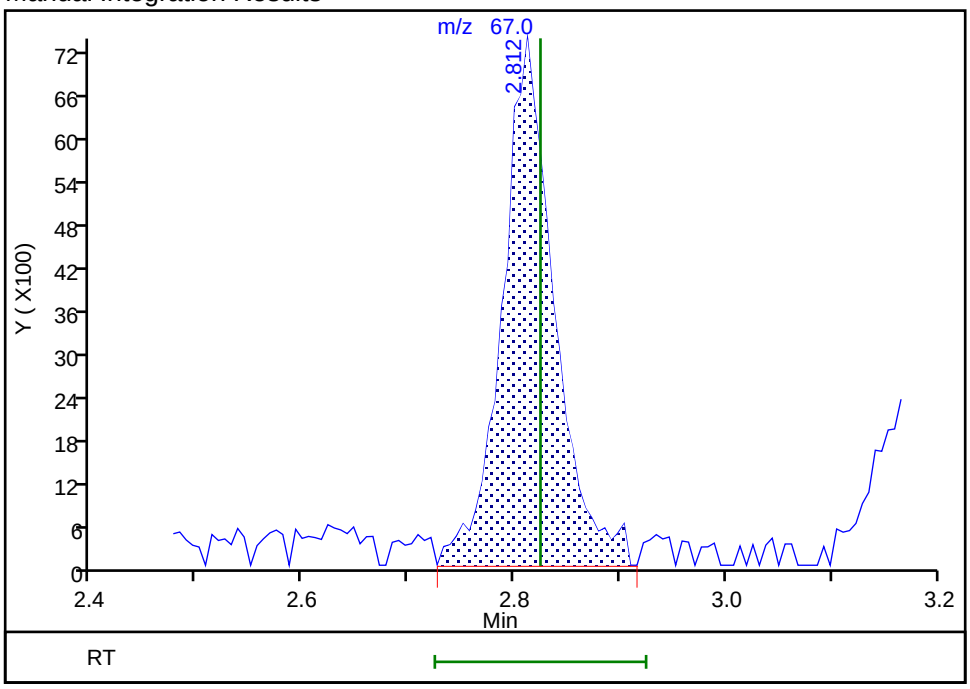
Processing Integration Results

RT: 2.81
Area: 22789
Amount: 0.399524
Amount Units: ug/l



Manual Integration Results

RT: 2.81
Area: 24929
Amount: 0.238711
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:20:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

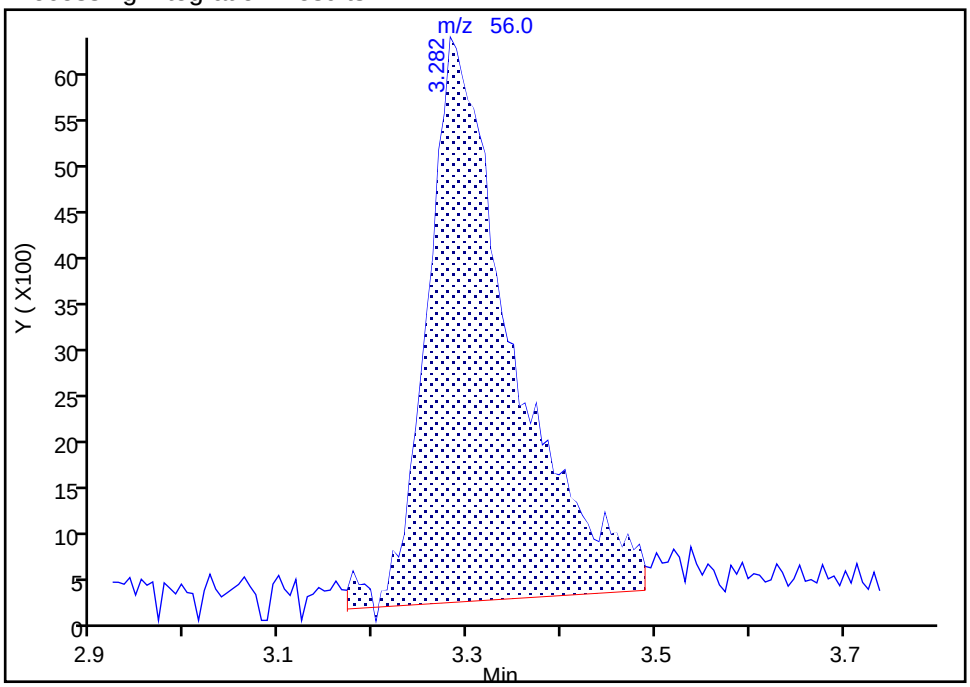
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

16 Acrolein, CAS: 107-02-8

Signal: 1

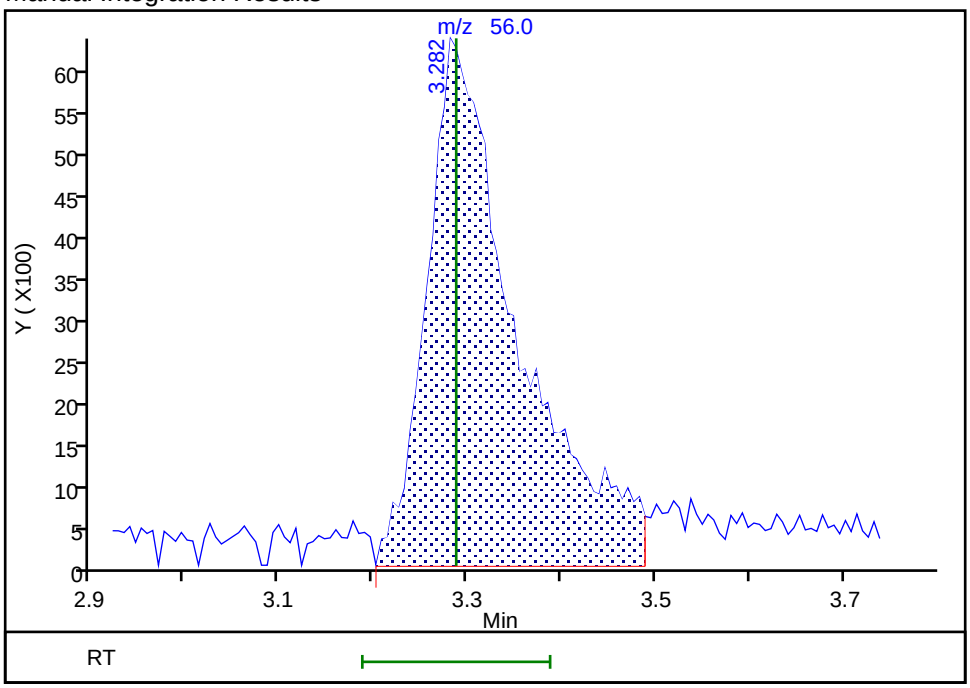
Processing Integration Results

RT: 3.28
Area: 38539
Amount: 10.000253
Amount Units: ug/l



Manual Integration Results

RT: 3.28
Area: 42308
Amount: 10.765312
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:21:06
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

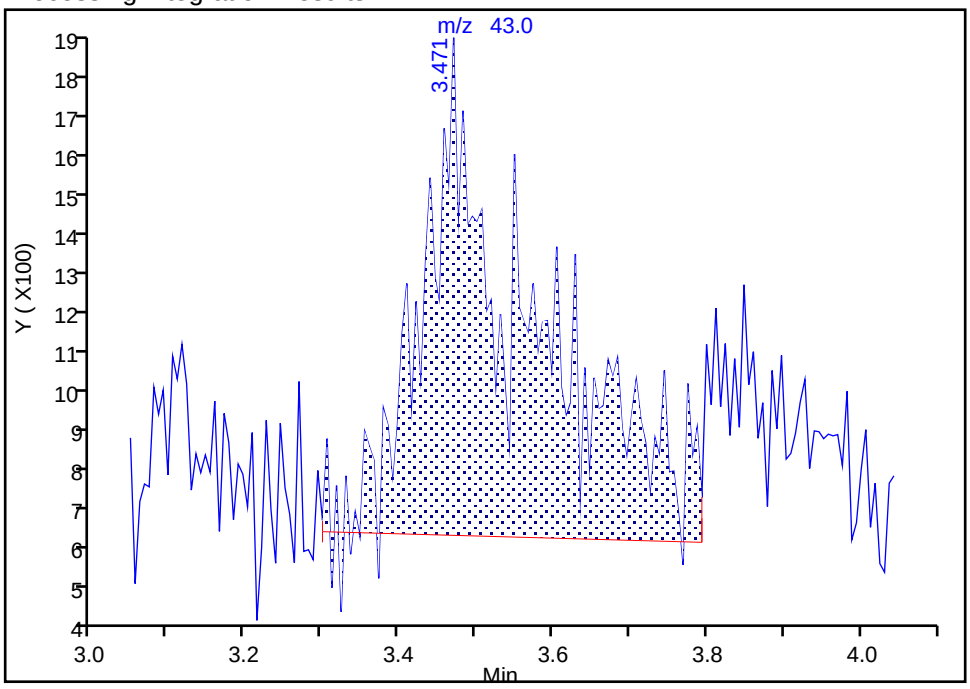
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Acetone, CAS: 67-64-1

Signal: 1

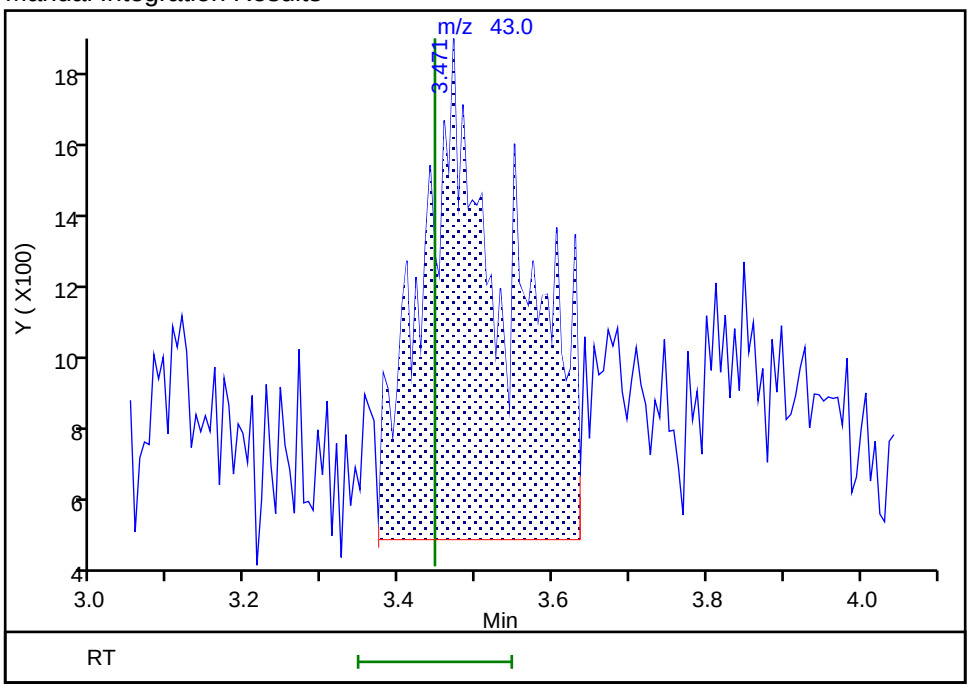
Processing Integration Results

RT: 3.47
Area: 11643
Amount: 2.000000
Amount Units: ug/l



Manual Integration Results

RT: 3.47
Area: 10984
Amount: 2.796456
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:49:39
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

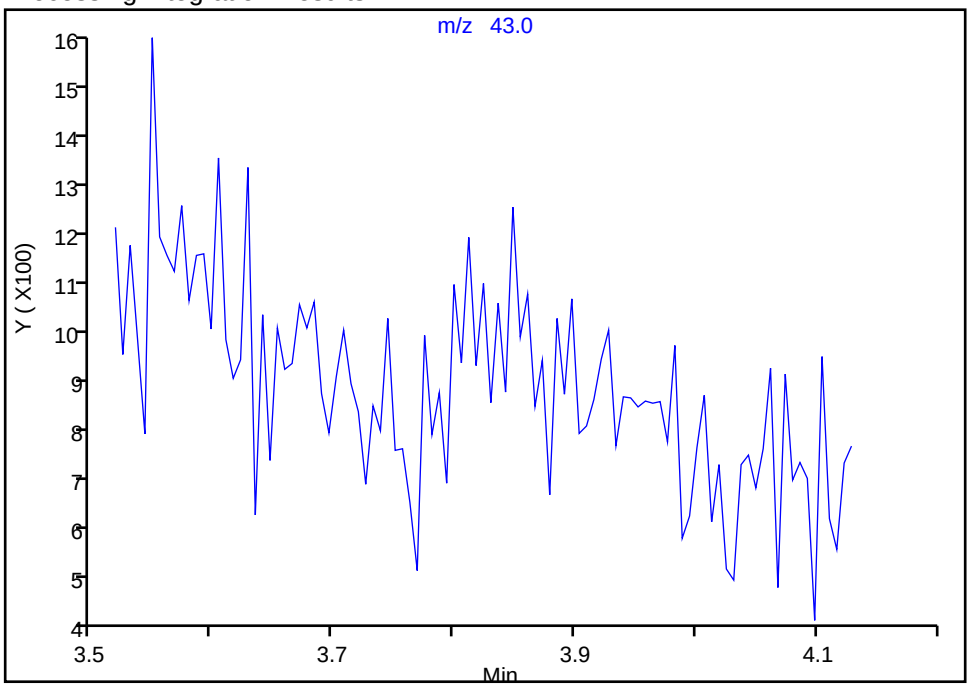
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

24 Methyl acetate, CAS: 79-20-9

Signal: 1

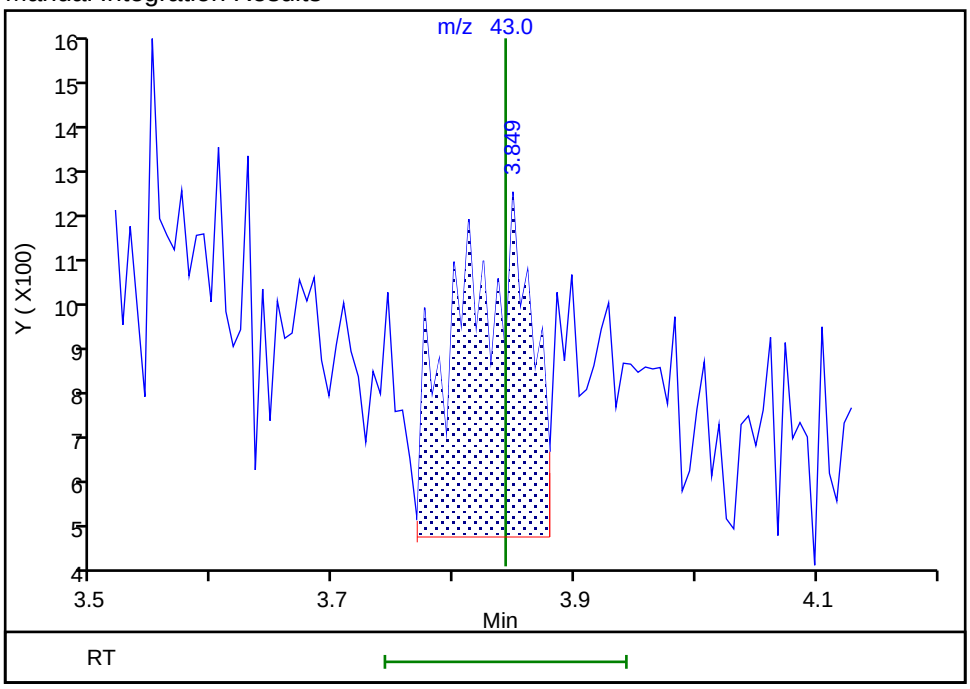
Not Detected
Expected RT: 3.84

Processing Integration Results



Manual Integration Results

RT: 3.85
Area: 2932
Amount: 0.223141
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:22:15
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

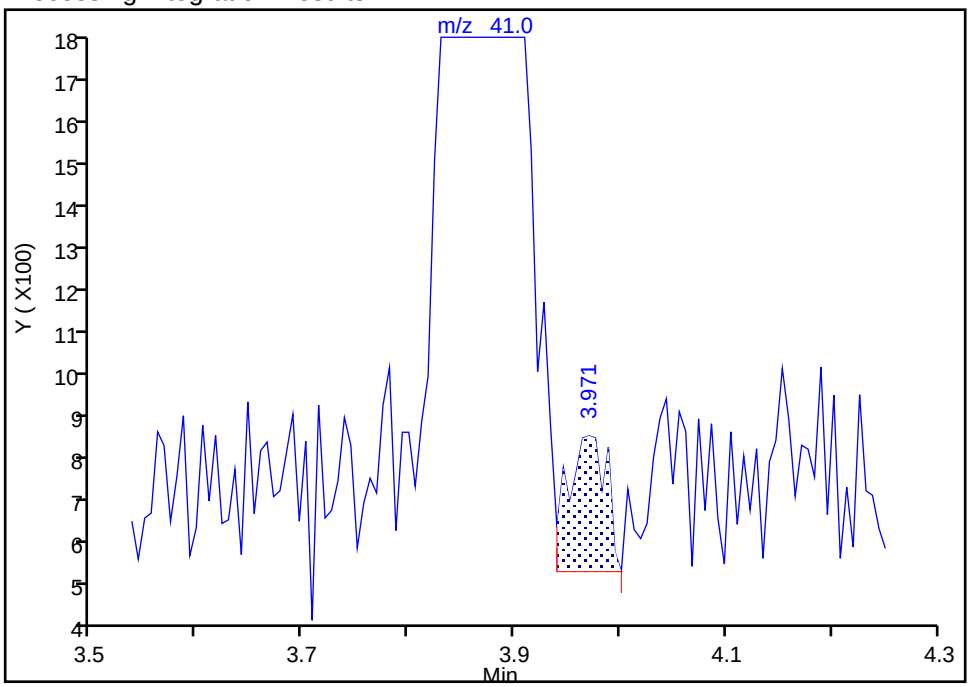
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

26 3-Chloro-1-propene, CAS: 107-05-1

Signal: 1

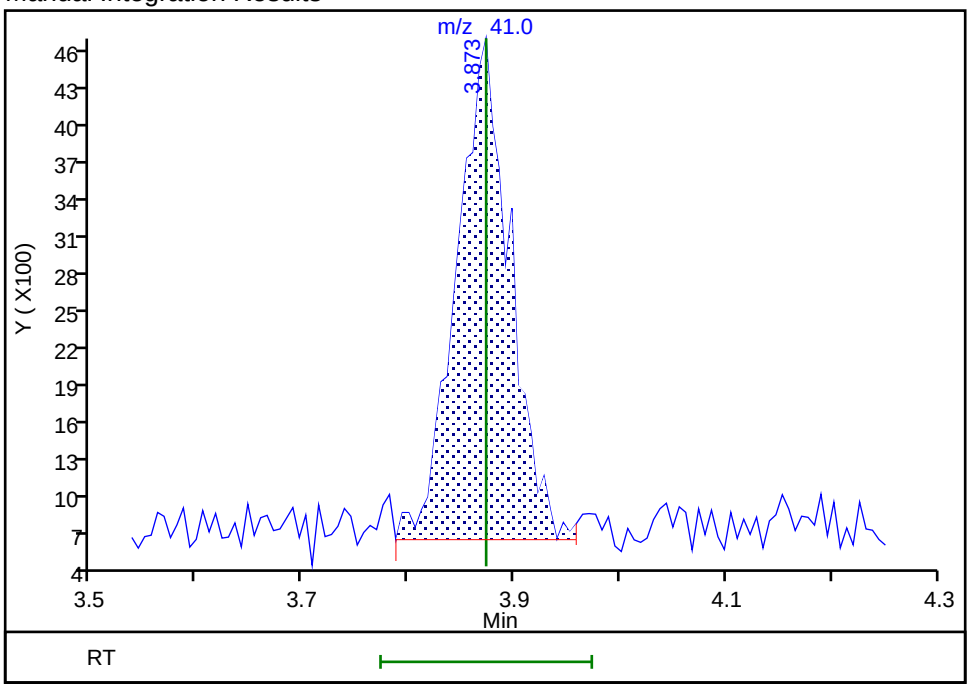
Processing Integration Results

RT: 3.97
Area: 767
Amount: 0.388845
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 14193
Amount: 0.184390
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:22:20
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

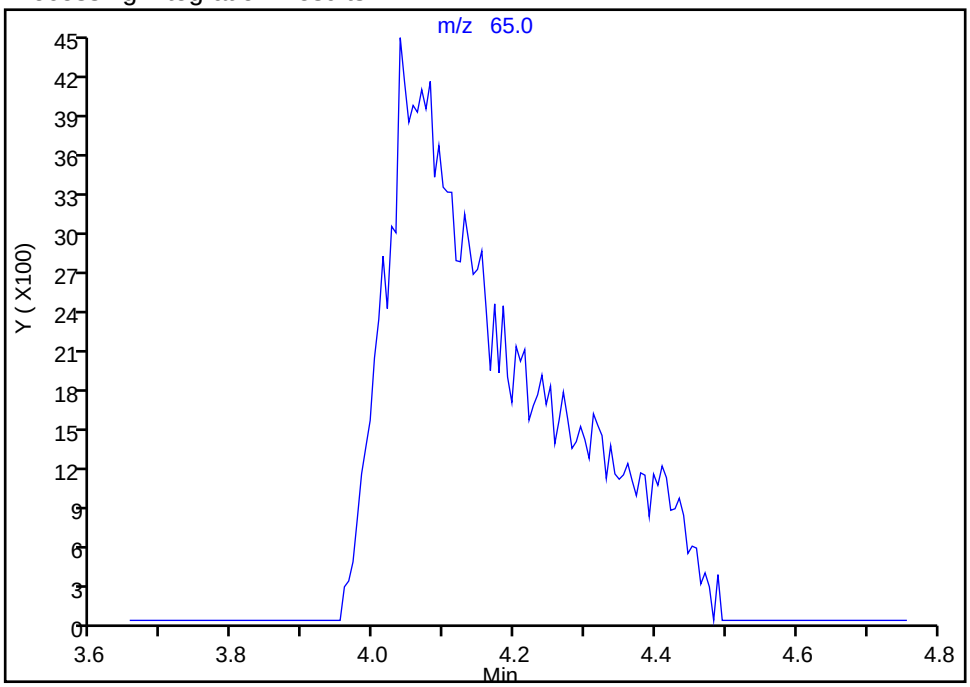
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 28 t-Butyl alcohol-d10 (IS), CAS: 53001-22-2

Signal: 1

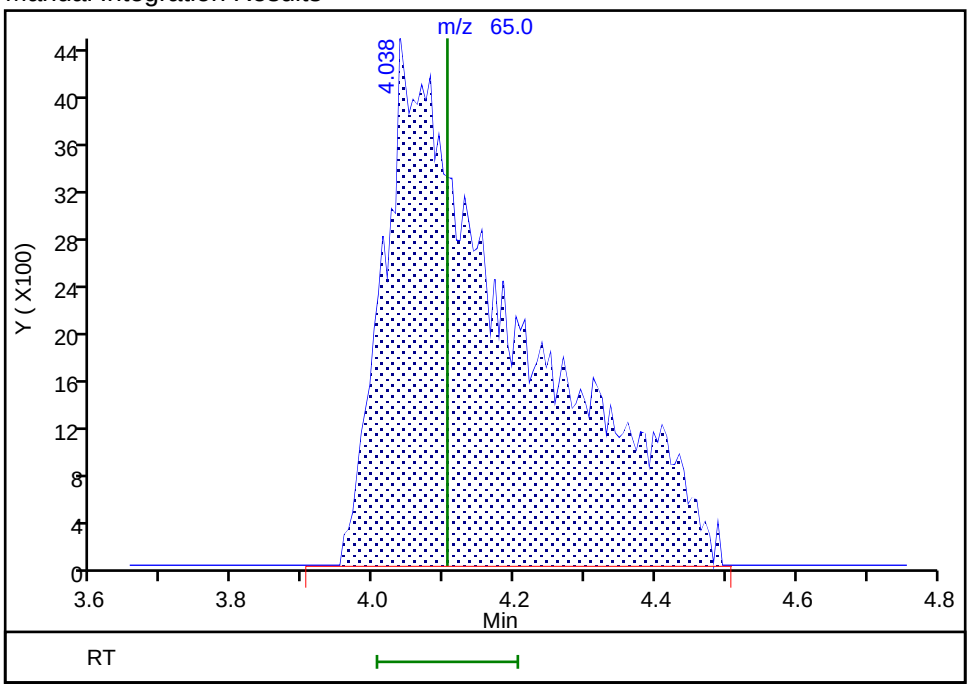
Not Detected
Expected RT: 4.10

Processing Integration Results



Manual Integration Results

RT: 4.04
Area: 59505
Amount: 50.000000
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:20:38
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

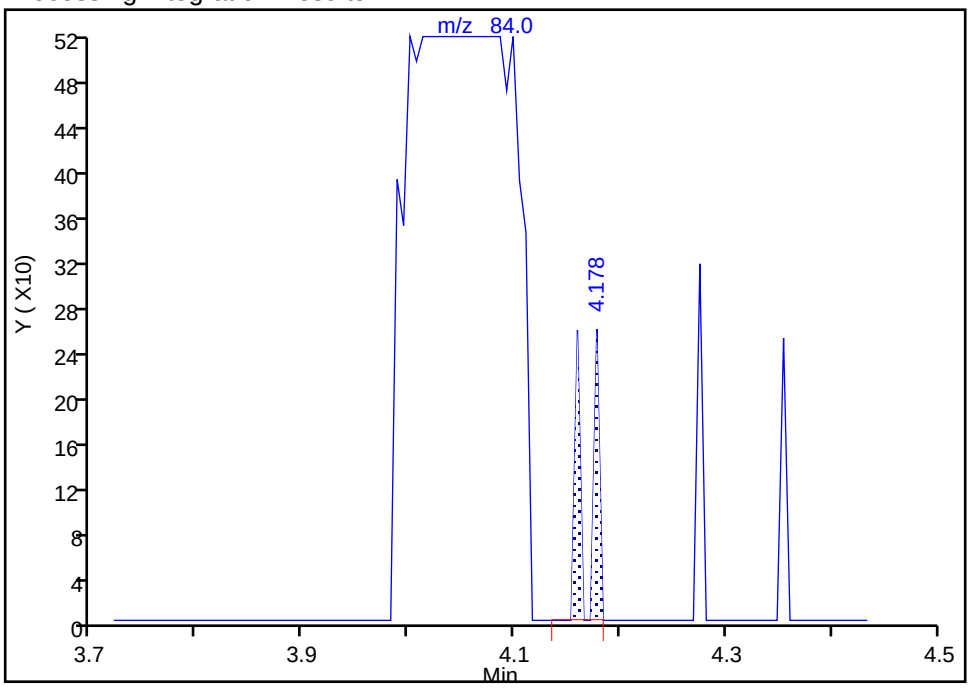
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

27 Methylene Chloride, CAS: 75-09-2

Signal: 1

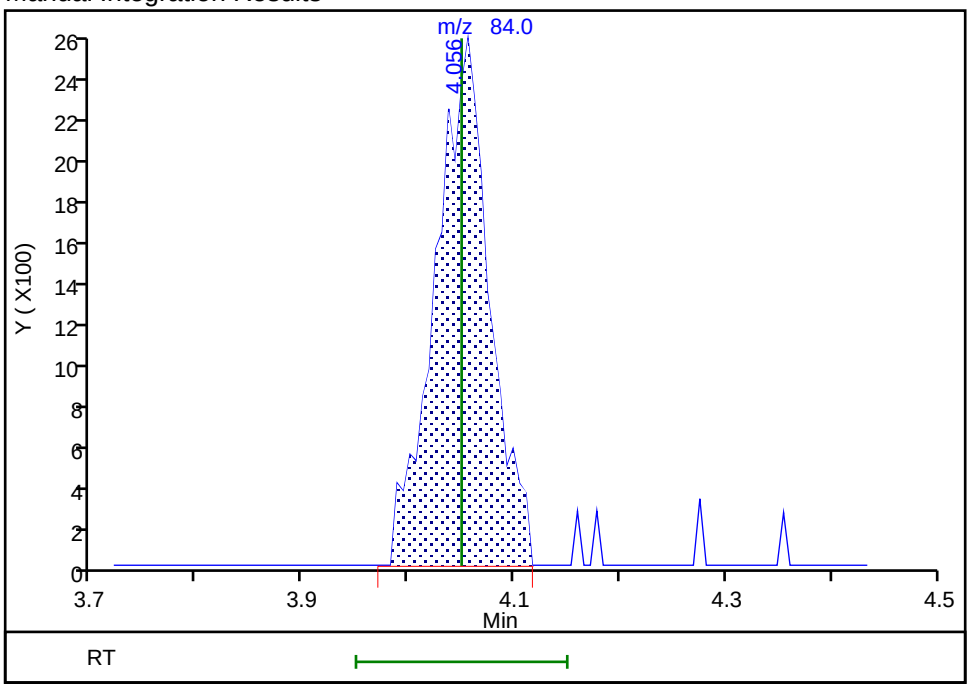
Processing Integration Results

RT: 4.18
Area: 189
Amount: 0.374772
Amount Units: ug/l



Manual Integration Results

RT: 4.06
Area: 8984
Amount: 0.195402
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:22:26
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

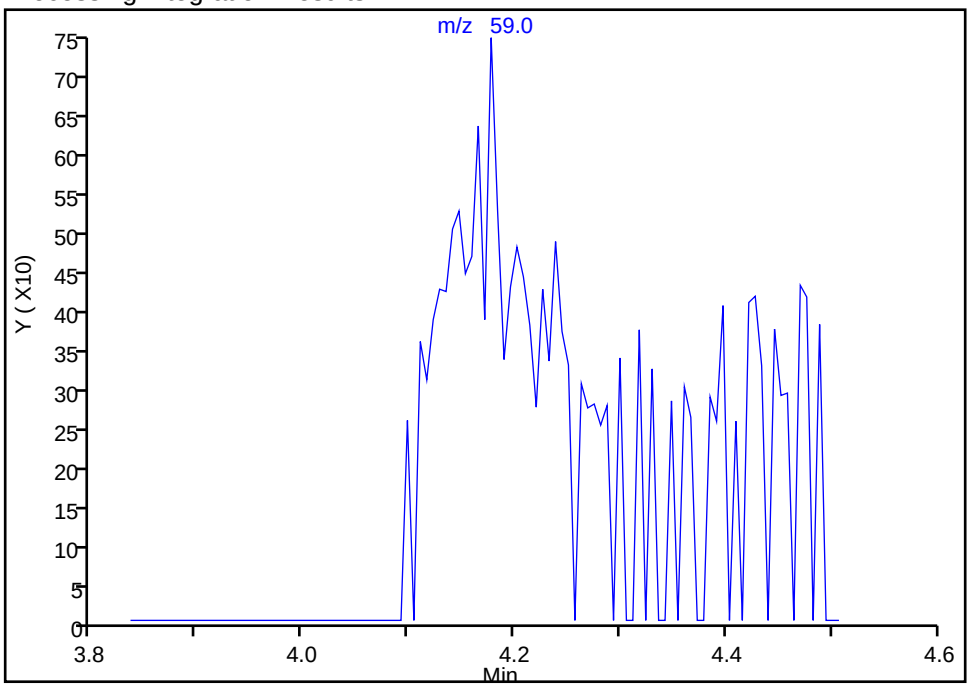
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

29 2-Methyl-2-propanol, CAS: 75-65-0

Signal: 1

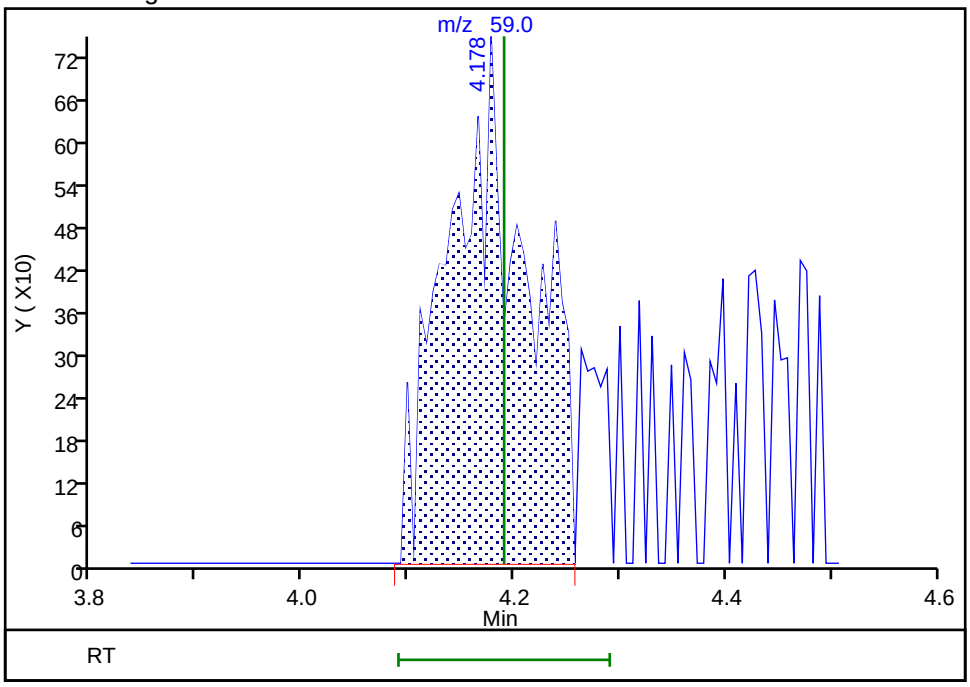
Not Detected
Expected RT: 4.19

Processing Integration Results



Manual Integration Results

RT: 4.18
Area: 3893
Amount: 3.390586
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:22:37
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

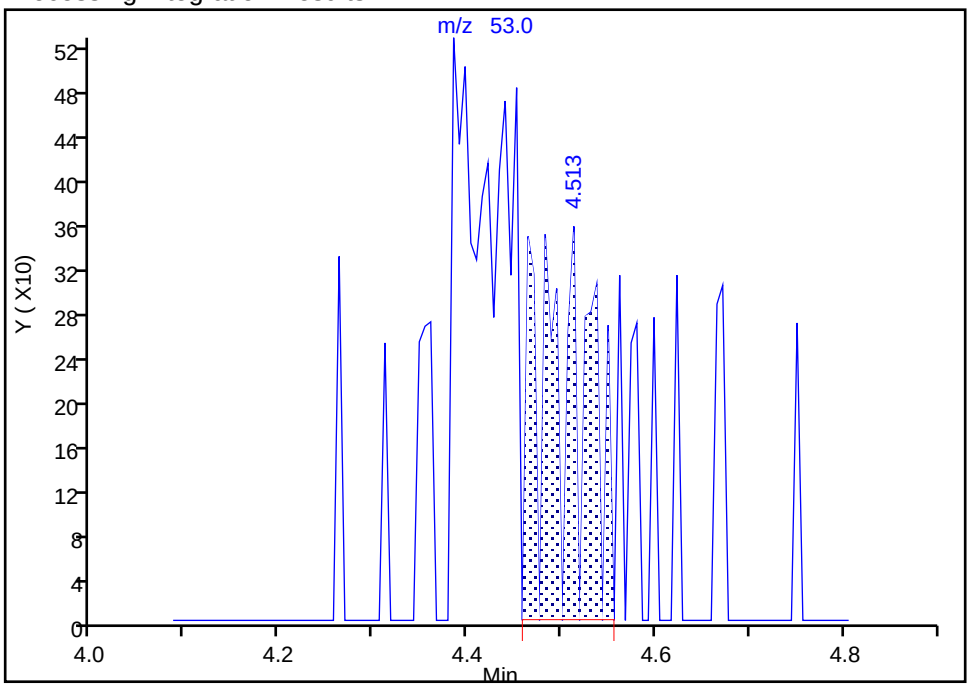
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25 mm) Detector MS Quad

31 Acrylonitrile, CAS: 107-13-1

Signal: 1

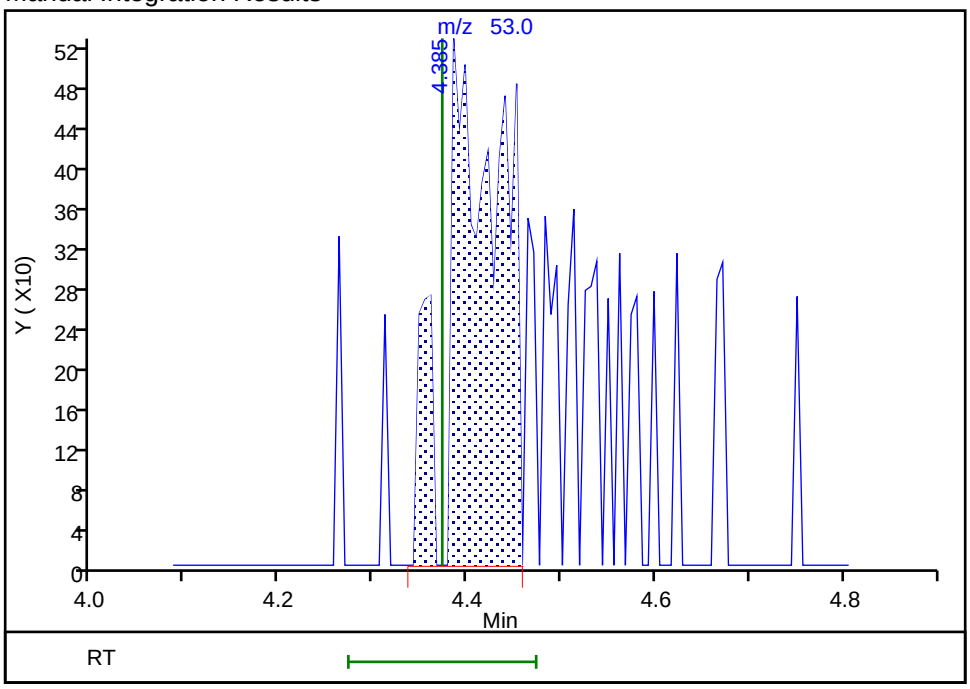
Processing Integration Results

RT: 4.51
Area: 1204
Amount: 0.500000
Amount Units: ug/l



Manual Integration Results

RT: 4.39
Area: 2061
Amount: 0.348498
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:22:49
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

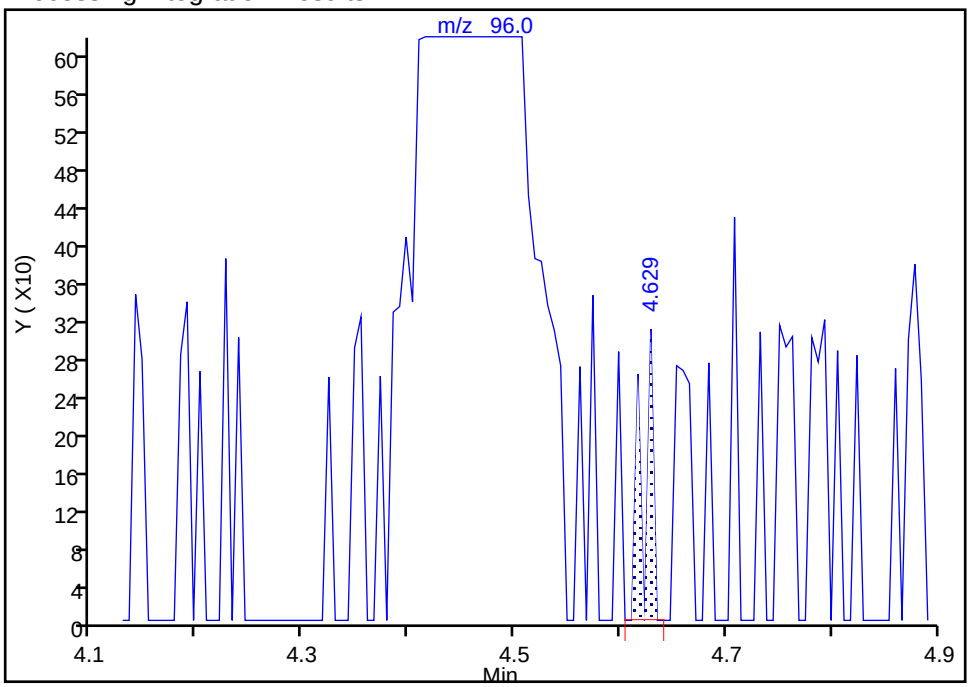
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

33 trans-1,2-Dichloroethene, CAS: 156-60-5

Signal: 1

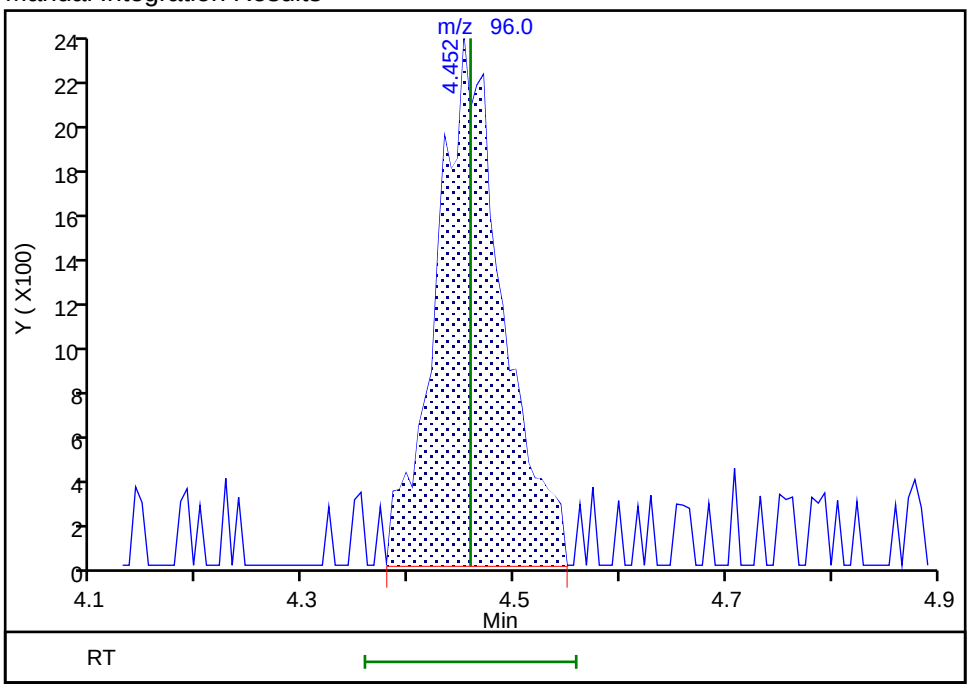
Processing Integration Results

RT: 4.63
Area: 209
Amount: 0.399987
Amount Units: ug/l



Manual Integration Results

RT: 4.45
Area: 10137
Amount: 0.208708
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:23:02
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

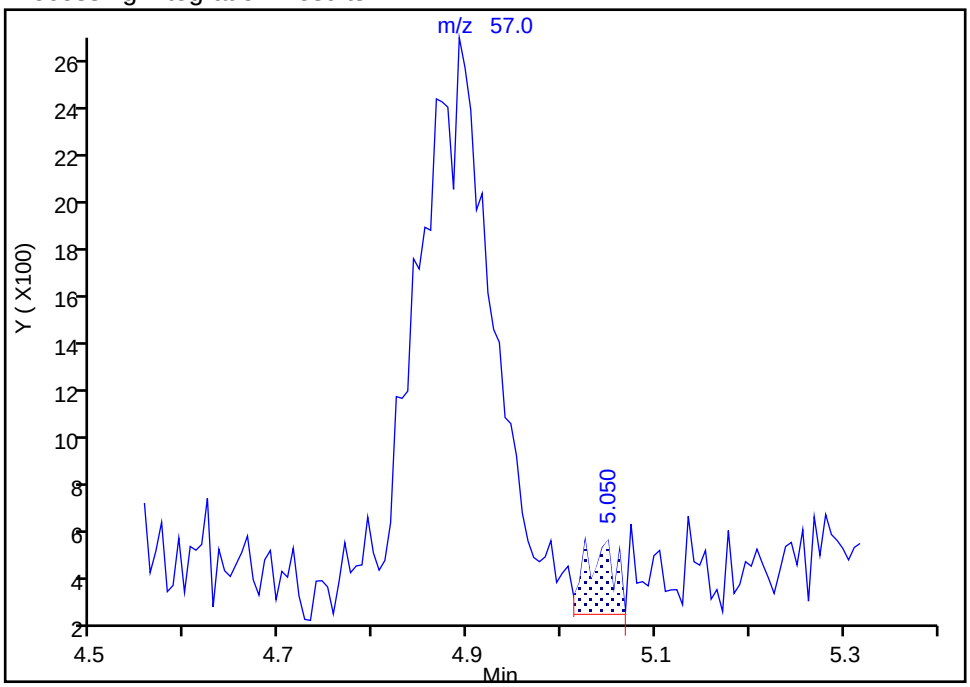
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

34 Hexane, CAS: 110-54-3

Signal: 1

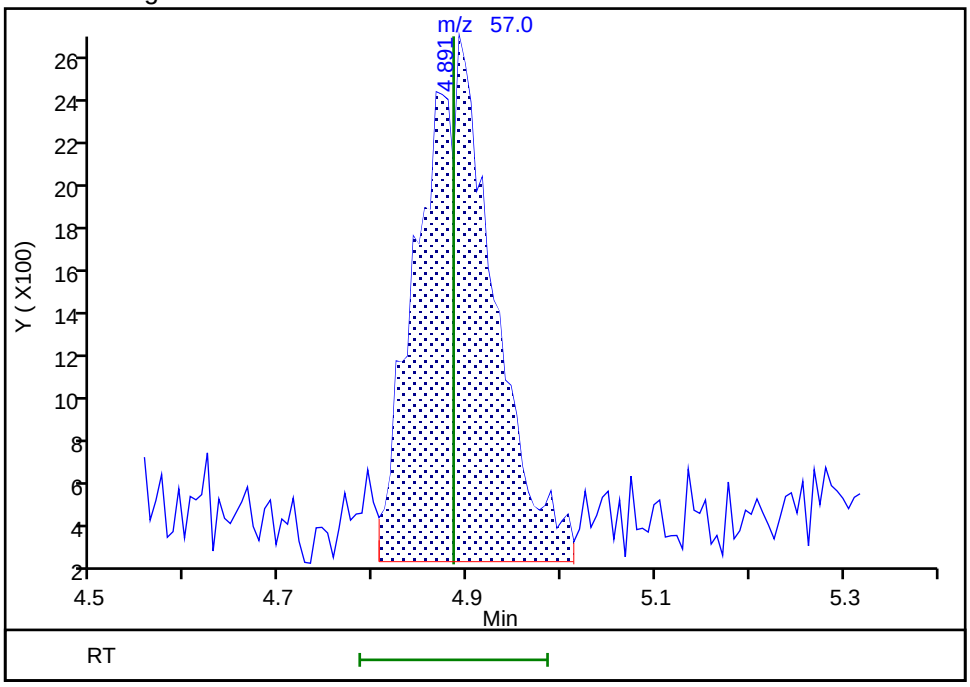
Processing Integration Results

RT: 5.05
Area: 615
Amount: 0.388914
Amount Units: ug/l



Manual Integration Results

RT: 4.89
Area: 13003
Amount: 0.219837
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:23:37

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

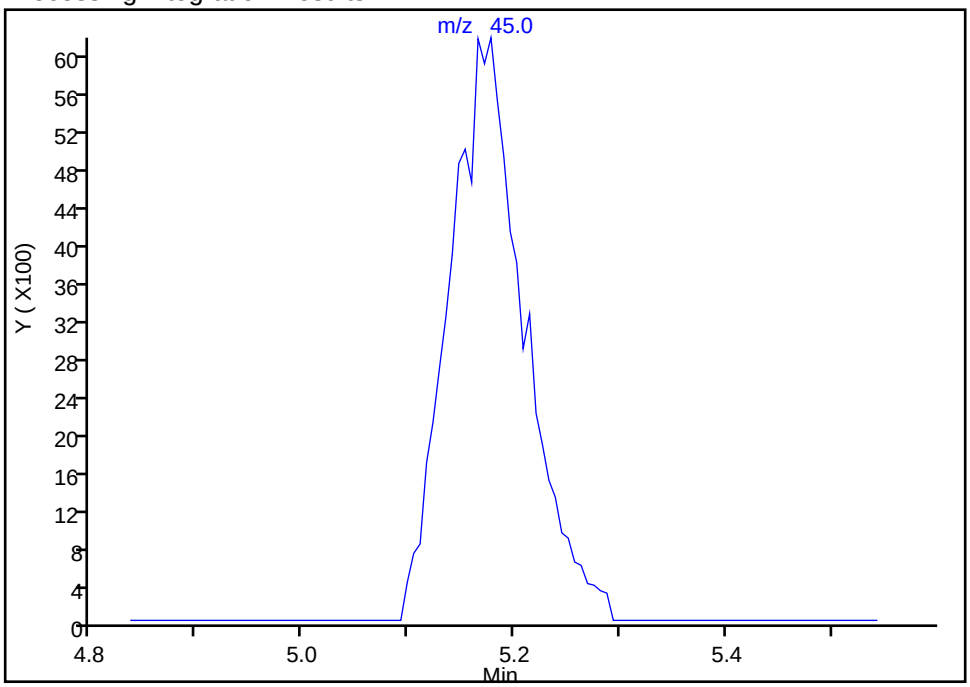
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

37 Isopropyl ether, CAS: 108-20-3

Signal: 1

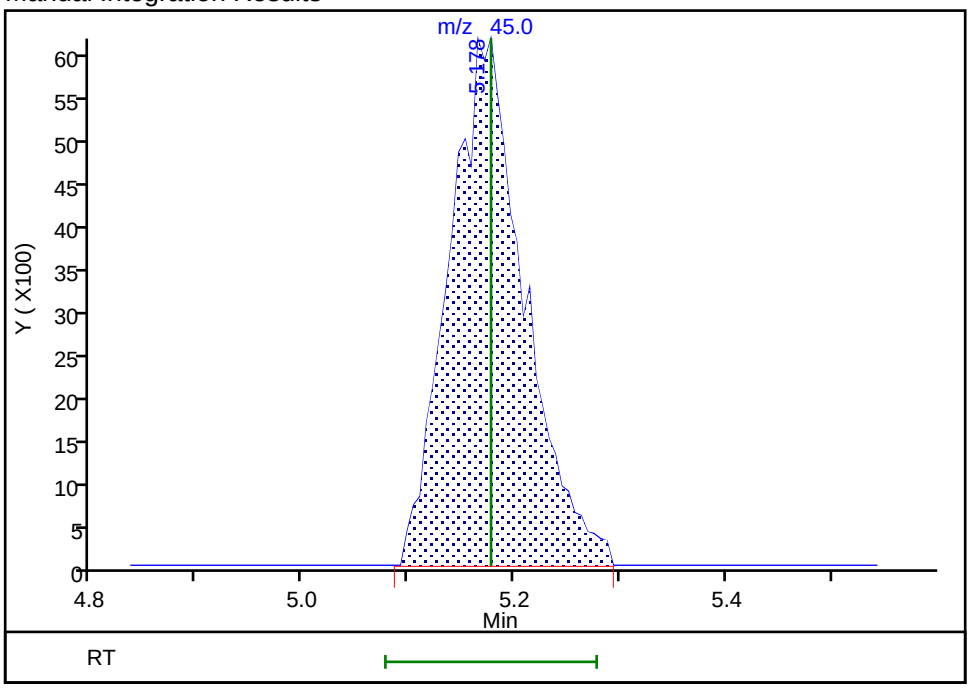
Processing Integration Results

Not Detected
Expected RT: 5.18



Manual Integration Results

RT: 5.18
Area: 30515
Amount: 0.191420
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:23:40
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

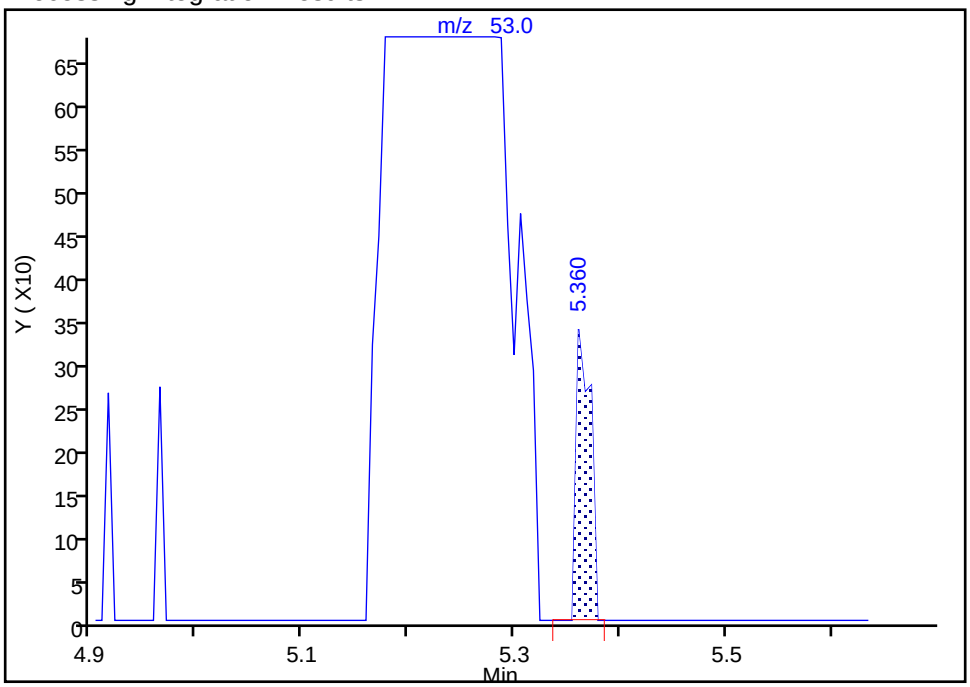
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

38 2-Chloro-1,3-butadiene, CAS: 126-99-8

Signal: 1

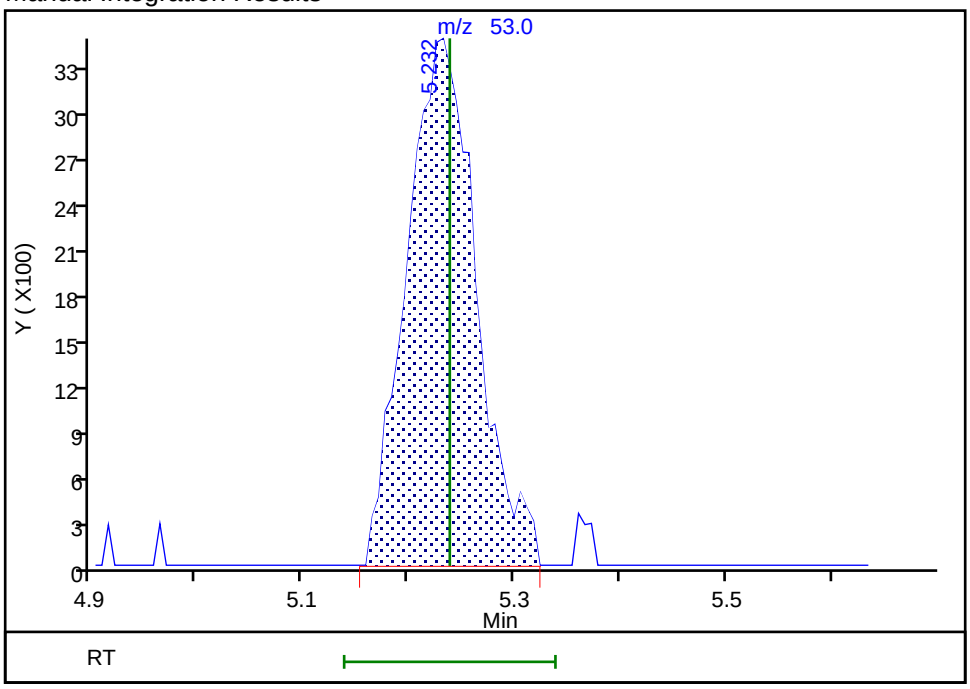
Processing Integration Results

RT: 5.36
Area: 320
Amount: 0.373571
Amount Units: ug/l



Manual Integration Results

RT: 5.23
Area: 15760
Amount: 0.197725
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:23:43
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

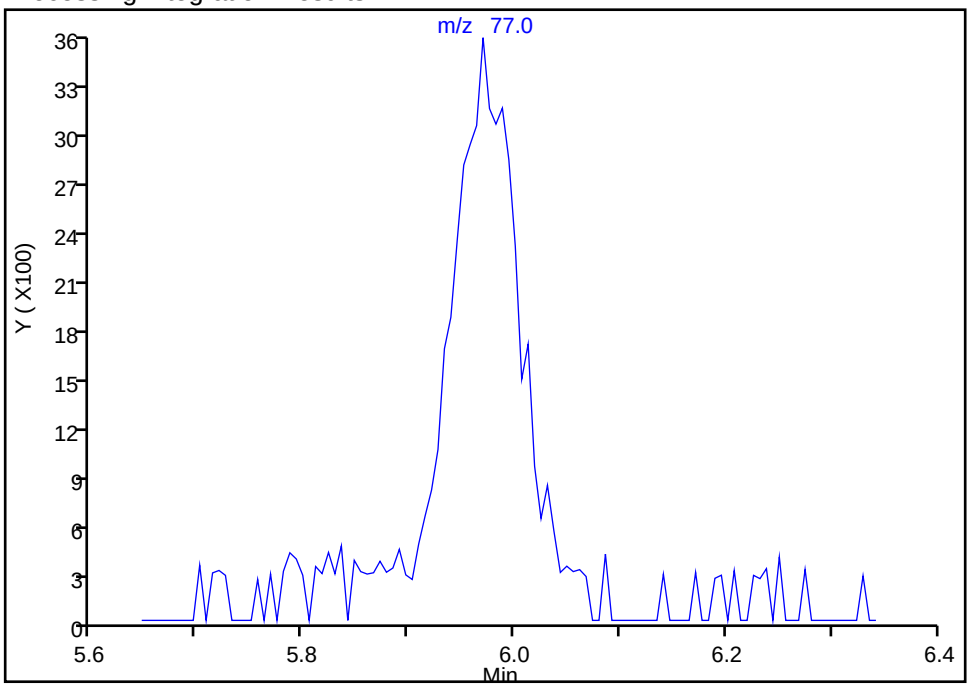
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

43 2,2-Dichloropropane, CAS: 594-20-7

Signal: 1

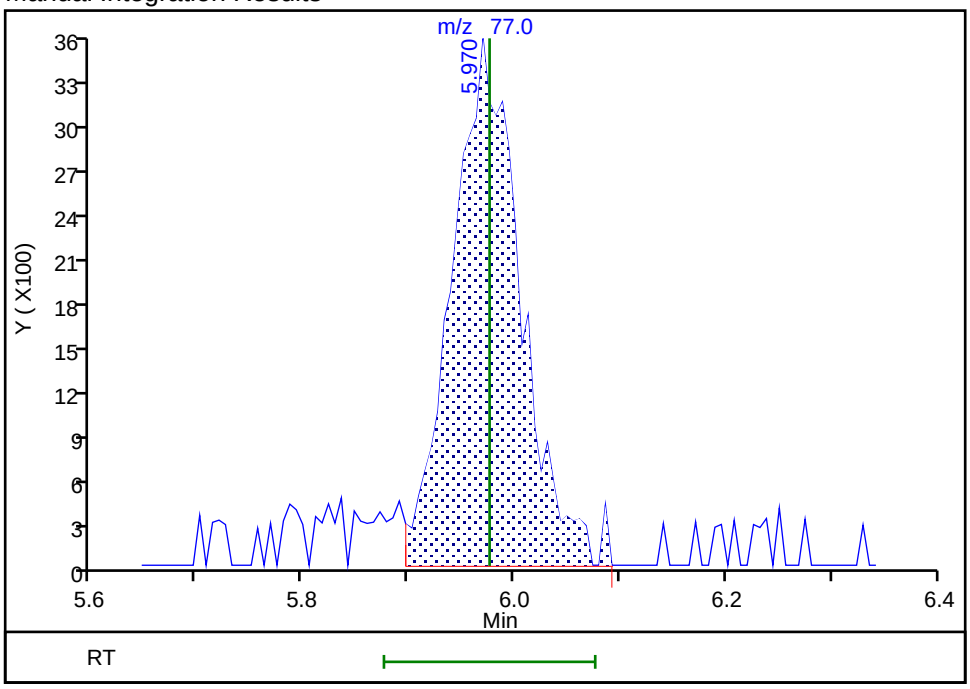
Not Detected
Expected RT: 5.98

Processing Integration Results



Manual Integration Results

RT: 5.97
Area: 16087
Amount: 0.213085
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:24:01
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

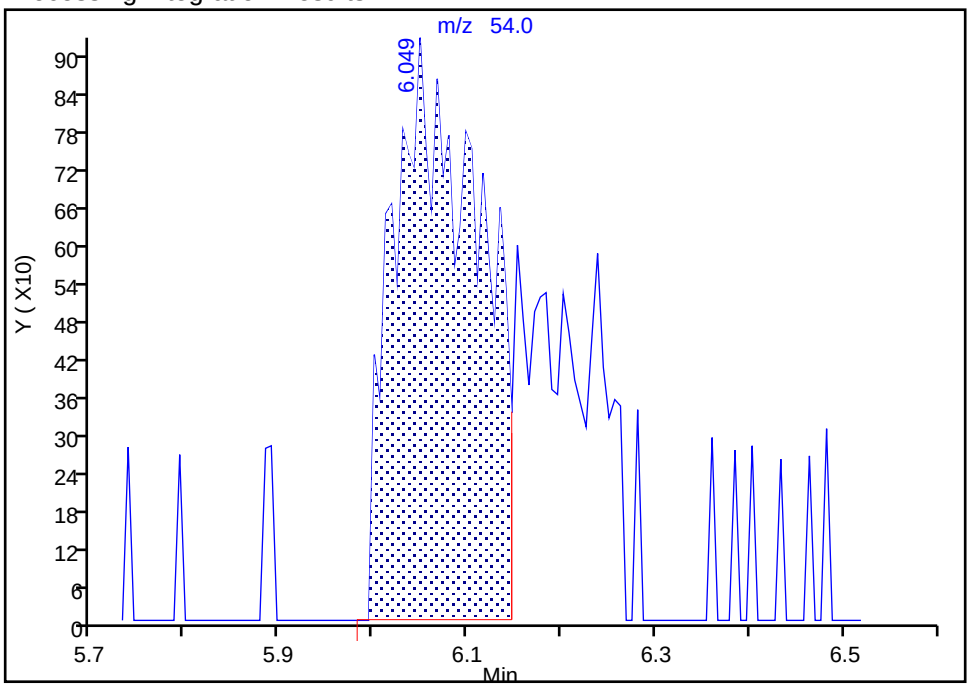
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

44 Propionitrile, CAS: 107-12-0

Signal: 1

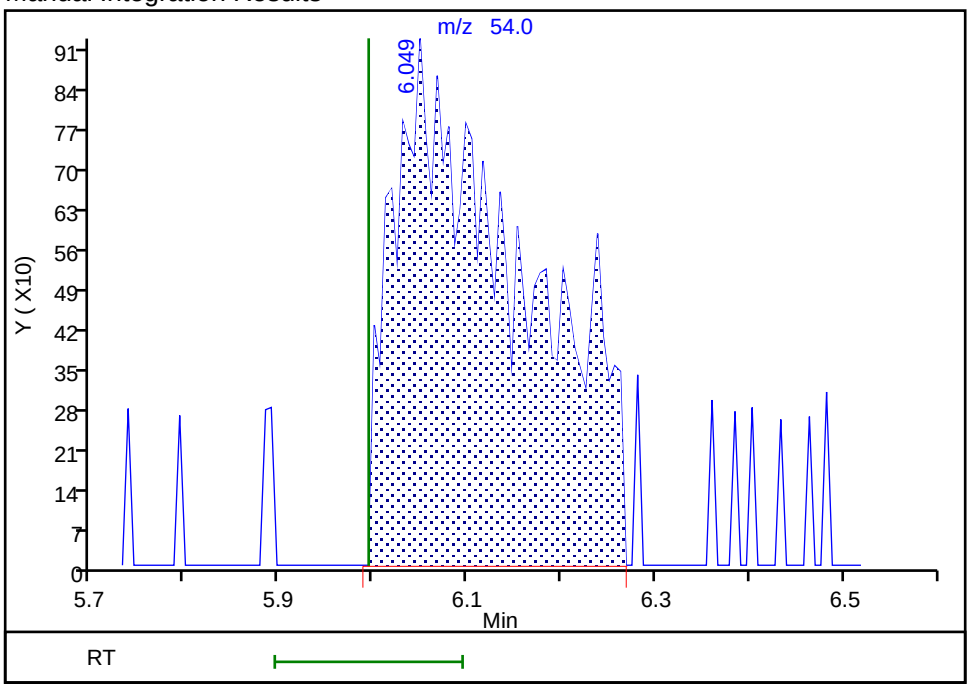
Processing Integration Results

RT: 6.05
Area: 5813
Amount: 4.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.05
Area: 8781
Amount: 4.350734
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:24:13
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

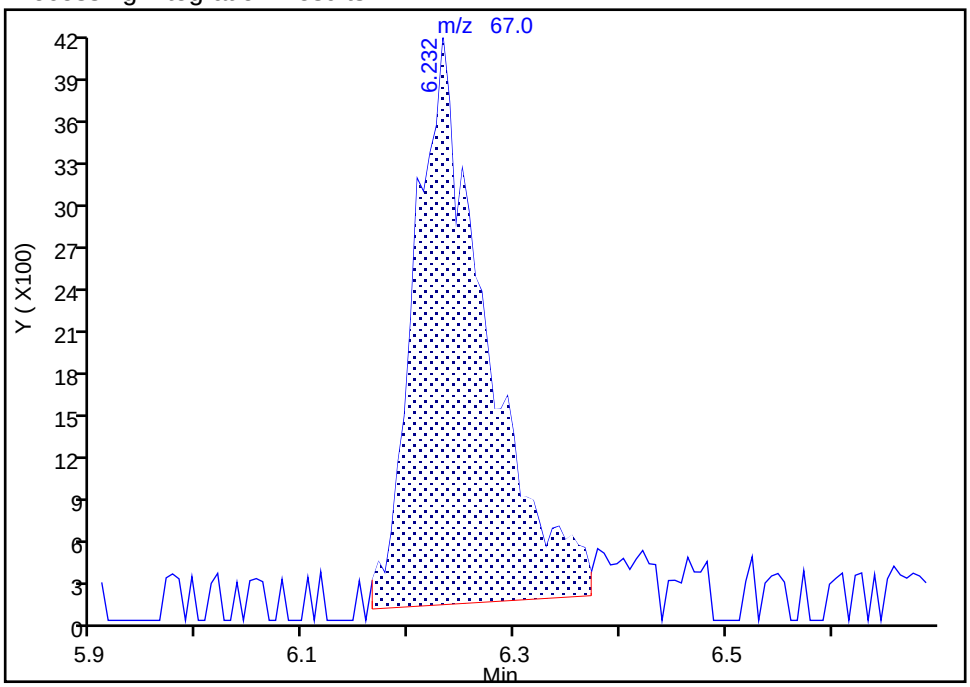
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

47 Methacrylonitrile, CAS: 126-98-7

Signal: 1

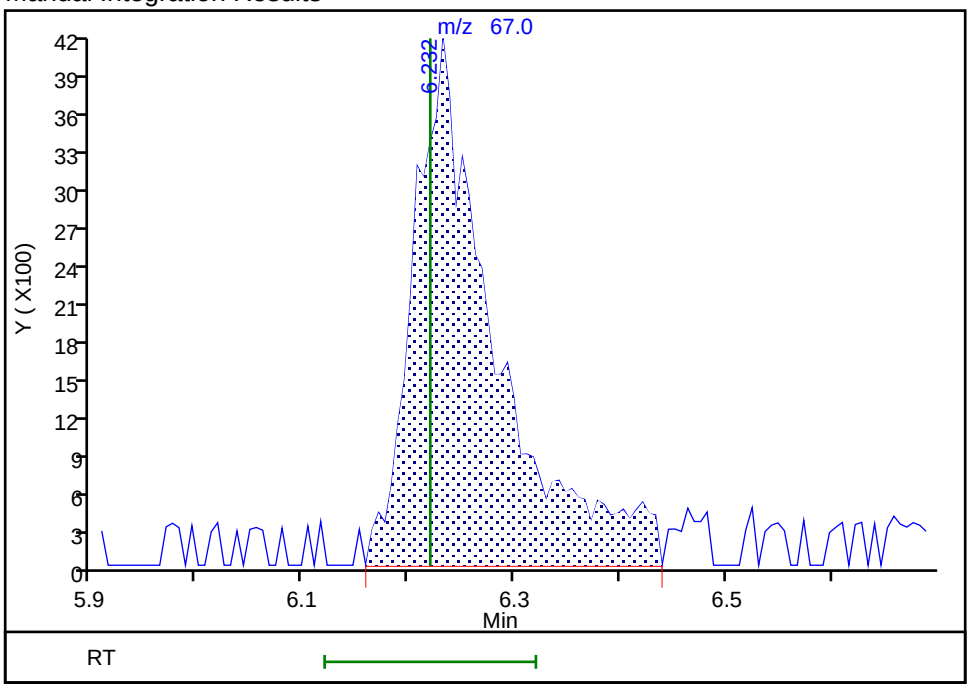
Processing Integration Results

RT: 6.23
Area: 18891
Amount: 2.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.23
Area: 22143
Amount: 2.428111
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:24:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

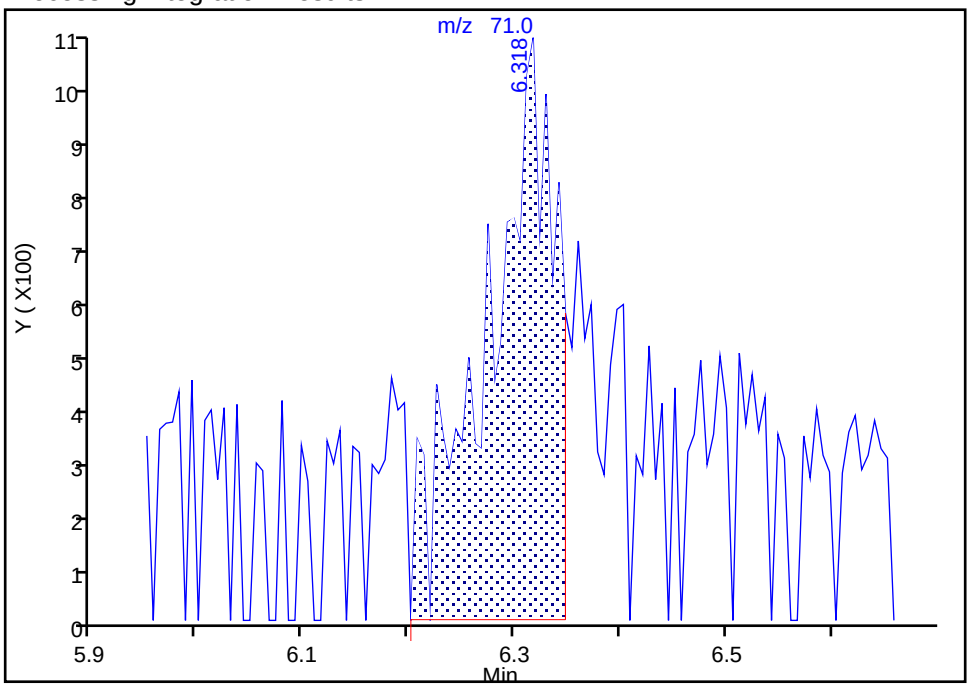
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

49 Tetrahydrofuran, CAS: 109-99-9

Signal: 1

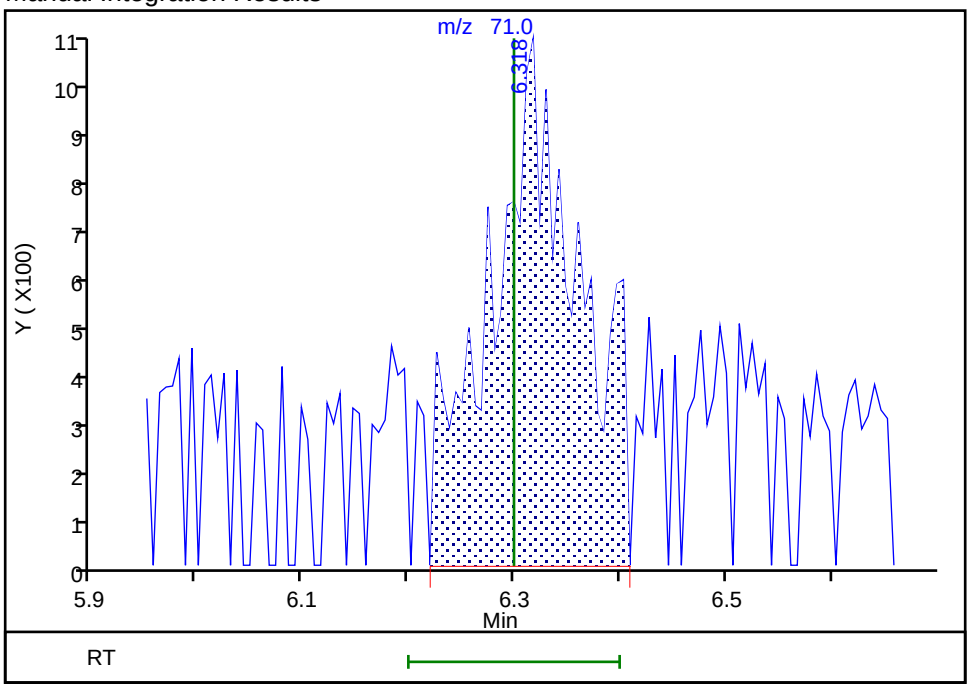
Processing Integration Results

RT: 6.32
Area: 4692
Amount: 1.000000
Amount Units: ug/l



Manual Integration Results

RT: 6.32
Area: 6083
Amount: 2.845221
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:24:46
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

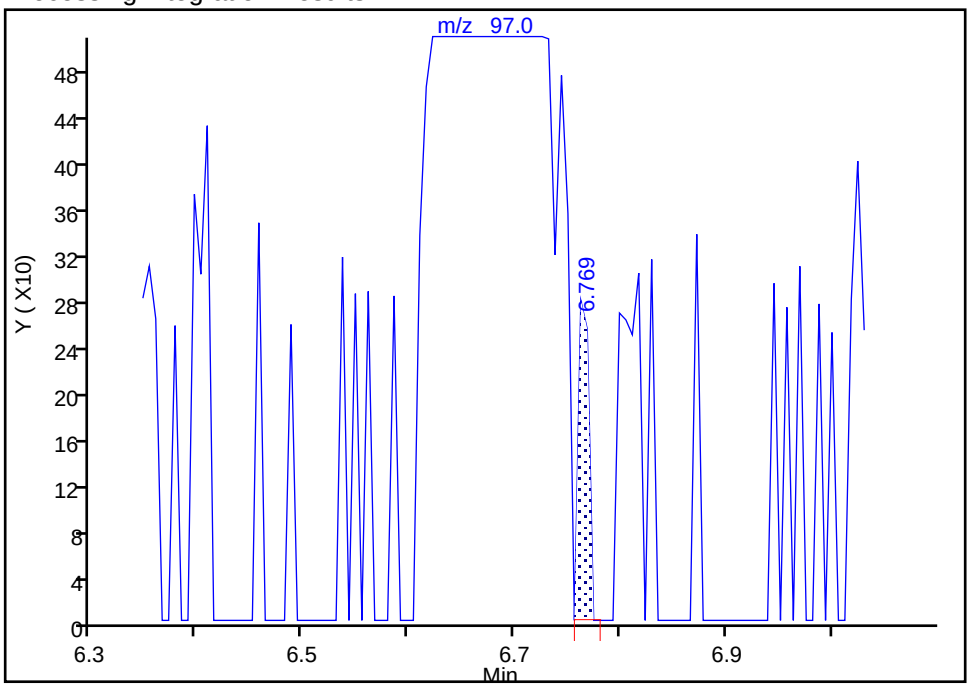
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

53 1,1,1-Trichloroethane, CAS: 71-55-6

Signal: 1

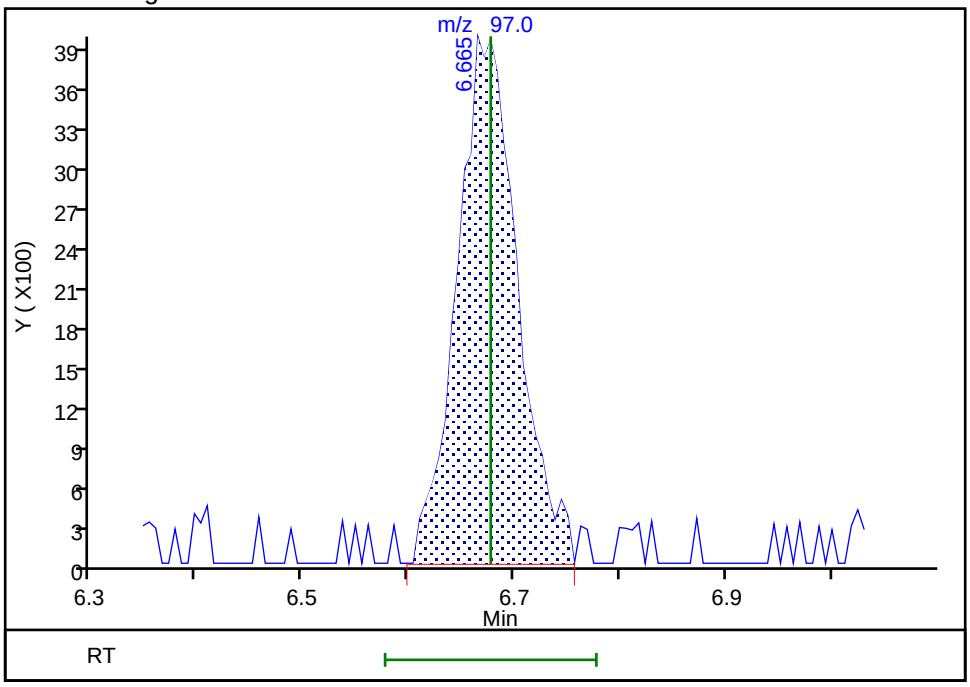
Processing Integration Results

RT: 6.77
Area: 196
Amount: 0.399757
Amount Units: ug/l



Manual Integration Results

RT: 6.67
Area: 15812
Amount: 0.203396
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:25:11
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

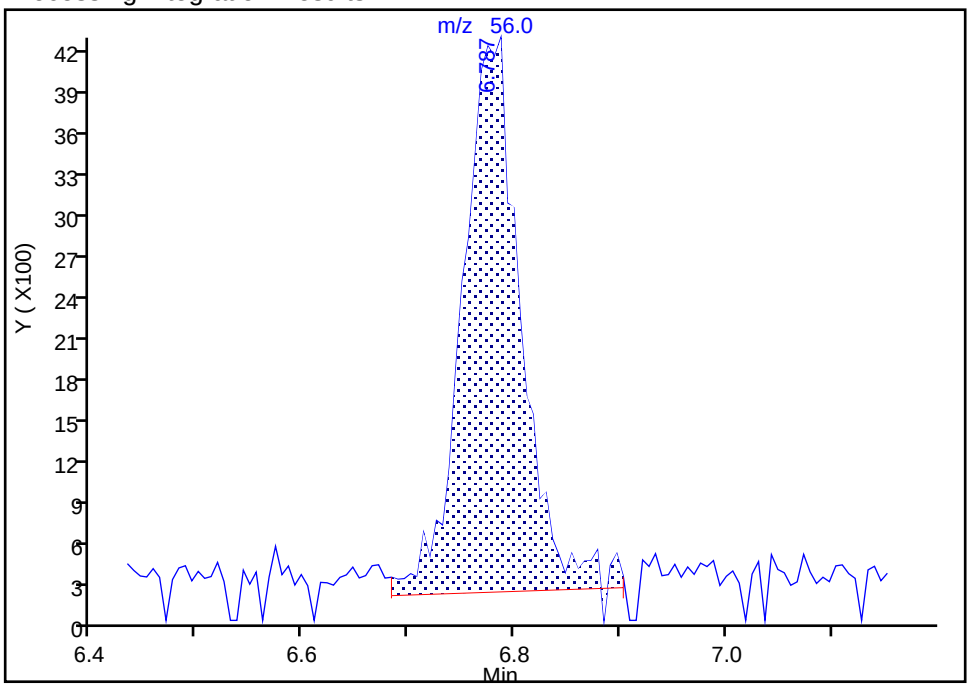
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

54 Cyclohexane, CAS: 110-82-7

Signal: 1

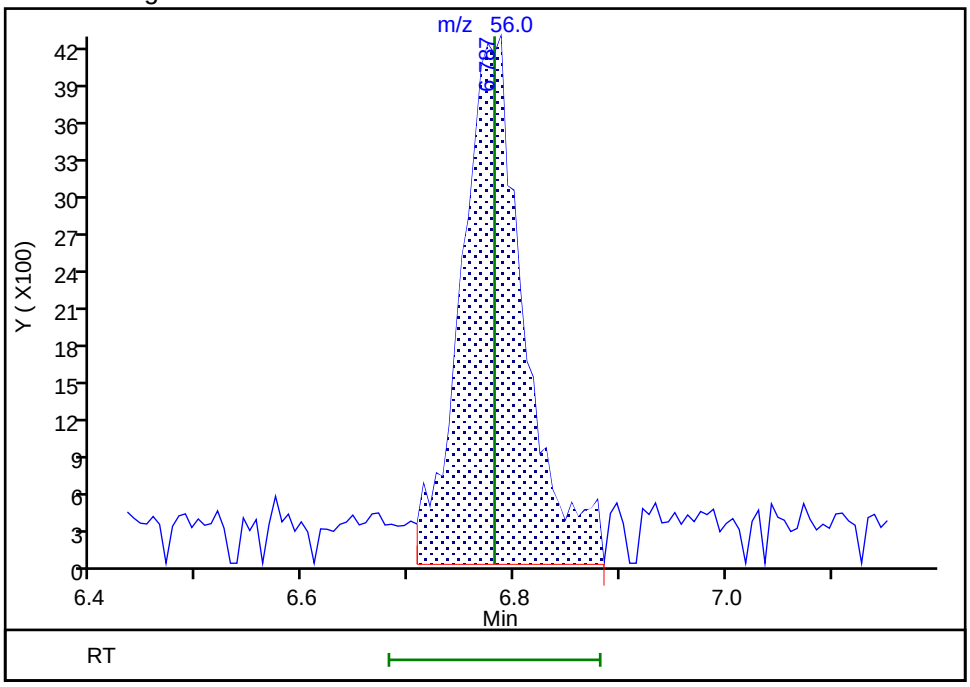
Processing Integration Results

RT: 6.79
Area: 15427
Amount: 0.399370
Amount Units: ug/l



Manual Integration Results

RT: 6.79
Area: 17303
Amount: 0.208070
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:24:59
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

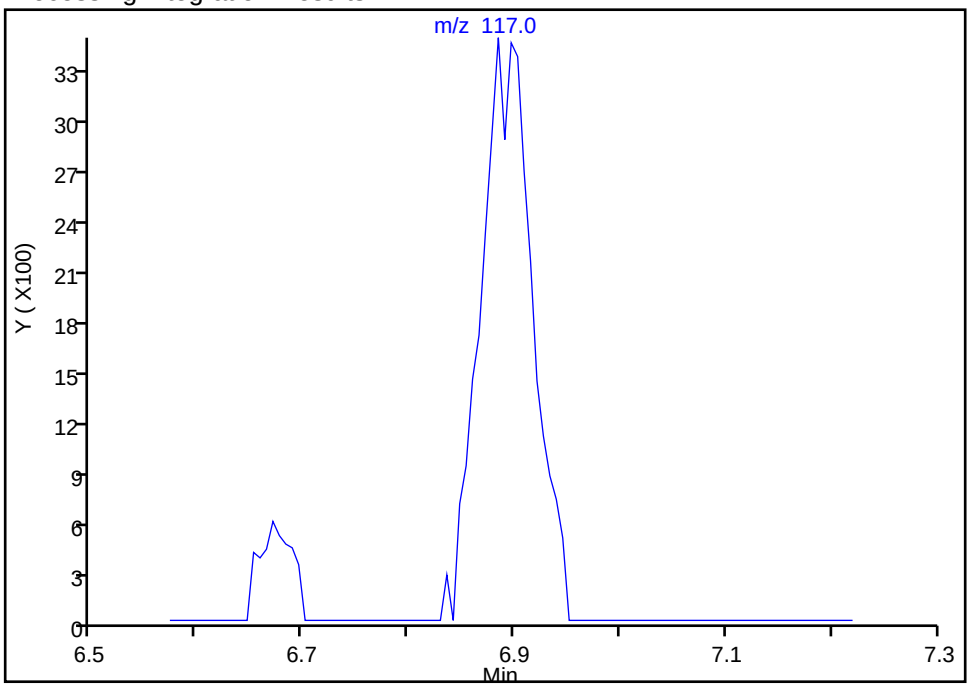
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

56 Carbon tetrachloride, CAS: 56-23-5

Signal: 1

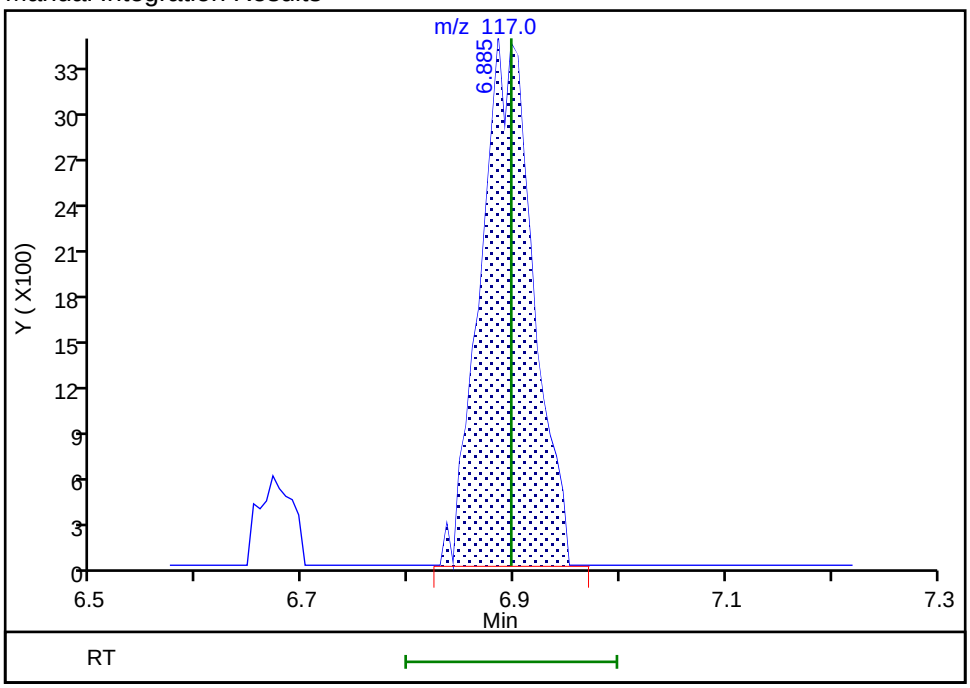
Not Detected
Expected RT: 6.90

Processing Integration Results



Manual Integration Results

RT: 6.88
Area: 11820
Amount: 0.180711
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:25:29
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

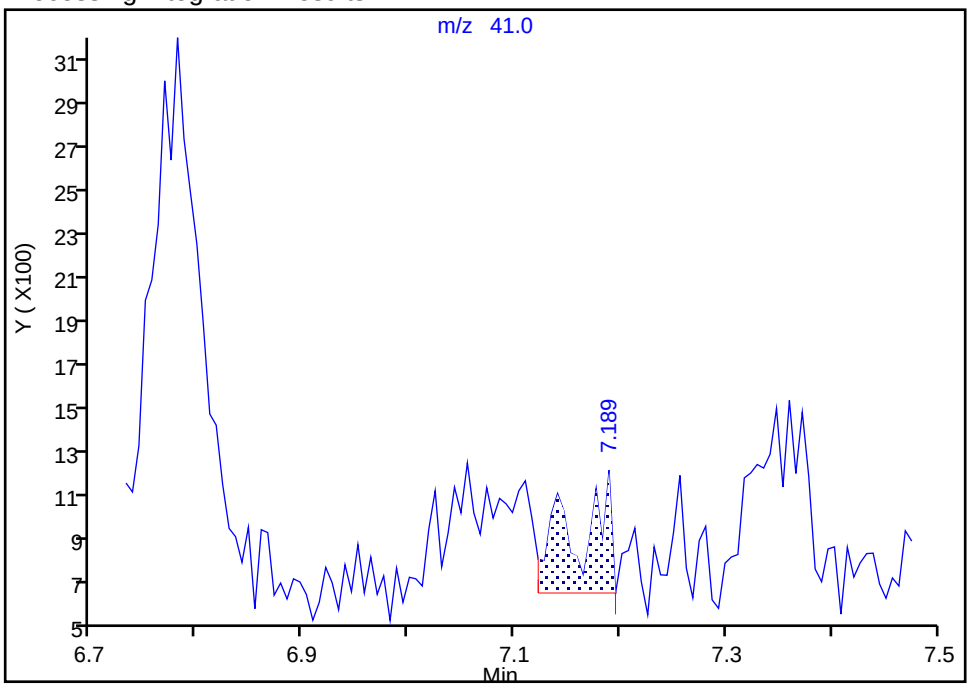
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

57 Isobutyl alcohol, CAS: 78-83-1

Signal: 1

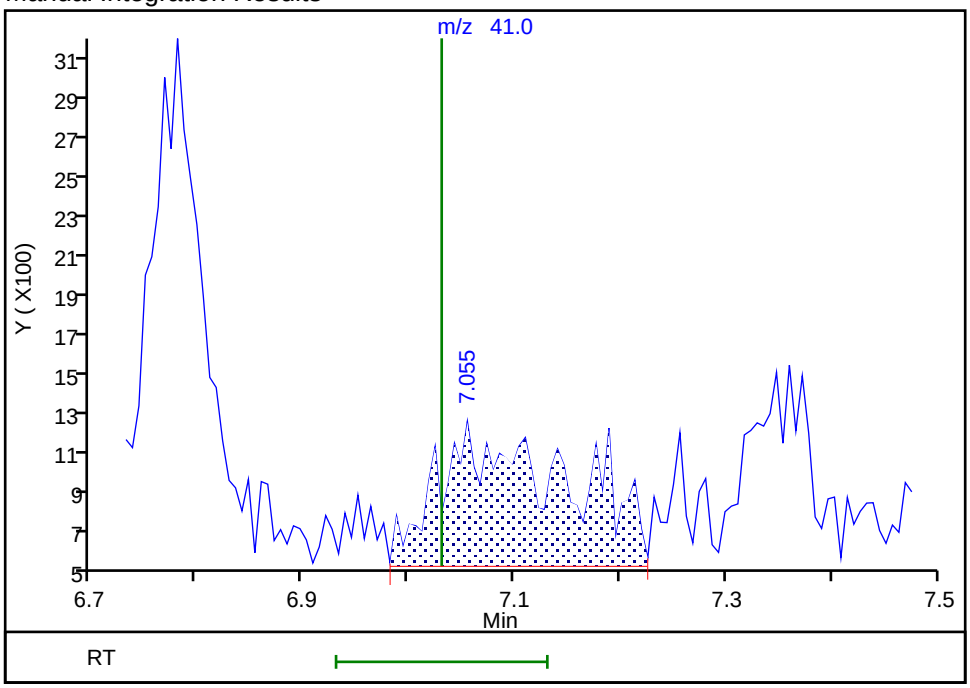
Processing Integration Results

RT: 7.19
Area: 1237
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 7.06
Area: 5843
Amount: 12.686188
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:25:58
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

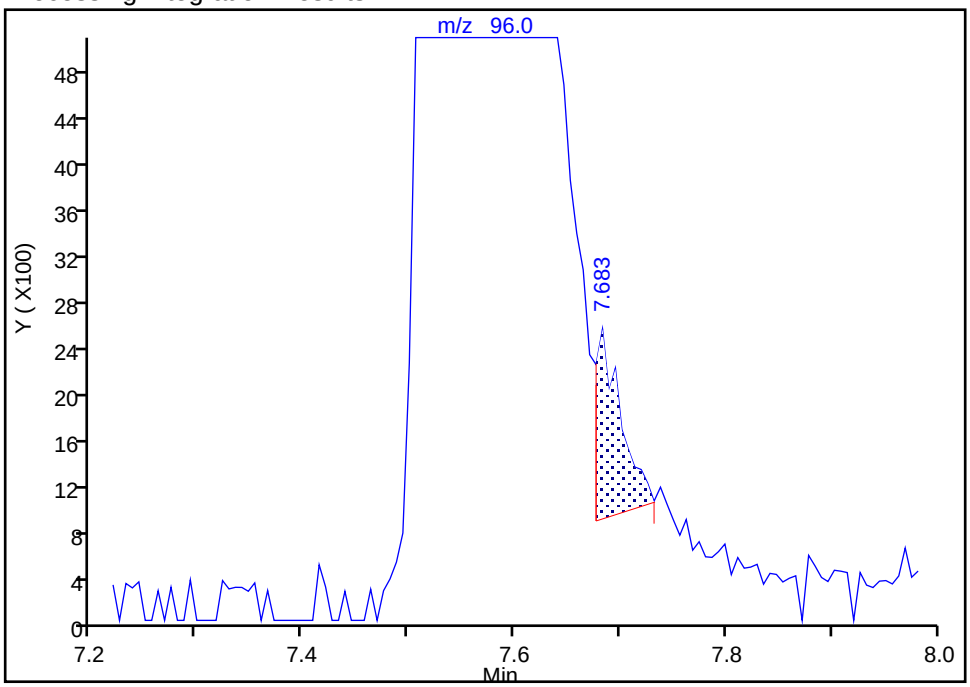
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D
Injection Date: 19-Apr-2023 21:41:30 Instrument ID: 19094
Lims ID: IC std1 0.2
Client ID:
Operator ID: mec29284 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

* 64 Fluorobenzene (IS), CAS: 462-06-6

Signal: 1

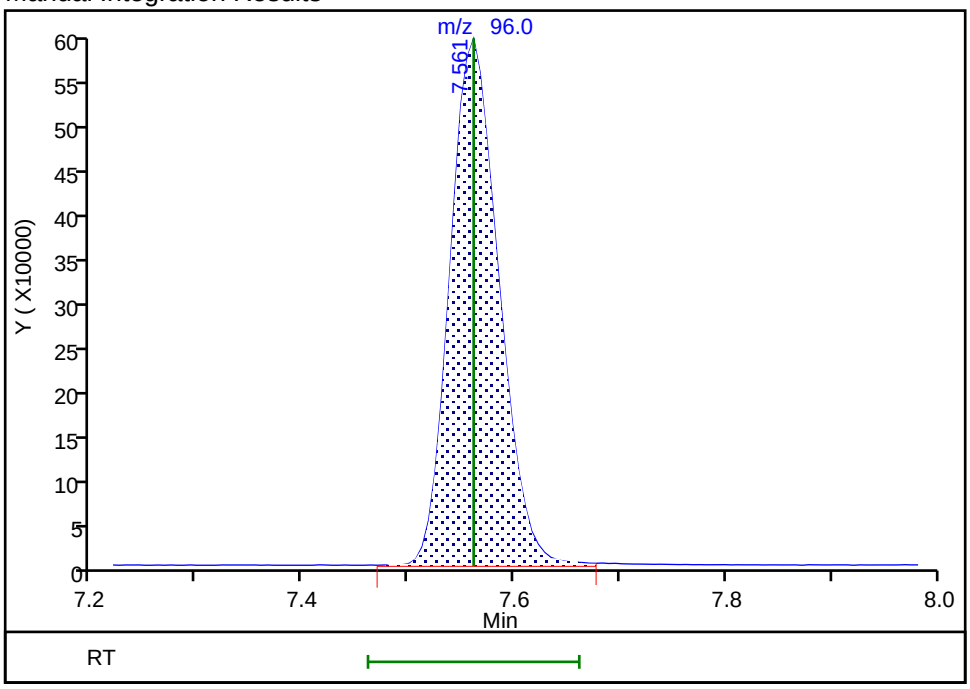
Processing Integration Results

RT: 7.68
Area: 2714
Amount: 10.000000
Amount Units: ug/l



Manual Integration Results

RT: 7.56
Area: 1905653
Amount: 10.000000
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:26:13
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

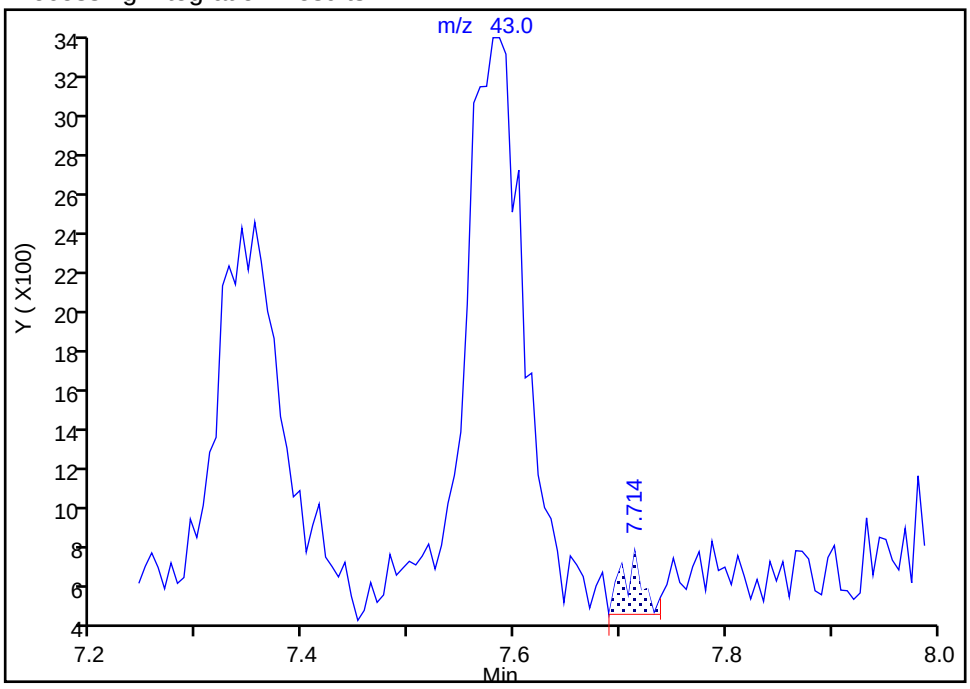
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

65 n-Heptane, CAS: 142-82-5

Signal: 1

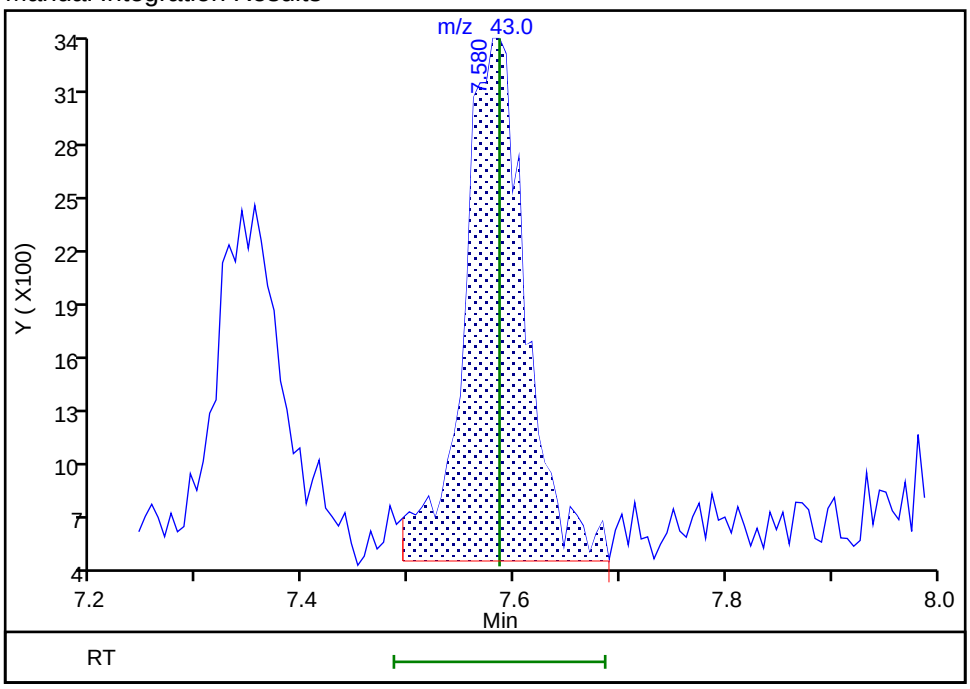
Processing Integration Results

RT: 7.71
Area: 426
Amount: 0.394051
Amount Units: ug/l



Manual Integration Results

RT: 7.58
Area: 11676
Amount: 0.211143
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:26:23
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

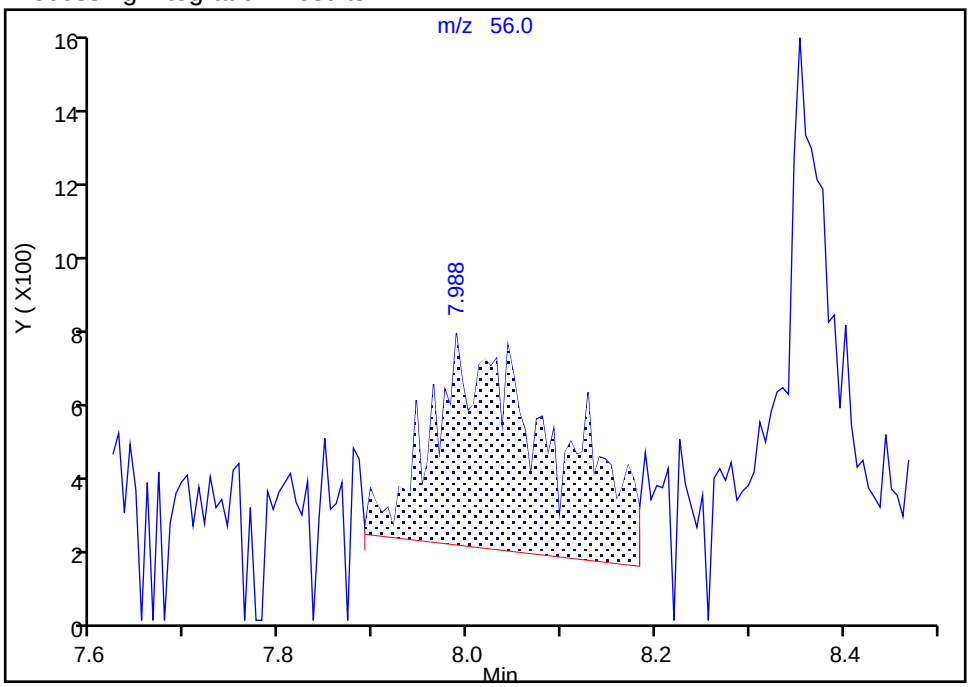
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

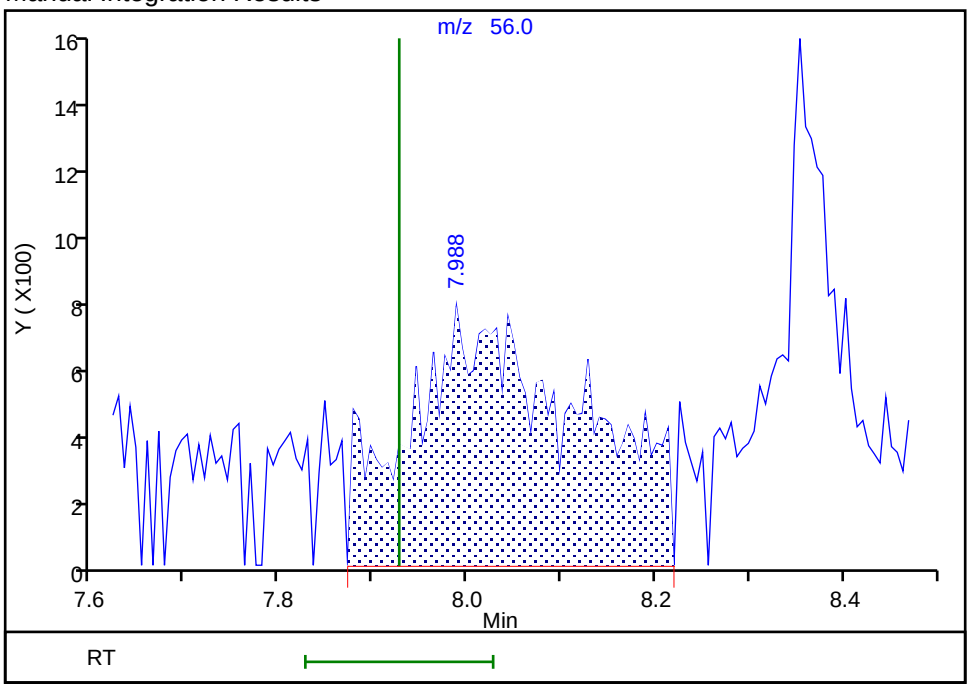
Processing Integration Results

RT: 7.99
Area: 5200
Amount: 17.500000
Amount Units: ug/l



Manual Integration Results

RT: 7.99
Area: 9717
Amount: 29.100771
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:26:53
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

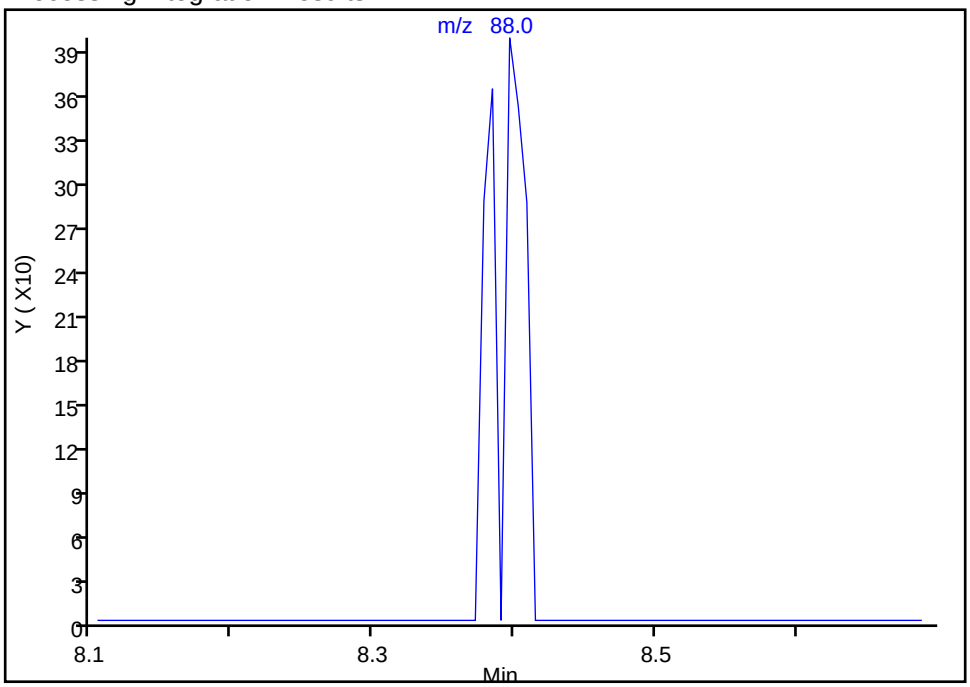
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

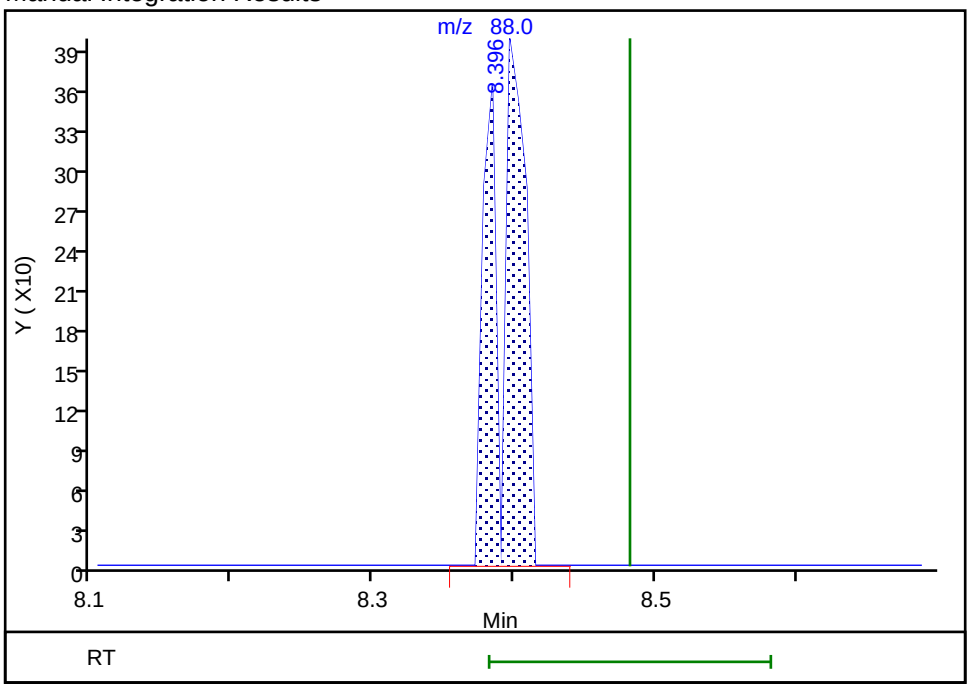
Not Detected
Expected RT: 8.48

Processing Integration Results



Manual Integration Results

RT: 8.40
Area: 619
Amount: 11.663284
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:27:08
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

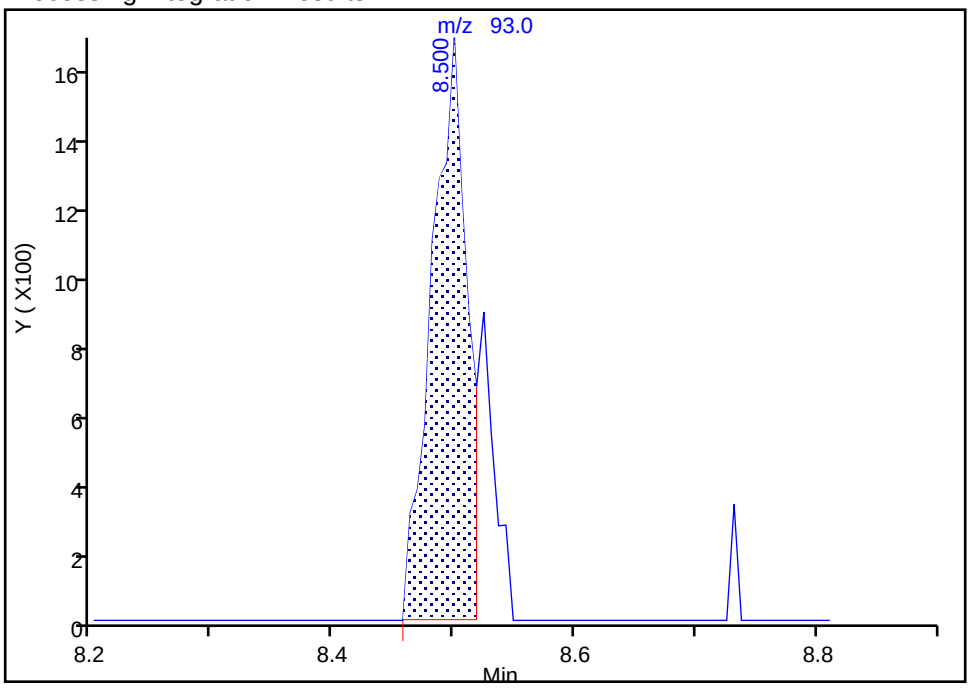
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 Dibromomethane, CAS: 74-95-3

Signal: 1

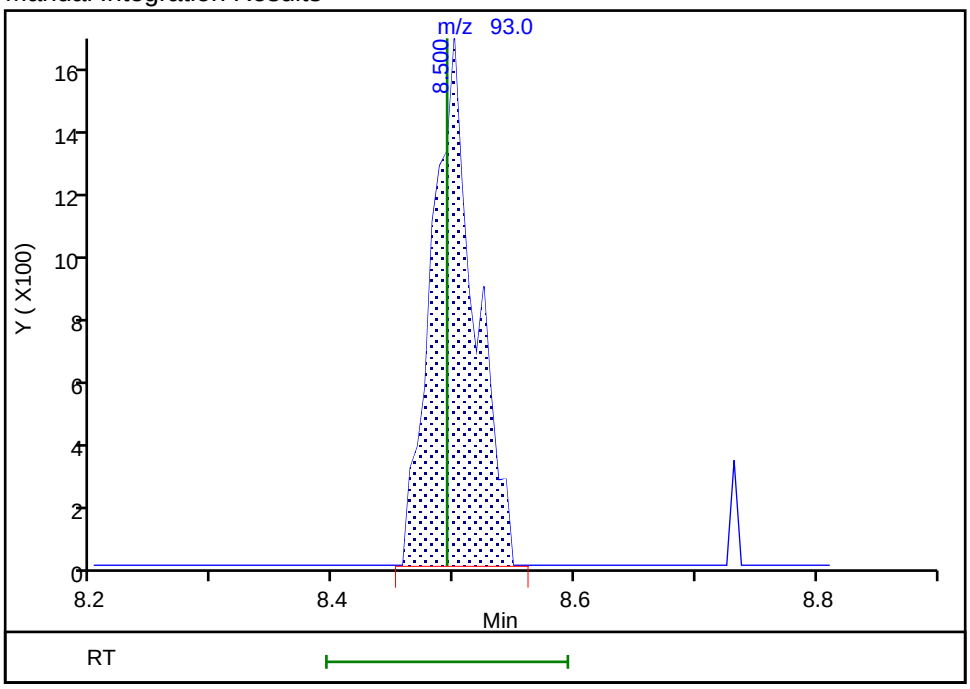
Processing Integration Results

RT: 8.50
Area: 3390
Amount: 0.180585
Amount Units: ug/l



Manual Integration Results

RT: 8.50
Area: 4104
Amount: 0.194933
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:27:18

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

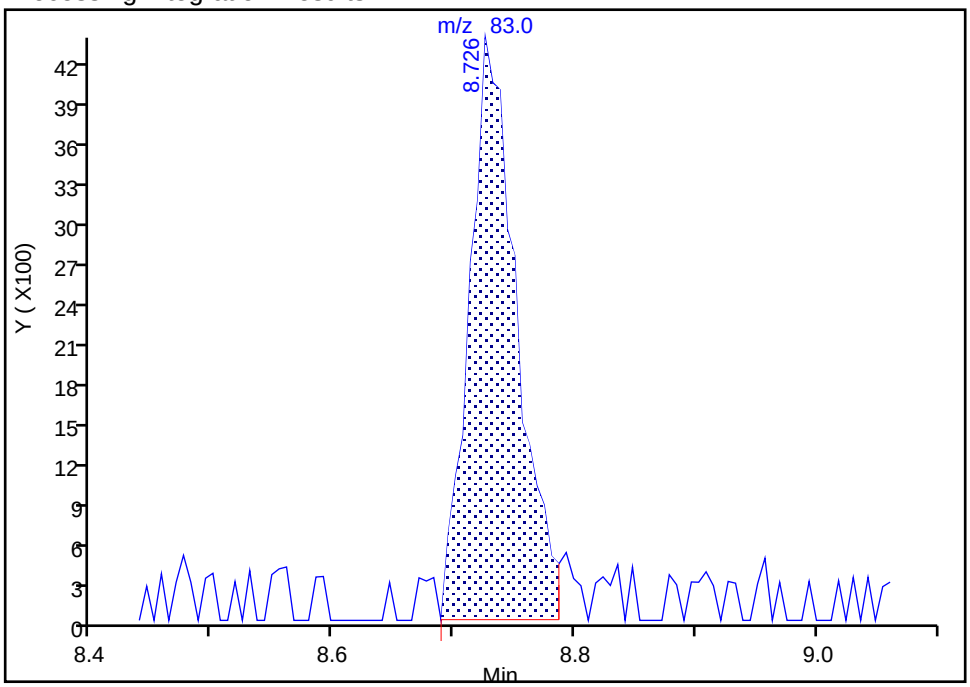
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

76 Dichlorobromomethane, CAS: 75-27-4

Signal: 1

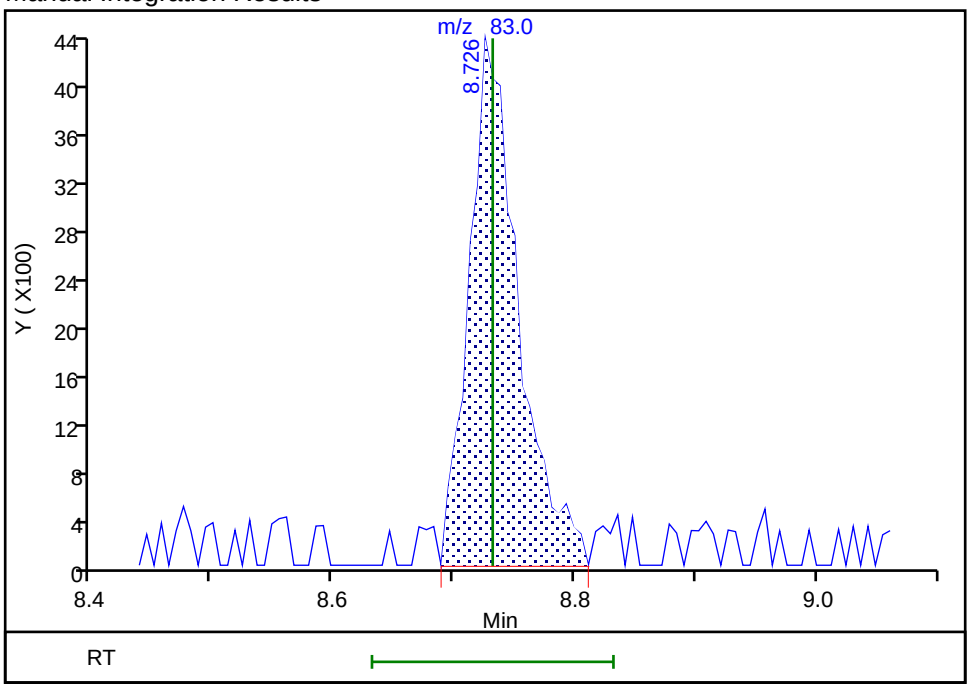
Processing Integration Results

RT: 8.73
Area: 11893
Amount: 0.197428
Amount Units: ug/l



Manual Integration Results

RT: 8.73
Area: 12287
Amount: 0.199087
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:27:25
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

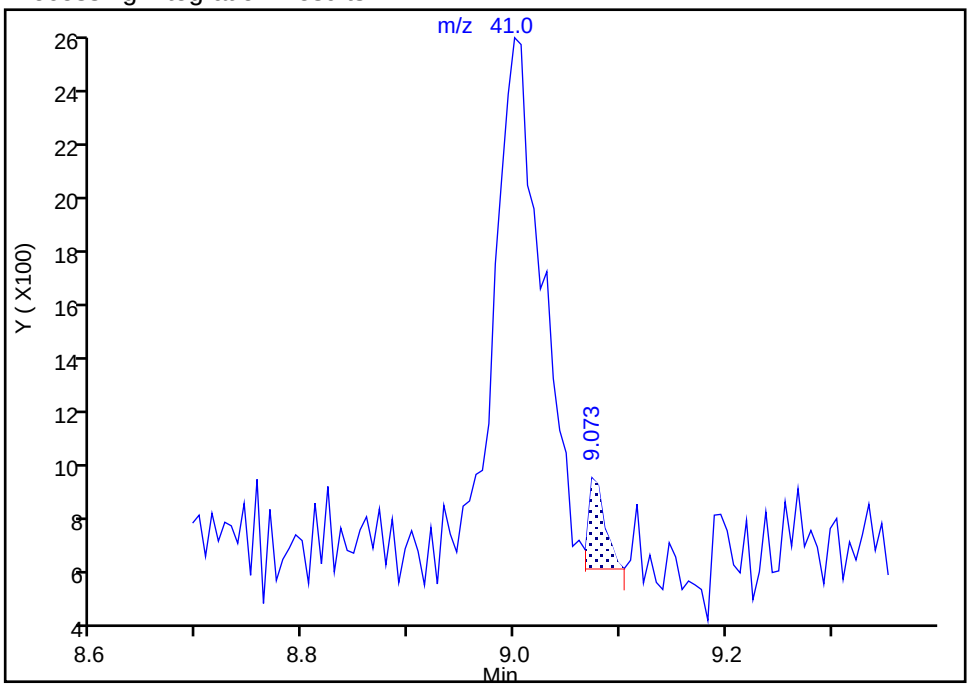
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X12.D				
Injection Date:	19-Apr-2023 21:41:30	Instrument ID:	19094		
Lims ID:	IC std1 0.2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	12	Worklist Smp#:	13
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

77 2-Nitropropane, CAS: 79-46-9

Signal: 1

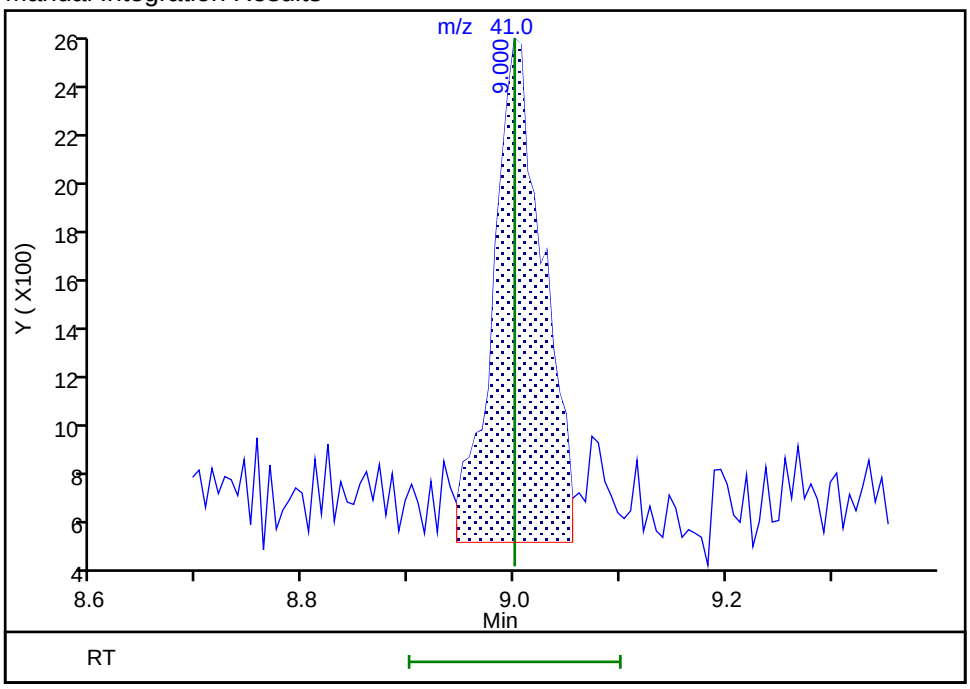
Processing Integration Results

RT: 9.07
Area: 356
Amount: 1.000000
Amount Units: ug/l



Manual Integration Results

RT: 9.00
Area: 6722
Amount: 1.296804
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:27:43
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D
Lims ID: IC std2 0.5
Client ID:
Sample Type: IC Calib Level: 2
Inject. Date: 19-Apr-2023 22:01:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-014
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:34:42 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:32:28

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	97	34429	0.5000	0.5449	M
5 Chloromethane	50	2.099	2.093	0.006	99	41642	0.5000	0.4987	
6 Vinyl chloride	62	2.209	2.203	0.006	97	38729	0.5000	0.4965	
7 Butadiene	39	2.202	2.203	-0.001	90	41522	0.5000	0.5191	M
9 Bromomethane	94	2.526	2.526	0.000	90	24140	0.5000	0.4957	
10 Chloroethane	64	2.605	2.599	0.006	99	22196	0.5000	0.5080	
11 Dichlorofluoromethane	67	2.830	2.824	0.006	97	52913	0.5000	0.5059	
12 Trichlorofluoromethane	101	2.910	2.904	0.006	97	41870	0.5000	0.4743	
14 Ethyl ether	59	3.123	3.117	0.006	89	18138	0.5000	0.5070	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.214	3.202	0.012	93	34438	0.5000	0.5011	
16 Acrolein	56	3.294	3.288	0.006	99	117548	25.0	27.4	
17 1,1-Dichloroethene	96	3.428	3.422	0.006	97	22916	0.5000	0.5269	
19 Acetone	43	3.452	3.446	0.006	40	27075	5.00	6.32	M
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.470	3.465	0.005	94	19225	0.5000	0.4705	
21 Iodomethane	142	3.617	3.611	0.006	98	39699	0.5000	0.5063	
22 Ethyl bromide	108	3.641	3.635	0.006	97	20751	0.5010	0.5082	
23 Carbon disulfide	76	3.720	3.715	0.005	99	63335	0.5000	0.5127	
24 Methyl acetate	43	3.855	3.843	0.012	20	7716	0.5000	0.5384	M
26 3-Chloro-1-propene	41	3.879	3.873	0.006	93	42088	0.5000	0.5459	
27 Methylene Chloride	84	4.062	4.050	0.012	94	24190	0.5000	0.5253	
* 28 t-Butyl alcohol-d10 (IS)	65	4.086	4.105	-0.019	98	64902	50.0	50.0	
29 2-Methyl-2-propanol	59	4.184	4.190	-0.006	50	14341	10.0	11.5	
31 Acrylonitrile	53	4.434	4.373	0.061	24	9600	1.25	1.49	
32 Methyl tert-butyl ether	73	4.464	4.452	0.012	89	54709	0.5000	0.5242	
33 trans-1,2-Dichloroethene	96	4.464	4.458	0.006	98	25315	0.5000	0.5204	
34 Hexane	57	4.903	4.885	0.018	89	27246	0.5000	0.4599	
36 1,1-Dichloroethane	63	5.123	5.123	0.000	97	46987	0.5000	0.5115	a
37 Isopropyl ether	45	5.190	5.178	0.012	95	83037	0.5000	0.5200	
38 2-Chloro-1,3-butadiene	53	5.238	5.239	-0.001	91	41693	0.5000	0.5222	
40 Tert-butyl ethyl ether	59	5.714	5.720	-0.006	99	75440	0.5000	0.5358	
41 2-Butanone (MEK)	43	5.927	5.909	0.018	99	49525	5.00	5.76	M

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.964	5.958	0.006	84	27925	0.5000	0.5270	
43 2,2-Dichloropropane	77	5.988	5.976	0.012	88	40888	0.5000	0.5407	
44 Propionitrile	54	6.013	5.995	0.018	45	26268	10.0	11.9	M
S 46 1,2-Dichloroethene, Total	100				0			1.05	
47 Methacrylonitrile	67	6.232	6.220	0.012	92	54269	5.00	5.46	
48 Chlorobromomethane	128	6.305	6.299	0.006	94	9844	0.5000	0.5001	
49 Tetrahydrofuran	71	6.305	6.299	0.006	82	11675	2.50	5.01	
50 Chloroform	83	6.446	6.446	0.000	94	46535	0.5000	0.5301	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	94	454822	10.0	10.0	
53 1,1,1-Trichloroethane	97	6.683	6.677	0.006	65	41187	0.5000	0.5289	
54 Cyclohexane	56	6.787	6.781	0.006	92	39353	0.5000	0.4725	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	94	34708	0.5000	0.5138	
56 Carbon tetrachloride	117	6.891	6.897	-0.006	94	32822	0.5000	0.5010	
57 Isobutyl alcohol	41	7.031	7.031	0.000	65	14404	25.0	28.7	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	76	85590	10.0	10.1	
59 Benzene	78	7.159	7.159	0.000	96	102641	0.5000	0.5140	
60 1,2-Dichloroethane	62	7.220	7.226	-0.006	96	25813	0.5000	0.5294	
63 Tert-amyl methyl ether	73	7.348	7.354	-0.006	98	62020	0.5000	0.5263	
* 64 Fluorobenzene (IS)	96	7.567	7.561	0.006	98	1908755	10.0	10.0	
65 n-Heptane	43	7.579	7.586	-0.007	36	26291	0.5000	0.4747	
67 n-Butanol	56	7.970	7.927	0.043	89	16774	43.8	46.1	M
68 Trichloroethene	95	8.055	8.049	0.006	97	28081	0.5000	0.5271	
69 Methylcyclohexane	83	8.372	8.366	0.006	93	38844	0.5000	0.4924	
70 1,2-Dichloropropane	63	8.390	8.390	0.000	74	26782	0.5000	0.5174	
71 2-ethoxy-2-methyl butane	87	8.396	8.397	-0.001	92	37788	0.5000	0.5178	
72 Methyl methacrylate	69	8.470	8.470	0.000	91	10431	0.5000	0.5612	
73 1,4-Dioxane	88	8.402	8.482	-0.080	28	1713	25.0	29.6	
74 Dibromomethane	93	8.488	8.494	-0.006	95	10614	0.5000	0.5033	M
76 Dichlorobromomethane	83	8.738	8.732	0.006	98	32077	0.5000	0.5189	M
77 2-Nitropropane	41	9.000	9.000	0.000	98	15686	2.50	2.77	M
79 1-Bromo-2-chloroethane	63	9.140	9.134	0.006	98	24405	0.5000	0.5048	
80 cis-1,3-Dichloropropene	75	9.299	9.293	0.006	96	37131	0.5000	0.5058	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	97	135107	5.00	5.51	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1902986	10.0	10.0	
84 Toluene	92	9.689	9.689	0.000	97	65631	0.5000	0.5245	
85 trans-1,3-Dichloropropene	75	9.957	9.951	0.006	94	27919	0.5000	0.4829	
104 Ethyl methacrylate	69	10.024	10.018	0.006	90	22711	0.5000	0.5137	
S 105 1,3-Dichloropropene, Total	100				0			0.9888	
106 1,1,2-Trichloroethane	97	10.158	10.165	-0.006	90	16844	0.5000	0.5282	
107 Tetrachloroethene	166	10.262	10.256	0.006	92	27671	0.5000	0.4995	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	90	27462	0.5000	0.5157	
109 2-Hexanone	43	10.384	10.378	0.006	98	89565	5.00	5.52	
111 Chlorodibromomethane	129	10.548	10.549	-0.001	90	19439	0.5000	0.5006	
112 Ethylene Dibromide	107	10.658	10.658	0.000	98	14489	0.5000	0.5070	
* 113 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	86	1394279	10.0	10.0	
114 1-Chlorohexane	91	11.109	11.103	0.006	96	38936	0.5000	0.5152	
115 Chlorobenzene	112	11.121	11.122	-0.001	94	70920	0.5000	0.5226	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	94	23846	0.5000	0.5100	
117 Ethylbenzene	91	11.213	11.207	0.006	99	126015	0.5000	0.5120	
S 118 Xylenes, Total	106				0			1.54	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	100	95152	1.00	1.03	
120 o-Xylene	106	11.658	11.658	0.000	96	45833	0.5000	0.5112	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.670	0.006	95	75960	0.5000	0.5132	
122 Bromoform	173	11.835	11.835	0.000	97	11260	0.5000	0.4959	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	123286	0.5000	0.5098	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	692437	10.0	10.1	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	92	22035	0.5000	0.5575	
128 Bromobenzene	156	12.225	12.219	0.006	97	27030	0.5000	0.5180	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	92	40590	5.00	5.20	
130 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	73	5014	0.5000	0.5378	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	147502	0.5000	0.5120	
132 2-Chlorotoluene	126	12.371	12.365	0.006	95	28490	0.5000	0.5163	
133 1,3,5-Trimethylbenzene	105	12.432	12.426	0.006	94	105192	0.5000	0.5216	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	29413	0.5000	0.5212	
135 tert-Butylbenzene	134	12.670	12.670	0.000	93	23699	0.5000	0.5430	
136 Pentachloroethane	167	12.700	12.707	-0.007	84	17687	0.5000	0.4951	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	102286	0.5000	0.5027	
138 sec-Butylbenzene	105	12.835	12.835	-0.001	94	125788	0.5000	0.4984	
139 1,3-Dichlorobenzene	146	12.938	12.932	0.006	98	54008	0.5000	0.5038	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	108740	0.5000	0.5047	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	752239	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.005	13.012	-0.007	94	52676	0.5000	0.5181	
143 1,2,3-Trimethylbenzene	120	13.017	13.018	-0.001	99	44925	0.5000	0.5120	
144 Benzyl chloride	126	13.084	13.085	-0.001	99	7493	0.5000	0.5244	
145 p-Diethylbenzene	119	13.145	13.146	-0.001	92	64043	0.5000	0.5049	
146 n-Butylbenzene	92	13.237	13.237	0.000	98	50581	0.5000	0.4920	
147 1,2-Dichlorobenzene	146	13.267	13.268	-0.001	97	48521	0.5000	0.5108	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	89	2293	0.5000	0.4937	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	97	37023	0.5000	0.4945	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	28411	0.5000	0.4739	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	95	11059	0.5000	0.4933	
153 Naphthalene	128	14.541	14.542	-0.001	97	48021	0.5000	0.4857	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	94	22376	0.5000	0.4707	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00073	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

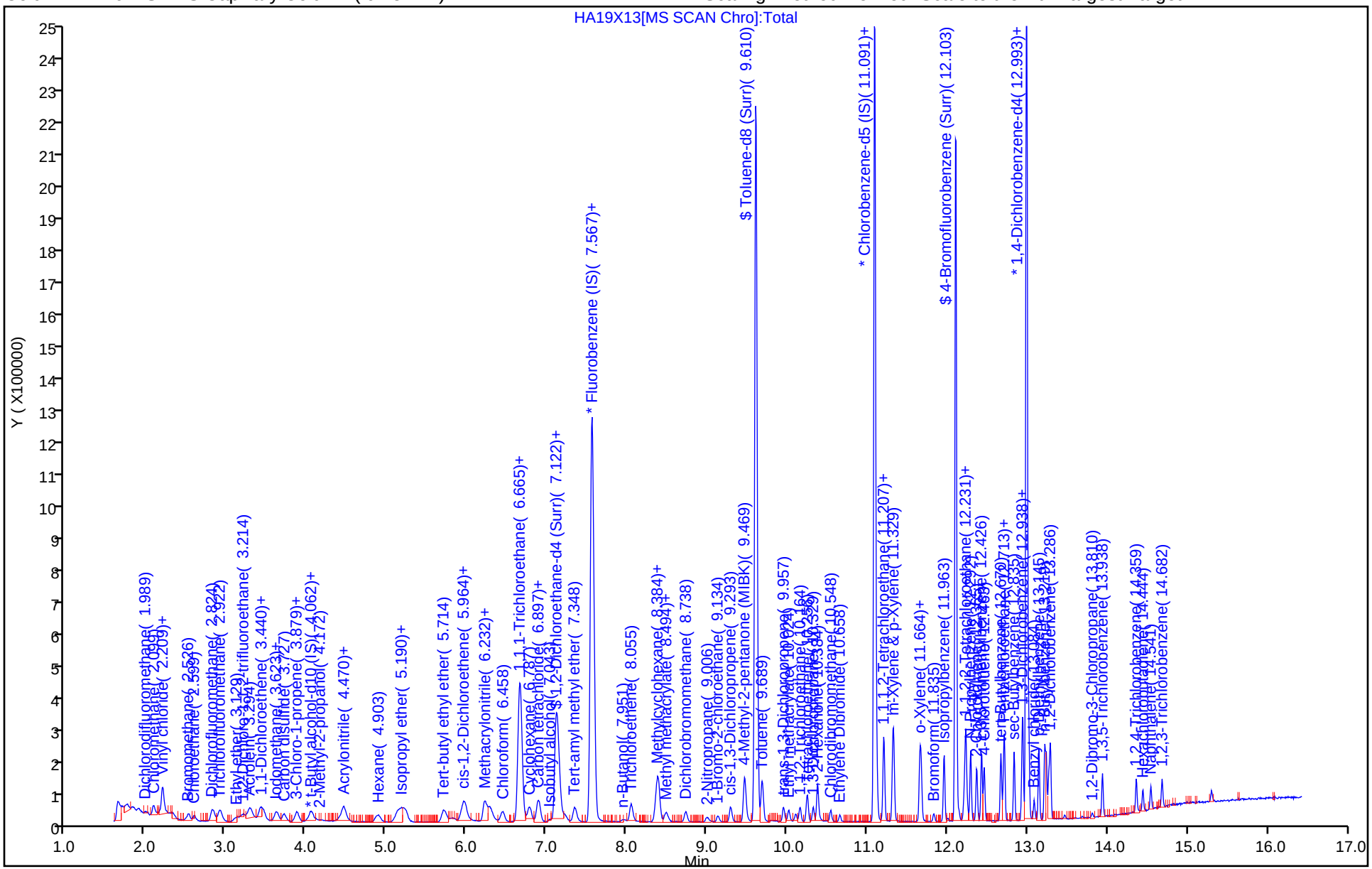
Report Date: 23-Apr-2023 20:34:42 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D

Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std2 0.5			Worklist Smp#:	14
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

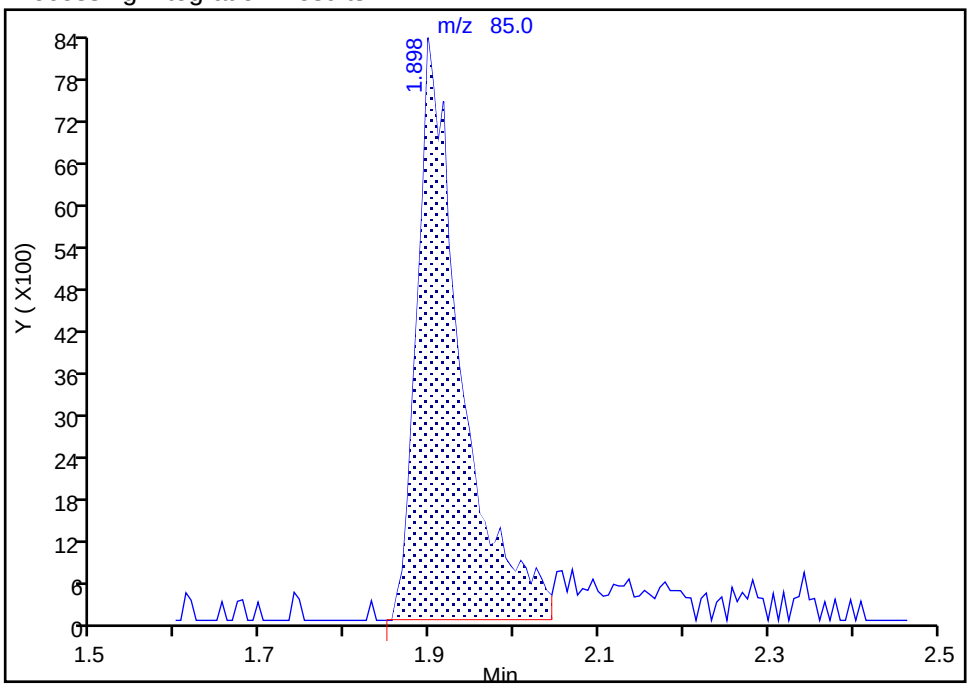
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

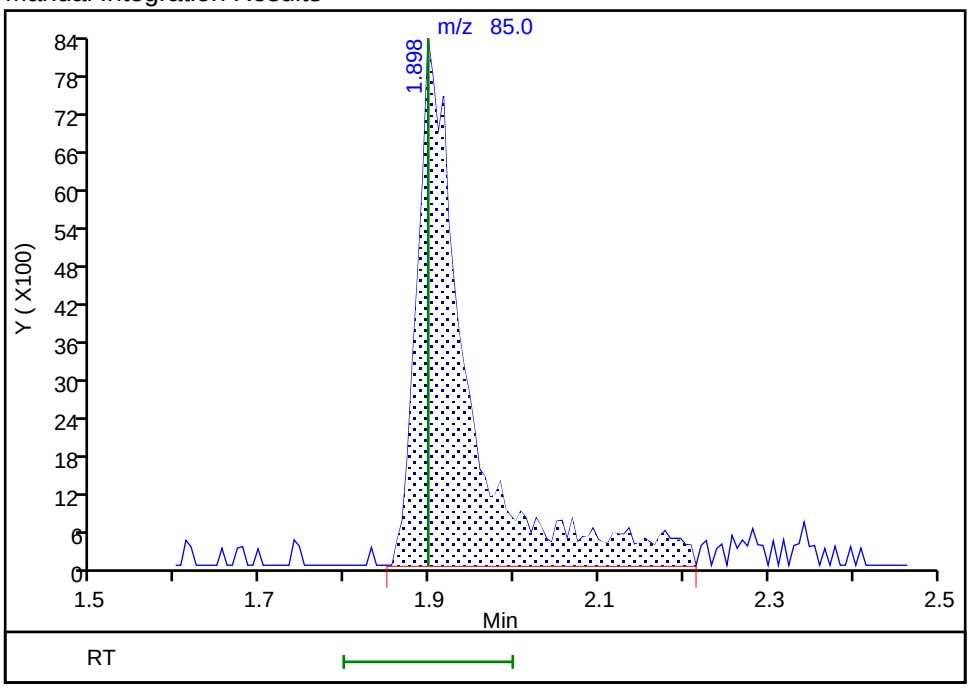
Processing Integration Results

RT: 1.90
Area: 29915
Amount: 0.398524
Amount Units: ug/l



Manual Integration Results

RT: 1.90
Area: 34429
Amount: 0.544946
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:29:36
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

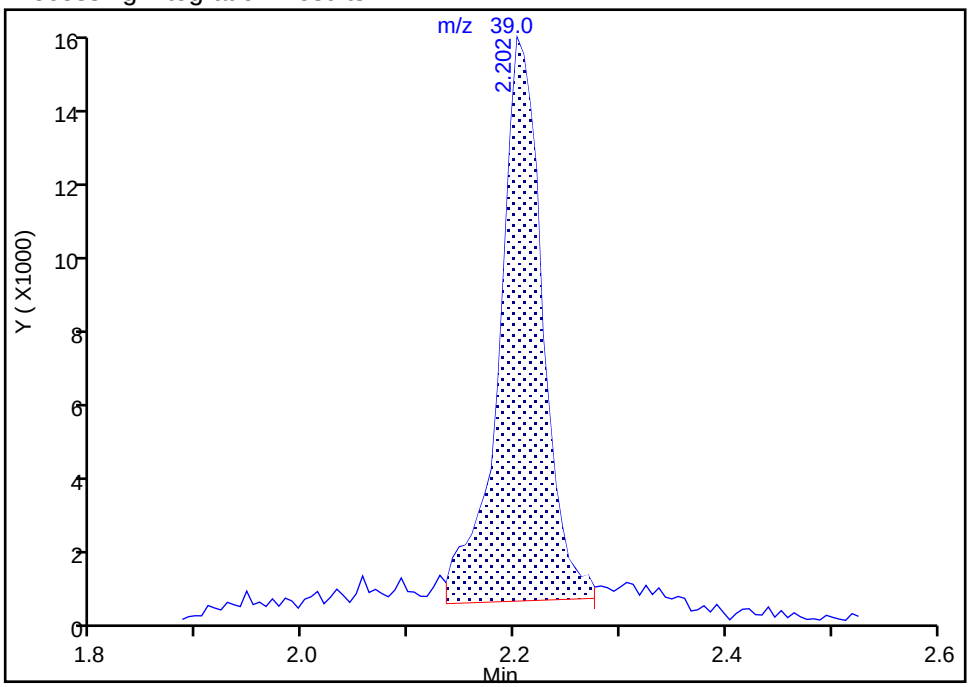
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

7 Butadiene, CAS: 106-99-0

Signal: 1

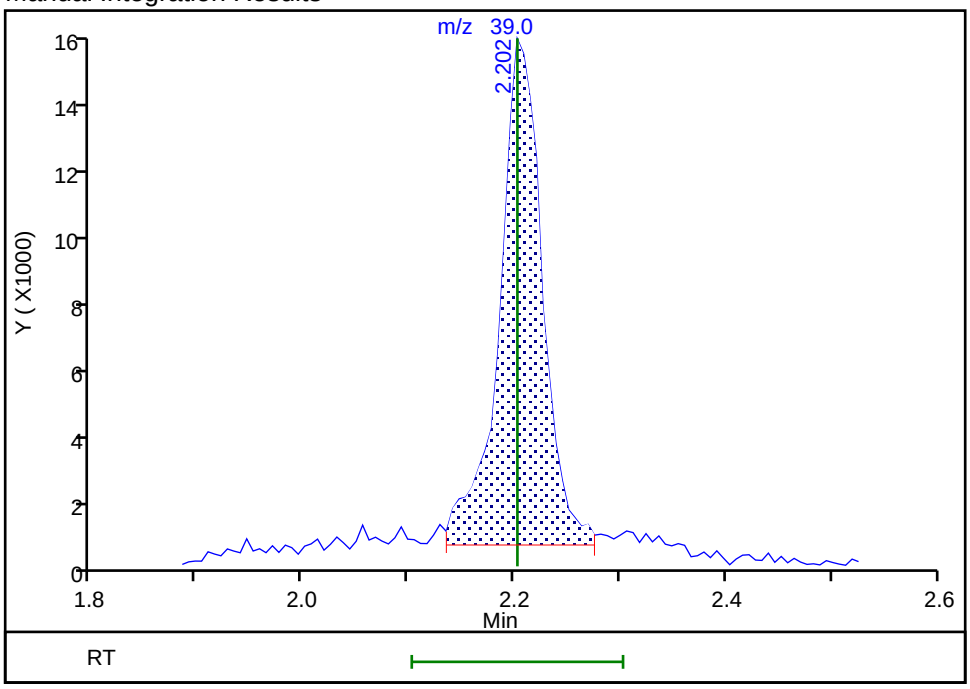
Processing Integration Results

RT: 2.20
Area: 42233
Amount: 0.507854
Amount Units: ug/l



Manual Integration Results

RT: 2.20
Area: 41522
Amount: 0.519077
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:29:44
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

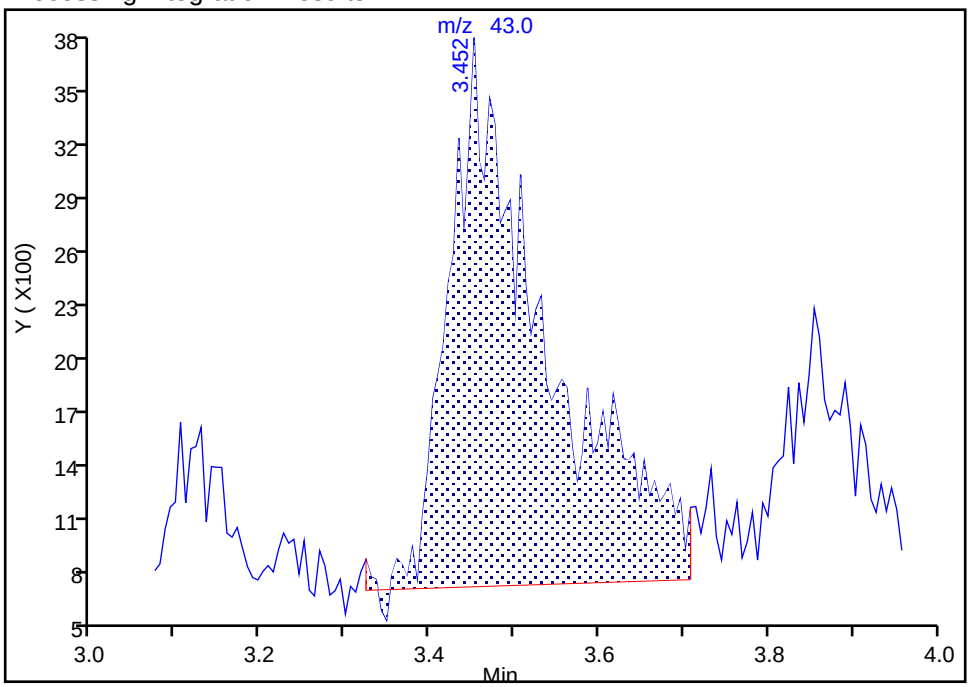
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Acetone, CAS: 67-64-1

Signal: 1

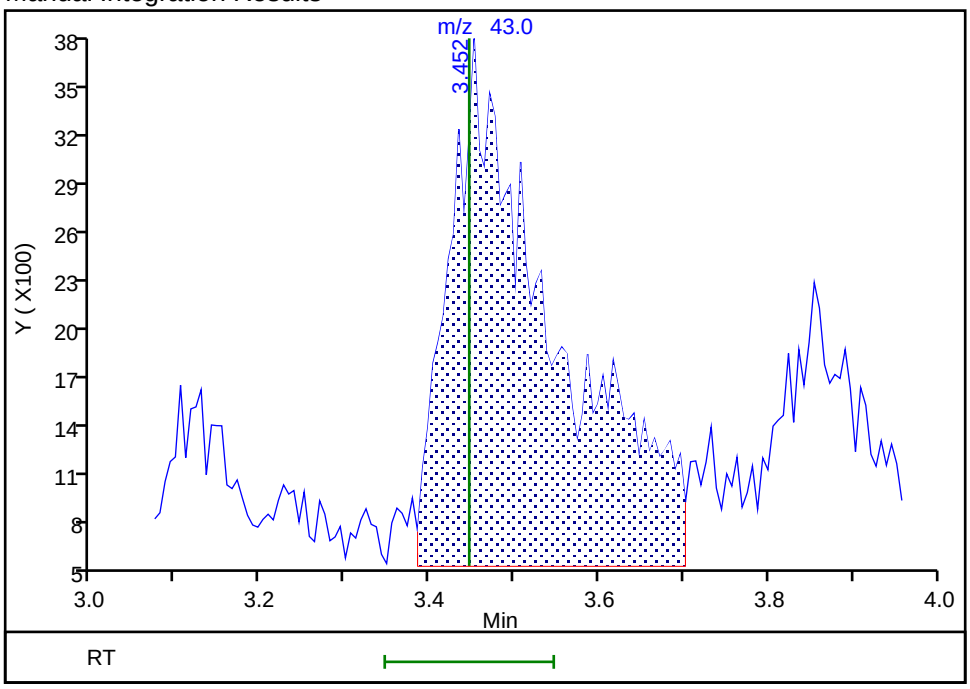
Processing Integration Results

RT: 3.45
Area: 23333
Amount: 3.876706
Amount Units: ug/l



Manual Integration Results

RT: 3.45
Area: 27075
Amount: 6.319916
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:50:12
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

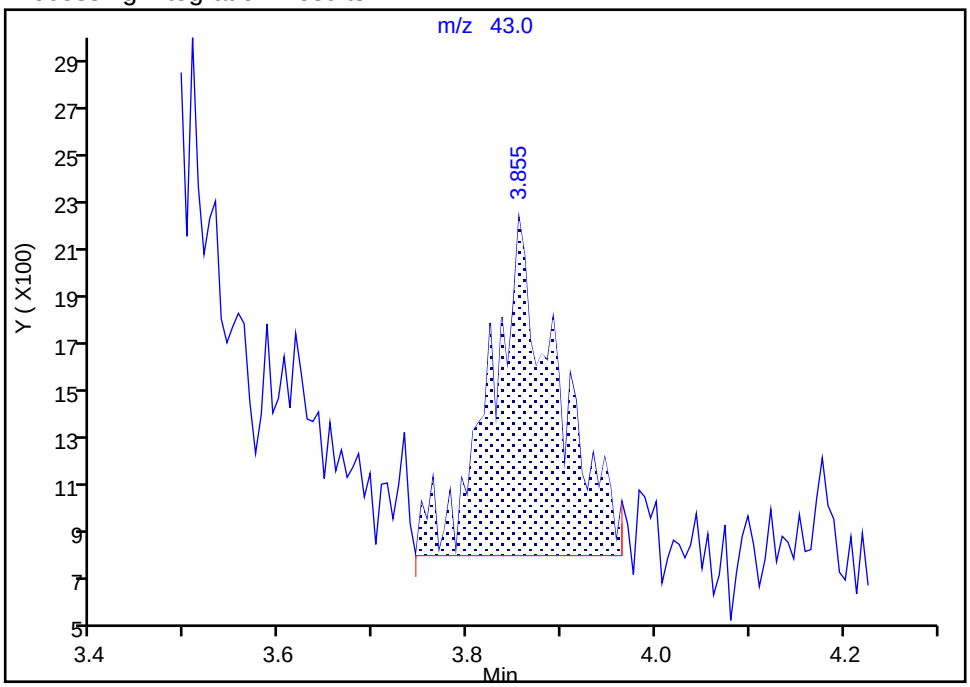
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D
Injection Date: 19-Apr-2023 22:01:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methyl acetate, CAS: 79-20-9

Signal: 1

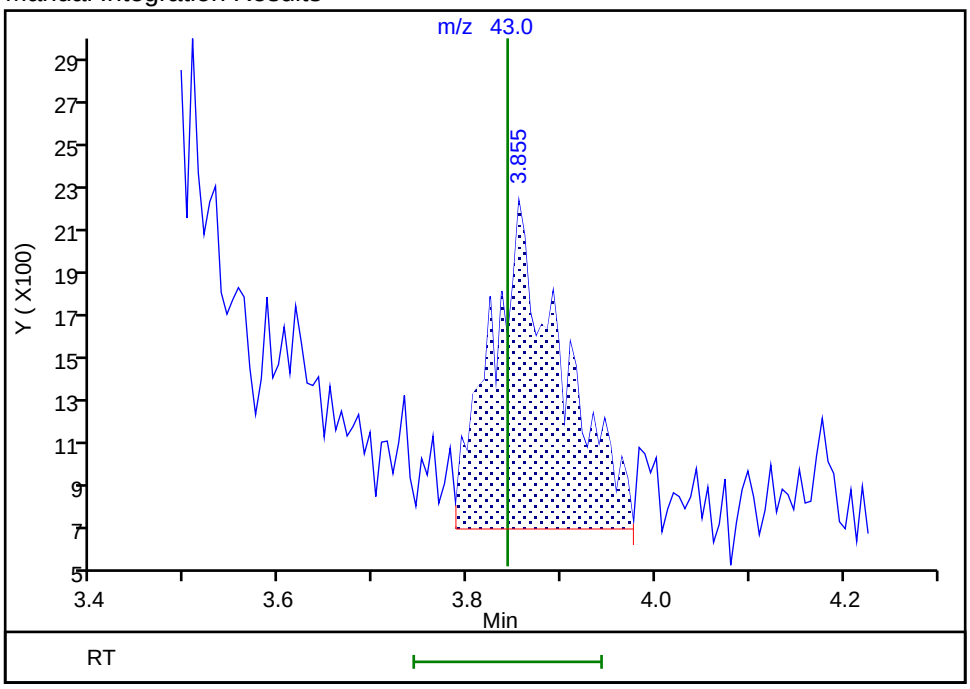
Processing Integration Results

RT: 3.85
Area: 6886
Amount: 0.462743
Amount Units: ug/l



Manual Integration Results

RT: 3.85
Area: 7716
Amount: 0.538397
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:30:11
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

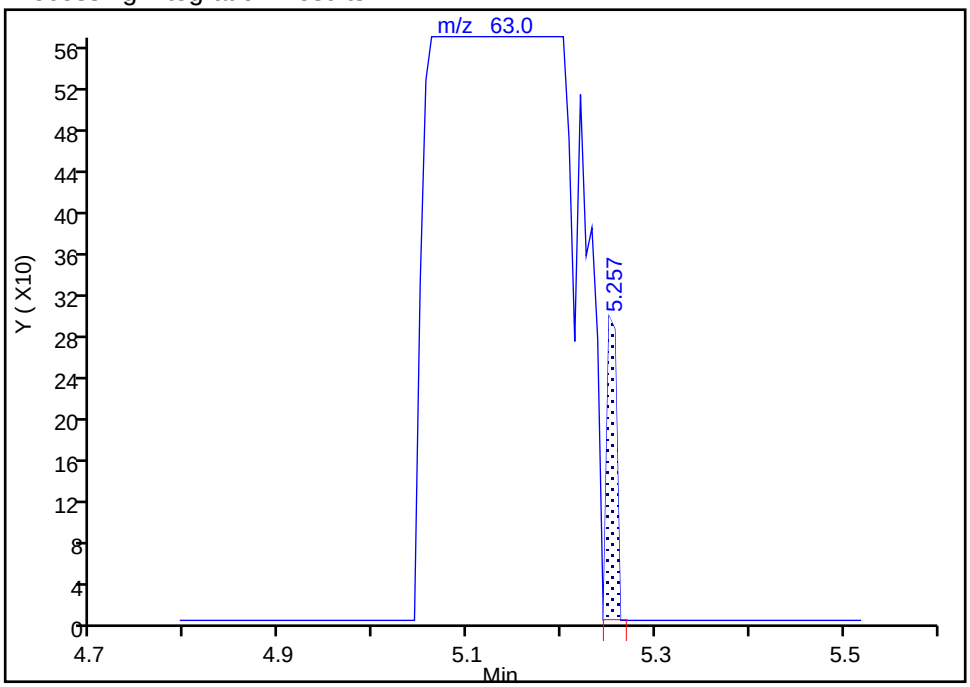
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

36 1,1-Dichloroethane, CAS: 75-34-3

Signal: 1

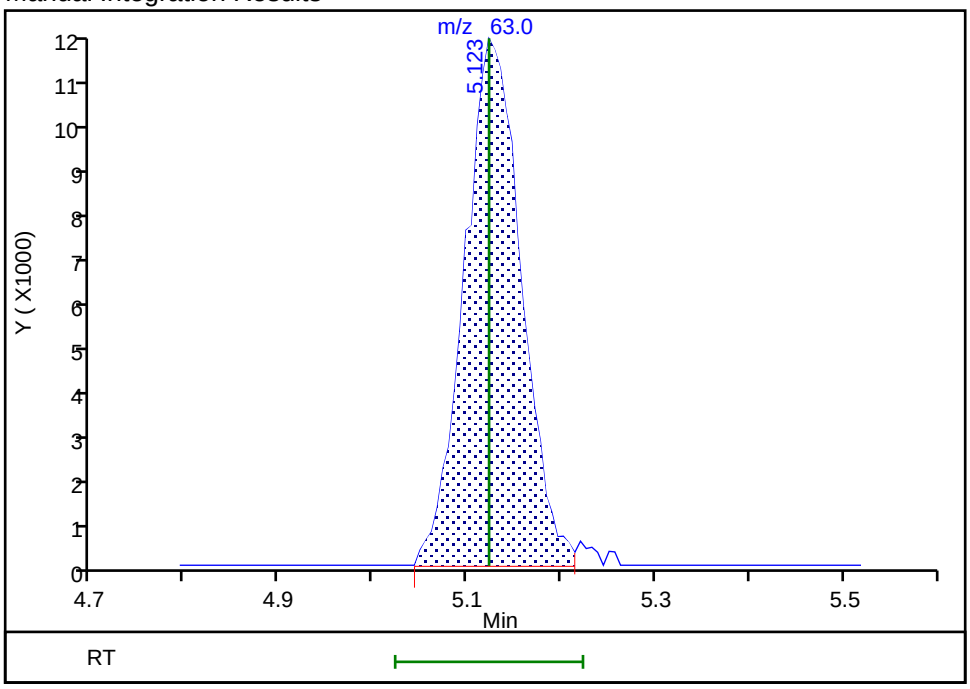
Processing Integration Results

RT: 5.26
Area: 211
Amount: 0.500000
Amount Units: ug/l



Manual Integration Results

RT: 5.12
Area: 46987
Amount: 0.511548
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:32:09
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

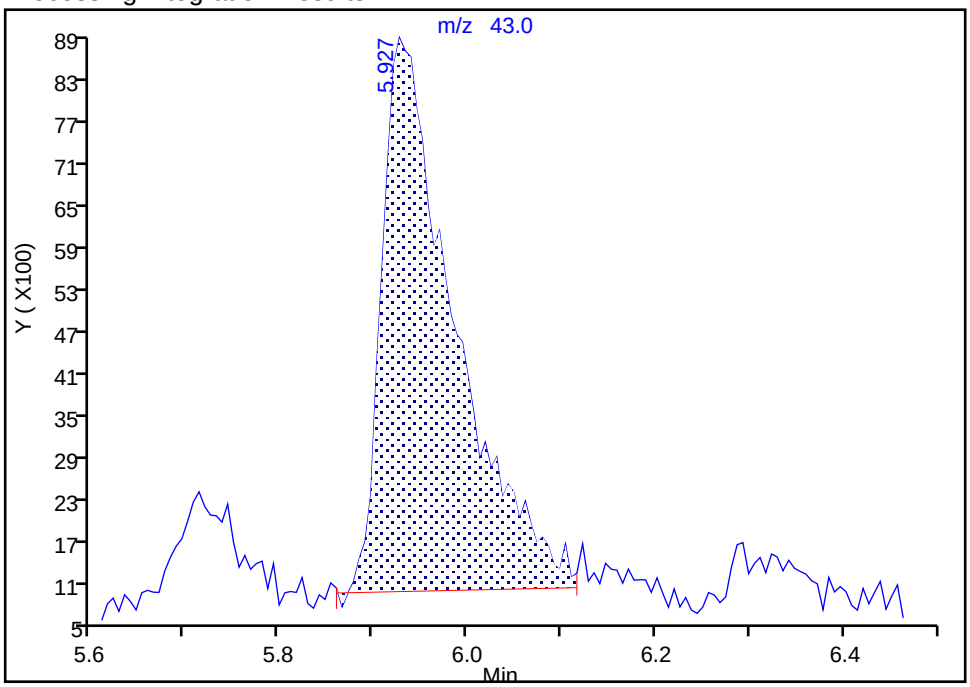
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D
Injection Date: 19-Apr-2023 22:01:30 Instrument ID: 19094
Lims ID: IC std2 0.5
Client ID:
Operator ID: mec29284 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

41 2-Butanone (MEK), CAS: 78-93-3

Signal: 1

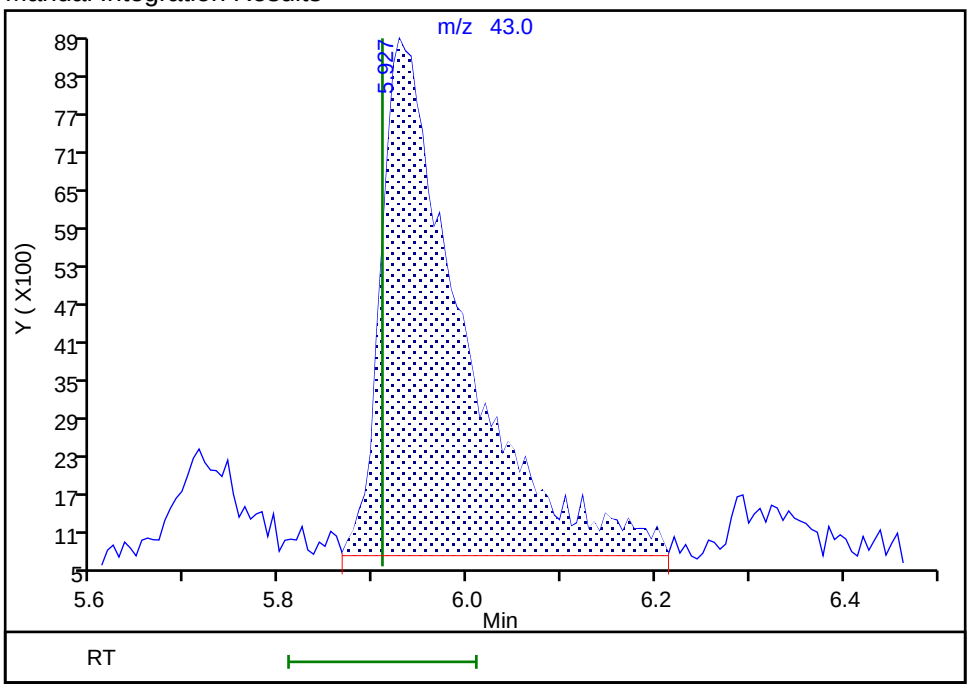
Processing Integration Results

RT: 5.93
Area: 42480
Amount: 5.103520
Amount Units: ug/l



Manual Integration Results

RT: 5.93
Area: 49525
Amount: 5.757221
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:30:28
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

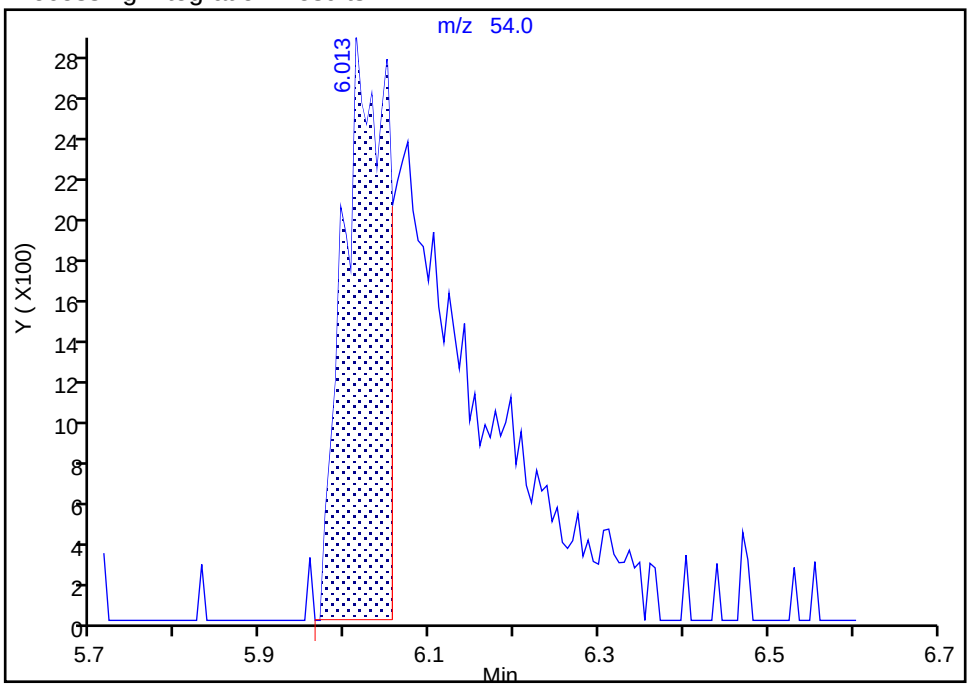
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

44 Propionitrile, CAS: 107-12-0

Signal: 1

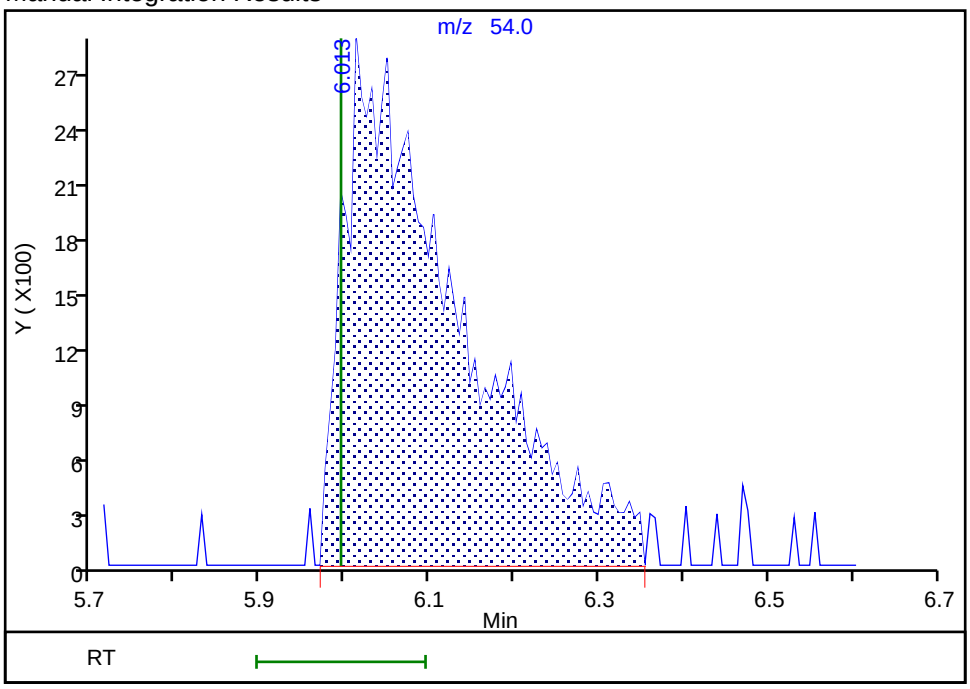
Processing Integration Results

RT: 6.01
Area: 10072
Amount: 5.921997
Amount Units: ug/l



Manual Integration Results

RT: 6.01
Area: 26268
Amount: 11.932761
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:30:39
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

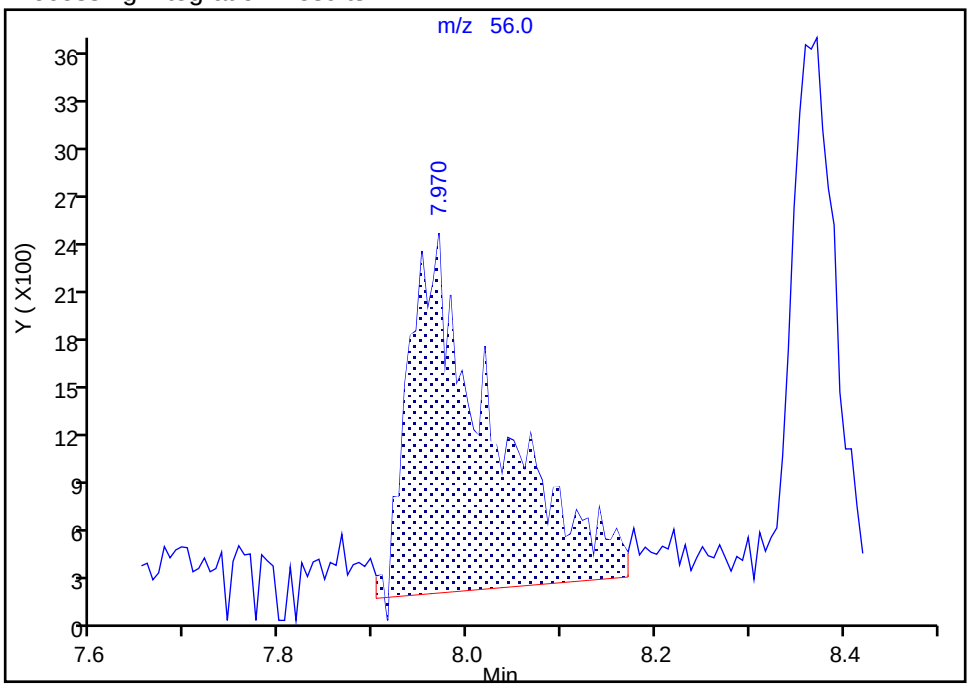
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

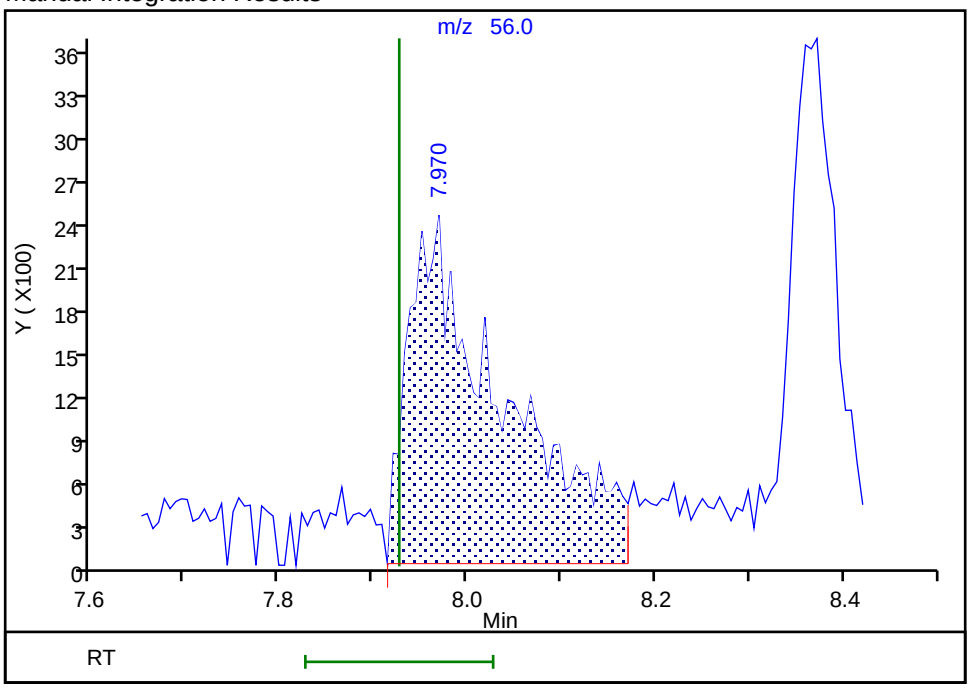
Processing Integration Results

RT: 7.97
Area: 13743
Amount: 29.884412
Amount Units: ug/l



Manual Integration Results

RT: 7.97
Area: 16774
Amount: 46.057918
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:31:06
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

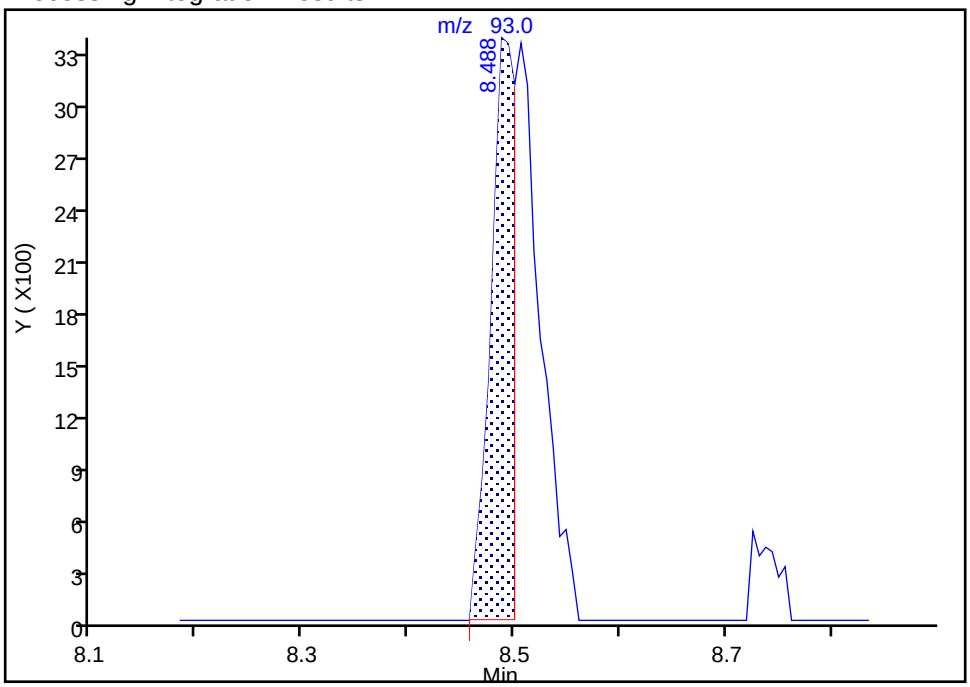
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

74 Dibromomethane, CAS: 74-95-3

Signal: 1

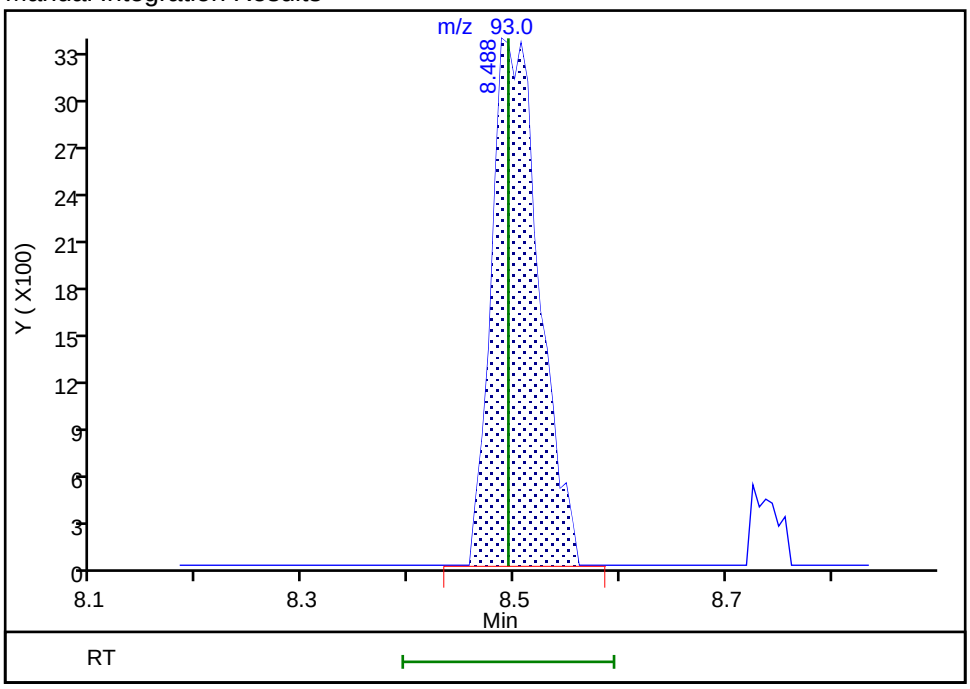
Processing Integration Results

RT: 8.49
Area: 5503
Amount: 0.316340
Amount Units: ug/l



Manual Integration Results

RT: 8.49
Area: 10614
Amount: 0.503329
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:31:21
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

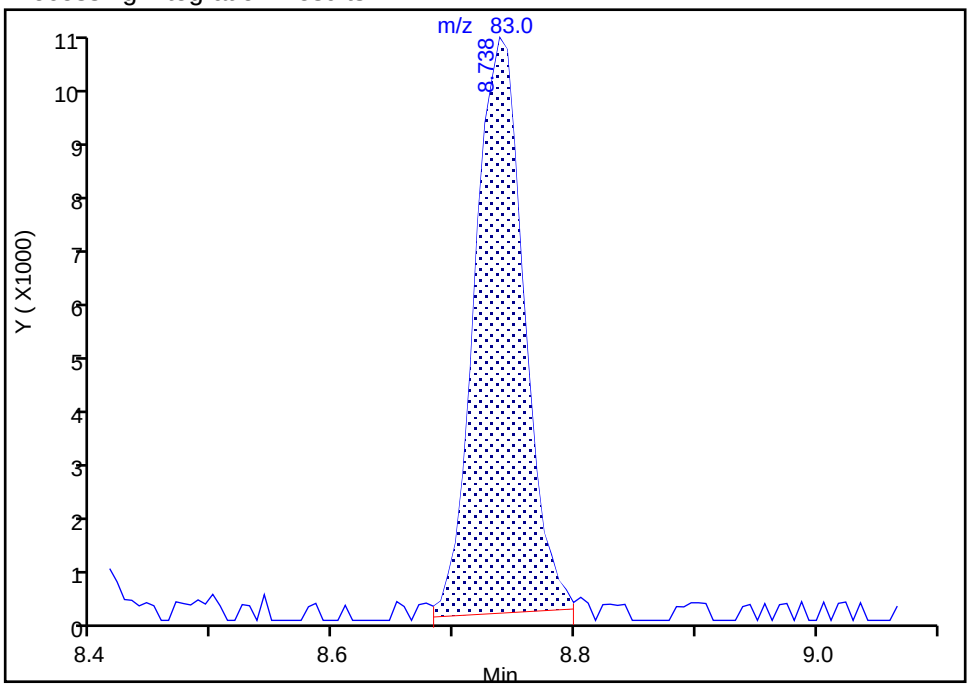
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

76 Dichlorobromomethane, CAS: 75-27-4

Signal: 1

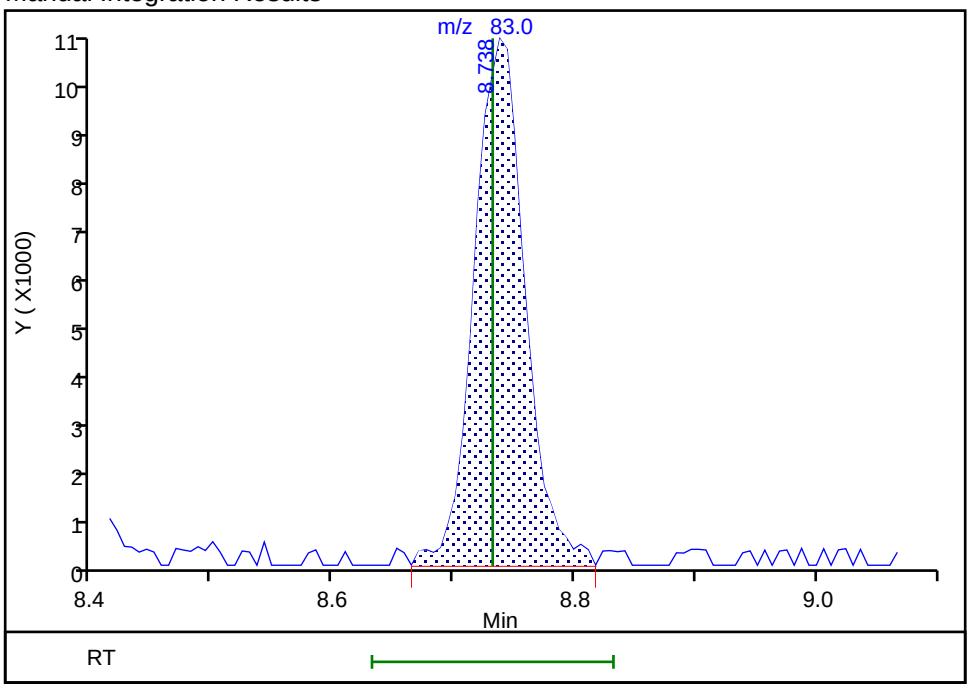
Processing Integration Results

RT: 8.74
Area: 30545
Amount: 0.498724
Amount Units: ug/l



Manual Integration Results

RT: 8.74
Area: 32077
Amount: 0.518902
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:31:29
Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

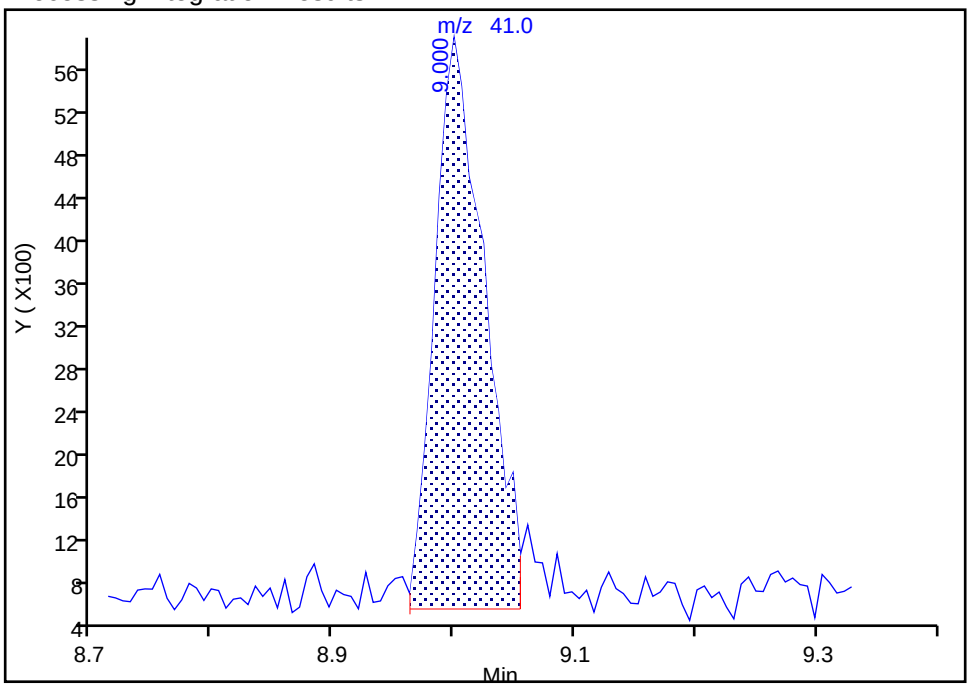
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X13.D				
Injection Date:	19-Apr-2023 22:01:30	Instrument ID:	19094		
Lims ID:	IC std2 0.5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

77 2-Nitropropane, CAS: 79-46-9

Signal: 1

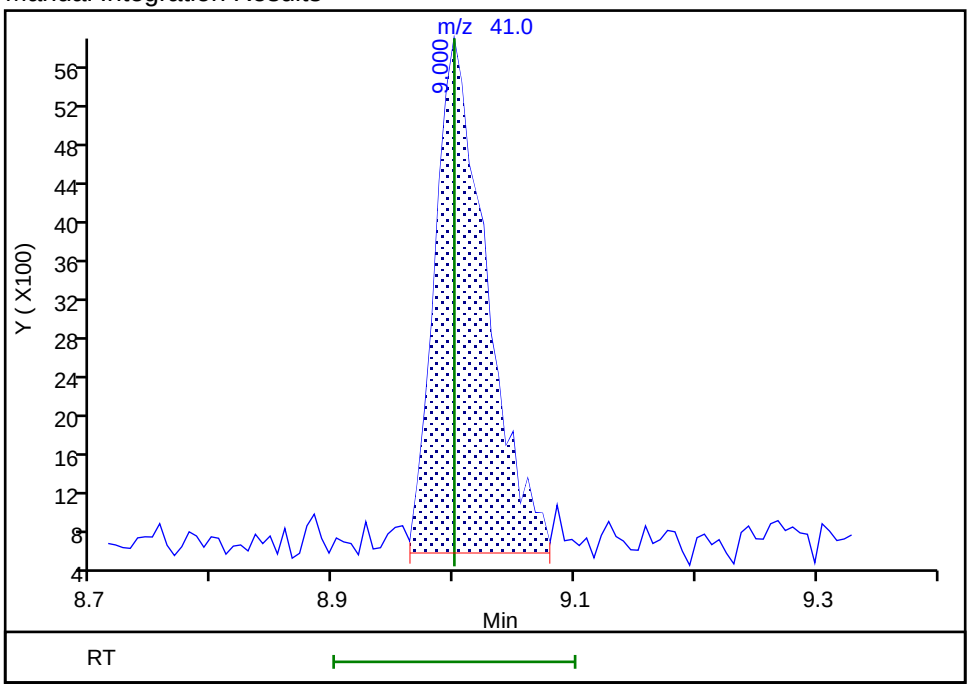
Processing Integration Results

RT: 9.00
Area: 15173
Amount: 2.264479
Amount Units: ug/l



Manual Integration Results

RT: 9.00
Area: 15686
Amount: 2.774492
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:31:40
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D
Lims ID: IC std3 1
Client ID:
Sample Type: IC Calib Level: 3
Inject. Date: 19-Apr-2023 22:21:30 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-015
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:34:48 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:35:27

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	70493	1.00	1.11	M
5 Chloromethane	50	2.093	2.093	0.000	99	87280	1.00	1.04	
6 Vinyl chloride	62	2.209	2.203	0.006	97	83205	1.00	1.06	
7 Butadiene	39	2.209	2.203	0.006	91	81722	1.00	1.02	
9 Bromomethane	94	2.519	2.526	-0.007	91	50297	1.00	1.03	
10 Chloroethane	64	2.605	2.599	0.006	99	45043	1.00	1.03	
11 Dichlorofluoromethane	67	2.824	2.824	0.000	97	106606	1.00	1.01	
12 Trichlorofluoromethane	101	2.904	2.904	0.000	98	91529	1.00	1.03	
14 Ethyl ether	59	3.123	3.117	0.006	92	34308	1.00	0.9549	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.202	0.006	95	73676	1.00	1.07	
16 Acrolein	56	3.294	3.288	0.006	99	226319	50.0	45.7	
17 1,1-Dichloroethene	96	3.422	3.422	0.000	98	45667	1.00	1.05	
19 Acetone	43	3.464	3.446	0.018	72	48054	10.0	9.71	M
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.458	3.465	-0.007	94	43330	1.00	1.06	
21 Iodomethane	142	3.617	3.611	0.006	99	82757	1.00	1.05	
22 Ethyl bromide	108	3.635	3.635	0.000	97	39012	1.00	0.9514	
23 Carbon disulfide	76	3.720	3.715	0.005	99	129064	1.00	1.04	
24 Methyl acetate	43	3.873	3.843	0.030	22	16745	1.00	1.01	M
26 3-Chloro-1-propene	41	3.885	3.873	0.012	93	78620	1.00	1.02	
27 Methylene Chloride	84	4.062	4.050	0.012	94	47612	1.00	1.03	
* 28 t-Butyl alcohol-d10 (IS)	65	4.068	4.105	-0.037	98	74978	50.0	50.0	
29 2-Methyl-2-propanol	59	4.190	4.190	0.000	72	33070	20.0	22.9	
31 Acrylonitrile	53	4.379	4.373	0.006	90	19063	2.50	2.56	M
32 Methyl tert-butyl ether	73	4.446	4.452	-0.006	92	110227	1.00	1.05	
33 trans-1,2-Dichloroethene	96	4.464	4.458	0.006	98	51694	1.00	1.06	
34 Hexane	57	4.897	4.885	0.012	93	58462	1.00	0.9827	
36 1,1-Dichloroethane	63	5.129	5.123	0.006	96	97758	1.00	1.06	
37 Isopropyl ether	45	5.177	5.178	-0.001	95	166958	1.00	1.04	
38 2-Chloro-1,3-butadiene	53	5.238	5.239	-0.001	91	82119	1.00	1.02	
40 Tert-butyl ethyl ether	59	5.714	5.720	-0.006	98	148016	1.00	1.05	
41 2-Butanone (MEK)	43	5.921	5.909	0.012	100	97040	10.0	9.76	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.964	5.958	0.006	84	54947	1.00	1.03	
43 2,2-Dichloropropane	77	5.970	5.976	-0.006	88	79534	1.00	1.05	
44 Propionitrile	54	6.013	5.995	0.018	99	45428	20.0	17.9	
S 46 1,2-Dichloroethene, Total	100				0			2.09	
47 Methacrylonitrile	67	6.220	6.220	0.000	95	106761	10.0	9.29	
48 Chlorobromomethane	128	6.293	6.299	-0.006	94	21405	1.00	1.08	
49 Tetrahydrofuran	71	6.318	6.299	0.019	64	14423	5.00	5.35	
50 Chloroform	83	6.446	6.446	0.000	93	92007	1.00	1.04	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	94	453126	10.0	9.95	
53 1,1,1-Trichloroethane	97	6.677	6.677	0.000	99	81215	1.00	1.04	
54 Cyclohexane	56	6.781	6.781	0.000	92	87979	1.00	1.05	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	94	70685	1.00	1.04	
56 Carbon tetrachloride	117	6.903	6.897	0.006	93	69798	1.00	1.06	
57 Isobutyl alcohol	41	7.037	7.031	0.006	94	30058	50.0	51.8	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.116	0.012	93	85801	10.0	10.1	
59 Benzene	78	7.153	7.159	-0.006	95	206883	1.00	1.03	
60 1,2-Dichloroethane	62	7.226	7.226	0.000	98	51276	1.00	1.05	
63 Tert-amyl methyl ether	73	7.348	7.354	-0.006	98	125084	1.00	1.06	
* 64 Fluorobenzene (IS)	96	7.567	7.561	0.006	98	1916682	10.0	10.0	
65 n-Heptane	43	7.586	7.586	0.000	38	53133	1.00	0.9553	
67 n-Butanol	56	7.939	7.927	0.012	87	42491	87.5	101.0	M
68 Trichloroethene	95	8.049	8.049	0.000	97	55451	1.00	1.04	
69 Methylcyclohexane	83	8.366	8.366	0.000	93	79553	1.00	1.00	
70 1,2-Dichloropropane	63	8.384	8.390	-0.006	95	53692	1.00	1.03	
71 2-ethoxy-2-methyl butane	87	8.396	8.397	-0.001	92	77264	1.00	1.05	
72 Methyl methacrylate	69	8.476	8.470	0.006	90	19157	1.00	0.8921	
73 1,4-Dioxane	88	8.482	8.482	0.000	30	3251	50.0	48.6	M
74 Dibromomethane	93	8.500	8.494	0.006	96	22202	1.00	1.05	
76 Dichlorobromomethane	83	8.738	8.732	0.006	99	63260	1.00	1.02	
77 2-Nitropropane	41	9.000	9.000	0.000	97	30794	5.00	4.71	
79 1-Bromo-2-chloroethane	63	9.140	9.134	0.006	98	47103	1.00	0.9702	
80 cis-1,3-Dichloropropene	75	9.293	9.293	0.000	96	77227	1.00	1.05	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	97	276292	10.0	9.76	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1919525	10.0	10.1	
84 Toluene	92	9.689	9.689	0.000	97	128686	1.00	1.03	
85 trans-1,3-Dichloropropene	75	9.957	9.951	0.006	93	61538	1.00	1.06	
104 Ethyl methacrylate	69	10.018	10.018	0.000	89	44377	1.00	1.00	
S 105 1,3-Dichloropropene, Total	100				0			2.11	
106 1,1,2-Trichloroethane	97	10.164	10.165	0.000	91	32787	1.00	1.03	
107 Tetrachloroethene	166	10.256	10.256	0.000	97	58105	1.00	1.05	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	90	56026	1.00	1.05	
109 2-Hexanone	43	10.378	10.378	0.000	97	187482	10.0	10.0	
111 Chlorodibromomethane	129	10.542	10.549	-0.007	90	40489	1.00	1.04	
112 Ethylene Dibromide	107	10.658	10.658	0.000	99	30159	1.00	1.05	
* 113 Chlorobenzene-d5 (IS)	117	11.091	11.097	-0.006	86	1397988	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	97	77621	1.00	1.02	
115 Chlorobenzene	112	11.121	11.122	-0.001	95	141545	1.00	1.04	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	95	49504	1.00	1.06	
117 Ethylbenzene	91	11.207	11.207	0.000	99	259348	1.00	1.05	
S 118 Xylenes, Total	106				0			3.14	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	100	194086	2.00	2.10	
120 o-Xylene	106	11.658	11.658	0.000	97	93674	1.00	1.04	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.670	0.006	95	154598	1.00	1.04	
122 Bromoform	173	11.829	11.835	-0.006	95	24058	1.00	1.06	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	253192	1.00	1.04	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	694184	10.0	10.1	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	92	41618	1.00	1.04	
128 Bromobenzene	156	12.225	12.219	0.006	97	55285	1.00	1.05	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	93	87995	10.0	9.76	
130 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	82	9938	1.00	1.05	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	304419	1.00	1.04	
132 2-Chlorotoluene	126	12.365	12.365	0.000	96	58702	1.00	1.05	
133 1,3,5-Trimethylbenzene	105	12.432	12.426	0.006	94	209016	1.00	1.02	
134 4-Chlorotoluene	126	12.463	12.463	0.000	98	59424	1.00	1.04	
135 tert-Butylbenzene	134	12.670	12.670	0.000	93	45302	1.00	1.02	
136 Pentachloroethane	167	12.707	12.707	-0.001	81	33185	1.00	0.9169	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	214894	1.00	1.04	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	262058	1.00	1.02	
139 1,3-Dichlorobenzene	146	12.938	12.932	0.006	98	112235	1.00	1.03	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	225919	1.00	1.04	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	762073	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.011	13.012	-0.001	94	107153	1.00	1.04	
143 1,2,3-Trimethylbenzene	120	13.017	13.018	-0.001	98	91533	1.00	1.03	
144 Benzyl chloride	126	13.084	13.085	-0.001	98	15412	1.00	1.06	
145 p-Diethylbenzene	119	13.145	13.146	-0.001	92	133571	1.00	1.04	
146 n-Butylbenzene	92	13.237	13.237	0.000	97	107313	1.00	1.03	
147 1,2-Dichlorobenzene	146	13.267	13.268	-0.001	98	100276	1.00	1.04	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	82	5017	1.00	1.07	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	97	79399	1.00	1.05	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	93	64018	1.00	1.05	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	95	23943	1.00	1.05	
153 Naphthalene	128	14.542	14.542	0.000	97	108102	1.00	1.08	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	94	50904	1.00	1.06	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00073	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

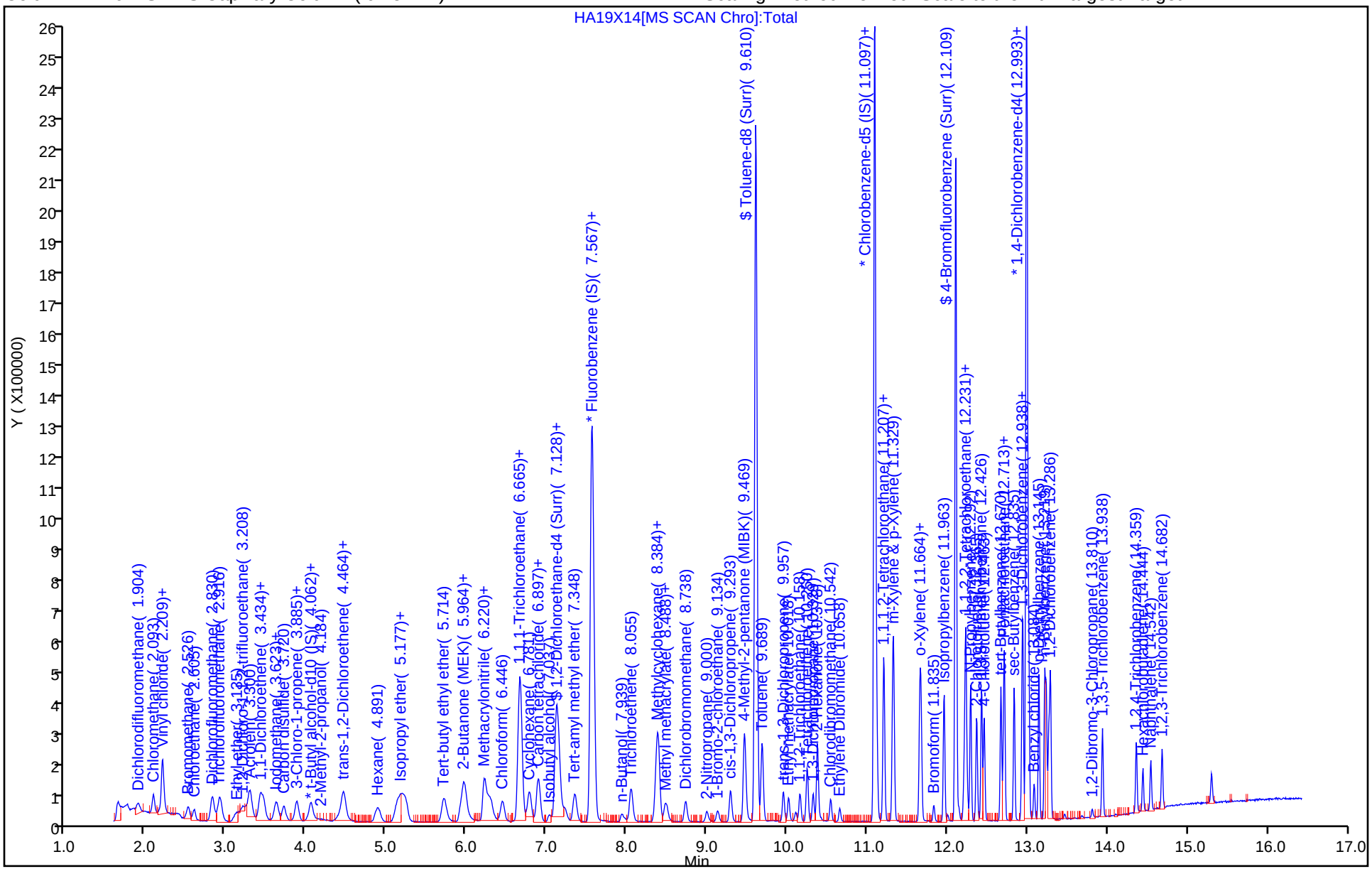
Report Date: 23-Apr-2023 20:34:49 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D

Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std3 1			Worklist Smp#:	15
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	14
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

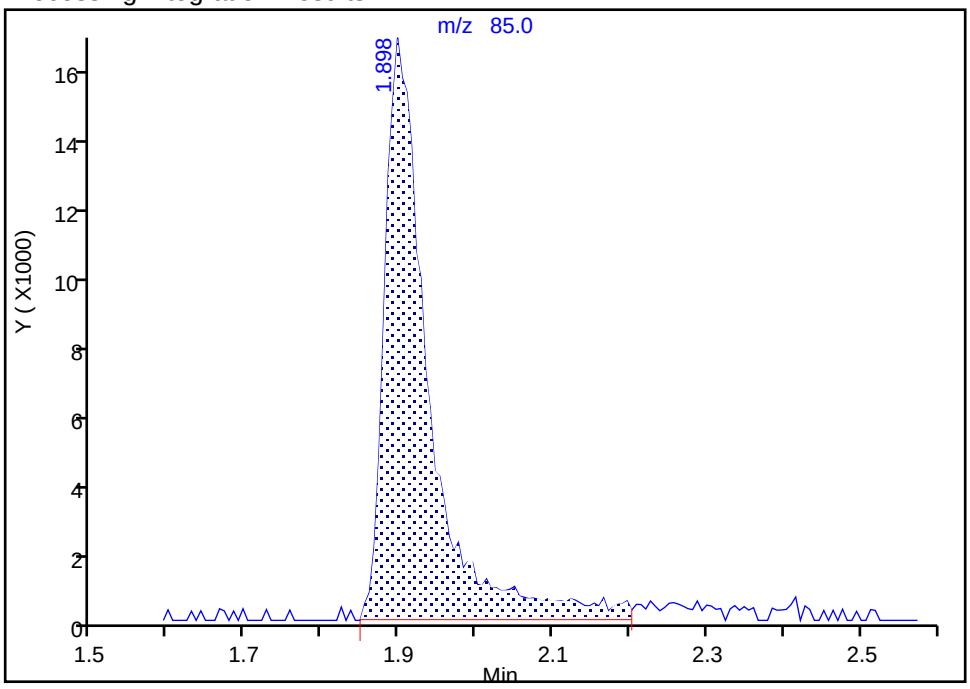
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D				
Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

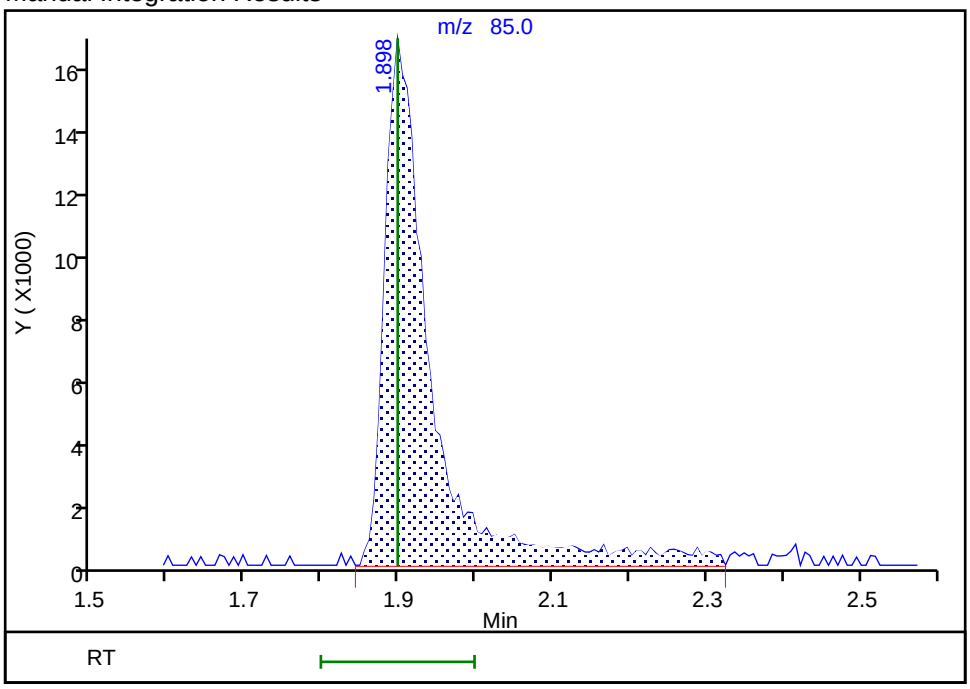
Processing Integration Results

RT: 1.90
Area: 67663
Amount: 0.893662
Amount Units: ug/l



Manual Integration Results

RT: 1.90
Area: 70493
Amount: 1.111156
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:32:40

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

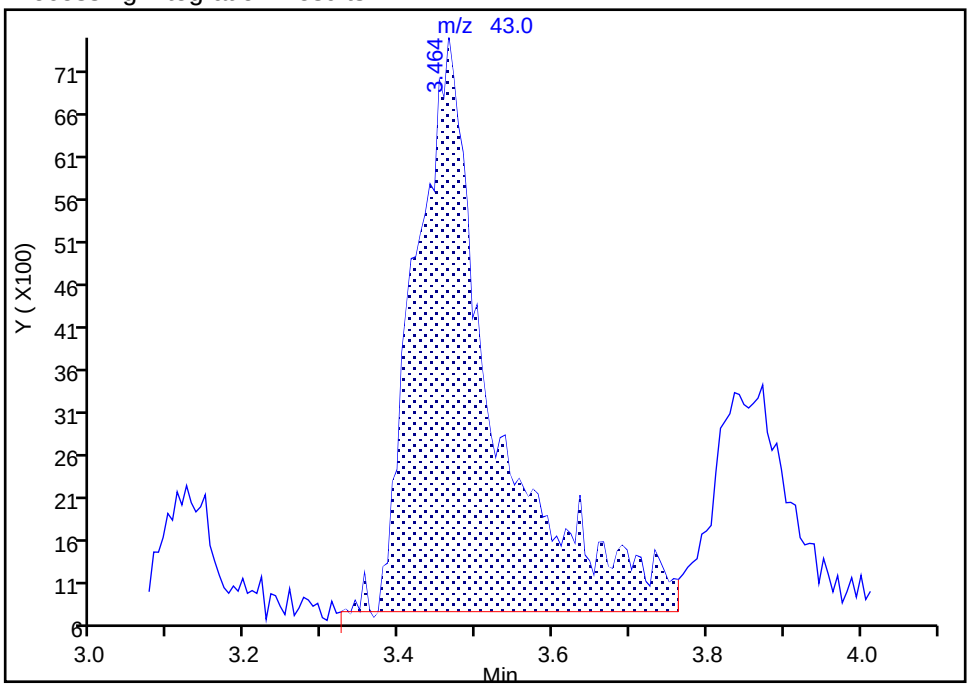
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D
Injection Date: 19-Apr-2023 22:21:30 Instrument ID: 19094
Lims ID: IC std3 1
Client ID:
Operator ID: mec29284 ALS Bottle#: 14 Worklist Smp#: 15
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

19 Acetone, CAS: 67-64-1

Signal: 1

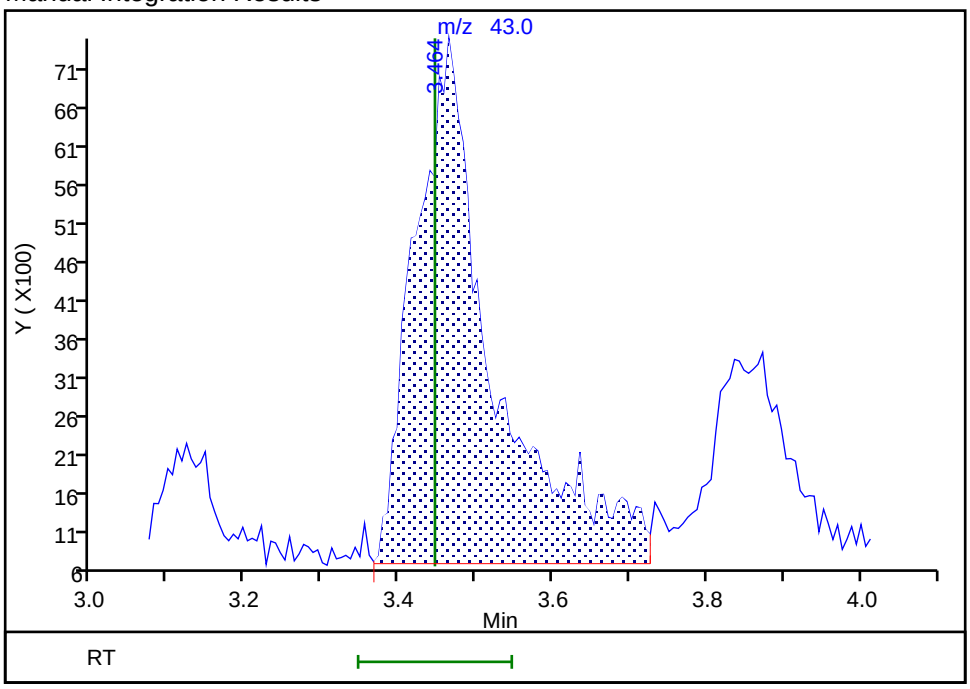
Processing Integration Results

RT: 3.46
Area: 47784
Amount: 7.283417
Amount Units: ug/l



Manual Integration Results

RT: 3.46
Area: 48054
Amount: 9.709495
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:33:04
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

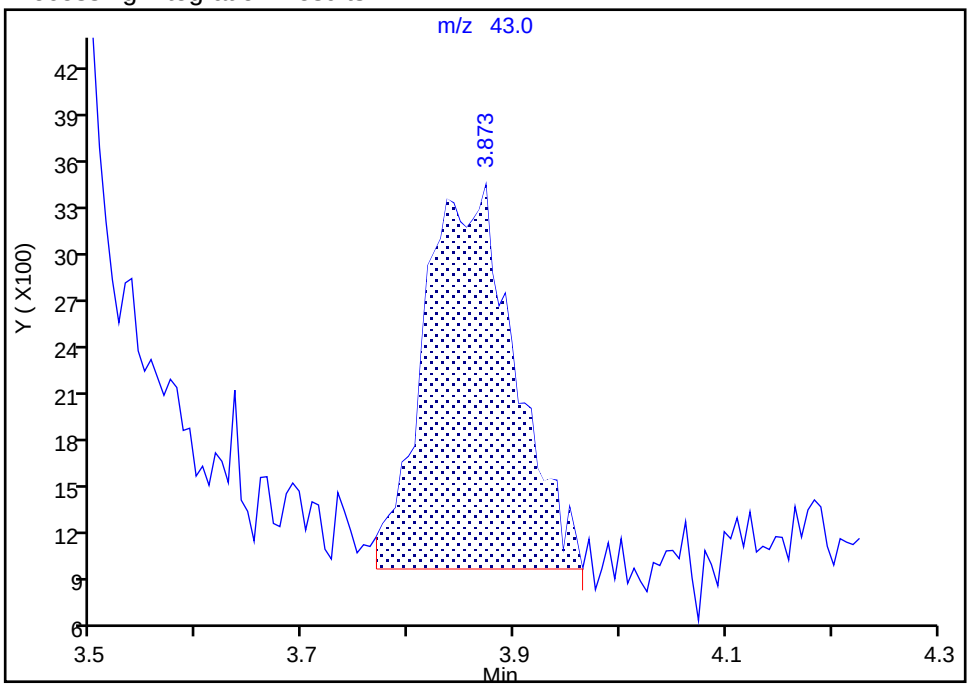
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D				
Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methyl acetate, CAS: 79-20-9

Signal: 1

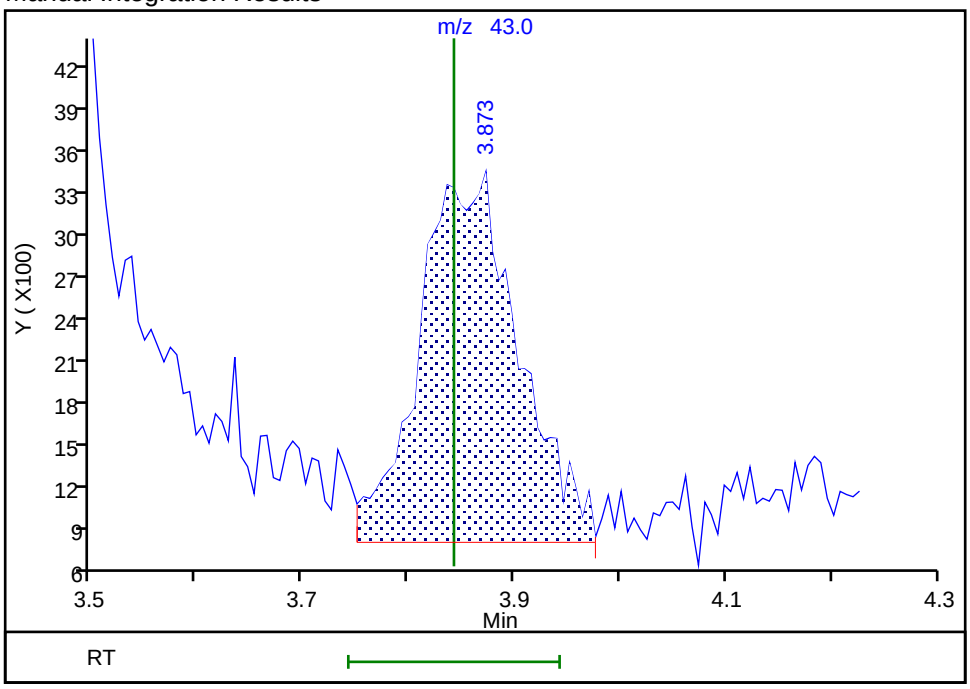
Processing Integration Results

RT: 3.87
Area: 14407
Amount: 0.852370
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 16745
Amount: 1.011393
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:33:45
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

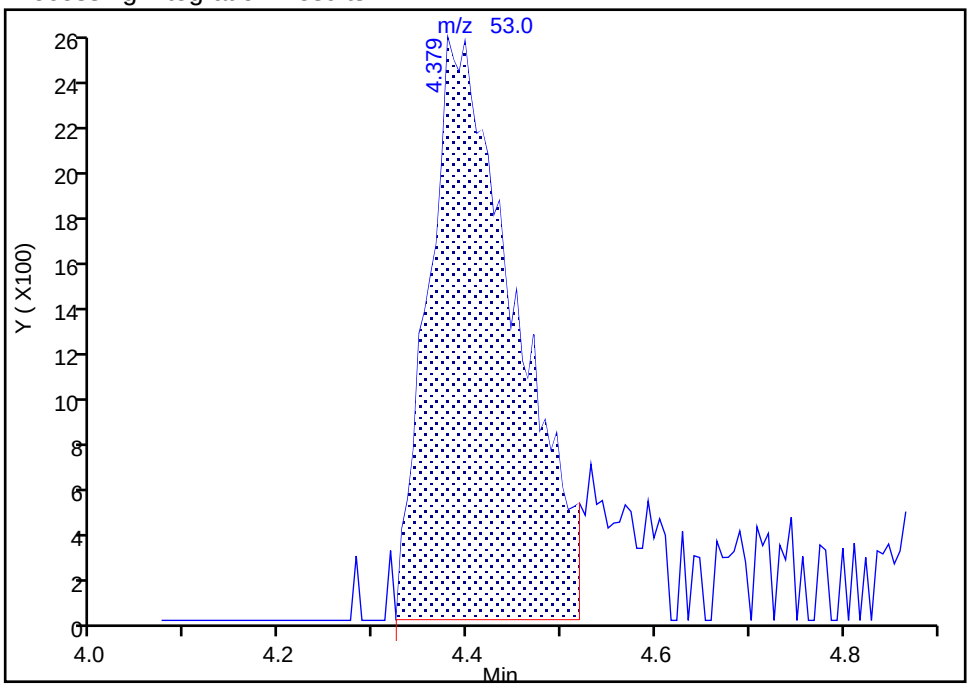
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D				
Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

31 Acrylonitrile, CAS: 107-13-1

Signal: 1

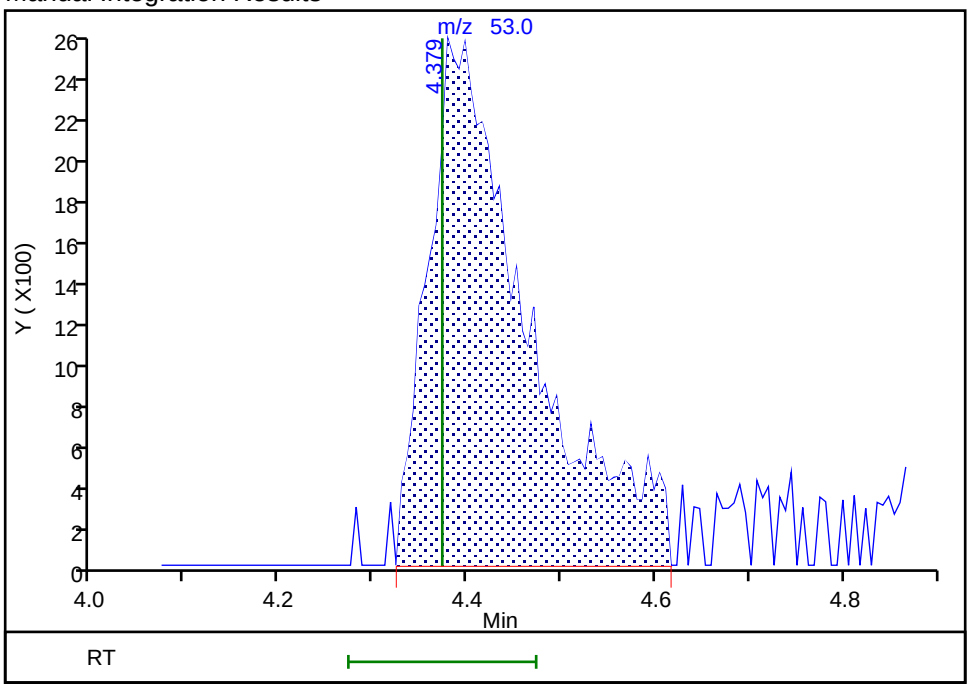
Processing Integration Results

RT: 4.38
Area: 16558
Amount: 2.400945
Amount Units: ug/l



Manual Integration Results

RT: 4.38
Area: 19063
Amount: 2.558195
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:33:55

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

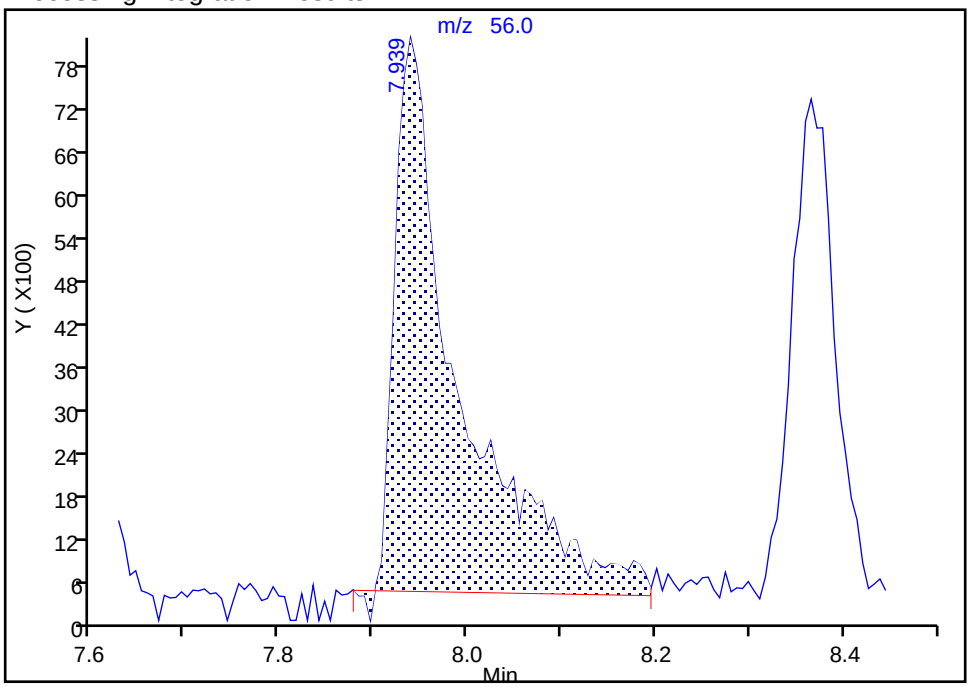
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D				
Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

67 n-Butanol, CAS: 71-36-3

Signal: 1

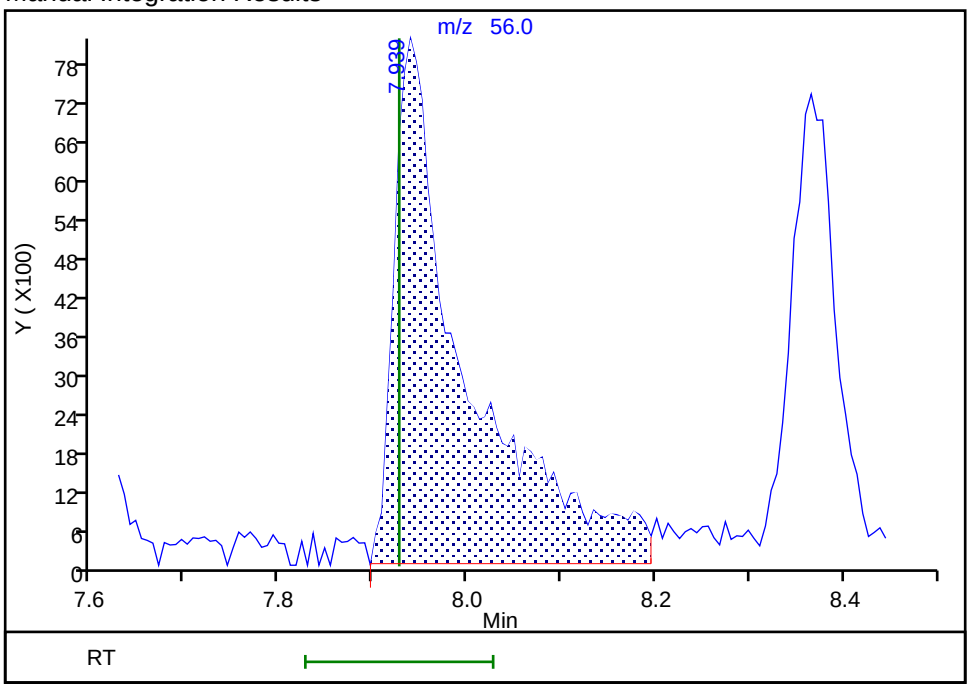
Processing Integration Results

RT: 7.94
Area: 35991
Amount: 69.485398
Amount Units: ug/l



Manual Integration Results

RT: 7.94
Area: 42491
Amount: 100.9924
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:35:02
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

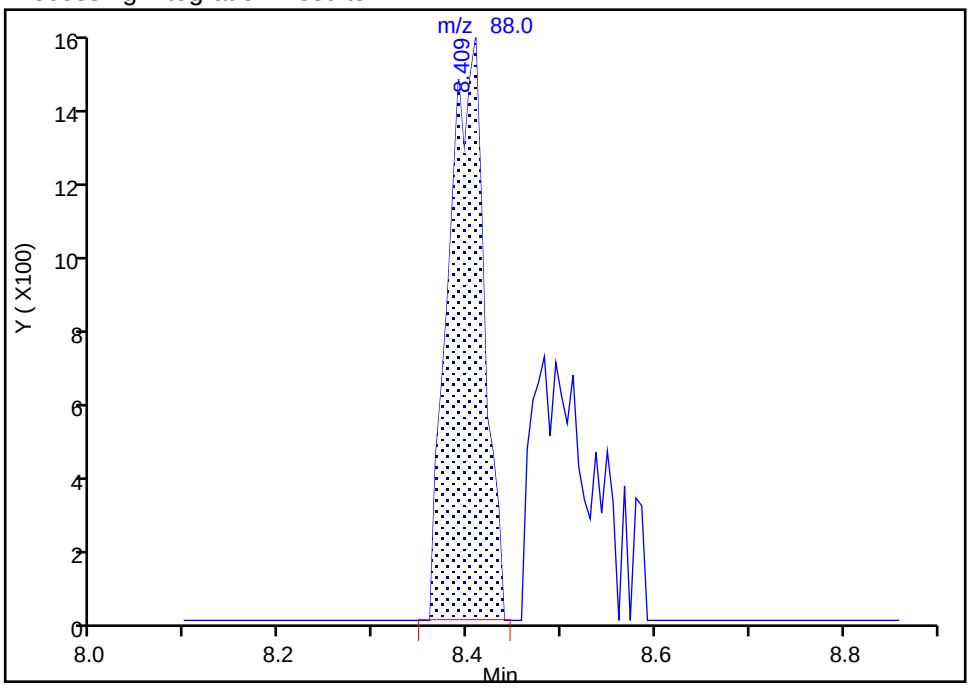
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X14.D				
Injection Date:	19-Apr-2023 22:21:30	Instrument ID:	19094		
Lims ID:	IC std3 1				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	14	Worklist Smp#:	15
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

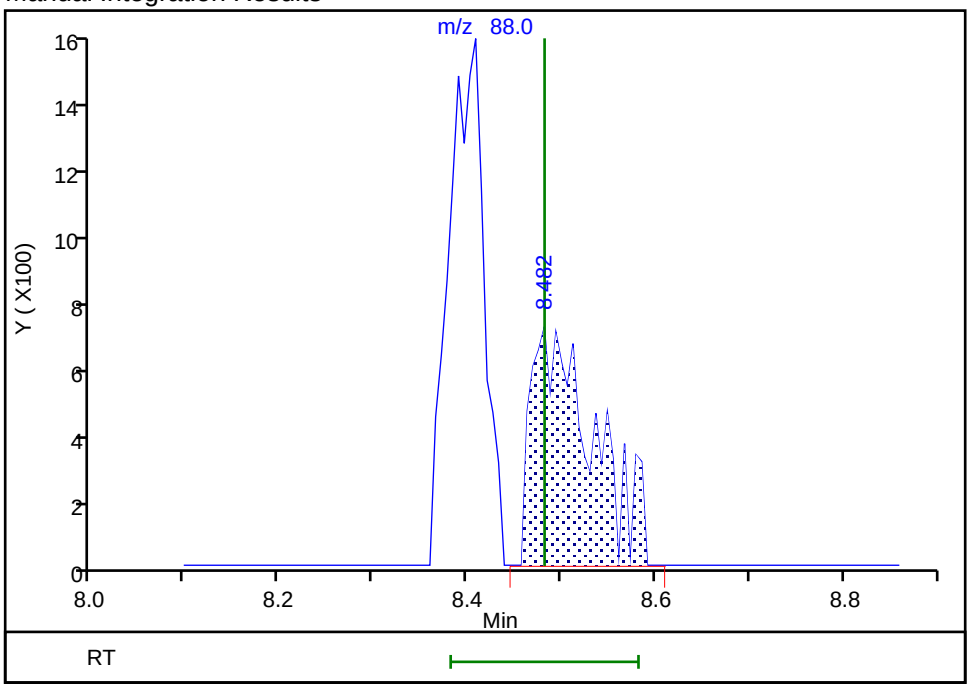
Processing Integration Results

RT: 8.41
Area: 4098
Amount: 51.414922
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 3251
Amount: 48.614608
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:35:10

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X15.D
Lims ID: IC std4 2
Client ID:
Sample Type: IC Calib Level: 4
Inject. Date: 19-Apr-2023 22:41:30 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-016
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:34:55 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:37:07

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.904	0.000	99	116124	2.00	1.83	
5 Chloromethane	50	2.093	2.093	0.000	99	170957	2.00	2.03	
6 Vinyl chloride	62	2.209	2.209	0.000	97	154080	2.00	1.96	
7 Butadiene	39	2.209	2.209	0.000	94	161491	2.00	2.00	
9 Bromomethane	94	2.532	2.532	0.000	90	99431	2.00	2.03	
10 Chloroethane	64	2.605	2.605	0.000	100	87400	2.00	1.99	
11 Dichlorofluoromethane	67	2.824	2.824	0.000	97	207264	2.00	1.97	
12 Trichlorofluoromethane	101	2.910	2.910	0.000	96	167042	2.00	1.88	
14 Ethyl ether	59	3.129	3.129	0.000	92	77498	2.00	2.15	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.209	3.209	0.000	97	127261	2.00	1.84	
16 Acrolein	56	3.294	3.294	0.000	99	453625	100.0	99.7	
17 1,1-Dichloroethene	96	3.434	3.434	0.000	97	80339	2.00	1.83	
19 Acetone	43	3.465	3.465	0.000	43	89796	20.0	19.7	M
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.465	3.465	0.000	92	77826	2.00	1.89	
21 Iodomethane	142	3.617	3.617	0.000	98	153693	2.00	1.95	
22 Ethyl bromide	108	3.647	3.647	0.000	98	89304	2.00	2.17	
23 Carbon disulfide	76	3.721	3.721	0.000	99	233851	2.00	1.88	
24 Methyl acetate	43	3.836	3.836	0.000	22	32258	2.00	2.12	M
26 3-Chloro-1-propene	41	3.879	3.879	0.000	92	147182	2.00	1.90	
27 Methylene Chloride	84	4.068	4.068	0.000	93	89325	2.00	1.93	
* 28 t-Butyl alcohol-d10 (IS)	65	4.062	4.062	0.000	99	68924	50.0	50.0	
29 2-Methyl-2-propanol	59	4.202	4.202	0.000	84	53929	40.0	40.6	
31 Acrylonitrile	53	4.403	4.403	0.000	98	35563	5.00	5.19	
32 Methyl tert-butyl ether	73	4.458	4.458	0.000	92	207645	2.00	1.98	
33 trans-1,2-Dichloroethene	96	4.464	4.464	0.000	98	91248	2.00	1.86	
34 Hexane	57	4.891	4.891	0.000	93	105690	2.00	1.77	
36 1,1-Dichloroethane	63	5.129	5.129	0.000	96	177913	2.00	1.92	
37 Isopropyl ether	45	5.190	5.190	0.000	96	312325	2.00	1.94	
38 2-Chloro-1,3-butadiene	53	5.239	5.239	0.000	91	149672	2.00	1.86	
40 Tert-butyl ethyl ether	59	5.720	5.720	0.000	98	275834	2.00	1.95	
41 2-Butanone (MEK)	43	5.915	5.915	0.000	100	179118	20.0	19.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	83	101890	2.00	1.91	
43 2,2-Dichloropropane	77	5.982	5.982	0.000	88	140523	2.00	1.85	
44 Propionitrile	54	6.013	6.013	0.000	98	85786	40.0	36.7	
S 46 1,2-Dichloroethene, Total	100				0			3.77	
47 Methacrylonitrile	67	6.226	6.226	0.000	93	210355	20.0	19.9	
48 Chlorobromomethane	128	6.293	6.293	0.000	96	39209	2.00	1.98	
49 Tetrahydrofuran	71	6.306	6.306	0.000	65	24762	10.0	10.0	
50 Chloroform	83	6.452	6.452	0.000	94	169008	2.00	1.91	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	93	457231	10.0	10.0	
53 1,1,1-Trichloroethane	97	6.677	6.677	0.000	98	145917	2.00	1.86	
54 Cyclohexane	56	6.787	6.787	0.000	92	148700	2.00	1.77	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	95	127188	2.00	1.87	
56 Carbon tetrachloride	117	6.903	6.903	0.000	93	124713	2.00	1.89	
57 Isobutyl alcohol	41	7.037	7.037	0.000	93	50843	100.0	95.3	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.129	7.129	0.000	79	84188	10.0	9.90	
59 Benzene	78	7.159	7.159	0.000	97	384679	2.00	1.91	
60 1,2-Dichloroethane	62	7.226	7.226	0.000	97	92762	2.00	1.89	
63 Tert-amyl methyl ether	73	7.354	7.354	0.000	98	231229	2.00	1.95	
* 64 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	1921970	10.0	10.0	
65 n-Heptane	43	7.580	7.580	0.000	93	101077	2.00	1.81	
67 n-Butanol	56	7.933	7.933	0.000	87	63870	175.0	165.1	
68 Trichloroethene	95	8.055	8.055	0.000	99	99079	2.00	1.85	
69 Methylcyclohexane	83	8.372	8.372	0.000	93	143298	2.00	1.80	
70 1,2-Dichloropropane	63	8.390	8.390	0.000	95	100335	2.00	1.93	
71 2-ethoxy-2-methyl butane	87	8.397	8.397	0.000	91	145212	2.00	1.98	
72 Methyl methacrylate	69	8.476	8.476	0.000	93	41287	2.00	2.09	
73 1,4-Dioxane	88	8.482	8.482	0.000	29	5622	100.0	91.5	M
74 Dibromomethane	93	8.494	8.494	0.000	98	40955	2.00	1.93	
76 Dichlorobromomethane	83	8.738	8.738	0.000	99	120233	2.00	1.93	
77 2-Nitropropane	41	9.000	9.000	0.000	96	55820	10.0	9.30	
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	102767	2.00	2.11	
80 cis-1,3-Dichloropropene	75	9.299	9.299	0.000	95	143484	2.00	1.94	
82 4-Methyl-2-pentanone (MIBK)	43	9.470	9.470	0.000	97	521038	20.0	20.0	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1908364	10.0	9.94	
84 Toluene	92	9.689	9.689	0.000	97	240802	2.00	1.90	
85 trans-1,3-Dichloropropene	75	9.957	9.957	0.000	93	115846	2.00	1.98	
104 Ethyl methacrylate	69	10.018	10.018	0.000	89	87863	2.00	1.96	
S 105 1,3-Dichloropropene, Total	100				0			3.92	
106 1,1,2-Trichloroethane	97	10.158	10.158	0.000	91	62066	2.00	1.92	
107 Tetrachloroethene	166	10.256	10.256	0.000	98	108060	2.00	1.93	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	89	107028	2.00	1.99	
109 2-Hexanone	43	10.378	10.378	0.000	97	349011	20.0	20.2	
111 Chlorodibromomethane	129	10.542	10.542	0.000	90	77568	2.00	1.97	
112 Ethylene Dibromide	107	10.658	10.658	0.000	98	56966	2.00	1.97	
* 113 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1411369	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	98	138814	2.00	1.81	
115 Chlorobenzene	112	11.122	11.122	0.000	95	264276	2.00	1.92	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	96	91175	2.00	1.93	
117 Ethylbenzene	91	11.213	11.213	0.000	98	479673	2.00	1.93	
S 118 Xylenes, Total	106				0			5.75	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	100	357788	4.00	3.83	
120 o-Xylene	106	11.658	11.658	0.000	97	175003	2.00	1.93	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.676	0.000	95	289293	2.00	1.93	
122 Bromoform	173	11.835	11.835	0.000	97	45397	2.00	1.98	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	465640	2.00	1.90	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	697431	10.0	10.0	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	92	77837	2.00	1.94	
128 Bromobenzene	156	12.225	12.225	0.000	97	103263	2.00	1.95	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	93	167876	20.0	20.2	
130 1,2,3-Trichloropropane	110	12.256	12.256	0.000	82	18470	2.00	1.95	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	557347	2.00	1.91	
132 2-Chlorotoluene	126	12.365	12.365	0.000	96	107930	2.00	1.93	
133 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	95	390053	2.00	1.91	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	109989	2.00	1.92	
135 tert-Butylbenzene	134	12.670	12.670	0.000	94	82091	2.00	1.86	
136 Pentachloroethane	167	12.701	12.701	0.000	94	77077	2.00	2.13	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	397668	2.00	1.93	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	480487	2.00	1.88	
139 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	210377	2.00	1.94	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	413962	2.00	1.90	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	762594	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.012	13.012	0.000	95	202029	2.00	1.96	
143 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	170773	2.00	1.92	
144 Benzyl chloride	126	13.085	13.085	0.000	99	28779	2.00	1.99	
145 p-Diethylbenzene	119	13.146	13.146	0.000	92	243815	2.00	1.90	
146 n-Butylbenzene	92	13.237	13.237	0.000	98	196834	2.00	1.89	
147 1,2-Dichlorobenzene	146	13.268	13.268	0.000	98	188289	2.00	1.96	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	86	9373	2.00	1.99	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	98	145760	2.00	1.92	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	118450	2.00	1.95	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	96	41789	2.00	1.84	
153 Naphthalene	128	14.542	14.542	0.000	97	198435	2.00	1.98	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	95	93224	2.00	1.93	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LL_#1_826_00073	Amount Added:	2.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	2.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	2.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

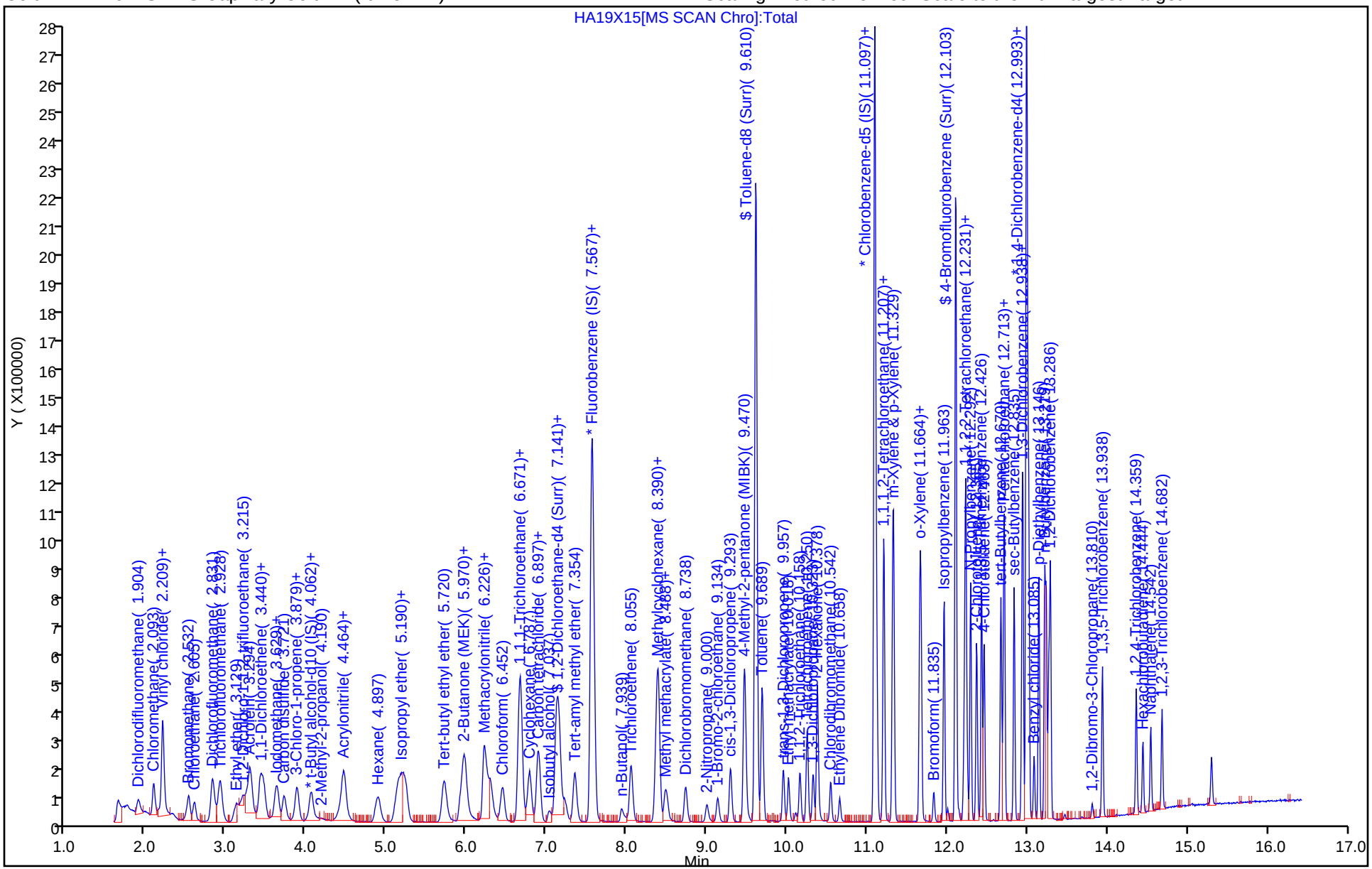
Report Date: 23-Apr-2023 20:34:56 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X15.D

Injection Date:	19-Apr-2023 22:41:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std4 2			Worklist Smp#:	16
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	15
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

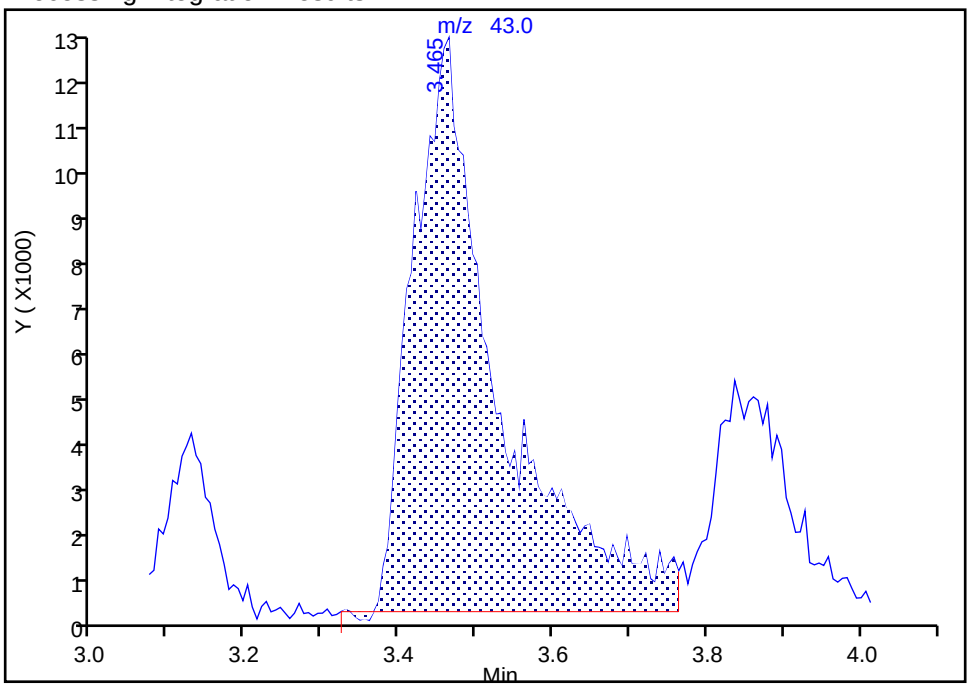
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X15.D				
Injection Date:	19-Apr-2023 22:41:30	Instrument ID:	19094		
Lims ID:	IC std4 2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Acetone, CAS: 67-64-1

Signal: 1

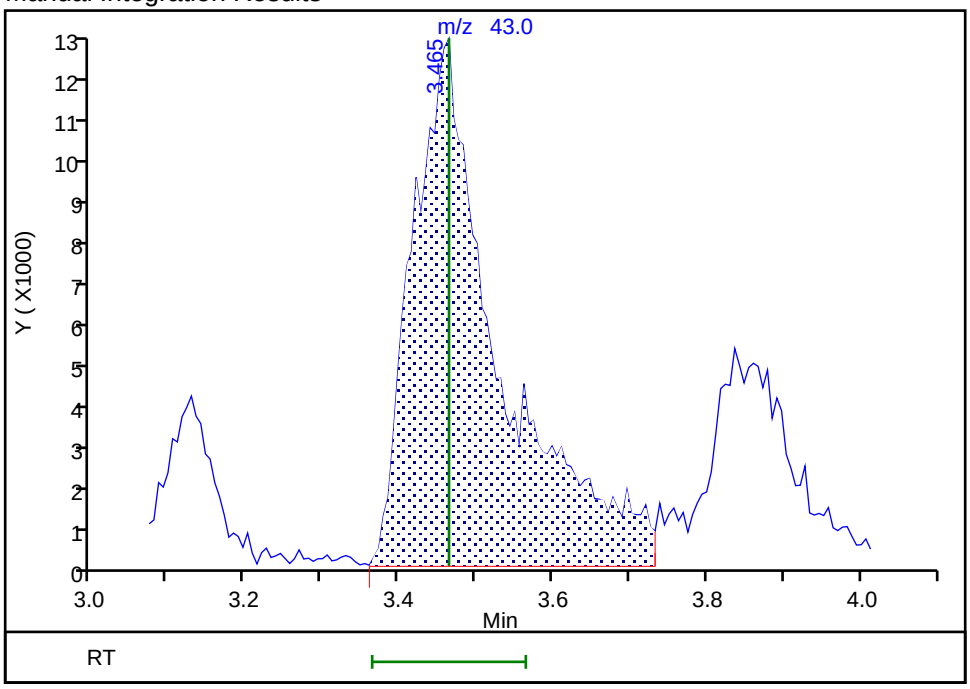
Processing Integration Results

RT: 3.46
Area: 87430
Amount: 15.550647
Amount Units: ug/l



Manual Integration Results

RT: 3.46
Area: 89796
Amount: 19.737287
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:35:58
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

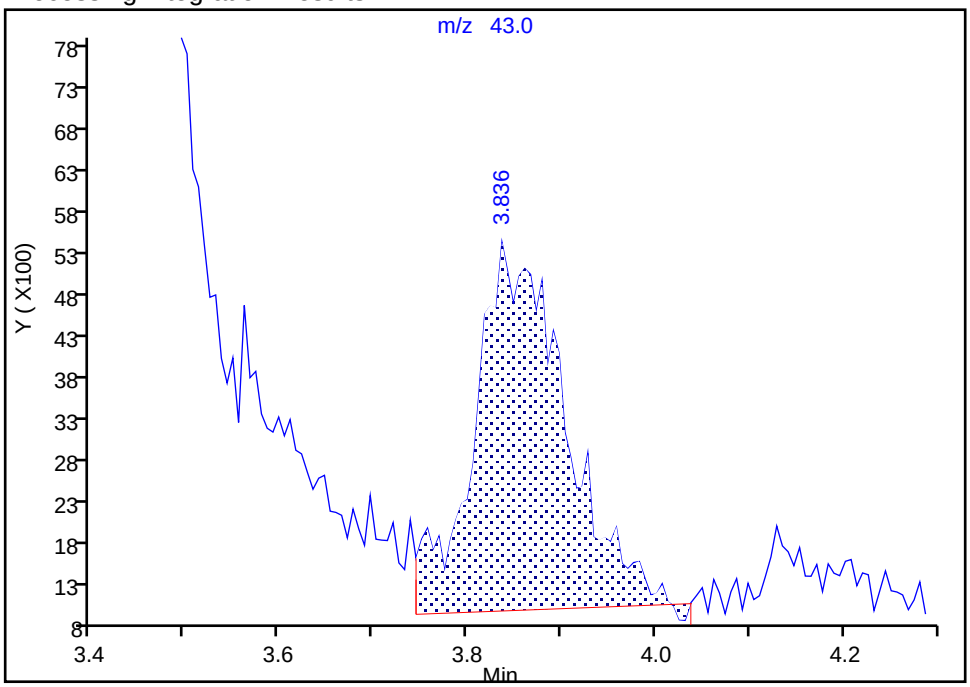
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X15.D
Injection Date: 19-Apr-2023 22:41:30 Instrument ID: 19094
Lims ID: IC std4 2
Client ID:
Operator ID: mec29284 ALS Bottle#: 15 Worklist Smp#: 16
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methyl acetate, CAS: 79-20-9

Signal: 1

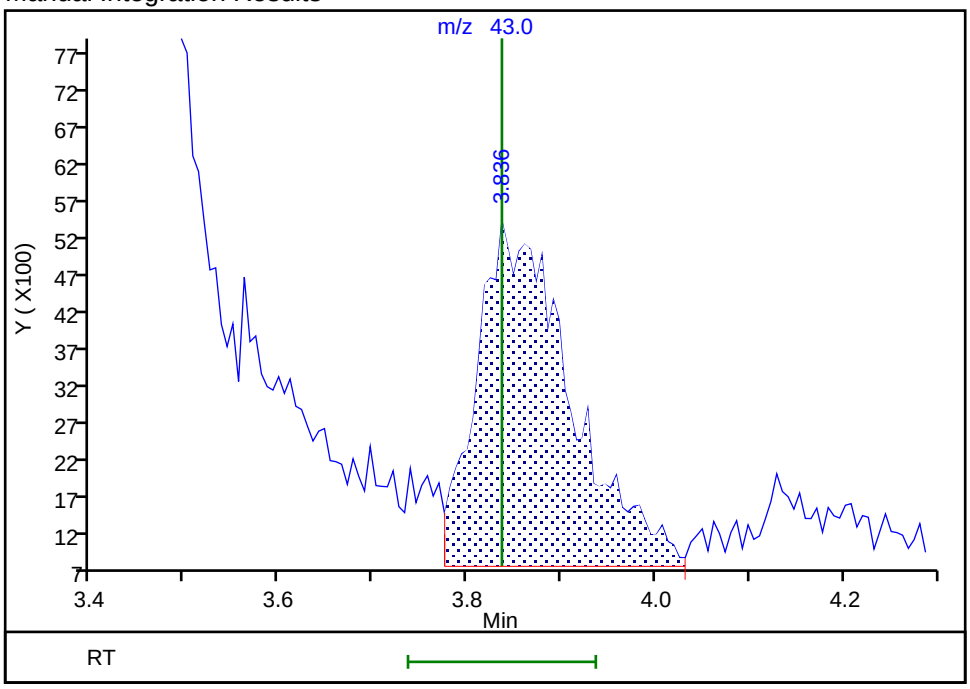
Processing Integration Results

RT: 3.84
Area: 29846
Amount: 1.874608
Amount Units: ug/l



Manual Integration Results

RT: 3.84
Area: 32258
Amount: 2.119510
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:36:25
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

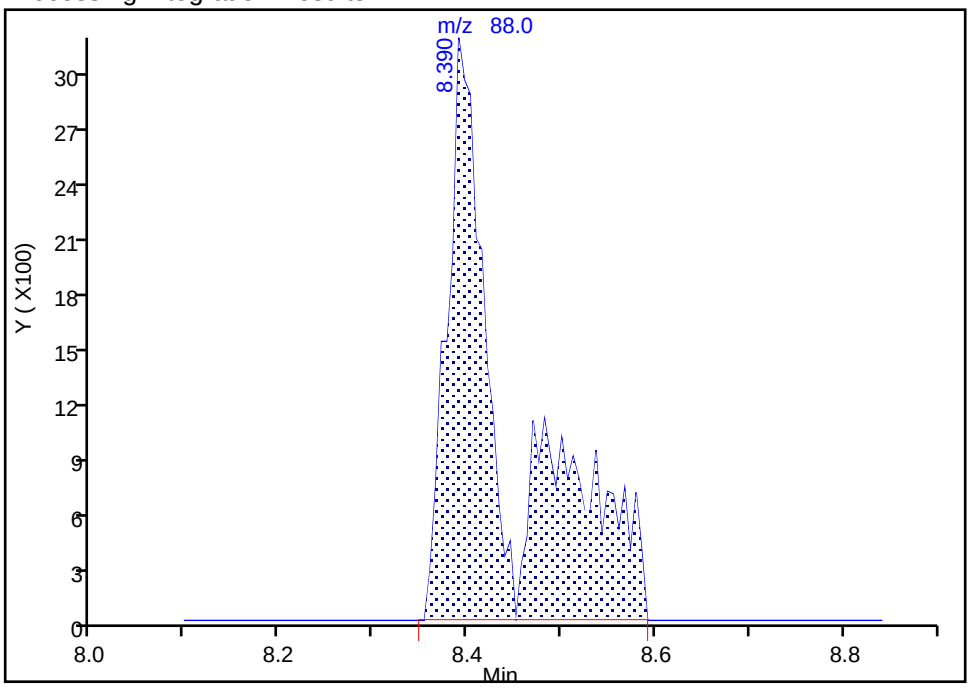
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X15.D				
Injection Date:	19-Apr-2023 22:41:30	Instrument ID:	19094		
Lims ID:	IC std4 2				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	15	Worklist Smp#:	16
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

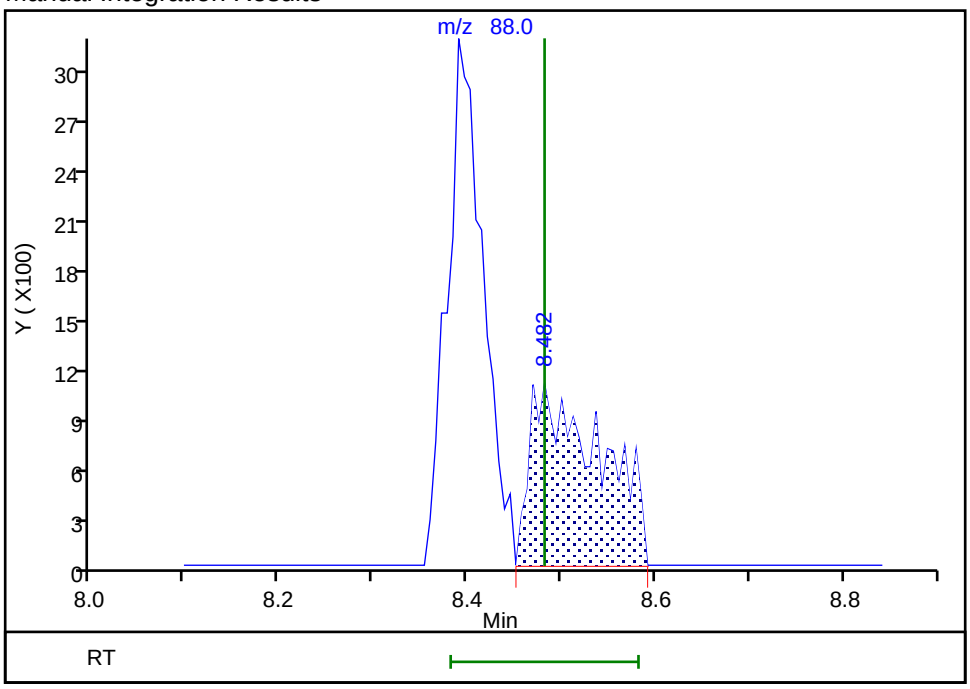
Processing Integration Results

RT: 8.39
Area: 14014
Amount: 162.7763
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 5622
Amount: 91.454281
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:36:52
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X16.D
Lims ID: IC std5 5
Client ID:
Sample Type: IC Calib Level: 5
Inject. Date: 19-Apr-2023 23:01:30 ALS Bottle#: 16 Worklist Smp#: 17
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-017
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:35:03 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:38:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.904	1.904	0.000	99	318413	5.00	4.93	
5 Chloromethane	50	2.093	2.093	0.000	99	405000	5.00	4.74	
6 Vinyl chloride	62	2.209	2.209	0.000	97	382745	5.00	4.80	
7 Butadiene	39	2.209	2.209	0.000	92	392467	5.00	4.80	
9 Bromomethane	94	2.532	2.532	0.000	91	240708	5.00	4.84	
10 Chloroethane	64	2.599	2.605	-0.006	100	214603	5.00	4.81	
11 Dichlorofluoromethane	67	2.830	2.824	0.006	97	512847	5.00	4.80	
12 Trichlorofluoromethane	101	2.910	2.910	0.000	98	453540	5.00	5.03	
14 Ethyl ether	59	3.123	3.129	-0.006	93	184404	5.00	5.04	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.208	3.209	-0.001	94	325993	5.00	4.64	
16 Acrolein	56	3.300	3.294	0.006	99	1231678	250.0	265.6	
17 1,1-Dichloroethene	96	3.428	3.434	-0.006	97	218036	5.00	4.90	
19 Acetone	43	3.458	3.465	-0.007	59	232459	50.0	50.1	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.471	3.465	0.005	93	218851	5.00	5.24	
21 Iodomethane	142	3.617	3.617	0.000	99	407989	5.00	5.09	
22 Ethyl bromide	108	3.641	3.647	-0.006	98	213957	5.01	5.13	
23 Carbon disulfide	76	3.720	3.721	-0.001	99	634668	5.00	5.03	
24 Methyl acetate	43	3.836	3.836	0.000	96	76277	5.00	4.92	M
26 3-Chloro-1-propene	41	3.879	3.879	0.000	92	395258	5.00	5.02	
* 28 t-Butyl alcohol-d10 (IS)	65	4.062	4.062	0.000	99	70223	50.0	50.0	
27 Methylene Chloride	84	4.056	4.068	-0.012	93	237348	5.00	5.04	
29 2-Methyl-2-propanol	59	4.135	4.202	-0.067	95	128115	100.0	94.6	
31 Acrylonitrile	53	4.391	4.403	-0.012	97	96000	12.5	13.8	
32 Methyl tert-butyl ether	73	4.452	4.458	-0.006	90	543441	5.00	5.09	
33 trans-1,2-Dichloroethene	96	4.464	4.464	0.000	98	241965	5.00	4.87	
34 Hexane	57	4.891	4.891	0.000	92	303506	5.00	5.01	
36 1,1-Dichloroethane	63	5.123	5.129	-0.006	96	480525	5.00	5.12	
37 Isopropyl ether	45	5.184	5.190	-0.006	97	818376	5.00	5.01	
38 2-Chloro-1,3-butadiene	53	5.238	5.239	-0.001	91	406104	5.00	4.98	
40 Tert-butyl ethyl ether	59	5.720	5.720	0.000	98	721138	5.00	5.01	
41 2-Butanone (MEK)	43	5.915	5.915	0.000	100	506276	50.0	54.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.964	5.958	0.006	84	265869	5.00	4.91	
43 2,2-Dichloropropane	77	5.982	5.982	0.000	90	367107	5.00	4.75	
44 Propionitrile	54	5.994	6.013	-0.019	97	253963	100.0	106.6	
S 46 1,2-Dichloroethene, Total	100				0			9.77	
47 Methacrylonitrile	67	6.220	6.226	-0.006	92	541609	50.0	50.3	
48 Chlorobromomethane	128	6.305	6.293	0.012	95	104507	5.00	5.19	
49 Tetrahydrofuran	71	6.305	6.306	-0.001	69	68833	25.0	27.3	
50 Chloroform	83	6.452	6.452	0.000	94	449290	5.00	5.01	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	94	466155	10.0	10.1	
53 1,1,1-Trichloroethane	97	6.683	6.677	0.006	98	388654	5.00	4.88	
54 Cyclohexane	56	6.787	6.787	0.000	91	427183	5.00	5.02	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	96	351085	5.00	5.08	
56 Carbon tetrachloride	117	6.897	6.903	-0.006	91	338491	5.00	5.05	
57 Isobutyl alcohol	41	7.031	7.037	-0.006	94	121519	250.0	223.6	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.129	-0.006	95	85902	10.0	9.95	
59 Benzene	78	7.159	7.159	0.000	97	1037536	5.00	5.08	
60 1,2-Dichloroethane	62	7.226	7.226	0.000	97	255763	5.00	5.13	
63 Tert-amyl methyl ether	73	7.354	7.354	0.000	99	609166	5.00	5.06	
* 64 Fluorobenzene (IS)	96	7.567	7.567	0.000	98	1951110	10.0	10.0	
65 n-Heptane	43	7.586	7.580	0.006	94	284346	5.00	5.02	
67 n-Butanol	56	7.933	7.933	0.000	88	159856	437.5	405.7	
68 Trichloroethene	95	8.055	8.055	0.000	99	270948	5.00	4.98	
69 Methylcyclohexane	83	8.372	8.372	0.000	92	418179	5.00	5.19	
70 1,2-Dichloropropane	63	8.384	8.390	-0.006	85	272090	5.00	5.14	
71 2-ethoxy-2-methyl butane	87	8.396	8.397	-0.001	90	379913	5.00	5.09	
72 Methyl methacrylate	69	8.470	8.476	-0.006	90	107865	5.00	5.36	
73 1,4-Dioxane	88	8.488	8.482	0.006	29	12985	250.0	207.3	a
74 Dibromomethane	93	8.494	8.494	0.000	97	109860	5.00	5.10	
76 Dichlorobromomethane	83	8.738	8.738	0.000	99	311381	5.00	4.93	
77 2-Nitropropane	41	9.000	9.000	0.000	98	150205	25.0	24.6	
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	253838	5.00	5.14	
80 cis-1,3-Dichloropropene	75	9.293	9.299	-0.006	96	385246	5.00	5.13	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	97	1373060	50.0	51.8	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1946729	10.0	10.0	
84 Toluene	92	9.689	9.689	0.000	97	648649	5.00	5.05	
85 trans-1,3-Dichloropropene	75	9.951	9.957	-0.006	93	310893	5.00	5.24	
104 Ethyl methacrylate	69	10.018	10.018	0.000	89	232904	5.00	5.13	
S 105 1,3-Dichloropropene, Total	100				0			10.4	
106 1,1,2-Trichloroethane	97	10.164	10.158	0.006	91	158299	5.00	4.84	
107 Tetrachloroethene	166	10.256	10.256	0.000	98	290211	5.00	5.10	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	89	279745	5.00	5.12	
109 2-Hexanone	43	10.378	10.378	0.000	97	927403	50.0	52.8	
111 Chlorodibromomethane	129	10.548	10.542	0.006	90	207592	5.00	5.21	
112 Ethylene Dibromide	107	10.658	10.658	0.000	98	150103	5.00	5.12	
* 113 Chlorobenzene-d5 (IS)	117	11.097	11.097	0.000	87	1430808	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	98	375882	5.00	4.85	
115 Chlorobenzene	112	11.121	11.122	-0.001	94	706382	5.00	5.07	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	97	242526	5.00	5.05	
117 Ethylbenzene	91	11.207	11.213	-0.006	99	1280561	5.00	5.07	
S 118 Xylenes, Total	106				0			15.3	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	100	969863	10.0	10.2	
120 o-Xylene	106	11.658	11.658	0.000	96	469615	5.00	5.10	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.676	0.000	95	776015	5.00	5.11	
122 Bromoform	173	11.835	11.835	0.000	97	120439	5.00	5.17	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	1257363	5.00	5.07	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	703711	10.0	9.97	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	92	200075	5.00	4.95	
128 Bromobenzene	156	12.225	12.225	0.000	97	273271	5.00	5.12	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	93	448606	50.0	53.1	
130 1,2,3-Trichloropropane	110	12.255	12.256	-0.001	83	48099	5.00	5.04	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	1515215	5.00	5.14	
132 2-Chlorotoluene	126	12.365	12.365	0.000	96	292568	5.00	5.18	
133 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	1053133	5.00	5.11	
134 4-Chlorotoluene	126	12.463	12.463	0.000	98	296792	5.00	5.14	
135 tert-Butylbenzene	134	12.670	12.670	0.000	94	220495	5.00	4.94	
136 Pentachloroethane	167	12.707	12.701	0.005	94	193643	5.00	5.30	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	98	1077037	5.00	5.17	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	1316129	5.00	5.10	
139 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	556943	5.00	5.08	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	1129043	5.00	5.12	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	94	769500	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.011	13.012	-0.001	94	529693	5.00	5.09	
143 1,2,3-Trimethylbenzene	120	13.017	13.018	-0.001	99	453918	5.00	5.06	
144 Benzyl chloride	126	13.084	13.085	-0.001	99	73498	5.00	5.03	
145 p-Diethylbenzene	119	13.145	13.146	-0.001	92	666538	5.00	5.14	
146 n-Butylbenzene	92	13.237	13.237	0.000	98	543862	5.00	5.17	
147 1,2-Dichlorobenzene	146	13.267	13.268	-0.001	98	495463	5.00	5.10	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	87	26097	5.00	5.49	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	97	399828	5.00	5.22	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	320606	5.00	5.23	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	96	117258	5.00	5.11	
153 Naphthalene	128	14.542	14.542	0.000	97	529033	5.00	5.23	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	95	256958	5.00	5.28	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00073	Amount Added:	5.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	5.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	5.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

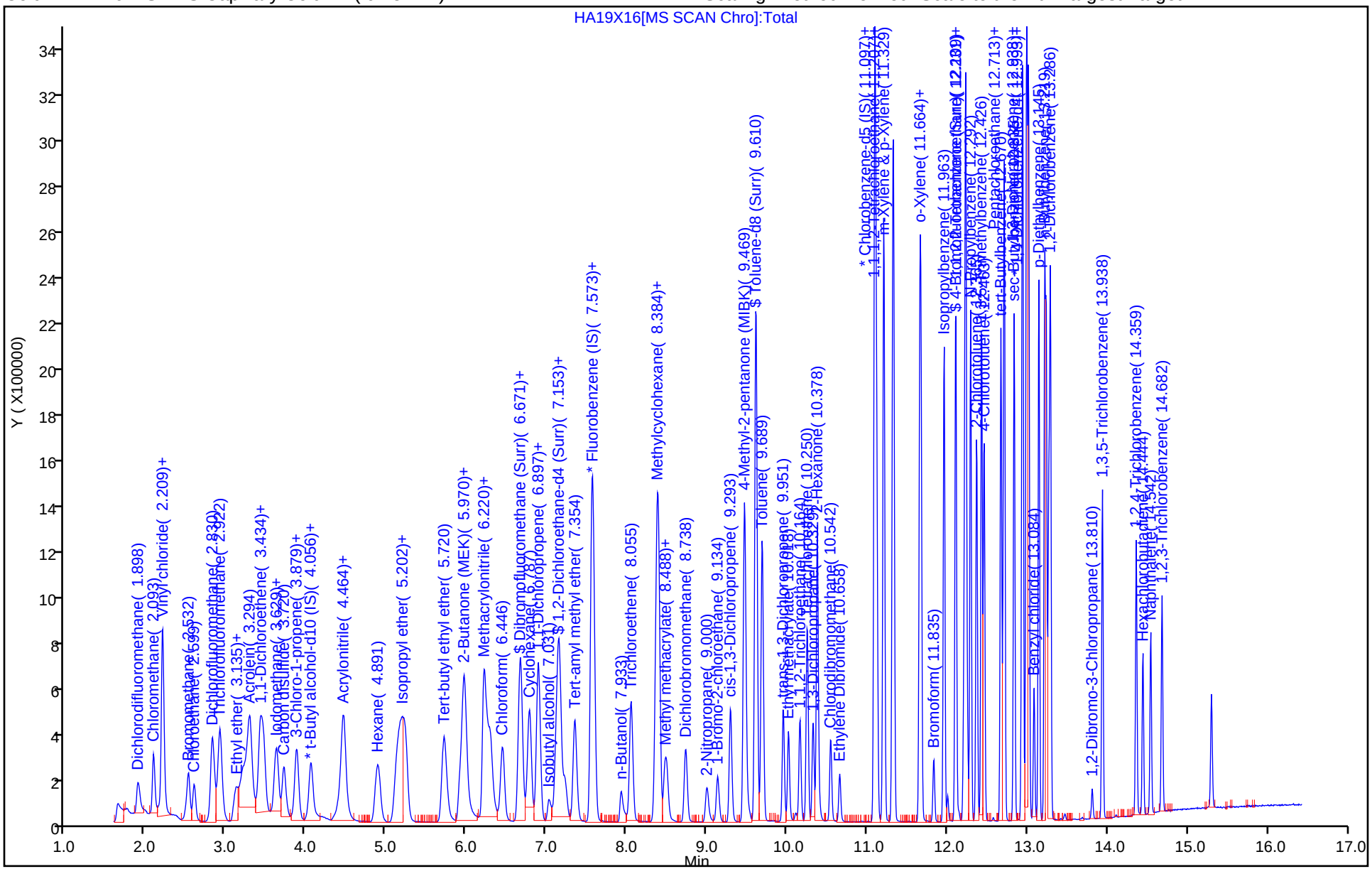
Report Date: 23-Apr-2023 20:35:04 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X16.D

Injection Date:	19-Apr-2023 23:01:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std5 5			Worklist Smp#:	17
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	16
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

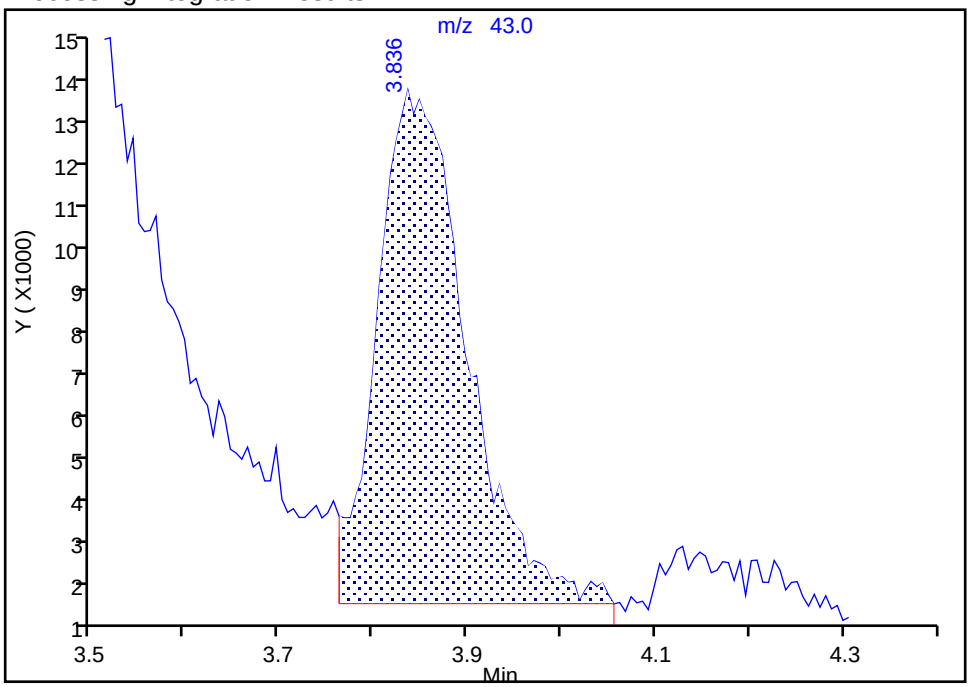
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X16.D				
Injection Date:	19-Apr-2023 23:01:30	Instrument ID:	19094		
Lims ID:	IC std5 5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methyl acetate, CAS: 79-20-9

Signal: 1

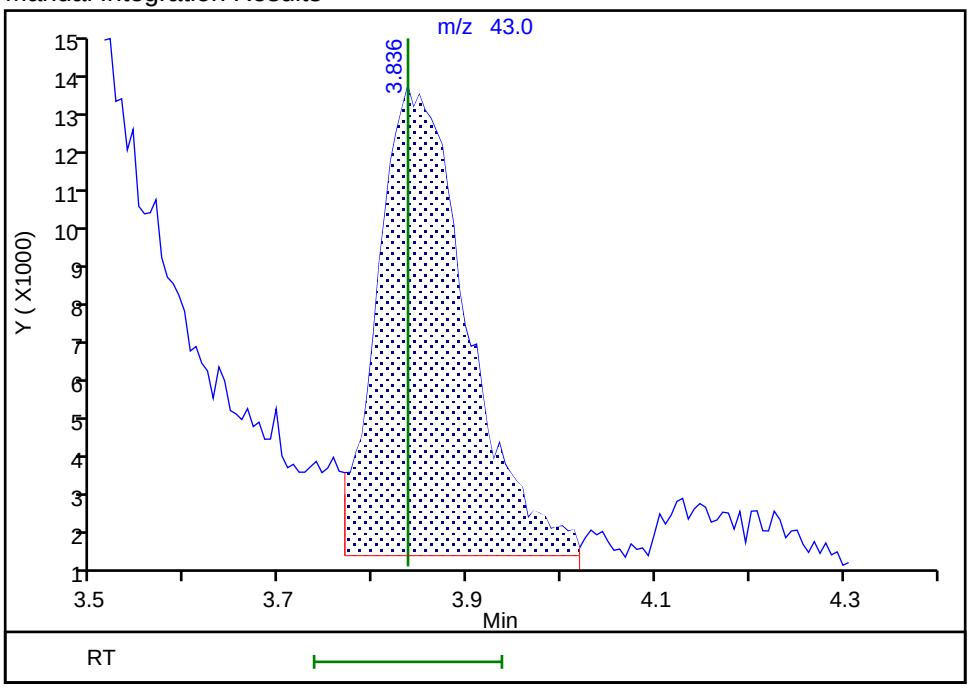
Processing Integration Results

RT: 3.84
Area: 75635
Amount: 4.654990
Amount Units: ug/l



Manual Integration Results

RT: 3.84
Area: 76277
Amount: 4.919067
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:37:56
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

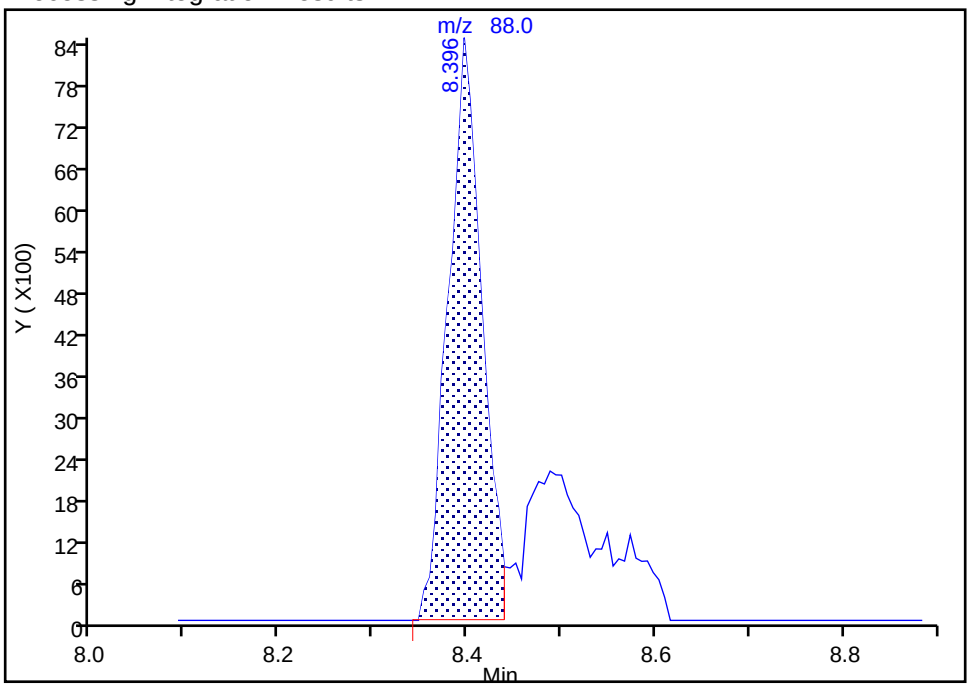
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X16.D				
Injection Date:	19-Apr-2023 23:01:30	Instrument ID:	19094		
Lims ID:	IC std5 5				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	16	Worklist Smp#:	17
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

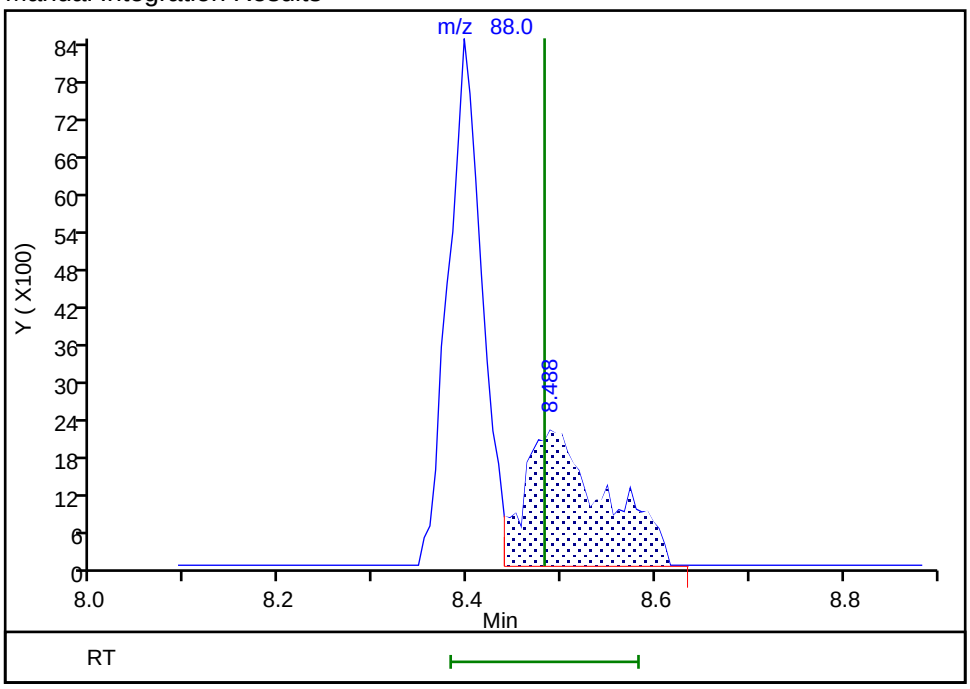
Processing Integration Results

RT: 8.40
Area: 21170
Amount: 302.3913
Amount Units: ug/l



Manual Integration Results

RT: 8.49
Area: 12985
Amount: 207.3224
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:38:13
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X17.D
Lims ID: ICIS 10
Client ID:
Sample Type: ICIS Calib Level: 6
Inject. Date: 19-Apr-2023 23:21:30 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-018
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:35:09 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:40:19

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	636955	10.0	9.70	
5 Chloromethane	50	2.093	2.093	0.000	99	810550	10.0	9.34	
6 Vinyl chloride	62	2.203	2.203	0.000	97	782215	10.0	9.65	
7 Butadiene	39	2.203	2.203	0.000	92	764078	10.0	9.19	
9 Bromomethane	94	2.526	2.526	0.000	91	486665	10.0	9.62	
10 Chloroethane	64	2.599	2.599	0.000	100	430991	10.0	9.49	
11 Dichlorofluoromethane	67	2.824	2.824	0.000	97	1003661	10.0	9.23	
12 Trichlorofluoromethane	101	2.904	2.904	0.000	99	924460	10.0	10.1	
14 Ethyl ether	59	3.117	3.117	0.000	93	357895	10.0	9.63	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.202	3.202	0.000	94	647850	10.0	9.07	
16 Acrolein	56	3.288	3.288	0.000	99	2510655	500.0	484.2	
17 1,1-Dichloroethene	96	3.422	3.422	0.000	97	450439	10.0	9.97	
19 Acetone	43	3.446	3.446	0.000	59	495967	100.0	95.7	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.465	3.465	0.000	93	468821	10.0	11.0	
21 Iodomethane	142	3.611	3.611	0.000	99	841246	10.0	10.3	
22 Ethyl bromide	108	3.635	3.635	0.000	98	410521	10.0	9.67	
23 Carbon disulfide	76	3.715	3.715	0.000	99	1311680	10.0	10.2	
24 Methyl acetate	43	3.843	3.843	0.000	96	160403	10.0	9.25	M
26 3-Chloro-1-propene	41	3.873	3.873	0.000	93	814150	10.0	10.2	
* 28 t-Butyl alcohol-d10 (IS)	65	4.050	4.050	0.000	99	78513	50.0	50.0	
27 Methylene Chloride	84	4.050	4.050	0.000	93	478473	10.0	10.0	
29 2-Methyl-2-propanol	59	4.190	4.190	0.000	97	305748	200.0	201.8	
31 Acrylonitrile	53	4.373	4.373	0.000	99	197290	25.0	25.3	
32 Methyl tert-butyl ether	73	4.452	4.452	0.000	95	1093526	10.0	10.1	
33 trans-1,2-Dichloroethene	96	4.458	4.458	0.000	98	497751	10.0	9.85	
34 Hexane	57	4.885	4.885	0.000	92	658533	10.0	10.7	
36 1,1-Dichloroethane	63	5.123	5.123	0.000	96	982112	10.0	10.3	
37 Isopropyl ether	45	5.178	5.178	0.000	95	1669640	10.0	10.1	
38 2-Chloro-1,3-butadiene	53	5.239	5.239	0.000	91	845634	10.0	10.2	
40 Tert-butyl ethyl ether	59	5.720	5.720	0.000	98	1471793	10.0	10.1	
41 2-Butanone (MEK)	43	5.909	5.909	0.000	100	989354	100.0	95.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.958	5.958	0.000	83	548754	10.0	9.97	
43 2,2-Dichloropropane	77	5.976	5.976	0.000	88	772779	10.0	9.83	
44 Propionitrile	54	5.995	5.995	0.000	99	513896	200.0	193.0	
47 Methacrylonitrile	67	6.220	6.220	0.000	92	1082796	100.0	90.0	
48 Chlorobromomethane	128	6.299	6.299	0.000	95	214131	10.0	10.5	
49 Tetrahydrofuran	71	6.299	6.299	0.000	80	133716	50.0	47.4	
50 Chloroform	83	6.446	6.446	0.000	93	902080	10.0	9.89	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	93	470051	10.0	9.97	
53 1,1,1-Trichloroethane	97	6.677	6.677	0.000	99	810954	10.0	10.0	
54 Cyclohexane	56	6.781	6.781	0.000	91	904666	10.0	10.5	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	95	726484	10.0	10.3	
56 Carbon tetrachloride	117	6.897	6.897	0.000	92	711773	10.0	10.5	
57 Isobutyl alcohol	41	7.031	7.031	0.000	95	264560	500.0	435.3	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	82	88122	10.0	10.0	
59 Benzene	78	7.159	7.159	0.000	97	2131251	10.0	10.3	
60 1,2-Dichloroethane	62	7.226	7.226	0.000	97	514210	10.0	10.1	
63 Tert-amyl methyl ether	73	7.354	7.354	0.000	98	1229540	10.0	10.0	
* 64 Fluorobenzene (IS)	96	7.567	7.567	0.000	97	1983640	10.0	10.0	
65 n-Heptane	43	7.586	7.586	0.000	93	623465	10.0	10.8	
67 n-Butanol	56	7.927	7.927	0.000	88	376542	875.0	854.7	
68 Trichloroethene	95	8.049	8.049	0.000	99	563481	10.0	10.2	
69 Methylcyclohexane	83	8.366	8.366	0.000	93	887897	10.0	10.8	
70 1,2-Dichloropropane	63	8.390	8.390	0.000	87	556276	10.0	10.3	
71 2-ethoxy-2-methyl butane	87	8.397	8.397	0.000	90	778791	10.0	10.3	
72 Methyl methacrylate	69	8.470	8.470	0.000	91	219582	10.0	9.77	
73 1,4-Dioxane	88	8.482	8.482	0.000	29	32409	500.0	462.8	Ma
74 Dibromomethane	93	8.494	8.494	0.000	97	220960	10.0	10.1	
76 Dichlorobromomethane	83	8.732	8.732	0.000	100	647350	10.0	10.1	
77 2-Nitropropane	41	9.000	9.000	0.000	96	304682	50.0	44.5	
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	489908	10.0	9.75	
80 cis-1,3-Dichloropropene	75	9.293	9.293	0.000	96	794418	10.0	10.4	
82 4-Methyl-2-pentanone (MIBK)	43	9.470	9.470	0.000	97	2760554	100.0	93.1	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1979494	10.0	10.0	
84 Toluene	92	9.689	9.689	0.000	98	1336088	10.0	10.3	
85 trans-1,3-Dichloropropene	75	9.951	9.951	0.000	93	636888	10.0	10.6	
104 Ethyl methacrylate	69	10.018	10.018	0.000	89	479093	10.0	10.4	
106 1,1,2-Trichloroethane	97	10.165	10.165	0.000	91	321718	10.0	9.69	
107 Tetrachloroethene	166	10.256	10.256	0.000	98	607647	10.0	10.5	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	90	569662	10.0	10.3	
109 2-Hexanone	43	10.378	10.378	0.000	97	1868352	100.0	95.1	
111 Chlorodibromomethane	129	10.549	10.549	0.000	90	422450	10.0	10.5	
112 Ethylene Dibromide	107	10.658	10.658	0.000	99	302559	10.0	10.2	
* 113 Chlorobenzene-d5 (IS)	117	11.091	11.091	0.000	86	1451141	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	98	790325	10.0	10.0	
115 Chlorobenzene	112	11.122	11.122	0.000	94	1445549	10.0	10.2	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	97	504509	10.0	10.4	
117 Ethylbenzene	91	11.207	11.207	0.000	99	2639936	10.0	10.3	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	99	2011044	20.0	20.9	
120 o-Xylene	106	11.658	11.658	0.000	96	970389	10.0	10.4	
121 Styrene	104	11.670	11.670	0.000	95	1601100	10.0	10.4	
122 Bromoform	173	11.835	11.835	0.000	98	248769	10.0	10.5	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	2612391	10.0	10.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	714332	10.0	9.97	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	91	403972	10.0	9.70	
128 Bromobenzene	156	12.219	12.219	0.000	97	564932	10.0	10.3	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	92	932718	100.0	98.8	
130 1,2,3-Trichloropropane	110	12.256	12.256	0.000	83	96400	10.0	9.82	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	3145301	10.0	10.4	
132 2-Chlorotoluene	126	12.365	12.365	0.000	96	601725	10.0	10.4	
133 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	2206475	10.0	10.4	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	614053	10.0	10.3	
135 tert-Butylbenzene	134	12.670	12.670	0.000	94	474319	10.0	10.3	
136 Pentachloroethane	167	12.707	12.707	0.000	93	377707	10.0	10.0	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	2231472	10.0	10.4	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	2783461	10.0	10.5	
139 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	1164783	10.0	10.3	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	2386266	10.0	10.5	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	792309	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.012	13.012	0.000	94	1094581	10.0	10.2	
143 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	947210	10.0	10.2	
144 Benzyl chloride	126	13.085	13.085	0.000	99	152191	10.0	10.1	
145 p-Diethylbenzene	119	13.146	13.146	0.000	92	1399547	10.0	10.5	
146 n-Butylbenzene	92	13.237	13.237	0.000	97	1162197	10.0	10.7	
147 1,2-Dichlorobenzene	146	13.268	13.268	0.000	98	1022011	10.0	10.2	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	86	51352	10.0	10.5	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	98	840176	10.0	10.7	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	676839	10.0	10.7	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	93	253716	10.0	10.7	
153 Naphthalene	128	14.542	14.542	0.000	97	1087740	10.0	10.4	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	537387	10.0	10.7	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00073	Amount Added:	10.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added:	10.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added:	10.00	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

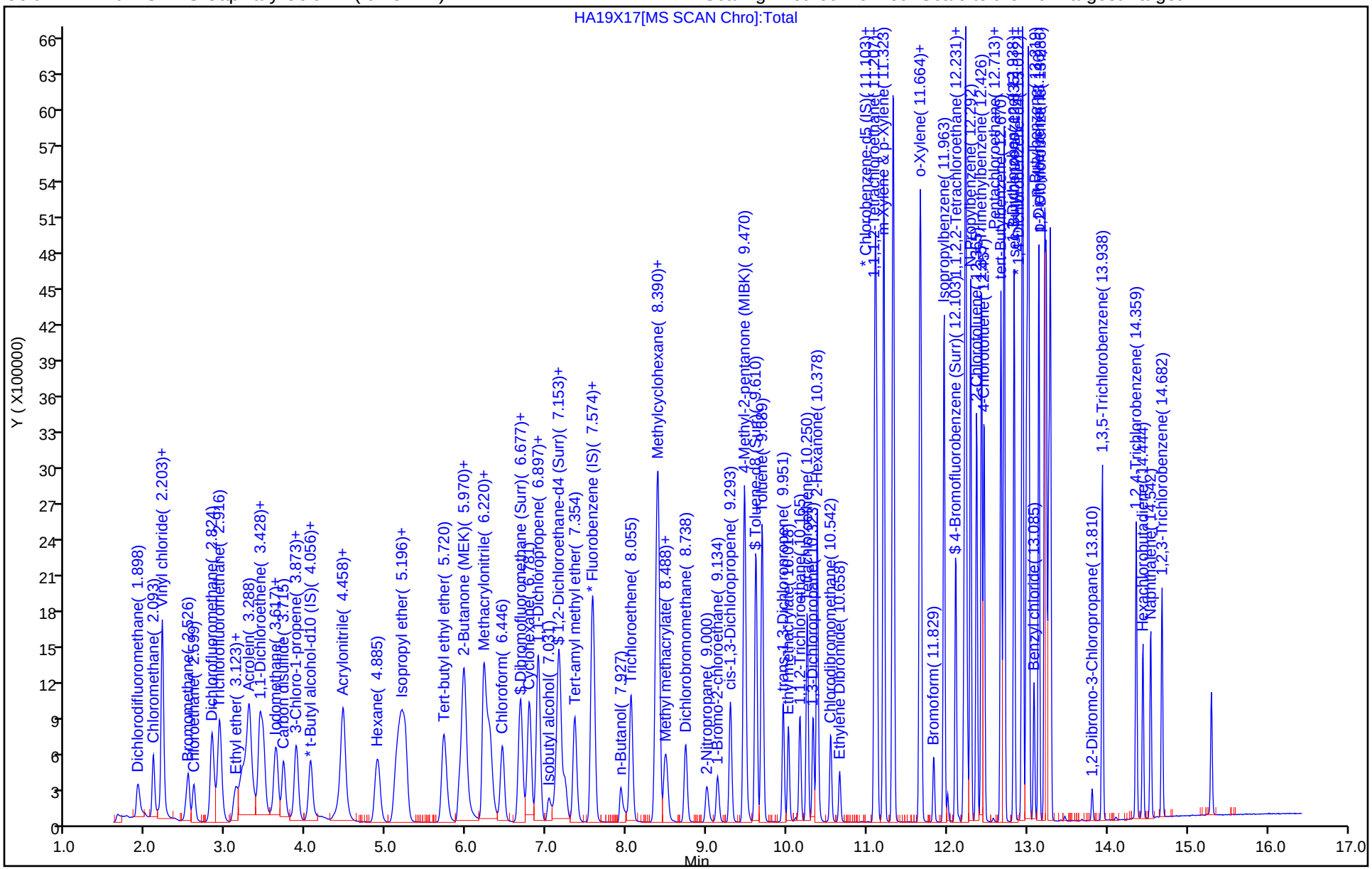
Report Date: 23-Apr-2023 20:35:10 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X17.D

Injection Date:	19-Apr-2023 23:21:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	ICIS 10			Worklist Smp#:	18
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	17
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

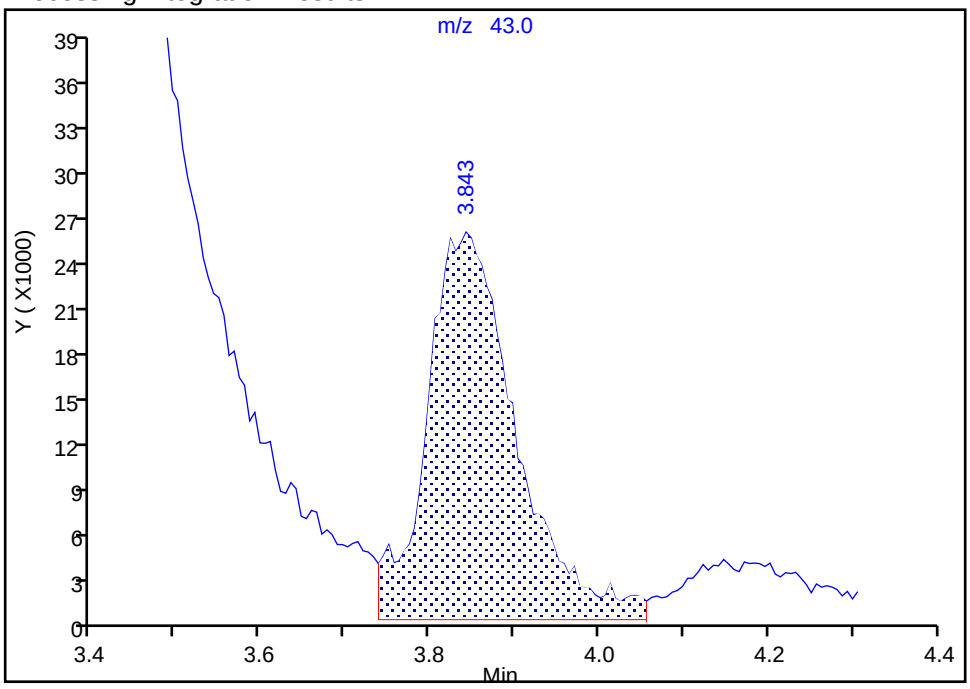
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X17.D
Injection Date: 19-Apr-2023 23:21:30 Instrument ID: 19094
Lims ID: ICIS 10
Client ID:
Operator ID: mec29284 ALS Bottle#: 17 Worklist Smp#: 18
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methyl acetate, CAS: 79-20-9

Signal: 1

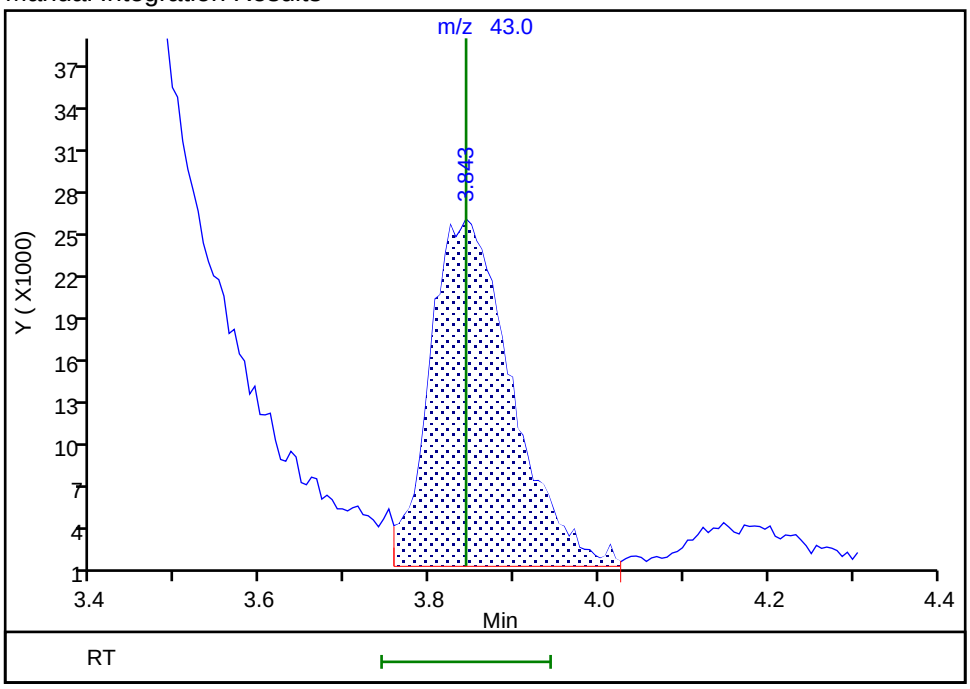
Processing Integration Results

RT: 3.84
Area: 182783
Amount: 10.038121
Amount Units: ug/l



Manual Integration Results

RT: 3.84
Area: 160403
Amount: 9.252081
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:39:34
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

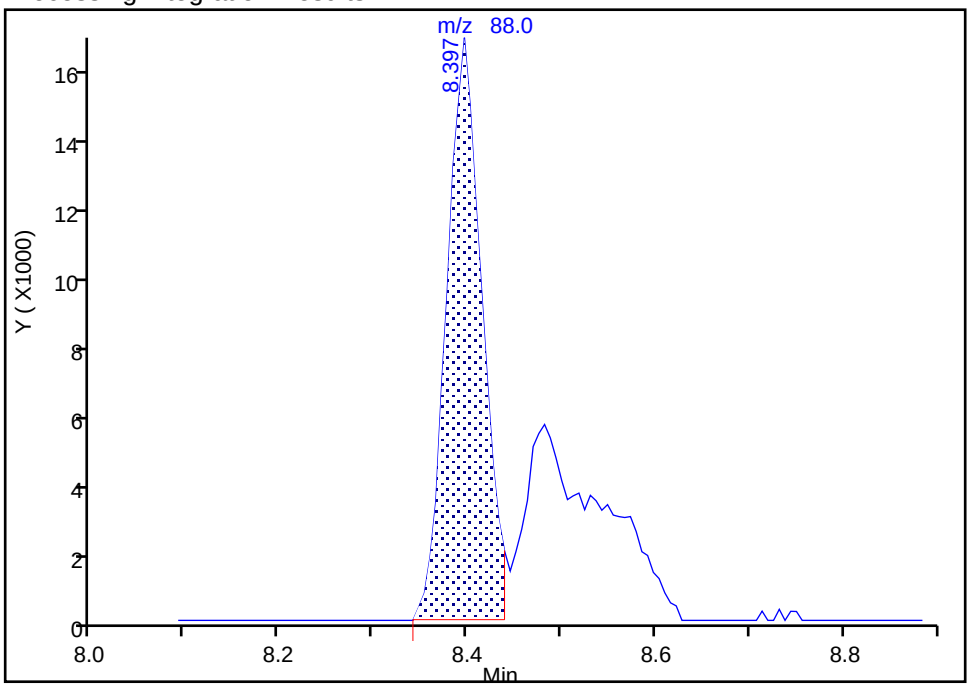
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X17.D				
Injection Date:	19-Apr-2023 23:21:30	Instrument ID:	19094		
Lims ID:	ICIS 10				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	17	Worklist Smp#:	18
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

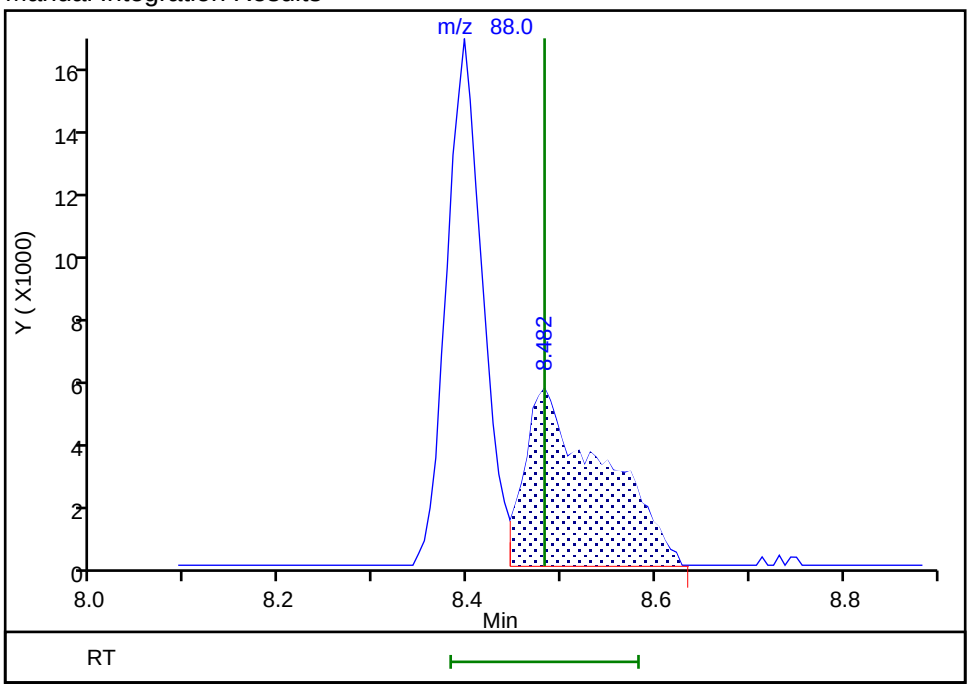
Processing Integration Results

RT: 8.40
Area: 43482
Amount: 590.6202
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 32409
Amount: 462.8153
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:40:04
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D
Lims ID: IC std7 25
Client ID:
Sample Type: IC Calib Level: 7
Inject. Date: 19-Apr-2023 23:41:30 ALS Bottle#: 18 Worklist Smp#: 19
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-019
Operator ID: mec29284 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:35:20 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 23-Apr-2023 19:45:02

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	100	1534246	25.0	23.3	M
5 Chloromethane	50	2.093	2.093	0.000	99	2014037	25.0	23.1	
6 Vinyl chloride	62	2.203	2.203	0.000	97	1921148	25.0	23.6	
7 Butadiene	39	2.203	2.203	0.000	91	1824970	25.0	21.8	
9 Bromomethane	94	2.526	2.526	0.000	90	1198943	25.0	23.6	
10 Chloroethane	64	2.599	2.599	0.000	100	1076714	25.0	23.6	
11 Dichlorofluoromethane	67	2.824	2.824	0.000	97	2494422	25.0	22.8	
12 Trichlorofluoromethane	101	2.904	2.904	0.000	98	2253491	25.0	24.4	
14 Ethyl ether	59	3.123	3.117	0.006	92	883832	25.0	23.7	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.209	3.202	0.007	94	1608567	25.0	22.4	
16 Acrolein	56	3.288	3.288	0.000	100	5624213	1250.0	1106.9	
17 1,1-Dichloroethene	96	3.422	3.422	0.000	97	1104927	25.0	24.3	
19 Acetone	43	3.459	3.446	0.012	99	1038749	250.0	204.6	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.465	3.465	0.000	93	1147974	25.0	26.9	
21 Iodomethane	142	3.611	3.611	0.000	99	2064892	25.0	25.2	
22 Ethyl bromide	108	3.635	3.635	0.000	98	1030409	25.0	24.2	
23 Carbon disulfide	76	3.721	3.715	0.006	99	3273647	25.0	25.4	
24 Methyl acetate	43	3.843	3.843	0.000	98	351365	25.0	20.7	M
26 3-Chloro-1-propene	41	3.879	3.873	0.006	93	2020271	25.0	25.1	
* 28 t-Butyl alcohol-d10 (IS)	65	4.062	4.050	0.012	99	76932	50.0	50.0	
27 Methylene Chloride	84	4.056	4.050	0.006	94	1168187	25.0	24.3	
29 2-Methyl-2-propanol	59	4.184	4.190	-0.006	99	664962	500.0	448.0	
31 Acrylonitrile	53	4.385	4.373	0.012	98	448719	62.5	58.7	
32 Methyl tert-butyl ether	73	4.452	4.452	0.000	95	2636429	25.0	24.2	
33 trans-1,2-Dichloroethene	96	4.464	4.458	0.006	98	1230308	25.0	24.2	
34 Hexane	57	4.891	4.885	0.006	92	1609642	25.0	26.0	
36 1,1-Dichloroethane	63	5.123	5.123	0.000	96	2413514	25.0	25.2	
37 Isopropyl ether	45	5.184	5.178	0.006	95	4090868	25.0	24.5	
38 2-Chloro-1,3-butadiene	53	5.239	5.239	0.000	91	2078698	25.0	24.9	
40 Tert-butyl ethyl ether	59	5.726	5.720	0.006	98	3584711	25.0	24.4	
41 2-Butanone (MEK)	43	5.909	5.909	0.000	100	2308325	250.0	226.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.964	5.958	0.006	84	1340829	25.0	24.2	
43 2,2-Dichloropropane	77	5.982	5.976	0.006	89	1875167	25.0	23.7	
44 Propionitrile	54	5.995	5.995	0.000	99	1144640	500.0	438.7	
S 46 1,2-Dichloroethene, Total	100				0			48.4	
47 Methacrylonitrile	67	6.220	6.220	0.000	92	2545195	250.0	215.9	
48 Chlorobromomethane	128	6.293	6.299	-0.006	95	514920	25.0	25.0	
49 Tetrahydrofuran	71	6.299	6.299	0.000	90	307505	125.0	111.2	
50 Chloroform	83	6.446	6.446	0.000	93	2226938	25.0	24.3	
$ 52 Dibromofluoromethane (Surr)	113	6.665	6.665	0.000	93	470672	10.0	9.94	
53 1,1,1-Trichloroethane	97	6.683	6.677	0.006	99	1986785	25.0	24.4	
54 Cyclohexane	56	6.787	6.781	0.006	92	2235456	25.0	25.7	
55 1,1-Dichloropropene	75	6.897	6.897	0.000	95	1815287	25.0	25.7	
56 Carbon tetrachloride	117	6.897	6.897	0.000	91	1765238	25.0	25.8	
57 Isobutyl alcohol	41	7.031	7.031	0.000	95	618236	1250.0	1038.2	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.116	7.116	0.000	96	85640	10.0	9.71	
59 Benzene	78	7.159	7.159	0.000	96	5259098	25.0	25.2	
60 1,2-Dichloroethane	62	7.226	7.226	0.000	97	1240685	25.0	24.4	
63 Tert-amyl methyl ether	73	7.354	7.354	0.000	98	3016082	25.0	24.5	
* 64 Fluorobenzene (IS)	96	7.574	7.567	0.007	99	1993554	10.0	10.0	
65 n-Heptane	43	7.586	7.586	0.000	94	1512707	25.0	26.1	
67 n-Butanol	56	7.927	7.927	0.000	89	892759	2187.5	2068.0	
68 Trichloroethene	95	8.055	8.049	0.006	99	1398978	25.0	25.1	
69 Methylcyclohexane	83	8.366	8.366	0.000	93	2190578	25.0	26.6	
70 1,2-Dichloropropane	63	8.390	8.390	0.000	88	1368707	25.0	25.3	
71 2-ethoxy-2-methyl butane	87	8.397	8.397	0.000	90	1914612	25.0	25.1	
72 Methyl methacrylate	69	8.470	8.470	0.000	92	533478	25.0	24.2	
73 1,4-Dioxane	88	8.482	8.482	0.000	28	86474	1250.0	1260.3	a
74 Dibromomethane	93	8.500	8.494	0.006	97	538614	25.0	24.5	
76 Dichlorobromomethane	83	8.738	8.732	0.006	99	1595722	25.0	24.7	
77 2-Nitropropane	41	9.000	9.000	0.000	97	710007	125.0	105.9	
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	1213607	25.0	24.0	
80 cis-1,3-Dichloropropene	75	9.293	9.293	0.000	97	1973868	25.0	25.7	
82 4-Methyl-2-pentanone (MIBK)	43	9.470	9.470	0.000	97	6580651	250.0	226.5	
$ 83 Toluene-d8 (Surr)	98	9.616	9.610	0.006	94	2002074	10.0	10.0	
84 Toluene	92	9.689	9.689	0.000	98	3316926	25.0	25.1	
85 trans-1,3-Dichloropropene	75	9.951	9.951	0.000	93	1577560	25.0	25.8	
104 Ethyl methacrylate	69	10.018	10.018	0.000	89	1152324	25.0	24.7	
S 105 1,3-Dichloropropene, Total	100				0			51.6	
106 1,1,2-Trichloroethane	97	10.165	10.165	0.001	90	790858	25.0	23.5	
107 Tetrachloroethene	166	10.256	10.256	0.000	98	1512270	25.0	25.9	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	90	1393771	25.0	24.8	
109 2-Hexanone	43	10.378	10.378	0.000	97	4447274	250.0	231.0	
111 Chlorodibromomethane	129	10.549	10.549	0.000	90	1046745	25.0	25.5	
112 Ethylene Dibromide	107	10.658	10.658	0.000	99	745028	25.0	24.7	
* 113 Chlorobenzene-d5 (IS)	117	11.097	11.091	0.006	87	1471953	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	98	1975227	25.0	24.8	
115 Chlorobenzene	112	11.122	11.122	0.000	97	3594835	25.0	25.1	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	97	1246196	25.0	25.2	
117 Ethylbenzene	91	11.213	11.207	0.006	99	6580100	25.0	25.3	
S 118 Xylenes, Total	106				0			76.8	
119 m-Xylene & p-Xylene	106	11.329	11.329	0.000	99	5000973	50.0	51.3	
120 o-Xylene	106	11.658	11.658	0.000	97	2419441	25.0	25.6	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
121 Styrene	104	11.676	11.670	0.006	95	3972660	25.0	25.4	
122 Bromoform	173	11.835	11.835	0.000	98	615440	25.0	25.7	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	6505402	25.0	25.5	
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	725645	10.0	9.99	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	92	969172	25.0	23.2	
128 Bromobenzene	156	12.225	12.219	0.006	97	1396862	25.0	25.3	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	91	2312520	250.0	249.9	
130 1,2,3-Trichloropropane	110	12.256	12.256	0.000	83	234344	25.0	23.8	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	7795652	25.0	25.6	
132 2-Chlorotoluene	126	12.371	12.365	0.006	97	1505528	25.0	25.8	
133 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	5499441	25.0	25.8	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	1532440	25.0	25.7	
135 tert-Butylbenzene	134	12.670	12.670	0.000	93	1194054	25.0	25.9	
136 Pentachloroethane	167	12.707	12.707	0.000	94	980542	25.0	26.0	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	5638811	25.0	26.2	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	7043767	25.0	26.4	
139 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	2928653	25.0	25.8	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	6030062	25.0	26.5	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	94	795283	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.012	13.012	0.000	94	2757148	25.0	25.7	
143 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	2368607	25.0	25.5	
144 Benzyl chloride	126	13.085	13.085	0.000	99	379203	25.0	25.1	
145 p-Diethylbenzene	119	13.146	13.146	0.000	91	3567746	25.0	26.6	
146 n-Butylbenzene	92	13.237	13.237	0.000	98	2959276	25.0	27.2	
147 1,2-Dichlorobenzene	146	13.268	13.268	0.000	98	2555458	25.0	25.4	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	87	130897	25.0	26.7	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	97	2138064	25.0	27.0	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	1729336	25.0	27.3	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	96	657077	25.0	27.7	
153 Naphthalene	128	14.542	14.542	0.000	97	2770049	25.0	26.5	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	1371466	25.0	27.3	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

a - User Assigned ID

Reagents:

MSV_LL_#1_826_00073	Amount Added: 25.00	Units: uL	
MSV_LL_GAS826_00145	Amount Added: 25.00	Units: uL	
MSV_LL_#2_826_00081	Amount Added: 25.00	Units: uL	
MSV_LLcentISS_00007	Amount Added: 5.00	Units: uL	Run Reagent

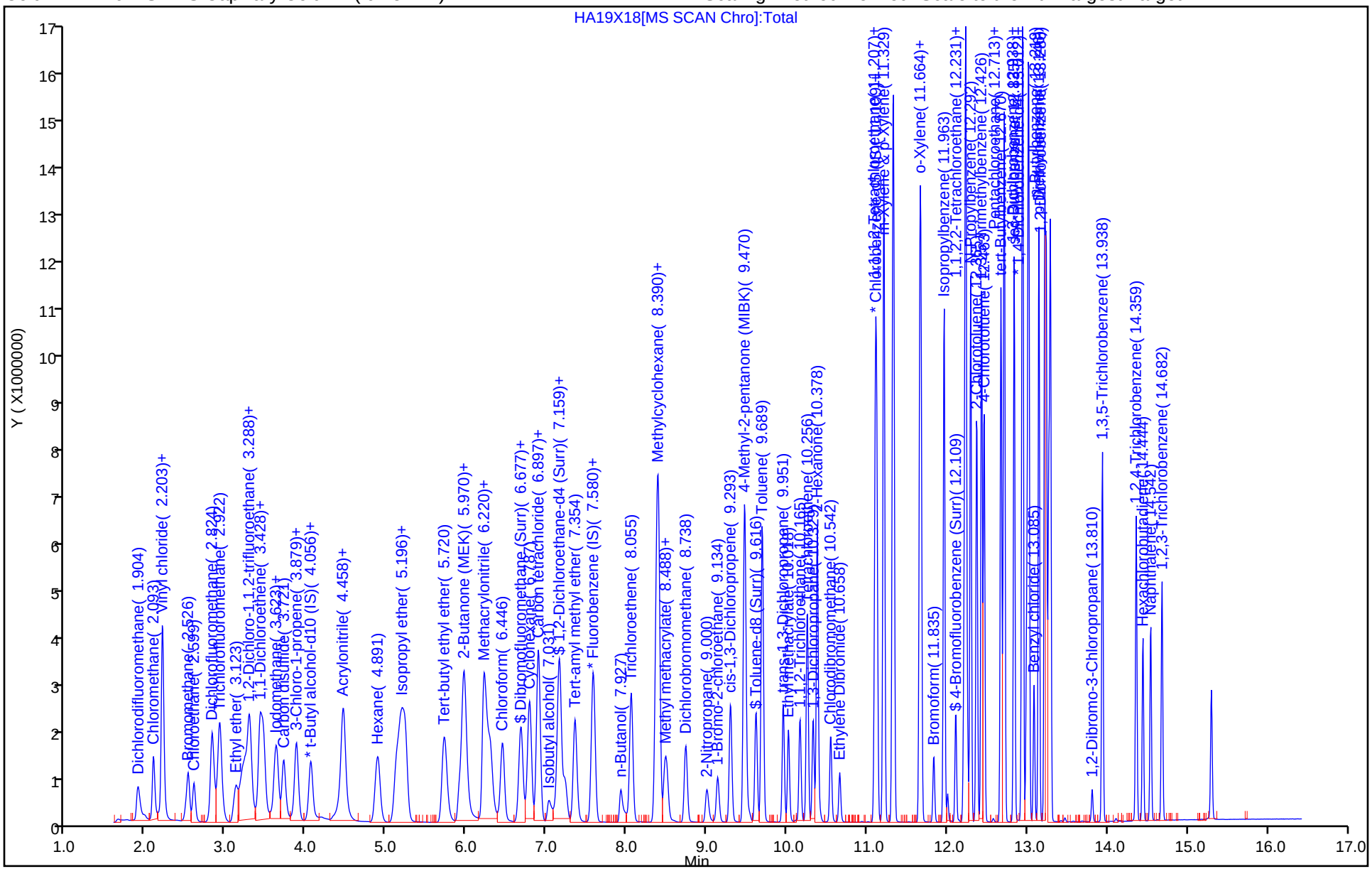
Report Date: 23-Apr-2023 20:35:21 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Injection Date:	19-Apr-2023 23:41:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	IC std7 25			Worklist Smp#:	19
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	18
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

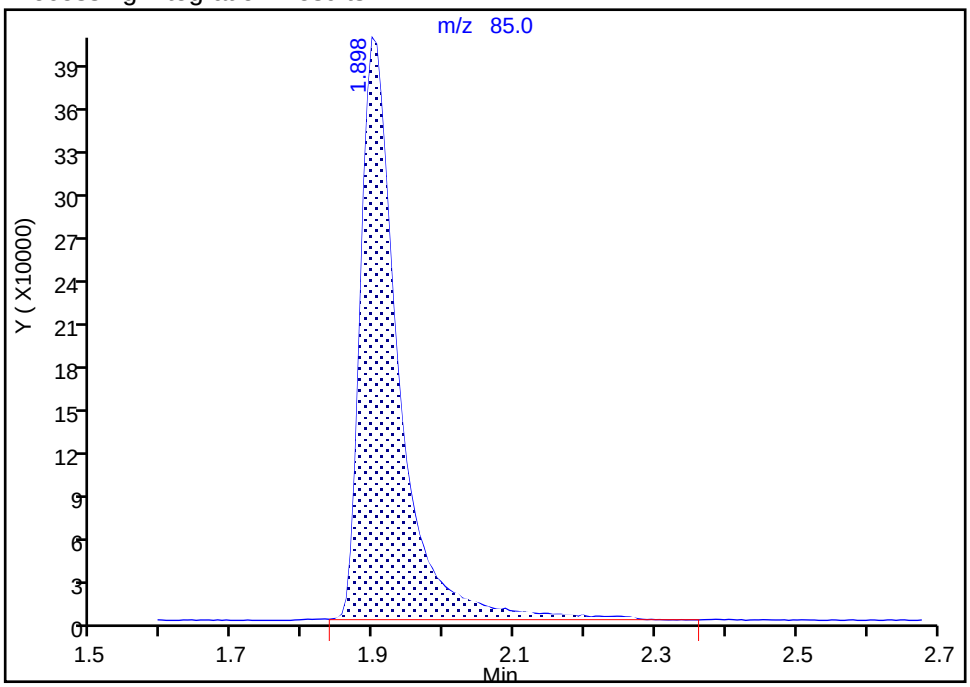
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Injection Date:	19-Apr-2023 23:41:30	Instrument ID:	19094		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

2 Dichlorodifluoromethane, CAS: 75-71-8

Signal: 1

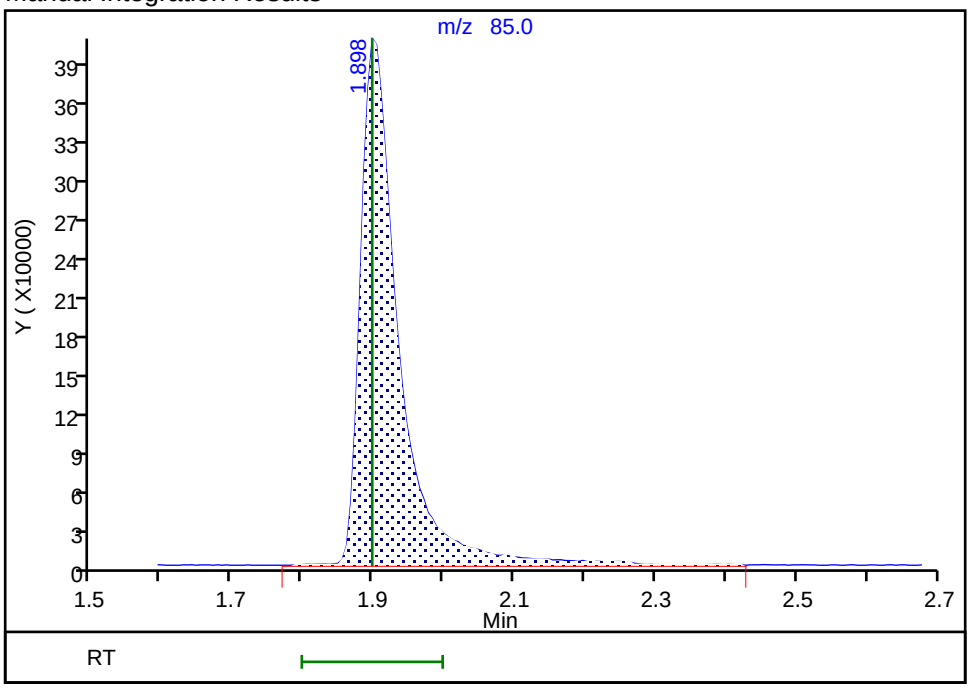
Processing Integration Results

RT: 1.90
Area: 1524465
Amount: 24.858518
Amount Units: ug/l



Manual Integration Results

RT: 1.90
Area: 1534246
Amount: 23.251230
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:40:31

Audit Action: Manually Integrated Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

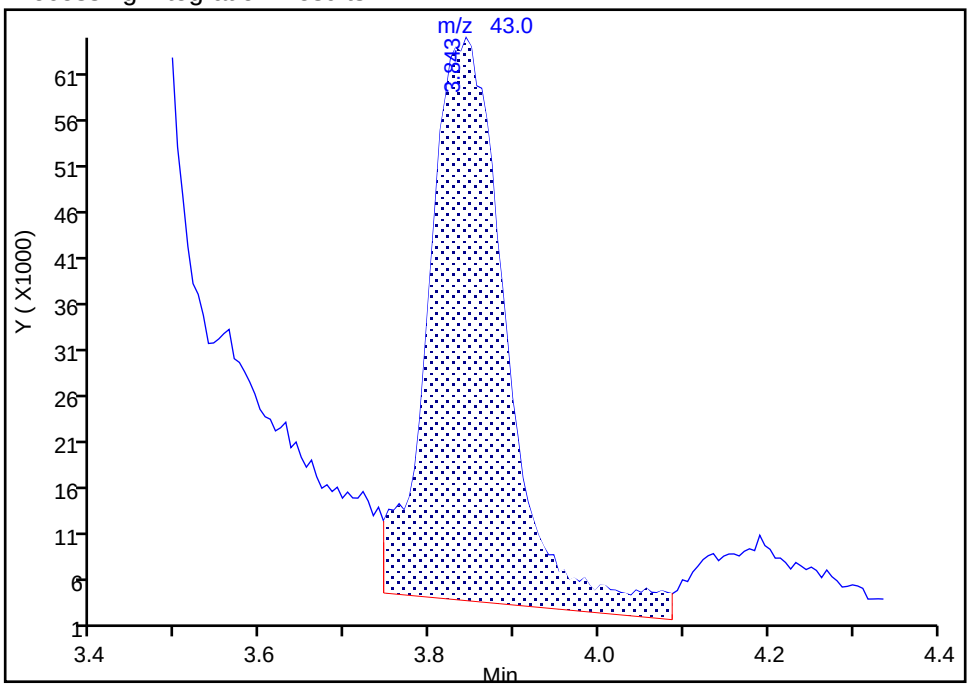
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Injection Date:	19-Apr-2023 23:41:30	Instrument ID:	19094		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methyl acetate, CAS: 79-20-9

Signal: 1

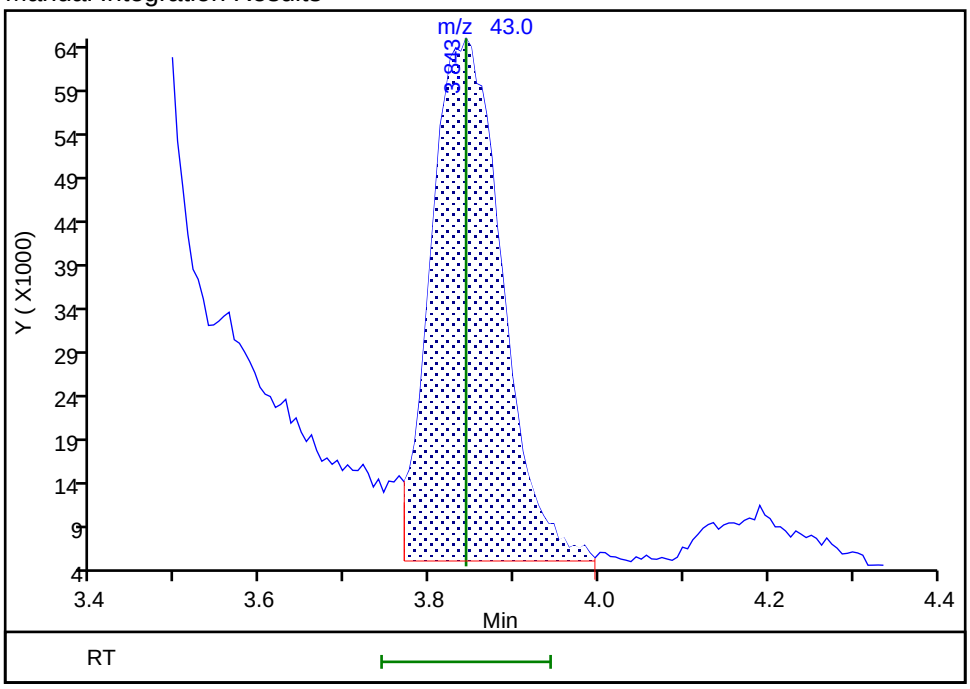
Processing Integration Results

RT: 3.84
Area: 394085
Amount: 22.869415
Amount Units: ug/l



Manual Integration Results

RT: 3.84
Area: 351365
Amount: 20.683309
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:40:57
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

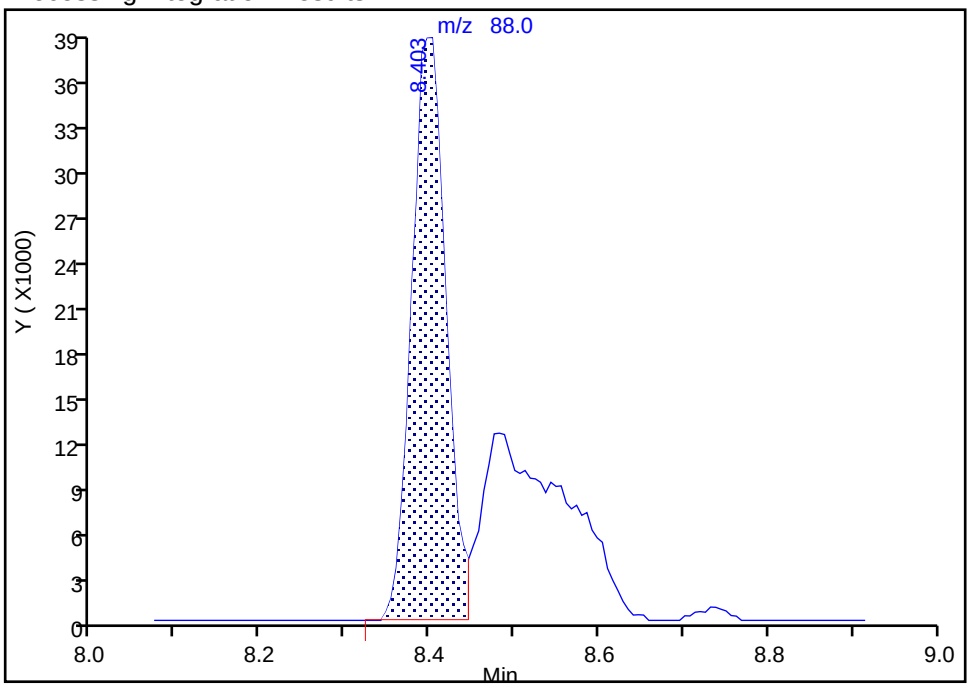
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Injection Date:	19-Apr-2023 23:41:30	Instrument ID:	19094		
Lims ID:	IC std7 25				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	18	Worklist Smp#:	19
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

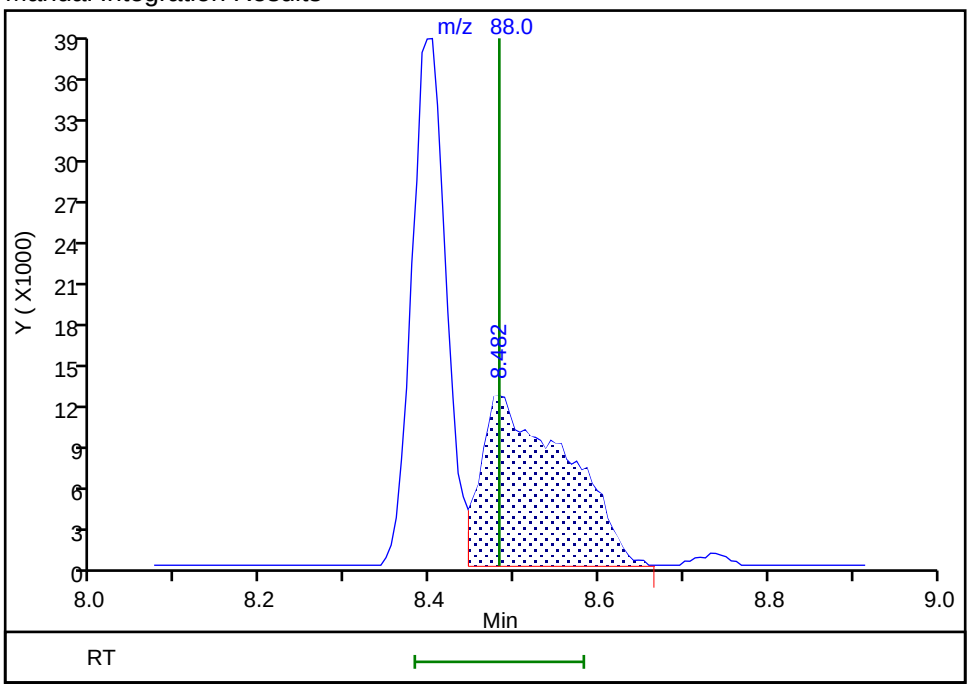
Processing Integration Results

RT: 8.40
Area: 107501
Amount: 1513.6986
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 86474
Amount: 1260.2659
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 19:41:23
Audit Action: Assigned Compound ID Audit Reason: Incomplete Integration

Calibration / Dichlorodifluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

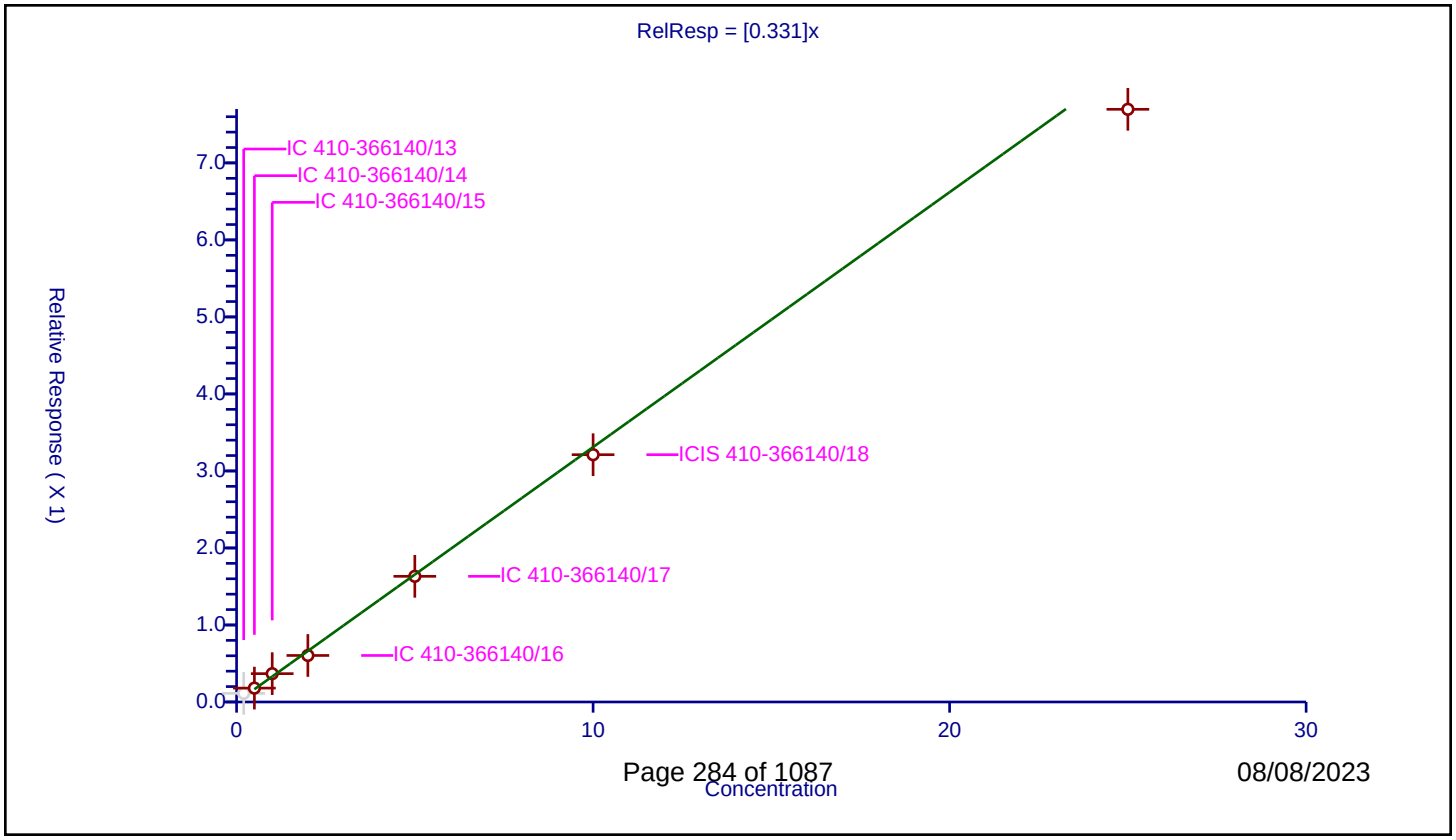
Curve Coefficients

Intercept:	0
Slope:	0.331

Error Coefficients

Standard Error:	759000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.112093	10.0	1905653.0	0.560464	N
2	IC 410-366140/14	0.5	0.180374	10.0	1908755.0	0.360748	Y
3	IC 410-366140/15	1.0	0.367787	10.0	1916682.0	0.367787	Y
4	IC 410-366140/16	2.0	0.604193	10.0	1921970.0	0.302096	Y
5	IC 410-366140/17	5.0	1.631958	10.0	1951110.0	0.326392	Y
6	ICIS 410-366140/18	10.0	3.211041	10.0	1983640.0	0.321104	Y
7	IC 410-366140/19	25.0	7.696034	10.0	1993554.0	0.307841	Y



Calibration / Chloromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

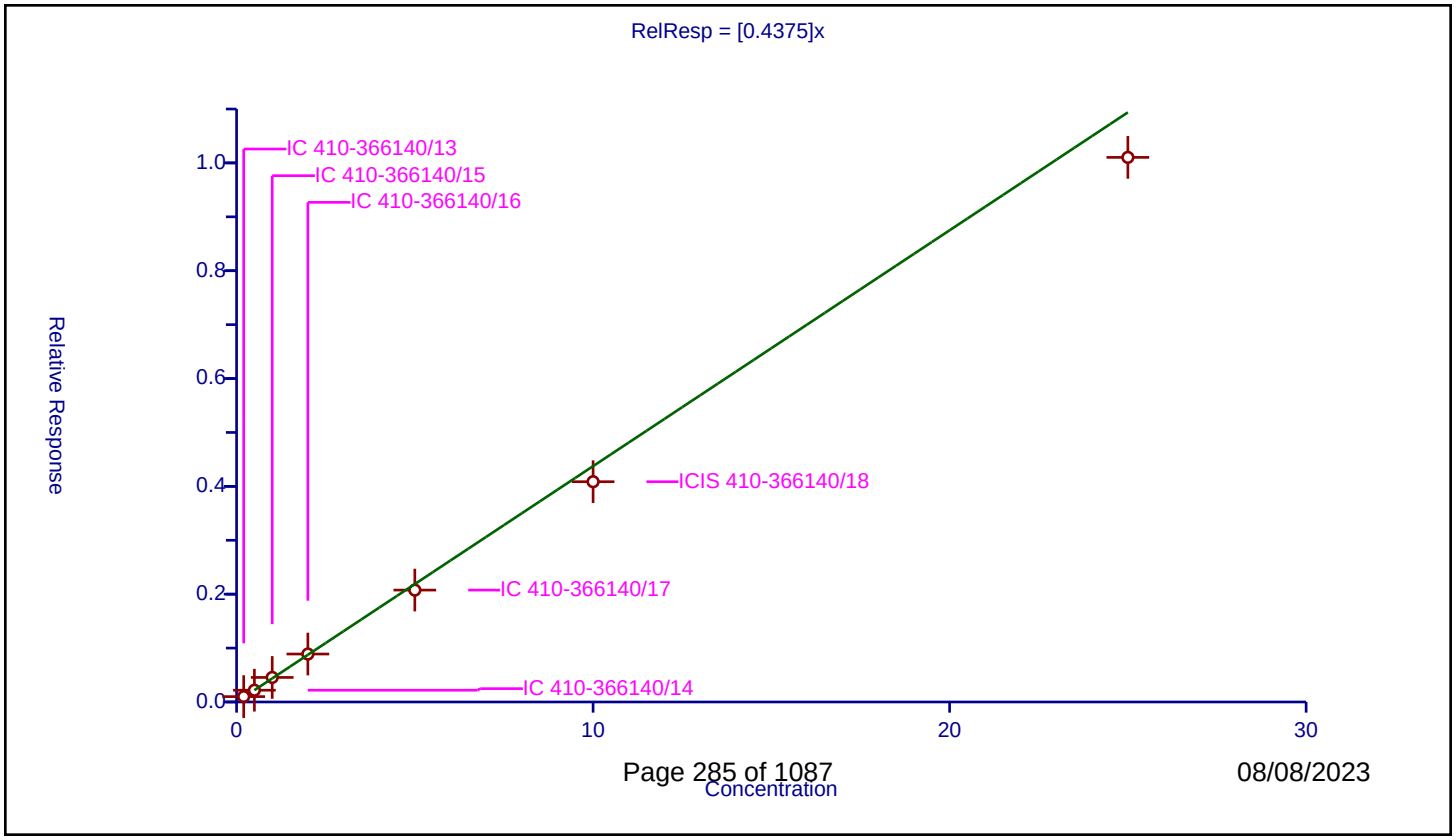
Curve Coefficients

Intercept:	0
Slope:	0.4375

Error Coefficients

Standard Error:	905000
Relative Standard Error:	7.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.09964	10.0	1905653.0	0.498202	Y
2	IC 410-366140/14	0.5	0.218163	10.0	1908755.0	0.436326	Y
3	IC 410-366140/15	1.0	0.45537	10.0	1916682.0	0.45537	Y
4	IC 410-366140/16	2.0	0.889488	10.0	1921970.0	0.444744	Y
5	IC 410-366140/17	5.0	2.075742	10.0	1951110.0	0.415148	Y
6	ICIS 410-366140/18	10.0	4.086175	10.0	1983640.0	0.408617	Y
7	IC 410-366140/19	25.0	10.102746	10.0	1993554.0	0.40411	Y



08/08/2023

Calibration / Butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

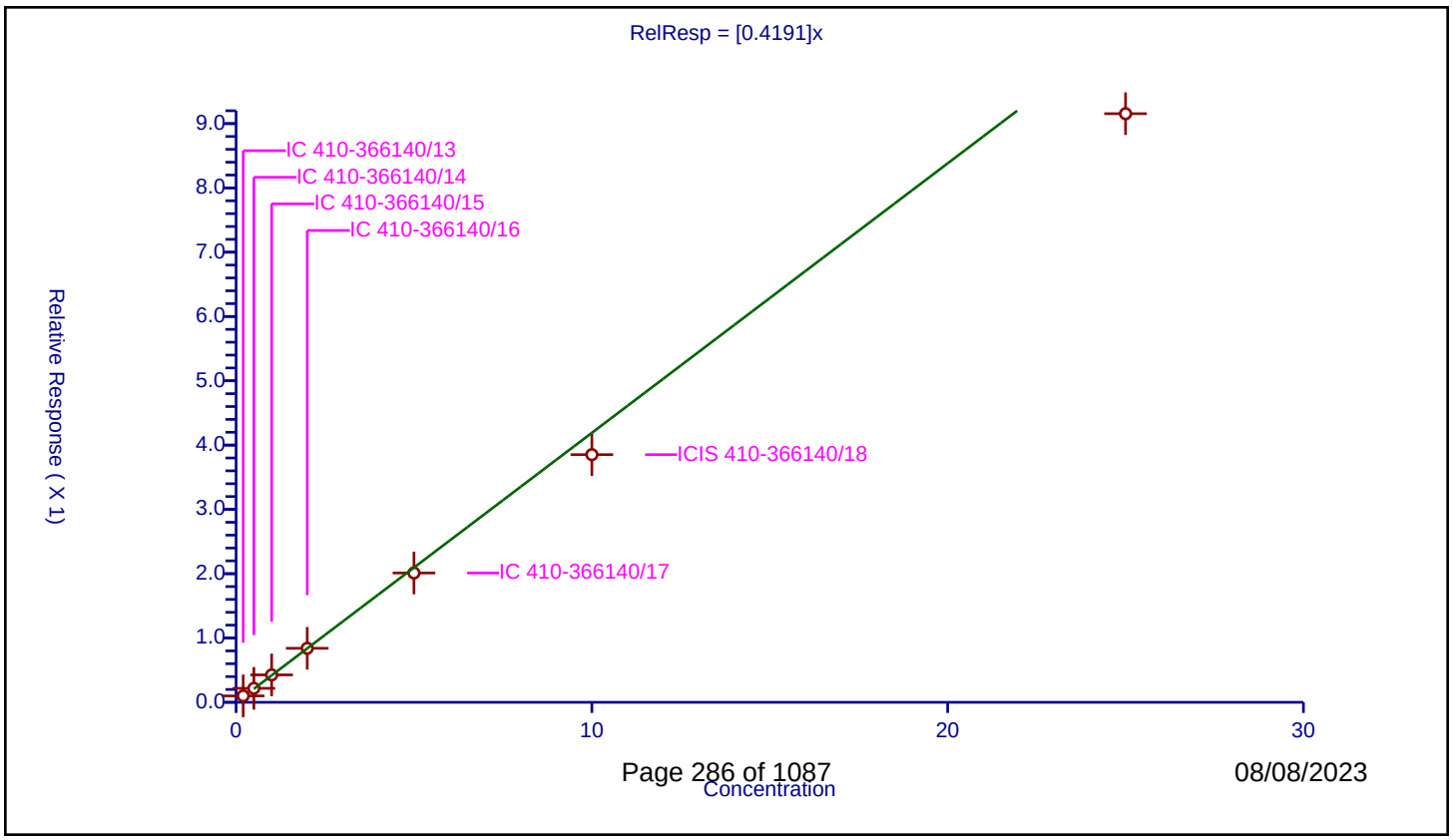
Curve Coefficients

Intercept:	0
Slope:	0.4191

Error Coefficients

Standard Error:	827000
Relative Standard Error:	10.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.984

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.099667	10.0	1905653.0	0.498333	Y
2	IC 410-366140/14	0.5	0.217534	10.0	1908755.0	0.435069	Y
3	IC 410-366140/15	1.0	0.426372	10.0	1916682.0	0.426372	Y
4	IC 410-366140/16	2.0	0.840237	10.0	1921970.0	0.420118	Y
5	IC 410-366140/17	5.0	2.011506	10.0	1951110.0	0.402301	Y
6	ICIS 410-366140/18	10.0	3.851899	10.0	1983640.0	0.38519	Y
7	IC 410-366140/19	25.0	9.154354	10.0	1993554.0	0.366174	Y



Calibration / Vinyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

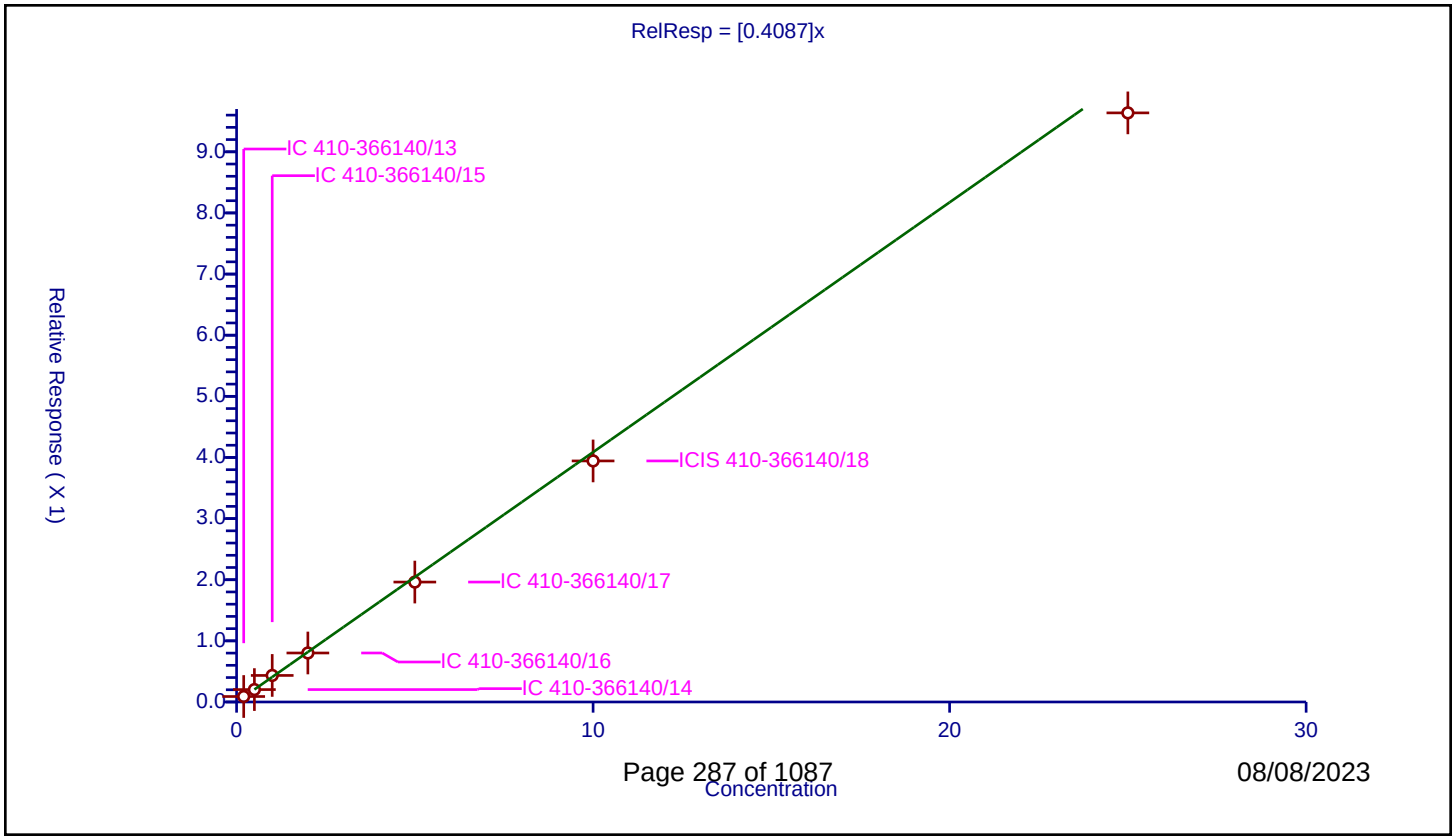
Curve Coefficients

Intercept:	0
Slope:	0.4087

Error Coefficients

Standard Error:	864000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.089555	10.0	1905653.0	0.447773	Y
2	IC 410-366140/14	0.5	0.202902	10.0	1908755.0	0.405804	Y
3	IC 410-366140/15	1.0	0.43411	10.0	1916682.0	0.43411	Y
4	IC 410-366140/16	2.0	0.801677	10.0	1921970.0	0.400839	Y
5	IC 410-366140/17	5.0	1.961678	10.0	1951110.0	0.392336	Y
6	ICIS 410-366140/18	10.0	3.943331	10.0	1983640.0	0.394333	Y
7	IC 410-366140/19	25.0	9.636799	10.0	1993554.0	0.385472	Y



Calibration / Bromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

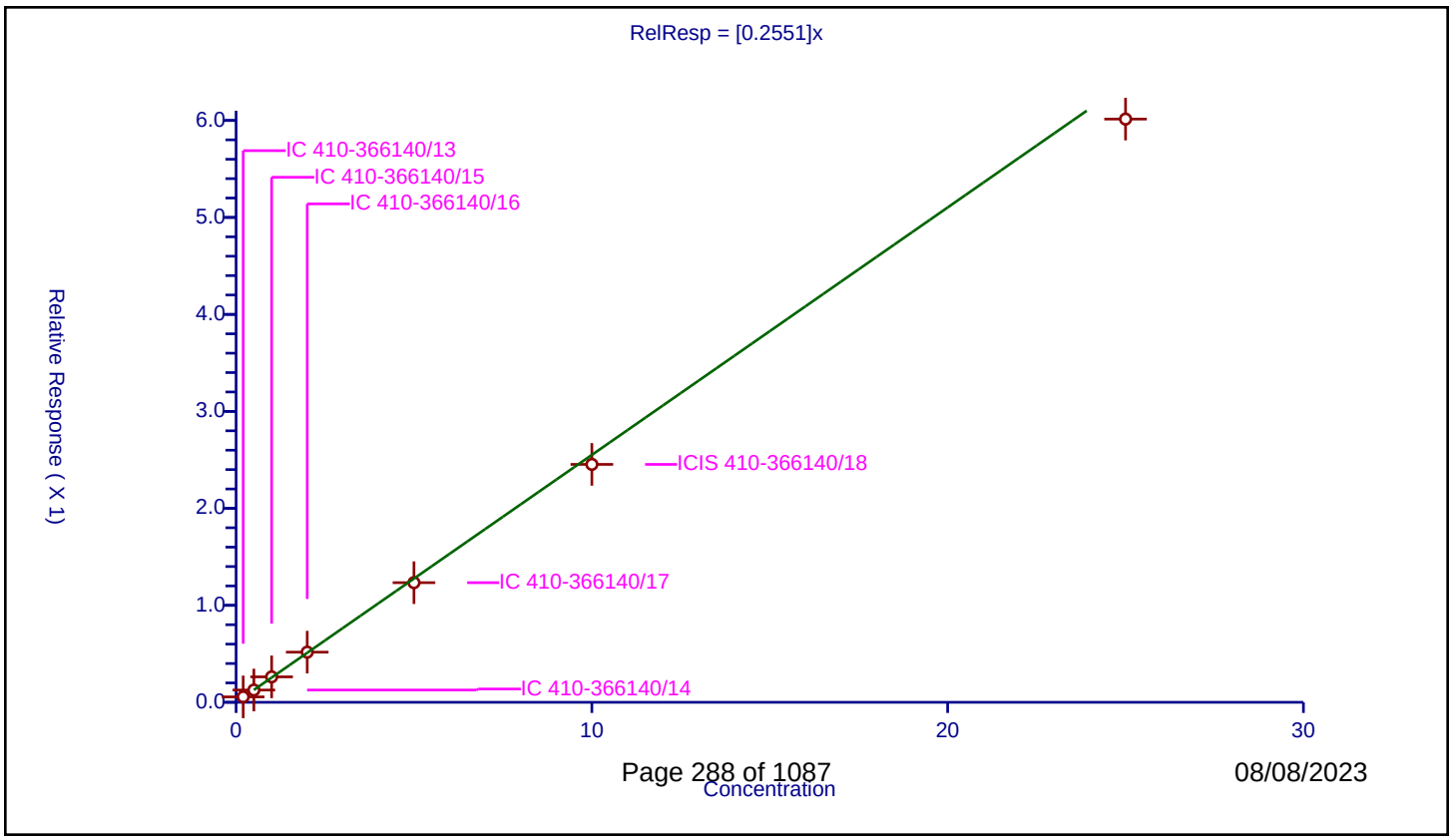
Curve Coefficients

Intercept:	0
Slope:	0.2551

Error Coefficients

Standard Error:	539000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.055855	10.0	1905653.0	0.279274	Y
2	IC 410-366140/14	0.5	0.12647	10.0	1908755.0	0.25294	Y
3	IC 410-366140/15	1.0	0.262417	10.0	1916682.0	0.262417	Y
4	IC 410-366140/16	2.0	0.517339	10.0	1921970.0	0.258669	Y
5	IC 410-366140/17	5.0	1.233698	10.0	1951110.0	0.24674	Y
6	ICIS 410-366140/18	10.0	2.453394	10.0	1983640.0	0.245339	Y
7	IC 410-366140/19	25.0	6.014098	10.0	1993554.0	0.240564	Y



Calibration / Chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

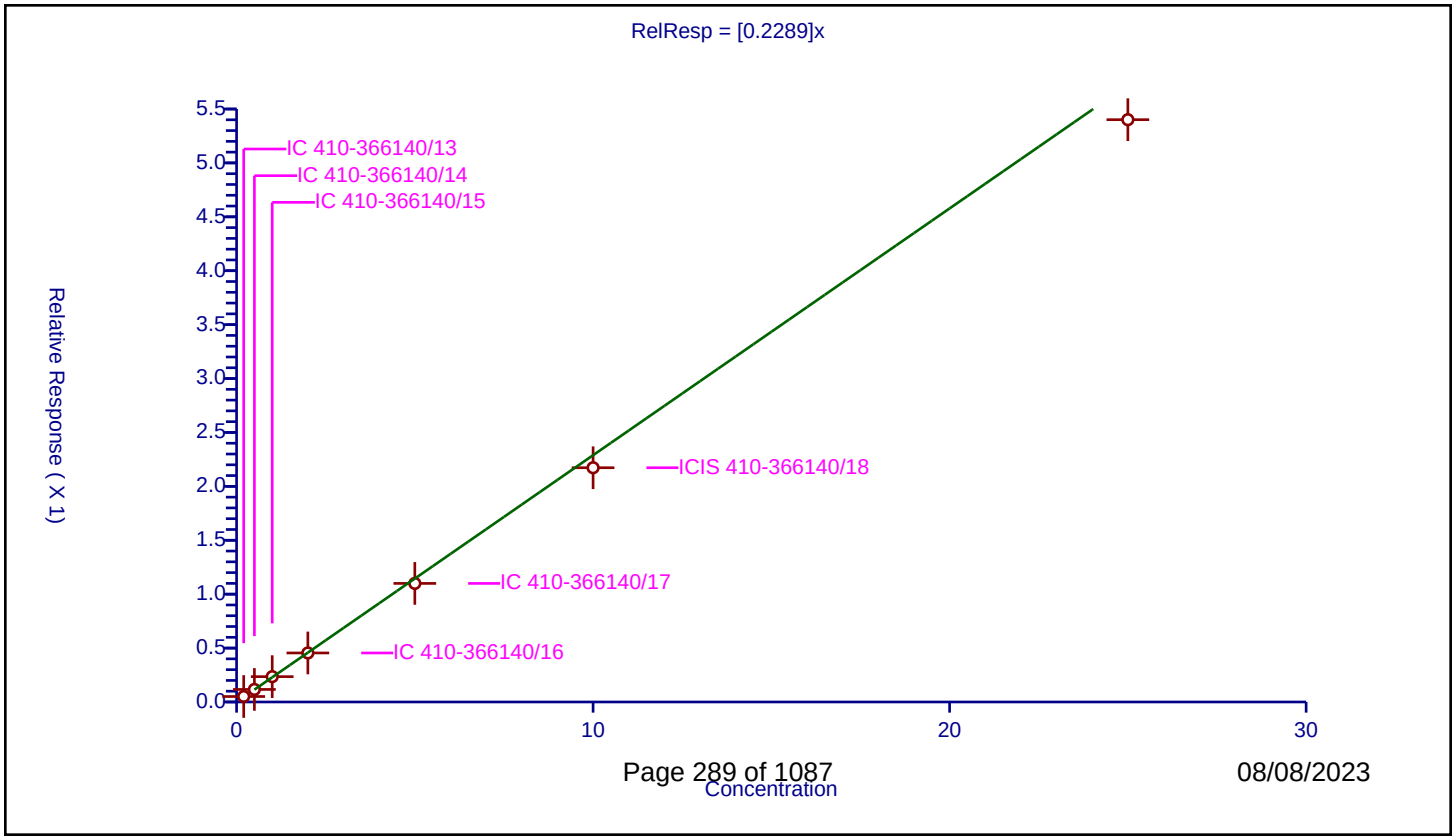
Curve Coefficients

Intercept:	0
Slope:	0.2289

Error Coefficients

Standard Error:	483000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.050801	10.0	1905653.0	0.254007	Y
2	IC 410-366140/14	0.5	0.116285	10.0	1908755.0	0.23257	Y
3	IC 410-366140/15	1.0	0.235005	10.0	1916682.0	0.235005	Y
4	IC 410-366140/16	2.0	0.454742	10.0	1921970.0	0.227371	Y
5	IC 410-366140/17	5.0	1.099902	10.0	1951110.0	0.21998	Y
6	ICIS 410-366140/18	10.0	2.172728	10.0	1983640.0	0.217273	Y
7	IC 410-366140/19	25.0	5.400977	10.0	1993554.0	0.216039	Y



08/08/2023

Calibration / Dichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

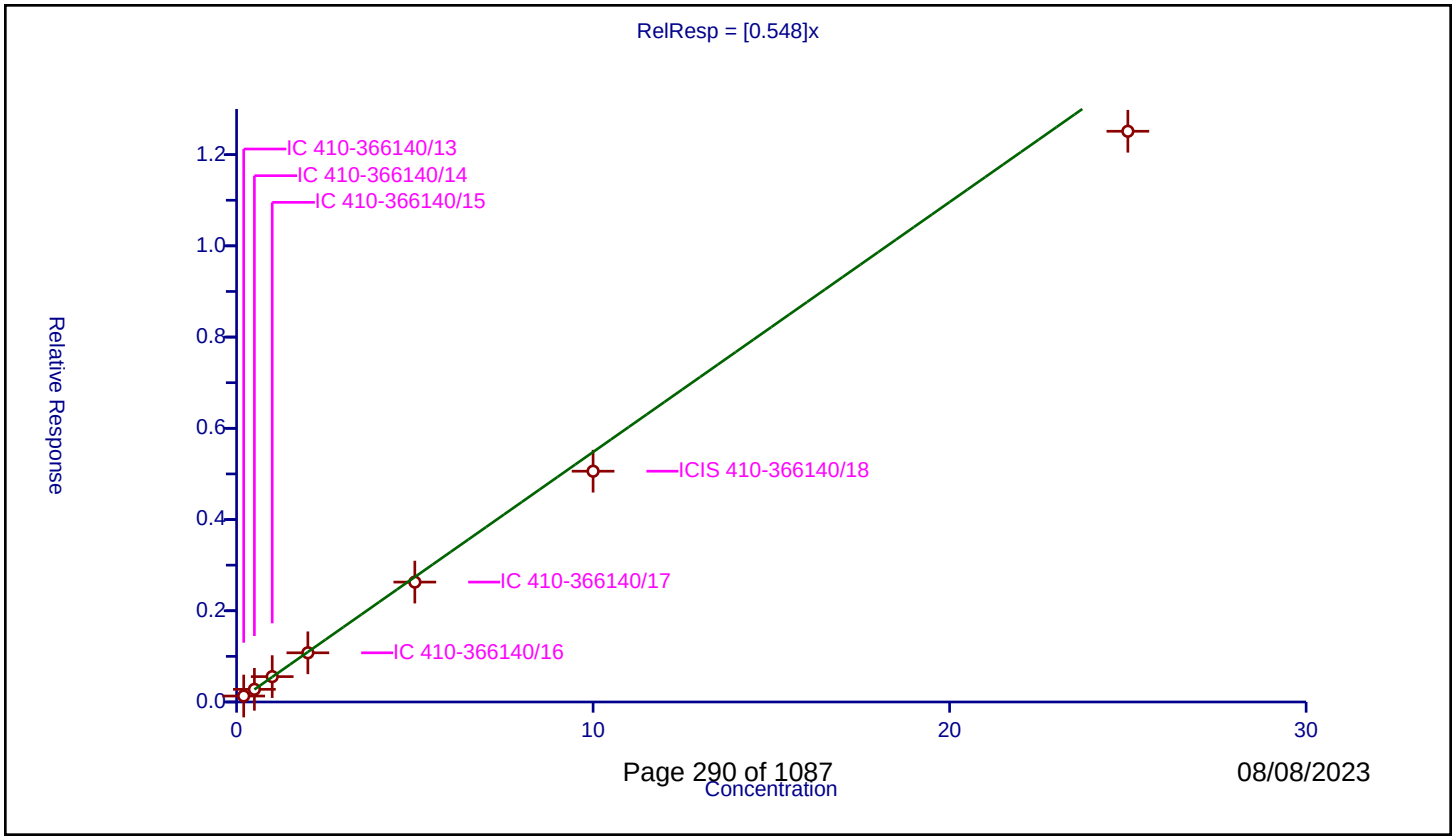
Curve Coefficients

Intercept:	0
Slope:	0.548

Error Coefficients

Standard Error:	1120000
Relative Standard Error:	9.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.986

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.130816	10.0	1905653.0	0.65408	Y
2	IC 410-366140/14	0.5	0.277212	10.0	1908755.0	0.554424	Y
3	IC 410-366140/15	1.0	0.556201	10.0	1916682.0	0.556201	Y
4	IC 410-366140/16	2.0	1.078394	10.0	1921970.0	0.539197	Y
5	IC 410-366140/17	5.0	2.628488	10.0	1951110.0	0.525698	Y
6	ICIS 410-366140/18	10.0	5.059693	10.0	1983640.0	0.505969	Y
7	IC 410-366140/19	25.0	12.512438	10.0	1993554.0	0.500498	Y



Calibration / Trichlorofluoromethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

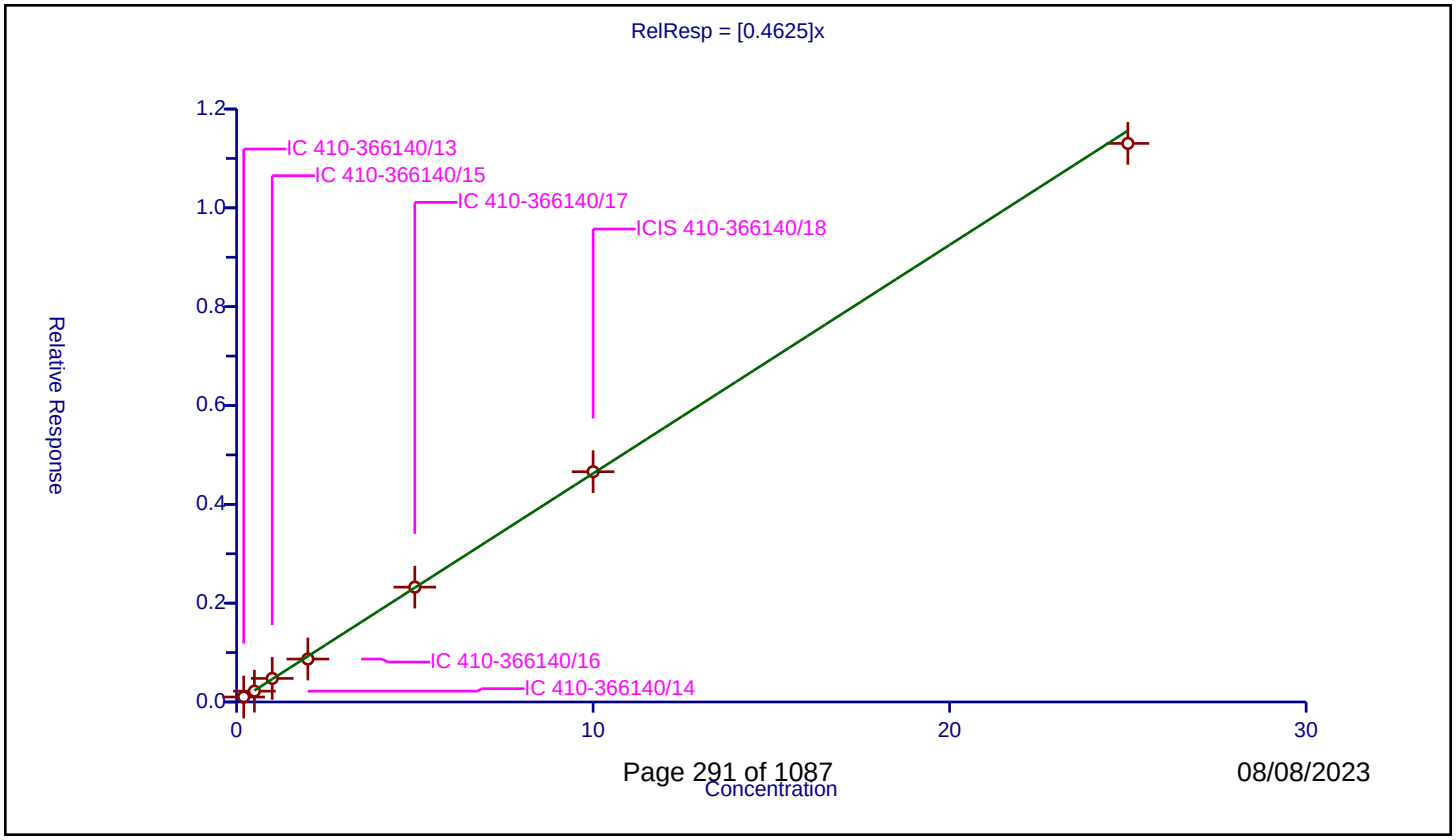
Curve Coefficients

Intercept:	0
Slope:	0.4625

Error Coefficients

Standard Error:	1010000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.100706	10.0	1905653.0	0.503528	Y
2	IC 410-366140/14	0.5	0.219358	10.0	1908755.0	0.438715	Y
3	IC 410-366140/15	1.0	0.477539	10.0	1916682.0	0.477539	Y
4	IC 410-366140/16	2.0	0.869119	10.0	1921970.0	0.434559	Y
5	IC 410-366140/17	5.0	2.324523	10.0	1951110.0	0.464905	Y
6	ICIS 410-366140/18	10.0	4.660422	10.0	1983640.0	0.466042	Y
7	IC 410-366140/19	25.0	11.303887	10.0	1993554.0	0.452155	Y



Calibration / Ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

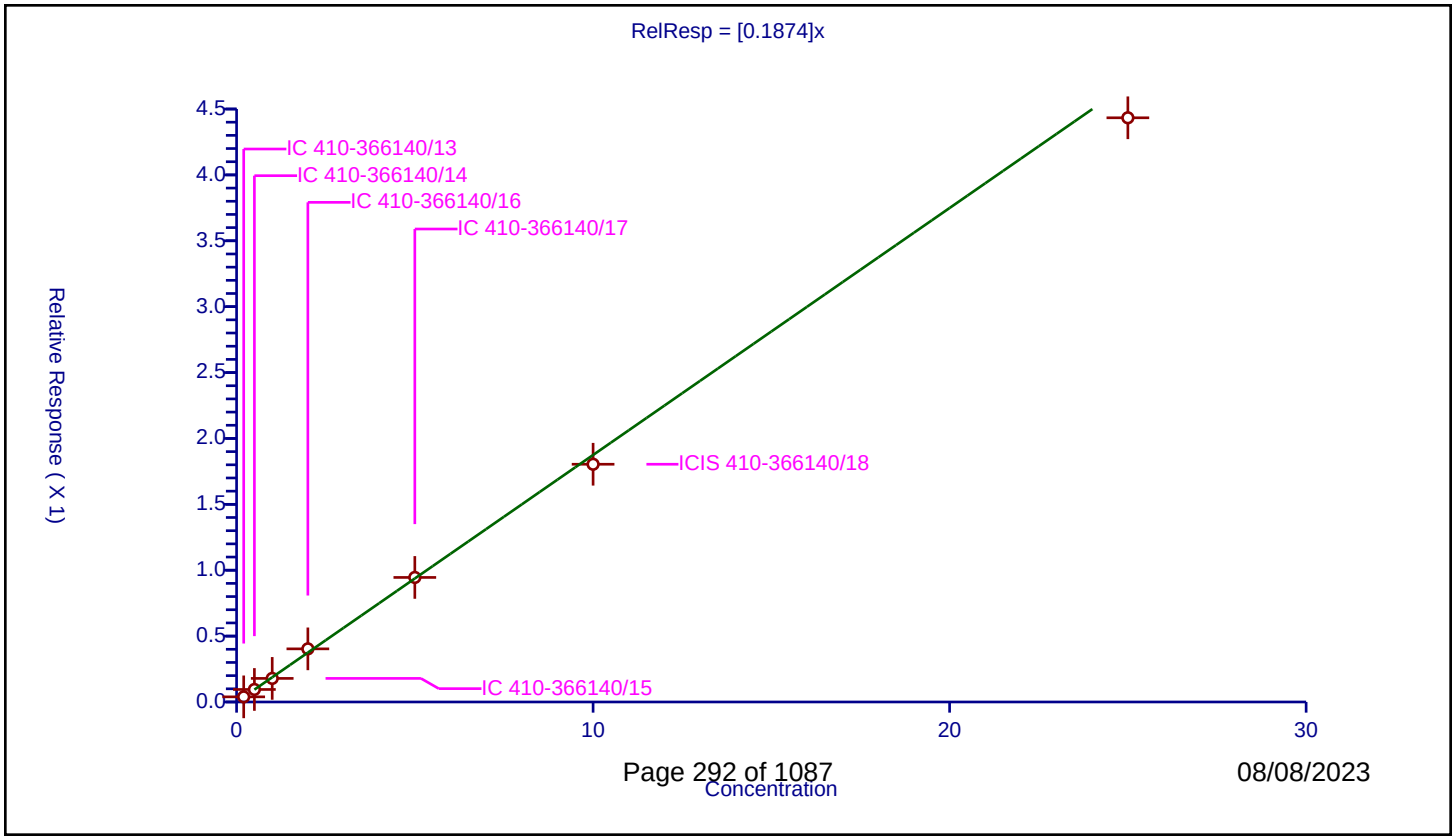
Curve Coefficients

Intercept:	0
Slope:	0.1874

Error Coefficients

Standard Error:	398000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.199998	0.038932	10.0	1905653.0	0.194659	Y
2	IC 410-366140/14	0.499996	0.095025	10.0	1908755.0	0.190052	Y
3	IC 410-366140/15	0.999992	0.178997	10.0	1916682.0	0.178998	Y
4	IC 410-366140/16	1.999985	0.403222	10.0	1921970.0	0.201612	Y
5	IC 410-366140/17	4.999962	0.945124	10.0	1951110.0	0.189026	Y
6	ICIS 410-366140/18	9.999924	1.804234	10.0	1983640.0	0.180425	Y
7	IC 410-366140/19	24.99981	4.433449	10.0	1993554.0	0.177339	Y



Calibration / 1,2-Dichloro-1,1,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

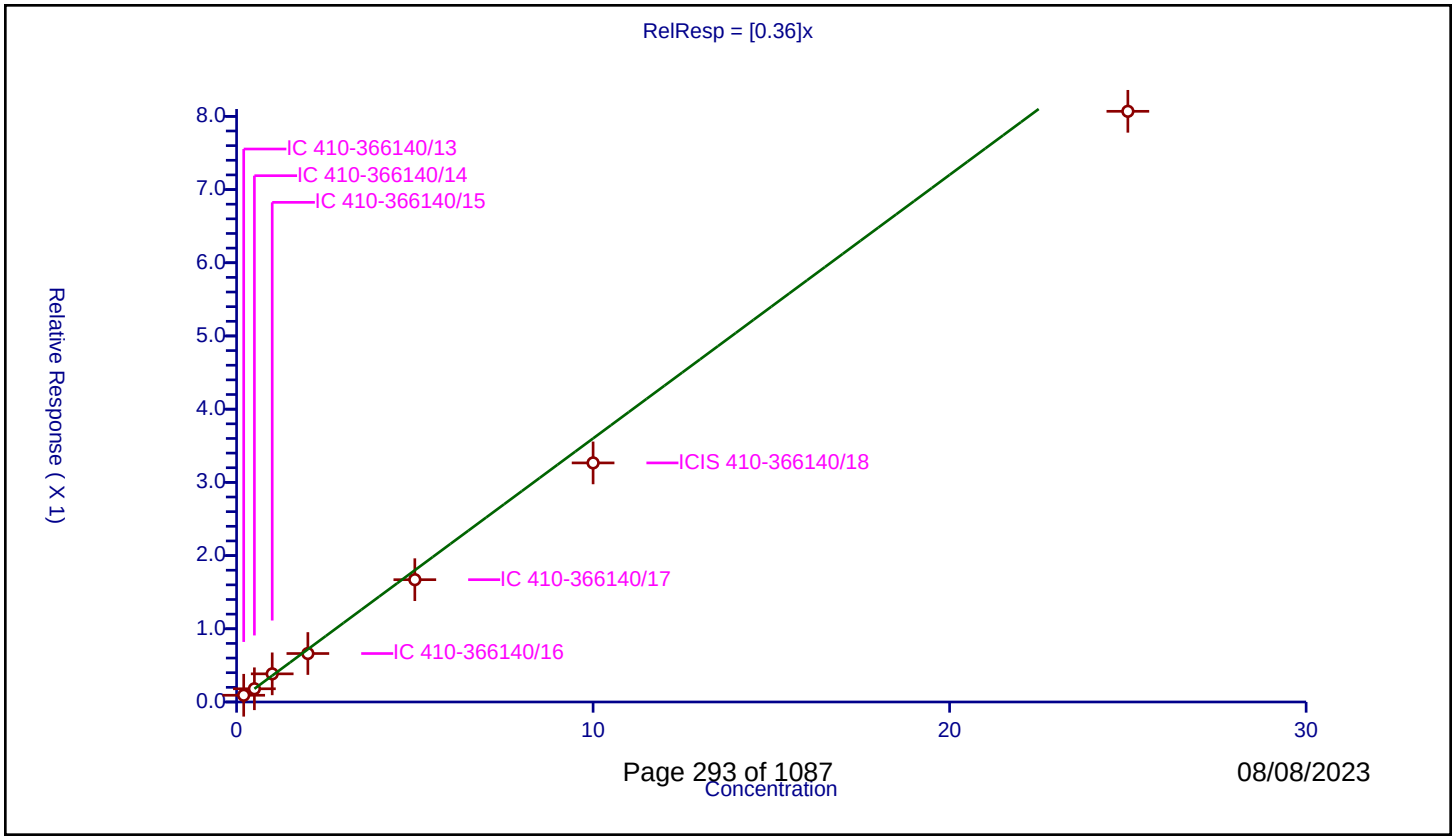
Curve Coefficients

Intercept:	0
Slope:	0.36

Error Coefficients

Standard Error:	723000
Relative Standard Error:	13.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.969

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.092068	10.0	1905653.0	0.460341	Y
2	IC 410-366140/14	0.5	0.180421	10.0	1908755.0	0.360843	Y
3	IC 410-366140/15	1.0	0.384393	10.0	1916682.0	0.384393	Y
4	IC 410-366140/16	2.0	0.662138	10.0	1921970.0	0.331069	Y
5	IC 410-366140/17	5.0	1.670808	10.0	1951110.0	0.334162	Y
6	ICIS 410-366140/18	10.0	3.265966	10.0	1983640.0	0.326597	Y
7	IC 410-366140/19	25.0	8.068841	10.0	1993554.0	0.322754	Y



Calibration / Acrolein

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

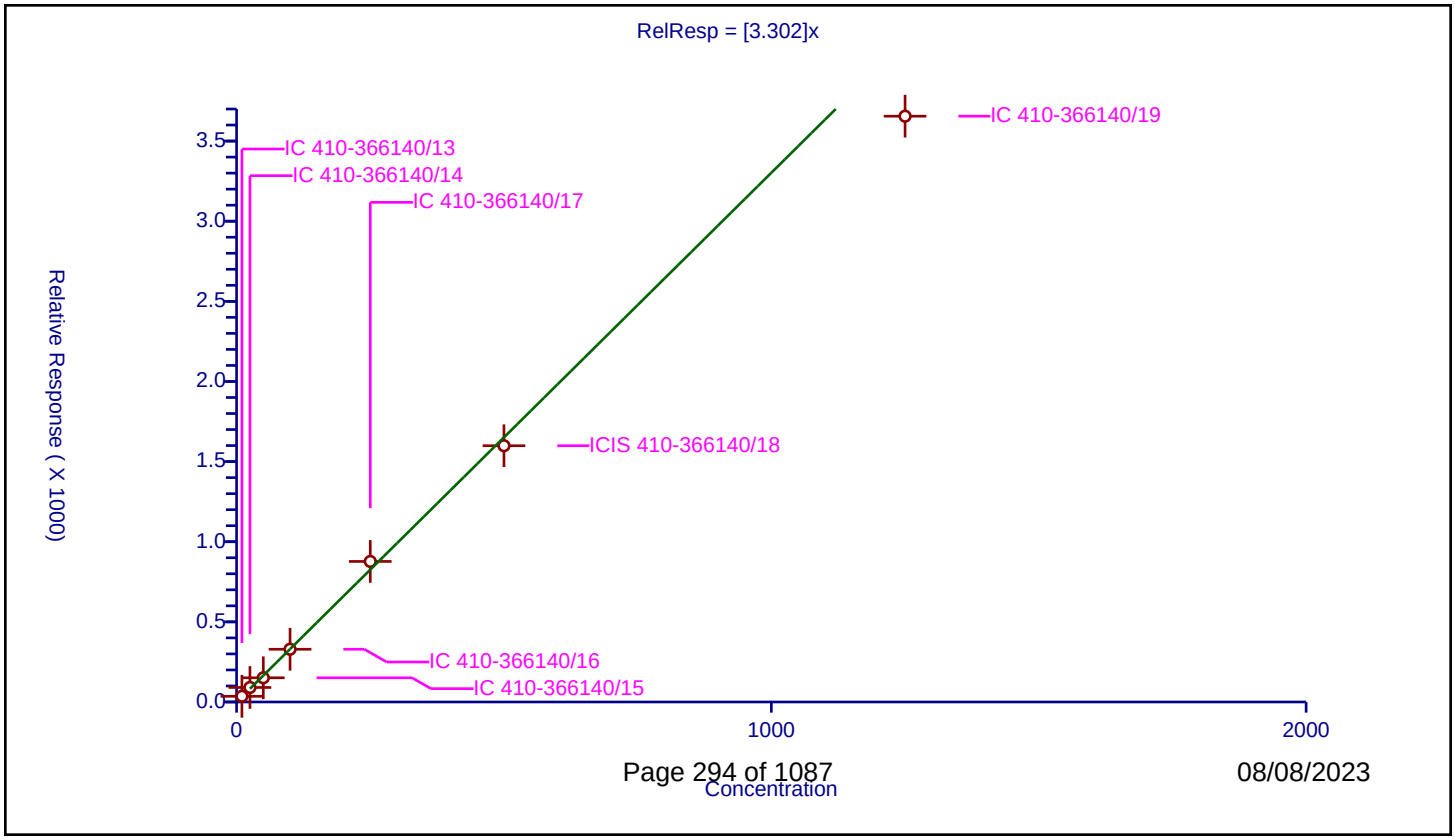
Curve Coefficients

Intercept:	0
Slope:	3.302

Error Coefficients

Standard Error:	2570000
Relative Standard Error:	8.2
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.000253	35.549954	50.0	59505.0	3.554906	Y
2	IC 410-366140/14	25.000632	90.558072	50.0	64902.0	3.622231	Y
3	IC 410-366140/15	50.001264	150.923604	50.0	74978.0	3.018396	Y
4	IC 410-366140/16	100.002528	329.076229	50.0	68924.0	3.290679	Y
5	IC 410-366140/17	250.006319	876.976204	50.0	70223.0	3.507816	Y
6	ICIS 410-366140/18	500.012639	1598.87853	50.0	78513.0	3.197676	Y
7	IC 410-366140/19	1250.031597	3655.314434	50.0	76932.0	2.924178	Y



Calibration / 1,1-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

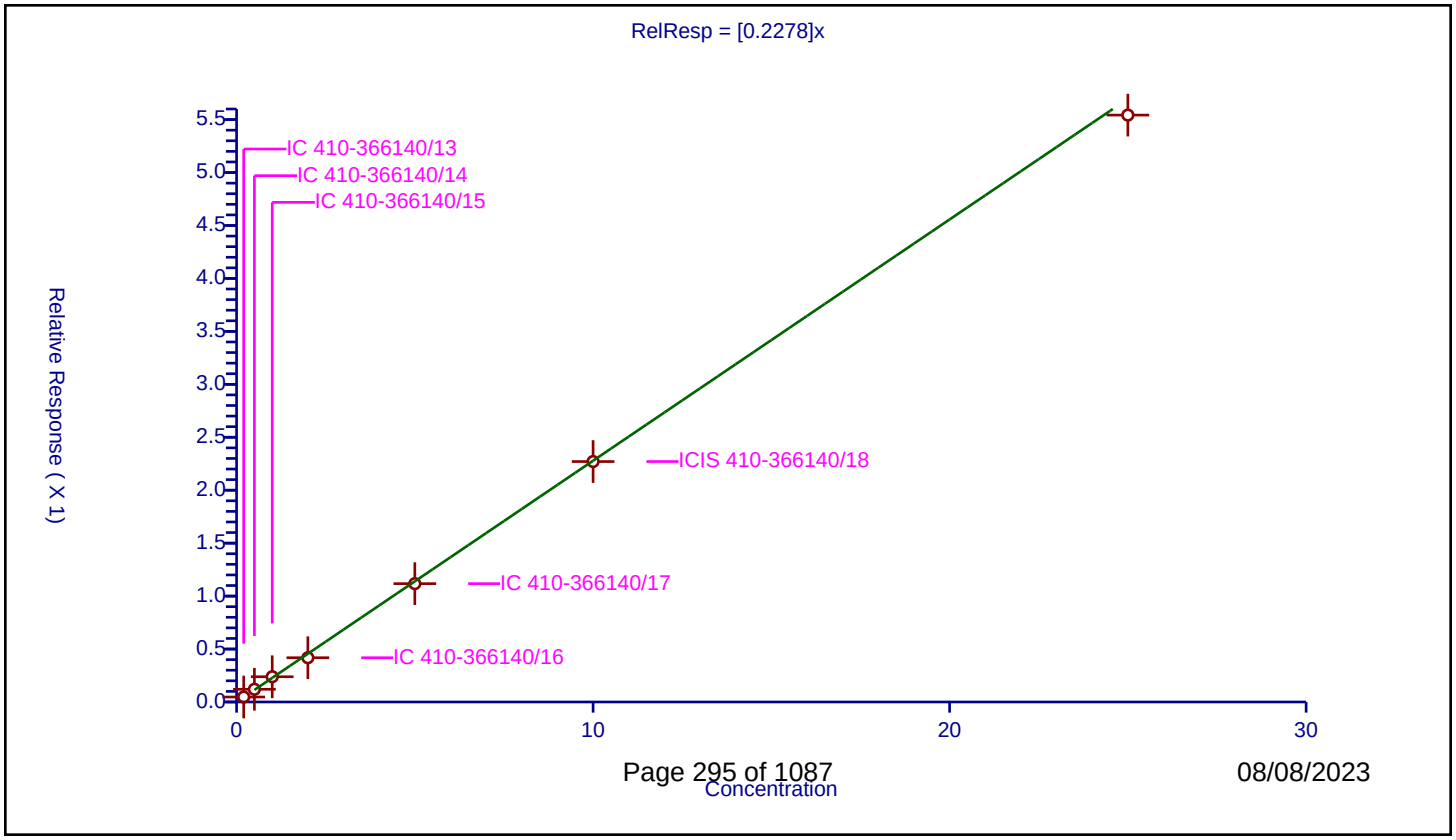
Curve Coefficients

Intercept:	0
Slope:	0.2278

Error Coefficients

Standard Error:	497000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.047055	10.0	1905653.0	0.235274	Y
2	IC 410-366140/14	0.5	0.120057	10.0	1908755.0	0.240115	Y
3	IC 410-366140/15	1.0	0.238261	10.0	1916682.0	0.238261	Y
4	IC 410-366140/16	2.0	0.418003	10.0	1921970.0	0.209002	Y
5	IC 410-366140/17	5.0	1.117497	10.0	1951110.0	0.223499	Y
6	ICIS 410-366140/18	10.0	2.27077	10.0	1983640.0	0.227077	Y
7	IC 410-366140/19	25.0	5.542498	10.0	1993554.0	0.2217	Y



Calibration / Acetone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

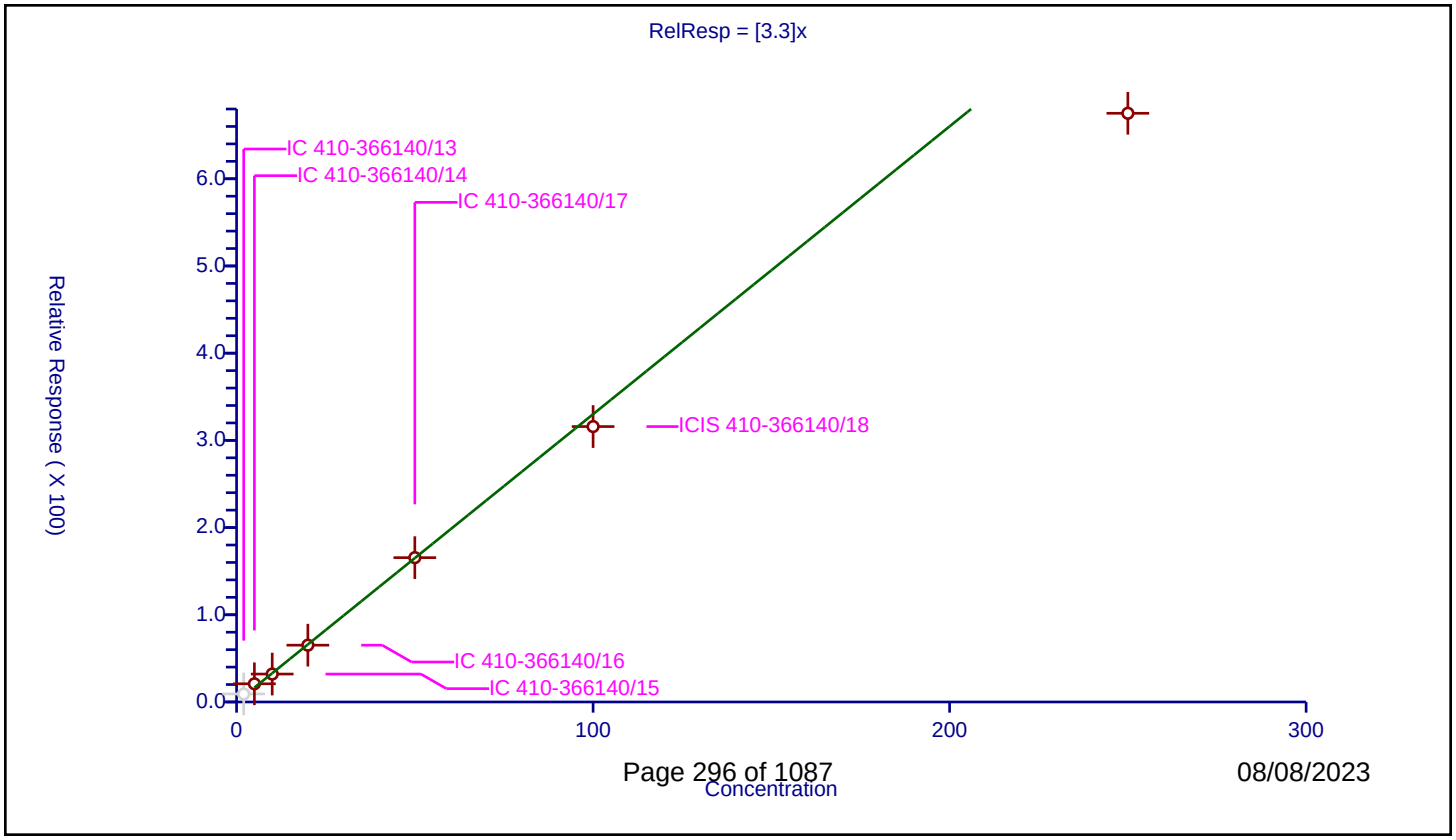
Curve Coefficients

Intercept:	0
Slope:	3.3

Error Coefficients

Standard Error:	527000
Relative Standard Error:	14.5
Correlation Coefficient:	0.994
Coefficient of Determination (Adjusted):	0.959

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	9.229477	50.0	59505.0	4.614738	N
2	IC 410-366140/14	5.0	20.858371	50.0	64902.0	4.171674	Y
3	IC 410-366140/15	10.0	32.0454	50.0	74978.0	3.20454	Y
4	IC 410-366140/16	20.0	65.141315	50.0	68924.0	3.257066	Y
5	IC 410-366140/17	50.0	165.51486	50.0	70223.0	3.310297	Y
6	ICIS 410-366140/18	100.0	315.850241	50.0	78513.0	3.158502	Y
7	IC 410-366140/19	250.0	675.108537	50.0	76932.0	2.700434	Y



Calibration / 1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

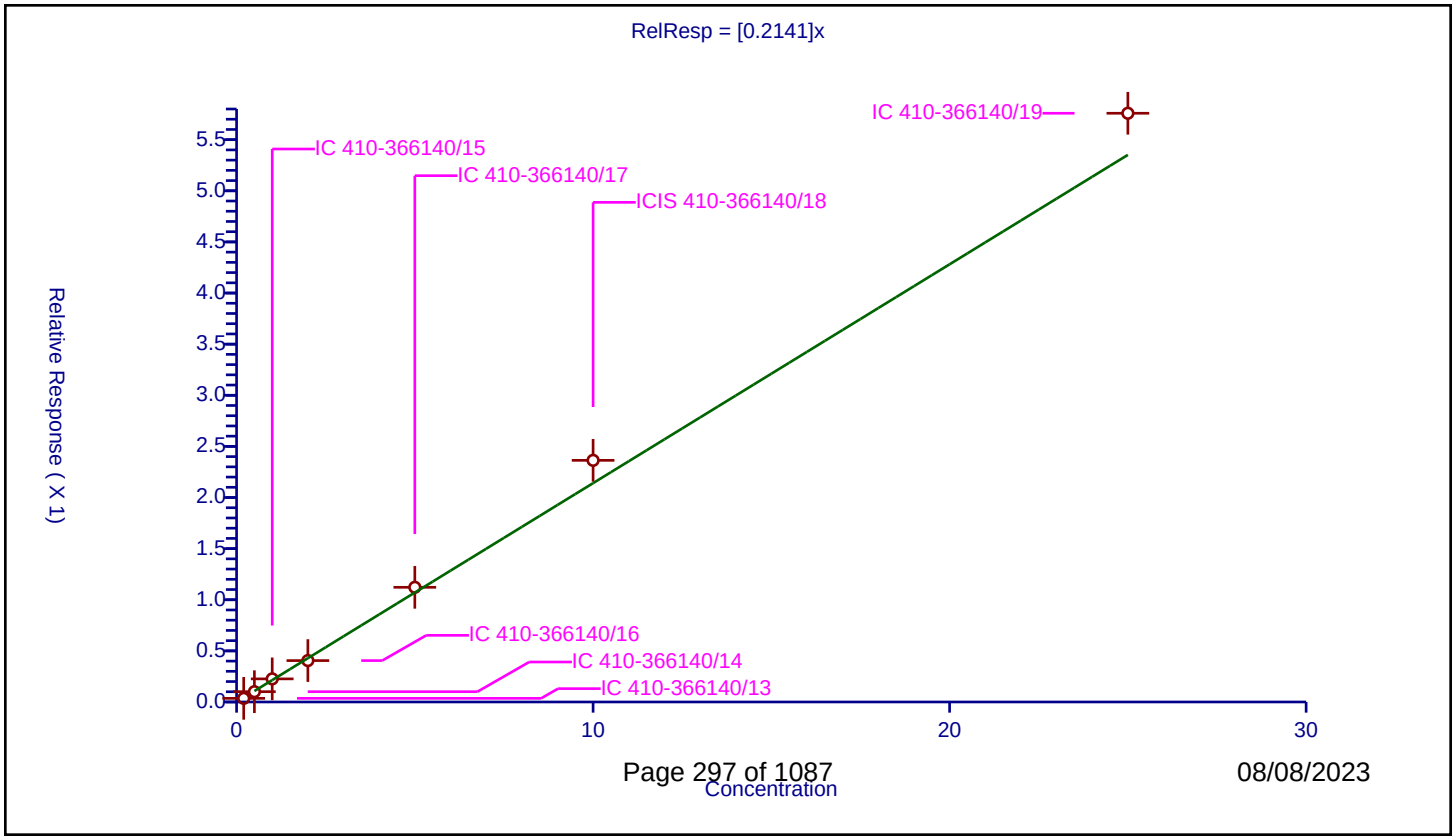
Curve Coefficients

Intercept:	0
Slope:	0.2141

Error Coefficients

Standard Error:	515000
Relative Standard Error:	9.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.035484	10.0	1905653.0	0.177419	Y
2	IC 410-366140/14	0.5	0.10072	10.0	1908755.0	0.20144	Y
3	IC 410-366140/15	1.0	0.226068	10.0	1916682.0	0.226068	Y
4	IC 410-366140/16	2.0	0.404928	10.0	1921970.0	0.202464	Y
5	IC 410-366140/17	5.0	1.121674	10.0	1951110.0	0.224335	Y
6	ICIS 410-366140/18	10.0	2.363438	10.0	1983640.0	0.236344	Y
7	IC 410-366140/19	25.0	5.758429	10.0	1993554.0	0.230337	Y



Calibration / Iodomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

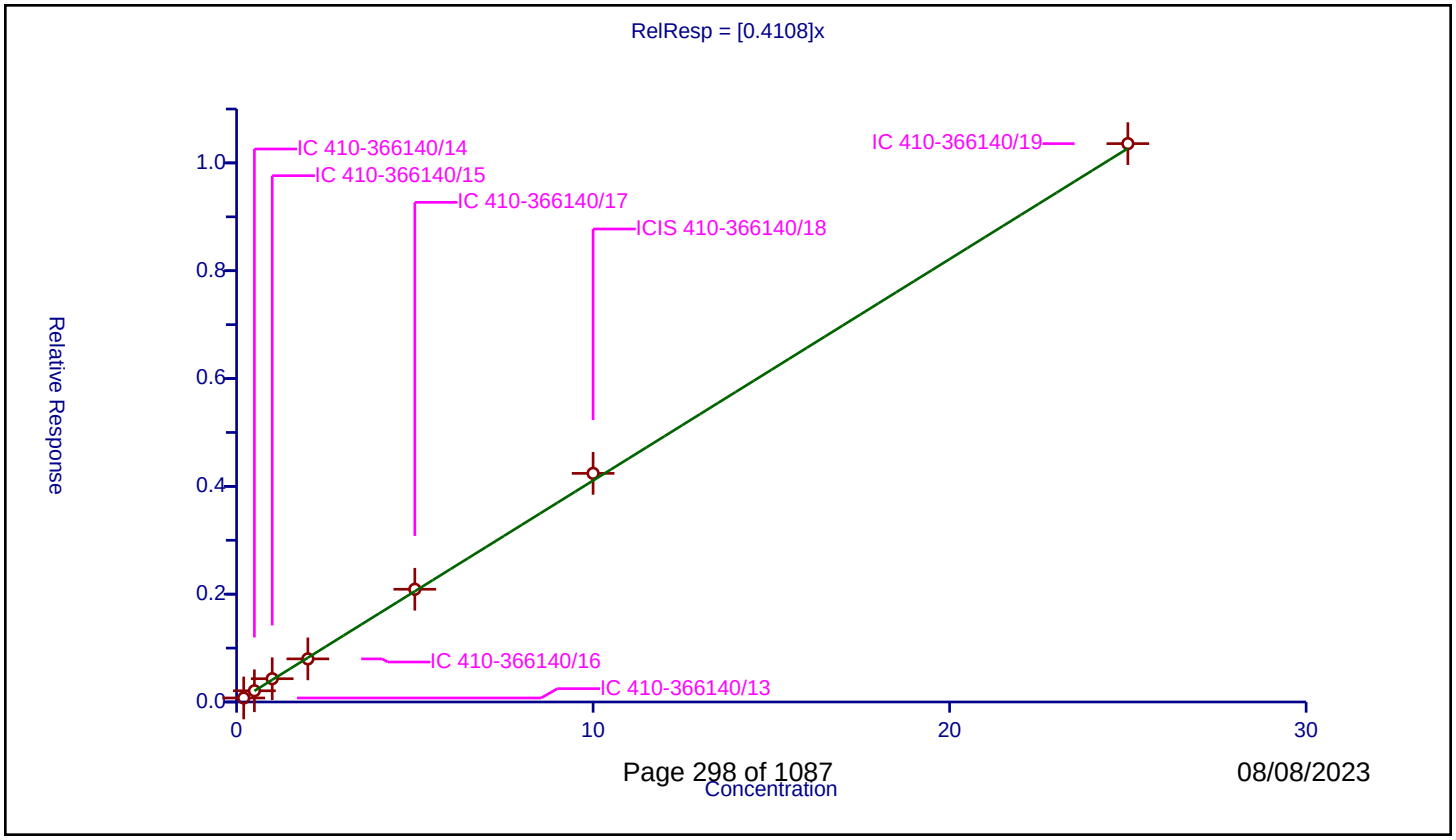
Curve Coefficients

Intercept:	0
Slope:	0.4108

Error Coefficients

Standard Error:	928000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.074253	10.0	1905653.0	0.371264	Y
2	IC 410-366140/14	0.5	0.207984	10.0	1908755.0	0.415967	Y
3	IC 410-366140/15	1.0	0.431772	10.0	1916682.0	0.431772	Y
4	IC 410-366140/16	2.0	0.799664	10.0	1921970.0	0.399832	Y
5	IC 410-366140/17	5.0	2.091061	10.0	1951110.0	0.418212	Y
6	ICIS 410-366140/18	10.0	4.240921	10.0	1983640.0	0.424092	Y
7	IC 410-366140/19	25.0	10.357843	10.0	1993554.0	0.414314	Y



08/08/2023

Calibration / Carbon disulfide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

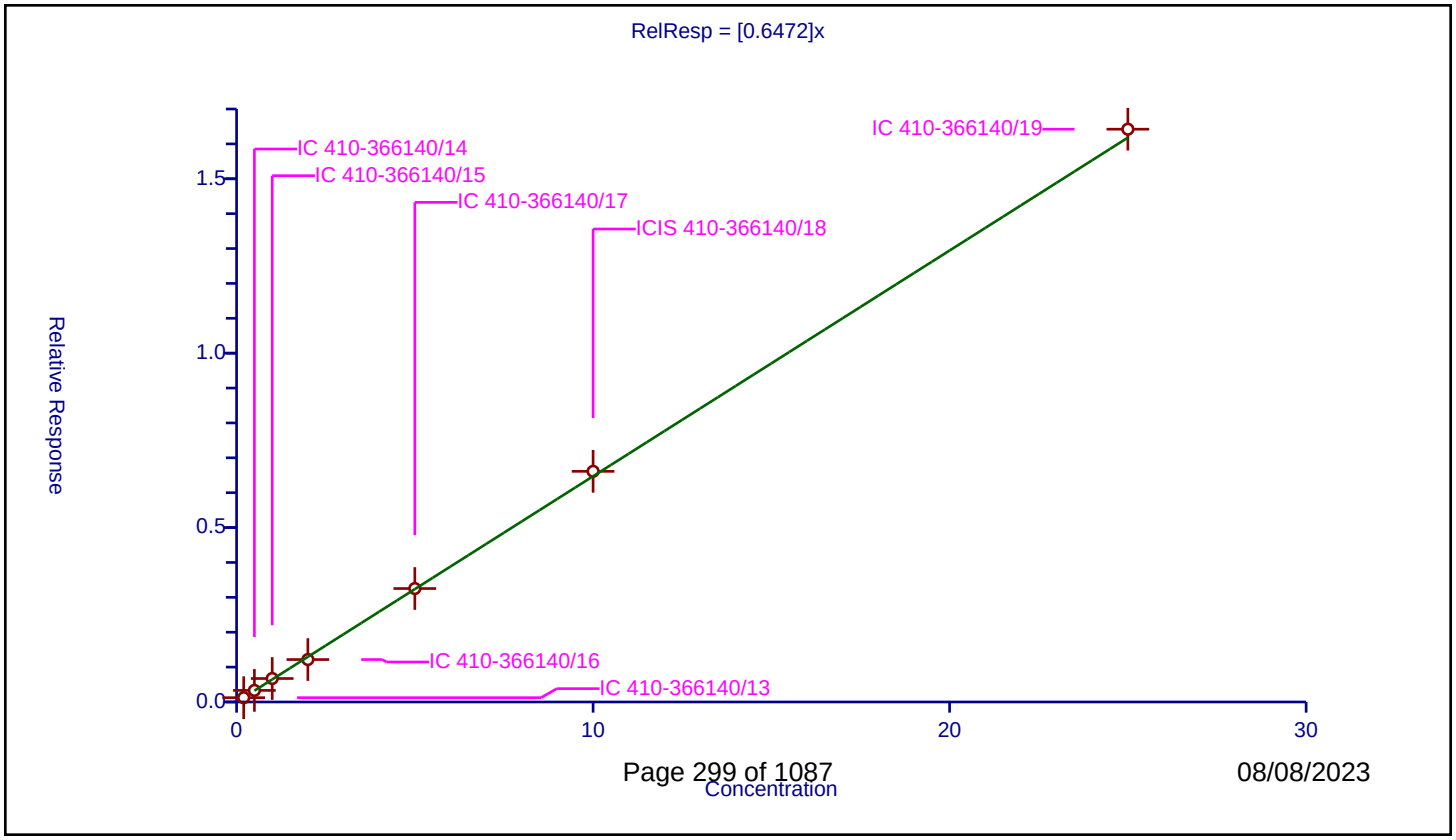
Curve Coefficients

Intercept:	0
Slope:	0.6472

Error Coefficients

Standard Error:	1470000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.123218	10.0	1905653.0	0.616088	Y
2	IC 410-366140/14	0.5	0.331813	10.0	1908755.0	0.663626	Y
3	IC 410-366140/15	1.0	0.673372	10.0	1916682.0	0.673372	Y
4	IC 410-366140/16	2.0	1.216726	10.0	1921970.0	0.608363	Y
5	IC 410-366140/17	5.0	3.252856	10.0	1951110.0	0.650571	Y
6	ICIS 410-366140/18	10.0	6.61249	10.0	1983640.0	0.661249	Y
7	IC 410-366140/19	25.0	16.42116	10.0	1993554.0	0.656846	Y



Calibration / Methyl acetate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

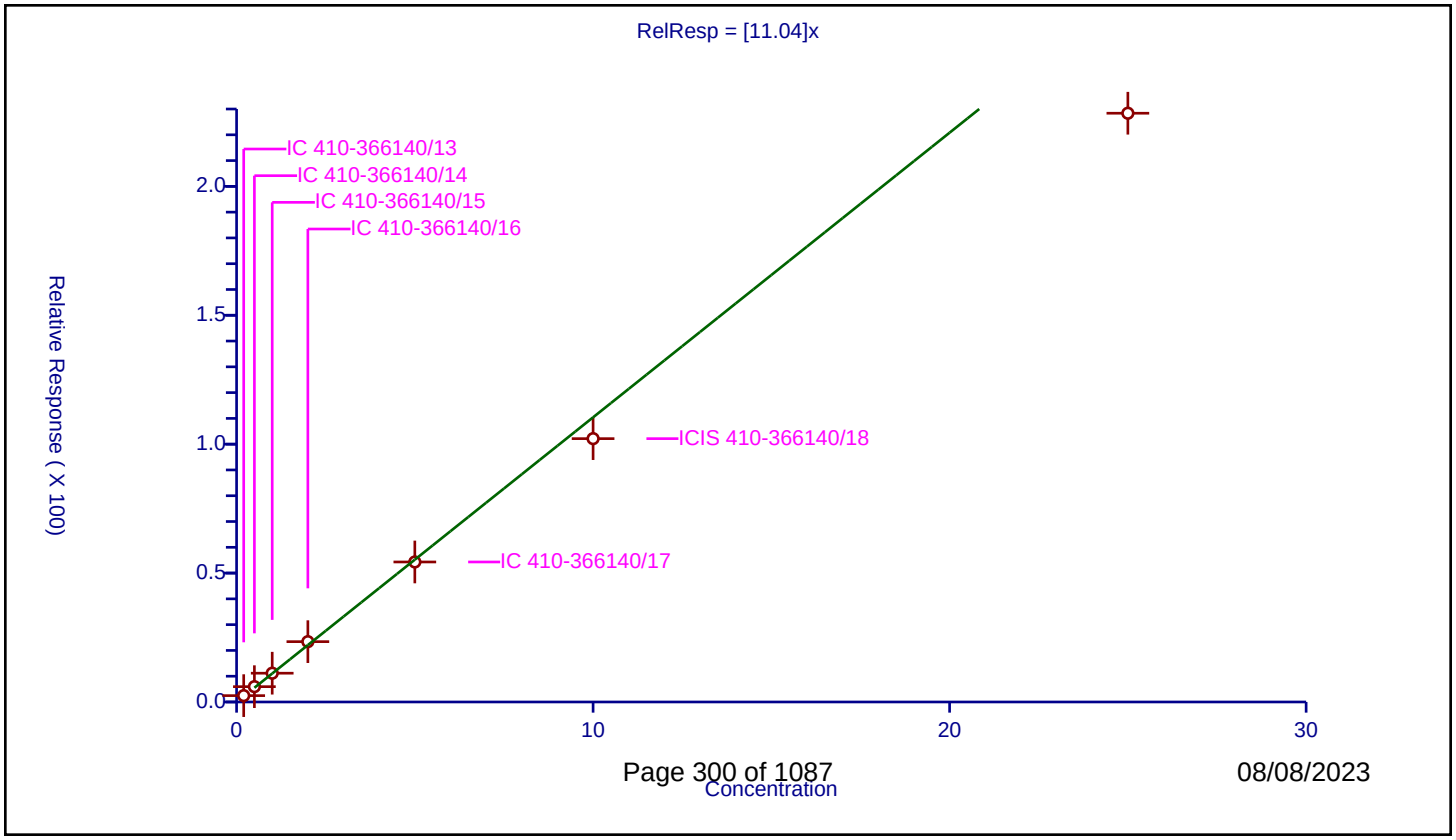
Curve Coefficients

Intercept:	0
Slope:	11.04

Error Coefficients

Standard Error:	161000
Relative Standard Error:	9.9
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.985

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	2.463659	50.0	59505.0	12.318293	Y
2	IC 410-366140/14	0.5	5.944347	50.0	64902.0	11.888694	Y
3	IC 410-366140/15	1.0	11.166609	50.0	74978.0	11.166609	Y
4	IC 410-366140/16	2.0	23.401137	50.0	68924.0	11.700569	Y
5	IC 410-366140/17	5.0	54.310554	50.0	70223.0	10.862111	Y
6	ICIS 410-366140/18	10.0	102.150599	50.0	78513.0	10.21506	Y
7	IC 410-366140/19	25.0	228.36076	50.0	76932.0	9.13443	Y



08/08/2023

Calibration / 3-Chloro-1-propene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

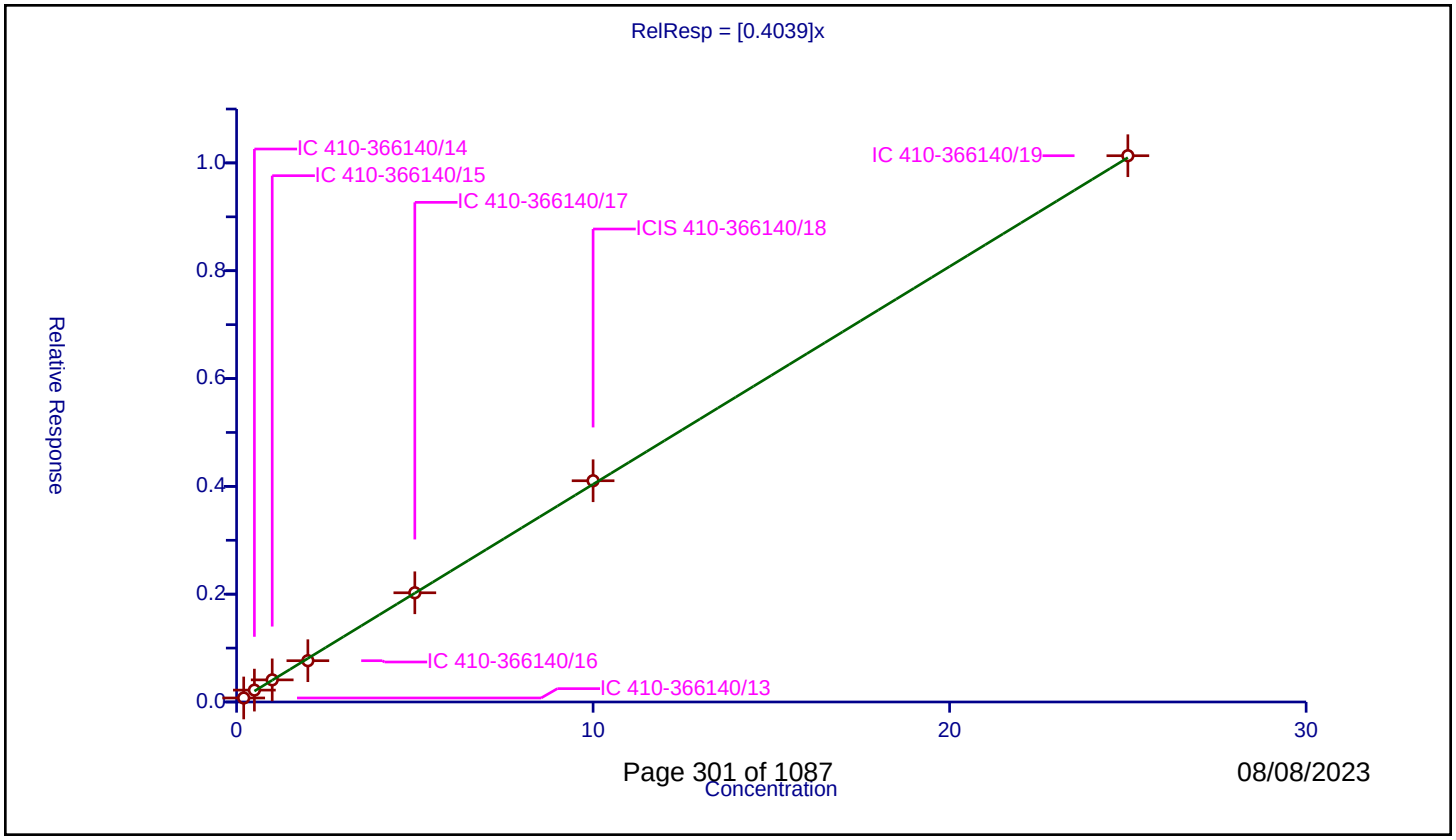
Curve Coefficients

Intercept:	0
Slope:	0.4039

Error Coefficients

Standard Error:	906000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.074478	10.0	1905653.0	0.372392	Y
2	IC 410-366140/14	0.5	0.2205	10.0	1908755.0	0.440999	Y
3	IC 410-366140/15	1.0	0.410188	10.0	1916682.0	0.410188	Y
4	IC 410-366140/16	2.0	0.765787	10.0	1921970.0	0.382894	Y
5	IC 410-366140/17	5.0	2.025811	10.0	1951110.0	0.405162	Y
6	ICIS 410-366140/18	10.0	4.104323	10.0	1983640.0	0.410432	Y
7	IC 410-366140/19	25.0	10.134017	10.0	1993554.0	0.405361	Y



08/08/2023

Calibration / Methylene Chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

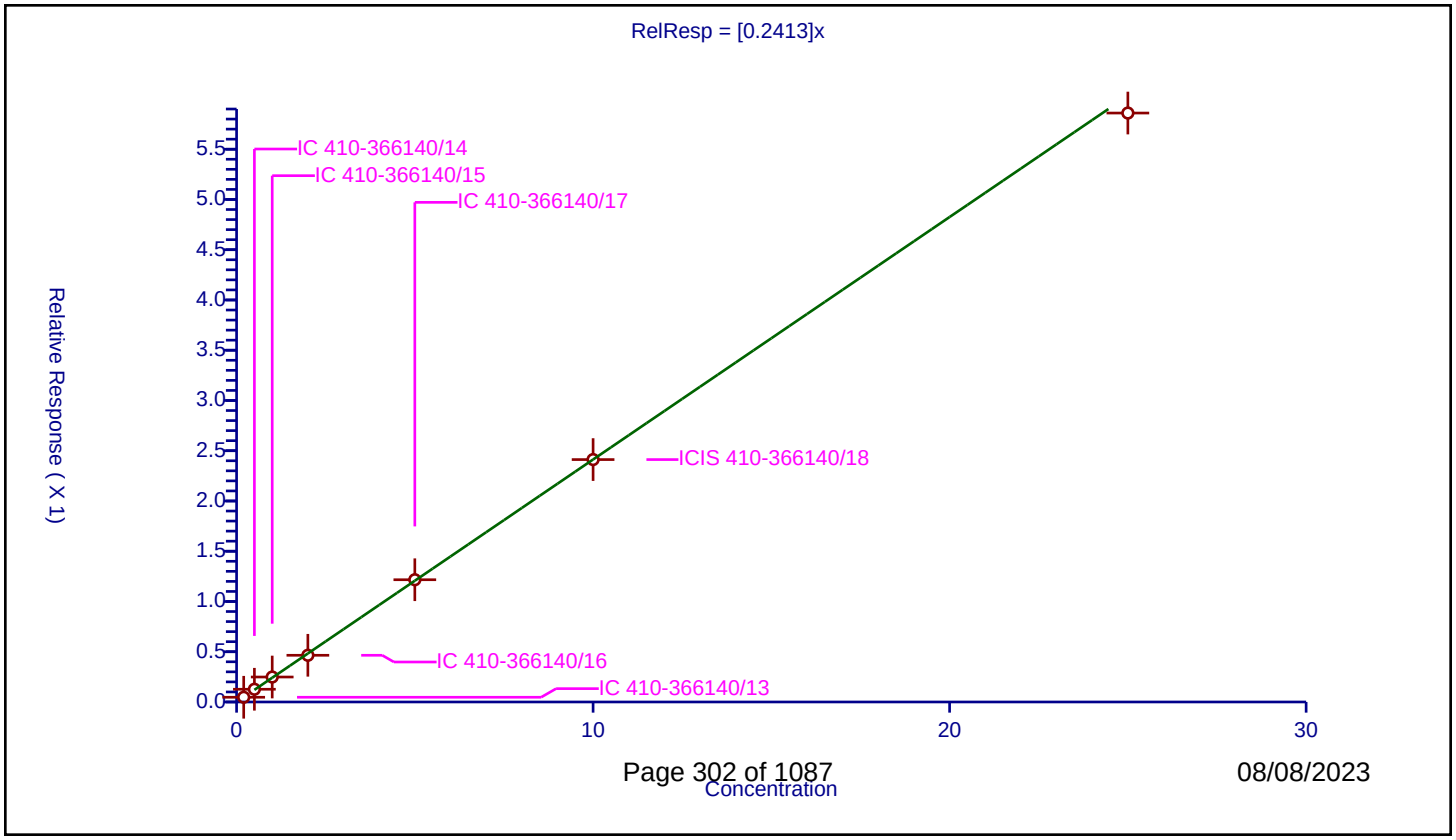
Curve Coefficients

Intercept:	0
Slope:	0.2413

Error Coefficients

Standard Error:	526000
Relative Standard Error:	3.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.047144	10.0	1905653.0	0.23572	Y
2	IC 410-366140/14	0.5	0.126732	10.0	1908755.0	0.253464	Y
3	IC 410-366140/15	1.0	0.248408	10.0	1916682.0	0.248408	Y
4	IC 410-366140/16	2.0	0.464758	10.0	1921970.0	0.232379	Y
5	IC 410-366140/17	5.0	1.216477	10.0	1951110.0	0.243295	Y
6	ICIS 410-366140/18	10.0	2.412096	10.0	1983640.0	0.24121	Y
7	IC 410-366140/19	25.0	5.859821	10.0	1993554.0	0.234393	Y



Calibration / 2-Methyl-2-propanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

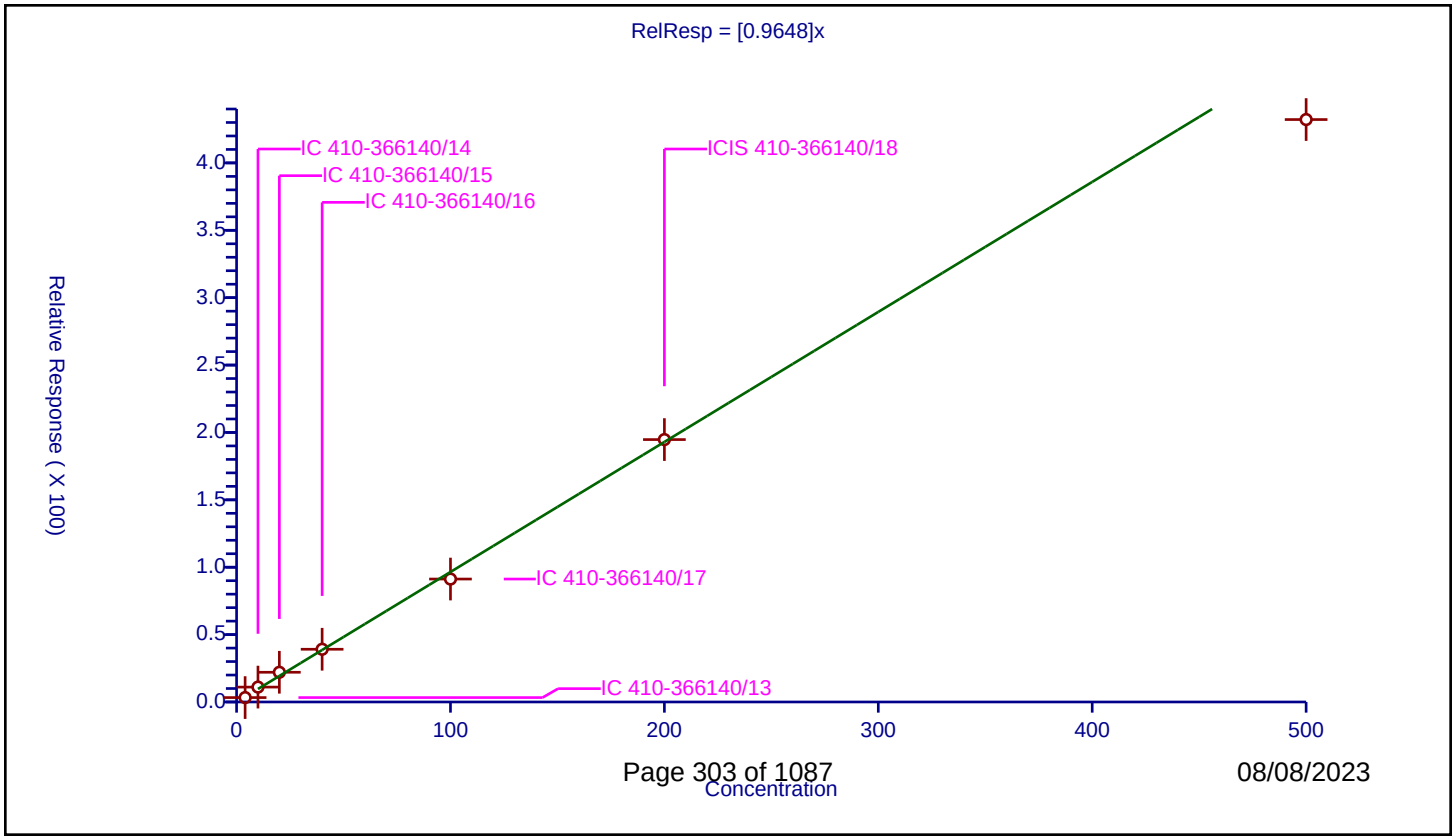
Curve Coefficients

Intercept:	0
Slope:	0.9648

Error Coefficients

Standard Error:	304000
Relative Standard Error:	11.5
Correlation Coefficient:	0.996
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	4.0	3.271154	50.0	59505.0	0.817788	Y
2	IC 410-366140/14	10.0	11.048196	50.0	64902.0	1.10482	Y
3	IC 410-366140/15	20.0	22.053136	50.0	74978.0	1.102657	Y
4	IC 410-366140/16	40.0	39.122076	50.0	68924.0	0.978052	Y
5	IC 410-366140/17	100.0	91.220113	50.0	70223.0	0.912201	Y
6	ICIS 410-366140/18	200.0	194.711704	50.0	78513.0	0.973559	Y
7	IC 410-366140/19	500.0	432.175168	50.0	76932.0	0.86435	Y



Calibration / Acrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

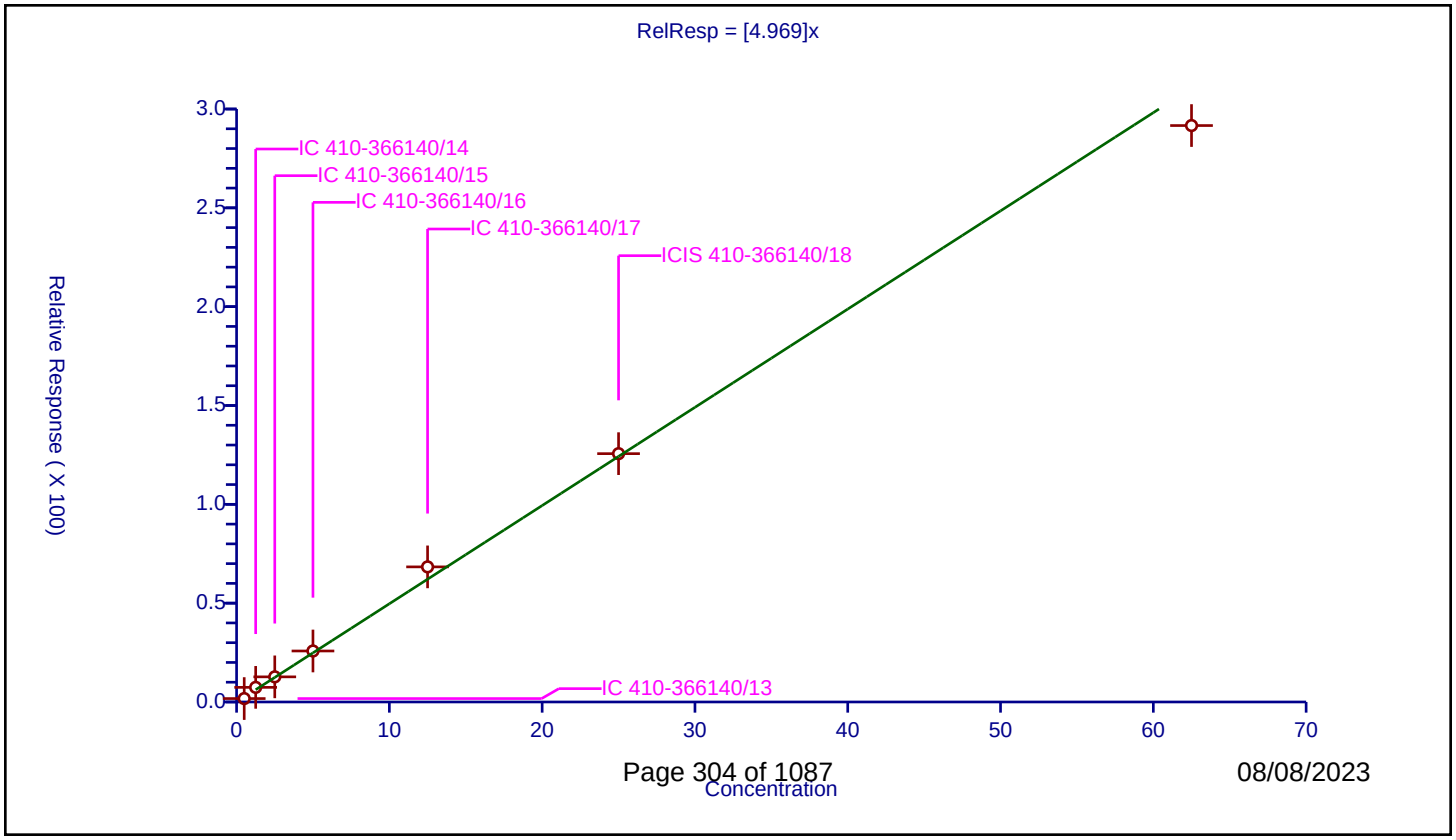
Curve Coefficients

Intercept:	0
Slope:	4.969

Error Coefficients

Standard Error:	204000
Relative Standard Error:	15.5
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.972

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.5	1.731787	50.0	59505.0	3.463574	Y
2	IC 410-366140/14	1.25	7.395766	50.0	64902.0	5.916613	Y
3	IC 410-366140/15	2.5	12.712396	50.0	74978.0	5.084958	Y
4	IC 410-366140/16	5.0	25.798706	50.0	68924.0	5.159741	Y
5	IC 410-366140/17	12.5	68.353673	50.0	70223.0	5.468294	Y
6	ICIS 410-366140/18	25.0	125.641613	50.0	78513.0	5.025665	Y
7	IC 410-366140/19	62.5	291.633521	50.0	76932.0	4.666136	Y



08/08/2023

Calibration / Methyl tert-butyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

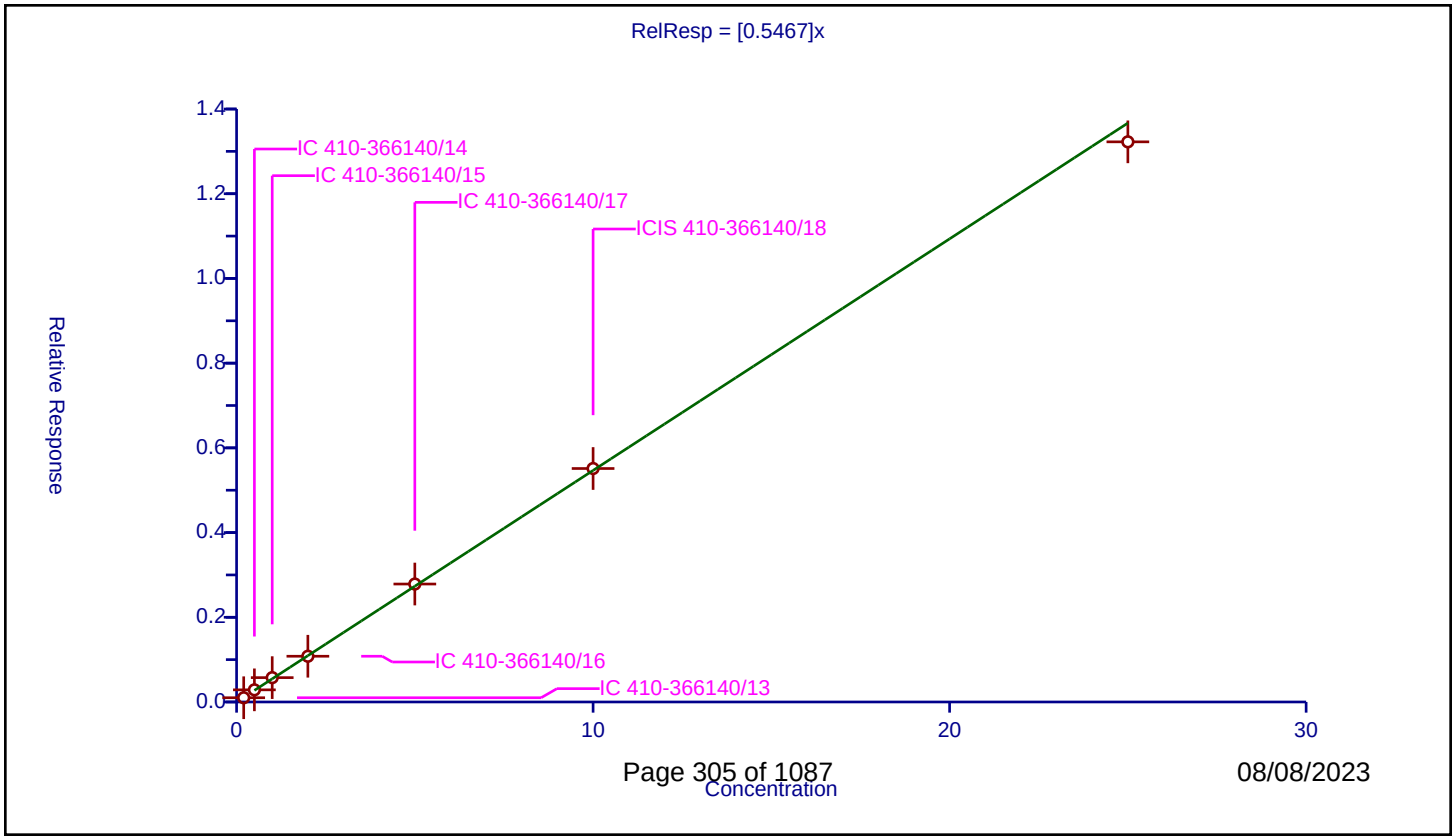
Curve Coefficients

Intercept:	0
Slope:	0.5467

Error Coefficients

Standard Error:	1190000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.10026	10.0	1905653.0	0.501298	Y
2	IC 410-366140/14	0.5	0.286621	10.0	1908755.0	0.573243	Y
3	IC 410-366140/15	1.0	0.575093	10.0	1916682.0	0.575093	Y
4	IC 410-366140/16	2.0	1.080376	10.0	1921970.0	0.540188	Y
5	IC 410-366140/17	5.0	2.785291	10.0	1951110.0	0.557058	Y
6	ICIS 410-366140/18	10.0	5.512724	10.0	1983640.0	0.551272	Y
7	IC 410-366140/19	25.0	13.224768	10.0	1993554.0	0.528991	Y



Calibration / trans-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

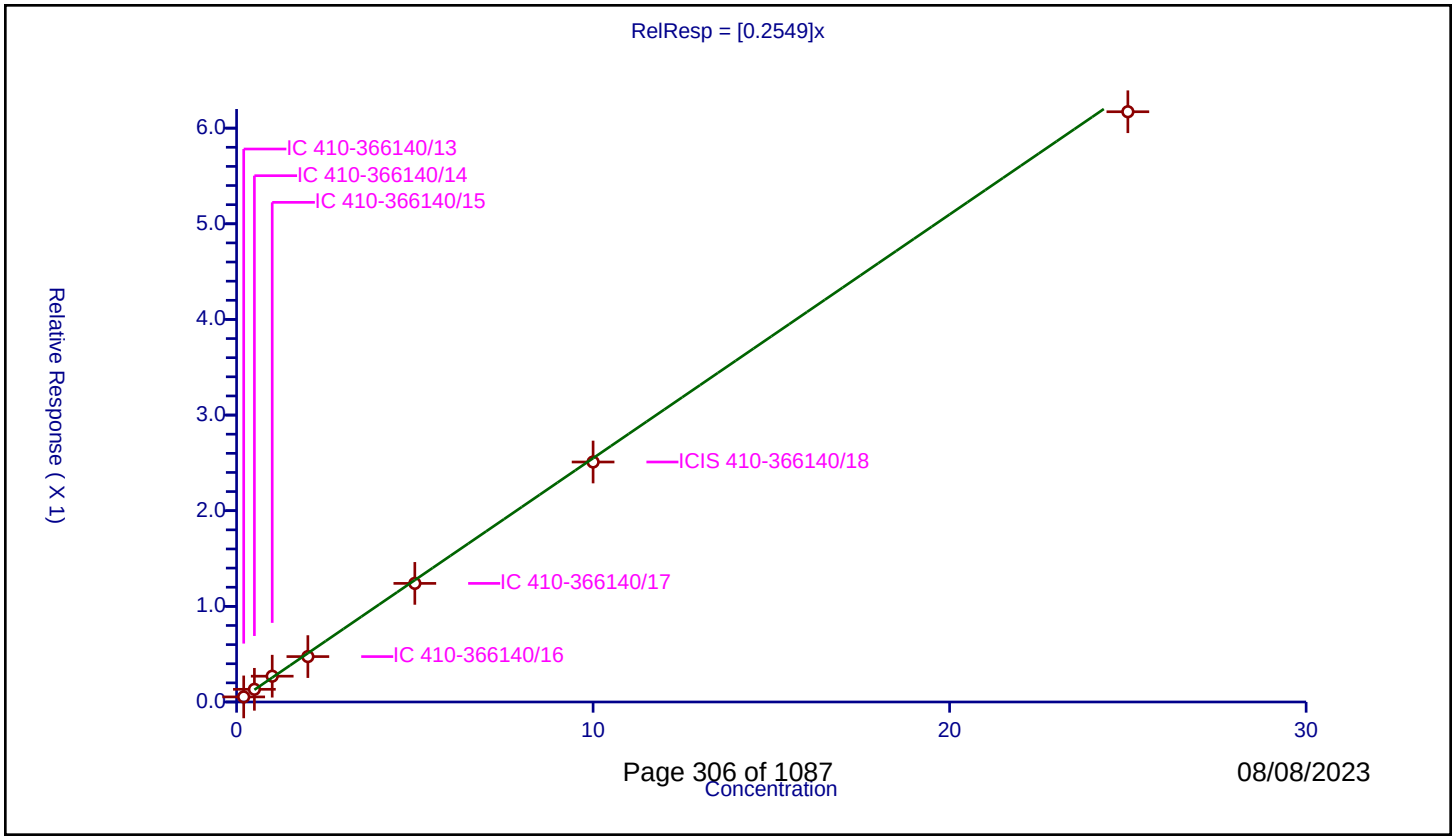
Curve Coefficients

Intercept:	0
Slope:	0.2549

Error Coefficients

Standard Error:	553000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.053194	10.0	1905653.0	0.265972	Y
2	IC 410-366140/14	0.5	0.132626	10.0	1908755.0	0.265251	Y
3	IC 410-366140/15	1.0	0.269706	10.0	1916682.0	0.269706	Y
4	IC 410-366140/16	2.0	0.474763	10.0	1921970.0	0.237381	Y
5	IC 410-366140/17	5.0	1.24014	10.0	1951110.0	0.248028	Y
6	ICIS 410-366140/18	10.0	2.509281	10.0	1983640.0	0.250928	Y
7	IC 410-366140/19	25.0	6.171431	10.0	1993554.0	0.246857	Y



Calibration / Hexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

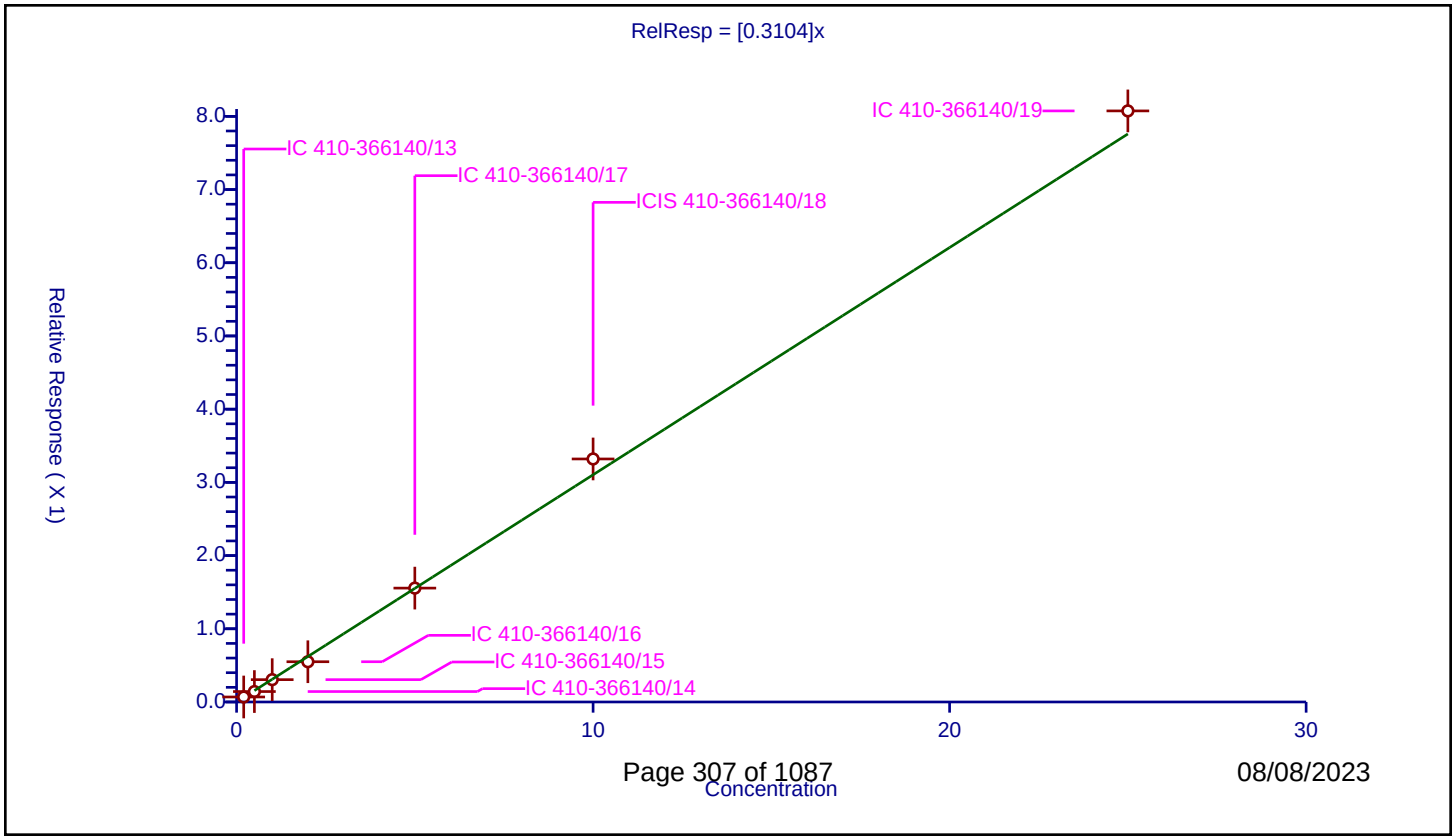
Curve Coefficients

Intercept:	0
Slope:	0.3104

Error Coefficients

Standard Error:	723000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.068234	10.0	1905653.0	0.341169	Y
2	IC 410-366140/14	0.5	0.142742	10.0	1908755.0	0.285485	Y
3	IC 410-366140/15	1.0	0.305017	10.0	1916682.0	0.305017	Y
4	IC 410-366140/16	2.0	0.549905	10.0	1921970.0	0.274952	Y
5	IC 410-366140/17	5.0	1.555556	10.0	1951110.0	0.311111	Y
6	ICIS 410-366140/18	10.0	3.319821	10.0	1983640.0	0.331982	Y
7	IC 410-366140/19	25.0	8.074233	10.0	1993554.0	0.322969	Y



Calibration / 1,1-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

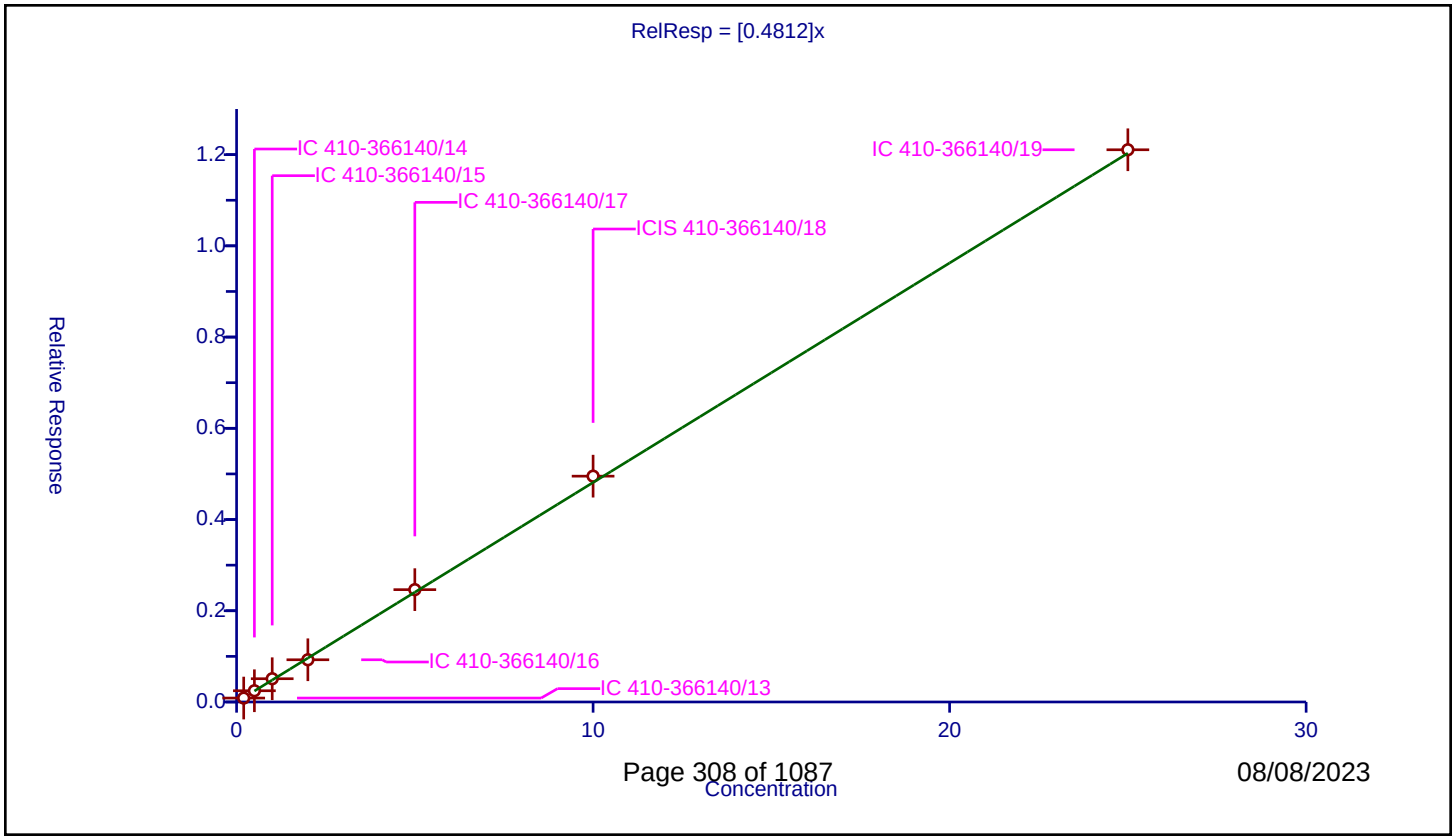
Curve Coefficients

Intercept:	0
Slope:	0.4812

Error Coefficients

Standard Error:	1090000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.086275	10.0	1905653.0	0.431374	Y
2	IC 410-366140/14	0.5	0.246166	10.0	1908755.0	0.492331	Y
3	IC 410-366140/15	1.0	0.510038	10.0	1916682.0	0.510038	Y
4	IC 410-366140/16	2.0	0.92568	10.0	1921970.0	0.46284	Y
5	IC 410-366140/17	5.0	2.462829	10.0	1951110.0	0.492566	Y
6	ICIS 410-366140/18	10.0	4.95106	10.0	1983640.0	0.495106	Y
7	IC 410-366140/19	25.0	12.10659	10.0	1993554.0	0.484264	Y



Calibration / Isopropyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

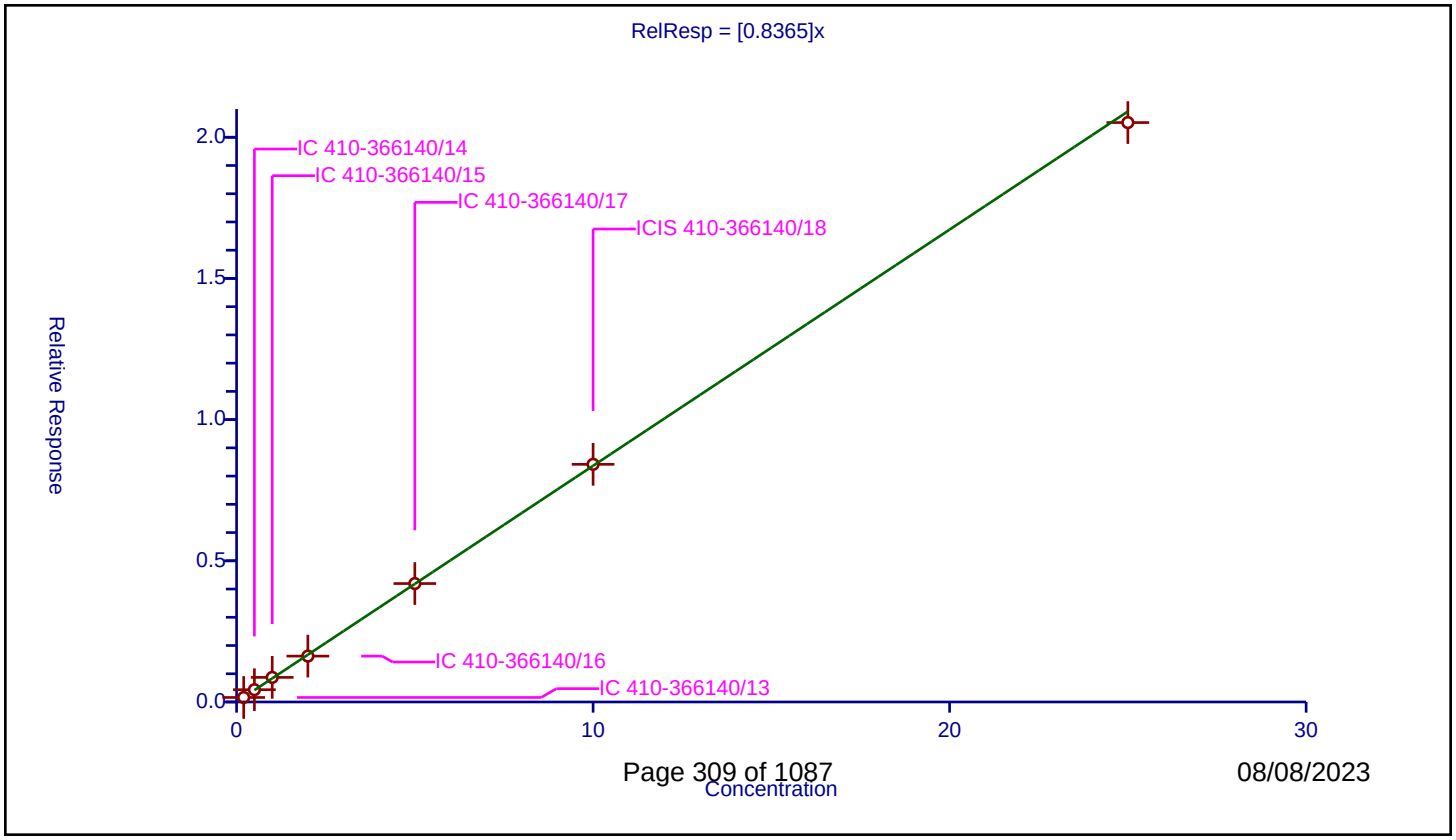
Curve Coefficients

Intercept:	0
Slope:	0.8365

Error Coefficients

Standard Error:	1840000
Relative Standard Error:	3.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.160129	10.0	1905653.0	0.800644	Y
2	IC 410-366140/14	0.5	0.435032	10.0	1908755.0	0.870065	Y
3	IC 410-366140/15	1.0	0.871078	10.0	1916682.0	0.871078	Y
4	IC 410-366140/16	2.0	1.625025	10.0	1921970.0	0.812513	Y
5	IC 410-366140/17	5.0	4.194412	10.0	1951110.0	0.838882	Y
6	ICIS 410-366140/18	10.0	8.417051	10.0	1983640.0	0.841705	Y
7	IC 410-366140/19	25.0	20.520477	10.0	1993554.0	0.820819	Y



Calibration / 2-Chloro-1,3-butadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

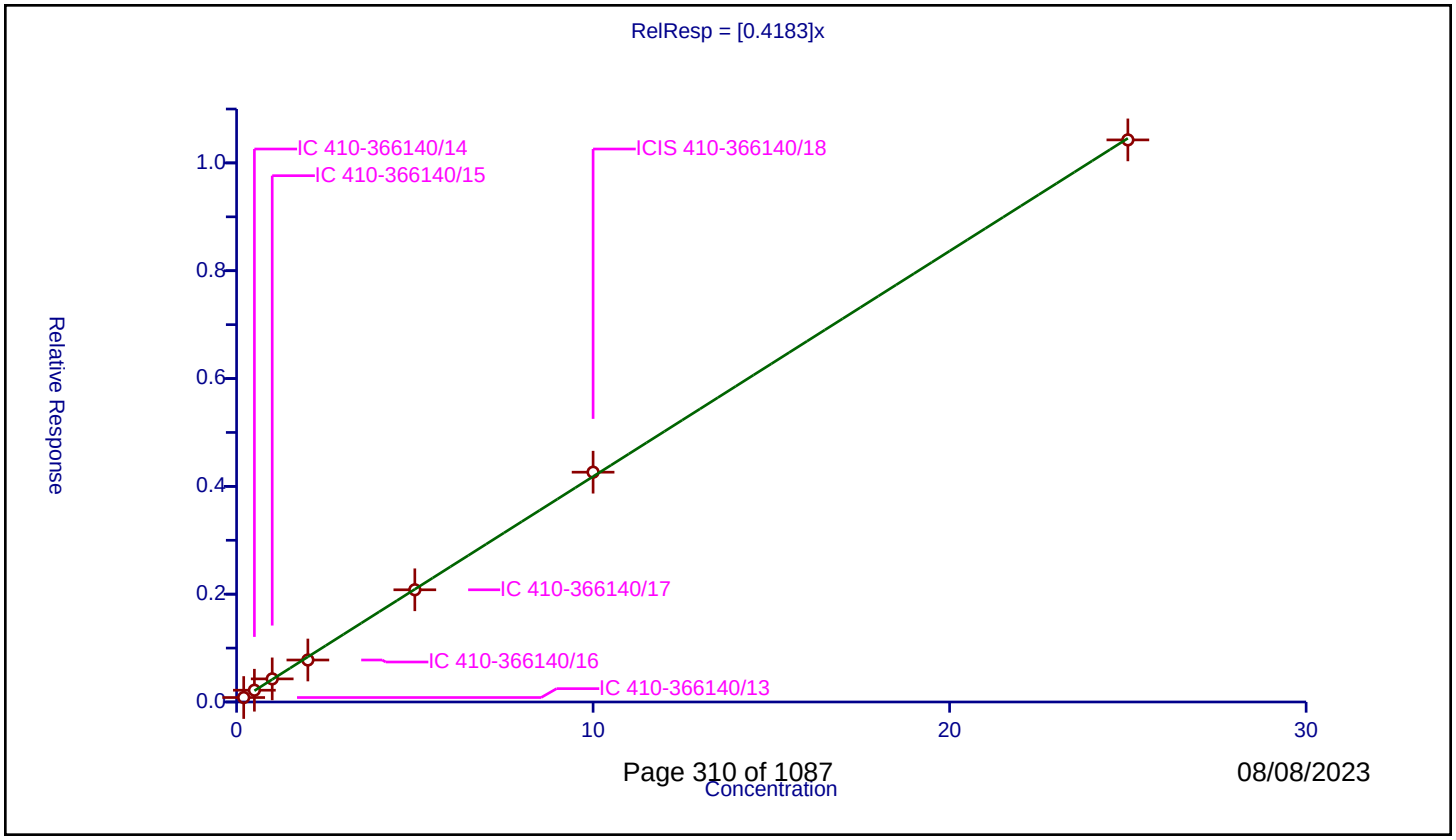
Curve Coefficients

Intercept:	0
Slope:	0.4183

Error Coefficients

Standard Error:	934000
Relative Standard Error:	3.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.082701	10.0	1905653.0	0.413507	Y
2	IC 410-366140/14	0.5	0.21843	10.0	1908755.0	0.436861	Y
3	IC 410-366140/15	1.0	0.428444	10.0	1916682.0	0.428444	Y
4	IC 410-366140/16	2.0	0.778743	10.0	1921970.0	0.389371	Y
5	IC 410-366140/17	5.0	2.0814	10.0	1951110.0	0.41628	Y
6	ICIS 410-366140/18	10.0	4.263042	10.0	1983640.0	0.426304	Y
7	IC 410-366140/19	25.0	10.427097	10.0	1993554.0	0.417084	Y



Calibration / Tert-butyl ethyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

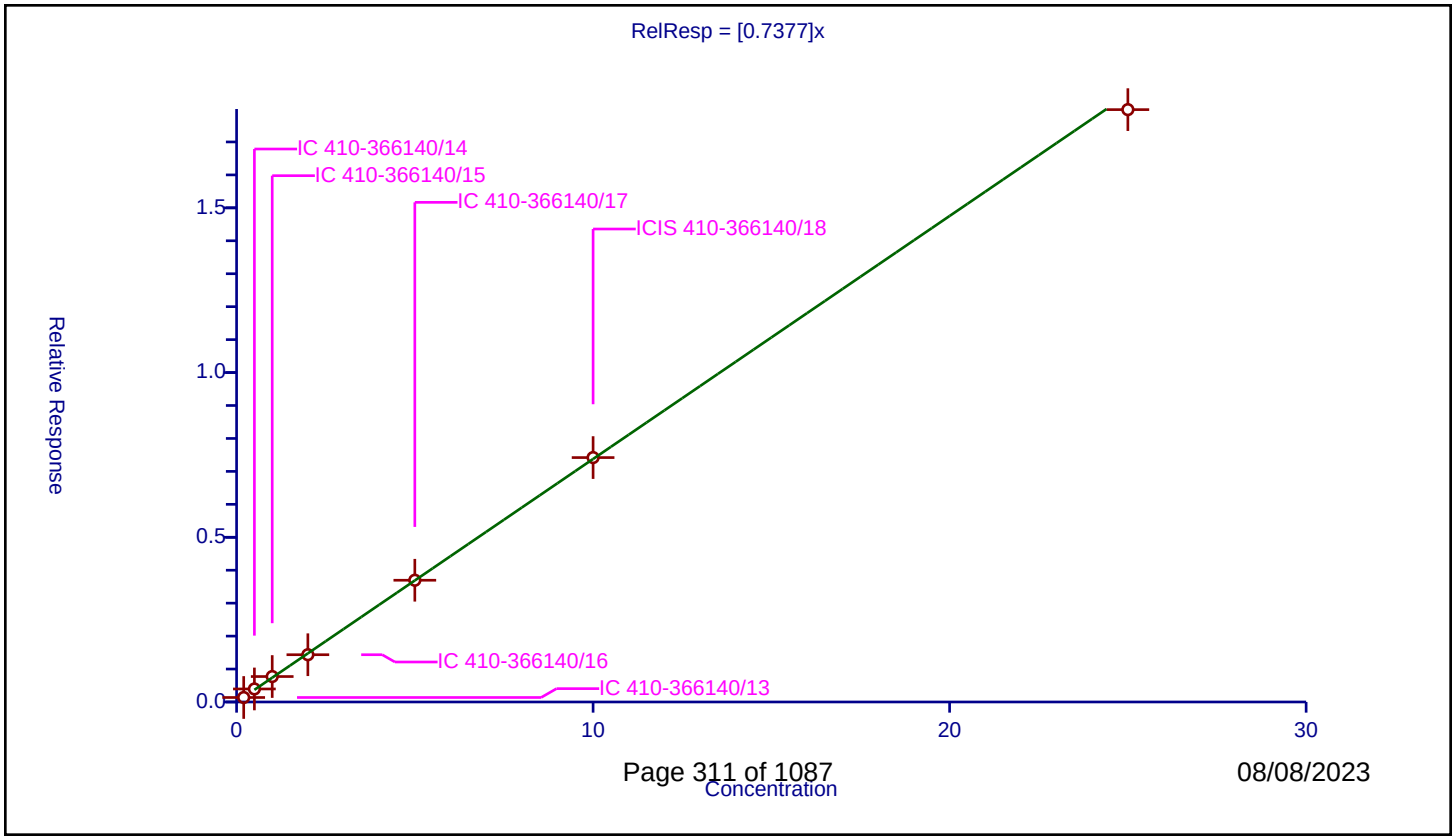
Curve Coefficients

Intercept:	0
Slope:	0.7377

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.136567	10.0	1905653.0	0.682837	Y
2	IC 410-366140/14	0.5	0.395231	10.0	1908755.0	0.790463	Y
3	IC 410-366140/15	1.0	0.772251	10.0	1916682.0	0.772251	Y
4	IC 410-366140/16	2.0	1.435163	10.0	1921970.0	0.717581	Y
5	IC 410-366140/17	5.0	3.69604	10.0	1951110.0	0.739208	Y
6	ICIS 410-366140/18	10.0	7.419658	10.0	1983640.0	0.741966	Y
7	IC 410-366140/19	25.0	17.981509	10.0	1993554.0	0.71926	Y



Calibration / 2-Butanone (MEK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

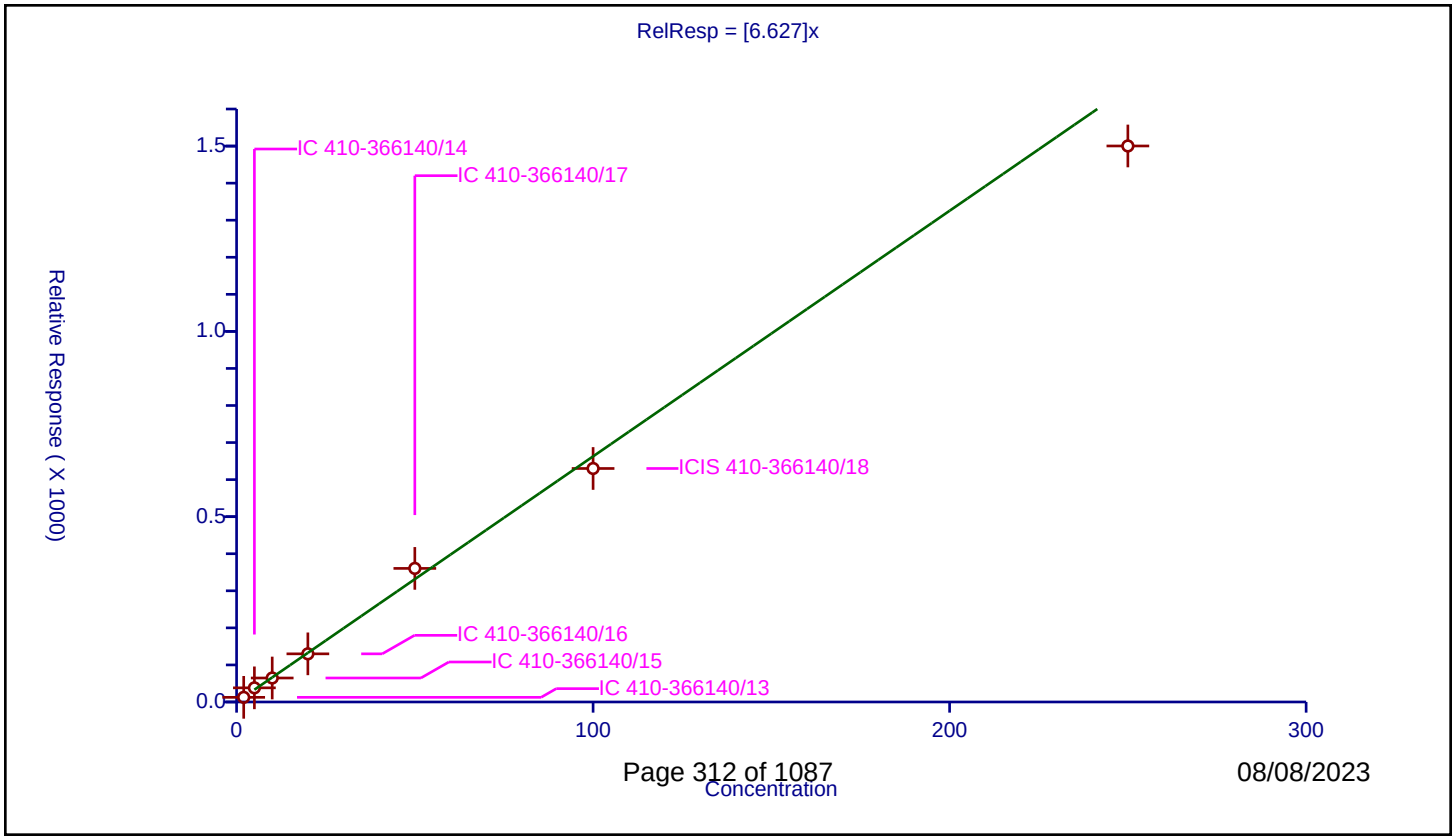
Curve Coefficients

Intercept:	0
Slope:	6.627

Error Coefficients

Standard Error:	1050000
Relative Standard Error:	8.7
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	12.559449	50.0	59505.0	6.279724	Y
2	IC 410-366140/14	5.0	38.153678	50.0	64902.0	7.630736	Y
3	IC 410-366140/15	10.0	64.712316	50.0	74978.0	6.471232	Y
4	IC 410-366140/16	20.0	129.938773	50.0	68924.0	6.496939	Y
5	IC 410-366140/17	50.0	360.477336	50.0	70223.0	7.209547	Y
6	ICIS 410-366140/18	100.0	630.057443	50.0	78513.0	6.300574	Y
7	IC 410-366140/19	250.0	1500.237222	50.0	76932.0	6.000949	Y



Calibration / cis-1,2-Dichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

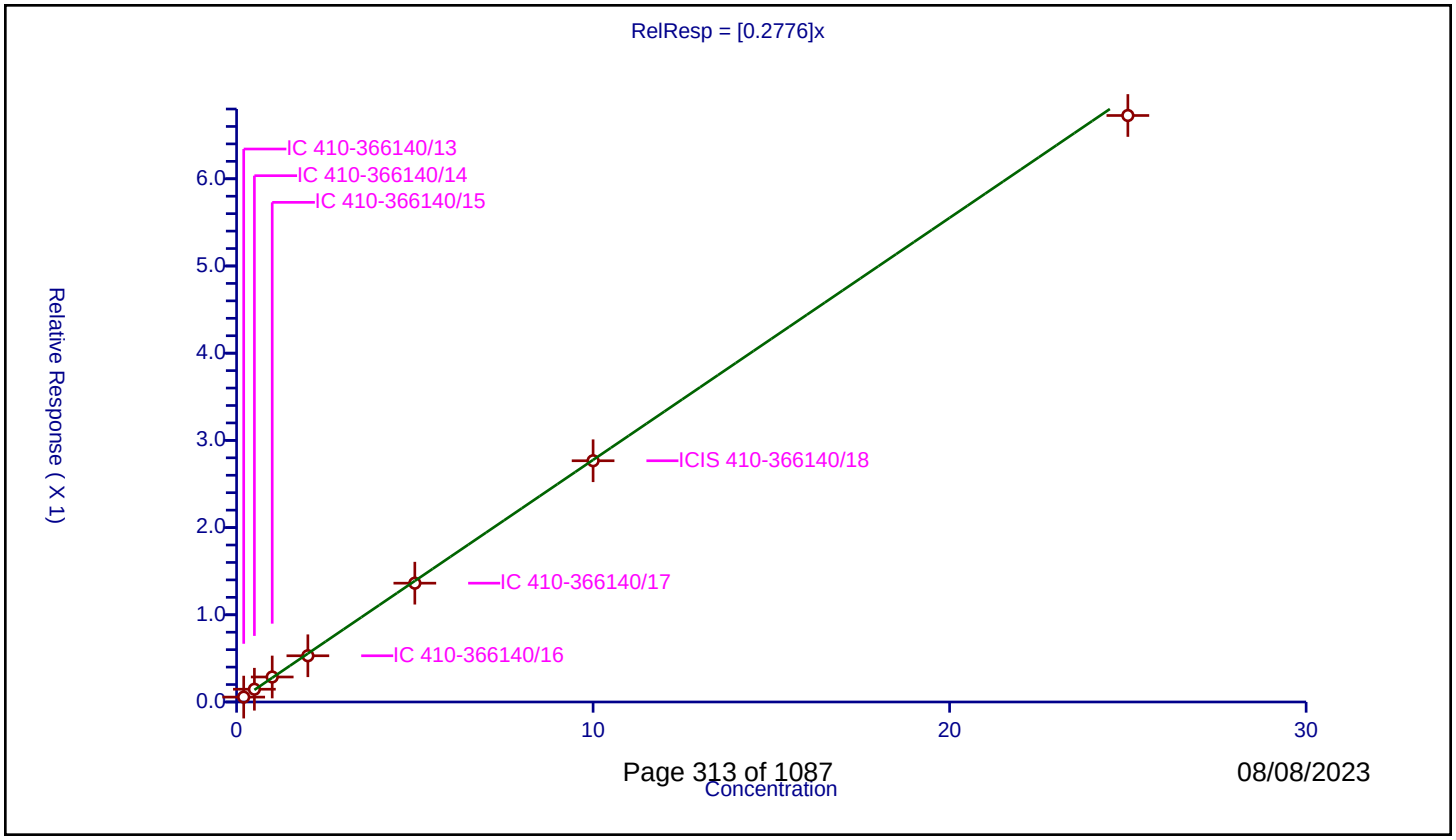
Curve Coefficients

Intercept:	0
Slope:	0.2776

Error Coefficients

Standard Error:	603000
Relative Standard Error:	3.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.056143	10.0	1905653.0	0.280717	Y
2	IC 410-366140/14	0.5	0.1463	10.0	1908755.0	0.292599	Y
3	IC 410-366140/15	1.0	0.286678	10.0	1916682.0	0.286678	Y
4	IC 410-366140/16	2.0	0.530133	10.0	1921970.0	0.265067	Y
5	IC 410-366140/17	5.0	1.362655	10.0	1951110.0	0.272531	Y
6	ICIS 410-366140/18	10.0	2.766399	10.0	1983640.0	0.27664	Y
7	IC 410-366140/19	25.0	6.725822	10.0	1993554.0	0.269033	Y



Calibration / 2,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

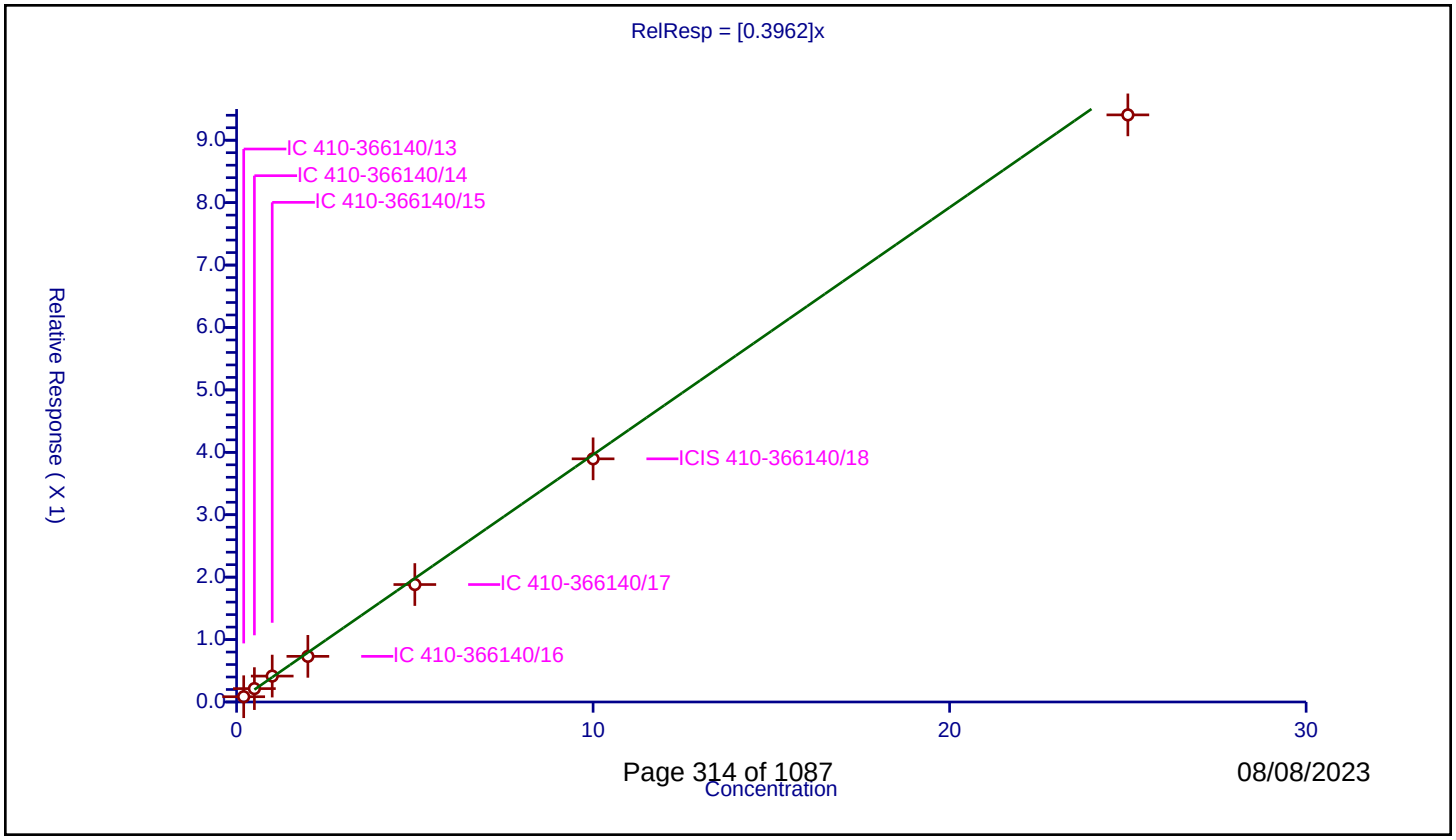
Curve Coefficients

Intercept:	0
Slope:	0.3962

Error Coefficients

Standard Error:	844000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.084417	10.0	1905653.0	0.422086	Y
2	IC 410-366140/14	0.5	0.214213	10.0	1908755.0	0.428426	Y
3	IC 410-366140/15	1.0	0.414957	10.0	1916682.0	0.414957	Y
4	IC 410-366140/16	2.0	0.73114	10.0	1921970.0	0.36557	Y
5	IC 410-366140/17	5.0	1.881529	10.0	1951110.0	0.376306	Y
6	ICIS 410-366140/18	10.0	3.895762	10.0	1983640.0	0.389576	Y
7	IC 410-366140/19	25.0	9.406151	10.0	1993554.0	0.376246	Y



Calibration / Propionitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

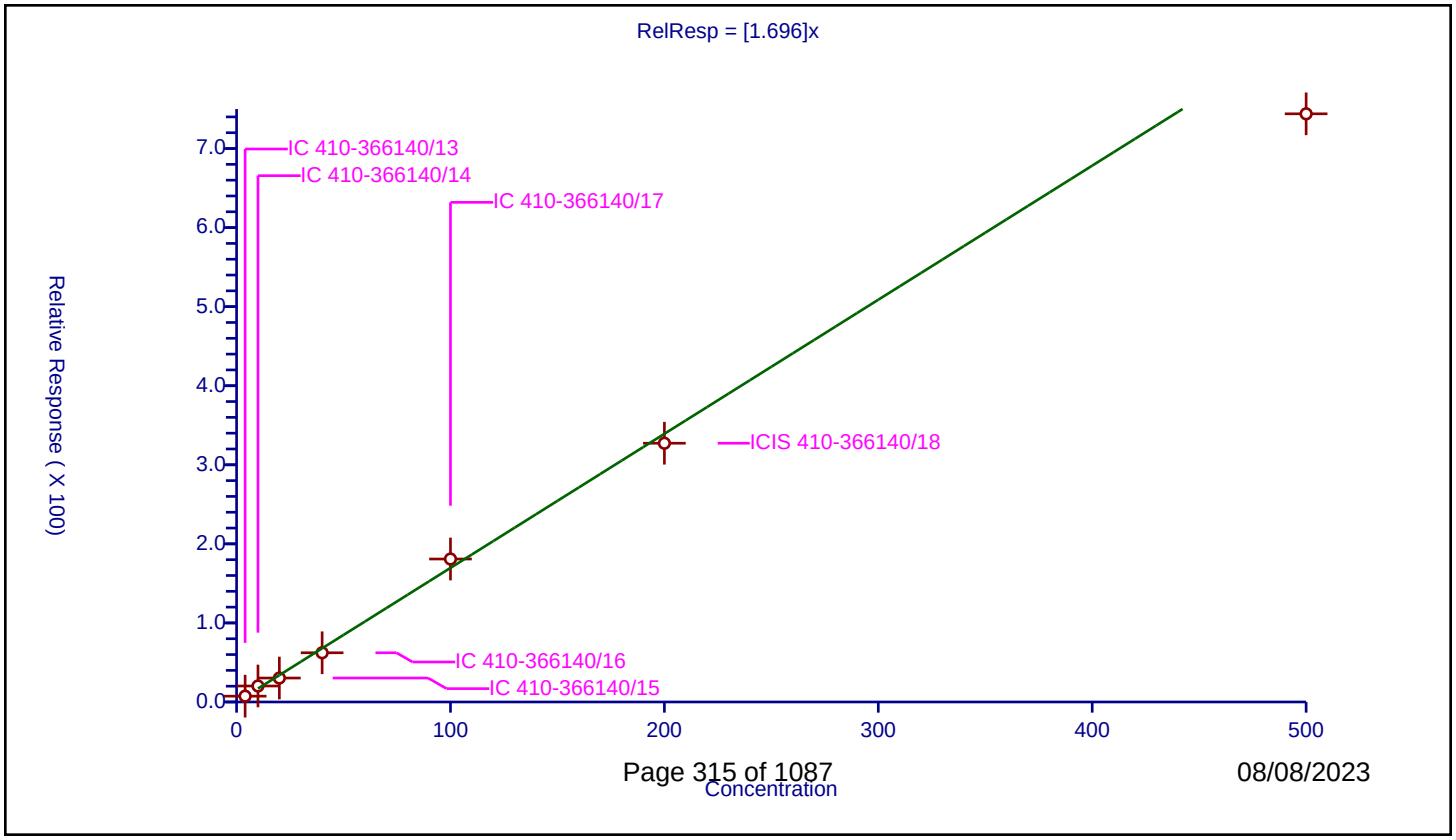
Curve Coefficients

Intercept:	0
Slope:	1.696

Error Coefficients

Standard Error:	524000
Relative Standard Error:	11.8
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.979

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	4.0	7.378372	50.0	59505.0	1.844593	Y
2	IC 410-366140/14	10.0	20.236665	50.0	64902.0	2.023666	Y
3	IC 410-366140/15	20.0	30.29422	50.0	74978.0	1.514711	Y
4	IC 410-366140/16	40.0	62.232314	50.0	68924.0	1.555808	Y
5	IC 410-366140/17	100.0	180.826083	50.0	70223.0	1.808261	Y
6	ICIS 410-366140/18	200.0	327.268096	50.0	78513.0	1.63634	Y
7	IC 410-366140/19	500.0	743.929704	50.0	76932.0	1.487859	Y



Calibration / Methacrylonitrile

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

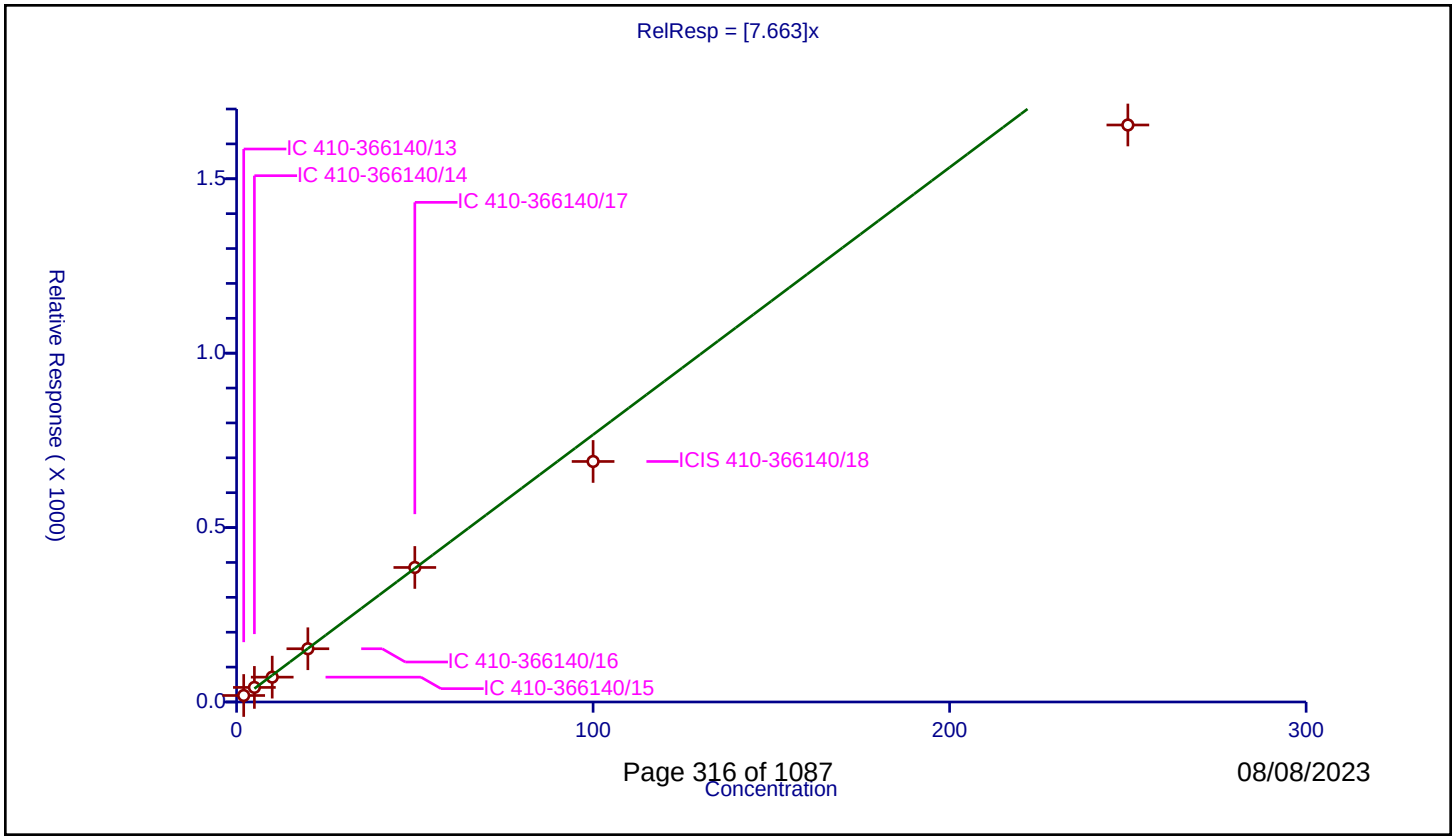
Curve Coefficients

Intercept:	0
Slope:	7.663

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	12.1
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.977

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	18.605999	50.0	59505.0	9.303	Y
2	IC 410-366140/14	5.0	41.808419	50.0	64902.0	8.361684	Y
3	IC 410-366140/15	10.0	71.194884	50.0	74978.0	7.119488	Y
4	IC 410-366140/16	20.0	152.59924	50.0	68924.0	7.629962	Y
5	IC 410-366140/17	50.0	385.635048	50.0	70223.0	7.712701	Y
6	ICIS 410-366140/18	100.0	689.564785	50.0	78513.0	6.895648	Y
7	IC 410-366140/19	250.0	1654.184865	50.0	76932.0	6.616739	Y



Calibration / Chlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

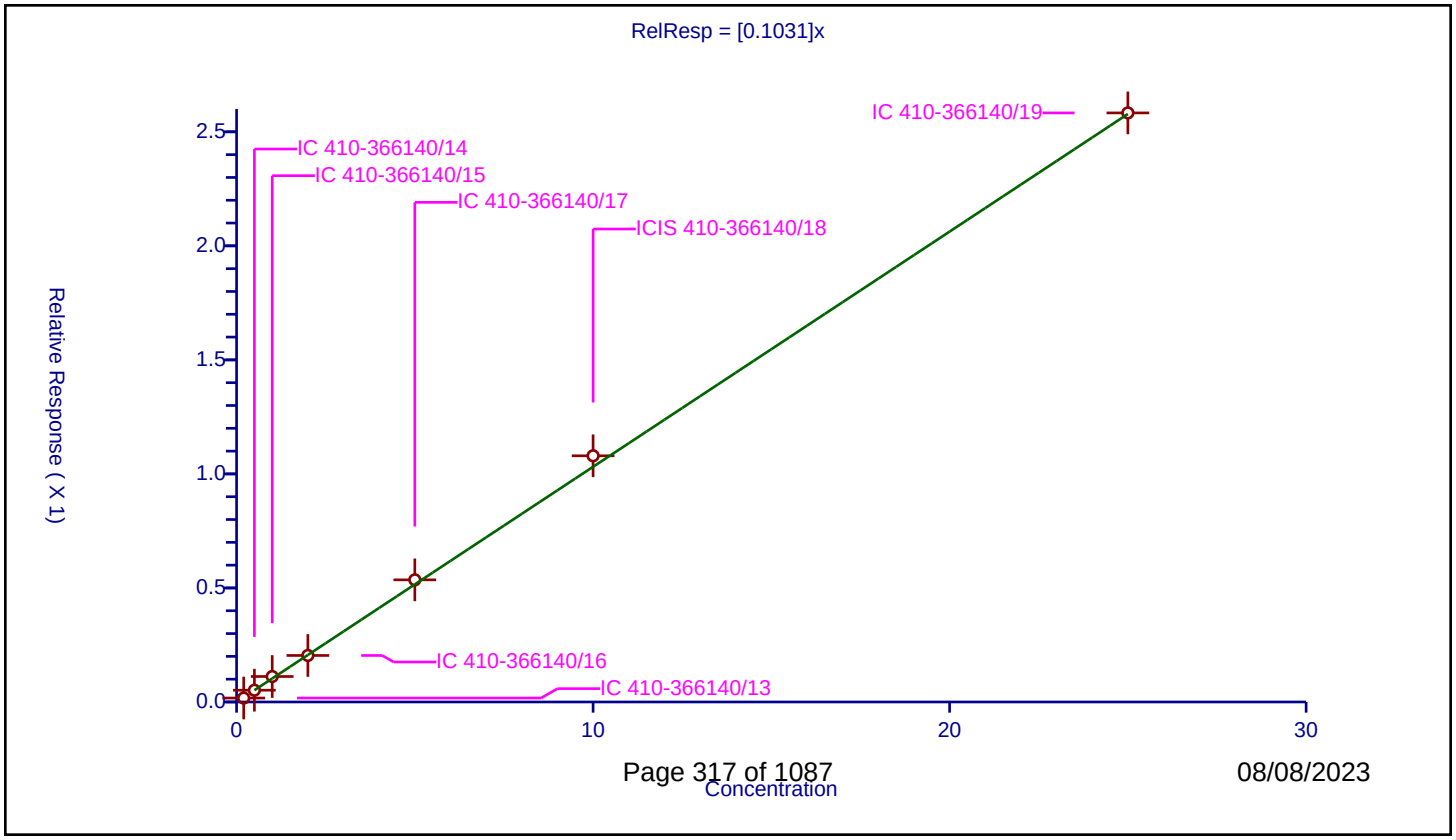
Curve Coefficients

Intercept:	0
Slope:	0.1031

Error Coefficients

Standard Error:	232000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.017333	10.0	1905653.0	0.086663	Y
2	IC 410-366140/14	0.5	0.051573	10.0	1908755.0	0.103146	Y
3	IC 410-366140/15	1.0	0.111677	10.0	1916682.0	0.111677	Y
4	IC 410-366140/16	2.0	0.204004	10.0	1921970.0	0.102002	Y
5	IC 410-366140/17	5.0	0.535628	10.0	1951110.0	0.107126	Y
6	ICIS 410-366140/18	10.0	1.079485	10.0	1983640.0	0.107949	Y
7	IC 410-366140/19	25.0	2.582925	10.0	1993554.0	0.103317	Y



Calibration / Tetrahydrofuran

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

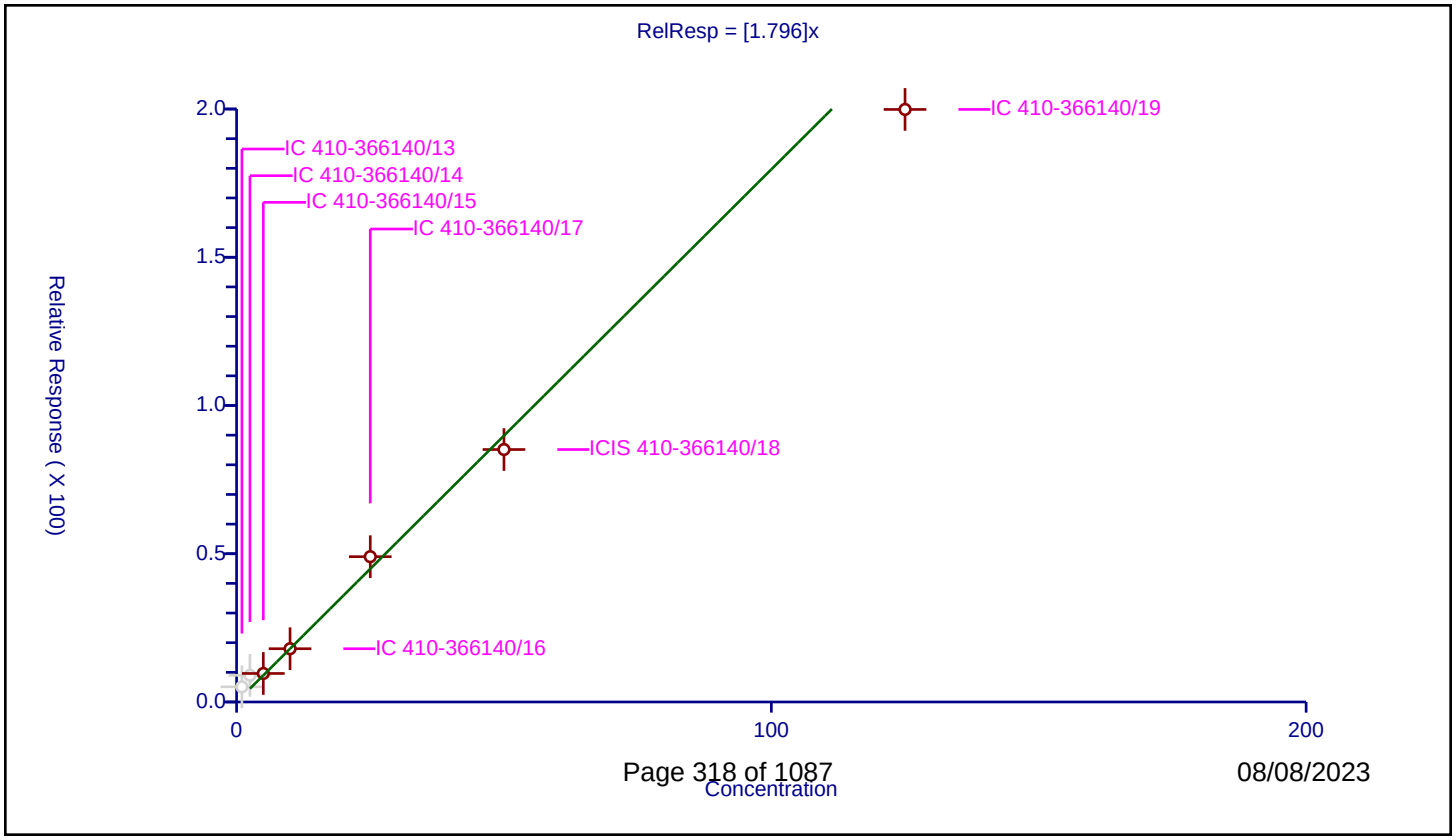
Curve Coefficients

Intercept:	0
Slope:	1.796

Error Coefficients

Standard Error:	172000
Relative Standard Error:	8.4
Correlation Coefficient:	0.998
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	1.0	5.111335	50.0	59505.0	5.111335	N
2	IC 410-366140/14	2.5	8.99433	50.0	64902.0	3.597732	N
3	IC 410-366140/15	5.0	9.618155	50.0	74978.0	1.923631	Y
4	IC 410-366140/16	10.0	17.963264	50.0	68924.0	1.796326	Y
5	IC 410-366140/17	25.0	49.010296	50.0	70223.0	1.960412	Y
6	ICIS 410-366140/18	50.0	85.155325	50.0	78513.0	1.703106	Y
7	IC 410-366140/19	125.0	199.855067	50.0	76932.0	1.598841	Y



Calibration / Chloroform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

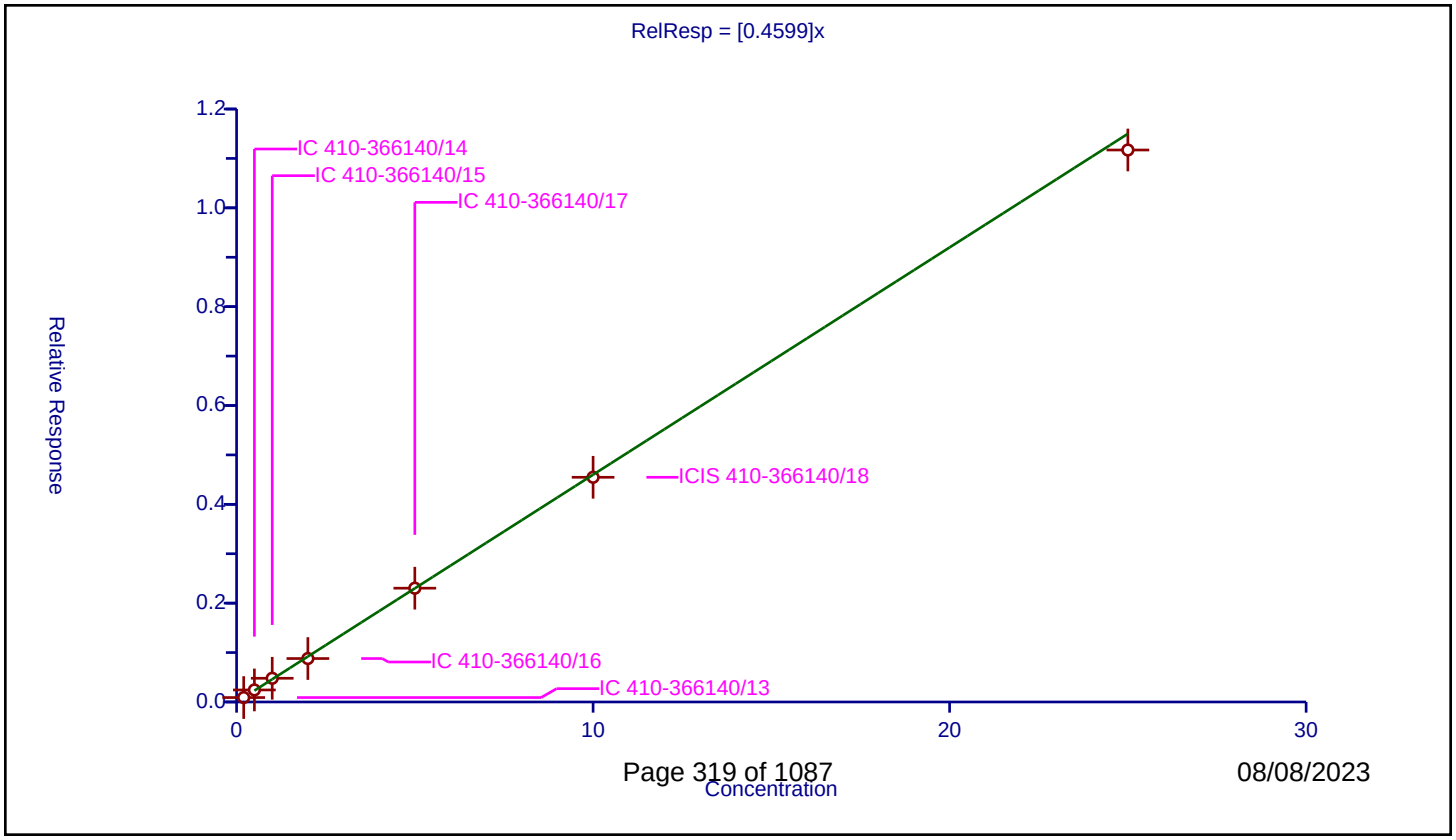
Curve Coefficients

Intercept:	0
Slope:	0.4599

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	3.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.090037	10.0	1905653.0	0.450187	Y
2	IC 410-366140/14	0.5	0.243798	10.0	1908755.0	0.487595	Y
3	IC 410-366140/15	1.0	0.480033	10.0	1916682.0	0.480033	Y
4	IC 410-366140/16	2.0	0.879348	10.0	1921970.0	0.439674	Y
5	IC 410-366140/17	5.0	2.30274	10.0	1951110.0	0.460548	Y
6	ICIS 410-366140/18	10.0	4.547599	10.0	1983640.0	0.45476	Y
7	IC 410-366140/19	25.0	11.170693	10.0	1993554.0	0.446828	Y



Calibration / Dibromofluoromethane (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

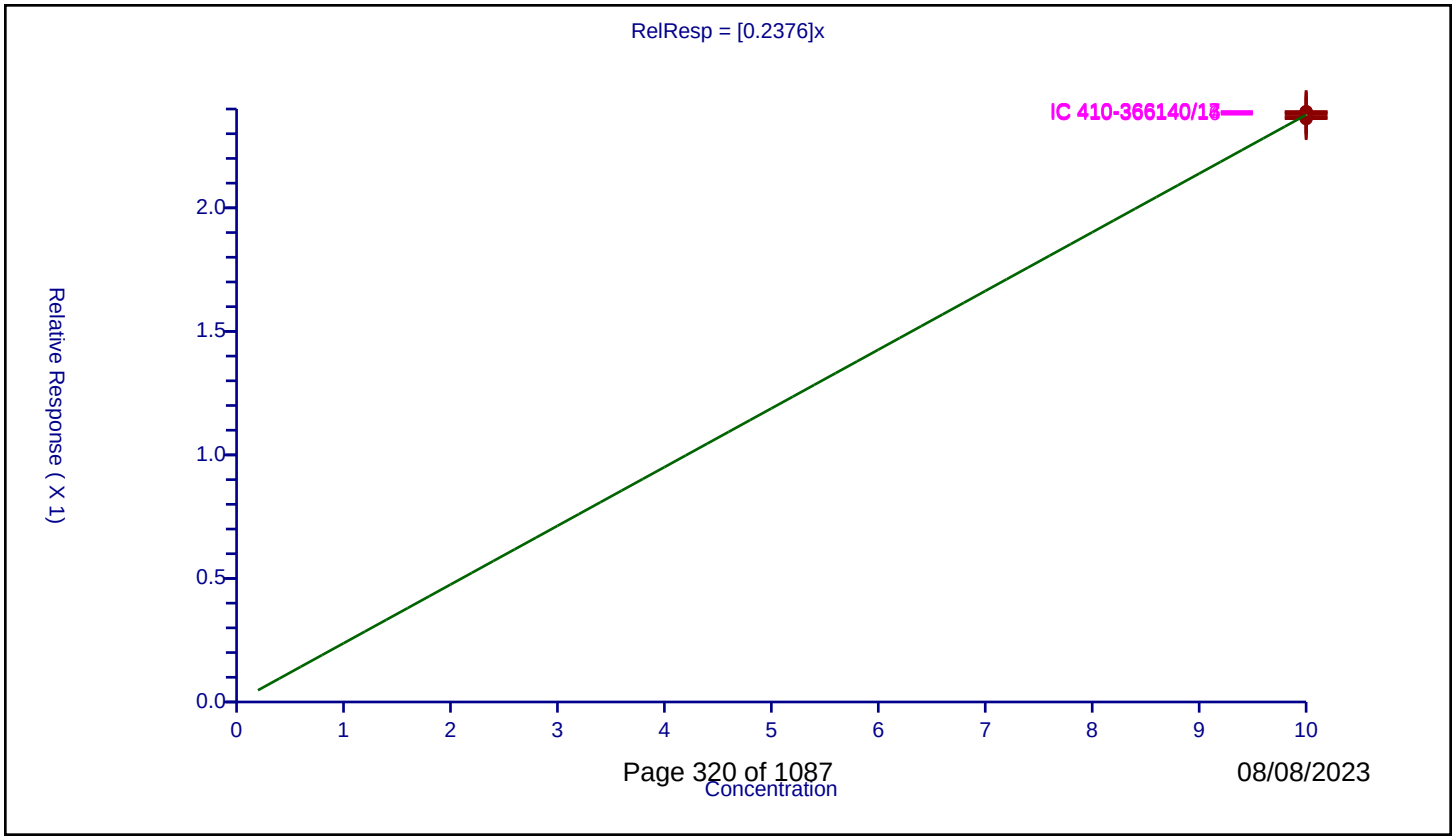
Curve Coefficients

Intercept:	0
Slope:	0.2376

Error Coefficients

Standard Error:	498000
Relative Standard Error:	0.5
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	2.388614	10.0	1905653.0	0.238861	Y
2	IC 410-366140/14	10.0	2.38282	10.0	1908755.0	0.238282	Y
3	IC 410-366140/15	10.0	2.364117	10.0	1916682.0	0.236412	Y
4	IC 410-366140/16	10.0	2.378971	10.0	1921970.0	0.237897	Y
5	IC 410-366140/17	10.0	2.389178	10.0	1951110.0	0.238918	Y
6	ICIS 410-366140/18	10.0	2.369639	10.0	1983640.0	0.236964	Y
7	IC 410-366140/19	10.0	2.360969	10.0	1993554.0	0.236097	Y



Calibration / 1,1,1-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

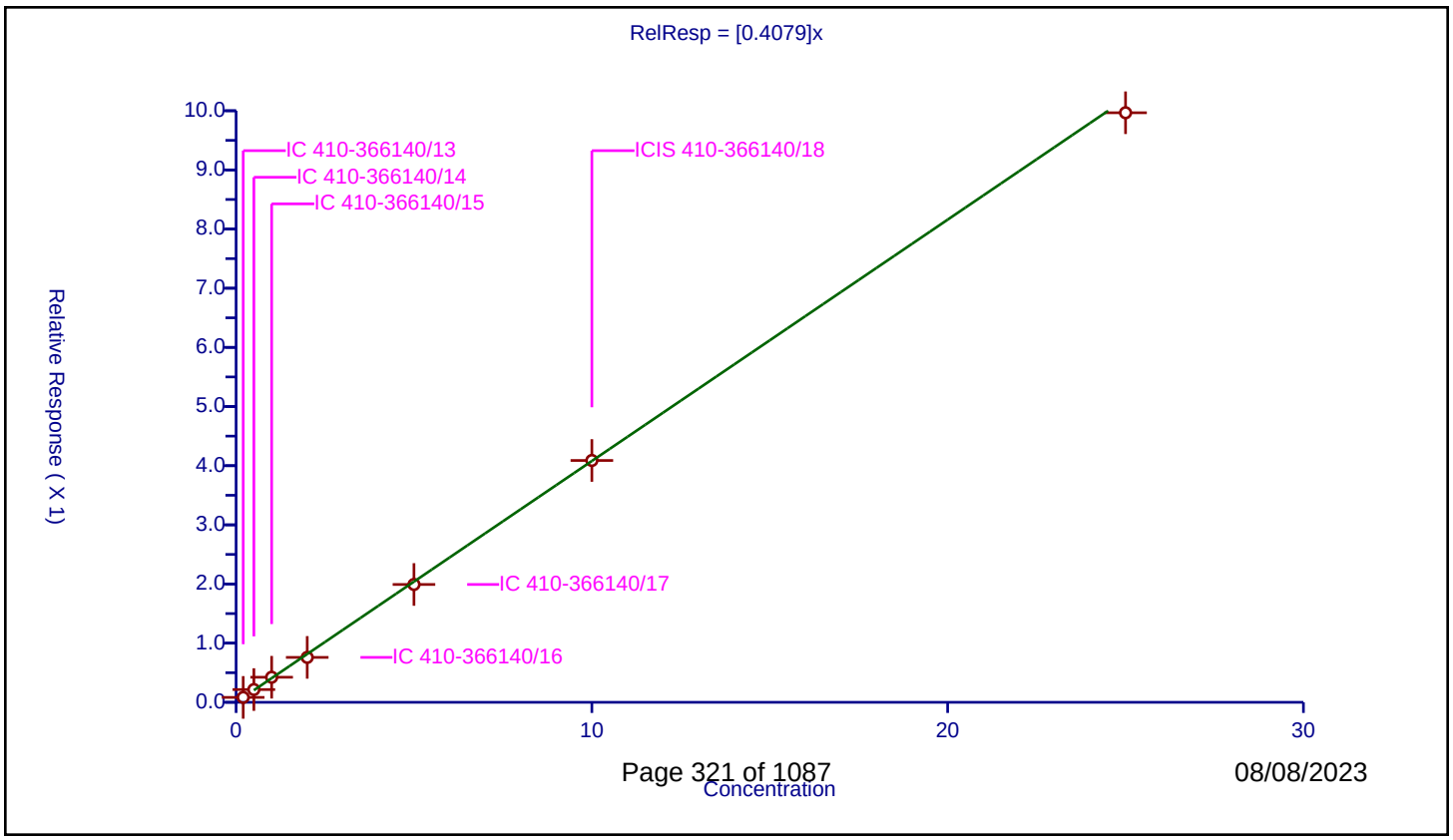
Curve Coefficients

Intercept:	0
Slope:	0.4079

Error Coefficients

Standard Error:	893000
Relative Standard Error:	4.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.082974	10.0	1905653.0	0.414871	Y
2	IC 410-366140/14	0.5	0.215779	10.0	1908755.0	0.431559	Y
3	IC 410-366140/15	1.0	0.423727	10.0	1916682.0	0.423727	Y
4	IC 410-366140/16	2.0	0.759205	10.0	1921970.0	0.379603	Y
5	IC 410-366140/17	5.0	1.991964	10.0	1951110.0	0.398393	Y
6	ICIS 410-366140/18	10.0	4.088212	10.0	1983640.0	0.408821	Y
7	IC 410-366140/19	25.0	9.966046	10.0	1993554.0	0.398642	Y



Calibration / Cyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

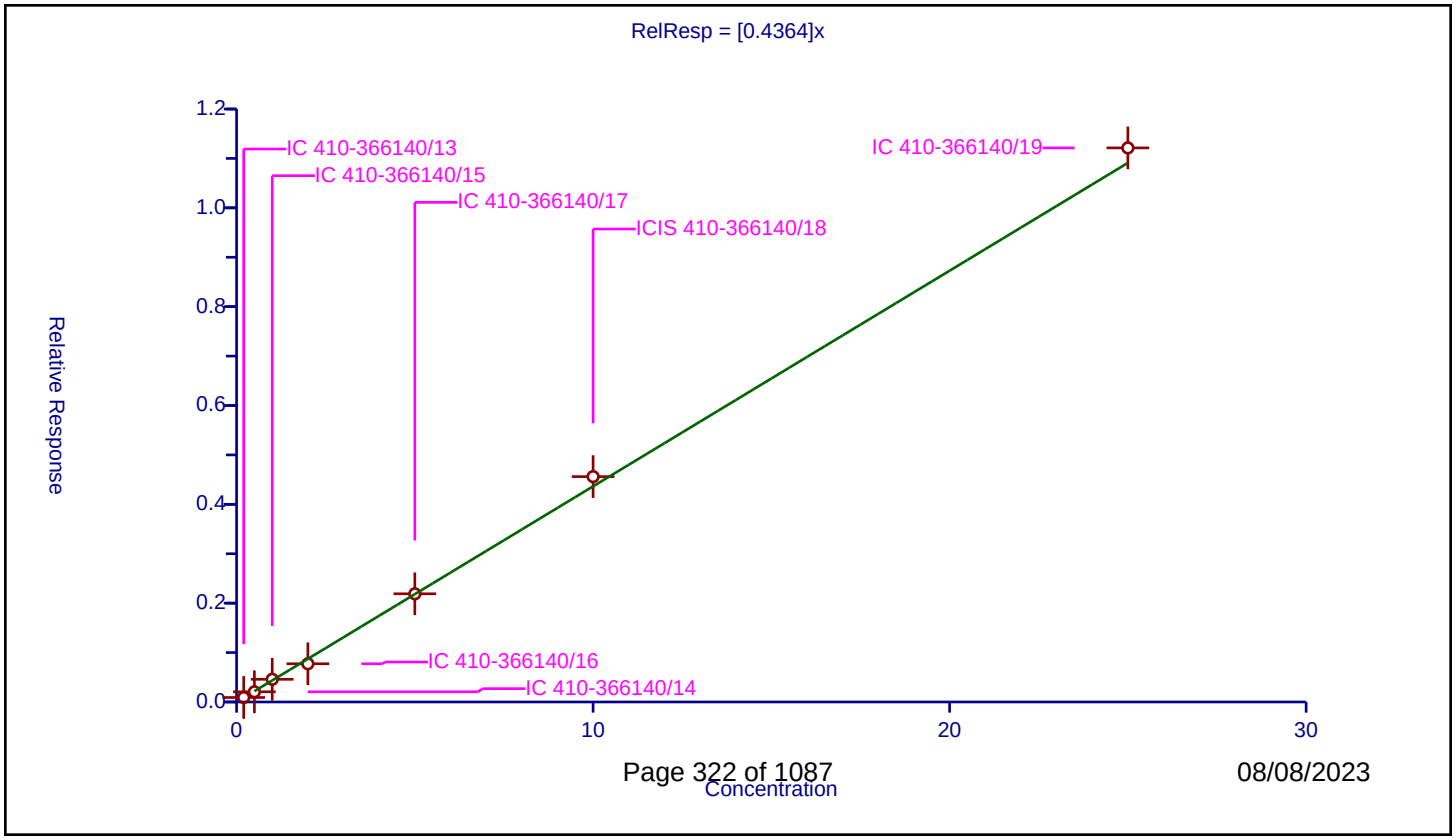
Curve Coefficients

Intercept:	0
Slope:	0.4364

Error Coefficients

Standard Error:	1000000
Relative Standard Error:	6.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.090798	10.0	1905653.0	0.453991	Y
2	IC 410-366140/14	0.5	0.206171	10.0	1908755.0	0.412342	Y
3	IC 410-366140/15	1.0	0.459017	10.0	1916682.0	0.459017	Y
4	IC 410-366140/16	2.0	0.773685	10.0	1921970.0	0.386843	Y
5	IC 410-366140/17	5.0	2.189436	10.0	1951110.0	0.437887	Y
6	ICIS 410-366140/18	10.0	4.560636	10.0	1983640.0	0.456064	Y
7	IC 410-366140/19	25.0	11.213421	10.0	1993554.0	0.448537	Y



08/08/2023

Calibration / 1,1-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

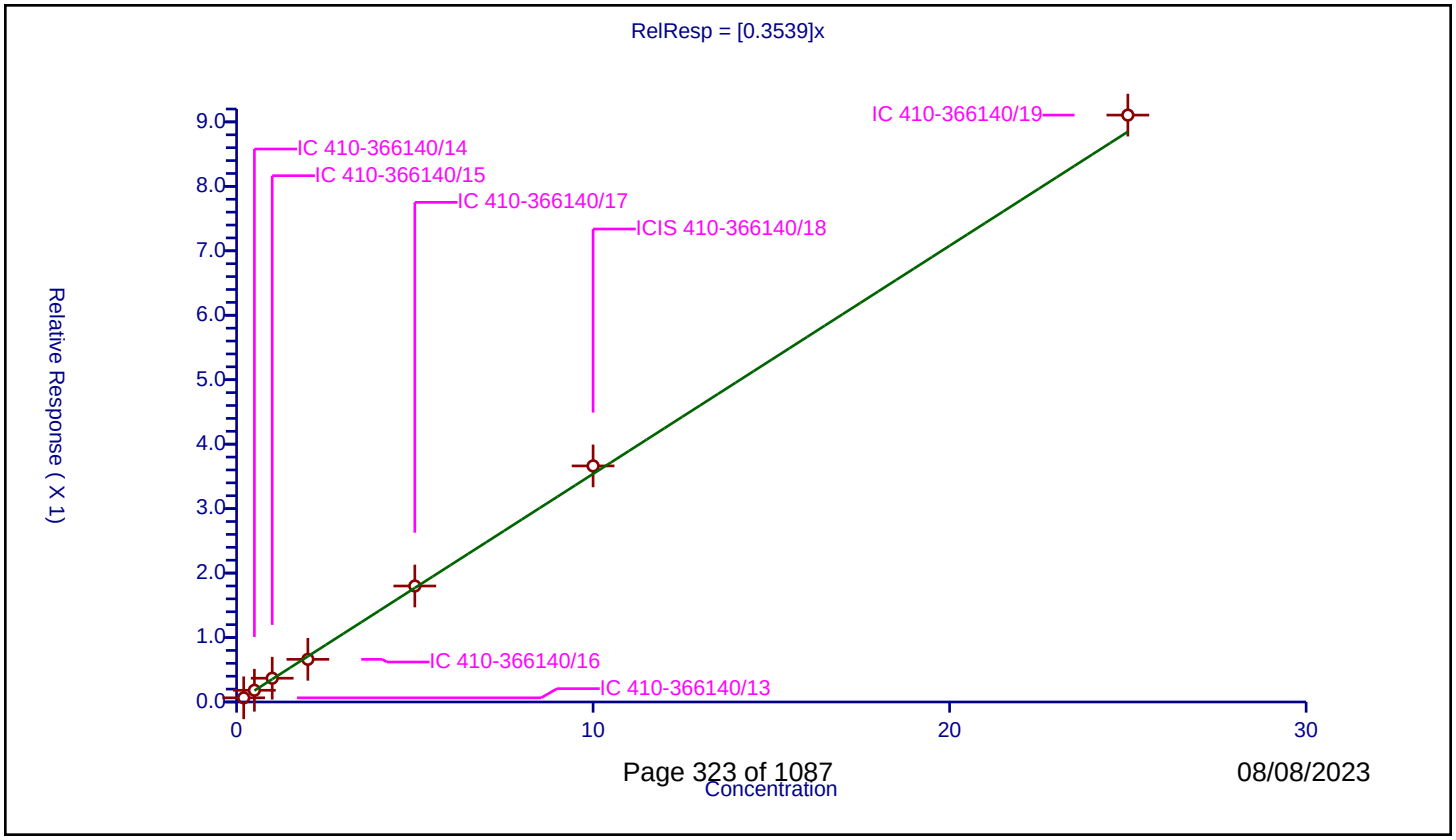
Curve Coefficients

Intercept:	0
Slope:	0.3539

Error Coefficients

Standard Error:	813000
Relative Standard Error:	5.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.064744	10.0	1905653.0	0.323721	Y
2	IC 410-366140/14	0.5	0.181836	10.0	1908755.0	0.363672	Y
3	IC 410-366140/15	1.0	0.368788	10.0	1916682.0	0.368788	Y
4	IC 410-366140/16	2.0	0.661759	10.0	1921970.0	0.330879	Y
5	IC 410-366140/17	5.0	1.799412	10.0	1951110.0	0.359882	Y
6	ICIS 410-366140/18	10.0	3.662378	10.0	1983640.0	0.366238	Y
7	IC 410-366140/19	25.0	9.105783	10.0	1993554.0	0.364231	Y



Calibration / Carbon tetrachloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

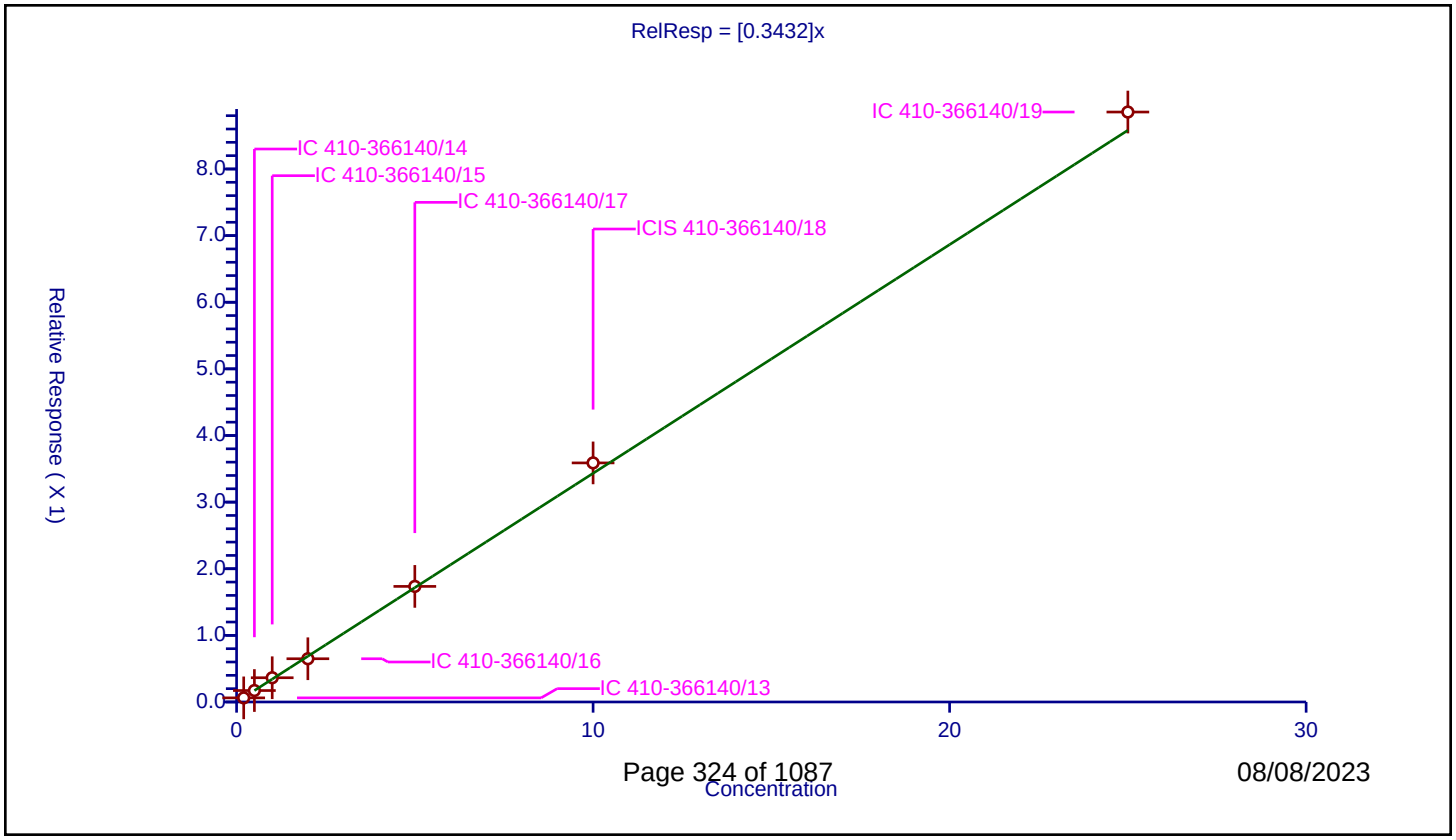
Curve Coefficients

Intercept:	0
Slope:	0.3432

Error Coefficients

Standard Error:	792000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.062026	10.0	1905653.0	0.31013	Y
2	IC 410-366140/14	0.5	0.171955	10.0	1908755.0	0.34391	Y
3	IC 410-366140/15	1.0	0.364161	10.0	1916682.0	0.364161	Y
4	IC 410-366140/16	2.0	0.648881	10.0	1921970.0	0.324441	Y
5	IC 410-366140/17	5.0	1.734864	10.0	1951110.0	0.346973	Y
6	ICIS 410-366140/18	10.0	3.588217	10.0	1983640.0	0.358822	Y
7	IC 410-366140/19	25.0	8.854729	10.0	1993554.0	0.354189	Y



Calibration / Isobutyl alcohol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

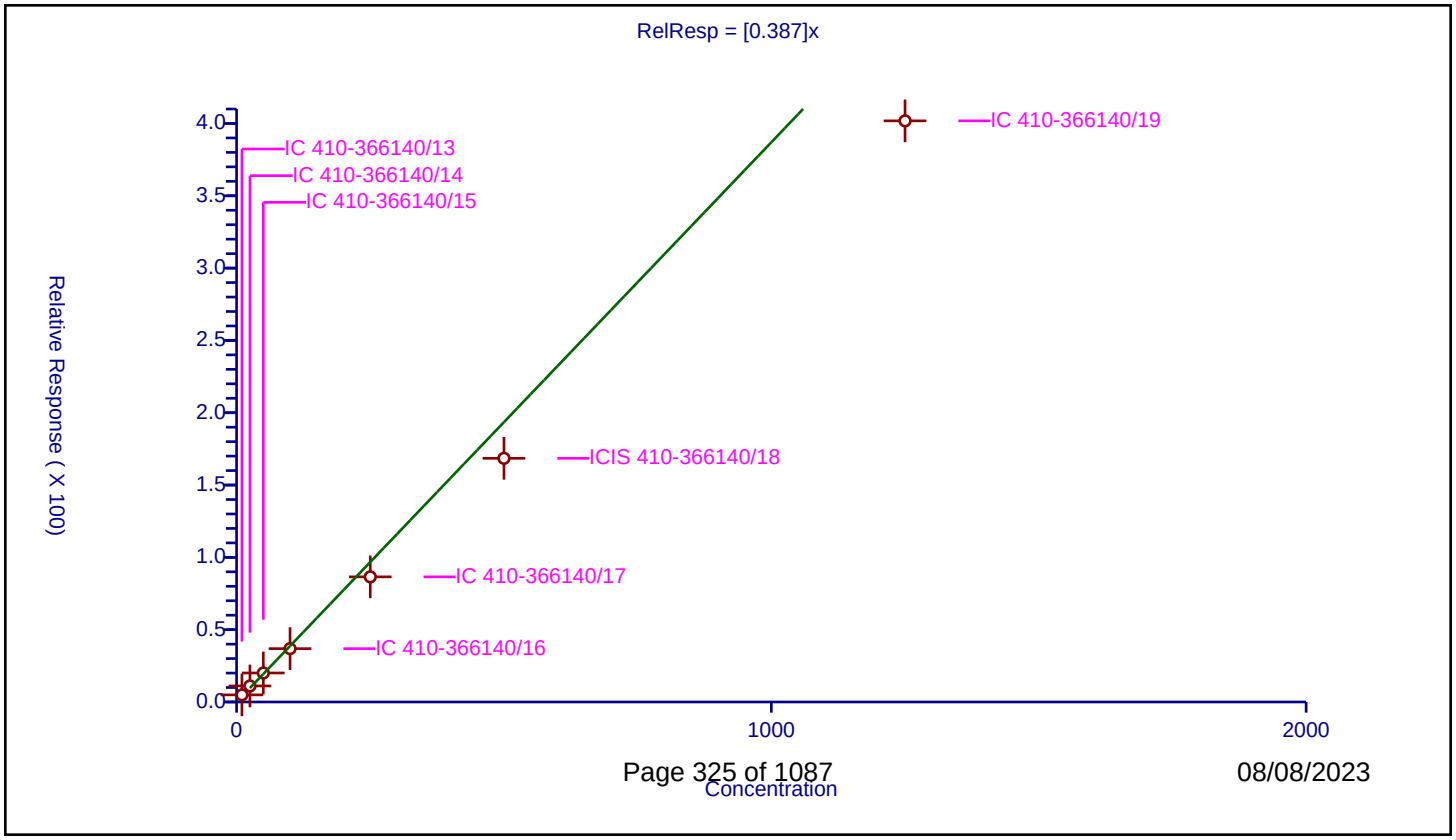
Curve Coefficients

Intercept:	0
Slope:	0.387

Error Coefficients

Standard Error:	280000
Relative Standard Error:	16.0
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.957

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	4.909671	50.0	59505.0	0.490967	Y
2	IC 410-366140/14	25.0	11.09673	50.0	64902.0	0.443869	Y
3	IC 410-366140/15	50.0	20.044546	50.0	74978.0	0.400891	Y
4	IC 410-366140/16	100.0	36.883379	50.0	68924.0	0.368834	Y
5	IC 410-366140/17	250.0	86.523646	50.0	70223.0	0.346095	Y
6	ICIS 410-366140/18	500.0	168.481653	50.0	78513.0	0.336963	Y
7	IC 410-366140/19	1250.0	401.80679	50.0	76932.0	0.321445	Y



Calibration / 1,2-Dichloroethane-d4 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

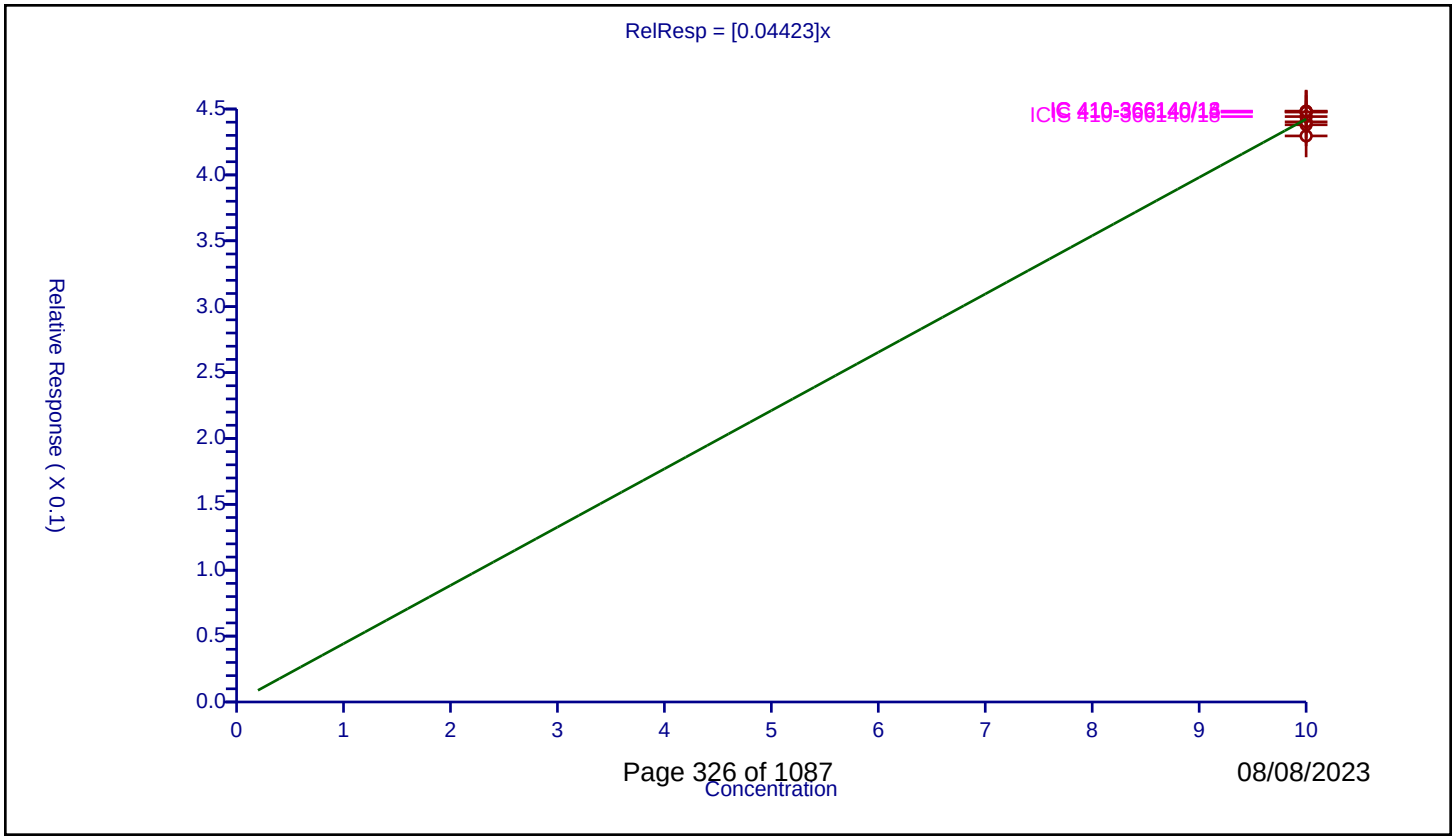
Curve Coefficients

Intercept:	0
Slope:	0.04423

Error Coefficients

Standard Error:	92700
Relative Standard Error:	1.6
Correlation Coefficient:	0.00000000000000000000
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	0.448067	10.0	1905653.0	0.044807	Y
2	IC 410-366140/14	10.0	0.448407	10.0	1908755.0	0.044841	Y
3	IC 410-366140/15	10.0	0.447654	10.0	1916682.0	0.044765	Y
4	IC 410-366140/16	10.0	0.43803	10.0	1921970.0	0.043803	Y
5	IC 410-366140/17	10.0	0.440272	10.0	1951110.0	0.044027	Y
6	ICIS 410-366140/18	10.0	0.444244	10.0	1983640.0	0.044424	Y
7	IC 410-366140/19	10.0	0.429585	10.0	1993554.0	0.042958	Y



Calibration / Benzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

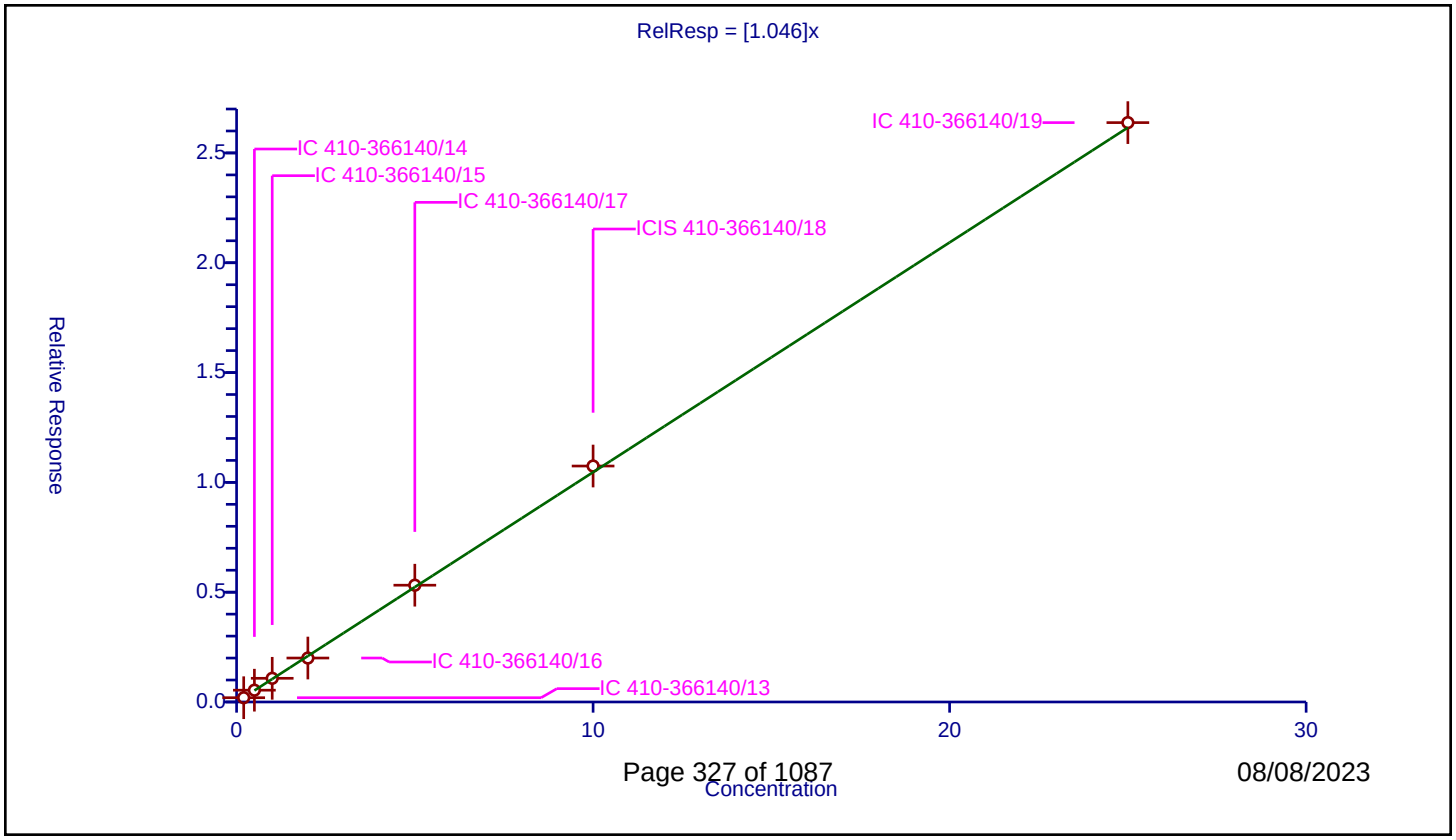
Curve Coefficients

Intercept:	0
Slope:	1.046

Error Coefficients

Standard Error:	2360000
Relative Standard Error:	4.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.194899	10.0	1905653.0	0.974495	Y
2	IC 410-366140/14	0.5	0.537738	10.0	1908755.0	1.075476	Y
3	IC 410-366140/15	1.0	1.079381	10.0	1916682.0	1.079381	Y
4	IC 410-366140/16	2.0	2.001483	10.0	1921970.0	1.000741	Y
5	IC 410-366140/17	5.0	5.31767	10.0	1951110.0	1.063534	Y
6	ICIS 410-366140/18	10.0	10.744142	10.0	1983640.0	1.074414	Y
7	IC 410-366140/19	25.0	26.380514	10.0	1993554.0	1.055221	Y



Calibration / 1,2-Dichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

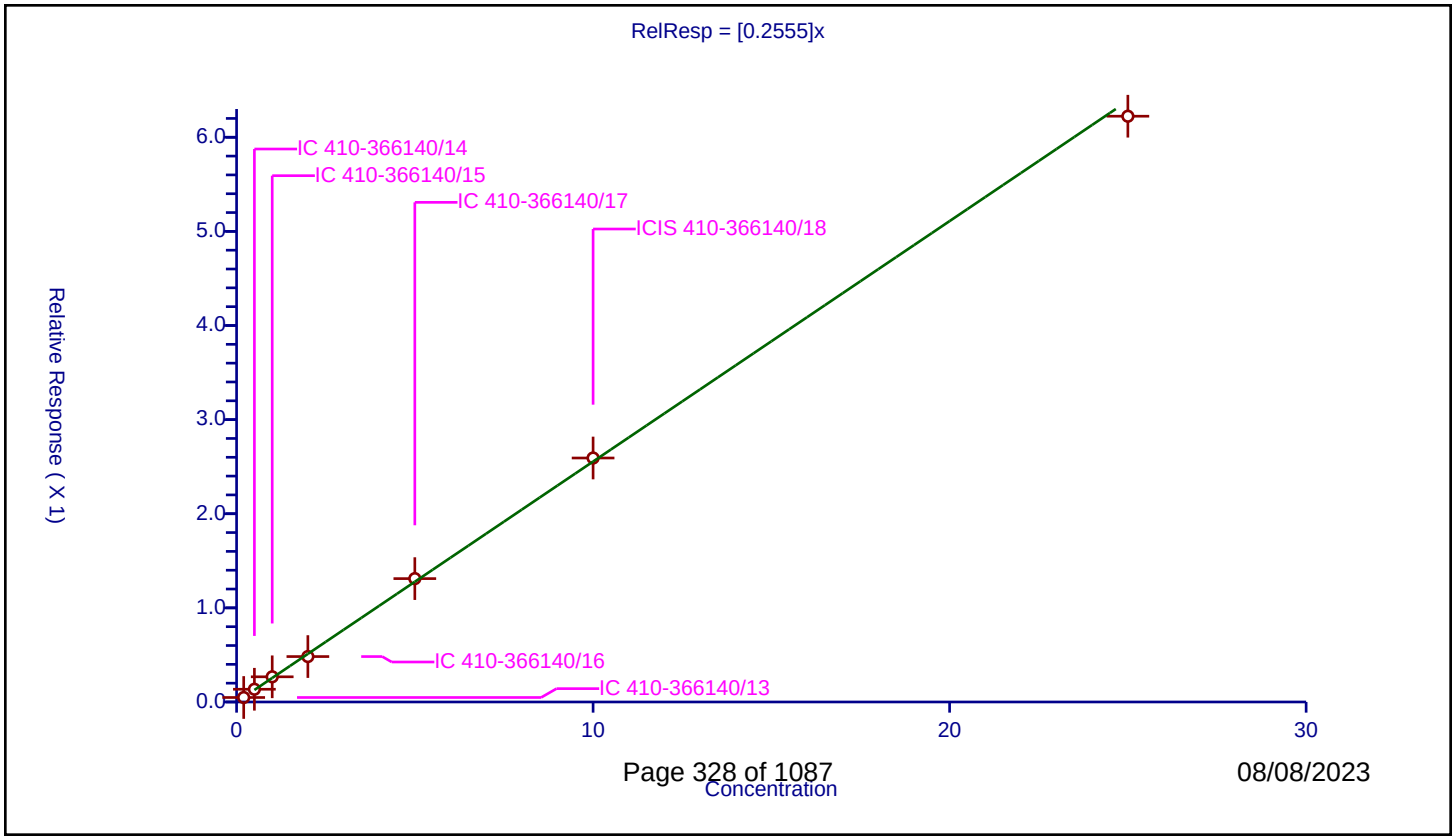
Curve Coefficients

Intercept:	0
Slope:	0.2555

Error Coefficients

Standard Error:	560000
Relative Standard Error:	4.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.047716	10.0	1905653.0	0.23858	Y
2	IC 410-366140/14	0.5	0.135235	10.0	1908755.0	0.270469	Y
3	IC 410-366140/15	1.0	0.267525	10.0	1916682.0	0.267525	Y
4	IC 410-366140/16	2.0	0.48264	10.0	1921970.0	0.24132	Y
5	IC 410-366140/17	5.0	1.310859	10.0	1951110.0	0.262172	Y
6	ICIS 410-366140/18	10.0	2.592255	10.0	1983640.0	0.259225	Y
7	IC 410-366140/19	25.0	6.223483	10.0	1993554.0	0.248939	Y



Calibration / Tert-amyl methyl ether

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

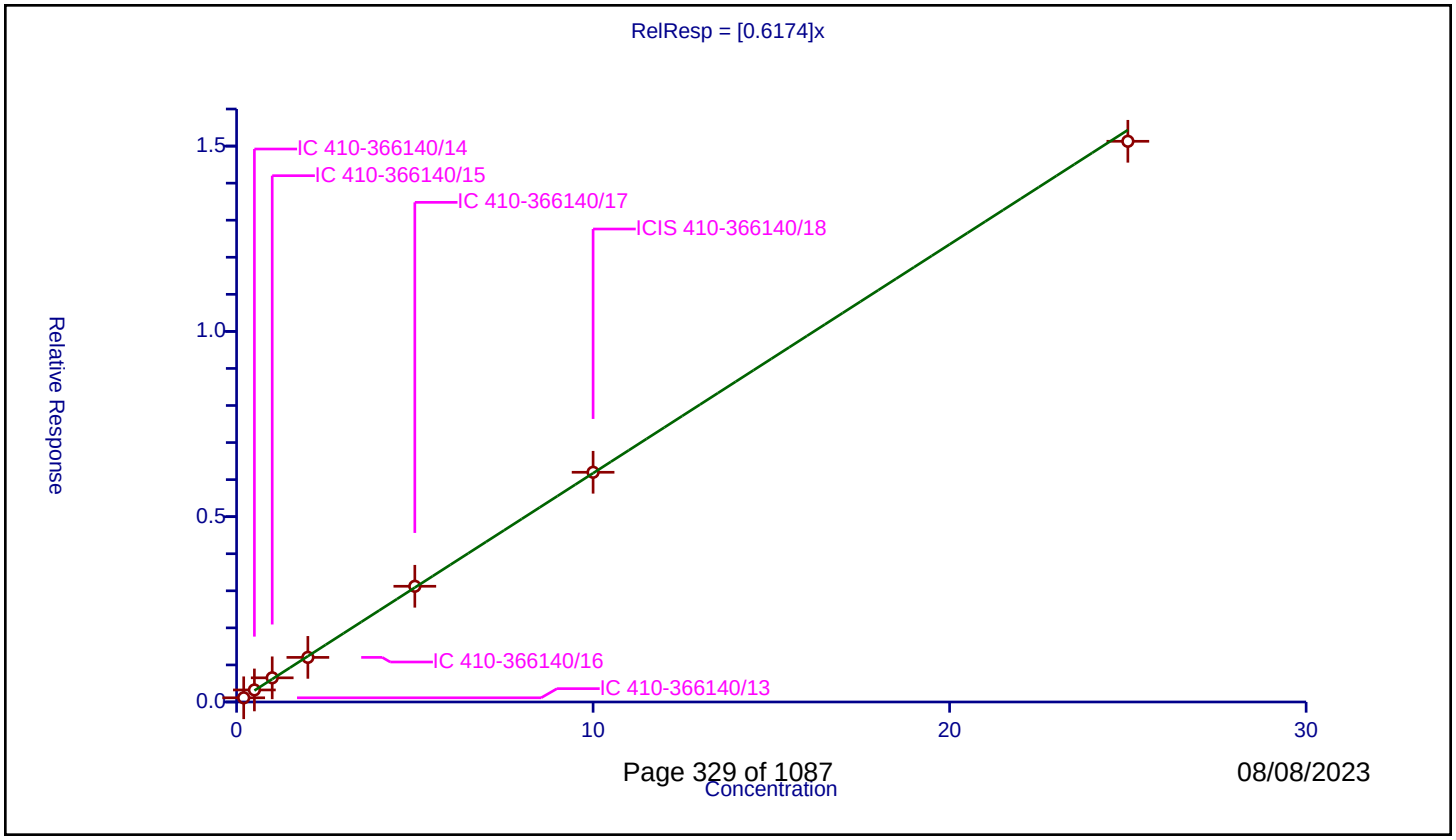
Curve Coefficients

Intercept:	0
Slope:	0.6174

Error Coefficients

Standard Error:	1360000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.113651	10.0	1905653.0	0.568257	Y
2	IC 410-366140/14	0.5	0.324924	10.0	1908755.0	0.649848	Y
3	IC 410-366140/15	1.0	0.652607	10.0	1916682.0	0.652607	Y
4	IC 410-366140/16	2.0	1.203083	10.0	1921970.0	0.601542	Y
5	IC 410-366140/17	5.0	3.122151	10.0	1951110.0	0.62443	Y
6	ICIS 410-366140/18	10.0	6.198403	10.0	1983640.0	0.61984	Y
7	IC 410-366140/19	25.0	15.129171	10.0	1993554.0	0.605167	Y



Calibration / n-Heptane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

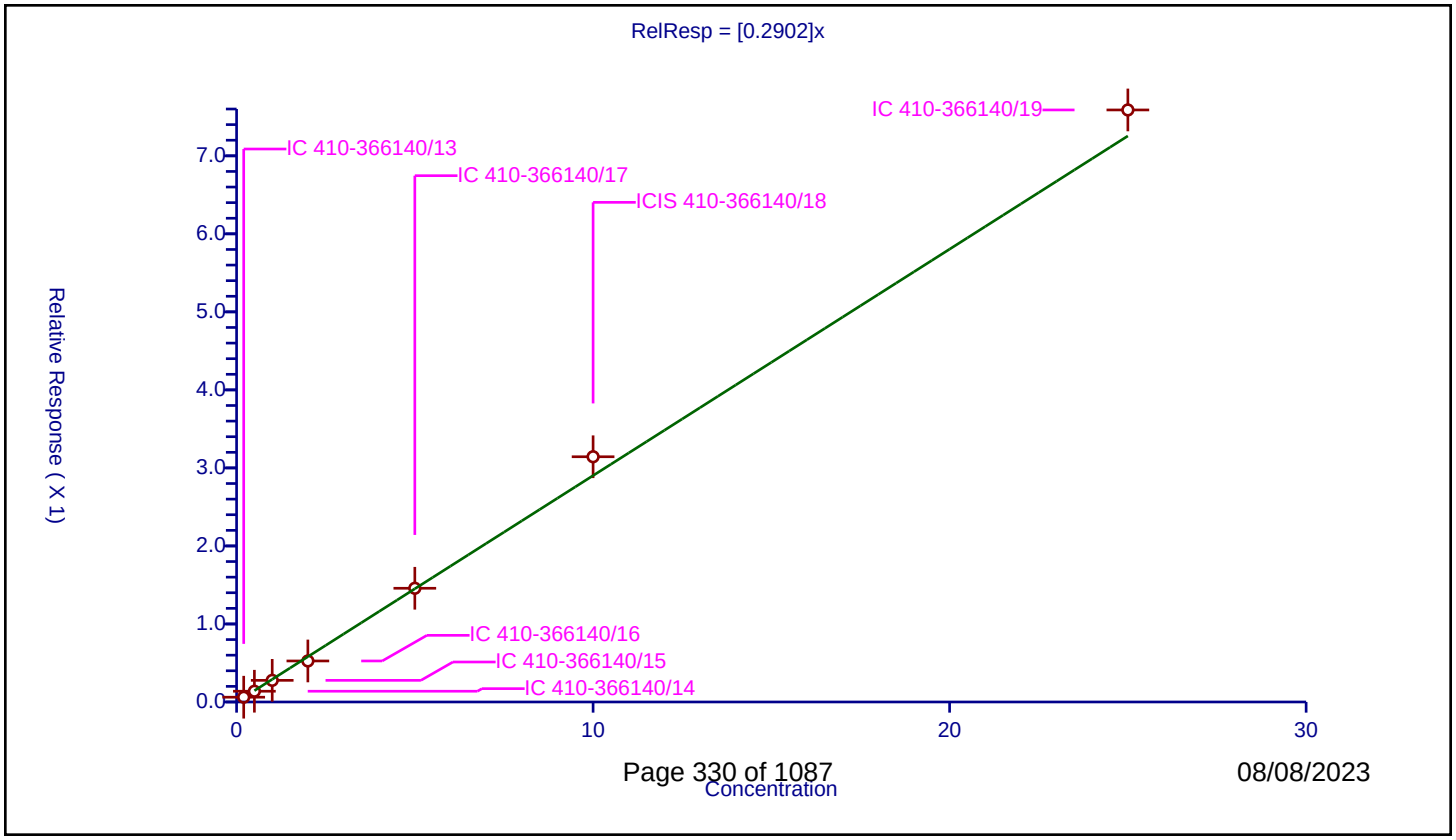
Curve Coefficients

Intercept:	0
Slope:	0.2902

Error Coefficients

Standard Error:	680000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.06127	10.0	1905653.0	0.306352	Y
2	IC 410-366140/14	0.5	0.137739	10.0	1908755.0	0.275478	Y
3	IC 410-366140/15	1.0	0.277213	10.0	1916682.0	0.277213	Y
4	IC 410-366140/16	2.0	0.525903	10.0	1921970.0	0.262952	Y
5	IC 410-366140/17	5.0	1.457355	10.0	1951110.0	0.291471	Y
6	ICIS 410-366140/18	10.0	3.143035	10.0	1983640.0	0.314304	Y
7	IC 410-366140/19	25.0	7.587991	10.0	1993554.0	0.30352	Y



Calibration / n-Butanol

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

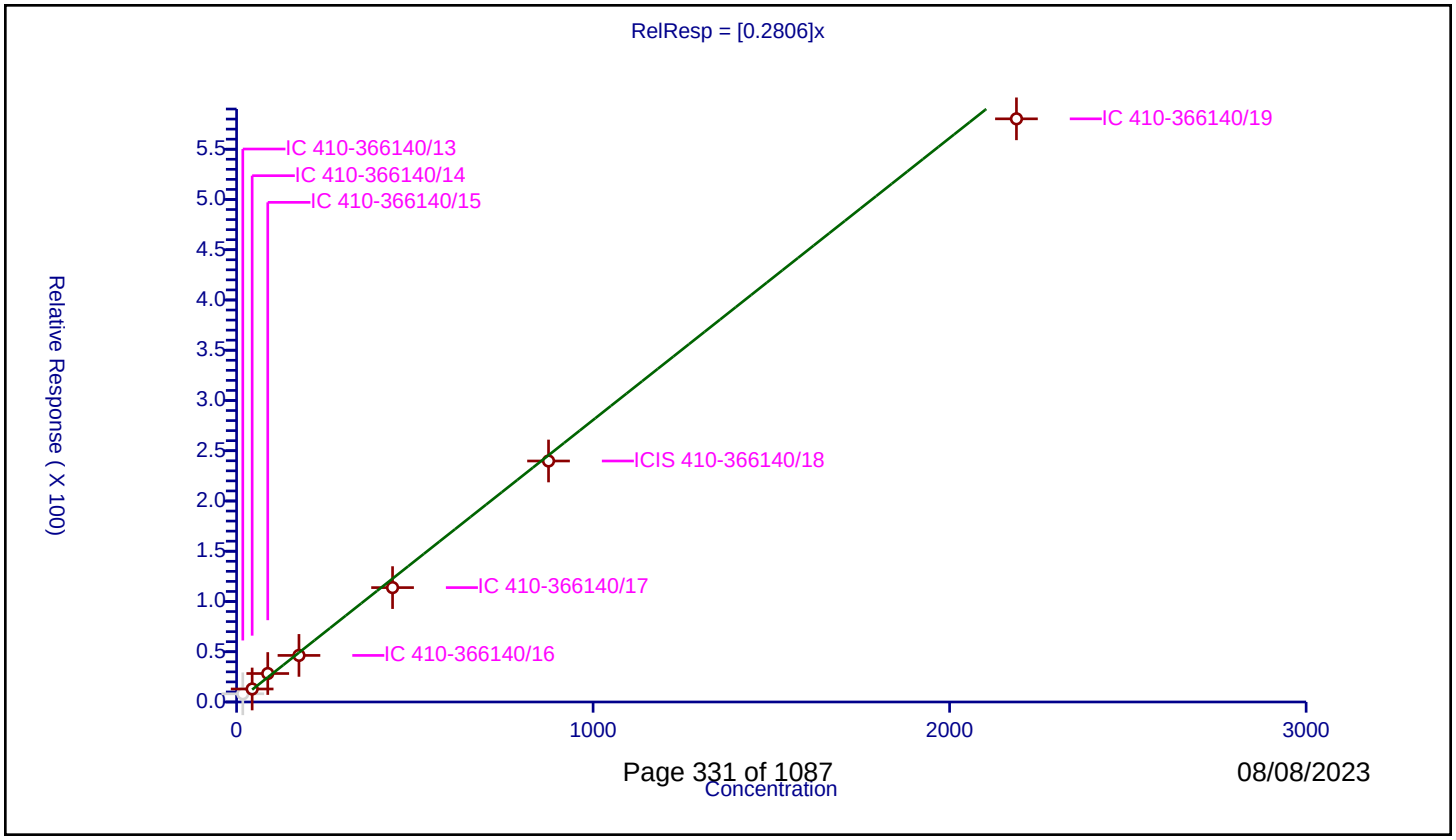
Curve Coefficients

Intercept:	0
Slope:	0.2806

Error Coefficients

Standard Error:	440000
Relative Standard Error:	8.8
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.987

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	17.5	8.16486	50.0	59505.0	0.466563	N
2	IC 410-366140/14	43.75	12.92256	50.0	64902.0	0.295373	Y
3	IC 410-366140/15	87.5	28.335645	50.0	74978.0	0.323836	Y
4	IC 410-366140/16	175.0	46.333643	50.0	68924.0	0.264764	Y
5	IC 410-366140/17	437.5	113.820258	50.0	70223.0	0.260161	Y
6	ICIS 410-366140/18	875.0	239.795957	50.0	78513.0	0.274053	Y
7	IC 410-366140/19	2187.5	580.226044	50.0	76932.0	0.265246	Y



08/08/2023

Calibration / Trichloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

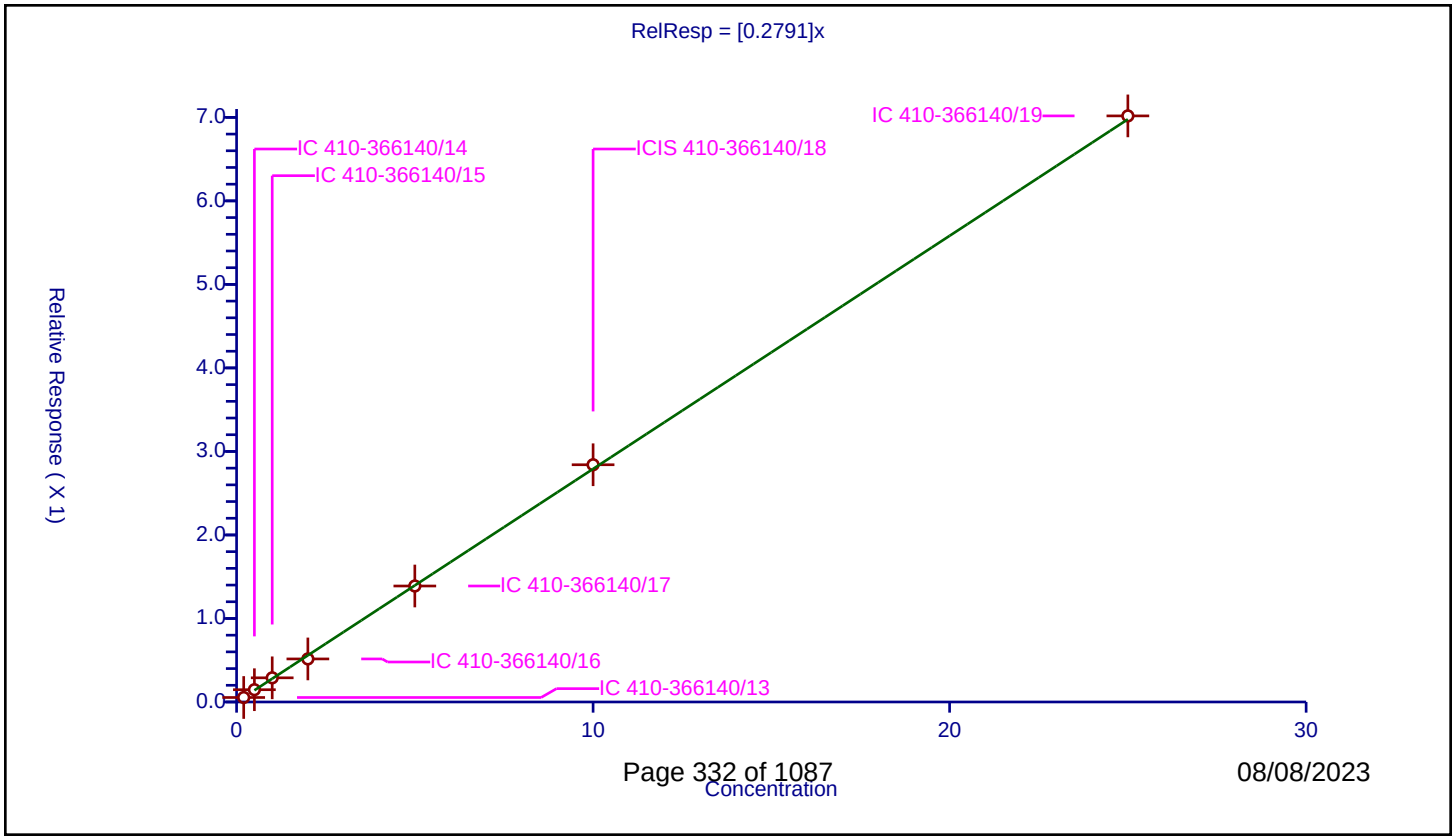
Curve Coefficients

Intercept:	0
Slope:	0.2791

Error Coefficients

Standard Error:	627000
Relative Standard Error:	4.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.053955	10.0	1905653.0	0.269776	Y
2	IC 410-366140/14	0.5	0.147117	10.0	1908755.0	0.294234	Y
3	IC 410-366140/15	1.0	0.289307	10.0	1916682.0	0.289307	Y
4	IC 410-366140/16	2.0	0.515508	10.0	1921970.0	0.257754	Y
5	IC 410-366140/17	5.0	1.388686	10.0	1951110.0	0.277737	Y
6	ICIS 410-366140/18	10.0	2.840641	10.0	1983640.0	0.284064	Y
7	IC 410-366140/19	25.0	7.017507	10.0	1993554.0	0.2807	Y



Calibration / Methylcyclohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

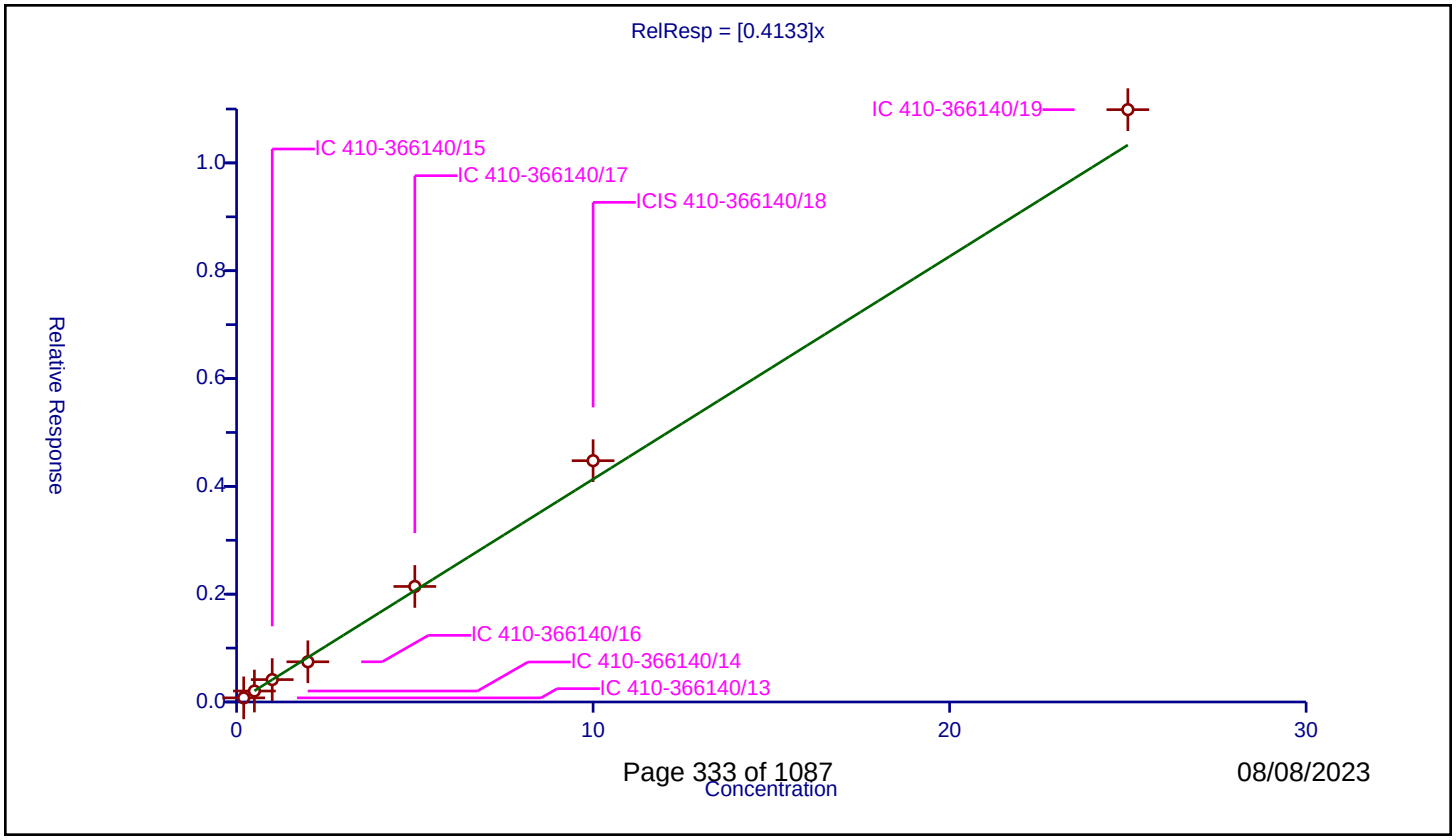
Curve Coefficients

Intercept:	0
Slope:	0.4133

Error Coefficients

Standard Error:	982000
Relative Standard Error:	6.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.076499	10.0	1905653.0	0.382494	Y
2	IC 410-366140/14	0.5	0.203504	10.0	1908755.0	0.407009	Y
3	IC 410-366140/15	1.0	0.415056	10.0	1916682.0	0.415056	Y
4	IC 410-366140/16	2.0	0.745579	10.0	1921970.0	0.372789	Y
5	IC 410-366140/17	5.0	2.143288	10.0	1951110.0	0.428658	Y
6	ICIS 410-366140/18	10.0	4.476099	10.0	1983640.0	0.44761	Y
7	IC 410-366140/19	25.0	10.988305	10.0	1993554.0	0.439532	Y



Calibration / 1,2-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

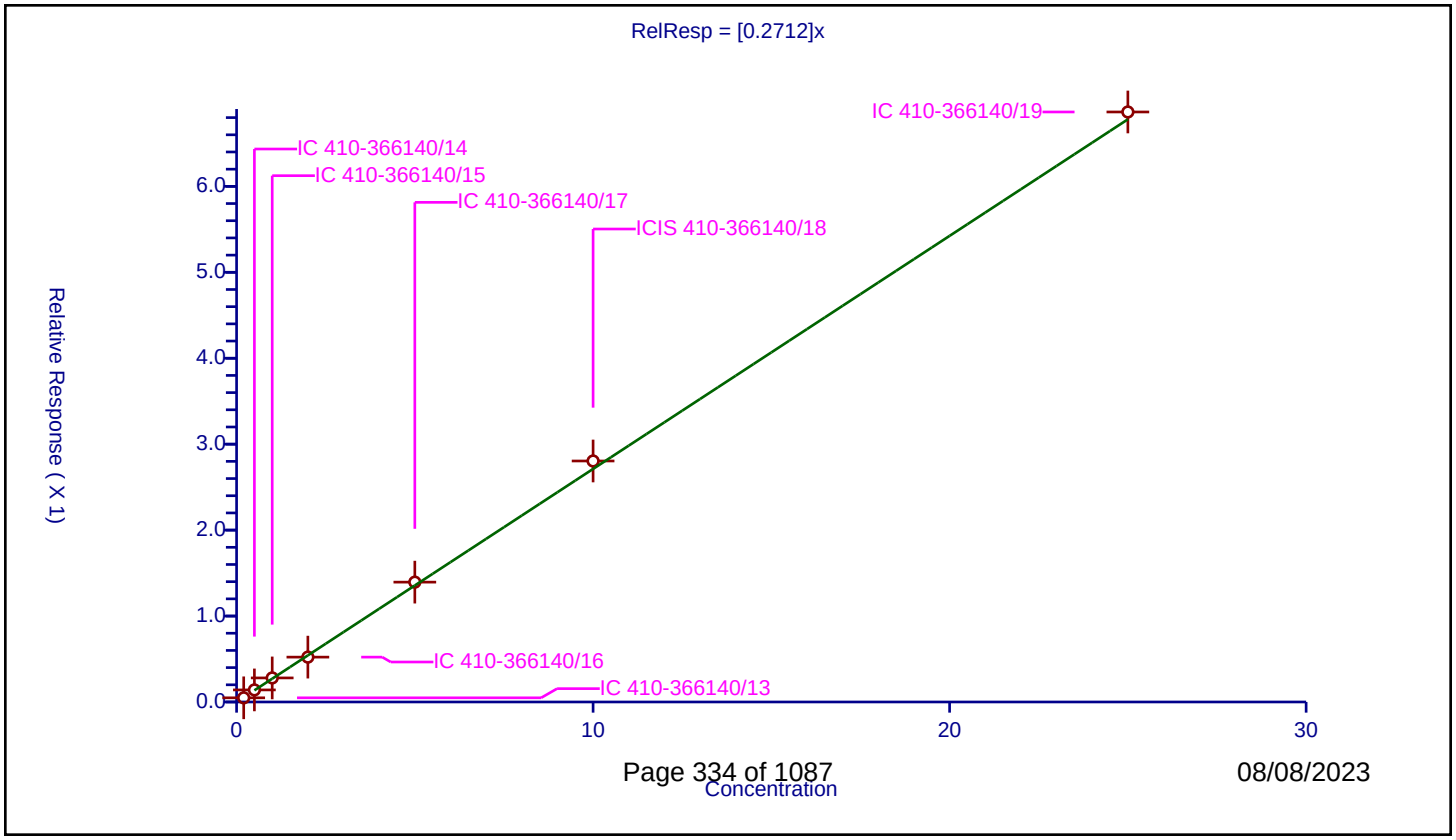
Curve Coefficients

Intercept:	0
Slope:	0.2712

Error Coefficients

Standard Error:	615000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.048519	10.0	1905653.0	0.242594	Y
2	IC 410-366140/14	0.5	0.140311	10.0	1908755.0	0.280623	Y
3	IC 410-366140/15	1.0	0.28013	10.0	1916682.0	0.28013	Y
4	IC 410-366140/16	2.0	0.522042	10.0	1921970.0	0.261021	Y
5	IC 410-366140/17	5.0	1.39454	10.0	1951110.0	0.278908	Y
6	ICIS 410-366140/18	10.0	2.804319	10.0	1983640.0	0.280432	Y
7	IC 410-366140/19	25.0	6.865663	10.0	1993554.0	0.274627	Y



Calibration / 1,4-Dioxane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

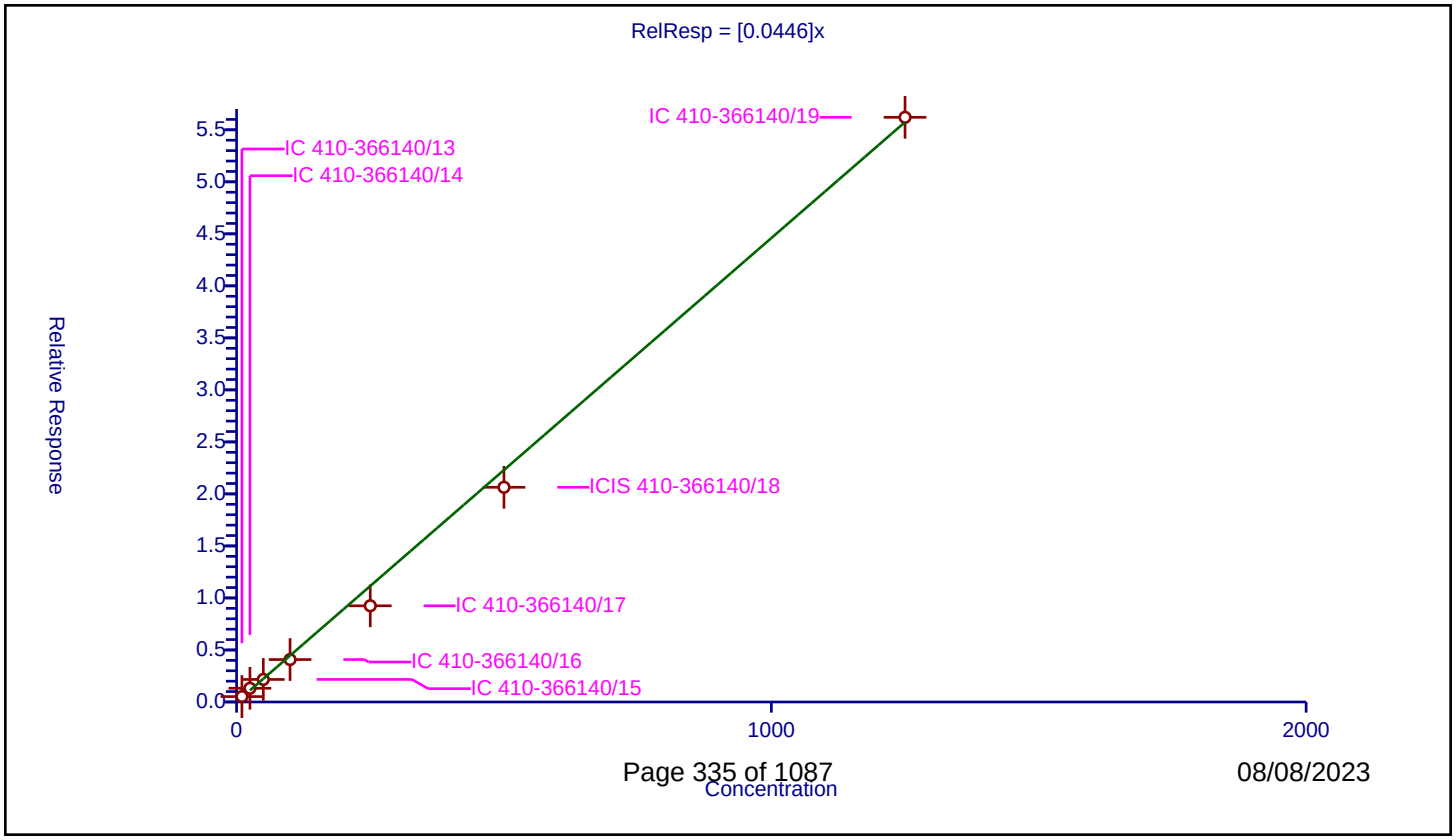
Curve Coefficients

Intercept:	0
Slope:	0.0446

Error Coefficients

Standard Error:	38100
Relative Standard Error:	13.2
Correlation Coefficient:	0.997
Coefficient of Determination (Adjusted):	0.973

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	0.520124	50.0	59505.0	0.052012	Y
2	IC 410-366140/14	25.0	1.319682	50.0	64902.0	0.052787	Y
3	IC 410-366140/15	50.0	2.167969	50.0	74978.0	0.043359	Y
4	IC 410-366140/16	100.0	4.078405	50.0	68924.0	0.040784	Y
5	IC 410-366140/17	250.0	9.245546	50.0	70223.0	0.036982	Y
6	ICIS 410-366140/18	500.0	20.639257	50.0	78513.0	0.041279	Y
7	IC 410-366140/19	1250.0	56.201581	50.0	76932.0	0.044961	Y



Calibration / Methyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

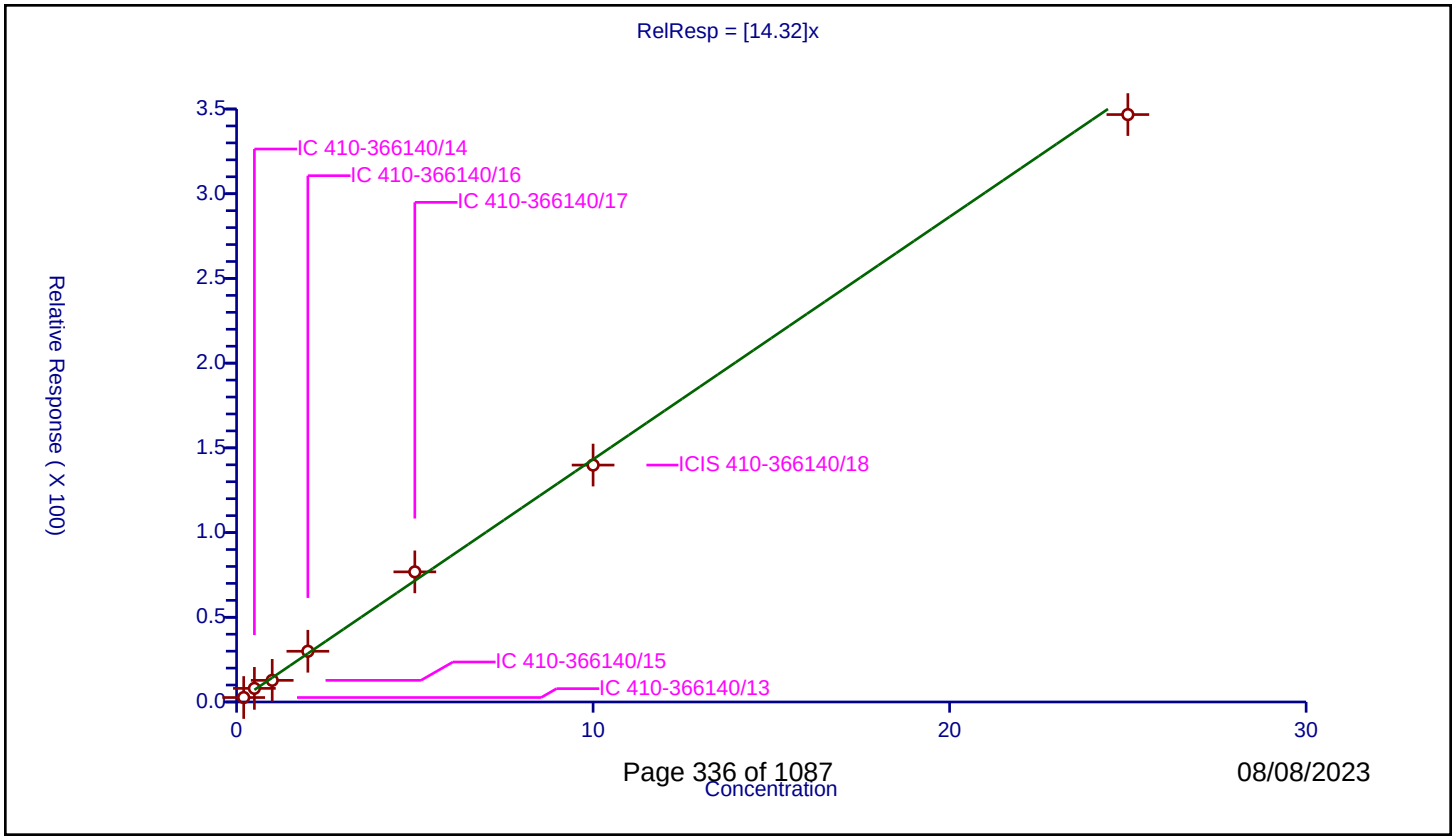
Curve Coefficients

Intercept:	0
Slope:	14.32

Error Coefficients

Standard Error:	240000
Relative Standard Error:	8.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	2.640114	50.0	59505.0	13.200571	Y
2	IC 410-366140/14	0.5	8.035962	50.0	64902.0	16.071924	Y
3	IC 410-366140/15	1.0	12.775081	50.0	74978.0	12.775081	Y
4	IC 410-366140/16	2.0	29.951106	50.0	68924.0	14.975553	Y
5	IC 410-366140/17	5.0	76.80176	50.0	70223.0	15.360352	Y
6	ICIS 410-366140/18	10.0	139.837989	50.0	78513.0	13.983799	Y
7	IC 410-366140/19	25.0	346.72048	50.0	76932.0	13.868819	Y



08/08/2023

Calibration / Dibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

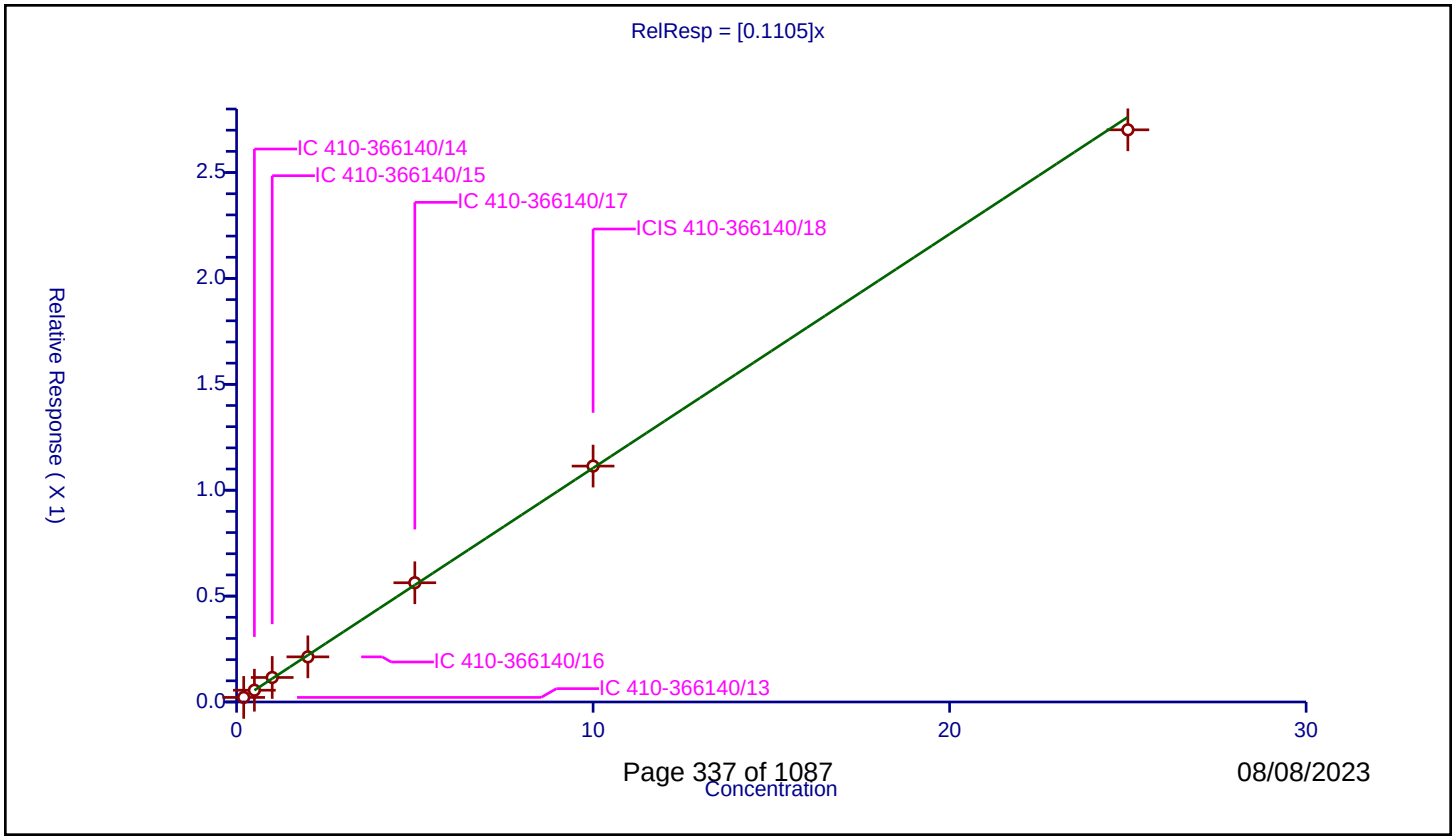
Curve Coefficients

Intercept:	0
Slope:	0.1105

Error Coefficients

Standard Error:	243000
Relative Standard Error:	3.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.021536	10.0	1905653.0	0.10768	Y
2	IC 410-366140/14	0.5	0.055607	10.0	1908755.0	0.111214	Y
3	IC 410-366140/15	1.0	0.115836	10.0	1916682.0	0.115836	Y
4	IC 410-366140/16	2.0	0.213089	10.0	1921970.0	0.106544	Y
5	IC 410-366140/17	5.0	0.563064	10.0	1951110.0	0.112613	Y
6	ICIS 410-366140/18	10.0	1.113912	10.0	1983640.0	0.111391	Y
7	IC 410-366140/19	25.0	2.701778	10.0	1993554.0	0.108071	Y



Calibration / Dichlorobromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

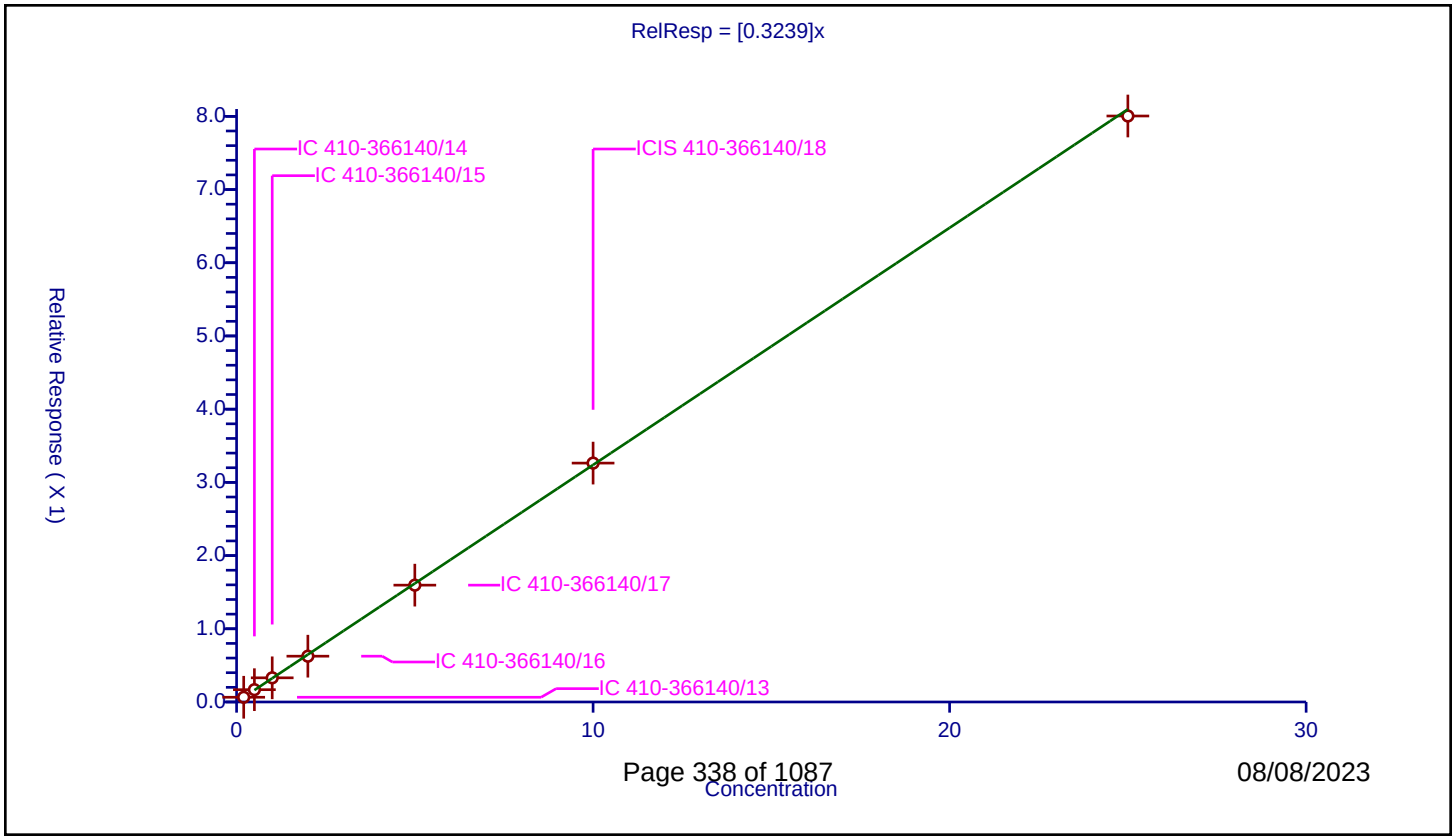
Curve Coefficients

Intercept:	0
Slope:	0.3239

Error Coefficients

Standard Error:	717000
Relative Standard Error:	2.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.999

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.064477	10.0	1905653.0	0.322383	Y
2	IC 410-366140/14	0.5	0.168052	10.0	1908755.0	0.336104	Y
3	IC 410-366140/15	1.0	0.33005	10.0	1916682.0	0.33005	Y
4	IC 410-366140/16	2.0	0.625572	10.0	1921970.0	0.312786	Y
5	IC 410-366140/17	5.0	1.595917	10.0	1951110.0	0.319183	Y
6	ICIS 410-366140/18	10.0	3.263445	10.0	1983640.0	0.326344	Y
7	IC 410-366140/19	25.0	8.004408	10.0	1993554.0	0.320176	Y



Calibration / 2-Nitropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

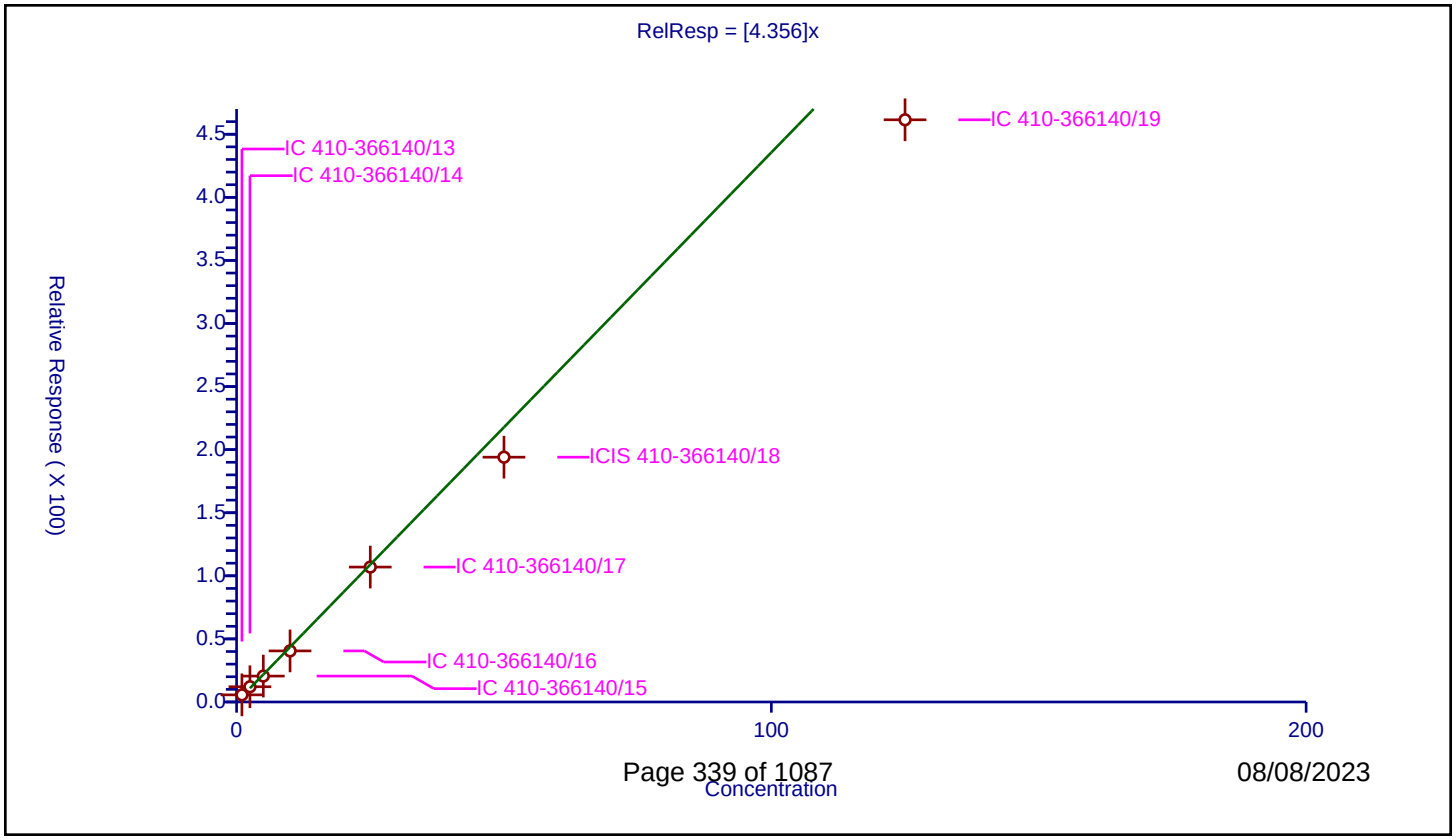
Curve Coefficients

Intercept:	0
Slope:	4.356

Error Coefficients

Standard Error:	322000
Relative Standard Error:	15.5
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.960

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	1.0	5.648265	50.0	59505.0	5.648265	Y
2	IC 410-366140/14	2.5	12.084373	50.0	64902.0	4.833749	Y
3	IC 410-366140/15	5.0	20.535357	50.0	74978.0	4.107071	Y
4	IC 410-366140/16	10.0	40.493877	50.0	68924.0	4.049388	Y
5	IC 410-366140/17	25.0	106.948578	50.0	70223.0	4.277943	Y
6	ICIS 410-366140/18	50.0	194.032835	50.0	78513.0	3.880657	Y
7	IC 410-366140/19	125.0	461.451022	50.0	76932.0	3.691608	Y



Calibration / 1-Bromo-2-chloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

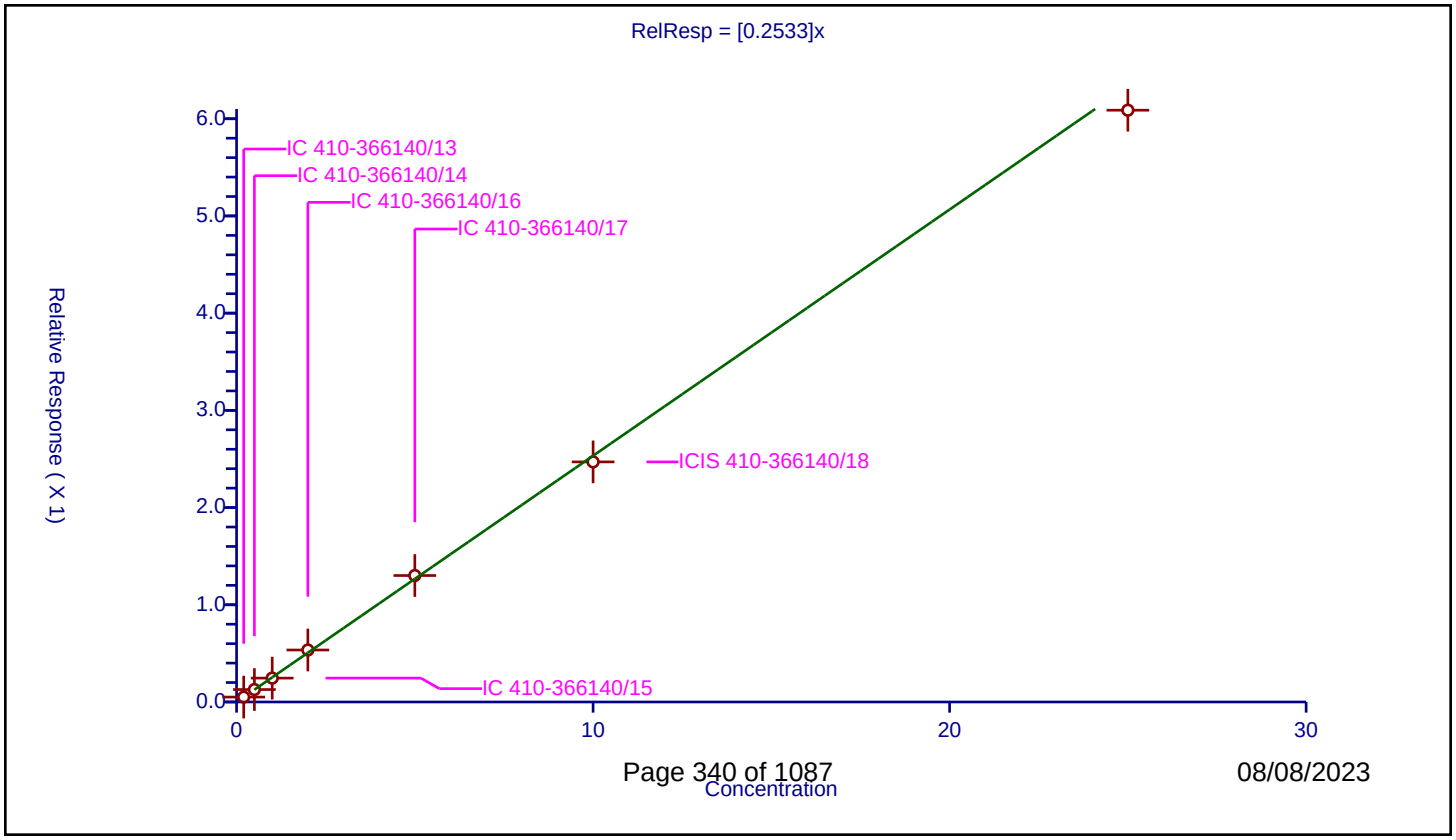
Curve Coefficients

Intercept:	0
Slope:	0.2533

Error Coefficients

Standard Error:	546000
Relative Standard Error:	3.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.050712	10.0	1905653.0	0.253561	Y
2	IC 410-366140/14	0.5	0.127858	10.0	1908755.0	0.255716	Y
3	IC 410-366140/15	1.0	0.245753	10.0	1916682.0	0.245753	Y
4	IC 410-366140/16	2.0	0.534696	10.0	1921970.0	0.267348	Y
5	IC 410-366140/17	5.0	1.300993	10.0	1951110.0	0.260199	Y
6	ICIS 410-366140/18	10.0	2.469742	10.0	1983640.0	0.246974	Y
7	IC 410-366140/19	25.0	6.087656	10.0	1993554.0	0.243506	Y



Calibration / cis-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

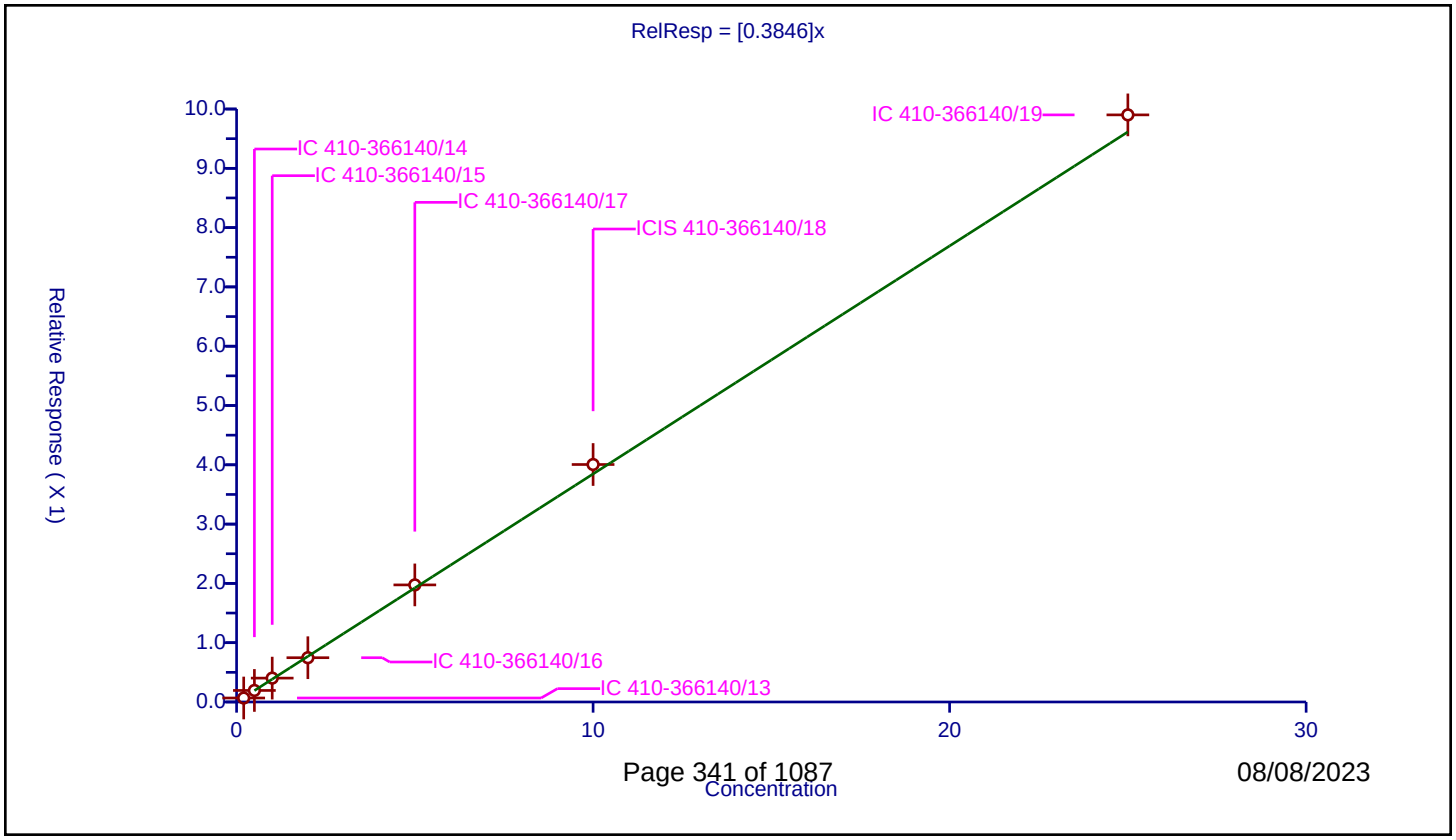
Curve Coefficients

Intercept:	0
Slope:	0.3846

Error Coefficients

Standard Error:	885000
Relative Standard Error:	6.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.067048	10.0	1905653.0	0.335239	Y
2	IC 410-366140/14	0.5	0.19453	10.0	1908755.0	0.38906	Y
3	IC 410-366140/15	1.0	0.40292	10.0	1916682.0	0.40292	Y
4	IC 410-366140/16	2.0	0.746547	10.0	1921970.0	0.373273	Y
5	IC 410-366140/17	5.0	1.974497	10.0	1951110.0	0.394899	Y
6	ICIS 410-366140/18	10.0	4.00485	10.0	1983640.0	0.400485	Y
7	IC 410-366140/19	25.0	9.901252	10.0	1993554.0	0.39605	Y



Calibration / 4-Methyl-2-pentanone (MIBK)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

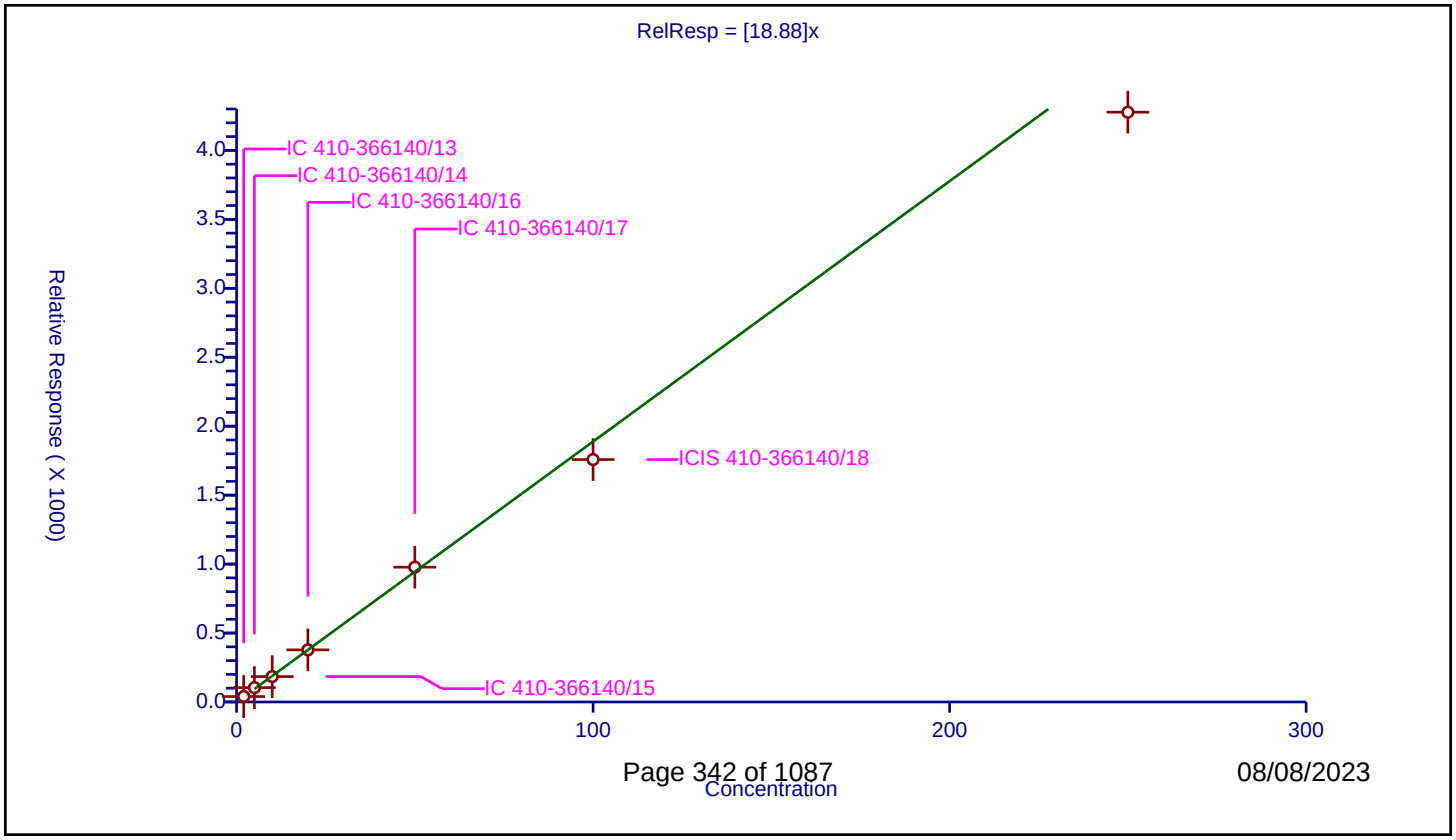
Curve Coefficients

Intercept:	0
Slope:	18.88

Error Coefficients

Standard Error:	2970000
Relative Standard Error:	6.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	39.617679	50.0	59505.0	19.80884	Y
2	IC 410-366140/14	5.0	104.08539	50.0	64902.0	20.817078	Y
3	IC 410-366140/15	10.0	184.248713	50.0	74978.0	18.424871	Y
4	IC 410-366140/16	20.0	377.980094	50.0	68924.0	18.899005	Y
5	IC 410-366140/17	50.0	977.642653	50.0	70223.0	19.552853	Y
6	ICIS 410-366140/18	100.0	1758.023512	50.0	78513.0	17.580235	Y
7	IC 410-366140/19	250.0	4276.927026	50.0	76932.0	17.107708	Y



Calibration / Toluene-d8 (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

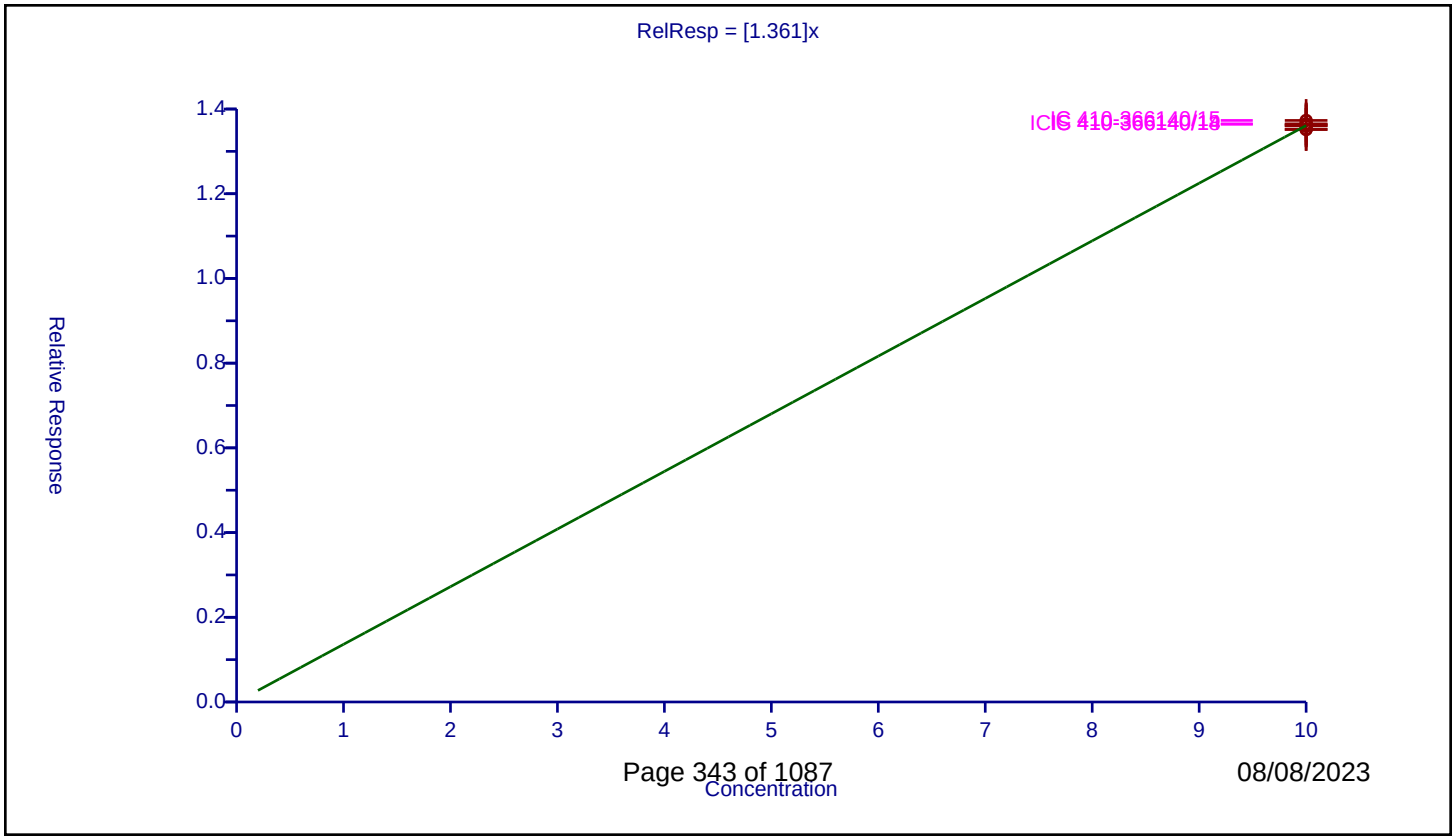
Curve Coefficients

Intercept:	0
Slope:	1.361

Error Coefficients

Standard Error:	2090000
Relative Standard Error:	0.6
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	13.515193	10.0	1410045.0	1.351519	Y
2	IC 410-366140/14	10.0	13.648531	10.0	1394279.0	1.364853	Y
3	IC 410-366140/15	10.0	13.730626	10.0	1397988.0	1.373063	Y
4	IC 410-366140/16	10.0	13.521368	10.0	1411369.0	1.352137	Y
5	IC 410-366140/17	10.0	13.605802	10.0	1430808.0	1.36058	Y
6	ICIS 410-366140/18	10.0	13.640949	10.0	1451141.0	1.364095	Y
7	IC 410-366140/19	10.0	13.60148	10.0	1471953.0	1.360148	Y



Calibration / Toluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

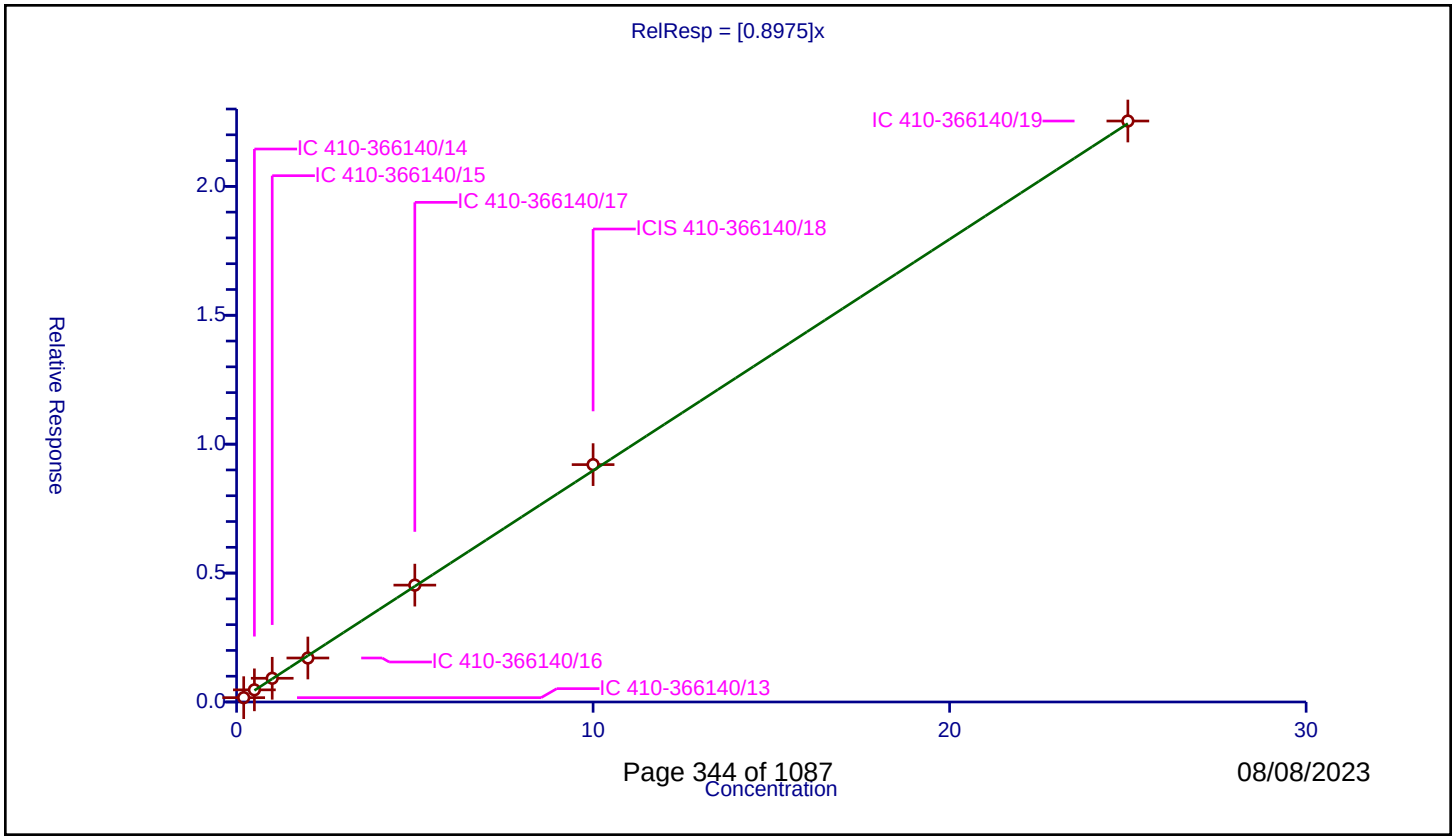
Curve Coefficients

Intercept:	0
Slope:	0.8975

Error Coefficients

Standard Error:	1490000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.16769	10.0	1410045.0	0.838448	Y
2	IC 410-366140/14	0.5	0.470716	10.0	1394279.0	0.941433	Y
3	IC 410-366140/15	1.0	0.920509	10.0	1397988.0	0.920509	Y
4	IC 410-366140/16	2.0	1.706159	10.0	1411369.0	0.85308	Y
5	IC 410-366140/17	5.0	4.533445	10.0	1430808.0	0.906689	Y
6	ICIS 410-366140/18	10.0	9.207155	10.0	1451141.0	0.920715	Y
7	IC 410-366140/19	25.0	22.534184	10.0	1471953.0	0.901367	Y



08/08/2023

Calibration / trans-1,3-Dichloropropene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

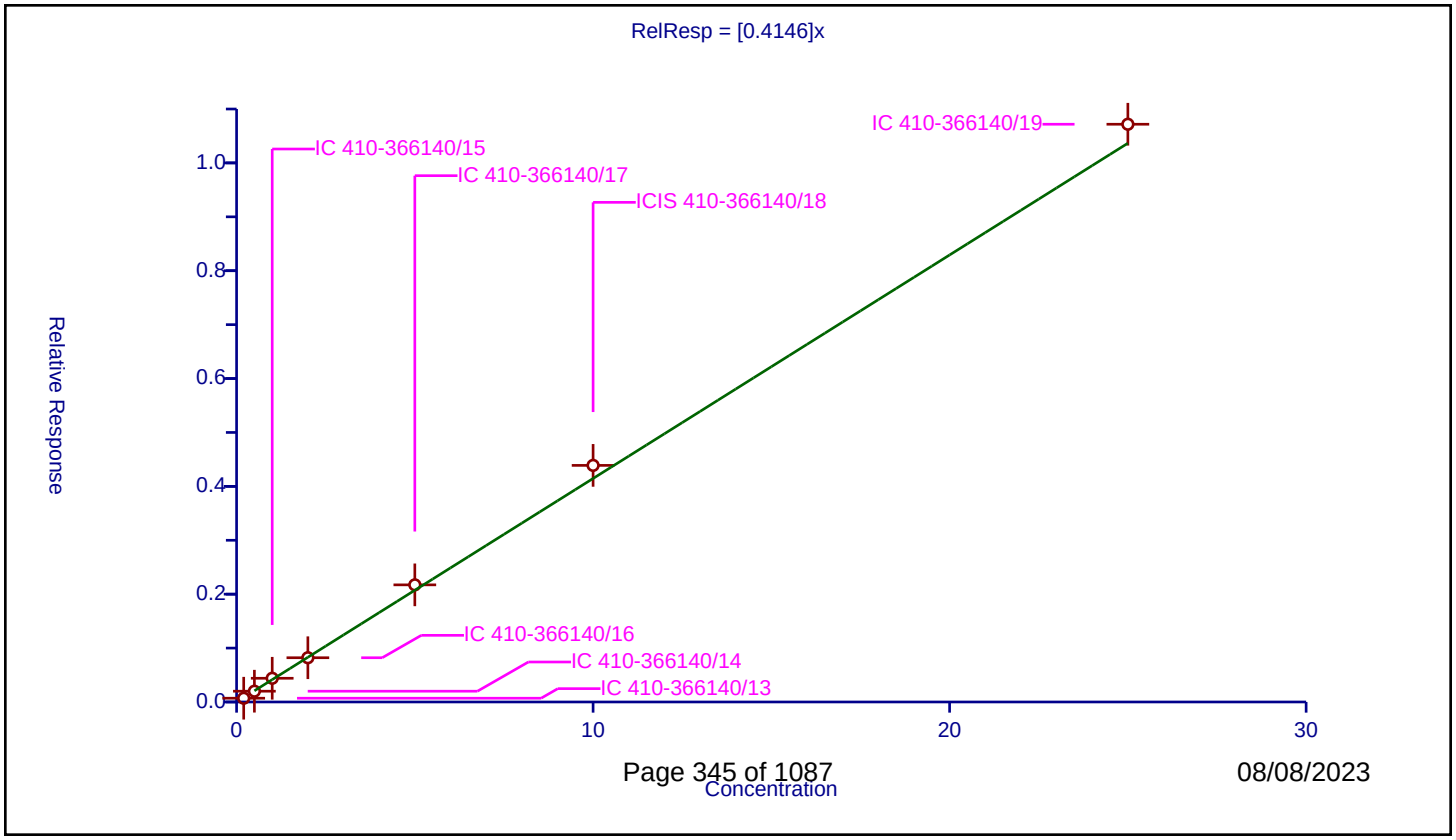
Curve Coefficients

Intercept:	0
Slope:	0.4146

Error Coefficients

Standard Error:	708000
Relative Standard Error:	7.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.992

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.06982	10.0	1410045.0	0.349102	Y
2	IC 410-366140/14	0.5	0.20024	10.0	1394279.0	0.400479	Y
3	IC 410-366140/15	1.0	0.44019	10.0	1397988.0	0.44019	Y
4	IC 410-366140/16	2.0	0.820806	10.0	1411369.0	0.410403	Y
5	IC 410-366140/17	5.0	2.172849	10.0	1430808.0	0.43457	Y
6	ICIS 410-366140/18	10.0	4.388877	10.0	1451141.0	0.438888	Y
7	IC 410-366140/19	25.0	10.717462	10.0	1471953.0	0.428698	Y



Calibration / Ethyl methacrylate

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

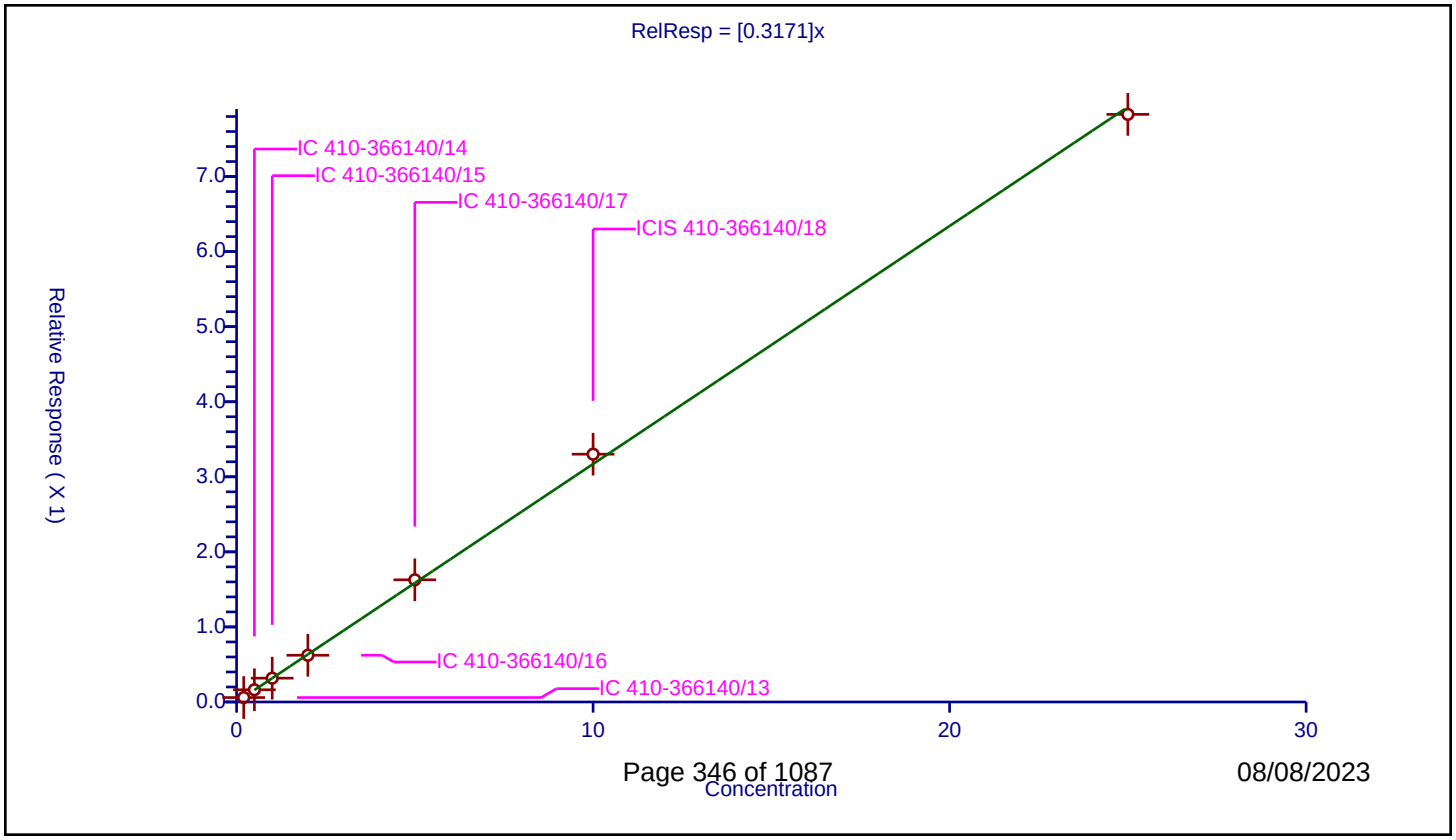
Curve Coefficients

Intercept:	0
Slope:	0.3171

Error Coefficients

Standard Error:	520000
Relative Standard Error:	3.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.059239	10.0	1410045.0	0.296196	Y
2	IC 410-366140/14	0.5	0.162887	10.0	1394279.0	0.325774	Y
3	IC 410-366140/15	1.0	0.317435	10.0	1397988.0	0.317435	Y
4	IC 410-366140/16	2.0	0.622537	10.0	1411369.0	0.311269	Y
5	IC 410-366140/17	5.0	1.62778	10.0	1430808.0	0.325556	Y
6	ICIS 410-366140/18	10.0	3.301492	10.0	1451141.0	0.330149	Y
7	IC 410-366140/19	25.0	7.828538	10.0	1471953.0	0.313142	Y



Calibration / 1,1,2-Trichloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

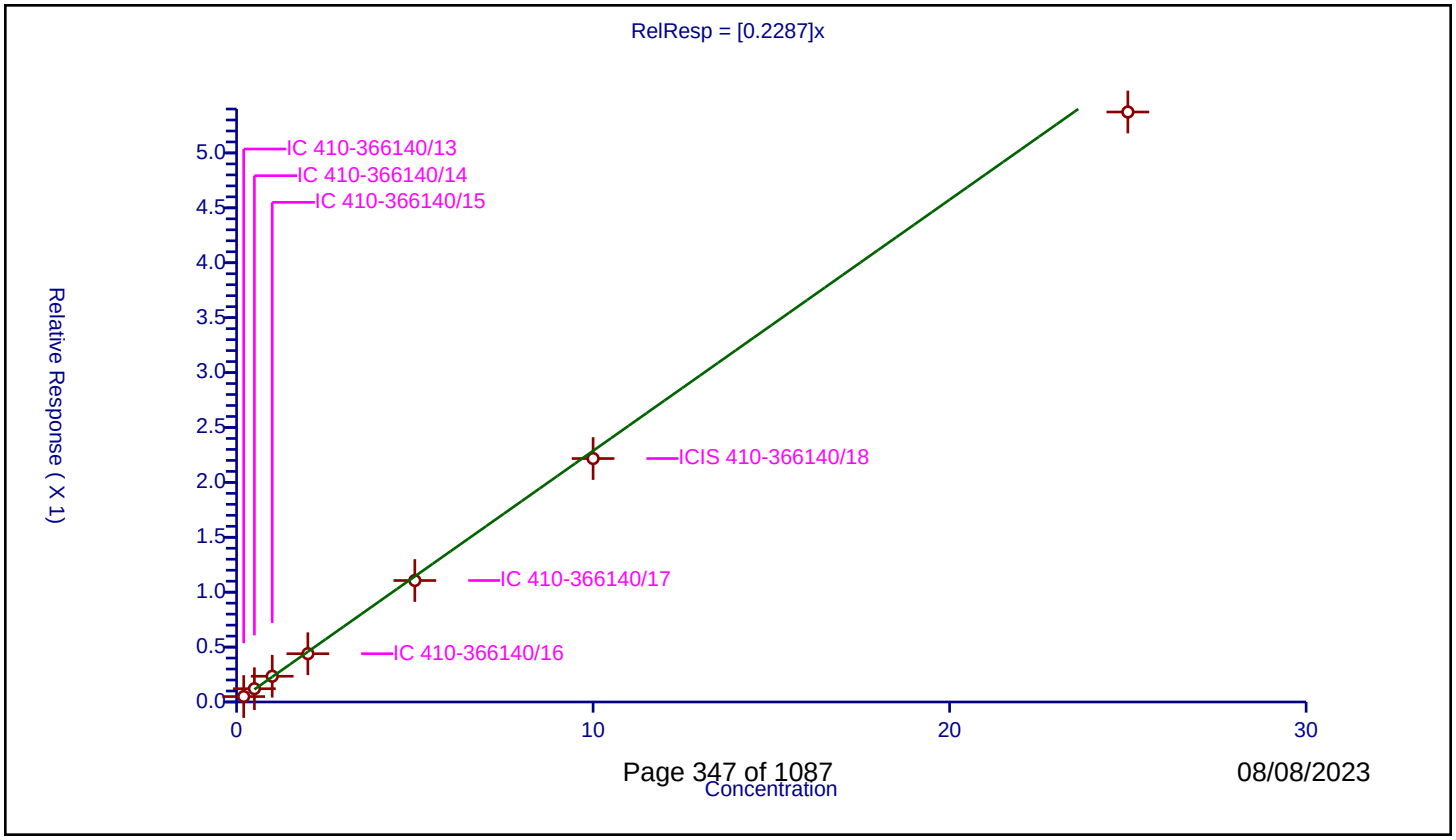
Curve Coefficients

Intercept:	0
Slope:	0.2287

Error Coefficients

Standard Error:	356000
Relative Standard Error:	5.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.049424	10.0	1410045.0	0.24712	Y
2	IC 410-366140/14	0.5	0.120808	10.0	1394279.0	0.241616	Y
3	IC 410-366140/15	1.0	0.23453	10.0	1397988.0	0.23453	Y
4	IC 410-366140/16	2.0	0.439757	10.0	1411369.0	0.219879	Y
5	IC 410-366140/17	5.0	1.106361	10.0	1430808.0	0.221272	Y
6	ICIS 410-366140/18	10.0	2.217	10.0	1451141.0	0.2217	Y
7	IC 410-366140/19	25.0	5.372848	10.0	1471953.0	0.214914	Y



Calibration / Tetrachloroethene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

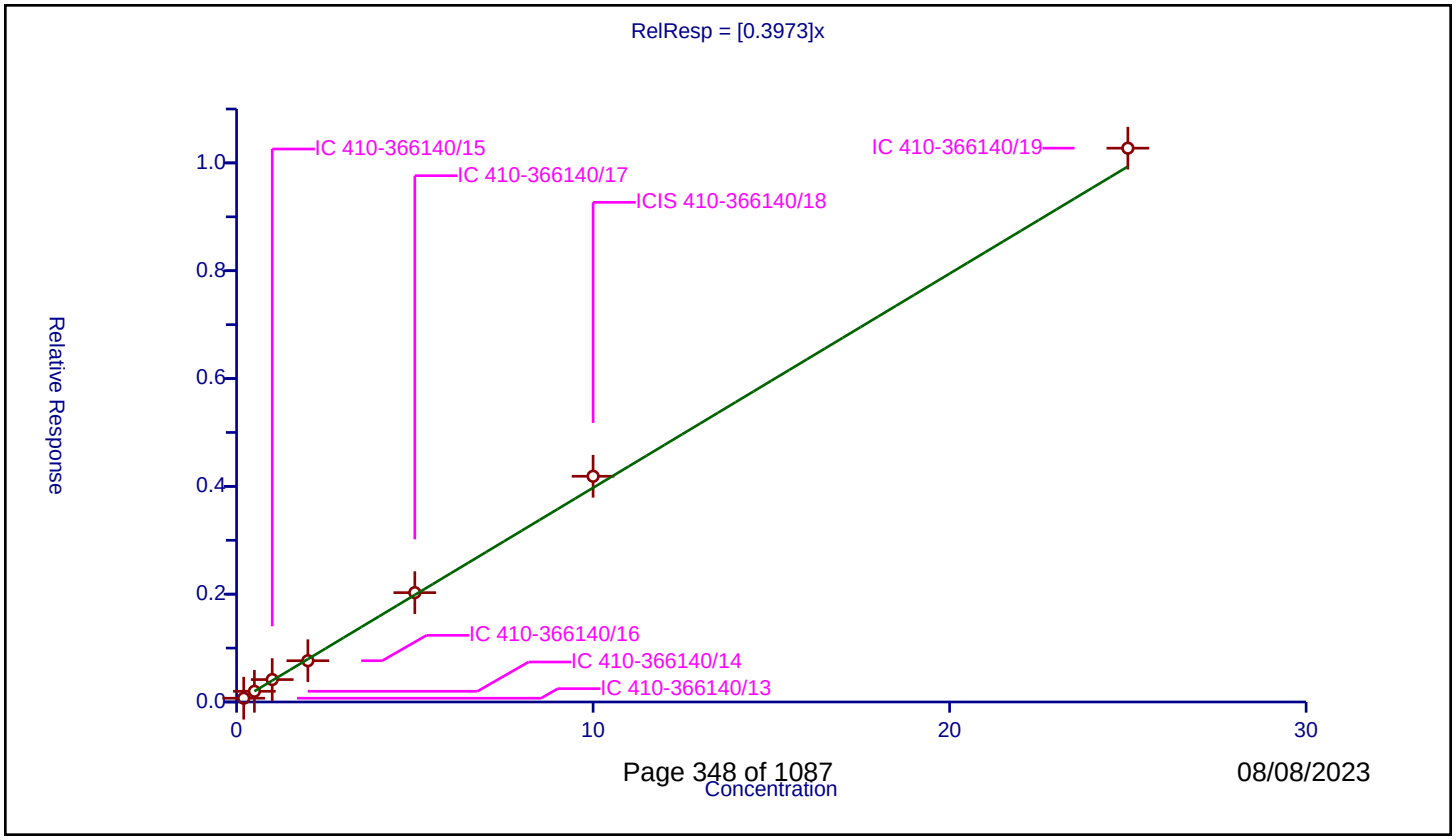
Curve Coefficients

Intercept:	0
Slope:	0.3973

Error Coefficients

Standard Error:	678000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.070125	10.0	1410045.0	0.350627	Y
2	IC 410-366140/14	0.5	0.198461	10.0	1394279.0	0.396922	Y
3	IC 410-366140/15	1.0	0.415633	10.0	1397988.0	0.415633	Y
4	IC 410-366140/16	2.0	0.76564	10.0	1411369.0	0.38282	Y
5	IC 410-366140/17	5.0	2.028301	10.0	1430808.0	0.40566	Y
6	ICIS 410-366140/18	10.0	4.187374	10.0	1451141.0	0.418737	Y
7	IC 410-366140/19	25.0	10.273901	10.0	1471953.0	0.410956	Y



Calibration / 1,3-Dichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

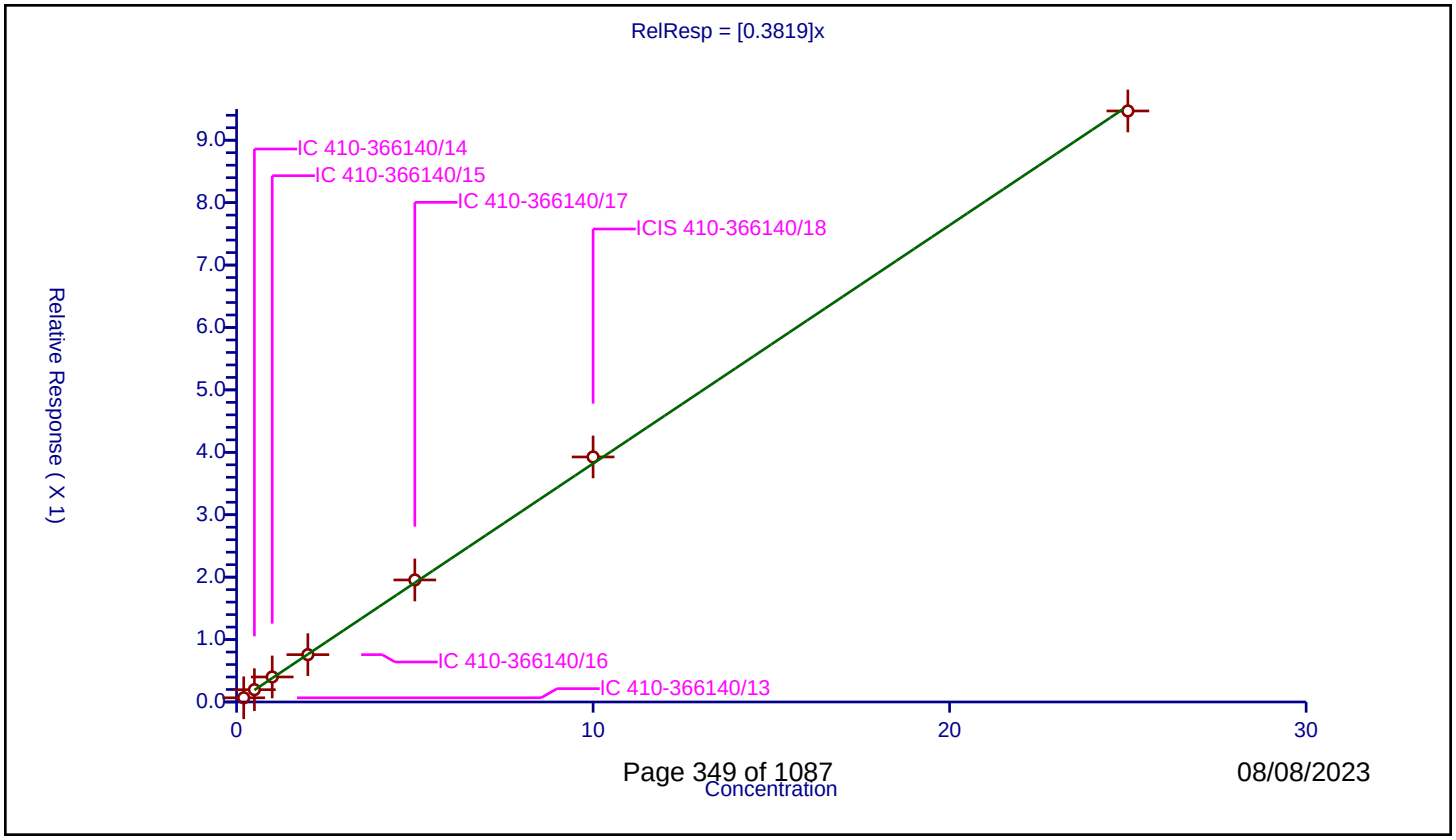
Curve Coefficients

Intercept:	0
Slope:	0.3819

Error Coefficients

Standard Error:	627000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.06748	10.0	1410045.0	0.337401	Y
2	IC 410-366140/14	0.5	0.196962	10.0	1394279.0	0.393924	Y
3	IC 410-366140/15	1.0	0.400762	10.0	1397988.0	0.400762	Y
4	IC 410-366140/16	2.0	0.758328	10.0	1411369.0	0.379164	Y
5	IC 410-366140/17	5.0	1.955154	10.0	1430808.0	0.391031	Y
6	ICIS 410-366140/18	10.0	3.925614	10.0	1451141.0	0.392561	Y
7	IC 410-366140/19	25.0	9.468855	10.0	1471953.0	0.378754	Y



Calibration / 2-Hexanone

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

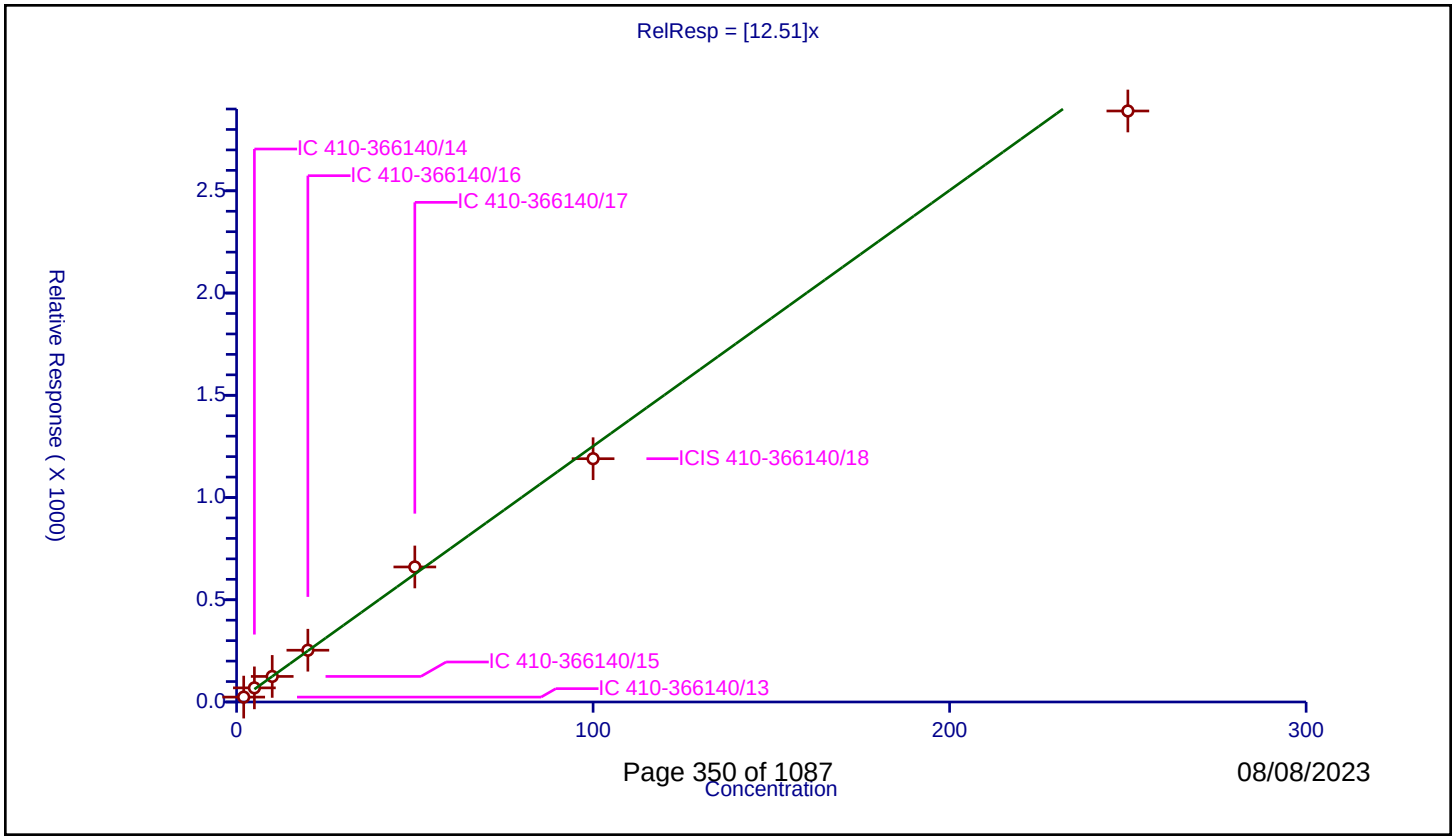
Curve Coefficients

Intercept:	0
Slope:	12.51

Error Coefficients

Standard Error:	2010000
Relative Standard Error:	6.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	23.899672	50.0	59505.0	11.949836	Y
2	IC 410-366140/14	5.0	69.000185	50.0	64902.0	13.800037	Y
3	IC 410-366140/15	10.0	125.024674	50.0	74978.0	12.502467	Y
4	IC 410-366140/16	20.0	253.185393	50.0	68924.0	12.65927	Y
5	IC 410-366140/17	50.0	660.327101	50.0	70223.0	13.206542	Y
6	ICIS 410-366140/18	100.0	1189.836078	50.0	78513.0	11.898361	Y
7	IC 410-366140/19	250.0	2890.392814	50.0	76932.0	11.561571	Y



Calibration / Chlorodibromomethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

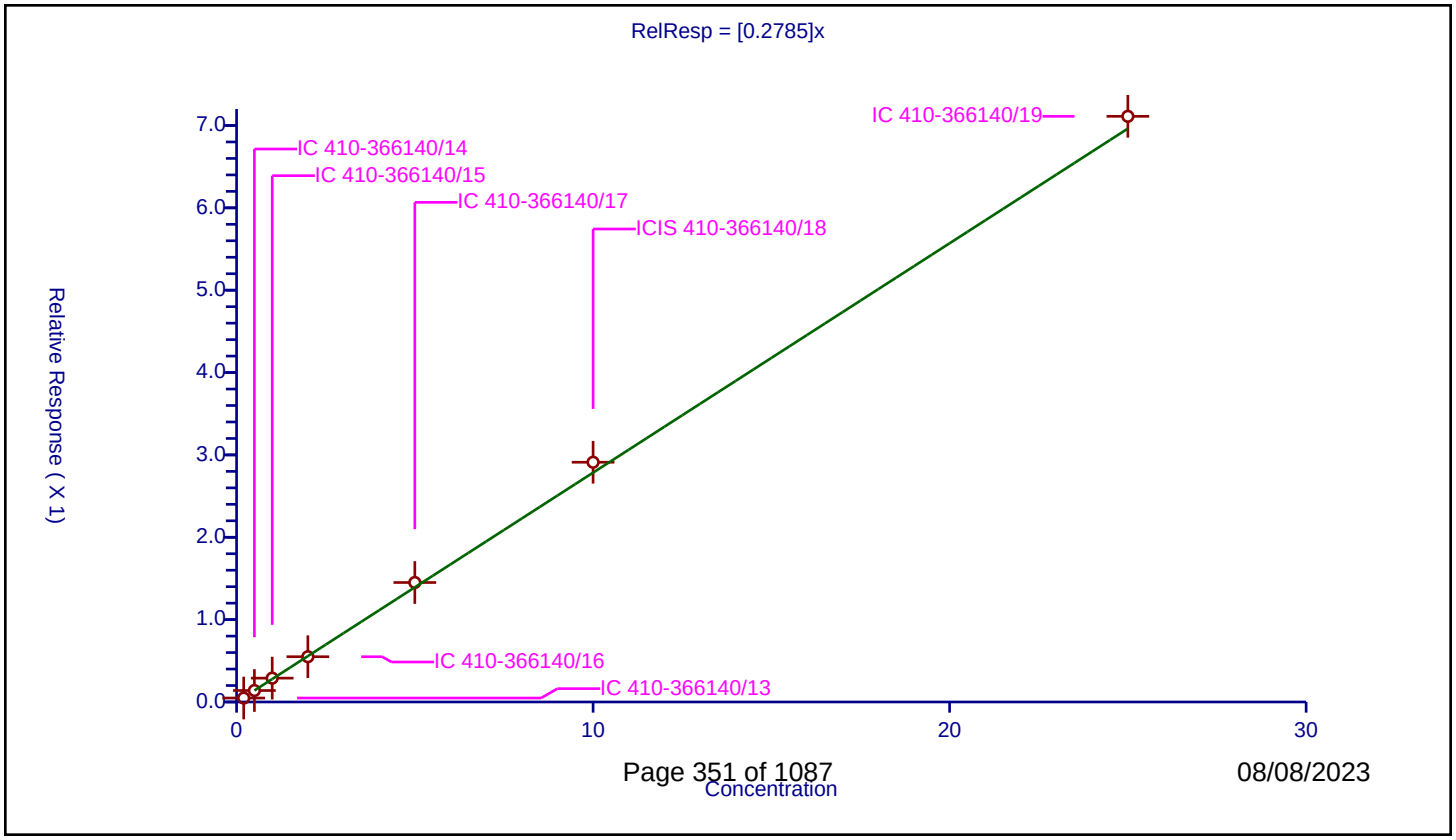
Curve Coefficients

Intercept:	0
Slope:	0.2785

Error Coefficients

Standard Error:	470000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.048084	10.0	1410045.0	0.240418	Y
2	IC 410-366140/14	0.5	0.13942	10.0	1394279.0	0.278839	Y
3	IC 410-366140/15	1.0	0.289623	10.0	1397988.0	0.289623	Y
4	IC 410-366140/16	2.0	0.549594	10.0	1411369.0	0.274797	Y
5	IC 410-366140/17	5.0	1.450873	10.0	1430808.0	0.290175	Y
6	ICIS 410-366140/18	10.0	2.911157	10.0	1451141.0	0.291116	Y
7	IC 410-366140/19	25.0	7.111266	10.0	1471953.0	0.284451	Y



Calibration / Ethylene Dibromide

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

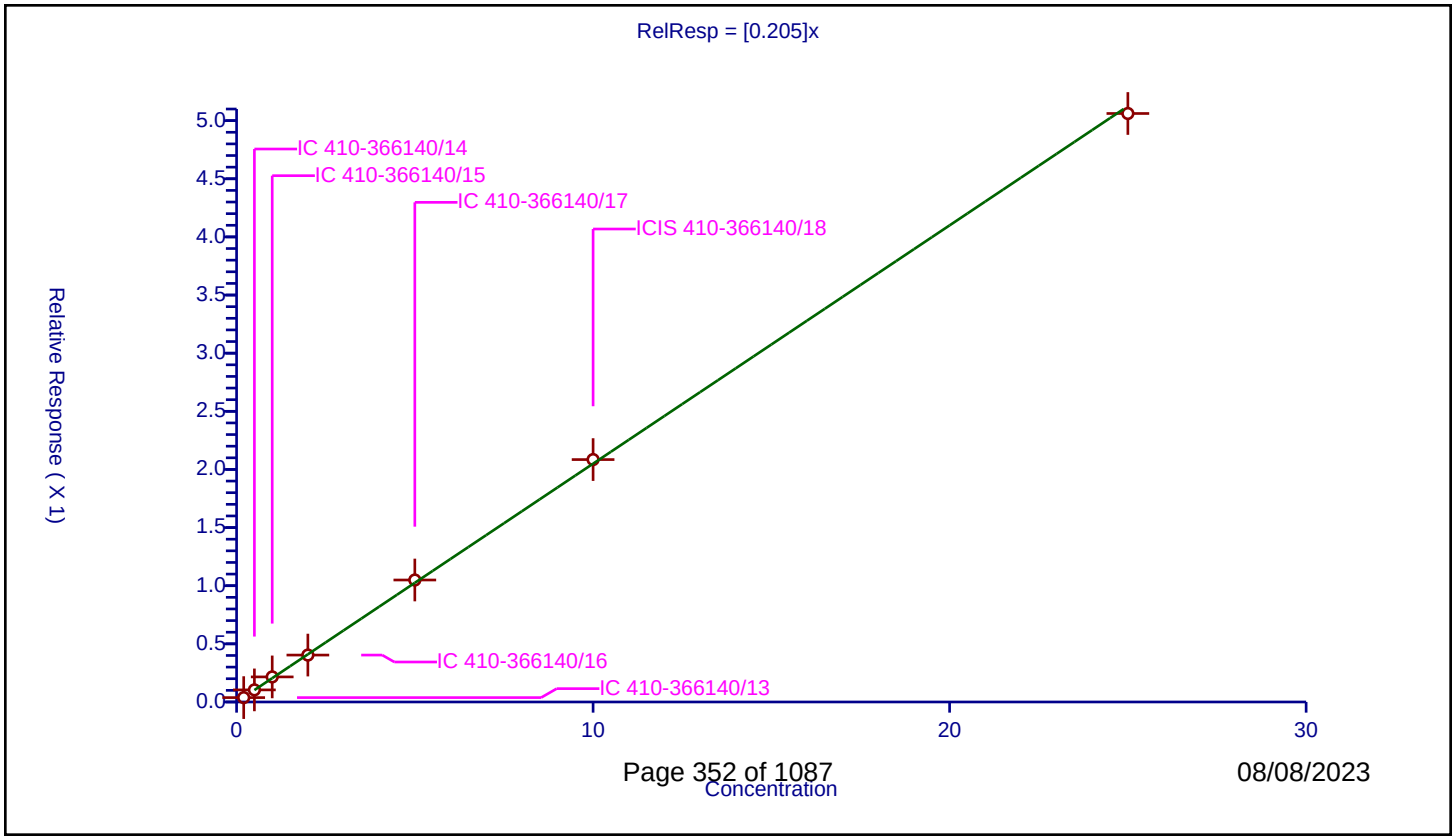
Curve Coefficients

Intercept:	0
Slope:	0.205

Error Coefficients

Standard Error:	335000
Relative Standard Error:	4.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.037729	10.0	1410045.0	0.188646	Y
2	IC 410-366140/14	0.5	0.103918	10.0	1394279.0	0.207835	Y
3	IC 410-366140/15	1.0	0.215731	10.0	1397988.0	0.215731	Y
4	IC 410-366140/16	2.0	0.403622	10.0	1411369.0	0.201811	Y
5	IC 410-366140/17	5.0	1.049079	10.0	1430808.0	0.209816	Y
6	ICIS 410-366140/18	10.0	2.084973	10.0	1451141.0	0.208497	Y
7	IC 410-366140/19	25.0	5.061493	10.0	1471953.0	0.20246	Y



08/08/2023

Calibration / 1-Chlorohexane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

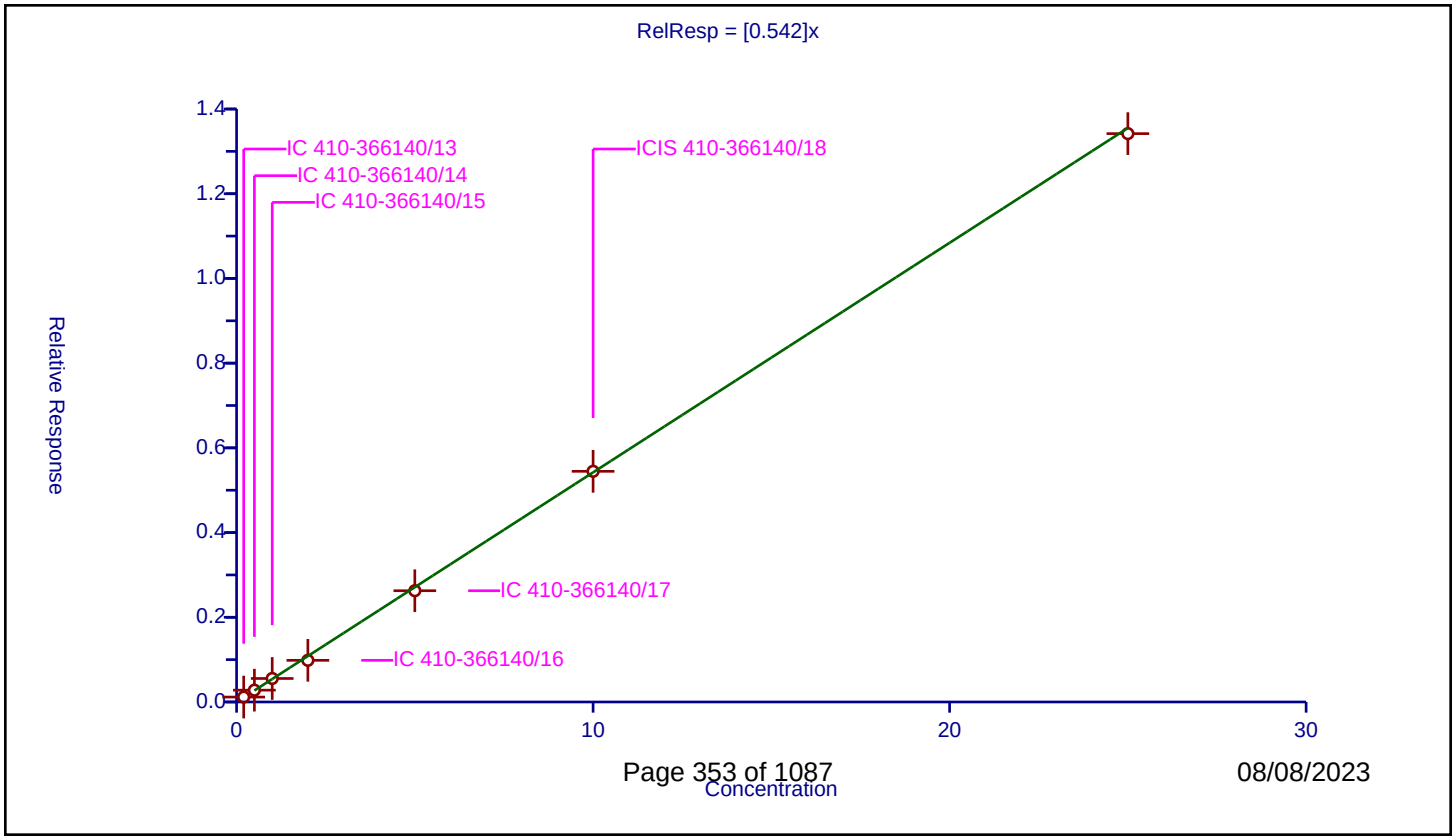
Curve Coefficients

Intercept:	0
Slope:	0.542

Error Coefficients

Standard Error:	885000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.116386	10.0	1410045.0	0.581932	Y
2	IC 410-366140/14	0.5	0.279255	10.0	1394279.0	0.558511	Y
3	IC 410-366140/15	1.0	0.555234	10.0	1397988.0	0.555234	Y
4	IC 410-366140/16	2.0	0.983542	10.0	1411369.0	0.491771	Y
5	IC 410-366140/17	5.0	2.627061	10.0	1430808.0	0.525412	Y
6	ICIS 410-366140/18	10.0	5.446232	10.0	1451141.0	0.544623	Y
7	IC 410-366140/19	25.0	13.41909	10.0	1471953.0	0.536764	Y



Calibration / Chlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

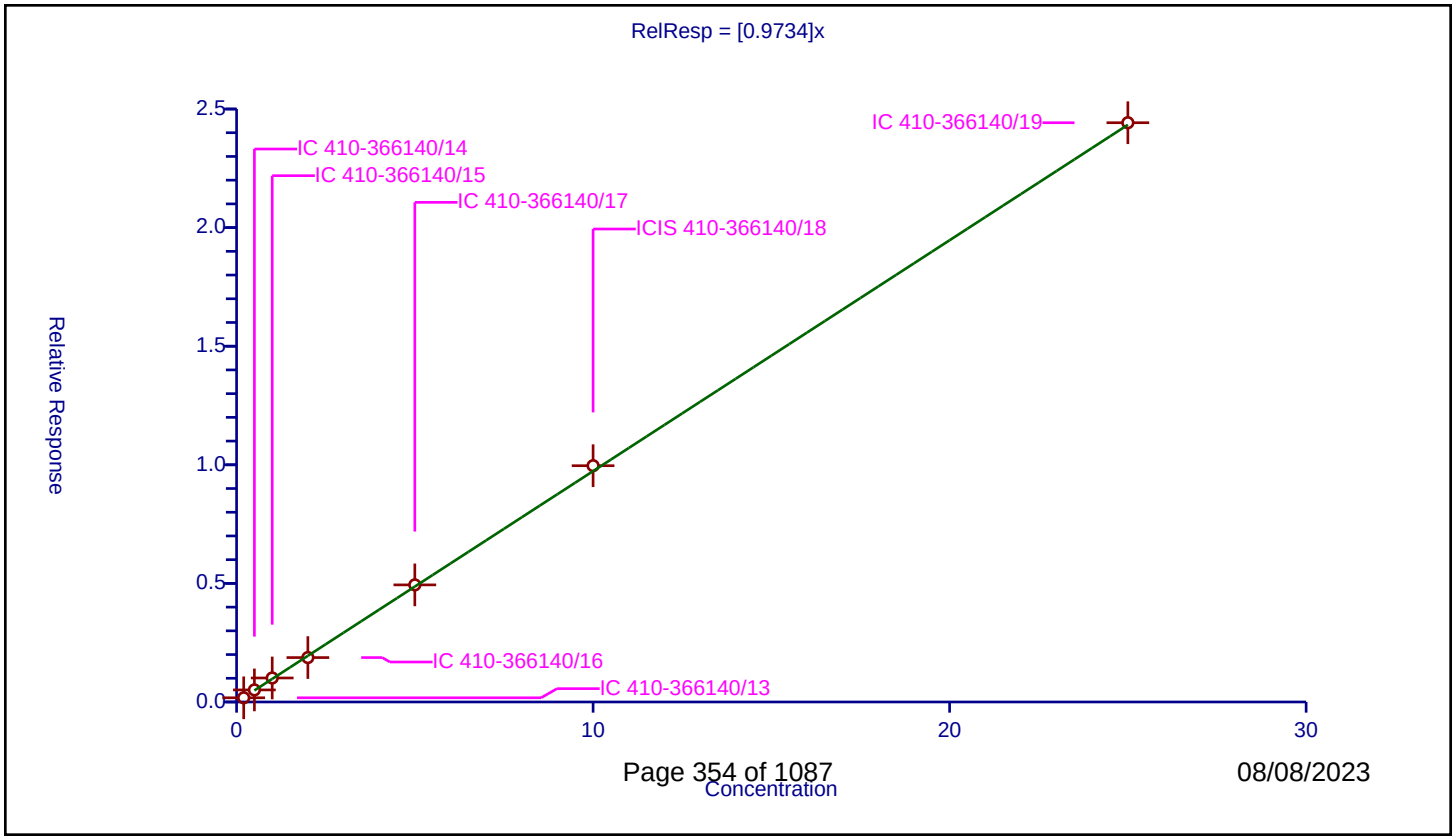
Curve Coefficients

Intercept:	0
Slope:	0.9734

Error Coefficients

Standard Error:	1610000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.17742	10.0	1410045.0	0.887099	Y
2	IC 410-366140/14	0.5	0.50865	10.0	1394279.0	1.0173	Y
3	IC 410-366140/15	1.0	1.012491	10.0	1397988.0	1.012491	Y
4	IC 410-366140/16	2.0	1.87248	10.0	1411369.0	0.93624	Y
5	IC 410-366140/17	5.0	4.936945	10.0	1430808.0	0.987389	Y
6	ICIS 410-366140/18	10.0	9.961465	10.0	1451141.0	0.996146	Y
7	IC 410-366140/19	25.0	24.422213	10.0	1471953.0	0.976889	Y



08/08/2023

Calibration / 1,1,1,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

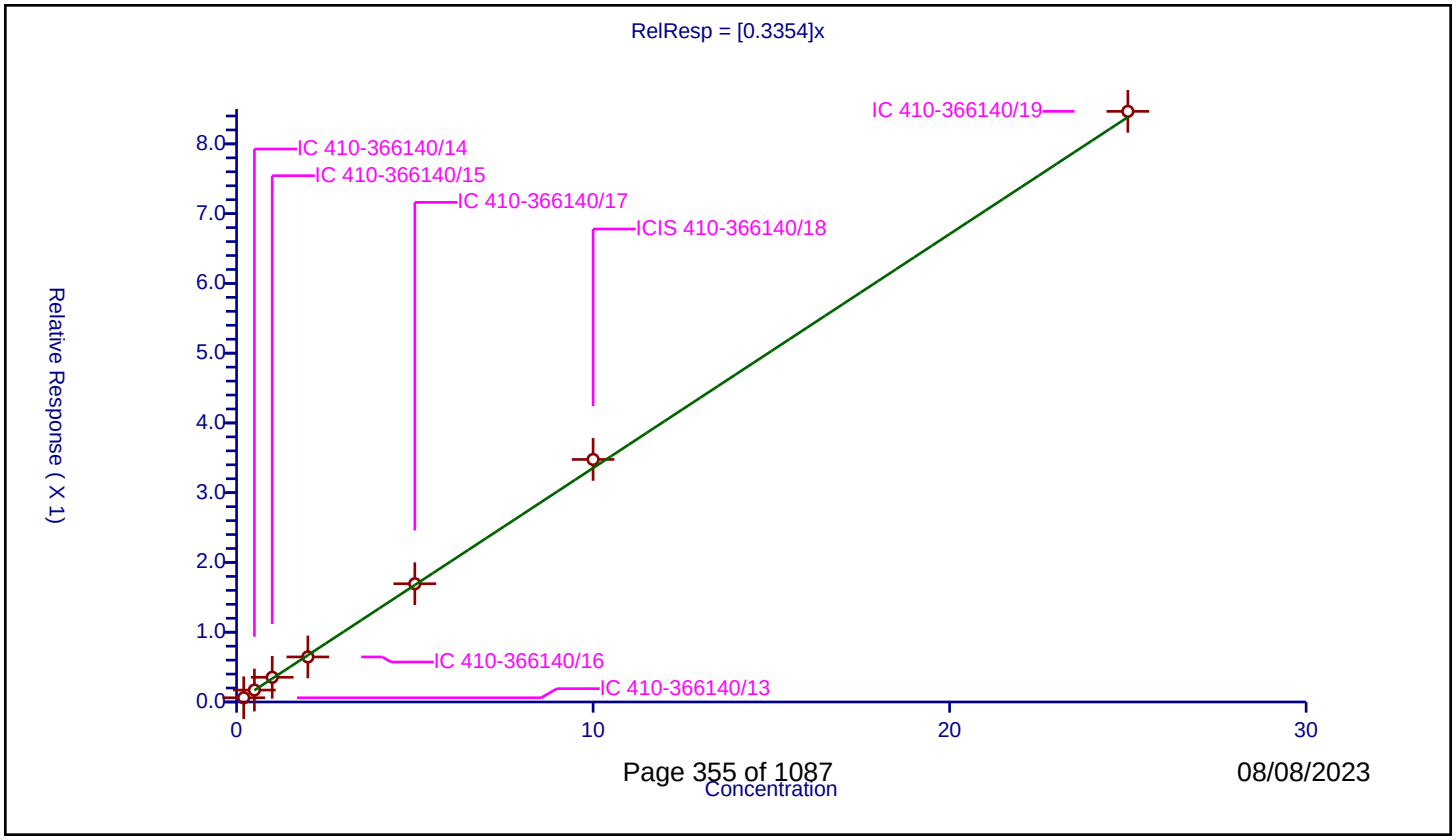
Curve Coefficients

Intercept:	0
Slope:	0.3354

Error Coefficients

Standard Error:	559000
Relative Standard Error:	5.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.060608	10.0	1410045.0	0.30304	Y
2	IC 410-366140/14	0.5	0.171027	10.0	1394279.0	0.342055	Y
3	IC 410-366140/15	1.0	0.354109	10.0	1397988.0	0.354109	Y
4	IC 410-366140/16	2.0	0.646004	10.0	1411369.0	0.323002	Y
5	IC 410-366140/17	5.0	1.695028	10.0	1430808.0	0.339006	Y
6	ICIS 410-366140/18	10.0	3.476637	10.0	1451141.0	0.347664	Y
7	IC 410-366140/19	25.0	8.466276	10.0	1471953.0	0.338651	Y



Calibration / Ethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

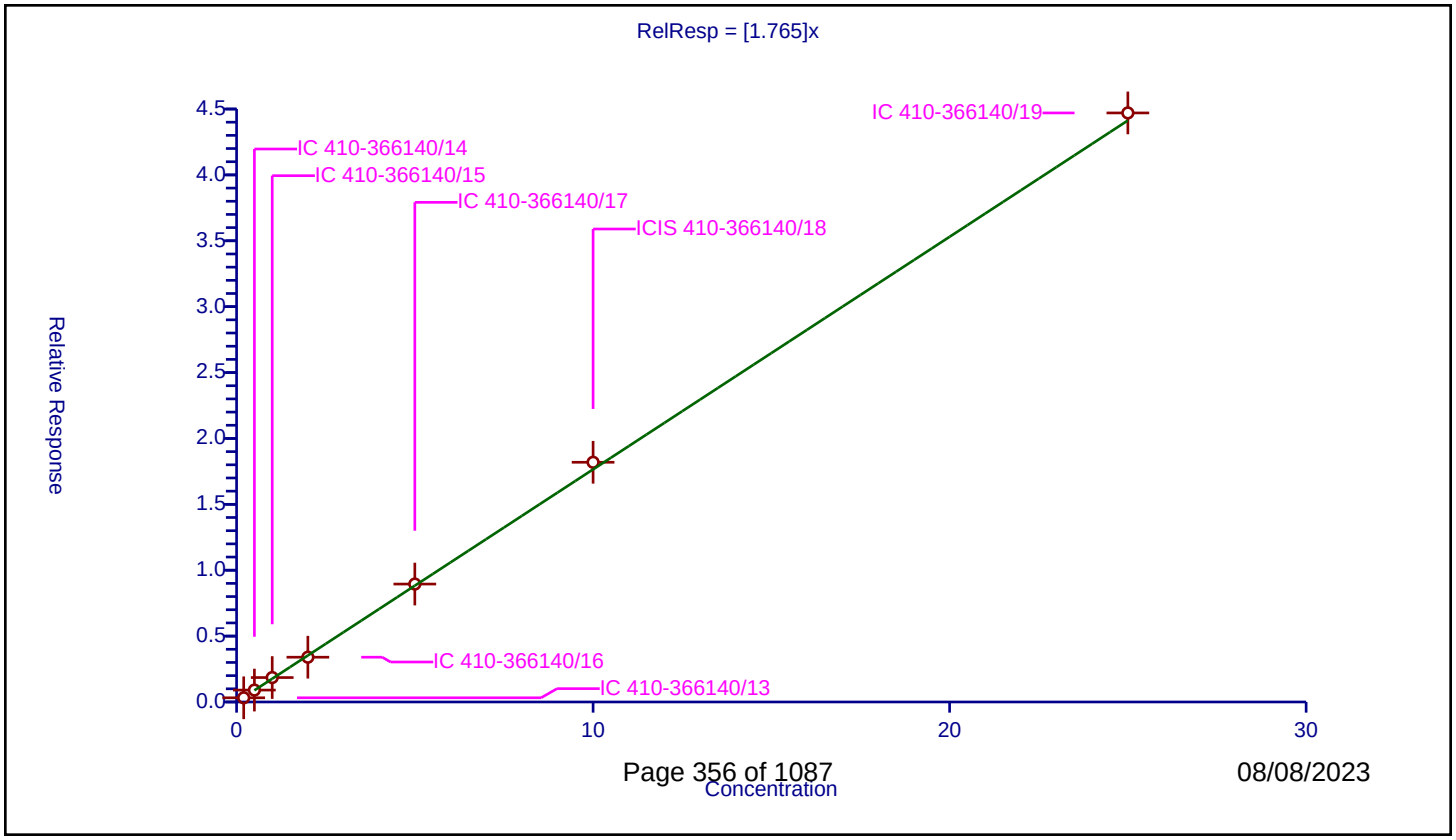
Curve Coefficients

Intercept:	0
Slope:	1.765

Error Coefficients

Standard Error:	2950000
Relative Standard Error:	5.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.319359	10.0	1410045.0	1.596793	Y
2	IC 410-366140/14	0.5	0.9038	10.0	1394279.0	1.807601	Y
3	IC 410-366140/15	1.0	1.855152	10.0	1397988.0	1.855152	Y
4	IC 410-366140/16	2.0	3.398636	10.0	1411369.0	1.699318	Y
5	IC 410-366140/17	5.0	8.949915	10.0	1430808.0	1.789983	Y
6	ICIS 410-366140/18	10.0	18.19214	10.0	1451141.0	1.819214	Y
7	IC 410-366140/19	25.0	44.703194	10.0	1471953.0	1.788128	Y



Calibration / m-Xylene & p-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

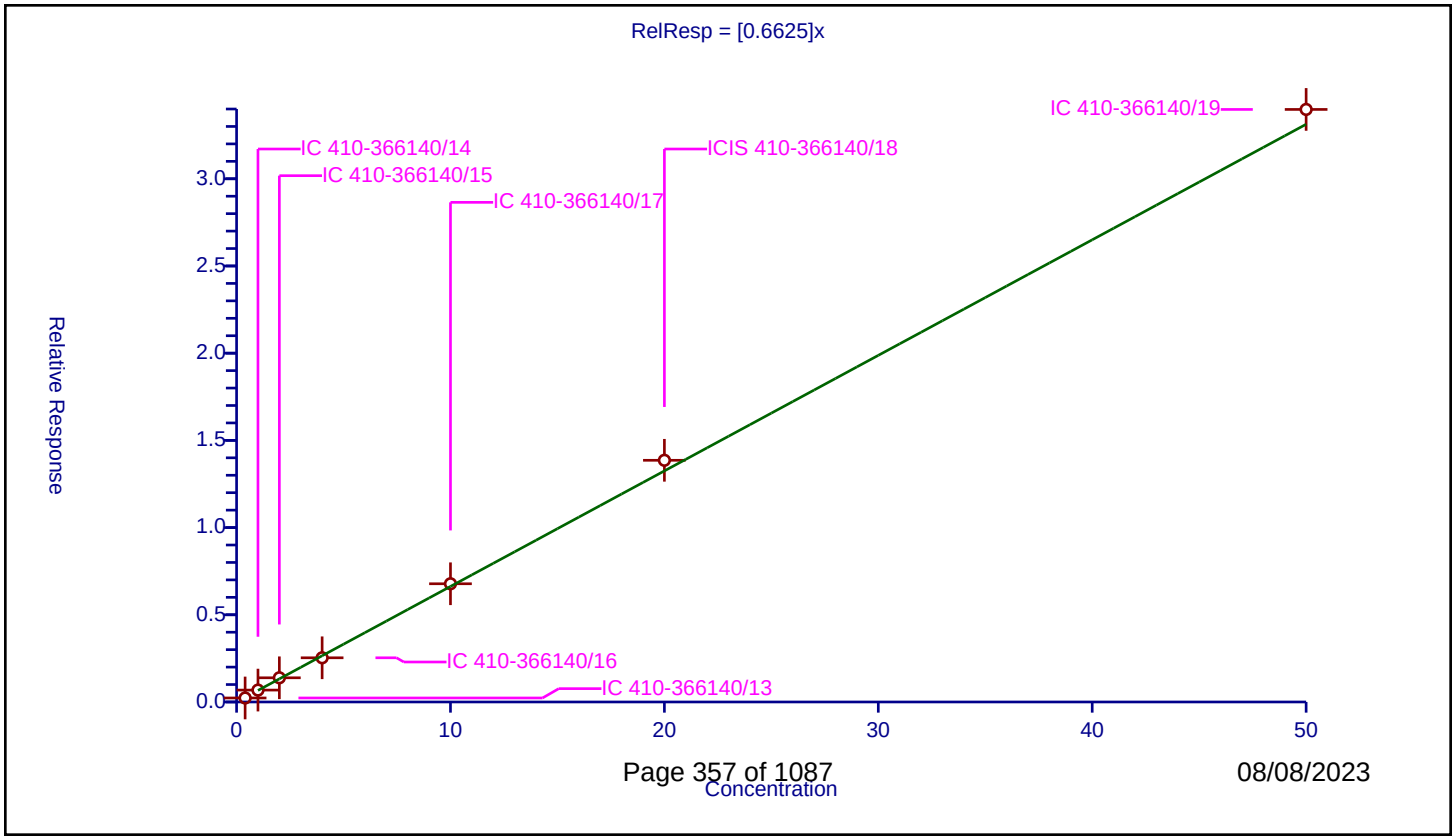
Curve Coefficients

Intercept:	0
Slope:	0.6625

Error Coefficients

Standard Error:	2240000
Relative Standard Error:	6.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.4	0.23073	10.0	1410045.0	0.576826	Y
2	IC 410-366140/14	1.0	0.682446	10.0	1394279.0	0.682446	Y
3	IC 410-366140/15	2.0	1.388324	10.0	1397988.0	0.694162	Y
4	IC 410-366140/16	4.0	2.535042	10.0	1411369.0	0.633761	Y
5	IC 410-366140/17	10.0	6.778429	10.0	1430808.0	0.677843	Y
6	ICIS 410-366140/18	20.0	13.858364	10.0	1451141.0	0.692918	Y
7	IC 410-366140/19	50.0	33.975086	10.0	1471953.0	0.679502	Y



Calibration / o-Xylene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

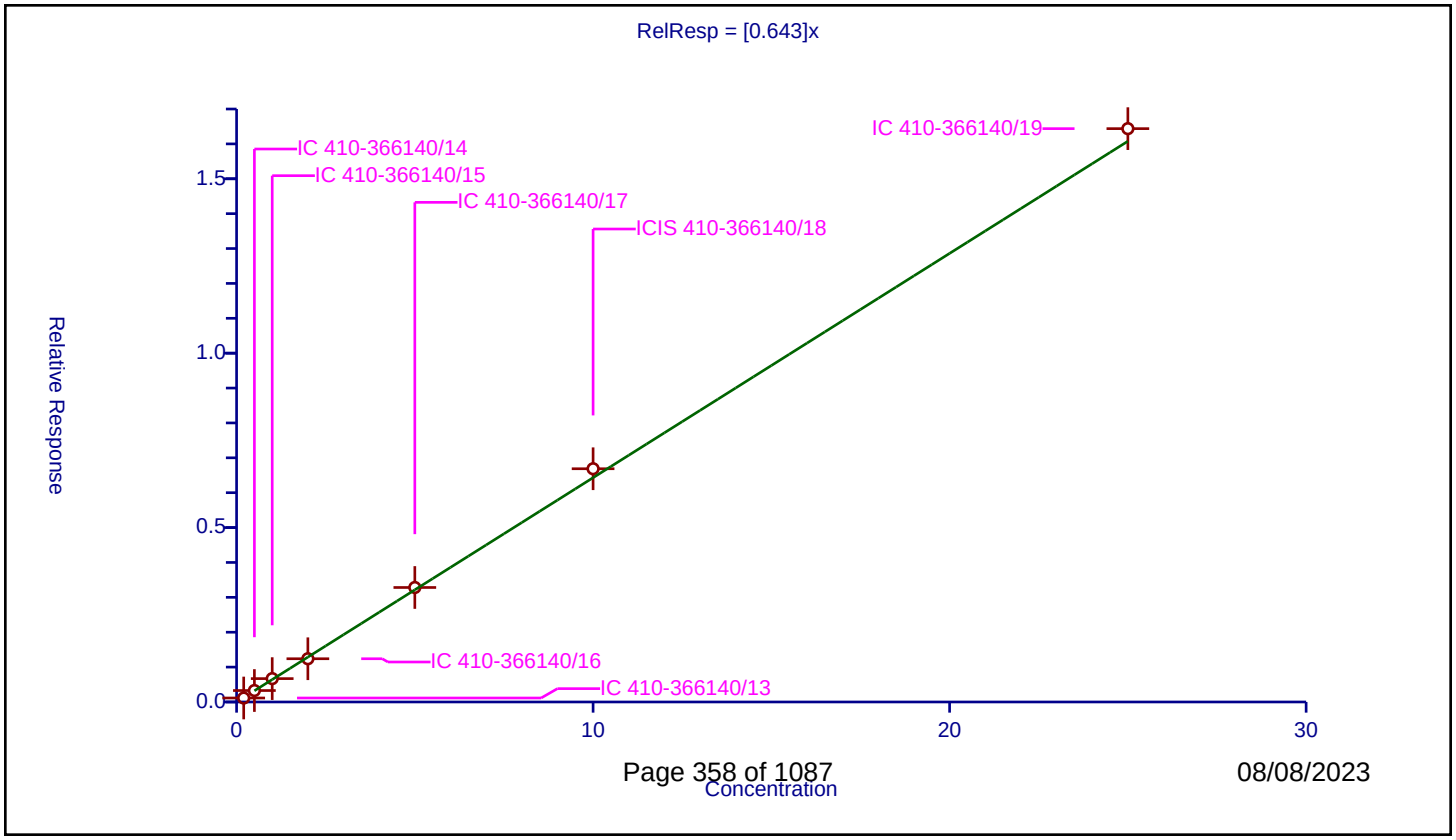
Curve Coefficients

Intercept:	0
Slope:	0.643

Error Coefficients

Standard Error:	1080000
Relative Standard Error:	5.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.11423	10.0	1410045.0	0.571152	Y
2	IC 410-366140/14	0.5	0.328722	10.0	1394279.0	0.657444	Y
3	IC 410-366140/15	1.0	0.670063	10.0	1397988.0	0.670063	Y
4	IC 410-366140/16	2.0	1.239952	10.0	1411369.0	0.619976	Y
5	IC 410-366140/17	5.0	3.282166	10.0	1430808.0	0.656433	Y
6	ICIS 410-366140/18	10.0	6.687076	10.0	1451141.0	0.668708	Y
7	IC 410-366140/19	25.0	16.436945	10.0	1471953.0	0.657478	Y



Calibration / Styrene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

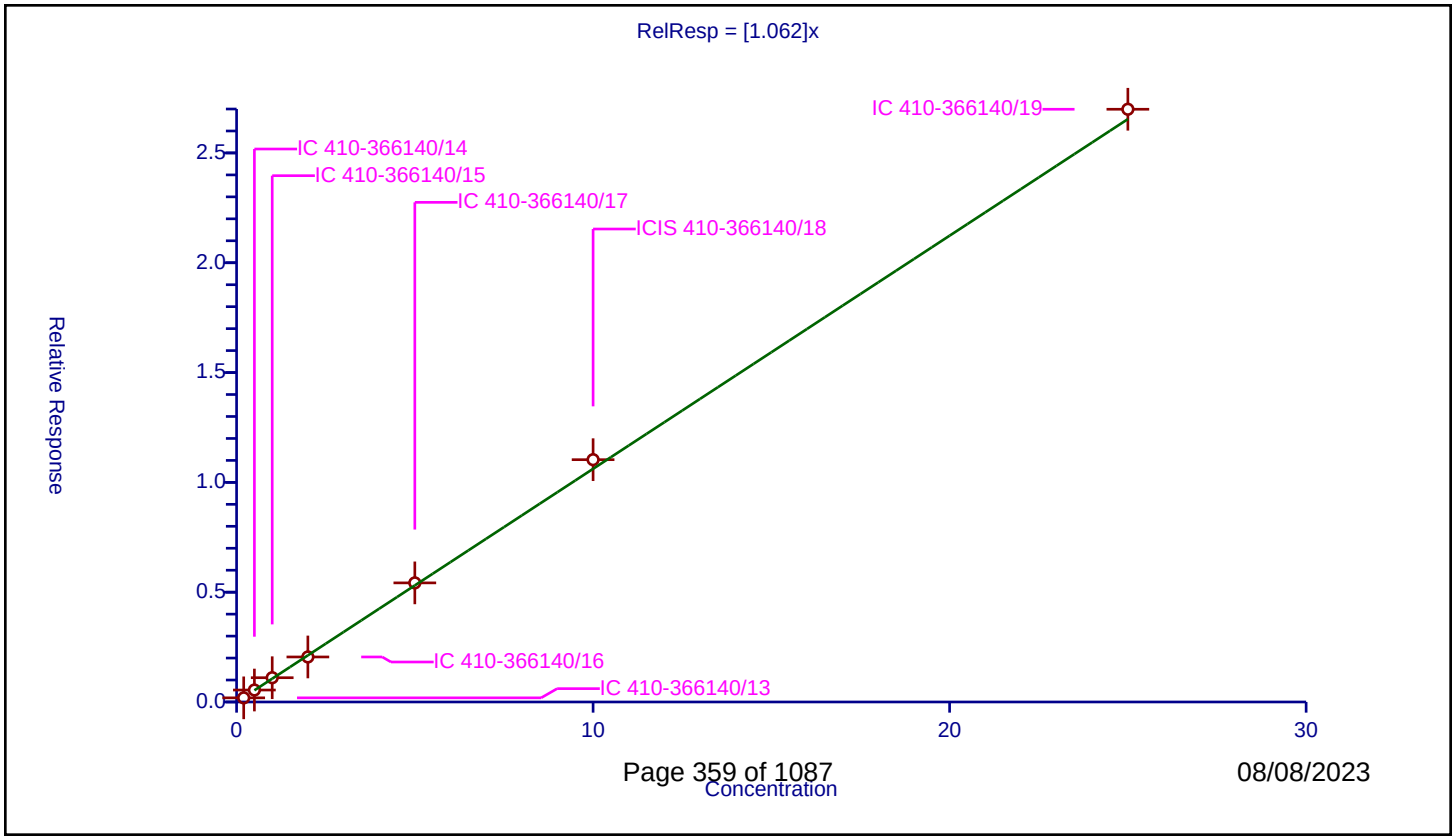
Curve Coefficients

Intercept:	0
Slope:	1.062

Error Coefficients

Standard Error:	1780000
Relative Standard Error:	5.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.188654	10.0	1410045.0	0.943268	Y
2	IC 410-366140/14	0.5	0.544798	10.0	1394279.0	1.089595	Y
3	IC 410-366140/15	1.0	1.105861	10.0	1397988.0	1.105861	Y
4	IC 410-366140/16	2.0	2.049733	10.0	1411369.0	1.024867	Y
5	IC 410-366140/17	5.0	5.423614	10.0	1430808.0	1.084723	Y
6	ICIS 410-366140/18	10.0	11.033387	10.0	1451141.0	1.103339	Y
7	IC 410-366140/19	25.0	26.989041	10.0	1471953.0	1.079562	Y



Calibration / Bromoform

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

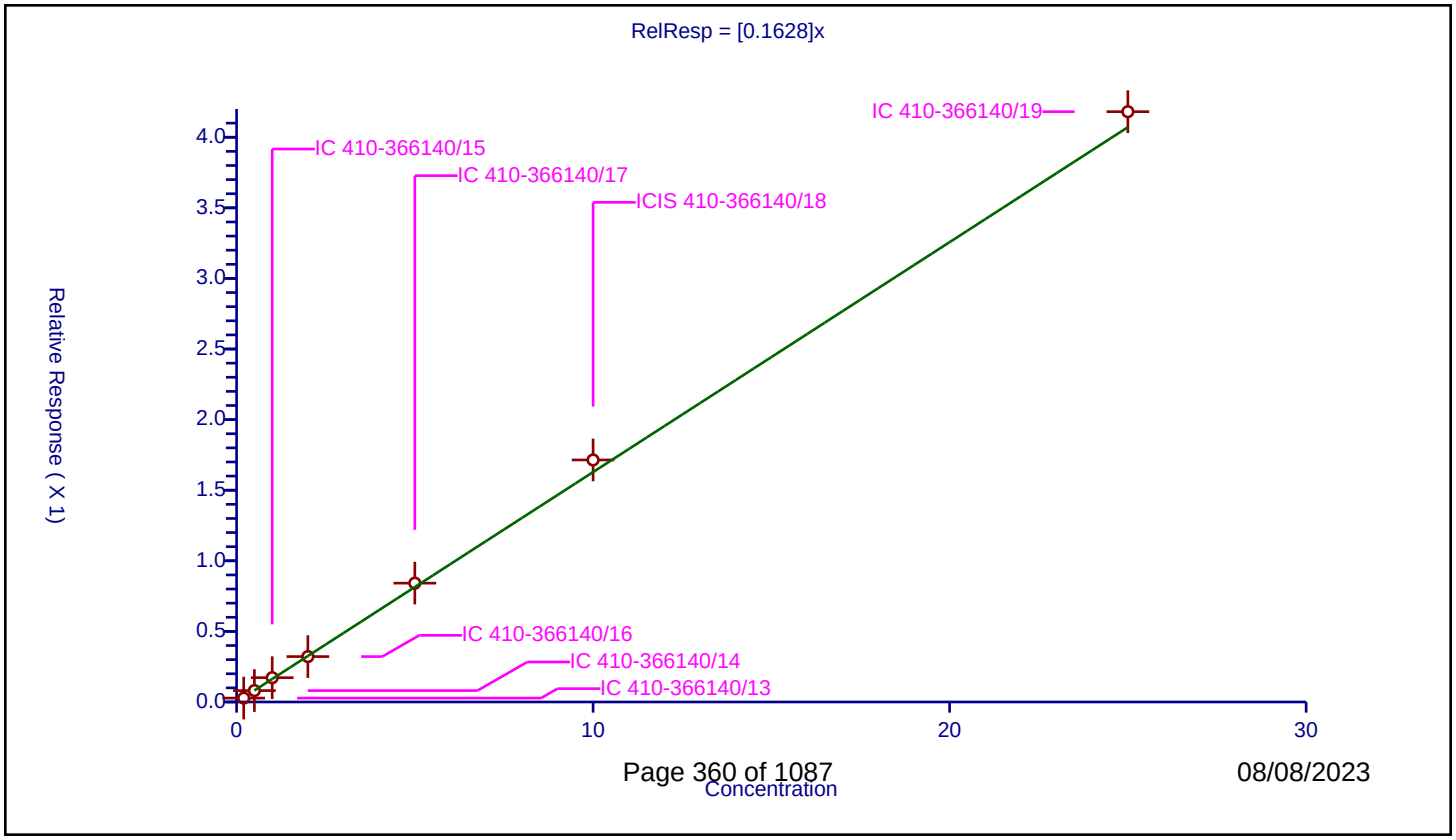
Curve Coefficients

Intercept:	0
Slope:	0.1628

Error Coefficients

Standard Error:	276000
Relative Standard Error:	7.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.027694	10.0	1410045.0	0.138471	Y
2	IC 410-366140/14	0.5	0.080759	10.0	1394279.0	0.161517	Y
3	IC 410-366140/15	1.0	0.17209	10.0	1397988.0	0.17209	Y
4	IC 410-366140/16	2.0	0.321652	10.0	1411369.0	0.160826	Y
5	IC 410-366140/17	5.0	0.841755	10.0	1430808.0	0.168351	Y
6	ICIS 410-366140/18	10.0	1.714299	10.0	1451141.0	0.17143	Y
7	IC 410-366140/19	25.0	4.181112	10.0	1471953.0	0.167244	Y



Calibration / Isopropylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

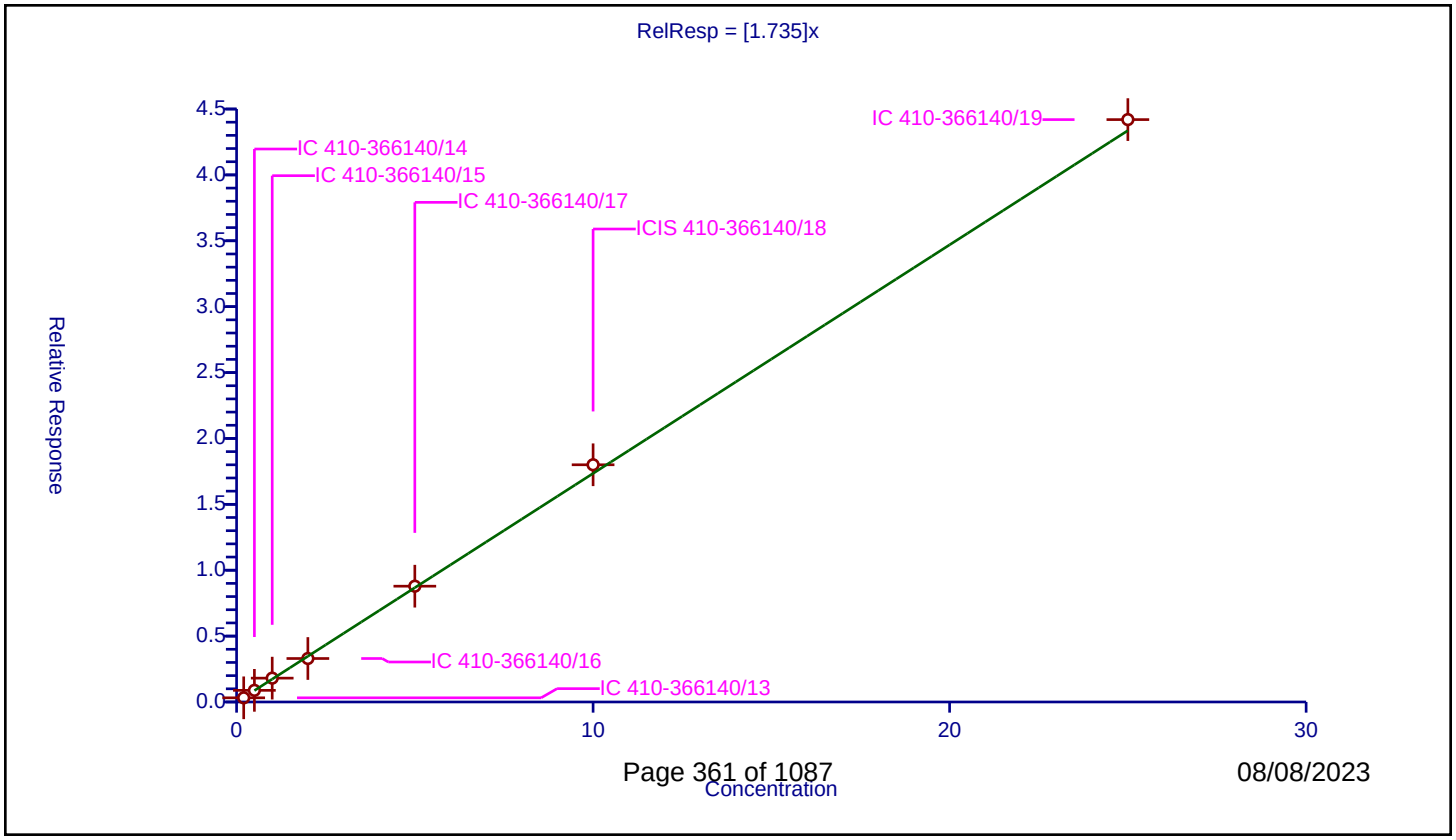
Curve Coefficients

Intercept:	0
Slope:	1.735

Error Coefficients

Standard Error:	2920000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.317515	10.0	1410045.0	1.587573	Y
2	IC 410-366140/14	0.5	0.884228	10.0	1394279.0	1.768455	Y
3	IC 410-366140/15	1.0	1.811117	10.0	1397988.0	1.811117	Y
4	IC 410-366140/16	2.0	3.299208	10.0	1411369.0	1.649604	Y
5	IC 410-366140/17	5.0	8.787783	10.0	1430808.0	1.757557	Y
6	ICIS 410-366140/18	10.0	18.002324	10.0	1451141.0	1.800232	Y
7	IC 410-366140/19	25.0	44.195718	10.0	1471953.0	1.767829	Y



Calibration / 4-Bromofluorobenzene (Surr)

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

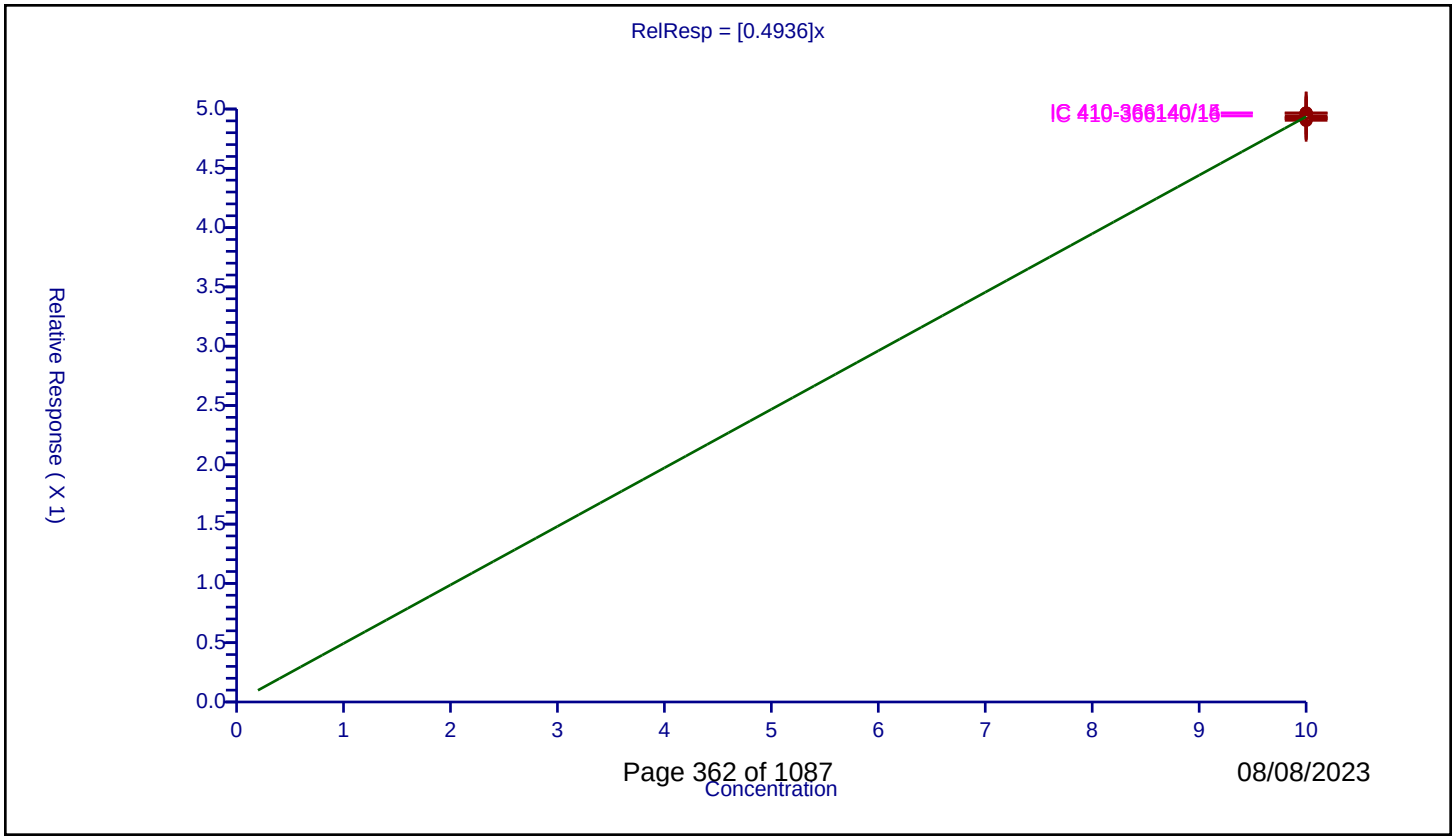
Curve Coefficients

Intercept:	0
Slope:	0.4936

Error Coefficients

Standard Error:	759000
Relative Standard Error:	0.5
Correlation Coefficient:	NA
Coefficient of Determination (Adjusted):	0

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	10.0	4.904496	10.0	1410045.0	0.49045	Y
2	IC 410-366140/14	10.0	4.966273	10.0	1394279.0	0.496627	Y
3	IC 410-366140/15	10.0	4.965593	10.0	1397988.0	0.496559	Y
4	IC 410-366140/16	10.0	4.941521	10.0	1411369.0	0.494152	Y
5	IC 410-366140/17	10.0	4.918277	10.0	1430808.0	0.491828	Y
6	ICIS 410-366140/18	10.0	4.922554	10.0	1451141.0	0.492255	Y
7	IC 410-366140/19	10.0	4.929811	10.0	1471953.0	0.492981	Y



Calibration / 1,1,2,2-Tetrachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

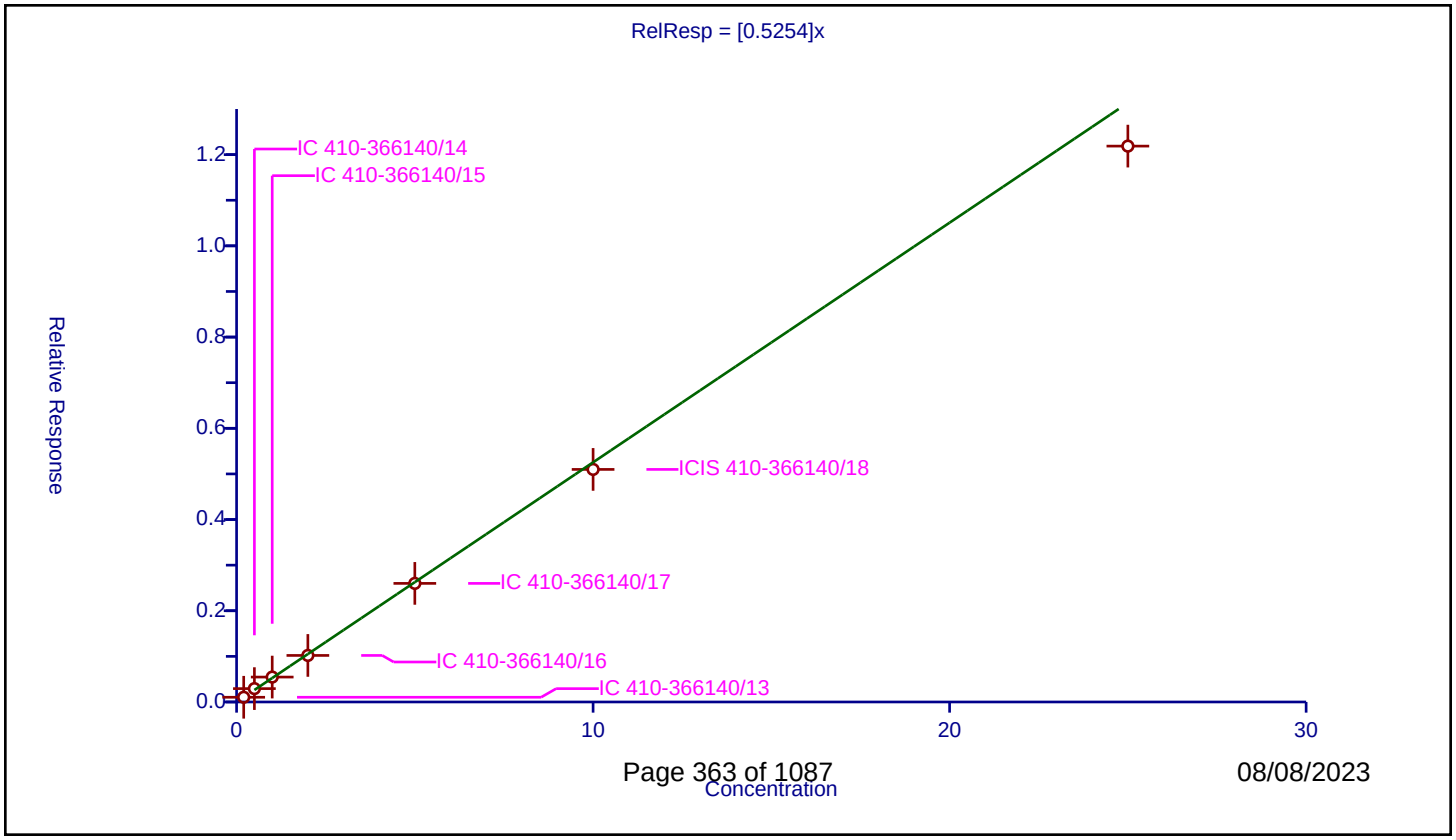
Curve Coefficients

Intercept:	0
Slope:	0.5254

Error Coefficients

Standard Error:	438000
Relative Standard Error:	6.1
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.103628	10.0	756163.0	0.518142	Y
2	IC 410-366140/14	0.5	0.292926	10.0	752239.0	0.585851	Y
3	IC 410-366140/15	1.0	0.546116	10.0	762073.0	0.546116	Y
4	IC 410-366140/16	2.0	1.020687	10.0	762594.0	0.510344	Y
5	IC 410-366140/17	5.0	2.600065	10.0	769500.0	0.520013	Y
6	ICIS 410-366140/18	10.0	5.098667	10.0	792309.0	0.509867	Y
7	IC 410-366140/19	25.0	12.186505	10.0	795283.0	0.48746	Y



Calibration / Bromobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

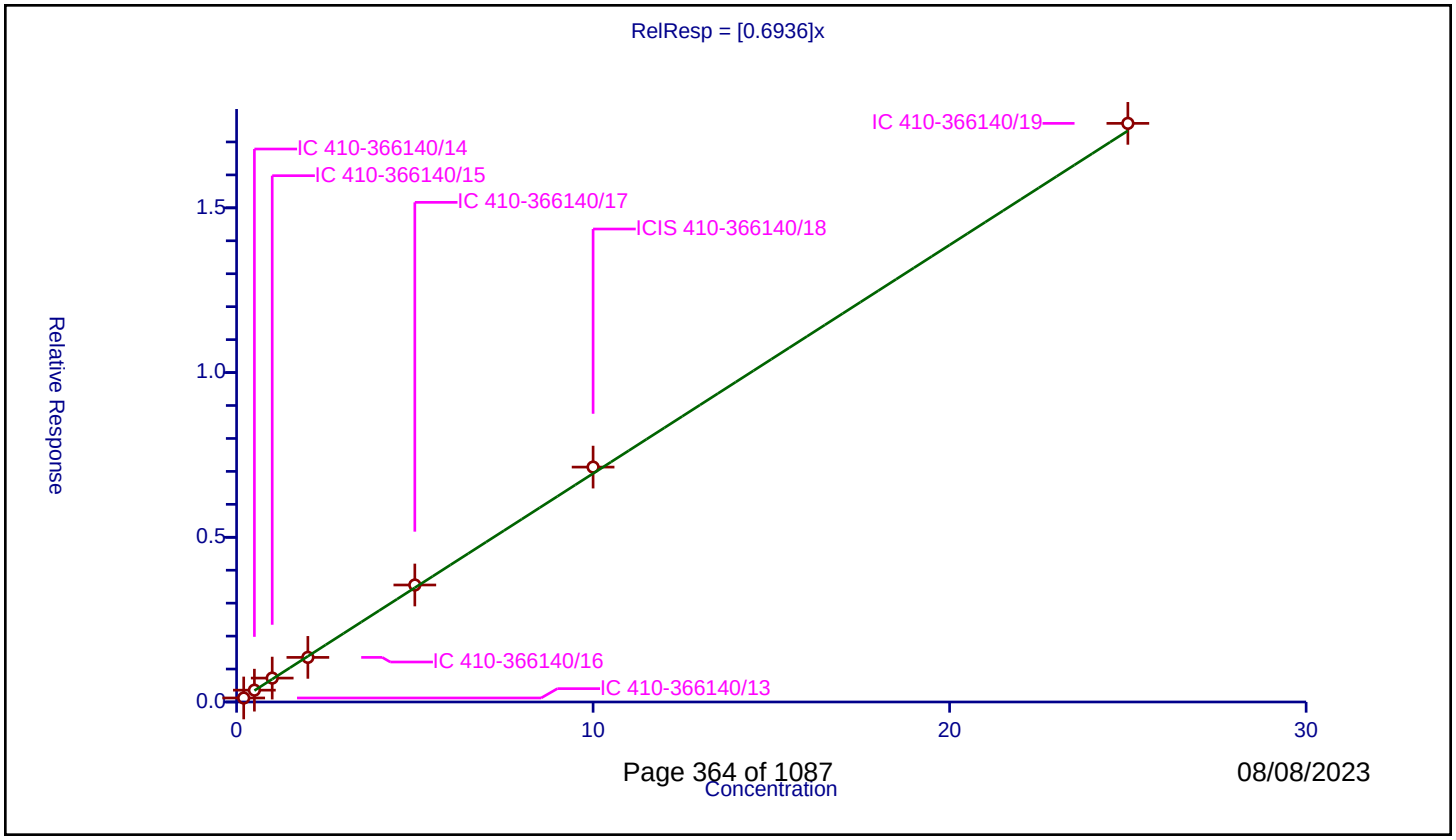
Curve Coefficients

Intercept:	0
Slope:	0.6936

Error Coefficients

Standard Error:	627000
Relative Standard Error:	5.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.121667	10.0	756163.0	0.608334	Y
2	IC 410-366140/14	0.5	0.359327	10.0	752239.0	0.718655	Y
3	IC 410-366140/15	1.0	0.725455	10.0	762073.0	0.725455	Y
4	IC 410-366140/16	2.0	1.354102	10.0	762594.0	0.677051	Y
5	IC 410-366140/17	5.0	3.55128	10.0	769500.0	0.710256	Y
6	ICIS 410-366140/18	10.0	7.130198	10.0	792309.0	0.71302	Y
7	IC 410-366140/19	25.0	17.564339	10.0	795283.0	0.702574	Y



Calibration / trans-1,4-Dichloro-2-butene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

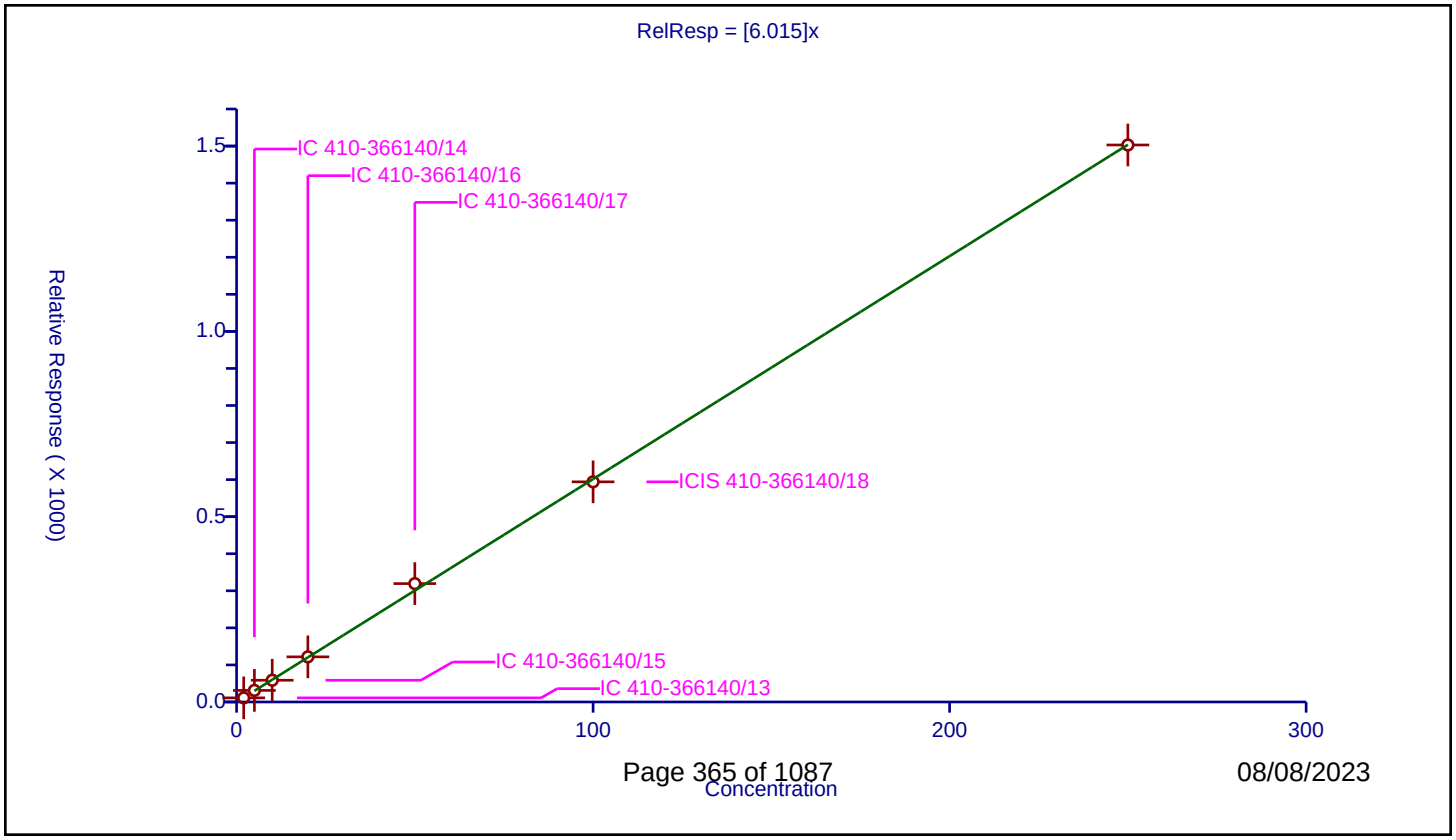
Curve Coefficients

Intercept:	0
Slope:	6.015

Error Coefficients

Standard Error:	1040000
Relative Standard Error:	4.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	2.0	11.104109	50.0	59505.0	5.552054	Y
2	IC 410-366140/14	5.0	31.270223	50.0	64902.0	6.254045	Y
3	IC 410-366140/15	10.0	58.680546	50.0	74978.0	5.868055	Y
4	IC 410-366140/16	20.0	121.783414	50.0	68924.0	6.089171	Y
5	IC 410-366140/17	50.0	319.415291	50.0	70223.0	6.388306	Y
6	ICIS 410-366140/18	100.0	593.98953	50.0	78513.0	5.939895	Y
7	IC 410-366140/19	250.0	1502.963656	50.0	76932.0	6.011855	Y



Calibration / 1,2,3-Trichloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

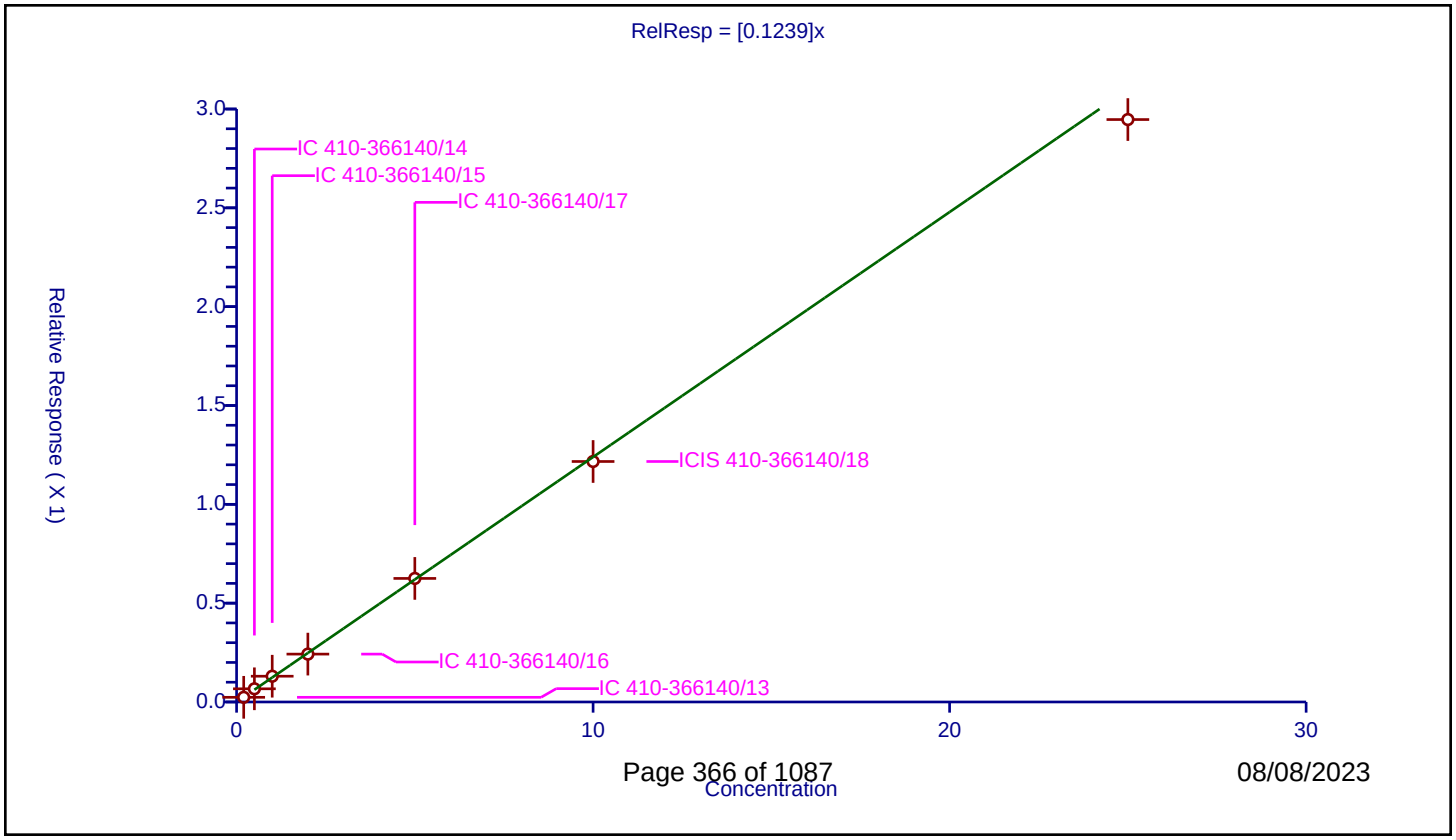
Curve Coefficients

Intercept:	0
Slope:	0.1239

Error Coefficients

Standard Error:	106000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.023632	10.0	756163.0	0.118162	Y
2	IC 410-366140/14	0.5	0.066654	10.0	752239.0	0.133309	Y
3	IC 410-366140/15	1.0	0.130407	10.0	762073.0	0.130407	Y
4	IC 410-366140/16	2.0	0.2422	10.0	762594.0	0.1211	Y
5	IC 410-366140/17	5.0	0.625068	10.0	769500.0	0.125014	Y
6	ICIS 410-366140/18	10.0	1.216697	10.0	792309.0	0.12167	Y
7	IC 410-366140/19	25.0	2.946674	10.0	795283.0	0.117867	Y



Calibration / N-Propylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

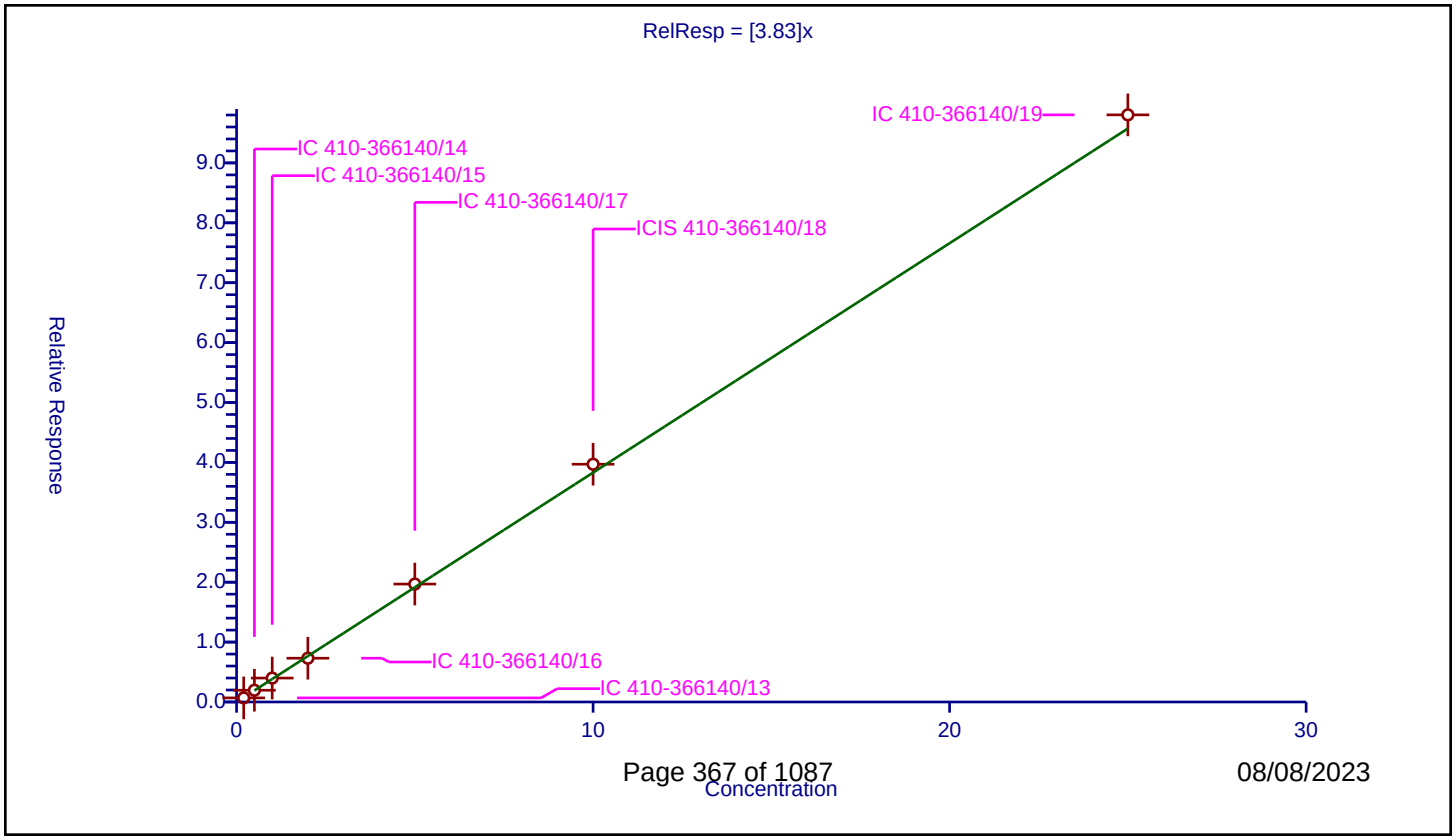
Curve Coefficients

Intercept:	0
Slope:	3.83

Error Coefficients

Standard Error:	3500000
Relative Standard Error:	5.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.681612	10.0	756163.0	3.408061	Y
2	IC 410-366140/14	0.5	1.96084	10.0	752239.0	3.921679	Y
3	IC 410-366140/15	1.0	3.994617	10.0	762073.0	3.994617	Y
4	IC 410-366140/16	2.0	7.308568	10.0	762594.0	3.654284	Y
5	IC 410-366140/17	5.0	19.690903	10.0	769500.0	3.938181	Y
6	ICIS 410-366140/18	10.0	39.697908	10.0	792309.0	3.969791	Y
7	IC 410-366140/19	25.0	98.023622	10.0	795283.0	3.920945	Y



Calibration / 2-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

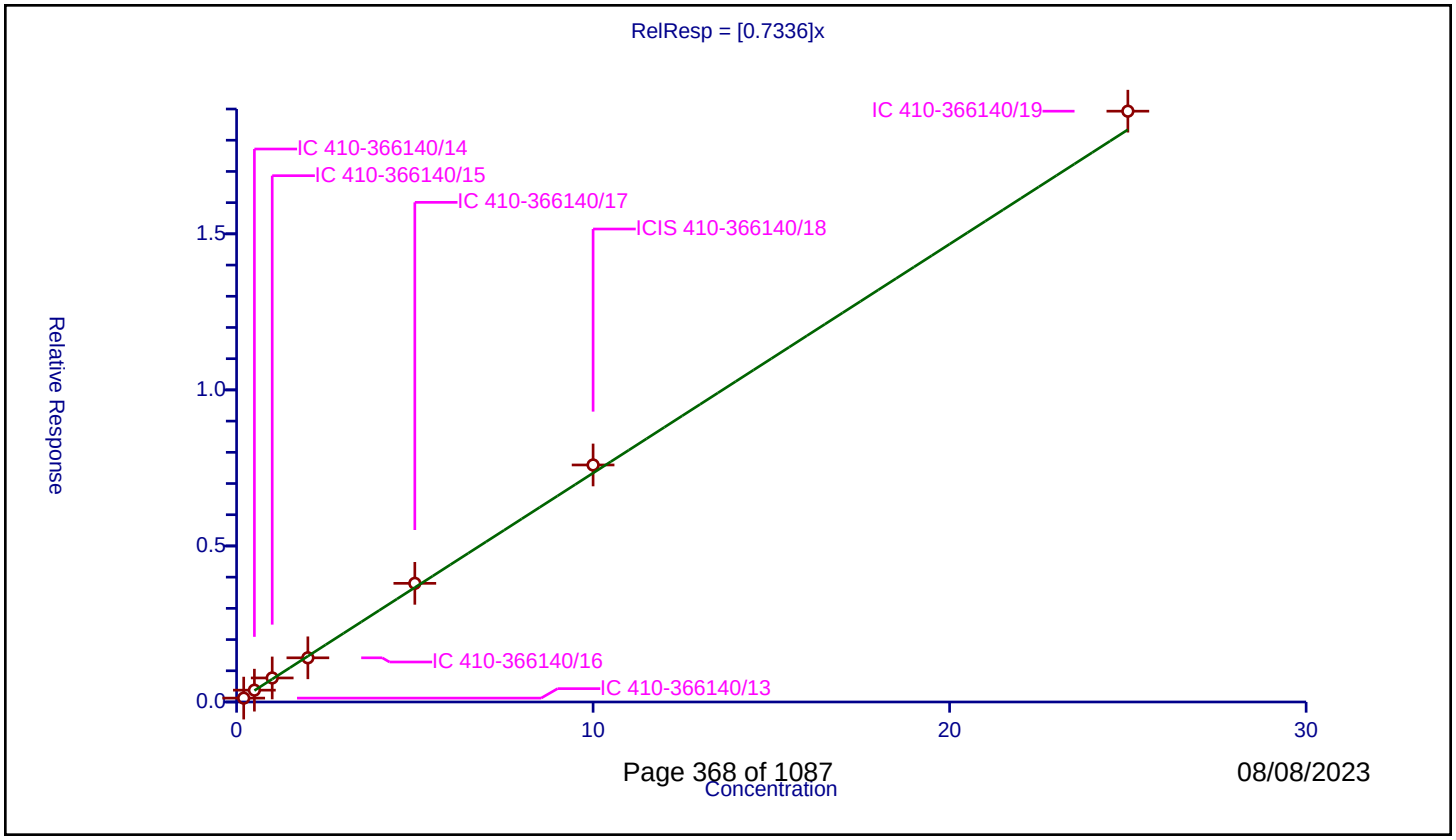
Curve Coefficients

Intercept:	0
Slope:	0.7336

Error Coefficients

Standard Error:	675000
Relative Standard Error:	7.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.993

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.124471	10.0	756163.0	0.622353	Y
2	IC 410-366140/14	0.5	0.378736	10.0	752239.0	0.757472	Y
3	IC 410-366140/15	1.0	0.770294	10.0	762073.0	0.770294	Y
4	IC 410-366140/16	2.0	1.415301	10.0	762594.0	0.70765	Y
5	IC 410-366140/17	5.0	3.802053	10.0	769500.0	0.760411	Y
6	ICIS 410-366140/18	10.0	7.594575	10.0	792309.0	0.759457	Y
7	IC 410-366140/19	25.0	18.93072	10.0	795283.0	0.757229	Y



Calibration / 1,3,5-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

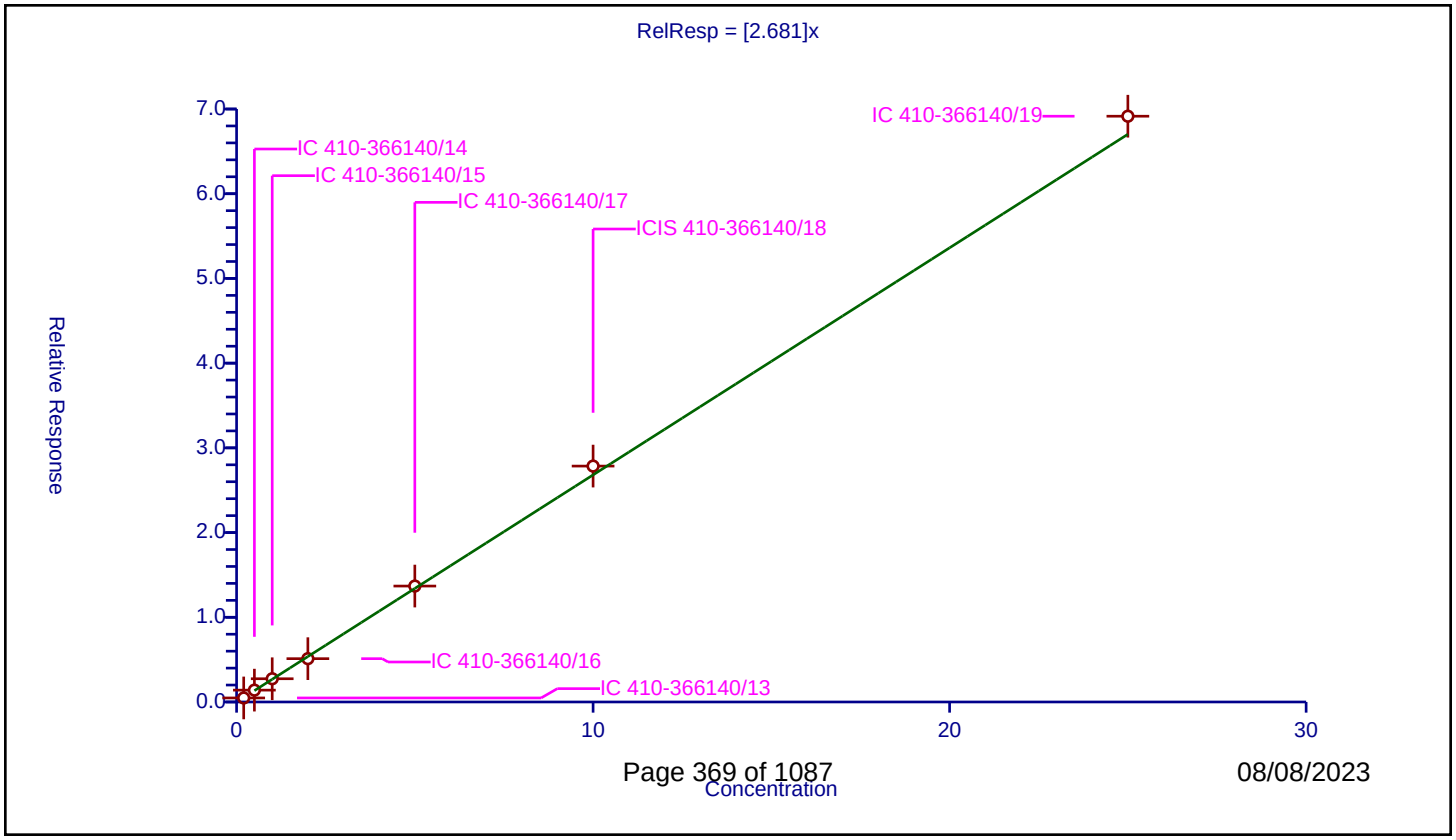
Curve Coefficients

Intercept:	0
Slope:	2.681

Error Coefficients

Standard Error:	2460000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.476008	10.0	756163.0	2.380042	Y
2	IC 410-366140/14	0.5	1.398385	10.0	752239.0	2.796771	Y
3	IC 410-366140/15	1.0	2.742729	10.0	762073.0	2.742729	Y
4	IC 410-366140/16	2.0	5.114819	10.0	762594.0	2.557409	Y
5	IC 410-366140/17	5.0	13.685939	10.0	769500.0	2.737188	Y
6	ICIS 410-366140/18	10.0	27.848668	10.0	792309.0	2.784867	Y
7	IC 410-366140/19	25.0	69.150743	10.0	795283.0	2.76603	Y



Calibration / 4-Chlorotoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

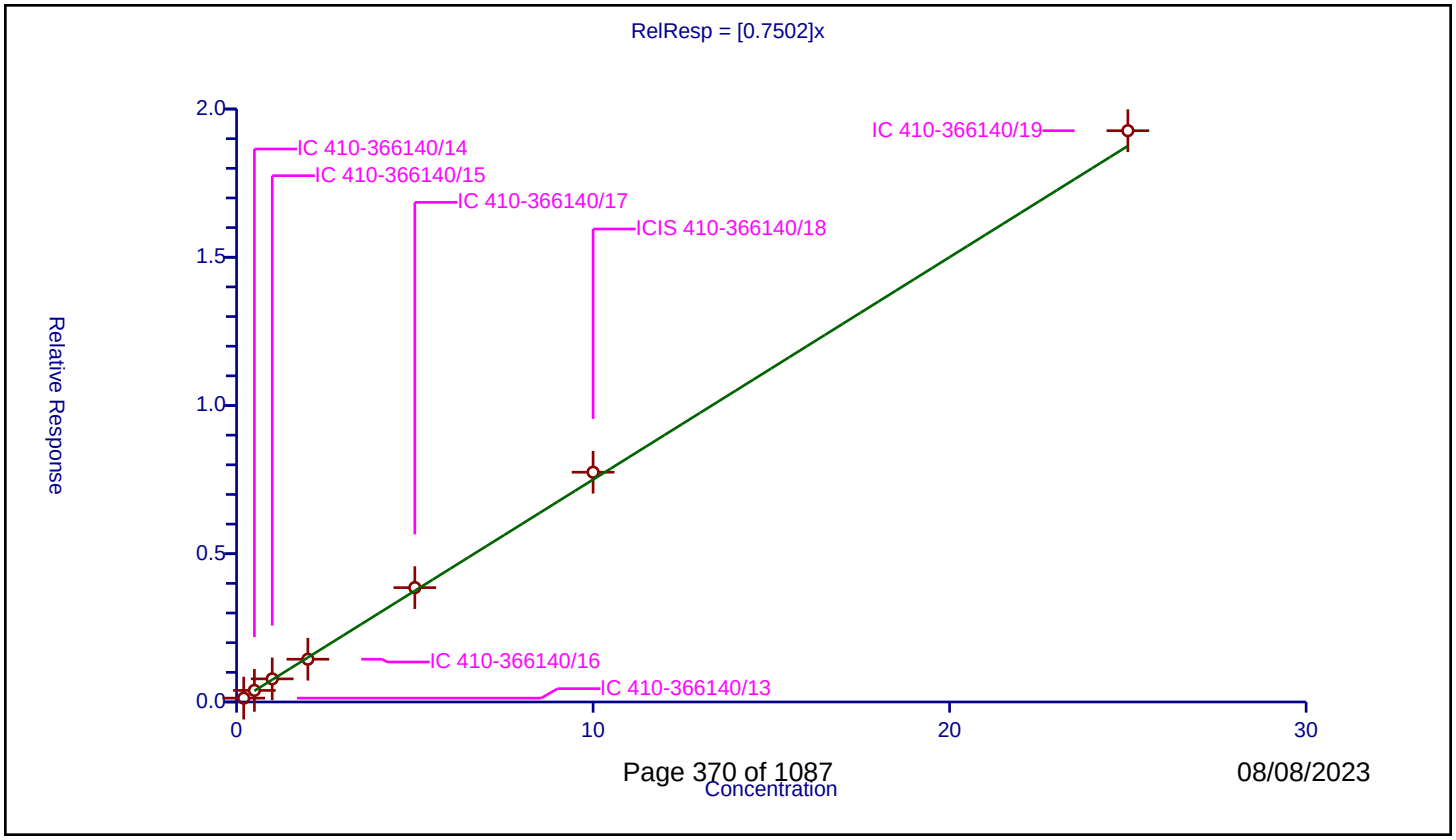
Curve Coefficients

Intercept:	0
Slope:	0.7502

Error Coefficients

Standard Error:	687000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.130223	10.0	756163.0	0.651116	Y
2	IC 410-366140/14	0.5	0.391006	10.0	752239.0	0.782012	Y
3	IC 410-366140/15	1.0	0.779768	10.0	762073.0	0.779768	Y
4	IC 410-366140/16	2.0	1.442301	10.0	762594.0	0.72115	Y
5	IC 410-366140/17	5.0	3.856946	10.0	769500.0	0.771389	Y
6	ICIS 410-366140/18	10.0	7.750171	10.0	792309.0	0.775017	Y
7	IC 410-366140/19	25.0	19.269116	10.0	795283.0	0.770765	Y



Calibration / tert-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

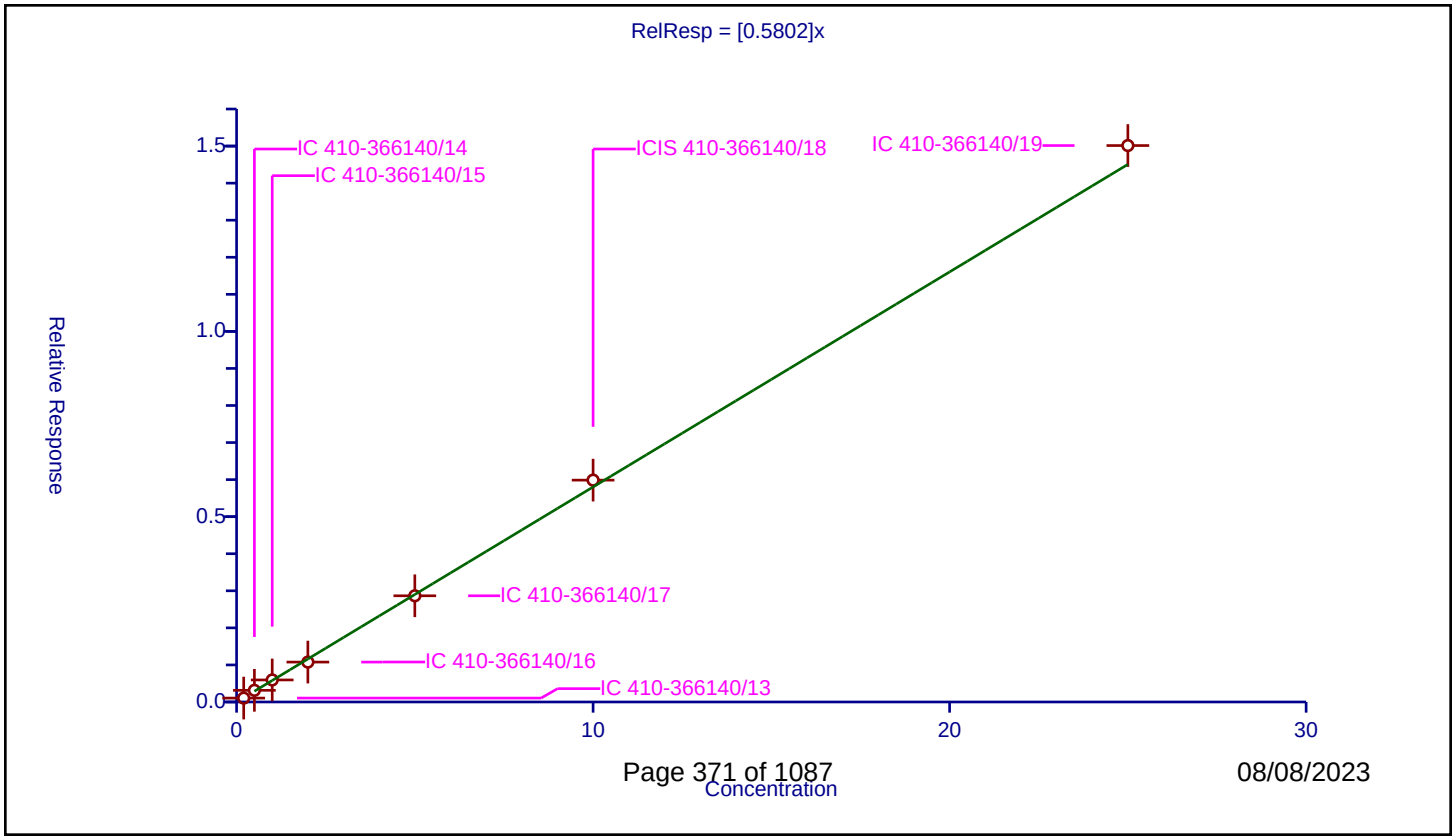
Curve Coefficients

Intercept:	0
Slope:	0.5802

Error Coefficients

Standard Error:	534000
Relative Standard Error:	6.4
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.105295	10.0	756163.0	0.526474	Y
2	IC 410-366140/14	0.5	0.315046	10.0	752239.0	0.630092	Y
3	IC 410-366140/15	1.0	0.594457	10.0	762073.0	0.594457	Y
4	IC 410-366140/16	2.0	1.076471	10.0	762594.0	0.538235	Y
5	IC 410-366140/17	5.0	2.865432	10.0	769500.0	0.573086	Y
6	ICIS 410-366140/18	10.0	5.986541	10.0	792309.0	0.598654	Y
7	IC 410-366140/19	25.0	15.014202	10.0	795283.0	0.600568	Y



08/08/2023

Calibration / Pentachloroethane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

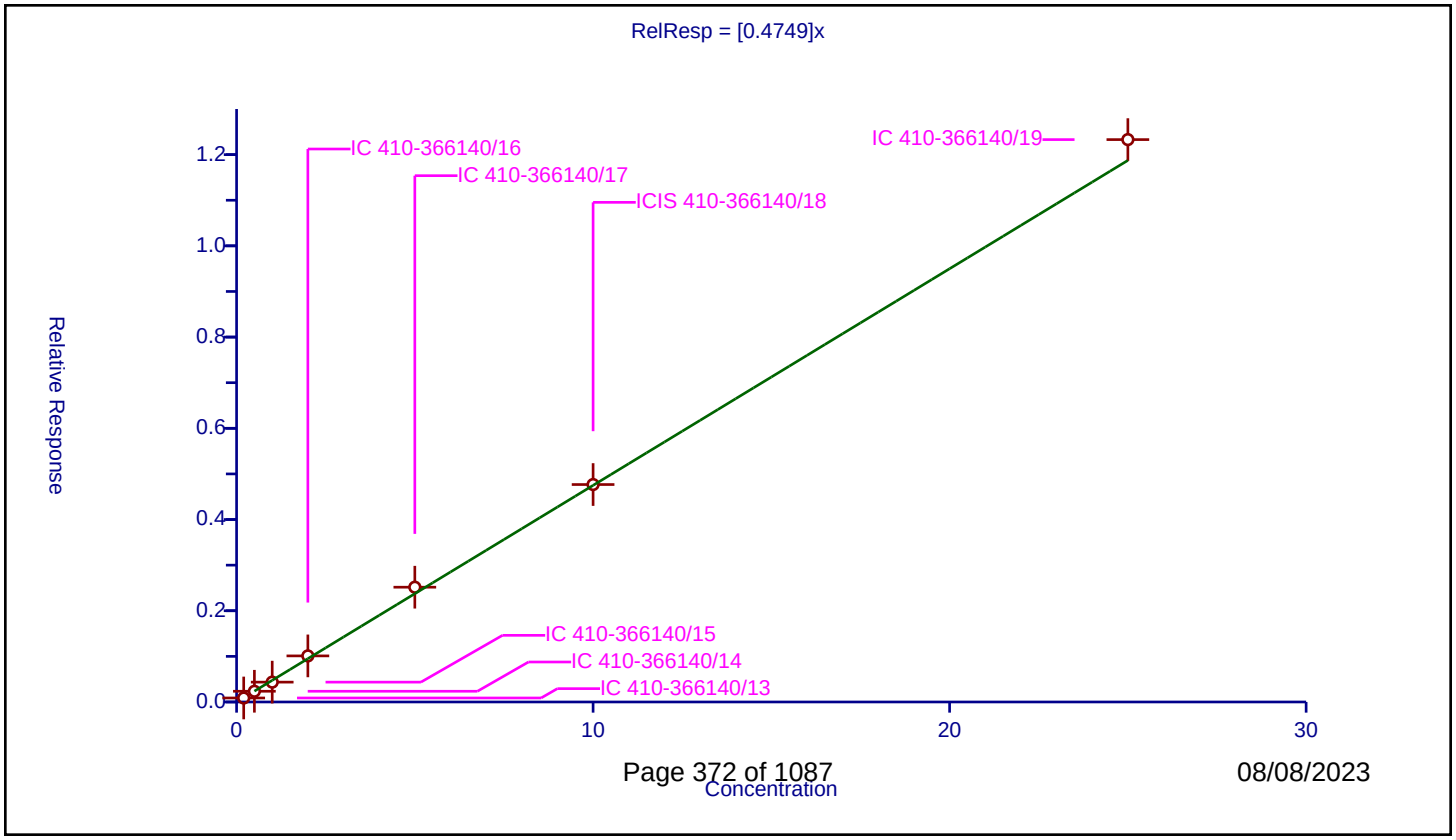
Curve Coefficients

Intercept:	0
Slope:	0.4749

Error Coefficients

Standard Error:	438000
Relative Standard Error:	6.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.08805	10.0	756163.0	0.440249	Y
2	IC 410-366140/14	0.5	0.235125	10.0	752239.0	0.470249	Y
3	IC 410-366140/15	1.0	0.435457	10.0	762073.0	0.435457	Y
4	IC 410-366140/16	2.0	1.010721	10.0	762594.0	0.505361	Y
5	IC 410-366140/17	5.0	2.516478	10.0	769500.0	0.503296	Y
6	ICIS 410-366140/18	10.0	4.767168	10.0	792309.0	0.476717	Y
7	IC 410-366140/19	25.0	12.329473	10.0	795283.0	0.493179	Y



08/08/2023

Calibration / 1,2,4-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

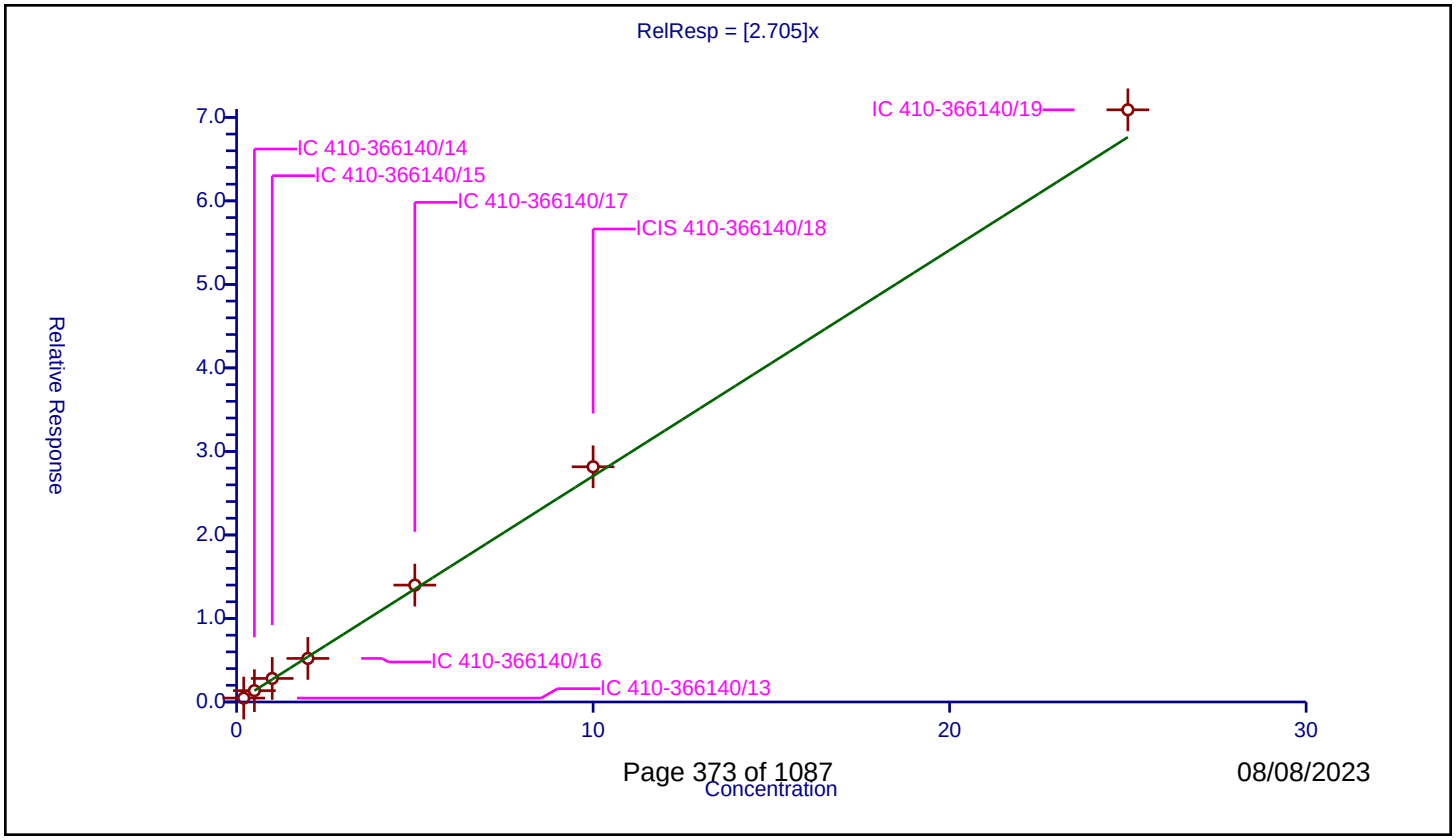
Curve Coefficients

Intercept:	0
Slope:	2.705

Error Coefficients

Standard Error:	2520000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.467492	10.0	756163.0	2.337459	Y
2	IC 410-366140/14	0.5	1.359754	10.0	752239.0	2.719508	Y
3	IC 410-366140/15	1.0	2.819861	10.0	762073.0	2.819861	Y
4	IC 410-366140/16	2.0	5.214675	10.0	762594.0	2.607338	Y
5	IC 410-366140/17	5.0	13.996582	10.0	769500.0	2.799316	Y
6	ICIS 410-366140/18	10.0	28.164163	10.0	792309.0	2.816416	Y
7	IC 410-366140/19	25.0	70.9032	10.0	795283.0	2.836128	Y



Calibration / sec-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

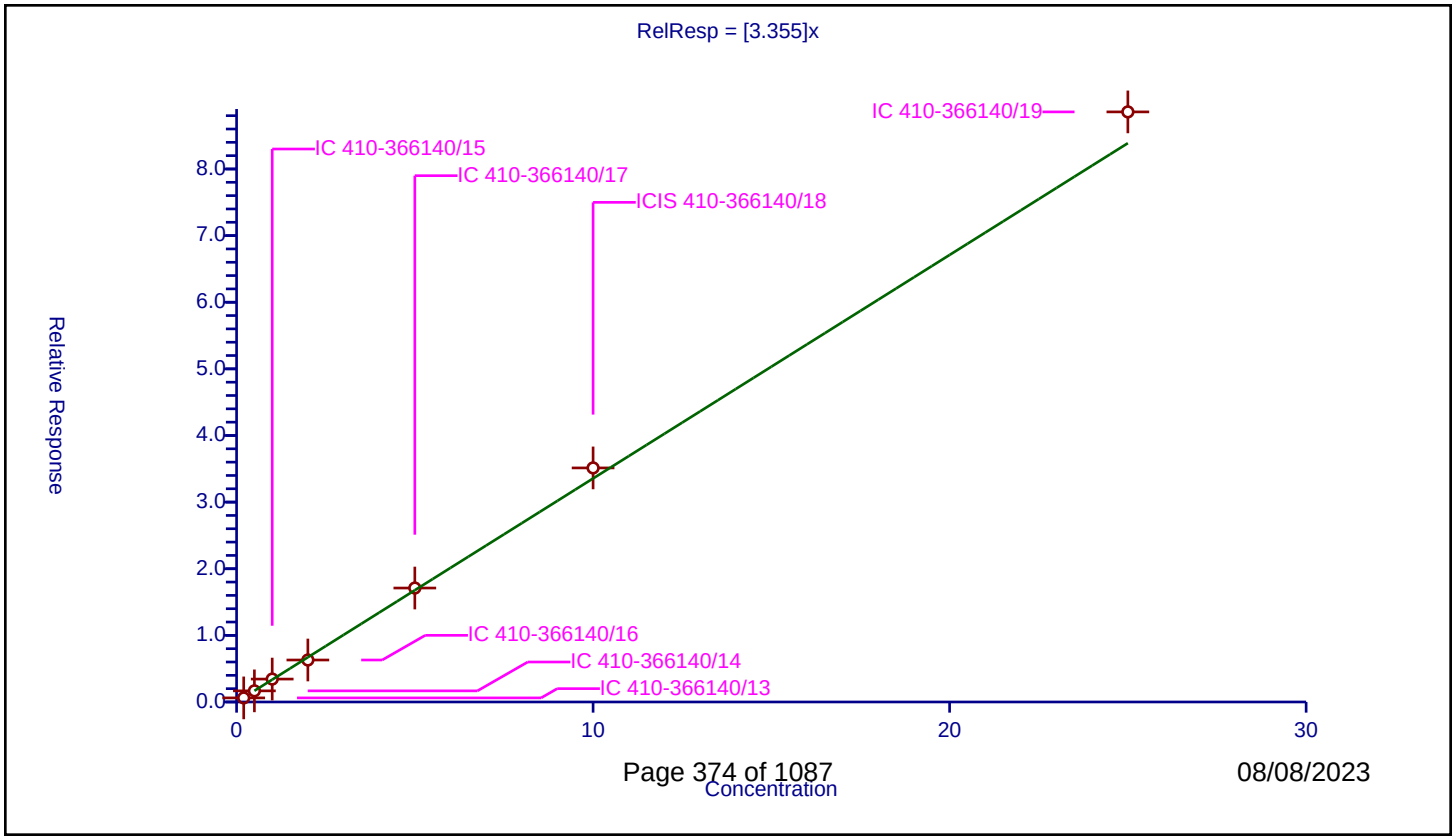
Curve Coefficients

Intercept:	0
Slope:	3.355

Error Coefficients

Standard Error:	3150000
Relative Standard Error:	5.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.614841	10.0	756163.0	3.074205	Y
2	IC 410-366140/14	0.5	1.672181	10.0	752239.0	3.344363	Y
3	IC 410-366140/15	1.0	3.438752	10.0	762073.0	3.438752	Y
4	IC 410-366140/16	2.0	6.300692	10.0	762594.0	3.150346	Y
5	IC 410-366140/17	5.0	17.103691	10.0	769500.0	3.420738	Y
6	ICIS 410-366140/18	10.0	35.131003	10.0	792309.0	3.5131	Y
7	IC 410-366140/19	25.0	88.569314	10.0	795283.0	3.542773	Y



Calibration / 1,3-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

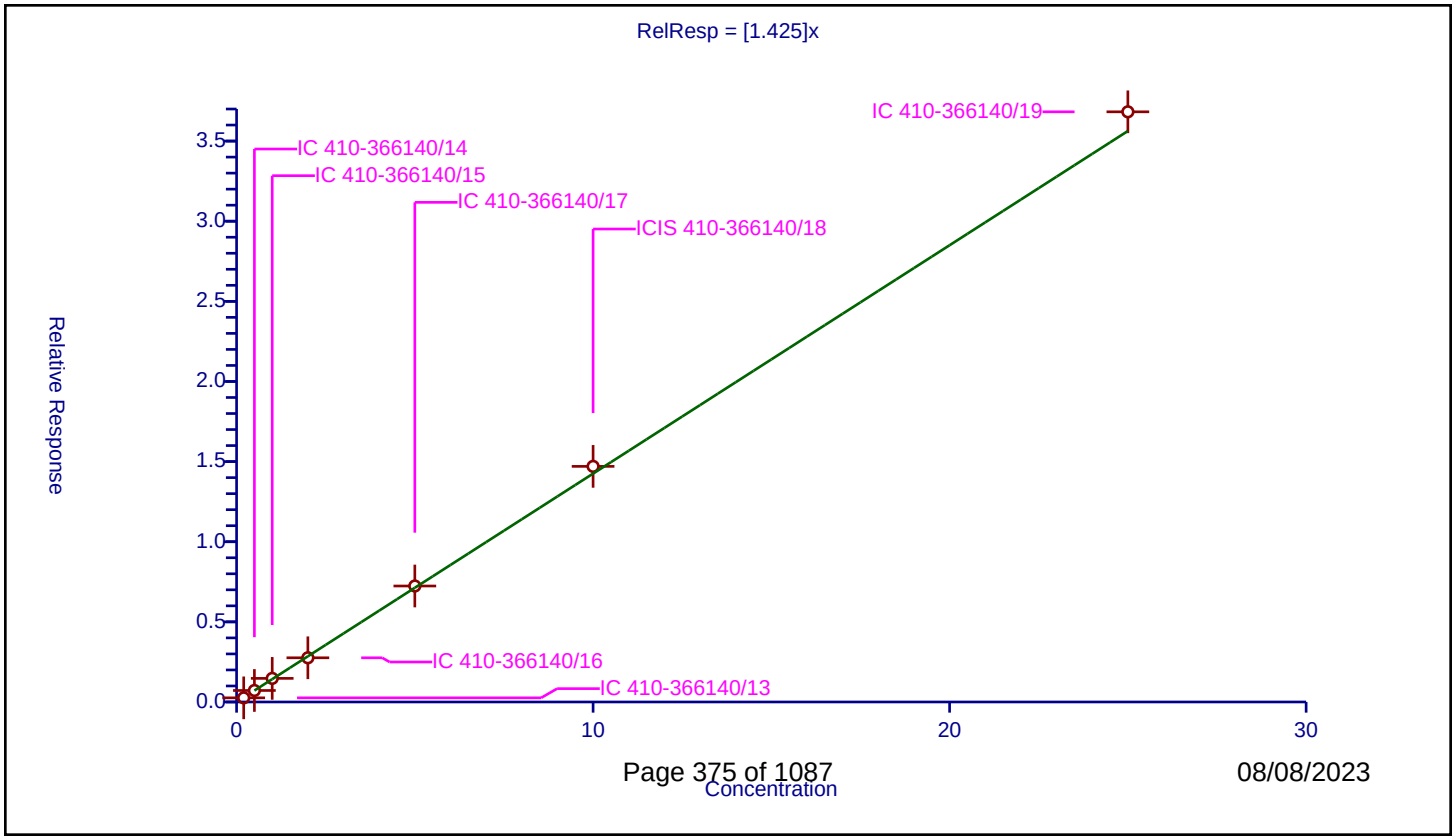
Curve Coefficients

Intercept:	0
Slope:	1.425

Error Coefficients

Standard Error:	1310000
Relative Standard Error:	4.6
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.259349	10.0	756163.0	1.296744	Y
2	IC 410-366140/14	0.5	0.717963	10.0	752239.0	1.435927	Y
3	IC 410-366140/15	1.0	1.472759	10.0	762073.0	1.472759	Y
4	IC 410-366140/16	2.0	2.758703	10.0	762594.0	1.379351	Y
5	IC 410-366140/17	5.0	7.237726	10.0	769500.0	1.447545	Y
6	ICIS 410-366140/18	10.0	14.70112	10.0	792309.0	1.470112	Y
7	IC 410-366140/19	25.0	36.825294	10.0	795283.0	1.473012	Y



Calibration / 4-Isopropyltoluene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

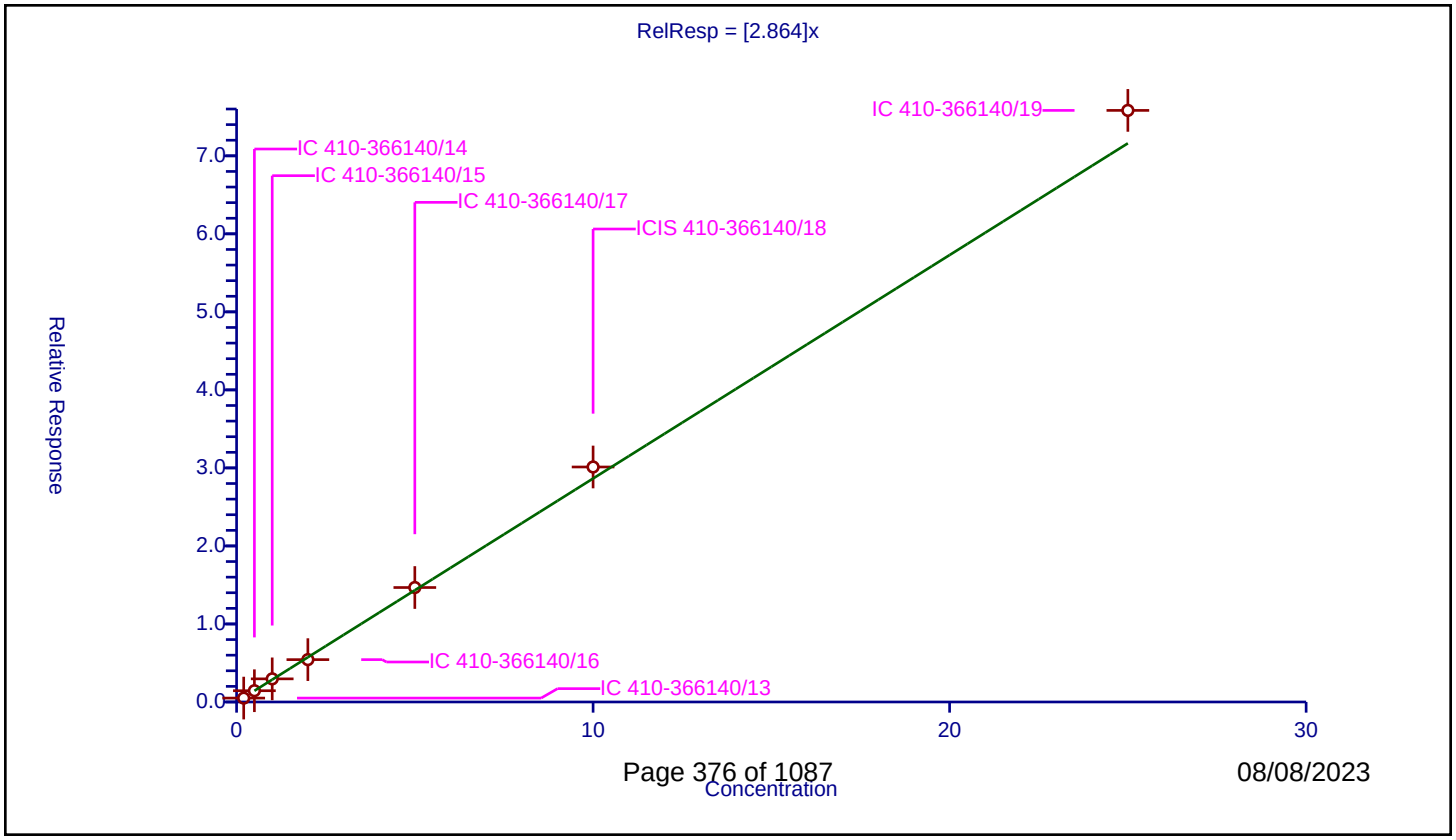
Curve Coefficients

Intercept:	0
Slope:	2.864

Error Coefficients

Standard Error:	2690000
Relative Standard Error:	6.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.994

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.500091	10.0	756163.0	2.500453	Y
2	IC 410-366140/14	0.5	1.445551	10.0	752239.0	2.891102	Y
3	IC 410-366140/15	1.0	2.964532	10.0	762073.0	2.964532	Y
4	IC 410-366140/16	2.0	5.428341	10.0	762594.0	2.71417	Y
5	IC 410-366140/17	5.0	14.672424	10.0	769500.0	2.934485	Y
6	ICIS 410-366140/18	10.0	30.117871	10.0	792309.0	3.011787	Y
7	IC 410-366140/19	25.0	75.822845	10.0	795283.0	3.032914	Y



Calibration / 1,4-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

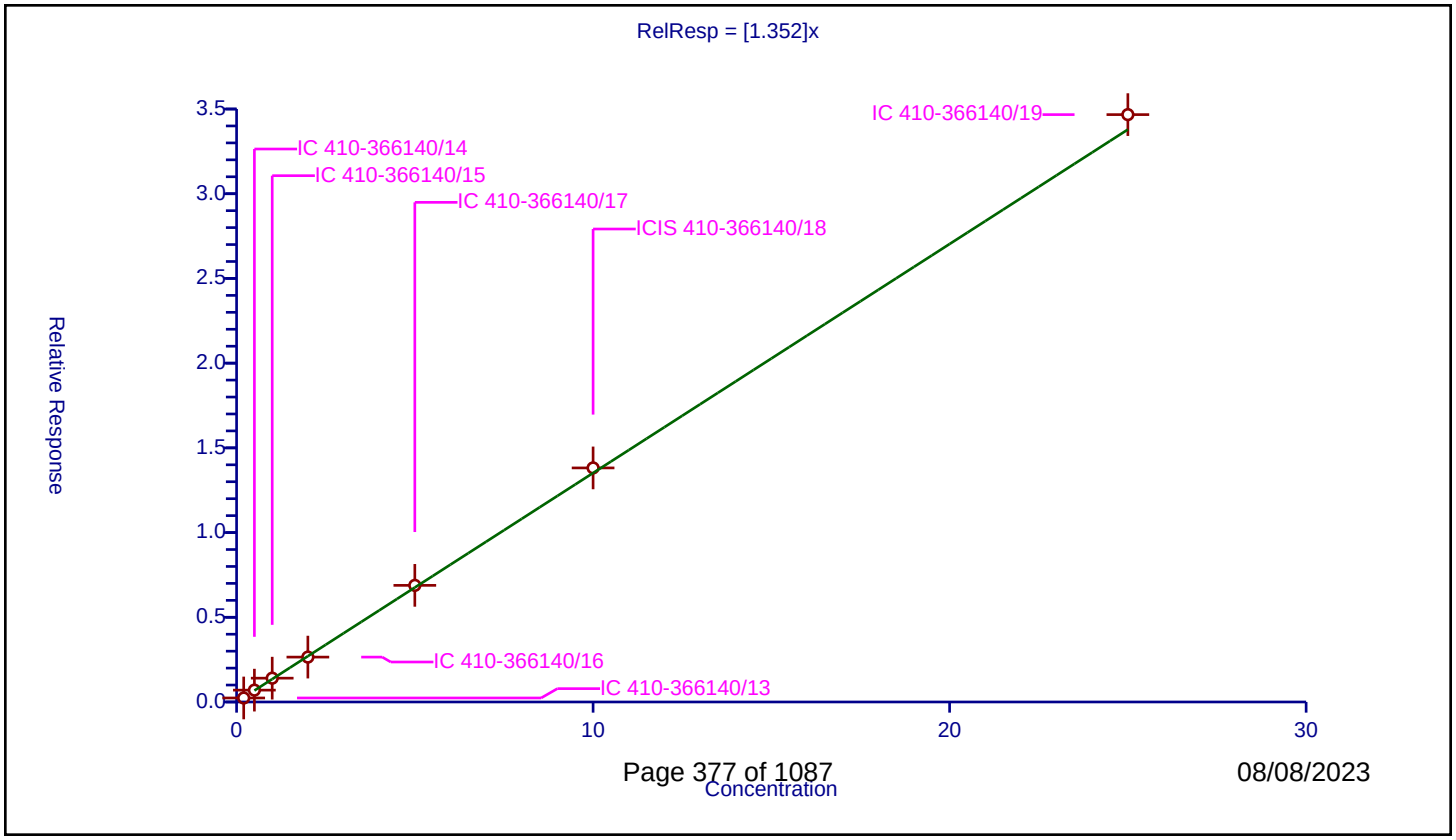
Curve Coefficients

Intercept:	0
Slope:	1.352

Error Coefficients

Standard Error:	1230000
Relative Standard Error:	5.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.996

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.236999	10.0	756163.0	1.184996	Y
2	IC 410-366140/14	0.5	0.700256	10.0	752239.0	1.400512	Y
3	IC 410-366140/15	1.0	1.406073	10.0	762073.0	1.406073	Y
4	IC 410-366140/16	2.0	2.649234	10.0	762594.0	1.324617	Y
5	IC 410-366140/17	5.0	6.8836	10.0	769500.0	1.37672	Y
6	ICIS 410-366140/18	10.0	13.815077	10.0	792309.0	1.381508	Y
7	IC 410-366140/19	25.0	34.668766	10.0	795283.0	1.386751	Y



Calibration / 1,2,3-Trimethylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

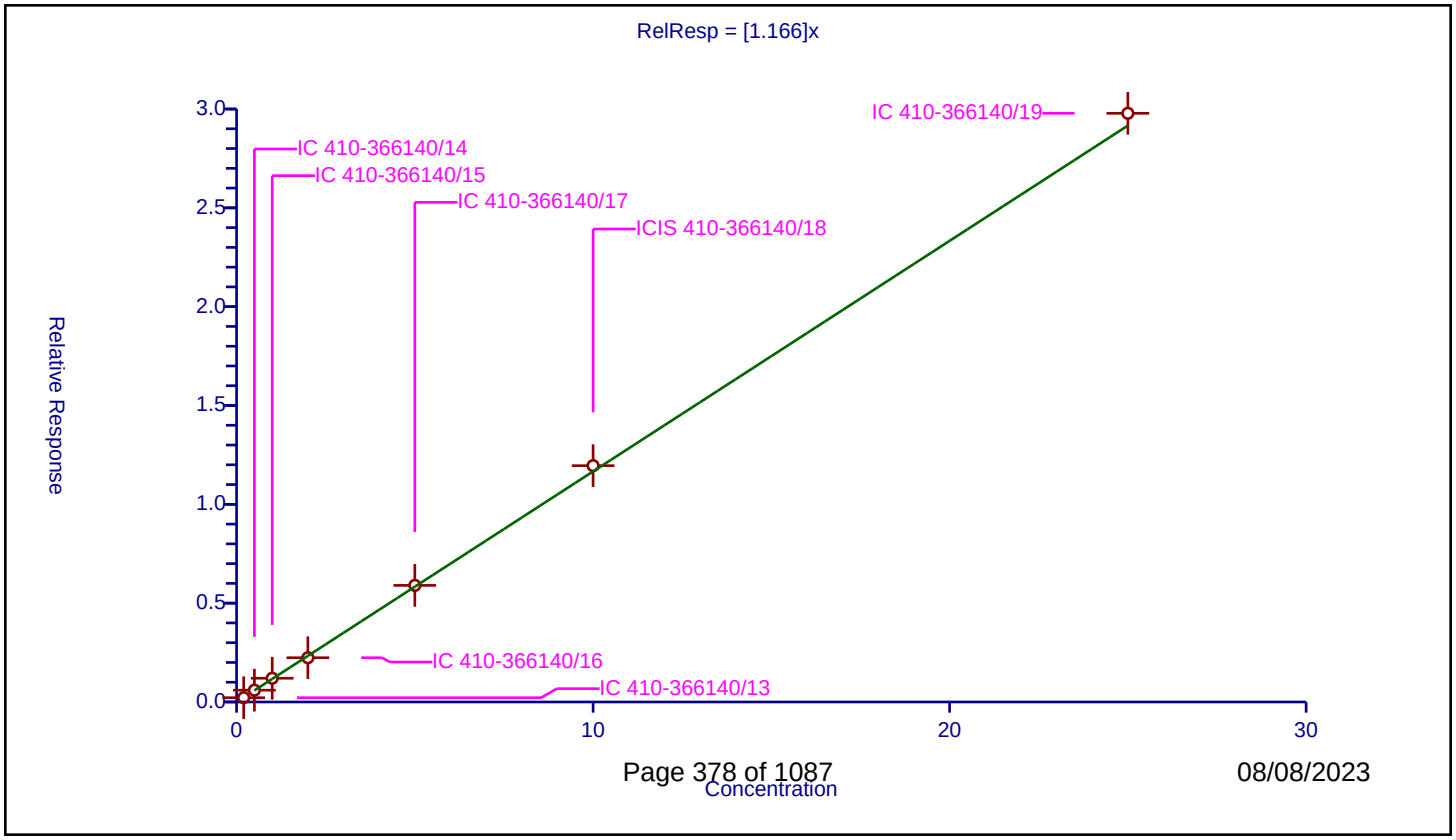
Curve Coefficients

Intercept:	0
Slope:	1.166

Error Coefficients

Standard Error:	1060000
Relative Standard Error:	3.9
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.998

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.216699	10.0	756163.0	1.083497	Y
2	IC 410-366140/14	0.5	0.597217	10.0	752239.0	1.194434	Y
3	IC 410-366140/15	1.0	1.201105	10.0	762073.0	1.201105	Y
4	IC 410-366140/16	2.0	2.23937	10.0	762594.0	1.119685	Y
5	IC 410-366140/17	5.0	5.898869	10.0	769500.0	1.179774	Y
6	ICIS 410-366140/18	10.0	11.955058	10.0	792309.0	1.195506	Y
7	IC 410-366140/19	25.0	29.783197	10.0	795283.0	1.191328	Y



Calibration / Benzyl chloride

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

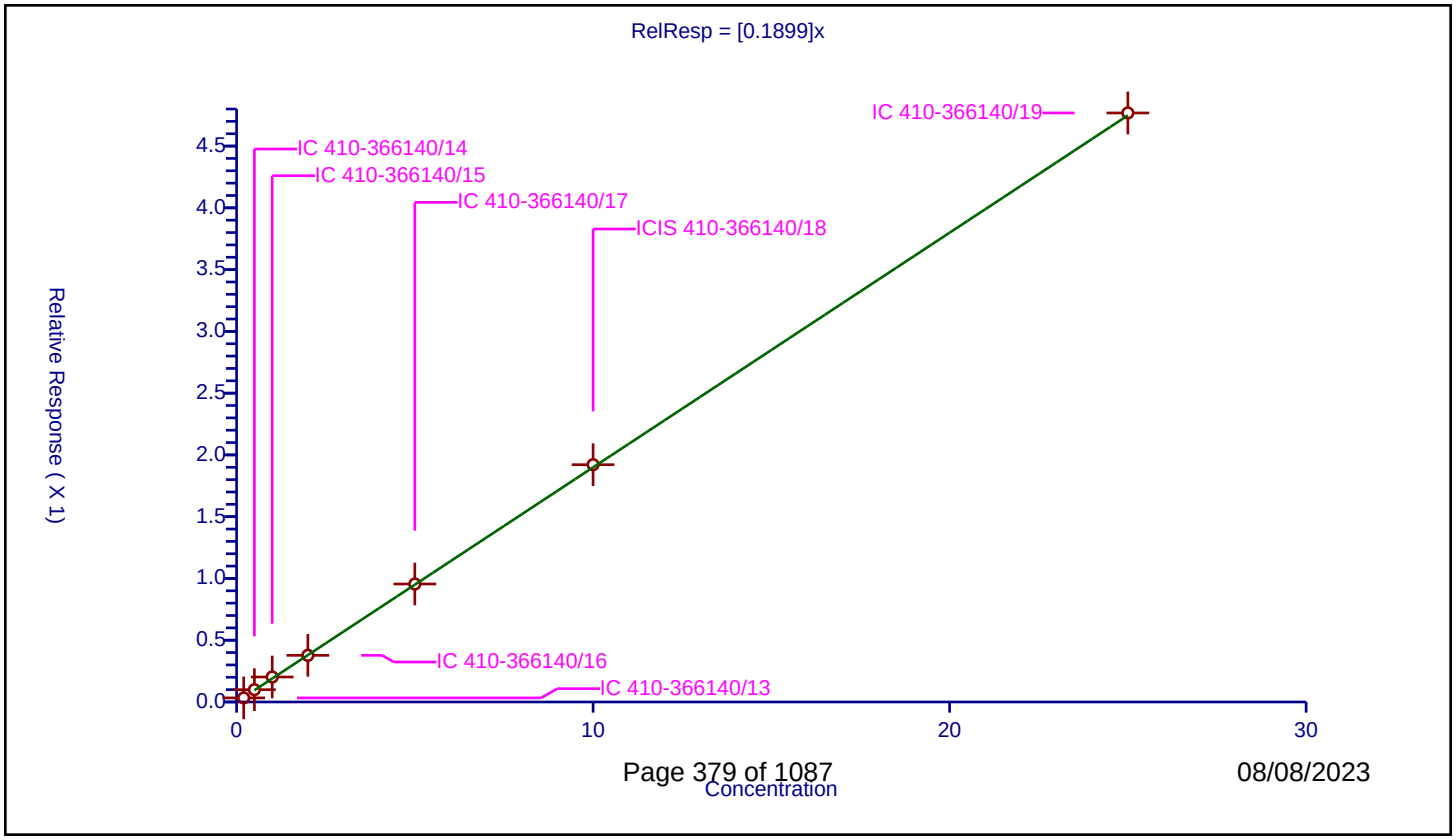
Curve Coefficients

Intercept:	0
Slope:	0.1899

Error Coefficients

Standard Error:	170000
Relative Standard Error:	6.2
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.995

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.033115	10.0	756163.0	0.165573	Y
2	IC 410-366140/14	0.5	0.099609	10.0	752239.0	0.199219	Y
3	IC 410-366140/15	1.0	0.202238	10.0	762073.0	0.202238	Y
4	IC 410-366140/16	2.0	0.377383	10.0	762594.0	0.188691	Y
5	IC 410-366140/17	5.0	0.95514	10.0	769500.0	0.191028	Y
6	ICIS 410-366140/18	10.0	1.920854	10.0	792309.0	0.192085	Y
7	IC 410-366140/19	25.0	4.768152	10.0	795283.0	0.190726	Y



Calibration / n-Butylbenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

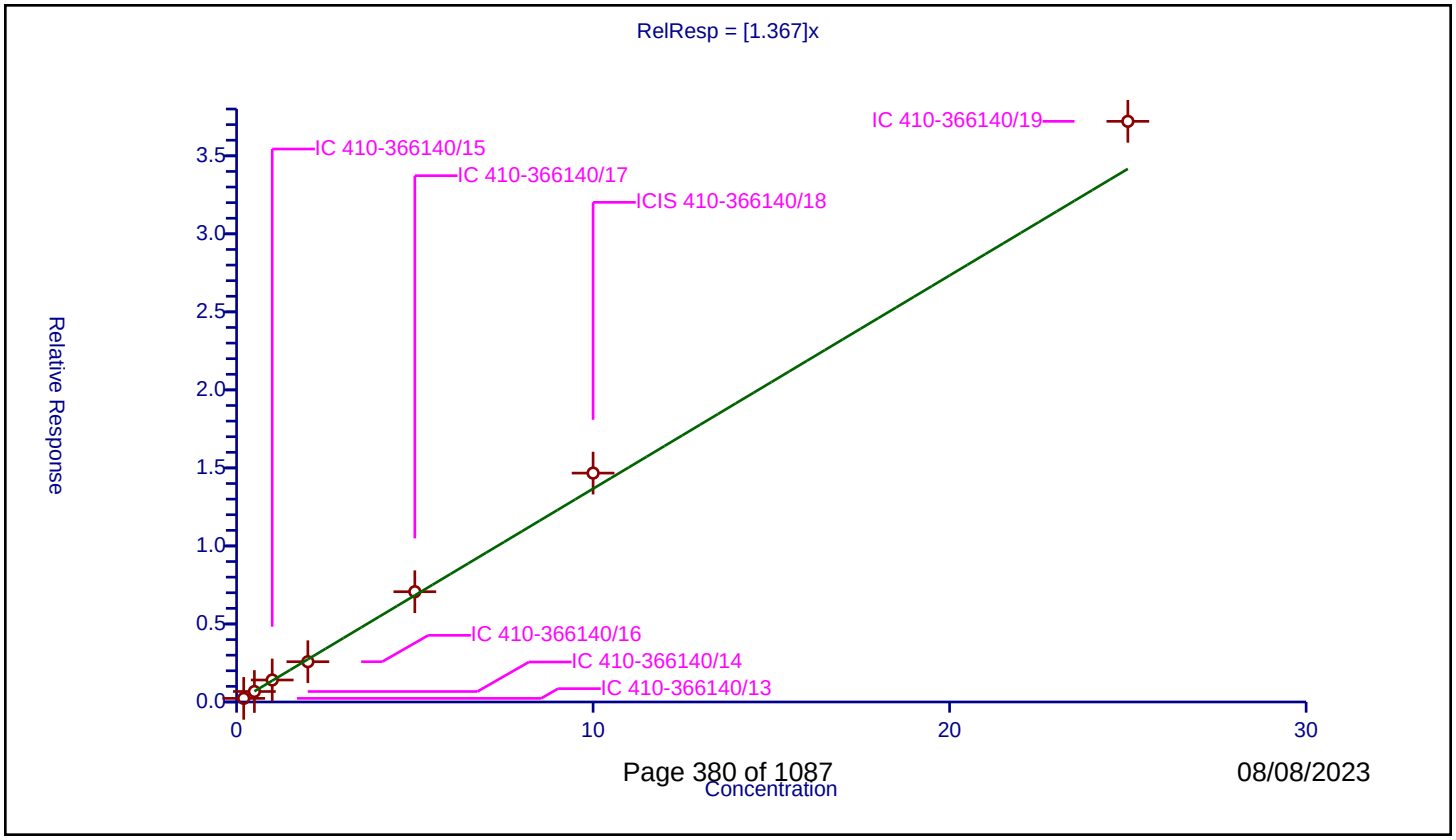
Curve Coefficients

Intercept:	0
Slope:	1.367

Error Coefficients

Standard Error:	1320000
Relative Standard Error:	8.5
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.991

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.230823	10.0	756163.0	1.154116	Y
2	IC 410-366140/14	0.5	0.672406	10.0	752239.0	1.344812	Y
3	IC 410-366140/15	1.0	1.408172	10.0	762073.0	1.408172	Y
4	IC 410-366140/16	2.0	2.581111	10.0	762594.0	1.290556	Y
5	IC 410-366140/17	5.0	7.067732	10.0	769500.0	1.413546	Y
6	ICIS 410-366140/18	10.0	14.668482	10.0	792309.0	1.466848	Y
7	IC 410-366140/19	25.0	37.210352	10.0	795283.0	1.488414	Y



Calibration / 1,2-Dichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

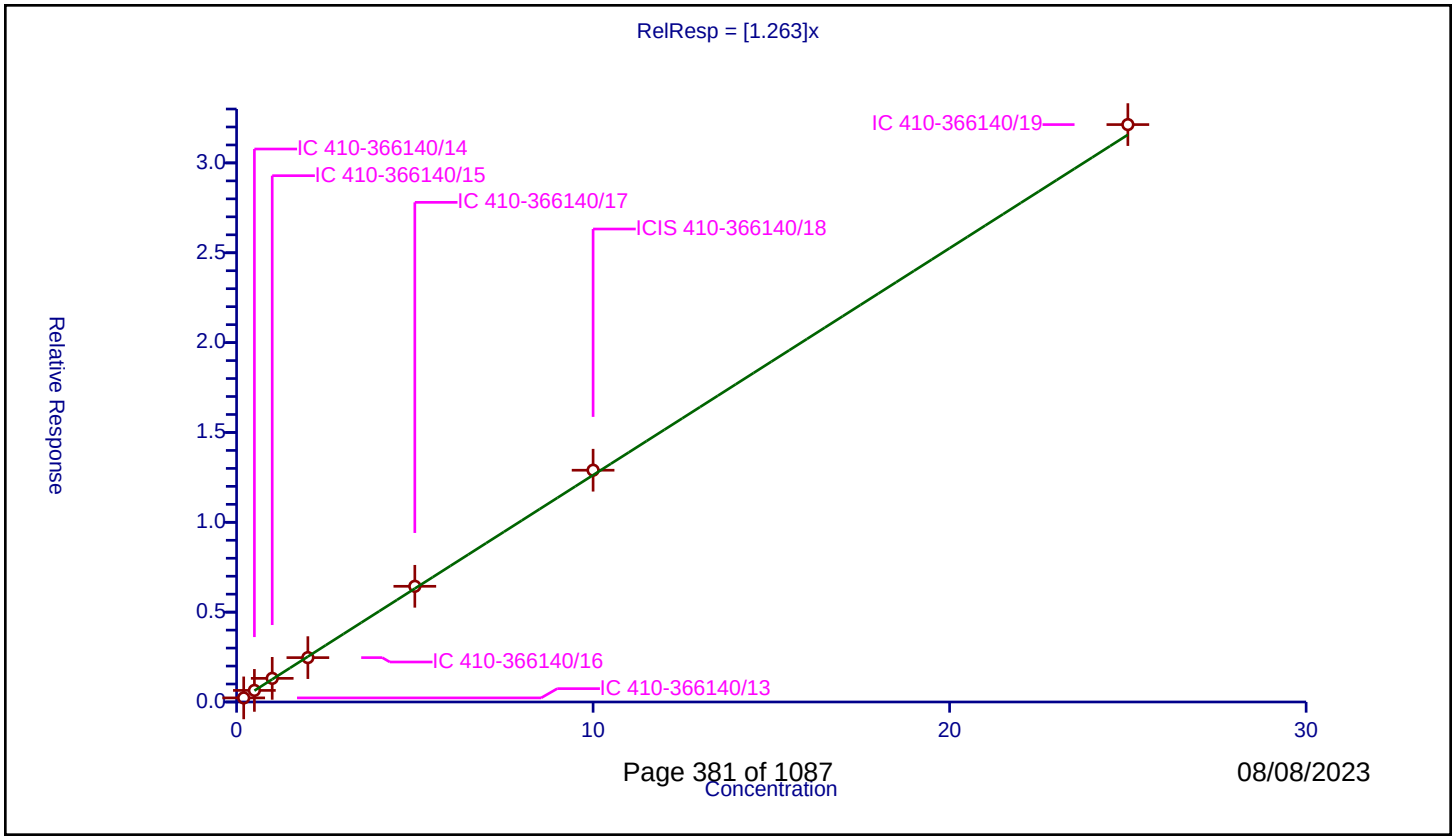
Curve Coefficients

Intercept:	0
Slope:	1.263

Error Coefficients

Standard Error:	1150000
Relative Standard Error:	4.8
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.997

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.227147	10.0	756163.0	1.135734	Y
2	IC 410-366140/14	0.5	0.645021	10.0	752239.0	1.290042	Y
3	IC 410-366140/15	1.0	1.315832	10.0	762073.0	1.315832	Y
4	IC 410-366140/16	2.0	2.46906	10.0	762594.0	1.23453	Y
5	IC 410-366140/17	5.0	6.438765	10.0	769500.0	1.287753	Y
6	ICIS 410-366140/18	10.0	12.899147	10.0	792309.0	1.289915	Y
7	IC 410-366140/19	25.0	32.132687	10.0	795283.0	1.285307	Y



Calibration / 1,2-Dibromo-3-Chloropropane

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

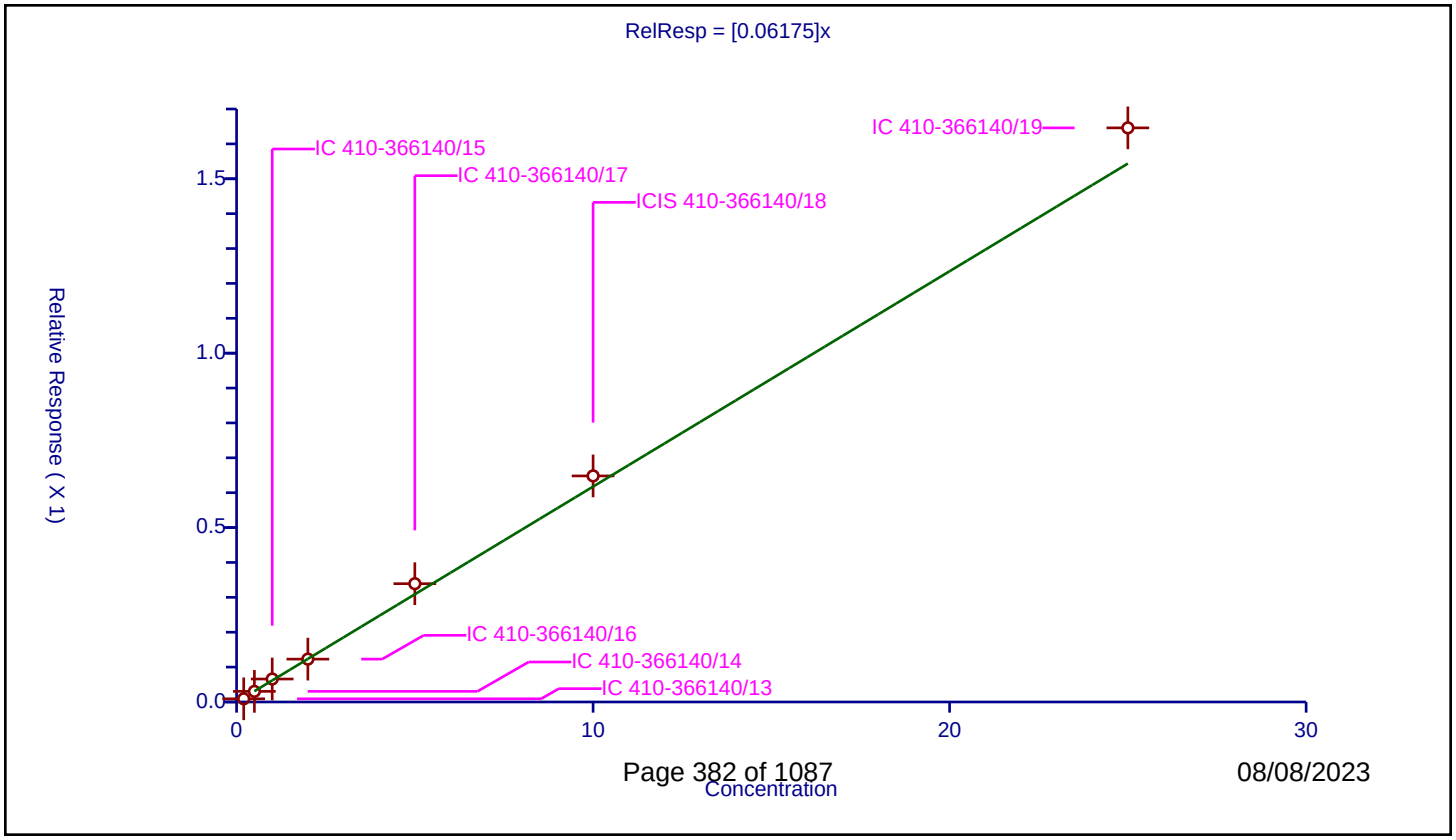
Curve Coefficients

Intercept:	0
Slope:	0.06175

Error Coefficients

Standard Error:	58600
Relative Standard Error:	12.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.983

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.009099	10.0	756163.0	0.045493	Y
2	IC 410-366140/14	0.5	0.030482	10.0	752239.0	0.060965	Y
3	IC 410-366140/15	1.0	0.065834	10.0	762073.0	0.065834	Y
4	IC 410-366140/16	2.0	0.122909	10.0	762594.0	0.061455	Y
5	IC 410-366140/17	5.0	0.339142	10.0	769500.0	0.067828	Y
6	ICIS 410-366140/18	10.0	0.648131	10.0	792309.0	0.064813	Y
7	IC 410-366140/19	25.0	1.645917	10.0	795283.0	0.065837	Y



Calibration / 1,3,5-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

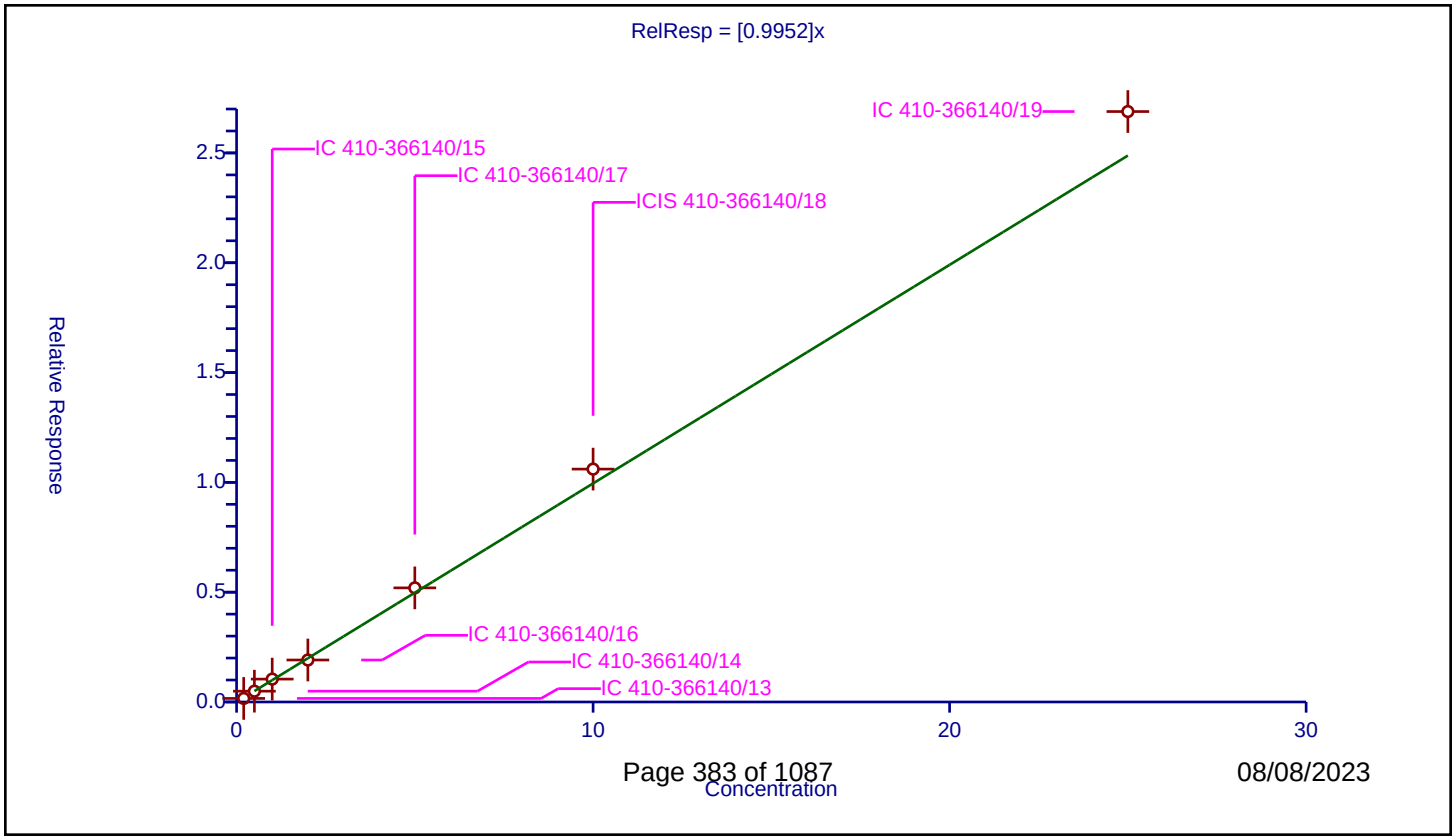
Curve Coefficients

Intercept:	0
Slope:	0.9952

Error Coefficients

Standard Error:	954000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.16191	10.0	756163.0	0.809548	Y
2	IC 410-366140/14	0.5	0.492171	10.0	752239.0	0.984341	Y
3	IC 410-366140/15	1.0	1.041882	10.0	762073.0	1.041882	Y
4	IC 410-366140/16	2.0	1.911371	10.0	762594.0	0.955685	Y
5	IC 410-366140/17	5.0	5.195945	10.0	769500.0	1.039189	Y
6	ICIS 410-366140/18	10.0	10.604146	10.0	792309.0	1.060415	Y
7	IC 410-366140/19	25.0	26.884317	10.0	795283.0	1.075373	Y



Calibration / 1,2,4-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

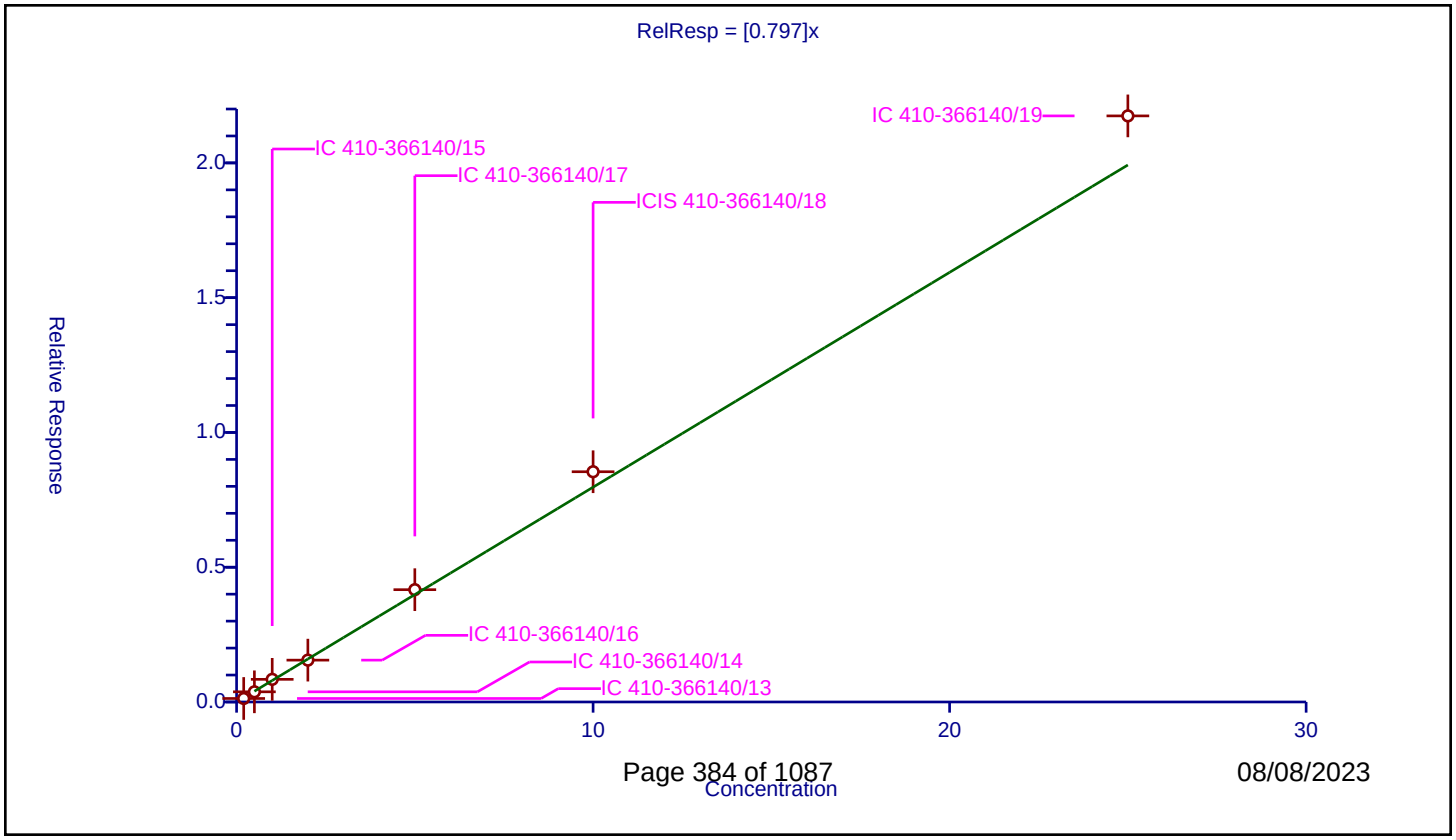
Curve Coefficients

Intercept:	0
Slope:	0.797

Error Coefficients

Standard Error:	771000
Relative Standard Error:	9.7
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.129853	10.0	756163.0	0.649265	Y
2	IC 410-366140/14	0.5	0.377686	10.0	752239.0	0.755372	Y
3	IC 410-366140/15	1.0	0.840051	10.0	762073.0	0.840051	Y
4	IC 410-366140/16	2.0	1.553251	10.0	762594.0	0.776626	Y
5	IC 410-366140/17	5.0	4.16642	10.0	769500.0	0.833284	Y
6	ICIS 410-366140/18	10.0	8.542614	10.0	792309.0	0.854261	Y
7	IC 410-366140/19	25.0	21.744913	10.0	795283.0	0.869797	Y



Calibration / Hexachlorobutadiene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

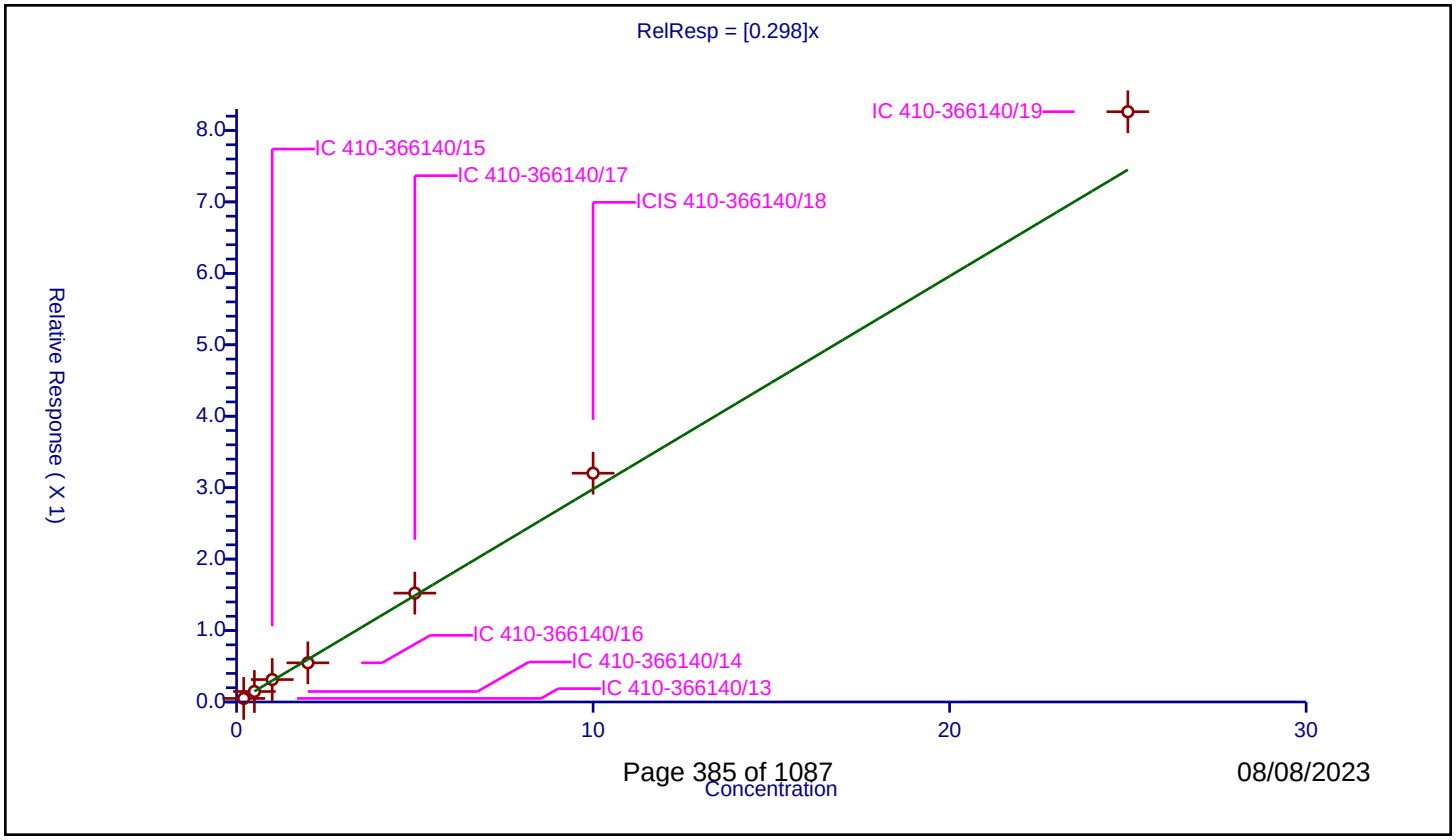
Curve Coefficients

Intercept:	0
Slope:	0.298

Error Coefficients

Standard Error:	292000
Relative Standard Error:	9.6
Correlation Coefficient:	0.999
Coefficient of Determination (Adjusted):	0.989

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.049659	10.0	756163.0	0.248293	Y
2	IC 410-366140/14	0.5	0.147014	10.0	752239.0	0.294029	Y
3	IC 410-366140/15	1.0	0.314182	10.0	762073.0	0.314182	Y
4	IC 410-366140/16	2.0	0.547985	10.0	762594.0	0.273992	Y
5	IC 410-366140/17	5.0	1.523821	10.0	769500.0	0.304764	Y
6	ICIS 410-366140/18	10.0	3.202235	10.0	792309.0	0.320224	Y
7	IC 410-366140/19	25.0	8.262178	10.0	795283.0	0.330487	Y



Calibration / Naphthalene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

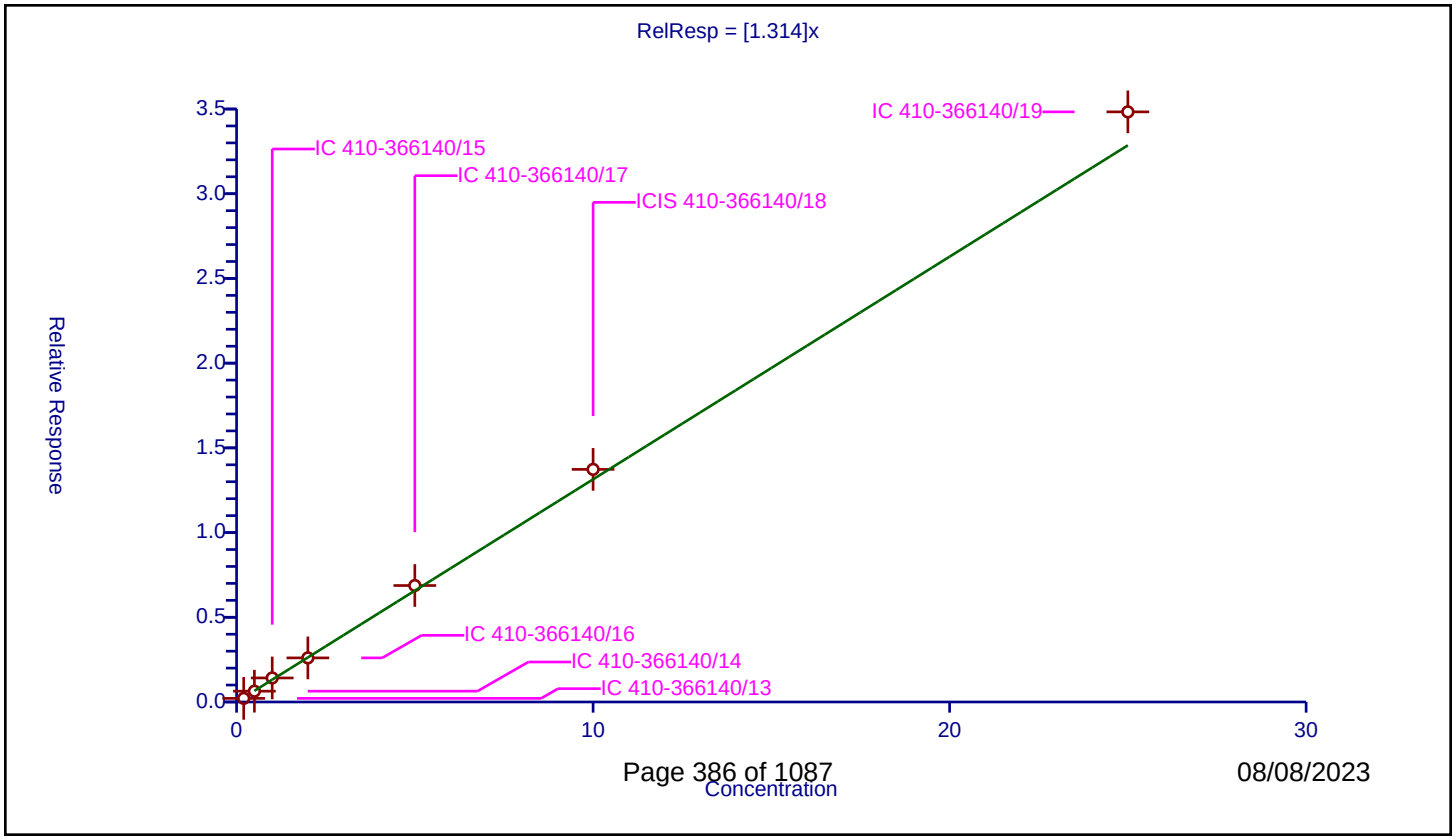
Curve Coefficients

Intercept:	0
Slope:	1.314

Error Coefficients

Standard Error:	1240000
Relative Standard Error:	9.3
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.990

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.212494	10.0	756163.0	1.062469	Y
2	IC 410-366140/14	0.5	0.638374	10.0	752239.0	1.276748	Y
3	IC 410-366140/15	1.0	1.418526	10.0	762073.0	1.418526	Y
4	IC 410-366140/16	2.0	2.602105	10.0	762594.0	1.301053	Y
5	IC 410-366140/17	5.0	6.875023	10.0	769500.0	1.375005	Y
6	ICIS 410-366140/18	10.0	13.728735	10.0	792309.0	1.372873	Y
7	IC 410-366140/19	25.0	34.830985	10.0	795283.0	1.393239	Y



Calibration / 1,2,3-Trichlorobenzene

Curve Type:	Average
Weighting:	Conc_Sq
Origin:	Force
Dependency:	Response
Calib Mode:	ISTD
Response Base:	AREA
RF Rounding:	0

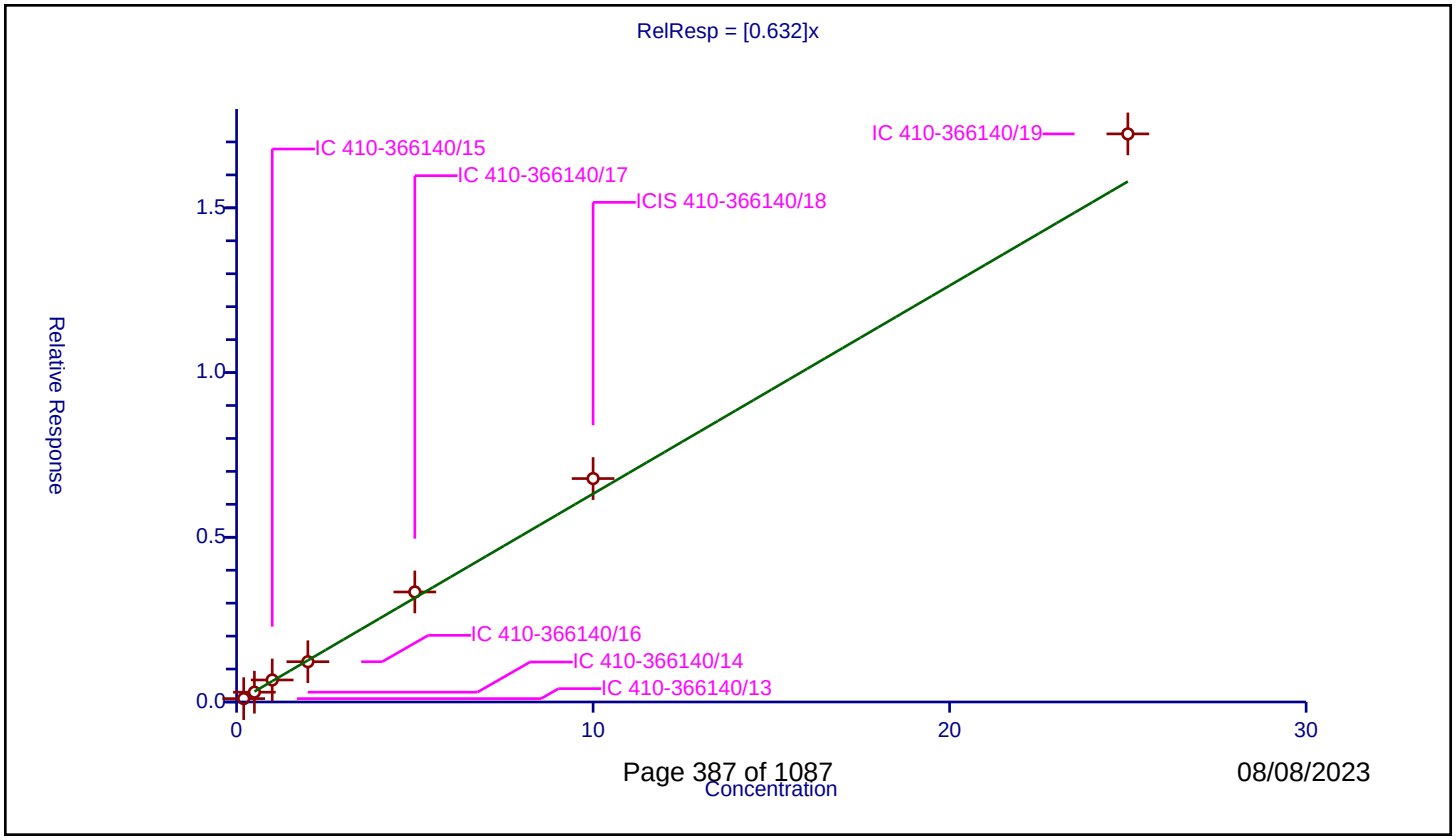
Curve Coefficients

Intercept:	0
Slope:	0.632

Error Coefficients

Standard Error:	612000
Relative Standard Error:	10.0
Correlation Coefficient:	1.000
Coefficient of Determination (Adjusted):	0.988

ID	Level	Concentration	Rel. Resp.	IS Amount	IS Response	RRF	Used
1	IC 410-366140/13	0.2	0.102782	10.0	756163.0	0.51391	Y
2	IC 410-366140/14	0.5	0.297459	10.0	752239.0	0.594917	Y
3	IC 410-366140/15	1.0	0.667968	10.0	762073.0	0.667968	Y
4	IC 410-366140/16	2.0	1.222459	10.0	762594.0	0.61123	Y
5	IC 410-366140/17	5.0	3.339285	10.0	769500.0	0.667857	Y
6	ICIS 410-366140/18	10.0	6.782543	10.0	792309.0	0.678254	Y
7	IC 410-366140/19	25.0	17.245006	10.0	795283.0	0.6898	Y



FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: ICV 410-366140/21 Calibration Date: 04/20/2023 00:21

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HA19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3310	0.3218	0.1000	4.86	5.00	-2.8	30.0
Chloromethane	Ave	0.4375	0.4110	0.1000	4.70	5.00	-6.1	30.0
1,3-Butadiene	Ave	0.4191	0.3635		4.34	5.00	-13.3	30.0
Vinyl chloride	Ave	0.4087	0.3953	0.1000	4.84	5.00	-3.3	30.0
Bromomethane	Ave	0.2551	0.2496	0.1000	4.89	5.00	-2.2	30.0
Chloroethane	Ave	0.2289	0.2205	0.1000	4.82	5.00	-3.6	30.0
Dichlorofluoromethane	Ave	0.5480	0.5214		4.76	5.00	-4.9	30.0
Trichlorofluoromethane	Ave	0.4625	0.4076	0.1000	4.41	5.00	-11.9	30.0
Ethyl ether	Ave	0.1874	0.1613		4.29	4.99	-14.0	30.0
Freon 123a	Ave	0.3600	0.3313		4.60	5.00	-8.0	30.0
Acrolein	Ave	3.302	3.055		34.7	37.5	-7.5	30.0
1,1-Dichloroethene	Ave	0.2278	0.2639	0.1000	5.79	5.00	15.8	30.0
Acetone	Ave	3.300	3.043	0.1000	57.6	62.5	-7.8	30.0
Freon 113	Ave	0.2141	0.2537	0.1000	5.93	5.00	18.5	30.0
Methyl iodide	Ave	0.4108	0.4512		5.49	5.00	9.8	30.0
Ethyl bromide	Ave	0.2139	0.1849		4.26	4.93	-13.6	30.0
Carbon disulfide	Ave	0.6472	0.7549	0.1000	5.83	5.00	16.7	30.0
Methyl acetate	Ave	11.04	10.17	0.1000	4.61	5.00	-7.9	30.0
Allyl chloride	Ave	0.4039	0.4493		5.56	5.00	11.2	30.0
Methylene Chloride	Ave	0.2413	0.2594	0.1000	5.38	5.00	7.5	30.0
t-Butyl alcohol	Ave	0.9648	1.132		58.7	50.0	17.4	30.0
Acrylonitrile	Ave	4.969	4.870		24.5	25.0	-2.0	30.0
Methyl tertiary butyl ether	Ave	0.5467	0.5674	0.1000	5.19	5.00	3.8	30.0
trans-1,2-Dichloroethene	Ave	0.2549	0.2753	0.1000	5.40	5.00	8.0	30.0
n-Hexane	Ave	0.3104	0.3722		6.00	5.00	19.9	30.0
1,1-Dichloroethane	Ave	0.4812	0.5269	0.2000	5.47	5.00	9.5	30.0
di-Isopropyl ether	Ave	0.8365	0.8774		5.24	5.00	4.9	30.0
2-Chloro-1,3-butadiene	Ave	0.4183	0.4645		5.55	5.00	11.1	30.0
Ethyl t-butyl ether	Ave	0.7377	0.7926		5.37	5.00	7.5	30.0
2-Butanone	Ave	6.627	6.246	0.1000	58.9	62.5	-5.7	30.0
cis-1,2-Dichloroethene	Ave	0.2776	0.3043	0.1000	5.48	5.00	9.6	30.0
2,2-Dichloropropane	Ave	0.3962	0.4365		5.51	5.00	10.2	30.0
Propionitrile	Ave	1.696	1.598		35.3	37.5	-5.8	30.0
Methacrylonitrile	Ave	7.663	6.881		33.7	37.5	-10.2	30.0
Bromochloromethane	Ave	0.1031	0.1170		5.67	5.00	13.5	30.0
Tetrahydrofuran	Ave	1.796	1.664		23.2	25.0	-7.4	30.0
Chloroform	Ave	0.4599	0.4882	0.2000	5.31	5.00	6.1	30.0
1,1,1-Trichloroethane	Ave	0.4079	0.4569	0.1000	5.60	5.00	12.0	30.0
Cyclohexane	Ave	0.4364	0.5201	0.1000	5.96	5.00	19.2	30.0
1,1-Dichloropropene	Ave	0.3539	0.4224		5.97	5.00	19.4	30.0
Carbon tetrachloride	Ave	0.3432	0.3956	0.1000	5.76	5.00	15.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: ICV 410-366140/21 Calibration Date: 04/20/2023 00:21

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HA19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3870	0.3860		125	125	-0.3	30.0
Benzene	Ave	1.046	1.194	0.5000	5.71	5.00	14.2	30.0
1,2-Dichloroethane	Ave	0.2555	0.2734	0.1000	5.35	5.00	7.0	30.0
t-Amyl methyl ether	Ave	0.6174	0.6739		5.46	5.00	9.2	30.0
n-Heptane	Ave	0.2902	0.3405		5.87	5.00	17.3	30.0
n-Butanol	Ave	0.2806	0.3248		289	250	15.7	30.0
Trichloroethene	Ave	0.2791	0.3094	0.2000	5.54	5.00	10.9	30.0
Methylcyclohexane	Ave	0.4133	0.5033	0.1000	6.09	5.00	21.8	30.0
1,2-Dichloropropane	Ave	0.2712	0.2969	0.1000	5.47	5.00	9.5	30.0
Methyl methacrylate	Ave	14.32	14.64		5.11	5.00	2.2	30.0
1,4-Dioxane	Ave	0.0446	0.1014	0.0050	284	125	127.5*	30.0
Dibromomethane	Ave	0.1105	0.1222		5.53	5.00	10.6	30.0
Bromodichloromethane	Ave	0.3239	0.3517	0.2000	5.43	5.00	8.6	30.0
2-Nitropropane	Ave	4.356	3.919		4.50	5.00	-10.0	30.0
1-Bromo-2-chloroethane	Ave	0.2533	0.2416		4.77	5.00	-4.6	30.0
cis-1,3-Dichloropropene	Ave	0.3846	0.4201	0.2000	5.46	5.00	9.2	30.0
4-Methyl-2-pentanone	Ave	18.88	18.00	0.1000	59.6	62.5	-4.7	30.0
Toluene	Ave	0.8975	1.022	0.4000	5.69	5.00	13.8	30.0
trans-1,3-Dichloropropene	Ave	0.4146	0.4710	0.1000	5.68	5.00	13.6	30.0
Ethyl methacrylate	Ave	0.3171	0.3526		5.56	5.00	11.2	30.0
1,1,2-Trichloroethane	Ave	0.2287	0.2414	0.1000	5.28	5.00	5.6	30.0
Tetrachloroethene	Ave	0.3973	0.4596	0.2000	5.78	5.00	15.7	30.0
1,3-Dichloropropane	Ave	0.3819	0.4275		5.60	5.00	11.9	30.0
2-Hexanone	Ave	12.51	12.15	0.1000	60.7	62.5	-2.9	30.0
Dibromochloromethane	Ave	0.2785	0.3125		5.61	5.00	12.2	30.0
1,2-Dibromoethane	Ave	0.2050	0.2272	0.1000	5.54	5.00	10.9	30.0
1-Chlorohexane	Ave	0.5420	0.5936		5.48	5.00	9.5	30.0
Chlorobenzene	Ave	0.9734	1.089	0.5000	5.59	5.00	11.8	30.0
1,1,1,2-Tetrachloroethane	Ave	0.3354	0.3929		5.86	5.00	17.2	30.0
Ethylbenzene	Ave	1.765	2.021	0.1000	5.72	5.00	14.5	30.0
m&p-Xylene	Ave	0.6625	0.7644	0.1000	11.5	10.0	15.4	30.0
o-Xylene	Ave	0.6430	0.7456	0.3000	5.80	5.00	15.9	30.0
Styrene	Ave	1.062	1.224	0.3000	5.76	5.00	15.3	30.0
Bromoform	Ave	0.1628	0.1805	0.1000	5.54	5.00	10.9	30.0
Isopropylbenzene	Ave	1.735	2.040	0.1000	5.88	5.00	17.6	30.0
1,1,2,2-Tetrachloroethane	Ave	0.5254	0.5696	0.3000	5.42	5.00	8.4	30.0
Bromobenzene	Ave	0.6936	0.8006		5.77	5.00	15.4	30.0
trans-1,4-Dichloro-2-butene	Ave	6.015	6.149		25.6	25.0	2.2	30.0
1,2,3-Trichloropropane	Ave	0.1239	0.1351		5.45	5.00	9.0	30.0
N-Propylbenzene	Ave	3.830	4.419		5.77	5.00	15.4	30.0
2-Chlorotoluene	Ave	0.7336	0.8532		5.82	5.00	16.3	30.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: ICV 410-366140/21 Calibration Date: 04/20/2023 00:21

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HA19X20.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.681	3.062		5.71	5.00	14.2	30.0
4-Chlorotoluene	Ave	0.7502	0.8578		5.72	5.00	14.3	30.0
tert-Butylbenzene	Ave	0.5802	0.6951		5.99	5.00	19.8	30.0
Pentachloroethane	Ave	0.4749	0.4716		4.97	5.00	-0.7	30.0
1,2,4-Trimethylbenzene	Ave	2.705	3.093		5.72	5.00	14.3	30.0
sec-Butylbenzene	Ave	3.355	3.946		5.88	5.00	17.6	30.0
1,3-Dichlorobenzene	Ave	1.425	1.594	0.6000	5.59	5.00	11.8	30.0
p-Isopropyltoluene	Ave	2.864	3.347		5.84	5.00	16.8	30.0
1,4-Dichlorobenzene	Ave	1.352	1.592	0.5000	5.89	5.00	17.8	30.0
1,2,3-Trimethylbenzene	Ave	1.166	1.285		5.51	5.00	10.2	30.0
Benzyl chloride	Ave	0.1899	0.2043		5.38	5.00	7.6	30.0
n-Butylbenzene	Ave	1.367	1.611		5.89	5.00	17.9	30.0
1,2-Dichlorobenzene	Ave	1.263	1.400	0.4000	5.54	5.00	10.9	30.0
1,2-Dibromo-3-Chloropropane	Ave	0.0617	0.0710	0.0500	5.75	5.00	15.0	30.0
1,3,5-Trichlorobenzene	Ave	0.995	1.143		5.74	5.00	14.8	30.0
1,2,4-Trichlorobenzene	Ave	0.7970	0.9265	0.2000	5.81	5.00	16.3	30.0
Hexachlorobutadiene	Ave	0.2980	0.3711		6.23	5.00	24.5	30.0
Naphthalene	Ave	1.314	1.499		5.70	5.00	14.1	30.0
1,2,3-Trichlorobenzene	Ave	0.6320	0.7447		5.89	5.00	17.8	30.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2367		9.96	10.0	-0.4	30.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0442	0.0448		10.1	10.0	1.2	30.0
Toluene-d8 (Surr)	Ave	1.361	1.365		10.0	10.0	0.3	30.0
4-Bromofluorobenzene (Surr)	Ave	0.4936	0.4961		10.1	10.0	0.5	30.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D
Lims ID: ICV
Client ID:
Sample Type: ICV
Inject. Date: 20-Apr-2023 00:21:30 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0081852-021
Operator ID: mec29284 Instrument ID: 19094
Sublist:

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:41:59 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: DVW2 Date: 20-Apr-2023 09:03:54

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.898	0.000	99	320092	5.00	4.86	
5 Chloromethane	50	2.087	2.093	-0.006	99	408803	5.00	4.70	
6 Vinyl chloride	62	2.203	2.203	0.000	97	393169	5.00	4.84	
7 Butadiene	39	2.203	2.203	0.000	92	361503	5.00	4.34	
9 Bromomethane	94	2.526	2.526	0.000	90	248267	5.00	4.89	
10 Chloroethane	64	2.593	2.599	-0.006	100	219351	5.00	4.82	
11 Dichlorofluoromethane	67	2.818	2.824	-0.006	97	518572	5.00	4.76	
12 Trichlorofluoromethane	101	2.904	2.904	0.000	98	405394	5.00	4.41	
14 Ethyl ether	59	3.117	3.117	0.000	92	160012	4.99	4.29	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.202	3.202	0.000	94	329506	5.00	4.60	
16 Acrolein	56	3.288	3.288	0.000	98	183942	37.5	34.7	M
17 1,1-Dichloroethene	96	3.416	3.422	-0.006	97	262522	5.00	5.79	
19 Acetone	43	3.446	3.446	0.000	52	305388	62.5	57.6	M
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.458	3.465	-0.007	92	252311	5.00	5.93	
21 Iodomethane	142	3.611	3.611	0.000	98	448772	5.00	5.49	
22 Ethyl bromide	108	3.629	3.635	-0.006	98	181149	4.93	4.26	
23 Carbon disulfide	76	3.715	3.715	-0.001	99	750840	5.00	5.83	
24 Methyl acetate	43	3.855	3.843	0.012	97	81660	5.00	4.61	M
26 3-Chloro-1-propene	41	3.879	3.873	0.006	92	446915	5.00	5.56	
* 28 t-Butyl alcohol-d10 (IS)	65	4.056	4.050	0.006	98	80290	50.0	50.0	
27 Methylene Chloride	84	4.050	4.050	0.000	94	258031	5.00	5.38	
29 2-Methyl-2-propanol	59	4.178	4.190	-0.012	98	90912	50.0	58.7	
31 Acrylonitrile	53	4.379	4.373	0.006	99	195490	25.0	24.5	
32 Methyl tert-butyl ether	73	4.440	4.452	-0.012	95	564366	5.00	5.19	
33 trans-1,2-Dichloroethene	96	4.452	4.458	-0.006	98	273863	5.00	5.40	
34 Hexane	57	4.885	4.885	0.000	92	370180	5.00	6.00	
36 1,1-Dichloroethane	63	5.123	5.123	0.000	96	524058	5.00	5.47	
37 Isopropyl ether	45	5.178	5.178	0.000	96	872622	5.00	5.24	
38 2-Chloro-1,3-butadiene	53	5.233	5.239	-0.007	91	462027	5.00	5.55	
40 Tert-butyl ethyl ether	59	5.714	5.720	-0.006	99	788352	5.00	5.37	
41 2-Butanone (MEK)	43	5.909	5.909	0.000	100	626886	62.5	58.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
42 cis-1,2-Dichloroethene	96	5.952	5.958	-0.006	83	302611	5.00	5.48	
43 2,2-Dichloropropane	77	5.976	5.976	0.000	87	434113	5.00	5.51	
44 Propionitrile	54	6.001	5.995	0.006	46	96244	37.5	35.3	
47 Methacrylonitrile	67	6.220	6.220	0.000	92	414353	37.5	33.7	
48 Chlorobromomethane	128	6.287	6.299	-0.012	97	116383	5.00	5.67	
49 Tetrahydrofuran	71	6.305	6.299	0.006	79	66817	25.0	23.2	
50 Chloroform	83	6.446	6.446	0.000	94	485522	5.00	5.31	
$ 52 Dibromofluoromethane (Surr)	113	6.659	6.665	-0.006	94	470842	10.0	9.96	
53 1,1,1-Trichloroethane	97	6.677	6.677	0.000	99	454450	5.00	5.60	
54 Cyclohexane	56	6.781	6.781	0.000	91	517330	5.00	5.96	
55 1,1-Dichloropropene	75	6.891	6.897	-0.006	96	420129	5.00	5.97	
56 Carbon tetrachloride	117	6.891	6.897	-0.006	90	393490	5.00	5.76	
57 Isobutyl alcohol	41	7.037	7.031	0.006	94	77473	125.0	124.7	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.122	7.116	0.006	90	89078	10.0	10.1	
59 Benzene	78	7.153	7.159	-0.006	97	1187788	5.00	5.71	
60 1,2-Dichloroethane	62	7.232	7.226	0.006	97	271965	5.00	5.35	
63 Tert-amyl methyl ether	73	7.348	7.354	-0.006	99	670300	5.00	5.46	
* 64 Fluorobenzene (IS)	96	7.561	7.567	-0.006	98	1989207	10.0	10.0	
65 n-Heptane	43	7.586	7.586	0.000	94	338658	5.00	5.87	
67 n-Butanol	56	7.927	7.927	0.000	88	130372	250.0	289.4	
68 Trichloroethene	95	8.049	8.049	0.000	99	307723	5.00	5.54	
69 Methylcyclohexane	83	8.366	8.366	0.000	93	500607	5.00	6.09	
70 1,2-Dichloropropane	63	8.384	8.390	-0.006	96	295273	5.00	5.47	
71 2-ethoxy-2-methyl butane	87	8.397	8.397	0.000	93	417987	5.00	5.50	
72 Methyl methacrylate	69	8.470	8.470	0.000	92	117524	5.00	5.11	
73 1,4-Dioxane	88	8.482	8.482	0.000	29	20360	125.0	284.3	M
74 Dibromomethane	93	8.494	8.494	0.000	97	121538	5.00	5.53	
76 Dichlorobromomethane	83	8.738	8.732	0.006	99	349792	5.00	5.43	
77 2-Nitropropane	41	9.000	9.000	0.000	98	31464	5.00	4.50	
79 1-Bromo-2-chloroethane	63	9.134	9.134	0.000	99	240314	5.00	4.77	
80 cis-1,3-Dichloropropene	75	9.293	9.293	0.000	95	417858	5.00	5.46	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.470	-0.001	97	1806452	62.5	59.6	
$ 83 Toluene-d8 (Surr)	98	9.610	9.610	0.000	94	1987744	10.0	10.0	
84 Toluene	92	9.689	9.689	0.000	98	743973	5.00	5.69	
85 trans-1,3-Dichloropropene	75	9.951	9.951	0.000	93	342978	5.00	5.68	
104 Ethyl methacrylate	69	10.018	10.018	0.000	90	256794	5.00	5.56	
106 1,1,2-Trichloroethane	97	10.164	10.165	0.000	90	175798	5.00	5.28	
107 Tetrachloroethene	166	10.250	10.256	-0.006	98	334694	5.00	5.78	
108 1,3-Dichloropropane	76	10.329	10.329	0.000	89	311323	5.00	5.60	
109 2-Hexanone	43	10.378	10.378	0.000	97	1219087	62.5	60.7	
111 Chlorodibromomethane	129	10.542	10.549	-0.007	91	227559	5.00	5.61	
112 Ethylene Dibromide	107	10.658	10.658	0.000	99	165454	5.00	5.54	
* 113 Chlorobenzene-d5 (IS)	117	11.097	11.091	0.006	87	1456389	10.0	10.0	
114 1-Chlorohexane	91	11.103	11.103	0.000	98	432234	5.00	5.48	
115 Chlorobenzene	112	11.122	11.122	0.000	94	792693	5.00	5.59	
116 1,1,1,2-Tetrachloroethane	131	11.207	11.207	0.000	96	286109	5.00	5.86	
117 Ethylbenzene	91	11.207	11.207	0.000	99	1471559	5.00	5.72	
119 m-Xylene & p-Xylene	106	11.323	11.329	-0.006	100	1113305	10.0	11.5	
120 o-Xylene	106	11.658	11.658	0.000	97	542917	5.00	5.80	
121 Styrene	104	11.676	11.670	0.006	95	891228	5.00	5.76	
122 Bromoform	173	11.835	11.835	0.000	97	131464	5.00	5.54	
123 Isopropylbenzene	105	11.963	11.963	0.000	96	1485644	5.00	5.88	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 126 4-Bromofluorobenzene (Surr)	95	12.103	12.103	0.000	89	722537	10.0	10.1	
127 1,1,2,2-Tetrachloroethane	83	12.207	12.207	0.000	93	224146	5.00	5.42	
128 Bromobenzene	156	12.219	12.219	0.000	97	315008	5.00	5.77	
129 trans-1,4-Dichloro-2-butene	53	12.231	12.231	0.000	93	246837	25.0	25.6	
130 1,2,3-Trichloropropane	110	12.256	12.256	0.000	84	53178	5.00	5.45	
131 N-Propylbenzene	91	12.292	12.292	0.000	99	1738686	5.00	5.77	
132 2-Chlorotoluene	126	12.365	12.365	0.000	96	335704	5.00	5.82	
133 1,3,5-Trimethylbenzene	105	12.426	12.426	0.000	94	1204704	5.00	5.71	
134 4-Chlorotoluene	126	12.463	12.463	0.000	97	337513	5.00	5.72	
135 tert-Butylbenzene	134	12.670	12.670	0.000	94	273530	5.00	5.99	
136 Pentachloroethane	167	12.701	12.707	-0.006	92	185574	5.00	4.97	
137 1,2,4-Trimethylbenzene	105	12.713	12.713	0.000	97	1217017	5.00	5.72	
138 sec-Butylbenzene	105	12.835	12.835	0.000	94	1552583	5.00	5.88	
139 1,3-Dichlorobenzene	146	12.932	12.932	0.000	98	627042	5.00	5.59	
140 4-Isopropyltoluene	119	12.944	12.944	0.000	97	1316814	5.00	5.84	
* 141 1,4-Dichlorobenzene-d4	152	12.993	12.993	0.000	95	786971	10.0	10.0	
142 1,4-Dichlorobenzene	146	13.011	13.012	-0.001	94	626616	5.00	5.89	
143 1,2,3-Trimethylbenzene	120	13.018	13.018	0.000	99	505735	5.00	5.51	
144 Benzyl chloride	126	13.085	13.085	0.000	99	80397	5.00	5.38	
145 p-Diethylbenzene	119	13.146	13.146	0.000	92	747884	5.00	5.64	
146 n-Butylbenzene	92	13.237	13.237	0.000	97	633919	5.00	5.89	
147 1,2-Dichlorobenzene	146	13.268	13.268	0.000	98	550781	5.00	5.54	
149 1,2-Dibromo-3-Chloropropane	155	13.810	13.810	0.000	86	27941	5.00	5.75	
150 1,3,5-Trichlorobenzene	180	13.938	13.938	0.000	98	449615	5.00	5.74	
151 1,2,4-Trichlorobenzene	180	14.359	14.359	0.000	94	364559	5.00	5.81	
152 Hexachlorobutadiene	225	14.444	14.444	0.000	96	146006	5.00	6.23	
153 Naphthalene	128	14.542	14.542	0.000	97	589896	5.00	5.70	
154 1,2,3-Trichlorobenzene	180	14.682	14.682	0.000	96	293041	5.00	5.89	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

MSV_LCS_VOC#1_00105	Amount Added:	12.50	Units: uL	
MSV_LCS_Penta_00027	Amount Added:	12.50	Units: uL	
MSV_QC_Gas826_00135	Amount Added:	12.50	Units: uL	
MSV_LCS_EE_00004	Amount Added:	12.50	Units: uL	
LCS_ETBR_00005	Amount Added:	12.50	Units: uL	
MSV_LCS_ACROL_00108	Amount Added:	12.50	Units: uL	
MSV_LLcentISS_00007	Amount Added:	5.00	Units: uL	Run Reagent

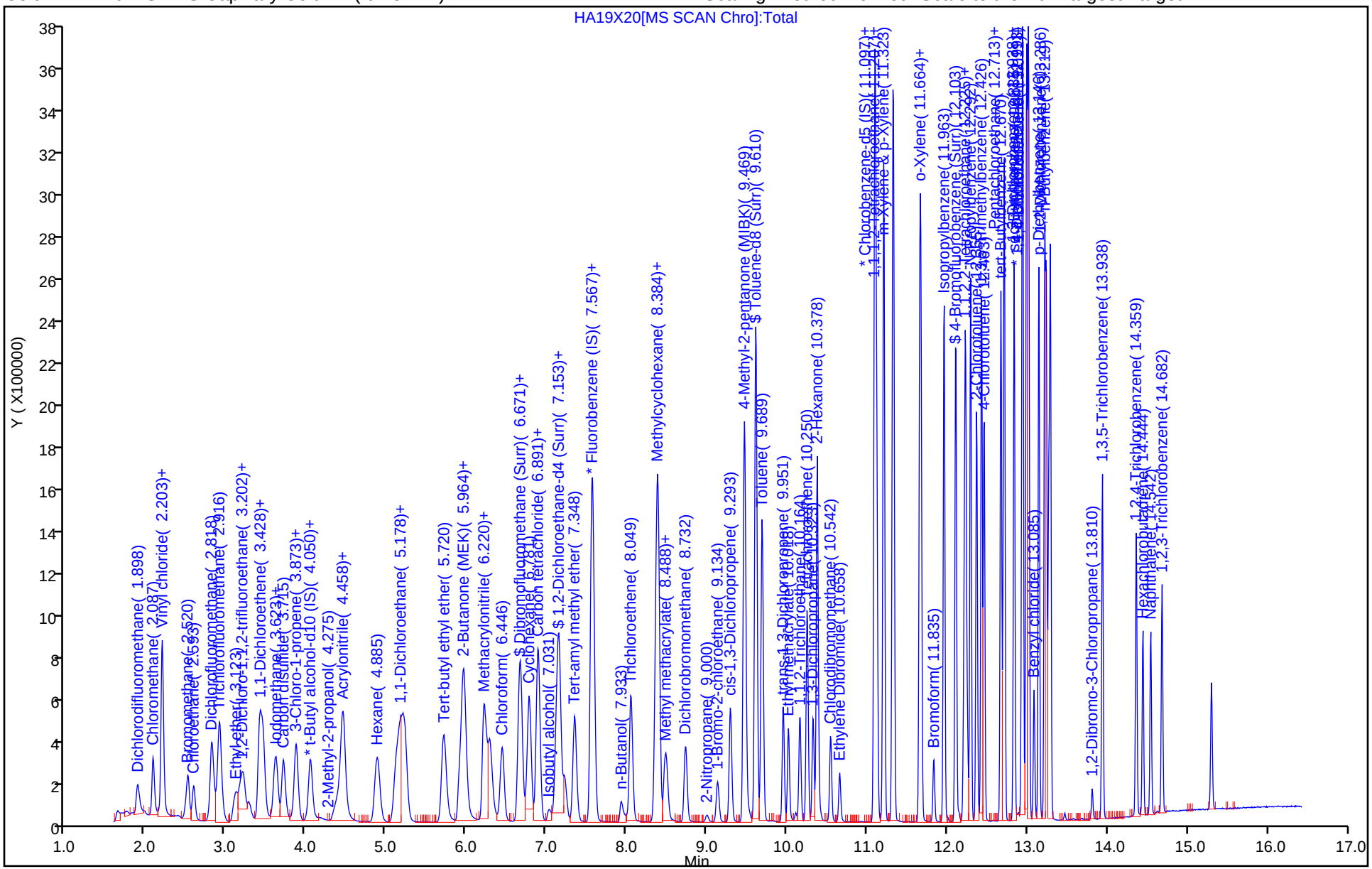
Report Date: 23-Apr-2023 20:42:04 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D

Injection Date:	20-Apr-2023 00:21:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	ICV			Worklist Smp#:	21
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	20
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

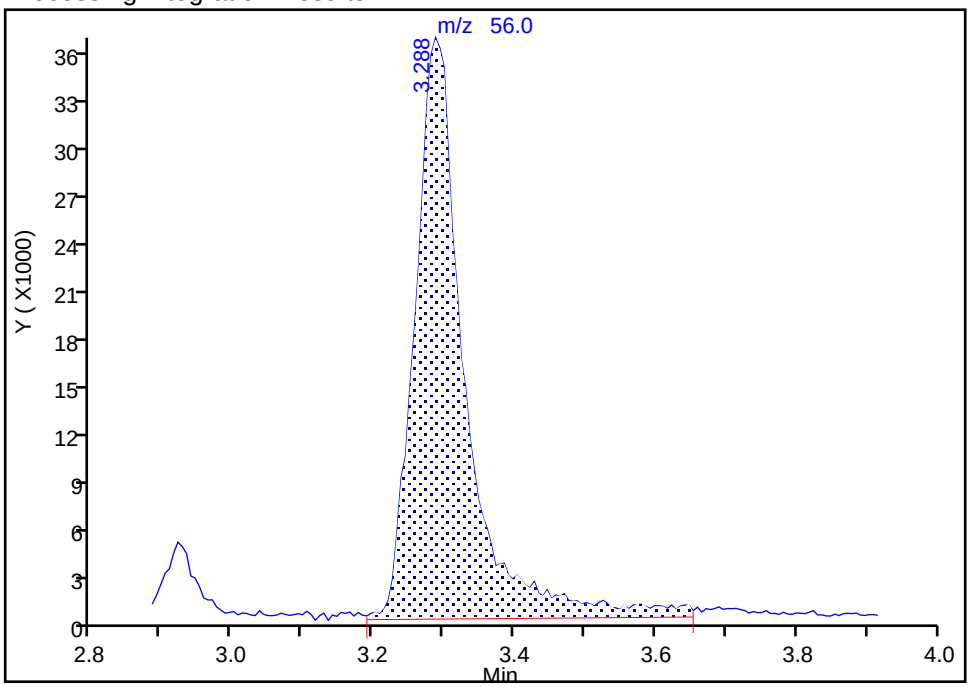
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D				
Injection Date:	20-Apr-2023 00:21:30	Instrument ID:	19094		
Lims ID:	ICV				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25 mm)	Detector	MS Quad		

16 Acrolein, CAS: 107-02-8

Signal: 1

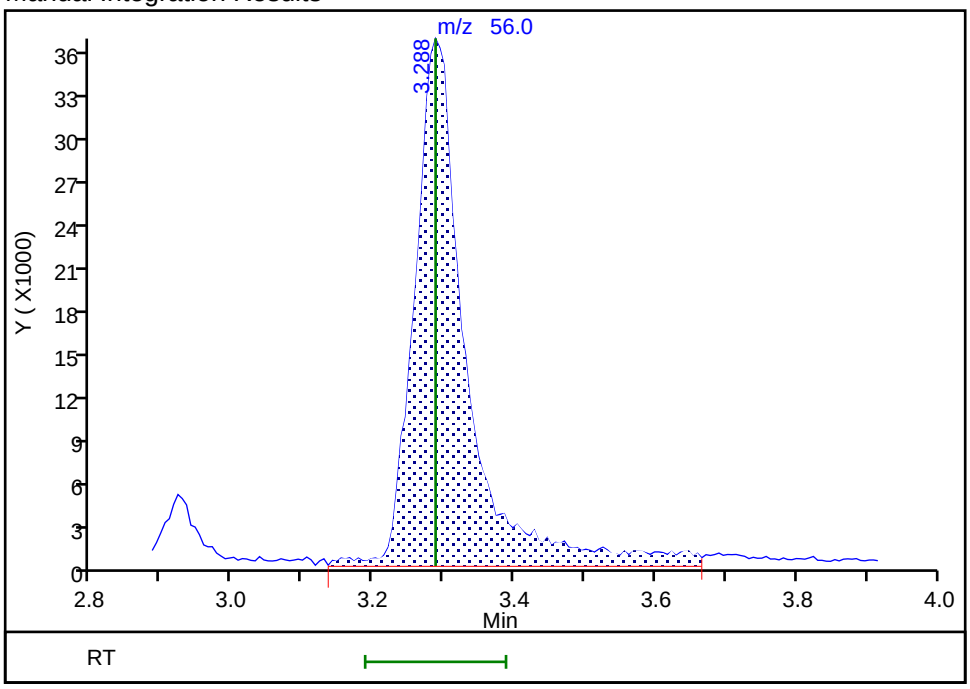
Processing Integration Results

RT: 3.29
Area: 177484
Amount: 33.469971
Amount Units: ug/l



Manual Integration Results

RT: 3.29
Area: 183942
Amount: 34.687822
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 20:23:58
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

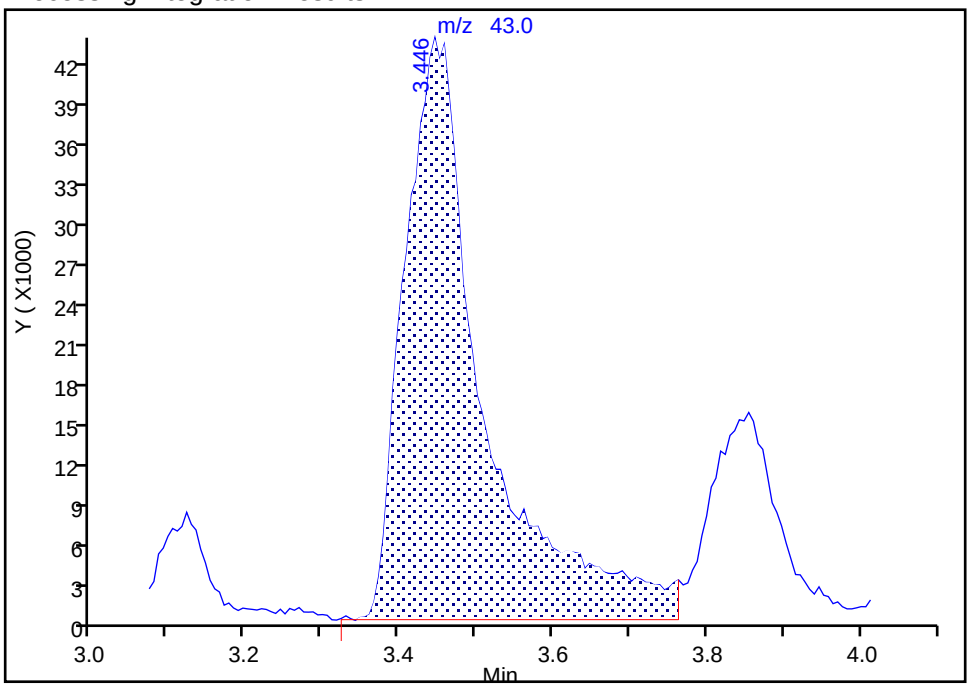
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D				
Injection Date:	20-Apr-2023 00:21:30	Instrument ID:	19094		
Lims ID:	ICV				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

19 Acetone, CAS: 67-64-1

Signal: 1

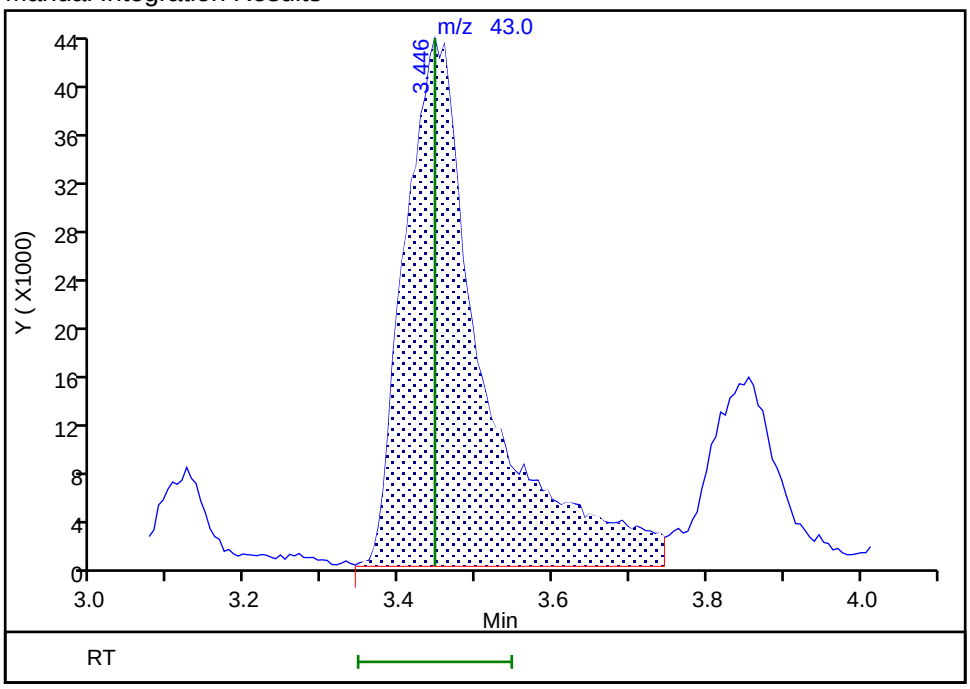
Processing Integration Results

RT: 3.45
Area: 304465
Amount: 57.448256
Amount Units: ug/l



Manual Integration Results

RT: 3.45
Area: 305388
Amount: 57.622413
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 20:24:12
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

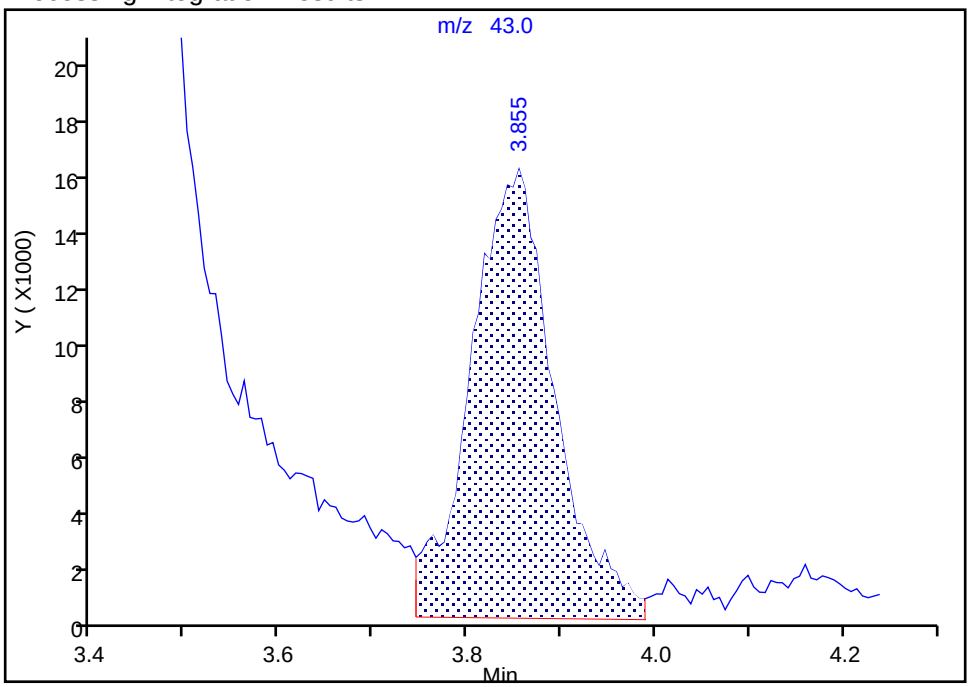
Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D
Injection Date: 20-Apr-2023 00:21:30 Instrument ID: 19094
Lims ID: ICV
Client ID:
Operator ID: mec29284 ALS Bottle#: 20 Worklist Smp#: 21
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Column: Rxi-624Sil MS Capillary Column (0.25mm) Detector MS Quad

24 Methyl acetate, CAS: 79-20-9

Signal: 1

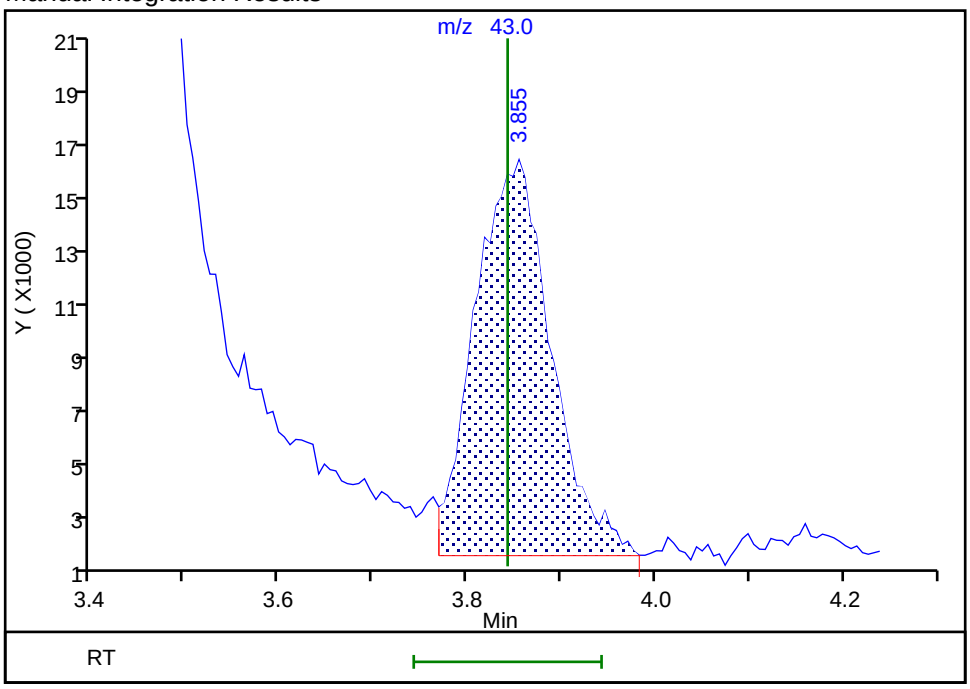
Processing Integration Results

RT: 3.85
Area: 93899
Amount: 5.296245
Amount Units: ug/l



Manual Integration Results

RT: 3.85
Area: 81660
Amount: 4.605921
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 20:24:51
Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

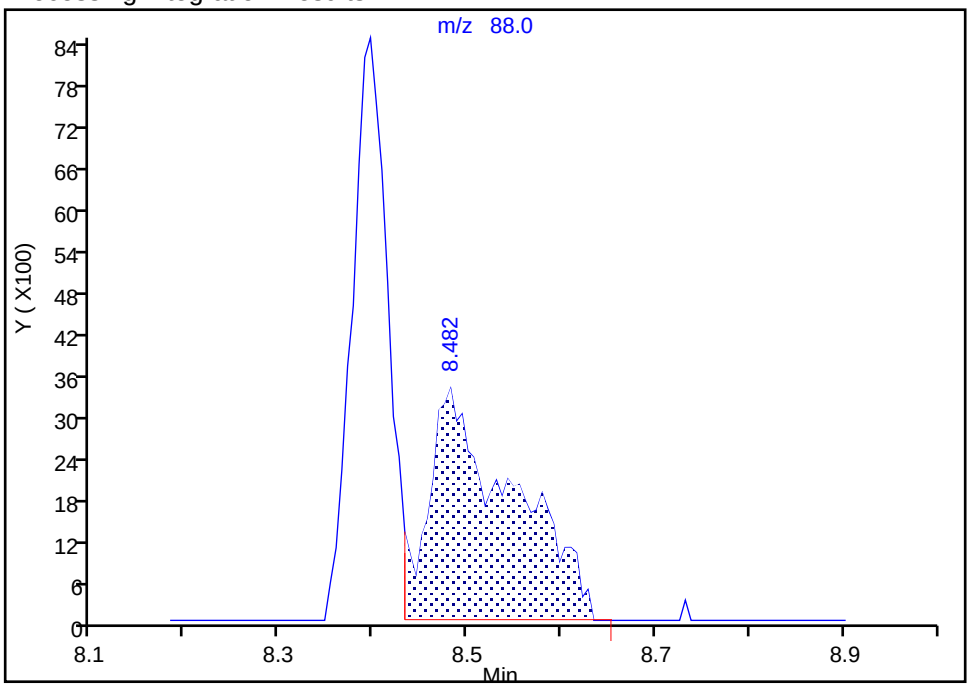
Data File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X20.D				
Injection Date:	20-Apr-2023 00:21:30	Instrument ID:	19094		
Lims ID:	ICV				
Client ID:					
Operator ID:	mec29284	ALS Bottle#:	20	Worklist Smp#:	21
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

73 1,4-Dioxane, CAS: 123-91-1

Signal: 1

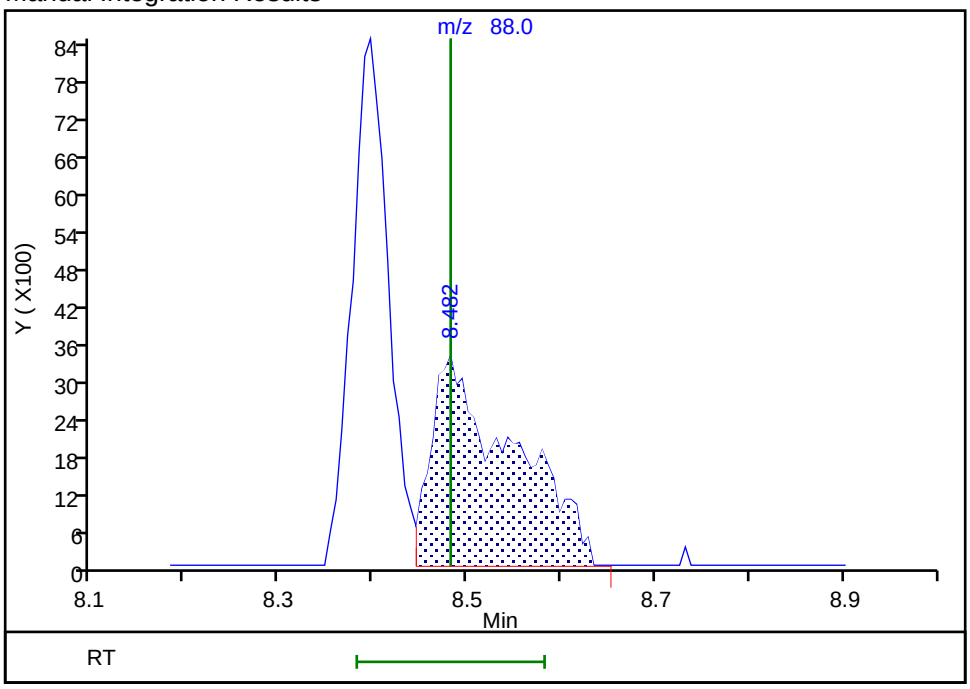
Processing Integration Results

RT: 8.48
Area: 21172
Amount: 295.6542
Amount Units: ug/l



Manual Integration Results

RT: 8.48
Area: 20360
Amount: 284.3151
Amount Units: ug/l



Reviewer: K4WN, 23-Apr-2023 20:25:12
Audit Action: Split an Integrated Peak Audit Reason: Incomplete Integration

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: CCVIS 410-402356/3 Calibration Date: 07/30/2023 13:01

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HL30X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3310	0.3491	0.1000	10.5	10.0	5.5	20.0
Chloromethane	Ave	0.4375	0.4221	0.1000	9.65	10.0	-3.5	20.0
1,3-Butadiene	Ave	0.4191	0.5021		12.0	10.0	19.8	20.0
Vinyl chloride	Ave	0.4087	0.3791	0.1000	9.28	10.0	-7.2	20.0
Bromomethane	Ave	0.2551	0.2588	0.1000	10.1	10.0	1.4	20.0
Chloroethane	Ave	0.2289	0.2201	0.1000	9.61	10.0	-3.9	20.0
Dichlorofluoromethane	Ave	0.5480	0.5617		10.3	10.0	2.5	20.0
Trichlorofluoromethane	Ave	0.4625	0.4320	0.1000	9.34	10.0	-6.6	20.0
Ethyl ether	Ave	0.1874	0.1690		9.02	10.0	-9.9	20.0
Freon 123a	Ave	0.3600	0.3363		9.34	10.0	-6.6	20.0
Acrolein	Ave	3.302	3.110		471	500	-5.8	20.0
1,1-Dichloroethene	Ave	0.2278	0.2386	0.1000	10.5	10.0	4.7	20.0
Acetone	Ave	3.300	3.576	0.1000	108	100	8.3	20.0
Freon 113	Ave	0.2141	0.2386	0.1000	11.1	10.0	11.5	20.0
Methyl iodide	Ave	0.4108	0.4454		10.8	10.0	8.4	20.0
Ethyl bromide	Ave	0.2139	0.1984		9.26	9.99	-7.3	20.0
Carbon disulfide	Ave	0.6472	0.6315	0.1000	9.76	10.0	-2.4	20.0
Methyl acetate	Ave	11.04	10.56	0.1000	9.57	10.0	-4.3	20.0
Allyl chloride	Ave	0.4039	0.4110		10.2	10.0	1.7	20.0
Methylene Chloride	Ave	0.2413	0.2539	0.1000	10.5	10.0	5.2	20.0
t-Butyl alcohol	Ave	0.9648	0.9610		199	200	-0.4	20.0
Acrylonitrile	Ave	4.969	5.365		27.0	25.0	8.0	20.0
Methyl tertiary butyl ether	Ave	0.5467	0.5481	0.1000	10.0	10.0	0.2	20.0
trans-1,2-Dichloroethene	Ave	0.2549	0.2623	0.1000	10.3	10.0	2.9	20.0
n-Hexane	Ave	0.3104	0.3193		10.3	10.0	2.9	20.0
1,1-Dichloroethane	Ave	0.4812	0.5095	0.2000	10.6	10.0	5.9	20.0
di-Isopropyl ether	Ave	0.8365	0.8379		10.0	10.0	0.2	20.0
2-Chloro-1,3-butadiene	Ave	0.4183	0.4268		10.2	10.0	2.0	20.0
Ethyl t-butyl ether	Ave	0.7377	0.7253		9.83	10.0	-1.7	20.0
2-Butanone	Ave	6.627	7.113	0.1000	107	100	7.3	20.0
cis-1,2-Dichloroethene	Ave	0.2776	0.2947	0.1000	10.6	10.0	6.1	20.0
2,2-Dichloropropane	Ave	0.3962	0.4347		11.0	10.0	9.7	20.0
Propionitrile	Ave	1.696	1.811		214	200	6.8	20.0
Methacrylonitrile	Ave	7.663	7.376		96.3	100	-3.7	20.0
Bromochloromethane	Ave	0.1031	0.1201		11.6	10.0	16.5	20.0
Tetrahydrofuran	Ave	1.796	1.916		53.3	50.0	6.6	20.0
Chloroform	Ave	0.4599	0.5021	0.2000	10.9	10.0	9.2	20.0
1,1,1-Trichloroethane	Ave	0.4079	0.4374	0.1000	10.7	10.0	7.2	20.0
Cyclohexane	Ave	0.4364	0.4323	0.1000	9.91	10.0	-0.9	20.0
1,1-Dichloropropene	Ave	0.3539	0.3738		10.6	10.0	5.6	20.0
Carbon tetrachloride	Ave	0.3432	0.3894	0.1000	11.3	10.0	13.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: CCVIS 410-402356/3 Calibration Date: 07/30/2023 13:01

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HL30X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Isobutyl alcohol	Ave	0.3870	0.4160		537	500	7.5	20.0
Benzene	Ave	1.046	1.103	0.5000	10.5	10.0	5.4	20.0
1,2-Dichloroethane	Ave	0.2555	0.2822	0.1000	11.0	10.0	10.4	20.0
t-Amyl methyl ether	Ave	0.6174	0.6312		10.2	10.0	2.2	20.0
n-Heptane	Ave	0.2902	0.3026		10.4	10.0	4.3	20.0
n-Butanol	Ave	0.2806	0.3417		1070	875	21.8*	20.0
Trichloroethene	Ave	0.2791	0.2973	0.2000	10.7	10.0	6.5	20.0
Methylcyclohexane	Ave	0.4133	0.4384	0.1000	10.6	10.0	6.1	20.0
1,2-Dichloropropane	Ave	0.2712	0.2899	0.1000	10.7	10.0	6.9	20.0
Methyl methacrylate	Ave	14.32	14.23		9.94	10.0	-0.6	20.0
1,4-Dioxane	Ave	0.0446	0.0581	0.0050	651	500	30.2*	20.0
Dibromomethane	Ave	0.1105	0.1269		11.5	10.0	14.9	20.0
Bromodichloromethane	Ave	0.3239	0.3525	0.2000	10.9	10.0	8.8	20.0
2-Nitropropane	Ave	4.356	4.311		49.5	50.0	-1.0	20.0
1-Bromo-2-chloroethane	Ave	0.2533	0.2603		10.3	10.0	2.8	20.0
cis-1,3-Dichloropropene	Ave	0.3846	0.4194	0.2000	10.9	10.0	9.0	20.0
4-Methyl-2-pentanone	Ave	18.88	18.36	0.1000	97.2	100	-2.8	20.0
Toluene	Ave	0.8975	0.9092	0.4000	10.1	10.0	1.3	20.0
trans-1,3-Dichloropropene	Ave	0.4146	0.4532	0.1000	10.9	10.0	9.3	20.0
Ethyl methacrylate	Ave	0.3171	0.3175		10.0	10.0	0.1	20.0
1,1,2-Trichloroethane	Ave	0.2287	0.2386	0.1000	10.4	10.0	4.3	20.0
Tetrachloroethene	Ave	0.3973	0.4353	0.2000	11.0	10.0	9.6	20.0
1,3-Dichloropropane	Ave	0.3819	0.4065		10.6	10.0	6.4	20.0
2-Hexanone	Ave	12.51	12.78	0.1000	102	100	2.2	20.0
Dibromochloromethane	Ave	0.2785	0.3094		11.1	10.0	11.1	20.0
1,2-Dibromoethane	Ave	0.2050	0.2233	0.1000	10.9	10.0	9.0	20.0
1-Chlorohexane	Ave	0.5420	0.5292		9.76	10.0	-2.4	20.0
Chlorobenzene	Ave	0.9734	1.035	0.5000	10.6	10.0	6.3	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3354	0.3577		10.7	10.0	6.7	20.0
Ethylbenzene	Ave	1.765	1.818	0.1000	10.3	10.0	3.0	20.0
m&p-Xylene	Ave	0.6625	0.6905	0.1000	20.8	20.0	4.2	20.0
o-Xylene	Ave	0.6430	0.6604	0.3000	10.3	10.0	2.7	20.0
Styrene	Ave	1.062	1.102	0.3000	10.4	10.0	3.8	20.0
Bromoform	Ave	0.1628	0.1877	0.1000	11.5	10.0	15.2	20.0
Isopropylbenzene	Ave	1.735	1.781	0.1000	10.3	10.0	2.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.5254	0.5182	0.3000	9.86	10.0	-1.4	20.0
Bromobenzene	Ave	0.6936	0.7514		10.8	10.0	8.3	20.0
trans-1,4-Dichloro-2-butene	Ave	6.015	6.077		101	100	1.0	20.0
1,2,3-Trichloropropane	Ave	0.1239	0.1263		10.2	10.0	1.9	20.0
N-Propylbenzene	Ave	3.830	3.924		10.2	10.0	2.5	20.0
2-Chlorotoluene	Ave	0.7336	0.7632		10.4	10.0	4.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Lab Sample ID: CCVIS 410-402356/3 Calibration Date: 07/30/2023 13:01

Instrument ID: 19094 Calib Start Date: 04/19/2023 21:41

GC Column: R-624SilMS 30m ID: 0.25(mm) Calib End Date: 04/19/2023 23:41

Lab File ID: HL30X02.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trimethylbenzene	Ave	2.681	2.653		9.90	10.0	-1.0	20.0
4-Chlorotoluene	Ave	0.7502	0.7923		10.6	10.0	5.6	20.0
tert-Butylbenzene	Ave	0.5802	0.5937		10.2	10.0	2.3	20.0
Pentachloroethane	Ave	0.4749	0.4955		10.4	10.0	4.3	20.0
1,2,4-Trimethylbenzene	Ave	2.705	2.716		10.0	10.0	0.4	20.0
sec-Butylbenzene	Ave	3.355	3.424		10.2	10.0	2.1	20.0
1,3-Dichlorobenzene	Ave	1.425	1.525	0.6000	10.7	10.0	7.0	20.0
p-Isopropyltoluene	Ave	2.864	2.959		10.3	10.0	3.3	20.0
1,4-Dichlorobenzene	Ave	1.352	1.473	0.5000	10.9	10.0	9.0	20.0
1,2,3-Trimethylbenzene	Ave	1.166	1.202		10.3	10.0	3.1	20.0
Benzyl chloride	Ave	0.1899	0.2322		12.2	10.0	22.3*	20.0
n-Butylbenzene	Ave	1.367	1.469		10.7	10.0	7.5	20.0
1,2-Dichlorobenzene	Ave	1.263	1.356	0.4000	10.7	10.0	7.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0617	0.0647	0.0500	10.5	10.0	4.7	20.0
1,3,5-Trichlorobenzene	Ave	0.995	1.111		11.2	10.0	11.6	20.0
1,2,4-Trichlorobenzene	Ave	0.7970	0.8220	0.2000	10.3	10.0	3.1	20.0
Hexachlorobutadiene	Ave	0.2980	0.3596		12.1	10.0	20.7*	20.0
Naphthalene	Ave	1.314	1.199		9.12	10.0	-8.8	20.0
1,2,3-Trichlorobenzene	Ave	0.6320	0.5718		9.05	10.0	-9.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2376	0.2512		10.6	10.0	5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.0442	0.0475		10.7	10.0	7.5	20.0
Toluene-d8 (Surr)	Ave	1.361	1.315		9.66	10.0	-3.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4936	0.4767		9.66	10.0	-3.4	20.0

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X02.D
Lims ID: CCVIS VSTD10
Client ID:
Sample Type: CCVIS
Inject. Date: 30-Jul-2023 13:01:30 ALS Bottle#: 2 Worklist Smp#: 3
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-003
Misc. Info.: CCVIS
Operator ID: knk41612 Instrument ID: 19094
Sublist: chrom-MSV_19094_25mL*sub1

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 30-Jul-2023 13:47:58 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1668

First Level Reviewer: DVW2 Date: 30-Jul-2023 13:24:05

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	706843	10.0	10.5	
5 Chloromethane	50	2.099	2.099	0.000	99	854679	10.0	9.65	
7 Butadiene	39	2.215	2.215	0.000	92	1016620	10.0	12.0	
6 Vinyl chloride	62	2.215	2.215	0.000	92	767545	10.0	9.28	
9 Bromomethane	94	2.544	2.544	0.000	91	524045	10.0	10.1	
10 Chloroethane	64	2.617	2.617	0.000	100	445595	10.0	9.61	
11 Dichlorofluoromethane	67	2.843	2.843	0.000	97	1137465	10.0	10.3	
12 Trichlorofluoromethane	101	2.928	2.928	0.000	97	874712	10.0	9.34	
14 Ethyl ether	59	3.141	3.141	0.000	93	342176	10.0	9.02	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.233	3.233	0.000	94	681060	10.0	9.34	
16 Acrolein	56	3.306	3.306	0.000	100	2539947	500.0	470.9	
17 1,1-Dichloroethene	96	3.446	3.446	0.000	98	483206	10.0	10.5	
19 Acetone	43	3.465	3.465	0.000	100	584041	100.0	108.3	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.489	0.000	93	483071	10.0	11.1	
21 Iodomethane	142	3.641	3.641	0.000	99	901935	10.0	10.8	
22 Ethyl bromide	108	3.666	3.666	0.000	99	401292	10.0	9.26	
23 Carbon disulfide	76	3.739	3.739	0.000	99	1278709	10.0	9.76	
24 Methyl acetate	43	3.867	3.867	0.000	97	172532	10.0	9.57	M
26 3-Chloro-1-propene	41	3.903	3.903	0.000	92	832175	10.0	10.2	
27 Methylene Chloride	84	4.086	4.086	0.000	93	514111	10.0	10.5	
* 28 t-Butyl alcohol-d10 (IS)	65	4.105	4.105	0.000	99	81669	50.0	50.0	
29 2-Methyl-2-propanol	59	4.214	4.214	0.000	99	313929	200.0	199.2	
31 Acrylonitrile	53	4.403	4.403	0.000	99	219097	25.0	27.0	
32 Methyl tert-butyl ether	73	4.483	4.483	0.000	97	1109822	10.0	10.0	
33 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	99	531054	10.0	10.3	
34 Hexane	57	4.915	4.915	0.000	93	646598	10.0	10.3	
36 1,1-Dichloroethane	63	5.147	5.147	0.000	96	1031652	10.0	10.6	
37 Isopropyl ether	45	5.208	5.208	0.000	96	1696652	10.0	10.0	
38 2-Chloro-1,3-butadiene	53	5.257	5.257	0.000	92	864132	10.0	10.2	
40 Tert-butyl ethyl ether	59	5.745	5.745	0.000	98	1468697	10.0	9.83	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
41 2-Butanone (MEK)	43	5.940	5.940	0.000	100	1161758	100.0	107.3	
42 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	82	596643	10.0	10.6	
43 2,2-Dichloropropane	77	6.001	6.001	0.000	88	880268	10.0	11.0	
44 Propionitrile	54	6.019	6.019	0.000	99	591627	200.0	213.6	
47 Methacrylonitrile	67	6.238	6.238	0.000	92	1204856	100.0	96.3	
48 Chlorobromomethane	128	6.312	6.312	0.000	95	243209	10.0	11.6	
49 Tetrahydrofuran	71	6.324	6.324	0.000	79	156471	50.0	53.3	
50 Chloroform	83	6.464	6.464	0.000	93	1016625	10.0	10.9	
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	93	508607	10.0	10.6	
53 1,1,1-Trichloroethane	97	6.696	6.696	0.000	99	885668	10.0	10.7	
54 Cyclohexane	56	6.799	6.799	0.000	91	875254	10.0	9.91	
55 1,1-Dichloropropene	75	6.903	6.903	0.000	96	756921	10.0	10.6	
56 Carbon tetrachloride	117	6.909	6.909	0.000	97	788549	10.0	11.3	
57 Isobutyl alcohol	41	7.055	7.055	0.000	94	339765	500.0	537.5	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.128	7.128	0.000	78	96240	10.0	10.7	
59 Benzene	78	7.165	7.165	0.000	97	2233396	10.0	10.5	
60 1,2-Dichloroethane	62	7.232	7.232	0.000	97	571326	10.0	11.0	
63 Tert-amyl methyl ether	73	7.366	7.366	0.000	98	1278193	10.0	10.2	
* 64 Fluorobenzene (IS)	96	7.573	7.573	0.000	98	2024876	10.0	10.0	
65 n-Heptane	43	7.592	7.592	0.000	91	612750	10.0	10.4	
67 n-Butanol	56	7.951	7.951	0.000	89	488426	875.0	1065.8	
68 Trichloroethene	95	8.055	8.055	0.000	98	601922	10.0	10.7	
69 Methylcyclohexane	83	8.372	8.372	0.000	91	887753	10.0	10.6	
70 1,2-Dichloropropane	63	8.384	8.384	0.000	86	586917	10.0	10.7	
71 2-ethoxy-2-methyl butane	87	8.403	8.403	0.000	91	828917	10.0	10.7	
72 Methyl methacrylate	69	8.476	8.476	0.000	91	232427	10.0	9.94	
73 1,4-Dioxane	88	8.482	8.482	0.000	33	47411	500.0	650.9	
74 Dibromomethane	93	8.500	8.500	0.000	96	256965	10.0	11.5	
76 Dichlorobromomethane	83	8.738	8.738	0.000	99	713803	10.0	10.9	
77 2-Nitropropane	41	8.994	8.994	0.000	98	352074	50.0	49.5	
79 1-Bromo-2-chloroethane	63	9.128	9.128	0.000	99	527051	10.0	10.3	
80 cis-1,3-Dichloropropene	75	9.287	9.287	0.000	95	849139	10.0	10.9	
82 4-Methyl-2-pentanone (MIBK)	43	9.463	9.463	0.000	97	2999359	100.0	97.2	
$ 83 Toluene-d8 (Surr)	98	9.604	9.604	0.000	94	2049804	10.0	9.66	
84 Toluene	92	9.683	9.683	0.000	98	1417251	10.0	10.1	
85 trans-1,3-Dichloropropene	75	9.939	9.939	0.000	93	706402	10.0	10.9	
104 Ethyl methacrylate	69	10.006	10.006	0.000	89	494856	10.0	10.0	
106 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	371862	10.0	10.4	
107 Tetrachloroethene	166	10.244	10.244	0.000	98	678561	10.0	11.0	
108 1,3-Dichloropropane	76	10.311	10.311	0.000	91	633550	10.0	10.6	
109 2-Hexanone	43	10.366	10.366	0.000	97	2088003	100.0	102.2	
111 Chlorodibromomethane	129	10.530	10.530	0.000	90	482315	10.0	11.1	
112 Ethylene Dibromide	107	10.640	10.640	0.000	98	348114	10.0	10.9	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	85	1558723	10.0	10.0	
114 1-Chlorohexane	91	11.085	11.085	0.000	98	824865	10.0	9.76	
115 Chlorobenzene	112	11.103	11.103	0.000	95	1613234	10.0	10.6	
116 1,1,1,2-Tetrachloroethane	131	11.189	11.189	0.000	96	557548	10.0	10.7	
117 Ethylbenzene	91	11.189	11.189	0.000	99	2833655	10.0	10.3	
119 m-Xylene & p-Xylene	106	11.304	11.304	0.000	99	2152749	20.0	20.8	
120 o-Xylene	106	11.634	11.634	0.000	97	1029361	10.0	10.3	
121 Styrene	104	11.652	11.652	0.000	95	1717034	10.0	10.4	
122 Bromoform	173	11.810	11.810	0.000	97	292517	10.0	11.5	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
123 Isopropylbenzene	105	11.938	11.938	0.000	96	2776790	10.0	10.3	
$ 126 4-Bromofluorobenzene (Surr)	95	12.079	12.079	0.000	92	743111	10.0	9.66	
127 1,1,2,2-Tetrachloroethane	83	12.182	12.182	0.000	92	457898	10.0	9.86	
128 Bromobenzene	156	12.195	12.195	0.000	97	663992	10.0	10.8	
129 trans-1,4-Dichloro-2-butene	53	12.207	12.207	0.000	92	992639	100.0	101.0	
130 1,2,3-Trichloropropane	110	12.225	12.225	0.000	80	111601	10.0	10.2	
131 N-Propylbenzene	91	12.268	12.268	0.000	99	3467406	10.0	10.2	
132 2-Chlorotoluene	126	12.341	12.341	0.000	97	674474	10.0	10.4	
133 1,3,5-Trimethylbenzene	105	12.402	12.402	0.000	94	2344156	10.0	9.90	
134 4-Chlorotoluene	126	12.432	12.432	0.000	98	700129	10.0	10.6	
135 tert-Butylbenzene	134	12.646	12.646	0.000	93	524660	10.0	10.2	
136 Pentachloroethane	167	12.676	12.676	0.000	94	437837	10.0	10.4	
137 1,2,4-Trimethylbenzene	105	12.688	12.688	0.000	97	2400332	10.0	10.0	
138 sec-Butylbenzene	105	12.810	12.810	0.000	94	3026145	10.0	10.2	
139 1,3-Dichlorobenzene	146	12.908	12.908	0.000	98	1347821	10.0	10.7	
140 4-Isopropyltoluene	119	12.914	12.914	0.000	97	2614842	10.0	10.3	
* 141 1,4-Dichlorobenzene-d4	152	12.963	12.963	0.000	98	883701	10.0	10.0	
142 1,4-Dichlorobenzene	146	12.981	12.981	0.000	94	1302057	10.0	10.9	
143 1,2,3-Trimethylbenzene	120	12.993	12.993	0.000	98	1062624	10.0	10.3	
144 Benzyl chloride	126	13.060	13.060	0.000	99	205232	10.0	12.2	
145 p-Diethylbenzene	119	13.188	13.188	0.000	94	1592541	10.0	10.7	
146 n-Butylbenzene	92	13.207	13.207	0.000	97	1297833	10.0	10.7	
147 1,2-Dichlorobenzene	146	13.243	13.243	0.000	98	1198080	10.0	10.7	
149 1,2-Dibromo-3-Chloropropane	155	13.786	13.786	0.000	87	57147	10.0	10.5	
150 1,3,5-Trichlorobenzene	180	13.914	13.914	0.000	98	981393	10.0	11.2	
151 1,2,4-Trichlorobenzene	180	14.334	14.334	0.000	94	726377	10.0	10.3	
152 Hexachlorobutadiene	225	14.420	14.420	0.000	95	317818	10.0	12.1	
153 Naphthalene	128	14.517	14.517	0.000	97	1059791	10.0	9.12	
154 1,2,3-Trichlorobenzene	180	14.657	14.657	0.000	96	505296	10.0	9.05	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

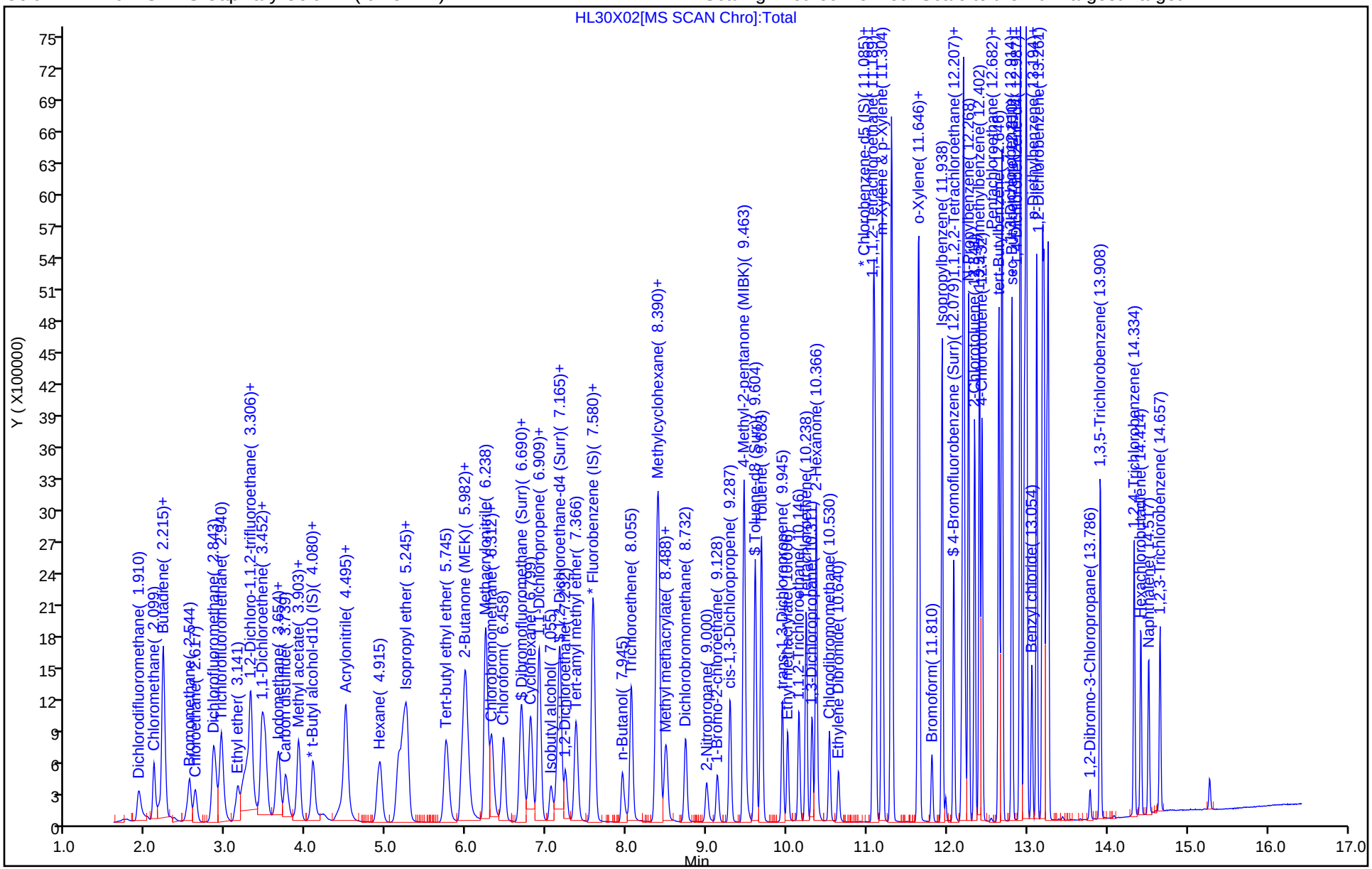
MSV_LL_GAS826_00162	Amount Added:	20.00	Units: uL	
MSV_LL_#1_826_00085	Amount Added:	20.00	Units: uL	
MSV_LL_#2_826_00096	Amount Added:	20.00	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 30-Jul-2023 13:48:00 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X02.D				
Injection Date:	30-Jul-2023 13:01:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	CCVIS VSTD10			Worklist Smp#:	3
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	2
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Manual Integration/User Assign Peak Report

Eurofins Lancaster Laboratories Environment Testing, LLC

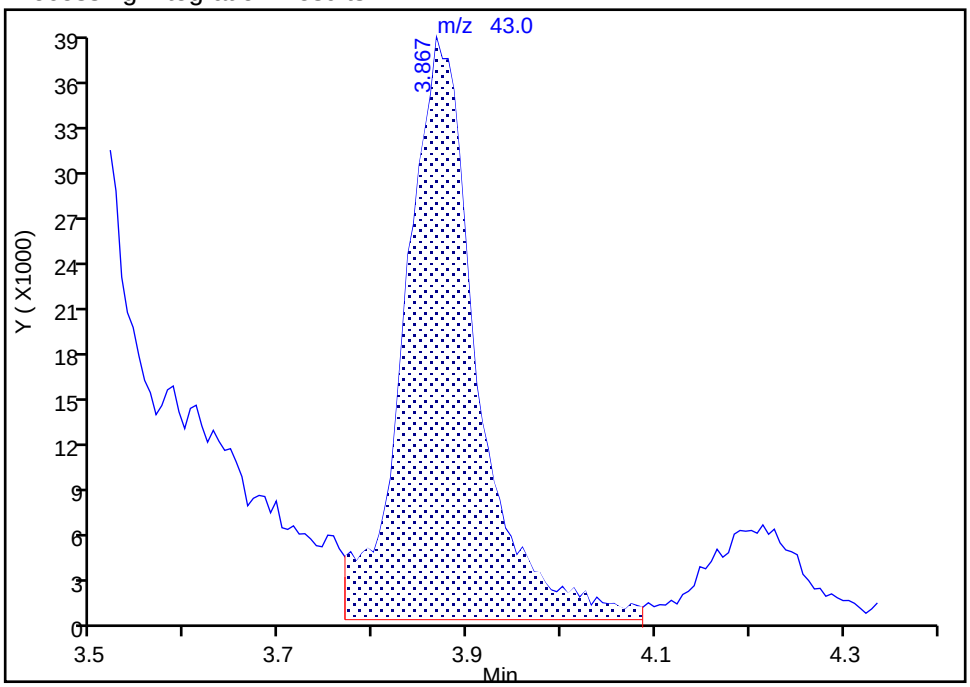
Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X02.D				
Injection Date:	30-Jul-2023 13:01:30	Instrument ID:	19094		
Lims ID:	CCVIS VSTD10				
Client ID:					
Operator ID:	knk41612	ALS Bottle#:	2	Worklist Smp#:	3
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		
Column:	Rxi-624Sil MS Capillary Column (0.25mm)	Detector	MS Quad		

24 Methyl acetate, CAS: 79-20-9

Signal: 1

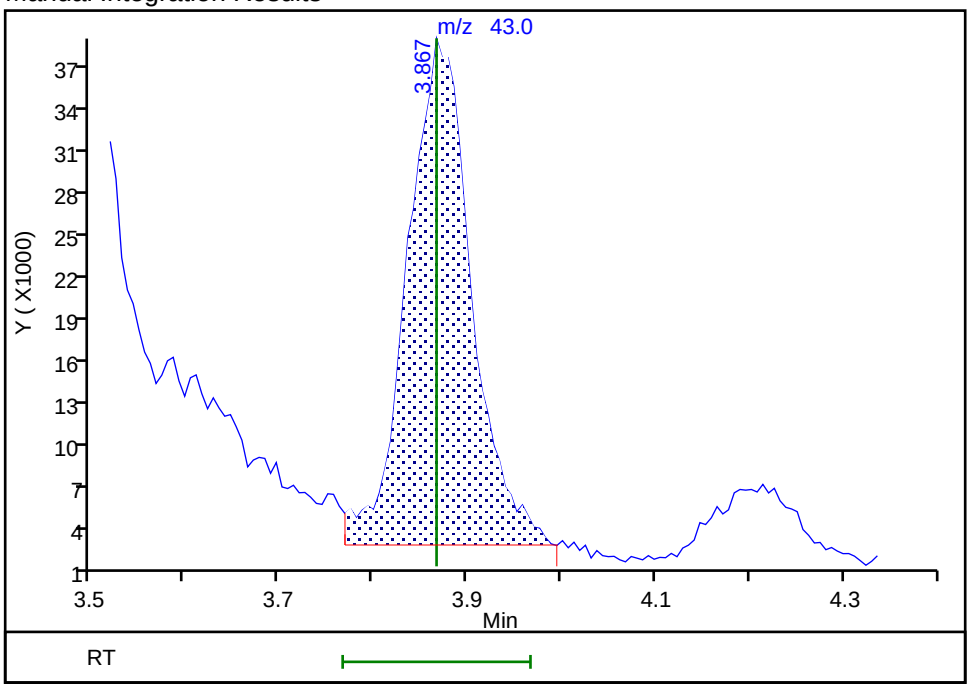
Processing Integration Results

RT: 3.87
Area: 205699
Amount: 11.406266
Amount Units: ug/l



Manual Integration Results

RT: 3.87
Area: 172532
Amount: 9.567114
Amount Units: ug/l



Reviewer: DVW2, 30-Jul-2023 13:23:00 -04:00:00 (UTC)

Audit Action: Assigned New Baseline Audit Reason: Incomplete Integration

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19T31.D
Lims ID: bfb
Client ID:
Sample Type: BFB
Inject. Date: 19-Apr-2023 17:40:30 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Sample Info:
Misc. Info.: BFB
Operator ID: mec29284 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 23-Apr-2023 20:41:59 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1665

First Level Reviewer: K4WN Date: 19-Apr-2023 17:59:01

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 166 BFB	95	5.123	5.123	0.000	91	659865	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

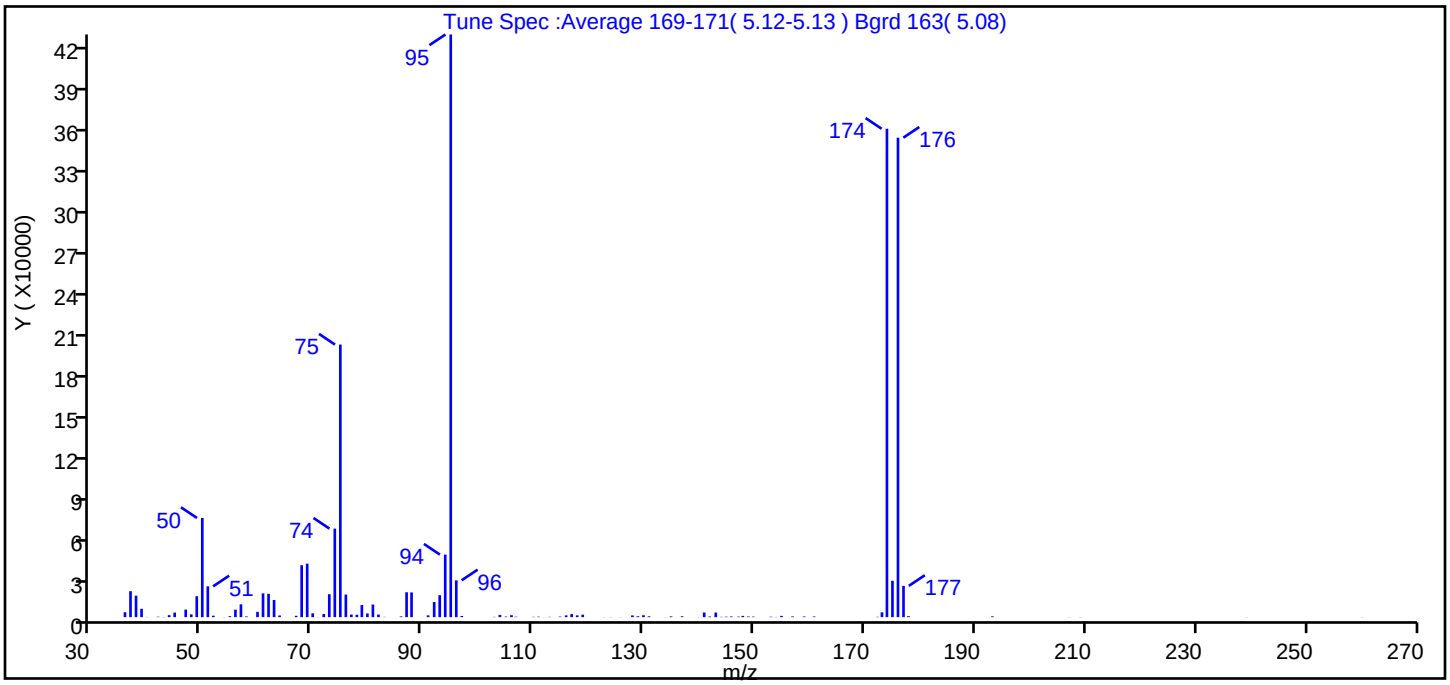
MSV_V_BFB_00011 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19T31.D
Injection Date: 19-Apr-2023 17:40:30 Instrument ID: 19094
Lims ID: bfb
Client ID:
Operator ID: mec29284 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 166 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	17.0
75	30 to 60% of m/z 95	46.8
96	5 to 9% of m/z 95	6.3
173	Less than 2% of m/z 174	0.8 (1.0)
174	50 to 120% of m/z 95	83.8
175	5 to 9% of m/z 174	6.2 (7.4)
176	Greater than 95% but less than 101% of m/z 174	82.3 (98.2)
177	5 to 9% of m/z 176	5.4 (6.5)

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19T31.D\MSV_19094_25mL.rslt\spectra.d
Injection Date: 19-Apr-2023 17:40:30
Spectrum: Tune Spec :Average 169-171(5.12-5.13) Bgrd 163(5.08)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 105

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	3603	69.00	39400	105.00	425	145.00	347
37.00	19120	70.00	2821	106.00	1426	146.00	485
38.00	15817	71.00	76	107.00	350	147.00	383
39.00	6137	72.00	2310	110.00	232	148.00	929
40.00	128	73.00	16912	111.00	361	149.00	473
42.00	308	74.00	65192	112.00	86	150.00	389
43.00	111	75.00	200768	113.00	214	153.00	323
44.00	1459	76.00	16632	115.00	421	154.00	117
45.00	3367	77.00	1898	116.00	1281	155.00	930
47.00	5541	78.00	1756	117.00	2259	157.00	533
48.00	2052	79.00	8918	118.00	1303	159.00	484
49.00	15420	80.00	2721	119.00	1824	161.00	493
50.00	73056	81.00	9260	123.00	86	172.00	254
51.00	22696	82.00	1901	124.00	105	173.00	3543
52.00	1067	83.00	190	126.00	95	174.00	359744
54.00	89	86.00	553	128.00	1265	175.00	26784
55.00	691	87.00	18336	129.00	652	176.00	353152
56.00	5488	88.00	18200	130.00	1404	177.00	23032
57.00	9415	91.00	1323	131.00	618	178.00	737
58.00	522	92.00	11122	134.00	92	193.00	598
60.00	3896	93.00	16180	135.00	563	207.00	103
61.00	17528	94.00	46072	137.00	626	209.00	107
62.00	17160	95.00	429184	140.00	84	239.00	90
63.00	12617	96.00	27104	141.00	3420	260.00	84
64.00	1242	97.00	871	142.00	487		
67.00	986	103.00	194	143.00	3370		
68.00	38256	104.00	1648	144.00	211		

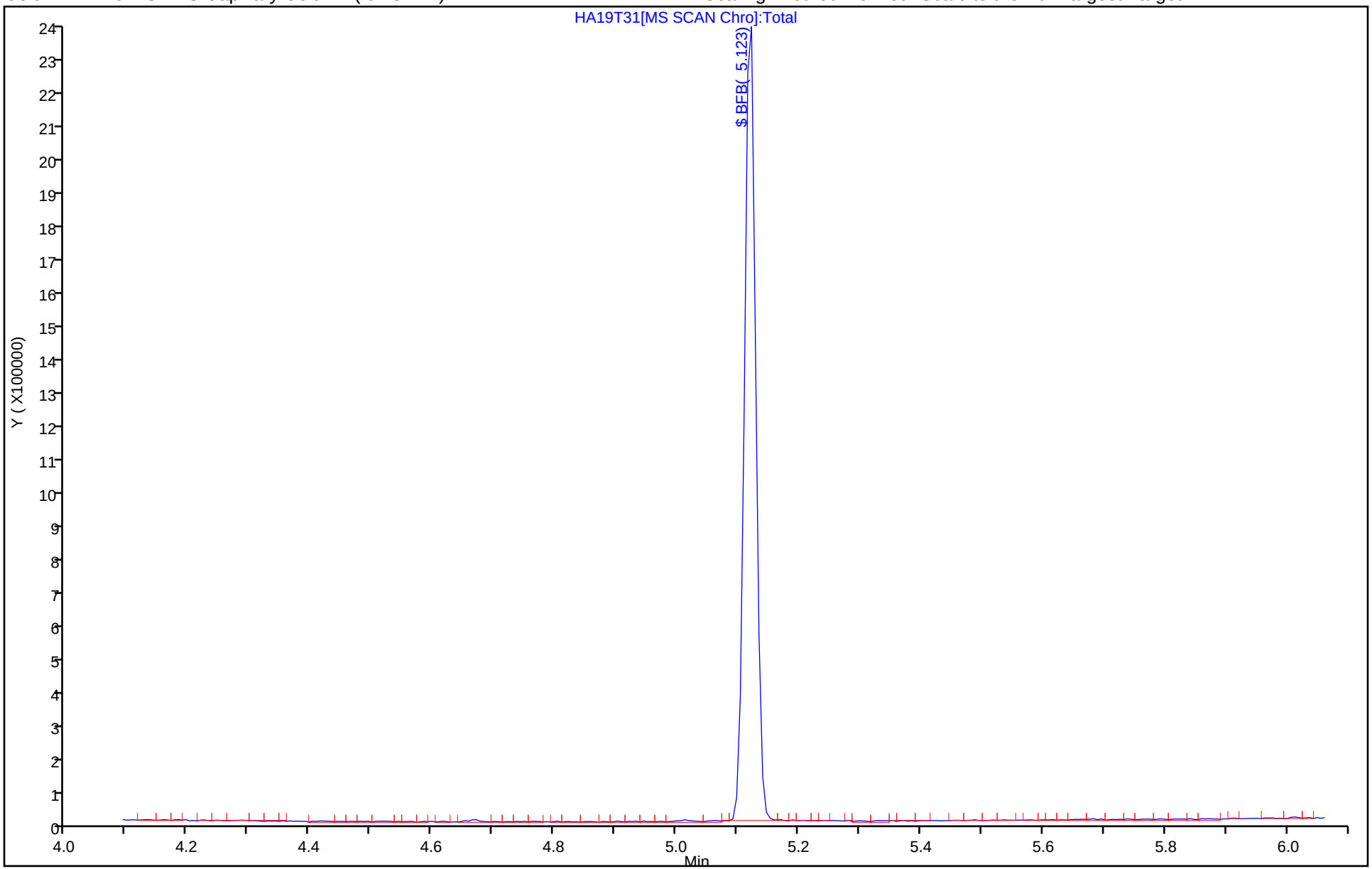
Report Date: 23-Apr-2023 20:41:59 Chrom Revision: 2.3 20-Apr-2023 08:27:48

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19T31.D

Injection Date:	19-Apr-2023 17:40:30	Instrument ID:	19094	Operator ID:	mec29284
Lims ID:	bfb			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30T01.D				
Lims ID:	BFB				
Client ID:					
Sample Type:	BFB				
Inject. Date:	30-Jul-2023 12:22:30	ALS Bottle#:	1	Worklist Smp#:	1
Injection Vol:	1.0 uL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-001				
Misc. Info.:	BFB				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	30-Jul-2023 13:48:06	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1668				

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
$ 166 BFB	95	5.093	5.093	0.000	93	263558	NR	NR	

QC Flag Legend

Processing Flags
NR - Missing Quant Standard

Reagents:

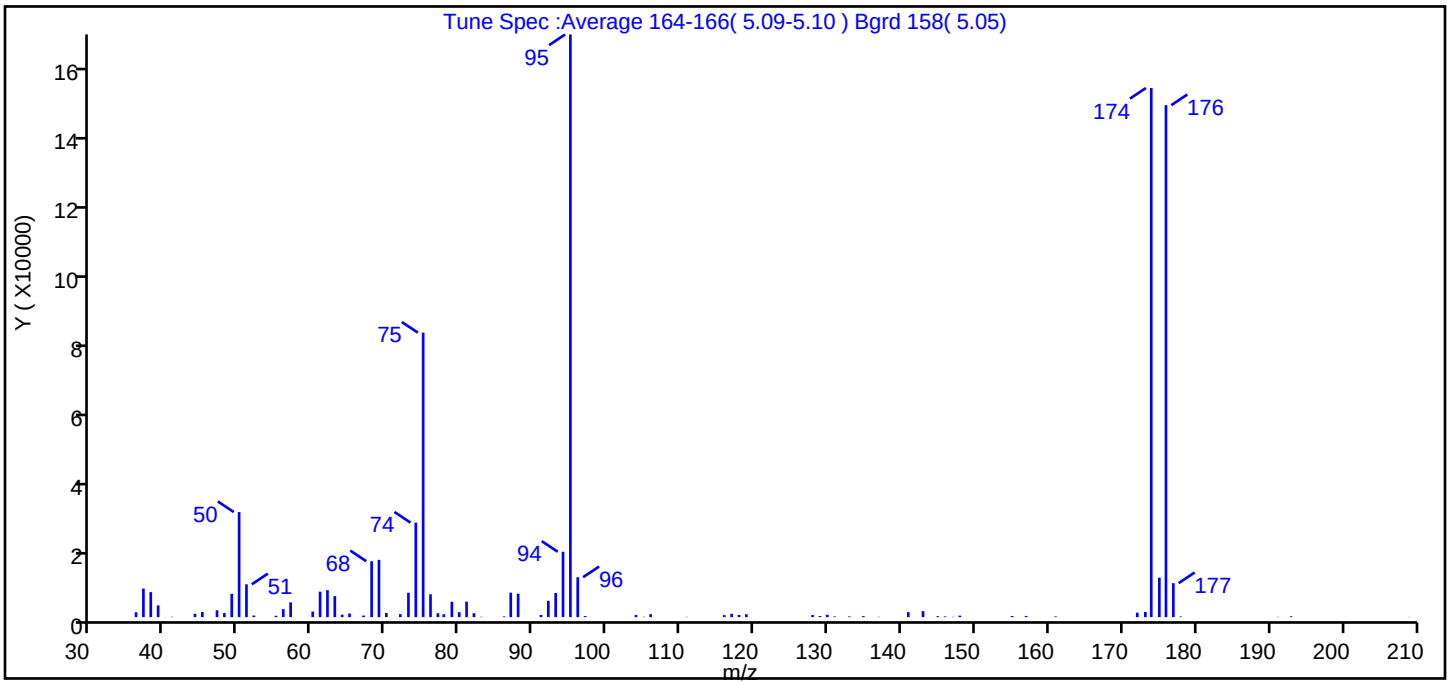
MSV_V_BFB_00012 Amount Added: 1.00 Units: uL

MS Tune Report

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30T01.D
Injection Date: 30-Jul-2023 12:22:30 Instrument ID: 19094
Lims ID: BFB
Client ID:
Operator ID: knk41612 ALS Bottle#: 1 Worklist Smp#: 1
Injection Vol: 1.0 uL Dil. Factor: 1.0000
Method: MSV_19094_25mL Limit Group: MSV - 8260C_D
Tune Method: BFB Method 8260

$ 166 BFB



m/z	Ion Abundance Criteria	% Relative Abundance
95	Base peak, 100% relative abundance	100.0
50	15 to 40% of m/z 95	18.0
75	30 to 60% of m/z 95	48.8
96	5 to 9% of m/z 95	6.9
173	Less than 2% of m/z 174	0.9 (1.0)
174	50 to 120% of m/z 95	90.8
175	5 to 9% of m/z 174	6.8 (7.5)
176	Greater than 95% but less than 101% of m/z 174	87.9 (96.8)
177	5 to 9% of m/z 176	5.8 (6.6)

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30T01.D\MSV_19094_25mL.rslt\spectra.d
Injection Date: 30-Jul-2023 12:22:30
Spectrum: Tune Spec :Average 164-166(5.09-5.10) Bgrd 158(5.05)
Base Peak: 95.00
Minimum % Base Peak: 0
Number of Points: 83

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1430	64.00	722	91.00	636	137.00	92
37.00	8306	65.00	1061	92.00	4754	141.00	1447
38.00	7273	67.00	458	93.00	7029	143.00	1745
39.00	3416	68.00	16241	94.00	19000	145.00	277
40.00	27	69.00	16648	95.00	169344	146.00	212
41.00	99	70.00	1217	96.00	11608	147.00	89
44.00	968	72.00	868	97.00	343	148.00	435
45.00	1476	73.00	7084	104.00	650	155.00	340
47.00	1990	74.00	27472	105.00	94	157.00	345
48.00	1192	75.00	82680	106.00	854	161.00	197
49.00	6777	76.00	6644	111.00	85	172.00	1303
50.00	30536	77.00	1136	116.00	590	173.00	1501
51.00	9546	78.00	845	117.00	982	174.00	153792
52.00	483	79.00	4486	118.00	644	175.00	11461
55.00	409	80.00	1435	119.00	835	176.00	148800
56.00	2305	81.00	4500	128.00	634	177.00	9886
57.00	4301	82.00	1132	129.00	325	178.00	184
60.00	1632	83.00	96	130.00	684	191.00	87
61.00	7412	86.00	206	131.00	201	193.00	247
62.00	7847	87.00	7119	133.00	201	209.00	55
63.00	6113	88.00	6808	135.00	305		

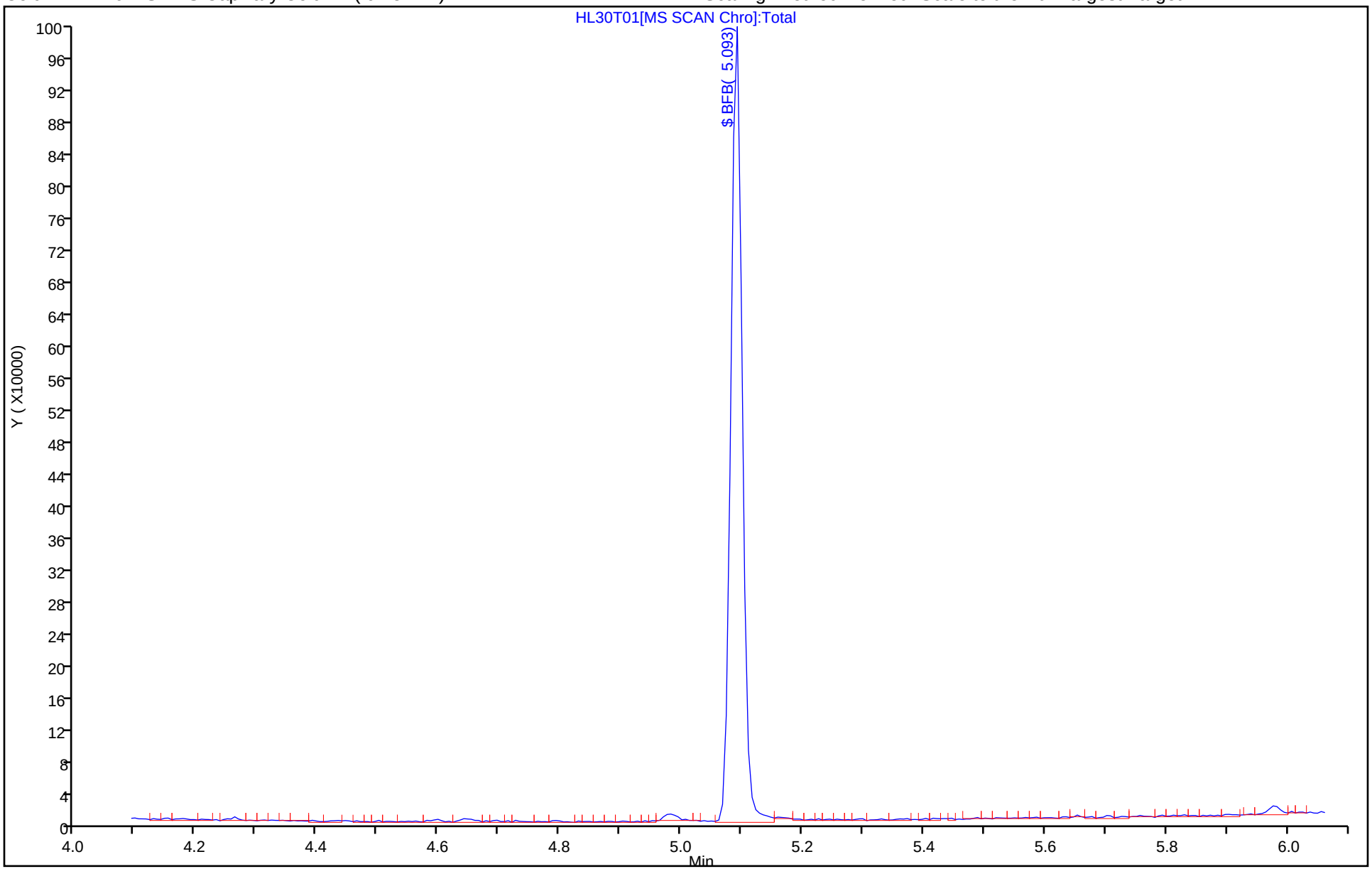
Report Date: 30-Jul-2023 13:48:07 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30T01.D

Injection Date:	30-Jul-2023 12:22:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	BFB			Worklist Smp#:	1
Client ID:					
Injection Vol:	1.0 uL	Dil. Factor:	1.0000	ALS Bottle#:	1
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID:
Lab Sample ID: MB 410-402356/6

Matrix: Water
Lab File ID: HL30X05.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 14:02

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	ND		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	ND		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	ND		1.0	0.80
79-01-6	Trichloroethene	ND		1.0	0.30
75-01-4	Vinyl chloride	ND		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		80-120
460-00-4	4-Bromofluorobenzene (Surr)	93		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	95		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X05.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Jul-2023 14:02:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-006
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 30-Jul-2023 14:38:30 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1668

First Level Reviewer: DVW2 Date: 30-Jul-2023 14:38:30

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
1 Chlorotrifluoroethene	116		1.867					ND	
2 Dichlorodifluoromethane	85		1.910					ND	
3 Chlorodifluoromethane	51		1.922					ND	
4 Dimethyl ether	45		1.983					ND	
5 Chloromethane	50		2.099					ND	7
7 Butadiene	39		2.215					ND	7
6 Vinyl chloride	62		2.215					ND	
8 2-Chloro-1,1,1-Trifluoroethane	118		2.288					ND	
9 Bromomethane	94		2.544					ND	
10 Chloroethane	64		2.617					ND	
11 Dichlorofluoromethane	67		2.843					ND	
12 Trichlorofluoromethane	101		2.928					ND	
13 Ethanol	45		3.111					ND	
14 Ethyl ether	59		3.141					ND	
15 1,2-Dichloro-1,1,2-trifluoroetha	67		3.233					ND	
16 Acrolein	56		3.306					ND	7
17 1,1-Dichloroethene	96		3.446					ND	7
19 Acetone	43		3.465					ND	U
20 1,1,2-Trichloro-1,2,2-trifluoroe	101		3.489					ND	
21 Iodomethane	142		3.641					ND	
22 Ethyl bromide	108		3.666					ND	
23 Carbon disulfide	76		3.739					ND	7
25 Acetonitrile	41		3.849					ND	
24 Methyl acetate	43		3.867					ND	
26 3-Chloro-1-propene	41		3.903					ND	
27 Methylene Chloride	84		4.086					ND	
* 28 t-Butyl alcohol-d10 (IS)	65	4.099	4.105	-0.006	23	84866	50.0	50.0	
29 2-Methyl-2-propanol	59		4.214					ND	
31 Acrylonitrile	53		4.403					ND	
32 Methyl tert-butyl ether	73		4.483					ND	
33 trans-1,2-Dichloroethene	96		4.495					ND	
34 Hexane	57		4.915					ND	

	Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
	36 1,1-Dichloroethane	63		5.147					ND	
	35 Vinyl acetate	43		5.159					ND	
	37 Isopropyl ether	45		5.208					ND	
	38 2-Chloro-1,3-butadiene	53		5.257					ND	
	40 Tert-butyl ethyl ether	59		5.745					ND	
	41 2-Butanone (MEK)	43		5.940					ND	7
	42 cis-1,2-Dichloroethene	96		5.982					ND	7
	43 2,2-Dichloropropane	77		6.001					ND	
	44 Propionitrile	54		6.019					ND	
	45 Ethyl acetate	43		6.043					ND	
S	46 1,2-Dichloroethene, Total	100		6.155					ND	7
	47 Methacrylonitrile	67		6.238					ND	
	48 Chlorobromomethane	128		6.312					ND	
	49 Tetrahydrofuran	71		6.324					ND	
	50 Chloroform	83		6.464					ND	
	51 Methyl acrylate	55		6.482					ND	
$	52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	510022	10.0	10.5	
	53 1,1,1-Trichloroethane	97		6.696					ND	
	54 Cyclohexane	56		6.799					ND	U
	55 1,1-Dichloropropene	75		6.903					ND	
	56 Carbon tetrachloride	117		6.909					ND	
	57 Isobutyl alcohol	41		7.055					ND	
$	58 1,2-Dichloroethane-d4 (Surr)	102	7.135	7.128	0.007	52	97934	10.0	10.8	
	59 Benzene	78		7.165					ND	7
	60 1,2-Dichloroethane	62		7.232					ND	7
	62 1-Chlorobutane	56		7.250					ND	
	61 Isopropyl acetate	43		7.269					ND	
	63 Tert-amyl methyl ether	73		7.366					ND	
*	64 Fluorobenzene (IS)	96	7.574	7.573	0.001	99	2042666	10.0	10.0	
	65 n-Heptane	43		7.592					ND	7
	66 t-Amyl alcohol	73		7.842					ND	
	67 n-Butanol	56	8.000	7.951	0.049	13	3968		8.33	
	68 Trichloroethene	95		8.055					ND	
	69 Methylcyclohexane	83		8.372					ND	
	70 1,2-Dichloropropane	63		8.384					ND	
	71 2-ethoxy-2-methyl butane	87		8.403					ND	
	72 Methyl methacrylate	69		8.476					ND	
	73 1,4-Dioxane	88		8.482					ND	
	74 Dibromomethane	93		8.500					ND	
	75 n-Propyl acetate	61		8.567					ND	
	76 Dichlorobromomethane	83		8.738					ND	
	77 2-Nitropropane	41		8.994					ND	
	78 2-Chloroethyl vinyl ether	63		9.104					ND	
	79 1-Bromo-2-chloroethane	63		9.128					ND	
	80 cis-1,3-Dichloropropene	75		9.287					ND	
	81 Chloroacetonitrile	75		9.427					ND	
	82 4-Methyl-2-pentanone (MIBK)	43		9.463					ND	
$	83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2036356	10.0	9.54	
	84 Toluene	92		9.683					ND	
	85 trans-1,3-Dichloropropene	75		9.939					ND	
	104 Ethyl methacrylate	69		10.006					ND	
S	105 1,3-Dichloropropene, Total	100		10.060					ND	7

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
106 1,1,2-Trichloroethane	97		10.152					ND	
107 Tetrachloroethene	166		10.244					ND	
108 1,3-Dichloropropane	76		10.311					ND	
109 2-Hexanone	43		10.366					ND	
110 n-Butyl acetate	43		10.482					ND	
111 Chlorodibromomethane	129		10.530					ND	
112 Ethylene Dibromide	107		10.640					ND	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1568867	10.0	10.0	
114 1-Chlorohexane	91		11.085					ND	7
115 Chlorobenzene	112		11.103					ND	7
116 1,1,1,2-Tetrachloroethane	131		11.189					ND	
117 Ethylbenzene	91		11.189					ND	7
S 118 Xylenes, Total	106		11.245					ND	7
119 m-Xylene & p-Xylene	106		11.304					ND	
120 o-Xylene	106		11.634					ND	
121 Styrene	104		11.652					ND	
122 Bromoform	173		11.810					ND	
123 Isopropylbenzene	105		11.938					ND	7
125 Cyclohexanone	55		12.000					ND	
124 cis-1,4-Dichloro-2-butene	88		12.067					ND	U
$ 126 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	92	722503	10.0	9.33	
127 1,1,2,2-Tetrachloroethane	83		12.182					ND	
128 Bromobenzene	156		12.195					ND	
129 trans-1,4-Dichloro-2-butene	53		12.207					ND	
130 1,2,3-Trichloropropane	110		12.225					ND	
131 N-Propylbenzene	91		12.268					ND	7
132 2-Chlorotoluene	126		12.341					ND	
133 1,3,5-Trimethylbenzene	105		12.402					ND	7
134 4-Chlorotoluene	126		12.432					ND	
135 tert-Butylbenzene	134		12.646					ND	
136 Pentachloroethane	167		12.676					ND	
137 1,2,4-Trimethylbenzene	105		12.688					ND	7
138 sec-Butylbenzene	105		12.810					ND	7
139 1,3-Dichlorobenzene	146		12.908					ND	7
140 4-Isopropyltoluene	119		12.914					ND	7
* 141 1,4-Dichlorobenzene-d4	152	12.969	12.963	0.006	95	834870	10.0	10.0	
142 1,4-Dichlorobenzene	146		12.981					ND	7
143 1,2,3-Trimethylbenzene	120		12.993					ND	7
144 Benzyl chloride	126		13.060					ND	
145 p-Diethylbenzene	119		13.188					ND	U
146 n-Butylbenzene	92		13.207					ND	7
147 1,2-Dichlorobenzene	146		13.243					ND	7
148 Hexachloroethane	201		13.682					ND	
149 1,2-Dibromo-3-Chloropropane	155		13.786					ND	
150 1,3,5-Trichlorobenzene	180		13.914					ND	7
151 1,2,4-Trichlorobenzene	180	14.341	14.334	0.007	91	2973		0.0447	
152 Hexachlorobutadiene	225	14.420	14.420	0.000	90	1602		0.0644	
153 Naphthalene	128	14.517	14.517	0.000	96	6870		0.0626	
154 1,2,3-Trichlorobenzene	180	14.664	14.657	0.007	96	7593		0.1439	
155 tert-Butyl Formate	1		0.000					ND	
156 Dodecane	57		0.000					ND	
157 Pentane	43		0.000					ND	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
158 1,1-Dichloroacetone	1		0.000					ND	
159 n-Decane	57		0.000					ND	
160 1-Bromo-3-Chloropropane	1		0.000					ND	
161 1-Chloropropane	1		0.000					ND	
162 Propene oxide	1		0.000					ND	
163 1,1-Dichloro-1-fluoroethane	1		0.000					ND	
164 Methylal	1		0.000					ND	
165 2-Bromo-1-chloropropane	1		0.000					ND	

QC Flag Legend

Processing Flags

7 - Failed Limit of Detection

Review Flags

U - Marked Undetected

Reagents:

MSV_LLcentISS_00009 Amount Added: 5.00 Units: uL Run Reagent

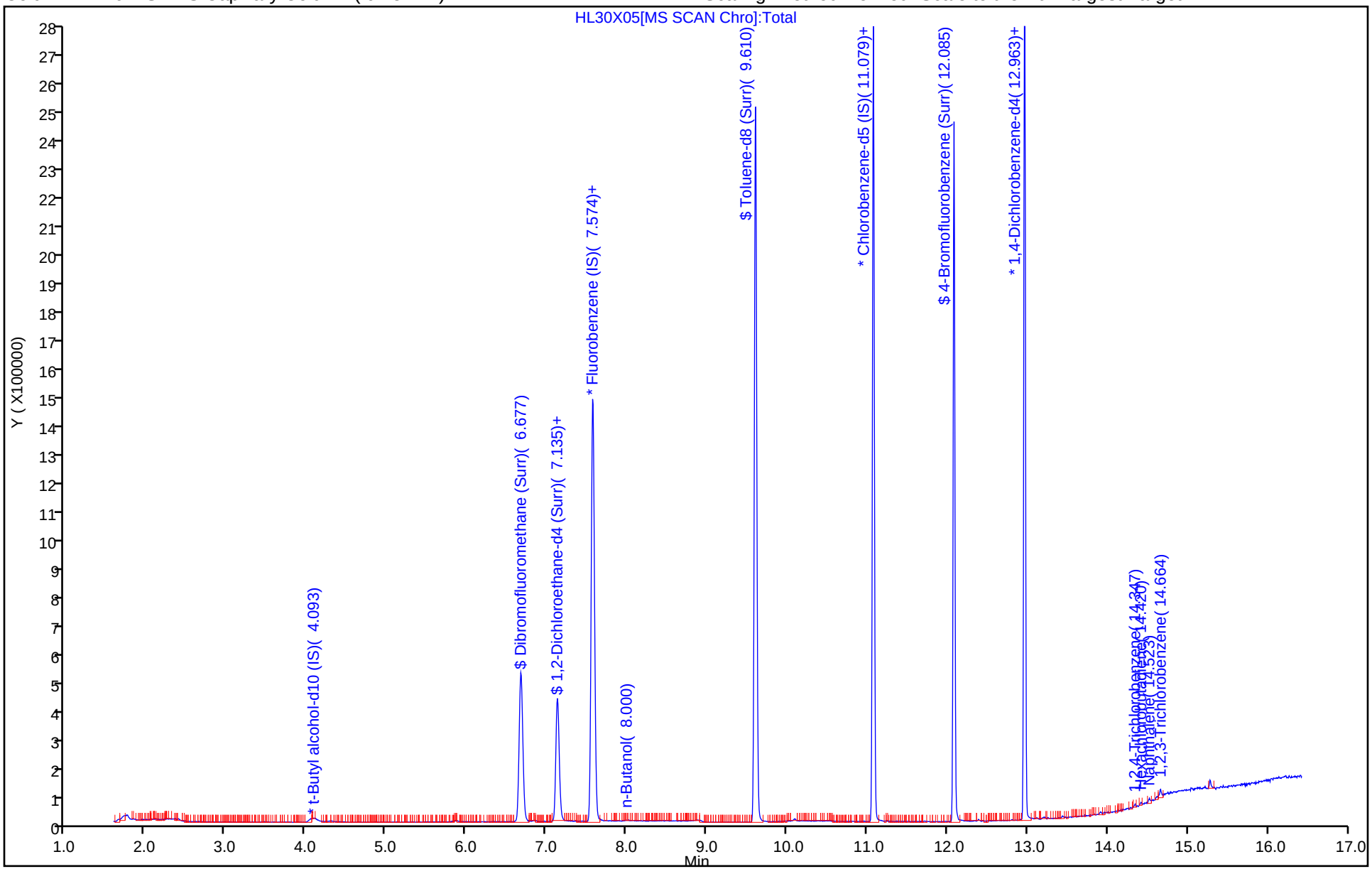
Report Date: 30-Jul-2023 14:38:54 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X05.D

Injection Date:	30-Jul-2023 14:02:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	MB			Worklist Smp#:	6
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	5
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X05.D
Lims ID: MB
Client ID:
Sample Type: MB
Inject. Date: 30-Jul-2023 14:02:30 ALS Bottle#: 5 Worklist Smp#: 6
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-006
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 30-Jul-2023 14:38:30 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1668

First Level Reviewer: DVW2 Date: 30-Jul-2023 14:38:30

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	105.07
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.8	108.39
$ 83 Toluene-d8 (Surr)	10.0	9.54	95.38
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.33	93.31

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID:
Lab Sample ID: LCS 410-402356/4

Matrix: Water
Lab File ID: HL30X03.D

Analysis Method: 8260D
Date Collected:

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 13:22

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	5.57		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	5.61		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	5.43		1.0	0.80
79-01-6	Trichloroethene	5.46		1.0	0.30
75-01-4	Vinyl chloride	3.62		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	106		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X03.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 30-Jul-2023 13:22:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-004
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 30-Jul-2023 13:47:58 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1668

First Level Reviewer: DVW2 Date: 30-Jul-2023 13:46:11

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.898	1.910	-0.012	99	261073	5.00	3.81	
5 Chloromethane	50	2.093	2.099	-0.006	99	310320	5.00	3.42	
7 Butadiene	39	2.209	2.215	-0.006	93	344623	5.00	3.97	
6 Vinyl chloride	62	2.209	2.215	-0.006	97	306851	5.00	3.62	
9 Bromomethane	94	2.538	2.544	-0.006	91	216159	5.00	4.09	
10 Chloroethane	64	2.605	2.617	-0.012	100	194345	5.00	4.10	
11 Dichlorofluoromethane	67	2.836	2.843	-0.007	97	499331	5.00	4.40	
12 Trichlorofluoromethane	101	2.916	2.928	-0.012	97	373326	5.00	3.90	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.233	-0.012	94	337130	5.00	4.52	
17 1,1-Dichloroethene	96	3.440	3.446	-0.006	98	262990	5.00	5.57	
19 Acetone	43	3.464	3.465	-0.001	100	374833	62.5	65.4	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.483	3.489	-0.006	92	255027	5.00	5.75	
21 Iodomethane	142	3.629	3.641	-0.012	99	474724	5.00	5.58	
23 Carbon disulfide	76	3.739	3.739	0.000	99	761837	5.00	5.68	
24 Methyl acetate	43	3.873	3.867	0.006	97	97669	5.00	5.10	
26 3-Chloro-1-propene	41	3.903	3.903	0.000	91	438032	5.00	5.23	
27 Methylene Chloride	84	4.074	4.086	-0.012	94	280897	5.00	5.62	
* 28 t-Butyl alcohol-d10 (IS)	65	4.080	4.105	-0.025	100	86799	50.0	50.0	
29 2-Methyl-2-propanol	59	4.190	4.214	-0.024	99	94183	50.0	56.2	
31 Acrylonitrile	53	4.391	4.403	-0.012	99	213325	25.0	24.7	
32 Methyl tert-butyl ether	73	4.483	4.483	-0.001	97	589345	5.00	5.20	
33 trans-1,2-Dichloroethene	96	4.489	4.495	-0.006	98	286476	5.00	5.43	
34 Hexane	57	4.909	4.915	-0.006	94	363763	5.00	5.66	
36 1,1-Dichloroethane	63	5.141	5.147	-0.006	96	532016	5.00	5.34	
37 Isopropyl ether	45	5.214	5.208	0.006	95	872482	5.00	5.03	
38 2-Chloro-1,3-butadiene	53	5.251	5.257	-0.006	92	441697	5.00	5.10	
40 Tert-butyl ethyl ether	59	5.744	5.745	-0.001	98	791160	5.00	5.18	
41 2-Butanone (MEK)	43	5.940	5.940	0.000	100	736270	62.5	64.0	
42 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	81	322659	5.00	5.61	
43 2,2-Dichloropropane	77	5.994	6.001	-0.007	88	470783	5.00	5.74	
44 Propionitrile	54	6.025	6.019	0.006	99	98349	37.5	33.4	
47 Methacrylonitrile	67	6.238	6.238	0.000	92	463651	37.5	34.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Chlorobromomethane	128	6.311	6.312	-0.001	95	135518	5.00	6.34	
49 Tetrahydrofuran	71	6.324	6.324	0.000	82	80780	25.0	25.9	
50 Chloroform	83	6.464	6.464	0.000	94	528454	5.00	5.55	
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	520798	10.0	10.6	
53 1,1,1-Trichloroethane	97	6.689	6.696	-0.007	99	469867	5.00	5.56	
54 Cyclohexane	56	6.799	6.799	0.000	91	476496	5.00	5.27	
55 1,1-Dichloropropene	75	6.903	6.903	0.000	97	417090	5.00	5.69	
56 Carbon tetrachloride	117	6.909	6.909	0.000	96	409189	5.00	5.75	
57 Isobutyl alcohol	41	7.055	7.055	0.000	94	91153	125.0	135.7	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.134	7.128	0.006	93	99490	10.0	10.9	
59 Benzene	78	7.165	7.165	0.000	97	1213507	5.00	5.60	
60 1,2-Dichloroethane	62	7.232	7.232	0.000	97	304591	5.00	5.76	
63 Tert-amyl methyl ether	73	7.366	7.366	0.000	98	687127	5.00	5.37	
* 64 Fluorobenzene (IS)	96	7.573	7.573	0.000	98	2071675	10.0	10.0	
65 n-Heptane	43	7.592	7.592	0.000	93	358273	5.00	5.96	
67 n-Butanol	56	7.951	7.951	0.000	89	142142	250.0	291.8	
68 Trichloroethene	95	8.055	8.055	0.000	99	315408	5.00	5.46	
69 Methylcyclohexane	83	8.372	8.372	0.000	91	475040	5.00	5.55	
70 1,2-Dichloropropane	63	8.390	8.384	0.006	86	310241	5.00	5.52	
71 2-ethoxy-2-methyl butane	87	8.402	8.403	-0.001	90	424405	5.00	5.36	
72 Methyl methacrylate	69	8.476	8.476	0.000	88	118242	5.00	4.76	
73 1,4-Dioxane	88	8.488	8.482	0.006	32	19134	125.0	247.2	
74 Dibromomethane	93	8.494	8.500	-0.006	96	137491	5.00	6.01	
76 Dichlorobromomethane	83	8.732	8.738	-0.006	99	366291	5.00	5.46	
77 2-Nitropropane	41	9.006	8.994	0.012	99	35480	5.00	4.69	
79 1-Bromo-2-chloroethane	63	9.134	9.128	0.006	99	264716	5.00	5.04	
80 cis-1,3-Dichloropropene	75	9.293	9.287	0.006	96	434635	5.00	5.46	
82 4-Methyl-2-pentanone (MIBK)	43	9.463	9.463	0.000	97	1903616	62.5	58.1	
$ 83 Toluene-d8 (Surr)	98	9.603	9.604	-0.001	94	2087654	10.0	9.72	
84 Toluene	92	9.683	9.683	0.000	97	756525	5.00	5.34	
85 trans-1,3-Dichloropropene	75	9.945	9.939	0.006	93	365114	5.00	5.58	
104 Ethyl methacrylate	69	10.012	10.006	0.006	89	247290	5.00	4.94	
106 1,1,2-Trichloroethane	97	10.152	10.152	0.000	91	193163	5.00	5.35	
107 Tetrachloroethene	166	10.244	10.244	0.000	98	355664	5.00	5.67	
108 1,3-Dichloropropane	76	10.311	10.311	0.000	91	338057	5.00	5.61	
109 2-Hexanone	43	10.366	10.366	0.000	98	1327620	62.5	61.1	
111 Chlorodibromomethane	129	10.530	10.530	0.000	90	244205	5.00	5.56	
112 Ethylene Dibromide	107	10.646	10.640	0.006	99	185322	5.00	5.73	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1578047	10.0	10.0	
114 1-Chlorohexane	91	11.085	11.085	0.000	98	432456	5.00	5.06	
115 Chlorobenzene	112	11.103	11.103	0.000	94	833683	5.00	5.43	
116 1,1,1,2-Tetrachloroethane	131	11.189	11.189	-0.001	96	297814	5.00	5.63	
117 Ethylbenzene	91	11.189	11.189	-0.001	99	1481432	5.00	5.32	
119 m-Xylene & p-Xylene	106	11.310	11.304	0.006	100	1129388	10.0	10.8	
120 o-Xylene	106	11.640	11.634	0.006	97	530486	5.00	5.23	
121 Styrene	104	11.652	11.652	0.000	94	876056	5.00	5.23	
122 Bromoform	173	11.810	11.810	0.000	97	143167	5.00	5.57	
123 Isopropylbenzene	105	11.938	11.938	0.000	96	1454362	5.00	5.31	
$ 126 4-Bromofluorobenzene (Surr)	95	12.085	12.079	0.006	93	753895	10.0	9.68	
127 1,1,2,2-Tetrachloroethane	83	12.182	12.182	0.000	93	235173	5.00	5.13	
128 Bromobenzene	156	12.201	12.195	0.005	97	344249	5.00	5.69	
129 trans-1,4-Dichloro-2-butene	53	12.207	12.207	0.000	91	226467	25.0	21.7	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 1,2,3-Trichloropropane	110	12.231	12.225	0.006	84	59602	5.00	5.51	
131 N-Propylbenzene	91	12.268	12.268	0.000	99	1771381	5.00	5.30	
132 2-Chlorotoluene	126	12.341	12.341	0.000	96	345914	5.00	5.41	
133 1,3,5-Trimethylbenzene	105	12.402	12.402	0.000	94	1197050	5.00	5.12	
134 4-Chlorotoluene	126	12.438	12.432	0.006	97	358043	5.00	5.47	
135 tert-Butylbenzene	134	12.646	12.646	0.000	93	257148	5.00	5.08	
137 1,2,4-Trimethylbenzene	105	12.688	12.688	0.000	97	1222931	5.00	5.18	
138 sec-Butylbenzene	105	12.810	12.810	0.000	94	1557632	5.00	5.32	
139 1,3-Dichlorobenzene	146	12.908	12.908	0.000	98	676344	5.00	5.44	
140 4-Isopropyltoluene	119	12.920	12.914	0.006	98	1334159	5.00	5.34	
* 141 1,4-Dichlorobenzene-d4	152	12.963	12.963	0.000	95	872242	10.0	10.0	
142 1,4-Dichlorobenzene	146	12.981	12.981	0.000	94	682014	5.00	5.79	
143 1,2,3-Trimethylbenzene	120	12.993	12.993	0.000	98	520577	5.00	5.12	
144 Benzyl chloride	126	13.060	13.060	0.000	98	99647	5.00	6.01	
145 p-Diethylbenzene	119	13.188	13.188	0.000	96	793372	5.00	5.39	
146 n-Butylbenzene	92	13.206	13.207	-0.001	98	653903	5.00	5.49	
147 1,2-Dichlorobenzene	146	13.243	13.243	0.000	98	604299	5.00	5.49	
149 1,2-Dibromo-3-Chloropropane	155	13.786	13.786	0.000	91	28165	5.00	5.23	
150 1,3,5-Trichlorobenzene	180	13.914	13.914	0.000	97	494973	5.00	5.70	
151 1,2,4-Trichlorobenzene	180	14.334	14.334	0.000	94	404308	5.00	5.82	
152 Hexachlorobutadiene	225	14.420	14.420	0.000	96	167194	5.00	6.43	
153 Naphthalene	128	14.517	14.517	0.000	97	627442	5.00	5.47	
154 1,2,3-Trichlorobenzene	180	14.657	14.657	0.000	95	328665	5.00	5.96	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

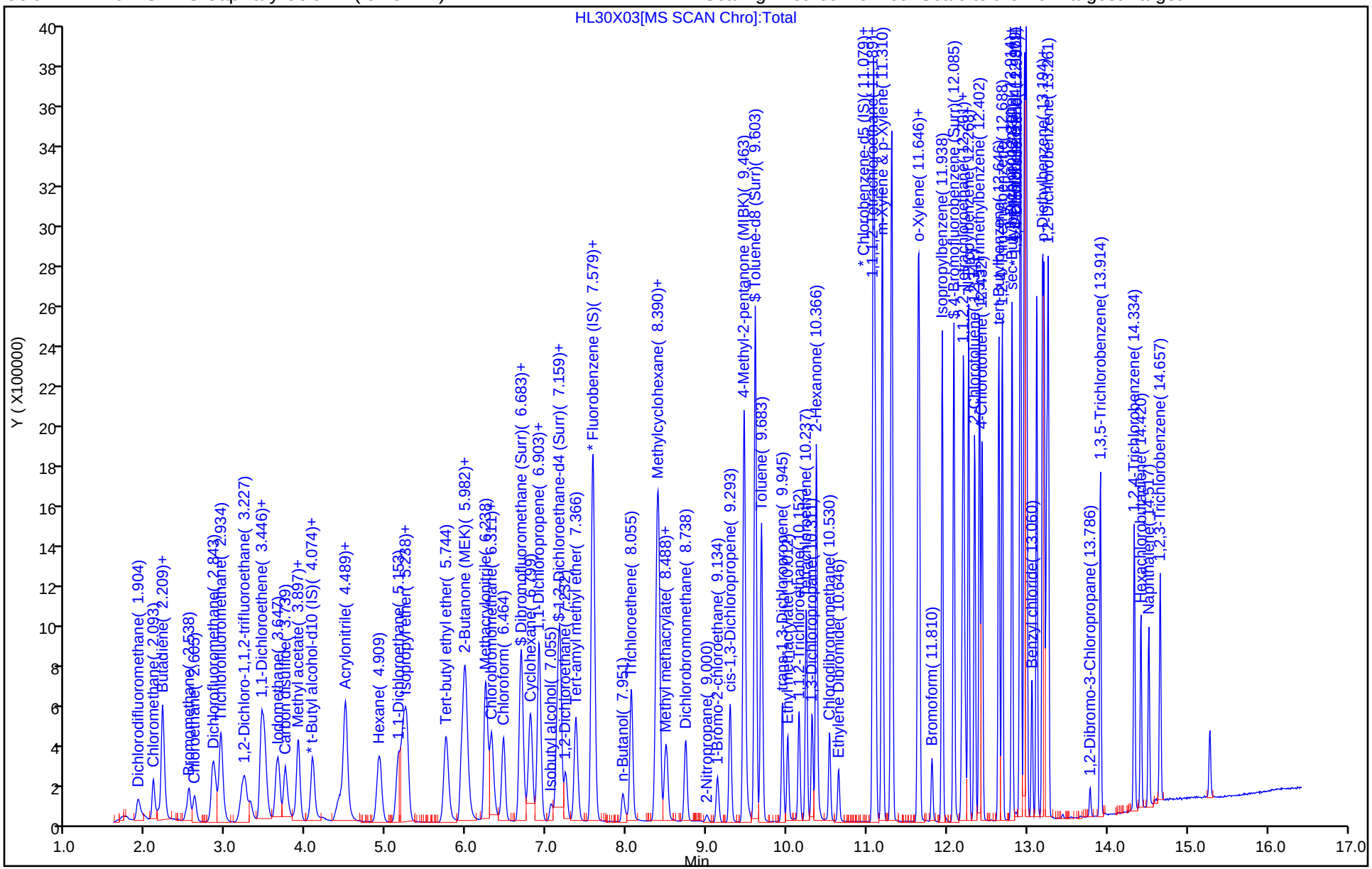
MSV_LCS_VOC#1_00120	Amount Added: 12.50	Units: uL	
MSV_QC_Gas826_00151	Amount Added: 12.50	Units: uL	
MSV_LLcentISS_00009	Amount Added: 5.00	Units: uL	Run Reagent

Report Date: 30-Jul-2023 13:48:04 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X03.D				
Injection Date:	30-Jul-2023 13:22:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	LCS			Worklist Smp#:	4
Client ID:					
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	3
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X03.D
Lims ID: LCS
Client ID:
Sample Type: LCS
Inject. Date: 30-Jul-2023 13:22:30 ALS Bottle#: 3 Worklist Smp#: 4
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-004
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 30-Jul-2023 13:47:58 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1668

First Level Reviewer: DVW2 Date: 30-Jul-2023 13:46:11

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.6	105.79
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.9	108.57
$ 83 Toluene-d8 (Surr)	10.0	9.72	97.21
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.68	96.80

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W7B MS
Lab Sample ID: 410-136176-3 MS

Matrix: Water
Lab File ID: HL30X12.D

Analysis Method: 8260D
Date Collected: 07/25/2023 10:05

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 16:26

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	6.30		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	6.04		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	6.02		1.0	0.80
79-01-6	Trichloroethene	6.13		1.0	0.30
75-01-4	Vinyl chloride	3.73		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	98		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	97		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X12.D
Lims ID: 410-136176-A-3 MS
Client ID: 5W7B
Sample Type: MS
Inject. Date: 30-Jul-2023 16:26:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-013
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:28:03

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.910	1.910	0.000	99	260258	5.00	3.88	
5 Chloromethane	50	2.099	2.099	0.000	99	317784	5.00	3.58	
7 Butadiene	39	2.215	2.215	0.000	93	367302	5.00	4.32	
6 Vinyl chloride	62	2.215	2.215	0.000	97	308617	5.00	3.73	
9 Bromomethane	94	2.544	2.544	0.000	91	206981	5.00	4.00	
10 Chloroethane	64	2.617	2.617	0.000	100	194522	5.00	4.19	
11 Dichlorofluoromethane	67	2.849	2.843	0.006	97	510318	5.00	4.59	
12 Trichlorofluoromethane	101	2.928	2.928	0.000	97	396799	5.00	4.23	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.221	3.233	-0.012	95	348308	5.00	4.77	
17 1,1-Dichloroethene	96	3.446	3.446	0.000	98	291143	5.00	6.30	
19 Acetone	43	3.465	3.465	0.000	56	346841	62.6	70.2	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.489	0.000	93	300083	5.00	6.92	
21 Iodomethane	142	3.641	3.641	0.000	99	501141	5.00	6.02	
23 Carbon disulfide	76	3.745	3.739	0.006	99	847208	5.00	6.46	
24 Methyl acetate	43	3.855	3.867	-0.012	95	86134	5.00	5.21	M
26 3-Chloro-1-propene	41	3.904	3.903	0.001	92	471459	5.00	5.76	
27 Methylene Chloride	84	4.086	4.086	0.000	93	291823	5.00	5.97	
* 28 t-Butyl alcohol-d10 (IS)	65	4.074	4.105	-0.031	99	74845	50.0	50.0	
29 2-Methyl-2-propanol	59	4.178	4.214	-0.036	97	55834	50.0	38.7	
31 Acrylonitrile	53	4.403	4.403	0.000	97	200618	25.0	27.0	
32 Methyl tert-butyl ether	73	4.477	4.483	-0.006	97	581856	5.00	5.25	
33 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	98	310839	5.00	6.02	
34 Hexane	57	4.922	4.915	0.007	93	431352	5.00	6.86	
36 1,1-Dichloroethane	63	5.147	5.147	0.000	96	565575	5.00	5.80	
37 Isopropyl ether	45	5.208	5.208	0.000	94	881964	5.00	5.20	
38 2-Chloro-1,3-butadiene	53	5.257	5.257	0.000	92	492698	5.00	5.81	
40 Tert-butyl ethyl ether	59	5.745	5.745	0.000	98	788007	5.00	5.27	
41 2-Butanone (MEK)	43	5.940	5.940	0.000	100	732470	62.6	73.8	
42 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	81	339918	5.00	6.04	
43 2,2-Dichloropropane	77	6.001	6.001	0.000	89	524055	5.00	6.53	
44 Propionitrile	54	6.025	6.019	0.006	98	92683	37.5	36.5	
47 Methacrylonitrile	67	6.238	6.238	0.000	93	458126	37.5	39.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Chlorobromomethane	128	6.305	6.312	-0.007	94	137691	5.00	6.59	
49 Tetrahydrofuran	71	6.324	6.324	0.000	85	77710	25.0	28.9	
50 Chloroform	83	6.464	6.464	0.000	94	584148	5.00	6.27	
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	507921	10.0	10.5	
53 1,1,1-Trichloroethane	97	6.702	6.696	0.006	98	525869	5.00	6.36	
54 Cyclohexane	56	6.799	6.799	0.000	91	549068	5.00	6.21	
55 1,1-Dichloropropene	75	6.903	6.903	0.000	97	467299	5.00	6.51	
56 Carbon tetrachloride	117	6.915	6.909	0.006	97	454327	5.00	6.53	
57 Isobutyl alcohol	41	7.055	7.055	0.000	94	74381	125.1	128.4	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.129	7.128	0.000	78	95746	10.0	10.7	
59 Benzene	78	7.165	7.165	0.000	97	1286528	5.00	6.07	
60 1,2-Dichloroethane	62	7.238	7.232	0.006	97	313870	5.00	6.06	
63 Tert-amyl methyl ether	73	7.366	7.366	0.000	98	675987	5.00	5.40	
* 64 Fluorobenzene (IS)	96	7.574	7.573	0.001	98	2027091	10.0	10.0	
65 n-Heptane	43	7.598	7.592	0.006	94	416570	5.00	7.08	
67 n-Butanol	56	7.958	7.951	0.007	91	124438	250.2	296.3	
68 Trichloroethene	95	8.061	8.055	0.006	98	347034	5.00	6.13	
69 Methylcyclohexane	83	8.378	8.372	0.006	91	558400	5.00	6.66	
70 1,2-Dichloropropane	63	8.390	8.384	0.006	83	324446	5.00	5.90	
71 2-ethoxy-2-methyl butane	87	8.409	8.403	0.006	91	429256	5.00	5.54	
72 Methyl methacrylate	69	8.482	8.476	0.006	90	117855	5.00	5.50	
73 1,4-Dioxane	88	8.488	8.482	0.006	29	11180	125.1	167.5	
74 Dibromomethane	93	8.500	8.500	0.000	96	139931	5.00	6.25	
76 Dichlorobromomethane	83	8.738	8.738	0.000	99	379810	5.00	5.79	
77 2-Nitropropane	41	9.000	8.994	0.006	99	35144	5.00	5.39	
79 1-Bromo-2-chloroethane	63	9.134	9.128	0.006	99	255714	5.00	4.98	
80 cis-1,3-Dichloropropene	75	9.293	9.287	0.006	95	441947	5.00	5.67	
82 4-Methyl-2-pentanone (MIBK)	43	9.470	9.463	0.007	97	1847748	62.6	65.4	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2043574	10.0	9.71	
84 Toluene	92	9.689	9.683	0.006	98	809982	5.00	5.83	
85 trans-1,3-Dichloropropene	75	9.951	9.939	0.012	94	364216	5.00	5.68	
104 Ethyl methacrylate	69	10.012	10.006	0.006	89	239897	5.00	4.89	
106 1,1,2-Trichloroethane	97	10.152	10.152	0.000	90	198665	5.00	5.62	
107 Tetrachloroethene	166	10.244	10.244	0.000	98	390899	5.00	6.36	
108 1,3-Dichloropropane	76	10.317	10.311	0.006	91	343560	5.00	5.82	
109 2-Hexanone	43	10.372	10.366	0.006	97	1292968	62.6	69.0	
111 Chlorodibromomethane	129	10.536	10.530	0.006	90	247328	5.00	5.74	
112 Ethylene Dibromide	107	10.646	10.640	0.006	99	186386	5.00	5.88	
* 113 Chlorobenzene-d5 (IS)	117	11.079	11.079	0.000	86	1546773	10.0	10.0	
114 1-Chlorohexane	91	11.091	11.085	0.006	98	478081	5.00	5.70	
115 Chlorobenzene	112	11.109	11.103	0.006	94	880693	5.00	5.85	
116 1,1,1,2-Tetrachloroethane	131	11.195	11.189	0.006	96	304848	5.00	5.88	
117 Ethylbenzene	91	11.195	11.189	0.006	99	1586869	5.00	5.81	
119 m-Xylene & p-Xylene	106	11.311	11.304	0.007	100	1202299	10.0	11.7	
120 o-Xylene	106	11.646	11.634	0.012	97	567957	5.00	5.71	
121 Styrene	104	11.658	11.652	0.006	94	902499	5.00	5.50	
122 Bromoform	173	11.817	11.810	0.007	97	141790	5.00	5.63	
123 Isopropylbenzene	105	11.945	11.938	0.007	96	1545350	5.00	5.76	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	93	745267	10.0	9.76	
127 1,1,2,2-Tetrachloroethane	83	12.188	12.182	0.006	93	234202	5.00	5.15	
128 Bromobenzene	156	12.207	12.195	0.012	97	359893	5.00	5.99	
129 trans-1,4-Dichloro-2-butene	53	12.213	12.207	0.006	93	225780	25.0	25.1	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 1,2,3-Trichloropropane	110	12.237	12.225	0.012	84	58368	5.00	5.44	
131 N-Propylbenzene	91	12.274	12.268	0.006	99	1906407	5.00	5.75	
132 2-Chlorotoluene	126	12.353	12.341	0.012	97	367546	5.00	5.79	
133 1,3,5-Trimethylbenzene	105	12.408	12.402	0.006	94	1271807	5.00	5.48	
134 4-Chlorotoluene	126	12.445	12.432	0.013	97	375078	5.00	5.78	
135 tert-Butylbenzene	134	12.652	12.646	0.006	94	273758	5.00	5.45	
137 1,2,4-Trimethylbenzene	105	12.694	12.688	0.006	98	1284437	5.00	5.48	
138 sec-Butylbenzene	105	12.816	12.810	0.006	94	1666100	5.00	5.74	
139 1,3-Dichlorobenzene	146	12.914	12.908	0.006	98	705625	5.00	5.72	
140 4-Isopropyltoluene	119	12.926	12.914	0.012	97	1403613	5.00	5.66	
* 141 1,4-Dichlorobenzene-d4	152	12.969	12.963	0.006	95	865714	10.0	10.0	
142 1,4-Dichlorobenzene	146	12.987	12.981	0.006	95	706735	5.00	6.04	
143 1,2,3-Trimethylbenzene	120	12.999	12.993	0.006	99	554529	5.00	5.49	
144 Benzyl chloride	126	13.066	13.060	0.006	99	100244	5.00	6.10	
145 p-Diethylbenzene	119	13.194	13.188	0.006	95	834619	5.00	5.72	
146 n-Butylbenzene	92	13.219	13.207	0.012	98	695829	5.00	5.88	
147 1,2-Dichlorobenzene	146	13.249	13.243	0.006	98	610076	5.00	5.58	
149 1,2-Dibromo-3-Chloropropane	155	13.792	13.786	0.006	88	26000	5.00	4.86	
150 1,3,5-Trichlorobenzene	180	13.920	13.914	0.006	98	498055	5.00	5.78	
151 1,2,4-Trichlorobenzene	180	14.347	14.334	0.013	93	365869	5.00	5.30	
152 Hexachlorobutadiene	225	14.426	14.420	0.006	96	169764	5.00	6.58	
153 Naphthalene	128	14.523	14.517	0.006	97	476467	5.00	4.19	
154 1,2,3-Trichlorobenzene	180	14.670	14.657	0.013	96	231084	5.00	4.22	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Review Flags

M - Manually Integrated

Reagents:

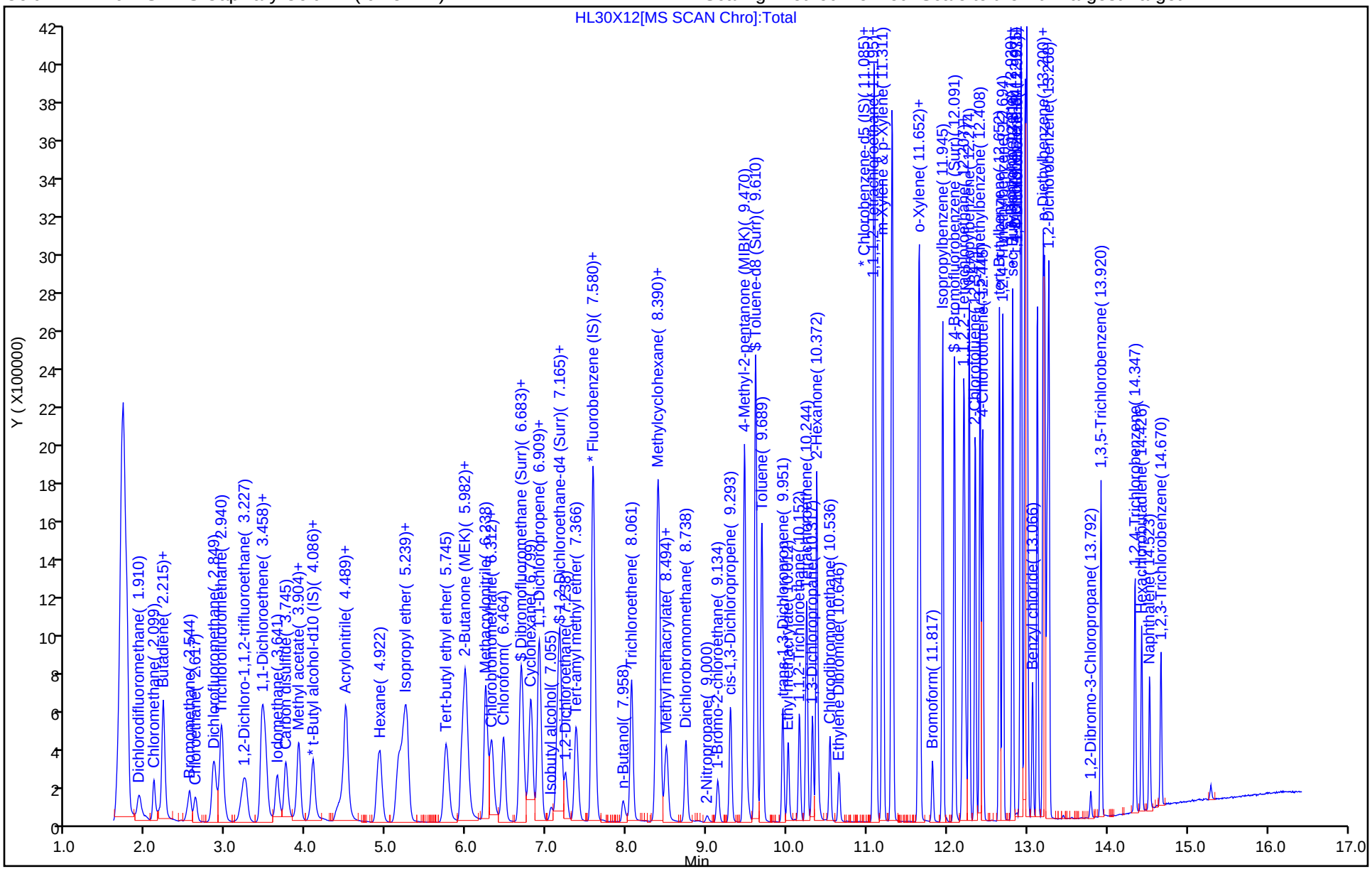
MSV_QC_Gas826_00151	Amount Added:	5.38	Units: uL	
MSV_LCS_VOC#1_00120	Amount Added:	5.38	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 31-Jul-2023 16:33:58 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X12.D				
Injection Date:	30-Jul-2023 16:26:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-3 MS			Worklist Smp#:	13
Client ID:	5W7B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	12
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X12.D
Lims ID: 410-136176-A-3 MS
Client ID: 5W7B
Sample Type: MS
Inject. Date: 30-Jul-2023 16:26:30 ALS Bottle#: 12 Worklist Smp#: 13
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-013
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:28:03

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	105.44
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	106.78
$ 83 Toluene-d8 (Surr)	10.0	9.71	97.08
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.76	97.62

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC
Job No.: 410-136176-1

SDG No.:

Client Sample ID: 5W7B MSD
Lab Sample ID: 410-136176-3 MSD

Matrix: Water
Lab File ID: HL30X13.D

Analysis Method: 8260D
Date Collected: 07/25/2023 10:05

Sample wt/vol: 25(mL)
Date Analyzed: 07/30/2023 16:46

Soil Aliquot Vol:
Dilution Factor: 1

Soil Extract Vol.:
GC Column: R-624SilMS 30m ID: 0.25(mm)

Purge Volume: 25.0(mL)
Heated Purge: (Y/N) N pH:

% Moisture: % Solids:
Level: (low/med) Low

Analysis Batch No.: 402356
Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
75-35-4	1,1-Dichloroethene	6.25		1.0	0.20
156-59-2	cis-1,2-Dichloroethene	5.97		1.0	0.10
156-60-5	trans-1,2-Dichloroethene	5.97		1.0	0.80
79-01-6	Trichloroethene	6.10		1.0	0.30
75-01-4	Vinyl chloride	3.66		1.0	0.20

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		80-120
460-00-4	4-Bromofluorobenzene (Surr)	97		80-120
1868-53-7	Dibromofluoromethane (Surr)	105		80-120
2037-26-5	Toluene-d8 (Surr)	96		80-120

Eurofins Lancaster Laboratories Environment Testing, LLC
Target Compound Quantitation Report

Data File: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X13.D
Lims ID: 410-136176-A-3 MSD
Client ID: 5W7B
Sample Type: MSD
Inject. Date: 30-Jul-2023 16:46:30 ALS Bottle#: 13 Worklist Smp#: 14
Purge Vol: 25.000 mL Dil. Factor: 1.0000
Sample Info: 410-0090184-014
Operator ID: knk41612 Instrument ID: 19094

Method: \\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m
Limit Group: MSV - 8260C_D
Last Update: 31-Jul-2023 16:33:36 Calib Date: 19-Apr-2023 23:41:30
Integrator: RTE ID Type: Deconvolution ID
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D

Column 1 : Rxi-624Sil MS Capillary Column (0.25 mm) Det: MS Quad
Process Host: CTX1602

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:04

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
2 Dichlorodifluoromethane	85	1.916	1.910	0.006	99	263099	5.00	3.84	
5 Chloromethane	50	2.099	2.099	0.000	99	306443	5.00	3.38	
7 Butadiene	39	2.215	2.215	0.000	91	366850	5.00	4.23	
6 Vinyl chloride	62	2.215	2.215	0.000	97	309915	5.00	3.66	
9 Bromomethane	94	2.544	2.544	0.000	90	206689	5.00	3.91	
10 Chloroethane	64	2.617	2.617	0.000	100	194358	5.00	4.10	
11 Dichlorofluoromethane	67	2.849	2.843	0.006	97	504987	5.00	4.45	
12 Trichlorofluoromethane	101	2.928	2.928	0.000	98	396842	5.00	4.14	
15 1,2-Dichloro-1,1,2-trifluoroetha	67	3.227	3.233	-0.006	93	357075	5.00	4.79	
17 1,1-Dichloroethene	96	3.446	3.446	0.000	98	295131	5.00	6.25	
19 Acetone	43	3.465	3.465	0.000	59	348461	62.6	63.8	
20 1,1,2-Trichloro-1,2,2-trifluoroe	101	3.489	3.489	0.000	92	304355	5.00	6.86	
21 Iodomethane	142	3.635	3.641	-0.006	99	509040	5.00	5.98	
23 Carbon disulfide	76	3.751	3.739	0.012	99	853232	5.00	6.36	
24 Methyl acetate	43	3.861	3.867	-0.006	98	101650	5.00	5.57	
26 3-Chloro-1-propene	41	3.910	3.903	0.007	92	474760	5.00	5.67	
27 Methylene Chloride	84	4.086	4.086	0.000	93	294147	5.00	5.89	
* 28 t-Butyl alcohol-d10 (IS)	65	4.105	4.105	0.000	100	82709	50.0	50.0	
29 2-Methyl-2-propanol	59	4.214	4.214	0.000	99	80607	50.0	50.5	
31 Acrylonitrile	53	4.409	4.403	0.006	100	222633	25.0	27.1	
32 Methyl tert-butyl ether	73	4.483	4.483	0.000	96	591656	5.00	5.22	
33 trans-1,2-Dichloroethene	96	4.495	4.495	0.000	99	314939	5.00	5.97	
34 Hexane	57	4.915	4.915	0.000	93	435508	5.00	6.77	
36 1,1-Dichloroethane	63	5.147	5.147	0.000	96	580230	5.00	5.82	
37 Isopropyl ether	45	5.214	5.208	0.006	94	898651	5.00	5.19	
38 2-Chloro-1,3-butadiene	53	5.257	5.257	0.000	91	503557	5.00	5.81	
40 Tert-butyl ethyl ether	59	5.751	5.745	0.006	98	802016	5.00	5.25	
41 2-Butanone (MEK)	43	5.940	5.940	0.000	100	715623	62.6	65.3	
42 cis-1,2-Dichloroethene	96	5.982	5.982	0.000	81	343269	5.00	5.97	
43 2,2-Dichloropropane	77	6.001	6.001	0.000	89	527231	5.00	6.42	
44 Propionitrile	54	6.025	6.019	0.006	98	109012	37.5	38.9	
47 Methacrylonitrile	67	6.244	6.238	0.006	92	467860	37.5	36.9	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
48 Chlorobromomethane	128	6.312	6.312	0.000	95	137201	5.00	6.42	
49 Tetrahydrofuran	71	6.324	6.324	0.000	86	77296	25.0	26.0	
50 Chloroform	83	6.464	6.464	0.000	94	587648	5.00	6.17	
$ 52 Dibromofluoromethane (Surr)	113	6.677	6.677	0.000	94	517072	10.0	10.5	
53 1,1,1-Trichloroethane	97	6.696	6.696	0.000	98	526160	5.00	6.23	
54 Cyclohexane	56	6.805	6.799	0.006	91	562682	5.00	6.22	
55 1,1-Dichloropropene	75	6.909	6.903	0.006	96	467217	5.00	6.37	
56 Carbon tetrachloride	117	6.915	6.909	0.006	95	459430	5.00	6.46	
57 Isobutyl alcohol	41	7.061	7.055	0.006	95	80059	125.1	125.1	
$ 58 1,2-Dichloroethane-d4 (Surr)	102	7.141	7.128	0.013	97	98196	10.0	10.7	
59 Benzene	78	7.171	7.165	0.006	97	1307397	5.00	6.03	
60 1,2-Dichloroethane	62	7.238	7.232	0.006	97	307971	5.00	5.82	
63 Tert-amyl methyl ether	73	7.372	7.366	0.006	98	688303	5.00	5.38	
* 64 Fluorobenzene (IS)	96	7.574	7.573	0.001	98	2071457	10.0	10.0	
65 n-Heptane	43	7.598	7.592	0.006	92	420484	5.00	7.00	
67 n-Butanol	56	7.958	7.951	0.007	90	139125	250.2	299.8	
68 Trichloroethene	95	8.061	8.055	0.006	98	352452	5.00	6.10	
69 Methylcyclohexane	83	8.378	8.372	0.006	91	565688	5.00	6.61	
70 1,2-Dichloropropane	63	8.390	8.384	0.006	97	326116	5.00	5.81	
71 2-ethoxy-2-methyl butane	87	8.409	8.403	0.006	90	435739	5.00	5.50	
72 Methyl methacrylate	69	8.482	8.476	0.006	91	117361	5.00	4.95	
73 1,4-Dioxane	88	8.488	8.482	0.006	29	13665	125.1	185.2	
74 Dibromomethane	93	8.500	8.500	0.000	96	140716	5.00	6.15	
76 Dichlorobromomethane	83	8.738	8.738	0.000	99	384220	5.00	5.73	
77 2-Nitropropane	41	9.006	8.994	0.012	99	35782	5.00	4.97	
79 1-Bromo-2-chloroethane	63	9.140	9.128	0.012	99	252239	5.00	4.81	
80 cis-1,3-Dichloropropene	75	9.293	9.287	0.006	96	447014	5.00	5.61	
82 4-Methyl-2-pentanone (MIBK)	43	9.469	9.463	0.006	98	1884494	62.6	60.3	
$ 83 Toluene-d8 (Surr)	98	9.610	9.604	0.006	94	2079886	10.0	9.63	
84 Toluene	92	9.683	9.683	0.000	98	814933	5.00	5.72	
85 trans-1,3-Dichloropropene	75	9.951	9.939	0.012	94	372186	5.00	5.66	
104 Ethyl methacrylate	69	10.012	10.006	0.006	90	245060	5.00	4.87	
106 1,1,2-Trichloroethane	97	10.152	10.152	0.000	90	197044	5.00	5.43	
107 Tetrachloroethene	166	10.244	10.244	0.000	98	389884	5.00	6.18	
108 1,3-Dichloropropane	76	10.317	10.311	0.006	90	343061	5.00	5.66	
109 2-Hexanone	43	10.372	10.366	0.006	97	1307407	62.6	63.2	
111 Chlorodibromomethane	129	10.536	10.530	0.006	90	245747	5.00	5.56	
112 Ethylene Dibromide	107	10.652	10.640	0.012	99	185113	5.00	5.69	
* 113 Chlorobenzene-d5 (IS)	117	11.085	11.079	0.006	86	1586725	10.0	10.0	
114 1-Chlorohexane	91	11.091	11.085	0.006	98	482293	5.00	5.61	
115 Chlorobenzene	112	11.109	11.103	0.006	94	879835	5.00	5.70	
116 1,1,1,2-Tetrachloroethane	131	11.195	11.189	0.006	97	306301	5.00	5.76	
117 Ethylbenzene	91	11.195	11.189	0.006	99	1597076	5.00	5.70	
119 m-Xylene & p-Xylene	106	11.311	11.304	0.007	99	1220334	10.0	11.6	
120 o-Xylene	106	11.646	11.634	0.012	97	567489	5.00	5.56	
121 Styrene	104	11.658	11.652	0.006	95	908805	5.00	5.40	
122 Bromoform	173	11.817	11.810	0.007	96	140918	5.00	5.45	
123 Isopropylbenzene	105	11.945	11.938	0.007	96	1574747	5.00	5.72	
$ 126 4-Bromofluorobenzene (Surr)	95	12.091	12.079	0.012	93	760875	10.0	9.72	
127 1,1,2,2-Tetrachloroethane	83	12.188	12.182	0.006	93	233419	5.00	5.00	
128 Bromobenzene	156	12.207	12.195	0.012	97	355113	5.00	5.76	
129 trans-1,4-Dichloro-2-butene	53	12.213	12.207	0.006	92	233129	25.0	23.4	

Compound	Sig	RT (min.)	Exp RT (min.)	Dlt RT (min.)	Q	Response	Cal Amt ug/l	OnCol Amt ug/l	Flags
130 1,2,3-Trichloropropane	110	12.237	12.225	0.012	83	58236	5.00	5.28	
131 N-Propylbenzene	91	12.274	12.268	0.006	99	1926747	5.00	5.66	
132 2-Chlorotoluene	126	12.353	12.341	0.012	97	373142	5.00	5.72	
133 1,3,5-Trimethylbenzene	105	12.408	12.402	0.006	95	1274136	5.00	5.34	
134 4-Chlorotoluene	126	12.445	12.432	0.012	97	383655	5.00	5.75	
135 tert-Butylbenzene	134	12.652	12.646	0.006	94	276921	5.00	5.37	
137 1,2,4-Trimethylbenzene	105	12.694	12.688	0.006	98	1287040	5.00	5.35	
138 sec-Butylbenzene	105	12.816	12.810	0.006	94	1679473	5.00	5.63	
139 1,3-Dichlorobenzene	146	12.914	12.908	0.006	98	709337	5.00	5.60	
140 4-Isopropyltoluene	119	12.926	12.914	0.012	97	1425443	5.00	5.60	
* 141 1,4-Dichlorobenzene-d4	152	12.975	12.963	0.012	95	889337	10.0	10.0	
142 1,4-Dichlorobenzene	146	12.993	12.981	0.012	94	711349	5.00	5.92	
143 1,2,3-Trimethylbenzene	120	12.999	12.993	0.006	99	546489	5.00	5.27	
144 Benzyl chloride	126	13.066	13.060	0.006	99	100832	5.00	5.97	
145 p-Diethylbenzene	119	13.200	13.188	0.012	95	838466	5.00	5.59	
146 n-Butylbenzene	92	13.219	13.207	0.012	97	699968	5.00	5.76	
147 1,2-Dichlorobenzene	146	13.249	13.243	0.006	98	624990	5.00	5.57	
149 1,2-Dibromo-3-Chloropropane	155	13.792	13.786	0.006	84	28647	5.00	5.22	
150 1,3,5-Trichlorobenzene	180	13.920	13.914	0.006	97	506920	5.00	5.73	
151 1,2,4-Trichlorobenzene	180	14.347	14.334	0.013	94	393553	5.00	5.55	
152 Hexachlorobutadiene	225	14.432	14.420	0.012	95	175755	5.00	6.63	
153 Naphthalene	128	14.529	14.517	0.012	97	569634	5.00	4.87	
154 1,2,3-Trichlorobenzene	180	14.670	14.657	0.013	96	290401	5.00	5.17	
157 Pentane	43		0.000				ND	ND	

QC Flag Legend

Processing Flags

ND - Not Detected or Marked ND

Reagents:

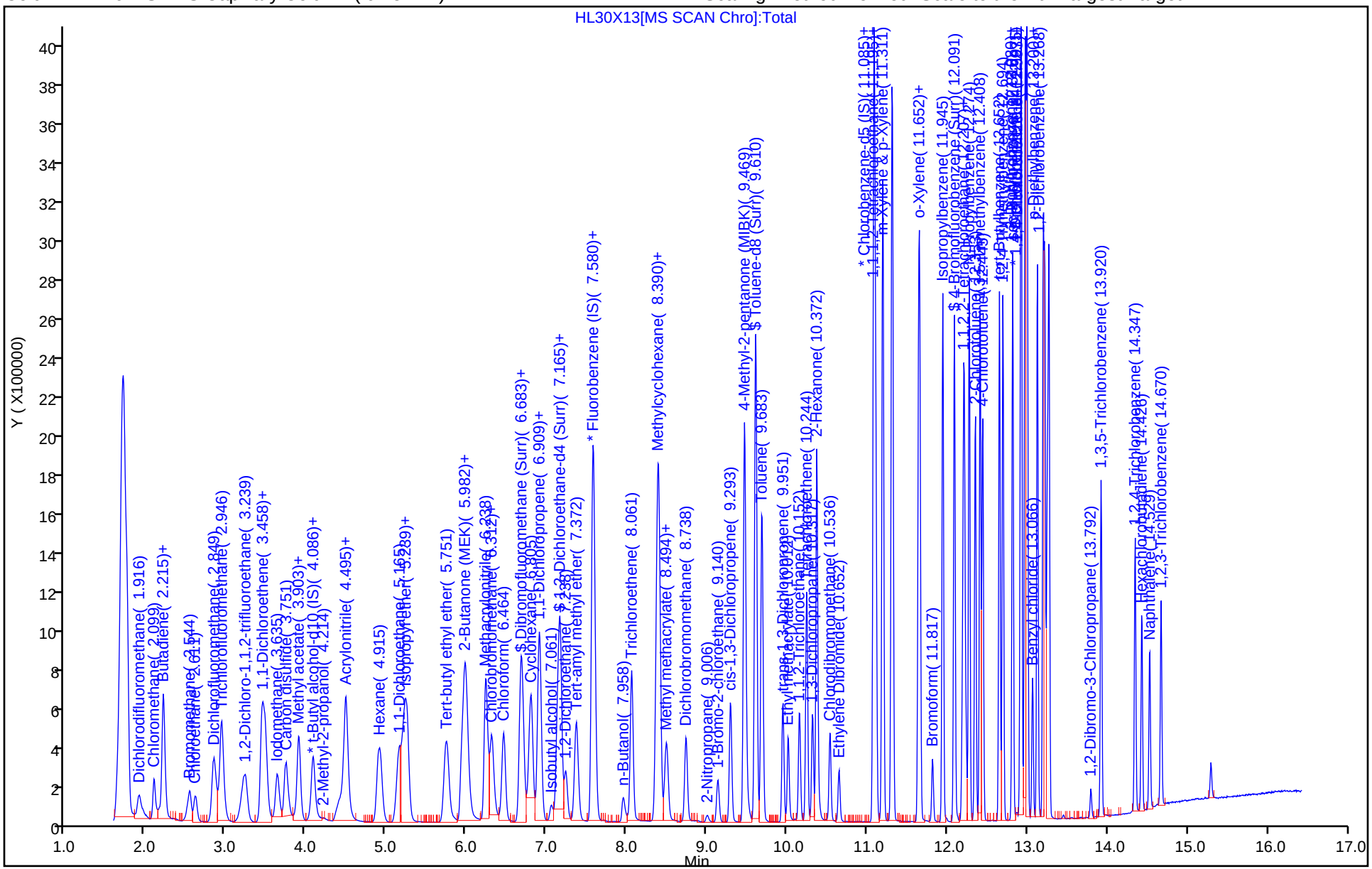
MSV_QC_Gas826_00151	Amount Added:	5.38	Units: uL	
MSV_LCS_VOC#1_00120	Amount Added:	5.38	Units: uL	
MSV_LLcentISS_00009	Amount Added:	5.00	Units: uL	Run Reagent

Report Date: 31-Jul-2023 16:34:06 Chrom Revision: 2.3 28-Jul-2023 13:25:42

Eurofins Lancaster Laboratories Environment Testing, LLC

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X13.D				
Injection Date:	30-Jul-2023 16:46:30	Instrument ID:	19094	Operator ID:	knk41612
Lims ID:	410-136176-A-3 MSD			Worklist Smp#:	14
Client ID:	5W7B				
Purge Vol:	25.000 mL	Dil. Factor:	1.0000	ALS Bottle#:	13
Method:	MSV_19094_25mL	Limit Group:	MSV - 8260C_D		

Column: Rxi-624Sil MS Capillary Column (0.25 mm) Y Scaling: Method Defined: Scale to the Nth Largest Target: 2



Eurofins Lancaster Laboratories Environment Testing, LLC

Recovery Report

Data File:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\HL30X13.D				
Lims ID:	410-136176-A-3 MSD				
Client ID:	5W7B				
Sample Type:	MSD				
Inject. Date:	30-Jul-2023 16:46:30	ALS Bottle#:	13	Worklist Smp#:	14
Purge Vol:	25.000 mL	Dil. Factor:	1.0000		
Sample Info:	410-0090184-014				
Operator ID:	knk41612	Instrument ID:	19094		
Method:	\\chromfs\Lancaster\ChromData\19094\20230730-90184.b\MSV_19094_25mL.m				
Limit Group:	MSV - 8260C_D				
Last Update:	31-Jul-2023 16:33:36	Calib Date:	19-Apr-2023 23:41:30		
Integrator:	RTE	ID Type:	Deconvolution ID		
Quant Method:	Internal Standard	Quant By:	Initial Calibration		
Last ICal File:	\\chromfs\Lancaster\ChromData\19094\20230419-81852.b\HA19X18.D				
Column 1 :	Rxi-624Sil MS Capillary Column (0.25 mm)		Det: MS Quad		
Process Host:	CTX1602				

First Level Reviewer: DVW2 Date: 31-Jul-2023 16:29:04

Compound	Amount Added	Amount Recovered	% Rec.
$ 52 Dibromofluoromethane (Surr)	10.0	10.5	105.04
$ 58 1,2-Dichloroethane-d4 (Surr)	10.0	10.7	107.17
$ 83 Toluene-d8 (Surr)	10.0	9.63	96.32
$ 126 4-Bromofluorobenzene (Surr)	10.0	9.72	97.16

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Start Date: 04/19/2023 17:40

Analysis Batch Number: 366140 End Date: 04/20/2023 00:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-366140/1		04/19/2023 17:40	1	HA19T31.D	R-624SilMS 30m 0.25(mm)
IC 410-366140/3		04/19/2023 18:20	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/4		04/19/2023 18:40	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/5		04/19/2023 19:00	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/6		04/19/2023 19:21	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/7		04/19/2023 19:41	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/8		04/19/2023 20:01	1		R-624SilMS 30m 0.25(mm)
CCV 410-366140/1008		04/19/2023 20:01	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/9		04/19/2023 20:21	1		R-624SilMS 30m 0.25(mm)
ICV 410-366140/11		04/19/2023 21:01	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/13		04/19/2023 21:41	1	HA19X12.D	R-624SilMS 30m 0.25(mm)
IC 410-366140/14		04/19/2023 22:01	1	HA19X13.D	R-624SilMS 30m 0.25(mm)
IC 410-366140/15		04/19/2023 22:21	1	HA19X14.D	R-624SilMS 30m 0.25(mm)
IC 410-366140/16		04/19/2023 22:41	1	HA19X15.D	R-624SilMS 30m 0.25(mm)
IC 410-366140/17		04/19/2023 23:01	1	HA19X16.D	R-624SilMS 30m 0.25(mm)
ICIS 410-366140/18		04/19/2023 23:21	1	HA19X17.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-366140/1018		04/19/2023 23:21	1		R-624SilMS 30m 0.25(mm)
IC 410-366140/19		04/19/2023 23:41	1	HA19X18.D	R-624SilMS 30m 0.25(mm)
ICV 410-366140/21		04/20/2023 00:21	1	HA19X20.D	R-624SilMS 30m 0.25(mm)

GC/MS VOA ANALYSIS RUN LOG

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Instrument ID: 19094 Start Date: 07/30/2023 12:22

Analysis Batch Number: 402356 End Date: 07/30/2023 22:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 410-402356/1		07/30/2023 12:22	1	HL30T01.D	R-624SilMS 30m 0.25(mm)
CCVIS 410-402356/3		07/30/2023 13:01	1	HL30X02.D	R-624SilMS 30m 0.25(mm)
LCS 410-402356/4		07/30/2023 13:22	1	HL30X03.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 13:42	1		R-624SilMS 30m 0.25(mm)
MB 410-402356/6		07/30/2023 14:02	1	HL30X05.D	R-624SilMS 30m 0.25(mm)
410-136176-9	Trip Blank 1	07/30/2023 14:23	1	HL30X06.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 14:43	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 15:04	1		R-624SilMS 30m 0.25(mm)
410-136176-1	5W8B	07/30/2023 15:24	1	HL30X09.D	R-624SilMS 30m 0.25(mm)
410-136176-2	5W5B	07/30/2023 15:45	1	HL30X10.D	R-624SilMS 30m 0.25(mm)
410-136176-3	5W7B	07/30/2023 16:05	1	HL30X11.D	R-624SilMS 30m 0.25(mm)
410-136176-3 MS	5W7B MS	07/30/2023 16:26	1	HL30X12.D	R-624SilMS 30m 0.25(mm)
410-136176-3 MSD	5W7B MSD	07/30/2023 16:46	1	HL30X13.D	R-624SilMS 30m 0.25(mm)
410-136176-4	5WC21	07/30/2023 17:06	1	HL30X14.D	R-624SilMS 30m 0.25(mm)
410-136176-5	5WDUP	07/30/2023 17:27	1	HL30X15.D	R-624SilMS 30m 0.25(mm)
410-136176-6	5WC22	07/30/2023 17:47	1	HL30X16.D	R-624SilMS 30m 0.25(mm)
410-136176-7	5WC23	07/30/2023 18:08	1	HL30X17.D	R-624SilMS 30m 0.25(mm)
410-136176-8	5W12A	07/30/2023 18:28	1	HL30X18.D	R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 18:49	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 19:09	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 19:30	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 19:50	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 20:11	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 20:31	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 20:52	1		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 21:13	10		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 21:33	2		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 21:54	20		R-624SilMS 30m 0.25(mm)
ZZZZZ		07/30/2023 22:15	10		R-624SilMS 30m 0.25(mm)

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136176-1

SDG No.:

Batch Number: 366140 | Batch Start Date: 04/19/23 17:40 | Batch Analyst: Campbell, Miranda E

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Lot#Vial	LCS_ETBR 00005	MSV_LCS_ACROL 00108	MSV_LCS_EE 00004
BFB 410-366140/1		8260D		1 uL	1 uL				
IC 410-366140/13		8260D		25 mL	25 mL	2684			
IC 410-366140/14		8260D		25 mL	25 mL	2684			
IC 410-366140/15		8260D		25 mL	25 mL	2684			
IC 410-366140/16		8260D		25 mL	25 mL	2684			
IC 410-366140/17		8260D		25 mL	25 mL	2684			
ICIS 410-366140/18		8260D		25 mL	25 mL	2684			
IC 410-366140/19		8260D		25 mL	25 mL	2684			
ICV 410-366140/21		8260D		25 mL	25 mL	2684	12.5 uL	12.5 uL	12.5 uL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_Penta 00027	MSV_LCS_VOC#1 00105	MSV_LL_#1_826 00073	MSV_LL_#2_826 00081	MSV_LL_GAS826 00145	MSV_LLcentISS 00007
BFB 410-366140/1		8260D							
IC 410-366140/13		8260D				2 uL	2 uL	2 uL	5 uL
IC 410-366140/14		8260D				2 uL	2 uL	2 uL	5 uL
IC 410-366140/15		8260D				2 uL	2 uL	2 uL	5 uL
IC 410-366140/16		8260D				2 uL	2 uL	2 uL	5 uL
IC 410-366140/17		8260D				5 uL	5 uL	5 uL	5 uL
ICIS 410-366140/18		8260D				10 uL	10 uL	10 uL	5 uL
IC 410-366140/19		8260D				25 uL	25 uL	25 uL	5 uL
ICV 410-366140/21		8260D		12.5 uL	12.5 uL				5 uL

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories Job No.: 410-136176-1

SDG No.:

Batch Number: 366140 Batch Start Date: 04/19/23 17:40 Batch Analyst: Campbell, Miranda E

Batch Method: 8260D Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_QC_Gas826 00135	MSV_V_BFB 00011				
BFB 410-366140/1		8260D			1 uL				
IC 410-366140/13		8260D							
IC 410-366140/14		8260D							
IC 410-366140/15		8260D							
IC 410-366140/16		8260D							
IC 410-366140/17		8260D							
ICIS 410-366140/18		8260D							
IC 410-366140/19		8260D							
ICV 410-366140/21		8260D		12.5 uL					

Batch Notes	

Basis	Basis Description

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136176-1

SDG No.:

Batch Number: 402356 | Batch Start Date: 07/30/23 12:22 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	Initial pH	ResidualChloCheck	Headspace	Lot#Vial
BFB 410-402356/1		8260D		1 uL	1 uL				
CCVIS 410-402356/3		8260D		25 mL	25 mL				2705
LCS 410-402356/4		8260D		25 mL	25 mL				2705
MB 410-402356/6		8260D		25 mL	25 mL				2705
410-136176-A-9	Trip Blank 1	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-1	5W8B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-2	5W5B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-3	5W7B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-3 MS	5W7B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-3 MSD	5W7B	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-4	5WC21	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-5	5WDUP	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-6	5WC22	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-7	5WC23	8260D	T	25 mL	25 mL	<2 SU	N	N	
410-136176-A-8	5W12A	8260D	T	25 mL	25 mL	<2 SU	N	N	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_VOC#1 00120	MSV_LL_#1_826 00085	MSV_LL_#2_826 00096	MSV_LL_GAS826 00162	MSV_LLcentISS 00009	MSV_QC_Gas826 00151
BFB 410-402356/1		8260D							
CCVIS 410-402356/3		8260D			20 uL	20 uL	20 uL	5 uL	
LCS 410-402356/4		8260D		12.5 uL				5 uL	12.5 uL
MB 410-402356/6		8260D						5 uL	
410-136176-A-9	Trip Blank 1	8260D	T					5 uL	
410-136176-A-1	5W8B	8260D	T					5 uL	
410-136176-A-2	5W5B	8260D	T					5 uL	
410-136176-A-3	5W7B	8260D	T					5 uL	

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136176-1

SDG No.:

Batch Number: 402356 | Batch Start Date: 07/30/23 12:22 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_LCS_VOC#1 00120	MSV_LL_#1_826 00085	MSV_LL_#2_826 00096	MSV_LL_GAS826 00162	MSV_LLcentISS 00009	MSV_QC_Gas826 00151
410-136176-A-3 MS	5W7B	8260D	T	5.38 uL				5 uL	5.38 uL
410-136176-A-3 MSD	5W7B	8260D	T	5.38 uL				5 uL	5.38 uL
410-136176-A-4	5WC21	8260D	T					5 uL	
410-136176-A-5	5WDUP	8260D	T					5 uL	
410-136176-A-6	5WC22	8260D	T					5 uL	
410-136176-A-7	5WC23	8260D	T					5 uL	
410-136176-A-8	5W12A	8260D	T					5 uL	

Lab Sample ID	Client Sample ID	Method Chain	Basis	MSV_V_BFB 00012					
BFB 410-402356/1		8260D		1 uL					
CCVIS 410-402356/3		8260D							
LCS 410-402356/4		8260D							
MB 410-402356/6		8260D							
410-136176-A-9	Trip Blank 1	8260D	T						
410-136176-A-1	5W8B	8260D	T						
410-136176-A-2	5W5B	8260D	T						
410-136176-A-3	5W7B	8260D	T						
410-136176-A-3 MS	5W7B	8260D	T						
410-136176-A-3 MSD	5W7B	8260D	T						
410-136176-A-4	5WC21	8260D	T						
410-136176-A-5	5WDUP	8260D	T						
410-136176-A-6	5WC22	8260D	T						
410-136176-A-7	5WC23	8260D	T						
410-136176-A-8	5W12A	8260D	T						

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

GC/MS VOA BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136176-1

SDG No.:

Batch Number: 402356 | Batch Start Date: 07/30/23 12:22 | Batch Analyst: Kephart, Kayla

Batch Method: 8260D | Batch End Date:

Batch Notes	

Basis	Basis Description
T	Total/NA

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

METALS

COVER PAGE
METALS

Lab Name: Eurofins Lancaster Laboratories En Job Number: 410-136176-1

SDG No.:

Project: RFAAP, Radford VA HWMU5

Client Sample ID	Lab Sample ID
5W8B	410-136176-1
5W5B	410-136176-2
5W7B	410-136176-3
5WC21	410-136176-4
5WDUP	410-136176-5
5WC22	410-136176-6
5WC23	410-136176-7
5W12A	410-136176-8

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5W8B
Lab Sample ID: 410-136176-1
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136176-1
SDG ID.:
Matrix: Water
Date Sampled: 07/25/2023 08:30
Reporting Basis: WET
Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	ND	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5W5B
Lab Sample ID: 410-136176-2
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136176-1
SDG ID.:
Matrix: Water
Date Sampled: 07/25/2023 10:50
Reporting Basis: WET
Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	ND	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5W7B
Lab Sample ID: 410-136176-3
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136176-1
SDG ID.:
Matrix: Water
Date Sampled: 07/25/2023 10:05
Reporting Basis: WET
Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	6.7	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5WC21 Lab Sample ID: 410-136176-4

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136176-1

SDG ID.:

Matrix: Water Date Sampled: 07/25/2023 13:25

Reporting Basis: WET Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	27	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5WDUP
Lab Sample ID: 410-136176-5
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136176-1
SDG ID.:
Matrix: Water
Date Sampled: 07/25/2023 13:30
Reporting Basis: WET
Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	27	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5WC22 Lab Sample ID: 410-136176-6

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136176-1

SDG ID.:

Matrix: Water Date Sampled: 07/25/2023 11:40

Reporting Basis: WET Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	26	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5WC23 Lab Sample ID: 410-136176-7

Lab Name: Eurofins Lancaster Laboratories Environment Test Job No.: 410-136176-1

SDG ID.:

Matrix: Water Date Sampled: 07/25/2023 12:35

Reporting Basis: WET Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	ND	5.0	1.0	ug/L			1	6020B

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: 5W12A
Lab Sample ID: 410-136176-8
Lab Name: Eurofins Lancaster Laboratories Environment Test
Job No.: 410-136176-1
SDG ID.:
Matrix: Water
Date Sampled: 07/25/2023 09:20
Reporting Basis: WET
Date Received: 07/26/2023 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-48-4	Cobalt	ND	5.0	1.0	ug/L			1	6020B

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136176-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	ICV 410-405464/4 08/07/2023 15:30				CCV 410-405464/13 08/07/2023 16:03				CCV 410-405464/18 08/07/2023 16:14			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	495		500	99	504		500	101	505		500	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi Job No.: 410-136176-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-405464/23 08/07/2023 16:25				CCV 410-405464/32 08/07/2023 16:43				CCV 410-405464/41 08/07/2023 17:01			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	505		500	101	509		500	102	523		500	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: Eurofins Lancaster Laboratories Envi: Job No.: 410-136176-1

SDG No.:

ICV Source: MT_MJ_ICV_00088 Concentration Units: ug/L

CCV Source: MT_MJ_CCV_00168

Analyte	CCV 410-405464/51 08/07/2023 17:21											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Cobalt	504		500	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories Environm Job No.: 410-136176-1

SDG No.:

Method: 6020B Instrument ID: E08 - 30647

Lab Sample ID: CRI 410-405464/6 Concentration Units: ug/L

CRQL Check Standard Source: MT_MJ_CRI-V_00152

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Cobalt	0.504	0.497	J	99	80-120

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 410-405464/5 08/07/2023 15:37		CCB 410-405464/14 08/07/2023 16:05		CCB 410-405464/19 08/07/2023 16:16		CCB 410-405464/24 08/07/2023 16:27	
		Found	C	Found	C	Found	C	Found	C
Cobalt	0.50	ND		ND		0.189	J	0.215	J

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 410-405464/33 08/07/2023 16:45		CCB 410-405464/42 08/07/2023 17:03		CCB 410-405464/52 08/07/2023 17:23			
		Found	C	Found	C	Found	C	Found	C
Cobalt	0.50	0.180	J	ND		ND			

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136176-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 410-401990/1-A

Instrument Code: E08 - 30647 Batch No.: 405464

CAS No.	Analyte	Concentration	C	Q	Method
7440-48-4	Cobalt	ND			6020B

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136176-1

SDG No.:

Lab Sample ID: ICSA 410-405464/7 Instrument ID: E08 - 30647

Lab File ID: 023ICSA.d ICS Source: MT_MJ_ICSA_00103

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Cobalt	**0.280**	**0.259**	
Aluminum	*100000*	*107948*	*108*
Antimony	*0.120*	*0.190*	
Arsenic	*7.70*	*0.227*	
Barium	*0.400*	*0.620*	
Beryllium	*0.0110*	*0.0270*	
Cadmium	*0.450*	*0.219*	
Calcium	*299000*	*309793*	*104*
Chromium	*3.60*	*3.31*	
Copper	*0.440*	*0.101*	
Iron	*260000*	*261414*	*101*
Lead	*0.0930*	*0.103*	
Magnesium	*100000*	*103783*	*104*
Manganese	*0.600*	*1.14*	
Molybdenum	*2000*	*2177*	*109*
Nickel	*1.20*	*0.642*	
Potassium	*100000*	*104765*	*105*
Selenium	*0.0720*	*0.0970*	
Silver	*0.300*	*0.0390*	
Sodium	*260000*	*258480*	*99*
Strontium	*1.80*	*2.25*	
Thallium	*0.0620*	*0.0100*	
Tin	*0.170*	*0.306*	
Titanium	*2000*	*2116*	*106*
Uranium	*0.110*	*0.0630*	
Vanadium	*0.310*	*0.0500*	
Zinc	*1.10*	*1.01*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: Eurofins Lancaster Laboratories E Job No.: 410-136176-1

SDG No.:

Lab Sample ID: ICSAB 410-405464/8 Instrument ID: E08 - 30647

Lab File ID: 024ICSB.d ICS Source: MT_MJ_ICSAB_00080

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Cobalt	**200**	**199**	**99**
Aluminum	*100000*	*104363*	*104*
Antimony	*0.120*	*0.175*	
Arsenic	*108*	*98.8*	*92*
Barium	*0.400*	*0.518*	
Beryllium	*0.0110*	*0.0500*	
Cadmium	*100*	*103*	*102*
Calcium	*299000*	*300846*	*101*
Chromium	*204*	*209*	*103*
Copper	*201*	*200*	*100*
Iron	*260000*	*253209*	*97*
Lead	*0.0930*	*0.0990*	
Magnesium	*100000*	*100485*	*100*
Manganese	*201*	*203*	*101*
Molybdenum	*2000*	*2154*	*108*
Nickel	*201*	*199*	*99*
Potassium	*100000*	*101587*	*102*
Selenium	*100*	*102*	*102*
Silver	*50.3*	*51.8*	*103*
Sodium	*260000*	*248794*	*96*
Strontium	*1.80*	*2.21*	
Thallium	*0.0620*	*0.0170*	
Tin	*0.170*	*0.338*	
Titanium	*2000*	*2101*	*105*
Uranium	*0.110*	*0.0630*	
Vanadium	*200*	*210*	*105*
Zinc	*101*	*103*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 5W7B MS
Lab ID: 410-136176-3 MS
Lab Name: Eurofins Lancaster Laboratories Env
Job No.: 410-136176-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cobalt	507		6.7		500	100	80-125		6020B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 5W7B MSD
Lab ID: 410-136176-3 MSD
Lab Name: Eurofins Lancaster Laboratories Env
Job No.: 410-136176-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Cobalt	501		500	99	80-125	1	20		6020B

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5B-IN
POST DIGESTION SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: 5W7B PDS | Lab ID: 410-136176-3 PDS

Lab Name: Eurofins Lancaster Laboratories Env | Job No.: 410-136176-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Cobalt	496		6.7		500	98	85-115		6020B

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VB - IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: 5W7B DU
Lab ID: 410-136176-3 DU
Lab Name: Eurofins Lancaster Laboratories En
Job No.: 410-136176-1
SDG No.:
% Solids for Sample:
% Solids for Duplicate:
Matrix: Water
Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Cobalt	5.0	6.7		6.46		4		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LINEAR RANGE CHECK STANDARD
METALS

Lab ID: LRC 410-405464/9

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136176-1

Sample Matrix: LCS Source: MT_MJ_LRC_00094

Analyte	(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Cobalt	2000	1860		93	90	110		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 410-401990/2-A

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136176-1

Sample Matrix: Water LCS Source: MT_LCS-SPK-A_00030

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Cobalt	500	502		100	90	113		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 410-136176-3

SDG No:

Lab Name: Eurofins Lancaster Laboratories En Job No: 410-136176-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Cobalt	6.7		7.51	J	NC		6020B

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136176-1

SDG Number:

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B MDL Date: 10/11/2021 12:05

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Cobalt	59	5	1

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: Eurofins Lancaster Laboratories E Job Number: 410-136176-1

SDG Number:

Matrix: Water Instrument ID: E08 - 30647

Method: 6020B XMDL Date: 03/14/2022 00:00

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Cobalt	59	0.5	0.156

11-IN
LINEAR RANGES
METALS

Lab Name: Eurofins Lancaster Laboratories Job No: 410-136176-1

SDG No.:

Instrument ID: E08 - 30647 Date: 04/07/2022 16:22

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Cobalt		1000	6020B

12-IN
PREPARATION LOG
METALS

Lab Name: Eurofins Lancaster Laboratories En Job No.: 410-136176-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 410-401990/1-A	07/28/2023 11:39	401990		50	50
LCS 410-401990/2-A	07/28/2023 11:39	401990		50	50
410-136176-3	07/28/2023 11:39	401990		50	50
410-136176-3 DU	07/28/2023 11:39	401990		50	50
410-136176-3 MS	07/28/2023 11:39	401990		50	50
410-136176-3 MSD	07/28/2023 11:39	401990		50	50
410-136176-6	07/28/2023 11:39	401990		50	50
410-136176-5	07/28/2023 11:39	401990		50	50
410-136176-4	07/28/2023 11:39	401990		50	50
410-136176-1	07/28/2023 11:39	401990		50	50
410-136176-8	07/28/2023 11:39	401990		50	50
410-136176-7	07/28/2023 11:39	401990		50	50
410-136176-2	07/28/2023 11:39	401990		50	50

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 08/07/2023 06:25 End Date: 08/07/2023 19:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				Co																								
ITUNE 410-405464/1	1		06:25																									
ICIS 410-405464/2			15:21	X																								
STD1 410-405464/3 IC	1		15:23	X																								
ICV 410-405464/4	1		15:30	X																								
ICB 410-405464/5	1		15:37	X																								
CRI 410-405464/6	1		15:49	X																								
ICSA 410-405464/7	1		15:52	X																								
ICSAB 410-405464/8	1		15:54	X																								
LRC 410-405464/9	1		15:56	X																								
RINSE 410-405464/10			15:57																									
RINSE 410-405464/11			15:59																									
RINSE 410-405464/12			16:01																									
CCV 410-405464/13	1		16:03	X																								
CCB 410-405464/14	1		16:05	X																								
RINSE 410-405464/15			16:08																									
RINSE 410-405464/16			16:10																									
RINSE 410-405464/17			16:12																									
CCV 410-405464/18	1		16:14	X																								
CCB 410-405464/19	1		16:16	X																								
MB 410-401990/1-A	1	R	16:19	X																								
LCS 410-401990/2-A	1	R	16:21	X																								
RINSE 410-405464/22			16:23																									
CCV 410-405464/23	1		16:25	X																								
CCB 410-405464/24	1		16:27	X																								
410-136176-3	1	R	16:29	X																								
410-136176-3 PDS	1	R	16:31	X																								
410-136176-3 SD	5	R	16:33	X																								
410-136176-3 DU	1	R	16:35	X																								
410-136176-3 MS	1	R	16:37	X																								
410-136176-3 MSD	1	R	16:39	X																								
RINSE 410-405464/31			16:41																									
CCV 410-405464/32	1		16:43	X																								
CCB 410-405464/33	1		16:45	X																								
410-136176-6	1	R	16:47	X																								
410-136176-5	1	R	16:49	X																								
410-136176-4	1	R	16:51	X																								
410-136176-1	1	R	16:53	X																								
410-136176-8	1	R	16:55	X																								
410-136176-7	1	R	16:57	X																								
RINSE 410-405464/40			16:59																									
CCV 410-405464/41	1		17:01	X																								
CCB 410-405464/42	1		17:03	X																								

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 08/07/2023 06:25 End Date: 08/07/2023 19:49

Lab Sample Id	D/F	Type	Time	Analytes																								
				Co																								
410-136176-2	1	R	17:05	X																								
ZZZZZZ			17:07																									
ZZZZZZ			17:09																									
ZZZZZZ			17:11																									
ZZZZZZ			17:13																									
ZZZZZZ			17:15																									
ZZZZZZ			17:17																									
RINSE 410-405464/50			17:19																									
CCV 410-405464/51	1		17:21	X																								
CCB 410-405464/52	1		17:23	X																								
RINSE 410-405464/53			17:25																									
RINSE 410-405464/54			17:27																									
RINSE 410-405464/55			17:29																									
RINSE 410-405464/56			17:31																									
RINSE 410-405464/57			17:33																									
RINSE 410-405464/58			17:35																									
CCV 410-405464/59			17:37																									
CCB 410-405464/60			17:39																									
ZZZZZZ			17:42																									
ZZZZZZ			17:44																									
ZZZZZZ			17:46																									
ZZZZZZ			17:48																									
RINSE 410-405464/65			17:50																									
RINSE 410-405464/66			17:52																									
CCV 410-405464/67			17:54																									
CCB 410-405464/68			17:56																									
ZZZZZZ			17:58																									
ZZZZZZ			18:00																									
ZZZZZZ			18:02																									
ZZZZZZ			18:04																									
ZZZZZZ			18:06																									
ZZZZZZ			18:08																									
RINSE 410-405464/75			18:10																									
CCV 410-405464/76			18:12																									
CCB 410-405464/77			18:14																									
ZZZZZZ			18:16																									
ZZZZZZ			18:18																									
RINSE 410-405464/80			18:20																									
CCV 410-405464/81			18:22																									
CCB 410-405464/82			18:24																									
ZZZZZZ			18:35																									
ZZZZZZ			18:37																									

FORM XIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: Eurofins Lancaster Laboratories Enviror Job No.: 410-136176-1

SDG No.:

Instrument ID: E08 - 30647 Analysis Method: 6020B

Start Date: 08/07/2023 06:25 End Date: 08/07/2023 19:49

Lab Sample Id	D/F	Type	Time	Analytes																									
				Co																									
RINSE 410-405464/85			18:39																										
CCV 410-405464/86			18:41																										
CCB 410-405464/87			18:43																										
ZZZZZZ			18:45																										
ZZZZZZ			18:47																										
ZZZZZZ			18:49																										
ZZZZZZ			18:51																										
ZZZZZZ			18:53																										
RINSE 410-405464/93			18:55																										
CCV 410-405464/94			18:57																										
CCB 410-405464/95			18:59																										
ZZZZZZ			19:01																										
ZZZZZZ			19:03																										
ZZZZZZ			19:05																										
ZZZZZZ			19:07																										
ZZZZZZ			19:09																										
ZZZZZZ			19:11																										
RINSE 410-405464/102			19:13																										
CCV 410-405464/103			19:15																										
CCB 410-405464/104			19:17																										
ZZZZZZ			19:19																										
ZZZZZZ			19:21																										
ZZZZZZ			19:23																										
ZZZZZZ			19:25																										
ZZZZZZ			19:27																										
ZZZZZZ			19:29																										
RINSE 410-405464/111			19:31																										
CCV 410-405464/112			19:33																										
CCB 410-405464/113			19:35																										
ZZZZZZ			19:37																										
ZZZZZZ			19:39																										
ZZZZZZ			19:41																										
ZZZZZZ			19:43																										
RINSE 410-405464/118			19:45																										
CCV 410-405464/119			19:47																										
CCB 410-405464/120			19:49																										

Prep Types:
R = Total Recoverable

FORM XIII-IN

14-IN
ICP-MS TUNE
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.:

ICP-MS Instrument ID: E08 - 30647 Analysis Date: 08/07/23

Lab ID: ITUNE 410-405464/1

Element - Mass	Avg. Measured Mass (amu)	Avg. Peak Width at Peak Height (amu)	% RSD	Q
Be-9	9	0.7886	0.637	
Mg-24	24	0.8121	0.514	
Co-59	59	0.7930	0.451	
In-115	115	0.7594	0.759	
Pb-208	208	0.7878	0.802	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.: Analysis Batch No.: 405464

ICP-MS Instrument ID: E08 - 30647 Start Date: 08/07/2023 End Date: 08/07/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Sc-45/1	Q	Element Sc-45/2	Q	Element Sc-45/3	Q	Element Ge/1	Q	Element Ge/2	Q
STD1 410-405464/3	15:23	101		105		104		103		107	
IC ICV 410-405464/4	15:30	101		104		104		103		106	
ICB 410-405464/5	15:37	100		102		99		101		103	
CRI 410-405464/6	15:49	100		101		103		101		103	
ICSA 410-405464/7	15:52	102		102		100		105		106	
ICSAB 410-405464/8	15:54	99		100		102		104		105	
LRC 410-405464/9	15:56	105		99		103		102		103	
CCV 410-405464/13	16:03	101		102		102		101		102	
CCB 410-405464/14	16:05	99		101		102		100		101	
CCV 410-405464/18	16:14	100		104		102		100		103	
CCB 410-405464/19	16:16	100		101		100		100		101	
MB 410-401990/1-A	16:19	100		103		103		103		104	
LCS 410-401990/2-A	16:21	104		105		103		106		108	
CCV 410-405464/23	16:25	101		102		103		101		102	
CCB 410-405464/24	16:27	98		100		99		99		101	
410-136176-3	16:29	100		102		100		107		108	
410-136176-3 PDS	16:31	103		103		102		106		107	
410-136176-3 SD	16:33	99		102		100		105		106	
410-136176-3 DU	16:35	101		101		102		107		107	
410-136176-3 MS	16:37	104		104		102		105		107	
410-136176-3 MSD	16:39	101		102		103		105		108	
CCV 410-405464/32	16:43	100		102		102		100		103	
CCB 410-405464/33	16:45	97		100		101		99		100	
410-136176-6	16:47	100		102		100		104		106	
410-136176-5	16:49	101		104		103		105		107	
410-136176-4	16:51	101		104		102		106		105	
410-136176-1	16:53	98		101		102		104		106	
410-136176-8	16:55	99		102		99		104		105	
410-136176-7	16:57	99		101		104		102		104	
CCV 410-405464/41	17:01	99		102		99		100		101	
CCB 410-405464/42	17:03	97		100		99		98		100	
410-136176-2	17:05	99		102		102		105		108	
CCV 410-405464/51	17:21	101		104		104		99		105	
CCB 410-405464/52	17:23	99		102		100		97		101	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136176-1

SDG No.: Analysis Batch No.: 405464

ICP-MS Instrument ID: E08 - 30647 Start Date: 08/07/2023 End Date: 08/07/2023

Analyte	Mass	Internal Standard Used:				
		Element In-115/2 115	Element In-115/3 115	Element Tb-159 159	Element Bi-209 209	Element Sc-45/1 45
Cobalt	59					
Aluminum	27					
Antimony	121		X			
Arsenic	75					
Barium	137		X			
Beryllium	9					X
Cadmium	111		X			
Calcium	44					
Chromium	52					
Copper	63					
Iron	57					
Lead	208				X	
Magnesium	24					
Manganese	55					
Molybdenum	98		X			
Nickel	60					
Potassium	39					
Selenium	78					
Silver	107		X			
Sodium	23					
Strontium	88		X			
Thallium	205				X	
Tin	120		X			
Titanium	47					
Uranium	238				X	
Vanadium	51					
Zinc	66					
Internal Standard Name on Instrument		In-115 (IS)	In-115 (IS)	Tb-159 (IS)	Bi-209 (IS)	Sc-45 (IS)

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: Eurofins Lancaster Laboratories Environment Testing, LLC Job No.: 410-136176-1

SDG No.: Analysis Batch No.: 405464

ICP-MS Instrument ID: E08 - 30647 Start Date: 08/07/2023 End Date: 08/07/2023

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Ge/3	Q	Element In-115/2	Q	Element In-115/3	Q	Element Tb-159	Q	Element Bi-209	Q
STD1 410-405464/3	15:23	103		103		100		102		100	
IC ICV 410-405464/4	15:30	104		103		102		102		100	
ICB 410-405464/5	15:37	100		102		99		100		100	
CRI 410-405464/6	15:49	101		103		102		101		101	
ICSA 410-405464/7	15:52	103		97		96		99		95	
ICSAB 410-405464/8	15:54	102		96		97		98		94	
LRC 410-405464/9	15:56	101		120		99		98		94	
CCV 410-405464/13	16:03	99		103		100		100		99	
CCB 410-405464/14	16:05	99		103		102		100		99	
CCV 410-405464/18	16:14	101		102		99		101		100	
CCB 410-405464/19	16:16	98		101		100		100		101	
MB 410-401990/1-A	16:19	102		103		100		101		102	
LCS 410-401990/2-A	16:21	105		104		101		102		102	
CCV 410-405464/23	16:25	99		102		100		101		100	
CCB 410-405464/24	16:27	99		102		100		100		99	
410-136176-3	16:29	105		103		104		101		104	
410-136176-3 PDS	16:31	104		104		102		101		102	
410-136176-3 SD	16:33	105		103		102		100		102	
410-136176-3 DU	16:35	106		103		102		102		103	
410-136176-3 MS	16:37	105		103		102		102		103	
410-136176-3 MSD	16:39	103		103		102		101		102	
CCV 410-405464/32	16:43	100		101		100		100		100	
CCB 410-405464/33	16:45	98		101		101		100		99	
410-136176-6	16:47	103		101		100		102		100	
410-136176-5	16:49	105		102		103		102		102	
410-136176-4	16:51	105		102		101		103		102	
410-136176-1	16:53	103		103		103		101		102	
410-136176-8	16:55	103		102		101		101		101	
410-136176-7	16:57	100		103		100		102		101	
CCV 410-405464/41	17:01	100		101		99		101		101	
CCB 410-405464/42	17:03	99		101		99		100		100	
410-136176-2	17:05	106		102		102		102		102	
CCV 410-405464/51	17:21	102		103		101		103		102	
CCB 410-405464/52	17:23	99		104		101		102		101	
IS Name on Instrument											

15A-IN
ICP-MS INTERNAL STANDARDS RELATIONS
METALS

Lab Name: Eurofins Lancaster Laboratories Env: Job No.: 410-136176-1

SDG No.: Analysis Batch No.: 405464

ICP-MS Instrument ID: E08 - 30647 Start Date: 08/07/2023 End Date: 08/07/2023

Analyte	Mass	Internal Standard Used:				
		Element Sc-45/2 45	Element Sc-45/3 45	Element Ge/1 72	Element Ge/2 72	Element Ge/3 72
Cobalt	59		X			
Aluminum	27		X			
Antimony	121					
Arsenic	75					X
Barium	137					
Beryllium	9					
Cadmium	111					
Calcium	44		X			
Chromium	52		X			
Copper	63					X
Iron	57		X			
Lead	208					
Magnesium	24		X			
Manganese	55		X			
Molybdenum	98					
Nickel	60					X
Potassium	39		X			
Selenium	78				X	
Silver	107					
Sodium	23		X			
Strontium	88					
Thallium	205					
Tin	120					
Titanium	47		X			
Uranium	238					
Vanadium	51		X			
Zinc	66					X
Internal Standard Name on Instrument		Sc-45 (IS)	Sc-45 (IS)	Ge Internal Standard	Ge Internal Standard	Ge Internal Standard

METALS BATCH WORKSHEET

Lab Name: Eurofins Lancaster Laboratories | Job No.: 410-136176-1

SDG No.:

Batch Number: 401990 | Batch Start Date: 07/31/23 07:35 | Batch Analyst: Dickens, Emily

Batch Method: 3005A | Batch End Date: 07/31/23 11:55

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MP_1:1HCl 00029	MP_1:1HNO3 00045	MT_LCS-SPK-A 00030	MT_LCS-SPK-B 00029
MB 410-401990/1		3005A, 6020B		50 mL	50 mL	5 mL	2 mL		
LCS 410-401990/2		3005A, 6020B		50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136176-E-3	5W7B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-B-3 DU	5W7B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-3 MS	5W7B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136176-E-3 MSD	5W7B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL	0.2 mL	0.2 mL
410-136176-E-6	5WC22	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-5	5WDUP	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-4	5WC21	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-1	5W8B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-8	5W12A	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-7	5WC23	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		
410-136176-E-2	5W5B	3005A, 6020B	R	50 mL	50 mL	5 mL	2 mL		

Batch Notes	
Digestion Tube/Cup ID	2206050
Pipette/Syringe/Dispenser ID	g20054g
Pipette Tip Lot ID	f169949r
Digestion Unit ID	14
Thermometer ID	3811
Temperature - Uncorrected - Start	95 Degrees C
Temperature - Corrected - Start	95 Degrees C
Temperature - Uncorrected - End	95 Degrees C
Temperature - Corrected - End	95 Degrees C

Basis	Basis Description
R	Total Recoverable

The pound sign (#) in the amount added field denotes that the reagent was used undiluted. All calculations are performed using the stated concentration for this reagent.

Quantitation Report

Data File Name	012CALB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:21:55 PM
Sample Name	ICIS 4613416
Sample Type	CalBlk
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

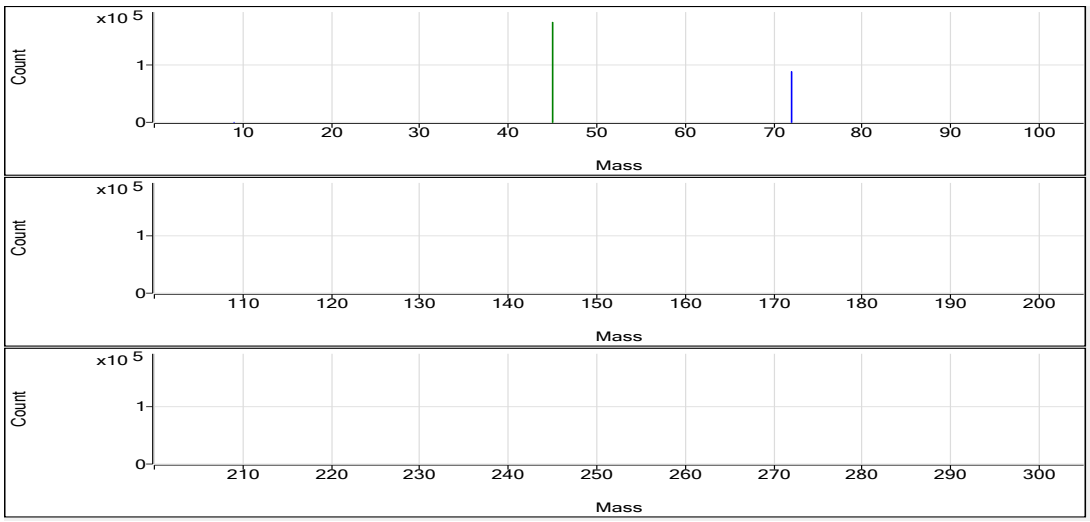
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.000	ppb	N/A	22.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.000	ppb	N/A	1.55	0.0000	Pulse	1.5000	3
Na	23	45	He	0.000	ppb	N/A	7548.85	0.2648	Pulse	0.1000	3
Mg	24	45	He	0.000	ppb	N/A	143.34	0.0050	Pulse	0.1000	3
Al	27	45	He	0.000	ppb	N/A	43.33	0.0015	Pulse	0.1000	3
K	39	45	He	0.000	ppb	N/A	10344.01	0.3627	Pulse	0.1000	3
Ca	44	45	He	0.000	ppb	N/A	73.33	0.0026	Pulse	0.1000	3
Ti	47	45	He	0.000	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.000	ppb	N/A	330.68	0.0116	Pulse	0.5000	3
Cr	52	45	He	0.000	ppb	N/A	1940.22	0.0680	Pulse	0.1000	3
Mn	55	45	He	0.000	ppb	N/A	120.01	0.0042	Pulse	0.1000	3
Fe	57	45	He	0.000	ppb	N/A	116.67	0.0041	Pulse	0.1000	3
Co	59	45	He	0.000	ppb	N/A	140.01	0.0049	Pulse	0.1000	3
Ni	60	72	He	0.000	ppb	N/A	370.02	0.0067	Pulse	0.1000	3
Cu	63	72	He	0.000	ppb	N/A	176.67	0.0032	Pulse	0.1000	3
Zn	66	72	He	0.000	ppb	N/A	163.34	0.0030	Pulse	0.1000	3
As	75	72	He	0.000	ppb	N/A	27.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	N/A	36.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	30.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	N/A	716.71	0.0133	Pulse	0.1000	3
Sb	121	115	He	0.000	ppb	N/A	80.00	0.0015	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.000	ppb	N/A	40.00	0.0002	Pulse	0.1000	3
Pb	208	209	He	0.000	ppb	N/A	186.67	0.0010	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	16.67	0.0001	Pulse	0.1000	3

ISTD Table:

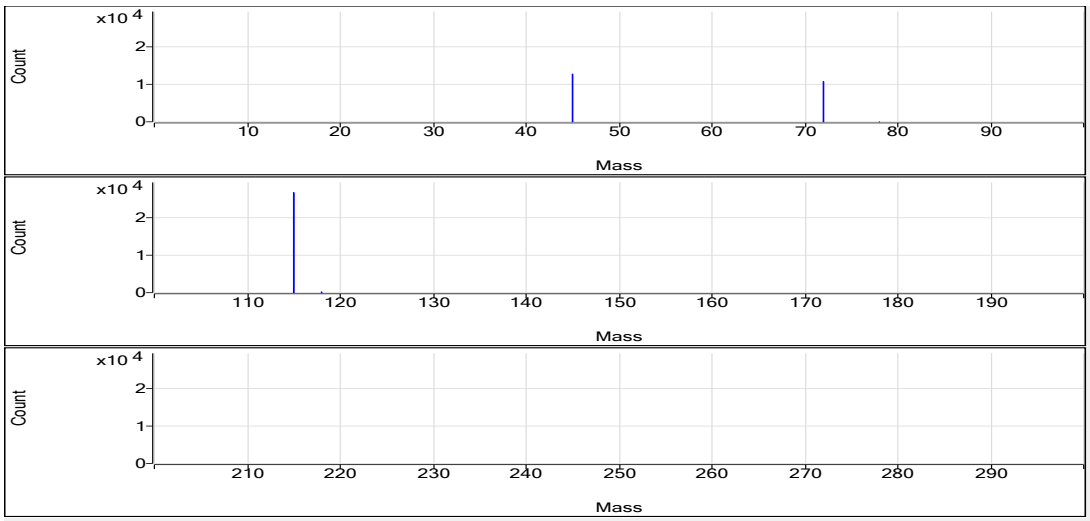
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1761283.98	0.5	100.0	Analog	0.1000	3
No Gas	Ge	72	892421.55	0.3	100.0	Pulse	0.1000	3
H2	Sc	45	127323.19	0.7	100.0	Pulse	0.1000	3
H2	Ge	72	107227.26	1.3	100.0	Pulse	0.1000	3
H2	In	115	266313.47	0.9	100.0	Pulse	0.1000	3
He	Sc	45	28508.75	1.0	100.0	Pulse	0.1000	3
He	Ge	72	55327.98	1.0	100.0	Pulse	0.1000	3
He	In	115	53673.00	1.2	100.0	Pulse	0.1000	3
He	Tb	159	245765.86	1.0	100.0	Pulse	0.1000	3
He	Bi	209	190851.87	2.1	100.0	Pulse	0.1000	3

No Gas

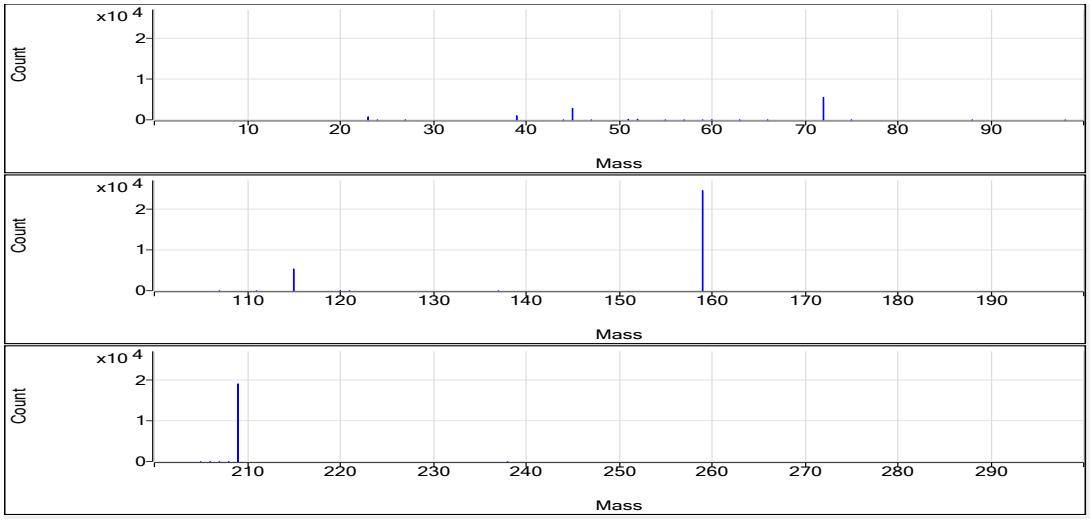


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.002	0	24.00	0.0004	1.287E-05
Be	9	1	No Gas	-0.001	0	22.00	0.0004	1.287E-05
Be	9	1	No Gas	-0.001	0	22.00	0.0004	1.287E-05
Se	78	2	H2	-0.005	0	1.33	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.011	0	2.00	0.0004	1.451E-05
Na	23	3	He	-3.233	0.2567	7402.12	0.0025	0.2648
Na	23	3	He	2.354	0.2708	7652.22	0.0025	0.2648
Na	23	3	He	0.879	0.2671	7592.22	0.0025	0.2648
Mg	24	3	He	-0.66	0.0042	120.01	0.0013	0.005032
Mg	24	3	He	-0.059	0.005	140.00	0.0013	0.005032
Mg	24	3	He	0.719	0.006	170.01	0.0013	0.005032
Al	27	3	He	1.303	0.0021	60.00	0.0004	0.001519
Al	27	3	He	1.402	0.0021	60.00	0.0004	0.001519
Al	27	3	He	-2.705	0.0004	10.00	0.0004	0.001519
K	39	3	He	22.966	0.385	11104.56	0.001	0.3627
K	39	3	He	3.411	0.366	10343.99	0.001	0.3627
K	39	3	He	-26.377	0.3371	9583.49	0.001	0.3627
Ca	44	3	He	3.492	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	-1.618	0.0025	70.00	0.0001	0.002571
Ca	44	3	He	-1.873	0.0025	70.00	0.0001	0.002571
Ti	47	3	He	0.248	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.259	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.003	0.0117	336.01	0.0201	0.0116
V	51	3	He	-0.01	0.0114	322.01	0.0201	0.0116
V	51	3	He	0.008	0.0117	334.01	0.0201	0.0116
Cr	52	3	He	0.322	0.0763	2200.27	0.0257	0.06801
Cr	52	3	He	-0.154	0.0641	1810.19	0.0257	0.06801
Cr	52	3	He	-0.169	0.0637	1810.20	0.0257	0.06801
Mn	55	3	He	-0.066	0.0035	100.00	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.065	0.005	140.01	0.0113	0.004215
Mn	55	3	He	0.001	0.0042	120.01	0.0113	0.004215
Fe	57	3	He	-1.236	0.0035	100.00	0.0005	0.004099
Fe	57	3	He	3.064	0.0057	160.01	0.0005	0.004099
Fe	57	3	He	-1.827	0.0032	90.00	0.0005	0.004099
Co	59	3	He	-0.001	0.0049	140.01	0.0518	0.004913
Co	59	3	He	0.014	0.0057	160.01	0.0518	0.004913
Co	59	3	He	-0.013	0.0042	120.00	0.0518	0.004913
Ni	60	3	He	-0.126	0.0058	320.02	0.0075	0.006695
Ni	60	3	He	0.181	0.008	440.02	0.0075	0.006695
Ni	60	3	He	-0.055	0.0063	350.02	0.0075	0.006695
Cu	63	3	He	0.027	0.0038	210.01	0.0216	0.003198
Cu	63	3	He	0.038	0.004	220.01	0.0216	0.003198
Cu	63	3	He	-0.065	0.0018	100.00	0.0216	0.003198
Zn	66	3	He	-0.302	0.0022	120.00	0.0026	0.002954
Zn	66	3	He	0.128	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	0.174	0.0034	190.01	0.0026	0.002954
As	75	3	He	-0.032	0.0004	24.00	0.002	0.0004943
As	75	3	He	0.028	0.0005	30.00	0.002	0.0004943
As	75	3	He	0.004	0.0005	28.00	0.002	0.0004943
Sr	88	3	He	-0.039	0.0004	20.00	0.0081	0.0006852
Sr	88	3	He	0.031	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.008	0.0008	40.00	0.0081	0.0006852
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.093	0.0147	800.05	0.0146	0.01334
Sn	120	3	He	0.009	0.0135	720.04	0.0146	0.01334
Sn	120	3	He	-0.103	0.0118	630.04	0.0146	0.01334
Sb	121	3	He	0.064	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	-0.025	0.0011	60.00	0.0142	0.001484
Sb	121	3	He	-0.038	0.0009	50.00	0.0142	0.001484
Ba	137	3	He	-0.041	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.041	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	-0.004	0.0001	20.00	0.0282	0.00021
Tl	205	3	He	-0.004	0.0001	20.00	0.0282	0.00021
Tl	205	3	He	0.007	0.0004	80.00	0.0282	0.00021
Pb	208	3	He	0	0.001	150.01	0.0372	0.0009772
Pb	208	3	He	-0.005	0.0008	100.00	0.0372	0.0009772
Pb	208	3	He	0.005	0.0012	100.00	0.0372	0.0009772
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
U	238	3	He	-0.001	0.0001	10.00	0.0417	8.729E-05
Sc	45	1	No Gas			1752760.13		
Sc	45	1	No Gas			1761723.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1769367.94		
Ge	72	1	No Gas			894750.22		
Ge	72	1	No Gas			893086.24		
Ge	72	1	No Gas			889428.19		
Sc	45	2	H2			126567.16		
Sc	45	2	H2			128391.16		
Sc	45	2	H2			127011.25		
Ge	72	2	H2			106868.36		
Ge	72	2	H2			108751.91		
Ge	72	2	H2			106061.50		
In	115	2	H2			263519.16		
In	115	2	H2			267003.86		
In	115	2	H2			268417.40		
Sc	45	3	He			28839.34		
Sc	45	3	He			28258.44		
Sc	45	3	He			28428.48		
Ge	72	3	He			55588.72		
Ge	72	3	He			54715.75		
Ge	72	3	He			55679.48		
In	115	3	He			54397.62		
In	115	3	He			53423.86		
In	115	3	He			53212.57		
Tb	159	3	He			248601.66		
Tb	159	3	He			243775.64		
Tb	159	3	He			244920.29		
Bi	209	3	He			195186.09		
Bi	209	3	He			187234.16		
Bi	209	3	He			190135.35		

Quantitation Report

Data File Name	013CALS.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:23:55 PM
Sample Name	STD1 4625647
Sample Type	CalStd
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

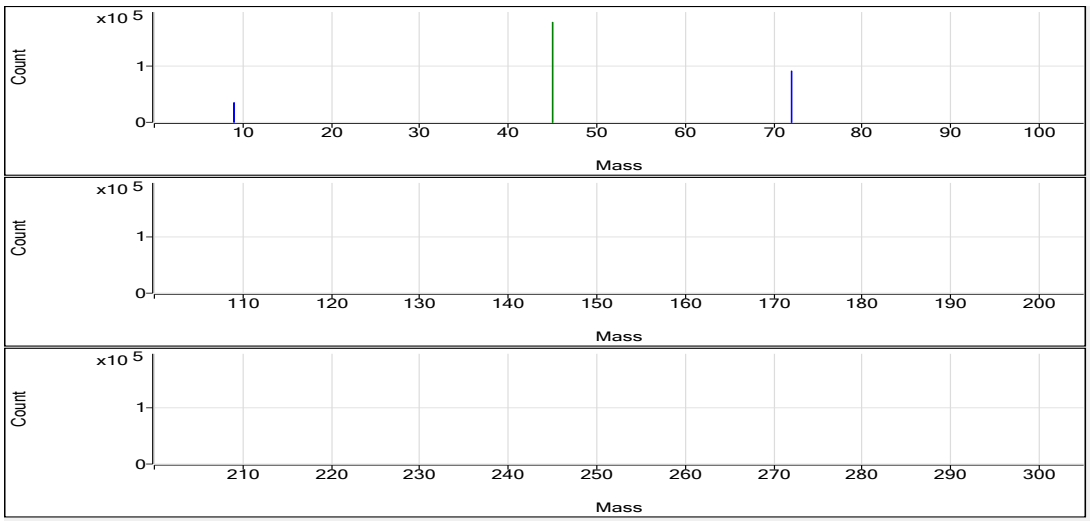
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	100.000	ppb	7.4	70233.42	0.0394	Pulse	0.5000	3
Se	78	72	H2	100.000	ppb	2.1	4488.04	0.0391	Pulse	1.5000	3
Na	23	45	He	10000.000	ppb	4.0	753241.58	25.5518	Pulse	0.1000	3
Mg	24	45	He	10000.000	ppb	3.4	389279.62	13.2035	Pulse	0.1000	3
Al	27	45	He	10000.000	ppb	3.7	127179.65	4.3140	Pulse	0.1000	3
K	39	45	He	10000.000	ppb	3.1	297163.20	10.0783	Pulse	0.1000	3
Ca	44	45	He	10000.000	ppb	7.4	17194.05	0.5835	Pulse	0.1000	3
Ti	47	45	He	10000.000	ppb	3.2	135496.07	4.5956	Pulse	0.1000	3
V	51	45	He	1000.000	ppb	3.1	591754.65	20.0698	Pulse	0.5000	3
Cr	52	45	He	1000.000	ppb	3.1	759803.06	25.7691	Pulse	0.1000	3
Mn	55	45	He	1000.000	ppb	2.4	334224.73	11.3337	Pulse	0.1000	3
Fe	57	45	He	10000.000	ppb	3.9	150609.85	5.1086	Pulse	0.1000	3
Co	59	45	He	1000.000	ppb	2.3	1528237.27	51.8205	Analog	0.1000	3
Ni	60	72	He	1000.000	ppb	0.2	422842.33	7.4567	Pulse	0.1000	3
Cu	63	72	He	1000.000	ppb	0.8	1224296.47	21.5909	Pulse	0.1000	3
Zn	66	72	He	1000.000	ppb	1.9	149293.43	2.6330	Pulse	0.1000	3
As	75	72	He	1000.000	ppb	0.8	110737.57	1.9529	Pulse	0.5000	3
Sr	88	115	He	100.000	ppb	1.8	43534.59	0.8120	Pulse	0.1000	3
Mo	98	115	He	100.000	ppb	2.3	109780.52	2.0475	Pulse	0.1000	3
Ag	107	115	He	100.000	ppb	1.6	230814.65	4.3051	Pulse	0.1000	3
Cd	111	115	He	100.000	ppb	1.7	26799.01	0.4998	Pulse	0.5000	3
Sn	120	115	He	100.000	ppb	1.5	79079.16	1.4750	Pulse	0.1000	3
Sb	121	115	He	100.000	ppb	0.7	76374.33	1.4243	Pulse	0.1000	3
Ba	137	115	He	1000.000	ppb	2.1	247006.83	4.6074	Pulse	0.1000	3
Tl	205	209	He	100.000	ppb	0.9	537897.75	2.8225	Pulse	0.1000	3
Pb	208	209	He	100.000	ppb	0.9	709849.44	3.7247	Pulse	0.1000	3
U	238	209	He	100.000	ppb	0.7	795064.83	4.1718	Pulse	0.1000	3

ISTD Table:

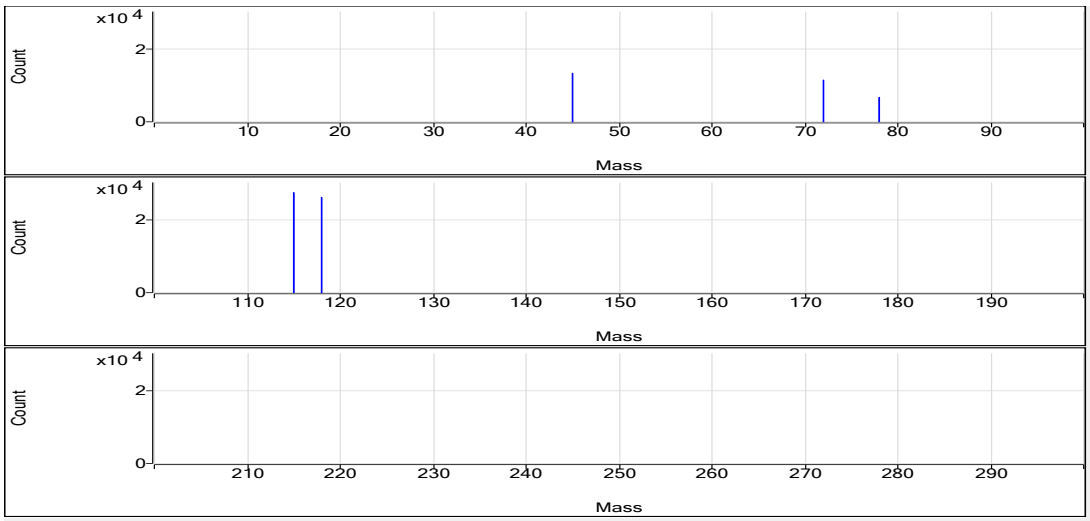
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1782897.89	0.8	101.2	Analog	0.1000	3
No Gas	Ge	72	914918.40	0.9	102.5	Pulse	0.1000	3
H2	Sc	45	133231.74	0.5	104.6	Pulse	0.1000	3
H2	Ge	72	114714.82	0.8	107.0	Pulse	0.1000	3
H2	In	115	274357.03	0.6	103.0	Pulse	0.1000	3
He	Sc	45	29504.09	3.2	103.5	Pulse	0.1000	3
He	Ge	72	56706.47	0.7	102.5	Pulse	0.1000	3
He	In	115	53622.72	1.5	99.9	Pulse	0.1000	3
He	Tb	159	249683.80	1.0	101.6	Pulse	0.1000	3
He	Bi	209	190590.57	1.2	99.9	Pulse	0.1000	3

No Gas

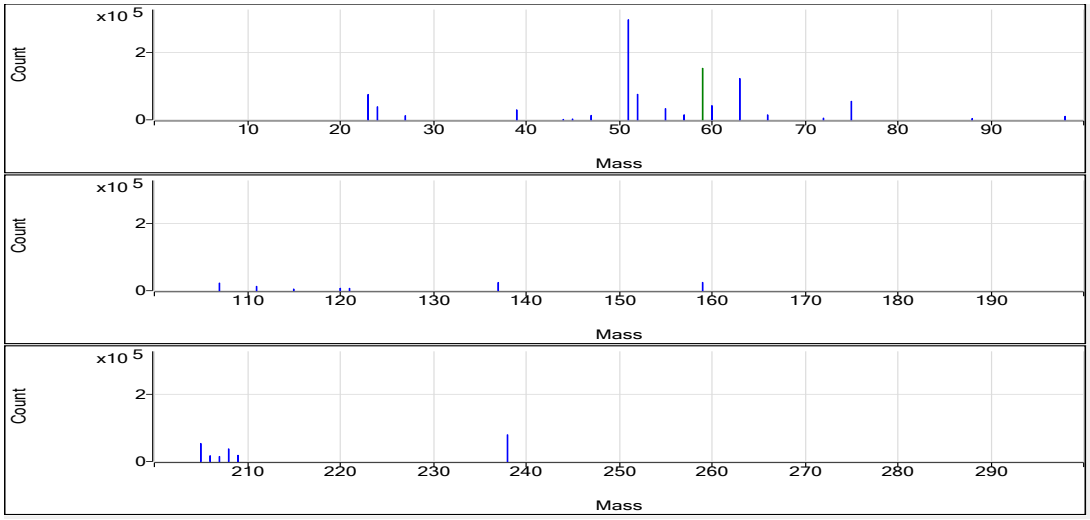


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	92.056	0.0363	65180.99	0.0004	1.287E-05
Be	9	1	No Gas	101.349	0.0399	70681.65	0.0004	1.287E-05
Be	9	1	No Gas	106.595	0.042	74837.63	0.0004	1.287E-05
Se	78	2	H2	99.891	0.0391	4476.71	0.0004	1.451E-05
Se	78	2	H2	102.141	0.04	4552.06	0.0004	1.451E-05
Se	78	2	H2	97.968	0.0383	4435.36	0.0004	1.451E-05
Na	23	3	He	9597.504	24.534	747623.50	0.0025	0.2648
Na	23	3	He	10002.638	25.5585	752964.21	0.0025	0.2648
Na	23	3	He	10399.858	26.5629	759137.02	0.0025	0.2648
Mg	24	3	He	9682.056	12.7839	389561.99	0.0013	0.005032
Mg	24	3	He	9967.684	13.1608	387724.60	0.0013	0.005032
Mg	24	3	He	10350.26	13.6658	390552.26	0.0013	0.005032
Al	27	3	He	9604.08	4.1433	126258.34	0.0004	0.001519
Al	27	3	He	10046.218	4.334	127680.60	0.0004	0.001519
Al	27	3	He	10349.703	4.4648	127600.00	0.0004	0.001519
K	39	3	He	9663.816	9.7517	297163.73	0.001	0.3627
K	39	3	He	10059.981	10.1366	298629.49	0.001	0.3627
K	39	3	He	10276.203	10.3467	295696.38	0.001	0.3627
Ca	44	3	He	9163.449	0.5349	16299.58	0.0001	0.002571
Ca	44	3	He	10562.185	0.6161	18151.80	0.0001	0.002571
Ca	44	3	He	10274.366	0.5994	17130.76	0.0001	0.002571
Ti	47	3	He	9667.328	4.4428	135384.32	0.0005	0.0002328
Ti	47	3	He	10016.772	4.6034	135616.93	0.0005	0.0002328
Ti	47	3	He	10315.9	4.7408	135486.97	0.0005	0.0002328
V	51	3	He	966.736	19.4025	591252.94	0.0201	0.0116
V	51	3	He	1006.097	20.192	594867.19	0.0201	0.0116
V	51	3	He	1027.167	20.6147	589143.81	0.0201	0.0116
Cr	52	3	He	966.666	24.9124	759154.13	0.0257	0.06801
Cr	52	3	He	1006.663	25.9403	764214.29	0.0257	0.06801
Cr	52	3	He	1026.671	26.4546	756040.77	0.0257	0.06801
Mn	55	3	He	973.729	11.0361	336301.24	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1006.746	11.4101	336147.53	0.0113	0.004215
Mn	55	3	He	1019.525	11.5549	330225.42	0.0113	0.004215
Fe	57	3	He	9556.172	4.882	148770.24	0.0005	0.004099
Fe	57	3	He	10190.03	5.2056	153359.24	0.0005	0.004099
Fe	57	3	He	10253.798	5.2381	149700.08	0.0005	0.004099
Co	59	3	He	973.586	50.4519	1537418.26	0.0518	0.004913
Co	59	3	He	1012.038	52.4443	1545034.51	0.0518	0.004913
Co	59	3	He	1014.376	52.5654	1502259.04	0.0518	0.004913
Ni	60	3	He	997.905	7.4411	420890.70	0.0075	0.006695
Ni	60	3	He	999.735	7.4547	426144.92	0.0075	0.006695
Ni	60	3	He	1002.36	7.4743	421491.36	0.0075	0.006695
Cu	63	3	He	1006.421	21.7295	1229083.03	0.0216	0.003198
Cu	63	3	He	990.407	21.3838	1222389.90	0.0216	0.003198
Cu	63	3	He	1003.172	21.6593	1221416.47	0.0216	0.003198
Zn	66	3	He	998.694	2.6295	148733.75	0.0026	0.002954
Zn	66	3	He	981.798	2.5851	147774.95	0.0026	0.002954
Zn	66	3	He	1019.508	2.6843	151371.59	0.0026	0.002954
As	75	3	He	999.242	1.9514	110377.52	0.002	0.0004943
As	75	3	He	992.212	1.9377	110766.53	0.002	0.0004943
As	75	3	He	1008.547	1.9696	111068.67	0.002	0.0004943
Sr	88	3	He	97.893	0.7949	43207.06	0.0081	0.0006852
Sr	88	3	He	100.889	0.8192	44059.64	0.0081	0.0006852
Sr	88	3	He	101.218	0.8219	43337.08	0.0081	0.0006852
Mo	98	3	He	97.495	1.9963	108507.10	0.0205	0.0005587
Mo	98	3	He	101.974	2.0879	112296.72	0.0205	0.0005587
Mo	98	3	He	100.531	2.0584	108537.73	0.0205	0.0005587
Ag	107	3	He	98.761	4.2518	231106.19	0.043	0.0004367
Ag	107	3	He	99.49	4.2832	230363.53	0.043	0.0004367
Ag	107	3	He	101.749	4.3804	230974.23	0.043	0.0004367
Cd	111	3	He	98.093	0.4903	26651.45	0.005	1.253E-05
Cd	111	3	He	100.523	0.5025	27024.11	0.005	1.253E-05
Cd	111	3	He	101.384	0.5068	26721.46	0.005	1.253E-05
Sn	120	3	He	98.672	1.4555	79116.68	0.0146	0.01334
Sn	120	3	He	99.73	1.471	79115.71	0.0146	0.01334
Sn	120	3	He	101.598	1.4983	79005.09	0.0146	0.01334
Sb	121	3	He	99.346	1.415	76913.60	0.0142	0.001484
Sb	121	3	He	100.759	1.4351	77185.23	0.0142	0.001484
Sb	121	3	He	99.895	1.4228	75024.15	0.0142	0.001484
Ba	137	3	He	984.59	4.5364	246576.32	0.0046	0.000374
Ba	137	3	He	991.277	4.5672	245638.59	0.0046	0.000374
Ba	137	3	He	1024.133	4.7185	248805.58	0.0046	0.000374
Tl	205	3	He	99.969	2.8216	537711.63	0.0282	0.00021
Tl	205	3	He	100.892	2.8477	536040.34	0.0282	0.00021
Tl	205	3	He	99.138	2.7982	539941.28	0.0282	0.00021
Pb	208	3	He	100.213	3.7327	381401.67	0.0372	0.0009772
Pb	208	3	He	100.768	3.7533	377057.14	0.0372	0.0009772
Pb	208	3	He	99.019	3.6882	378267.14	0.0372	0.0009772
U	238	3	He	99.589	4.1546	791747.10	0.0417	8.729E-05
U	238	3	He	100.86	4.2077	792052.57	0.0417	8.729E-05
U	238	3	He	99.551	4.1531	801394.83	0.0417	8.729E-05
Sc	45	1	No Gas			1796914.04		
Sc	45	1	No Gas			1769957.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1781821.85		
Ge	72	1	No Gas			922359.60		
Ge	72	1	No Gas			906808.97		
Ge	72	1	No Gas			915586.63		
Sc	45	2	H2			132469.03		
Sc	45	2	H2			133649.04		
Sc	45	2	H2			133577.15		
Ge	72	2	H2			114537.40		
Ge	72	2	H2			113901.07		
Ge	72	2	H2			115705.98		
In	115	2	H2			273432.59		
In	115	2	H2			273316.17		
In	115	2	H2			276322.32		
Sc	45	3	He			30472.96		
Sc	45	3	He			29460.47		
Sc	45	3	He			28578.84		
Ge	72	3	He			56562.94		
Ge	72	3	He			57164.34		
Ge	72	3	He			56392.13		
In	115	3	He			54909.23		
In	115	3	He			54337.24		
In	115	3	He			53282.35		
Tb	159	3	He			247584.92		
Tb	159	3	He			248980.97		
Tb	159	3	He			252485.50		
Bi	209	3	He			190569.18		
Bi	209	3	He			188238.98		
Bi	209	3	He			192963.55		

Quantitation Report

Data File Name	016_ICV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:30:16 PM
Sample Name	ICV 4596497
Sample Type	ICV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

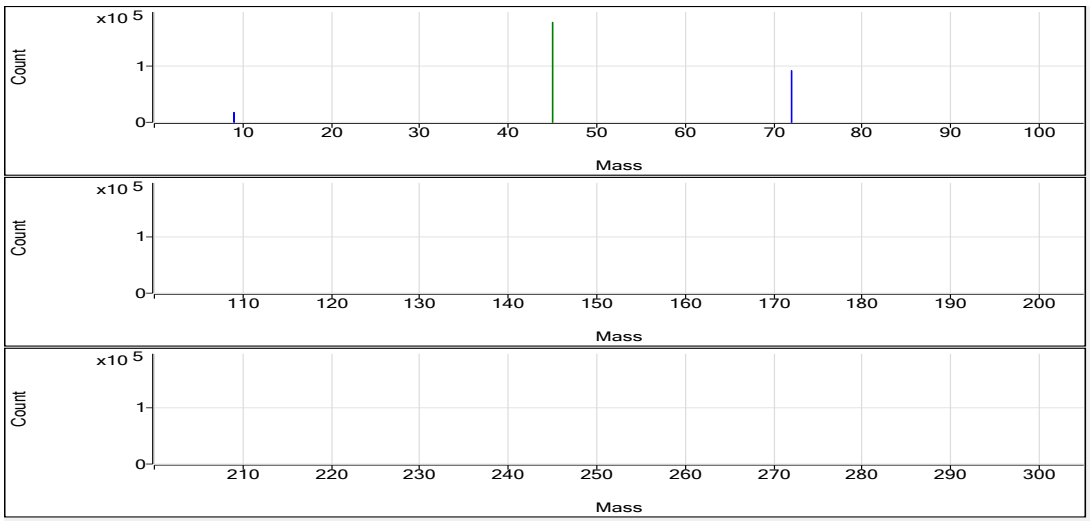
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.778	ppb	6.7	35750.69	0.0200	Pulse	0.5000	3
Se	78	72	H2	50.921	ppb	2.2	2258.41	0.0199	Pulse	1.5000	3
Na	23	45	He	5029.457	ppb	3.5	382722.85	12.9828	Pulse	0.1000	3
Mg	24	45	He	5028.346	ppb	3.1	195815.80	6.6417	Pulse	0.1000	3
Al	27	45	He	5035.430	ppb	3.2	64059.97	2.1731	Pulse	0.1000	3
K	39	45	He	5125.185	ppb	4.0	157474.00	5.3422	Pulse	0.1000	3
Ca	44	45	He	5136.492	ppb	2.7	8873.03	0.3010	Pulse	0.1000	3
Ti	47	45	He	5070.848	ppb	2.8	68709.72	2.3305	Pulse	0.1000	3
V	51	45	He	509.256	ppb	3.3	301458.82	10.2263	Pulse	0.5000	3
Cr	52	45	He	508.137	ppb	4.3	386928.14	13.1277	Pulse	0.1000	3
Mn	55	45	He	514.966	ppb	2.8	172131.74	5.8385	Pulse	0.1000	3
Fe	57	45	He	5141.390	ppb	3.4	77484.97	2.6285	Pulse	0.1000	3
Co	59	45	He	495.485	ppb	3.2	756992.39	25.6788	Pulse	0.1000	3
Ni	60	72	He	506.634	ppb	0.6	216485.68	3.7811	Pulse	0.1000	3
Cu	63	72	He	506.100	ppb	0.3	625723.29	10.9287	Pulse	0.1000	3
Zn	66	72	He	512.314	ppb	0.8	77315.28	1.3503	Pulse	0.1000	3
As	75	72	He	490.714	ppb	1.0	54880.65	0.9586	Pulse	0.5000	3
Sr	88	115	He	50.851	ppb	2.6	22655.42	0.4132	Pulse	0.1000	3
Mo	98	115	He	49.396	ppb	2.3	55460.37	1.0117	Pulse	0.1000	3
Ag	107	115	He	50.796	ppb	1.6	119908.62	2.1870	Pulse	0.1000	3
Cd	111	115	He	54.299	ppb	0.9	14881.31	0.2714	Pulse	0.5000	3
Sn	120	115	He	52.293	ppb	2.9	42639.84	0.7777	Pulse	0.1000	3
Sb	121	115	He	52.602	ppb	2.3	41111.83	0.7499	Pulse	0.1000	3
Ba	137	115	He	498.863	ppb	1.2	126019.57	2.2986	Pulse	0.1000	3
Tl	205	209	He	50.560	ppb	0.9	272879.46	1.4272	Pulse	0.1000	3
Pb	208	209	He	50.668	ppb	1.1	360943.10	1.8877	Pulse	0.1000	3
U	238	209	He	51.727	ppb	2.5	412579.08	2.1580	Pulse	0.1000	3

ISTD Table:

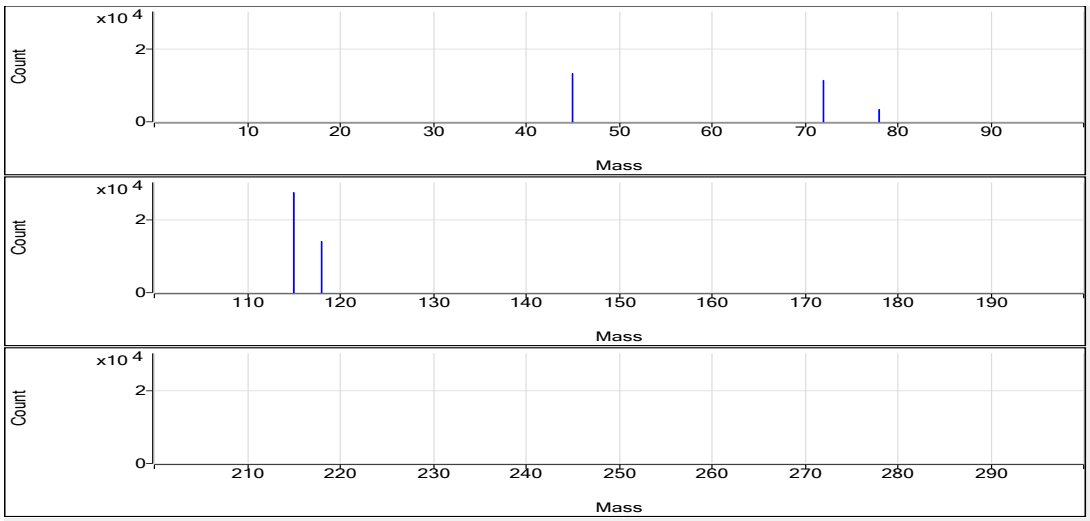
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1786538.88	1.1	101.4	Analog	0.1000	3
No Gas	Ge	72	922523.35	0.8	103.4	Pulse	0.1000	3
H2	Sc	45	131937.20	0.4	103.6	Pulse	0.1000	3
H2	Ge	72	113317.23	0.8	105.7	Pulse	0.1000	3
H2	In	115	273540.54	0.6	102.7	Pulse	0.1000	3
He	Sc	45	29500.85	3.4	103.5	Pulse	0.1000	3
He	Ge	72	57255.28	0.6	103.5	Pulse	0.1000	3
He	In	115	54825.28	0.8	102.1	Pulse	0.1000	3
He	Tb	159	249693.33	1.2	101.6	Pulse	0.1000	3
He	Bi	209	191212.01	0.8	100.2	Pulse	0.1000	3

No Gas

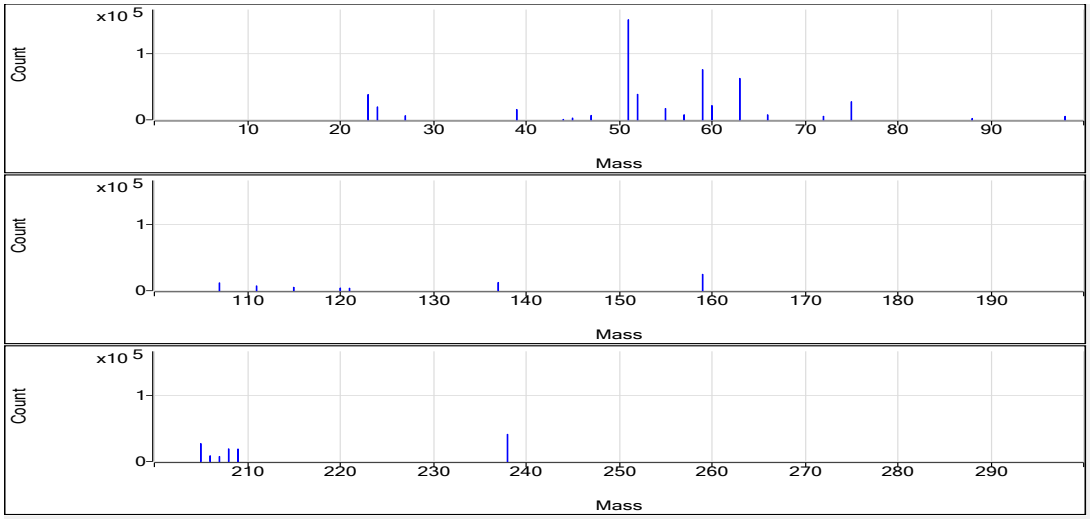


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.259	0.0186	33238.82	0.0004	1.287E-05
Be	9	1	No Gas	51.045	0.0201	36344.00	0.0004	1.287E-05
Be	9	1	No Gas	54.031	0.0213	37669.26	0.0004	1.287E-05
Se	78	2	H2	52.166	0.0204	2305.52	0.0004	1.451E-05
Se	78	2	H2	50.657	0.0198	2234.85	0.0004	1.451E-05
Se	78	2	H2	49.941	0.0195	2234.85	0.0004	1.451E-05
Na	23	3	He	4983.986	12.8678	377683.28	0.0025	0.2648
Na	23	3	He	4879.943	12.6047	385362.14	0.0025	0.2648
Na	23	3	He	5224.442	13.4759	385123.12	0.0025	0.2648
Mg	24	3	He	4964.66	6.5576	192472.65	0.0013	0.005032
Mg	24	3	He	4917.03	6.4948	198563.08	0.0013	0.005032
Mg	24	3	He	5203.346	6.8726	196411.66	0.0013	0.005032
Al	27	3	He	5067.766	2.187	64190.60	0.0004	0.001519
Al	27	3	He	4858.961	2.097	64109.76	0.0004	0.001519
Al	27	3	He	5179.563	2.2352	63879.55	0.0004	0.001519
K	39	3	He	5238.785	5.4525	160037.22	0.001	0.3627
K	39	3	He	4888.563	5.1123	156296.60	0.001	0.3627
K	39	3	He	5248.209	5.4617	156088.17	0.001	0.3627
Ca	44	3	He	5177.32	0.3033	8902.97	0.0001	0.002571
Ca	44	3	He	4980.008	0.2919	8923.16	0.0001	0.002571
Ca	44	3	He	5252.147	0.3077	8792.95	0.0001	0.002571
Ti	47	3	He	5051.408	2.3216	68140.18	0.0005	0.0002328
Ti	47	3	He	4941.128	2.2709	69427.38	0.0005	0.0002328
Ti	47	3	He	5220.009	2.399	68561.60	0.0005	0.0002328
V	51	3	He	511.345	10.2682	301383.09	0.0201	0.0116
V	51	3	He	491.45	9.8692	301728.59	0.0201	0.0116
V	51	3	He	524.972	10.5416	301264.78	0.0201	0.0116
Cr	52	3	He	502.741	12.989	381239.84	0.0257	0.06801
Cr	52	3	He	489.74	12.6549	386895.03	0.0257	0.06801
Cr	52	3	He	531.931	13.7392	392649.56	0.0257	0.06801
Mn	55	3	He	515.33	5.8426	171486.93	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	500.297	5.6723	173418.71	0.0113	0.004215
Mn	55	3	He	529.273	6.0006	171489.59	0.0113	0.004215
Fe	57	3	He	5117.648	2.6164	76793.91	0.0005	0.004099
Fe	57	3	He	4977.979	2.5451	77811.07	0.0005	0.004099
Fe	57	3	He	5328.543	2.7241	77849.93	0.0005	0.004099
Co	59	3	He	496.575	25.7353	755355.07	0.0518	0.004913
Co	59	3	He	478.972	24.8231	758913.27	0.0518	0.004913
Co	59	3	He	510.91	26.478	756708.82	0.0518	0.004913
Ni	60	3	He	509.562	3.8029	217509.90	0.0075	0.006695
Ni	60	3	He	506.833	3.7826	215359.57	0.0075	0.006695
Ni	60	3	He	503.505	3.7578	216587.56	0.0075	0.006695
Cu	63	3	He	504.679	10.898	623314.72	0.0216	0.003198
Cu	63	3	He	507.567	10.9604	624019.25	0.0216	0.003198
Cu	63	3	He	506.053	10.9277	629835.89	0.0216	0.003198
Zn	66	3	He	507.736	1.3383	76544.48	0.0026	0.002954
Zn	66	3	He	513.563	1.3536	77067.66	0.0026	0.002954
Zn	66	3	He	515.642	1.3591	78333.70	0.0026	0.002954
As	75	3	He	488.928	0.9551	54625.75	0.002	0.0004943
As	75	3	He	496.444	0.9698	55211.86	0.002	0.0004943
As	75	3	He	486.769	0.9509	54804.35	0.002	0.0004943
Sr	88	3	He	52.378	0.4256	23299.66	0.0081	0.0006852
Sr	88	3	He	50.051	0.4068	22498.57	0.0081	0.0006852
Sr	88	3	He	50.123	0.4073	22168.02	0.0081	0.0006852
Mo	98	3	He	48.688	0.9972	54587.21	0.0205	0.0005587
Mo	98	3	He	48.814	0.9998	55299.52	0.0205	0.0005587
Mo	98	3	He	50.685	1.0381	56494.37	0.0205	0.0005587
Ag	107	3	He	51.631	2.223	121687.03	0.043	0.0004367
Ag	107	3	He	50.741	2.1847	120839.40	0.043	0.0004367
Ag	107	3	He	50.017	2.1535	117199.44	0.043	0.0004367
Cd	111	3	He	54.402	0.2719	14885.98	0.005	1.253E-05
Cd	111	3	He	54.709	0.2735	15126.23	0.005	1.253E-05
Cd	111	3	He	53.786	0.2689	14631.73	0.005	1.253E-05
Sn	120	3	He	50.746	0.7551	41332.45	0.0146	0.01334
Sn	120	3	He	53.786	0.7995	44221.44	0.0146	0.01334
Sn	120	3	He	52.348	0.7785	42365.62	0.0146	0.01334
Sb	121	3	He	51.598	0.7356	40269.19	0.0142	0.001484
Sb	121	3	He	52.249	0.7449	41202.23	0.0142	0.001484
Sb	121	3	He	53.96	0.7692	41864.07	0.0142	0.001484
Ba	137	3	He	505.724	2.3302	127559.10	0.0046	0.000374
Ba	137	3	He	493.766	2.2751	125844.70	0.0046	0.000374
Ba	137	3	He	497.101	2.2905	124654.90	0.0046	0.000374
Tl	205	3	He	50.769	1.433	271755.19	0.0282	0.00021
Tl	205	3	He	50.898	1.4367	275085.45	0.0282	0.00021
Tl	205	3	He	50.014	1.4117	271797.75	0.0282	0.00021
Pb	208	3	He	50.857	1.8948	193703.75	0.0372	0.0009772
Pb	208	3	He	51.101	1.9039	194616.89	0.0372	0.0009772
Pb	208	3	He	50.045	1.8645	191978.63	0.0372	0.0009772
U	238	3	He	52.989	2.2106	419214.92	0.0417	8.729E-05
U	238	3	He	51.797	2.1609	413758.43	0.0417	8.729E-05
U	238	3	He	50.394	2.1024	404763.90	0.0417	8.729E-05
Sc	45	1	No Gas			1784324.04		
Sc	45	1	No Gas			1806418.10		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1768874.50		
Ge	72	1	No Gas			921964.21		
Ge	72	1	No Gas			930268.81		
Ge	72	1	No Gas			915337.02		
Sc	45	2	H2			131792.99		
Sc	45	2	H2			132467.93		
Sc	45	2	H2			131550.69		
Ge	72	2	H2			112913.99		
Ge	72	2	H2			112711.98		
Ge	72	2	H2			114325.71		
In	115	2	H2			274292.05		
In	115	2	H2			271801.97		
In	115	2	H2			274527.59		
Sc	45	3	He			29350.99		
Sc	45	3	He			30572.83		
Sc	45	3	He			28578.74		
Ge	72	3	He			57195.15		
Ge	72	3	He			56934.10		
Ge	72	3	He			57636.59		
In	115	3	He			55030.14		
In	115	3	He			55622.31		
In	115	3	He			54718.84		
Tb	159	3	He			252808.84		
Tb	159	3	He			249359.10		
Tb	159	3	He			246912.05		
Bi	209	3	He			189635.68		
Bi	209	3	He			191472.97		
Bi	209	3	He			192527.38		

Quantitation Report

Data File Name	018_ICB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:37:51 PM
Sample Name	ICB 4613416
Sample Type	ICB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

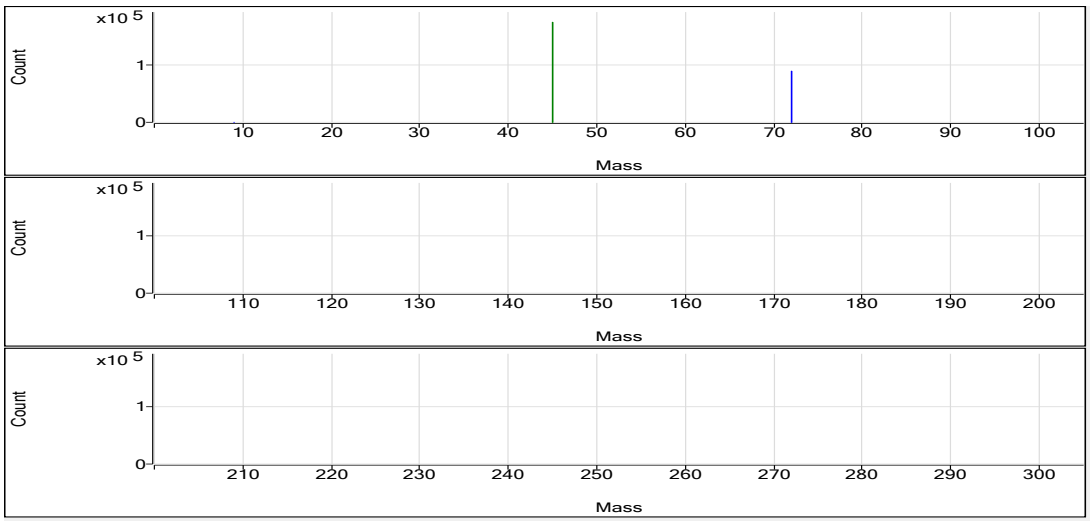
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.054	ppb	32.5	60.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	78.5	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	2.488	ppb	198.7	7648.88	0.2711	Pulse	0.1000	3
Mg	24	45	He	-0.769	ppb	N/A	113.33	0.0040	Pulse	0.1000	3
Al	27	45	He	1.960	ppb	50.0	66.67	0.0024	Pulse	0.1000	3
K	39	45	He	10.387	ppb	396.0	10510.82	0.3728	Pulse	0.1000	3
Ca	44	45	He	-1.622	ppb	N/A	70.00	0.0025	Pulse	0.1000	3
Ti	47	45	He	2.063	ppb	78.3	33.33	0.0012	Pulse	0.1000	3
V	51	45	He	0.064	ppb	130.6	364.01	0.0129	Pulse	0.5000	3
Cr	52	45	He	0.179	ppb	134.9	2050.22	0.0726	Pulse	0.1000	3
Mn	55	45	He	0.138	ppb	110.0	163.34	0.0058	Pulse	0.1000	3
Fe	57	45	He	1.214	ppb	167.3	133.34	0.0047	Pulse	0.1000	3
Co	59	45	He	0.083	ppb	53.5	260.01	0.0092	Pulse	0.1000	3
Ni	60	72	He	0.028	ppb	477.2	380.02	0.0069	Pulse	0.1000	3
Cu	63	72	He	0.065	ppb	96.1	253.34	0.0046	Pulse	0.1000	3
Zn	66	72	He	0.606	ppb	106.2	250.01	0.0045	Pulse	0.1000	3
As	75	72	He	0.150	ppb	31.9	43.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.000	ppb	2720.3	36.67	0.0007	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	30598.6	30.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	85.3	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.099	ppb	36.1	786.71	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.076	ppb	42.8	136.67	0.0026	Pulse	0.1000	3
Ba	137	115	He	0.083	ppb	87.2	40.00	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.025	ppb	32.0	176.68	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.024	ppb	24.3	360.01	0.0019	Pulse	0.1000	3
U	238	209	He	0.005	ppb	85.7	60.00	0.0003	Pulse	0.1000	3

ISTD Table:

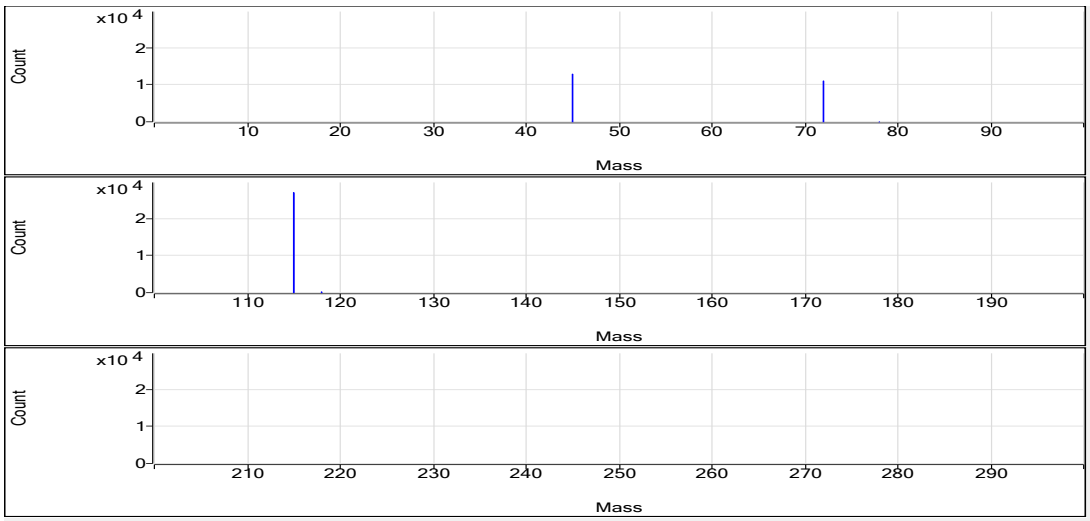
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1755843.78	0.7	99.7	Analog	0.1000	3
No Gas	Ge	72	899474.60	0.9	100.8	Pulse	0.1000	3
H2	Sc	45	129256.52	0.6	101.5	Pulse	0.1000	3
H2	Ge	72	110659.54	0.6	103.2	Pulse	0.1000	3
H2	In	115	270612.61	0.7	101.6	Pulse	0.1000	3
He	Sc	45	28224.69	1.6	99.0	Pulse	0.1000	3
He	Ge	72	55077.02	1.2	99.5	Pulse	0.1000	3
He	In	115	53160.19	1.4	99.0	Pulse	0.1000	3
He	Tb	159	246693.90	0.9	100.4	Pulse	0.1000	3
He	Bi	209	191491.89	1.9	100.3	Pulse	0.1000	3

No Gas

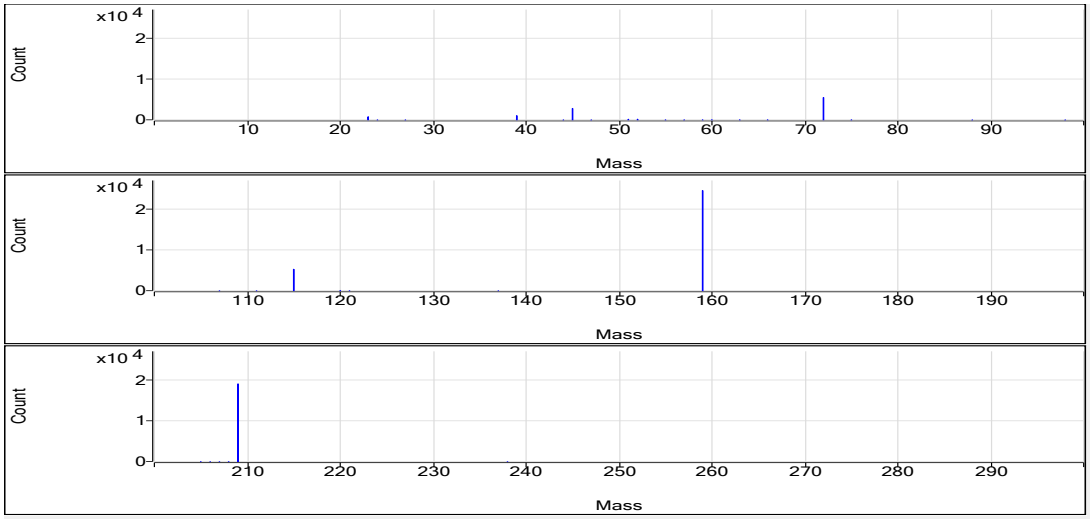


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.068	0	70.00	0.0004	1.287E-05
Be	9	1	No Gas	0.06	0	64.00	0.0004	1.287E-05
Be	9	1	No Gas	0.034	0	46.00	0.0004	1.287E-05
Se	78	2	H2	0.024	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.025	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.086	0	5.33	0.0004	1.451E-05
Na	23	3	He	6.554	0.2814	7842.35	0.0025	0.2648
Na	23	3	He	3.927	0.2748	7712.20	0.0025	0.2648
Na	23	3	He	-3.017	0.2572	7392.08	0.0025	0.2648
Mg	24	3	He	-0.822	0.0039	110.00	0.0013	0.005032
Mg	24	3	He	-0.573	0.0043	120.00	0.0013	0.005032
Mg	24	3	He	-0.913	0.0038	110.00	0.0013	0.005032
Al	27	3	He	1.471	0.0022	60.00	0.0004	0.001519
Al	27	3	He	3.088	0.0029	80.00	0.0004	0.001519
Al	27	3	He	1.32	0.0021	60.00	0.0004	0.001519
K	39	3	He	45.661	0.4071	11344.80	0.001	0.3627
K	39	3	He	20.286	0.3824	10734.29	0.001	0.3627
K	39	3	He	-34.787	0.3289	9453.37	0.001	0.3627
Ca	44	3	He	-7.197	0.0022	60.00	0.0001	0.002571
Ca	44	3	He	-1.328	0.0025	70.00	0.0001	0.002571
Ca	44	3	He	3.658	0.0028	80.00	0.0001	0.002571
Ti	47	3	He	3.398	0.0018	50.00	0.0005	0.0002328
Ti	47	3	He	0.269	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	2.522	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.066	0.0129	360.01	0.0201	0.0116
V	51	3	He	-0.02	0.0112	314.01	0.0201	0.0116
V	51	3	He	0.147	0.0145	418.01	0.0201	0.0116
Cr	52	3	He	0.272	0.075	2090.24	0.0257	0.06801
Cr	52	3	He	-0.095	0.0656	1840.17	0.0257	0.06801
Cr	52	3	He	0.36	0.0773	2220.25	0.0257	0.06801
Mn	55	3	He	0.166	0.0061	170.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	-0.026	0.0039	110.00	0.0113	0.004215
Mn	55	3	He	0.273	0.0073	210.01	0.0113	0.004215
Fe	57	3	He	1.813	0.005	140.01	0.0005	0.004099
Fe	57	3	He	-1.05	0.0036	100.00	0.0005	0.004099
Fe	57	3	He	2.878	0.0056	160.01	0.0005	0.004099
Co	59	3	He	0.058	0.0079	220.01	0.0518	0.004913
Co	59	3	He	0.056	0.0078	220.01	0.0518	0.004913
Co	59	3	He	0.134	0.0118	340.02	0.0518	0.004913
Ni	60	3	He	0.184	0.0081	440.02	0.0075	0.006695
Ni	60	3	He	-0.057	0.0063	350.02	0.0075	0.006695
Ni	60	3	He	-0.042	0.0064	350.02	0.0075	0.006695
Cu	63	3	He	0.098	0.0053	290.01	0.0216	0.003198
Cu	63	3	He	-0.007	0.003	170.01	0.0216	0.003198
Cu	63	3	He	0.105	0.0055	300.01	0.0216	0.003198
Zn	66	3	He	0.479	0.0042	230.01	0.0026	0.002954
Zn	66	3	He	0.035	0.003	170.01	0.0026	0.002954
Zn	66	3	He	1.303	0.0064	350.02	0.0026	0.002954
As	75	3	He	0.197	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.151	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.102	0.0007	38.00	0.002	0.0004943
Sr	88	3	He	-0.014	0.0006	30.00	0.0081	0.0006852
Sr	88	3	He	0.008	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.007	0.0007	40.00	0.0081	0.0006852
Mo	98	3	He	-0.018	0.0002	10.00	0.0205	0.0005587
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	0.027	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	-0.01	0	0.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.068	0.0143	750.05	0.0146	0.01334
Sn	120	3	He	0.139	0.0154	820.05	0.0146	0.01334
Sn	120	3	He	0.092	0.0147	790.04	0.0146	0.01334
Sb	121	3	He	0.084	0.0027	140.01	0.0142	0.001484
Sb	121	3	He	0.041	0.0021	110.00	0.0142	0.001484
Sb	121	3	He	0.105	0.003	160.01	0.0142	0.001484
Ba	137	3	He	0.126	0.001	50.00	0.0046	0.000374
Ba	137	3	He	0.122	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.001	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.034	0.0012	230.01	0.0282	0.00021
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Tl	205	3	He	0.021	0.0008	150.01	0.0282	0.00021
Pb	208	3	He	0.018	0.0016	190.01	0.0372	0.0009772
Pb	208	3	He	0.025	0.0019	180.01	0.0372	0.0009772
Pb	208	3	He	0.03	0.0021	210.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.011	0.0005	100.01	0.0417	8.729E-05
Sc	45	1	No Gas			1770302.32		
Sc	45	1	No Gas			1752126.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1745102.16		
Ge	72	1	No Gas			905898.66		
Ge	72	1	No Gas			902500.14		
Ge	72	1	No Gas			890024.99		
Sc	45	2	H2			129955.90		
Sc	45	2	H2			128472.56		
Sc	45	2	H2			129341.09		
Ge	72	2	H2			111270.25		
Ge	72	2	H2			109869.54		
Ge	72	2	H2			110838.82		
In	115	2	H2			270357.93		
In	115	2	H2			272559.10		
In	115	2	H2			268920.80		
Sc	45	3	He			27867.46		
Sc	45	3	He			28067.57		
Sc	45	3	He			28739.04		
Ge	72	3	He			54575.19		
Ge	72	3	He			55800.08		
Ge	72	3	He			54855.78		
In	115	3	He			52318.97		
In	115	3	He			53362.96		
In	115	3	He			53815.16		
Tb	159	3	He			248838.08		
Tb	159	3	He			246599.80		
Tb	159	3	He			244643.82		
Bi	209	3	He			194353.36		
Bi	209	3	He			192681.97		
Bi	209	3	He			187440.33		

Quantitation Report

Data File Name	022_LLC.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:49:12 PM
Sample Name	CRI 4659443
Sample Type	CRI
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

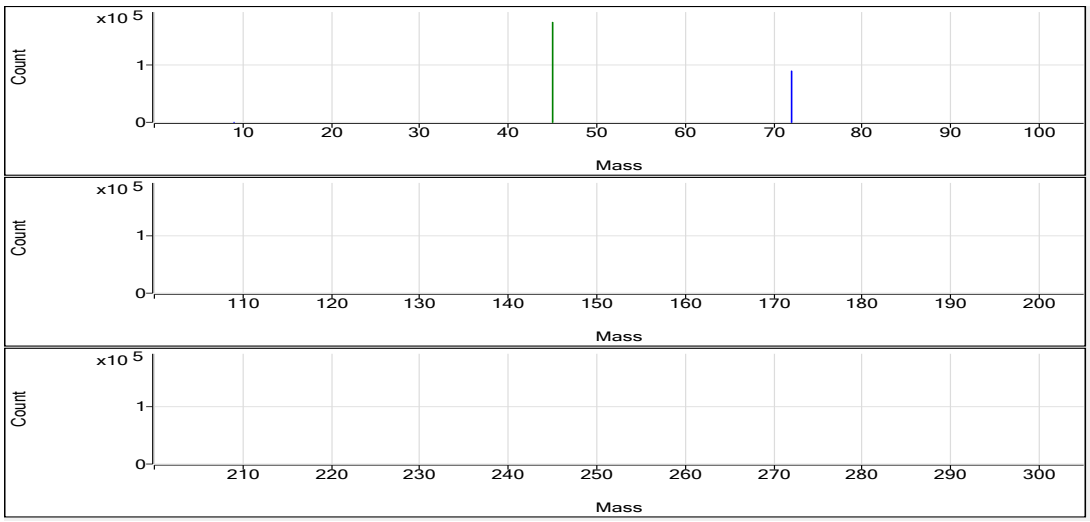
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.529	ppb	12.7	388.68	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.033	ppb	2.5	46.22	0.0004	Pulse	1.5000	3
Na	23	45	He	201.576	ppb	8.9	22624.60	0.7746	Pulse	0.1000	3
Mg	24	45	He	48.071	ppb	6.5	2000.21	0.0685	Pulse	0.1000	3
Al	27	45	He	27.311	ppb	21.4	386.69	0.0133	Pulse	0.1000	3
K	39	45	He	197.369	ppb	11.2	16242.93	0.5545	Pulse	0.1000	3
Ca	44	45	He	98.161	ppb	38.2	240.01	0.0083	Pulse	0.1000	3
Ti	47	45	He	9.818	ppb	37.4	140.01	0.0047	Pulse	0.1000	3
V	51	45	He	1.963	ppb	9.0	1488.09	0.0510	Pulse	0.5000	3
Cr	52	45	He	2.525	ppb	11.1	3883.98	0.1329	Pulse	0.1000	3
Mn	55	45	He	2.165	ppb	18.3	836.72	0.0287	Pulse	0.1000	3
Fe	57	45	He	52.820	ppb	21.4	903.39	0.0311	Pulse	0.1000	3
Co	59	45	He	0.497	ppb	11.4	900.06	0.0307	Pulse	0.1000	3
Ni	60	72	He	1.234	ppb	29.2	886.72	0.0159	Pulse	0.1000	3
Cu	63	72	He	1.162	ppb	4.4	1580.15	0.0283	Pulse	0.1000	3
Zn	66	72	He	11.106	ppb	8.7	1796.85	0.0322	Pulse	0.1000	3
As	75	72	He	2.273	ppb	5.2	275.33	0.0049	Pulse	0.5000	3
Sr	88	115	He	1.047	ppb	9.6	503.36	0.0092	Pulse	0.1000	3
Mo	98	115	He	0.513	ppb	16.4	603.37	0.0111	Pulse	0.1000	3
Ag	107	115	He	0.524	ppb	5.6	1260.11	0.0230	Pulse	0.1000	3
Cd	111	115	He	0.446	ppb	4.7	122.67	0.0022	Pulse	0.5000	3
Sn	120	115	He	2.175	ppb	3.2	2470.31	0.0451	Pulse	0.1000	3
Sb	121	115	He	1.030	ppb	1.7	883.40	0.0161	Pulse	0.1000	3
Ba	137	115	He	2.114	ppb	12.6	553.37	0.0101	Pulse	0.1000	3
Tl	205	209	He	0.503	ppb	0.1	2773.75	0.0144	Pulse	0.1000	3
Pb	208	209	He	0.505	ppb	6.8	3810.37	0.0198	Pulse	0.1000	3
U	238	209	He	1.010	ppb	3.2	8126.18	0.0422	Pulse	0.1000	3

ISTD Table:

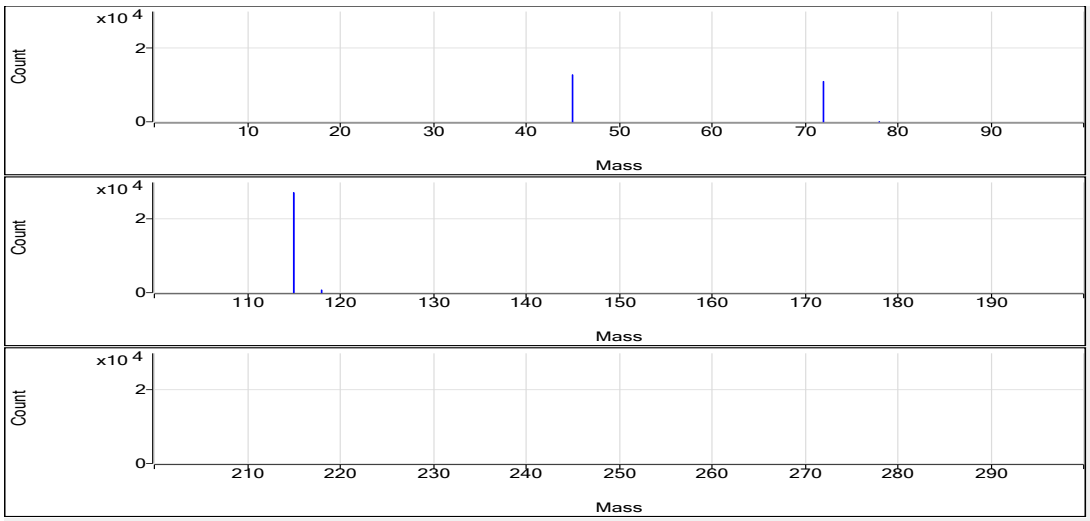
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1756621.07	1.4	99.7	Analog	0.1000	3
No Gas	Ge	72	901787.54	1.0	101.0	Pulse	0.1000	3
H2	Sc	45	128443.49	1.6	100.9	Pulse	0.1000	3
H2	Ge	72	110390.47	2.2	103.0	Pulse	0.1000	3
H2	In	115	273278.13	1.1	102.6	Pulse	0.1000	3
He	Sc	45	29267.07	5.0	102.7	Pulse	0.1000	3
He	Ge	72	55846.50	0.7	100.9	Pulse	0.1000	3
He	In	115	54734.64	2.6	102.0	Pulse	0.1000	3
He	Tb	159	248072.77	1.8	100.9	Pulse	0.1000	3
He	Bi	209	192443.28	0.8	100.8	Pulse	0.1000	3

No Gas

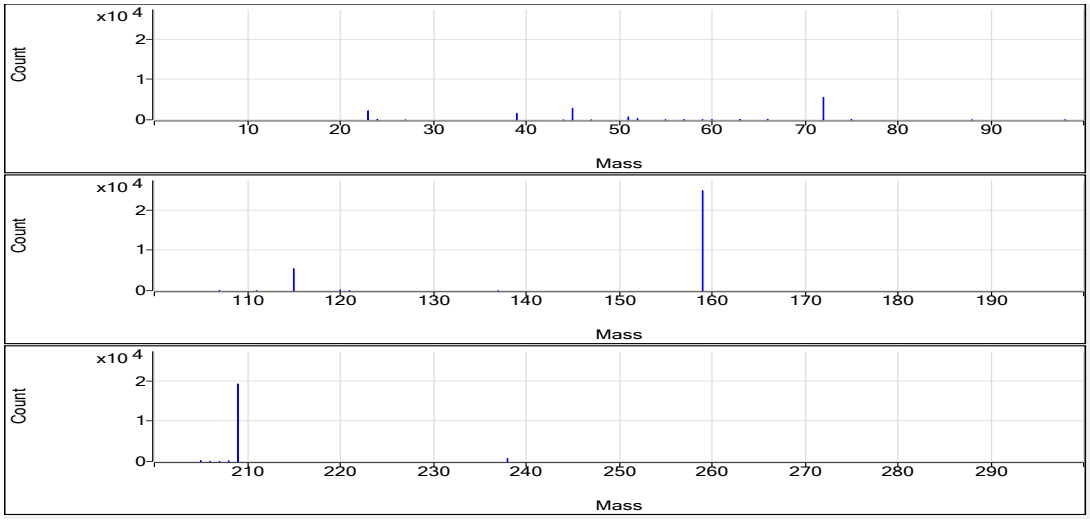


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.457	0.0002	340.01	0.0004	1.287E-05
Be	9	1	No Gas	0.54	0.0002	390.01	0.0004	1.287E-05
Be	9	1	No Gas	0.59	0.0002	436.01	0.0004	1.287E-05
Se	78	2	H2	1.023	0.0004	45.33	0.0004	1.451E-05
Se	78	2	H2	1.063	0.0004	48.67	0.0004	1.451E-05
Se	78	2	H2	1.013	0.0004	44.67	0.0004	1.451E-05
Na	23	3	He	181.384	0.7235	22337.46	0.0025	0.2648
Na	23	3	He	207.243	0.7889	22838.43	0.0025	0.2648
Na	23	3	He	216.1	0.8113	22697.91	0.0025	0.2648
Mg	24	3	He	44.537	0.0638	1970.19	0.0013	0.005032
Mg	24	3	He	49.322	0.0701	2030.23	0.0013	0.005032
Mg	24	3	He	50.355	0.0715	2000.20	0.0013	0.005032
Al	27	3	He	21.265	0.0107	330.02	0.0004	0.001519
Al	27	3	He	27.719	0.0135	390.02	0.0004	0.001519
Al	27	3	He	32.949	0.0157	440.02	0.0004	0.001519
K	39	3	He	220.109	0.5766	17801.45	0.001	0.3627
K	39	3	He	175.9	0.5336	15448.59	0.001	0.3627
K	39	3	He	196.099	0.5533	15478.74	0.001	0.3627
Ca	44	3	He	56.107	0.0058	180.01	0.0001	0.002571
Ca	44	3	He	110.348	0.009	260.01	0.0001	0.002571
Ca	44	3	He	128.028	0.01	280.01	0.0001	0.002571
Ti	47	3	He	13.591	0.0065	200.01	0.0005	0.0002328
Ti	47	3	He	6.258	0.0031	90.00	0.0005	0.0002328
Ti	47	3	He	9.606	0.0046	130.01	0.0005	0.0002328
V	51	3	He	1.776	0.0472	1458.08	0.0201	0.0116
V	51	3	He	1.984	0.0514	1488.09	0.0201	0.0116
V	51	3	He	2.127	0.0543	1518.09	0.0201	0.0116
Cr	52	3	He	2.219	0.125	3860.65	0.0257	0.06801
Cr	52	3	He	2.771	0.1392	4030.68	0.0257	0.06801
Cr	52	3	He	2.584	0.1344	3760.62	0.0257	0.06801
Mn	55	3	He	1.744	0.024	740.05	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2.22	0.0294	850.05	0.0113	0.004215
Mn	55	3	He	2.531	0.0329	920.07	0.0113	0.004215
Fe	57	3	He	40.198	0.0246	760.05	0.0005	0.004099
Fe	57	3	He	56.262	0.0328	950.06	0.0005	0.004099
Fe	57	3	He	61.998	0.0357	1000.07	0.0005	0.004099
Co	59	3	He	0.549	0.0334	1030.07	0.0518	0.004913
Co	59	3	He	0.505	0.0311	900.07	0.0518	0.004913
Co	59	3	He	0.436	0.0275	770.05	0.0518	0.004913
Ni	60	3	He	1.645	0.0189	1050.07	0.0075	0.006695
Ni	60	3	He	1.083	0.0148	830.05	0.0075	0.006695
Ni	60	3	He	0.974	0.014	780.05	0.0075	0.006695
Cu	63	3	He	1.122	0.0274	1520.14	0.0216	0.003198
Cu	63	3	He	1.146	0.0279	1570.13	0.0216	0.003198
Cu	63	3	He	1.219	0.0295	1650.17	0.0216	0.003198
Zn	66	3	He	9.993	0.0292	1620.15	0.0026	0.002954
Zn	66	3	He	11.593	0.0334	1880.20	0.0026	0.002954
Zn	66	3	He	11.734	0.0338	1890.19	0.0026	0.002954
As	75	3	He	2.409	0.0052	288.00	0.002	0.0004943
As	75	3	He	2.188	0.0048	268.00	0.002	0.0004943
As	75	3	He	2.221	0.0048	270.00	0.002	0.0004943
Sr	88	3	He	1.125	0.0098	550.03	0.0081	0.0006852
Sr	88	3	He	1.083	0.0095	520.03	0.0081	0.0006852
Sr	88	3	He	0.934	0.0083	440.02	0.0081	0.0006852
Mo	98	3	He	0.443	0.0096	540.03	0.0205	0.0005587
Mo	98	3	He	0.489	0.0106	580.03	0.0205	0.0005587
Mo	98	3	He	0.606	0.013	690.05	0.0205	0.0005587
Ag	107	3	He	0.533	0.0234	1310.12	0.043	0.0004367
Ag	107	3	He	0.548	0.024	1320.11	0.043	0.0004367
Ag	107	3	He	0.492	0.0216	1150.10	0.043	0.0004367
Cd	111	3	He	0.469	0.0024	132.00	0.005	1.253E-05
Cd	111	3	He	0.427	0.0021	118.00	0.005	1.253E-05
Cd	111	3	He	0.441	0.0022	118.00	0.005	1.253E-05
Sn	120	3	He	2.115	0.0443	2480.31	0.0146	0.01334
Sn	120	3	He	2.252	0.0463	2540.34	0.0146	0.01334
Sn	120	3	He	2.159	0.0449	2390.28	0.0146	0.01334
Sb	121	3	He	1.012	0.0159	890.07	0.0142	0.001484
Sb	121	3	He	1.047	0.0164	900.06	0.0142	0.001484
Sb	121	3	He	1.031	0.0162	860.06	0.0142	0.001484
Ba	137	3	He	1.894	0.0091	510.03	0.0046	0.000374
Ba	137	3	He	2.409	0.0115	630.04	0.0046	0.000374
Ba	137	3	He	2.039	0.0098	520.03	0.0046	0.000374
Tl	205	3	He	0.503	0.0144	2790.41	0.0282	0.00021
Tl	205	3	He	0.504	0.0144	2750.40	0.0282	0.00021
Tl	205	3	He	0.503	0.0144	2780.43	0.0282	0.00021
Pb	208	3	He	0.527	0.0206	2010.24	0.0372	0.0009772
Pb	208	3	He	0.465	0.0183	2020.24	0.0372	0.0009772
Pb	208	3	He	0.523	0.0205	2030.23	0.0372	0.0009772
U	238	3	He	1.019	0.0426	8252.89	0.0417	8.729E-05
U	238	3	He	1.037	0.0433	8262.91	0.0417	8.729E-05
U	238	3	He	0.975	0.0407	7862.74	0.0417	8.729E-05
Sc	45	1	No Gas			1763887.94		
Sc	45	1	No Gas			1728518.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1777456.85		
Ge	72	1	No Gas			901663.42		
Ge	72	1	No Gas			893036.08		
Ge	72	1	No Gas			910663.11		
Sc	45	2	H2			128070.84		
Sc	45	2	H2			130612.05		
Sc	45	2	H2			126647.57		
Ge	72	2	H2			109296.13		
Ge	72	2	H2			113154.33		
Ge	72	2	H2			108720.94		
In	115	2	H2			272314.70		
In	115	2	H2			276555.29		
In	115	2	H2			270964.39		
Sc	45	3	He			30873.93		
Sc	45	3	He			28949.85		
Sc	45	3	He			27977.42		
Ge	72	3	He			55418.23		
Ge	72	3	He			56221.46		
Ge	72	3	He			55899.80		
In	115	3	He			56063.58		
In	115	3	He			54939.25		
In	115	3	He			53252.95		
Tb	159	3	He			252576.09		
Tb	159	3	He			247752.11		
Tb	159	3	He			243890.11		
Bi	209	3	He			193695.15		
Bi	209	3	He			190659.68		
Bi	209	3	He			192975.02		

Quantitation Report

Data File Name	023ICSA.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:52:06 PM
Sample Name	ICSA 4618236
Sample Type	ICSA
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

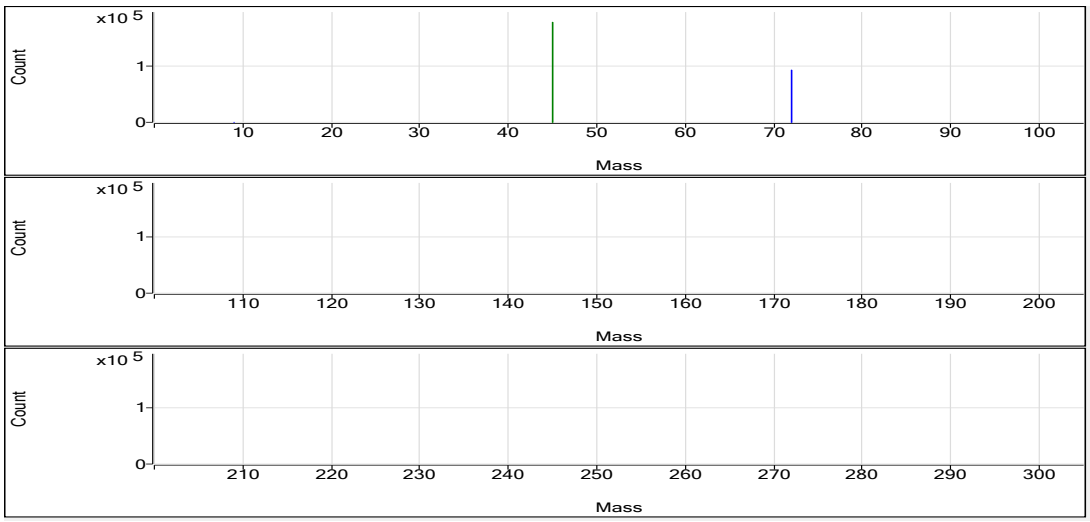
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.027	ppb	9.9	42.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.097	ppb	38.6	6.00	0.0001	Pulse	1.5000	3
Na	23	45	He	258479.667	ppb	2.2	18571283.47	653.8810	Analog	0.1000	3
Mg	24	45	He	103783.130	ppb	3.3	3889921.19	136.9828	Analog	0.1000	3
Al	27	45	He	107948.124	ppb	3.1	1322030.81	46.5543	Analog	0.1000	3
K	39	45	He	104764.975	ppb	3.0	2900790.48	102.1483	Analog	0.1000	3
Ca	44	45	He	309792.644	ppb	2.3	511185.61	17.9988	Pulse	0.1000	3
Ti	47	45	He	2116.205	ppb	3.2	27623.56	0.9727	Pulse	0.1000	3
V	51	45	He	0.050	ppb	68.3	358.01	0.0126	Pulse	0.5000	3
Cr	52	45	He	3.305	ppb	4.3	4344.16	0.1529	Pulse	0.1000	3
Mn	55	45	He	1.136	ppb	21.3	486.69	0.0171	Pulse	0.1000	3
Fe	57	45	He	261413.692	ppb	3.2	3789369.74	133.4426	Analog	0.1000	3
Co	59	45	He	0.259	ppb	17.6	520.03	0.0183	Pulse	0.1000	3
Ni	60	72	He	0.642	ppb	18.9	653.38	0.0115	Pulse	0.1000	3
Cu	63	72	He	0.101	ppb	23.8	306.68	0.0054	Pulse	0.1000	3
Zn	66	72	He	1.012	ppb	21.0	320.01	0.0056	Pulse	0.1000	3
As	75	72	He	0.227	ppb	32.3	53.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	2.245	ppb	4.7	976.74	0.0189	Pulse	0.1000	3
Mo	98	115	He	2176.806	ppb	1.8	2302624.18	44.5591	Analog	0.1000	3
Ag	107	115	He	0.039	ppb	42.3	110.01	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.219	ppb	25.6	57.33	0.0011	Pulse	0.5000	3
Sn	120	115	He	0.306	ppb	25.0	920.06	0.0178	Pulse	0.1000	3
Sb	121	115	He	0.190	ppb	10.3	216.68	0.0042	Pulse	0.1000	3
Ba	137	115	He	0.620	ppb	12.4	166.68	0.0032	Pulse	0.1000	3
Tl	205	209	He	0.010	ppb	84.0	90.00	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.103	ppb	16.9	873.38	0.0048	Pulse	0.1000	3
U	238	209	He	0.063	ppb	2.0	490.03	0.0027	Pulse	0.1000	3

ISTD Table:

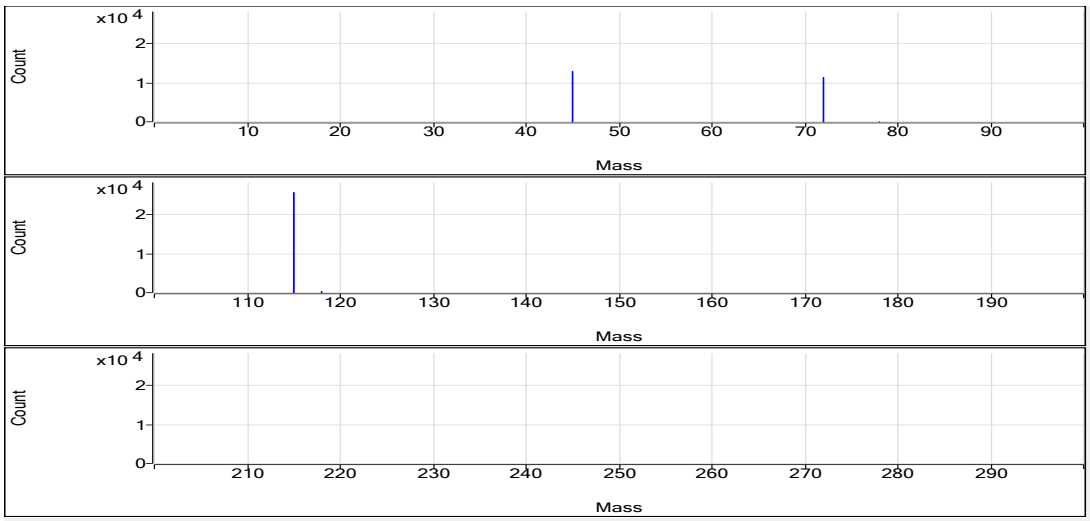
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1793189.09	0.5	101.8	Analog	0.1000	3
No Gas	Ge	72	937060.17	0.9	105.0	Pulse	0.1000	3
H2	Sc	45	129488.76	1.0	101.7	Pulse	0.1000	3
H2	Ge	72	114092.99	2.1	106.4	Pulse	0.1000	3
H2	In	115	257294.22	1.2	96.6	Pulse	0.1000	3
He	Sc	45	28411.82	2.5	99.7	Pulse	0.1000	3
He	Ge	72	56944.17	1.3	102.9	Pulse	0.1000	3
He	In	115	51686.98	1.9	96.3	Pulse	0.1000	3
He	Tb	159	242227.41	1.2	98.6	Pulse	0.1000	3
He	Bi	209	180832.15	0.4	94.8	Pulse	0.1000	3

No Gas

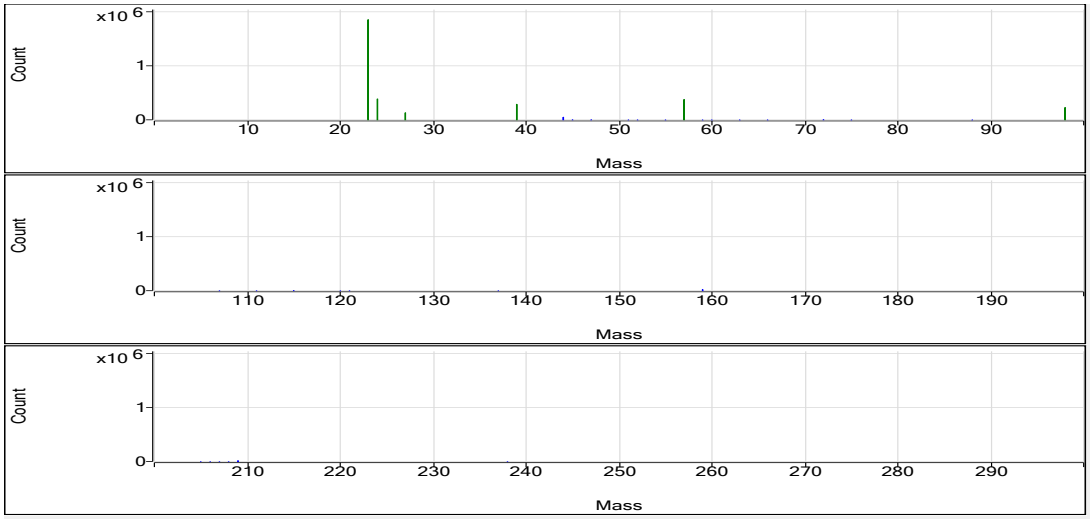


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0	40.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.027	0	42.00	0.0004	1.287E-05
Se	78	2	H2	0.055	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.11	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.126	0.0001	7.33	0.0004	1.451E-05
Na	23	3	He	251947.016	637.3619	18623682.22	0.0025	0.2648
Na	23	3	He	261375.088	661.2026	18505652.22	0.0025	0.2648
Na	23	3	He	262116.896	663.0784	18584515.97	0.0025	0.2648
Mg	24	3	He	99985.04	131.9699	3856154.32	0.0013	0.005032
Mg	24	3	He	104754.021	138.2642	3869721.50	0.0013	0.005032
Mg	24	3	He	106610.329	140.7143	3943887.75	0.0013	0.005032
Al	27	3	He	104128.71	44.9072	1312185.14	0.0004	0.001519
Al	27	3	He	109104.167	47.0528	1316908.73	0.0004	0.001519
Al	27	3	He	110611.496	47.7029	1336998.57	0.0004	0.001519
K	39	3	He	101138.209	98.6246	2881806.83	0.001	0.3627
K	39	3	He	106828.953	104.1535	2915035.58	0.001	0.3627
K	39	3	He	106327.762	103.6666	2905529.02	0.001	0.3627
Ca	44	3	He	301619.063	17.524	512049.72	0.0001	0.002571
Ca	44	3	He	314976.301	18.2999	512175.62	0.0001	0.002571
Ca	44	3	He	312782.568	18.1725	509331.48	0.0001	0.002571
Ti	47	3	He	2044.993	0.94	27466.50	0.0005	0.0002328
Ti	47	3	He	2126.477	0.9774	27356.37	0.0005	0.0002328
Ti	47	3	He	2177.144	1.0007	28047.82	0.0005	0.0002328
V	51	3	He	0.016	0.0119	348.01	0.0201	0.0116
V	51	3	He	0.084	0.0133	372.01	0.0201	0.0116
V	51	3	He	0.051	0.0126	354.01	0.0201	0.0116
Cr	52	3	He	3.174	0.1496	4370.84	0.0257	0.06801
Cr	52	3	He	3.458	0.1569	4390.84	0.0257	0.06801
Cr	52	3	He	3.283	0.1524	4270.79	0.0257	0.06801
Mn	55	3	He	1.41	0.0202	590.03	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.953	0.015	420.02	0.0113	0.004215
Mn	55	3	He	1.045	0.0161	450.03	0.0113	0.004215
Fe	57	3	He	251874.814	128.5735	3756909.94	0.0005	0.004099
Fe	57	3	He	267463.116	136.5305	3821197.76	0.0005	0.004099
Fe	57	3	He	264903.145	135.2238	3790001.51	0.0005	0.004099
Co	59	3	He	0.209	0.0157	460.02	0.0518	0.004913
Co	59	3	He	0.298	0.0204	570.03	0.0518	0.004913
Co	59	3	He	0.27	0.0189	530.03	0.0518	0.004913
Ni	60	3	He	0.777	0.0125	710.05	0.0075	0.006695
Ni	60	3	He	0.543	0.0107	620.04	0.0075	0.006695
Ni	60	3	He	0.605	0.0112	630.04	0.0075	0.006695
Cu	63	3	He	0.121	0.0058	330.02	0.0216	0.003198
Cu	63	3	He	0.109	0.0055	320.01	0.0216	0.003198
Cu	63	3	He	0.074	0.0048	270.01	0.0216	0.003198
Zn	66	3	He	0.949	0.0055	310.01	0.0026	0.002954
Zn	66	3	He	1.249	0.0062	360.02	0.0026	0.002954
Zn	66	3	He	0.838	0.0052	290.01	0.0026	0.002954
As	75	3	He	0.179	0.0008	48.00	0.002	0.0004943
As	75	3	He	0.191	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.311	0.0011	62.00	0.002	0.0004943
Sr	88	3	He	2.134	0.018	930.08	0.0081	0.0006852
Sr	88	3	He	2.345	0.0197	1000.07	0.0081	0.0006852
Sr	88	3	He	2.257	0.019	1000.07	0.0081	0.0006852
Mo	98	3	He	2170.557	44.4312	2295751.53	0.0205	0.0005587
Mo	98	3	He	2218.497	45.4126	2304082.93	0.0205	0.0005587
Mo	98	3	He	2141.364	43.8337	2308038.09	0.0205	0.0005587
Ag	107	3	He	0.053	0.0027	140.01	0.043	0.0004367
Ag	107	3	He	0.045	0.0024	120.01	0.043	0.0004367
Ag	107	3	He	0.021	0.0013	70.00	0.043	0.0004367
Cd	111	3	He	0.261	0.0013	68.00	0.005	1.253E-05
Cd	111	3	He	0.155	0.0008	40.00	0.005	1.253E-05
Cd	111	3	He	0.241	0.0012	64.00	0.005	1.253E-05
Sn	120	3	He	0.345	0.0184	950.06	0.0146	0.01334
Sn	120	3	He	0.355	0.0185	940.06	0.0146	0.01334
Sn	120	3	He	0.218	0.0165	870.06	0.0146	0.01334
Sb	121	3	He	0.168	0.0039	200.01	0.0142	0.001484
Sb	121	3	He	0.2	0.0043	220.01	0.0142	0.001484
Sb	121	3	He	0.203	0.0044	230.01	0.0142	0.001484
Ba	137	3	He	0.633	0.0033	170.01	0.0046	0.000374
Ba	137	3	He	0.689	0.0035	180.01	0.0046	0.000374
Ba	137	3	He	0.537	0.0028	150.01	0.0046	0.000374
Tl	205	3	He	0	0.0002	40.00	0.0282	0.00021
Tl	205	3	He	0.014	0.0006	110.00	0.0282	0.00021
Tl	205	3	He	0.016	0.0007	120.01	0.0282	0.00021
Pb	208	3	He	0.121	0.0055	580.04	0.0372	0.0009772
Pb	208	3	He	0.104	0.0049	430.03	0.0372	0.0009772
Pb	208	3	He	0.086	0.0042	400.02	0.0372	0.0009772
U	238	3	He	0.061	0.0027	480.03	0.0417	8.729E-05
U	238	3	He	0.064	0.0028	500.03	0.0417	8.729E-05
U	238	3	He	0.063	0.0027	490.03	0.0417	8.729E-05
Sc	45	1	No Gas			1791463.25		
Sc	45	1	No Gas			1802448.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1785655.29		
Ge	72	1	No Gas			946242.17		
Ge	72	1	No Gas			934129.36		
Ge	72	1	No Gas			930808.97		
Sc	45	2	H2			128341.91		
Sc	45	2	H2			130984.74		
Sc	45	2	H2			129139.64		
Ge	72	2	H2			111361.84		
Ge	72	2	H2			115957.74		
Ge	72	2	H2			114959.40		
In	115	2	H2			253772.42		
In	115	2	H2			258871.97		
In	115	2	H2			259238.28		
Sc	45	3	He			29219.95		
Sc	45	3	He			27987.87		
Sc	45	3	He			28027.63		
Ge	72	3	He			56873.96		
Ge	72	3	He			57716.86		
Ge	72	3	He			56241.70		
In	115	3	He			51676.42		
In	115	3	He			50743.28		
In	115	3	He			52660.55		
Tb	159	3	He			245579.72		
Tb	159	3	He			240133.94		
Tb	159	3	He			240968.57		
Bi	209	3	He			181027.99		
Bi	209	3	He			181395.33		
Bi	209	3	He			180073.12		

Quantitation Report

Data File Name	024ICSB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:54:04 PM
Sample Name	ICSAB 4588922
Sample Type	ICSAB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

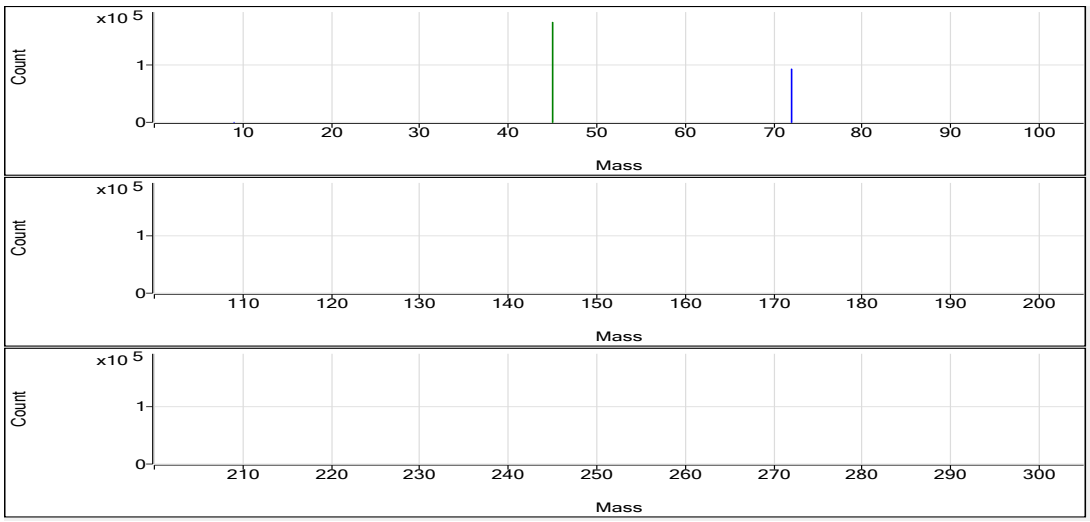
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.050	ppb	39.4	56.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	101.782	ppb	4.5	4492.27	0.0398	Pulse	1.5000	3
Na	23	45	He	248793.722	ppb	2.2	18283406.40	629.3882	Analog	0.1000	3
Mg	24	45	He	100485.163	ppb	1.7	3853044.32	132.6300	Analog	0.1000	3
Al	27	45	He	104362.886	ppb	0.7	1307675.13	45.0082	Analog	0.1000	3
K	39	45	He	101586.815	ppb	2.3	2877602.87	99.0605	Analog	0.1000	3
Ca	44	45	He	300846.476	ppb	1.8	507776.71	17.4791	Pulse	0.1000	3
Ti	47	45	He	2100.739	ppb	1.7	28057.76	0.9656	Pulse	0.1000	3
V	51	45	He	209.621	ppb	2.3	122476.94	4.2162	Pulse	0.5000	3
Cr	52	45	He	209.473	ppb	2.5	158371.32	5.4517	Pulse	0.1000	3
Mn	55	45	He	203.464	ppb	2.6	67082.89	2.3094	Pulse	0.1000	3
Fe	57	45	He	253209.166	ppb	2.0	3754857.55	129.2546	Analog	0.1000	3
Co	59	45	He	199.046	ppb	2.4	299742.13	10.3186	Pulse	0.1000	3
Ni	60	72	He	199.056	ppb	2.0	84024.98	1.4897	Pulse	0.1000	3
Cu	63	72	He	199.681	ppb	2.5	243314.26	4.3139	Pulse	0.1000	3
Zn	66	72	He	103.069	ppb	3.3	15455.46	0.2740	Pulse	0.1000	3
As	75	72	He	98.829	ppb	2.5	10910.87	0.1934	Pulse	0.5000	3
Sr	88	115	He	2.207	ppb	8.6	970.07	0.0186	Pulse	0.1000	3
Mo	98	115	He	2154.296	ppb	3.4	2298789.23	44.0984	Analog	0.1000	3
Ag	107	115	He	51.838	ppb	2.1	116361.77	2.2319	Pulse	0.1000	3
Cd	111	115	He	102.762	ppb	2.0	26781.63	0.5137	Pulse	0.5000	3
Sn	120	115	He	0.338	ppb	27.1	953.40	0.0183	Pulse	0.1000	3
Sb	121	115	He	0.175	ppb	37.2	206.68	0.0040	Pulse	0.1000	3
Ba	137	115	He	0.518	ppb	35.7	143.34	0.0028	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	13.7	123.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.099	ppb	9.4	836.71	0.0046	Pulse	0.1000	3
U	238	209	He	0.063	ppb	27.1	486.70	0.0027	Pulse	0.1000	3

ISTD Table:

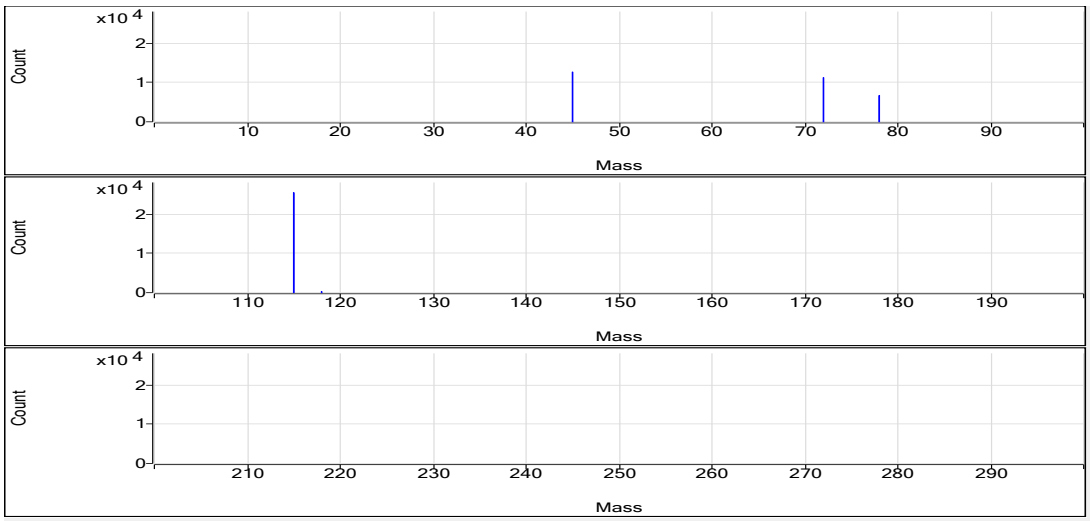
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735464.82	0.5	98.5	Analog	0.1000	3
No Gas	Ge	72	925248.27	0.8	103.7	Pulse	0.1000	3
H2	Sc	45	127195.15	0.8	99.9	Pulse	0.1000	3
H2	Ge	72	112829.00	0.9	105.2	Pulse	0.1000	3
H2	In	115	255188.13	0.7	95.8	Pulse	0.1000	3
He	Sc	45	29056.38	1.7	101.9	Pulse	0.1000	3
He	Ge	72	56418.45	1.8	102.0	Pulse	0.1000	3
He	In	115	52148.96	1.7	97.2	Pulse	0.1000	3
He	Tb	159	241171.01	0.2	98.1	Pulse	0.1000	3
He	Bi	209	180132.75	0.8	94.4	Pulse	0.1000	3

No Gas

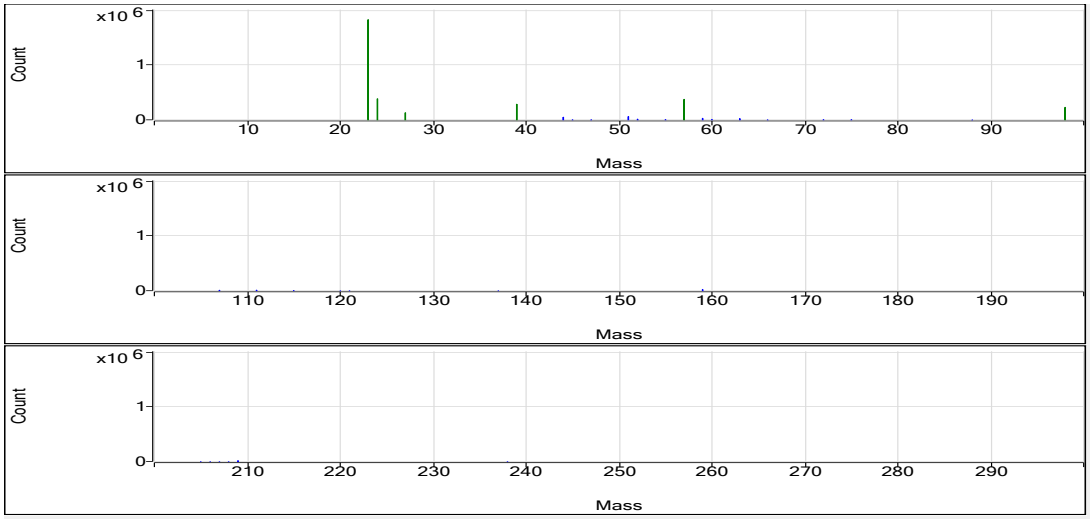


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.055	0	60.00	0.0004	1.287E-05
Be	9	1	No Gas	0.067	0	68.00	0.0004	1.287E-05
Se	78	2	H2	97.307	0.0381	4318.66	0.0004	1.451E-05
Se	78	2	H2	106.47	0.0417	4648.76	0.0004	1.451E-05
Se	78	2	H2	101.569	0.0397	4509.38	0.0004	1.451E-05
Na	23	3	He	254931.988	644.91	18379030.98	0.0025	0.2648
Na	23	3	He	246491.901	623.5676	18289479.73	0.0025	0.2648
Na	23	3	He	244957.277	619.687	18181708.48	0.0025	0.2648
Mg	24	3	He	102389.692	135.1437	3851405.88	0.0013	0.005032
Mg	24	3	He	100082.594	132.0987	3874505.57	0.0013	0.005032
Mg	24	3	He	98983.204	130.6476	3833221.51	0.0013	0.005032
Al	27	3	He	105185.028	45.3627	1292773.57	0.0004	0.001519
Al	27	3	He	103971.627	44.8394	1315157.79	0.0004	0.001519
Al	27	3	He	103932.002	44.8223	1315094.04	0.0004	0.001519
K	39	3	He	104298.74	101.6953	2898173.08	0.001	0.3627
K	39	3	He	100628.255	98.1292	2878167.14	0.001	0.3627
K	39	3	He	99833.45	97.357	2856468.39	0.001	0.3627
Ca	44	3	He	307182.129	17.8471	508618.55	0.0001	0.002571
Ca	44	3	He	297153.431	17.2646	506376.36	0.0001	0.002571
Ca	44	3	He	298203.868	17.3256	508335.23	0.0001	0.002571
Ti	47	3	He	2096.011	0.9634	27456.58	0.0005	0.0002328
Ti	47	3	He	2067.041	0.9501	27867.49	0.0005	0.0002328
Ti	47	3	He	2139.164	0.9833	28849.20	0.0005	0.0002328
V	51	3	He	215.181	4.3277	123334.36	0.0201	0.0116
V	51	3	He	206.995	4.1635	122117.99	0.0201	0.0116
V	51	3	He	206.689	4.1574	121978.48	0.0201	0.0116
Cr	52	3	He	214.305	5.5759	158904.59	0.0257	0.06801
Cr	52	3	He	210.069	5.467	160349.31	0.0257	0.06801
Cr	52	3	He	204.045	5.3122	155860.06	0.0257	0.06801
Mn	55	3	He	209.336	2.3759	67709.44	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	199.123	2.2602	66291.73	0.0113	0.004215
Mn	55	3	He	201.932	2.292	67247.51	0.0113	0.004215
Fe	57	3	He	258904.819	132.1619	3766429.63	0.0005	0.004099
Fe	57	3	He	251363.288	128.3123	3763451.19	0.0005	0.004099
Fe	57	3	He	249359.39	127.2895	3734691.82	0.0005	0.004099
Co	59	3	He	204.536	10.6031	302172.71	0.0518	0.004913
Co	59	3	He	196.9	10.2074	299387.16	0.0518	0.004913
Co	59	3	He	195.703	10.1454	297666.52	0.0518	0.004913
Ni	60	3	He	200.589	1.5011	84678.75	0.0075	0.006695
Ni	60	3	He	194.446	1.4553	83602.24	0.0075	0.006695
Ni	60	3	He	202.133	1.5126	83793.96	0.0075	0.006695
Cu	63	3	He	202.104	4.3661	246301.85	0.0216	0.003198
Cu	63	3	He	193.968	4.1905	240728.12	0.0216	0.003198
Cu	63	3	He	202.972	4.3849	242912.81	0.0216	0.003198
Zn	66	3	He	100.643	0.2676	15098.38	0.0026	0.002954
Zn	66	3	He	101.661	0.2703	15528.88	0.0026	0.002954
Zn	66	3	He	106.904	0.2841	15739.11	0.0026	0.002954
As	75	3	He	99.678	0.1951	11006.26	0.002	0.0004943
As	75	3	He	96.024	0.188	10798.13	0.002	0.0004943
As	75	3	He	100.786	0.1973	10928.22	0.002	0.0004943
Sr	88	3	He	2.062	0.0174	890.06	0.0081	0.0006852
Sr	88	3	He	2.421	0.0203	1070.08	0.0081	0.0006852
Sr	88	3	He	2.138	0.018	950.07	0.0081	0.0006852
Mo	98	3	He	2239.059	45.8335	2342942.93	0.0205	0.0005587
Mo	98	3	He	2118.053	43.3565	2282442.15	0.0205	0.0005587
Mo	98	3	He	2105.777	43.1052	2270982.62	0.0205	0.0005587
Ag	107	3	He	53.099	2.2862	116866.21	0.043	0.0004367
Ag	107	3	He	51.369	2.2117	116431.59	0.043	0.0004367
Ag	107	3	He	51.045	2.1977	115787.50	0.043	0.0004367
Cd	111	3	He	104.751	0.5236	26765.58	0.005	1.253E-05
Cd	111	3	He	100.628	0.503	26479.03	0.005	1.253E-05
Cd	111	3	He	102.908	0.5144	27100.27	0.005	1.253E-05
Sn	120	3	He	0.345	0.0184	940.08	0.0146	0.01334
Sn	120	3	He	0.426	0.0196	1030.07	0.0146	0.01334
Sn	120	3	He	0.243	0.0169	890.06	0.0146	0.01334
Sb	121	3	He	0.239	0.0049	250.02	0.0142	0.001484
Sb	121	3	He	0.109	0.003	160.01	0.0142	0.001484
Sb	121	3	He	0.176	0.004	210.01	0.0142	0.001484
Ba	137	3	He	0.726	0.0037	190.01	0.0046	0.000374
Ba	137	3	He	0.372	0.0021	110.01	0.0046	0.000374
Ba	137	3	He	0.454	0.0025	130.01	0.0046	0.000374
Tl	205	3	He	0.018	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.014	0.0006	110.00	0.0282	0.00021
Tl	205	3	He	0.018	0.0007	130.01	0.0282	0.00021
Pb	208	3	He	0.092	0.0044	410.02	0.0372	0.0009772
Pb	208	3	He	0.094	0.0045	480.03	0.0372	0.0009772
Pb	208	3	He	0.109	0.005	460.03	0.0372	0.0009772
U	238	3	He	0.063	0.0027	490.03	0.0417	8.729E-05
U	238	3	He	0.046	0.002	360.02	0.0417	8.729E-05
U	238	3	He	0.08	0.0034	610.04	0.0417	8.729E-05
Sc	45	1	No Gas			1740987.63		
Sc	45	1	No Gas			1740444.66		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1724962.16		
Ge	72	1	No Gas			916963.19		
Ge	72	1	No Gas			927621.94		
Ge	72	1	No Gas			931159.67		
Sc	45	2	H2			126071.17		
Sc	45	2	H2			127827.41		
Sc	45	2	H2			127686.88		
Ge	72	2	H2			113426.86		
Ge	72	2	H2			111592.26		
Ge	72	2	H2			113467.89		
In	115	2	H2			255727.63		
In	115	2	H2			256707.16		
In	115	2	H2			253129.59		
Sc	45	3	He			28498.60		
Sc	45	3	He			29330.39		
Sc	45	3	He			29340.15		
Ge	72	3	He			56411.69		
Ge	72	3	He			57445.88		
Ge	72	3	He			55397.78		
In	115	3	He			51125.20		
In	115	3	He			52650.81		
In	115	3	He			52690.89		
Tb	159	3	He			240999.47		
Tb	159	3	He			240875.27		
Tb	159	3	He			241638.30		
Bi	209	3	He			181595.76		
Bi	209	3	He			180258.61		
Bi	209	3	He			178543.88		

Quantitation Report

Data File Name	025_LRC.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:56:02 PM
Sample Name	LRC 4661368
Sample Type	LRC
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

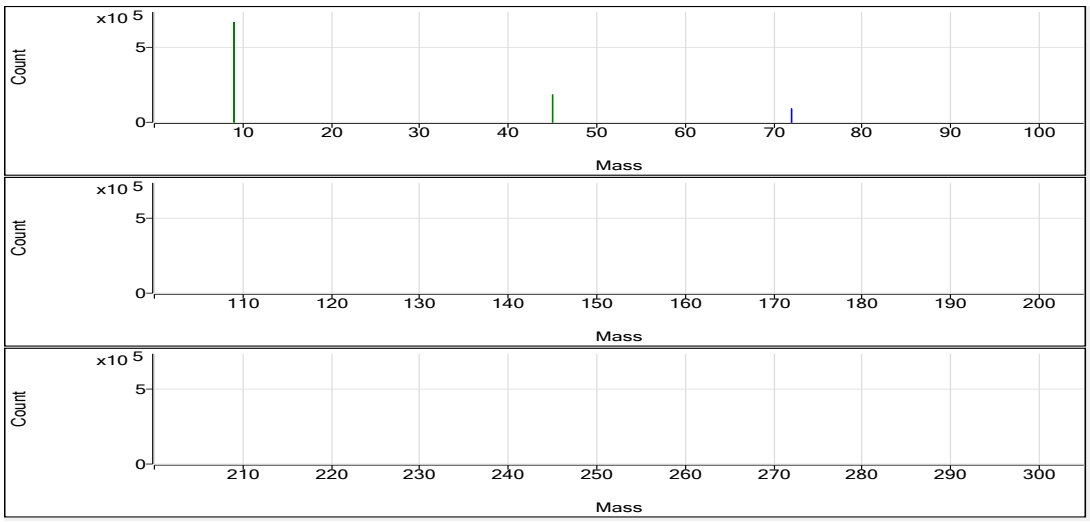
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1841.263	ppb	5.7	1339369.79	0.7253	Analog	0.5000	3
Se	78	72	H2	1947.840	ppb	0.7	84182.52	0.7619	Pulse	1.5000	3
Na	23	45	He	189198.034	ppb	0.9	14017051.04	478.6889	Analog	0.1000	3
Mg	24	45	He	191190.705	ppb	1.0	7389438.43	252.3474	Analog	0.1000	3
Al	27	45	He	197542.506	ppb	1.3	2494704.18	85.1920	Analog	0.1000	3
K	39	45	He	191427.533	ppb	1.2	5456592.00	186.3462	Analog	0.1000	3
Ca	44	45	He	195809.047	ppb	1.1	333162.54	11.3773	Pulse	0.1000	3
Ti	47	45	He	1993.623	ppb	2.0	26832.08	0.9164	Pulse	0.1000	3
V	51	45	He	1946.227	ppb	0.6	1143472.04	39.0493	Pulse	0.5000	3
Cr	52	45	He	1919.110	ppb	1.3	1446256.70	49.3912	Analog	0.1000	3
Mn	55	45	He	5828.494	ppb	0.9	1933838.93	66.0380	Analog	0.1000	3
Fe	57	45	He	155222.676	ppb	1.0	2320345.54	79.2374	Analog	0.1000	3
Co	59	45	He	1861.352	ppb	1.3	2824264.85	96.4520	Analog	0.1000	3
Ni	60	72	He	1901.787	ppb	2.3	787750.43	14.1750	Pulse	0.1000	3
Cu	63	72	He	1939.695	ppb	2.0	2327325.18	41.8767	Analog	0.1000	3
Zn	66	72	He	1924.826	ppb	2.8	281468.12	5.0653	Pulse	0.1000	3
As	75	72	He	1911.199	ppb	2.7	207377.15	3.7319	Pulse	0.5000	3
Sr	88	115	He	1979.893	ppb	1.0	849060.82	16.0637	Pulse	0.1000	3
Mo	98	115	He	2047.795	ppb	0.3	2215778.56	41.9183	Analog	0.1000	3
Ag	107	115	He	1987.168	ppb	0.7	4521473.58	85.5414	Analog	0.1000	3
Cd	111	115	He	1937.306	ppb	1.0	511823.01	9.6834	Pulse	0.5000	3
Sn	120	115	He	1986.309	ppb	2.0	1535166.85	29.0455	Mix	0.1000	3
Sb	121	115	He	1929.040	ppb	0.8	1450831.33	27.4484	Pulse	0.1000	3
Ba	137	115	He	1959.939	ppb	1.0	477281.35	9.0298	Pulse	0.1000	3
Tl	205	209	He	2063.724	ppb	1.9	10395601.72	58.2439	Analog	0.1000	3
Pb	208	209	He	2073.672	ppb	1.0	13783782.71	77.2197	Analog	0.1000	3
U	238	209	He	206.406	ppb	1.6	1536945.34	8.6108	Pulse	0.1000	3

ISTD Table:

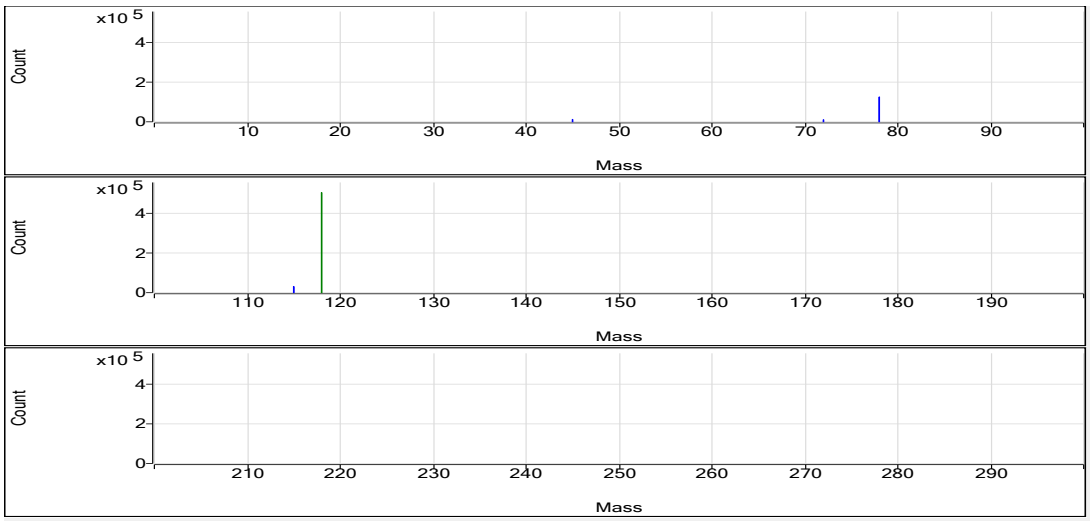
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1846784.82	0.2	104.9	Analog	0.1000	3
No Gas	Ge	72	911971.97	0.4	102.2	Pulse	0.1000	3
H2	Sc	45	126475.51	0.2	99.3	Pulse	0.1000	3
H2	Ge	72	110492.28	0.4	103.0	Pulse	0.1000	3
H2	In	115	318754.41	1.0	119.7	Pulse	0.1000	3
He	Sc	45	29283.59	0.8	102.7	Pulse	0.1000	3
He	Ge	72	55595.72	2.8	100.5	Pulse	0.1000	3
He	In	115	52860.18	1.2	98.5	Pulse	0.1000	3
He	Tb	159	240964.41	0.6	98.0	Pulse	0.1000	3
He	Bi	209	178518.76	1.6	93.5	Pulse	0.1000	3

No Gas

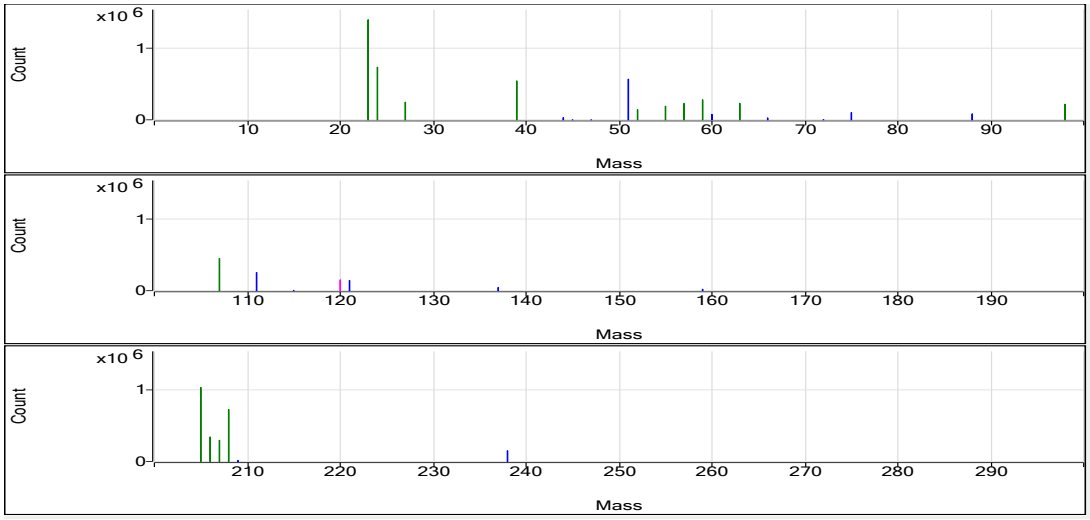


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1729.787	0.6814	1259971.75	0.0004	1.287E-05
Be	9	1	No Gas	1855.497	0.7309	1350625.38	0.0004	1.287E-05
Be	9	1	No Gas	1938.504	0.7636	1407512.25	0.0004	1.287E-05
Se	78	2	H2	1947.656	0.7618	83884.48	0.0004	1.451E-05
Se	78	2	H2	1933.437	0.7562	83515.88	0.0004	1.451E-05
Se	78	2	H2	1962.426	0.7676	85147.19	0.0004	1.451E-05
Na	23	3	He	189475.547	479.3906	14017453.54	0.0025	0.2648
Na	23	3	He	190723.407	482.5461	14027498.54	0.0025	0.2648
Na	23	3	He	187395.149	474.1299	14006201.04	0.0025	0.2648
Mg	24	3	He	193165.339	254.9536	7454881.14	0.0013	0.005032
Mg	24	3	He	190884.371	251.9431	7323924.27	0.0013	0.005032
Mg	24	3	He	189522.404	250.1455	7389509.89	0.0013	0.005032
Al	27	3	He	200417.307	86.4318	2527277.46	0.0004	0.001519
Al	27	3	He	196045.759	84.5465	2457746.99	0.0004	0.001519
Al	27	3	He	196164.451	84.5977	2499088.09	0.0004	0.001519
K	39	3	He	193306.664	188.1719	5502173.67	0.001	0.3627
K	39	3	He	192145.186	187.0434	5437307.42	0.001	0.3627
K	39	3	He	188830.748	183.8232	5430294.92	0.001	0.3627
Ca	44	3	He	198214.925	11.5171	336761.99	0.0001	0.002571
Ca	44	3	He	195044.522	11.3329	329445.74	0.0001	0.002571
Ca	44	3	He	194167.693	11.282	333279.88	0.0001	0.002571
Ti	47	3	He	2001.837	0.9202	26905.60	0.0005	0.0002328
Ti	47	3	He	2029.317	0.9328	27115.91	0.0005	0.0002328
Ti	47	3	He	1949.715	0.8962	26474.72	0.0005	0.0002328
V	51	3	He	1953.695	39.1991	1146188.13	0.0201	0.0116
V	51	3	He	1951.696	39.159	1138343.50	0.0201	0.0116
V	51	3	He	1933.289	38.7898	1145884.50	0.0201	0.0116
Cr	52	3	He	1933.354	49.7573	1454910.76	0.0257	0.06801
Cr	52	3	He	1933.698	49.7661	1446689.82	0.0257	0.06801
Cr	52	3	He	1890.28	48.6502	1437169.51	0.0257	0.06801
Mn	55	3	He	5885.7	66.6861	1949911.53	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5786.564	65.5629	1905899.03	0.0113	0.004215
Mn	55	3	He	5813.219	65.8649	1945706.22	0.0113	0.004215
Fe	57	3	He	157090.739	80.191	2344796.22	0.0005	0.004099
Fe	57	3	He	154161.214	78.6956	2287662.31	0.0005	0.004099
Fe	57	3	He	154416.075	78.8257	2328578.09	0.0005	0.004099
Co	59	3	He	1868.165	96.8051	2830594.33	0.0518	0.004913
Co	59	3	He	1881.164	97.4786	2833680.27	0.0518	0.004913
Co	59	3	He	1834.726	95.0724	2808519.96	0.0518	0.004913
Ni	60	3	He	1873.659	13.9655	786554.29	0.0075	0.006695
Ni	60	3	He	1951.066	14.5422	782841.63	0.0075	0.006695
Ni	60	3	He	1880.636	14.0175	793855.38	0.0075	0.006695
Cu	63	3	He	1931.179	41.6929	2348196.84	0.0216	0.003198
Cu	63	3	He	1982.29	42.7962	2303828.72	0.0216	0.003198
Cu	63	3	He	1905.615	41.141	2329949.97	0.0216	0.003198
Zn	66	3	He	1913.306	5.035	283575.76	0.0026	0.002954
Zn	66	3	He	1982.588	5.2172	280853.75	0.0026	0.002954
Zn	66	3	He	1878.583	4.9436	279974.84	0.0026	0.002954
As	75	3	He	1884.566	3.6799	207257.73	0.002	0.0004943
As	75	3	He	1969.717	3.8462	207048.70	0.002	0.0004943
As	75	3	He	1879.314	3.6697	207825.03	0.002	0.0004943
Sr	88	3	He	1956.879	15.877	851038.97	0.0081	0.0006852
Sr	88	3	He	1986.762	16.1195	847198.42	0.0081	0.0006852
Sr	88	3	He	1996.038	16.1947	848945.07	0.0081	0.0006852
Mo	98	3	He	2044.333	41.8475	2243105.44	0.0205	0.0005587
Mo	98	3	He	2043.561	41.8317	2198566.69	0.0205	0.0005587
Mo	98	3	He	2055.491	42.0759	2205663.56	0.0205	0.0005587
Ag	107	3	He	1971.739	84.8772	4549583.06	0.043	0.0004367
Ag	107	3	He	1988.749	85.6094	4499416.18	0.043	0.0004367
Ag	107	3	He	2001.016	86.1375	4515421.50	0.043	0.0004367
Cd	111	3	He	1914.725	9.5705	512997.78	0.005	1.253E-05
Cd	111	3	He	1948.768	9.7407	511944.69	0.005	1.253E-05
Cd	111	3	He	1948.425	9.7389	510526.56	0.005	1.253E-05
Sn	120	3	He	1949.68	28.5101	1528196.54	0.0146	0.01334
Sn	120	3	He	2029.499	29.6767	1559734.82	0.0146	0.01334
Sn	120	3	He	1979.749	28.9496	1517569.20	0.0146	0.01334
Sb	121	3	He	1910.788	27.1887	1457369.51	0.0142	0.001484
Sb	121	3	He	1935.913	27.5462	1447760.60	0.0142	0.001484
Sb	121	3	He	1940.418	27.6103	1447363.88	0.0142	0.001484
Ba	137	3	He	1940.329	8.9395	479172.14	0.0046	0.000374
Ba	137	3	He	1961.692	9.0379	475007.81	0.0046	0.000374
Ba	137	3	He	1977.795	9.1121	477664.09	0.0046	0.000374
Tl	205	3	He	2034.019	57.4056	10335963.60	0.0282	0.00021
Tl	205	3	He	2108.937	59.5199	10435099.22	0.0282	0.00021
Tl	205	3	He	2048.216	57.8063	10415742.34	0.0282	0.00021
Pb	208	3	He	2066.546	76.9543	7330946.77	0.0372	0.0009772
Pb	208	3	He	2096.64	78.0749	7267904.27	0.0372	0.0009772
Pb	208	3	He	2057.83	76.6297	7334086.77	0.0372	0.0009772
U	238	3	He	205.659	8.5796	1544774.35	0.0417	8.729E-05
U	238	3	He	209.996	8.7605	1535907.16	0.0417	8.729E-05
U	238	3	He	203.564	8.4922	1530154.51	0.0417	8.729E-05
Sc	45	1	No Gas			1849158.25		
Sc	45	1	No Gas			1847912.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1843284.04		
Ge	72	1	No Gas			908119.21		
Ge	72	1	No Gas			915714.67		
Ge	72	1	No Gas			912082.02		
Sc	45	2	H2			126151.85		
Sc	45	2	H2			126606.93		
Sc	45	2	H2			126667.75		
Ge	72	2	H2			110112.75		
Ge	72	2	H2			110435.08		
Ge	72	2	H2			110929.01		
In	115	2	H2			321313.49		
In	115	2	H2			319538.80		
In	115	2	H2			315410.93		
Sc	45	3	He			29240.15		
Sc	45	3	He			29069.76		
Sc	45	3	He			29540.85		
Ge	72	3	He			56321.32		
Ge	72	3	He			53832.53		
Ge	72	3	He			56633.31		
In	115	3	He			64299.33		
In	115	3	He			63475.63		
In	115	3	He			63044.09		
Tb	159	3	He			242115.89		
Tb	159	3	He			239184.43		
Tb	159	3	He			241592.91		
Bi	209	3	He			180051.56		
Bi	209	3	He			175321.05		
Bi	209	3	He			180183.67		

Quantitation Report

Data File Name	026SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:57:59 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

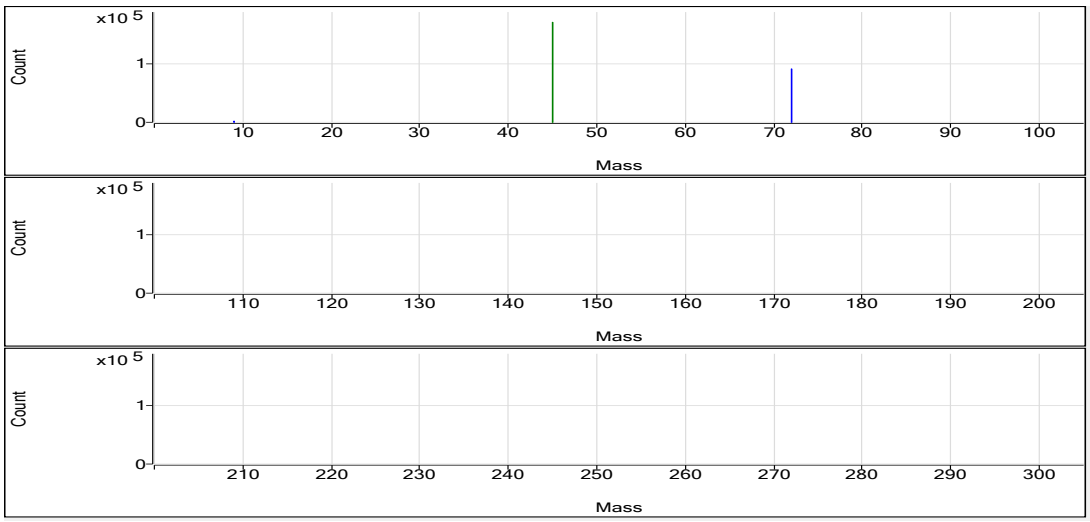
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	6.925	ppb	8.4	4703.44	0.0027	Pulse	0.5000	3
Se	78	72	H2	2.019	ppb	11.5	87.78	0.0008	Pulse	1.5000	3
Na	23	45	He	97.003	ppb	13.6	14193.96	0.5101	Pulse	0.1000	3
Mg	24	45	He	52.789	ppb	21.5	2080.23	0.0747	Pulse	0.1000	3
Al	27	45	He	54.434	ppb	47.5	696.71	0.0250	Pulse	0.1000	3
K	39	45	He	39.531	ppb	72.5	11161.27	0.4011	Pulse	0.1000	3
Ca	44	45	He	96.204	ppb	27.3	226.68	0.0082	Pulse	0.1000	3
Ti	47	45	He	1.323	ppb	90.8	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.544	ppb	19.5	626.69	0.0225	Pulse	0.5000	3
Cr	52	45	He	0.332	ppb	134.6	2130.24	0.0765	Pulse	0.1000	3
Mn	55	45	He	1.532	ppb	12.3	600.04	0.0216	Pulse	0.1000	3
Fe	57	45	He	64.230	ppb	35.2	1026.75	0.0369	Pulse	0.1000	3
Co	59	45	He	0.510	ppb	33.4	873.39	0.0314	Pulse	0.1000	3
Ni	60	72	He	0.617	ppb	43.6	626.70	0.0113	Pulse	0.1000	3
Cu	63	72	He	0.528	ppb	19.7	810.05	0.0146	Pulse	0.1000	3
Zn	66	72	He	0.085	ppb	493.6	176.67	0.0032	Pulse	0.1000	3
As	75	72	He	0.646	ppb	10.9	97.33	0.0018	Pulse	0.5000	3
Sr	88	115	He	0.399	ppb	11.0	206.68	0.0039	Pulse	0.1000	3
Mo	98	115	He	1.342	ppb	15.1	1480.14	0.0280	Pulse	0.1000	3
Ag	107	115	He	0.378	ppb	9.0	880.06	0.0167	Pulse	0.1000	3
Cd	111	115	He	0.459	ppb	28.1	122.00	0.0023	Pulse	0.5000	3
Sn	120	115	He	1.114	ppb	5.2	1560.15	0.0296	Pulse	0.1000	3
Sb	121	115	He	1.197	ppb	9.9	976.74	0.0185	Pulse	0.1000	3
Ba	137	115	He	0.451	ppb	56.3	130.01	0.0025	Pulse	0.1000	3
Tl	205	209	He	1.840	ppb	19.4	9817.52	0.0521	Pulse	0.1000	3
Pb	208	209	He	0.437	ppb	27.6	3250.28	0.0173	Pulse	0.1000	3
U	238	209	He	0.058	ppb	41.5	470.03	0.0025	Pulse	0.1000	3

ISTD Table:

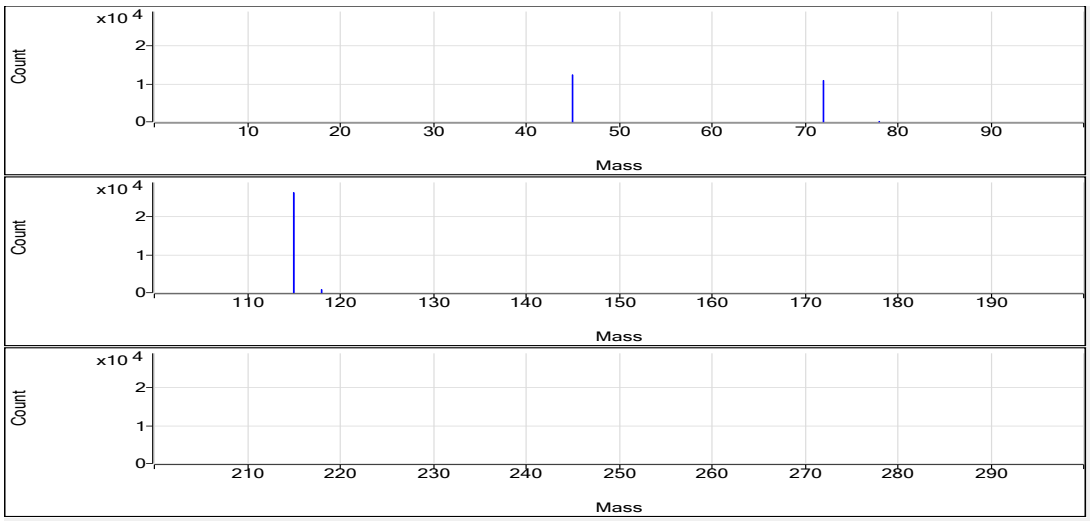
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1714797.73	1.6	97.4	Analog	0.1000	3
No Gas	Ge	72	915669.31	0.8	102.6	Pulse	0.1000	3
H2	Sc	45	124025.21	2.8	97.4	Pulse	0.1000	3
H2	Ge	72	109211.93	1.4	101.9	Pulse	0.1000	3
H2	In	115	264171.25	1.1	99.2	Pulse	0.1000	3
He	Sc	45	27814.03	1.0	97.6	Pulse	0.1000	3
He	Ge	72	55418.09	1.7	100.2	Pulse	0.1000	3
He	In	115	52633.06	3.2	98.1	Pulse	0.1000	3
He	Tb	159	241805.65	0.1	98.4	Pulse	0.1000	3
He	Bi	209	188237.16	0.4	98.6	Pulse	0.1000	3

No Gas

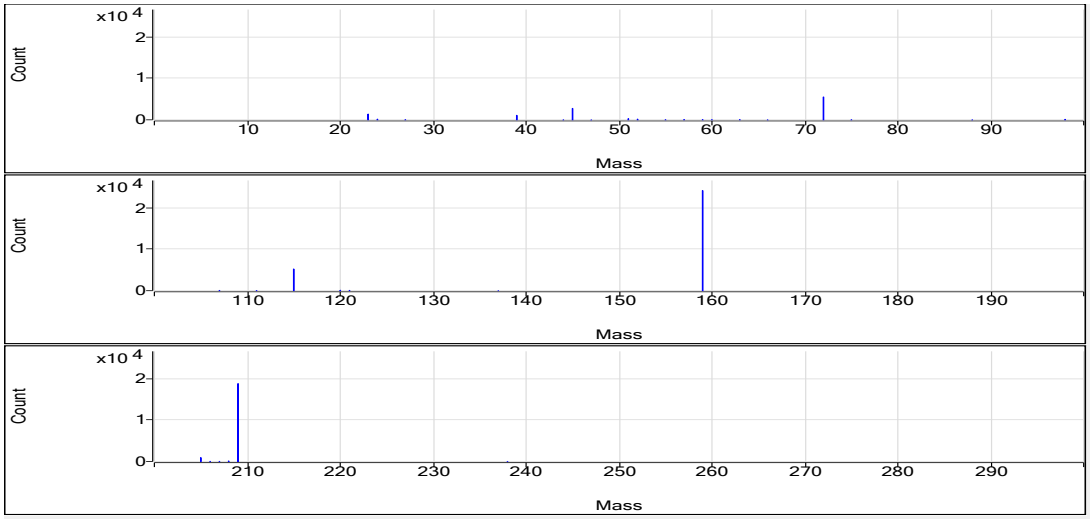


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	7.477	0.003	5166.92	0.0004	1.287E-05
Be	9	1	No Gas	6.98	0.0028	4698.77	0.0004	1.287E-05
Be	9	1	No Gas	6.318	0.0025	4244.63	0.0004	1.287E-05
Se	78	2	H2	2.274	0.0009	97.33	0.0004	1.451E-05
Se	78	2	H2	1.966	0.0008	86.67	0.0004	1.451E-05
Se	78	2	H2	1.818	0.0007	79.33	0.0004	1.451E-05
Na	23	3	He	111.476	0.5467	15378.51	0.0025	0.2648
Na	23	3	He	93.906	0.5023	13846.88	0.0025	0.2648
Na	23	3	He	85.627	0.4814	13356.49	0.0025	0.2648
Mg	24	3	He	65.422	0.0914	2570.32	0.0013	0.005032
Mg	24	3	He	49.513	0.0704	1940.19	0.0013	0.005032
Mg	24	3	He	43.432	0.0624	1730.18	0.0013	0.005032
Al	27	3	He	81.395	0.0366	1030.06	0.0004	0.001519
Al	27	3	He	51.999	0.0239	660.04	0.0004	0.001519
Al	27	3	He	29.909	0.0144	400.02	0.0004	0.001519
K	39	3	He	69.613	0.4304	12105.45	0.001	0.3627
K	39	3	He	36.4	0.3981	10974.41	0.001	0.3627
K	39	3	He	12.579	0.375	10403.96	0.001	0.3627
Ca	44	3	He	65.905	0.0064	180.01	0.0001	0.002571
Ca	44	3	He	111.86	0.0091	250.01	0.0001	0.002571
Ca	44	3	He	110.846	0.009	250.01	0.0001	0.002571
Ti	47	3	He	0.267	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	1.072	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	2.63	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.666	0.025	702.02	0.0201	0.0116
V	51	3	He	0.471	0.021	580.02	0.0201	0.0116
V	51	3	He	0.496	0.0216	598.02	0.0201	0.0116
Cr	52	3	He	0.771	0.0878	2470.30	0.0257	0.06801
Cr	52	3	He	0.346	0.0769	2120.23	0.0257	0.06801
Cr	52	3	He	-0.122	0.0649	1800.18	0.0257	0.06801
Mn	55	3	He	1.636	0.0228	640.04	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.645	0.0229	630.04	0.0113	0.004215
Mn	55	3	He	1.314	0.0191	530.03	0.0113	0.004215
Fe	57	3	He	81.127	0.0455	1280.10	0.0005	0.004099
Fe	57	3	He	72.992	0.0414	1140.10	0.0005	0.004099
Fe	57	3	He	38.572	0.0238	660.04	0.0005	0.004099
Co	59	3	He	0.694	0.0409	1150.09	0.0518	0.004913
Co	59	3	He	0.479	0.0297	820.06	0.0518	0.004913
Co	59	3	He	0.357	0.0234	650.03	0.0518	0.004913
Ni	60	3	He	0.86	0.0131	740.04	0.0075	0.006695
Ni	60	3	He	0.328	0.0091	500.02	0.0075	0.006695
Ni	60	3	He	0.661	0.0116	640.03	0.0075	0.006695
Cu	63	3	He	0.648	0.0172	970.06	0.0216	0.003198
Cu	63	3	He	0.462	0.0132	720.04	0.0216	0.003198
Cu	63	3	He	0.474	0.0134	740.05	0.0216	0.003198
Zn	66	3	He	0.56	0.0044	250.01	0.0026	0.002954
Zn	66	3	He	-0.08	0.0027	150.01	0.0026	0.002954
Zn	66	3	He	-0.226	0.0024	130.00	0.0026	0.002954
As	75	3	He	0.69	0.0018	104.00	0.002	0.0004943
As	75	3	He	0.683	0.0018	100.00	0.002	0.0004943
As	75	3	He	0.565	0.0016	88.00	0.002	0.0004943
Sr	88	3	He	0.413	0.004	220.01	0.0081	0.0006852
Sr	88	3	He	0.434	0.0042	220.01	0.0081	0.0006852
Sr	88	3	He	0.35	0.0035	180.01	0.0081	0.0006852
Mo	98	3	He	1.56	0.0325	1770.18	0.0205	0.0005587
Mo	98	3	He	1.308	0.0273	1430.13	0.0205	0.0005587
Mo	98	3	He	1.158	0.0243	1240.10	0.0205	0.0005587
Ag	107	3	He	0.416	0.0184	1000.07	0.043	0.0004367
Ag	107	3	He	0.363	0.0161	840.05	0.043	0.0004367
Ag	107	3	He	0.354	0.0157	800.05	0.043	0.0004367
Cd	111	3	He	0.607	0.003	166.00	0.005	1.253E-05
Cd	111	3	He	0.388	0.0019	102.00	0.005	1.253E-05
Cd	111	3	He	0.381	0.0019	98.00	0.005	1.253E-05
Sn	120	3	He	1.172	0.0305	1660.15	0.0146	0.01334
Sn	120	3	He	1.114	0.0296	1550.15	0.0146	0.01334
Sn	120	3	He	1.055	0.0288	1470.14	0.0146	0.01334
Sb	121	3	He	1.315	0.0202	1100.09	0.0142	0.001484
Sb	121	3	He	1.199	0.0185	970.07	0.0142	0.001484
Sb	121	3	He	1.078	0.0168	860.06	0.0142	0.001484
Ba	137	3	He	0.716	0.0037	200.01	0.0046	0.000374
Ba	137	3	He	0.209	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.429	0.0023	120.01	0.0046	0.000374
Tl	205	3	He	2.193	0.0621	11745.79	0.0282	0.00021
Tl	205	3	He	1.848	0.0524	9844.10	0.0282	0.00021
Tl	205	3	He	1.478	0.0419	7862.66	0.0282	0.00021
Pb	208	3	He	0.57	0.0222	2010.22	0.0372	0.0009772
Pb	208	3	He	0.407	0.0161	1660.17	0.0372	0.0009772
Pb	208	3	He	0.335	0.0134	1490.13	0.0372	0.0009772
U	238	3	He	0.082	0.0035	660.05	0.0417	8.729E-05
U	238	3	He	0.058	0.0025	470.02	0.0417	8.729E-05
U	238	3	He	0.034	0.0015	280.01	0.0417	8.729E-05
Sc	45	1	No Gas			1746621.54		
Sc	45	1	No Gas			1701010.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1696761.22		
Ge	72	1	No Gas			924291.16		
Ge	72	1	No Gas			909493.11		
Ge	72	1	No Gas			913223.66		
Sc	45	2	H2			121765.25		
Sc	45	2	H2			122290.89		
Sc	45	2	H2			128019.48		
Ge	72	2	H2			107682.82		
Ge	72	2	H2			110626.23		
Ge	72	2	H2			109326.73		
In	115	2	H2			261878.20		
In	115	2	H2			263224.02		
In	115	2	H2			267411.52		
Sc	45	3	He			28128.09		
Sc	45	3	He			27566.92		
Sc	45	3	He			27747.09		
Ge	72	3	He			56472.31		
Ge	72	3	He			54705.39		
Ge	72	3	He			55076.57		
In	115	3	He			54487.03		
In	115	3	He			52329.41		
In	115	3	He			51115.50		
Tb	159	3	He			242098.73		
Tb	159	3	He			241690.48		
Tb	159	3	He			241627.75		
Bi	209	3	He			189169.84		
Bi	209	3	He			187982.79		
Bi	209	3	He			187558.84		

Quantitation Report

Data File Name	027SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 3:59:58 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

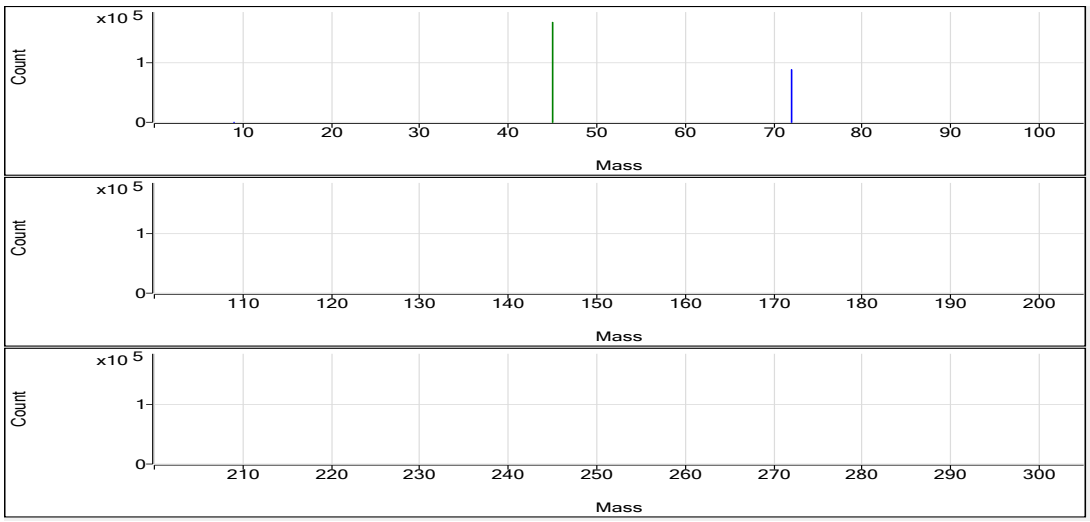
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	1.109	ppb	8.1	754.02	0.0004	Pulse	0.5000	3
Se	78	72	H2	0.415	ppb	22.2	19.33	0.0002	Pulse	1.5000	3
Na	23	45	He	66.523	ppb	10.5	11948.57	0.4331	Pulse	0.1000	3
Mg	24	45	He	24.197	ppb	19.9	1020.07	0.0370	Pulse	0.1000	3
Al	27	45	He	22.259	ppb	31.0	306.68	0.0111	Pulse	0.1000	3
K	39	45	He	27.145	ppb	173.7	10734.30	0.3891	Pulse	0.1000	3
Ca	44	45	He	-2.915	ppb	N/A	66.67	0.0024	Pulse	0.1000	3
Ti	47	45	He	0.019	ppb	2424.7	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.030	ppb	34.8	336.68	0.0122	Pulse	0.5000	3
Cr	52	45	He	0.891	ppb	39.9	2506.98	0.0909	Pulse	0.1000	3
Mn	55	45	He	0.438	ppb	40.6	253.34	0.0092	Pulse	0.1000	3
Fe	57	45	He	28.449	ppb	24.7	513.36	0.0186	Pulse	0.1000	3
Co	59	45	He	0.175	ppb	69.5	386.69	0.0140	Pulse	0.1000	3
Ni	60	72	He	0.405	ppb	20.3	540.03	0.0097	Pulse	0.1000	3
Cu	63	72	He	0.195	ppb	50.9	413.35	0.0074	Pulse	0.1000	3
Zn	66	72	He	-0.283	ppb	N/A	123.34	0.0022	Pulse	0.1000	3
As	75	72	He	0.238	ppb	15.4	53.33	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.101	ppb	79.1	80.00	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.560	ppb	2.5	636.71	0.0120	Pulse	0.1000	3
Ag	107	115	He	0.106	ppb	41.5	266.68	0.0050	Pulse	0.1000	3
Cd	111	115	He	0.113	ppb	24.5	30.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.092	ppb	66.5	776.72	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.249	ppb	36.0	266.68	0.0050	Pulse	0.1000	3
Ba	137	115	He	0.056	ppb	46.1	33.33	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.795	ppb	15.2	4330.86	0.0226	Pulse	0.1000	3
Pb	208	209	He	0.181	ppb	17.9	1476.76	0.0077	Pulse	0.1000	3
U	238	209	He	0.018	ppb	46.2	163.34	0.0009	Pulse	0.1000	3

ISTD Table:

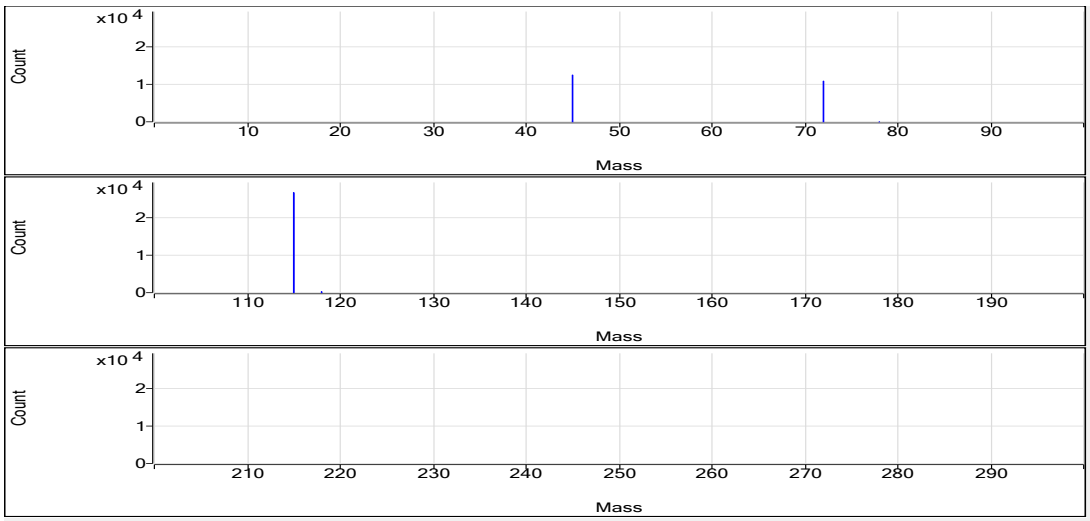
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1677406.28	1.8	95.2	Analog	0.1000	3
No Gas	Ge	72	883070.82	1.4	99.0	Pulse	0.1000	3
H2	Sc	45	125299.81	1.0	98.4	Pulse	0.1000	3
H2	Ge	72	109168.34	0.6	101.8	Pulse	0.1000	3
H2	In	115	267634.63	1.1	100.5	Pulse	0.1000	3
He	Sc	45	27603.65	1.7	96.8	Pulse	0.1000	3
He	Ge	72	55632.14	1.7	100.5	Pulse	0.1000	3
He	In	115	52942.85	2.0	98.6	Pulse	0.1000	3
He	Tb	159	241992.80	1.3	98.5	Pulse	0.1000	3
He	Bi	209	191309.86	1.0	100.2	Pulse	0.1000	3

No Gas

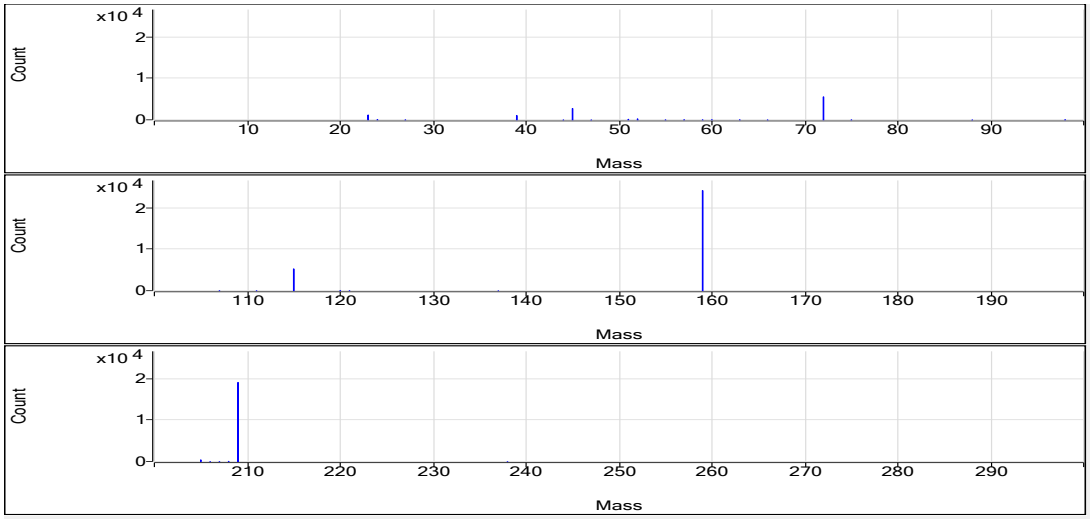


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	1.211	0.0005	806.03	0.0004	1.287E-05
Be	9	1	No Gas	1.078	0.0004	746.02	0.0004	1.287E-05
Be	9	1	No Gas	1.039	0.0004	710.02	0.0004	1.287E-05
Se	78	2	H2	0.46	0.0002	21.33	0.0004	1.451E-05
Se	78	2	H2	0.477	0.0002	22.00	0.0004	1.451E-05
Se	78	2	H2	0.309	0.0001	14.67	0.0004	1.451E-05
Na	23	3	He	67.711	0.4361	12025.22	0.0025	0.2648
Na	23	3	He	72.862	0.4491	12195.44	0.0025	0.2648
Na	23	3	He	58.996	0.414	11625.06	0.0025	0.2648
Mg	24	3	He	29.709	0.0442	1220.09	0.0013	0.005032
Mg	24	3	He	22.137	0.0342	930.06	0.0013	0.005032
Mg	24	3	He	20.745	0.0324	910.06	0.0013	0.005032
Al	27	3	He	30.115	0.0145	400.02	0.0004	0.001519
Al	27	3	He	19.535	0.0099	270.01	0.0004	0.001519
Al	27	3	He	17.126	0.0089	250.01	0.0004	0.001519
K	39	3	He	76.593	0.4372	12055.23	0.001	0.3627
K	39	3	He	22.122	0.3842	10434.13	0.001	0.3627
K	39	3	He	-17.281	0.3459	9713.53	0.001	0.3627
Ca	44	3	He	11.92	0.0033	90.00	0.0001	0.002571
Ca	44	3	He	-31.582	0.0007	20.00	0.0001	0.002571
Ca	44	3	He	10.917	0.0032	90.00	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.295	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.268	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.033	0.0123	338.01	0.0201	0.0116
V	51	3	He	0.039	0.0124	336.01	0.0201	0.0116
V	51	3	He	0.018	0.012	336.01	0.0201	0.0116
Cr	52	3	He	0.98	0.0932	2570.32	0.0257	0.06801
Cr	52	3	He	1.194	0.0987	2680.32	0.0257	0.06801
Cr	52	3	He	0.5	0.0809	2270.29	0.0257	0.06801
Mn	55	3	He	0.236	0.0069	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.506	0.0099	270.01	0.0113	0.004215
Mn	55	3	He	0.571	0.0107	300.01	0.0113	0.004215
Fe	57	3	He	35.307	0.0221	610.03	0.0005	0.004099
Fe	57	3	He	28.765	0.0188	510.03	0.0005	0.004099
Fe	57	3	He	21.276	0.015	420.02	0.0005	0.004099
Co	59	3	He	0.311	0.021	580.03	0.0518	0.004913
Co	59	3	He	0.076	0.0088	240.01	0.0518	0.004913
Co	59	3	He	0.139	0.0121	340.02	0.0518	0.004913
Ni	60	3	He	0.31	0.009	510.03	0.0075	0.006695
Ni	60	3	He	0.456	0.0101	560.03	0.0075	0.006695
Ni	60	3	He	0.449	0.01	550.03	0.0075	0.006695
Cu	63	3	He	0.302	0.0097	550.03	0.0216	0.003198
Cu	63	3	He	0.177	0.007	390.02	0.0216	0.003198
Cu	63	3	He	0.106	0.0055	300.01	0.0216	0.003198
Zn	66	3	He	0.019	0.003	170.01	0.0026	0.002954
Zn	66	3	He	-0.37	0.002	110.01	0.0026	0.002954
Zn	66	3	He	-0.498	0.0016	90.00	0.0026	0.002954
As	75	3	He	0.253	0.001	56.00	0.002	0.0004943
As	75	3	He	0.264	0.001	56.00	0.002	0.0004943
As	75	3	He	0.196	0.0009	48.00	0.002	0.0004943
Sr	88	3	He	0.189	0.0022	120.00	0.0081	0.0006852
Sr	88	3	He	0.081	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.033	0.001	50.00	0.0081	0.0006852
Mo	98	3	He	0.568	0.0122	660.04	0.0205	0.0005587
Mo	98	3	He	0.544	0.0117	610.04	0.0205	0.0005587
Mo	98	3	He	0.568	0.0122	640.04	0.0205	0.0005587
Ag	107	3	He	0.157	0.0072	390.03	0.043	0.0004367
Ag	107	3	He	0.083	0.004	210.01	0.043	0.0004367
Ag	107	3	He	0.078	0.0038	200.01	0.043	0.0004367
Cd	111	3	He	0.131	0.0007	36.00	0.005	1.253E-05
Cd	111	3	He	0.128	0.0007	34.00	0.005	1.253E-05
Cd	111	3	He	0.081	0.0004	22.00	0.005	1.253E-05
Sn	120	3	He	0.022	0.0137	740.05	0.0146	0.01334
Sn	120	3	He	0.137	0.0153	800.05	0.0146	0.01334
Sn	120	3	He	0.116	0.015	790.05	0.0146	0.01334
Sb	121	3	He	0.324	0.0061	330.02	0.0142	0.001484
Sb	121	3	He	0.273	0.0054	280.01	0.0142	0.001484
Sb	121	3	He	0.15	0.0036	190.01	0.0142	0.001484
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	0.085	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.043	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.933	0.0265	5061.15	0.0282	0.00021
Tl	205	3	He	0.705	0.0201	3890.67	0.0282	0.00021
Tl	205	3	He	0.747	0.0213	4040.76	0.0282	0.00021
Pb	208	3	He	0.216	0.009	960.07	0.0372	0.0009772
Pb	208	3	He	0.175	0.0075	790.05	0.0372	0.0009772
Pb	208	3	He	0.152	0.0066	630.04	0.0372	0.0009772
U	238	3	He	0.021	0.0009	180.01	0.0417	8.729E-05
U	238	3	He	0.009	0.0005	90.01	0.0417	8.729E-05
U	238	3	He	0.026	0.0012	220.01	0.0417	8.729E-05
Sc	45	1	No Gas			1645920.76		
Sc	45	1	No Gas			1705061.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1681236.69		
Ge	72	1	No Gas			879640.69		
Ge	72	1	No Gas			896892.96		
Ge	72	1	No Gas			872678.82		
Sc	45	2	H2			123965.03		
Sc	45	2	H2			126526.94		
Sc	45	2	H2			125407.45		
Ge	72	2	H2			109669.06		
Ge	72	2	H2			109476.98		
Ge	72	2	H2			108358.99		
In	115	2	H2			264923.67		
In	115	2	H2			270621.09		
In	115	2	H2			267359.12		
Sc	45	3	He			27576.81		
Sc	45	3	He			27156.02		
Sc	45	3	He			28078.11		
Ge	72	3	He			56622.40		
Ge	72	3	He			55508.37		
Ge	72	3	He			54765.66		
In	115	3	He			54146.05		
In	115	3	He			52158.92		
In	115	3	He			52539.90		
Tb	159	3	He			243594.04		
Tb	159	3	He			243990.86		
Tb	159	3	He			238393.49		
Bi	209	3	He			190736.81		
Bi	209	3	He			193442.11		
Bi	209	3	He			189750.66		

Quantitation Report

Data File Name	028SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:01:57 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

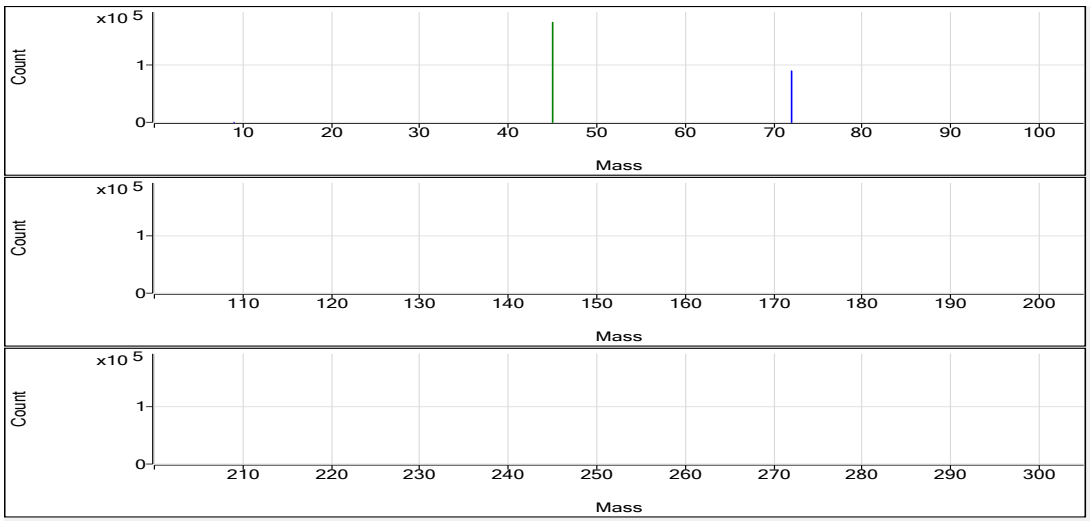
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.576	ppb	11.2	420.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.227	ppb	2.2	11.33	0.0001	Pulse	1.5000	3
Na	23	45	He	39.402	ppb	15.8	10360.62	0.3645	Pulse	0.1000	3
Mg	24	45	He	14.404	ppb	33.5	683.38	0.0240	Pulse	0.1000	3
Al	27	45	He	11.999	ppb	16.6	190.01	0.0067	Pulse	0.1000	3
K	39	45	He	18.573	ppb	174.7	10831.18	0.3808	Pulse	0.1000	3
Ca	44	45	He	22.461	ppb	99.3	110.00	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.005	ppb	18082.0	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.076	ppb	17.6	373.34	0.0131	Pulse	0.5000	3
Cr	52	45	He	0.378	ppb	41.2	2210.25	0.0777	Pulse	0.1000	3
Mn	55	45	He	0.466	ppb	6.3	270.01	0.0095	Pulse	0.1000	3
Fe	57	45	He	11.266	ppb	21.9	280.01	0.0098	Pulse	0.1000	3
Co	59	45	He	0.075	ppb	25.2	250.01	0.0088	Pulse	0.1000	3
Ni	60	72	He	0.384	ppb	44.6	523.36	0.0096	Pulse	0.1000	3
Cu	63	72	He	0.109	ppb	20.3	303.35	0.0055	Pulse	0.1000	3
Zn	66	72	He	0.567	ppb	74.6	243.34	0.0044	Pulse	0.1000	3
As	75	72	He	0.202	ppb	9.2	48.67	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.031	ppb	153.5	50.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.286	ppb	4.7	343.35	0.0064	Pulse	0.1000	3
Ag	107	115	He	0.087	ppb	24.9	223.34	0.0042	Pulse	0.1000	3
Cd	111	115	He	0.070	ppb	47.8	19.33	0.0004	Pulse	0.5000	3
Sn	120	115	He	0.099	ppb	54.1	793.39	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.202	ppb	47.2	233.35	0.0044	Pulse	0.1000	3
Ba	137	115	He	0.080	ppb	218.8	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.278	ppb	2.1	1520.16	0.0080	Pulse	0.1000	3
Pb	208	209	He	0.095	ppb	12.4	853.38	0.0045	Pulse	0.1000	3
U	238	209	He	0.008	ppb	26.7	80.00	0.0004	Pulse	0.1000	3

ISTD Table:

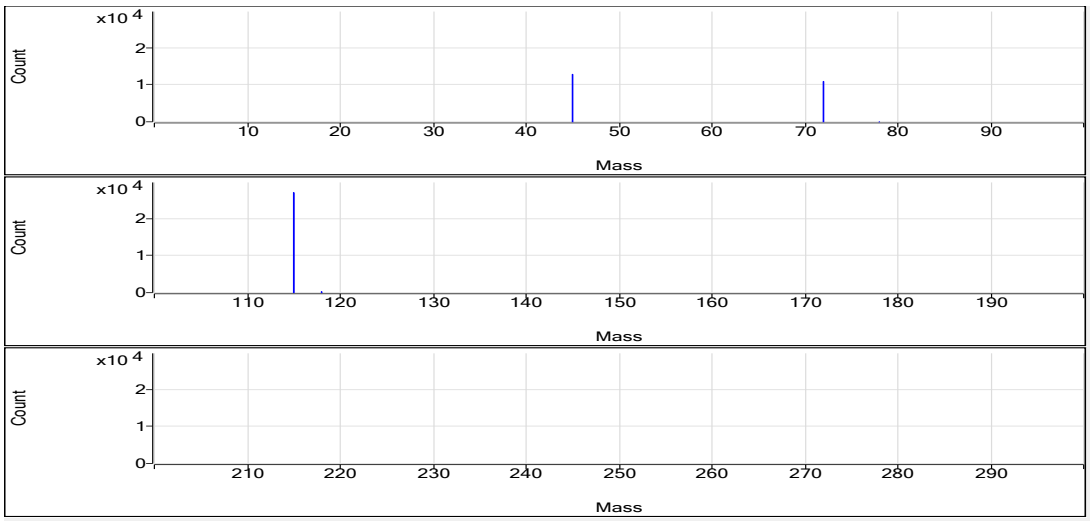
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1754329.45	1.9	99.6	Analog	0.1000	3
No Gas	Ge	72	901372.38	0.8	101.0	Pulse	0.1000	3
H2	Sc	45	128822.63	1.6	101.2	Pulse	0.1000	3
H2	Ge	72	109530.93	1.9	102.1	Pulse	0.1000	3
H2	In	115	271195.80	0.8	101.8	Pulse	0.1000	3
He	Sc	45	28445.11	2.3	99.8	Pulse	0.1000	3
He	Ge	72	54748.98	1.8	99.0	Pulse	0.1000	3
He	In	115	53628.68	1.1	99.9	Pulse	0.1000	3
He	Tb	159	245239.25	0.5	99.8	Pulse	0.1000	3
He	Bi	209	188988.28	0.6	99.0	Pulse	0.1000	3

No Gas

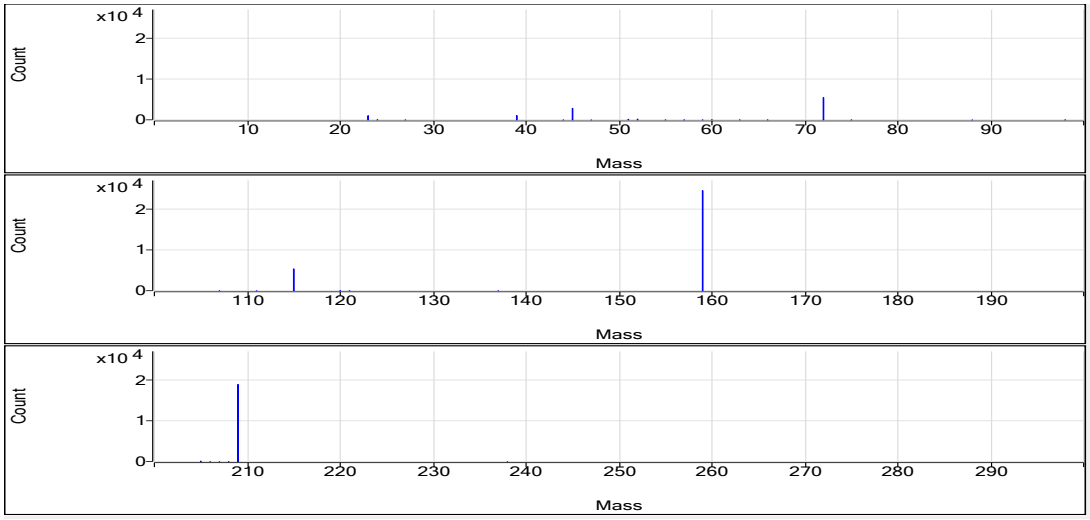


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.627	0.0003	446.01	0.0004	1.287E-05
Be	9	1	No Gas	0.598	0.0002	438.01	0.0004	1.287E-05
Be	9	1	No Gas	0.503	0.0002	376.01	0.0004	1.287E-05
Se	78	2	H2	0.233	0.0001	11.33	0.0004	1.451E-05
Se	78	2	H2	0.227	0.0001	11.33	0.0004	1.451E-05
Se	78	2	H2	0.222	0.0001	11.33	0.0004	1.451E-05
Na	23	3	He	40.071	0.3662	10383.91	0.0025	0.2648
Na	23	3	He	32.88	0.348	10143.75	0.0025	0.2648
Na	23	3	He	45.254	0.3793	10554.19	0.0025	0.2648
Mg	24	3	He	19.968	0.0314	890.07	0.0013	0.005032
Mg	24	3	He	11.264	0.0199	580.03	0.0013	0.005032
Mg	24	3	He	11.98	0.0208	580.03	0.0013	0.005032
Al	27	3	He	12.016	0.0067	190.01	0.0004	0.001519
Al	27	3	He	10.003	0.0058	170.01	0.0004	0.001519
Al	27	3	He	13.979	0.0075	210.01	0.0004	0.001519
K	39	3	He	55.85	0.417	11825.28	0.001	0.3627
K	39	3	He	3.198	0.3658	10664.32	0.001	0.3627
K	39	3	He	-3.328	0.3595	10003.94	0.001	0.3627
Ca	44	3	He	46.8	0.0053	150.01	0.0001	0.002571
Ca	44	3	He	2.983	0.0027	80.00	0.0001	0.002571
Ca	44	3	He	17.601	0.0036	100.00	0.0001	0.002571
Ti	47	3	He	1.028	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.062	0.0128	364.01	0.0201	0.0116
V	51	3	He	0.079	0.0132	384.01	0.0201	0.0116
V	51	3	He	0.088	0.0134	372.01	0.0201	0.0116
Cr	52	3	He	0.208	0.0734	2080.23	0.0257	0.06801
Cr	52	3	He	0.411	0.0786	2290.27	0.0257	0.06801
Cr	52	3	He	0.514	0.0812	2260.25	0.0257	0.06801
Mn	55	3	He	0.5	0.0099	280.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.446	0.0093	270.01	0.0113	0.004215
Mn	55	3	He	0.453	0.0093	260.01	0.0113	0.004215
Fe	57	3	He	14.079	0.0113	320.02	0.0005	0.004099
Fe	57	3	He	9.445	0.0089	260.01	0.0005	0.004099
Fe	57	3	He	10.276	0.0093	260.01	0.0005	0.004099
Co	59	3	He	0.055	0.0078	220.01	0.0518	0.004913
Co	59	3	He	0.077	0.0089	260.01	0.0518	0.004913
Co	59	3	He	0.092	0.0097	270.01	0.0518	0.004913
Ni	60	3	He	0.19	0.0081	440.02	0.0075	0.006695
Ni	60	3	He	0.446	0.01	560.03	0.0075	0.006695
Ni	60	3	He	0.515	0.0105	570.03	0.0075	0.006695
Cu	63	3	He	0.117	0.0057	310.02	0.0216	0.003198
Cu	63	3	He	0.084	0.005	280.01	0.0216	0.003198
Cu	63	3	He	0.126	0.0059	320.02	0.0216	0.003198
Zn	66	3	He	0.139	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	0.577	0.0045	250.01	0.0026	0.002954
Zn	66	3	He	0.985	0.0055	300.01	0.0026	0.002954
As	75	3	He	0.219	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.205	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.182	0.0009	46.00	0.002	0.0004943
Sr	88	3	He	0.03	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	-0.016	0.0006	30.00	0.0081	0.0006852
Sr	88	3	He	0.078	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.291	0.0065	350.02	0.0205	0.0005587
Mo	98	3	He	0.27	0.0061	330.01	0.0205	0.0005587
Mo	98	3	He	0.296	0.0066	350.02	0.0205	0.0005587
Ag	107	3	He	0.068	0.0033	180.01	0.043	0.0004367
Ag	107	3	He	0.11	0.0052	280.01	0.043	0.0004367
Ag	107	3	He	0.082	0.004	210.01	0.043	0.0004367
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.101	0.0005	28.00	0.005	1.253E-05
Cd	111	3	He	0.073	0.0004	20.00	0.005	1.253E-05
Sn	120	3	He	0.067	0.0143	770.05	0.0146	0.01334
Sn	120	3	He	0.161	0.0157	850.06	0.0146	0.01334
Sn	120	3	He	0.069	0.0143	760.05	0.0146	0.01334
Sb	121	3	He	0.21	0.0045	240.01	0.0142	0.001484
Sb	121	3	He	0.103	0.003	160.01	0.0142	0.001484
Sb	121	3	He	0.294	0.0057	300.02	0.0142	0.001484
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.279	0.0017	90.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Tl	205	3	He	0.278	0.0081	1530.15	0.0282	0.00021
Tl	205	3	He	0.283	0.0082	1540.15	0.0282	0.00021
Tl	205	3	He	0.271	0.0079	1490.17	0.0282	0.00021
Pb	208	3	He	0.108	0.005	430.03	0.0372	0.0009772
Pb	208	3	He	0.085	0.0042	460.03	0.0372	0.0009772
Pb	208	3	He	0.092	0.0044	400.02	0.0372	0.0009772
U	238	3	He	0.011	0.0005	100.00	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
Sc	45	1	No Gas			1716862.94		
Sc	45	1	No Gas			1764367.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1781758.25		
Ge	72	1	No Gas			895270.22		
Ge	72	1	No Gas			899764.52		
Ge	72	1	No Gas			909082.41		
Sc	45	2	H2			126696.91		
Sc	45	2	H2			128947.47		
Sc	45	2	H2			130823.50		
Ge	72	2	H2			107411.43		
Ge	72	2	H2			109537.39		
Ge	72	2	H2			111643.98		
In	115	2	H2			268837.77		
In	115	2	H2			272712.46		
In	115	2	H2			272037.16		
Sc	45	3	He			28358.17		
Sc	45	3	He			29149.99		
Sc	45	3	He			27827.18		
Ge	72	3	He			54233.60		
Ge	72	3	He			55900.46		
Ge	72	3	He			54112.89		
In	115	3	He			53754.95		
In	115	3	He			54175.93		
In	115	3	He			52971.82		
Tb	159	3	He			245955.72		
Tb	159	3	He			245864.55		
Tb	159	3	He			243897.48		
Bi	209	3	He			189932.22		
Bi	209	3	He			187739.59		
Bi	209	3	He			189293.02		

Quantitation Report

Data File Name	029_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:03:57 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

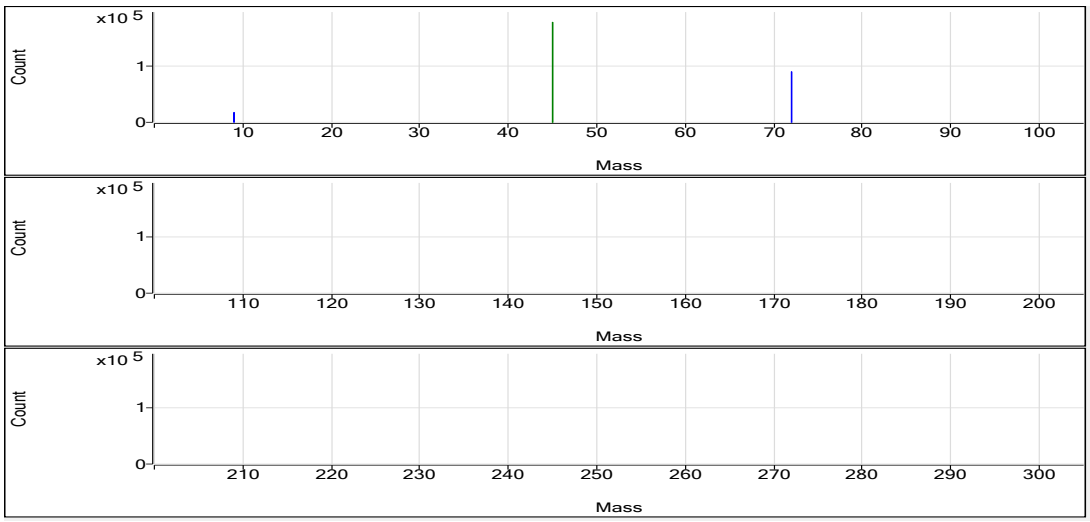
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.477	ppb	7.0	35539.58	0.0199	Pulse	0.5000	3
Se	78	72	H2	52.862	ppb	3.3	2257.07	0.0207	Pulse	1.5000	3
Na	23	45	He	5152.284	ppb	0.7	385685.22	13.2934	Pulse	0.1000	3
Mg	24	45	He	5129.462	ppb	0.4	196564.81	6.7751	Pulse	0.1000	3
Al	27	45	He	5027.219	ppb	2.4	62938.25	2.1695	Pulse	0.1000	3
K	39	45	He	5103.950	ppb	1.0	154398.95	5.3215	Pulse	0.1000	3
Ca	44	45	He	5297.285	ppb	4.7	9003.10	0.3103	Pulse	0.1000	3
Ti	47	45	He	5072.461	ppb	2.0	67634.38	2.3312	Pulse	0.1000	3
V	51	45	He	513.898	ppb	0.3	299396.16	10.3194	Pulse	0.5000	3
Cr	52	45	He	512.528	ppb	0.9	384163.00	13.2405	Pulse	0.1000	3
Mn	55	45	He	512.757	ppb	1.0	168661.50	5.8135	Pulse	0.1000	3
Fe	57	45	He	5143.531	ppb	1.2	76295.39	2.6296	Pulse	0.1000	3
Co	59	45	He	503.940	ppb	0.8	757715.02	26.1169	Pulse	0.1000	3
Ni	60	72	He	527.507	ppb	0.8	216306.97	3.9366	Pulse	0.1000	3
Cu	63	72	He	523.285	ppb	1.4	620860.08	11.2997	Pulse	0.1000	3
Zn	66	72	He	521.003	ppb	1.2	75448.64	1.3732	Pulse	0.1000	3
As	75	72	He	519.233	ppb	0.6	55729.93	1.0142	Pulse	0.5000	3
Sr	88	115	He	50.839	ppb	1.3	22178.00	0.4131	Pulse	0.1000	3
Mo	98	115	He	51.661	ppb	1.1	56792.09	1.0580	Pulse	0.1000	3
Ag	107	115	He	51.579	ppb	0.5	119205.76	2.2207	Pulse	0.1000	3
Cd	111	115	He	50.813	ppb	0.3	13634.04	0.2540	Pulse	0.5000	3
Sn	120	115	He	52.012	ppb	0.5	41522.99	0.7736	Pulse	0.1000	3
Sb	121	115	He	51.300	ppb	2.6	39249.55	0.7314	Pulse	0.1000	3
Ba	137	115	He	512.550	ppb	1.1	126762.47	2.3617	Pulse	0.1000	3
Tl	205	209	He	51.063	ppb	0.7	273362.14	1.4413	Pulse	0.1000	3
Pb	208	209	He	51.588	ppb	0.9	364518.56	1.9220	Pulse	0.1000	3
U	238	209	He	51.198	ppb	0.2	405094.88	2.1359	Pulse	0.1000	3

ISTD Table:

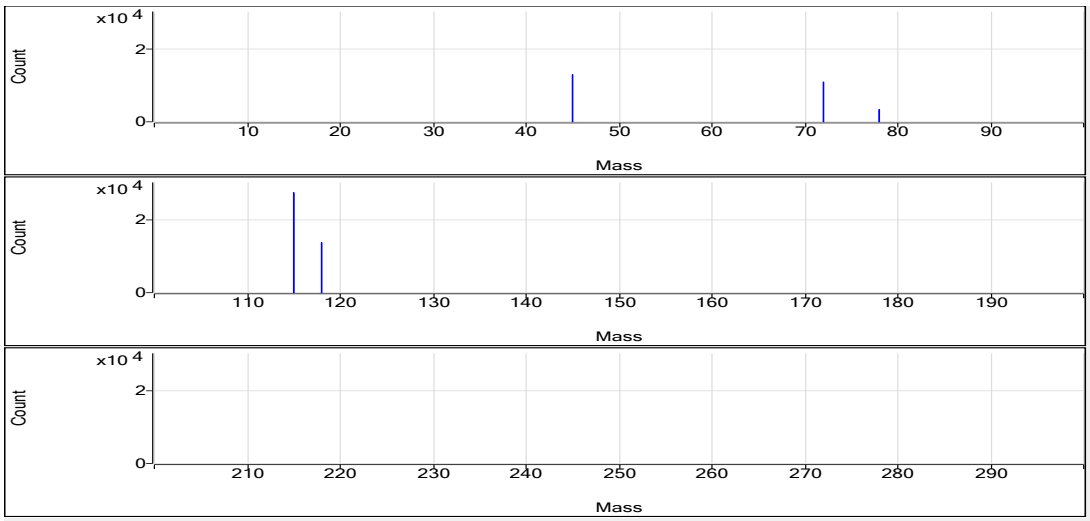
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1785891.74	0.7	101.4	Analog	0.1000	3
No Gas	Ge	72	903003.37	0.7	101.2	Pulse	0.1000	3
H2	Sc	45	129176.86	1.1	101.5	Pulse	0.1000	3
H2	Ge	72	109080.34	0.5	101.7	Pulse	0.1000	3
H2	In	115	273538.01	0.6	102.7	Pulse	0.1000	3
He	Sc	45	29013.08	0.7	101.8	Pulse	0.1000	3
He	Ge	72	54946.29	0.8	99.3	Pulse	0.1000	3
He	In	115	53678.55	1.6	100.0	Pulse	0.1000	3
He	Tb	159	245480.42	1.0	99.9	Pulse	0.1000	3
He	Bi	209	189655.04	0.6	99.4	Pulse	0.1000	3

No Gas

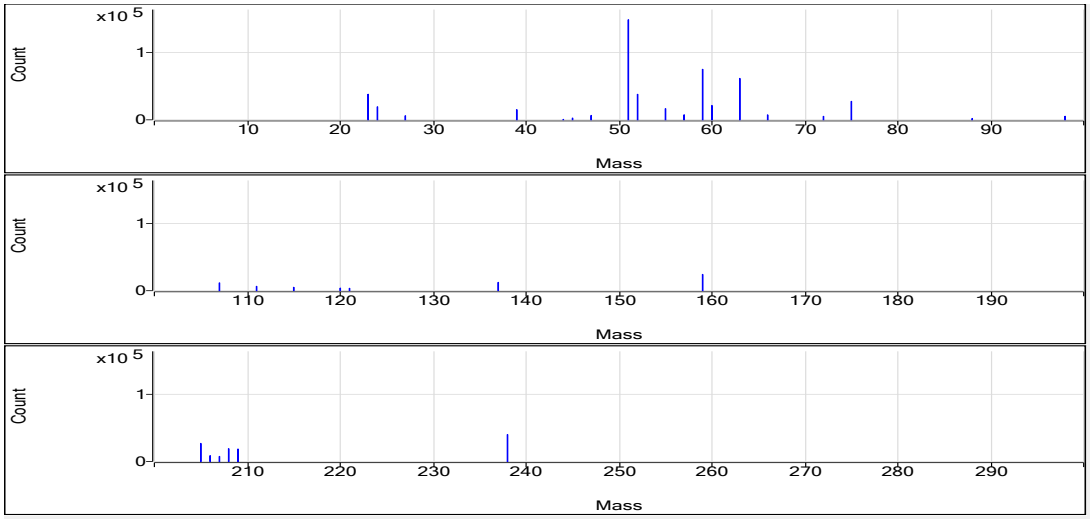


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.688	0.0184	32775.84	0.0004	1.287E-05
Be	9	1	No Gas	51.077	0.0201	35756.57	0.0004	1.287E-05
Be	9	1	No Gas	53.666	0.0212	38086.32	0.0004	1.287E-05
Se	78	2	H2	51.543	0.0202	2187.51	0.0004	1.451E-05
Se	78	2	H2	54.873	0.0215	2348.20	0.0004	1.451E-05
Se	78	2	H2	52.17	0.0204	2235.51	0.0004	1.451E-05
Na	23	3	He	5159.333	13.3112	389090.62	0.0025	0.2648
Na	23	3	He	5184.836	13.3757	386816.91	0.0025	0.2648
Na	23	3	He	5112.685	13.1933	381148.12	0.0025	0.2648
Mg	24	3	He	5112.025	6.7521	197366.34	0.0013	0.005032
Mg	24	3	He	5122.423	6.7658	195663.84	0.0013	0.005032
Mg	24	3	He	5153.939	6.8074	196664.25	0.0013	0.005032
Al	27	3	He	4903.868	2.1163	61860.58	0.0004	0.001519
Al	27	3	He	5029.907	2.1707	62774.46	0.0004	0.001519
Al	27	3	He	5147.883	2.2216	64179.72	0.0004	0.001519
K	39	3	He	5147.434	5.3638	156784.78	0.001	0.3627
K	39	3	He	5112.887	5.3302	154146.41	0.001	0.3627
K	39	3	He	5051.53	5.2706	152265.66	0.001	0.3627
Ca	44	3	He	5387.491	0.3155	9223.23	0.0001	0.002571
Ca	44	3	He	5017.028	0.294	8502.76	0.0001	0.002571
Ca	44	3	He	5487.337	0.3213	9283.30	0.0001	0.002571
Ti	47	3	He	5023.622	2.3088	67486.71	0.0005	0.0002328
Ti	47	3	He	5189.575	2.3851	68974.31	0.0005	0.0002328
Ti	47	3	He	5004.185	2.2999	66442.12	0.0005	0.0002328
V	51	3	He	512.731	10.296	300956.03	0.0201	0.0116
V	51	3	He	513.653	10.3145	298289.97	0.0201	0.0116
V	51	3	He	515.309	10.3478	298942.47	0.0201	0.0116
Cr	52	3	He	517.725	13.3741	390928.74	0.0257	0.06801
Cr	52	3	He	509.089	13.1522	380351.79	0.0257	0.06801
Cr	52	3	He	510.77	13.1953	381208.47	0.0257	0.06801
Mn	55	3	He	508.693	5.7674	168583.79	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	511.108	5.7948	167581.87	0.0113	0.004215
Mn	55	3	He	518.469	5.8782	169818.83	0.0113	0.004215
Fe	57	3	He	5188.708	2.6527	77538.34	0.0005	0.004099
Fe	57	3	He	5074.399	2.5943	75026.15	0.0005	0.004099
Fe	57	3	He	5167.484	2.6418	76321.67	0.0005	0.004099
Co	59	3	He	501.231	25.9765	759301.55	0.0518	0.004913
Co	59	3	He	502.255	26.0296	752758.04	0.0518	0.004913
Co	59	3	He	508.335	26.3446	761085.46	0.0518	0.004913
Ni	60	3	He	532.394	3.973	219619.45	0.0075	0.006695
Ni	60	3	He	523.878	3.9096	215562.95	0.0075	0.006695
Ni	60	3	He	526.248	3.9273	213738.51	0.0075	0.006695
Cu	63	3	He	527.51	11.3909	629661.20	0.0216	0.003198
Cu	63	3	He	514.983	11.1205	613149.29	0.0216	0.003198
Cu	63	3	He	527.362	11.3877	619769.76	0.0216	0.003198
Zn	66	3	He	522.208	1.3764	76081.99	0.0026	0.002954
Zn	66	3	He	514.182	1.3553	74724.59	0.0026	0.002954
Zn	66	3	He	526.619	1.388	75539.35	0.0026	0.002954
As	75	3	He	522.958	1.0215	56466.80	0.002	0.0004943
As	75	3	He	517.017	1.0099	55683.72	0.002	0.0004943
As	75	3	He	517.724	1.0113	55039.26	0.002	0.0004943
Sr	88	3	He	50.851	0.4132	22568.62	0.0081	0.0006852
Sr	88	3	He	51.494	0.4185	22378.26	0.0081	0.0006852
Sr	88	3	He	50.171	0.4077	21587.13	0.0081	0.0006852
Mo	98	3	He	51.621	1.0572	57739.03	0.0205	0.0005587
Mo	98	3	He	51.114	1.0468	55982.18	0.0205	0.0005587
Mo	98	3	He	52.249	1.0701	56655.05	0.0205	0.0005587
Ag	107	3	He	51.653	2.2239	121455.60	0.043	0.0004367
Ag	107	3	He	51.282	2.2079	118075.43	0.043	0.0004367
Ag	107	3	He	51.802	2.2304	118086.26	0.043	0.0004367
Cd	111	3	He	50.708	0.2535	13842.92	0.005	1.253E-05
Cd	111	3	He	50.999	0.2549	13632.70	0.005	1.253E-05
Cd	111	3	He	50.733	0.2536	13426.49	0.005	1.253E-05
Sn	120	3	He	52.049	0.7741	42275.69	0.0146	0.01334
Sn	120	3	He	51.761	0.7699	41171.76	0.0146	0.01334
Sn	120	3	He	52.226	0.7767	41121.53	0.0146	0.01334
Sb	121	3	He	49.808	0.7102	38784.82	0.0142	0.001484
Sb	121	3	He	51.712	0.7373	39426.57	0.0142	0.001484
Sb	121	3	He	52.38	0.7468	39537.27	0.0142	0.001484
Ba	137	3	He	507.026	2.3362	127589.71	0.0046	0.000374
Ba	137	3	He	518.212	2.3878	127691.79	0.0046	0.000374
Ba	137	3	He	512.412	2.3611	125005.91	0.0046	0.000374
Tl	205	3	He	51.379	1.4503	276729.49	0.0282	0.00021
Tl	205	3	He	51.163	1.4442	272530.46	0.0282	0.00021
Tl	205	3	He	50.647	1.4296	270826.48	0.0282	0.00021
Pb	208	3	He	51.782	1.9292	197236.89	0.0372	0.0009772
Pb	208	3	He	51.907	1.9339	194254.45	0.0372	0.0009772
Pb	208	3	He	51.077	1.903	192902.18	0.0372	0.0009772
U	238	3	He	51.31	2.1406	408449.80	0.0417	8.729E-05
U	238	3	He	51.059	2.1301	401979.76	0.0417	8.729E-05
U	238	3	He	51.226	2.1371	404855.07	0.0417	8.729E-05
Sc	45	1	No Gas			1780969.97		
Sc	45	1	No Gas			1776110.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1800594.82		
Ge	72	1	No Gas			897630.06		
Ge	72	1	No Gas			901834.52		
Ge	72	1	No Gas			909545.53		
Sc	45	2	H2			130379.46		
Sc	45	2	H2			129494.29		
Sc	45	2	H2			127656.82		
Ge	72	2	H2			108428.34		
Ge	72	2	H2			109335.01		
Ge	72	2	H2			109477.67		
In	115	2	H2			271947.40		
In	115	2	H2			273467.79		
In	115	2	H2			275198.84		
Sc	45	3	He			29230.28		
Sc	45	3	He			28919.36		
Sc	45	3	He			28889.61		
Ge	72	3	He			55277.49		
Ge	72	3	He			55136.90		
Ge	72	3	He			54424.47		
In	115	3	He			54909.20		
In	115	3	He			53765.62		
In	115	3	He			53232.82		
Tb	159	3	He			247646.87		
Tb	159	3	He			246033.47		
Tb	159	3	He			242760.93		
Bi	209	3	He			190811.95		
Bi	209	3	He			188711.13		
Bi	209	3	He			189442.05		

Quantitation Report

Data File Name	030_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:05:57 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

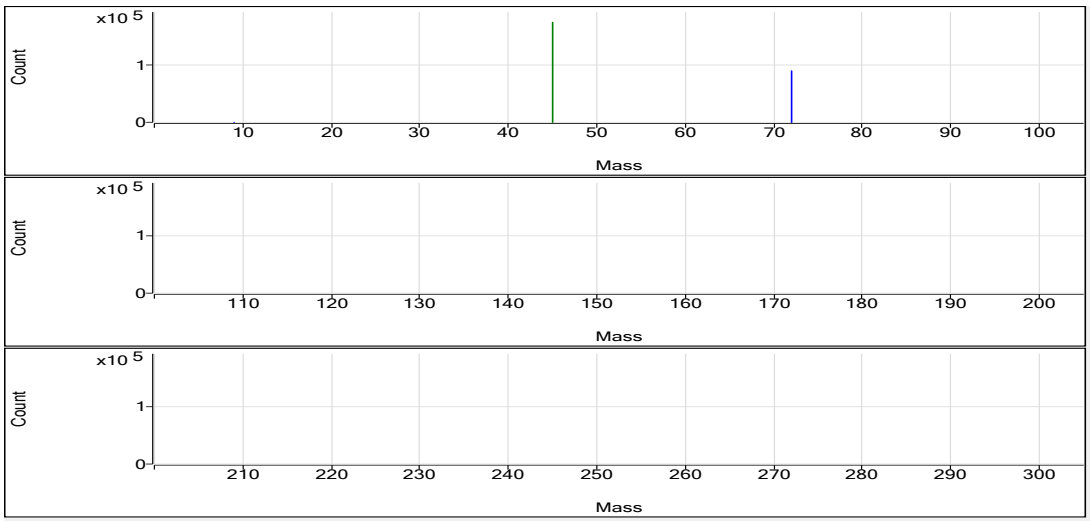
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.542	ppb	8.4	393.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.309	ppb	23.4	14.67	0.0001	Pulse	1.5000	3
Na	23	45	He	34.890	ppb	17.4	10270.54	0.3531	Pulse	0.1000	3
Mg	24	45	He	12.261	ppb	10.3	616.70	0.0212	Pulse	0.1000	3
Al	27	45	He	8.708	ppb	8.6	153.34	0.0053	Pulse	0.1000	3
K	39	45	He	7.882	ppb	491.7	10777.66	0.3704	Pulse	0.1000	3
Ca	44	45	He	16.625	ppb	102.1	103.34	0.0035	Pulse	0.1000	3
Ti	47	45	He	2.723	ppb	61.9	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.197	ppb	39.8	452.01	0.0155	Pulse	0.5000	3
Cr	52	45	He	0.226	ppb	51.0	2146.90	0.0738	Pulse	0.1000	3
Mn	55	45	He	0.133	ppb	42.2	166.68	0.0057	Pulse	0.1000	3
Fe	57	45	He	18.243	ppb	6.8	390.02	0.0134	Pulse	0.1000	3
Co	59	45	He	0.142	ppb	42.5	356.68	0.0123	Pulse	0.1000	3
Ni	60	72	He	0.302	ppb	51.7	486.69	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.175	ppb	64.1	380.02	0.0070	Pulse	0.1000	3
Zn	66	72	He	0.111	ppb	139.2	176.68	0.0032	Pulse	0.1000	3
As	75	72	He	0.507	ppb	40.2	80.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.044	ppb	129.9	56.67	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.313	ppb	20.1	380.02	0.0070	Pulse	0.1000	3
Ag	107	115	He	0.062	ppb	23.9	170.01	0.0031	Pulse	0.1000	3
Cd	111	115	He	0.095	ppb	11.4	26.67	0.0005	Pulse	0.5000	3
Sn	120	115	He	0.171	ppb	67.1	863.39	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.214	ppb	28.0	246.68	0.0045	Pulse	0.1000	3
Ba	137	115	He	0.158	ppb	91.4	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.207	ppb	12.1	1140.09	0.0060	Pulse	0.1000	3
Pb	208	209	He	0.079	ppb	21.1	736.71	0.0039	Pulse	0.1000	3
U	238	209	He	0.025	ppb	24.5	213.34	0.0011	Pulse	0.1000	3

ISTD Table:

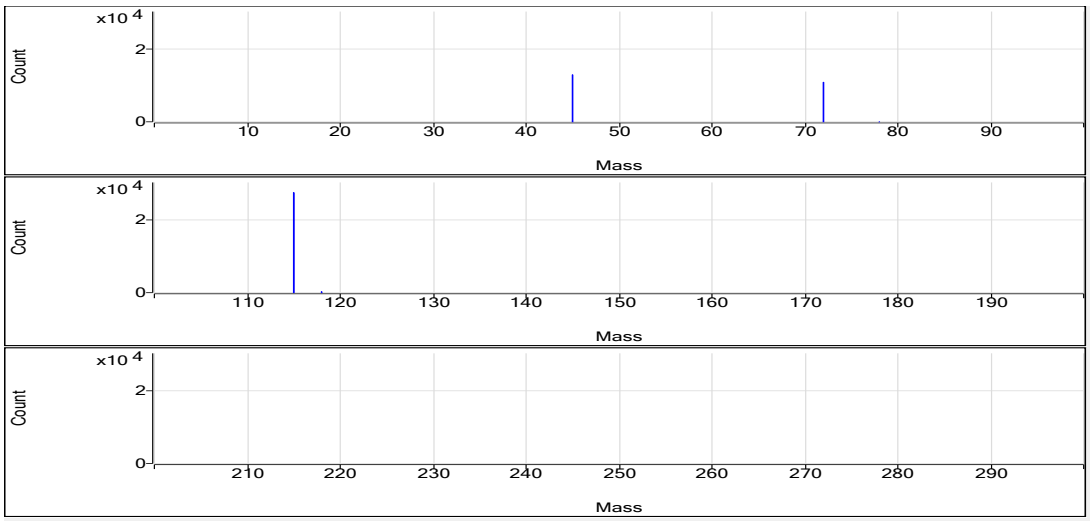
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1738364.56	0.3	98.7	Analog	0.1000	3
No Gas	Ge	72	894567.96	1.0	100.2	Pulse	0.1000	3
H2	Sc	45	128759.31	0.9	101.1	Pulse	0.1000	3
H2	Ge	72	108503.28	1.3	101.2	Pulse	0.1000	3
H2	In	115	273930.39	0.9	102.9	Pulse	0.1000	3
He	Sc	45	29103.18	2.3	102.1	Pulse	0.1000	3
He	Ge	72	54471.29	1.3	98.5	Pulse	0.1000	3
He	In	115	54504.96	0.5	101.6	Pulse	0.1000	3
He	Tb	159	245301.48	0.9	99.8	Pulse	0.1000	3
He	Bi	209	188524.52	0.6	98.8	Pulse	0.1000	3

No Gas

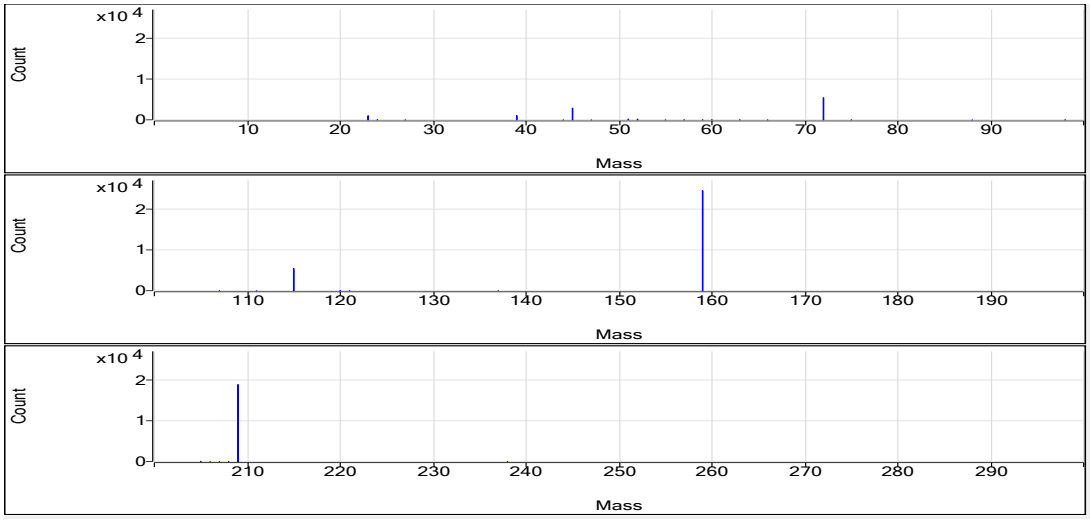


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.594	0.0002	430.01	0.0004	1.287E-05
Be	9	1	No Gas	0.512	0.0002	372.01	0.0004	1.287E-05
Be	9	1	No Gas	0.519	0.0002	378.01	0.0004	1.287E-05
Se	78	2	H2	0.342	0.0001	16.00	0.0004	1.451E-05
Se	78	2	H2	0.359	0.0002	16.67	0.0004	1.451E-05
Se	78	2	H2	0.226	0.0001	11.33	0.0004	1.451E-05
Na	23	3	He	28.296	0.3364	9903.61	0.0025	0.2648
Na	23	3	He	40.225	0.3666	10383.94	0.0025	0.2648
Na	23	3	He	36.15	0.3563	10524.07	0.0025	0.2648
Mg	24	3	He	12.144	0.0211	620.03	0.0013	0.005032
Mg	24	3	He	13.573	0.0229	650.04	0.0013	0.005032
Mg	24	3	He	11.064	0.0196	580.03	0.0013	0.005032
Al	27	3	He	8.294	0.0051	150.01	0.0004	0.001519
Al	27	3	He	9.577	0.0056	160.01	0.0004	0.001519
Al	27	3	He	8.254	0.0051	150.01	0.0004	0.001519
K	39	3	He	45.663	0.4071	11985.24	0.001	0.3627
K	39	3	He	9.754	0.3722	10544.10	0.001	0.3627
K	39	3	He	-31.772	0.3319	9803.64	0.001	0.3627
Ca	44	3	He	31.758	0.0044	130.01	0.0001	0.002571
Ca	44	3	He	-1.723	0.0025	70.00	0.0001	0.002571
Ca	44	3	He	19.84	0.0037	110.00	0.0001	0.002571
Ti	47	3	He	4.667	0.0024	70.00	0.0005	0.0002328
Ti	47	3	He	1.798	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	1.703	0.001	30.00	0.0005	0.0002328
V	51	3	He	0.252	0.0166	490.01	0.0201	0.0116
V	51	3	He	0.231	0.0162	460.01	0.0201	0.0116
V	51	3	He	0.107	0.0137	406.01	0.0201	0.0116
Cr	52	3	He	0.209	0.0734	2160.24	0.0257	0.06801
Cr	52	3	He	0.348	0.077	2180.23	0.0257	0.06801
Cr	52	3	He	0.12	0.0711	2100.23	0.0257	0.06801
Mn	55	3	He	0.198	0.0065	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.095	0.0053	150.01	0.0113	0.004215
Mn	55	3	He	0.106	0.0054	160.01	0.0113	0.004215
Fe	57	3	He	17.258	0.0129	380.02	0.0005	0.004099
Fe	57	3	He	19.634	0.0141	400.02	0.0005	0.004099
Fe	57	3	He	17.836	0.0132	390.02	0.0005	0.004099
Co	59	3	He	0.207	0.0156	460.02	0.0518	0.004913
Co	59	3	He	0.13	0.0116	330.02	0.0518	0.004913
Co	59	3	He	0.088	0.0095	280.01	0.0518	0.004913
Ni	60	3	He	0.39	0.0096	520.03	0.0075	0.006695
Ni	60	3	He	0.122	0.0076	420.02	0.0075	0.006695
Ni	60	3	He	0.395	0.0096	520.03	0.0075	0.006695
Cu	63	3	He	0.305	0.0098	530.03	0.0216	0.003198
Cu	63	3	He	0.103	0.0054	300.02	0.0216	0.003198
Cu	63	3	He	0.118	0.0057	310.01	0.0216	0.003198
Zn	66	3	He	0.28	0.0037	200.01	0.0026	0.002954
Zn	66	3	He	-0.022	0.0029	160.01	0.0026	0.002954
Zn	66	3	He	0.075	0.0031	170.01	0.0026	0.002954
As	75	3	He	0.446	0.0014	74.00	0.002	0.0004943
As	75	3	He	0.34	0.0012	64.00	0.002	0.0004943
As	75	3	He	0.734	0.0019	104.00	0.002	0.0004943
Sr	88	3	He	0.096	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	-0.017	0.0005	30.00	0.0081	0.0006852
Sr	88	3	He	0.052	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.357	0.0079	430.02	0.0205	0.0005587
Mo	98	3	He	0.241	0.0055	300.01	0.0205	0.0005587
Mo	98	3	He	0.342	0.0076	410.02	0.0205	0.0005587
Ag	107	3	He	0.071	0.0035	190.01	0.043	0.0004367
Ag	107	3	He	0.045	0.0024	130.01	0.043	0.0004367
Ag	107	3	He	0.071	0.0035	190.01	0.043	0.0004367
Cd	111	3	He	0.093	0.0005	26.00	0.005	1.253E-05
Cd	111	3	He	0.107	0.0005	30.00	0.005	1.253E-05
Cd	111	3	He	0.086	0.0004	24.00	0.005	1.253E-05
Sn	120	3	He	0.076	0.0145	790.05	0.0146	0.01334
Sn	120	3	He	0.139	0.0154	840.06	0.0146	0.01334
Sn	120	3	He	0.299	0.0177	960.07	0.0146	0.01334
Sb	121	3	He	0.281	0.0055	300.02	0.0142	0.001484
Sb	121	3	He	0.192	0.0042	230.01	0.0142	0.001484
Sb	121	3	He	0.168	0.0039	210.01	0.0142	0.001484
Ba	137	3	He	0.197	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.279	0.0017	90.00	0.0046	0.000374
Tl	205	3	He	0.222	0.0065	1210.11	0.0282	0.00021
Tl	205	3	He	0.221	0.0065	1220.09	0.0282	0.00021
Tl	205	3	He	0.178	0.0052	990.08	0.0282	0.00021
Pb	208	3	He	0.097	0.0046	460.03	0.0372	0.0009772
Pb	208	3	He	0.065	0.0034	350.02	0.0372	0.0009772
Pb	208	3	He	0.074	0.0038	360.02	0.0372	0.0009772
U	238	3	He	0.03	0.0013	250.01	0.0417	8.729E-05
U	238	3	He	0.027	0.0012	230.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
Sc	45	1	No Gas			1740972.32		
Sc	45	1	No Gas			1733149.04		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1740972.32		
Ge	72	1	No Gas			904495.69		
Ge	72	1	No Gas			888529.21		
Ge	72	1	No Gas			890678.97		
Sc	45	2	H2			128059.92		
Sc	45	2	H2			130056.97		
Sc	45	2	H2			128161.05		
Ge	72	2	H2			107985.88		
Ge	72	2	H2			107472.37		
Ge	72	2	H2			110051.59		
In	115	2	H2			273213.55		
In	115	2	H2			276678.53		
In	115	2	H2			271899.10		
Sc	45	3	He			29440.51		
Sc	45	3	He			28328.21		
Sc	45	3	He			29540.83		
Ge	72	3	He			54183.42		
Ge	72	3	He			55257.49		
Ge	72	3	He			53972.96		
In	115	3	He			54678.52		
In	115	3	He			54638.18		
In	115	3	He			54216.31		
Tb	159	3	He			245895.74		
Tb	159	3	He			242924.55		
Tb	159	3	He			247084.16		
Bi	209	3	He			187192.40		
Bi	209	3	He			189079.12		
Bi	209	3	He			189302.03		

Quantitation Report

Data File Name	031SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:08:12 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

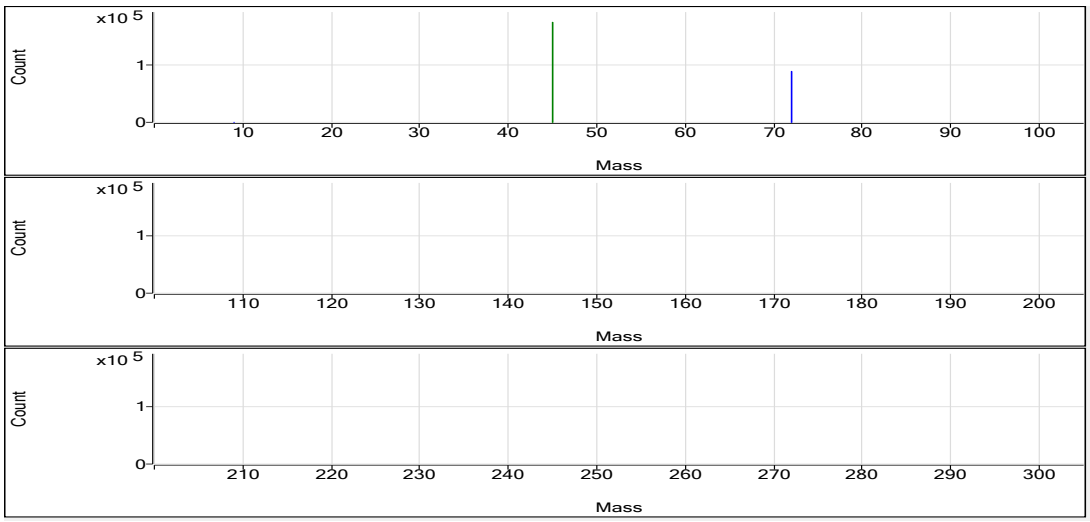
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.299	ppb	9.3	226.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.152	ppb	45.6	8.00	0.0001	Pulse	1.5000	3
Na	23	45	He	33.648	ppb	14.3	9896.98	0.3499	Pulse	0.1000	3
Mg	24	45	He	10.924	ppb	8.3	550.03	0.0194	Pulse	0.1000	3
Al	27	45	He	9.918	ppb	43.6	163.34	0.0058	Pulse	0.1000	3
K	39	45	He	5.276	ppb	399.7	10407.40	0.3679	Pulse	0.1000	3
Ca	44	45	He	22.738	ppb	56.6	110.01	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.526	ppb	340.2	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.103	ppb	50.1	386.01	0.0137	Pulse	0.5000	3
Cr	52	45	He	0.288	ppb	62.8	2133.56	0.0754	Pulse	0.1000	3
Mn	55	45	He	0.074	ppb	150.1	143.34	0.0051	Pulse	0.1000	3
Fe	57	45	He	12.274	ppb	25.6	293.34	0.0104	Pulse	0.1000	3
Co	59	45	He	0.133	ppb	40.0	333.35	0.0118	Pulse	0.1000	3
Ni	60	72	He	0.172	ppb	74.9	436.69	0.0080	Pulse	0.1000	3
Cu	63	72	He	0.116	ppb	49.3	313.35	0.0057	Pulse	0.1000	3
Zn	66	72	He	0.175	ppb	267.1	186.67	0.0034	Pulse	0.1000	3
As	75	72	He	0.133	ppb	22.5	41.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.128	ppb	8.4	93.33	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.196	ppb	32.4	246.68	0.0046	Pulse	0.1000	3
Ag	107	115	He	0.051	ppb	41.1	143.34	0.0026	Pulse	0.1000	3
Cd	111	115	He	0.064	ppb	12.6	18.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.230	ppb	31.8	903.40	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.134	ppb	19.7	183.34	0.0034	Pulse	0.1000	3
Ba	137	115	He	0.132	ppb	91.3	53.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.136	ppb	12.1	770.05	0.0040	Pulse	0.1000	3
Pb	208	209	He	0.066	ppb	30.0	656.70	0.0034	Pulse	0.1000	3
U	238	209	He	0.010	ppb	31.5	100.00	0.0005	Pulse	0.1000	3

ISTD Table:

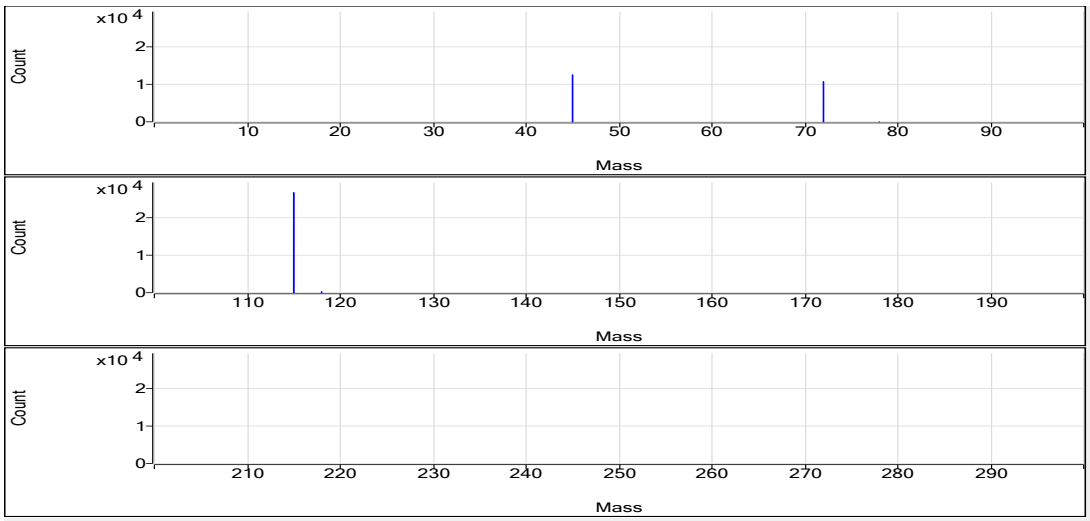
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1736375.24	0.4	98.6	Analog	0.1000	3
No Gas	Ge	72	884527.02	1.7	99.1	Pulse	0.1000	3
H2	Sc	45	126382.43	0.5	99.3	Pulse	0.1000	3
H2	Ge	72	108140.53	0.8	100.9	Pulse	0.1000	3
H2	In	115	269069.74	1.0	101.0	Pulse	0.1000	3
He	Sc	45	28298.38	2.4	99.3	Pulse	0.1000	3
He	Ge	72	54823.10	1.4	99.1	Pulse	0.1000	3
He	In	115	54039.93	1.1	100.7	Pulse	0.1000	3
He	Tb	159	244991.04	0.6	99.7	Pulse	0.1000	3
He	Bi	209	190647.60	0.5	99.9	Pulse	0.1000	3

No Gas

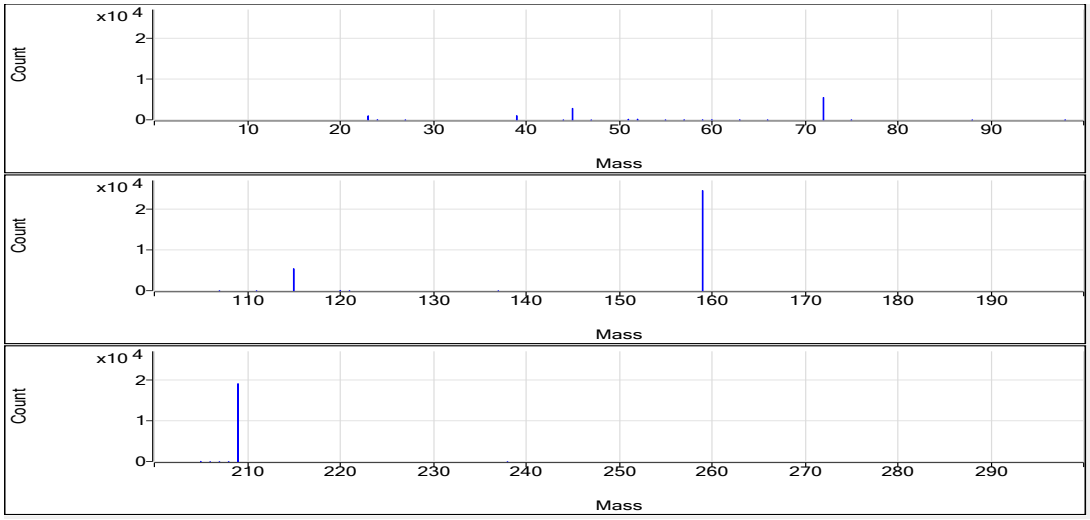


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.317	0.0001	240.00	0.0004	1.287E-05
Be	9	1	No Gas	0.267	0.0001	204.00	0.0004	1.287E-05
Be	9	1	No Gas	0.312	0.0001	236.00	0.0004	1.287E-05
Se	78	2	H2	0.199	0.0001	10.00	0.0004	1.451E-05
Se	78	2	H2	0.186	0.0001	9.33	0.0004	1.451E-05
Se	78	2	H2	0.073	0	4.67	0.0004	1.451E-05
Na	23	3	He	35.308	0.3541	9953.71	0.0025	0.2648
Na	23	3	He	28.223	0.3362	9763.55	0.0025	0.2648
Na	23	3	He	37.413	0.3594	9973.68	0.0025	0.2648
Mg	24	3	He	11.822	0.0206	580.03	0.0013	0.005032
Mg	24	3	He	10.016	0.0183	530.03	0.0013	0.005032
Mg	24	3	He	10.933	0.0195	540.02	0.0013	0.005032
Al	27	3	He	8.029	0.005	140.01	0.0004	0.001519
Al	27	3	He	6.859	0.0045	130.00	0.0004	0.001519
Al	27	3	He	14.865	0.0079	220.01	0.0004	0.001519
K	39	3	He	29.618	0.3915	11004.58	0.001	0.3627
K	39	3	He	-7.44	0.3555	10323.95	0.001	0.3627
K	39	3	He	-6.352	0.3566	9893.67	0.001	0.3627
Ca	44	3	He	10.865	0.0032	90.01	0.0001	0.002571
Ca	44	3	He	20.951	0.0038	110.01	0.0001	0.002571
Ca	44	3	He	36.397	0.0047	130.01	0.0001	0.002571
Ti	47	3	He	2.59	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.131	0.0142	400.01	0.0201	0.0116
V	51	3	He	0.043	0.0125	362.01	0.0201	0.0116
V	51	3	He	0.133	0.0143	396.01	0.0201	0.0116
Cr	52	3	He	0.095	0.0704	1980.20	0.0257	0.06801
Cr	52	3	He	0.315	0.0761	2210.24	0.0257	0.06801
Cr	52	3	He	0.453	0.0797	2210.25	0.0257	0.06801
Mn	55	3	He	0.13	0.0057	160.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.145	0.0059	170.01	0.0113	0.004215
Mn	55	3	He	-0.054	0.0036	100.01	0.0113	0.004215
Fe	57	3	He	8.699	0.0085	240.01	0.0005	0.004099
Fe	57	3	He	13.559	0.011	320.01	0.0005	0.004099
Fe	57	3	He	14.565	0.0115	320.01	0.0005	0.004099
Co	59	3	He	0.125	0.0114	320.01	0.0518	0.004913
Co	59	3	He	0.085	0.0093	270.01	0.0518	0.004913
Co	59	3	He	0.19	0.0148	410.02	0.0518	0.004913
Ni	60	3	He	0.098	0.0074	410.02	0.0075	0.006695
Ni	60	3	He	0.32	0.0091	490.03	0.0075	0.006695
Ni	60	3	He	0.097	0.0074	410.02	0.0075	0.006695
Cu	63	3	He	0.179	0.0071	390.02	0.0216	0.003198
Cu	63	3	He	0.066	0.0046	250.01	0.0216	0.003198
Cu	63	3	He	0.103	0.0054	300.01	0.0216	0.003198
Zn	66	3	He	0.185	0.0034	190.01	0.0026	0.002954
Zn	66	3	He	0.638	0.0046	250.01	0.0026	0.002954
Zn	66	3	He	-0.298	0.0022	120.00	0.0026	0.002954
As	75	3	He	0.155	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.145	0.0008	42.00	0.002	0.0004943
As	75	3	He	0.099	0.0007	38.00	0.002	0.0004943
Sr	88	3	He	0.141	0.0018	100.00	0.0081	0.0006852
Sr	88	3	He	0.122	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.122	0.0017	90.00	0.0081	0.0006852
Mo	98	3	He	0.124	0.0031	170.01	0.0205	0.0005587
Mo	98	3	He	0.245	0.0056	300.02	0.0205	0.0005587
Mo	98	3	He	0.219	0.005	270.01	0.0205	0.0005587
Ag	107	3	He	0.071	0.0035	190.01	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.055	0.0028	150.01	0.043	0.0004367
Cd	111	3	He	0.056	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.064	0.0003	18.00	0.005	1.253E-05
Cd	111	3	He	0.072	0.0004	20.00	0.005	1.253E-05
Sn	120	3	He	0.312	0.0179	980.07	0.0146	0.01334
Sn	120	3	He	0.207	0.0164	880.06	0.0146	0.01334
Sn	120	3	He	0.171	0.0158	850.06	0.0146	0.01334
Sb	121	3	He	0.14	0.0035	190.01	0.0142	0.001484
Sb	121	3	He	0.157	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.105	0.003	160.01	0.0142	0.001484
Ba	137	3	He	0.236	0.0015	80.00	0.0046	0.000374
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.162	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.121	0.0036	690.05	0.0282	0.00021
Tl	205	3	He	0.132	0.0039	750.04	0.0282	0.00021
Tl	205	3	He	0.153	0.0045	870.06	0.0282	0.00021
Pb	208	3	He	0.088	0.0043	450.03	0.0372	0.0009772
Pb	208	3	He	0.061	0.0033	280.01	0.0372	0.0009772
Pb	208	3	He	0.049	0.0028	220.01	0.0372	0.0009772
U	238	3	He	0.012	0.0006	110.01	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
Sc	45	1	No Gas			1743259.82		
Sc	45	1	No Gas			1729962.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1735903.10		
Ge	72	1	No Gas			898755.85		
Ge	72	1	No Gas			886456.55		
Ge	72	1	No Gas			868368.66		
Sc	45	2	H2			127051.45		
Sc	45	2	H2			126104.07		
Sc	45	2	H2			125991.76		
Ge	72	2	H2			108368.89		
Ge	72	2	H2			107139.37		
Ge	72	2	H2			108913.34		
In	115	2	H2			270359.39		
In	115	2	H2			265839.51		
In	115	2	H2			271010.31		
Sc	45	3	He			28107.93		
Sc	45	3	He			29040.04		
Sc	45	3	He			27747.18		
Ge	72	3	He			55237.66		
Ge	72	3	He			53963.50		
Ge	72	3	He			55268.13		
In	115	3	He			54739.04		
In	115	3	He			53755.01		
In	115	3	He			53644.70		
Tb	159	3	He			245776.83		
Tb	159	3	He			245793.20		
Tb	159	3	He			243403.08		
Bi	209	3	He			189992.52		
Bi	209	3	He			190316.17		
Bi	209	3	He			191634.12		

Quantitation Report

Data File Name	032SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:10:11 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

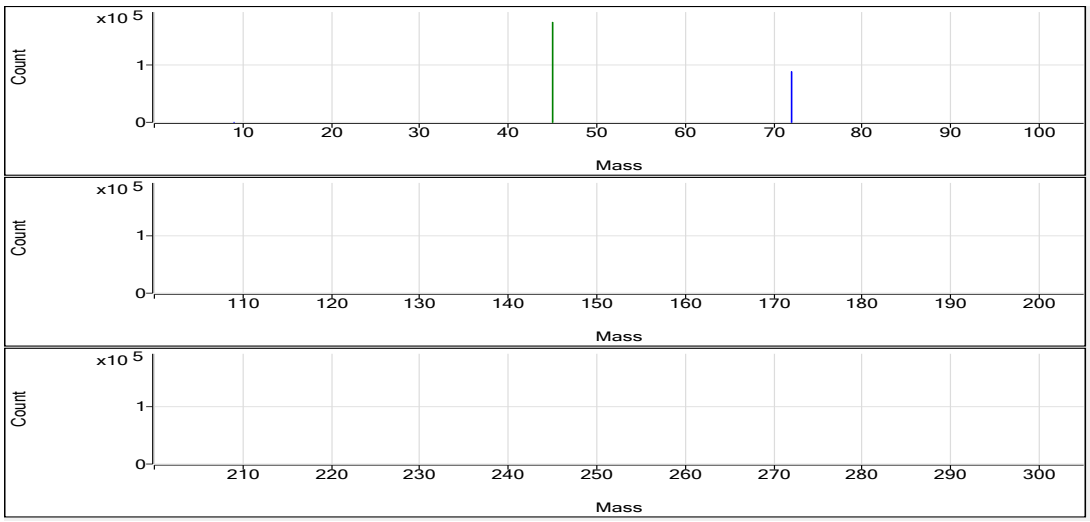
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.273	ppb	7.1	212.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.118	ppb	37.0	6.67	0.0001	Pulse	1.5000	3
Na	23	45	He	32.530	ppb	19.6	9810.23	0.3471	Pulse	0.1000	3
Mg	24	45	He	11.212	ppb	9.5	560.03	0.0198	Pulse	0.1000	3
Al	27	45	He	11.758	ppb	32.9	186.67	0.0066	Pulse	0.1000	3
K	39	45	He	12.316	ppb	306.1	10580.87	0.3747	Pulse	0.1000	3
Ca	44	45	He	10.487	ppb	96.9	90.00	0.0032	Pulse	0.1000	3
Ti	47	45	He	0.261	ppb	299.8	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.121	ppb	50.7	396.01	0.0140	Pulse	0.5000	3
Cr	52	45	He	0.374	ppb	50.6	2196.91	0.0776	Pulse	0.1000	3
Mn	55	45	He	0.108	ppb	108.7	153.34	0.0054	Pulse	0.1000	3
Fe	57	45	He	12.893	ppb	46.7	300.02	0.0107	Pulse	0.1000	3
Co	59	45	He	0.043	ppb	53.7	203.34	0.0072	Pulse	0.1000	3
Ni	60	72	He	0.356	ppb	86.5	516.69	0.0093	Pulse	0.1000	3
Cu	63	72	He	0.078	ppb	47.3	270.01	0.0049	Pulse	0.1000	3
Zn	66	72	He	0.594	ppb	44.0	250.01	0.0045	Pulse	0.1000	3
As	75	72	He	0.154	ppb	84.2	44.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.106	ppb	43.2	83.33	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.130	ppb	38.4	173.34	0.0032	Pulse	0.1000	3
Ag	107	115	He	0.036	ppb	47.3	106.67	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.059	ppb	31.5	16.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.094	ppb	78.0	793.39	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.144	ppb	5.5	190.01	0.0035	Pulse	0.1000	3
Ba	137	115	He	0.161	ppb	24.7	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.108	ppb	26.1	623.38	0.0033	Pulse	0.1000	3
Pb	208	209	He	0.062	ppb	27.6	630.03	0.0033	Pulse	0.1000	3
U	238	209	He	0.008	ppb	54.0	80.00	0.0004	Pulse	0.1000	3

ISTD Table:

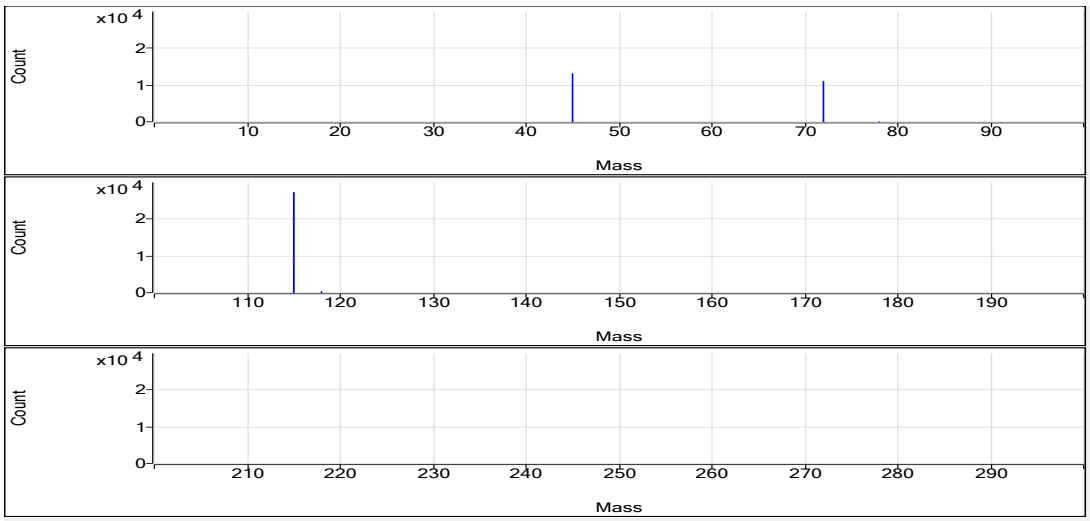
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1761133.46	0.9	100.0	Analog	0.1000	3
No Gas	Ge	72	892168.87	0.7	100.0	Pulse	0.1000	3
H2	Sc	45	130658.94	2.1	102.6	Pulse	0.1000	3
H2	Ge	72	110058.80	1.8	102.6	Pulse	0.1000	3
H2	In	115	271985.13	0.5	102.1	Pulse	0.1000	3
He	Sc	45	28278.17	3.5	99.2	Pulse	0.1000	3
He	Ge	72	55414.96	1.5	100.2	Pulse	0.1000	3
He	In	115	53849.73	2.2	100.3	Pulse	0.1000	3
He	Tb	159	244615.82	0.4	99.5	Pulse	0.1000	3
He	Bi	209	191368.22	1.6	100.3	Pulse	0.1000	3

No Gas

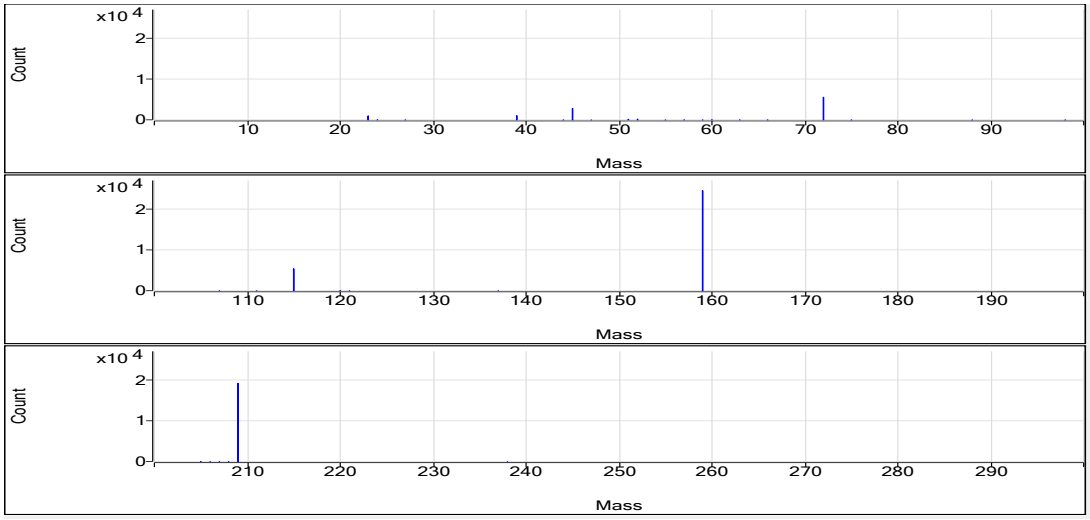


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.251	0.0001	196.00	0.0004	1.287E-05
Be	9	1	No Gas	0.287	0.0001	220.00	0.0004	1.287E-05
Be	9	1	No Gas	0.281	0.0001	220.00	0.0004	1.287E-05
Se	78	2	H2	0.1	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.086	0	5.33	0.0004	1.451E-05
Se	78	2	H2	0.168	0.0001	8.67	0.0004	1.451E-05
Na	23	3	He	39.778	0.3654	10073.68	0.0025	0.2648
Na	23	3	He	30.005	0.3407	10013.75	0.0025	0.2648
Na	23	3	He	27.807	0.3352	9343.26	0.0025	0.2648
Mg	24	3	He	12.404	0.0214	590.03	0.0013	0.005032
Mg	24	3	He	10.367	0.0187	550.04	0.0013	0.005032
Mg	24	3	He	10.865	0.0194	540.03	0.0013	0.005032
Al	27	3	He	14.144	0.0076	210.01	0.0004	0.001519
Al	27	3	He	13.837	0.0075	220.01	0.0004	0.001519
Al	27	3	He	7.292	0.0047	130.00	0.0004	0.001519
K	39	3	He	55.842	0.417	11495.04	0.001	0.3627
K	39	3	He	-9.35	0.3537	10393.98	0.001	0.3627
K	39	3	He	-9.544	0.3535	9853.60	0.001	0.3627
Ca	44	3	He	18.185	0.0036	100.00	0.0001	0.002571
Ca	44	3	He	14.311	0.0034	100.00	0.0001	0.002571
Ca	44	3	He	-1.035	0.0025	70.00	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.234	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	1.055	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.109	0.0138	380.01	0.0201	0.0116
V	51	3	He	0.066	0.0129	380.01	0.0201	0.0116
V	51	3	He	0.187	0.0154	428.01	0.0201	0.0116
Cr	52	3	He	0.445	0.0795	2190.24	0.0257	0.06801
Cr	52	3	He	0.518	0.0813	2390.27	0.0257	0.06801
Cr	52	3	He	0.16	0.0721	2010.21	0.0257	0.06801
Mn	55	3	He	0.236	0.0069	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.079	0.0051	150.01	0.0113	0.004215
Mn	55	3	He	0.008	0.0043	120.01	0.0113	0.004215
Fe	57	3	He	16.845	0.0127	350.02	0.0005	0.004099
Fe	57	3	He	5.969	0.0071	210.01	0.0005	0.004099
Fe	57	3	He	15.865	0.0122	340.02	0.0005	0.004099
Co	59	3	He	0.024	0.0062	170.01	0.0518	0.004913
Co	59	3	He	0.069	0.0085	250.01	0.0518	0.004913
Co	59	3	He	0.037	0.0068	190.01	0.0518	0.004913
Ni	60	3	He	0.116	0.0076	420.02	0.0075	0.006695
Ni	60	3	He	0.249	0.0085	480.02	0.0075	0.006695
Ni	60	3	He	0.702	0.0119	650.04	0.0075	0.006695
Cu	63	3	He	0.077	0.0049	270.01	0.0216	0.003198
Cu	63	3	He	0.042	0.0041	230.01	0.0216	0.003198
Cu	63	3	He	0.115	0.0057	310.01	0.0216	0.003198
Zn	66	3	He	0.314	0.0038	210.01	0.0026	0.002954
Zn	66	3	He	0.637	0.0046	260.01	0.0026	0.002954
Zn	66	3	He	0.83	0.0051	280.01	0.0026	0.002954
As	75	3	He	0.005	0.0005	28.00	0.002	0.0004943
As	75	3	He	0.239	0.001	54.00	0.002	0.0004943
As	75	3	He	0.217	0.0009	50.00	0.002	0.0004943
Sr	88	3	He	0.139	0.0018	100.00	0.0081	0.0006852
Sr	88	3	He	0.125	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.054	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.123	0.0031	170.01	0.0205	0.0005587
Mo	98	3	He	0.084	0.0023	120.00	0.0205	0.0005587
Mo	98	3	He	0.183	0.0043	230.01	0.0205	0.0005587
Ag	107	3	He	0.045	0.0024	130.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.046	0.0024	130.00	0.043	0.0004367
Cd	111	3	He	0.055	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.043	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.08	0.0004	22.00	0.005	1.253E-05
Sn	120	3	He	0.166	0.0158	870.06	0.0146	0.01334
Sn	120	3	He	0.019	0.0136	720.05	0.0146	0.01334
Sn	120	3	He	0.097	0.0148	790.05	0.0146	0.01334
Sb	121	3	He	0.15	0.0036	200.01	0.0142	0.001484
Sb	121	3	He	0.135	0.0034	180.01	0.0142	0.001484
Sb	121	3	He	0.145	0.0036	190.01	0.0142	0.001484
Ba	137	3	He	0.155	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.124	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.203	0.0013	70.00	0.0046	0.000374
Tl	205	3	He	0.131	0.0039	760.06	0.0282	0.00021
Tl	205	3	He	0.076	0.0024	450.03	0.0282	0.00021
Tl	205	3	He	0.116	0.0035	660.05	0.0282	0.00021
Pb	208	3	He	0.058	0.0031	300.01	0.0372	0.0009772
Pb	208	3	He	0.081	0.004	420.03	0.0372	0.0009772
Pb	208	3	He	0.048	0.0028	300.01	0.0372	0.0009772
U	238	3	He	0.01	0.0005	100.00	0.0417	8.729E-05
U	238	3	He	0.011	0.0005	100.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
Sc	45	1	No Gas			1756003.57		
Sc	45	1	No Gas			1748929.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1778467.63		
Ge	72	1	No Gas			887174.05		
Ge	72	1	No Gas			889789.05		
Ge	72	1	No Gas			899543.50		
Sc	45	2	H2			133831.25		
Sc	45	2	H2			129228.45		
Sc	45	2	H2			128917.11		
Ge	72	2	H2			111855.85		
Ge	72	2	H2			110324.90		
Ge	72	2	H2			107995.65		
In	115	2	H2			272017.01		
In	115	2	H2			273251.70		
In	115	2	H2			270686.68		
Sc	45	3	He			27566.74		
Sc	45	3	He			29390.44		
Sc	45	3	He			27877.33		
Ge	72	3	He			55579.35		
Ge	72	3	He			56161.33		
Ge	72	3	He			54504.21		
In	115	3	He			55190.67		
In	115	3	He			52861.36		
In	115	3	He			53513.82		
Tb	159	3	He			245694.74		
Tb	159	3	He			244225.50		
Tb	159	3	He			243927.22		
Bi	209	3	He			194862.56		
Bi	209	3	He			190204.59		
Bi	209	3	He			189037.50		

Quantitation Report

Data File Name	033SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:12:12 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

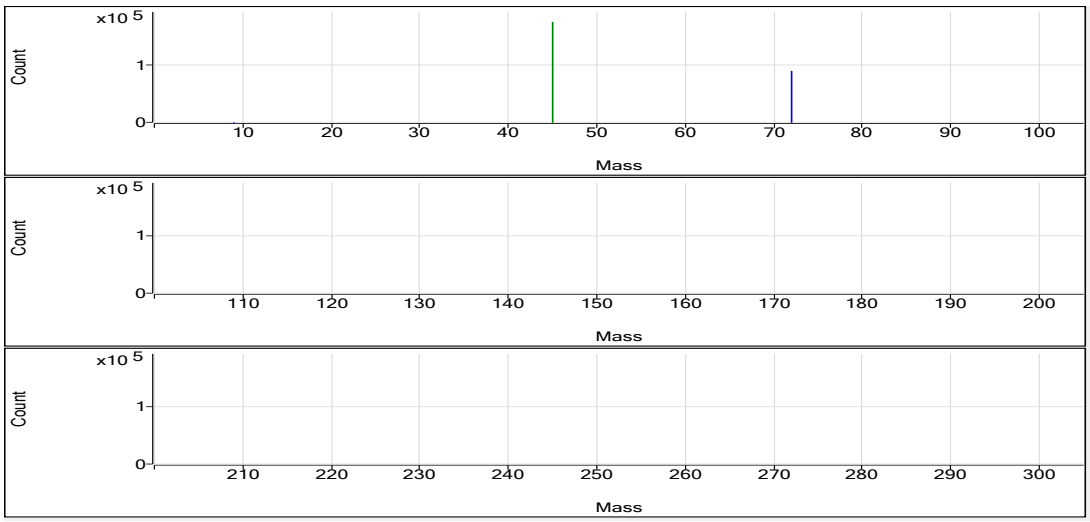
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.240	ppb	12.2	187.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.131	ppb	37.0	7.11	0.0001	Pulse	1.5000	3
Na	23	45	He	28.514	ppb	33.7	9556.70	0.3369	Pulse	0.1000	3
Mg	24	45	He	9.775	ppb	11.4	510.03	0.0179	Pulse	0.1000	3
Al	27	45	He	10.657	ppb	36.2	173.34	0.0061	Pulse	0.1000	3
K	39	45	He	16.811	ppb	279.9	10744.31	0.3791	Pulse	0.1000	3
Ca	44	45	He	12.055	ppb	143.2	93.33	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.002	ppb	23168.4	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.100	ppb	37.9	386.68	0.0136	Pulse	0.5000	3
Cr	52	45	He	0.335	ppb	56.6	2173.58	0.0766	Pulse	0.1000	3
Mn	55	45	He	0.210	ppb	74.1	186.68	0.0066	Pulse	0.1000	3
Fe	57	45	He	12.665	ppb	2.0	300.02	0.0106	Pulse	0.1000	3
Co	59	45	He	0.053	ppb	87.3	216.68	0.0077	Pulse	0.1000	3
Ni	60	72	He	0.473	ppb	60.1	560.03	0.0102	Pulse	0.1000	3
Cu	63	72	He	0.108	ppb	38.9	303.35	0.0055	Pulse	0.1000	3
Zn	66	72	He	0.172	ppb	127.2	186.68	0.0034	Pulse	0.1000	3
As	75	72	He	0.120	ppb	27.2	40.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.055	ppb	45.0	60.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.129	ppb	14.5	170.01	0.0032	Pulse	0.1000	3
Ag	107	115	He	0.038	ppb	29.1	110.00	0.0021	Pulse	0.1000	3
Cd	111	115	He	0.043	ppb	60.1	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.195	ppb	78.5	860.06	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.121	ppb	35.2	170.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	0.014	ppb	160.2	23.33	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.086	ppb	26.0	500.03	0.0026	Pulse	0.1000	3
Pb	208	209	He	0.069	ppb	18.4	673.38	0.0035	Pulse	0.1000	3
U	238	209	He	0.003	ppb	1.5	40.00	0.0002	Pulse	0.1000	3

ISTD Table:

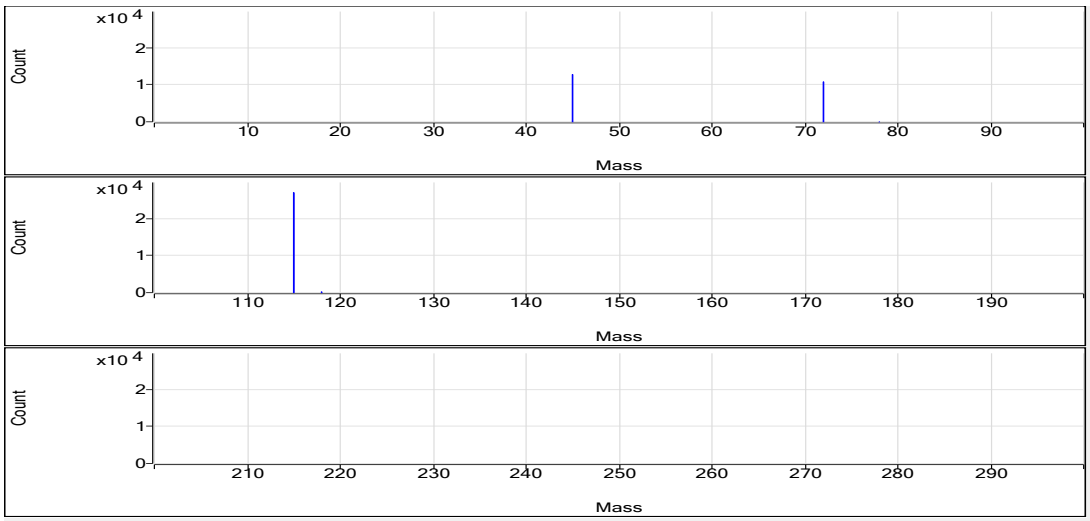
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1745819.61	1.3	99.1	Analog	0.1000	3
No Gas	Ge	72	893333.47	0.6	100.1	Pulse	0.1000	3
H2	Sc	45	128224.14	1.0	100.7	Pulse	0.1000	3
H2	Ge	72	108344.75	0.9	101.0	Pulse	0.1000	3
H2	In	115	271117.23	1.0	101.8	Pulse	0.1000	3
He	Sc	45	28398.53	2.7	99.6	Pulse	0.1000	3
He	Ge	72	54852.71	0.6	99.1	Pulse	0.1000	3
He	In	115	53049.56	1.3	98.8	Pulse	0.1000	3
He	Tb	159	245804.26	0.9	100.0	Pulse	0.1000	3
He	Bi	209	190133.63	0.9	99.6	Pulse	0.1000	3

No Gas

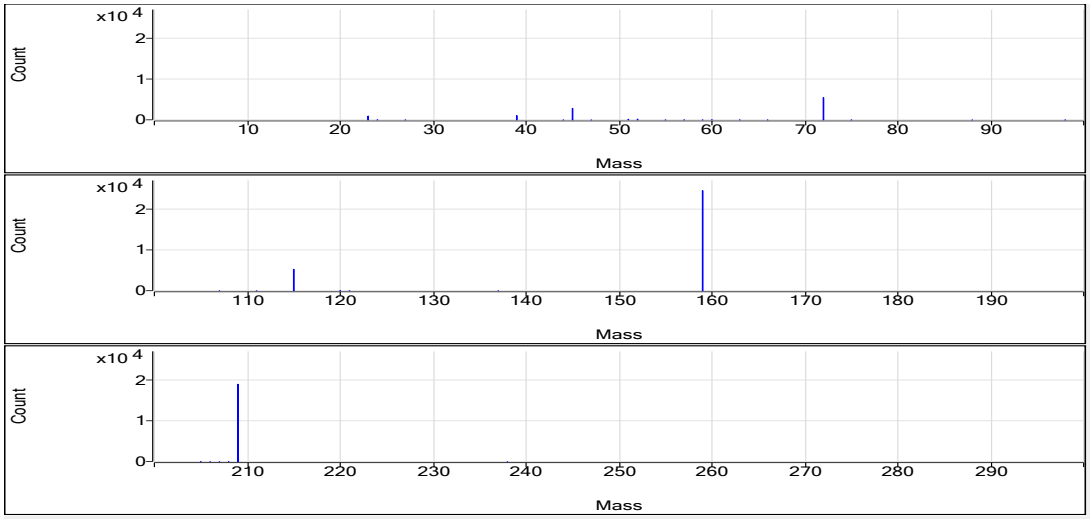


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.207	0.0001	166.00	0.0004	1.287E-05
Be	9	1	No Gas	0.262	0.0001	204.00	0.0004	1.287E-05
Be	9	1	No Gas	0.251	0.0001	192.00	0.0004	1.287E-05
Se	78	2	H2	0.088	0	5.33	0.0004	1.451E-05
Se	78	2	H2	0.122	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.183	0.0001	9.33	0.0004	1.451E-05
Na	23	3	He	33.355	0.3492	9713.41	0.0025	0.2648
Na	23	3	He	34.744	0.3527	9913.63	0.0025	0.2648
Na	23	3	He	17.443	0.3089	9043.07	0.0025	0.2648
Mg	24	3	He	8.717	0.0165	460.02	0.0013	0.005032
Mg	24	3	He	9.666	0.0178	500.03	0.0013	0.005032
Mg	24	3	He	10.943	0.0195	570.03	0.0013	0.005032
Al	27	3	He	14.819	0.0079	220.01	0.0004	0.001519
Al	27	3	He	7.204	0.0046	130.01	0.0004	0.001519
Al	27	3	He	9.947	0.0058	170.01	0.0004	0.001519
K	39	3	He	67.526	0.4283	11915.28	0.001	0.3627
K	39	3	He	8.359	0.3709	10424.04	0.001	0.3627
K	39	3	He	-25.452	0.338	9893.60	0.001	0.3627
Ca	44	3	He	-7.13	0.0022	60.00	0.0001	0.002571
Ca	44	3	He	16.983	0.0036	100.00	0.0001	0.002571
Ca	44	3	He	26.313	0.0041	120.00	0.0001	0.002571
Ti	47	3	He	0.276	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.237	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.117	0.0139	388.01	0.0201	0.0116
V	51	3	He	0.057	0.0127	358.01	0.0201	0.0116
V	51	3	He	0.127	0.0141	414.01	0.0201	0.0116
Cr	52	3	He	0.473	0.0802	2230.26	0.0257	0.06801
Cr	52	3	He	0.413	0.0786	2210.25	0.0257	0.06801
Cr	52	3	He	0.119	0.0711	2080.23	0.0257	0.06801
Mn	55	3	He	0.39	0.0086	240.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.13	0.0057	160.01	0.0113	0.004215
Mn	55	3	He	0.111	0.0055	160.01	0.0113	0.004215
Fe	57	3	He	12.395	0.0104	290.01	0.0005	0.004099
Fe	57	3	He	12.881	0.0107	300.02	0.0005	0.004099
Fe	57	3	He	12.72	0.0106	310.02	0.0005	0.004099
Co	59	3	He	0.106	0.0104	290.01	0.0518	0.004913
Co	59	3	He	0.029	0.0064	180.01	0.0518	0.004913
Co	59	3	He	0.024	0.0061	180.01	0.0518	0.004913
Ni	60	3	He	0.593	0.0111	610.04	0.0075	0.006695
Ni	60	3	He	0.148	0.0078	430.02	0.0075	0.006695
Ni	60	3	He	0.677	0.0117	640.03	0.0075	0.006695
Cu	63	3	He	0.063	0.0046	250.01	0.0216	0.003198
Cu	63	3	He	0.146	0.0063	350.02	0.0216	0.003198
Cu	63	3	He	0.115	0.0057	310.01	0.0216	0.003198
Zn	66	3	He	-0.015	0.0029	160.01	0.0026	0.002954
Zn	66	3	He	0.118	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	0.411	0.004	220.01	0.0026	0.002954
As	75	3	He	0.083	0.0007	36.00	0.002	0.0004943
As	75	3	He	0.137	0.0008	42.00	0.002	0.0004943
As	75	3	He	0.141	0.0008	42.00	0.002	0.0004943
Sr	88	3	He	0.031	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.054	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.081	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.147	0.0036	190.01	0.0205	0.0005587
Mo	98	3	He	0.109	0.0028	150.01	0.0205	0.0005587
Mo	98	3	He	0.132	0.0033	170.01	0.0205	0.0005587
Ag	107	3	He	0.033	0.0019	100.00	0.043	0.0004367
Ag	107	3	He	0.051	0.0026	140.01	0.043	0.0004367
Ag	107	3	He	0.03	0.0017	90.00	0.043	0.0004367
Cd	111	3	He	0.028	0.0002	8.00	0.005	1.253E-05
Cd	111	3	He	0.072	0.0004	20.00	0.005	1.253E-05
Cd	111	3	He	0.028	0.0002	8.00	0.005	1.253E-05
Sn	120	3	He	0.332	0.0182	970.07	0.0146	0.01334
Sn	120	3	He	0.223	0.0166	890.06	0.0146	0.01334
Sn	120	3	He	0.03	0.0138	720.05	0.0146	0.01334
Sb	121	3	He	0.12	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.079	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.165	0.0038	200.01	0.0142	0.001484
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.04	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	0.002	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.111	0.0034	640.05	0.0282	0.00021
Tl	205	3	He	0.074	0.0023	440.03	0.0282	0.00021
Tl	205	3	He	0.072	0.0022	420.02	0.0282	0.00021
Pb	208	3	He	0.055	0.003	340.02	0.0372	0.0009772
Pb	208	3	He	0.08	0.004	310.02	0.0372	0.0009772
Pb	208	3	He	0.071	0.0036	380.02	0.0372	0.0009772
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
Sc	45	1	No Gas			1760205.76		
Sc	45	1	No Gas			1757325.91		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1719927.16		
Ge	72	1	No Gas			892238.42		
Ge	72	1	No Gas			899527.25		
Ge	72	1	No Gas			888234.75		
Sc	45	2	H2			128160.57		
Sc	45	2	H2			126979.89		
Sc	45	2	H2			129531.96		
Ge	72	2	H2			109295.03		
Ge	72	2	H2			107391.31		
Ge	72	2	H2			108347.92		
In	115	2	H2			272779.39		
In	115	2	H2			268011.83		
In	115	2	H2			272560.46		
Sc	45	3	He			27817.23		
Sc	45	3	He			28107.98		
Sc	45	3	He			29270.37		
Ge	72	3	He			54906.24		
Ge	72	3	He			55137.35		
Ge	72	3	He			54514.55		
In	115	3	He			53313.36		
In	115	3	He			53594.14		
In	115	3	He			52259.25		
Tb	159	3	He			248379.12		
Tb	159	3	He			244461.99		
Tb	159	3	He			244571.66		
Bi	209	3	He			190934.61		
Bi	209	3	He			191298.79		
Bi	209	3	He			188167.50		

Quantitation Report

Data File Name	034_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:14:11 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

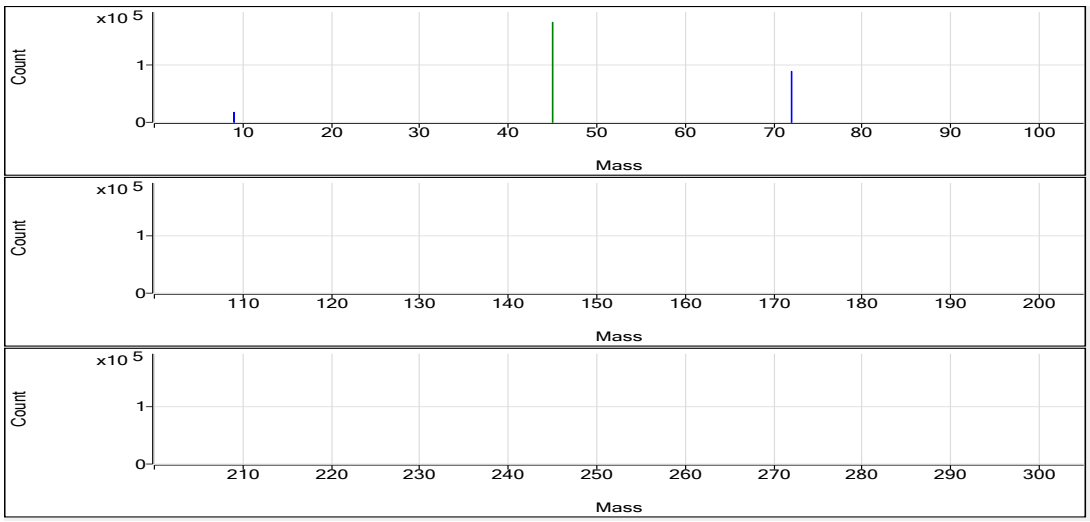
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.230	ppb	7.3	35476.05	0.0202	Pulse	0.5000	3
Se	78	72	H2	52.124	ppb	1.0	2242.18	0.0204	Pulse	1.5000	3
Na	23	45	He	5078.897	ppb	1.1	382644.59	13.1078	Pulse	0.1000	3
Mg	24	45	He	5075.365	ppb	1.4	195702.41	6.7037	Pulse	0.1000	3
Al	27	45	He	5027.957	ppb	3.2	63336.77	2.1698	Pulse	0.1000	3
K	39	45	He	5120.683	ppb	2.3	155815.28	5.3378	Pulse	0.1000	3
Ca	44	45	He	4961.882	ppb	4.2	8489.44	0.2908	Pulse	0.1000	3
Ti	47	45	He	5169.858	ppb	1.3	69359.42	2.3760	Pulse	0.1000	3
V	51	45	He	512.500	ppb	0.8	300431.36	10.2914	Pulse	0.5000	3
Cr	52	45	He	510.749	ppb	0.5	385195.38	13.1948	Pulse	0.1000	3
Mn	55	45	He	511.798	ppb	1.0	169392.34	5.8026	Pulse	0.1000	3
Fe	57	45	He	5131.297	ppb	1.2	76587.05	2.6234	Pulse	0.1000	3
Co	59	45	He	505.055	ppb	0.1	764123.24	26.1746	Pulse	0.1000	3
Ni	60	72	He	519.031	ppb	2.5	216535.09	3.8735	Pulse	0.1000	3
Cu	63	72	He	515.419	ppb	0.5	622257.49	11.1299	Pulse	0.1000	3
Zn	66	72	He	517.029	ppb	1.8	76182.61	1.3627	Pulse	0.1000	3
As	75	72	He	518.725	ppb	0.3	56650.17	1.0133	Pulse	0.5000	3
Sr	88	115	He	52.123	ppb	1.4	22521.87	0.4236	Pulse	0.1000	3
Mo	98	115	He	52.482	ppb	1.9	57136.82	1.0749	Pulse	0.1000	3
Ag	107	115	He	53.375	ppb	1.5	122168.17	2.2980	Pulse	0.1000	3
Cd	111	115	He	52.787	ppb	2.1	14025.76	0.2639	Pulse	0.5000	3
Sn	120	115	He	52.378	ppb	2.9	41406.19	0.7789	Pulse	0.1000	3
Sb	121	115	He	51.212	ppb	1.3	38815.27	0.7301	Pulse	0.1000	3
Ba	137	115	He	513.486	ppb	2.4	125763.59	2.3660	Pulse	0.1000	3
Tl	205	209	He	51.197	ppb	1.2	276094.09	1.4451	Pulse	0.1000	3
Pb	208	209	He	51.164	ppb	0.7	364206.28	1.9062	Pulse	0.1000	3
U	238	209	He	50.448	ppb	0.8	402105.35	2.1047	Pulse	0.1000	3

ISTD Table:

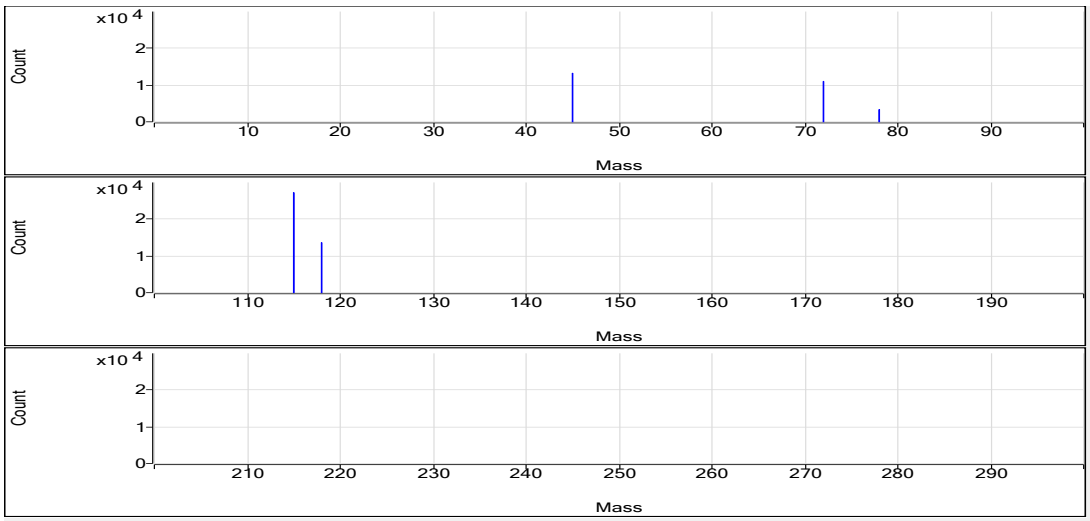
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1757316.12	0.5	99.8	Analog	0.1000	3
No Gas	Ge	72	895543.11	1.2	100.3	Pulse	0.1000	3
H2	Sc	45	132237.79	0.6	103.9	Pulse	0.1000	3
H2	Ge	72	109903.57	0.6	102.5	Pulse	0.1000	3
H2	In	115	271657.81	0.9	102.0	Pulse	0.1000	3
He	Sc	45	29193.37	0.6	102.4	Pulse	0.1000	3
He	Ge	72	55910.37	1.0	101.1	Pulse	0.1000	3
He	In	115	53170.27	2.0	99.1	Pulse	0.1000	3
He	Tb	159	247041.74	0.8	100.5	Pulse	0.1000	3
He	Bi	209	191061.37	0.7	100.1	Pulse	0.1000	3

No Gas

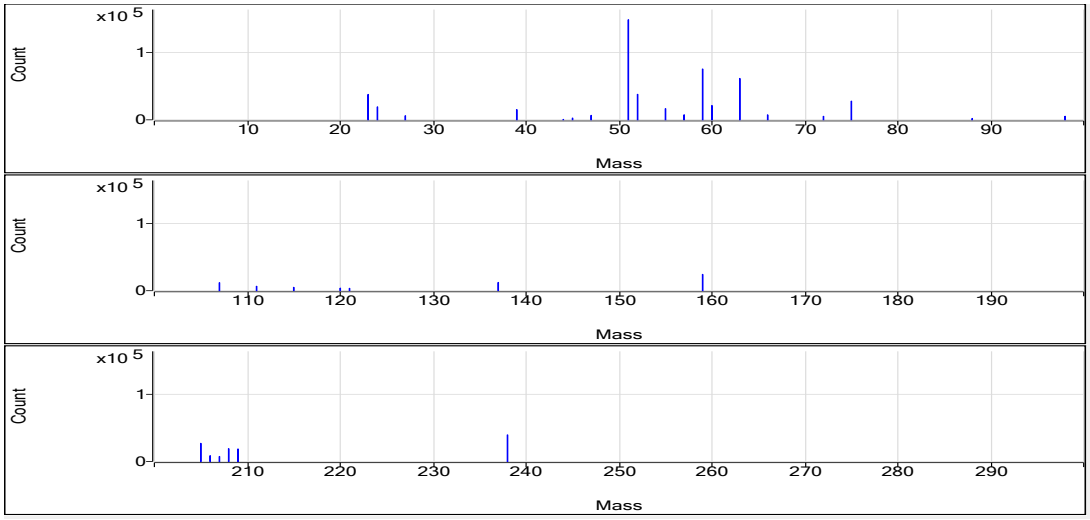


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.17	0.0186	32835.91	0.0004	1.287E-05
Be	9	1	No Gas	51.947	0.0205	35979.14	0.0004	1.287E-05
Be	9	1	No Gas	54.574	0.0215	37613.09	0.0004	1.287E-05
Se	78	2	H2	52.327	0.0205	2236.85	0.0004	1.451E-05
Se	78	2	H2	52.509	0.0206	2260.18	0.0004	1.451E-05
Se	78	2	H2	51.536	0.0202	2229.51	0.0004	1.451E-05
Na	23	3	He	5141.848	13.267	384738.39	0.0025	0.2648
Na	23	3	He	5058.111	13.0553	381345.70	0.0025	0.2648
Na	23	3	He	5036.731	13.0012	381849.68	0.0025	0.2648
Mg	24	3	He	5053.653	6.6751	193574.84	0.0013	0.005032
Mg	24	3	He	5156.47	6.8108	198943.71	0.0013	0.005032
Mg	24	3	He	5015.972	6.6253	194588.67	0.0013	0.005032
Al	27	3	He	5215.945	2.2509	65275.34	0.0004	0.001519
Al	27	3	He	4937.517	2.1308	62241.78	0.0004	0.001519
Al	27	3	He	4930.411	2.1278	62493.20	0.0004	0.001519
K	39	3	He	5258.431	5.4716	158675.02	0.001	0.3627
K	39	3	He	5048.367	5.2675	153865.18	0.001	0.3627
K	39	3	He	5055.251	5.2742	154905.64	0.001	0.3627
Ca	44	3	He	4913.929	0.288	8352.68	0.0001	0.002571
Ca	44	3	He	5190.757	0.3041	8883.04	0.0001	0.002571
Ca	44	3	He	4780.96	0.2803	8232.59	0.0001	0.002571
Ti	47	3	He	5246.83	2.4114	69928.79	0.0005	0.0002328
Ti	47	3	He	5150.672	2.3672	69145.58	0.0005	0.0002328
Ti	47	3	He	5112.072	2.3494	69003.90	0.0005	0.0002328
V	51	3	He	517.068	10.383	301104.25	0.0201	0.0116
V	51	3	He	510.617	10.2536	299509.72	0.0201	0.0116
V	51	3	He	509.815	10.2375	300680.13	0.0201	0.0116
Cr	52	3	He	511.942	13.2255	383533.67	0.0257	0.06801
Cr	52	3	He	512.377	13.2366	386644.13	0.0257	0.06801
Cr	52	3	He	507.93	13.1224	385408.35	0.0257	0.06801
Mn	55	3	He	514.127	5.829	169038.85	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	515.43	5.8438	170697.11	0.0113	0.004215
Mn	55	3	He	505.836	5.7351	168441.07	0.0113	0.004215
Fe	57	3	He	5122.029	2.6186	75939.48	0.0005	0.004099
Fe	57	3	He	5073.694	2.594	75769.96	0.0005	0.004099
Fe	57	3	He	5198.167	2.6575	78051.71	0.0005	0.004099
Co	59	3	He	505.465	26.1959	759671.24	0.0518	0.004913
Co	59	3	He	505.102	26.1771	764636.24	0.0518	0.004913
Co	59	3	He	504.597	26.1509	768062.25	0.0518	0.004913
Ni	60	3	He	530.68	3.9603	218996.91	0.0075	0.006695
Ni	60	3	He	504.806	3.7675	212344.94	0.0075	0.006695
Ni	60	3	He	521.606	3.8927	218263.43	0.0075	0.006695
Cu	63	3	He	518.112	11.188	618681.36	0.0216	0.003198
Cu	63	3	He	513.357	11.0854	624795.58	0.0216	0.003198
Cu	63	3	He	514.79	11.1163	623295.54	0.0216	0.003198
Zn	66	3	He	526.775	1.3884	76775.18	0.0026	0.002954
Zn	66	3	He	508.272	1.3397	75509.10	0.0026	0.002954
Zn	66	3	He	516.039	1.3601	76263.56	0.0026	0.002954
As	75	3	He	520.656	1.017	56239.84	0.002	0.0004943
As	75	3	He	518.09	1.012	57039.13	0.002	0.0004943
As	75	3	He	517.429	1.0107	56671.54	0.002	0.0004943
Sr	88	3	He	51.307	0.4169	22187.98	0.0081	0.0006852
Sr	88	3	He	52.379	0.4256	22177.91	0.0081	0.0006852
Sr	88	3	He	52.684	0.4281	23199.71	0.0081	0.0006852
Mo	98	3	He	52.738	1.0801	57477.69	0.0205	0.0005587
Mo	98	3	He	53.328	1.0922	56906.58	0.0205	0.0005587
Mo	98	3	He	51.382	1.0523	57026.20	0.0205	0.0005587
Ag	107	3	He	53.833	2.3178	123341.19	0.043	0.0004367
Ag	107	3	He	53.816	2.3171	120729.09	0.043	0.0004367
Ag	107	3	He	52.475	2.2593	122434.23	0.043	0.0004367
Cd	111	3	He	52.424	0.262	13945.01	0.005	1.253E-05
Cd	111	3	He	54.034	0.2701	14073.13	0.005	1.253E-05
Cd	111	3	He	51.902	0.2594	14059.15	0.005	1.253E-05
Sn	120	3	He	53.814	0.7999	42566.64	0.0146	0.01334
Sn	120	3	He	52.504	0.7807	40680.60	0.0146	0.01334
Sn	120	3	He	50.815	0.7561	40971.33	0.0146	0.01334
Sb	121	3	He	51.186	0.7298	38835.57	0.0142	0.001484
Sb	121	3	He	51.901	0.7399	38554.56	0.0142	0.001484
Sb	121	3	He	50.549	0.7207	39055.69	0.0142	0.001484
Ba	137	3	He	517.093	2.3826	126792.39	0.0046	0.000374
Ba	137	3	He	523.459	2.4119	125673.54	0.0046	0.000374
Ba	137	3	He	499.908	2.3034	124824.83	0.0046	0.000374
Tl	205	3	He	50.604	1.4284	275033.80	0.0282	0.00021
Tl	205	3	He	51.197	1.4451	274918.26	0.0282	0.00021
Tl	205	3	He	51.789	1.4618	278330.21	0.0282	0.00021
Pb	208	3	He	51.397	1.9149	198044.90	0.0372	0.0009772
Pb	208	3	He	50.778	1.8918	194537.89	0.0372	0.0009772
Pb	208	3	He	51.315	1.9118	194676.48	0.0372	0.0009772
U	238	3	He	50.013	2.0865	401752.03	0.0417	8.729E-05
U	238	3	He	50.709	2.1155	402452.03	0.0417	8.729E-05
U	238	3	He	50.624	2.112	402111.99	0.0417	8.729E-05
Sc	45	1	No Gas			1766030.29		
Sc	45	1	No Gas			1757254.66		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1748663.41		
Ge	72	1	No Gas			893494.60		
Ge	72	1	No Gas			907247.56		
Ge	72	1	No Gas			885887.17		
Sc	45	2	H2			132883.27		
Sc	45	2	H2			131329.02		
Sc	45	2	H2			132501.09		
Ge	72	2	H2			109214.89		
Ge	72	2	H2			109970.28		
Ge	72	2	H2			110525.53		
In	115	2	H2			270391.85		
In	115	2	H2			274545.31		
In	115	2	H2			270036.27		
Sc	45	3	He			28999.64		
Sc	45	3	He			29210.12		
Sc	45	3	He			29370.35		
Ge	72	3	He			55298.54		
Ge	72	3	He			56362.18		
Ge	72	3	He			56070.38		
In	115	3	He			53513.61		
In	115	3	He			52389.39		
In	115	3	He			54477.33		
Tb	159	3	He			248917.20		
Tb	159	3	He			244978.65		
Tb	159	3	He			247229.37		
Bi	209	3	He			192549.55		
Bi	209	3	He			190237.58		
Bi	209	3	He			190396.97		

Quantitation Report

Data File Name	035_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:16:10 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

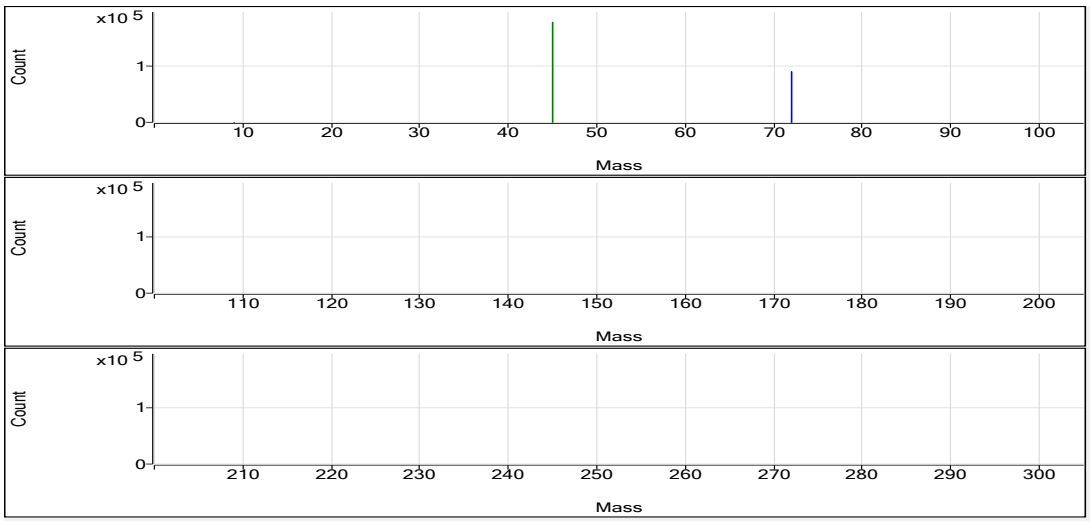
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.297	ppb	10.2	230.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.130	ppb	60.5	7.11	0.0001	Pulse	1.5000	3
Na	23	45	He	18.543	ppb	31.7	8886.31	0.3117	Pulse	0.1000	3
Mg	24	45	He	8.409	ppb	17.3	460.02	0.0161	Pulse	0.1000	3
Al	27	45	He	5.941	ppb	46.1	116.67	0.0041	Pulse	0.1000	3
K	39	45	He	13.127	ppb	155.3	10710.94	0.3755	Pulse	0.1000	3
Ca	44	45	He	15.971	ppb	126.4	100.00	0.0035	Pulse	0.1000	3
Ti	47	45	He	2.292	ppb	19.6	36.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.250	ppb	20.1	474.01	0.0166	Pulse	0.5000	3
Cr	52	45	He	0.447	ppb	48.2	2266.93	0.0795	Pulse	0.1000	3
Mn	55	45	He	0.329	ppb	21.7	226.68	0.0079	Pulse	0.1000	3
Fe	57	45	He	18.995	ppb	30.0	393.36	0.0138	Pulse	0.1000	3
Co	59	45	He	0.189	ppb	26.3	420.02	0.0147	Pulse	0.1000	3
Ni	60	72	He	0.500	ppb	7.6	566.70	0.0104	Pulse	0.1000	3
Cu	63	72	He	0.198	ppb	39.5	406.69	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.463	ppb	41.4	226.68	0.0042	Pulse	0.1000	3
As	75	72	He	0.506	ppb	20.5	80.67	0.0015	Pulse	0.5000	3
Sr	88	115	He	0.107	ppb	96.3	83.34	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.170	ppb	27.6	216.68	0.0040	Pulse	0.1000	3
Ag	107	115	He	0.037	ppb	21.9	110.00	0.0020	Pulse	0.1000	3
Cd	111	115	He	0.042	ppb	17.7	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.055	ppb	332.7	760.05	0.0142	Pulse	0.1000	3
Sb	121	115	He	0.226	ppb	27.4	253.34	0.0047	Pulse	0.1000	3
Ba	137	115	He	0.160	ppb	65.4	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.168	ppb	4.3	956.74	0.0050	Pulse	0.1000	3
Pb	208	209	He	0.057	ppb	8.4	600.03	0.0031	Pulse	0.1000	3
U	238	209	He	0.030	ppb	21.6	256.68	0.0013	Pulse	0.1000	3

ISTD Table:

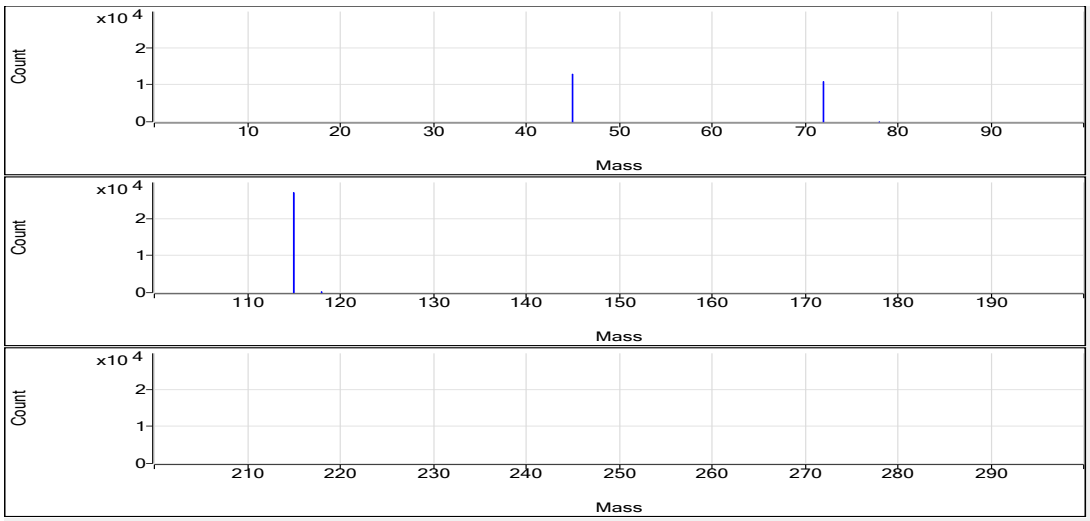
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1767358.10	1.7	100.3	Analog	0.1000	3
No Gas	Ge	72	894358.53	1.9	100.2	Pulse	0.1000	3
H2	Sc	45	128974.09	1.1	101.3	Pulse	0.1000	3
H2	Ge	72	108642.00	0.3	101.3	Pulse	0.1000	3
H2	In	115	270132.13	0.4	101.4	Pulse	0.1000	3
He	Sc	45	28518.60	1.4	100.0	Pulse	0.1000	3
He	Ge	72	54391.18	1.1	98.3	Pulse	0.1000	3
He	In	115	53789.65	1.3	100.2	Pulse	0.1000	3
He	Tb	159	246080.18	1.5	100.1	Pulse	0.1000	3
He	Bi	209	192953.76	1.4	101.1	Pulse	0.1000	3

No Gas

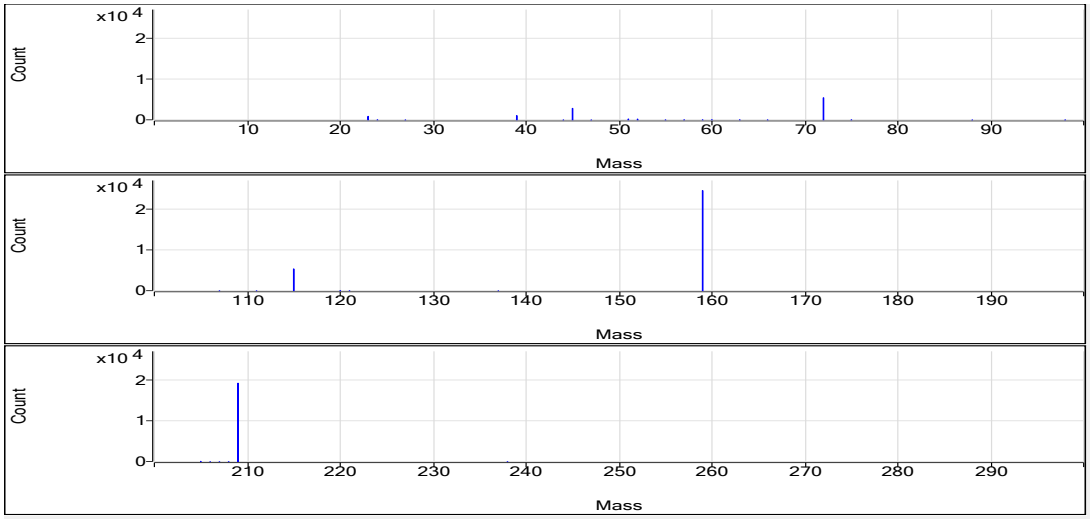


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.312	0.0001	244.00	0.0004	1.287E-05
Be	9	1	No Gas	0.263	0.0001	202.00	0.0004	1.287E-05
Be	9	1	No Gas	0.318	0.0001	244.00	0.0004	1.287E-05
Se	78	2	H2	0.057	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.214	0.0001	10.67	0.0004	1.451E-05
Se	78	2	H2	0.12	0.0001	6.67	0.0004	1.451E-05
Na	23	3	He	17.598	0.3093	8852.98	0.0025	0.2648
Na	23	3	He	13.191	0.2982	8602.76	0.0025	0.2648
Na	23	3	He	24.84	0.3277	9203.18	0.0025	0.2648
Mg	24	3	He	6.778	0.014	400.02	0.0013	0.005032
Mg	24	3	He	9.582	0.0177	510.03	0.0013	0.005032
Mg	24	3	He	8.866	0.0167	470.02	0.0013	0.005032
Al	27	3	He	6.203	0.0042	120.01	0.0004	0.001519
Al	27	3	He	8.536	0.0052	150.01	0.0004	0.001519
Al	27	3	He	3.083	0.0028	80.00	0.0004	0.001519
K	39	3	He	35.74	0.3975	11374.79	0.001	0.3627
K	39	3	He	7.481	0.37	10674.28	0.001	0.3627
K	39	3	He	-3.839	0.359	10083.76	0.001	0.3627
Ca	44	3	He	3.86	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	39.284	0.0049	140.01	0.0001	0.002571
Ca	44	3	He	4.769	0.0028	80.00	0.0001	0.002571
Ti	47	3	He	1.774	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	2.511	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	2.592	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.3	0.0176	504.01	0.0201	0.0116
V	51	3	He	0.251	0.0166	480.01	0.0201	0.0116
V	51	3	He	0.199	0.0156	438.01	0.0201	0.0116
Cr	52	3	He	0.658	0.0849	2430.29	0.0257	0.06801
Cr	52	3	He	0.227	0.0738	2130.24	0.0257	0.06801
Cr	52	3	He	0.457	0.0798	2240.25	0.0257	0.06801
Mn	55	3	He	0.399	0.0087	250.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.332	0.008	230.01	0.0113	0.004215
Mn	55	3	He	0.257	0.0071	200.01	0.0113	0.004215
Fe	57	3	He	12.507	0.0105	300.01	0.0005	0.004099
Fe	57	3	He	23.21	0.0159	460.03	0.0005	0.004099
Fe	57	3	He	21.267	0.015	420.03	0.0005	0.004099
Co	59	3	He	0.222	0.0164	470.02	0.0518	0.004913
Co	59	3	He	0.213	0.0159	460.03	0.0518	0.004913
Co	59	3	He	0.132	0.0117	330.02	0.0518	0.004913
Ni	60	3	He	0.54	0.0107	590.03	0.0075	0.006695
Ni	60	3	He	0.465	0.0102	550.03	0.0075	0.006695
Ni	60	3	He	0.494	0.0104	560.03	0.0075	0.006695
Cu	63	3	He	0.281	0.0093	510.03	0.0216	0.003198
Cu	63	3	He	0.186	0.0072	390.02	0.0216	0.003198
Cu	63	3	He	0.126	0.0059	320.02	0.0216	0.003198
Zn	66	3	He	0.258	0.0036	200.01	0.0026	0.002954
Zn	66	3	He	0.492	0.0042	230.01	0.0026	0.002954
Zn	66	3	He	0.638	0.0046	250.01	0.0026	0.002954
As	75	3	He	0.491	0.0015	80.00	0.002	0.0004943
As	75	3	He	0.617	0.0017	92.00	0.002	0.0004943
As	75	3	He	0.411	0.0013	70.00	0.002	0.0004943
Sr	88	3	He	0.006	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.102	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.212	0.0024	130.01	0.0081	0.0006852
Mo	98	3	He	0.207	0.0048	260.01	0.0205	0.0005587
Mo	98	3	He	0.185	0.0043	230.01	0.0205	0.0005587
Mo	98	3	He	0.117	0.003	160.01	0.0205	0.0005587
Ag	107	3	He	0.037	0.002	110.00	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.046	0.0024	130.01	0.043	0.0004367
Cd	111	3	He	0.034	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.043	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.049	0.0003	14.00	0.005	1.253E-05
Sn	120	3	He	-0.131	0.0114	620.04	0.0146	0.01334
Sn	120	3	He	0.237	0.0168	890.07	0.0146	0.01334
Sn	120	3	He	0.06	0.0142	770.05	0.0146	0.01334
Sb	121	3	He	0.284	0.0055	300.01	0.0142	0.001484
Sb	121	3	He	0.161	0.0038	200.01	0.0142	0.001484
Sb	121	3	He	0.233	0.0048	260.01	0.0142	0.001484
Ba	137	3	He	0.119	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.083	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.28	0.0017	90.00	0.0046	0.000374
Tl	205	3	He	0.172	0.0051	990.08	0.0282	0.00021
Tl	205	3	He	0.173	0.0051	970.08	0.0282	0.00021
Tl	205	3	He	0.16	0.0047	910.07	0.0282	0.00021
Pb	208	3	He	0.053	0.003	250.01	0.0372	0.0009772
Pb	208	3	He	0.063	0.0033	350.02	0.0372	0.0009772
Pb	208	3	He	0.056	0.0031	260.01	0.0372	0.0009772
U	238	3	He	0.037	0.0016	320.02	0.0417	8.729E-05
U	238	3	He	0.027	0.0012	230.01	0.0417	8.729E-05
U	238	3	He	0.025	0.0011	220.01	0.0417	8.729E-05
Sc	45	1	No Gas			1797422.63		
Sc	45	1	No Gas			1737043.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1767608.10		
Ge	72	1	No Gas			913912.96		
Ge	72	1	No Gas			882104.05		
Ge	72	1	No Gas			887058.58		
Sc	45	2	H2			127412.74		
Sc	45	2	H2			129966.38		
Sc	45	2	H2			129543.14		
Ge	72	2	H2			108844.11		
Ge	72	2	H2			108852.99		
Ge	72	2	H2			108228.91		
In	115	2	H2			271121.13		
In	115	2	H2			269165.76		
In	115	2	H2			270109.49		
Sc	45	3	He			28618.77		
Sc	45	3	He			28849.06		
Sc	45	3	He			28087.98		
Ge	72	3	He			55047.09		
Ge	72	3	He			54143.64		
Ge	72	3	He			53982.82		
In	115	3	He			54267.10		
In	115	3	He			52971.78		
In	115	3	He			54146.03		
Tb	159	3	He			249157.26		
Tb	159	3	He			241812.93		
Tb	159	3	He			247270.35		
Bi	209	3	He			195753.30		
Bi	209	3	He			190367.89		
Bi	209	3	He			192740.08		

Quantitation Report

Data File Name	036SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:19:55 PM
Sample Name	MB 410-401990/1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

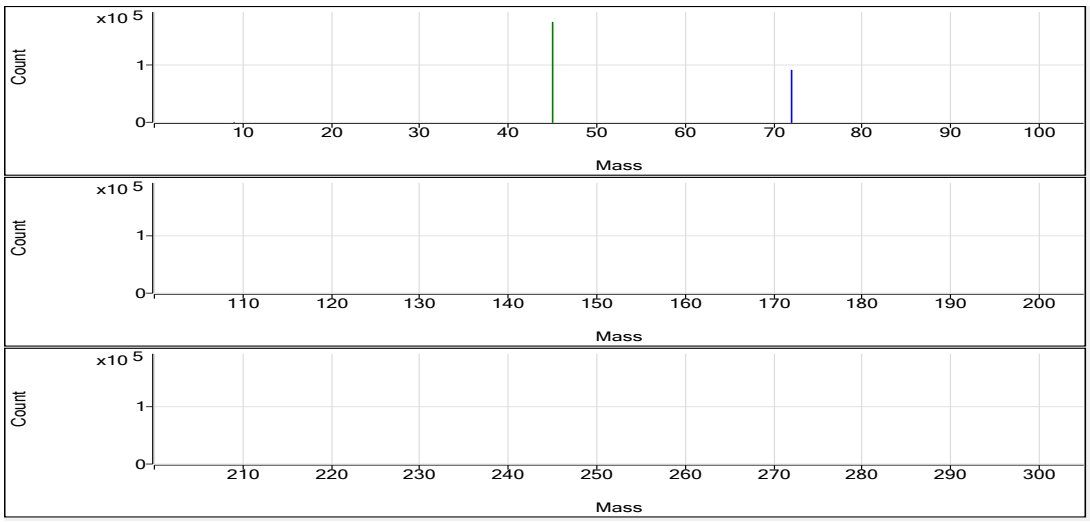
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.144	ppb	6.6	122.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.045	ppb	22.4	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	20.953	ppb	15.4	9303.20	0.3178	Pulse	0.1000	3
Mg	24	45	He	5.929	ppb	25.4	376.69	0.0129	Pulse	0.1000	3
Al	27	45	He	8.662	ppb	48.9	153.34	0.0053	Pulse	0.1000	3
K	39	45	He	-0.776	ppb	N/A	10607.53	0.3620	Pulse	0.1000	3
Ca	44	45	He	22.337	ppb	6.2	113.34	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.475	ppb	81.1	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.035	ppb	86.0	360.68	0.0123	Pulse	0.5000	3
Cr	52	45	He	0.229	ppb	67.2	2166.91	0.0739	Pulse	0.1000	3
Mn	55	45	He	0.246	ppb	77.7	206.68	0.0070	Pulse	0.1000	3
Fe	57	45	He	9.180	ppb	47.6	256.68	0.0088	Pulse	0.1000	3
Co	59	45	He	0.044	ppb	24.2	210.01	0.0072	Pulse	0.1000	3
Ni	60	72	He	0.143	ppb	107.6	436.69	0.0078	Pulse	0.1000	3
Cu	63	72	He	0.153	ppb	47.4	366.69	0.0065	Pulse	0.1000	3
Zn	66	72	He	-0.604	ppb	N/A	76.67	0.0014	Pulse	0.1000	3
As	75	72	He	0.063	ppb	153.0	34.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.138	ppb	50.2	96.67	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.064	ppb	86.6	100.00	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.027	ppb	6.8	86.67	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.037	ppb	13.7	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.157	ppb	58.7	836.73	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.080	ppb	47.9	140.00	0.0026	Pulse	0.1000	3
Ba	137	115	He	0.096	ppb	110.6	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	25.3	280.01	0.0014	Pulse	0.1000	3
Pb	208	209	He	0.053	ppb	15.5	576.69	0.0030	Pulse	0.1000	3
U	238	209	He	0.008	ppb	49.6	83.34	0.0004	Pulse	0.1000	3

ISTD Table:

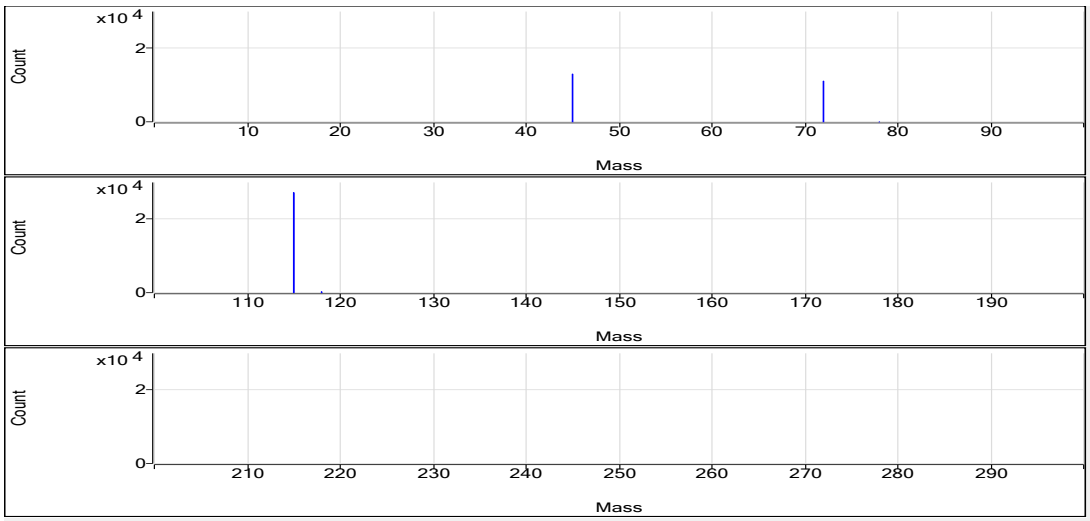
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1754352.84	1.4	99.6	Analog	0.1000	3
No Gas	Ge	72	915492.46	0.5	102.6	Pulse	0.1000	3
H2	Sc	45	130601.81	0.5	102.6	Pulse	0.1000	3
H2	Ge	72	111425.02	1.7	103.9	Pulse	0.1000	3
H2	In	115	273225.93	0.7	102.6	Pulse	0.1000	3
He	Sc	45	29290.29	3.9	102.7	Pulse	0.1000	3
He	Ge	72	56255.06	2.6	101.7	Pulse	0.1000	3
He	In	115	53561.78	2.0	99.8	Pulse	0.1000	3
He	Tb	159	247881.00	1.1	100.9	Pulse	0.1000	3
He	Bi	209	194423.17	0.8	101.9	Pulse	0.1000	3

No Gas

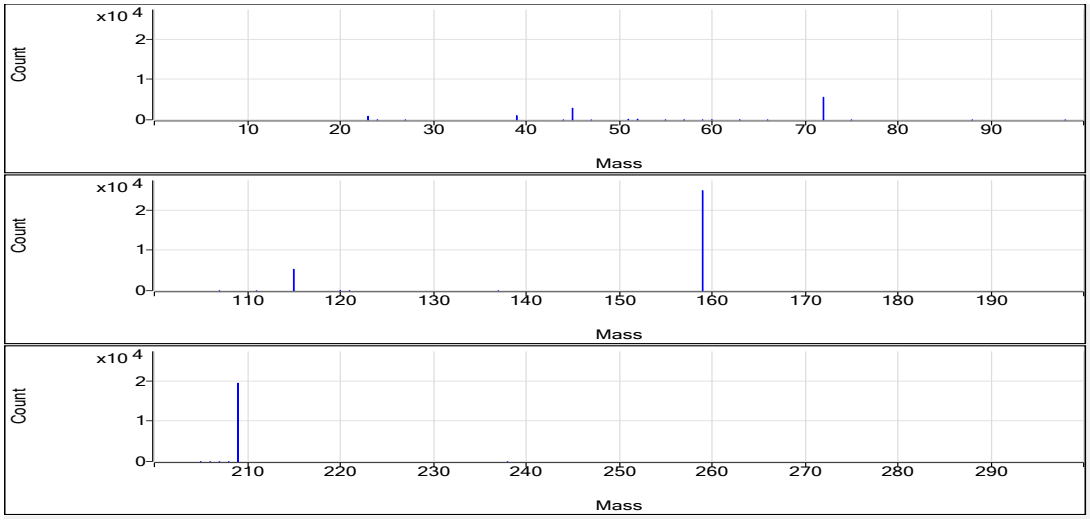


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.134	0.0001	114.00	0.0004	1.287E-05
Be	9	1	No Gas	0.152	0.0001	130.00	0.0004	1.287E-05
Be	9	1	No Gas	0.145	0.0001	122.00	0.0004	1.287E-05
Se	78	2	H2	0.056	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.04	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.038	0	3.33	0.0004	1.451E-05
Na	23	3	He	18.133	0.3107	9483.36	0.0025	0.2648
Na	23	3	He	24.477	0.3267	9223.13	0.0025	0.2648
Na	23	3	He	20.248	0.316	9203.12	0.0025	0.2648
Mg	24	3	He	5.372	0.0121	370.02	0.0013	0.005032
Mg	24	3	He	4.777	0.0113	320.01	0.0013	0.005032
Mg	24	3	He	7.637	0.0151	440.03	0.0013	0.005032
Al	27	3	He	8.635	0.0052	160.01	0.0004	0.001519
Al	27	3	He	12.909	0.0071	200.01	0.0004	0.001519
Al	27	3	He	4.442	0.0034	100.00	0.0004	0.001519
K	39	3	He	14.938	0.3772	11514.76	0.001	0.3627
K	39	3	He	6.74	0.3693	10424.15	0.001	0.3627
K	39	3	He	-24.004	0.3394	9883.69	0.001	0.3627
Ca	44	3	He	23.417	0.0039	120.00	0.0001	0.002571
Ca	44	3	He	22.827	0.0039	110.01	0.0001	0.002571
Ca	44	3	He	20.766	0.0038	110.00	0.0001	0.002571
Ti	47	3	He	0.919	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.264	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.241	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.046	0.0125	382.01	0.0201	0.0116
V	51	3	He	0.001	0.0116	328.01	0.0201	0.0116
V	51	3	He	0.059	0.0128	372.01	0.0201	0.0116
Cr	52	3	He	0.35	0.077	2350.27	0.0257	0.06801
Cr	52	3	He	0.056	0.0694	1960.20	0.0257	0.06801
Cr	52	3	He	0.28	0.0752	2190.27	0.0257	0.06801
Mn	55	3	He	0.467	0.0095	290.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.128	0.0057	160.01	0.0113	0.004215
Mn	55	3	He	0.143	0.0058	170.01	0.0113	0.004215
Fe	57	3	He	9.301	0.0088	270.01	0.0005	0.004099
Fe	57	3	He	13.486	0.011	310.01	0.0005	0.004099
Fe	57	3	He	4.754	0.0065	190.01	0.0005	0.004099
Co	59	3	He	0.032	0.0066	200.01	0.0518	0.004913
Co	59	3	He	0.049	0.0074	210.01	0.0518	0.004913
Co	59	3	He	0.051	0.0076	220.01	0.0518	0.004913
Ni	60	3	He	0.238	0.0085	490.03	0.0075	0.006695
Ni	60	3	He	0.224	0.0084	460.02	0.0075	0.006695
Ni	60	3	He	-0.034	0.0064	360.02	0.0075	0.006695
Cu	63	3	He	0.156	0.0066	380.02	0.0216	0.003198
Cu	63	3	He	0.079	0.0049	270.01	0.0216	0.003198
Cu	63	3	He	0.225	0.008	450.03	0.0216	0.003198
Zn	66	3	He	-0.729	0.001	60.00	0.0026	0.002954
Zn	66	3	He	-0.639	0.0013	70.00	0.0026	0.002954
Zn	66	3	He	-0.443	0.0018	100.00	0.0026	0.002954
As	75	3	He	-0.023	0.0004	26.00	0.002	0.0004943
As	75	3	He	0.045	0.0006	32.00	0.002	0.0004943
As	75	3	He	0.168	0.0008	46.00	0.002	0.0004943
Sr	88	3	He	0.119	0.0016	90.00	0.0081	0.0006852
Sr	88	3	He	0.08	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.214	0.0024	130.01	0.0081	0.0006852
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.038	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.128	0.0032	170.01	0.0205	0.0005587
Ag	107	3	He	0.028	0.0016	90.00	0.043	0.0004367
Ag	107	3	He	0.025	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Cd	111	3	He	0.034	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.043	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Sn	120	3	He	0.064	0.0143	780.05	0.0146	0.01334
Sn	120	3	He	0.249	0.017	890.07	0.0146	0.01334
Sn	120	3	He	0.158	0.0157	840.06	0.0146	0.01334
Sb	121	3	He	0.063	0.0024	130.00	0.0142	0.001484
Sb	121	3	He	0.124	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.053	0.0022	120.00	0.0142	0.001484
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.209	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.052	0.0017	330.02	0.0282	0.00021
Tl	205	3	He	0.031	0.0011	210.01	0.0282	0.00021
Tl	205	3	He	0.047	0.0015	300.01	0.0282	0.00021
Pb	208	3	He	0.059	0.0032	330.02	0.0372	0.0009772
Pb	208	3	He	0.057	0.0031	290.01	0.0372	0.0009772
Pb	208	3	He	0.044	0.0026	220.01	0.0372	0.0009772
U	238	3	He	0.006	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.01	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1740782.94		
Sc	45	1	No Gas			1783228.10		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739047.47		
Ge	72	1	No Gas			911840.61		
Ge	72	1	No Gas			920290.69		
Ge	72	1	No Gas			914346.08		
Sc	45	2	H2			131368.46		
Sc	45	2	H2			130257.54		
Sc	45	2	H2			130179.42		
Ge	72	2	H2			109830.67		
Ge	72	2	H2			110916.99		
Ge	72	2	H2			113527.39		
In	115	2	H2			271102.01		
In	115	2	H2			275134.88		
In	115	2	H2			273440.89		
Sc	45	3	He			30523.00		
Sc	45	3	He			28228.02		
Sc	45	3	He			29119.86		
Ge	72	3	He			57868.00		
Ge	72	3	He			54976.59		
Ge	72	3	He			55920.60		
In	115	3	He			54618.67		
In	115	3	He			52429.88		
In	115	3	He			53654.36		
Tb	159	3	He			251057.13		
Tb	159	3	He			245957.75		
Tb	159	3	He			246628.12		
Bi	209	3	He			195459.96		
Bi	209	3	He			192550.97		
Bi	209	3	He			195258.59		

Quantitation Report

Data File Name	037SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:21:55 PM
Sample Name	LCS 410-401990/2-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

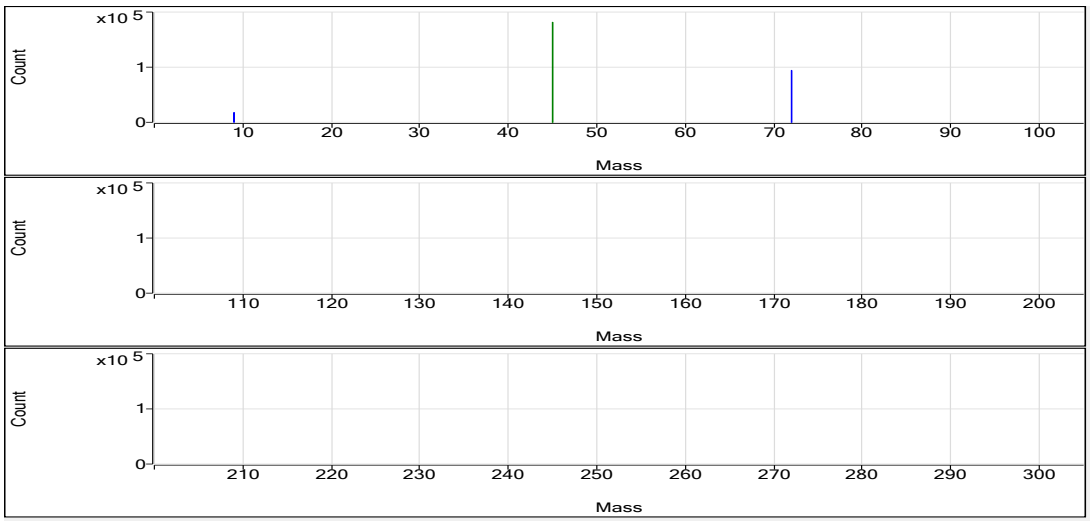
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.198	ppb	7.2	36015.96	0.0198	Pulse	0.5000	3
Se	78	72	H2	100.188	ppb	1.6	4534.05	0.0392	Pulse	1.5000	3
Na	23	45	He	5055.928	ppb	2.4	382960.36	13.0497	Pulse	0.1000	3
Mg	24	45	He	5054.236	ppb	1.4	195937.79	6.6758	Pulse	0.1000	3
Al	27	45	He	4957.655	ppb	2.2	62787.81	2.1395	Pulse	0.1000	3
K	39	45	He	5095.428	ppb	1.6	155942.05	5.3133	Pulse	0.1000	3
Ca	44	45	He	4957.784	ppb	1.1	8529.48	0.2906	Pulse	0.1000	3
Ti	47	45	He	502.854	ppb	2.9	6788.51	0.2313	Pulse	0.1000	3
V	51	45	He	506.429	ppb	1.3	298475.11	10.1696	Pulse	0.5000	3
Cr	52	45	He	508.325	ppb	1.3	385432.04	13.1325	Pulse	0.1000	3
Mn	55	45	He	507.338	ppb	2.1	168805.95	5.7521	Pulse	0.1000	3
Fe	57	45	He	5081.217	ppb	1.8	76241.84	2.5978	Pulse	0.1000	3
Co	59	45	He	501.961	ppb	1.4	763499.81	26.0143	Pulse	0.1000	3
Ni	60	72	He	496.748	ppb	1.7	214280.74	3.7075	Pulse	0.1000	3
Cu	63	72	He	499.690	ppb	0.3	623709.33	10.7903	Pulse	0.1000	3
Zn	66	72	He	500.658	ppb	1.5	76276.10	1.3197	Pulse	0.1000	3
As	75	72	He	498.345	ppb	1.0	56266.51	0.9735	Pulse	0.5000	3
Sr	88	115	He	51.664	ppb	3.0	22652.01	0.4198	Pulse	0.1000	3
Mo	98	115	He	50.136	ppb	1.1	55403.49	1.0268	Pulse	0.1000	3
Ag	107	115	He	51.872	ppb	0.5	120500.39	2.2333	Pulse	0.1000	3
Cd	111	115	He	51.924	ppb	1.6	14003.73	0.2595	Pulse	0.5000	3
Sn	120	115	He	101.514	ppb	1.0	80775.75	1.4971	Pulse	0.1000	3
Sb	121	115	He	100.487	ppb	1.7	77222.17	1.4312	Pulse	0.1000	3
Ba	137	115	He	506.291	ppb	0.4	125870.64	2.3329	Pulse	0.1000	3
Tl	205	209	He	99.456	ppb	1.2	547741.87	2.8071	Pulse	0.1000	3
Pb	208	209	He	50.521	ppb	1.1	367277.58	1.8823	Pulse	0.1000	3
U	238	209	He	49.794	ppb	1.2	405350.54	2.0774	Pulse	0.1000	3

ISTD Table:

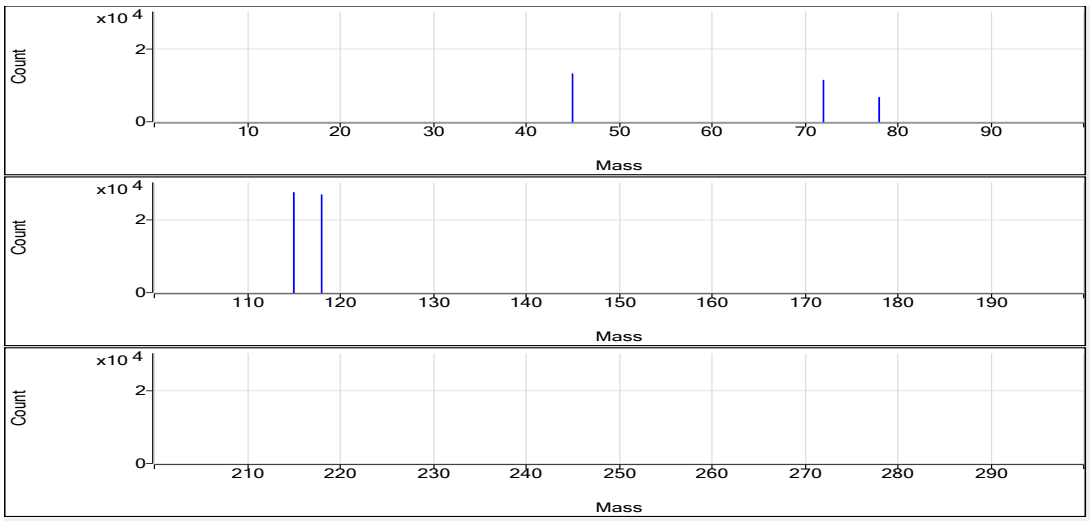
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1822445.29	2.4	103.5	Analog	0.1000	3
No Gas	Ge	72	945650.51	1.2	106.0	Pulse	0.1000	3
H2	Sc	45	133170.87	0.8	104.6	Pulse	0.1000	3
H2	Ge	72	115675.86	1.2	107.9	Pulse	0.1000	3
H2	In	115	277317.34	1.7	104.1	Pulse	0.1000	3
He	Sc	45	29353.62	1.6	103.0	Pulse	0.1000	3
He	Ge	72	57804.03	1.2	104.5	Pulse	0.1000	3
He	In	115	53955.52	0.1	100.5	Pulse	0.1000	3
He	Tb	159	250094.52	0.6	101.8	Pulse	0.1000	3
He	Bi	209	195141.29	1.1	102.2	Pulse	0.1000	3

No Gas

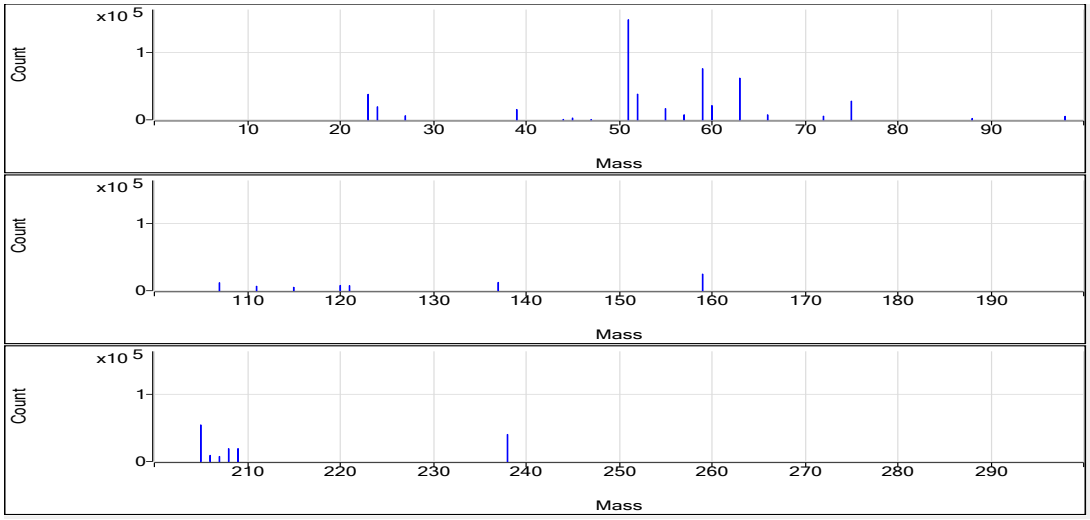


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.27	0.0182	34100.80	0.0004	1.287E-05
Be	9	1	No Gas	50.877	0.0201	36422.19	0.0004	1.287E-05
Be	9	1	No Gas	53.446	0.0211	37524.88	0.0004	1.287E-05
Se	78	2	H2	99.563	0.039	4522.05	0.0004	1.451E-05
Se	78	2	H2	102.043	0.0399	4555.39	0.0004	1.451E-05
Se	78	2	H2	98.96	0.0387	4524.72	0.0004	1.451E-05
Na	23	3	He	4920.1	12.7063	379808.78	0.0025	0.2648
Na	23	3	He	5093.009	13.1435	383394.25	0.0025	0.2648
Na	23	3	He	5154.675	13.2994	385678.04	0.0025	0.2648
Mg	24	3	He	4983.347	6.5823	196753.94	0.0013	0.005032
Mg	24	3	He	5125.173	6.7695	197464.55	0.0013	0.005032
Mg	24	3	He	5054.189	6.6758	193594.88	0.0013	0.005032
Al	27	3	He	4836.578	2.0873	62392.38	0.0004	0.001519
Al	27	3	He	4992.271	2.1544	62844.78	0.0004	0.001519
Al	27	3	He	5044.115	2.1768	63126.26	0.0004	0.001519
K	39	3	He	5007.913	5.2282	156279.21	0.001	0.3627
K	39	3	He	5169.854	5.3856	157096.10	0.001	0.3627
K	39	3	He	5108.517	5.326	154450.83	0.001	0.3627
Ca	44	3	He	4950.468	0.2901	8672.99	0.0001	0.002571
Ca	44	3	He	5014.891	0.2939	8572.79	0.0001	0.002571
Ca	44	3	He	4907.993	0.2877	8342.66	0.0001	0.002571
Ti	47	3	He	493.939	0.2272	6791.88	0.0005	0.0002328
Ti	47	3	He	494.971	0.2277	6641.76	0.0005	0.0002328
Ti	47	3	He	519.652	0.239	6931.89	0.0005	0.0002328
V	51	3	He	499.476	10.0302	299816.38	0.0201	0.0116
V	51	3	He	507.159	10.1843	297073.63	0.0201	0.0116
V	51	3	He	512.653	10.2945	298535.34	0.0201	0.0116
Cr	52	3	He	500.734	12.9374	386717.69	0.0257	0.06801
Cr	52	3	He	510.377	13.1853	384612.06	0.0257	0.06801
Cr	52	3	He	513.865	13.2749	384966.36	0.0257	0.06801
Mn	55	3	He	494.922	5.6114	167733.59	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	512.407	5.8095	169462.65	0.0113	0.004215
Mn	55	3	He	514.684	5.8353	169221.62	0.0113	0.004215
Fe	57	3	He	4979.593	2.5459	76101.48	0.0005	0.004099
Fe	57	3	He	5161.652	2.6389	76975.21	0.0005	0.004099
Fe	57	3	He	5102.407	2.6086	75648.84	0.0005	0.004099
Co	59	3	He	494.246	25.6146	765657.02	0.0518	0.004913
Co	59	3	He	503.099	26.0733	760554.44	0.0518	0.004913
Co	59	3	He	508.538	26.3551	764287.96	0.0518	0.004913
Ni	60	3	He	500.894	3.7384	215541.79	0.0075	0.006695
Ni	60	3	He	487.237	3.6366	212852.32	0.0075	0.006695
Ni	60	3	He	502.115	3.7475	214448.10	0.0075	0.006695
Cu	63	3	He	500.721	10.8126	623419.64	0.0216	0.003198
Cu	63	3	He	497.713	10.7477	629064.09	0.0216	0.003198
Cu	63	3	He	500.635	10.8107	618644.25	0.0216	0.003198
Zn	66	3	He	497.23	1.3107	75569.18	0.0026	0.002954
Zn	66	3	He	495.541	1.3062	76454.12	0.0026	0.002954
Zn	66	3	He	509.202	1.3422	76805.01	0.0026	0.002954
As	75	3	He	502.738	0.982	56621.20	0.002	0.0004943
As	75	3	He	492.807	0.9626	56344.24	0.002	0.0004943
As	75	3	He	499.489	0.9757	55834.09	0.002	0.0004943
Sr	88	3	He	53.448	0.4343	23399.79	0.0081	0.0006852
Sr	88	3	He	50.897	0.4136	22318.08	0.0081	0.0006852
Sr	88	3	He	50.646	0.4116	22238.16	0.0081	0.0006852
Mo	98	3	He	49.524	1.0143	54647.44	0.0205	0.0005587
Mo	98	3	He	50.558	1.0355	55871.47	0.0205	0.0005587
Mo	98	3	He	50.326	1.0307	55691.56	0.0205	0.0005587
Ag	107	3	He	51.997	2.2388	120617.71	0.043	0.0004367
Ag	107	3	He	52.068	2.2418	120961.32	0.043	0.0004367
Ag	107	3	He	51.55	2.2195	119922.15	0.043	0.0004367
Cd	111	3	He	52.747	0.2637	14205.28	0.005	1.253E-05
Cd	111	3	He	51.97	0.2598	14017.06	0.005	1.253E-05
Cd	111	3	He	51.054	0.2552	13788.85	0.005	1.253E-05
Sn	120	3	He	102.48	1.5112	81419.04	0.0146	0.01334
Sn	120	3	He	100.463	1.4817	79950.68	0.0146	0.01334
Sn	120	3	He	101.6	1.4983	80957.53	0.0146	0.01334
Sb	121	3	He	102.236	1.4561	78452.36	0.0142	0.001484
Sb	121	3	He	100.367	1.4295	77134.71	0.0142	0.001484
Sb	121	3	He	98.857	1.4081	76079.44	0.0142	0.001484
Ba	137	3	He	505.741	2.3303	125550.93	0.0046	0.000374
Ba	137	3	He	504.38	2.3241	125400.65	0.0046	0.000374
Ba	137	3	He	508.752	2.3442	126660.35	0.0046	0.000374
Tl	205	3	He	98.281	2.774	546558.94	0.0282	0.00021
Tl	205	3	He	100.569	2.8385	547269.91	0.0282	0.00021
Tl	205	3	He	99.519	2.8089	549396.75	0.0282	0.00021
Pb	208	3	He	49.928	1.8602	193947.69	0.0372	0.0009772
Pb	208	3	He	51.038	1.9015	194271.99	0.0372	0.0009772
Pb	208	3	He	50.597	1.8851	194951.68	0.0372	0.0009772
U	238	3	He	49.119	2.0492	403757.88	0.0417	8.729E-05
U	238	3	He	50.157	2.0925	403429.99	0.0417	8.729E-05
U	238	3	He	50.106	2.0904	408863.74	0.0417	8.729E-05
Sc	45	1	No Gas			1869704.97		
Sc	45	1	No Gas			1816265.60		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1781365.29		
Ge	72	1	No Gas			957536.16		
Ge	72	1	No Gas			944166.08		
Ge	72	1	No Gas			935249.28		
Sc	45	2	H2			134395.18		
Sc	45	2	H2			132518.45		
Sc	45	2	H2			132598.99		
Ge	72	2	H2			116078.94		
Ge	72	2	H2			114093.65		
Ge	72	2	H2			116854.98		
In	115	2	H2			282771.40		
In	115	2	H2			275499.76		
In	115	2	H2			273680.87		
Sc	45	3	He			29891.44		
Sc	45	3	He			29169.86		
Sc	45	3	He			28999.57		
Ge	72	3	He			57656.77		
Ge	72	3	He			58530.35		
Ge	72	3	He			57224.97		
In	115	3	He			54447.09		
In	115	3	He			54517.46		
In	115	3	He			54598.30		
Tb	159	3	He			251773.53		
Tb	159	3	He			249691.50		
Tb	159	3	He			248818.53		
Bi	209	3	He			197031.56		
Bi	209	3	He			192800.04		
Bi	209	3	He			195592.26		

Quantitation Report

Data File Name	038SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:23:53 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

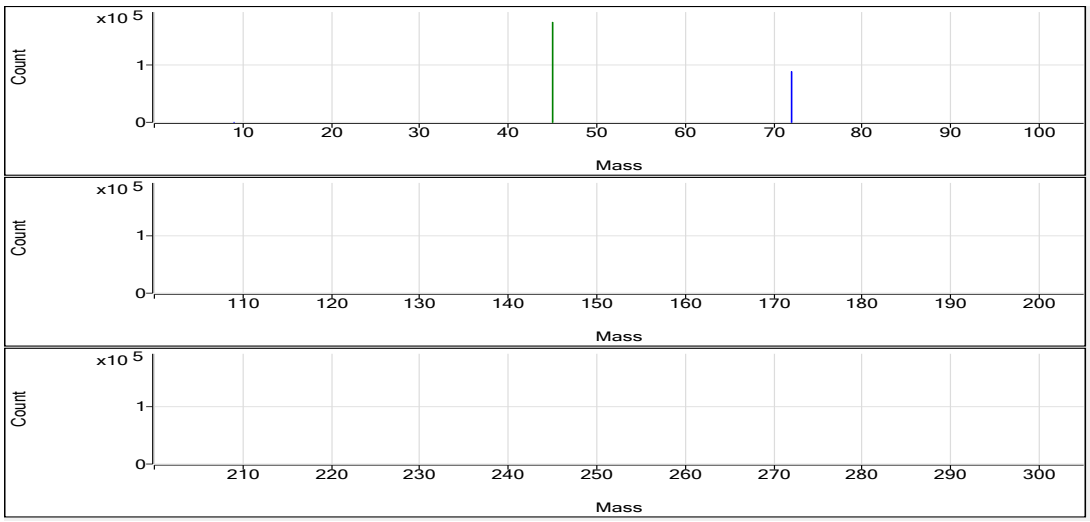
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.194	ppb	11.4	157.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.164	ppb	38.9	8.44	0.0001	Pulse	1.5000	3
Na	23	45	He	19.681	ppb	4.5	8949.65	0.3146	Pulse	0.1000	3
Mg	24	45	He	3.918	ppb	25.1	290.01	0.0102	Pulse	0.1000	3
Al	27	45	He	8.207	ppb	53.5	143.34	0.0051	Pulse	0.1000	3
K	39	45	He	18.672	ppb	250.7	10821.12	0.3809	Pulse	0.1000	3
Ca	44	45	He	-12.103	ppb	N/A	53.33	0.0019	Pulse	0.1000	3
Ti	47	45	He	1.017	ppb	73.6	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.150	ppb	30.2	415.34	0.0146	Pulse	0.5000	3
Cr	52	45	He	0.464	ppb	20.9	2273.58	0.0799	Pulse	0.1000	3
Mn	55	45	He	0.146	ppb	86.3	166.68	0.0059	Pulse	0.1000	3
Fe	57	45	He	10.182	ppb	77.8	263.35	0.0093	Pulse	0.1000	3
Co	59	45	He	0.133	ppb	9.2	336.69	0.0118	Pulse	0.1000	3
Ni	60	72	He	0.371	ppb	47.4	513.36	0.0095	Pulse	0.1000	3
Cu	63	72	He	0.164	ppb	25.5	366.69	0.0067	Pulse	0.1000	3
Zn	66	72	He	0.699	ppb	19.8	260.01	0.0048	Pulse	0.1000	3
As	75	72	He	0.362	ppb	39.2	65.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.046	ppb	178.8	56.67	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.115	ppb	21.9	156.67	0.0029	Pulse	0.1000	3
Ag	107	115	He	0.029	ppb	41.2	90.00	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.037	ppb	31.6	10.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.074	ppb	217.4	776.72	0.0144	Pulse	0.1000	3
Sb	121	115	He	0.196	ppb	16.4	230.01	0.0043	Pulse	0.1000	3
Ba	137	115	He	0.039	ppb	203.6	30.00	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.265	ppb	18.6	1460.14	0.0077	Pulse	0.1000	3
Pb	208	209	He	0.042	ppb	27.5	483.36	0.0025	Pulse	0.1000	3
U	238	209	He	0.024	ppb	32.6	203.34	0.0011	Pulse	0.1000	3

ISTD Table:

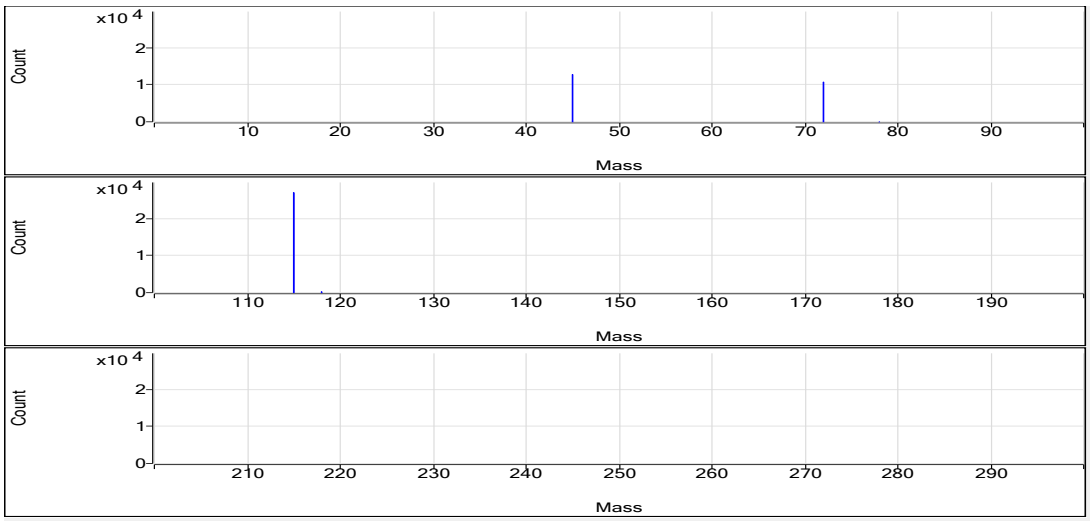
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1760708.88	0.2	100.0	Analog	0.1000	3
No Gas	Ge	72	892900.04	0.3	100.1	Pulse	0.1000	3
H2	Sc	45	127628.99	1.9	100.2	Pulse	0.1000	3
H2	Ge	72	107435.27	0.3	100.2	Pulse	0.1000	3
H2	In	115	269928.67	1.6	101.4	Pulse	0.1000	3
He	Sc	45	28445.21	1.5	99.8	Pulse	0.1000	3
He	Ge	72	54287.09	1.5	98.1	Pulse	0.1000	3
He	In	115	53869.83	1.0	100.4	Pulse	0.1000	3
He	Tb	159	244238.92	1.0	99.4	Pulse	0.1000	3
He	Bi	209	189868.45	1.0	99.5	Pulse	0.1000	3

No Gas

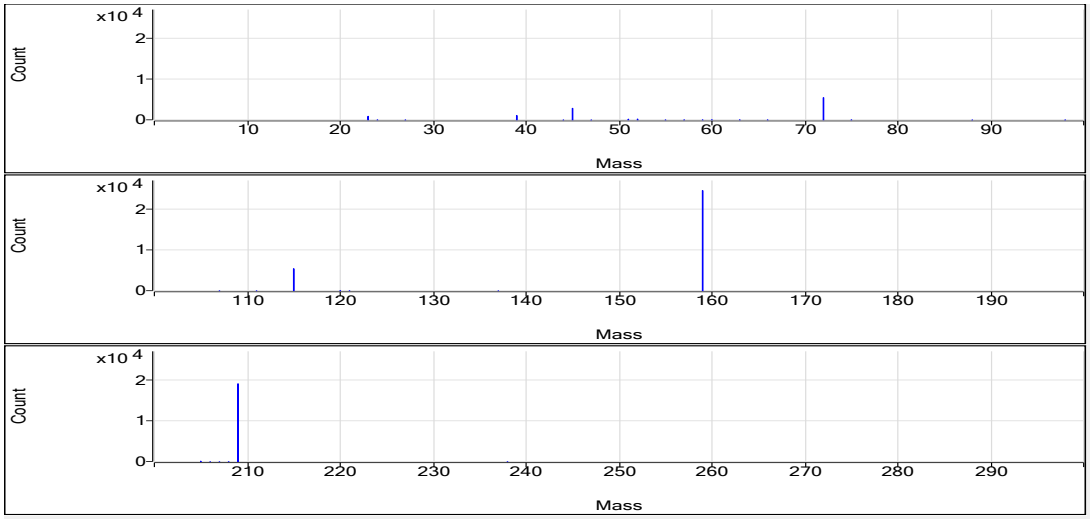


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.21	0.0001	168.00	0.0004	1.287E-05
Be	9	1	No Gas	0.204	0.0001	164.00	0.0004	1.287E-05
Be	9	1	No Gas	0.169	0.0001	140.00	0.0004	1.287E-05
Se	78	2	H2	0.2	0.0001	10.00	0.0004	1.451E-05
Se	78	2	H2	0.09	0	5.33	0.0004	1.451E-05
Se	78	2	H2	0.201	0.0001	10.00	0.0004	1.451E-05
Na	23	3	He	18.836	0.3125	8732.84	0.0025	0.2648
Na	23	3	He	19.6	0.3144	9023.02	0.0025	0.2648
Na	23	3	He	20.607	0.317	9093.09	0.0025	0.2648
Mg	24	3	He	4.592	0.0111	310.02	0.0013	0.005032
Mg	24	3	He	4.372	0.0108	310.01	0.0013	0.005032
Mg	24	3	He	2.79	0.0087	250.01	0.0013	0.005032
Al	27	3	He	13.074	0.0072	200.01	0.0004	0.001519
Al	27	3	He	4.559	0.0035	100.00	0.0004	0.001519
Al	27	3	He	6.987	0.0045	130.01	0.0004	0.001519
K	39	3	He	72.477	0.4332	12105.49	0.001	0.3627
K	39	3	He	-3.803	0.359	10304.07	0.001	0.3627
K	39	3	He	-12.658	0.3504	10053.80	0.001	0.3627
Ca	44	3	He	-25.782	0.0011	30.00	0.0001	0.002571
Ca	44	3	He	-14.269	0.0017	50.00	0.0001	0.002571
Ca	44	3	He	3.742	0.0028	80.00	0.0001	0.002571
Ti	47	3	He	0.272	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	1.768	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	1.01	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.164	0.0149	416.01	0.0201	0.0116
V	51	3	He	0.099	0.0136	390.01	0.0201	0.0116
V	51	3	He	0.186	0.0153	440.01	0.0201	0.0116
Cr	52	3	He	0.445	0.0794	2220.25	0.0257	0.06801
Cr	52	3	He	0.377	0.0777	2230.23	0.0257	0.06801
Cr	52	3	He	0.568	0.0826	2370.27	0.0257	0.06801
Mn	55	3	He	0.291	0.0075	210.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.089	0.0052	150.01	0.0113	0.004215
Mn	55	3	He	0.059	0.0049	140.01	0.0113	0.004215
Fe	57	3	He	18.609	0.0136	380.02	0.0005	0.004099
Fe	57	3	He	2.893	0.0056	160.01	0.0005	0.004099
Fe	57	3	He	9.043	0.0087	250.01	0.0005	0.004099
Co	59	3	He	0.119	0.0111	310.02	0.0518	0.004913
Co	59	3	He	0.141	0.0122	350.02	0.0518	0.004913
Co	59	3	He	0.141	0.0122	350.02	0.0518	0.004913
Ni	60	3	He	0.573	0.011	590.03	0.0075	0.006695
Ni	60	3	He	0.292	0.0089	490.03	0.0075	0.006695
Ni	60	3	He	0.249	0.0086	460.03	0.0075	0.006695
Cu	63	3	He	0.136	0.0061	330.02	0.0216	0.003198
Cu	63	3	He	0.212	0.0078	430.02	0.0216	0.003198
Cu	63	3	He	0.145	0.0063	340.02	0.0216	0.003198
Zn	66	3	He	0.643	0.0046	250.01	0.0026	0.002954
Zn	66	3	He	0.597	0.0045	250.01	0.0026	0.002954
Zn	66	3	He	0.856	0.0052	280.02	0.0026	0.002954
As	75	3	He	0.28	0.001	56.00	0.002	0.0004943
As	75	3	He	0.525	0.0015	84.00	0.002	0.0004943
As	75	3	He	0.28	0.001	56.00	0.002	0.0004943
Sr	88	3	He	-0.039	0.0004	20.00	0.0081	0.0006852
Sr	88	3	He	0.052	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.124	0.0017	90.00	0.0081	0.0006852
Mo	98	3	He	0.099	0.0026	140.00	0.0205	0.0005587
Mo	98	3	He	0.144	0.0035	190.01	0.0205	0.0005587
Mo	98	3	He	0.101	0.0026	140.01	0.0205	0.0005587
Ag	107	3	He	0.024	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.042	0.0023	120.01	0.043	0.0004367
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.034	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.05	0.0003	14.00	0.005	1.253E-05
Sn	120	3	He	0.239	0.0168	910.06	0.0146	0.01334
Sn	120	3	He	-0.081	0.0122	660.04	0.0146	0.01334
Sn	120	3	He	0.063	0.0143	760.05	0.0146	0.01334
Sb	121	3	He	0.221	0.0046	250.01	0.0142	0.001484
Sb	121	3	He	0.206	0.0044	240.01	0.0142	0.001484
Sb	121	3	He	0.16	0.0038	200.01	0.0142	0.001484
Ba	137	3	He	0.12	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Tl	205	3	He	0.32	0.0092	1760.20	0.0282	0.00021
Tl	205	3	He	0.224	0.0065	1250.11	0.0282	0.00021
Tl	205	3	He	0.251	0.0073	1370.12	0.0282	0.00021
Pb	208	3	He	0.055	0.003	320.02	0.0372	0.0009772
Pb	208	3	He	0.036	0.0023	280.02	0.0372	0.0009772
Pb	208	3	He	0.035	0.0023	180.01	0.0372	0.0009772
U	238	3	He	0.021	0.0009	180.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
U	238	3	He	0.032	0.0014	270.01	0.0417	8.729E-05
Sc	45	1	No Gas			1759887.94		
Sc	45	1	No Gas			1758008.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1764229.97		
Ge	72	1	No Gas			893234.13		
Ge	72	1	No Gas			889849.36		
Ge	72	1	No Gas			895616.63		
Sc	45	2	H2			127020.62		
Sc	45	2	H2			125537.73		
Sc	45	2	H2			130328.62		
Ge	72	2	H2			107683.60		
Ge	72	2	H2			107099.99		
Ge	72	2	H2			107522.21		
In	115	2	H2			269529.90		
In	115	2	H2			265811.03		
In	115	2	H2			274445.09		
Sc	45	3	He			27947.48		
Sc	45	3	He			28698.90		
Sc	45	3	He			28689.24		
Ge	72	3	He			53812.19		
Ge	72	3	He			55257.38		
Ge	72	3	He			53791.71		
In	115	3	He			54055.62		
In	115	3	He			54296.71		
In	115	3	He			53273.47		
Tb	159	3	He			242955.05		
Tb	159	3	He			246985.02		
Tb	159	3	He			242776.68		
Bi	209	3	He			190675.11		
Bi	209	3	He			191300.54		
Bi	209	3	He			187629.70		

Quantitation Report

Data File Name	039_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:25:55 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

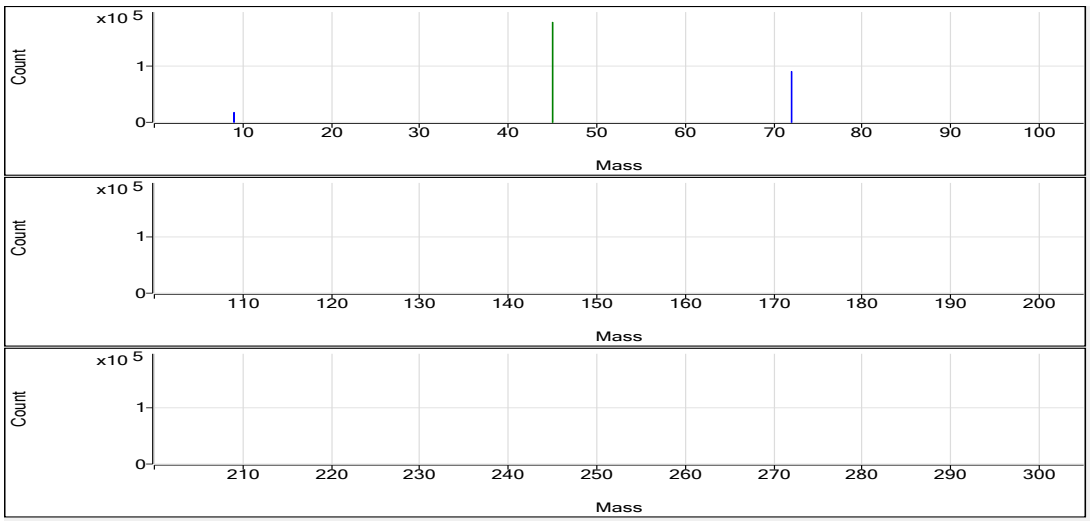
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.581	ppb	7.8	35437.32	0.0199	Pulse	0.5000	3
Se	78	72	H2	53.318	ppb	0.3	2291.96	0.0209	Pulse	1.5000	3
Na	23	45	He	5104.925	ppb	3.7	388010.16	13.1736	Pulse	0.1000	3
Mg	24	45	He	5098.150	ppb	3.9	198327.22	6.7338	Pulse	0.1000	3
Al	27	45	He	5047.152	ppb	4.1	64147.18	2.1781	Pulse	0.1000	3
K	39	45	He	5014.331	ppb	4.9	154142.56	5.2345	Pulse	0.1000	3
Ca	44	45	He	5229.018	ppb	4.0	9023.12	0.3063	Pulse	0.1000	3
Ti	47	45	He	5087.611	ppb	3.4	68876.86	2.3382	Pulse	0.1000	3
V	51	45	He	511.190	ppb	3.6	302349.50	10.2651	Pulse	0.5000	3
Cr	52	45	He	513.545	ppb	3.5	390767.39	13.2667	Pulse	0.1000	3
Mn	55	45	He	511.942	ppb	3.2	170969.01	5.8043	Pulse	0.1000	3
Fe	57	45	He	5132.250	ppb	3.7	77283.96	2.6239	Pulse	0.1000	3
Co	59	45	He	504.658	ppb	3.7	770339.13	26.1541	Pulse	0.1000	3
Ni	60	72	He	533.531	ppb	3.5	218870.99	3.9815	Pulse	0.1000	3
Cu	63	72	He	528.988	ppb	2.9	628019.34	11.4228	Pulse	0.1000	3
Zn	66	72	He	534.499	ppb	1.8	77466.17	1.4087	Pulse	0.1000	3
As	75	72	He	527.741	ppb	3.4	56669.58	1.0309	Pulse	0.5000	3
Sr	88	115	He	52.604	ppb	2.7	22922.51	0.4275	Pulse	0.1000	3
Mo	98	115	He	52.320	ppb	2.1	57458.18	1.0715	Pulse	0.1000	3
Ag	107	115	He	52.689	ppb	0.3	121650.15	2.2685	Pulse	0.1000	3
Cd	111	115	He	52.306	ppb	0.8	14021.08	0.2615	Pulse	0.5000	3
Sn	120	115	He	52.624	ppb	1.3	41961.08	0.7825	Pulse	0.1000	3
Sb	121	115	He	51.379	ppb	1.0	39280.00	0.7325	Pulse	0.1000	3
Ba	137	115	He	511.753	ppb	1.3	126443.97	2.3580	Pulse	0.1000	3
Tl	205	209	He	51.420	ppb	1.6	277868.56	1.4514	Pulse	0.1000	3
Pb	208	209	He	51.827	ppb	0.8	369664.44	1.9309	Pulse	0.1000	3
U	238	209	He	51.606	ppb	1.0	412177.27	2.1529	Pulse	0.1000	3

ISTD Table:

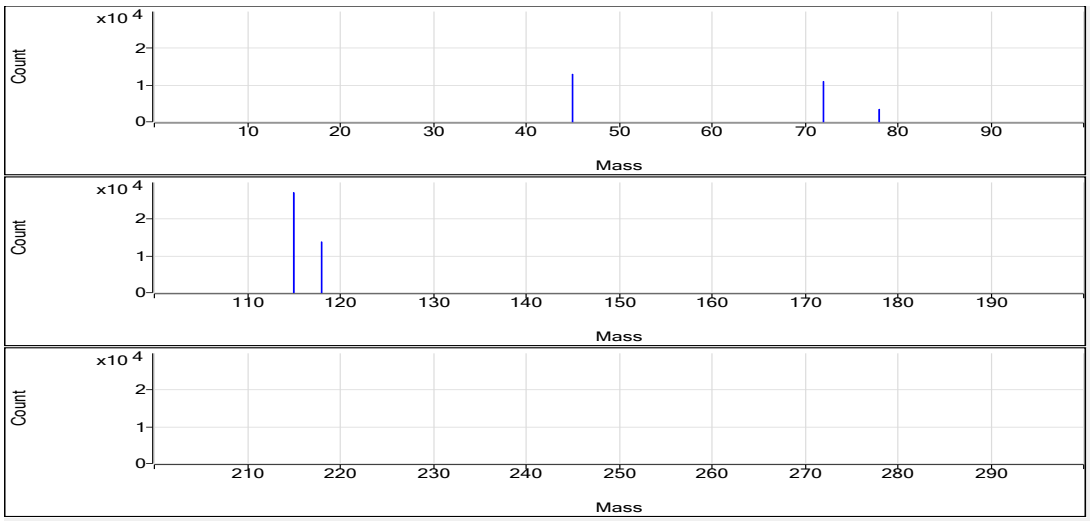
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1778419.82	1.0	101.0	Analog	0.1000	3
No Gas	Ge	72	903739.41	0.3	101.3	Pulse	0.1000	3
H2	Sc	45	129686.34	1.6	101.9	Pulse	0.1000	3
H2	Ge	72	109826.43	0.9	102.4	Pulse	0.1000	3
H2	In	115	271965.25	0.2	102.1	Pulse	0.1000	3
He	Sc	45	29477.18	3.4	103.4	Pulse	0.1000	3
He	Ge	72	55003.16	2.4	99.4	Pulse	0.1000	3
He	In	115	53625.09	0.6	99.9	Pulse	0.1000	3
He	Tb	159	247024.27	1.1	100.5	Pulse	0.1000	3
He	Bi	209	191450.20	0.4	100.3	Pulse	0.1000	3

No Gas

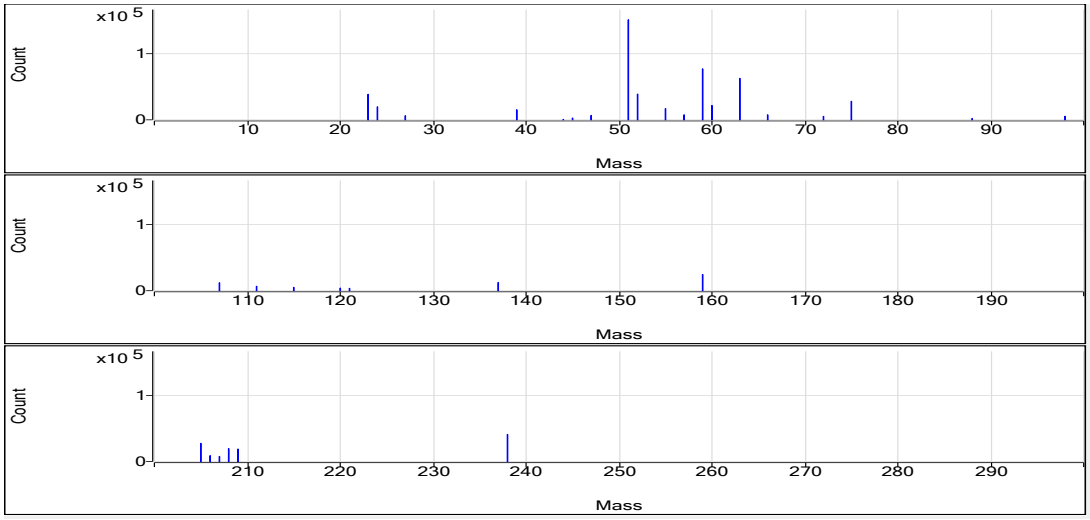


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.352	0.0183	32833.88	0.0004	1.287E-05
Be	9	1	No Gas	51.214	0.0202	35880.91	0.0004	1.287E-05
Be	9	1	No Gas	54.179	0.0214	37597.17	0.0004	1.287E-05
Se	78	2	H2	53.265	0.0208	2266.85	0.0004	1.451E-05
Se	78	2	H2	53.217	0.0208	2294.85	0.0004	1.451E-05
Se	78	2	H2	53.471	0.0209	2314.19	0.0004	1.451E-05
Na	23	3	He	5278.359	13.6122	390792.88	0.0025	0.2648
Na	23	3	He	4902.168	12.6609	387332.96	0.0025	0.2648
Na	23	3	He	5134.249	13.2478	385904.64	0.0025	0.2648
Mg	24	3	He	5295.809	6.9947	200810.58	0.0013	0.005032
Mg	24	3	He	4896.461	6.4676	197862.09	0.0013	0.005032
Mg	24	3	He	5102.18	6.7391	196308.98	0.0013	0.005032
Al	27	3	He	5240.353	2.2614	64923.38	0.0004	0.001519
Al	27	3	He	4829.994	2.0845	63769.42	0.0004	0.001519
Al	27	3	He	5071.11	2.1884	63748.74	0.0004	0.001519
K	39	3	He	5240.052	5.4538	156572.20	0.001	0.3627
K	39	3	He	4752.907	4.9805	152366.51	0.001	0.3627
K	39	3	He	5050.035	5.2692	153488.98	0.001	0.3627
Ca	44	3	He	5462.093	0.3199	9183.17	0.0001	0.002571
Ca	44	3	He	5061.13	0.2966	9073.15	0.0001	0.002571
Ca	44	3	He	5163.83	0.3025	8813.03	0.0001	0.002571
Ti	47	3	He	5278.586	2.426	69646.96	0.0005	0.0002328
Ti	47	3	He	4934.244	2.2677	69375.91	0.0005	0.0002328
Ti	47	3	He	5050.003	2.3209	67607.72	0.0005	0.0002328
V	51	3	He	528.599	10.6143	304726.88	0.0201	0.0116
V	51	3	He	491.906	9.8783	302205.72	0.0201	0.0116
V	51	3	He	513.065	10.3027	300115.91	0.0201	0.0116
Cr	52	3	He	530.798	13.7101	393603.63	0.0257	0.06801
Cr	52	3	He	494.809	12.7851	391133.24	0.0257	0.06801
Cr	52	3	He	515.028	13.3048	387565.31	0.0257	0.06801
Mn	55	3	He	524.187	5.943	170616.93	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	493.035	5.59	171015.10	0.0113	0.004215
Mn	55	3	He	518.604	5.8797	171275.00	0.0113	0.004215
Fe	57	3	He	5323.549	2.7215	78131.63	0.0005	0.004099
Fe	57	3	He	4946.977	2.5293	77377.72	0.0005	0.004099
Fe	57	3	He	5126.223	2.6208	76342.53	0.0005	0.004099
Co	59	3	He	523.728	27.1422	779226.08	0.0518	0.004913
Co	59	3	He	486.009	25.1878	770564.05	0.0518	0.004913
Co	59	3	He	504.238	26.1323	761227.25	0.0518	0.004913
Ni	60	3	He	547.528	4.0858	220930.76	0.0075	0.006695
Ni	60	3	He	541.04	4.0374	219693.84	0.0075	0.006695
Ni	60	3	He	512.024	3.8213	215988.38	0.0075	0.006695
Cu	63	3	He	543.973	11.7463	635158.43	0.0216	0.003198
Cu	63	3	He	529.495	11.4338	622157.10	0.0216	0.003198
Cu	63	3	He	513.496	11.0884	626742.49	0.0216	0.003198
Zn	66	3	He	545.602	1.4379	77751.08	0.0026	0.002954
Zn	66	3	He	530.374	1.3978	76062.14	0.0026	0.002954
Zn	66	3	He	527.521	1.3903	78585.30	0.0026	0.002954
As	75	3	He	543.799	1.0622	57436.62	0.002	0.0004943
As	75	3	He	531.45	1.0381	56486.96	0.002	0.0004943
As	75	3	He	507.975	0.9923	56085.15	0.002	0.0004943
Sr	88	3	He	52.878	0.4297	23199.61	0.0081	0.0006852
Sr	88	3	He	53.861	0.4377	23339.96	0.0081	0.0006852
Sr	88	3	He	51.073	0.415	22227.95	0.0081	0.0006852
Mo	98	3	He	51.272	1.0501	56695.45	0.0205	0.0005587
Mo	98	3	He	52.25	1.0701	57066.21	0.0205	0.0005587
Mo	98	3	He	53.439	1.0944	58612.87	0.0205	0.0005587
Ag	107	3	He	52.851	2.2755	122856.85	0.043	0.0004367
Ag	107	3	He	52.722	2.27	121052.24	0.043	0.0004367
Ag	107	3	He	52.494	2.2601	121041.37	0.043	0.0004367
Cd	111	3	He	52.768	0.2638	14241.29	0.005	1.253E-05
Cd	111	3	He	52.141	0.2606	13898.97	0.005	1.253E-05
Cd	111	3	He	52.009	0.26	13922.97	0.005	1.253E-05
Sn	120	3	He	52.556	0.7815	42195.27	0.0146	0.01334
Sn	120	3	He	53.363	0.7933	42305.71	0.0146	0.01334
Sn	120	3	He	51.953	0.7727	41382.27	0.0146	0.01334
Sb	121	3	He	50.775	0.7239	39086.12	0.0142	0.001484
Sb	121	3	He	51.685	0.7369	39296.33	0.0142	0.001484
Sb	121	3	He	51.677	0.7368	39457.55	0.0142	0.001484
Ba	137	3	He	508.525	2.3431	126510.27	0.0046	0.000374
Ba	137	3	He	519.178	2.3922	127572.54	0.0046	0.000374
Ba	137	3	He	507.556	2.3387	125249.11	0.0046	0.000374
Tl	205	3	He	51.913	1.4653	280973.59	0.0282	0.00021
Tl	205	3	He	51.867	1.464	279089.66	0.0282	0.00021
Tl	205	3	He	50.481	1.4249	273542.44	0.0282	0.00021
Pb	208	3	He	51.948	1.9354	197936.36	0.0372	0.0009772
Pb	208	3	He	52.146	1.9428	197470.35	0.0372	0.0009772
Pb	208	3	He	51.387	1.9145	197991.54	0.0372	0.0009772
U	238	3	He	52.034	2.1708	416245.11	0.0417	8.729E-05
U	238	3	He	51.717	2.1576	411301.83	0.0417	8.729E-05
U	238	3	He	51.067	2.1305	408984.88	0.0417	8.729E-05
Sc	45	1	No Gas			1797055.13		
Sc	45	1	No Gas			1777525.60		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1760678.72		
Ge	72	1	No Gas			901032.25		
Ge	72	1	No Gas			906809.52		
Ge	72	1	No Gas			903376.47		
Sc	45	2	H2			129814.97		
Sc	45	2	H2			127614.20		
Sc	45	2	H2			131629.86		
Ge	72	2	H2			108730.81		
Ge	72	2	H2			110172.83		
Ge	72	2	H2			110575.64		
In	115	2	H2			272591.48		
In	115	2	H2			271315.07		
In	115	2	H2			271989.21		
Sc	45	3	He			28709.02		
Sc	45	3	He			30592.78		
Sc	45	3	He			29129.74		
Ge	72	3	He			54072.99		
Ge	72	3	He			54414.01		
Ge	72	3	He			56522.47		
In	115	3	He			54287.07		
In	115	3	He			53624.23		
In	115	3	He			53845.16		
Tb	159	3	He			248877.09		
Tb	159	3	He			248398.10		
Tb	159	3	He			243797.61		
Bi	209	3	He			191747.71		
Bi	209	3	He			190632.18		
Bi	209	3	He			191970.72		

Quantitation Report

Data File Name	040_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:27:54 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

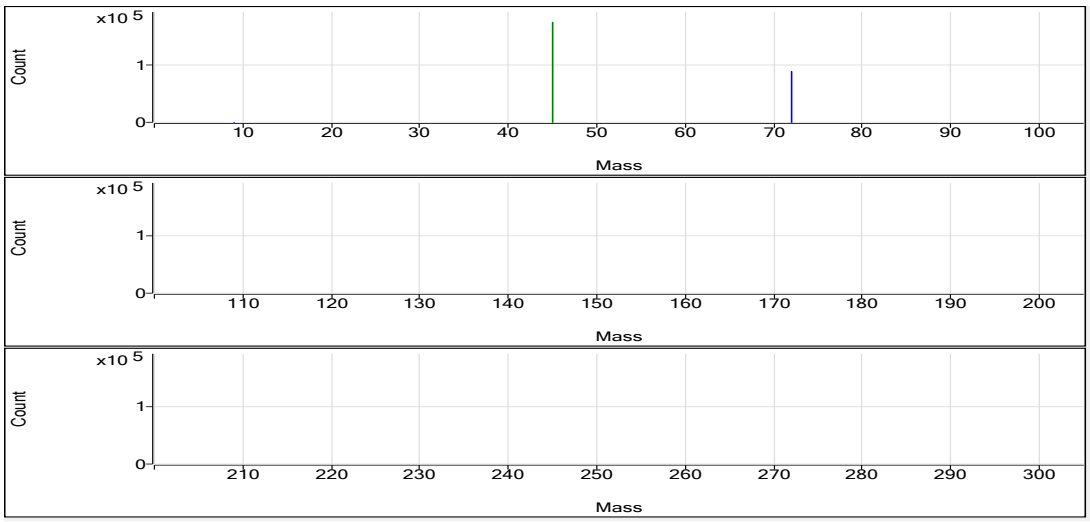
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.350	ppb	0.7	261.33	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.141	ppb	55.0	7.56	0.0001	Pulse	1.5000	3
Na	23	45	He	20.427	ppb	13.8	8939.61	0.3165	Pulse	0.1000	3
Mg	24	45	He	7.014	ppb	13.8	403.35	0.0143	Pulse	0.1000	3
Al	27	45	He	8.496	ppb	94.9	146.67	0.0052	Pulse	0.1000	3
K	39	45	He	14.355	ppb	246.3	10634.21	0.3767	Pulse	0.1000	3
Ca	44	45	He	8.527	ppb	106.0	86.67	0.0031	Pulse	0.1000	3
Ti	47	45	He	4.390	ppb	29.4	63.33	0.0023	Pulse	0.1000	3
V	51	45	He	0.216	ppb	40.4	450.01	0.0159	Pulse	0.5000	3
Cr	52	45	He	0.508	ppb	22.6	2290.26	0.0811	Pulse	0.1000	3
Mn	55	45	He	0.235	ppb	80.7	193.34	0.0069	Pulse	0.1000	3
Fe	57	45	He	11.630	ppb	14.2	283.34	0.0100	Pulse	0.1000	3
Co	59	45	He	0.215	ppb	16.2	453.36	0.0160	Pulse	0.1000	3
Ni	60	72	He	0.471	ppb	49.4	560.03	0.0102	Pulse	0.1000	3
Cu	63	72	He	0.207	ppb	31.9	420.02	0.0077	Pulse	0.1000	3
Zn	66	72	He	0.444	ppb	55.4	226.68	0.0041	Pulse	0.1000	3
As	75	72	He	0.424	ppb	11.0	72.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.074	ppb	117.2	70.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.133	ppb	25.2	176.68	0.0033	Pulse	0.1000	3
Ag	107	115	He	0.060	ppb	26.7	163.34	0.0030	Pulse	0.1000	3
Cd	111	115	He	0.032	ppb	26.9	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.115	ppb	107.9	810.06	0.0150	Pulse	0.1000	3
Sb	121	115	He	0.179	ppb	2.4	216.68	0.0040	Pulse	0.1000	3
Ba	137	115	He	0.164	ppb	131.3	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.150	ppb	12.2	843.40	0.0044	Pulse	0.1000	3
Pb	208	209	He	0.068	ppb	7.5	666.70	0.0035	Pulse	0.1000	3
U	238	209	He	0.032	ppb	6.5	270.01	0.0014	Pulse	0.1000	3

ISTD Table:

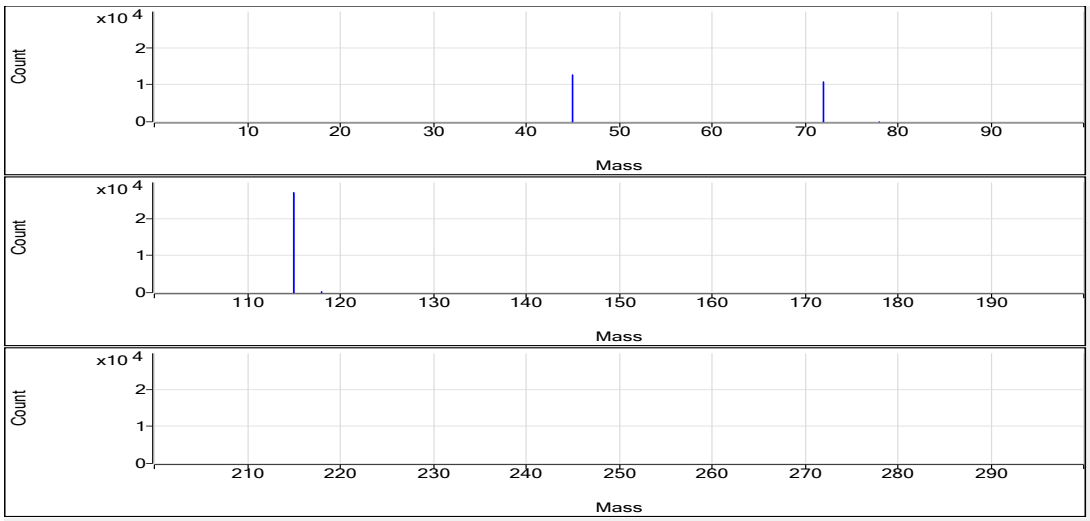
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1733291.12	0.6	98.4	Analog	0.1000	3
No Gas	Ge	72	881894.83	0.4	98.8	Pulse	0.1000	3
H2	Sc	45	127010.44	0.9	99.8	Pulse	0.1000	3
H2	Ge	72	108147.64	1.1	100.9	Pulse	0.1000	3
H2	In	115	270690.78	1.0	101.6	Pulse	0.1000	3
He	Sc	45	28254.88	2.2	99.1	Pulse	0.1000	3
He	Ge	72	54940.14	1.8	99.3	Pulse	0.1000	3
He	In	115	53782.44	2.9	100.2	Pulse	0.1000	3
He	Tb	159	246184.64	0.8	100.2	Pulse	0.1000	3
He	Bi	209	189680.08	0.9	99.4	Pulse	0.1000	3

No Gas

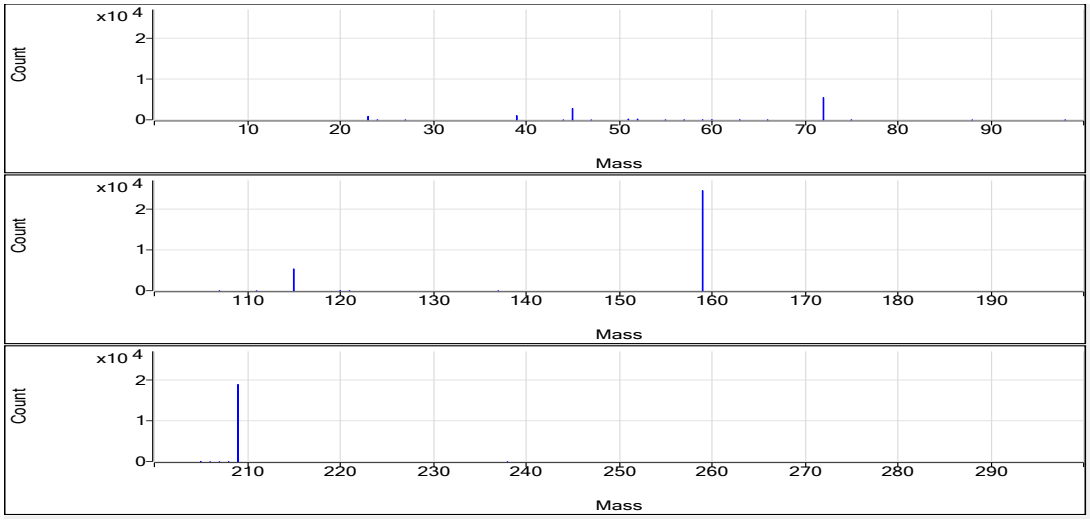


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.349	0.0002	262.00	0.0004	1.287E-05
Be	9	1	No Gas	0.349	0.0002	260.00	0.0004	1.287E-05
Be	9	1	No Gas	0.353	0.0002	262.00	0.0004	1.287E-05
Se	78	2	H2	0.213	0.0001	10.67	0.0004	1.451E-05
Se	78	2	H2	0.152	0.0001	8.00	0.0004	1.451E-05
Se	78	2	H2	0.059	0	4.00	0.0004	1.451E-05
Na	23	3	He	20.152	0.3158	8942.95	0.0025	0.2648
Na	23	3	He	17.759	0.3097	8932.97	0.0025	0.2648
Na	23	3	He	23.371	0.3239	8942.92	0.0025	0.2648
Mg	24	3	He	7.693	0.0152	430.02	0.0013	0.005032
Mg	24	3	He	5.909	0.0128	370.02	0.0013	0.005032
Mg	24	3	He	7.44	0.0149	410.02	0.0013	0.005032
Al	27	3	He	17.77	0.0092	260.01	0.0004	0.001519
Al	27	3	He	4.519	0.0035	100.00	0.0004	0.001519
Al	27	3	He	3.198	0.0029	80.00	0.0004	0.001519
K	39	3	He	43.715	0.4052	11474.83	0.001	0.3627
K	39	3	He	-24.894	0.3385	9763.57	0.001	0.3627
K	39	3	He	24.243	0.3863	10664.22	0.001	0.3627
Ca	44	3	He	-1.709	0.0025	70.00	0.0001	0.002571
Ca	44	3	He	15.43	0.0035	100.00	0.0001	0.002571
Ca	44	3	He	11.859	0.0033	90.00	0.0001	0.002571
Ti	47	3	He	4.104	0.0021	60.00	0.0005	0.0002328
Ti	47	3	He	3.266	0.0017	50.00	0.0005	0.0002328
Ti	47	3	He	5.799	0.0029	80.00	0.0005	0.0002328
V	51	3	He	0.316	0.0179	508.01	0.0201	0.0116
V	51	3	He	0.169	0.015	432.01	0.0201	0.0116
V	51	3	He	0.162	0.0149	410.01	0.0201	0.0116
Cr	52	3	He	0.377	0.0777	2200.24	0.0257	0.06801
Cr	52	3	He	0.592	0.0832	2400.29	0.0257	0.06801
Cr	52	3	He	0.554	0.0822	2270.25	0.0257	0.06801
Mn	55	3	He	0.283	0.0074	210.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.026	0.0045	130.01	0.0113	0.004215
Mn	55	3	He	0.395	0.0087	240.01	0.0113	0.004215
Fe	57	3	He	9.958	0.0092	260.01	0.0005	0.004099
Fe	57	3	He	11.671	0.0101	290.01	0.0005	0.004099
Fe	57	3	He	13.26	0.0109	300.01	0.0005	0.004099
Co	59	3	He	0.253	0.018	510.03	0.0518	0.004913
Co	59	3	He	0.206	0.0156	450.02	0.0518	0.004913
Co	59	3	He	0.185	0.0145	400.02	0.0518	0.004913
Ni	60	3	He	0.673	0.0117	630.04	0.0075	0.006695
Ni	60	3	He	0.217	0.0083	460.02	0.0075	0.006695
Ni	60	3	He	0.524	0.0106	590.03	0.0075	0.006695
Cu	63	3	He	0.282	0.0093	500.03	0.0216	0.003198
Cu	63	3	He	0.161	0.0067	370.01	0.0216	0.003198
Cu	63	3	He	0.176	0.007	390.02	0.0216	0.003198
Zn	66	3	He	0.361	0.0039	210.01	0.0026	0.002954
Zn	66	3	He	0.25	0.0036	200.01	0.0026	0.002954
Zn	66	3	He	0.721	0.0049	270.01	0.0026	0.002954
As	75	3	He	0.375	0.0012	66.00	0.002	0.0004943
As	75	3	He	0.468	0.0014	78.00	0.002	0.0004943
As	75	3	He	0.428	0.0013	74.00	0.002	0.0004943
Sr	88	3	He	0.076	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.161	0.002	110.01	0.0081	0.0006852
Sr	88	3	He	-0.014	0.0006	30.00	0.0081	0.0006852
Mo	98	3	He	0.155	0.0037	200.01	0.0205	0.0005587
Mo	98	3	He	0.149	0.0036	200.01	0.0205	0.0005587
Mo	98	3	He	0.094	0.0025	130.01	0.0205	0.0005587
Ag	107	3	He	0.042	0.0022	120.00	0.043	0.0004367
Ag	107	3	He	0.07	0.0034	190.01	0.043	0.0004367
Ag	107	3	He	0.07	0.0034	180.01	0.043	0.0004367
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.026	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.028	0.0002	8.00	0.005	1.253E-05
Sn	120	3	He	0.093	0.0147	790.06	0.0146	0.01334
Sn	120	3	He	0.249	0.017	940.07	0.0146	0.01334
Sn	120	3	He	0.003	0.0134	700.05	0.0146	0.01334
Sb	121	3	He	0.184	0.0041	220.01	0.0142	0.001484
Sb	121	3	He	0.175	0.004	220.01	0.0142	0.001484
Sb	121	3	He	0.178	0.004	210.01	0.0142	0.001484
Ba	137	3	He	0.323	0.0019	100.00	0.0046	0.000374
Ba	137	3	He	-0.081	0	0.00	0.0046	0.000374
Ba	137	3	He	0.251	0.0015	80.00	0.0046	0.000374
Tl	205	3	He	0.171	0.005	960.09	0.0282	0.00021
Tl	205	3	He	0.142	0.0042	790.06	0.0282	0.00021
Tl	205	3	He	0.137	0.0041	780.06	0.0282	0.00021
Pb	208	3	He	0.074	0.0037	310.02	0.0372	0.0009772
Pb	208	3	He	0.067	0.0035	360.02	0.0372	0.0009772
Pb	208	3	He	0.064	0.0034	260.01	0.0372	0.0009772
U	238	3	He	0.034	0.0015	290.01	0.0417	8.729E-05
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
Sc	45	1	No Gas			1744224.82		
Sc	45	1	No Gas			1731539.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1724109.04		
Ge	72	1	No Gas			885834.21		
Ge	72	1	No Gas			879011.86		
Ge	72	1	No Gas			880838.42		
Sc	45	2	H2			126607.21		
Sc	45	2	H2			126142.91		
Sc	45	2	H2			128281.21		
Ge	72	2	H2			109255.68		
Ge	72	2	H2			108359.92		
Ge	72	2	H2			106827.31		
In	115	2	H2			273110.97		
In	115	2	H2			267757.50		
In	115	2	H2			271203.86		
Sc	45	3	He			28318.40		
Sc	45	3	He			28839.42		
Sc	45	3	He			27606.81		
Ge	72	3	He			53791.73		
Ge	72	3	He			55368.53		
Ge	72	3	He			55660.15		
In	115	3	He			53724.51		
In	115	3	He			55360.65		
In	115	3	He			52279.17		
Tb	159	3	He			248574.82		
Tb	159	3	He			244859.39		
Tb	159	3	He			245119.70		
Bi	209	3	He			190507.26		
Bi	209	3	He			187810.43		
Bi	209	3	He			190722.54		

Quantitation Report

Data File Name	041SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:29:53 PM
Sample Name	410-136176-E-3-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

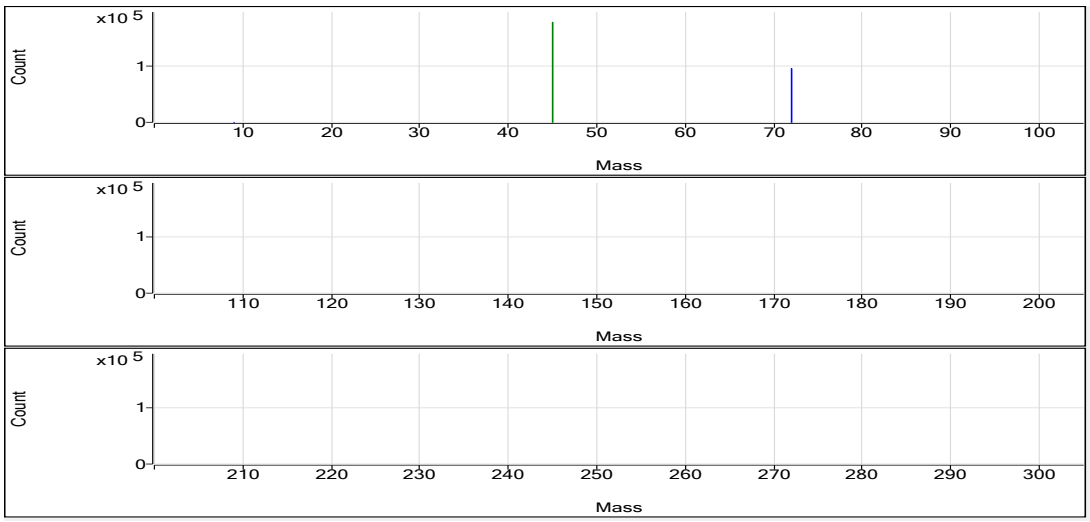
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.493	ppb	7.5	366.68	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.256	ppb	35.0	13.33	0.0001	Pulse	1.5000	3
Na	23	45	He	6602.899	ppb	0.8	484876.35	16.9616	Pulse	0.1000	3
Mg	24	45	He	6852.159	ppb	2.0	258650.36	9.0488	Pulse	0.1000	3
Al	27	45	He	944.420	ppb	1.2	11688.38	0.4088	Pulse	0.1000	3
K	39	45	He	1581.246	ppb	4.5	54274.71	1.8990	Pulse	0.1000	3
Ca	44	45	He	15177.148	ppb	2.3	25275.93	0.8842	Pulse	0.1000	3
Ti	47	45	He	1.019	ppb	130.2	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.183	ppb	40.1	436.01	0.0153	Pulse	0.5000	3
Cr	52	45	He	4.545	ppb	13.7	5284.51	0.1848	Pulse	0.1000	3
Mn	55	45	He	384.563	ppb	2.8	124651.25	4.3611	Pulse	0.1000	3
Fe	57	45	He	29.870	ppb	9.5	553.37	0.0193	Pulse	0.1000	3
Co	59	45	He	6.694	ppb	2.5	10053.84	0.3517	Pulse	0.1000	3
Ni	60	72	He	7.137	ppb	4.2	3463.86	0.0599	Pulse	0.1000	3
Cu	63	72	He	1.989	ppb	10.7	2673.67	0.0461	Pulse	0.1000	3
Zn	66	72	He	29.867	ppb	5.7	4714.28	0.0815	Pulse	0.1000	3
As	75	72	He	0.188	ppb	70.9	50.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	29.511	ppb	3.1	13343.38	0.2401	Pulse	0.1000	3
Mo	98	115	He	0.104	ppb	43.6	150.01	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.026	ppb	37.9	86.67	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.120	ppb	33.3	34.00	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.199	ppb	32.6	903.40	0.0162	Pulse	0.1000	3
Sb	121	115	He	0.153	ppb	11.0	203.34	0.0037	Pulse	0.1000	3
Ba	137	115	He	35.489	ppb	4.8	9109.99	0.1639	Pulse	0.1000	3
Tl	205	209	He	0.158	ppb	6.5	926.74	0.0047	Pulse	0.1000	3
Pb	208	209	He	0.699	ppb	2.3	5357.30	0.0270	Pulse	0.1000	3
U	238	209	He	0.087	ppb	10.8	740.05	0.0037	Pulse	0.1000	3

ISTD Table:

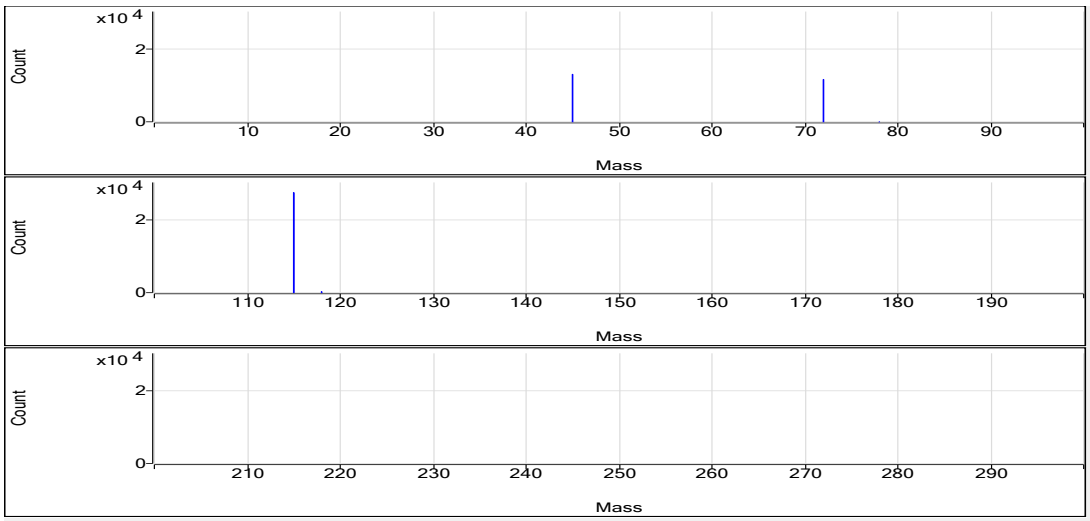
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1768879.61	0.4	100.4	Analog	0.1000	3
No Gas	Ge	72	951296.83	1.4	106.6	Pulse	0.1000	3
H2	Sc	45	130393.73	1.2	102.4	Pulse	0.1000	3
H2	Ge	72	116206.06	0.6	108.4	Pulse	0.1000	3
H2	In	115	274388.40	1.1	103.0	Pulse	0.1000	3
He	Sc	45	28588.91	1.4	100.3	Pulse	0.1000	3
He	Ge	72	57864.77	2.0	104.6	Pulse	0.1000	3
He	In	115	55588.82	1.4	103.6	Pulse	0.1000	3
He	Tb	159	249160.33	1.1	101.4	Pulse	0.1000	3
He	Bi	209	198377.38	1.0	103.9	Pulse	0.1000	3

No Gas

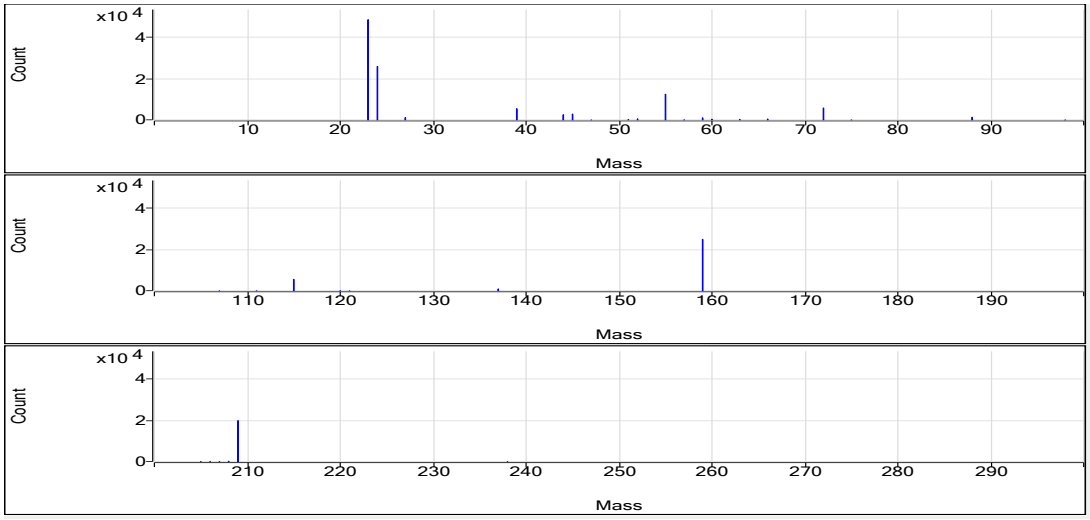


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.475	0.0002	352.01	0.0004	1.287E-05
Be	9	1	No Gas	0.536	0.0002	398.01	0.0004	1.287E-05
Be	9	1	No Gas	0.47	0.0002	350.01	0.0004	1.287E-05
Se	78	2	H2	0.356	0.0002	18.00	0.0004	1.451E-05
Se	78	2	H2	0.184	0.0001	10.00	0.0004	1.451E-05
Se	78	2	H2	0.227	0.0001	12.00	0.0004	1.451E-05
Na	23	3	He	6640.694	17.0571	482172.77	0.0025	0.2648
Na	23	3	He	6626.254	17.0206	484384.72	0.0025	0.2648
Na	23	3	He	6541.748	16.8069	488071.56	0.0025	0.2648
Mg	24	3	He	6997.105	9.2401	261201.17	0.0013	0.005032
Mg	24	3	He	6838.732	9.0311	257013.65	0.0013	0.005032
Mg	24	3	He	6720.64	8.8752	257736.27	0.0013	0.005032
Al	27	3	He	940.221	0.407	11504.84	0.0004	0.001519
Al	27	3	He	935.541	0.405	11524.97	0.0004	0.001519
Al	27	3	He	957.498	0.4144	12035.33	0.0004	0.001519
K	39	3	He	1661.575	1.9771	55887.66	0.001	0.3627
K	39	3	He	1559.355	1.8777	53438.15	0.001	0.3627
K	39	3	He	1522.807	1.8422	53498.33	0.001	0.3627
Ca	44	3	He	15571.614	0.9071	25643.26	0.0001	0.002571
Ca	44	3	He	14939.844	0.8704	24771.72	0.0001	0.002571
Ca	44	3	He	15019.987	0.8751	25412.82	0.0001	0.002571
Ti	47	3	He	0.263	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	2.552	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	0.243	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.226	0.0161	456.01	0.0201	0.0116
V	51	3	He	0.224	0.0161	458.01	0.0201	0.0116
V	51	3	He	0.098	0.0136	394.01	0.0201	0.0116
Cr	52	3	He	4.995	0.1964	5551.25	0.0257	0.06801
Cr	52	3	He	3.836	0.1666	4740.98	0.0257	0.06801
Cr	52	3	He	4.805	0.1915	5561.29	0.0257	0.06801
Mn	55	3	He	387.09	4.3897	124089.61	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	393.978	4.4678	127147.15	0.0113	0.004215
Mn	55	3	He	372.62	4.2258	122716.99	0.0113	0.004215
Fe	57	3	He	26.624	0.0177	500.03	0.0005	0.004099
Fe	57	3	He	31.211	0.02	570.04	0.0005	0.004099
Fe	57	3	He	31.775	0.0203	590.04	0.0005	0.004099
Co	59	3	He	6.776	0.356	10063.78	0.0518	0.004913
Co	59	3	He	6.805	0.3575	10173.87	0.0518	0.004913
Co	59	3	He	6.5	0.3417	9923.87	0.0518	0.004913
Ni	60	3	He	7.351	0.0615	3620.58	0.0075	0.006695
Ni	60	3	He	7.263	0.0608	3440.53	0.0075	0.006695
Ni	60	3	He	6.796	0.0573	3330.48	0.0075	0.006695
Cu	63	3	He	2.203	0.0508	2990.41	0.0216	0.003198
Cu	63	3	He	1.776	0.0415	2350.26	0.0216	0.003198
Cu	63	3	He	1.989	0.0461	2680.34	0.0216	0.003198
Zn	66	3	He	30.057	0.082	4830.98	0.0026	0.002954
Zn	66	3	He	31.474	0.0857	4850.98	0.0026	0.002954
Zn	66	3	He	28.071	0.0768	4460.88	0.0026	0.002954
As	75	3	He	0.321	0.0011	66.00	0.002	0.0004943
As	75	3	He	0.055	0.0006	34.00	0.002	0.0004943
As	75	3	He	0.188	0.0009	50.00	0.002	0.0004943
Sr	88	3	He	28.839	0.2347	13156.59	0.0081	0.0006852
Sr	88	3	He	30.564	0.2487	13596.92	0.0081	0.0006852
Sr	88	3	He	29.129	0.237	13276.62	0.0081	0.0006852
Mo	98	3	He	0.156	0.0037	210.01	0.0205	0.0005587
Mo	98	3	He	0.089	0.0024	130.01	0.0205	0.0005587
Mo	98	3	He	0.069	0.002	110.00	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.032	0.0018	100.00	0.043	0.0004367
Ag	107	3	He	0.031	0.0018	100.00	0.043	0.0004367
Cd	111	3	He	0.105	0.0005	30.00	0.005	1.253E-05
Cd	111	3	He	0.166	0.0008	46.00	0.005	1.253E-05
Cd	111	3	He	0.09	0.0005	26.00	0.005	1.253E-05
Sn	120	3	He	0.149	0.0155	870.06	0.0146	0.01334
Sn	120	3	He	0.176	0.0159	870.06	0.0146	0.01334
Sn	120	3	He	0.272	0.0173	970.07	0.0146	0.01334
Sb	121	3	He	0.134	0.0034	190.01	0.0142	0.001484
Sb	121	3	He	0.166	0.0038	210.01	0.0142	0.001484
Sb	121	3	He	0.159	0.0037	210.01	0.0142	0.001484
Ba	137	3	He	37.292	0.1722	9653.70	0.0046	0.000374
Ba	137	3	He	35.3	0.163	8913.16	0.0046	0.000374
Ba	137	3	He	33.875	0.1564	8763.10	0.0046	0.000374
Tl	205	3	He	0.169	0.005	1000.08	0.0282	0.00021
Tl	205	3	He	0.15	0.0044	880.07	0.0282	0.00021
Tl	205	3	He	0.155	0.0046	900.07	0.0282	0.00021
Pb	208	3	He	0.71	0.0274	2980.43	0.0372	0.0009772
Pb	208	3	He	0.707	0.0273	2710.41	0.0372	0.0009772
Pb	208	3	He	0.68	0.0263	2630.38	0.0372	0.0009772
U	238	3	He	0.096	0.0041	820.05	0.0417	8.729E-05
U	238	3	He	0.088	0.0038	750.04	0.0417	8.729E-05
U	238	3	He	0.077	0.0033	650.05	0.0417	8.729E-05
Sc	45	1	No Gas			1761333.57		
Sc	45	1	No Gas			1775967.94		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1769337.32		
Ge	72	1	No Gas			958200.30		
Ge	72	1	No Gas			960119.67		
Ge	72	1	No Gas			935570.53		
Sc	45	2	H2			129208.71		
Sc	45	2	H2			132226.59		
Sc	45	2	H2			129745.89		
Ge	72	2	H2			116955.65		
Ge	72	2	H2			115564.29		
Ge	72	2	H2			116098.24		
In	115	2	H2			274087.12		
In	115	2	H2			277485.09		
In	115	2	H2			271593.00		
Sc	45	3	He			28268.11		
Sc	45	3	He			28458.71		
Sc	45	3	He			29039.91		
Ge	72	3	He			58912.10		
Ge	72	3	He			56583.30		
Ge	72	3	He			58098.91		
In	115	3	He			56073.92		
In	115	3	He			54687.89		
In	115	3	He			56023.62		
Tb	159	3	He			251892.44		
Tb	159	3	He			249193.69		
Tb	159	3	He			246394.86		
Bi	209	3	He			200313.04		
Bi	209	3	He			198638.57		
Bi	209	3	He			196180.52		

Quantitation Report

Data File Name	042SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:31:54 PM
Sample Name	410-136176-E-3-A PDS
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

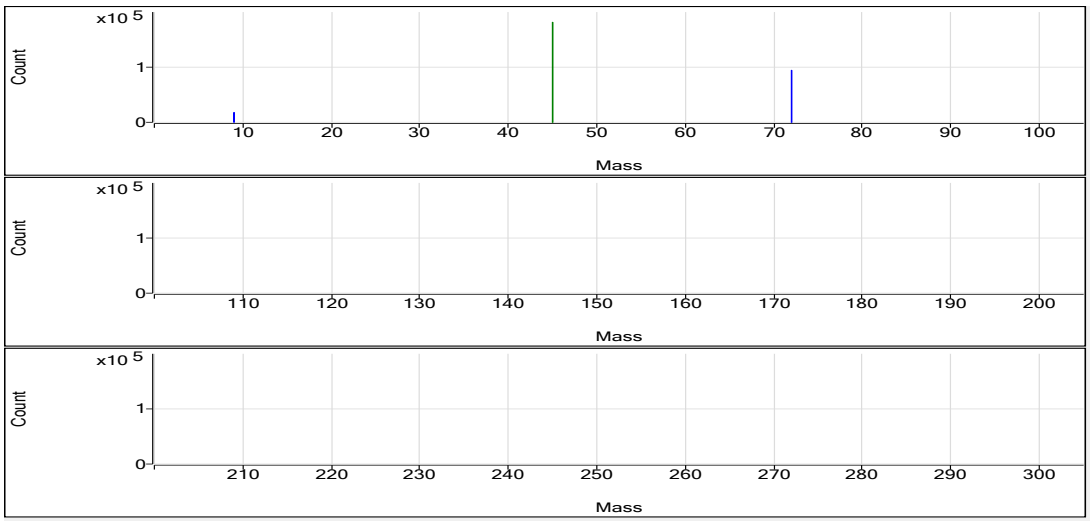
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.287	ppb	5.8	35950.50	0.0198	Pulse	0.5000	3
Se	78	72	H2	97.839	ppb	1.5	4388.01	0.0383	Pulse	1.5000	3
Na	23	45	He	11331.476	ppb	2.7	836503.82	28.9187	Pulse	0.1000	3
Mg	24	45	He	11571.394	ppb	2.8	441909.11	15.2775	Pulse	0.1000	3
Al	27	45	He	5839.388	ppb	2.5	72890.88	2.5198	Pulse	0.1000	3
K	39	45	He	6566.439	ppb	3.1	195022.18	6.7424	Pulse	0.1000	3
Ca	44	45	He	19592.071	ppb	2.8	32994.95	1.1407	Pulse	0.1000	3
Ti	47	45	He	517.819	ppb	6.0	6888.53	0.2382	Pulse	0.1000	3
V	51	45	He	495.602	ppb	3.3	287849.78	9.9525	Pulse	0.5000	3
Cr	52	45	He	496.061	ppb	4.1	370663.80	12.8173	Pulse	0.1000	3
Mn	55	45	He	860.732	ppb	2.8	282194.52	9.7559	Pulse	0.1000	3
Fe	57	45	He	4991.964	ppb	2.8	73829.43	2.5522	Pulse	0.1000	3
Co	59	45	He	496.461	ppb	3.3	744165.33	25.7294	Pulse	0.1000	3
Ni	60	72	He	484.224	ppb	1.1	207838.66	3.6142	Pulse	0.1000	3
Cu	63	72	He	484.810	ppb	0.9	602058.22	10.4691	Pulse	0.1000	3
Zn	66	72	He	511.032	ppb	1.5	77458.73	1.3470	Pulse	0.1000	3
As	75	72	He	485.533	ppb	0.6	54545.37	0.9484	Pulse	0.5000	3
Sr	88	115	He	78.462	ppb	2.6	34730.25	0.6373	Pulse	0.1000	3
Mo	98	115	He	48.212	ppb	1.4	53837.59	0.9874	Pulse	0.1000	3
Ag	107	115	He	58.566	ppb	1.4	137434.74	2.5215	Pulse	0.1000	3
Cd	111	115	He	48.547	ppb	1.5	13229.63	0.2427	Pulse	0.5000	3
Sn	120	115	He	98.459	ppb	1.6	79173.00	1.4524	Pulse	0.1000	3
Sb	121	115	He	97.276	ppb	2.1	75509.64	1.3856	Pulse	0.1000	3
Ba	137	115	He	511.796	ppb	1.5	128529.30	2.3582	Pulse	0.1000	3
Tl	205	209	He	96.966	ppb	0.8	533349.94	2.7368	Pulse	0.1000	3
Pb	208	209	He	48.979	ppb	1.0	355608.24	1.8248	Pulse	0.1000	3
U	238	209	He	48.242	ppb	0.5	392209.83	2.0126	Pulse	0.1000	3

ISTD Table:

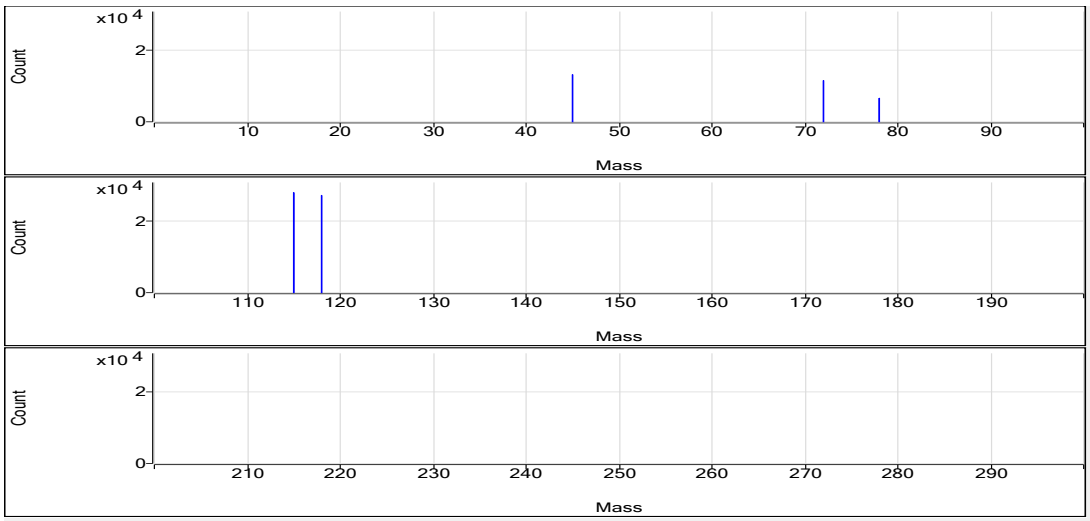
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1813142.47	1.0	102.9	Analog	0.1000	3
No Gas	Ge	72	944070.19	0.5	105.8	Pulse	0.1000	3
H2	Sc	45	131049.29	0.6	102.9	Pulse	0.1000	3
H2	Ge	72	114623.82	0.3	106.9	Pulse	0.1000	3
H2	In	115	277783.13	0.6	104.3	Pulse	0.1000	3
He	Sc	45	28939.45	2.6	101.5	Pulse	0.1000	3
He	Ge	72	57509.30	0.7	103.9	Pulse	0.1000	3
He	In	115	54512.65	2.0	101.6	Pulse	0.1000	3
He	Tb	159	248945.94	0.5	101.3	Pulse	0.1000	3
He	Bi	209	194878.85	0.5	102.1	Pulse	0.1000	3

No Gas

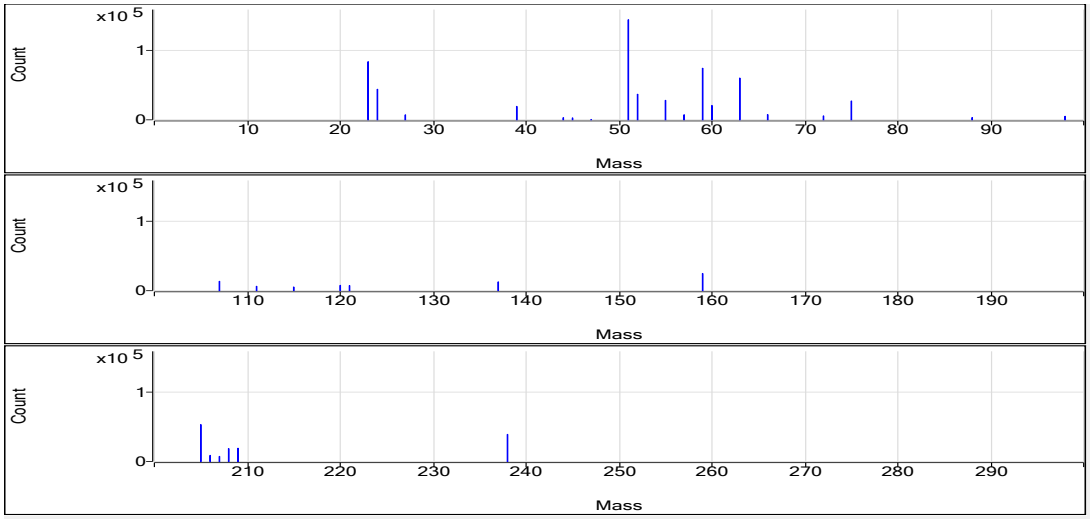


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.202	0.0186	33473.34	0.0004	1.287E-05
Be	9	1	No Gas	50.634	0.02	36077.33	0.0004	1.287E-05
Be	9	1	No Gas	53.024	0.0209	38300.84	0.0004	1.287E-05
Se	78	2	H2	97.788	0.0383	4376.67	0.0004	1.451E-05
Se	78	2	H2	99.352	0.0389	4451.37	0.0004	1.451E-05
Se	78	2	H2	96.378	0.0377	4336.00	0.0004	1.451E-05
Na	23	3	He	11550.032	29.4713	834578.11	0.0025	0.2648
Na	23	3	He	11458.251	29.2393	839425.77	0.0025	0.2648
Na	23	3	He	10986.146	28.0454	835507.57	0.0025	0.2648
Mg	24	3	He	11854.363	15.651	443208.67	0.0013	0.005032
Mg	24	3	He	11633.95	15.3601	440969.76	0.0013	0.005032
Mg	24	3	He	11225.869	14.8215	441548.90	0.0013	0.005032
Al	27	3	He	5998.039	2.5882	73292.86	0.0004	0.001519
Al	27	3	He	5814.086	2.5089	72026.25	0.0004	0.001519
Al	27	3	He	5706.038	2.4623	73353.54	0.0004	0.001519
K	39	3	He	6763.053	6.9335	196343.49	0.001	0.3627
K	39	3	He	6584.206	6.7597	194063.02	0.001	0.3627
K	39	3	He	6352.058	6.5341	194660.02	0.001	0.3627
Ca	44	3	He	20014.988	1.1653	32998.32	0.0001	0.002571
Ca	44	3	He	19790.127	1.1522	33078.43	0.0001	0.002571
Ca	44	3	He	18971.098	1.1046	32908.09	0.0001	0.002571
Ti	47	3	He	553.69	0.2547	7212.00	0.0005	0.0002328
Ti	47	3	He	496.861	0.2286	6561.73	0.0005	0.0002328
Ti	47	3	He	502.907	0.2313	6891.87	0.0005	0.0002328
V	51	3	He	508.689	10.215	289270.56	0.0201	0.0116
V	51	3	He	501.188	10.0645	288940.38	0.0201	0.0116
V	51	3	He	476.93	9.5779	285338.41	0.0201	0.0116
Cr	52	3	He	511.116	13.2043	373921.91	0.0257	0.06801
Cr	52	3	He	503.863	13.0178	373727.42	0.0257	0.06801
Cr	52	3	He	473.204	12.2299	364342.06	0.0257	0.06801
Mn	55	3	He	883.706	10.0161	283639.92	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	862.433	9.7751	280632.77	0.0113	0.004215
Mn	55	3	He	836.058	9.4763	282310.86	0.0113	0.004215
Fe	57	3	He	5151.627	2.6337	74583.11	0.0005	0.004099
Fe	57	3	He	4943.583	2.5275	72563.02	0.0005	0.004099
Fe	57	3	He	4880.683	2.4954	74342.17	0.0005	0.004099
Co	59	3	He	508.36	26.3459	746070.61	0.0518	0.004913
Co	59	3	He	503.178	26.0774	748652.96	0.0518	0.004913
Co	59	3	He	477.845	24.7648	737772.41	0.0518	0.004913
Ni	60	3	He	487.241	3.6366	208399.41	0.0075	0.006695
Ni	60	3	He	478.233	3.5695	206847.13	0.0075	0.006695
Ni	60	3	He	487.198	3.6363	208269.43	0.0075	0.006695
Cu	63	3	He	489.918	10.5794	606254.83	0.0216	0.003198
Cu	63	3	He	481.735	10.4027	602817.18	0.0216	0.003198
Cu	63	3	He	482.778	10.4253	597102.65	0.0216	0.003198
Zn	66	3	He	518.293	1.3661	78283.04	0.0026	0.002954
Zn	66	3	He	502.906	1.3256	76815.76	0.0026	0.002954
Zn	66	3	He	511.896	1.3492	77277.40	0.0026	0.002954
As	75	3	He	486.964	0.9512	54511.18	0.002	0.0004943
As	75	3	He	487.223	0.9517	55151.69	0.002	0.0004943
As	75	3	He	482.414	0.9424	53973.23	0.002	0.0004943
Sr	88	3	He	77.852	0.6323	35185.04	0.0081	0.0006852
Sr	88	3	He	76.821	0.6239	33971.50	0.0081	0.0006852
Sr	88	3	He	80.712	0.6555	35034.20	0.0081	0.0006852
Mo	98	3	He	49.007	1.0037	55852.32	0.0205	0.0005587
Mo	98	3	He	47.879	0.9806	53392.02	0.0205	0.0005587
Mo	98	3	He	47.749	0.978	52268.44	0.0205	0.0005587
Ag	107	3	He	58.152	2.5037	139320.33	0.043	0.0004367
Ag	107	3	He	58.067	2.5	136118.61	0.043	0.0004367
Ag	107	3	He	59.48	2.5608	136865.28	0.043	0.0004367
Cd	111	3	He	48.537	0.2426	13500.54	0.005	1.253E-05
Cd	111	3	He	49.267	0.2463	13408.46	0.005	1.253E-05
Cd	111	3	He	47.837	0.2391	12779.88	0.005	1.253E-05
Sn	120	3	He	97.376	1.4366	79940.64	0.0146	0.01334
Sn	120	3	He	100.236	1.4784	80494.46	0.0146	0.01334
Sn	120	3	He	97.765	1.4423	77083.89	0.0146	0.01334
Sb	121	3	He	94.971	1.3528	75275.33	0.0142	0.001484
Sb	121	3	He	97.96	1.3953	75968.84	0.0142	0.001484
Sb	121	3	He	98.897	1.4086	75284.74	0.0142	0.001484
Ba	137	3	He	503.014	2.3178	128972.79	0.0046	0.000374
Ba	137	3	He	515.989	2.3775	129448.69	0.0046	0.000374
Ba	137	3	He	516.386	2.3794	127166.41	0.0046	0.000374
Tl	205	3	He	97.735	2.7585	535857.30	0.0282	0.00021
Tl	205	3	He	96.971	2.737	536517.26	0.0282	0.00021
Tl	205	3	He	96.191	2.715	527675.27	0.0282	0.00021
Pb	208	3	He	49.437	1.8419	190082.58	0.0372	0.0009772
Pb	208	3	He	48.466	1.8057	187729.00	0.0372	0.0009772
Pb	208	3	He	49.033	1.8269	187503.71	0.0372	0.0009772
U	238	3	He	48.323	2.016	391615.50	0.0417	8.729E-05
U	238	3	He	47.957	2.0007	392189.06	0.0417	8.729E-05
U	238	3	He	48.447	2.0211	392824.92	0.0417	8.729E-05
Sc	45	1	No Gas			1799084.35		
Sc	45	1	No Gas			1807688.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1832654.66		
Ge	72	1	No Gas			938848.50		
Ge	72	1	No Gas			948258.97		
Ge	72	1	No Gas			945103.11		
Sc	45	2	H2			130663.09		
Sc	45	2	H2			131902.87		
Sc	45	2	H2			130581.92		
Ge	72	2	H2			114385.71		
Ge	72	2	H2			114506.47		
Ge	72	2	H2			114979.29		
In	115	2	H2			276828.55		
In	115	2	H2			279783.12		
In	115	2	H2			276737.73		
Sc	45	3	He			28318.29		
Sc	45	3	He			28708.86		
Sc	45	3	He			29791.20		
Ge	72	3	He			57305.35		
Ge	72	3	He			57947.90		
Ge	72	3	He			57274.64		
In	115	3	He			56205.20		
In	115	3	He			55010.17		
In	115	3	He			53985.21		
Tb	159	3	He			249652.75		
Tb	159	3	He			249691.70		
Tb	159	3	He			247493.38		
Bi	209	3	He			194253.49		
Bi	209	3	He			196025.78		
Bi	209	3	He			194357.28		

Quantitation Report

Data File Name	043SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:33:53 PM
Sample Name	410-136176-E-3-A SD@5
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

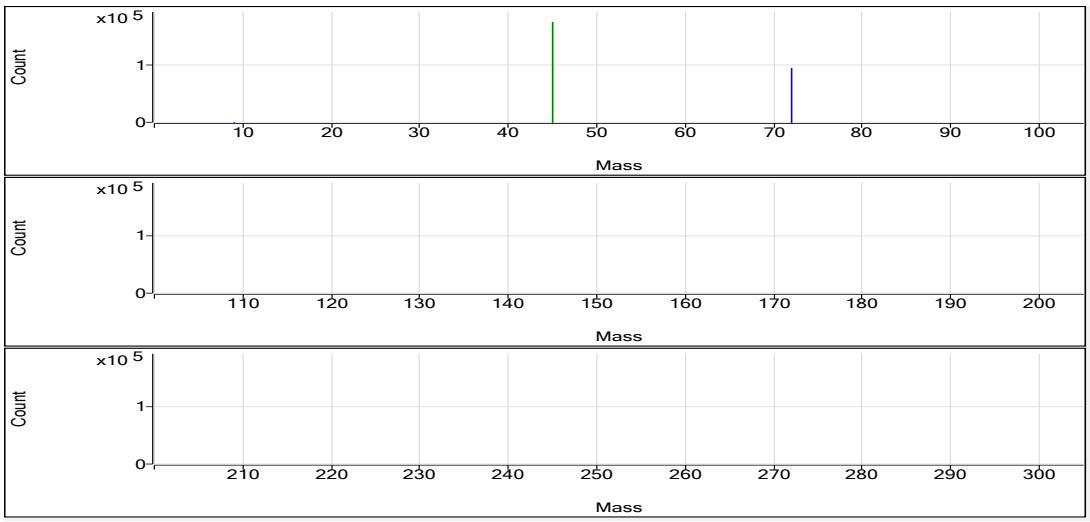
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.371	ppb	11.7	276.00	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.243	ppb	41.4	12.44	0.0001	Pulse	1.5000	3
Na	23	45	He	1303.490	ppb	2.8	101857.19	3.5610	Pulse	0.1000	3
Mg	24	45	He	1334.950	ppb	1.7	50544.05	1.7670	Pulse	0.1000	3
Al	27	45	He	201.037	ppb	2.3	2523.66	0.0882	Pulse	0.1000	3
K	39	45	He	302.576	ppb	6.3	18786.00	0.6567	Pulse	0.1000	3
Ca	44	45	He	3039.246	ppb	8.2	5121.05	0.1791	Pulse	0.1000	3
Ti	47	45	He	1.265	ppb	33.0	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.244	ppb	33.2	471.34	0.0165	Pulse	0.5000	3
Cr	52	45	He	0.907	ppb	33.1	2610.33	0.0913	Pulse	0.1000	3
Mn	55	45	He	75.806	ppb	0.3	24691.69	0.8631	Pulse	0.1000	3
Fe	57	45	He	12.261	ppb	63.0	296.68	0.0104	Pulse	0.1000	3
Co	59	45	He	1.502	ppb	5.3	2366.94	0.0827	Pulse	0.1000	3
Ni	60	72	He	1.832	ppb	10.3	1180.09	0.0203	Pulse	0.1000	3
Cu	63	72	He	0.481	ppb	16.1	786.72	0.0136	Pulse	0.1000	3
Zn	66	72	He	5.991	ppb	20.1	1083.42	0.0187	Pulse	0.1000	3
As	75	72	He	0.306	ppb	22.2	63.33	0.0011	Pulse	0.5000	3
Sr	88	115	He	5.663	ppb	8.1	2543.67	0.0466	Pulse	0.1000	3
Mo	98	115	He	0.119	ppb	10.4	163.34	0.0030	Pulse	0.1000	3
Ag	107	115	He	0.027	ppb	40.3	86.67	0.0016	Pulse	0.1000	3
Cd	111	115	He	0.044	ppb	35.1	12.67	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.170	ppb	65.7	863.39	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.157	ppb	19.1	203.34	0.0037	Pulse	0.1000	3
Ba	137	115	He	7.291	ppb	13.3	1853.52	0.0340	Pulse	0.1000	3
Tl	205	209	He	0.398	ppb	8.7	2233.60	0.0114	Pulse	0.1000	3
Pb	208	209	He	0.193	ppb	6.1	1596.77	0.0082	Pulse	0.1000	3
U	238	209	He	0.041	ppb	10.8	350.02	0.0018	Pulse	0.1000	3

ISTD Table:

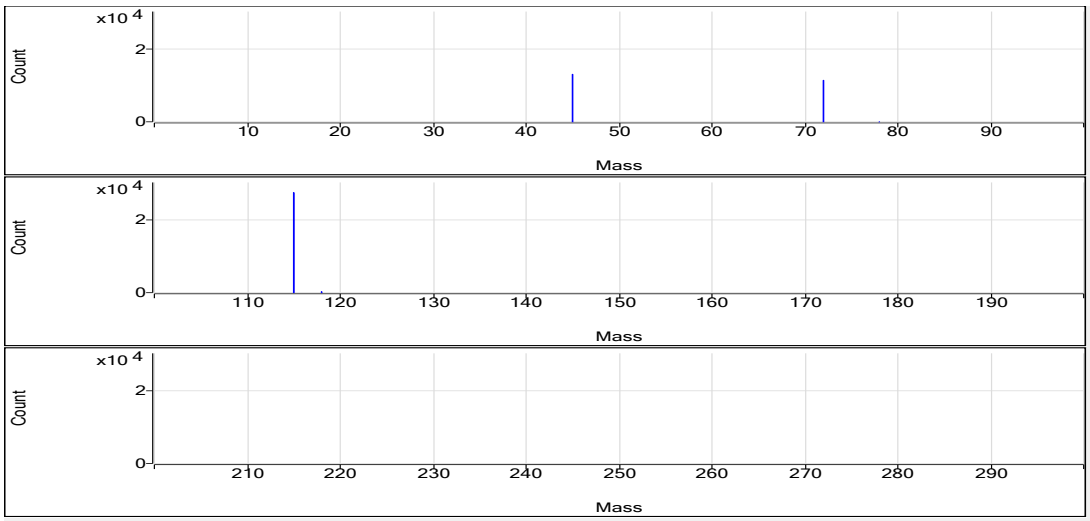
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735093.15	0.1	98.5	Analog	0.1000	3
No Gas	Ge	72	935236.10	0.1	104.8	Pulse	0.1000	3
H2	Sc	45	130218.96	0.9	102.3	Pulse	0.1000	3
H2	Ge	72	113773.72	1.4	106.1	Pulse	0.1000	3
H2	In	115	273867.21	0.8	102.8	Pulse	0.1000	3
He	Sc	45	28608.92	1.3	100.4	Pulse	0.1000	3
He	Ge	72	57978.14	1.1	104.8	Pulse	0.1000	3
He	In	115	54568.69	1.0	101.7	Pulse	0.1000	3
He	Tb	159	245793.31	0.2	100.0	Pulse	0.1000	3
He	Bi	209	195328.58	0.9	102.3	Pulse	0.1000	3

No Gas

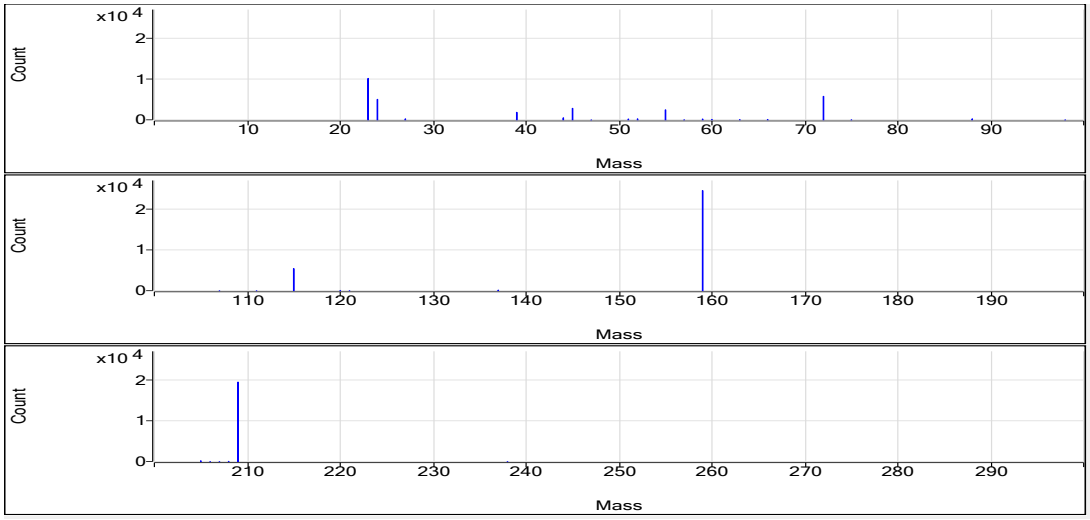


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.339	0.0001	254.00	0.0004	1.287E-05
Be	9	1	No Gas	0.421	0.0002	310.01	0.0004	1.287E-05
Be	9	1	No Gas	0.354	0.0002	264.00	0.0004	1.287E-05
Se	78	2	H2	0.304	0.0001	15.33	0.0004	1.451E-05
Se	78	2	H2	0.127	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.298	0.0001	14.67	0.0004	1.451E-05
Na	23	3	He	1345.27	3.6666	103502.22	0.0025	0.2648
Na	23	3	He	1289.12	3.5246	102072.18	0.0025	0.2648
Na	23	3	He	1276.081	3.4917	99997.18	0.0025	0.2648
Mg	24	3	He	1361.803	1.8024	50878.66	0.0013	0.005032
Mg	24	3	He	1321.273	1.7489	50647.85	0.0013	0.005032
Mg	24	3	He	1321.773	1.7496	50105.64	0.0013	0.005032
Al	27	3	He	204.335	0.0896	2530.33	0.0004	0.001519
Al	27	3	He	203.09	0.0891	2580.35	0.0004	0.001519
Al	27	3	He	195.685	0.0859	2460.30	0.0004	0.001519
K	39	3	He	318.813	0.6725	18982.98	0.001	0.3627
K	39	3	He	307.375	0.6614	19153.04	0.001	0.3627
K	39	3	He	281.539	0.6363	18221.99	0.001	0.3627
Ca	44	3	He	3310.496	0.1949	5501.17	0.0001	0.002571
Ca	44	3	He	2821.415	0.1665	4820.93	0.0001	0.002571
Ca	44	3	He	2985.828	0.176	5041.05	0.0001	0.002571
Ti	47	3	He	1.035	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.748	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	1.013	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.337	0.0184	518.01	0.0201	0.0116
V	51	3	He	0.207	0.0157	456.01	0.0201	0.0116
V	51	3	He	0.188	0.0154	440.01	0.0201	0.0116
Cr	52	3	He	1.228	0.0996	2810.39	0.0257	0.06801
Cr	52	3	He	0.632	0.0843	2440.29	0.0257	0.06801
Cr	52	3	He	0.859	0.0901	2580.32	0.0257	0.06801
Mn	55	3	He	75.519	0.8598	24270.89	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	76.014	0.8654	25062.17	0.0113	0.004215
Mn	55	3	He	75.883	0.8639	24742.02	0.0113	0.004215
Fe	57	3	He	12.792	0.0106	300.01	0.0005	0.004099
Fe	57	3	He	19.708	0.0142	410.02	0.0005	0.004099
Fe	57	3	He	4.284	0.0063	180.01	0.0005	0.004099
Co	59	3	He	1.423	0.0787	2220.23	0.0518	0.004913
Co	59	3	He	1.498	0.0825	2390.29	0.0518	0.004913
Co	59	3	He	1.583	0.087	2490.30	0.0518	0.004913
Ni	60	3	He	1.681	0.0192	1100.08	0.0075	0.006695
Ni	60	3	He	2.045	0.0219	1280.10	0.0075	0.006695
Ni	60	3	He	1.771	0.0199	1160.09	0.0075	0.006695
Cu	63	3	He	0.532	0.0147	840.05	0.0216	0.003198
Cu	63	3	He	0.519	0.0144	840.06	0.0216	0.003198
Cu	63	3	He	0.392	0.0117	680.04	0.0216	0.003198
Zn	66	3	He	7.381	0.0224	1280.11	0.0026	0.002954
Zn	66	3	He	5.261	0.0168	980.07	0.0026	0.002954
Zn	66	3	He	5.331	0.017	990.07	0.0026	0.002954
As	75	3	He	0.23	0.0009	54.00	0.002	0.0004943
As	75	3	He	0.361	0.0012	70.00	0.002	0.0004943
As	75	3	He	0.326	0.0011	66.00	0.002	0.0004943
Sr	88	3	He	5.235	0.0432	2360.27	0.0081	0.0006852
Sr	88	3	He	6.148	0.0506	2730.37	0.0081	0.0006852
Sr	88	3	He	5.607	0.0462	2540.36	0.0081	0.0006852
Mo	98	3	He	0.116	0.0029	160.01	0.0205	0.0005587
Mo	98	3	He	0.108	0.0028	150.01	0.0205	0.0005587
Mo	98	3	He	0.133	0.0033	180.01	0.0205	0.0005587
Ag	107	3	He	0.037	0.002	110.00	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.056	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.049	0.0003	14.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.15	0.0155	850.06	0.0146	0.01334
Sn	120	3	He	0.291	0.0176	950.07	0.0146	0.01334
Sn	120	3	He	0.07	0.0144	790.05	0.0146	0.01334
Sb	121	3	He	0.153	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.13	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.19	0.0042	230.01	0.0142	0.001484
Ba	137	3	He	6.23	0.0291	1590.15	0.0046	0.000374
Ba	137	3	He	7.517	0.035	1890.18	0.0046	0.000374
Ba	137	3	He	8.126	0.0378	2080.23	0.0046	0.000374
Tl	205	3	He	0.437	0.0126	2460.29	0.0282	0.00021
Tl	205	3	He	0.382	0.011	2160.25	0.0282	0.00021
Tl	205	3	He	0.374	0.0108	2080.25	0.0282	0.00021
Pb	208	3	He	0.204	0.0086	920.06	0.0372	0.0009772
Pb	208	3	He	0.195	0.0082	840.07	0.0372	0.0009772
Pb	208	3	He	0.181	0.0077	720.05	0.0372	0.0009772
U	238	3	He	0.046	0.002	390.02	0.0417	8.729E-05
U	238	3	He	0.037	0.0016	320.02	0.0417	8.729E-05
U	238	3	He	0.04	0.0018	340.02	0.0417	8.729E-05
Sc	45	1	No Gas			1734096.38		
Sc	45	1	No Gas			1736526.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1734657.01		
Ge	72	1	No Gas			935641.31		
Ge	72	1	No Gas			935353.42		
Ge	72	1	No Gas			934713.58		
Sc	45	2	H2			131016.76		
Sc	45	2	H2			130823.48		
Sc	45	2	H2			128816.65		
Ge	72	2	H2			114968.69		
Ge	72	2	H2			114395.92		
Ge	72	2	H2			111956.54		
In	115	2	H2			271826.34		
In	115	2	H2			276081.05		
In	115	2	H2			273694.25		
Sc	45	3	He			28228.25		
Sc	45	3	He			28959.67		
Sc	45	3	He			28638.85		
Ge	72	3	He			57234.86		
Ge	72	3	He			58369.72		
Ge	72	3	He			58329.85		
In	115	3	He			54698.46		
In	115	3	He			54005.80		
In	115	3	He			55019.93		
Tb	159	3	He			245398.59		
Tb	159	3	He			246321.27		
Tb	159	3	He			245660.07		
Bi	209	3	He			195936.91		
Bi	209	3	He			196688.26		
Bi	209	3	He			193360.58		

Quantitation Report

Data File Name	044SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:35:51 PM
Sample Name	410-136176-B-3-A DU
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

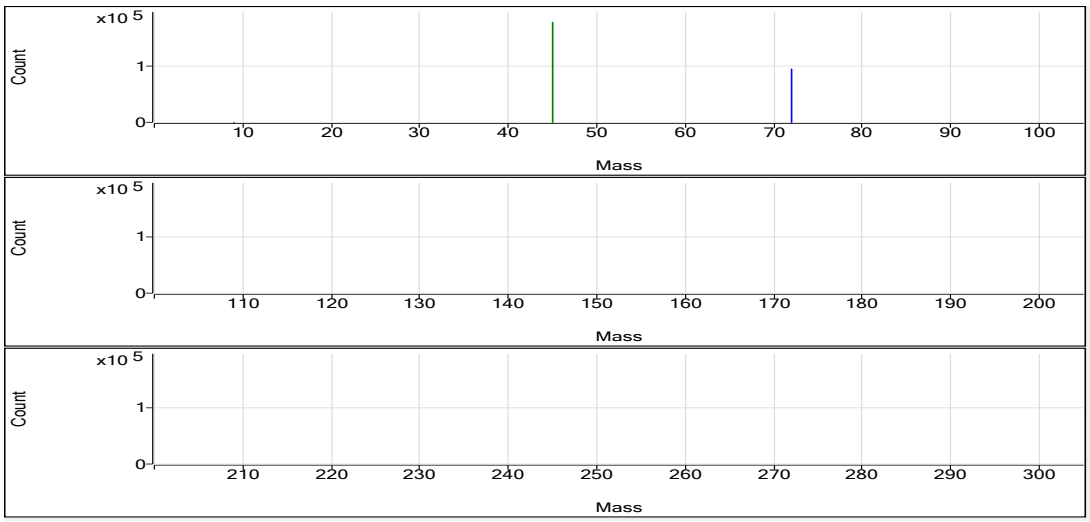
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.442	ppb	9.1	333.34	0.0002	Pulse	0.5000	3
Se	78	72	H2	0.450	ppb	24.3	21.78	0.0002	Pulse	1.5000	3
Na	23	45	He	6431.083	ppb	1.9	480641.18	16.5271	Pulse	0.1000	3
Mg	24	45	He	6669.669	ppb	1.3	256162.63	8.8080	Pulse	0.1000	3
Al	27	45	He	908.681	ppb	4.7	11444.85	0.3934	Pulse	0.1000	3
K	39	45	He	1560.824	ppb	4.2	54649.76	1.8792	Pulse	0.1000	3
Ca	44	45	He	14380.489	ppb	2.4	24374.39	0.8380	Pulse	0.1000	3
Ti	47	45	He	0.987	ppb	74.5	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.174	ppb	33.4	438.68	0.0151	Pulse	0.5000	3
Cr	52	45	He	4.400	ppb	7.5	5267.80	0.1811	Pulse	0.1000	3
Mn	55	45	He	378.659	ppb	1.6	124889.06	4.2942	Pulse	0.1000	3
Fe	57	45	He	20.925	ppb	7.2	430.02	0.0148	Pulse	0.1000	3
Co	59	45	He	6.461	ppb	4.8	9877.07	0.3397	Pulse	0.1000	3
Ni	60	72	He	7.149	ppb	7.3	3503.89	0.0600	Pulse	0.1000	3
Cu	63	72	He	1.791	ppb	4.0	2446.96	0.0419	Pulse	0.1000	3
Zn	66	72	He	27.883	ppb	4.7	4460.87	0.0763	Pulse	0.1000	3
As	75	72	He	0.220	ppb	11.0	54.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	29.823	ppb	2.1	13243.29	0.2426	Pulse	0.1000	3
Mo	98	115	He	0.071	ppb	83.2	110.00	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.030	ppb	47.1	93.34	0.0017	Pulse	0.1000	3
Cd	111	115	He	0.115	ppb	22.5	32.00	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.145	ppb	101.6	843.39	0.0155	Pulse	0.1000	3
Sb	121	115	He	0.080	ppb	55.8	143.34	0.0026	Pulse	0.1000	3
Ba	137	115	He	35.397	ppb	3.0	8919.91	0.1634	Pulse	0.1000	3
Tl	205	209	He	0.168	ppb	22.6	970.08	0.0050	Pulse	0.1000	3
Pb	208	209	He	0.696	ppb	3.9	5267.29	0.0269	Pulse	0.1000	3
U	238	209	He	0.076	ppb	3.1	640.04	0.0033	Pulse	0.1000	3

ISTD Table:

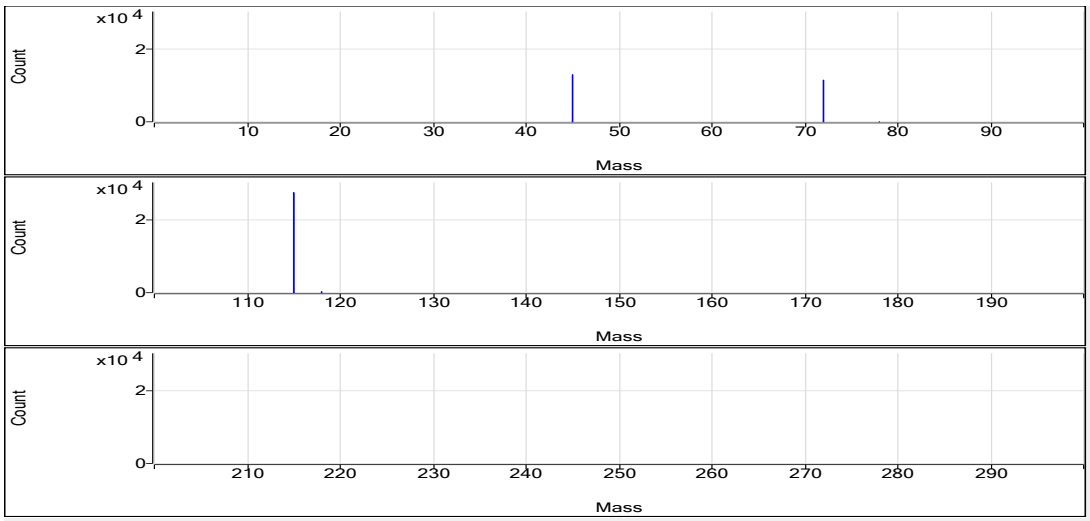
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1783221.69	0.6	101.2	Analog	0.1000	3
No Gas	Ge	72	951017.64	0.9	106.6	Pulse	0.1000	3
H2	Sc	45	128917.37	0.8	101.3	Pulse	0.1000	3
H2	Ge	72	114415.01	1.4	106.7	Pulse	0.1000	3
H2	In	115	273844.94	0.3	102.8	Pulse	0.1000	3
He	Sc	45	29086.44	1.3	102.0	Pulse	0.1000	3
He	Ge	72	58467.04	1.3	105.7	Pulse	0.1000	3
He	In	115	54575.35	0.6	101.7	Pulse	0.1000	3
He	Tb	159	250164.34	0.3	101.8	Pulse	0.1000	3
He	Bi	209	195839.87	1.5	102.6	Pulse	0.1000	3

No Gas

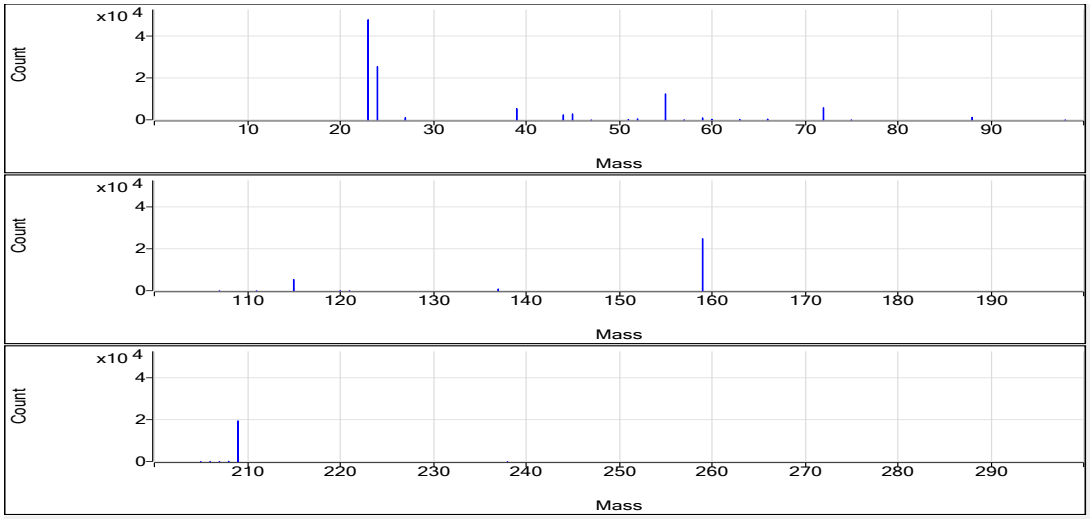


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.421	0.0002	318.01	0.0004	1.287E-05
Be	9	1	No Gas	0.488	0.0002	364.01	0.0004	1.287E-05
Be	9	1	No Gas	0.417	0.0002	318.00	0.0004	1.287E-05
Se	78	2	H2	0.545	0.0002	26.00	0.0004	1.451E-05
Se	78	2	H2	0.33	0.0001	16.67	0.0004	1.451E-05
Se	78	2	H2	0.476	0.0002	22.67	0.0004	1.451E-05
Na	23	3	He	6479.104	16.6485	484801.63	0.0025	0.2648
Na	23	3	He	6290.345	16.1712	476247.77	0.0025	0.2648
Na	23	3	He	6523.8	16.7615	480874.13	0.0025	0.2648
Mg	24	3	He	6655.707	8.7895	255949.78	0.0013	0.005032
Mg	24	3	He	6588.554	8.7009	256244.96	0.0013	0.005032
Mg	24	3	He	6764.745	8.9335	256293.16	0.0013	0.005032
Al	27	3	He	869.584	0.3765	10964.42	0.0004	0.001519
Al	27	3	He	954.353	0.4131	12165.49	0.0004	0.001519
Al	27	3	He	902.106	0.3906	11204.63	0.0004	0.001519
K	39	3	He	1622.28	1.9389	56459.80	0.001	0.3627
K	39	3	He	1491.133	1.8115	53348.19	0.001	0.3627
K	39	3	He	1569.058	1.8872	54141.30	0.001	0.3627
Ca	44	3	He	14771.329	0.8607	25062.11	0.0001	0.002571
Ca	44	3	He	14253.807	0.8306	24461.22	0.0001	0.002571
Ca	44	3	He	14116.33	0.8226	23599.84	0.0001	0.002571
Ti	47	3	He	0.241	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	1.71	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	1.01	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.168	0.015	436.01	0.0201	0.0116
V	51	3	He	0.119	0.014	412.01	0.0201	0.0116
V	51	3	He	0.235	0.0163	468.01	0.0201	0.0116
Cr	52	3	He	4.023	0.1714	4991.04	0.0257	0.06801
Cr	52	3	He	4.622	0.1868	5501.20	0.0257	0.06801
Cr	52	3	He	4.557	0.1851	5311.15	0.0257	0.06801
Mn	55	3	He	381.872	4.3306	126107.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	371.776	4.2162	124169.66	0.0113	0.004215
Mn	55	3	He	382.329	4.3358	124390.50	0.0113	0.004215
Fe	57	3	He	22.246	0.0155	450.02	0.0005	0.004099
Fe	57	3	He	21.241	0.0149	440.02	0.0005	0.004099
Fe	57	3	He	19.286	0.0139	400.02	0.0005	0.004099
Co	59	3	He	6.303	0.3315	9653.52	0.0518	0.004913
Co	59	3	He	6.264	0.3295	9703.64	0.0518	0.004913
Co	59	3	He	6.817	0.3581	10274.04	0.0518	0.004913
Ni	60	3	He	7.054	0.0592	3440.54	0.0075	0.006695
Ni	60	3	He	6.682	0.0565	3350.50	0.0075	0.006695
Ni	60	3	He	7.711	0.0641	3720.62	0.0075	0.006695
Cu	63	3	He	1.87	0.0436	2530.33	0.0216	0.003198
Cu	63	3	He	1.734	0.0406	2410.27	0.0216	0.003198
Cu	63	3	He	1.769	0.0414	2400.29	0.0216	0.003198
Zn	66	3	He	28.872	0.0789	4580.91	0.0026	0.002954
Zn	66	3	He	28.366	0.0776	4600.92	0.0026	0.002954
Zn	66	3	He	26.412	0.0724	4200.78	0.0026	0.002954
As	75	3	He	0.205	0.0009	52.00	0.002	0.0004943
As	75	3	He	0.248	0.001	58.00	0.002	0.0004943
As	75	3	He	0.206	0.0009	52.00	0.002	0.0004943
Sr	88	3	He	29.966	0.2438	13336.70	0.0081	0.0006852
Sr	88	3	He	30.367	0.2471	13546.90	0.0081	0.0006852
Sr	88	3	He	29.135	0.2371	12846.27	0.0081	0.0006852
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.062	0.0018	100.00	0.0205	0.0005587
Mo	98	3	He	0.135	0.0033	180.01	0.0205	0.0005587
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.024	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.046	0.0024	130.01	0.043	0.0004367
Cd	111	3	He	0.107	0.0005	30.00	0.005	1.253E-05
Cd	111	3	He	0.143	0.0007	40.00	0.005	1.253E-05
Cd	111	3	He	0.093	0.0005	26.00	0.005	1.253E-05
Sn	120	3	He	-0.025	0.013	710.05	0.0146	0.01334
Sn	120	3	He	0.223	0.0166	910.06	0.0146	0.01334
Sn	120	3	He	0.236	0.0168	910.06	0.0146	0.01334
Sb	121	3	He	0.037	0.002	110.00	0.0142	0.001484
Sb	121	3	He	0.126	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.077	0.0026	140.01	0.0142	0.001484
Ba	137	3	He	34.175	0.1578	8633.20	0.0046	0.000374
Ba	137	3	He	36.034	0.1664	9123.30	0.0046	0.000374
Ba	137	3	He	35.982	0.1661	9003.24	0.0046	0.000374
Tl	205	3	He	0.128	0.0038	760.05	0.0282	0.00021
Tl	205	3	He	0.204	0.006	1170.11	0.0282	0.00021
Tl	205	3	He	0.173	0.0051	980.07	0.0282	0.00021
Pb	208	3	He	0.721	0.0278	2740.41	0.0372	0.0009772
Pb	208	3	He	0.699	0.027	2750.41	0.0372	0.0009772
Pb	208	3	He	0.667	0.0258	2770.39	0.0372	0.0009772
U	238	3	He	0.074	0.0032	630.05	0.0417	8.729E-05
U	238	3	He	0.076	0.0033	640.04	0.0417	8.729E-05
U	238	3	He	0.079	0.0034	650.04	0.0417	8.729E-05
Sc	45	1	No Gas			1780694.04		
Sc	45	1	No Gas			1774120.60		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1794850.44		
Ge	72	1	No Gas			959285.53		
Ge	72	1	No Gas			951033.03		
Ge	72	1	No Gas			942734.36		
Sc	45	2	H2			128735.50		
Sc	45	2	H2			129976.43		
Sc	45	2	H2			128040.17		
Ge	72	2	H2			114263.78		
Ge	72	2	H2			116038.10		
Ge	72	2	H2			112943.14		
In	115	2	H2			272955.74		
In	115	2	H2			273816.71		
In	115	2	H2			274762.36		
Sc	45	3	He			29119.81		
Sc	45	3	He			29450.36		
Sc	45	3	He			28689.14		
Ge	72	3	He			58069.25		
Ge	72	3	He			59323.60		
Ge	72	3	He			58008.28		
In	115	3	He			54708.63		
In	115	3	He			54838.97		
In	115	3	He			54196.17		
Tb	159	3	He			250485.37		
Tb	159	3	He			250753.39		
Tb	159	3	He			249254.27		
Bi	209	3	He			198474.51		
Bi	209	3	He			196221.44		
Bi	209	3	He			192823.67		

Quantitation Report

Data File Name	045SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:37:52 PM
Sample Name	410-136176-E-3-B MS
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

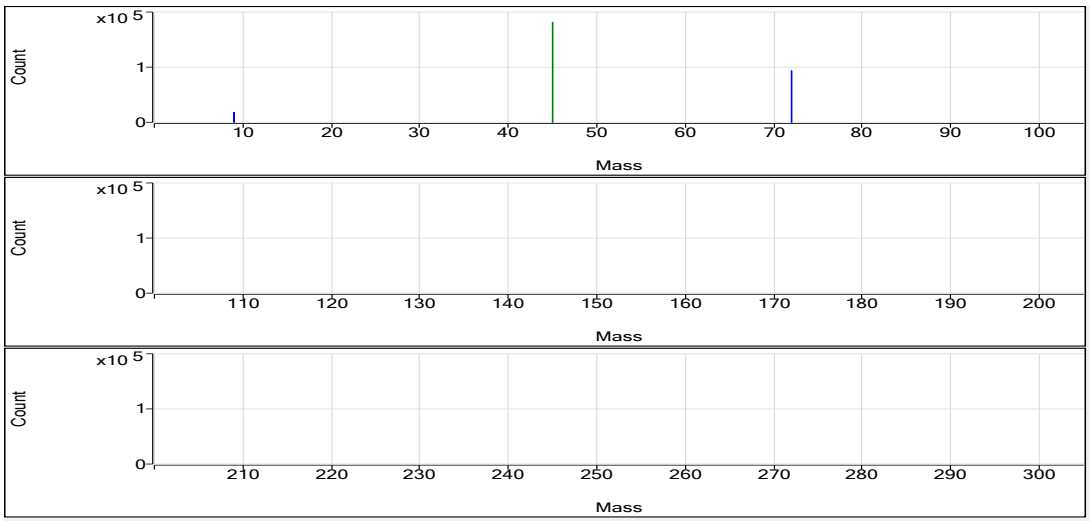
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.195	ppb	6.6	36841.34	0.0202	Pulse	0.5000	3
Se	78	72	H2	99.454	ppb	1.4	4478.93	0.0389	Pulse	1.5000	3
Na	23	45	He	11567.887	ppb	0.6	861937.62	29.5165	Pulse	0.1000	3
Mg	24	45	He	11842.352	ppb	1.1	456547.10	15.6351	Pulse	0.1000	3
Al	27	45	He	5938.159	ppb	1.0	74827.13	2.5624	Pulse	0.1000	3
K	39	45	He	6768.147	ppb	1.2	202603.97	6.9384	Pulse	0.1000	3
Ca	44	45	He	20308.213	ppb	0.5	34528.35	1.1823	Pulse	0.1000	3
Ti	47	45	He	528.579	ppb	2.2	7101.97	0.2431	Pulse	0.1000	3
V	51	45	He	509.685	ppb	1.4	298855.83	10.2350	Pulse	0.5000	3
Cr	52	45	He	510.609	ppb	0.7	385210.19	13.1912	Pulse	0.1000	3
Mn	55	45	He	879.800	ppb	1.1	291187.03	9.9719	Pulse	0.1000	3
Fe	57	45	He	5117.249	ppb	1.9	76389.05	2.6162	Pulse	0.1000	3
Co	59	45	He	507.447	ppb	1.0	767935.43	26.2986	Pulse	0.1000	3
Ni	60	72	He	495.111	ppb	1.0	214022.92	3.6953	Pulse	0.1000	3
Cu	63	72	He	495.601	ppb	2.2	619786.58	10.7021	Pulse	0.1000	3
Zn	66	72	He	526.581	ppb	0.9	80381.50	1.3879	Pulse	0.1000	3
As	75	72	He	498.836	ppb	1.2	56435.27	0.9744	Pulse	0.5000	3
Sr	88	115	He	81.405	ppb	1.5	36243.93	0.6611	Pulse	0.1000	3
Mo	98	115	He	48.717	ppb	1.2	54697.11	0.9978	Pulse	0.1000	3
Ag	107	115	He	50.426	ppb	1.1	119018.46	2.1711	Pulse	0.1000	3
Cd	111	115	He	50.306	ppb	2.7	13783.51	0.2515	Pulse	0.5000	3
Sn	120	115	He	102.205	ppb	1.1	82630.09	1.5072	Pulse	0.1000	3
Sb	121	115	He	99.464	ppb	2.4	77661.72	1.4167	Pulse	0.1000	3
Ba	137	115	He	531.266	ppb	1.7	134192.65	2.4479	Pulse	0.1000	3
Tl	205	209	He	99.437	ppb	0.4	552541.11	2.8066	Pulse	0.1000	3
Pb	208	209	He	50.532	ppb	0.4	370644.93	1.8827	Pulse	0.1000	3
U	238	209	He	49.467	ppb	0.2	406292.70	2.0637	Pulse	0.1000	3

ISTD Table:

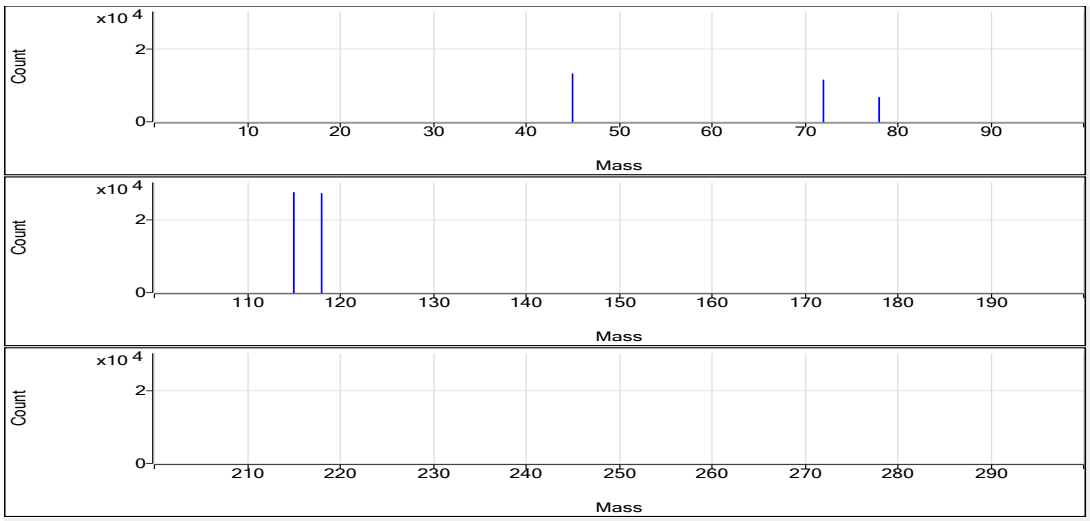
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1825602.37	0.9	103.7	Analog	0.1000	3
No Gas	Ge	72	941000.43	0.7	105.4	Pulse	0.1000	3
H2	Sc	45	131855.72	1.1	103.6	Pulse	0.1000	3
H2	Ge	72	115108.09	1.0	107.3	Pulse	0.1000	3
H2	In	115	275057.98	1.2	103.3	Pulse	0.1000	3
He	Sc	45	29203.38	1.5	102.4	Pulse	0.1000	3
He	Ge	72	57921.12	1.0	104.7	Pulse	0.1000	3
He	In	115	54823.06	1.0	102.1	Pulse	0.1000	3
He	Tb	159	249692.76	1.1	101.6	Pulse	0.1000	3
He	Bi	209	196876.14	0.8	103.2	Pulse	0.1000	3

No Gas

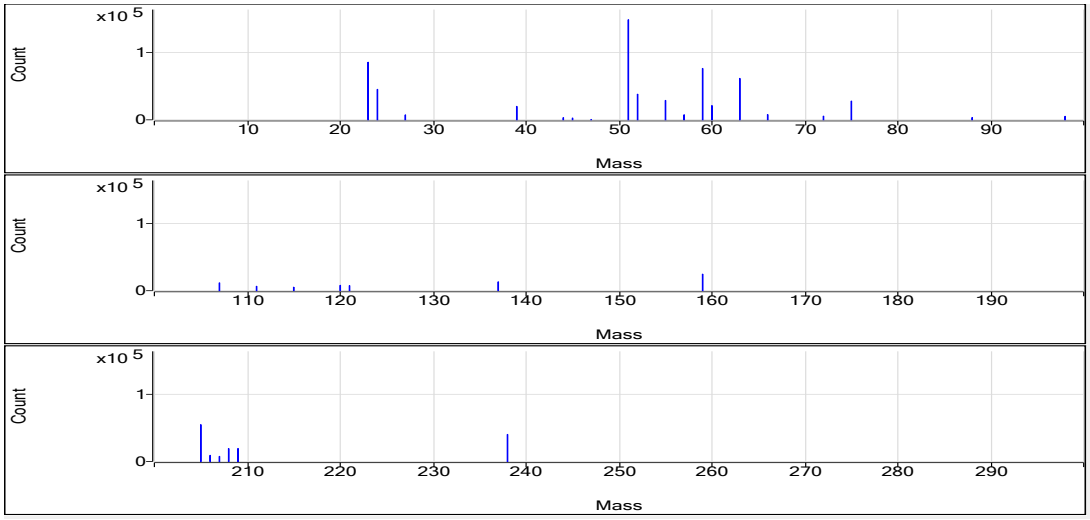


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.576	0.0188	34287.20	0.0004	1.287E-05
Be	9	1	No Gas	51.737	0.0204	36883.27	0.0004	1.287E-05
Be	9	1	No Gas	54.272	0.0214	39353.55	0.0004	1.287E-05
Se	78	2	H2	99.151	0.0388	4465.37	0.0004	1.451E-05
Se	78	2	H2	98.224	0.0384	4468.71	0.0004	1.451E-05
Se	78	2	H2	100.987	0.0395	4502.72	0.0004	1.451E-05
Na	23	3	He	11494.054	29.3298	863776.78	0.0025	0.2648
Na	23	3	He	11573.231	29.53	870269.99	0.0025	0.2648
Na	23	3	He	11636.376	29.6897	851766.08	0.0025	0.2648
Mg	24	3	He	11799.585	15.5787	458799.49	0.0013	0.005032
Mg	24	3	He	11735.13	15.4936	456607.22	0.0013	0.005032
Mg	24	3	He	11992.342	15.8331	454234.60	0.0013	0.005032
Al	27	3	He	5868.616	2.5324	74579.45	0.0004	0.001519
Al	27	3	He	5984.783	2.5825	76107.03	0.0004	0.001519
Al	27	3	He	5961.077	2.5722	73794.92	0.0004	0.001519
K	39	3	He	6761.04	6.9315	204135.95	0.001	0.3627
K	39	3	He	6692.913	6.8653	202325.39	0.001	0.3627
K	39	3	He	6850.488	7.0184	201350.58	0.001	0.3627
Ca	44	3	He	20427.281	1.1892	35022.99	0.0001	0.002571
Ca	44	3	He	20272.587	1.1802	34782.19	0.0001	0.002571
Ca	44	3	He	20224.772	1.1775	33779.87	0.0001	0.002571
Ti	47	3	He	537.561	0.2473	7282.06	0.0005	0.0002328
Ti	47	3	He	532.762	0.2451	7222.06	0.0005	0.0002328
Ti	47	3	He	515.414	0.2371	6801.78	0.0005	0.0002328
V	51	3	He	508.362	10.2084	300642.63	0.0201	0.0116
V	51	3	He	503.446	10.1098	297943.13	0.0201	0.0116
V	51	3	He	517.248	10.3866	297981.75	0.0201	0.0116
Cr	52	3	He	511.887	13.2241	389455.19	0.0257	0.06801
Cr	52	3	He	506.706	13.0909	385797.77	0.0257	0.06801
Cr	52	3	He	513.234	13.2587	380377.61	0.0257	0.06801
Mn	55	3	He	881.82	9.9948	294351.05	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	869.125	9.8509	290314.29	0.0113	0.004215
Mn	55	3	He	888.454	10.0699	288895.74	0.0113	0.004215
Fe	57	3	He	5016.789	2.5649	75538.03	0.0005	0.004099
Fe	57	3	He	5119.544	2.6174	77135.64	0.0005	0.004099
Fe	57	3	He	5215.415	2.6663	76493.49	0.0005	0.004099
Co	59	3	He	505.932	26.2201	772194.05	0.0518	0.004913
Co	59	3	He	503.503	26.0942	769015.46	0.0518	0.004913
Co	59	3	He	512.908	26.5815	762596.79	0.0518	0.004913
Ni	60	3	He	499.918	3.7311	213511.89	0.0075	0.006695
Ni	60	3	He	490.448	3.6605	213075.93	0.0075	0.006695
Ni	60	3	He	494.966	3.6942	215480.95	0.0075	0.006695
Cu	63	3	He	506.804	10.9439	626265.46	0.0216	0.003198
Cu	63	3	He	495.107	10.6914	622334.05	0.0216	0.003198
Cu	63	3	He	484.891	10.4709	610760.23	0.0216	0.003198
Zn	66	3	He	532.125	1.4024	80254.97	0.0026	0.002954
Zn	66	3	He	524.943	1.3836	80535.26	0.0026	0.002954
Zn	66	3	He	522.675	1.3776	80354.26	0.0026	0.002954
As	75	3	He	504.791	0.986	56426.53	0.002	0.0004943
As	75	3	He	498.693	0.9741	56703.57	0.002	0.0004943
As	75	3	He	493.025	0.9631	56175.70	0.002	0.0004943
Sr	88	3	He	80.53	0.654	35645.59	0.0081	0.0006852
Sr	88	3	He	80.835	0.6565	36387.79	0.0081	0.0006852
Sr	88	3	He	82.849	0.6728	36698.40	0.0081	0.0006852
Mo	98	3	He	49.173	1.0071	54888.51	0.0205	0.0005587
Mo	98	3	He	48.058	0.9843	54556.25	0.0205	0.0005587
Mo	98	3	He	48.919	1.0019	54646.56	0.0205	0.0005587
Ag	107	3	He	50.448	2.1721	118379.96	0.043	0.0004367
Ag	107	3	He	49.867	2.1471	119003.66	0.043	0.0004367
Ag	107	3	He	50.961	2.1941	119671.77	0.043	0.0004367
Cd	111	3	He	51.504	0.2574	14031.09	0.005	1.253E-05
Cd	111	3	He	48.844	0.2442	13532.61	0.005	1.253E-05
Cd	111	3	He	50.569	0.2528	13786.83	0.005	1.253E-05
Sn	120	3	He	103.027	1.5192	82797.96	0.0146	0.01334
Sn	120	3	He	102.67	1.514	83914.02	0.0146	0.01334
Sn	120	3	He	100.918	1.4884	81178.30	0.0146	0.01334
Sb	121	3	He	102.233	1.4561	79357.94	0.0142	0.001484
Sb	121	3	He	98.255	1.3995	77568.23	0.0142	0.001484
Sb	121	3	He	97.905	1.3945	76059.00	0.0142	0.001484
Ba	137	3	He	541.766	2.4963	136050.02	0.0046	0.000374
Ba	137	3	He	524.889	2.4185	134050.53	0.0046	0.000374
Ba	137	3	He	527.142	2.4289	132477.40	0.0046	0.000374
Tl	205	3	He	99.113	2.7974	555964.17	0.0282	0.00021
Tl	205	3	He	99.329	2.8035	550426.98	0.0282	0.00021
Tl	205	3	He	99.871	2.8188	551232.18	0.0282	0.00021
Pb	208	3	He	50.297	1.8739	196324.25	0.0372	0.0009772
Pb	208	3	He	50.694	1.8887	196982.91	0.0372	0.0009772
Pb	208	3	He	50.605	1.8854	194169.74	0.0372	0.0009772
U	238	3	He	49.489	2.0646	410329.60	0.0417	8.729E-05
U	238	3	He	49.37	2.0597	404385.58	0.0417	8.729E-05
U	238	3	He	49.54	2.0668	404162.92	0.0417	8.729E-05
Sc	45	1	No Gas			1828336.85		
Sc	45	1	No Gas			1808711.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1839758.41		
Ge	72	1	No Gas			946840.92		
Ge	72	1	No Gas			933771.24		
Ge	72	1	No Gas			942389.13		
Sc	45	2	H2			133216.18		
Sc	45	2	H2			130408.89		
Sc	45	2	H2			131942.10		
Ge	72	2	H2			115099.29		
Ge	72	2	H2			116272.21		
Ge	72	2	H2			113952.77		
In	115	2	H2			273385.21		
In	115	2	H2			278973.98		
In	115	2	H2			272814.74		
Sc	45	3	He			29450.49		
Sc	45	3	He			29470.70		
Sc	45	3	He			28688.96		
Ge	72	3	He			57225.01		
Ge	72	3	He			58208.83		
Ge	72	3	He			58329.51		
In	115	3	He			55080.55		
In	115	3	He			56013.78		
In	115	3	He			55110.08		
Tb	159	3	He			252527.54		
Tb	159	3	He			249364.68		
Tb	159	3	He			247186.07		
Bi	209	3	He			198740.97		
Bi	209	3	He			196333.75		
Bi	209	3	He			195553.71		

Quantitation Report

Data File Name	046SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:39:51 PM
Sample Name	410-136176-E-3-C MSD
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

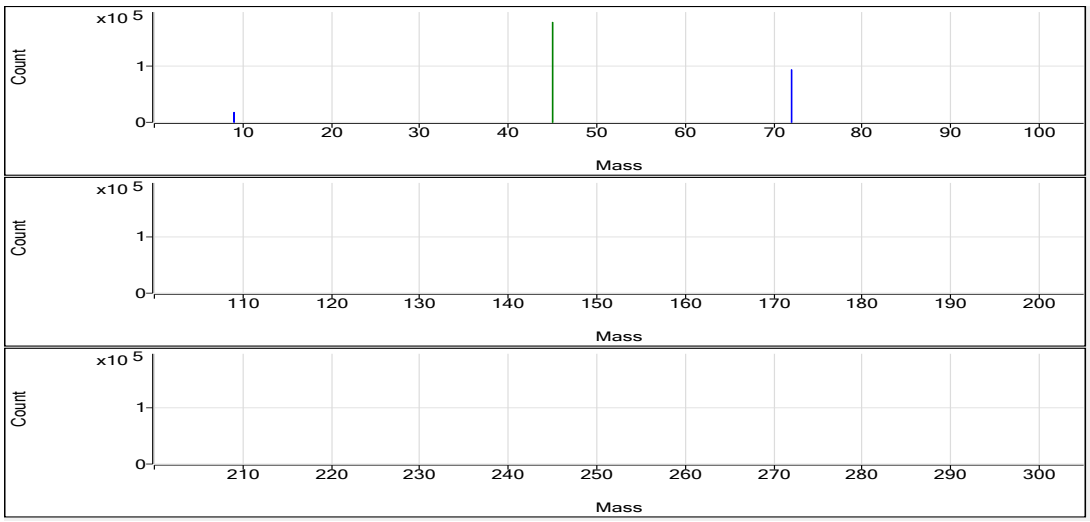
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.010	ppb	5.3	35776.81	0.0201	Pulse	0.5000	3
Se	78	72	H2	98.994	ppb	2.2	4470.71	0.0387	Pulse	1.5000	3
Na	23	45	He	11508.935	ppb	3.1	861059.05	29.3674	Pulse	0.1000	3
Mg	24	45	He	11752.216	ppb	3.2	454928.38	15.5162	Pulse	0.1000	3
Al	27	45	He	5873.064	ppb	4.0	74294.19	2.5343	Pulse	0.1000	3
K	39	45	He	6628.394	ppb	2.6	199478.64	6.8026	Pulse	0.1000	3
Ca	44	45	He	19581.940	ppb	3.0	33429.06	1.1401	Pulse	0.1000	3
Ti	47	45	He	501.804	ppb	5.4	6765.10	0.2308	Pulse	0.1000	3
V	51	45	He	503.514	ppb	2.7	296478.94	10.1112	Pulse	0.5000	3
Cr	52	45	He	507.140	ppb	2.6	384194.60	13.1020	Pulse	0.1000	3
Mn	55	45	He	878.788	ppb	3.1	292038.65	9.9604	Pulse	0.1000	3
Fe	57	45	He	5028.238	ppb	2.1	75390.37	2.5708	Pulse	0.1000	3
Co	59	45	He	500.938	ppb	2.9	761250.33	25.9613	Pulse	0.1000	3
Ni	60	72	He	497.703	ppb	0.7	212101.99	3.7146	Pulse	0.1000	3
Cu	63	72	He	502.836	ppb	0.4	619994.30	10.8582	Pulse	0.1000	3
Zn	66	72	He	527.973	ppb	0.6	79453.73	1.3915	Pulse	0.1000	3
As	75	72	He	504.532	ppb	1.5	56269.31	0.9855	Pulse	0.5000	3
Sr	88	115	He	81.497	ppb	2.1	36220.75	0.6619	Pulse	0.1000	3
Mo	98	115	He	49.061	ppb	0.7	54981.68	1.0048	Pulse	0.1000	3
Ag	107	115	He	50.965	ppb	0.2	120073.61	2.1943	Pulse	0.1000	3
Cd	111	115	He	49.910	ppb	1.6	13650.05	0.2495	Pulse	0.5000	3
Sn	120	115	He	101.419	ppb	1.4	81845.43	1.4957	Pulse	0.1000	3
Sb	121	115	He	101.147	ppb	2.2	78821.31	1.4406	Pulse	0.1000	3
Ba	137	115	He	532.757	ppb	1.7	134310.60	2.4548	Pulse	0.1000	3
Tl	205	209	He	100.427	ppb	0.5	550972.04	2.8345	Pulse	0.1000	3
Pb	208	209	He	51.092	ppb	0.5	370005.22	1.9035	Pulse	0.1000	3
U	238	209	He	49.800	ppb	1.0	403844.73	2.0776	Pulse	0.1000	3

ISTD Table:

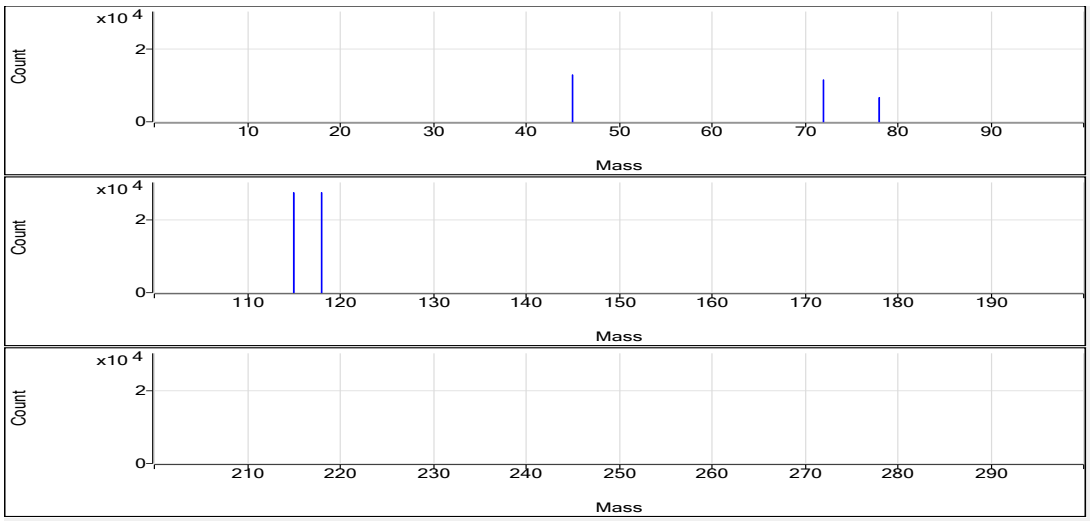
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1778645.28	2.4	101.0	Analog	0.1000	3
No Gas	Ge	72	934635.74	1.2	104.7	Pulse	0.1000	3
H2	Sc	45	129179.88	0.7	101.5	Pulse	0.1000	3
H2	Ge	72	115419.40	1.6	107.6	Pulse	0.1000	3
H2	In	115	275120.52	0.9	103.3	Pulse	0.1000	3
He	Sc	45	29337.09	2.8	102.9	Pulse	0.1000	3
He	Ge	72	57098.17	0.6	103.2	Pulse	0.1000	3
He	In	115	54721.29	1.3	102.0	Pulse	0.1000	3
He	Tb	159	249108.58	0.7	101.4	Pulse	0.1000	3
He	Bi	209	194378.12	0.2	101.8	Pulse	0.1000	3

No Gas

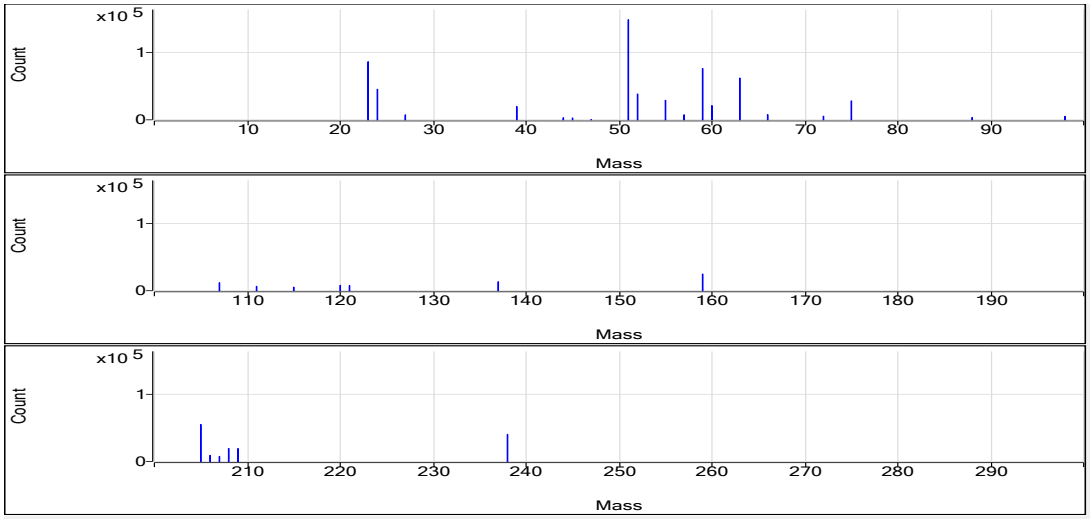


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.261	0.019	33759.99	0.0004	1.287E-05
Be	9	1	No Gas	51.138	0.0202	35038.94	0.0004	1.287E-05
Be	9	1	No Gas	53.631	0.0211	38531.49	0.0004	1.287E-05
Se	78	2	H2	100.116	0.0392	4446.03	0.0004	1.451E-05
Se	78	2	H2	100.407	0.0393	4604.75	0.0004	1.451E-05
Se	78	2	H2	96.46	0.0377	4361.34	0.0004	1.451E-05
Na	23	3	He	11263.14	28.7459	861855.30	0.0025	0.2648
Na	23	3	He	11347.681	28.9597	858108.89	0.0025	0.2648
Na	23	3	He	11915.985	30.3967	863212.96	0.0025	0.2648
Mg	24	3	He	11503.06	15.1873	455343.74	0.0013	0.005032
Mg	24	3	He	11573.858	15.2807	452786.52	0.0013	0.005032
Mg	24	3	He	12179.731	16.0804	456654.88	0.0013	0.005032
Al	27	3	He	5653.378	2.4395	73142.13	0.0004	0.001519
Al	27	3	He	5848.482	2.5237	74779.74	0.0004	0.001519
Al	27	3	He	6117.334	2.6396	74960.71	0.0004	0.001519
K	39	3	He	6531.32	6.7083	201127.65	0.001	0.3627
K	39	3	He	6526.406	6.7035	198633.65	0.001	0.3627
K	39	3	He	6827.457	6.996	198674.61	0.001	0.3627
Ca	44	3	He	19281.563	1.1227	33659.44	0.0001	0.002571
Ca	44	3	He	19196.01	1.1177	33118.47	0.0001	0.002571
Ca	44	3	He	20268.248	1.18	33509.26	0.0001	0.002571
Ti	47	3	He	483.73	0.2225	6671.77	0.0005	0.0002328
Ti	47	3	He	488.721	0.2248	6661.69	0.0005	0.0002328
Ti	47	3	He	532.961	0.2452	6961.84	0.0005	0.0002328
V	51	3	He	493.33	9.9069	297027.06	0.0201	0.0116
V	51	3	He	498.026	10.0011	296343.97	0.0201	0.0116
V	51	3	He	519.186	10.4255	296065.78	0.0201	0.0116
Cr	52	3	He	500.531	12.9322	387731.60	0.0257	0.06801
Cr	52	3	He	498.457	12.8789	381616.71	0.0257	0.06801
Cr	52	3	He	522.431	13.4951	383235.50	0.0257	0.06801
Mn	55	3	He	858.846	9.7345	291858.14	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	867.683	9.8346	291410.95	0.0113	0.004215
Mn	55	3	He	909.834	10.3122	292846.85	0.0113	0.004215
Fe	57	3	He	4978.935	2.5456	76321.65	0.0005	0.004099
Fe	57	3	He	4956.927	2.5344	75096.05	0.0005	0.004099
Fe	57	3	He	5148.852	2.6323	74753.40	0.0005	0.004099
Co	59	3	He	495.769	25.6935	770338.58	0.0518	0.004913
Co	59	3	He	489.748	25.3815	752083.74	0.0518	0.004913
Co	59	3	He	517.298	26.809	761328.66	0.0518	0.004913
Ni	60	3	He	501.477	3.7427	215157.79	0.0075	0.006695
Ni	60	3	He	496.625	3.7066	211178.43	0.0075	0.006695
Ni	60	3	He	495.006	3.6945	209969.76	0.0075	0.006695
Cu	63	3	He	504.996	10.9049	626891.63	0.0216	0.003198
Cu	63	3	He	500.969	10.8179	616343.70	0.0216	0.003198
Cu	63	3	He	502.542	10.8519	616747.57	0.0216	0.003198
Zn	66	3	He	528.759	1.3936	80113.91	0.0026	0.002954
Zn	66	3	He	524.536	1.3825	78766.13	0.0026	0.002954
Zn	66	3	He	530.625	1.3985	79481.14	0.0026	0.002954
As	75	3	He	496.369	0.9696	55739.86	0.002	0.0004943
As	75	3	He	506.401	0.9892	56358.29	0.002	0.0004943
As	75	3	He	510.827	0.9978	56709.77	0.002	0.0004943
Sr	88	3	He	83.436	0.6776	37240.01	0.0081	0.0006852
Sr	88	3	He	80.557	0.6543	36187.87	0.0081	0.0006852
Sr	88	3	He	80.498	0.6538	35234.37	0.0081	0.0006852
Mo	98	3	He	48.816	0.9998	54948.15	0.0205	0.0005587
Mo	98	3	He	48.93	1.0021	55430.06	0.0205	0.0005587
Mo	98	3	He	49.435	1.0125	54566.83	0.0205	0.0005587
Ag	107	3	He	50.899	2.1915	120438.31	0.043	0.0004367
Ag	107	3	He	50.924	2.1926	121273.90	0.043	0.0004367
Ag	107	3	He	51.072	2.1989	118508.61	0.043	0.0004367
Cd	111	3	He	49.909	0.2495	13710.77	0.005	1.253E-05
Cd	111	3	He	49.127	0.2456	13582.65	0.005	1.253E-05
Cd	111	3	He	50.694	0.2534	13656.74	0.005	1.253E-05
Sn	120	3	He	102.901	1.5174	83391.07	0.0146	0.01334
Sn	120	3	He	100.123	1.4767	81681.25	0.0146	0.01334
Sn	120	3	He	101.235	1.493	80463.97	0.0146	0.01334
Sb	121	3	He	102.256	1.4564	80042.09	0.0142	0.001484
Sb	121	3	He	98.573	1.404	77657.87	0.0142	0.001484
Sb	121	3	He	102.611	1.4615	78763.98	0.0142	0.001484
Ba	137	3	He	534.15	2.4612	135263.10	0.0046	0.000374
Ba	137	3	He	523.329	2.4113	133375.46	0.0046	0.000374
Ba	137	3	He	540.793	2.4918	134293.24	0.0046	0.000374
Tl	205	3	He	100.574	2.8387	550868.51	0.0282	0.00021
Tl	205	3	He	100.838	2.8461	554110.23	0.0282	0.00021
Tl	205	3	He	99.871	2.8188	547937.37	0.0282	0.00021
Pb	208	3	He	51.346	1.913	198017.67	0.0372	0.0009772
Pb	208	3	He	51.071	1.9027	195977.58	0.0372	0.0009772
Pb	208	3	He	50.861	1.8949	194150.60	0.0372	0.0009772
U	238	3	He	50.013	2.0865	404898.67	0.0417	8.729E-05
U	238	3	He	50.155	2.0924	407372.18	0.0417	8.729E-05
U	238	3	He	49.234	2.054	399263.35	0.0417	8.729E-05
Sc	45	1	No Gas			1774701.69		
Sc	45	1	No Gas			1738382.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1822851.69		
Ge	72	1	No Gas			944013.74		
Ge	72	1	No Gas			921649.05		
Ge	72	1	No Gas			938244.44		
Sc	45	2	H2			129341.89		
Sc	45	2	H2			130006.21		
Sc	45	2	H2			128191.53		
Ge	72	2	H2			113497.30		
Ge	72	2	H2			117207.69		
Ge	72	2	H2			115553.22		
In	115	2	H2			272796.91		
In	115	2	H2			275016.21		
In	115	2	H2			277548.43		
Sc	45	3	He			29981.87		
Sc	45	3	He			29631.18		
Sc	45	3	He			28398.22		
Ge	72	3	He			57487.22		
Ge	72	3	He			56974.21		
Ge	72	3	He			56833.07		
In	115	3	He			55542.01		
In	115	3	He			55883.36		
In	115	3	He			54457.25		
Tb	159	3	He			248327.97		
Tb	159	3	He			251036.81		
Tb	159	3	He			247960.97		
Bi	209	3	He			194058.98		
Bi	209	3	He			194690.27		
Bi	209	3	He			194385.11		

Quantitation Report

Data File Name	047SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:41:50 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

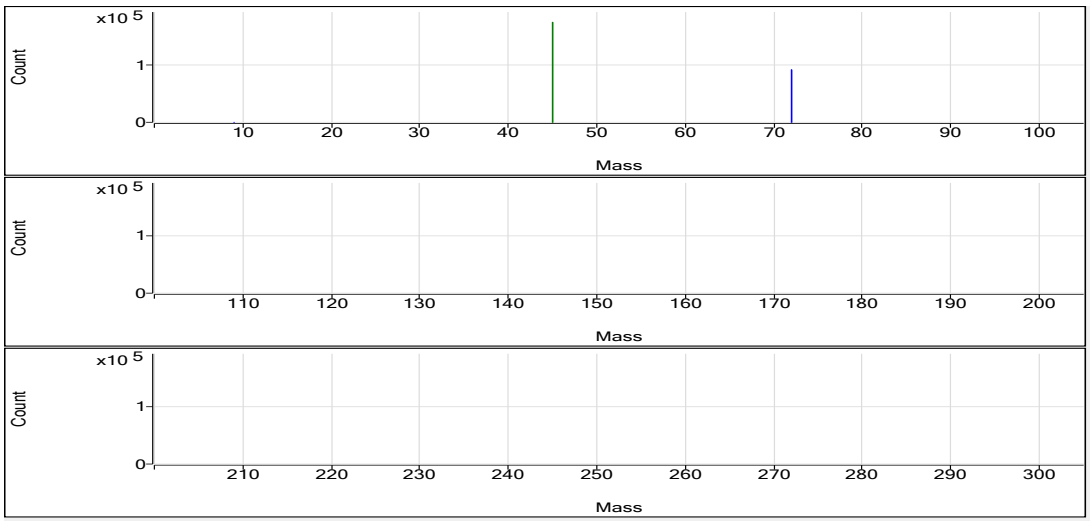
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.213	ppb	16.2	168.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.240	ppb	24.2	11.78	0.0001	Pulse	1.5000	3
Na	23	45	He	19.344	ppb	14.4	8886.31	0.3138	Pulse	0.1000	3
Mg	24	45	He	6.263	ppb	41.3	376.69	0.0133	Pulse	0.1000	3
Al	27	45	He	8.760	ppb	9.2	150.01	0.0053	Pulse	0.1000	3
K	39	45	He	20.734	ppb	117.3	10851.05	0.3829	Pulse	0.1000	3
Ca	44	45	He	18.583	ppb	106.6	103.33	0.0037	Pulse	0.1000	3
Ti	47	45	He	-0.004	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.262	ppb	9.4	477.34	0.0169	Pulse	0.5000	3
Cr	52	45	He	0.279	ppb	25.3	2130.23	0.0752	Pulse	0.1000	3
Mn	55	45	He	0.460	ppb	33.7	266.68	0.0094	Pulse	0.1000	3
Fe	57	45	He	8.287	ppb	56.5	236.68	0.0083	Pulse	0.1000	3
Co	59	45	He	0.150	ppb	31.4	360.02	0.0127	Pulse	0.1000	3
Ni	60	72	He	0.496	ppb	33.4	563.37	0.0104	Pulse	0.1000	3
Cu	63	72	He	0.180	ppb	10.1	383.35	0.0071	Pulse	0.1000	3
Zn	66	72	He	0.541	ppb	21.6	236.68	0.0044	Pulse	0.1000	3
As	75	72	He	0.365	ppb	42.4	65.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.037	ppb	89.3	53.33	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.123	ppb	12.8	166.68	0.0031	Pulse	0.1000	3
Ag	107	115	He	0.033	ppb	14.7	100.01	0.0019	Pulse	0.1000	3
Cd	111	115	He	0.034	ppb	36.7	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.132	ppb	66.4	826.72	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.173	ppb	9.1	213.34	0.0039	Pulse	0.1000	3
Ba	137	115	He	0.174	ppb	54.9	63.34	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.285	ppb	9.3	1566.82	0.0083	Pulse	0.1000	3
Pb	208	209	He	0.054	ppb	14.2	566.70	0.0030	Pulse	0.1000	3
U	238	209	He	0.029	ppb	30.4	250.01	0.0013	Pulse	0.1000	3

ISTD Table:

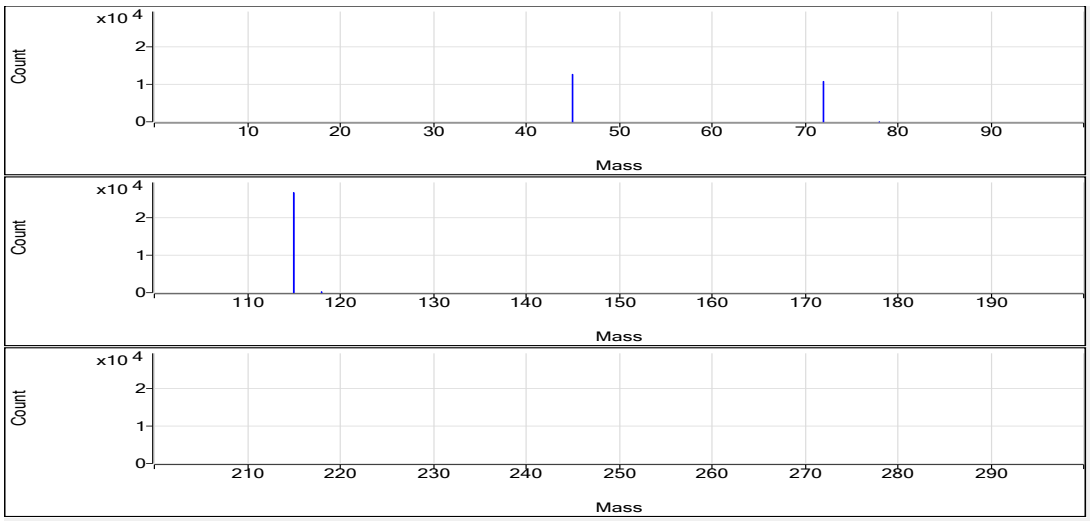
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1737835.29	1.1	98.7	Analog	0.1000	3
No Gas	Ge	72	912630.69	0.3	102.3	Pulse	0.1000	3
H2	Sc	45	127541.96	1.4	100.2	Pulse	0.1000	3
H2	Ge	72	108540.32	1.9	101.2	Pulse	0.1000	3
H2	In	115	268494.33	0.5	100.8	Pulse	0.1000	3
He	Sc	45	28324.84	1.7	99.4	Pulse	0.1000	3
He	Ge	72	54143.14	2.1	97.9	Pulse	0.1000	3
He	In	115	54090.62	1.5	100.8	Pulse	0.1000	3
He	Tb	159	244622.38	1.3	99.5	Pulse	0.1000	3
He	Bi	209	189542.80	0.7	99.3	Pulse	0.1000	3

No Gas

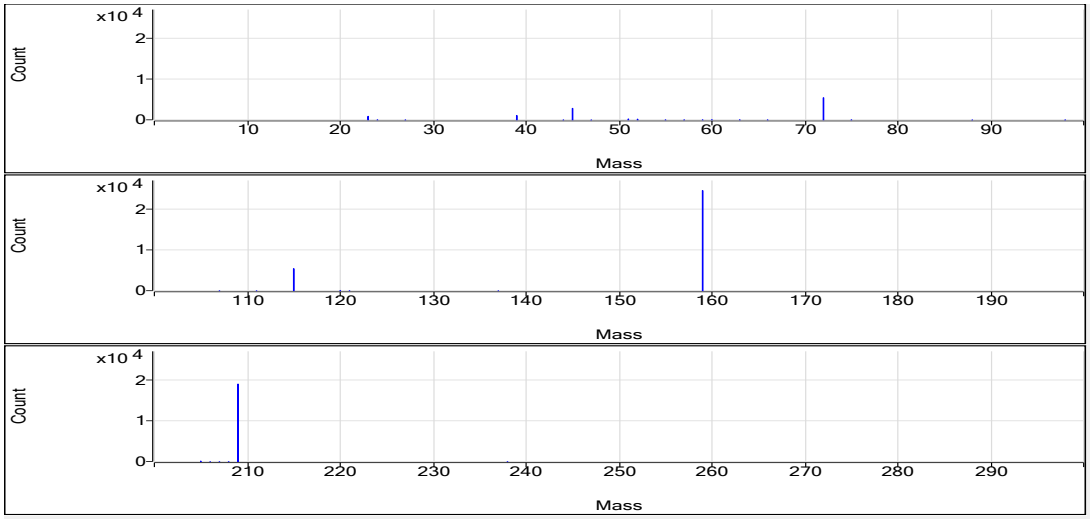


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.197	0.0001	156.00	0.0004	1.287E-05
Be	9	1	No Gas	0.253	0.0001	198.00	0.0004	1.287E-05
Be	9	1	No Gas	0.19	0.0001	152.00	0.0004	1.287E-05
Se	78	2	H2	0.232	0.0001	11.33	0.0004	1.451E-05
Se	78	2	H2	0.301	0.0001	14.67	0.0004	1.451E-05
Se	78	2	H2	0.186	0.0001	9.33	0.0004	1.451E-05
Na	23	3	He	17.591	0.3093	8933.02	0.0025	0.2648
Na	23	3	He	17.889	0.3101	8662.83	0.0025	0.2648
Na	23	3	He	22.551	0.3219	9063.07	0.0025	0.2648
Mg	24	3	He	5.633	0.0125	360.02	0.0013	0.005032
Mg	24	3	He	4.053	0.0104	290.02	0.0013	0.005032
Mg	24	3	He	9.104	0.017	480.02	0.0013	0.005032
Al	27	3	He	8.524	0.0052	150.01	0.0004	0.001519
Al	27	3	He	8.1	0.005	140.01	0.0004	0.001519
Al	27	3	He	9.656	0.0057	160.01	0.0004	0.001519
K	39	3	He	45.961	0.4074	11765.06	0.001	0.3627
K	39	3	He	18.8	0.381	10644.25	0.001	0.3627
K	39	3	He	-2.558	0.3603	10143.85	0.001	0.3627
Ca	44	3	He	9.387	0.0031	90.00	0.0001	0.002571
Ca	44	3	He	5.033	0.0029	80.00	0.0001	0.002571
Ca	44	3	He	41.329	0.005	140.00	0.0001	0.002571
Ti	47	3	He	1	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.237	0.0163	472.01	0.0201	0.0116
V	51	3	He	0.285	0.0173	484.01	0.0201	0.0116
V	51	3	He	0.265	0.0169	476.01	0.0201	0.0116
Cr	52	3	He	0.359	0.0772	2230.25	0.0257	0.06801
Cr	52	3	He	0.223	0.0737	2060.21	0.0257	0.06801
Cr	52	3	He	0.256	0.0746	2100.24	0.0257	0.06801
Mn	55	3	He	0.362	0.0083	240.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.639	0.0115	320.02	0.0113	0.004215
Mn	55	3	He	0.38	0.0085	240.01	0.0113	0.004215
Fe	57	3	He	13.679	0.0111	320.01	0.0005	0.004099
Fe	57	3	He	5.295	0.0068	190.01	0.0005	0.004099
Fe	57	3	He	5.886	0.0071	200.01	0.0005	0.004099
Co	59	3	He	0.199	0.0152	440.02	0.0518	0.004913
Co	59	3	He	0.106	0.0104	290.01	0.0518	0.004913
Co	59	3	He	0.145	0.0124	350.02	0.0518	0.004913
Ni	60	3	He	0.65	0.0115	630.04	0.0075	0.006695
Ni	60	3	He	0.32	0.0091	480.02	0.0075	0.006695
Ni	60	3	He	0.518	0.0106	580.04	0.0075	0.006695
Cu	63	3	He	0.2	0.0075	410.02	0.0216	0.003198
Cu	63	3	He	0.176	0.007	370.02	0.0216	0.003198
Cu	63	3	He	0.164	0.0067	370.02	0.0216	0.003198
Zn	66	3	He	0.478	0.0042	230.01	0.0026	0.002954
Zn	66	3	He	0.675	0.0047	250.01	0.0026	0.002954
Zn	66	3	He	0.469	0.0042	230.01	0.0026	0.002954
As	75	3	He	0.534	0.0015	84.00	0.002	0.0004943
As	75	3	He	0.328	0.0011	60.00	0.002	0.0004943
As	75	3	He	0.232	0.0009	52.00	0.002	0.0004943
Sr	88	3	He	0.072	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.03	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.008	0.0007	40.00	0.0081	0.0006852
Mo	98	3	He	0.106	0.0027	150.01	0.0205	0.0005587
Mo	98	3	He	0.137	0.0034	180.01	0.0205	0.0005587
Mo	98	3	He	0.128	0.0032	170.01	0.0205	0.0005587
Ag	107	3	He	0.028	0.0016	90.00	0.043	0.0004367
Ag	107	3	He	0.037	0.0021	110.01	0.043	0.0004367
Ag	107	3	He	0.033	0.0019	100.01	0.043	0.0004367
Cd	111	3	He	0.041	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Sn	120	3	He	0.169	0.0158	870.06	0.0146	0.01334
Sn	120	3	He	0.196	0.0162	870.06	0.0146	0.01334
Sn	120	3	He	0.032	0.0138	740.05	0.0146	0.01334
Sb	121	3	He	0.189	0.0042	230.01	0.0142	0.001484
Sb	121	3	He	0.171	0.0039	210.01	0.0142	0.001484
Sb	121	3	He	0.158	0.0037	200.01	0.0142	0.001484
Ba	137	3	He	0.116	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.121	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.283	0.0017	90.01	0.0046	0.000374
Tl	205	3	He	0.316	0.0091	1740.18	0.0282	0.00021
Tl	205	3	He	0.268	0.0078	1460.14	0.0282	0.00021
Tl	205	3	He	0.273	0.0079	1500.15	0.0282	0.00021
Pb	208	3	He	0.058	0.0031	280.02	0.0372	0.0009772
Pb	208	3	He	0.045	0.0027	210.01	0.0372	0.0009772
Pb	208	3	He	0.059	0.0032	250.01	0.0372	0.0009772
U	238	3	He	0.032	0.0014	270.01	0.0417	8.729E-05
U	238	3	He	0.02	0.0009	170.01	0.0417	8.729E-05
U	238	3	He	0.037	0.0016	310.02	0.0417	8.729E-05
Sc	45	1	No Gas			1723220.29		
Sc	45	1	No Gas			1758816.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1731469.51		
Ge	72	1	No Gas			913245.92		
Ge	72	1	No Gas			914897.49		
Ge	72	1	No Gas			909748.66		
Sc	45	2	H2			126274.29		
Sc	45	2	H2			129532.25		
Sc	45	2	H2			126819.33		
Ge	72	2	H2			107774.62		
Ge	72	2	H2			110887.32		
Ge	72	2	H2			106959.01		
In	115	2	H2			269502.87		
In	115	2	H2			267077.26		
In	115	2	H2			268902.87		
Sc	45	3	He			28879.13		
Sc	45	3	He			27937.60		
Sc	45	3	He			28157.78		
Ge	72	3	He			54625.08		
Ge	72	3	He			52858.11		
Ge	72	3	He			54946.23		
In	115	3	He			55039.90		
In	115	3	He			53664.87		
In	115	3	He			53584.46		
Tb	159	3	He			248204.25		
Tb	159	3	He			241803.24		
Tb	159	3	He			243859.64		
Bi	209	3	He			190681.93		
Bi	209	3	He			188117.69		
Bi	209	3	He			189828.77		

Quantitation Report

Data File Name	048_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:43:50 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

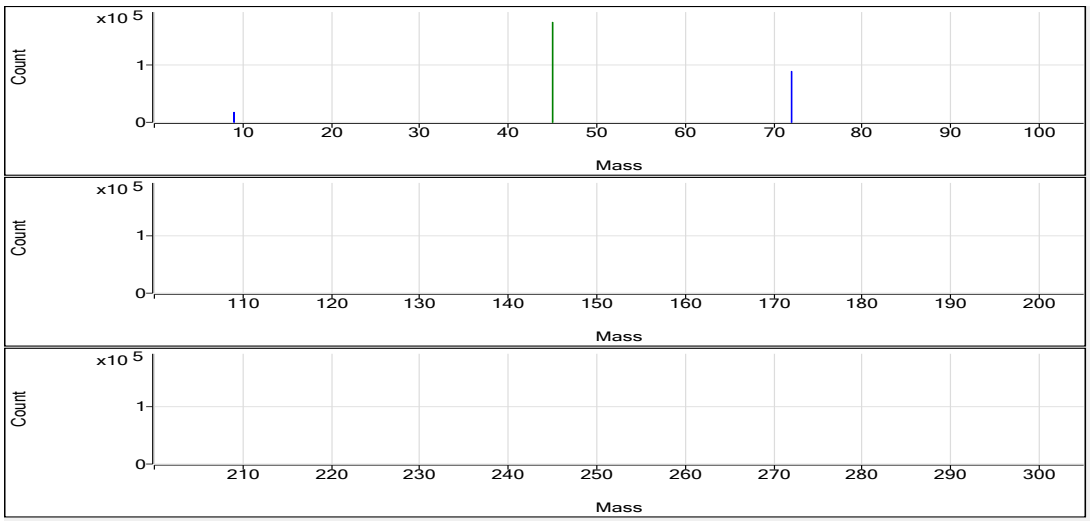
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.305	ppb	5.7	35458.66	0.0202	Pulse	0.5000	3
Se	78	72	H2	52.061	ppb	1.8	2259.96	0.0204	Pulse	1.5000	3
Na	23	45	He	5141.388	ppb	3.7	384967.69	13.2658	Pulse	0.1000	3
Mg	24	45	He	5114.867	ppb	2.1	196114.13	6.7559	Pulse	0.1000	3
Al	27	45	He	5081.698	ppb	4.0	63634.68	2.1930	Pulse	0.1000	3
K	39	45	He	5196.958	ppb	2.9	157089.53	5.4119	Pulse	0.1000	3
Ca	44	45	He	5099.499	ppb	3.4	8672.92	0.2988	Pulse	0.1000	3
Ti	47	45	He	5176.583	ppb	2.7	69051.34	2.3791	Pulse	0.1000	3
V	51	45	He	512.910	ppb	2.9	298929.76	10.2996	Pulse	0.5000	3
Cr	52	45	He	515.122	ppb	2.2	386273.99	13.3072	Pulse	0.1000	3
Mn	55	45	He	512.645	ppb	4.2	168650.96	5.8122	Pulse	0.1000	3
Fe	57	45	He	5155.212	ppb	2.2	76503.12	2.6356	Pulse	0.1000	3
Co	59	45	He	509.262	ppb	2.3	766106.55	26.3926	Pulse	0.1000	3
Ni	60	72	He	523.715	ppb	1.3	216985.82	3.9084	Pulse	0.1000	3
Cu	63	72	He	518.656	ppb	1.1	621724.98	11.1998	Pulse	0.1000	3
Zn	66	72	He	519.113	ppb	0.4	75964.19	1.3682	Pulse	0.1000	3
As	75	72	He	516.163	ppb	0.7	55972.71	1.0082	Pulse	0.5000	3
Sr	88	115	He	50.490	ppb	0.9	22051.18	0.4103	Pulse	0.1000	3
Mo	98	115	He	51.736	ppb	2.8	56942.85	1.0596	Pulse	0.1000	3
Ag	107	115	He	52.638	ppb	0.9	121797.41	2.2663	Pulse	0.1000	3
Cd	111	115	He	50.550	ppb	2.3	13577.99	0.2527	Pulse	0.5000	3
Sn	120	115	He	51.087	ppb	1.4	40847.61	0.7600	Pulse	0.1000	3
Sb	121	115	He	50.722	ppb	3.4	38862.24	0.7232	Pulse	0.1000	3
Ba	137	115	He	505.384	ppb	2.3	125132.09	2.3287	Pulse	0.1000	3
Tl	205	209	He	51.294	ppb	0.4	275802.12	1.4479	Pulse	0.1000	3
Pb	208	209	He	51.221	ppb	0.9	363510.97	1.9083	Pulse	0.1000	3
U	238	209	He	51.313	ppb	0.7	407789.02	2.1407	Pulse	0.1000	3

ISTD Table:

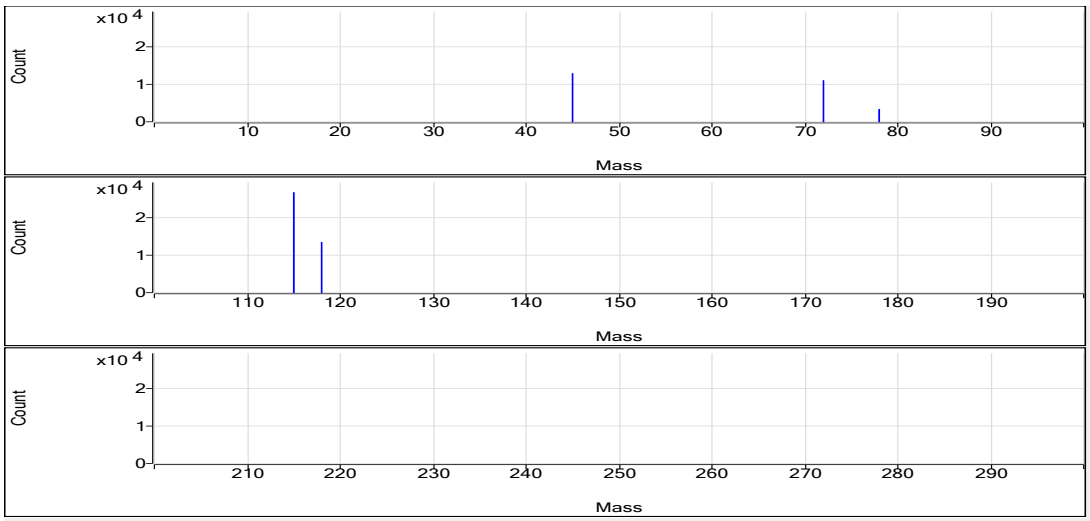
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1752760.49	1.1	99.5	Analog	0.1000	3
No Gas	Ge	72	893330.87	0.4	100.1	Pulse	0.1000	3
H2	Sc	45	129818.35	1.2	102.0	Pulse	0.1000	3
H2	Ge	72	110905.12	0.6	103.4	Pulse	0.1000	3
H2	In	115	269289.98	1.0	101.1	Pulse	0.1000	3
He	Sc	45	29039.68	2.9	101.9	Pulse	0.1000	3
He	Ge	72	55518.36	1.5	100.3	Pulse	0.1000	3
He	In	115	53746.42	1.4	100.1	Pulse	0.1000	3
He	Tb	159	245969.74	1.2	100.1	Pulse	0.1000	3
He	Bi	209	190493.46	0.5	99.8	Pulse	0.1000	3

No Gas

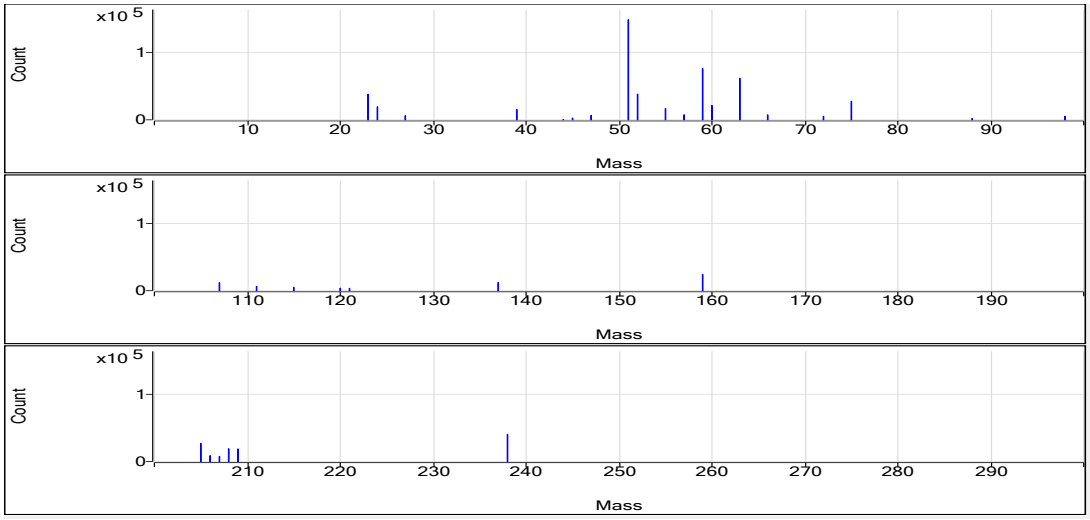


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.098	0.019	32844.05	0.0004	1.287E-05
Be	9	1	No Gas	52.065	0.0205	36025.16	0.0004	1.287E-05
Be	9	1	No Gas	53.752	0.0212	37506.78	0.0004	1.287E-05
Se	78	2	H2	51.735	0.0202	2260.18	0.0004	1.451E-05
Se	78	2	H2	53.092	0.0208	2302.86	0.0004	1.451E-05
Se	78	2	H2	51.356	0.0201	2216.84	0.0004	1.451E-05
Na	23	3	He	5215.855	13.4541	388008.16	0.0025	0.2648
Na	23	3	He	4926.373	12.7221	381301.83	0.0025	0.2648
Na	23	3	He	5281.936	13.6212	385593.08	0.0025	0.2648
Mg	24	3	He	5177.059	6.838	197201.79	0.0013	0.005032
Mg	24	3	He	4993.645	6.5959	197688.47	0.0013	0.005032
Mg	24	3	He	5173.898	6.8338	193452.13	0.0013	0.005032
Al	27	3	He	5138.376	2.2175	63949.71	0.0004	0.001519
Al	27	3	He	4856.327	2.0958	62814.81	0.0004	0.001519
Al	27	3	He	5250.39	2.2658	64139.51	0.0004	0.001519
K	39	3	He	5317.45	5.529	159451.36	0.001	0.3627
K	39	3	He	5028.192	5.2479	157288.47	0.001	0.3627
K	39	3	He	5245.232	5.4588	154528.76	0.001	0.3627
Ca	44	3	He	5258.111	0.308	8883.11	0.0001	0.002571
Ca	44	3	He	4914.1	0.288	8632.91	0.0001	0.002571
Ca	44	3	He	5126.285	0.3004	8502.74	0.0001	0.002571
Ti	47	3	He	5222.961	2.4004	69225.82	0.0005	0.0002328
Ti	47	3	He	5018.309	2.3064	69124.92	0.0005	0.0002328
Ti	47	3	He	5288.478	2.4305	68803.29	0.0005	0.0002328
V	51	3	He	515.737	10.3563	298669.63	0.0201	0.0116
V	51	3	He	496.872	9.9779	299053.94	0.0201	0.0116
V	51	3	He	526.122	10.5646	299065.72	0.0201	0.0116
Cr	52	3	He	517.85	13.3773	385792.22	0.0257	0.06801
Cr	52	3	He	502.809	12.9907	389352.49	0.0257	0.06801
Cr	52	3	He	524.708	13.5536	383677.26	0.0257	0.06801
Mn	55	3	He	524.266	5.9439	171417.07	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	487.642	5.5289	165710.82	0.0113	0.004215
Mn	55	3	He	526.026	5.9638	168825.00	0.0113	0.004215
Fe	57	3	He	5199.753	2.6583	76663.78	0.0005	0.004099
Fe	57	3	He	5024.065	2.5686	76985.77	0.0005	0.004099
Fe	57	3	He	5241.818	2.6798	75859.82	0.0005	0.004099
Co	59	3	He	516.214	26.7529	771533.89	0.0518	0.004913
Co	59	3	He	495.655	25.6876	769896.47	0.0518	0.004913
Co	59	3	He	515.916	26.7374	756889.29	0.0518	0.004913
Ni	60	3	He	523.133	3.904	220391.48	0.0075	0.006695
Ni	60	3	He	530.886	3.9618	218242.11	0.0075	0.006695
Ni	60	3	He	517.124	3.8593	212323.86	0.0075	0.006695
Cu	63	3	He	511.993	11.0559	624130.46	0.0216	0.003198
Cu	63	3	He	520.757	11.2451	619455.03	0.0216	0.003198
Cu	63	3	He	523.218	11.2982	621589.44	0.0216	0.003198
Zn	66	3	He	521.269	1.3739	77559.18	0.0026	0.002954
Zn	66	3	He	516.872	1.3623	75046.20	0.0026	0.002954
Zn	66	3	He	519.198	1.3684	75287.20	0.0026	0.002954
As	75	3	He	512.288	1.0007	56490.65	0.002	0.0004943
As	75	3	He	516.276	1.0085	55553.12	0.002	0.0004943
As	75	3	He	519.925	1.0156	55874.37	0.002	0.0004943
Sr	88	3	He	50.049	0.4067	22188.01	0.0081	0.0006852
Sr	88	3	He	50.511	0.4105	21987.65	0.0081	0.0006852
Sr	88	3	He	50.91	0.4137	21977.87	0.0081	0.0006852
Mo	98	3	He	51.491	1.0546	57528.30	0.0205	0.0005587
Mo	98	3	He	50.444	1.0331	55339.89	0.0205	0.0005587
Mo	98	3	He	53.274	1.0911	57960.37	0.0205	0.0005587
Ag	107	3	He	52.222	2.2484	122654.09	0.043	0.0004367
Ag	107	3	He	52.523	2.2614	121132.07	0.043	0.0004367
Ag	107	3	He	53.168	2.2892	121606.08	0.043	0.0004367
Cd	111	3	He	49.217	0.246	13420.50	0.005	1.253E-05
Cd	111	3	He	51.424	0.257	13768.84	0.005	1.253E-05
Cd	111	3	He	51.008	0.255	13544.62	0.005	1.253E-05
Sn	120	3	He	50.636	0.7534	41101.65	0.0146	0.01334
Sn	120	3	He	51.931	0.7724	41372.22	0.0146	0.01334
Sn	120	3	He	50.693	0.7543	40068.97	0.0146	0.01334
Sb	121	3	He	49.297	0.7029	38344.20	0.0142	0.001484
Sb	121	3	He	52.628	0.7503	40189.49	0.0142	0.001484
Sb	121	3	He	50.241	0.7163	38053.03	0.0142	0.001484
Ba	137	3	He	493.715	2.2749	124099.65	0.0046	0.000374
Ba	137	3	He	505.094	2.3273	124664.54	0.0046	0.000374
Ba	137	3	He	517.343	2.3838	126632.08	0.0046	0.000374
Tl	205	3	He	51.035	1.4406	275960.68	0.0282	0.00021
Tl	205	3	He	51.403	1.4509	275992.32	0.0282	0.00021
Tl	205	3	He	51.443	1.4521	275453.36	0.0282	0.00021
Pb	208	3	He	50.869	1.8952	191324.33	0.0372	0.0009772
Pb	208	3	He	51.022	1.9009	194922.52	0.0372	0.0009772
Pb	208	3	He	51.771	1.9288	195042.18	0.0372	0.0009772
U	238	3	He	51.018	2.1284	407728.28	0.0417	8.729E-05
U	238	3	He	51.201	2.136	406311.01	0.0417	8.729E-05
U	238	3	He	51.722	2.1578	409327.77	0.0417	8.729E-05
Sc	45	1	No Gas			1732406.54		
Sc	45	1	No Gas			1755496.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1770378.72		
Ge	72	1	No Gas			891539.44		
Ge	72	1	No Gas			890798.11		
Ge	72	1	No Gas			897655.06		
Sc	45	2	H2			131591.69		
Sc	45	2	H2			129361.25		
Sc	45	2	H2			128502.12		
Ge	72	2	H2			111614.41		
Ge	72	2	H2			110817.69		
Ge	72	2	H2			110283.27		
In	115	2	H2			270207.89		
In	115	2	H2			271268.28		
In	115	2	H2			266393.77		
Sc	45	3	He			28839.30		
Sc	45	3	He			29971.53		
Sc	45	3	He			28308.21		
Ge	72	3	He			56452.06		
Ge	72	3	He			55086.57		
Ge	72	3	He			55016.44		
In	115	3	He			54839.00		
In	115	3	He			53854.96		
In	115	3	He			53403.11		
Tb	159	3	He			247505.02		
Tb	159	3	He			242615.07		
Tb	159	3	He			247789.14		
Bi	209	3	He			191564.22		
Bi	209	3	He			190216.97		
Bi	209	3	He			189699.18		

Quantitation Report

Data File Name	049_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:45:49 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

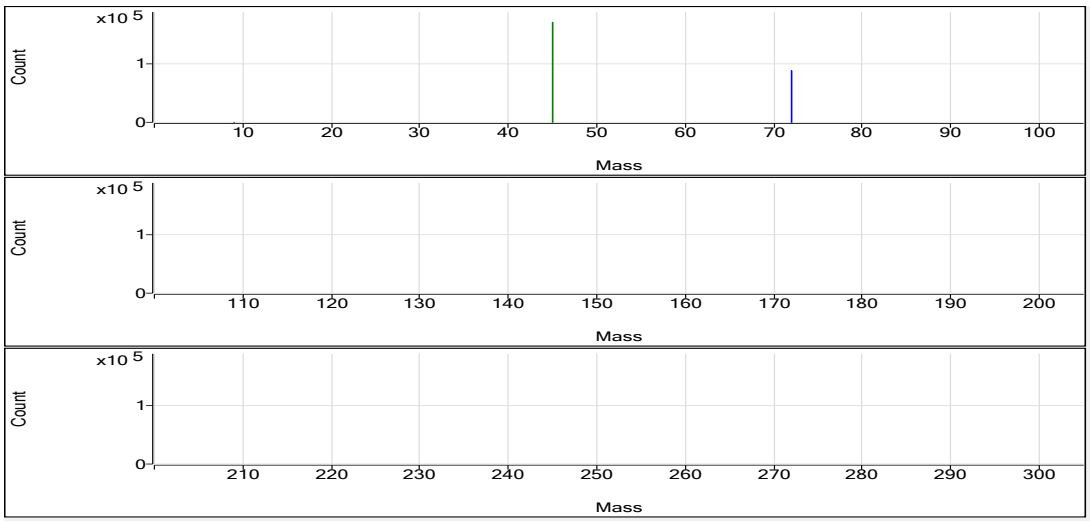
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.281	ppb	3.6	212.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.170	ppb	25.2	8.67	0.0001	Pulse	1.5000	3
Na	23	45	He	12.258	ppb	26.2	8512.75	0.2958	Pulse	0.1000	3
Mg	24	45	He	3.665	ppb	51.2	283.35	0.0099	Pulse	0.1000	3
Al	27	45	He	8.229	ppb	108.4	146.71	0.0051	Pulse	0.1000	3
K	39	45	He	-1.769	ppb	N/A	10390.71	0.3610	Pulse	0.1000	3
Ca	44	45	He	-14.342	ppb	N/A	50.00	0.0017	Pulse	0.1000	3
Ti	47	45	He	3.289	ppb	62.0	50.00	0.0017	Pulse	0.1000	3
V	51	45	He	0.210	ppb	6.1	454.68	0.0158	Pulse	0.5000	3
Cr	52	45	He	0.471	ppb	90.2	2306.94	0.0801	Pulse	0.1000	3
Mn	55	45	He	0.376	ppb	62.2	243.34	0.0085	Pulse	0.1000	3
Fe	57	45	He	6.476	ppb	29.1	213.35	0.0074	Pulse	0.1000	3
Co	59	45	He	0.180	ppb	21.6	410.02	0.0142	Pulse	0.1000	3
Ni	60	72	He	0.458	ppb	11.2	546.70	0.0101	Pulse	0.1000	3
Cu	63	72	He	0.255	ppb	40.0	470.03	0.0087	Pulse	0.1000	3
Zn	66	72	He	0.709	ppb	32.4	260.01	0.0048	Pulse	0.1000	3
As	75	72	He	0.410	ppb	9.7	70.00	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.076	ppb	81.8	70.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.060	ppb	29.7	96.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	52.9	53.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.042	ppb	34.5	12.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.184	ppb	90.9	866.73	0.0160	Pulse	0.1000	3
Sb	121	115	He	0.139	ppb	19.7	186.68	0.0035	Pulse	0.1000	3
Ba	137	115	He	0.066	ppb	33.7	36.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.181	ppb	17.4	1003.41	0.0053	Pulse	0.1000	3
Pb	208	209	He	0.055	ppb	4.3	570.02	0.0030	Pulse	0.1000	3
U	238	209	He	0.034	ppb	17.3	280.01	0.0015	Pulse	0.1000	3

ISTD Table:

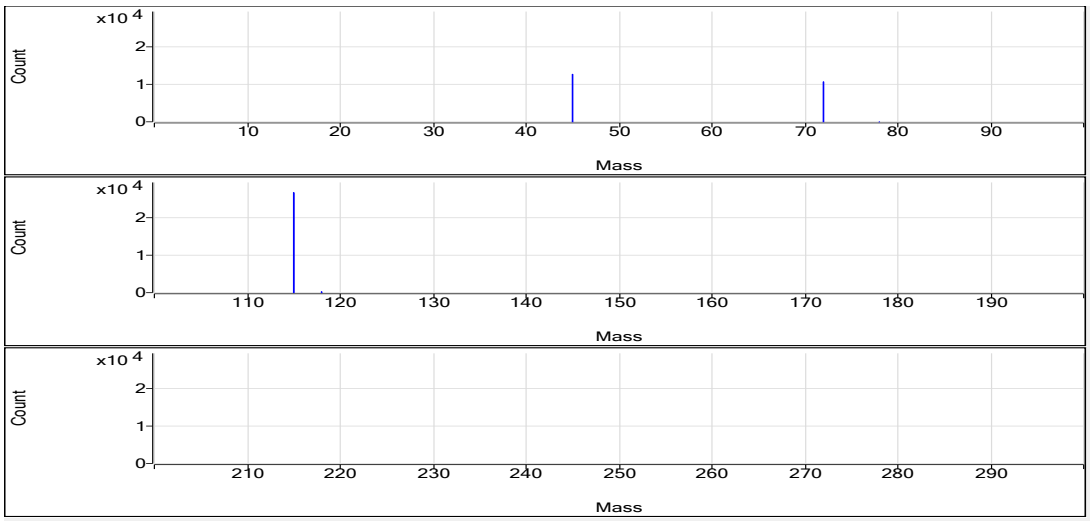
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1715162.63	1.7	97.4	Analog	0.1000	3
No Gas	Ge	72	886141.18	0.8	99.3	Pulse	0.1000	3
H2	Sc	45	127668.97	0.9	100.3	Pulse	0.1000	3
H2	Ge	72	107314.21	0.5	100.1	Pulse	0.1000	3
H2	In	115	268287.53	1.2	100.7	Pulse	0.1000	3
He	Sc	45	28779.19	1.5	100.9	Pulse	0.1000	3
He	Ge	72	54059.78	2.3	97.7	Pulse	0.1000	3
He	In	115	54006.39	1.1	100.6	Pulse	0.1000	3
He	Tb	159	246526.49	1.6	100.3	Pulse	0.1000	3
He	Bi	209	188345.30	0.1	98.7	Pulse	0.1000	3

No Gas

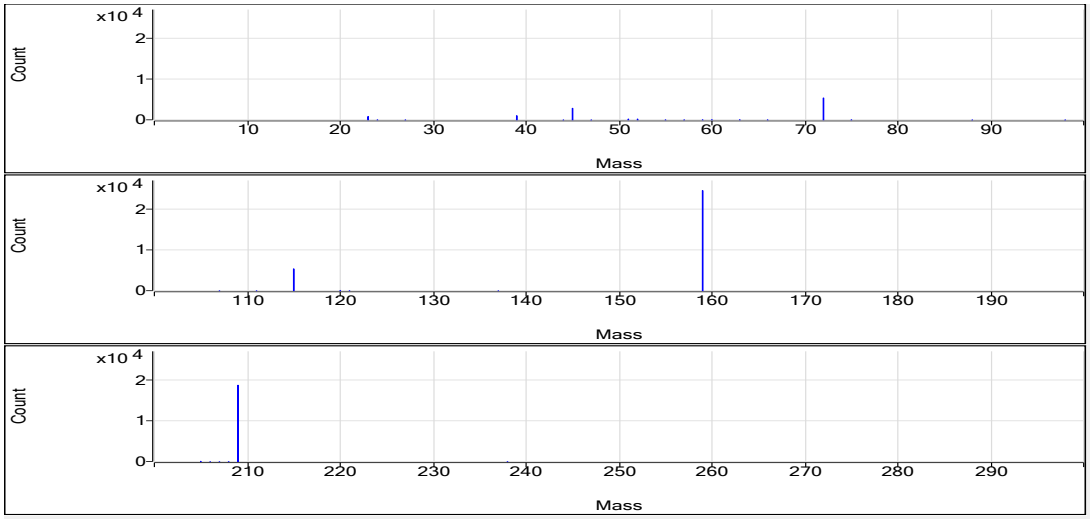


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.293	0.0001	224.00	0.0004	1.287E-05
Be	9	1	No Gas	0.277	0.0001	206.00	0.0004	1.287E-05
Be	9	1	No Gas	0.274	0.0001	206.00	0.0004	1.287E-05
Se	78	2	H2	0.201	0.0001	10.00	0.0004	1.451E-05
Se	78	2	H2	0.186	0.0001	9.33	0.0004	1.451E-05
Se	78	2	H2	0.121	0.0001	6.67	0.0004	1.451E-05
Na	23	3	He	13.522	0.299	8692.84	0.0025	0.2648
Na	23	3	He	14.647	0.3019	8542.72	0.0025	0.2648
Na	23	3	He	8.605	0.2866	8302.68	0.0025	0.2648
Mg	24	3	He	2.704	0.0086	250.01	0.0013	0.005032
Mg	24	3	He	5.827	0.0127	360.02	0.0013	0.005032
Mg	24	3	He	2.465	0.0083	240.01	0.0013	0.005032
Al	27	3	He	18.026	0.0093	270.12	0.0004	0.001519
Al	27	3	He	0.576	0.0018	50.00	0.0004	0.001519
Al	27	3	He	6.084	0.0041	120.00	0.0004	0.001519
K	39	3	He	29.041	0.391	11364.79	0.001	0.3627
K	39	3	He	-1.488	0.3613	10223.96	0.001	0.3627
K	39	3	He	-32.861	0.3308	9583.38	0.001	0.3627
Ca	44	3	He	-20.574	0.0014	40.00	0.0001	0.002571
Ca	44	3	He	-13.845	0.0018	50.00	0.0001	0.002571
Ca	44	3	He	-8.607	0.0021	60.00	0.0001	0.002571
Ti	47	3	He	0.99	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	4.876	0.0025	70.00	0.0005	0.0002328
Ti	47	3	He	4	0.0021	60.00	0.0005	0.0002328
V	51	3	He	0.211	0.0158	460.01	0.0201	0.0116
V	51	3	He	0.222	0.016	454.01	0.0201	0.0116
V	51	3	He	0.196	0.0155	450.01	0.0201	0.0116
Cr	52	3	He	0.955	0.0925	2690.34	0.0257	0.06801
Cr	52	3	He	0.297	0.0756	2140.25	0.0257	0.06801
Cr	52	3	He	0.161	0.0722	2090.22	0.0257	0.06801
Mn	55	3	He	0.114	0.0055	160.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.564	0.0106	300.01	0.0113	0.004215
Mn	55	3	He	0.451	0.0093	270.01	0.0113	0.004215
Fe	57	3	He	8.146	0.0083	240.02	0.0005	0.004099
Fe	57	3	He	4.432	0.0064	180.01	0.0005	0.004099
Fe	57	3	He	6.849	0.0076	220.01	0.0005	0.004099
Co	59	3	He	0.224	0.0165	480.02	0.0518	0.004913
Co	59	3	He	0.151	0.0127	360.02	0.0518	0.004913
Co	59	3	He	0.165	0.0135	390.02	0.0518	0.004913
Ni	60	3	He	0.503	0.0104	570.03	0.0075	0.006695
Ni	60	3	He	0.402	0.0097	510.03	0.0075	0.006695
Ni	60	3	He	0.47	0.0102	560.03	0.0075	0.006695
Cu	63	3	He	0.327	0.0103	560.03	0.0216	0.003198
Cu	63	3	He	0.301	0.0097	510.03	0.0216	0.003198
Cu	63	3	He	0.139	0.0062	340.02	0.0216	0.003198
Zn	66	3	He	0.548	0.0044	240.01	0.0026	0.002954
Zn	66	3	He	0.972	0.0055	290.02	0.0026	0.002954
Zn	66	3	He	0.607	0.0046	250.01	0.0026	0.002954
As	75	3	He	0.385	0.0012	68.00	0.002	0.0004943
As	75	3	He	0.389	0.0013	66.00	0.002	0.0004943
As	75	3	He	0.455	0.0014	76.00	0.002	0.0004943
Sr	88	3	He	0.028	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.146	0.0019	100.00	0.0081	0.0006852
Sr	88	3	He	0.053	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.08	0.0022	120.00	0.0205	0.0005587
Mo	98	3	He	0.046	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.054	0.0017	90.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.056	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.377	0.0189	1030.08	0.0146	0.01334
Sn	120	3	He	0.097	0.0148	790.06	0.0146	0.01334
Sn	120	3	He	0.079	0.0145	780.05	0.0146	0.01334
Sb	121	3	He	0.127	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.119	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.17	0.0039	210.01	0.0142	0.001484
Ba	137	3	He	0.078	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.04	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	0.08	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.203	0.0059	1120.09	0.0282	0.00021
Tl	205	3	He	0.196	0.0057	1080.10	0.0282	0.00021
Tl	205	3	He	0.145	0.0043	810.05	0.0282	0.00021
Pb	208	3	He	0.056	0.0031	290.01	0.0372	0.0009772
Pb	208	3	He	0.056	0.0031	350.02	0.0372	0.0009772
Pb	208	3	He	0.052	0.0029	270.01	0.0372	0.0009772
U	238	3	He	0.039	0.0017	320.02	0.0417	8.729E-05
U	238	3	He	0.035	0.0015	290.01	0.0417	8.729E-05
U	238	3	He	0.027	0.0012	230.01	0.0417	8.729E-05
Sc	45	1	No Gas			1748632.94		
Sc	45	1	No Gas			1691276.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1705578.72		
Ge	72	1	No Gas			894232.17		
Ge	72	1	No Gas			881578.81		
Ge	72	1	No Gas			882612.56		
Sc	45	2	H2			127745.01		
Sc	45	2	H2			128715.09		
Sc	45	2	H2			126546.81		
Ge	72	2	H2			107251.19		
Ge	72	2	H2			106766.11		
Ge	72	2	H2			107925.33		
In	115	2	H2			264894.76		
In	115	2	H2			268539.98		
In	115	2	H2			271427.85		
Sc	45	3	He			29069.62		
Sc	45	3	He			28298.50		
Sc	45	3	He			28969.46		
Ge	72	3	He			54605.50		
Ge	72	3	He			52637.41		
Ge	72	3	He			54936.42		
In	115	3	He			54648.53		
In	115	3	He			53553.83		
In	115	3	He			53835.01		
Tb	159	3	He			250496.38		
Tb	159	3	He			246567.85		
Tb	159	3	He			242515.25		
Bi	209	3	He			188497.36		
Bi	209	3	He			188421.64		
Bi	209	3	He			188116.91		

Quantitation Report

Data File Name	050SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:47:48 PM
Sample Name	410-136176-E-6-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

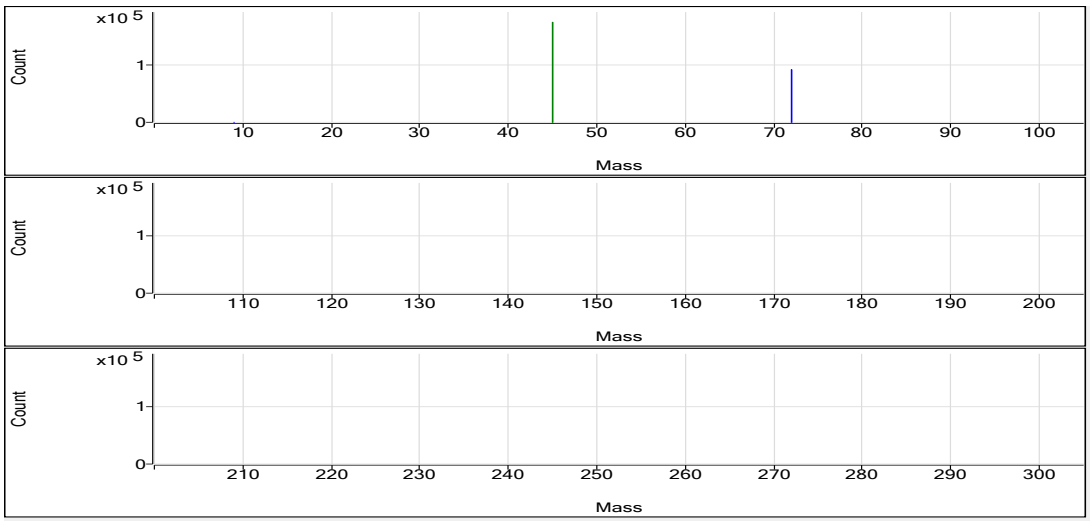
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.162	ppb	15.0	134.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.369	ppb	20.6	18.00	0.0002	Pulse	1.5000	3
Na	23	45	He	19674.676	ppb	1.6	1426575.76	50.0161	Analog	0.1000	3
Mg	24	45	He	34476.677	ppb	2.4	1297868.81	45.5089	Analog	0.1000	3
Al	27	45	He	210.817	ppb	8.2	2637.00	0.0924	Pulse	0.1000	3
K	39	45	He	3799.874	ppb	4.3	115615.29	4.0545	Pulse	0.1000	3
Ca	44	45	He	122670.041	ppb	2.7	203299.31	7.1286	Pulse	0.1000	3
Ti	47	45	He	3.308	ppb	2.4	50.00	0.0018	Pulse	0.1000	3
V	51	45	He	0.908	ppb	5.2	850.70	0.0298	Pulse	0.5000	3
Cr	52	45	He	0.924	ppb	24.0	2617.01	0.0918	Pulse	0.1000	3
Mn	55	45	He	5843.030	ppb	3.2	1887884.30	66.2027	Analog	0.1000	3
Fe	57	45	He	260.712	ppb	2.3	3914.00	0.1372	Pulse	0.1000	3
Co	59	45	He	26.342	ppb	2.6	39066.92	1.3699	Pulse	0.1000	3
Ni	60	72	He	6.332	ppb	7.0	3057.09	0.0539	Pulse	0.1000	3
Cu	63	72	He	0.772	ppb	21.1	1126.75	0.0199	Pulse	0.1000	3
Zn	66	72	He	3.141	ppb	25.6	636.71	0.0112	Pulse	0.1000	3
As	75	72	He	0.270	ppb	11.7	58.00	0.0010	Pulse	0.5000	3
Sr	88	115	He	111.959	ppb	2.3	48731.53	0.9090	Pulse	0.1000	3
Mo	98	115	He	0.246	ppb	14.2	300.01	0.0056	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	145.2	63.34	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.246	ppb	18.2	66.67	0.0012	Pulse	0.5000	3
Sn	120	115	He	0.537	ppb	15.9	1136.75	0.0212	Pulse	0.1000	3
Sb	121	115	He	0.136	ppb	32.4	183.34	0.0034	Pulse	0.1000	3
Ba	137	115	He	39.409	ppb	2.3	9753.80	0.1819	Pulse	0.1000	3
Tl	205	209	He	0.139	ppb	13.7	790.06	0.0041	Pulse	0.1000	3
Pb	208	209	He	0.129	ppb	0.6	1103.39	0.0058	Pulse	0.1000	3
U	238	209	He	0.613	ppb	5.2	4897.76	0.0257	Pulse	0.1000	3

ISTD Table:

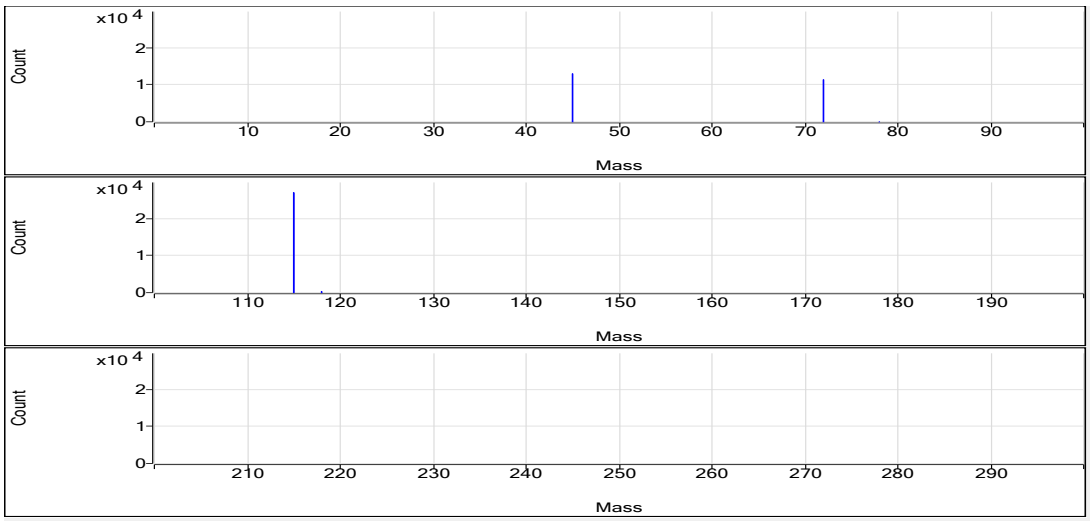
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1756156.59	2.0	99.7	Analog	0.1000	3
No Gas	Ge	72	924841.11	1.2	103.6	Pulse	0.1000	3
H2	Sc	45	129619.65	2.2	101.8	Pulse	0.1000	3
H2	Ge	72	113542.17	1.6	105.9	Pulse	0.1000	3
H2	In	115	269590.55	1.6	101.2	Pulse	0.1000	3
He	Sc	45	28528.62	2.1	100.1	Pulse	0.1000	3
He	Ge	72	56766.98	0.6	102.6	Pulse	0.1000	3
He	In	115	53616.45	1.0	99.9	Pulse	0.1000	3
He	Tb	159	250836.58	0.6	102.1	Pulse	0.1000	3
He	Bi	209	190859.77	0.9	100.0	Pulse	0.1000	3

No Gas

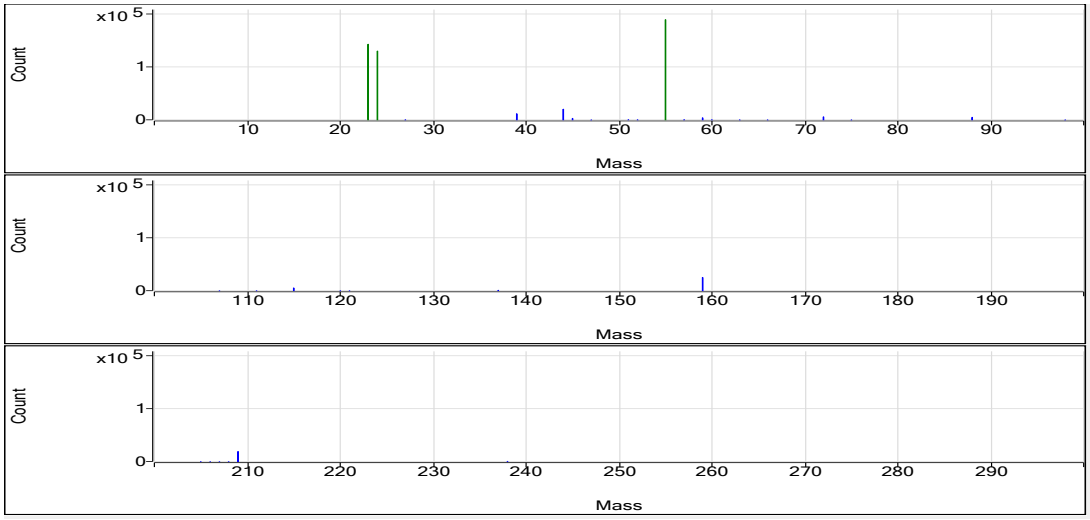


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.189	0.0001	152.00	0.0004	1.287E-05
Be	9	1	No Gas	0.154	0.0001	132.00	0.0004	1.287E-05
Be	9	1	No Gas	0.143	0.0001	120.00	0.0004	1.287E-05
Se	78	2	H2	0.35	0.0002	17.33	0.0004	1.451E-05
Se	78	2	H2	0.452	0.0002	21.33	0.0004	1.451E-05
Se	78	2	H2	0.304	0.0001	15.33	0.0004	1.451E-05
Na	23	3	He	19895.763	50.5751	1427633.26	0.0025	0.2648
Na	23	3	He	19811.673	50.3625	1416590.14	0.0025	0.2648
Na	23	3	He	19316.592	49.1106	1435503.88	0.0025	0.2648
Mg	24	3	He	34892.607	46.0579	1300120.84	0.0013	0.005032
Mg	24	3	He	35002.773	46.2033	1299600.76	0.0013	0.005032
Mg	24	3	He	33534.65	44.2656	1293884.82	0.0013	0.005032
Al	27	3	He	228.984	0.1003	2830.36	0.0004	0.001519
Al	27	3	He	194.356	0.0853	2400.28	0.0004	0.001519
Al	27	3	He	209.112	0.0917	2680.35	0.0004	0.001519
K	39	3	He	3955.929	4.2062	118731.33	0.001	0.3627
K	39	3	He	3812.683	4.067	114395.72	0.001	0.3627
K	39	3	He	3631.008	3.8905	113718.82	0.001	0.3627
Ca	44	3	He	125575.154	7.2974	205990.13	0.0001	0.002571
Ca	44	3	He	123322.671	7.1665	201579.22	0.0001	0.002571
Ca	44	3	He	119112.297	6.9219	202328.57	0.0001	0.002571
Ti	47	3	He	3.348	0.0018	50.00	0.0005	0.0002328
Ti	47	3	He	3.362	0.0018	50.00	0.0005	0.0002328
Ti	47	3	He	3.216	0.0017	50.00	0.0005	0.0002328
V	51	3	He	0.863	0.0289	816.03	0.0201	0.0116
V	51	3	He	0.957	0.0308	866.03	0.0201	0.0116
V	51	3	He	0.906	0.0298	870.03	0.0201	0.0116
Cr	52	3	He	0.745	0.0872	2460.32	0.0257	0.06801
Cr	52	3	He	1.172	0.0981	2760.37	0.0257	0.06801
Cr	52	3	He	0.855	0.09	2630.33	0.0257	0.06801
Mn	55	3	He	6004.956	68.0372	1920551.69	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	5884.767	66.6755	1875440.60	0.0113	0.004215
Mn	55	3	He	5639.368	63.8953	1867660.60	0.0113	0.004215
Fe	57	3	He	265.462	0.1396	3940.72	0.0005	0.004099
Fe	57	3	He	253.891	0.1337	3760.61	0.0005	0.004099
Fe	57	3	He	262.784	0.1382	4040.66	0.0005	0.004099
Co	59	3	He	26.935	1.4006	39534.81	0.0518	0.004913
Co	59	3	He	26.501	1.3781	38762.68	0.0518	0.004913
Co	59	3	He	25.591	1.3309	38903.28	0.0518	0.004913
Ni	60	3	He	6.621	0.056	3160.45	0.0075	0.006695
Ni	60	3	He	6.55	0.0555	3150.45	0.0075	0.006695
Ni	60	3	He	5.824	0.0501	2860.37	0.0075	0.006695
Cu	63	3	He	0.821	0.0209	1180.09	0.0216	0.003198
Cu	63	3	He	0.904	0.0227	1290.10	0.0216	0.003198
Cu	63	3	He	0.59	0.0159	910.07	0.0216	0.003198
Zn	66	3	He	3.461	0.0121	680.05	0.0026	0.002954
Zn	66	3	He	2.226	0.0088	500.02	0.0026	0.002954
Zn	66	3	He	3.737	0.0128	730.05	0.0026	0.002954
As	75	3	He	0.292	0.0011	60.00	0.002	0.0004943
As	75	3	He	0.234	0.001	54.00	0.002	0.0004943
As	75	3	He	0.285	0.0011	60.00	0.002	0.0004943
Sr	88	3	He	114.334	0.9283	49427.07	0.0081	0.0006852
Sr	88	3	He	109.245	0.887	48082.68	0.0081	0.0006852
Sr	88	3	He	112.298	0.9118	48684.85	0.0081	0.0006852
Mo	98	3	He	0.285	0.0064	340.02	0.0205	0.0005587
Mo	98	3	He	0.216	0.005	270.01	0.0205	0.0005587
Mo	98	3	He	0.238	0.0054	290.01	0.0205	0.0005587
Ag	107	3	He	0.047	0.0024	130.01	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.2	0.001	54.00	0.005	1.253E-05
Cd	111	3	He	0.248	0.0013	68.00	0.005	1.253E-05
Cd	111	3	He	0.29	0.0015	78.00	0.005	1.253E-05
Sn	120	3	He	0.552	0.0214	1140.09	0.0146	0.01334
Sn	120	3	He	0.614	0.0223	1210.09	0.0146	0.01334
Sn	120	3	He	0.445	0.0199	1060.08	0.0146	0.01334
Sb	121	3	He	0.133	0.0034	180.01	0.0142	0.001484
Sb	121	3	He	0.181	0.0041	220.01	0.0142	0.001484
Sb	121	3	He	0.093	0.0028	150.01	0.0142	0.001484
Ba	137	3	He	39.028	0.1802	9593.64	0.0046	0.000374
Ba	137	3	He	38.775	0.179	9703.86	0.0046	0.000374
Ba	137	3	He	40.423	0.1866	9963.89	0.0046	0.000374
Tl	205	3	He	0.161	0.0048	900.07	0.0282	0.00021
Tl	205	3	He	0.13	0.0039	750.05	0.0282	0.00021
Tl	205	3	He	0.126	0.0038	720.05	0.0282	0.00021
Pb	208	3	He	0.129	0.0058	600.03	0.0372	0.0009772
Pb	208	3	He	0.13	0.0058	570.03	0.0372	0.0009772
Pb	208	3	He	0.129	0.0058	590.04	0.0372	0.0009772
U	238	3	He	0.648	0.0271	5131.17	0.0417	8.729E-05
U	238	3	He	0.585	0.0245	4721.05	0.0417	8.729E-05
U	238	3	He	0.606	0.0254	4841.07	0.0417	8.729E-05
Sc	45	1	No Gas			1737820.44		
Sc	45	1	No Gas			1796507.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1734142.16		
Ge	72	1	No Gas			917642.49		
Ge	72	1	No Gas			937073.03		
Ge	72	1	No Gas			919807.80		
Sc	45	2	H2			130248.96		
Sc	45	2	H2			126546.69		
Sc	45	2	H2			132063.31		
Ge	72	2	H2			114375.34		
Ge	72	2	H2			111402.27		
Ge	72	2	H2			114848.89		
In	115	2	H2			269366.48		
In	115	2	H2			265426.95		
In	115	2	H2			273978.22		
Sc	45	3	He			28227.96		
Sc	45	3	He			28127.87		
Sc	45	3	He			29230.02		
Ge	72	3	He			56411.49		
Ge	72	3	He			56773.88		
Ge	72	3	He			57115.58		
In	115	3	He			53253.35		
In	115	3	He			54216.47		
In	115	3	He			53403.39		
Tb	159	3	He			250866.89		
Tb	159	3	He			252317.22		
Tb	159	3	He			249325.62		
Bi	209	3	He			189119.18		
Bi	209	3	He			192699.35		
Bi	209	3	He			190760.78		

Quantitation Report

Data File Name	051SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:49:46 PM
Sample Name	410-136176-E-5-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

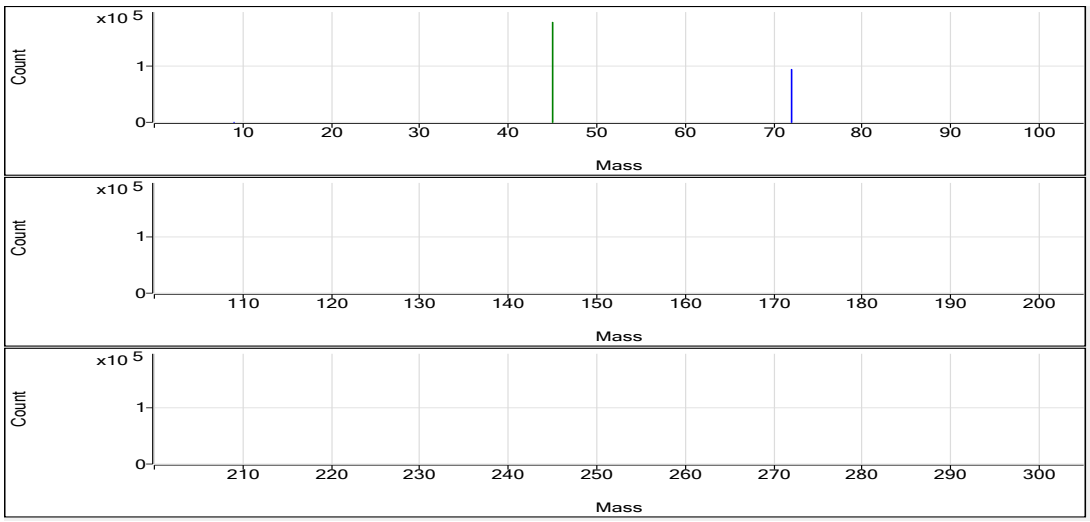
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.533	ppb	5.6	396.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.069	ppb	14.7	49.55	0.0004	Pulse	1.5000	3
Na	23	45	He	11386.857	ppb	2.4	853325.17	29.0587	Pulse	0.1000	3
Mg	24	45	He	19824.034	ppb	2.7	768442.33	26.1697	Pulse	0.1000	3
Al	27	45	He	3571.265	ppb	2.9	45266.85	1.5416	Pulse	0.1000	3
K	39	45	He	2746.154	ppb	3.6	88994.48	3.0308	Pulse	0.1000	3
Ca	44	45	He	48893.740	ppb	2.2	83485.85	2.8429	Pulse	0.1000	3
Ti	47	45	He	27.414	ppb	14.5	376.68	0.0128	Pulse	0.1000	3
V	51	45	He	7.330	ppb	1.6	4658.78	0.1586	Pulse	0.5000	3
Cr	52	45	He	8.806	ppb	6.4	8639.55	0.2943	Pulse	0.1000	3
Mn	55	45	He	3742.287	ppb	3.0	1245056.49	42.4024	Pulse	0.1000	3
Fe	57	45	He	7650.216	ppb	2.9	114784.15	3.9091	Pulse	0.1000	3
Co	59	45	He	26.961	ppb	5.3	41149.39	1.4019	Pulse	0.1000	3
Ni	60	72	He	20.547	ppb	1.5	9286.61	0.1598	Pulse	0.1000	3
Cu	63	72	He	3.431	ppb	3.4	4490.84	0.0773	Pulse	0.1000	3
Zn	66	72	He	11.463	ppb	16.9	1923.53	0.0331	Pulse	0.1000	3
As	75	72	He	1.045	ppb	4.3	147.33	0.0025	Pulse	0.5000	3
Sr	88	115	He	57.880	ppb	1.8	25947.94	0.4703	Pulse	0.1000	3
Mo	98	115	He	0.141	ppb	44.1	190.01	0.0034	Pulse	0.1000	3
Ag	107	115	He	0.017	ppb	102.6	63.34	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.263	ppb	6.3	73.33	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.149	ppb	69.9	856.73	0.0155	Pulse	0.1000	3
Sb	121	115	He	0.040	ppb	81.5	113.34	0.0021	Pulse	0.1000	3
Ba	137	115	He	20.992	ppb	5.1	5357.91	0.0971	Pulse	0.1000	3
Tl	205	209	He	0.153	ppb	17.7	886.72	0.0045	Pulse	0.1000	3
Pb	208	209	He	0.842	ppb	2.2	6314.21	0.0323	Pulse	0.1000	3
U	238	209	He	0.219	ppb	10.5	1800.19	0.0092	Pulse	0.1000	3

ISTD Table:

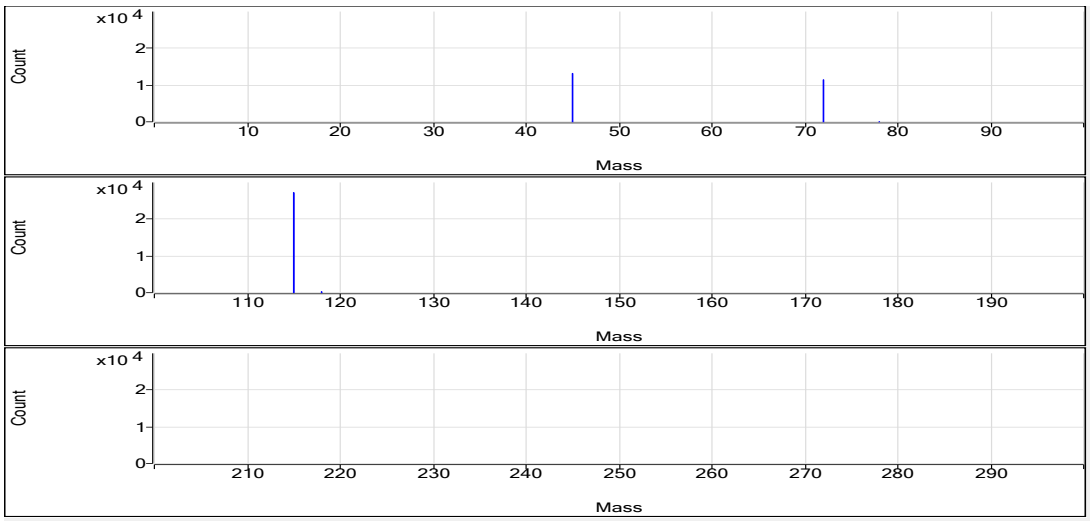
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1776301.54	1.2	100.9	Analog	0.1000	3
No Gas	Ge	72	939459.10	0.7	105.3	Pulse	0.1000	3
H2	Sc	45	131880.10	0.7	103.6	Pulse	0.1000	3
H2	Ge	72	114523.03	0.3	106.8	Pulse	0.1000	3
H2	In	115	272476.17	0.9	102.3	Pulse	0.1000	3
He	Sc	45	29377.22	2.5	103.0	Pulse	0.1000	3
He	Ge	72	58125.46	0.3	105.1	Pulse	0.1000	3
He	In	115	55177.70	0.6	102.8	Pulse	0.1000	3
He	Tb	159	251278.64	1.1	102.2	Pulse	0.1000	3
He	Bi	209	195410.31	0.4	102.4	Pulse	0.1000	3

No Gas

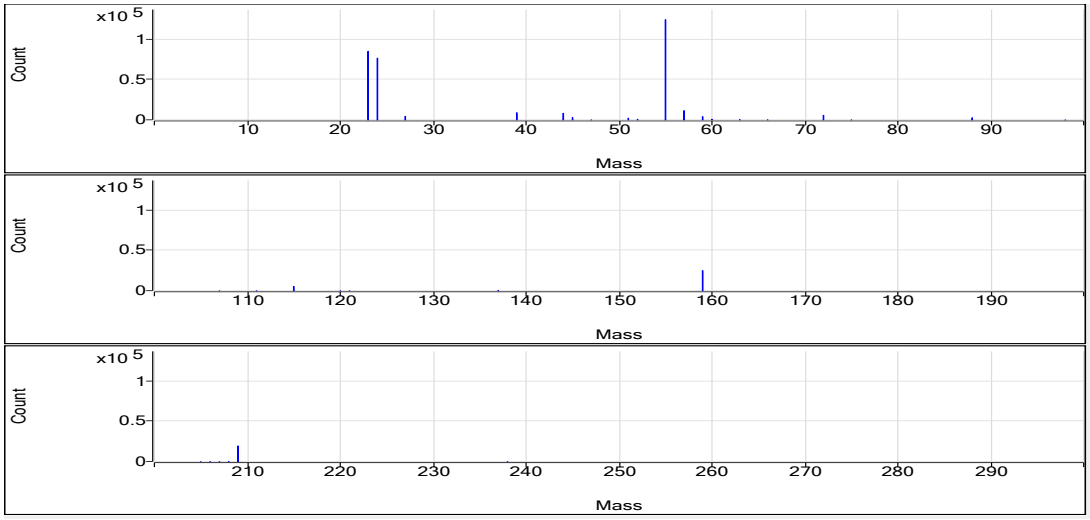


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.52	0.0002	382.01	0.0004	1.287E-05
Be	9	1	No Gas	0.513	0.0002	386.01	0.0004	1.287E-05
Be	9	1	No Gas	0.567	0.0002	420.01	0.0004	1.287E-05
Se	78	2	H2	1.151	0.0005	53.33	0.0004	1.451E-05
Se	78	2	H2	1.168	0.0005	54.00	0.0004	1.451E-05
Se	78	2	H2	0.888	0.0004	41.33	0.0004	1.451E-05
Na	23	3	He	11459.982	29.2436	853919.99	0.0025	0.2648
Na	23	3	He	11613.976	29.633	851626.00	0.0025	0.2648
Na	23	3	He	11086.613	28.2995	854429.52	0.0025	0.2648
Mg	24	3	He	19939.283	26.3218	768602.41	0.0013	0.005032
Mg	24	3	He	20294.304	26.7904	769931.00	0.0013	0.005032
Mg	24	3	He	19238.516	25.3969	766793.58	0.0013	0.005032
Al	27	3	He	3618.539	1.562	45611.25	0.0004	0.001519
Al	27	3	He	3644.29	1.5731	45210.11	0.0004	0.001519
Al	27	3	He	3450.966	1.4898	44979.18	0.0004	0.001519
K	39	3	He	2819.167	3.1017	90571.05	0.001	0.3627
K	39	3	He	2784.95	3.0685	88185.37	0.001	0.3627
K	39	3	He	2634.344	2.9222	88227.01	0.001	0.3627
Ca	44	3	He	49424.136	2.8737	83911.95	0.0001	0.002571
Ca	44	3	He	49585.119	2.883	82855.57	0.0001	0.002571
Ca	44	3	He	47671.965	2.7719	83690.03	0.0001	0.002571
Ti	47	3	He	23.341	0.011	320.01	0.0005	0.0002328
Ti	47	3	He	31.297	0.0146	420.02	0.0005	0.0002328
Ti	47	3	He	27.604	0.0129	390.02	0.0005	0.0002328
V	51	3	He	7.277	0.1576	4600.76	0.0201	0.0116
V	51	3	He	7.462	0.1613	4634.77	0.0201	0.0116
V	51	3	He	7.25	0.157	4740.81	0.0201	0.0116
Cr	52	3	He	8.83	0.295	8612.84	0.0257	0.06801
Cr	52	3	He	9.353	0.3084	8863.04	0.0257	0.06801
Cr	52	3	He	8.234	0.2796	8442.76	0.0257	0.06801
Mn	55	3	He	3799.967	43.0558	1257239.12	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3813.493	43.2091	1241788.89	0.0113	0.004215
Mn	55	3	He	3613.401	40.9422	1236141.47	0.0113	0.004215
Fe	57	3	He	7718.582	3.944	115166.89	0.0005	0.004099
Fe	57	3	He	7828.869	4.0003	114966.06	0.0005	0.004099
Fe	57	3	He	7403.197	3.7831	114219.51	0.0005	0.004099
Co	59	3	He	26.936	1.4006	40898.91	0.0518	0.004913
Co	59	3	He	28.393	1.4761	42422.69	0.0518	0.004913
Co	59	3	He	25.554	1.329	40126.56	0.0518	0.004913
Ni	60	3	He	20.803	0.1617	9383.33	0.0075	0.006695
Ni	60	3	He	20.211	0.1573	9173.17	0.0075	0.006695
Ni	60	3	He	20.629	0.1604	9303.33	0.0075	0.006695
Cu	63	3	He	3.38	0.0762	4420.79	0.0216	0.003198
Cu	63	3	He	3.347	0.0754	4400.83	0.0216	0.003198
Cu	63	3	He	3.566	0.0802	4650.91	0.0216	0.003198
Zn	66	3	He	13.488	0.0384	2230.24	0.0026	0.002954
Zn	66	3	He	9.634	0.0283	1650.16	0.0026	0.002954
Zn	66	3	He	11.267	0.0326	1890.20	0.0026	0.002954
As	75	3	He	1.071	0.0026	150.00	0.002	0.0004943
As	75	3	He	0.994	0.0024	142.00	0.002	0.0004943
As	75	3	He	1.071	0.0026	150.00	0.002	0.0004943
Sr	88	3	He	58.951	0.479	26445.44	0.0081	0.0006852
Sr	88	3	He	57.876	0.4702	25794.33	0.0081	0.0006852
Sr	88	3	He	56.814	0.4616	25604.04	0.0081	0.0006852
Mo	98	3	He	0.203	0.0047	260.01	0.0205	0.0005587
Mo	98	3	He	0.142	0.0035	190.01	0.0205	0.0005587
Mo	98	3	He	0.078	0.0022	120.00	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.032	0.0018	100.01	0.043	0.0004367
Cd	111	3	He	0.258	0.0013	72.00	0.005	1.253E-05
Cd	111	3	He	0.282	0.0014	78.00	0.005	1.253E-05
Cd	111	3	He	0.25	0.0013	70.00	0.005	1.253E-05
Sn	120	3	He	0.24	0.0168	930.07	0.0146	0.01334
Sn	120	3	He	0.035	0.0139	760.05	0.0146	0.01334
Sn	120	3	He	0.173	0.0159	880.06	0.0146	0.01334
Sb	121	3	He	0.01	0.0016	90.00	0.0142	0.001484
Sb	121	3	He	0.075	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.035	0.002	110.01	0.0142	0.001484
Ba	137	3	He	20.681	0.0956	5281.19	0.0046	0.000374
Ba	137	3	He	20.105	0.093	5101.18	0.0046	0.000374
Ba	137	3	He	22.192	0.1026	5691.37	0.0046	0.000374
Tl	205	3	He	0.159	0.0047	920.06	0.0282	0.00021
Tl	205	3	He	0.124	0.0037	720.04	0.0282	0.00021
Tl	205	3	He	0.177	0.0052	1020.07	0.0282	0.00021
Pb	208	3	He	0.82	0.0315	3410.58	0.0372	0.0009772
Pb	208	3	He	0.85	0.0326	3510.60	0.0372	0.0009772
Pb	208	3	He	0.854	0.0328	3570.63	0.0372	0.0009772
U	238	3	He	0.245	0.0103	2020.22	0.0417	8.729E-05
U	238	3	He	0.205	0.0086	1680.17	0.0417	8.729E-05
U	238	3	He	0.206	0.0087	1700.17	0.0417	8.729E-05
Sc	45	1	No Gas			1755557.32		
Sc	45	1	No Gas			1796658.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1776688.88		
Ge	72	1	No Gas			935461.70		
Ge	72	1	No Gas			936283.27		
Ge	72	1	No Gas			946632.33		
Sc	45	2	H2			132791.80		
Sc	45	2	H2			130984.78		
Sc	45	2	H2			131863.72		
Ge	72	2	H2			114799.83		
Ge	72	2	H2			114586.38		
Ge	72	2	H2			114182.87		
In	115	2	H2			272325.93		
In	115	2	H2			270030.43		
In	115	2	H2			275072.16		
Sc	45	3	He			29200.20		
Sc	45	3	He			28739.07		
Sc	45	3	He			30192.39		
Ge	72	3	He			58038.47		
Ge	72	3	He			58329.13		
Ge	72	3	He			58008.79		
In	115	3	He			55220.51		
In	115	3	He			54858.83		
In	115	3	He			55471.76		
Tb	159	3	He			252728.41		
Tb	159	3	He			248135.82		
Tb	159	3	He			252971.70		
Bi	209	3	He			195756.31		
Bi	209	3	He			194558.43		
Bi	209	3	He			195916.19		

Quantitation Report

Data File Name	052SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:51:45 PM
Sample Name	410-136176-E-4-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

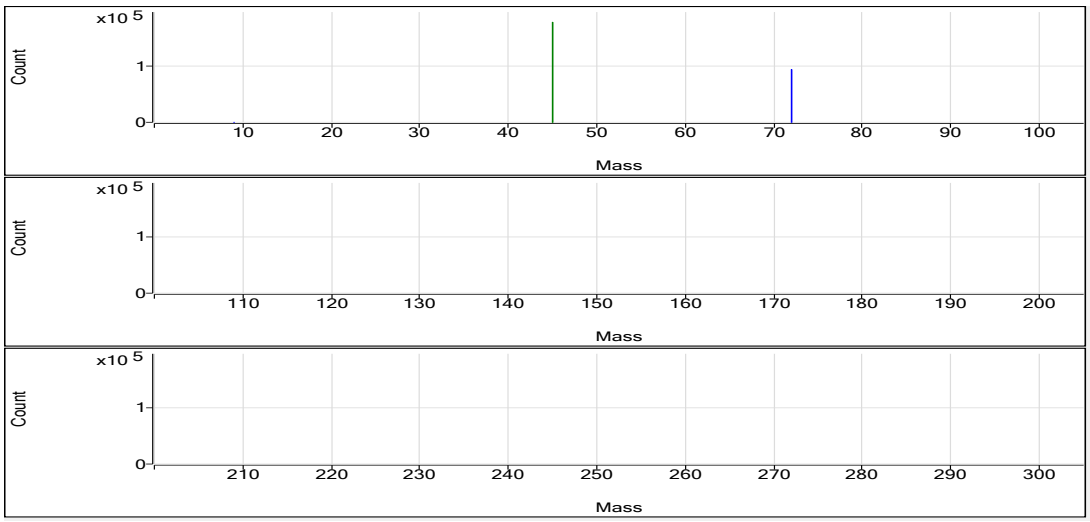
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.533	ppb	3.6	398.01	0.0002	Pulse	0.5000	3
Se	78	72	H2	1.089	ppb	9.8	49.78	0.0004	Pulse	1.5000	3
Na	23	45	He	11411.212	ppb	2.4	845213.37	29.1203	Pulse	0.1000	3
Mg	24	45	He	19811.304	ppb	2.4	759060.66	26.1529	Pulse	0.1000	3
Al	27	45	He	3460.346	ppb	1.8	43364.76	1.4938	Pulse	0.1000	3
K	39	45	He	2782.008	ppb	2.3	88983.58	3.0656	Pulse	0.1000	3
Ca	44	45	He	48765.886	ppb	3.6	82282.14	2.8354	Pulse	0.1000	3
Ti	47	45	He	30.517	ppb	15.4	413.35	0.0143	Pulse	0.1000	3
V	51	45	He	6.909	ppb	4.7	4357.34	0.1502	Pulse	0.5000	3
Cr	52	45	He	8.801	ppb	12.3	8529.48	0.2942	Pulse	0.1000	3
Mn	55	45	He	3747.454	ppb	2.6	1232364.93	42.4609	Pulse	0.1000	3
Fe	57	45	He	7481.836	ppb	2.2	110967.82	3.8232	Pulse	0.1000	3
Co	59	45	He	27.241	ppb	3.1	41106.07	1.4164	Pulse	0.1000	3
Ni	60	72	He	20.269	ppb	1.0	9126.52	0.1577	Pulse	0.1000	3
Cu	63	72	He	3.352	ppb	5.1	4370.81	0.0756	Pulse	0.1000	3
Zn	66	72	He	11.574	ppb	12.2	1930.20	0.0334	Pulse	0.1000	3
As	75	72	He	0.902	ppb	35.5	130.67	0.0023	Pulse	0.5000	3
Sr	88	115	He	58.171	ppb	1.3	25700.94	0.4726	Pulse	0.1000	3
Mo	98	115	He	0.218	ppb	14.8	273.35	0.0050	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	33.2	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.265	ppb	8.3	72.67	0.0013	Pulse	0.5000	3
Sn	120	115	He	0.242	ppb	63.5	916.73	0.0169	Pulse	0.1000	3
Sb	121	115	He	0.124	ppb	40.4	176.68	0.0032	Pulse	0.1000	3
Ba	137	115	He	21.067	ppb	5.8	5301.23	0.0974	Pulse	0.1000	3
Tl	205	209	He	0.124	ppb	19.9	720.05	0.0037	Pulse	0.1000	3
Pb	208	209	He	0.812	ppb	1.5	6060.77	0.0312	Pulse	0.1000	3
U	238	209	He	0.222	ppb	4.2	1816.88	0.0094	Pulse	0.1000	3

ISTD Table:

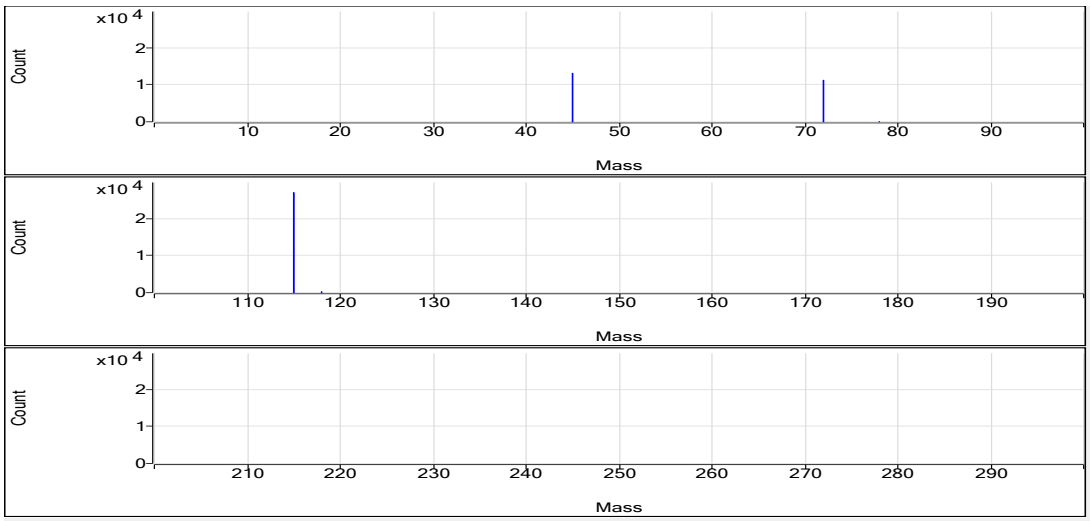
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1786730.03	1.0	101.4	Analog	0.1000	3
No Gas	Ge	72	942933.97	0.7	105.7	Pulse	0.1000	3
H2	Sc	45	131772.23	1.7	103.5	Pulse	0.1000	3
H2	Ge	72	112934.08	1.3	105.3	Pulse	0.1000	3
H2	In	115	271072.08	1.7	101.8	Pulse	0.1000	3
He	Sc	45	29036.55	2.7	101.9	Pulse	0.1000	3
He	Ge	72	57871.00	2.0	104.6	Pulse	0.1000	3
He	In	115	54384.06	1.3	101.3	Pulse	0.1000	3
He	Tb	159	252193.63	0.6	102.6	Pulse	0.1000	3
He	Bi	209	194076.45	1.2	101.7	Pulse	0.1000	3

No Gas

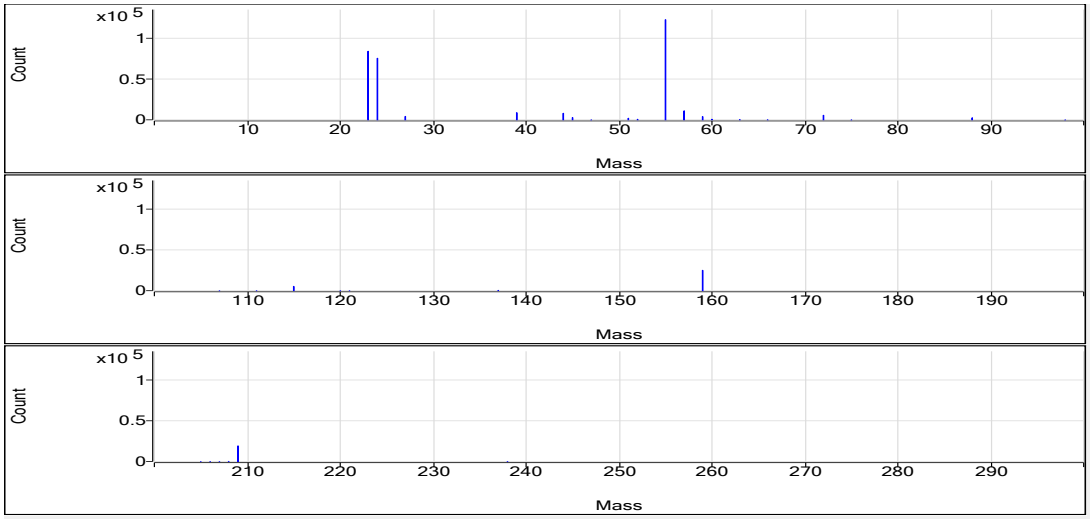


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.516	0.0002	384.01	0.0004	1.287E-05
Be	9	1	No Gas	0.529	0.0002	400.01	0.0004	1.287E-05
Be	9	1	No Gas	0.554	0.0002	410.01	0.0004	1.287E-05
Se	78	2	H2	1.023	0.0004	46.67	0.0004	1.451E-05
Se	78	2	H2	1.031	0.0004	46.67	0.0004	1.451E-05
Se	78	2	H2	1.213	0.0005	56.00	0.0004	1.451E-05
Na	23	3	He	11233.144	28.67	853253.66	0.0025	0.2648
Na	23	3	He	11720.791	29.9031	843220.77	0.0025	0.2648
Na	23	3	He	11279.7	28.7878	839165.69	0.0025	0.2648
Mg	24	3	He	19380.435	25.5842	761416.55	0.0013	0.005032
Mg	24	3	He	20321.952	26.8269	756475.22	0.0013	0.005032
Mg	24	3	He	19731.525	26.0476	759290.22	0.0013	0.005032
Al	27	3	He	3449.472	1.4891	44317.59	0.0004	0.001519
Al	27	3	He	3526.201	1.5222	42923.53	0.0004	0.001519
Al	27	3	He	3405.365	1.4701	42853.16	0.0004	0.001519
K	39	3	He	2734.939	3.0199	89875.60	0.001	0.3627
K	39	3	He	2854.317	3.1359	88426.74	0.001	0.3627
K	39	3	He	2756.767	3.0411	88648.39	0.001	0.3627
Ca	44	3	He	47793.278	2.7789	82704.47	0.0001	0.002571
Ca	44	3	He	50812.708	2.9543	83307.69	0.0001	0.002571
Ca	44	3	He	47691.672	2.773	80834.26	0.0001	0.002571
Ti	47	3	He	30.936	0.0144	430.02	0.0005	0.0002328
Ti	47	3	He	34.993	0.0163	460.02	0.0005	0.0002328
Ti	47	3	He	25.623	0.012	350.02	0.0005	0.0002328
V	51	3	He	6.65	0.145	4314.67	0.0201	0.0116
V	51	3	He	7.269	0.1574	4438.70	0.0201	0.0116
V	51	3	He	6.808	0.1482	4318.66	0.0201	0.0116
Cr	52	3	He	7.568	0.2625	7812.39	0.0257	0.06801
Cr	52	3	He	9.583	0.3143	8863.04	0.0257	0.06801
Cr	52	3	He	9.251	0.3058	8913.02	0.0257	0.06801
Mn	55	3	He	3679.384	41.6897	1240734.36	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3857.661	43.7095	1232537.48	0.0113	0.004215
Mn	55	3	He	3705.317	41.9835	1223822.95	0.0113	0.004215
Fe	57	3	He	7336.053	3.7488	111568.16	0.0005	0.004099
Fe	57	3	He	7664.061	3.9162	110430.97	0.0005	0.004099
Fe	57	3	He	7445.395	3.8046	110904.33	0.0005	0.004099
Co	59	3	He	26.726	1.3897	41360.14	0.0518	0.004913
Co	59	3	He	28.205	1.4664	41349.93	0.0518	0.004913
Co	59	3	He	26.79	1.3931	40608.13	0.0518	0.004913
Ni	60	3	He	20.398	0.1587	9393.34	0.0075	0.006695
Ni	60	3	He	20.368	0.1584	9033.10	0.0075	0.006695
Ni	60	3	He	20.039	0.156	8953.11	0.0075	0.006695
Cu	63	3	He	3.209	0.0725	4290.79	0.0216	0.003198
Cu	63	3	He	3.541	0.0796	4540.86	0.0216	0.003198
Cu	63	3	He	3.307	0.0746	4280.78	0.0216	0.003198
Zn	66	3	He	10.438	0.0304	1800.16	0.0026	0.002954
Zn	66	3	He	13.15	0.0375	2140.26	0.0026	0.002954
Zn	66	3	He	11.134	0.0322	1850.19	0.0026	0.002954
As	75	3	He	1.096	0.0026	156.00	0.002	0.0004943
As	75	3	He	1.076	0.0026	148.00	0.002	0.0004943
As	75	3	He	0.532	0.0015	88.00	0.002	0.0004943
Sr	88	3	He	57.304	0.4656	25614.37	0.0081	0.0006852
Sr	88	3	He	58.397	0.4745	25854.44	0.0081	0.0006852
Sr	88	3	He	58.812	0.4778	25634.00	0.0081	0.0006852
Mo	98	3	He	0.186	0.0044	240.01	0.0205	0.0005587
Mo	98	3	He	0.251	0.0057	310.02	0.0205	0.0005587
Mo	98	3	He	0.219	0.005	270.01	0.0205	0.0005587
Ag	107	3	He	0.019	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.281	0.0014	78.00	0.005	1.253E-05
Cd	111	3	He	0.24	0.0012	66.00	0.005	1.253E-05
Cd	111	3	He	0.273	0.0014	74.00	0.005	1.253E-05
Sn	120	3	He	0.095	0.0147	810.06	0.0146	0.01334
Sn	120	3	He	0.23	0.0167	910.06	0.0146	0.01334
Sn	120	3	He	0.401	0.0192	1030.07	0.0146	0.01334
Sb	121	3	He	0.151	0.0036	200.01	0.0142	0.001484
Sb	121	3	He	0.154	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.066	0.0024	130.01	0.0142	0.001484
Ba	137	3	He	22.335	0.1033	5681.41	0.0046	0.000374
Ba	137	3	He	20.956	0.0969	5281.23	0.0046	0.000374
Ba	137	3	He	19.911	0.0921	4941.05	0.0046	0.000374
Tl	205	3	He	0.097	0.0029	580.04	0.0282	0.00021
Tl	205	3	He	0.13	0.0039	750.06	0.0282	0.00021
Tl	205	3	He	0.145	0.0043	830.06	0.0282	0.00021
Pb	208	3	He	0.823	0.0316	3260.53	0.0372	0.0009772
Pb	208	3	He	0.815	0.0313	3070.47	0.0372	0.0009772
Pb	208	3	He	0.799	0.0307	3030.48	0.0372	0.0009772
U	238	3	He	0.229	0.0097	1900.22	0.0417	8.729E-05
U	238	3	He	0.212	0.0089	1720.19	0.0417	8.729E-05
U	238	3	He	0.226	0.0095	1830.22	0.0417	8.729E-05
Sc	45	1	No Gas			1777556.07		
Sc	45	1	No Gas			1807196.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1775437.79		
Ge	72	1	No Gas			949718.19		
Ge	72	1	No Gas			943092.80		
Ge	72	1	No Gas			935990.92		
Sc	45	2	H2			130207.61		
Sc	45	2	H2			130825.16		
Sc	45	2	H2			134283.91		
Ge	72	2	H2			112561.02		
Ge	72	2	H2			111674.09		
Ge	72	2	H2			114567.12		
In	115	2	H2			266799.00		
In	115	2	H2			270583.73		
In	115	2	H2			275833.51		
Sc	45	3	He			29761.17		
Sc	45	3	He			28198.40		
Sc	45	3	He			29150.09		
Ge	72	3	He			59203.05		
Ge	72	3	He			57014.29		
Ge	72	3	He			57395.66		
In	115	3	He			55019.49		
In	115	3	He			54498.05		
In	115	3	He			53653.88		
Tb	159	3	He			251596.79		
Tb	159	3	He			251083.73		
Tb	159	3	He			253900.37		
Bi	209	3	He			196697.61		
Bi	209	3	He			192842.48		
Bi	209	3	He			192689.27		

Quantitation Report

Data File Name	053SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:53:44 PM
Sample Name	410-136176-E-1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

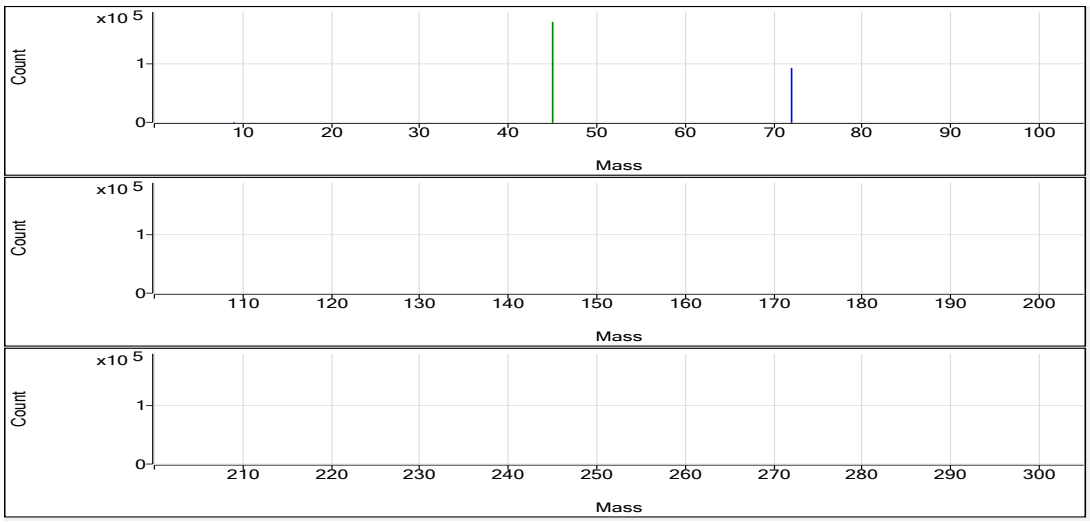
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.187	ppb	14.3	148.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.428	ppb	24.4	20.67	0.0002	Pulse	1.5000	3
Na	23	45	He	3774.166	ppb	0.6	283753.08	9.8086	Pulse	0.1000	3
Mg	24	45	He	1761.087	ppb	1.0	67387.42	2.3294	Pulse	0.1000	3
Al	27	45	He	229.229	ppb	13.1	2903.73	0.1004	Pulse	0.1000	3
K	39	45	He	1456.992	ppb	3.1	51444.58	1.7783	Pulse	0.1000	3
Ca	44	45	He	1957.116	ppb	4.8	3363.85	0.1163	Pulse	0.1000	3
Ti	47	45	He	3.000	ppb	72.0	46.67	0.0016	Pulse	0.1000	3
V	51	45	He	0.367	ppb	17.2	548.68	0.0190	Pulse	0.5000	3
Cr	52	45	He	0.595	ppb	47.7	2410.30	0.0833	Pulse	0.1000	3
Mn	55	45	He	44.763	ppb	3.0	14794.66	0.5114	Pulse	0.1000	3
Fe	57	45	He	166.677	ppb	5.1	2580.33	0.0892	Pulse	0.1000	3
Co	59	45	He	0.886	ppb	4.0	1470.12	0.0508	Pulse	0.1000	3
Ni	60	72	He	1.651	ppb	8.2	1086.75	0.0190	Pulse	0.1000	3
Cu	63	72	He	0.343	ppb	40.8	606.70	0.0106	Pulse	0.1000	3
Zn	66	72	He	1.934	ppb	26.7	460.03	0.0080	Pulse	0.1000	3
As	75	72	He	0.153	ppb	63.7	45.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	10.380	ppb	8.9	4667.61	0.0849	Pulse	0.1000	3
Mo	98	115	He	0.082	ppb	25.2	123.34	0.0022	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	59.7	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.039	ppb	30.5	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.108	ppb	134.4	823.39	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.082	ppb	75.7	146.67	0.0027	Pulse	0.1000	3
Ba	137	115	He	68.951	ppb	0.3	17508.31	0.3180	Pulse	0.1000	3
Tl	205	209	He	0.057	ppb	12.9	356.69	0.0018	Pulse	0.1000	3
Pb	208	209	He	0.126	ppb	9.6	1106.73	0.0057	Pulse	0.1000	3
U	238	209	He	0.021	ppb	14.6	186.68	0.0010	Pulse	0.1000	3

ISTD Table:

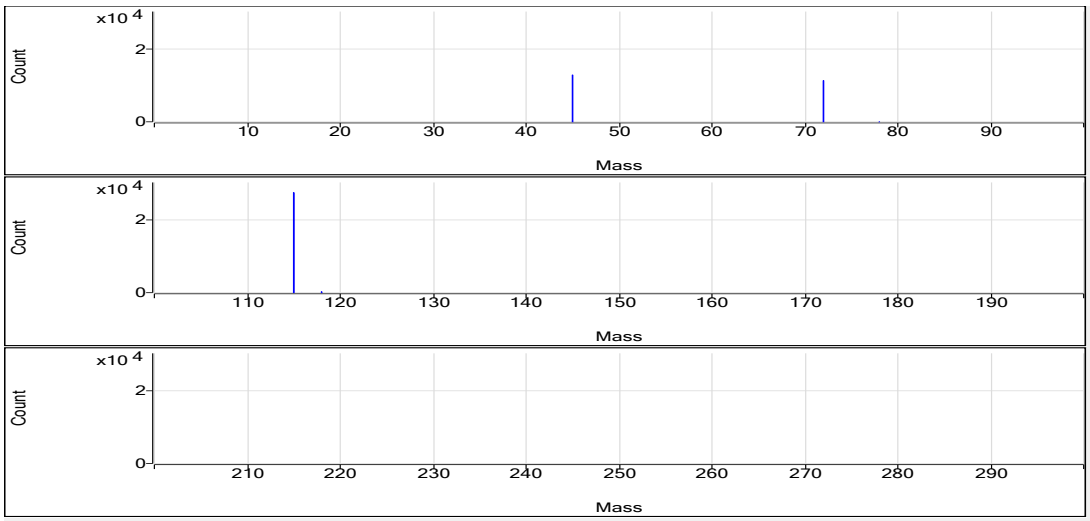
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1718927.01	0.4	97.6	Analog	0.1000	3
No Gas	Ge	72	927311.97	0.6	103.9	Pulse	0.1000	3
H2	Sc	45	128766.34	1.8	101.1	Pulse	0.1000	3
H2	Ge	72	113347.14	0.9	105.7	Pulse	0.1000	3
H2	In	115	274806.98	0.1	103.2	Pulse	0.1000	3
He	Sc	45	28929.71	0.5	101.5	Pulse	0.1000	3
He	Ge	72	57205.22	0.6	103.4	Pulse	0.1000	3
He	In	115	55051.03	2.3	102.6	Pulse	0.1000	3
He	Tb	159	249220.56	0.9	101.4	Pulse	0.1000	3
He	Bi	209	194823.52	0.3	102.1	Pulse	0.1000	3

No Gas

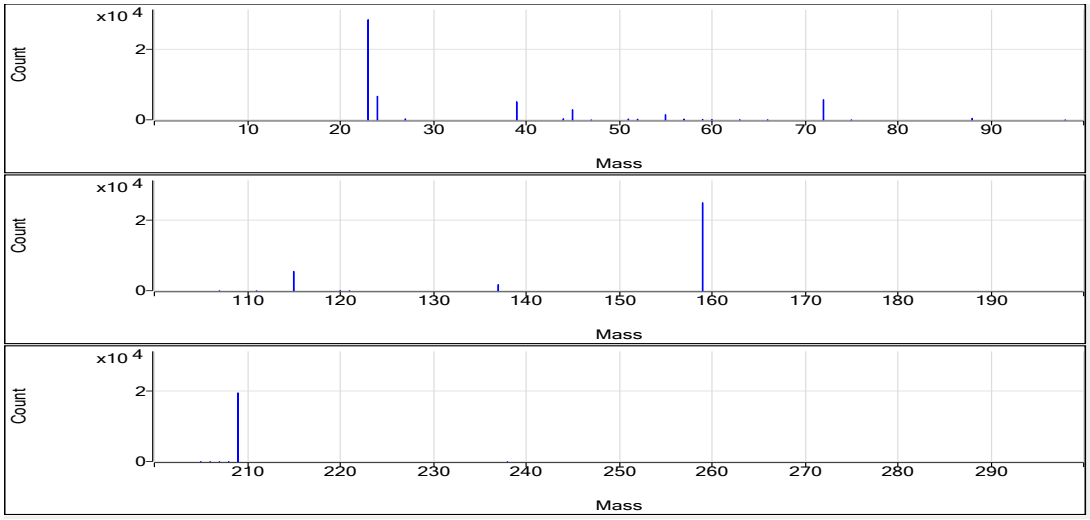


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.165	0.0001	134.00	0.0004	1.287E-05
Be	9	1	No Gas	0.179	0.0001	144.00	0.0004	1.287E-05
Be	9	1	No Gas	0.217	0.0001	168.00	0.0004	1.287E-05
Se	78	2	H2	0.312	0.0001	15.33	0.0004	1.451E-05
Se	78	2	H2	0.458	0.0002	22.00	0.0004	1.451E-05
Se	78	2	H2	0.515	0.0002	24.67	0.0004	1.451E-05
Na	23	3	He	3760.631	9.7743	283454.35	0.0025	0.2648
Na	23	3	He	3801.555	9.8778	284176.19	0.0025	0.2648
Na	23	3	He	3760.312	9.7735	283628.71	0.0025	0.2648
Mg	24	3	He	1742.262	2.3046	66831.69	0.0013	0.005032
Mg	24	3	He	1774.794	2.3475	67535.17	0.0013	0.005032
Mg	24	3	He	1766.206	2.3362	67795.40	0.0013	0.005032
Al	27	3	He	197.203	0.0866	2510.31	0.0004	0.001519
Al	27	3	He	233.48	0.1022	2940.41	0.0004	0.001519
Al	27	3	He	257.005	0.1124	3260.47	0.0004	0.001519
K	39	3	He	1498.356	1.8185	52735.68	0.001	0.3627
K	39	3	He	1464.551	1.7856	51371.22	0.001	0.3627
K	39	3	He	1408.069	1.7308	50226.84	0.001	0.3627
Ca	44	3	He	2051.479	0.1217	3530.56	0.0001	0.002571
Ca	44	3	He	1864.785	0.1109	3190.46	0.0001	0.002571
Ca	44	3	He	1955.084	0.1161	3370.52	0.0001	0.002571
Ti	47	3	He	1.744	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	1.763	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	5.492	0.0028	80.00	0.0005	0.0002328
V	51	3	He	0.295	0.0175	508.01	0.0201	0.0116
V	51	3	He	0.413	0.0199	572.01	0.0201	0.0116
V	51	3	He	0.394	0.0195	566.01	0.0201	0.0116
Cr	52	3	He	0.4	0.0783	2270.26	0.0257	0.06801
Cr	52	3	He	0.465	0.08	2300.27	0.0257	0.06801
Cr	52	3	He	0.921	0.0917	2660.36	0.0257	0.06801
Mn	55	3	He	45.552	0.5203	15088.44	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	43.217	0.4938	14207.30	0.0113	0.004215
Mn	55	3	He	45.519	0.5199	15088.23	0.0113	0.004215
Fe	57	3	He	171.687	0.0917	2660.34	0.0005	0.004099
Fe	57	3	He	156.782	0.0841	2420.28	0.0005	0.004099
Fe	57	3	He	171.563	0.0917	2660.36	0.0005	0.004099
Co	59	3	He	0.877	0.0503	1460.14	0.0518	0.004913
Co	59	3	He	0.925	0.0528	1520.11	0.0518	0.004913
Co	59	3	He	0.856	0.0493	1430.12	0.0518	0.004913
Ni	60	3	He	1.578	0.0185	1050.07	0.0075	0.006695
Ni	60	3	He	1.807	0.0202	1160.09	0.0075	0.006695
Ni	60	3	He	1.567	0.0184	1050.08	0.0075	0.006695
Cu	63	3	He	0.348	0.0107	610.04	0.0216	0.003198
Cu	63	3	He	0.48	0.0136	780.05	0.0216	0.003198
Cu	63	3	He	0.2	0.0075	430.02	0.0216	0.003198
Zn	66	3	He	2.217	0.0088	500.03	0.0026	0.002954
Zn	66	3	He	2.247	0.0089	510.03	0.0026	0.002954
Zn	66	3	He	1.339	0.0065	370.02	0.0026	0.002954
As	75	3	He	0.161	0.0008	46.00	0.002	0.0004943
As	75	3	He	0.245	0.001	56.00	0.002	0.0004943
As	75	3	He	0.052	0.0006	34.00	0.002	0.0004943
Sr	88	3	He	9.317	0.0763	4310.77	0.0081	0.0006852
Sr	88	3	He	10.966	0.0897	4881.00	0.0081	0.0006852
Sr	88	3	He	10.858	0.0888	4811.06	0.0081	0.0006852
Mo	98	3	He	0.059	0.0018	100.00	0.0205	0.0005587
Mo	98	3	He	0.089	0.0024	130.01	0.0205	0.0005587
Mo	98	3	He	0.099	0.0026	140.01	0.0205	0.0005587
Ag	107	3	He	0.023	0.0014	80.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.026	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.049	0.0003	14.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Sn	120	3	He	0.249	0.017	960.08	0.0146	0.01334
Sn	120	3	He	0.118	0.0151	820.05	0.0146	0.01334
Sn	120	3	He	-0.042	0.0127	690.04	0.0146	0.01334
Sb	121	3	He	0.132	0.0034	190.01	0.0142	0.001484
Sb	121	3	He	0.102	0.0029	160.01	0.0142	0.001484
Sb	121	3	He	0.012	0.0017	90.00	0.0142	0.001484
Ba	137	3	He	69.095	0.3187	18012.26	0.0046	0.000374
Ba	137	3	He	68.7	0.3169	17251.31	0.0046	0.000374
Ba	137	3	He	69.058	0.3185	17261.35	0.0046	0.000374
Tl	205	3	He	0.06	0.0019	370.02	0.0282	0.00021
Tl	205	3	He	0.063	0.002	390.02	0.0282	0.00021
Tl	205	3	He	0.049	0.0016	310.02	0.0282	0.00021
Pb	208	3	He	0.128	0.0057	620.04	0.0372	0.0009772
Pb	208	3	He	0.138	0.0061	700.05	0.0372	0.0009772
Pb	208	3	He	0.113	0.0052	460.03	0.0372	0.0009772
U	238	3	He	0.021	0.001	190.01	0.0417	8.729E-05
U	238	3	He	0.024	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
Sc	45	1	No Gas			1721097.01		
Sc	45	1	No Gas			1724962.16		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1710721.85		
Ge	72	1	No Gas			933839.36		
Ge	72	1	No Gas			924102.41		
Ge	72	1	No Gas			923994.13		
Sc	45	2	H2			126063.03		
Sc	45	2	H2			129774.69		
Sc	45	2	H2			130461.30		
Ge	72	2	H2			112238.02		
Ge	72	2	H2			113518.89		
Ge	72	2	H2			114284.50		
In	115	2	H2			274976.46		
In	115	2	H2			274383.71		
In	115	2	H2			275060.78		
Sc	45	3	He			28999.88		
Sc	45	3	He			28769.14		
Sc	45	3	He			29020.11		
Ge	72	3	He			56913.97		
Ge	72	3	He			57546.98		
Ge	72	3	He			57154.70		
In	115	3	He			56525.89		
In	115	3	He			54447.61		
In	115	3	He			54196.89		
Tb	159	3	He			249854.20		
Tb	159	3	He			251098.06		
Tb	159	3	He			246709.43		
Bi	209	3	He			195418.88		
Bi	209	3	He			194941.33		
Bi	209	3	He			194110.35		

Quantitation Report

Data File Name	054SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:55:43 PM
Sample Name	410-136176-E-8-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

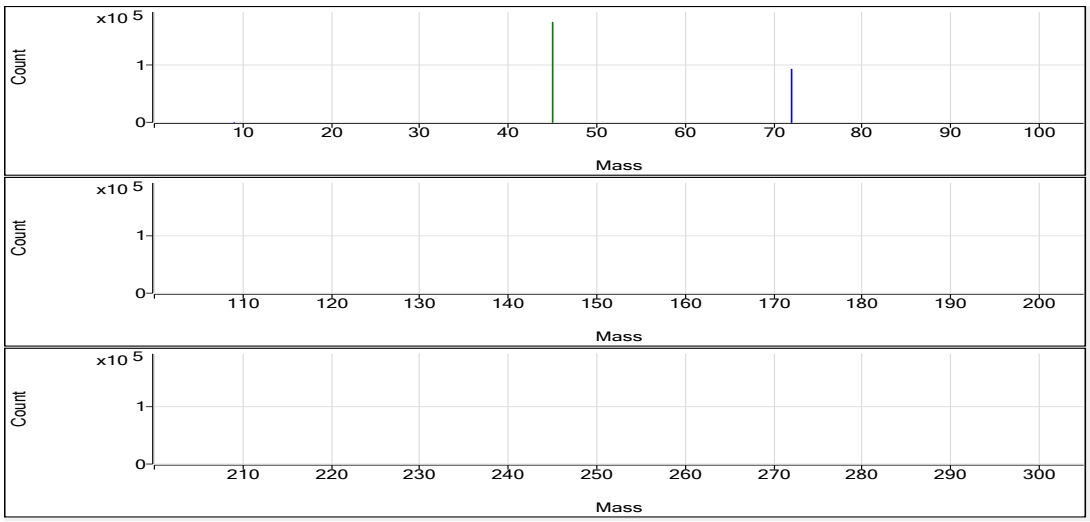
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	32.8	56.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.382	ppb	13.2	18.45	0.0002	Pulse	1.5000	3
Na	23	45	He	7803.389	ppb	0.7	565371.57	19.9972	Pulse	0.1000	3
Mg	24	45	He	25475.082	ppb	1.3	950692.17	33.6282	Pulse	0.1000	3
Al	27	45	He	53.643	ppb	24.6	696.71	0.0247	Pulse	0.1000	3
K	39	45	He	2037.874	ppb	2.6	66223.90	2.3427	Pulse	0.1000	3
Ca	44	45	He	57197.729	ppb	1.7	94002.63	3.3253	Pulse	0.1000	3
Ti	47	45	He	0.263	ppb	5.2	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.250	ppb	38.6	469.34	0.0166	Pulse	0.5000	3
Cr	52	45	He	0.998	ppb	24.0	2650.33	0.0937	Pulse	0.1000	3
Mn	55	45	He	1.200	ppb	5.1	503.36	0.0178	Pulse	0.1000	3
Fe	57	45	He	42.913	ppb	25.6	733.38	0.0260	Pulse	0.1000	3
Co	59	45	He	0.101	ppb	18.4	286.68	0.0101	Pulse	0.1000	3
Ni	60	72	He	0.280	ppb	79.1	500.03	0.0088	Pulse	0.1000	3
Cu	63	72	He	0.159	ppb	20.1	376.68	0.0066	Pulse	0.1000	3
Zn	66	72	He	0.324	ppb	27.6	216.68	0.0038	Pulse	0.1000	3
As	75	72	He	0.083	ppb	79.7	37.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	63.932	ppb	2.8	27995.07	0.5194	Pulse	0.1000	3
Mo	98	115	He	0.060	ppb	68.0	96.67	0.0018	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	153.2	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.025	ppb	16.3	7.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.140	ppb	45.1	830.06	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.062	ppb	110.8	126.67	0.0024	Pulse	0.1000	3
Ba	137	115	He	52.384	ppb	5.7	13023.39	0.2417	Pulse	0.1000	3
Tl	205	209	He	0.027	ppb	21.0	190.01	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.047	ppb	7.4	523.36	0.0027	Pulse	0.1000	3
U	238	209	He	0.132	ppb	4.9	1083.42	0.0056	Pulse	0.1000	3

ISTD Table:

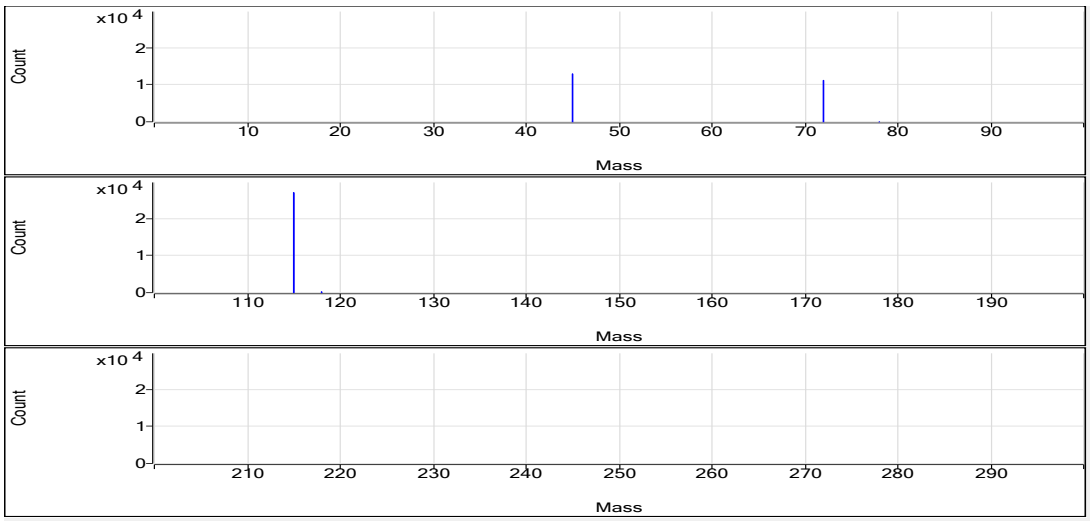
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1744416.74	0.9	99.0	Analog	0.1000	3
No Gas	Ge	72	927046.52	0.5	103.9	Pulse	0.1000	3
H2	Sc	45	129983.85	1.7	102.1	Pulse	0.1000	3
H2	Ge	72	112470.18	1.2	104.9	Pulse	0.1000	3
H2	In	115	271214.89	1.0	101.8	Pulse	0.1000	3
He	Sc	45	28274.85	1.8	99.2	Pulse	0.1000	3
He	Ge	72	56900.48	1.1	102.8	Pulse	0.1000	3
He	In	115	53916.41	1.8	100.5	Pulse	0.1000	3
He	Tb	159	247710.60	0.5	100.8	Pulse	0.1000	3
He	Bi	209	193066.74	0.8	101.2	Pulse	0.1000	3

No Gas

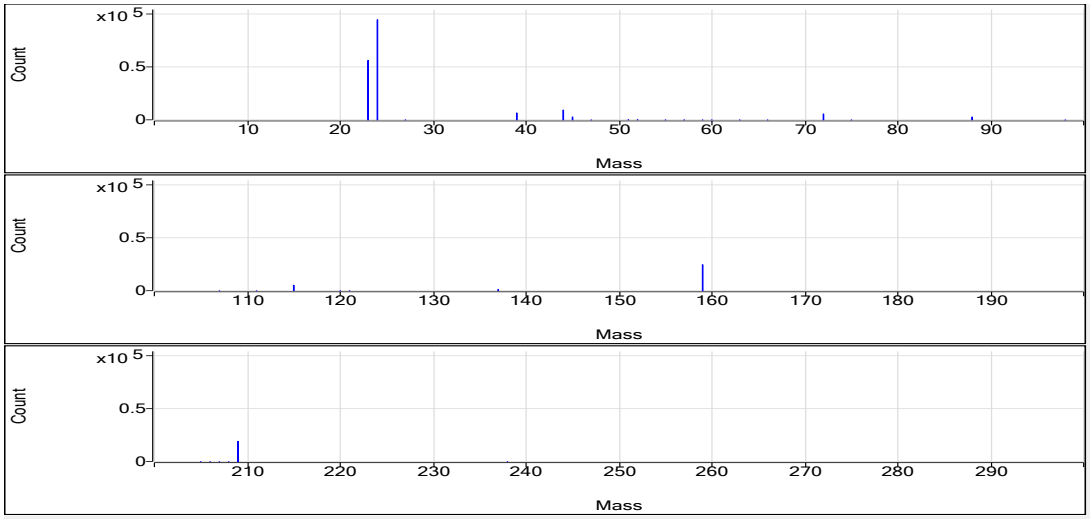


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.043	0	52.00	0.0004	1.287E-05
Be	9	1	No Gas	0.067	0	68.00	0.0004	1.287E-05
Se	78	2	H2	0.331	0.0001	16.00	0.0004	1.451E-05
Se	78	2	H2	0.383	0.0002	18.67	0.0004	1.451E-05
Se	78	2	H2	0.432	0.0002	20.67	0.0004	1.451E-05
Na	23	3	He	7787.341	19.9566	564136.32	0.0025	0.2648
Na	23	3	He	7755.521	19.8762	572021.87	0.0025	0.2648
Na	23	3	He	7867.305	20.1589	559956.52	0.0025	0.2648
Mg	24	3	He	25393.407	33.5204	947558.42	0.0013	0.005032
Mg	24	3	He	25195.639	33.2594	957181.00	0.0013	0.005032
Mg	24	3	He	25836.2	34.1048	947337.10	0.0013	0.005032
Al	27	3	He	68.67	0.0311	880.06	0.0004	0.001519
Al	27	3	He	44.019	0.0205	590.03	0.0004	0.001519
Al	27	3	He	48.24	0.0223	620.04	0.0004	0.001519
K	39	3	He	2074.389	2.3781	67225.21	0.001	0.3627
K	39	3	He	1975.935	2.2825	65687.98	0.001	0.3627
K	39	3	He	2063.299	2.3674	65758.52	0.001	0.3627
Ca	44	3	He	57341.001	3.3336	94233.86	0.0001	0.002571
Ca	44	3	He	56177.44	3.266	93992.62	0.0001	0.002571
Ca	44	3	He	58074.747	3.3762	93781.42	0.0001	0.002571
Ti	47	3	He	0.263	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.249	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.277	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.311	0.0178	504.01	0.0201	0.0116
V	51	3	He	0.139	0.0144	414.01	0.0201	0.0116
V	51	3	He	0.301	0.0176	490.01	0.0201	0.0116
Cr	52	3	He	0.864	0.0902	2550.32	0.0257	0.06801
Cr	52	3	He	1.275	0.1008	2900.38	0.0257	0.06801
Cr	52	3	He	0.856	0.09	2500.29	0.0257	0.06801
Mn	55	3	He	1.221	0.018	510.03	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1.131	0.017	490.03	0.0113	0.004215
Mn	55	3	He	1.249	0.0184	510.03	0.0113	0.004215
Fe	57	3	He	43.951	0.0265	750.05	0.0005	0.004099
Fe	57	3	He	31.454	0.0202	580.03	0.0005	0.004099
Fe	57	3	He	53.334	0.0313	870.06	0.0005	0.004099
Co	59	3	He	0.083	0.0092	260.01	0.0518	0.004913
Co	59	3	He	0.12	0.0111	320.01	0.0518	0.004913
Co	59	3	He	0.1	0.0101	280.01	0.0518	0.004913
Ni	60	3	He	0.383	0.0095	550.03	0.0075	0.006695
Ni	60	3	He	0.432	0.0099	560.03	0.0075	0.006695
Ni	60	3	He	0.026	0.0069	390.02	0.0075	0.006695
Cu	63	3	He	0.141	0.0063	360.02	0.0216	0.003198
Cu	63	3	He	0.139	0.0062	350.01	0.0216	0.003198
Cu	63	3	He	0.195	0.0074	420.02	0.0216	0.003198
Zn	66	3	He	0.395	0.004	230.01	0.0026	0.002954
Zn	66	3	He	0.224	0.0035	200.01	0.0026	0.002954
Zn	66	3	He	0.354	0.0039	220.01	0.0026	0.002954
As	75	3	He	0.014	0.0005	30.00	0.002	0.0004943
As	75	3	He	0.146	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.09	0.0007	38.00	0.002	0.0004943
Sr	88	3	He	65.925	0.5355	28489.29	0.0081	0.0006852
Sr	88	3	He	63.427	0.5153	27597.57	0.0081	0.0006852
Sr	88	3	He	62.445	0.5073	27898.36	0.0081	0.0006852
Mo	98	3	He	0.019	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.1	0.0026	140.01	0.0205	0.0005587
Mo	98	3	He	0.062	0.0018	100.00	0.0205	0.0005587
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.019	0.0013	70.00	0.043	0.0004367
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.155	0.0156	830.05	0.0146	0.01334
Sn	120	3	He	0.071	0.0144	770.06	0.0146	0.01334
Sn	120	3	He	0.194	0.0162	890.06	0.0146	0.01334
Sb	121	3	He	0.133	0.0034	180.01	0.0142	0.001484
Sb	121	3	He	0.053	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	-0.002	0.0015	80.00	0.0142	0.001484
Ba	137	3	He	54.91	0.2533	13477.10	0.0046	0.000374
Ba	137	3	He	53.119	0.2451	13126.94	0.0046	0.000374
Ba	137	3	He	49.123	0.2267	12466.13	0.0046	0.000374
Tl	205	3	He	0.033	0.0011	220.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.028	0.001	190.01	0.0282	0.00021
Pb	208	3	He	0.045	0.0027	270.01	0.0372	0.0009772
Pb	208	3	He	0.044	0.0026	300.02	0.0372	0.0009772
Pb	208	3	He	0.05	0.0029	360.02	0.0372	0.0009772
U	238	3	He	0.137	0.0058	1110.09	0.0417	8.729E-05
U	238	3	He	0.136	0.0057	1120.10	0.0417	8.729E-05
U	238	3	He	0.125	0.0053	1020.07	0.0417	8.729E-05
Sc	45	1	No Gas			1762753.72		
Sc	45	1	No Gas			1739199.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1731296.54		
Ge	72	1	No Gas			927651.86		
Ge	72	1	No Gas			931544.67		
Ge	72	1	No Gas			921943.03		
Sc	45	2	H2			128060.36		
Sc	45	2	H2			132358.16		
Sc	45	2	H2			129533.04		
Ge	72	2	H2			111089.03		
Ge	72	2	H2			113690.31		
Ge	72	2	H2			112631.20		
In	115	2	H2			268057.55		
In	115	2	H2			273251.30		
In	115	2	H2			272335.82		
Sc	45	3	He			28268.09		
Sc	45	3	He			28779.26		
Sc	45	3	He			27777.20		
Ge	72	3	He			57596.67		
Ge	72	3	He			56471.93		
Ge	72	3	He			56632.83		
In	115	3	He			53202.98		
In	115	3	He			53564.20		
In	115	3	He			54999.49		
Tb	159	3	He			249023.71		
Tb	159	3	He			247511.97		
Tb	159	3	He			246596.11		
Bi	209	3	He			191779.49		
Bi	209	3	He			194875.52		
Bi	209	3	He			192545.21		

Quantitation Report

Data File Name	055SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:57:41 PM
Sample Name	410-136176-E-7-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

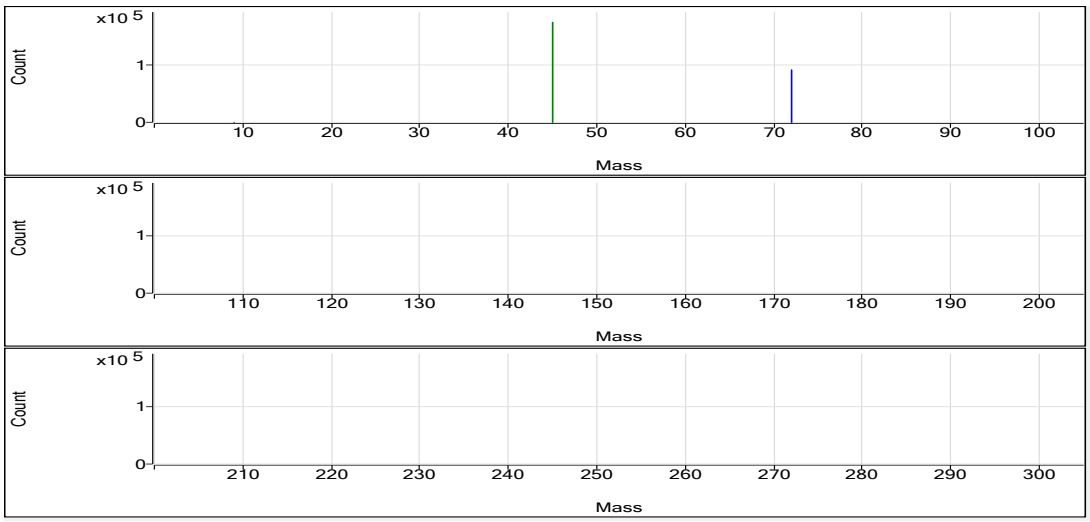
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.064	ppb	37.9	66.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.289	ppb	56.1	14.22	0.0001	Pulse	1.5000	3
Na	23	45	He	19372.577	ppb	2.2	1459066.02	49.2522	Analog	0.1000	3
Mg	24	45	He	34919.368	ppb	1.5	1365626.75	46.0932	Analog	0.1000	3
Al	27	45	He	5.602	ppb	19.6	116.67	0.0039	Pulse	0.1000	3
K	39	45	He	3550.839	ppb	3.8	112927.89	3.8126	Pulse	0.1000	3
Ca	44	45	He	121975.593	ppb	3.0	209967.07	7.0883	Pulse	0.1000	3
Ti	47	45	He	0.713	ppb	57.3	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.257	ppb	21.5	496.01	0.0167	Pulse	0.5000	3
Cr	52	45	He	0.263	ppb	88.6	2216.91	0.0748	Pulse	0.1000	3
Mn	55	45	He	894.092	ppb	2.1	300216.20	10.1338	Pulse	0.1000	3
Fe	57	45	He	10.023	ppb	22.9	273.34	0.0092	Pulse	0.1000	3
Co	59	45	He	0.884	ppb	14.6	1500.13	0.0507	Pulse	0.1000	3
Ni	60	72	He	1.341	ppb	13.5	926.73	0.0167	Pulse	0.1000	3
Cu	63	72	He	0.233	ppb	15.1	456.69	0.0082	Pulse	0.1000	3
Zn	66	72	He	1.247	ppb	30.1	346.68	0.0062	Pulse	0.1000	3
As	75	72	He	0.048	ppb	220.2	32.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	106.623	ppb	0.2	46651.19	0.8657	Pulse	0.1000	3
Mo	98	115	He	0.196	ppb	6.1	246.68	0.0046	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	65.3	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.136	ppb	40.1	37.33	0.0007	Pulse	0.5000	3
Sn	120	115	He	0.137	ppb	83.1	826.72	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.061	ppb	106.0	126.67	0.0023	Pulse	0.1000	3
Ba	137	115	He	19.194	ppb	2.7	4784.33	0.0888	Pulse	0.1000	3
Tl	205	209	He	0.070	ppb	13.1	423.36	0.0022	Pulse	0.1000	3
Pb	208	209	He	0.030	ppb	24.1	403.35	0.0021	Pulse	0.1000	3
U	238	209	He	0.602	ppb	4.1	4877.78	0.0252	Pulse	0.1000	3

ISTD Table:

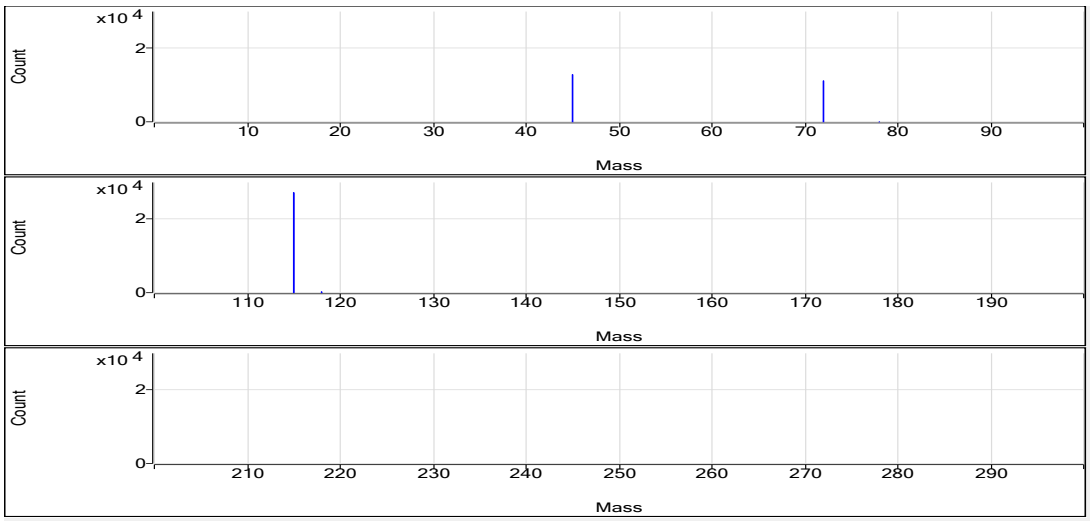
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1739633.52	1.3	98.8	Analog	0.1000	3
No Gas	Ge	72	912084.00	0.4	102.2	Pulse	0.1000	3
H2	Sc	45	128887.27	1.9	101.2	Pulse	0.1000	3
H2	Ge	72	111915.80	1.1	104.4	Pulse	0.1000	3
H2	In	115	272992.61	0.4	102.5	Pulse	0.1000	3
He	Sc	45	29634.27	2.3	103.9	Pulse	0.1000	3
He	Ge	72	55568.66	0.9	100.4	Pulse	0.1000	3
He	In	115	53886.01	0.9	100.4	Pulse	0.1000	3
He	Tb	159	249350.86	1.0	101.5	Pulse	0.1000	3
He	Bi	209	193405.21	0.4	101.3	Pulse	0.1000	3

No Gas

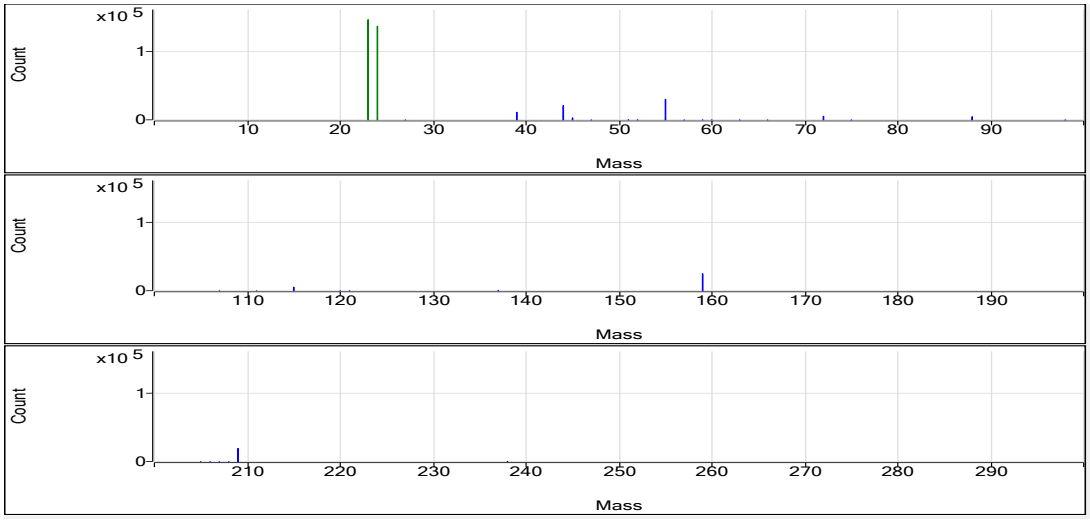


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.073	0	72.00	0.0004	1.287E-05
Be	9	1	No Gas	0.082	0	78.00	0.0004	1.287E-05
Be	9	1	No Gas	0.036	0	48.00	0.0004	1.287E-05
Se	78	2	H2	0.285	0.0001	14.00	0.0004	1.451E-05
Se	78	2	H2	0.128	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.452	0.0002	21.33	0.0004	1.451E-05
Na	23	3	He	19662.794	49.986	1452592.32	0.0025	0.2648
Na	23	3	He	18872.967	47.9888	1458005.13	0.0025	0.2648
Na	23	3	He	19581.97	49.7817	1466600.60	0.0025	0.2648
Mg	24	3	He	35424.543	46.76	1358843.26	0.0013	0.005032
Mg	24	3	He	34368.298	45.3659	1378315.45	0.0013	0.005032
Mg	24	3	He	34965.263	46.1538	1359721.54	0.0013	0.005032
Al	27	3	He	6.054	0.0041	120.00	0.0004	0.001519
Al	27	3	He	6.401	0.0043	130.01	0.0004	0.001519
Al	27	3	He	4.351	0.0034	100.01	0.0004	0.001519
K	39	3	He	3698.068	3.9556	114950.54	0.001	0.3627
K	39	3	He	3429.017	3.6942	112238.91	0.001	0.3627
K	39	3	He	3525.432	3.7879	111594.23	0.001	0.3627
Ca	44	3	He	123810.193	7.1949	209082.07	0.0001	0.002571
Ca	44	3	He	117795.022	6.8454	207978.92	0.0001	0.002571
Ca	44	3	He	124321.564	7.2246	212840.21	0.0001	0.002571
Ti	47	3	He	0.242	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.926	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.971	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.314	0.0179	520.01	0.0201	0.0116
V	51	3	He	0.252	0.0167	506.01	0.0201	0.0116
V	51	3	He	0.204	0.0157	462.01	0.0201	0.0116
Cr	52	3	He	0.313	0.0761	2210.24	0.0257	0.06801
Cr	52	3	He	0.466	0.08	2430.28	0.0257	0.06801
Cr	52	3	He	0.009	0.0682	2010.21	0.0257	0.06801
Mn	55	3	He	905.586	10.264	298272.09	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	872.739	9.8919	300537.42	0.0113	0.004215
Mn	55	3	He	903.95	10.2455	301839.10	0.0113	0.004215
Fe	57	3	He	7.477	0.0079	230.01	0.0005	0.004099
Fe	57	3	He	10.671	0.0095	290.01	0.0005	0.004099
Fe	57	3	He	11.921	0.0102	300.01	0.0005	0.004099
Co	59	3	He	1.008	0.0571	1660.14	0.0518	0.004913
Co	59	3	He	0.75	0.0438	1330.12	0.0518	0.004913
Co	59	3	He	0.894	0.0513	1510.14	0.0518	0.004913
Ni	60	3	He	1.543	0.0182	1000.06	0.0075	0.006695
Ni	60	3	He	1.287	0.0163	910.06	0.0075	0.006695
Ni	60	3	He	1.193	0.0156	870.06	0.0075	0.006695
Cu	63	3	He	0.273	0.0091	500.03	0.0216	0.003198
Cu	63	3	He	0.217	0.0079	440.02	0.0216	0.003198
Cu	63	3	He	0.209	0.0077	430.03	0.0216	0.003198
Zn	66	3	He	0.813	0.0051	280.01	0.0026	0.002954
Zn	66	3	He	1.463	0.0068	380.02	0.0026	0.002954
Zn	66	3	He	1.465	0.0068	380.01	0.0026	0.002954
As	75	3	He	-0.011	0.0005	26.00	0.002	0.0004943
As	75	3	He	-0.015	0.0005	26.00	0.002	0.0004943
As	75	3	He	0.169	0.0008	46.00	0.002	0.0004943
Sr	88	3	He	106.416	0.864	46146.34	0.0081	0.0006852
Sr	88	3	He	106.906	0.868	47169.78	0.0081	0.0006852
Sr	88	3	He	106.547	0.8651	46637.44	0.0081	0.0006852
Mo	98	3	He	0.183	0.0043	230.01	0.0205	0.0005587
Mo	98	3	He	0.206	0.0048	260.01	0.0205	0.0005587
Mo	98	3	He	0.199	0.0046	250.01	0.0205	0.0005587
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.095	0.0005	26.00	0.005	1.253E-05
Cd	111	3	He	0.115	0.0006	32.00	0.005	1.253E-05
Cd	111	3	He	0.198	0.001	54.00	0.005	1.253E-05
Sn	120	3	He	0.215	0.0165	880.06	0.0146	0.01334
Sn	120	3	He	0.006	0.0134	730.05	0.0146	0.01334
Sn	120	3	He	0.191	0.0161	870.06	0.0146	0.01334
Sb	121	3	He	0.001	0.0015	80.00	0.0142	0.001484
Sb	121	3	He	0.128	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.052	0.0022	120.01	0.0142	0.001484
Ba	137	3	He	19.797	0.0916	4891.05	0.0046	0.000374
Ba	137	3	He	18.896	0.0874	4750.98	0.0046	0.000374
Ba	137	3	He	18.887	0.0874	4710.96	0.0046	0.000374
Tl	205	3	He	0.079	0.0024	470.03	0.0282	0.00021
Tl	205	3	He	0.061	0.0019	370.02	0.0282	0.00021
Tl	205	3	He	0.071	0.0022	430.03	0.0282	0.00021
Pb	208	3	He	0.038	0.0024	270.01	0.0372	0.0009772
Pb	208	3	He	0.024	0.0019	160.01	0.0372	0.0009772
Pb	208	3	He	0.028	0.002	220.01	0.0372	0.0009772
U	238	3	He	0.587	0.0246	4741.01	0.0417	8.729E-05
U	238	3	He	0.59	0.0247	4761.11	0.0417	8.729E-05
U	238	3	He	0.631	0.0264	5131.21	0.0417	8.729E-05
Sc	45	1	No Gas			1725320.76		
Sc	45	1	No Gas			1727499.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1766079.82		
Ge	72	1	No Gas			907966.63		
Ge	72	1	No Gas			913160.38		
Ge	72	1	No Gas			915124.99		
Sc	45	2	H2			127293.31		
Sc	45	2	H2			131662.64		
Sc	45	2	H2			127705.85		
Ge	72	2	H2			111038.28		
Ge	72	2	H2			113267.43		
Ge	72	2	H2			111441.68		
In	115	2	H2			273928.04		
In	115	2	H2			273385.74		
In	115	2	H2			271664.06		
Sc	45	3	He			29059.96		
Sc	45	3	He			30382.19		
Sc	45	3	He			29460.66		
Ge	72	3	He			54986.48		
Ge	72	3	He			55880.16		
Ge	72	3	He			55839.33		
In	115	3	He			53413.19		
In	115	3	He			54346.89		
In	115	3	He			53915.30		
Tb	159	3	He			247922.36		
Tb	159	3	He			252097.18		
Tb	159	3	He			248033.04		
Bi	209	3	He			192994.10		
Bi	209	3	He			192915.78		
Bi	209	3	He			194305.76		

Quantitation Report

Data File Name	056SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 4:59:39 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

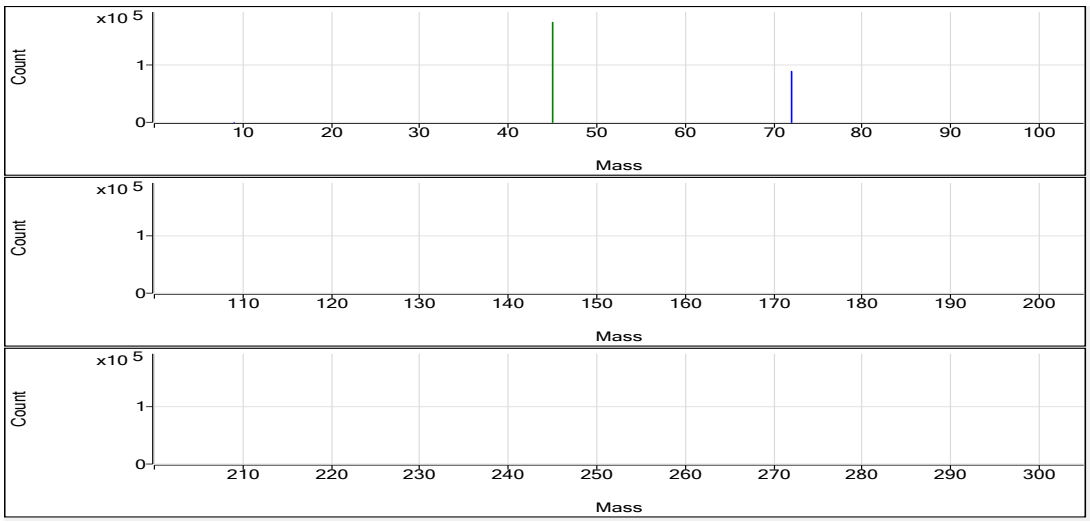
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.050	ppb	22.2	56.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	64.1	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	14.015	ppb	57.3	8406.06	0.3003	Pulse	0.1000	3
Mg	24	45	He	11.842	ppb	19.5	576.70	0.0207	Pulse	0.1000	3
Al	27	45	He	3.020	ppb	102.4	80.00	0.0028	Pulse	0.1000	3
K	39	45	He	14.494	ppb	339.5	10524.11	0.3768	Pulse	0.1000	3
Ca	44	45	He	4.807	ppb	203.0	80.00	0.0029	Pulse	0.1000	3
Ti	47	45	He	-0.253	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.115	ppb	21.6	389.34	0.0139	Pulse	0.5000	3
Cr	52	45	He	0.293	ppb	19.9	2116.91	0.0755	Pulse	0.1000	3
Mn	55	45	He	0.705	ppb	34.8	340.02	0.0122	Pulse	0.1000	3
Fe	57	45	He	1.351	ppb	161.1	133.34	0.0048	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	172.2	173.34	0.0061	Pulse	0.1000	3
Ni	60	72	He	0.116	ppb	115.7	410.02	0.0076	Pulse	0.1000	3
Cu	63	72	He	0.083	ppb	40.4	270.01	0.0050	Pulse	0.1000	3
Zn	66	72	He	0.110	ppb	364.5	176.67	0.0032	Pulse	0.1000	3
As	75	72	He	0.144	ppb	15.7	42.00	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.084	ppb	94.8	73.33	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.030	ppb	43.7	63.33	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	55.5	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	66.9	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.064	ppb	211.9	763.39	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.049	ppb	58.1	116.67	0.0022	Pulse	0.1000	3
Ba	137	115	He	0.094	ppb	97.6	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.027	ppb	32.2	186.68	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	18.4	373.35	0.0020	Pulse	0.1000	3
U	238	209	He	0.003	ppb	87.0	43.33	0.0002	Pulse	0.1000	3

ISTD Table:

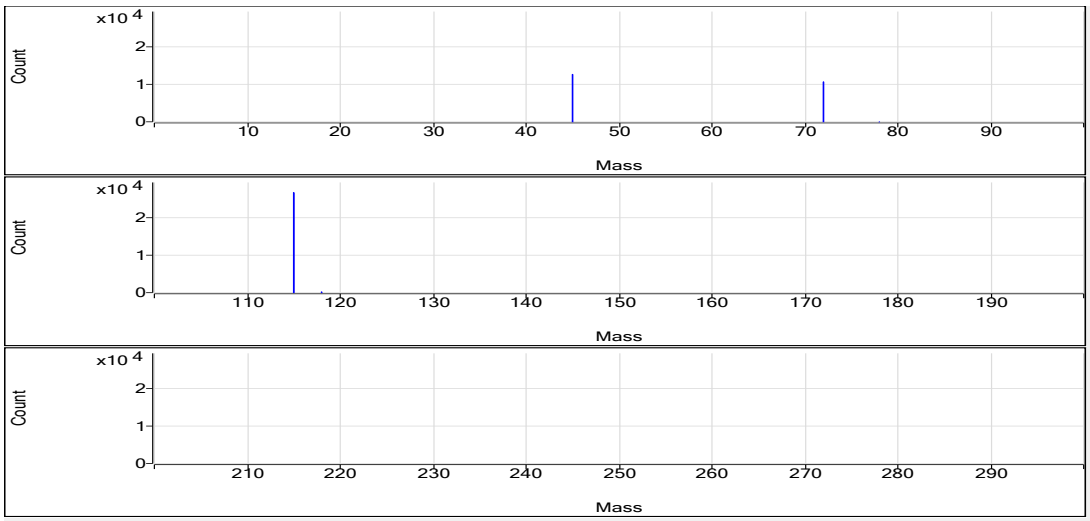
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1738182.37	1.2	98.7	Analog	0.1000	3
No Gas	Ge	72	885683.61	0.6	99.2	Pulse	0.1000	3
H2	Sc	45	127222.28	1.3	99.9	Pulse	0.1000	3
H2	Ge	72	107119.38	1.4	99.9	Pulse	0.1000	3
H2	In	115	268233.37	0.1	100.7	Pulse	0.1000	3
He	Sc	45	28024.37	4.2	98.3	Pulse	0.1000	3
He	Ge	72	54170.51	2.8	97.9	Pulse	0.1000	3
He	In	115	53535.14	1.6	99.7	Pulse	0.1000	3
He	Tb	159	245860.47	1.1	100.0	Pulse	0.1000	3
He	Bi	209	189921.08	1.0	99.5	Pulse	0.1000	3

No Gas

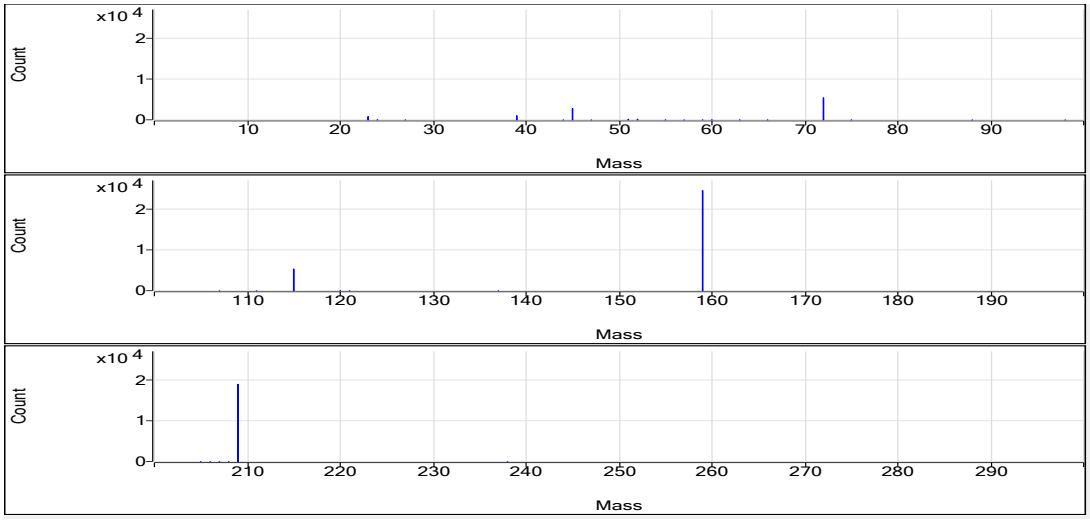


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.041	0	50.00	0.0004	1.287E-05
Be	9	1	No Gas	0.046	0	54.00	0.0004	1.287E-05
Be	9	1	No Gas	0.062	0	66.00	0.0004	1.287E-05
Se	78	2	H2	0.011	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.058	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.041	0	3.33	0.0004	1.451E-05
Na	23	3	He	18.697	0.3121	8322.68	0.0025	0.2648
Na	23	3	He	18.608	0.3119	8923.04	0.0025	0.2648
Na	23	3	He	4.741	0.2768	7972.45	0.0025	0.2648
Mg	24	3	He	14.374	0.024	640.04	0.0013	0.005032
Mg	24	3	He	11.284	0.0199	570.03	0.0013	0.005032
Mg	24	3	He	9.869	0.0181	520.03	0.0013	0.005032
Al	27	3	He	-0.043	0.0015	40.00	0.0004	0.001519
Al	27	3	He	2.963	0.0028	80.00	0.0004	0.001519
Al	27	3	He	6.141	0.0042	120.00	0.0004	0.001519
K	39	3	He	67.26	0.4281	11414.82	0.001	0.3627
K	39	3	He	6.355	0.3689	10554.12	0.001	0.3627
K	39	3	He	-30.132	0.3335	9603.40	0.001	0.3627
Ca	44	3	He	0.93	0.0026	70.00	0.0001	0.002571
Ca	44	3	He	15.911	0.0035	100.00	0.0001	0.002571
Ca	44	3	He	-2.419	0.0024	70.00	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.254	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.14	0.0144	384.01	0.0201	0.0116
V	51	3	He	0.115	0.0139	398.01	0.0201	0.0116
V	51	3	He	0.09	0.0134	386.01	0.0201	0.0116
Cr	52	3	He	0.287	0.0754	2010.23	0.0257	0.06801
Cr	52	3	He	0.237	0.0741	2120.24	0.0257	0.06801
Cr	52	3	He	0.353	0.0771	2220.26	0.0257	0.06801
Mn	55	3	He	0.952	0.015	400.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.461	0.0094	270.01	0.0113	0.004215
Mn	55	3	He	0.701	0.0122	350.02	0.0113	0.004215
Fe	57	3	He	3.726	0.006	160.01	0.0005	0.004099
Fe	57	3	He	0.873	0.0045	130.01	0.0005	0.004099
Fe	57	3	He	-0.547	0.0038	110.00	0.0005	0.004099
Co	59	3	He	-0.022	0.0038	100.00	0.0518	0.004913
Co	59	3	He	0.054	0.0077	220.01	0.0518	0.004913
Co	59	3	He	0.039	0.0069	200.01	0.0518	0.004913
Ni	60	3	He	0.269	0.0087	480.02	0.0075	0.006695
Ni	60	3	He	0.055	0.0071	390.02	0.0075	0.006695
Ni	60	3	He	0.023	0.0069	360.02	0.0075	0.006695
Cu	63	3	He	0.045	0.0042	230.01	0.0216	0.003198
Cu	63	3	He	0.097	0.0053	290.01	0.0216	0.003198
Cu	63	3	He	0.108	0.0055	290.01	0.0216	0.003198
Zn	66	3	He	0.462	0.0042	230.01	0.0026	0.002954
Zn	66	3	He	0.193	0.0035	190.01	0.0026	0.002954
Zn	66	3	He	-0.325	0.0021	110.00	0.0026	0.002954
As	75	3	He	0.118	0.0007	40.00	0.002	0.0004943
As	75	3	He	0.157	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.157	0.0008	42.00	0.002	0.0004943
Sr	88	3	He	0.166	0.002	110.00	0.0081	0.0006852
Sr	88	3	He	0.007	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.08	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.045	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.027	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.019	0.001	50.00	0.0205	0.0005587
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.036	0.0002	10.00	0.005	1.253E-05
Sn	120	3	He	0.075	0.0144	780.06	0.0146	0.01334
Sn	120	3	He	-0.077	0.0122	660.05	0.0146	0.01334
Sn	120	3	He	0.193	0.0162	850.05	0.0146	0.01334
Sb	121	3	He	0.065	0.0024	130.00	0.0142	0.001484
Sb	121	3	He	0.065	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.016	0.0017	90.00	0.0142	0.001484
Ba	137	3	He	0.2	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	0.043	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.023	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.038	0.0013	240.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Pb	208	3	He	0.025	0.0019	190.01	0.0372	0.0009772
Pb	208	3	He	0.032	0.0022	190.01	0.0372	0.0009772
Pb	208	3	He	0.023	0.0018	210.01	0.0372	0.0009772
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1718439.66		
Sc	45	1	No Gas			1735610.60		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1760496.85		
Ge	72	1	No Gas			889112.96		
Ge	72	1	No Gas			879175.53		
Ge	72	1	No Gas			888762.33		
Sc	45	2	H2			127020.67		
Sc	45	2	H2			129028.13		
Sc	45	2	H2			125618.05		
Ge	72	2	H2			105527.91		
Ge	72	2	H2			107351.10		
Ge	72	2	H2			108479.12		
In	115	2	H2			268268.20		
In	115	2	H2			268482.95		
In	115	2	H2			267948.96		
Sc	45	3	He			26665.00		
Sc	45	3	He			28608.94		
Sc	45	3	He			28799.16		
Ge	72	3	He			55178.31		
Ge	72	3	He			54906.24		
Ge	72	3	He			52426.99		
In	115	3	He			54035.84		
In	115	3	He			54005.54		
In	115	3	He			52580.08		
Tb	159	3	He			246912.05		
Tb	159	3	He			247770.25		
Tb	159	3	He			242899.10		
Bi	209	3	He			188928.06		
Bi	209	3	He			188814.47		
Bi	209	3	He			192020.72		

Quantitation Report

Data File Name	057_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:01:39 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

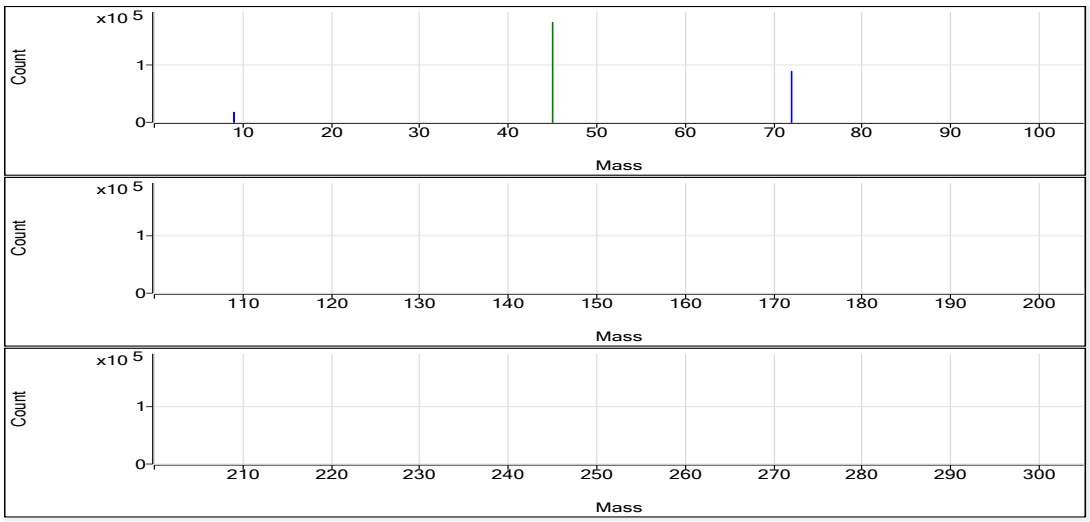
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.097	ppb	7.3	35927.82	0.0205	Pulse	0.5000	3
Se	78	72	H2	52.603	ppb	4.2	2225.74	0.0206	Pulse	1.5000	3
Na	23	45	He	5286.893	ppb	1.0	386053.39	13.6338	Pulse	0.1000	3
Mg	24	45	He	5221.706	ppb	0.9	195296.96	6.8969	Pulse	0.1000	3
Al	27	45	He	5207.015	ppb	3.9	63611.41	2.2471	Pulse	0.1000	3
K	39	45	He	5273.271	ppb	1.6	155334.40	5.4860	Pulse	0.1000	3
Ca	44	45	He	5452.746	ppb	4.9	9039.79	0.3193	Pulse	0.1000	3
Ti	47	45	He	5304.908	ppb	2.4	69034.34	2.4381	Pulse	0.1000	3
V	51	45	He	527.695	ppb	1.4	300028.32	10.5962	Pulse	0.5000	3
Cr	52	45	He	528.924	ppb	1.5	386830.92	13.6619	Pulse	0.1000	3
Mn	55	45	He	528.516	ppb	2.1	169661.21	5.9920	Pulse	0.1000	3
Fe	57	45	He	5337.924	ppb	2.2	77260.42	2.7288	Pulse	0.1000	3
Co	59	45	He	523.296	ppb	1.6	767883.14	27.1198	Pulse	0.1000	3
Ni	60	72	He	530.933	ppb	0.2	218078.92	3.9622	Pulse	0.1000	3
Cu	63	72	He	529.646	ppb	0.1	629490.80	11.4370	Pulse	0.1000	3
Zn	66	72	He	518.554	ppb	0.7	75223.99	1.3668	Pulse	0.1000	3
As	75	72	He	523.505	ppb	0.6	56281.39	1.0226	Pulse	0.5000	3
Sr	88	115	He	52.171	ppb	4.5	22418.45	0.4240	Pulse	0.1000	3
Mo	98	115	He	52.136	ppb	0.9	56494.32	1.0678	Pulse	0.1000	3
Ag	107	115	He	53.540	ppb	2.8	121925.48	2.3052	Pulse	0.1000	3
Cd	111	115	He	52.327	ppb	3.3	13833.57	0.2616	Pulse	0.5000	3
Sn	120	115	He	52.404	ppb	1.8	41225.59	0.7793	Pulse	0.1000	3
Sb	121	115	He	52.174	ppb	1.7	39349.94	0.7438	Pulse	0.1000	3
Ba	137	115	He	520.098	ppb	3.2	126743.30	2.3965	Pulse	0.1000	3
Tl	205	209	He	51.038	ppb	0.4	277208.04	1.4406	Pulse	0.1000	3
Pb	208	209	He	51.228	ppb	1.1	367231.21	1.9086	Pulse	0.1000	3
U	238	209	He	50.706	ppb	0.6	407034.93	2.1154	Pulse	0.1000	3

ISTD Table:

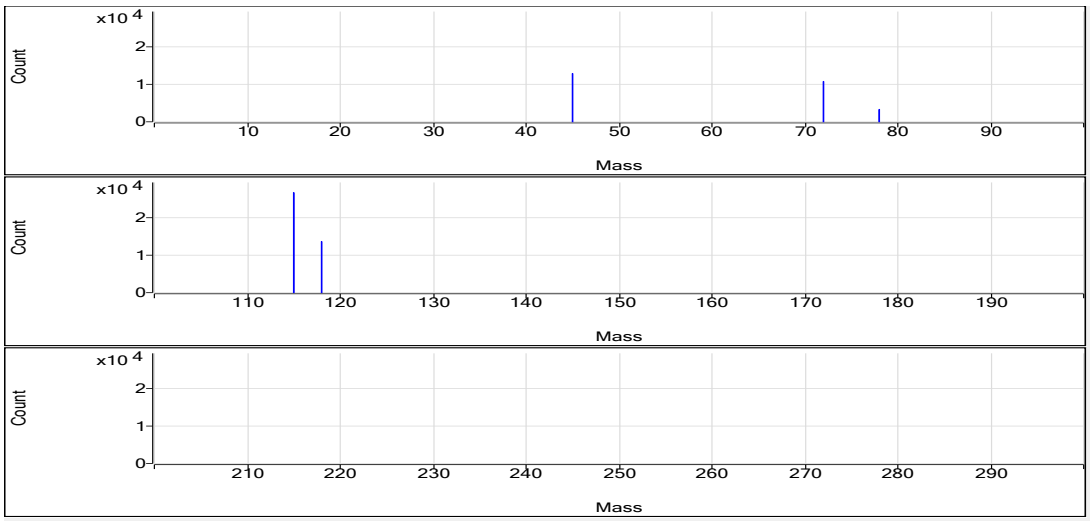
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1749957.32	0.3	99.4	Analog	0.1000	3
No Gas	Ge	72	893309.75	0.6	100.1	Pulse	0.1000	3
H2	Sc	45	129388.38	0.6	101.6	Pulse	0.1000	3
H2	Ge	72	108127.03	0.8	100.8	Pulse	0.1000	3
H2	In	115	267777.19	1.0	100.5	Pulse	0.1000	3
He	Sc	45	28318.24	1.4	99.3	Pulse	0.1000	3
He	Ge	72	55039.92	0.8	99.5	Pulse	0.1000	3
He	In	115	52917.42	2.6	98.6	Pulse	0.1000	3
He	Tb	159	247016.59	0.6	100.5	Pulse	0.1000	3
He	Bi	209	192427.14	1.5	100.8	Pulse	0.1000	3

No Gas

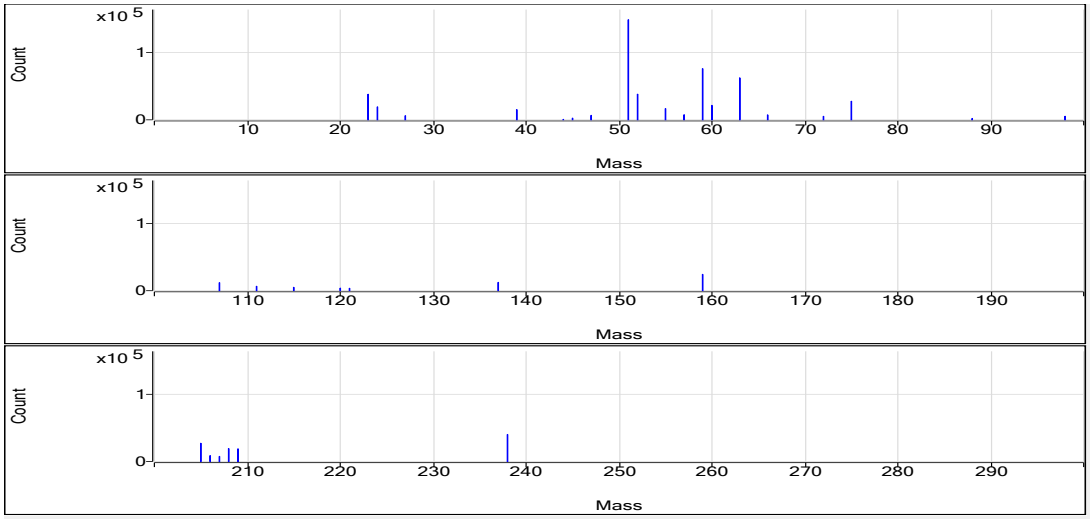


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.873	0.0189	33132.77	0.0004	1.287E-05
Be	9	1	No Gas	53.211	0.021	36666.70	0.0004	1.287E-05
Be	9	1	No Gas	55.206	0.0218	37983.99	0.0004	1.287E-05
Se	78	2	H2	53.351	0.0209	2248.85	0.0004	1.451E-05
Se	78	2	H2	50.133	0.0196	2142.17	0.0004	1.451E-05
Se	78	2	H2	54.325	0.0213	2286.19	0.0004	1.451E-05
Na	23	3	He	5275.672	13.6054	383507.26	0.0025	0.2648
Na	23	3	He	5346.202	13.7838	386189.49	0.0025	0.2648
Na	23	3	He	5238.804	13.5122	388463.43	0.0025	0.2648
Mg	24	3	He	5196.289	6.8633	193462.73	0.0013	0.005032
Mg	24	3	He	5274.179	6.9661	195175.35	0.0013	0.005032
Mg	24	3	He	5194.651	6.8612	197252.81	0.0013	0.005032
Al	27	3	He	5196.031	2.2423	63206.03	0.0004	0.001519
Al	27	3	He	5416.347	2.3373	65486.55	0.0004	0.001519
Al	27	3	He	5008.668	2.1615	62141.65	0.0004	0.001519
K	39	3	He	5285.427	5.4978	154972.58	0.001	0.3627
K	39	3	He	5350.691	5.5613	155813.77	0.001	0.3627
K	39	3	He	5183.694	5.399	155216.86	0.001	0.3627
Ca	44	3	He	5331.711	0.3123	8802.97	0.0001	0.002571
Ca	44	3	He	5757.828	0.3371	9443.38	0.0001	0.002571
Ca	44	3	He	5268.698	0.3086	8873.02	0.0001	0.002571
Ti	47	3	He	5446.819	2.5033	70561.85	0.0005	0.0002328
Ti	47	3	He	5259.798	2.4173	67728.01	0.0005	0.0002328
Ti	47	3	He	5208.106	2.3936	68813.15	0.0005	0.0002328
V	51	3	He	531.34	10.6693	300744.59	0.0201	0.0116
V	51	3	He	532.477	10.6921	299568.75	0.0201	0.0116
V	51	3	He	519.268	10.4272	299771.63	0.0201	0.0116
Cr	52	3	He	533.804	13.7873	388635.66	0.0257	0.06801
Cr	52	3	He	533.365	13.7761	385974.17	0.0257	0.06801
Cr	52	3	He	519.605	13.4224	385882.92	0.0257	0.06801
Mn	55	3	He	539.992	6.122	172567.20	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	527.787	5.9838	167651.46	0.0113	0.004215
Mn	55	3	He	517.769	5.8703	168764.98	0.0113	0.004215
Fe	57	3	He	5385.138	2.7529	77599.47	0.0005	0.004099
Fe	57	3	He	5426.245	2.7739	77719.00	0.0005	0.004099
Fe	57	3	He	5202.389	2.6597	76462.79	0.0005	0.004099
Co	59	3	He	528.969	27.4138	772735.93	0.0518	0.004913
Co	59	3	He	527.124	27.3182	765392.72	0.0518	0.004913
Co	59	3	He	513.797	26.6276	765520.77	0.0518	0.004913
Ni	60	3	He	532.355	3.9727	220242.87	0.0075	0.006695
Ni	60	3	He	530.148	3.9563	215955.27	0.0075	0.006695
Ni	60	3	He	530.297	3.9574	218038.61	0.0075	0.006695
Cu	63	3	He	529.321	11.43	633661.01	0.0216	0.003198
Cu	63	3	He	529.876	11.442	624562.61	0.0216	0.003198
Cu	63	3	He	529.74	11.4391	630248.78	0.0216	0.003198
Zn	66	3	He	514.205	1.3553	75136.69	0.0026	0.002954
Zn	66	3	He	520.233	1.3712	74845.52	0.0026	0.002954
Zn	66	3	He	521.223	1.3738	75689.76	0.0026	0.002954
As	75	3	He	520.195	1.0161	56332.13	0.002	0.0004943
As	75	3	He	526.071	1.0276	56091.38	0.002	0.0004943
As	75	3	He	524.25	1.024	56420.66	0.002	0.0004943
Sr	88	3	He	50.343	0.4091	21837.56	0.0081	0.0006852
Sr	88	3	He	51.324	0.4171	22528.55	0.0081	0.0006852
Sr	88	3	He	54.846	0.4457	22889.25	0.0081	0.0006852
Mo	98	3	He	51.918	1.0633	56755.09	0.0205	0.0005587
Mo	98	3	He	51.812	1.0611	57317.50	0.0205	0.0005587
Mo	98	3	He	52.677	1.0788	55410.36	0.0205	0.0005587
Ag	107	3	He	53.42	2.3	122765.76	0.043	0.0004367
Ag	107	3	He	52.121	2.2441	121213.70	0.043	0.0004367
Ag	107	3	He	55.079	2.3714	121796.98	0.043	0.0004367
Cd	111	3	He	52.244	0.2611	13939.04	0.005	1.253E-05
Cd	111	3	He	50.669	0.2533	13680.76	0.005	1.253E-05
Cd	111	3	He	54.068	0.2703	13880.91	0.005	1.253E-05
Sn	120	3	He	51.874	0.7715	41182.21	0.0146	0.01334
Sn	120	3	He	51.847	0.7711	41653.55	0.0146	0.01334
Sn	120	3	He	53.491	0.7952	40841.00	0.0146	0.01334
Sb	121	3	He	52.207	0.7443	39727.78	0.0142	0.001484
Sb	121	3	He	51.248	0.7307	39466.78	0.0142	0.001484
Sb	121	3	He	53.065	0.7565	38855.25	0.0142	0.001484
Ba	137	3	He	515.995	2.3776	126904.97	0.0046	0.000374
Ba	137	3	He	505.756	2.3304	125876.13	0.0046	0.000374
Ba	137	3	He	538.543	2.4814	127448.81	0.0046	0.000374
Tl	205	3	He	50.899	1.4367	280648.67	0.0282	0.00021
Tl	205	3	He	50.949	1.4381	276423.80	0.0282	0.00021
Tl	205	3	He	51.266	1.4471	274551.66	0.0282	0.00021
Pb	208	3	He	50.847	1.8944	197629.24	0.0372	0.0009772
Pb	208	3	He	50.983	1.8995	195567.28	0.0372	0.0009772
Pb	208	3	He	51.854	1.9319	196757.34	0.0372	0.0009772
U	238	3	He	50.436	2.1041	411021.40	0.0417	8.729E-05
U	238	3	He	50.656	2.1133	406208.04	0.0417	8.729E-05
U	238	3	He	51.025	2.1287	403875.35	0.0417	8.729E-05
Sc	45	1	No Gas			1755847.16		
Sc	45	1	No Gas			1748312.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1745712.32		
Ge	72	1	No Gas			888092.49		
Ge	72	1	No Gas			898600.14		
Ge	72	1	No Gas			893236.63		
Sc	45	2	H2			128715.76		
Sc	45	2	H2			129148.89		
Sc	45	2	H2			130300.48		
Ge	72	2	H2			107694.92		
Ge	72	2	H2			109164.81		
Ge	72	2	H2			107521.36		
In	115	2	H2			268475.82		
In	115	2	H2			270042.98		
In	115	2	H2			264812.77		
Sc	45	3	He			28187.86		
Sc	45	3	He			28017.73		
Sc	45	3	He			28749.14		
Ge	72	3	He			55438.43		
Ge	72	3	He			54585.13		
Ge	72	3	He			55096.21		
In	115	3	He			53664.48		
In	115	3	He			54306.73		
In	115	3	He			51646.78		
Tb	159	3	He			245710.80		
Tb	159	3	He			248550.17		
Tb	159	3	He			246788.79		
Bi	209	3	He			195340.92		
Bi	209	3	He			192211.93		
Bi	209	3	He			189728.57		

Quantitation Report

Data File Name	058_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:03:38 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

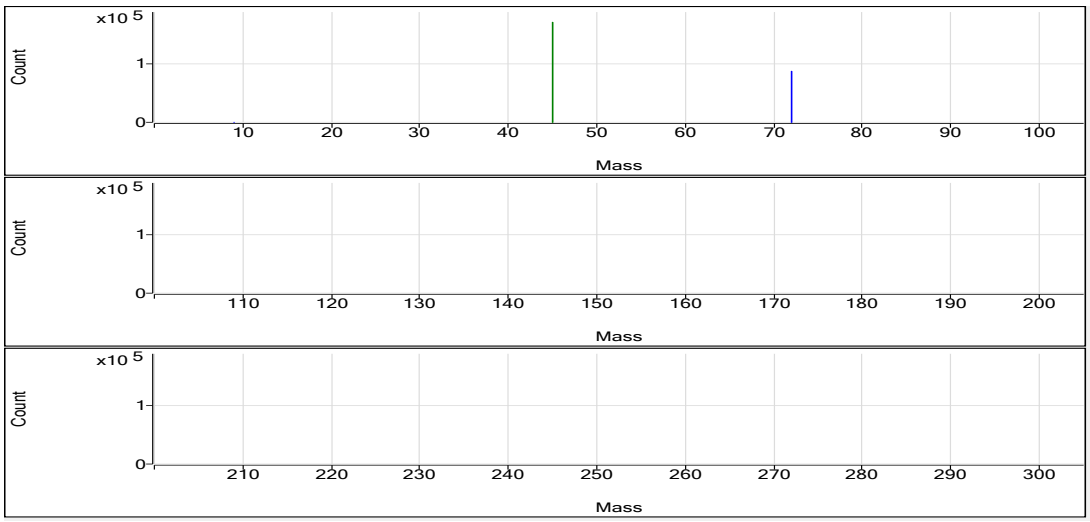
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.171	ppb	19.9	136.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.138	ppb	64.5	7.33	0.0001	Pulse	1.5000	3
Na	23	45	He	12.050	ppb	44.7	8349.31	0.2953	Pulse	0.1000	3
Mg	24	45	He	4.763	ppb	31.7	320.01	0.0113	Pulse	0.1000	3
Al	27	45	He	4.676	ppb	29.8	100.00	0.0035	Pulse	0.1000	3
K	39	45	He	14.839	ppb	281.9	10660.91	0.3772	Pulse	0.1000	3
Ca	44	45	He	36.807	ppb	67.3	133.34	0.0047	Pulse	0.1000	3
Ti	47	45	He	1.541	ppb	75.6	26.67	0.0009	Pulse	0.1000	3
V	51	45	He	0.170	ppb	19.2	424.68	0.0150	Pulse	0.5000	3
Cr	52	45	He	0.332	ppb	129.0	2163.58	0.0765	Pulse	0.1000	3
Mn	55	45	He	0.575	ppb	12.3	303.35	0.0107	Pulse	0.1000	3
Fe	57	45	He	3.978	ppb	35.7	173.34	0.0061	Pulse	0.1000	3
Co	59	45	He	0.099	ppb	14.3	283.34	0.0100	Pulse	0.1000	3
Ni	60	72	He	0.390	ppb	46.6	526.70	0.0096	Pulse	0.1000	3
Cu	63	72	He	0.201	ppb	33.1	413.36	0.0075	Pulse	0.1000	3
Zn	66	72	He	-0.015	ppb	N/A	160.01	0.0029	Pulse	0.1000	3
As	75	72	He	0.357	ppb	23.1	65.33	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.079	ppb	129.2	70.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.071	ppb	72.3	106.67	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	18.6	56.67	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.023	ppb	36.9	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.142	ppb	51.3	816.73	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.178	ppb	28.5	213.34	0.0040	Pulse	0.1000	3
Ba	137	115	He	0.178	ppb	16.2	63.33	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.103	ppb	11.4	590.04	0.0031	Pulse	0.1000	3
Pb	208	209	He	0.033	ppb	21.3	416.68	0.0022	Pulse	0.1000	3
U	238	209	He	0.028	ppb	2.8	236.68	0.0012	Pulse	0.1000	3

ISTD Table:

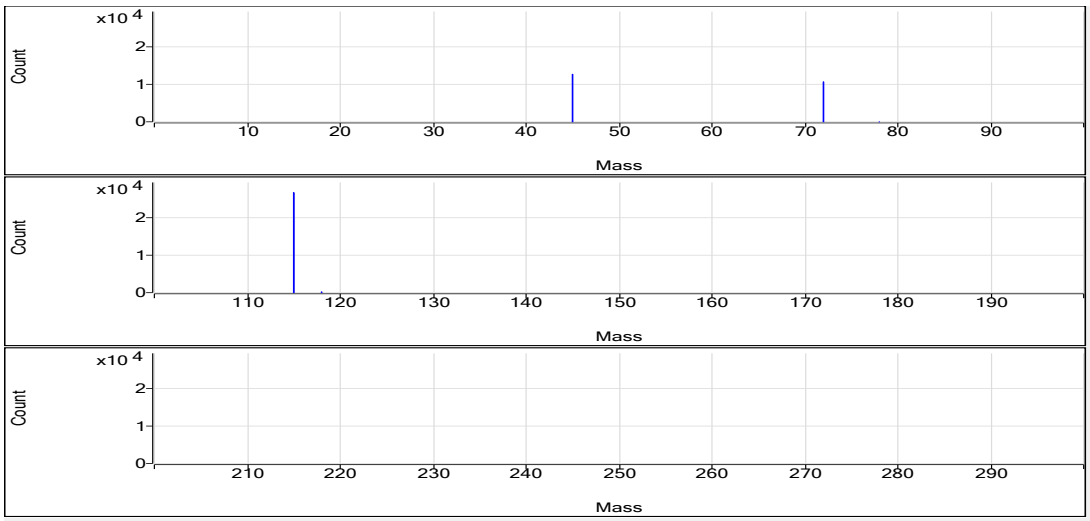
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1702281.07	1.3	96.7	Analog	0.1000	3
No Gas	Ge	72	869922.59	0.5	97.5	Pulse	0.1000	3
H2	Sc	45	127867.56	1.8	100.4	Pulse	0.1000	3
H2	Ge	72	107294.44	0.3	100.1	Pulse	0.1000	3
H2	In	115	268443.86	0.6	100.8	Pulse	0.1000	3
He	Sc	45	28278.31	0.6	99.2	Pulse	0.1000	3
He	Ge	72	54809.37	1.5	99.1	Pulse	0.1000	3
He	In	115	53022.93	1.9	98.8	Pulse	0.1000	3
He	Tb	159	244620.07	0.3	99.5	Pulse	0.1000	3
He	Bi	209	189910.55	0.6	99.5	Pulse	0.1000	3

No Gas

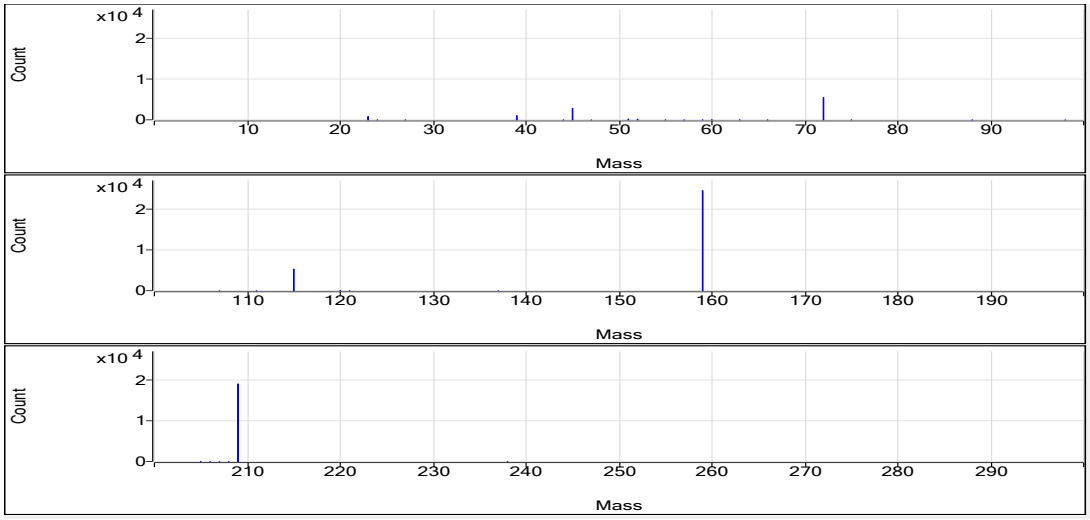


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.206	0.0001	158.00	0.0004	1.287E-05
Be	9	1	No Gas	0.138	0.0001	116.00	0.0004	1.287E-05
Be	9	1	No Gas	0.17	0.0001	136.00	0.0004	1.287E-05
Se	78	2	H2	0.042	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.153	0.0001	8.00	0.0004	1.451E-05
Se	78	2	H2	0.218	0.0001	10.67	0.0004	1.451E-05
Na	23	3	He	14.12	0.3005	8462.74	0.0025	0.2648
Na	23	3	He	5.932	0.2798	7972.41	0.0025	0.2648
Na	23	3	He	16.097	0.3055	8612.77	0.0025	0.2648
Mg	24	3	He	6.413	0.0135	380.02	0.0013	0.005032
Mg	24	3	He	4.432	0.0109	310.01	0.0013	0.005032
Mg	24	3	He	3.445	0.0096	270.01	0.0013	0.005032
Al	27	3	He	3.067	0.0028	80.00	0.0004	0.001519
Al	27	3	He	5.432	0.0039	110.00	0.0004	0.001519
Al	27	3	He	5.528	0.0039	110.00	0.0004	0.001519
K	39	3	He	58.167	0.4192	11805.14	0.001	0.3627
K	39	3	He	-25.309	0.3381	9633.45	0.001	0.3627
K	39	3	He	11.659	0.3741	10544.15	0.001	0.3627
Ca	44	3	He	29.101	0.0043	120.00	0.0001	0.002571
Ca	44	3	He	64.51	0.0063	180.01	0.0001	0.002571
Ca	44	3	He	16.809	0.0035	100.00	0.0001	0.002571
Ti	47	3	He	0.266	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	2.549	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	1.809	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.187	0.0153	432.01	0.0201	0.0116
V	51	3	He	0.192	0.0154	440.01	0.0201	0.0116
V	51	3	He	0.133	0.0143	402.01	0.0201	0.0116
Cr	52	3	He	0.795	0.0884	2490.31	0.0257	0.06801
Cr	52	3	He	-0.051	0.0667	1900.20	0.0257	0.06801
Cr	52	3	He	0.253	0.0745	2100.23	0.0257	0.06801
Mn	55	3	He	0.6	0.011	310.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.496	0.0098	280.01	0.0113	0.004215
Mn	55	3	He	0.63	0.0114	320.02	0.0113	0.004215
Fe	57	3	He	2.407	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	4.349	0.0063	180.01	0.0005	0.004099
Fe	57	3	He	5.176	0.0067	190.01	0.0005	0.004099
Co	59	3	He	0.111	0.0107	300.01	0.0518	0.004913
Co	59	3	He	0.102	0.0102	290.01	0.0518	0.004913
Co	59	3	He	0.083	0.0092	260.01	0.0518	0.004913
Ni	60	3	He	0.571	0.011	610.04	0.0075	0.006695
Ni	60	3	He	0.208	0.0082	450.03	0.0075	0.006695
Ni	60	3	He	0.39	0.0096	520.03	0.0075	0.006695
Cu	63	3	He	0.276	0.0092	510.03	0.0216	0.003198
Cu	63	3	He	0.174	0.007	380.02	0.0216	0.003198
Cu	63	3	He	0.151	0.0065	350.02	0.0216	0.003198
Zn	66	3	He	0.242	0.0036	200.01	0.0026	0.002954
Zn	66	3	He	-0.217	0.0024	130.00	0.0026	0.002954
Zn	66	3	He	-0.07	0.0028	150.01	0.0026	0.002954
As	75	3	He	0.354	0.0012	66.00	0.002	0.0004943
As	75	3	He	0.441	0.0014	74.00	0.002	0.0004943
As	75	3	He	0.276	0.001	56.00	0.002	0.0004943
Sr	88	3	He	0.145	0.0019	100.00	0.0081	0.0006852
Sr	88	3	He	0.129	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	-0.038	0.0004	20.00	0.0081	0.0006852
Mo	98	3	He	0.127	0.0032	170.01	0.0205	0.0005587
Mo	98	3	He	0.057	0.0017	90.00	0.0205	0.0005587
Mo	98	3	He	0.028	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.017	0.0012	60.00	0.043	0.0004367
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.08	0.0145	780.06	0.0146	0.01334
Sn	120	3	He	0.222	0.0166	860.07	0.0146	0.01334
Sn	120	3	He	0.124	0.0152	810.05	0.0146	0.01334
Sb	121	3	He	0.236	0.0048	260.01	0.0142	0.001484
Sb	121	3	He	0.14	0.0035	180.01	0.0142	0.001484
Sb	121	3	He	0.159	0.0037	200.01	0.0142	0.001484
Ba	137	3	He	0.161	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.212	0.0014	70.00	0.0046	0.000374
Ba	137	3	He	0.162	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.113	0.0034	650.04	0.0282	0.00021
Tl	205	3	He	0.104	0.0032	600.04	0.0282	0.00021
Tl	205	3	He	0.09	0.0028	520.03	0.0282	0.00021
Pb	208	3	He	0.04	0.0025	260.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.0019	180.01	0.0372	0.0009772
Pb	208	3	He	0.032	0.0022	140.01	0.0372	0.0009772
U	238	3	He	0.028	0.0013	240.01	0.0417	8.729E-05
U	238	3	He	0.027	0.0012	230.01	0.0417	8.729E-05
U	238	3	He	0.028	0.0013	240.01	0.0417	8.729E-05
Sc	45	1	No Gas			1678862.94		
Sc	45	1	No Gas			1723990.76		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1703989.51		
Ge	72	1	No Gas			866480.53		
Ge	72	1	No Gas			875112.88		
Ge	72	1	No Gas			868174.36		
Sc	45	2	H2			128412.48		
Sc	45	2	H2			129885.37		
Sc	45	2	H2			125304.84		
Ge	72	2	H2			107330.81		
Ge	72	2	H2			107563.77		
Ge	72	2	H2			106988.73		
In	115	2	H2			267904.92		
In	115	2	H2			270229.10		
In	115	2	H2			267197.57		
Sc	45	3	He			28157.86		
Sc	45	3	He			28488.94		
Sc	45	3	He			28188.13		
Ge	72	3	He			55699.90		
Ge	72	3	He			54575.05		
Ge	72	3	He			54153.16		
In	115	3	He			53764.84		
In	115	3	He			51857.40		
In	115	3	He			53463.70		
Tb	159	3	He			244063.12		
Tb	159	3	He			245279.66		
Tb	159	3	He			244517.42		
Bi	209	3	He			190792.22		
Bi	209	3	He			190195.97		
Bi	209	3	He			188743.45		

Quantitation Report

Data File Name	059SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:05:39 PM
Sample Name	410-136176-E-2-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

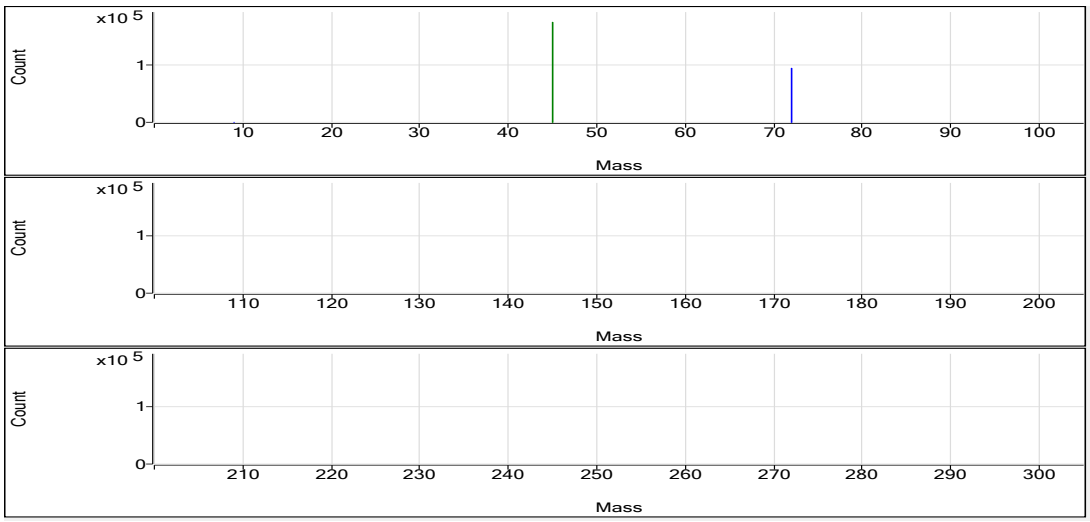
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.130	ppb	10.6	111.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	1.482	ppb	17.1	68.89	0.0006	Pulse	1.5000	3
Na	23	45	He	6844.766	ppb	2.7	511962.09	17.5732	Pulse	0.1000	3
Mg	24	45	He	13325.653	ppb	3.3	512481.46	17.5928	Pulse	0.1000	3
Al	27	45	He	16.392	ppb	27.4	250.01	0.0086	Pulse	0.1000	3
K	39	45	He	2238.766	ppb	0.3	73970.96	2.5378	Pulse	0.1000	3
Ca	44	45	He	31216.755	ppb	3.6	52896.98	1.8160	Pulse	0.1000	3
Ti	47	45	He	0.754	ppb	155.1	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.157	ppb	72.2	428.68	0.0147	Pulse	0.5000	3
Cr	52	45	He	0.524	ppb	45.7	2376.94	0.0815	Pulse	0.1000	3
Mn	55	45	He	13.136	ppb	9.2	4454.19	0.1530	Pulse	0.1000	3
Fe	57	45	He	5.652	ppb	17.9	203.34	0.0070	Pulse	0.1000	3
Co	59	45	He	0.166	ppb	28.6	393.35	0.0135	Pulse	0.1000	3
Ni	60	72	He	0.851	ppb	49.1	763.39	0.0130	Pulse	0.1000	3
Cu	63	72	He	4.873	ppb	5.4	6328.29	0.1084	Pulse	0.1000	3
Zn	66	72	He	59.249	ppb	3.2	9266.62	0.1588	Pulse	0.1000	3
As	75	72	He	0.174	ppb	41.0	48.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	71.568	ppb	1.1	31656.07	0.5813	Pulse	0.1000	3
Mo	98	115	He	0.044	ppb	59.8	80.00	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	66.0	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	61.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.155	ppb	55.4	850.06	0.0156	Pulse	0.1000	3
Sb	121	115	He	0.081	ppb	12.9	143.34	0.0026	Pulse	0.1000	3
Ba	137	115	He	26.050	ppb	7.7	6551.79	0.1204	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	34.8	283.35	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.150	ppb	8.2	1280.08	0.0066	Pulse	0.1000	3
U	238	209	He	0.032	ppb	22.5	276.68	0.0014	Pulse	0.1000	3

ISTD Table:

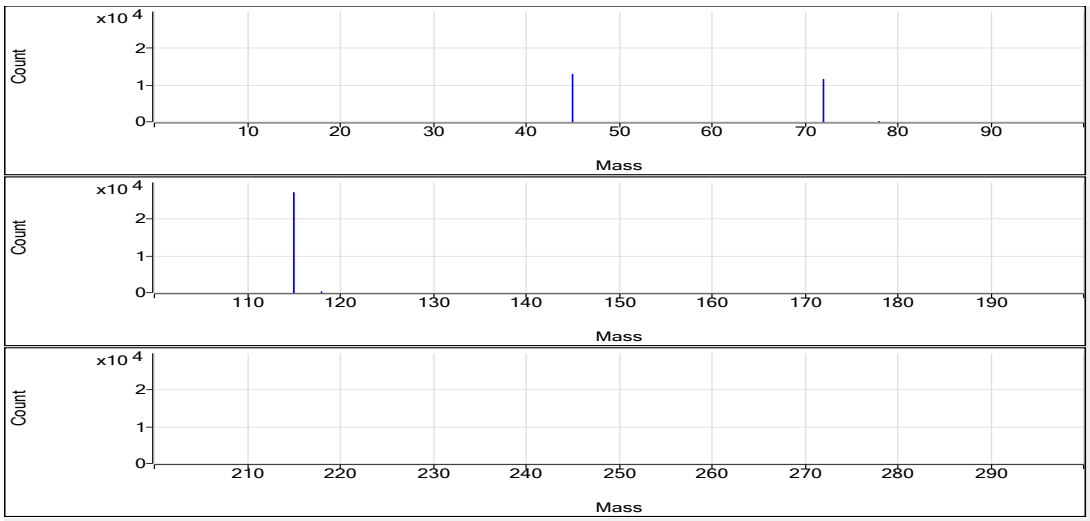
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1737224.56	0.7	98.6	Analog	0.1000	3
No Gas	Ge	72	940346.52	0.6	105.4	Pulse	0.1000	3
H2	Sc	45	129959.36	1.9	102.1	Pulse	0.1000	3
H2	Ge	72	115914.09	1.4	108.1	Pulse	0.1000	3
H2	In	115	272571.16	1.4	102.3	Pulse	0.1000	3
He	Sc	45	29146.67	2.6	102.2	Pulse	0.1000	3
He	Ge	72	58386.52	2.1	105.5	Pulse	0.1000	3
He	In	115	54458.05	1.6	101.5	Pulse	0.1000	3
He	Tb	159	250837.56	0.3	102.1	Pulse	0.1000	3
He	Bi	209	195258.66	0.6	102.3	Pulse	0.1000	3

No Gas

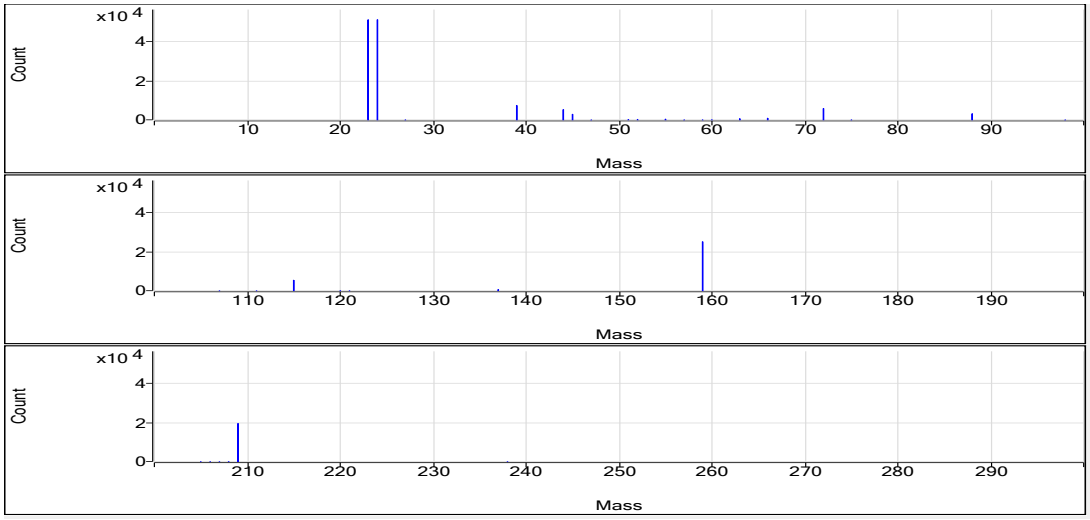


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.145	0.0001	122.00	0.0004	1.287E-05
Be	9	1	No Gas	0.128	0.0001	110.00	0.0004	1.287E-05
Be	9	1	No Gas	0.118	0.0001	102.00	0.0004	1.287E-05
Se	78	2	H2	1.244	0.0005	57.33	0.0004	1.451E-05
Se	78	2	H2	1.747	0.0007	80.67	0.0004	1.451E-05
Se	78	2	H2	1.454	0.0006	68.67	0.0004	1.451E-05
Na	23	3	He	6709.892	17.2321	509567.77	0.0025	0.2648
Na	23	3	He	7058.951	18.1148	512074.02	0.0025	0.2648
Na	23	3	He	6765.456	17.3726	514244.48	0.0025	0.2648
Mg	24	3	He	13090.027	17.2819	511038.82	0.0013	0.005032
Mg	24	3	He	13828.029	18.2559	516063.59	0.0013	0.005032
Mg	24	3	He	13058.903	17.2408	510341.98	0.0013	0.005032
Al	27	3	He	20.004	0.0101	300.01	0.0004	0.001519
Al	27	3	He	17.807	0.0092	260.01	0.0004	0.001519
Al	27	3	He	11.364	0.0064	190.01	0.0004	0.001519
K	39	3	He	2245.323	2.5442	75234.19	0.001	0.3627
K	39	3	He	2234.961	2.5341	71635.73	0.001	0.3627
K	39	3	He	2236.015	2.5352	75042.95	0.001	0.3627
Ca	44	3	He	30667.458	1.7841	52756.72	0.0001	0.002571
Ca	44	3	He	32510.31	1.8911	53459.14	0.0001	0.002571
Ca	44	3	He	30472.498	1.7728	52475.07	0.0001	0.002571
Ti	47	3	He	0.965	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.803	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.042	0.0124	368.01	0.0201	0.0116
V	51	3	He	0.268	0.017	480.01	0.0201	0.0116
V	51	3	He	0.159	0.0148	438.01	0.0201	0.0116
Cr	52	3	He	0.42	0.0788	2330.27	0.0257	0.06801
Cr	52	3	He	0.355	0.0771	2180.22	0.0257	0.06801
Cr	52	3	He	0.798	0.0885	2620.33	0.0257	0.06801
Mn	55	3	He	12.047	0.1407	4160.75	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	14.431	0.1677	4740.95	0.0113	0.004215
Mn	55	3	He	12.93	0.1507	4460.87	0.0113	0.004215
Fe	57	3	He	5.884	0.0071	210.01	0.0005	0.004099
Fe	57	3	He	6.525	0.0074	210.01	0.0005	0.004099
Fe	57	3	He	4.546	0.0064	190.01	0.0005	0.004099
Co	59	3	He	0.153	0.0129	380.02	0.0518	0.004913
Co	59	3	He	0.219	0.0163	460.02	0.0518	0.004913
Co	59	3	He	0.127	0.0115	340.02	0.0518	0.004913
Ni	60	3	He	1.151	0.0153	900.06	0.0075	0.006695
Ni	60	3	He	1.028	0.0144	850.06	0.0075	0.006695
Ni	60	3	He	0.373	0.0095	540.04	0.0075	0.006695
Cu	63	3	He	5.11	0.1135	6691.79	0.0216	0.003198
Cu	63	3	He	4.594	0.1024	6061.48	0.0216	0.003198
Cu	63	3	He	4.917	0.1093	6231.61	0.0216	0.003198
Zn	66	3	He	58.236	0.1561	9203.22	0.0026	0.002954
Zn	66	3	He	58.103	0.1558	9223.28	0.0026	0.002954
Zn	66	3	He	61.409	0.1645	9373.35	0.0026	0.002954
As	75	3	He	0.251	0.001	58.00	0.002	0.0004943
As	75	3	He	0.11	0.0007	42.00	0.002	0.0004943
As	75	3	He	0.16	0.0008	46.00	0.002	0.0004943
Sr	88	3	He	70.697	0.5743	31505.74	0.0081	0.0006852
Sr	88	3	He	71.906	0.5841	32137.25	0.0081	0.0006852
Sr	88	3	He	72.102	0.5857	31325.22	0.0081	0.0006852
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.07	0.002	110.00	0.0205	0.0005587
Mo	98	3	He	0.046	0.0015	80.00	0.0205	0.0005587
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.072	0.0144	790.05	0.0146	0.01334
Sn	120	3	He	0.244	0.0169	930.06	0.0146	0.01334
Sn	120	3	He	0.149	0.0155	830.06	0.0146	0.01334
Sb	121	3	He	0.075	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.075	0.0025	140.01	0.0142	0.001484
Sb	121	3	He	0.093	0.0028	150.01	0.0142	0.001484
Ba	137	3	He	24.059	0.1112	6101.54	0.0046	0.000374
Ba	137	3	He	26.002	0.1202	6611.84	0.0046	0.000374
Ba	137	3	He	28.091	0.1298	6941.99	0.0046	0.000374
Tl	205	3	He	0.059	0.0019	370.02	0.0282	0.00021
Tl	205	3	He	0.029	0.001	200.01	0.0282	0.00021
Tl	205	3	He	0.044	0.0014	280.02	0.0282	0.00021
Pb	208	3	He	0.139	0.0062	570.04	0.0372	0.0009772
Pb	208	3	He	0.147	0.0064	680.04	0.0372	0.0009772
Pb	208	3	He	0.163	0.0071	770.05	0.0372	0.0009772
U	238	3	He	0.037	0.0016	320.01	0.0417	8.729E-05
U	238	3	He	0.024	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.035	0.0015	300.02	0.0417	8.729E-05
Sc	45	1	No Gas			1745800.13		
Sc	45	1	No Gas			1742788.10		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1723085.44		
Ge	72	1	No Gas			939683.97		
Ge	72	1	No Gas			945852.56		
Ge	72	1	No Gas			935503.03		
Sc	45	2	H2			127243.24		
Sc	45	2	H2			132205.23		
Sc	45	2	H2			130429.61		
Ge	72	2	H2			114446.42		
Ge	72	2	H2			115583.84		
Ge	72	2	H2			117712.00		
In	115	2	H2			268750.86		
In	115	2	H2			272456.89		
In	115	2	H2			276505.72		
Sc	45	3	He			29570.83		
Sc	45	3	He			28268.31		
Sc	45	3	He			29600.87		
Ge	72	3	He			58952.03		
Ge	72	3	He			59213.13		
Ge	72	3	He			56994.40		
In	115	3	He			54869.12		
In	115	3	He			55029.66		
In	115	3	He			53493.23		
Tb	159	3	He			250344.00		
Tb	159	3	He			250438.71		
Tb	159	3	He			251729.96		
Bi	209	3	He			196264.84		
Bi	209	3	He			195482.22		
Bi	209	3	He			194028.92		

Quantitation Report

Data File Name	060SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:07:38 PM
Sample Name	410-136258-U-30-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

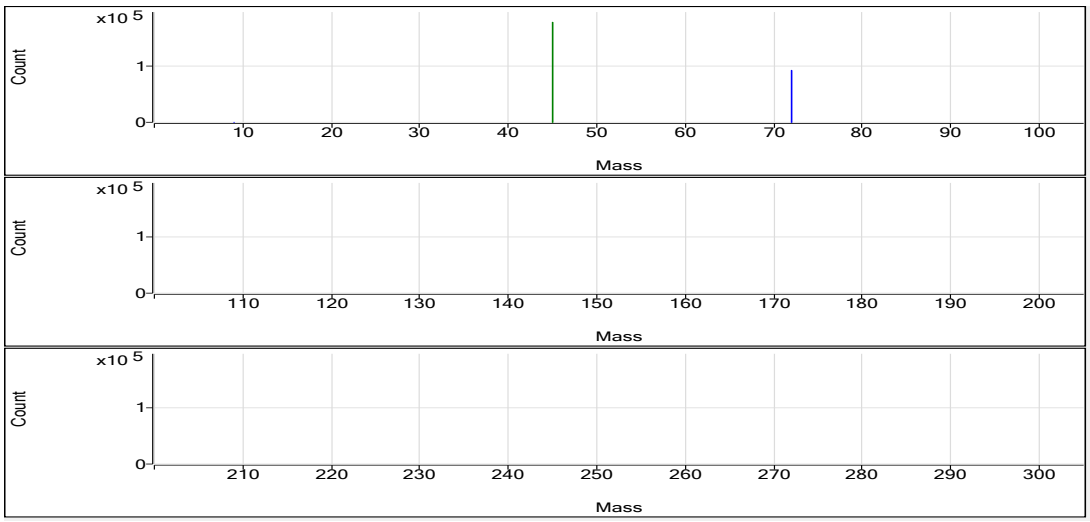
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.057	ppb	18.7	62.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.095	ppb	22.8	5.78	0.0001	Pulse	1.5000	3
Na	23	45	He	2695.613	ppb	0.5	204001.86	7.0812	Pulse	0.1000	3
Mg	24	45	He	17942.785	ppb	0.6	682402.36	23.6868	Pulse	0.1000	3
Al	27	45	He	7.480	ppb	26.8	136.67	0.0047	Pulse	0.1000	3
K	39	45	He	1238.480	ppb	5.8	45110.58	1.5660	Pulse	0.1000	3
Ca	44	45	He	157523.787	ppb	1.1	263670.80	9.1533	Pulse	0.1000	3
Ti	47	45	He	1.276	ppb	140.4	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.222	ppb	16.2	462.01	0.0160	Pulse	0.5000	3
Cr	52	45	He	0.304	ppb	44.5	2183.58	0.0758	Pulse	0.1000	3
Mn	55	45	He	2106.051	ppb	0.3	687541.99	23.8647	Pulse	0.1000	3
Fe	57	45	He	6622.558	ppb	2.7	97478.63	3.3846	Pulse	0.1000	3
Co	59	45	He	0.093	ppb	48.5	280.01	0.0097	Pulse	0.1000	3
Ni	60	72	He	0.207	ppb	90.9	466.69	0.0082	Pulse	0.1000	3
Cu	63	72	He	0.148	ppb	44.7	363.35	0.0064	Pulse	0.1000	3
Zn	66	72	He	0.151	ppb	131.3	190.01	0.0034	Pulse	0.1000	3
As	75	72	He	1.384	ppb	12.8	181.33	0.0032	Pulse	0.5000	3
Sr	88	115	He	501.736	ppb	0.6	219838.71	4.0713	Pulse	0.1000	3
Mo	98	115	He	0.449	ppb	9.5	526.69	0.0098	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	865.3	26.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	260.4	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.044	ppb	393.9	756.72	0.0140	Pulse	0.1000	3
Sb	121	115	He	0.087	ppb	34.0	146.68	0.0027	Pulse	0.1000	3
Ba	137	115	He	81.566	ppb	0.5	20312.34	0.3761	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	17.3	180.01	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.075	ppb	3.9	726.70	0.0038	Pulse	0.1000	3
U	238	209	He	1.531	ppb	2.5	12293.01	0.0640	Pulse	0.1000	3

ISTD Table:

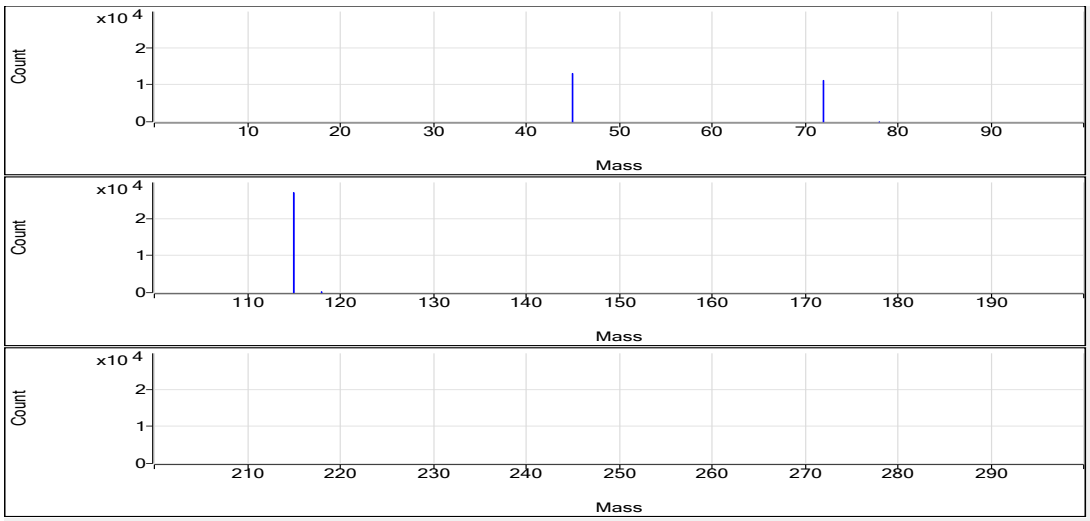
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1768476.95	1.5	100.4	Analog	0.1000	3
No Gas	Ge	72	918748.89	0.9	103.0	Pulse	0.1000	3
H2	Sc	45	130702.98	0.4	102.7	Pulse	0.1000	3
H2	Ge	72	111937.24	2.6	104.4	Pulse	0.1000	3
H2	In	115	270311.47	1.0	101.5	Pulse	0.1000	3
He	Sc	45	28809.42	1.7	101.1	Pulse	0.1000	3
He	Ge	72	56703.04	0.9	102.5	Pulse	0.1000	3
He	In	115	54000.29	1.7	100.6	Pulse	0.1000	3
He	Tb	159	248785.89	0.8	101.2	Pulse	0.1000	3
He	Bi	209	192166.00	1.5	100.7	Pulse	0.1000	3

No Gas

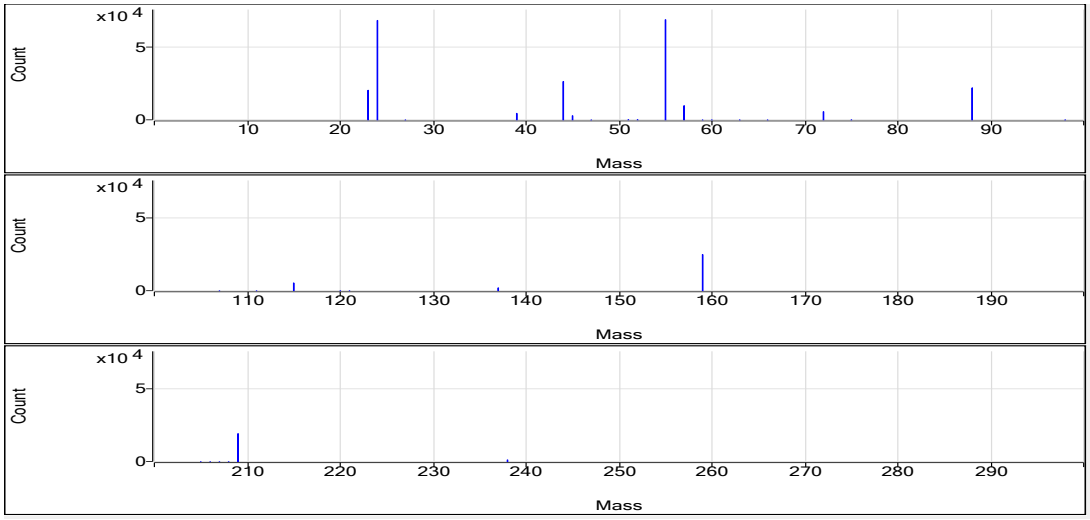


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.06	0	64.00	0.0004	1.287E-05
Be	9	1	No Gas	0.066	0	70.00	0.0004	1.287E-05
Be	9	1	No Gas	0.045	0	54.00	0.0004	1.287E-05
Se	78	2	H2	0.111	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.07	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.103	0.0001	6.00	0.0004	1.451E-05
Na	23	3	He	2705.956	7.1074	206040.25	0.0025	0.2648
Na	23	3	He	2682.222	7.0474	205643.47	0.0025	0.2648
Na	23	3	He	2698.66	7.0889	200321.85	0.0025	0.2648
Mg	24	3	He	18068.372	23.8525	691475.30	0.0013	0.005032
Mg	24	3	He	17845.378	23.5582	687432.88	0.0013	0.005032
Mg	24	3	He	17914.606	23.6496	668298.90	0.0013	0.005032
Al	27	3	He	5.278	0.0038	110.00	0.0004	0.001519
Al	27	3	He	9.194	0.0055	160.01	0.0004	0.001519
Al	27	3	He	7.968	0.005	140.01	0.0004	0.001519
K	39	3	He	1309.843	1.6353	47407.55	0.001	0.3627
K	39	3	He	1165.821	1.4954	43636.12	0.001	0.3627
K	39	3	He	1239.775	1.5673	44288.06	0.001	0.3627
Ca	44	3	He	157551.795	9.1549	265398.32	0.0001	0.002571
Ca	44	3	He	155775.79	9.0518	264132.54	0.0001	0.002571
Ca	44	3	He	159243.776	9.2532	261481.54	0.0001	0.002571
Ti	47	3	He	0.244	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.239	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	3.344	0.0018	50.00	0.0005	0.0002328
V	51	3	He	0.192	0.0155	448.01	0.0201	0.0116
V	51	3	He	0.211	0.0158	462.01	0.0201	0.0116
V	51	3	He	0.262	0.0168	476.01	0.0201	0.0116
Cr	52	3	He	0.307	0.0759	2200.25	0.0257	0.06801
Cr	52	3	He	0.168	0.0723	2110.23	0.0257	0.06801
Cr	52	3	He	0.438	0.0793	2240.25	0.0257	0.06801
Mn	55	3	He	2102.693	23.8266	690724.83	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2112.999	23.9434	698673.11	0.0113	0.004215
Mn	55	3	He	2102.461	23.824	673228.04	0.0113	0.004215
Fe	57	3	He	6584.849	3.3653	97559.70	0.0005	0.004099
Fe	57	3	He	6466.719	3.305	96441.52	0.0005	0.004099
Fe	57	3	He	6816.105	3.4834	98434.66	0.0005	0.004099
Co	59	3	He	0.058	0.0079	230.01	0.0518	0.004913
Co	59	3	He	0.143	0.0123	360.02	0.0518	0.004913
Co	59	3	He	0.076	0.0088	250.01	0.0518	0.004913
Ni	60	3	He	0.352	0.0093	530.03	0.0075	0.006695
Ni	60	3	He	-0.006	0.0067	380.02	0.0075	0.006695
Ni	60	3	He	0.274	0.0087	490.03	0.0075	0.006695
Cu	63	3	He	0.112	0.0056	320.01	0.0216	0.003198
Cu	63	3	He	0.225	0.0081	460.03	0.0216	0.003198
Cu	63	3	He	0.108	0.0055	310.01	0.0216	0.003198
Zn	66	3	He	-0.054	0.0028	160.01	0.0026	0.002954
Zn	66	3	He	0.342	0.0039	220.01	0.0026	0.002954
Zn	66	3	He	0.165	0.0034	190.01	0.0026	0.002954
As	75	3	He	1.583	0.0036	204.00	0.002	0.0004943
As	75	3	He	1.325	0.0031	176.00	0.002	0.0004943
As	75	3	He	1.244	0.0029	164.00	0.002	0.0004943
Sr	88	3	He	498.532	4.0453	222668.06	0.0081	0.0006852
Sr	88	3	He	503.777	4.0879	218778.77	0.0081	0.0006852
Sr	88	3	He	502.899	4.0808	218069.31	0.0081	0.0006852
Mo	98	3	He	0.461	0.01	550.03	0.0205	0.0005587
Mo	98	3	He	0.402	0.0088	470.02	0.0205	0.0005587
Mo	98	3	He	0.485	0.0105	560.03	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	-0.01	0	0.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.243	0.0169	930.07	0.0146	0.01334
Sn	120	3	He	-0.069	0.0123	660.04	0.0146	0.01334
Sn	120	3	He	-0.042	0.0127	680.04	0.0146	0.01334
Sb	121	3	He	0.062	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.08	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.119	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	81.731	0.3769	20746.36	0.0046	0.000374
Ba	137	3	He	81.136	0.3742	20025.14	0.0046	0.000374
Ba	137	3	He	81.829	0.3774	20165.52	0.0046	0.000374
Tl	205	3	He	0.027	0.001	190.01	0.0282	0.00021
Tl	205	3	He	0.029	0.001	200.01	0.0282	0.00021
Tl	205	3	He	0.021	0.0008	150.01	0.0282	0.00021
Pb	208	3	He	0.077	0.0039	280.01	0.0372	0.0009772
Pb	208	3	He	0.077	0.0038	410.02	0.0372	0.0009772
Pb	208	3	He	0.072	0.0037	340.02	0.0372	0.0009772
U	238	3	He	1.554	0.0649	12616.68	0.0417	8.729E-05
U	238	3	He	1.488	0.0621	12016.10	0.0417	8.729E-05
U	238	3	He	1.553	0.0649	12246.24	0.0417	8.729E-05
Sc	45	1	No Gas			1749534.35		
Sc	45	1	No Gas			1798706.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1757189.82		
Ge	72	1	No Gas			914344.44		
Ge	72	1	No Gas			928526.31		
Ge	72	1	No Gas			913375.92		
Sc	45	2	H2			131144.90		
Sc	45	2	H2			130856.04		
Sc	45	2	H2			130107.99		
Ge	72	2	H2			115122.81		
Ge	72	2	H2			111260.73		
Ge	72	2	H2			109428.18		
In	115	2	H2			272306.25		
In	115	2	H2			271403.39		
In	115	2	H2			267224.76		
Sc	45	3	He			28989.63		
Sc	45	3	He			29180.21		
Sc	45	3	He			28258.41		
Ge	72	3	He			56893.93		
Ge	72	3	He			57114.54		
Ge	72	3	He			56100.64		
In	115	3	He			55049.91		
In	115	3	He			53523.58		
In	115	3	He			53443.28		
Tb	159	3	He			250669.39		
Tb	159	3	He			248928.84		
Tb	159	3	He			246759.45		
Bi	209	3	He			194346.07		
Bi	209	3	He			193359.74		
Bi	209	3	He			188792.18		

Quantitation Report

Data File Name	061SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:09:37 PM
Sample Name	410-136258-S-28-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

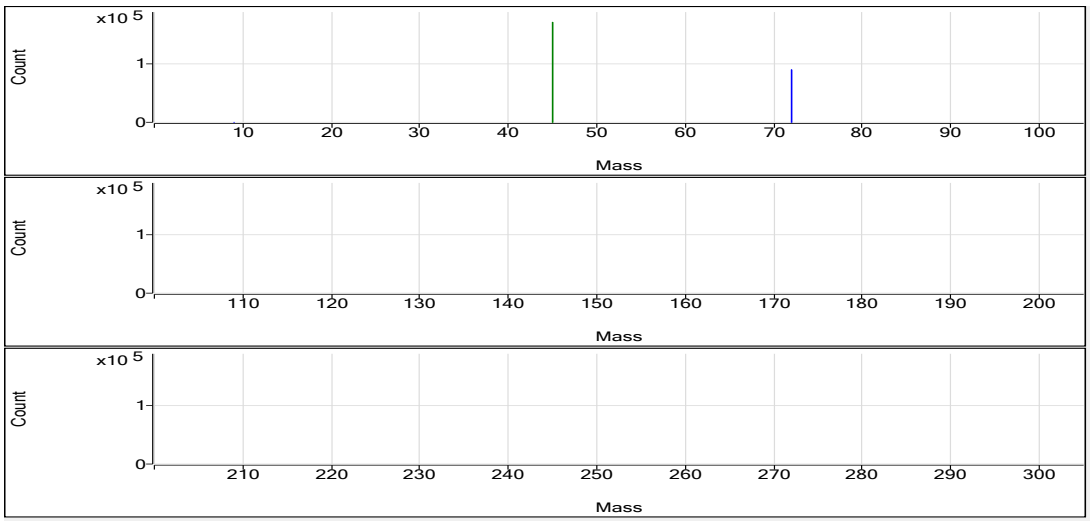
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.049	ppb	34.0	55.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.014	ppb	60.9	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	38.919	ppb	4.3	10440.70	0.3633	Pulse	0.1000	3
Mg	24	45	He	16.486	ppb	15.1	770.05	0.0268	Pulse	0.1000	3
Al	27	45	He	32.804	ppb	16.0	450.02	0.0157	Pulse	0.1000	3
K	39	45	He	30.747	ppb	122.1	11288.08	0.3926	Pulse	0.1000	3
Ca	44	45	He	105.437	ppb	20.0	250.01	0.0087	Pulse	0.1000	3
Ti	47	45	He	0.249	ppb	526.1	10.00	0.0003	Pulse	0.1000	3
V	51	45	He	0.104	ppb	62.4	393.34	0.0137	Pulse	0.5000	3
Cr	52	45	He	0.536	ppb	53.0	2350.27	0.0818	Pulse	0.1000	3
Mn	55	45	He	3.710	ppb	14.2	1330.11	0.0463	Pulse	0.1000	3
Fe	57	45	He	43.128	ppb	18.6	750.05	0.0261	Pulse	0.1000	3
Co	59	45	He	0.080	ppb	108.2	260.01	0.0091	Pulse	0.1000	3
Ni	60	72	He	0.116	ppb	182.2	433.35	0.0076	Pulse	0.1000	3
Cu	63	72	He	0.223	ppb	45.7	460.02	0.0080	Pulse	0.1000	3
Zn	66	72	He	3.407	ppb	15.6	683.38	0.0119	Pulse	0.1000	3
As	75	72	He	0.094	ppb	105.6	38.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.422	ppb	20.3	223.34	0.0041	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	134.7	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	90.6	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	57.8	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.065	ppb	355.7	776.72	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.111	ppb	37.3	166.68	0.0031	Pulse	0.1000	3
Ba	137	115	He	0.438	ppb	56.9	130.01	0.0024	Pulse	0.1000	3
Tl	205	209	He	0.021	ppb	41.3	153.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.385	ppb	3.1	2963.59	0.0153	Pulse	0.1000	3
U	238	209	He	0.005	ppb	80.3	60.00	0.0003	Pulse	0.1000	3

ISTD Table:

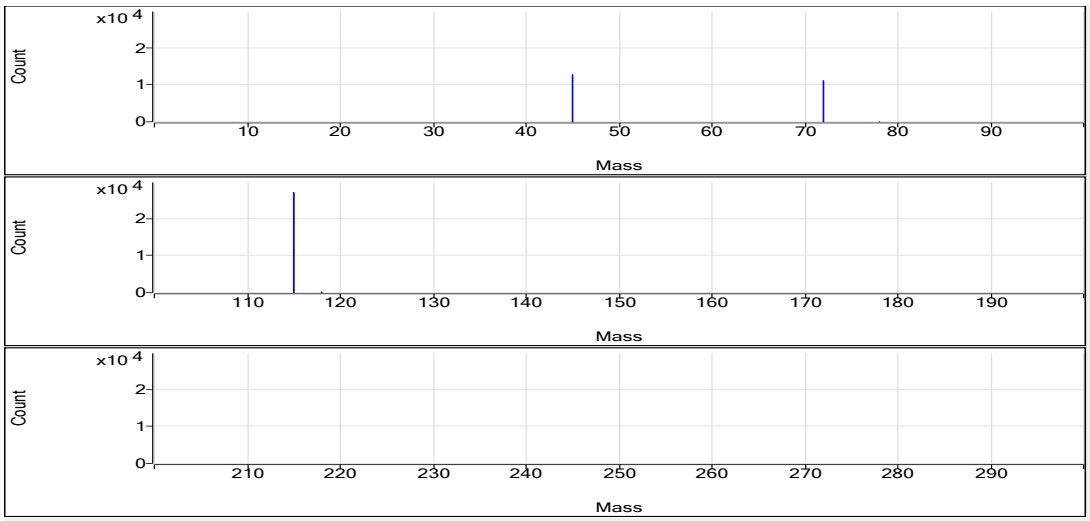
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1726267.11	2.0	98.0	Analog	0.1000	3
No Gas	Ge	72	906599.54	2.1	101.6	Pulse	0.1000	3
H2	Sc	45	127181.96	0.2	99.9	Pulse	0.1000	3
H2	Ge	72	110837.09	0.7	103.4	Pulse	0.1000	3
H2	In	115	269614.29	0.9	101.2	Pulse	0.1000	3
He	Sc	45	28742.46	0.7	100.8	Pulse	0.1000	3
He	Ge	72	57265.17	2.0	103.5	Pulse	0.1000	3
He	In	115	54315.33	0.3	101.2	Pulse	0.1000	3
He	Tb	159	245029.44	0.9	99.7	Pulse	0.1000	3
He	Bi	209	193402.69	0.4	101.3	Pulse	0.1000	3

No Gas

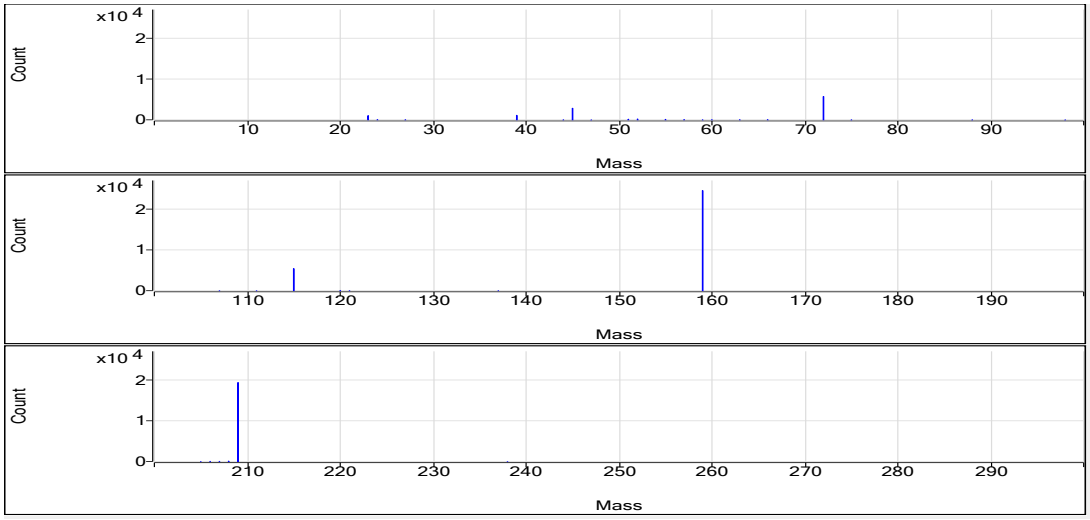


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.036	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.042	0	50.00	0.0004	1.287E-05
Be	9	1	No Gas	0.068	0	68.00	0.0004	1.287E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.024	0	2.67	0.0004	1.451E-05
Na	23	3	He	39.876	0.3657	10564.14	0.0025	0.2648
Na	23	3	He	36.98	0.3584	10323.95	0.0025	0.2648
Na	23	3	He	39.901	0.3657	10434.01	0.0025	0.2648
Mg	24	3	He	18.744	0.0298	860.06	0.0013	0.005032
Mg	24	3	He	13.809	0.0233	670.04	0.0013	0.005032
Mg	24	3	He	16.904	0.0273	780.05	0.0013	0.005032
Al	27	3	He	26.982	0.0132	380.02	0.0004	0.001519
Al	27	3	He	34.31	0.0163	470.02	0.0004	0.001519
Al	27	3	He	37.122	0.0175	500.03	0.0004	0.001519
K	39	3	He	73.626	0.4343	12545.72	0.001	0.3627
K	39	3	He	14.803	0.3771	10864.52	0.001	0.3627
K	39	3	He	3.811	0.3664	10453.99	0.001	0.3627
Ca	44	3	He	128.548	0.01	290.01	0.0001	0.002571
Ca	44	3	He	87.201	0.0076	220.01	0.0001	0.002571
Ca	44	3	He	100.563	0.0084	240.01	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	1.759	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.04	0.0124	358.01	0.0201	0.0116
V	51	3	He	0.104	0.0137	394.01	0.0201	0.0116
V	51	3	He	0.17	0.015	428.01	0.0201	0.0116
Cr	52	3	He	0.209	0.0734	2120.23	0.0257	0.06801
Cr	52	3	He	0.677	0.0854	2460.30	0.0257	0.06801
Cr	52	3	He	0.723	0.0866	2470.29	0.0257	0.06801
Mn	55	3	He	4.15	0.0512	1480.13	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.856	0.0479	1380.13	0.0113	0.004215
Mn	55	3	He	3.124	0.0396	1130.08	0.0113	0.004215
Fe	57	3	He	38.765	0.0239	690.05	0.0005	0.004099
Fe	57	3	He	38.214	0.0236	680.04	0.0005	0.004099
Fe	57	3	He	52.404	0.0308	880.06	0.0005	0.004099
Co	59	3	He	-0.015	0.0042	120.01	0.0518	0.004913
Co	59	3	He	0.099	0.0101	290.01	0.0518	0.004913
Co	59	3	He	0.156	0.013	370.02	0.0518	0.004913
Ni	60	3	He	0.319	0.0091	530.03	0.0075	0.006695
Ni	60	3	He	-0.102	0.0059	340.01	0.0075	0.006695
Ni	60	3	He	0.131	0.0077	430.02	0.0075	0.006695
Cu	63	3	He	0.328	0.0103	600.03	0.0216	0.003198
Cu	63	3	He	0.216	0.0079	450.02	0.0216	0.003198
Cu	63	3	He	0.124	0.0059	330.01	0.0216	0.003198
Zn	66	3	He	3.825	0.013	760.05	0.0026	0.002954
Zn	66	3	He	3.588	0.0124	710.05	0.0026	0.002954
Zn	66	3	He	2.81	0.0103	580.03	0.0026	0.002954
As	75	3	He	0.01	0.0005	30.00	0.002	0.0004943
As	75	3	He	0.069	0.0006	36.00	0.002	0.0004943
As	75	3	He	0.203	0.0009	50.00	0.002	0.0004943
Sr	88	3	He	0.481	0.0046	250.01	0.0081	0.0006852
Sr	88	3	He	0.324	0.0033	180.01	0.0081	0.0006852
Sr	88	3	He	0.462	0.0044	240.01	0.0081	0.0006852
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	0.036	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.027	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.255	0.0171	930.07	0.0146	0.01334
Sn	120	3	He	0.132	0.0153	830.06	0.0146	0.01334
Sn	120	3	He	-0.192	0.0105	570.03	0.0146	0.01334
Sb	121	3	He	0.141	0.0035	190.01	0.0142	0.001484
Sb	121	3	He	0.064	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.129	0.0033	180.01	0.0142	0.001484
Ba	137	3	He	0.238	0.0015	80.00	0.0046	0.000374
Ba	137	3	He	0.718	0.0037	200.01	0.0046	0.000374
Ba	137	3	He	0.36	0.002	110.01	0.0046	0.000374
Tl	205	3	He	0.011	0.0005	100.00	0.0282	0.00021
Tl	205	3	He	0.026	0.0009	180.01	0.0282	0.00021
Tl	205	3	He	0.026	0.0009	180.01	0.0282	0.00021
Pb	208	3	He	0.387	0.0154	1570.16	0.0372	0.0009772
Pb	208	3	He	0.372	0.0148	1400.14	0.0372	0.0009772
Pb	208	3	He	0.396	0.0157	1570.16	0.0372	0.0009772
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
Sc	45	1	No Gas			1762432.00		
Sc	45	1	No Gas			1694676.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1721693.26		
Ge	72	1	No Gas			924580.53		
Ge	72	1	No Gas			887076.86		
Ge	72	1	No Gas			908141.24		
Sc	45	2	H2			126989.81		
Sc	45	2	H2			127423.62		
Sc	45	2	H2			127132.45		
Ge	72	2	H2			110041.00		
Ge	72	2	H2			110938.70		
Ge	72	2	H2			111531.56		
In	115	2	H2			270114.06		
In	115	2	H2			271632.36		
In	115	2	H2			267096.44		
Sc	45	3	He			28889.38		
Sc	45	3	He			28809.36		
Sc	45	3	He			28528.63		
Ge	72	3	He			58409.75		
Ge	72	3	He			57305.10		
Ge	72	3	He			56080.65		
In	115	3	He			54487.70		
In	115	3	He			54358.14		
In	115	3	He			54116.45		
Tb	159	3	He			247491.05		
Tb	159	3	He			244612.71		
Tb	159	3	He			242984.55		
Bi	209	3	He			194215.56		
Bi	209	3	He			192691.72		
Bi	209	3	He			193300.80		

Quantitation Report

Data File Name	062SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:11:36 PM
Sample Name	410-136258-Y-25-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

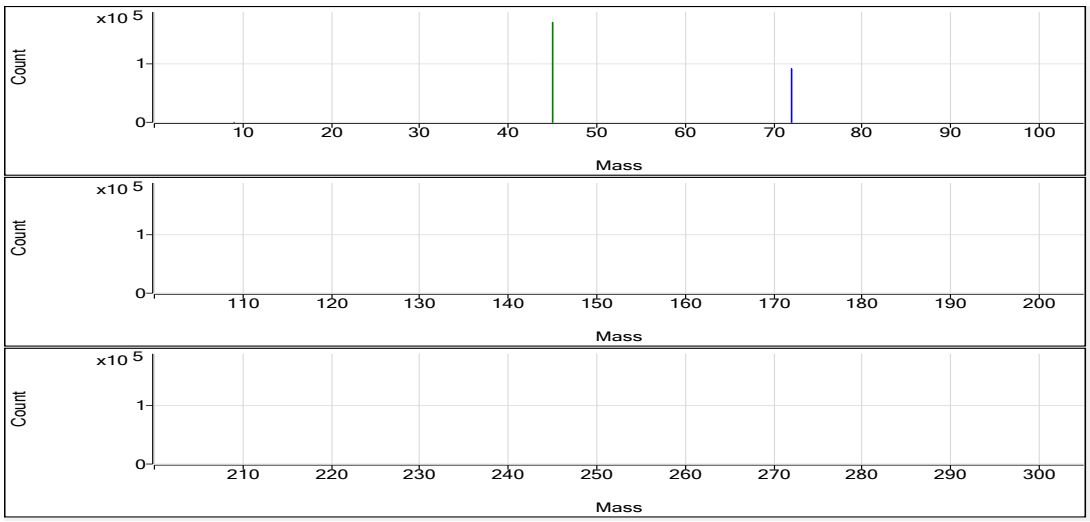
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.041	ppb	21.8	50.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.063	ppb	49.3	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	4216.067	ppb	0.7	317674.78	10.9260	Pulse	0.1000	3
Mg	24	45	He	6041.553	ppb	0.7	231990.83	7.9790	Pulse	0.1000	3
Al	27	45	He	5.221	ppb	78.0	110.01	0.0038	Pulse	0.1000	3
K	39	45	He	1229.429	ppb	1.0	45280.64	1.5572	Pulse	0.1000	3
Ca	44	45	He	32189.166	ppb	1.0	54449.10	1.8725	Pulse	0.1000	3
Ti	47	45	He	-0.005	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.114	ppb	58.3	404.01	0.0139	Pulse	0.5000	3
Cr	52	45	He	0.307	ppb	28.6	2206.91	0.0759	Pulse	0.1000	3
Mn	55	45	He	289.954	ppb	1.1	95639.47	3.2892	Pulse	0.1000	3
Fe	57	45	He	2.318	ppb	106.9	153.34	0.0053	Pulse	0.1000	3
Co	59	45	He	0.107	ppb	9.8	303.35	0.0104	Pulse	0.1000	3
Ni	60	72	He	0.468	ppb	62.1	586.70	0.0102	Pulse	0.1000	3
Cu	63	72	He	0.273	ppb	6.5	523.36	0.0091	Pulse	0.1000	3
Zn	66	72	He	3.258	ppb	9.6	663.37	0.0115	Pulse	0.1000	3
As	75	72	He	0.251	ppb	23.8	56.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	85.194	ppb	2.2	38432.96	0.6919	Pulse	0.1000	3
Mo	98	115	He	0.063	ppb	42.0	103.34	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	109.9	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	25.1	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.090	ppb	135.9	813.39	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.124	ppb	22.6	180.01	0.0032	Pulse	0.1000	3
Ba	137	115	He	3.294	ppb	6.6	863.39	0.0156	Pulse	0.1000	3
Tl	205	209	He	0.014	ppb	71.3	116.67	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	37.9	386.68	0.0020	Pulse	0.1000	3
U	238	209	He	0.025	ppb	16.3	216.68	0.0011	Pulse	0.1000	3

ISTD Table:

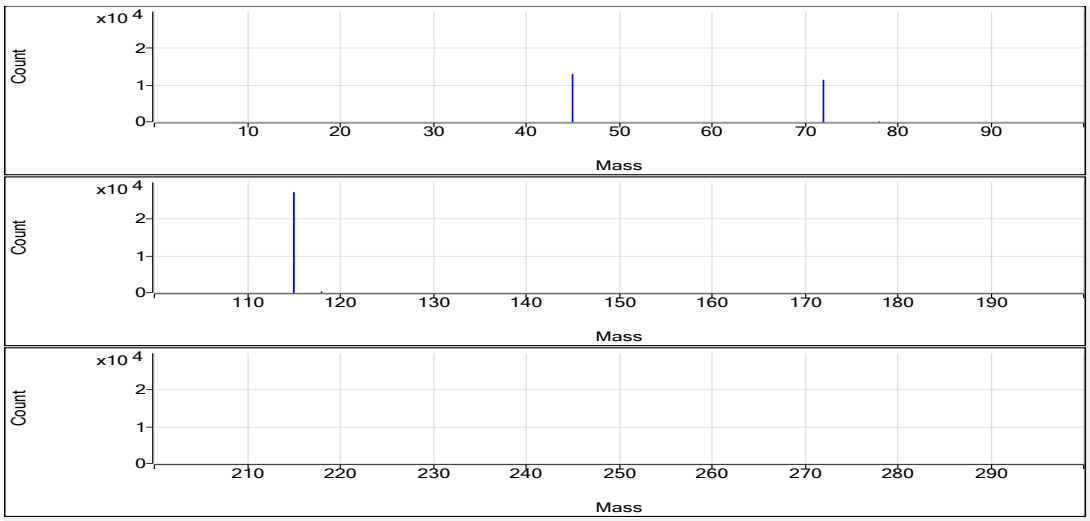
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1728507.84	2.1	98.1	Analog	0.1000	3
No Gas	Ge	72	927058.76	1.4	103.9	Pulse	0.1000	3
H2	Sc	45	129189.80	0.3	101.5	Pulse	0.1000	3
H2	Ge	72	113813.22	0.4	106.1	Pulse	0.1000	3
H2	In	115	272554.85	0.7	102.3	Pulse	0.1000	3
He	Sc	45	29076.48	1.2	102.0	Pulse	0.1000	3
He	Ge	72	57576.37	0.5	104.1	Pulse	0.1000	3
He	In	115	55559.57	1.8	103.5	Pulse	0.1000	3
He	Tb	159	249814.25	0.9	101.6	Pulse	0.1000	3
He	Bi	209	193295.73	1.2	101.3	Pulse	0.1000	3

No Gas

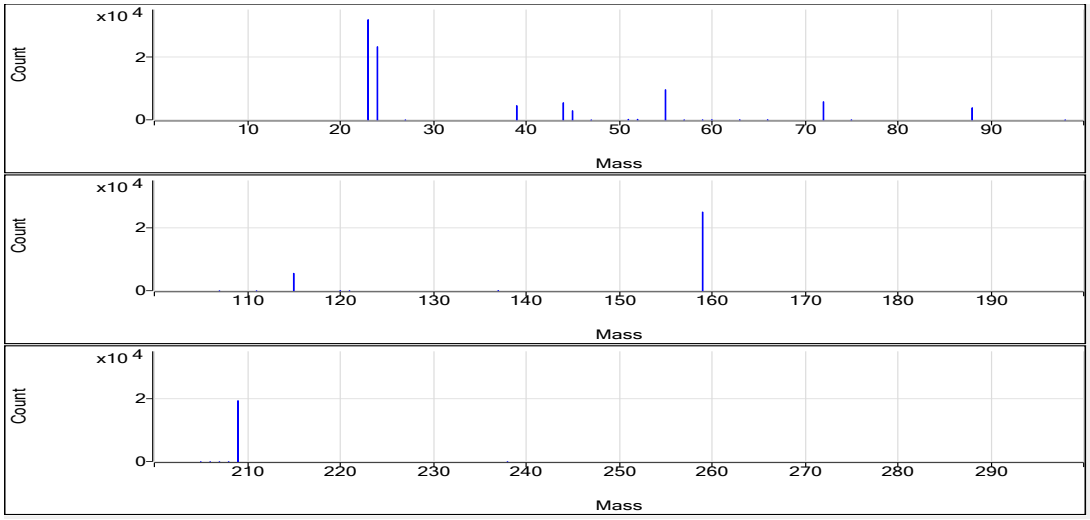


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.051	0	56.00	0.0004	1.287E-05
Be	9	1	No Gas	0.035	0	46.00	0.0004	1.287E-05
Be	9	1	No Gas	0.036	0	48.00	0.0004	1.287E-05
Se	78	2	H2	0.053	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.097	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.038	0	3.33	0.0004	1.451E-05
Na	23	3	He	4205.717	10.8998	319913.59	0.0025	0.2648
Na	23	3	He	4195.324	10.8735	317398.26	0.0025	0.2648
Na	23	3	He	4247.161	11.0046	315712.48	0.0025	0.2648
Mg	24	3	He	5993.846	7.916	232337.16	0.0013	0.005032
Mg	24	3	He	6063.444	8.0078	233748.86	0.0013	0.005032
Mg	24	3	He	6067.368	8.013	229886.48	0.0013	0.005032
Al	27	3	He	7.54	0.0048	140.01	0.0004	0.001519
Al	27	3	He	7.601	0.0048	140.01	0.0004	0.001519
Al	27	3	He	0.52	0.0017	50.00	0.0004	0.001519
K	39	3	He	1236.377	1.564	45902.54	0.001	0.3627
K	39	3	He	1237.081	1.5646	45671.67	0.001	0.3627
K	39	3	He	1214.828	1.543	44267.71	0.001	0.3627
Ca	44	3	He	32340.04	1.8812	55215.15	0.0001	0.002571
Ca	44	3	He	32405.791	1.8851	55024.91	0.0001	0.002571
Ca	44	3	He	31821.668	1.8511	53107.23	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.239	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.252	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.169	0.015	440.01	0.0201	0.0116
V	51	3	He	0.04	0.0124	362.01	0.0201	0.0116
V	51	3	He	0.134	0.0143	410.01	0.0201	0.0116
Cr	52	3	He	0.271	0.075	2200.23	0.0257	0.06801
Cr	52	3	He	0.407	0.0785	2290.26	0.0257	0.06801
Cr	52	3	He	0.243	0.0743	2130.24	0.0257	0.06801
Mn	55	3	He	287.113	3.2571	95595.88	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	293.593	3.3305	97216.40	0.0113	0.004215
Mn	55	3	He	289.156	3.2802	94106.13	0.0113	0.004215
Fe	57	3	He	1.983	0.0051	150.01	0.0005	0.004099
Fe	57	3	He	0.024	0.0041	120.00	0.0005	0.004099
Fe	57	3	He	4.946	0.0066	190.01	0.0005	0.004099
Co	59	3	He	0.096	0.0099	290.01	0.0518	0.004913
Co	59	3	He	0.117	0.011	320.02	0.0518	0.004913
Co	59	3	He	0.107	0.0105	300.01	0.0518	0.004913
Ni	60	3	He	0.613	0.0113	650.04	0.0075	0.006695
Ni	60	3	He	0.133	0.0077	440.02	0.0075	0.006695
Ni	60	3	He	0.658	0.0116	670.04	0.0075	0.006695
Cu	63	3	He	0.293	0.0095	550.03	0.0216	0.003198
Cu	63	3	He	0.265	0.0089	510.02	0.0216	0.003198
Cu	63	3	He	0.261	0.0088	510.03	0.0216	0.003198
Zn	66	3	He	2.896	0.0106	610.03	0.0026	0.002954
Zn	66	3	He	3.461	0.0121	690.04	0.0026	0.002954
Zn	66	3	He	3.417	0.0119	690.04	0.0026	0.002954
As	75	3	He	0.208	0.0009	52.00	0.002	0.0004943
As	75	3	He	0.32	0.0011	64.00	0.002	0.0004943
As	75	3	He	0.225	0.0009	54.00	0.002	0.0004943
Sr	88	3	He	84.61	0.6871	38844.02	0.0081	0.0006852
Sr	88	3	He	87.281	0.7088	38673.48	0.0081	0.0006852
Sr	88	3	He	83.693	0.6797	37781.38	0.0081	0.0006852
Mo	98	3	He	0.094	0.0025	140.01	0.0205	0.0005587
Mo	98	3	He	0.044	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.052	0.0016	90.00	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	-0.005	0.0133	750.05	0.0146	0.01334
Sn	120	3	He	0.228	0.0167	910.07	0.0146	0.01334
Sn	120	3	He	0.047	0.014	780.05	0.0146	0.01334
Sb	121	3	He	0.119	0.0032	180.01	0.0142	0.001484
Sb	121	3	He	0.153	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.098	0.0029	160.01	0.0142	0.001484
Ba	137	3	He	3.068	0.0145	820.05	0.0046	0.000374
Ba	137	3	He	3.499	0.0165	900.06	0.0046	0.000374
Ba	137	3	He	3.316	0.0157	870.07	0.0046	0.000374
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Tl	205	3	He	0.004	0.0003	60.00	0.0282	0.00021
Tl	205	3	He	0.023	0.0009	170.01	0.0282	0.00021
Pb	208	3	He	0.033	0.0022	240.01	0.0372	0.0009772
Pb	208	3	He	0.015	0.0016	130.01	0.0372	0.0009772
Pb	208	3	He	0.034	0.0022	170.01	0.0372	0.0009772
U	238	3	He	0.028	0.0013	240.01	0.0417	8.729E-05
U	238	3	He	0.02	0.0009	180.01	0.0417	8.729E-05
U	238	3	He	0.026	0.0012	230.01	0.0417	8.729E-05
Sc	45	1	No Gas			1696476.38		
Sc	45	1	No Gas			1722208.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1766838.88		
Ge	72	1	No Gas			916579.36		
Ge	72	1	No Gas			922655.30		
Ge	72	1	No Gas			941941.63		
Sc	45	2	H2			129129.34		
Sc	45	2	H2			129604.12		
Sc	45	2	H2			128835.95		
Ge	72	2	H2			113285.75		
Ge	72	2	H2			114202.88		
Ge	72	2	H2			113951.03		
In	115	2	H2			271612.81		
In	115	2	H2			271288.39		
In	115	2	H2			274763.34		
Sc	45	3	He			29350.37		
Sc	45	3	He			29189.98		
Sc	45	3	He			28689.10		
Ge	72	3	He			57706.81		
Ge	72	3	He			57235.27		
Ge	72	3	He			57787.02		
In	115	3	He			56536.07		
In	115	3	He			54568.20		
In	115	3	He			55591.52		
Tb	159	3	He			251636.62		
Tb	159	3	He			250486.27		
Tb	159	3	He			247319.86		
Bi	209	3	He			191178.08		
Bi	209	3	He			193066.27		
Bi	209	3	He			195642.85		

Quantitation Report

Data File Name	063SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:13:34 PM
Sample Name	410-136258-S-31-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

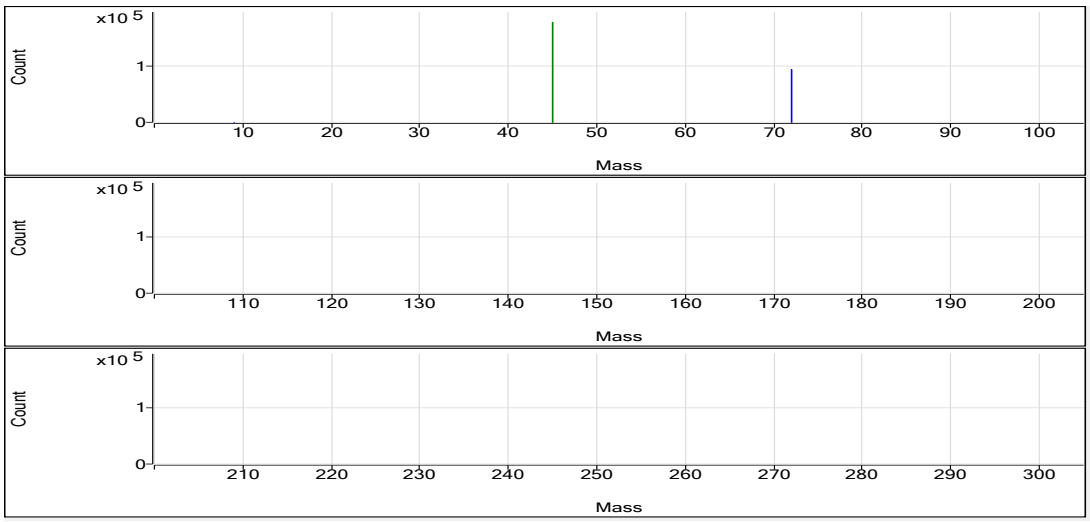
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.053	ppb	4.6	59.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.137	ppb	45.1	7.78	0.0001	Pulse	1.5000	3
Na	23	45	He	4268.317	ppb	2.1	318915.26	11.0581	Pulse	0.1000	3
Mg	24	45	He	16575.035	ppb	3.5	630864.84	21.8815	Pulse	0.1000	3
Al	27	45	He	34.277	ppb	8.6	470.02	0.0163	Pulse	0.1000	3
K	39	45	He	3559.638	ppb	2.5	110196.30	3.8211	Pulse	0.1000	3
Ca	44	45	He	129352.954	ppb	2.6	216759.32	7.5168	Pulse	0.1000	3
Ti	47	45	He	-0.005	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.445	ppb	10.5	592.68	0.0205	Pulse	0.5000	3
Cr	52	45	He	0.378	ppb	73.0	2240.26	0.0777	Pulse	0.1000	3
Mn	55	45	He	1302.120	ppb	2.8	425511.79	14.7566	Pulse	0.1000	3
Fe	57	45	He	1841.994	ppb	2.9	27229.73	0.9443	Pulse	0.1000	3
Co	59	45	He	0.618	ppb	2.9	1066.74	0.0370	Pulse	0.1000	3
Ni	60	72	He	0.985	ppb	33.3	810.05	0.0140	Pulse	0.1000	3
Cu	63	72	He	0.590	ppb	17.6	920.06	0.0159	Pulse	0.1000	3
Zn	66	72	He	-0.026	ppb	N/A	166.67	0.0029	Pulse	0.1000	3
As	75	72	He	3.785	ppb	11.0	455.34	0.0079	Pulse	0.5000	3
Sr	88	115	He	361.337	ppb	1.0	158010.52	2.9322	Pulse	0.1000	3
Mo	98	115	He	0.849	ppb	5.9	966.74	0.0179	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	176.9	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	1.3	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.141	ppb	34.7	830.06	0.0154	Pulse	0.1000	3
Sb	121	115	He	0.135	ppb	38.0	183.34	0.0034	Pulse	0.1000	3
Ba	137	115	He	36.663	ppb	7.3	9123.40	0.1693	Pulse	0.1000	3
Tl	205	209	He	0.023	ppb	12.5	166.68	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.208	ppb	5.5	1690.10	0.0087	Pulse	0.1000	3
U	238	209	He	0.936	ppb	4.2	7589.18	0.0391	Pulse	0.1000	3

ISTD Table:

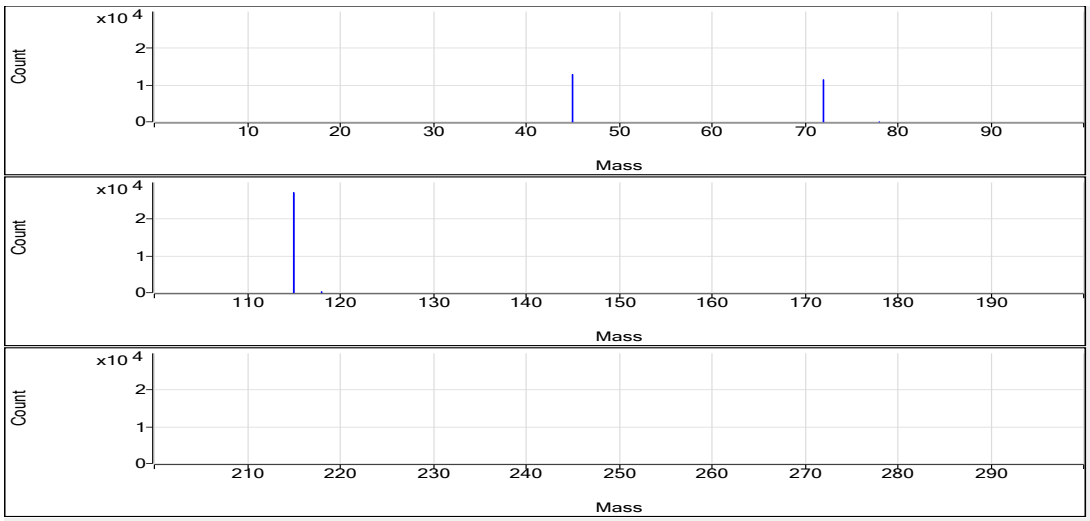
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1765715.34	1.1	100.3	Analog	0.1000	3
No Gas	Ge	72	932220.35	1.0	104.5	Pulse	0.1000	3
H2	Sc	45	129078.64	1.3	101.4	Pulse	0.1000	3
H2	Ge	72	114533.31	1.4	106.8	Pulse	0.1000	3
H2	In	115	272281.70	0.4	102.2	Pulse	0.1000	3
He	Sc	45	28852.63	3.3	101.2	Pulse	0.1000	3
He	Ge	72	57740.50	0.2	104.4	Pulse	0.1000	3
He	In	115	53889.48	0.9	100.4	Pulse	0.1000	3
He	Tb	159	251384.01	1.2	102.3	Pulse	0.1000	3
He	Bi	209	193952.43	1.1	101.6	Pulse	0.1000	3

No Gas

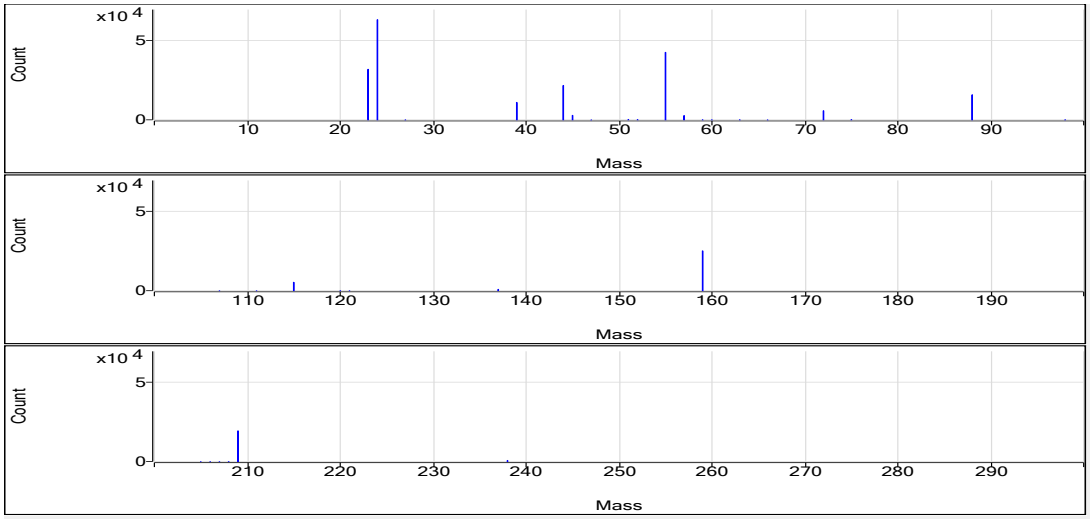


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.051	0	58.00	0.0004	1.287E-05
Be	9	1	No Gas	0.052	0	58.00	0.0004	1.287E-05
Be	9	1	No Gas	0.055	0	62.00	0.0004	1.287E-05
Se	78	2	H2	0.159	0.0001	8.67	0.0004	1.451E-05
Se	78	2	H2	0.067	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.183	0.0001	10.00	0.0004	1.451E-05
Na	23	3	He	4185.488	10.8487	322978.65	0.0025	0.2648
Na	23	3	He	4259.021	11.0346	319001.69	0.0025	0.2648
Na	23	3	He	4360.441	11.2911	314765.44	0.0025	0.2648
Mg	24	3	He	16064.22	21.2073	631369.68	0.0013	0.005032
Mg	24	3	He	16466.57	21.7384	628439.21	0.0013	0.005032
Mg	24	3	He	17194.314	22.6989	632785.62	0.0013	0.005032
Al	27	3	He	31.53	0.0151	450.02	0.0004	0.001519
Al	27	3	He	37.389	0.0176	510.03	0.0004	0.001519
Al	27	3	He	33.911	0.0161	450.02	0.0004	0.001519
K	39	3	He	3466.929	3.7311	111078.68	0.001	0.3627
K	39	3	He	3569.308	3.8305	110737.74	0.001	0.3627
K	39	3	He	3642.677	3.9018	108772.47	0.001	0.3627
Ca	44	3	He	126264.458	7.3374	218444.51	0.0001	0.002571
Ca	44	3	He	128957.256	7.4938	216641.27	0.0001	0.002571
Ca	44	3	He	132837.148	7.7192	215192.18	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.999	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.477	0.0212	630.02	0.0201	0.0116
V	51	3	He	0.467	0.021	606.02	0.0201	0.0116
V	51	3	He	0.391	0.0194	542.01	0.0201	0.0116
Cr	52	3	He	0.412	0.0786	2340.28	0.0257	0.06801
Cr	52	3	He	0.086	0.0702	2030.22	0.0257	0.06801
Cr	52	3	He	0.634	0.0843	2350.27	0.0257	0.06801
Mn	55	3	He	1271.223	14.4065	428900.03	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1293.767	14.6619	423864.52	0.0113	0.004215
Mn	55	3	He	1341.37	15.2012	423770.81	0.0113	0.004215
Fe	57	3	He	1794.764	0.9202	27396.58	0.0005	0.004099
Fe	57	3	He	1831.561	0.939	27146.26	0.0005	0.004099
Fe	57	3	He	1899.656	0.9738	27146.36	0.0005	0.004099
Co	59	3	He	0.631	0.0376	1120.08	0.0518	0.004913
Co	59	3	He	0.626	0.0374	1080.08	0.0518	0.004913
Co	59	3	He	0.598	0.0359	1000.07	0.0518	0.004913
Ni	60	3	He	0.981	0.014	810.05	0.0075	0.006695
Ni	60	3	He	0.659	0.0116	670.03	0.0075	0.006695
Ni	60	3	He	1.315	0.0165	950.07	0.0075	0.006695
Cu	63	3	He	0.588	0.0159	920.06	0.0216	0.003198
Cu	63	3	He	0.694	0.0182	1050.07	0.0216	0.003198
Cu	63	3	He	0.487	0.0137	790.05	0.0216	0.003198
Zn	66	3	He	0.323	0.0038	220.01	0.0026	0.002954
Zn	66	3	He	-0.662	0.0012	70.00	0.0026	0.002954
Zn	66	3	He	0.263	0.0036	210.01	0.0026	0.002954
As	75	3	He	4.12	0.0085	494.01	0.002	0.0004943
As	75	3	He	3.916	0.0081	470.01	0.002	0.0004943
As	75	3	He	3.321	0.007	402.01	0.002	0.0004943
Sr	88	3	He	357.802	2.9036	158044.14	0.0081	0.0006852
Sr	88	3	He	365.168	2.9633	159187.79	0.0081	0.0006852
Sr	88	3	He	361.041	2.9298	156799.63	0.0081	0.0006852
Mo	98	3	He	0.906	0.0191	1040.08	0.0205	0.0005587
Mo	98	3	He	0.828	0.0175	940.07	0.0205	0.0005587
Mo	98	3	He	0.813	0.0172	920.06	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.024	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.193	0.0162	880.07	0.0146	0.01334
Sn	120	3	He	0.132	0.0153	820.05	0.0146	0.01334
Sn	120	3	He	0.097	0.0148	790.05	0.0146	0.01334
Sb	121	3	He	0.076	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.157	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.171	0.0039	210.01	0.0142	0.001484
Ba	137	3	He	36.78	0.1698	9243.53	0.0046	0.000374
Ba	137	3	He	39.29	0.1814	9743.79	0.0046	0.000374
Ba	137	3	He	33.918	0.1566	8382.87	0.0046	0.000374
Tl	205	3	He	0.023	0.0009	170.01	0.0282	0.00021
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Tl	205	3	He	0.026	0.0009	180.01	0.0282	0.00021
Pb	208	3	He	0.206	0.0087	820.05	0.0372	0.0009772
Pb	208	3	He	0.197	0.0083	860.07	0.0372	0.0009772
Pb	208	3	He	0.22	0.0092	930.06	0.0372	0.0009772
U	238	3	He	0.906	0.0379	7432.42	0.0417	8.729E-05
U	238	3	He	0.98	0.041	7932.72	0.0417	8.729E-05
U	238	3	He	0.921	0.0385	7402.41	0.0417	8.729E-05
Sc	45	1	No Gas			1762070.91		
Sc	45	1	No Gas			1748137.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1786938.10		
Ge	72	1	No Gas			942470.38		
Ge	72	1	No Gas			927056.08		
Ge	72	1	No Gas			927134.60		
Sc	45	2	H2			127625.39		
Sc	45	2	H2			128604.57		
Sc	45	2	H2			131005.95		
Ge	72	2	H2			112783.09		
Ge	72	2	H2			114899.10		
Ge	72	2	H2			115917.73		
In	115	2	H2			271121.29		
In	115	2	H2			272295.76		
In	115	2	H2			273428.06		
Sc	45	3	He			29771.29		
Sc	45	3	He			28909.21		
Sc	45	3	He			27877.39		
Ge	72	3	He			57857.50		
Ge	72	3	He			57747.22		
Ge	72	3	He			57616.77		
In	115	3	He			54437.26		
In	115	3	He			53724.99		
In	115	3	He			53523.61		
Tb	159	3	He			248859.49		
Tb	159	3	He			254876.38		
Tb	159	3	He			250416.17		
Bi	209	3	He			196192.13		
Bi	209	3	He			193533.77		
Bi	209	3	He			192131.40		

Quantitation Report

Data File Name	064SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:15:33 PM
Sample Name	410-136283-G-5-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

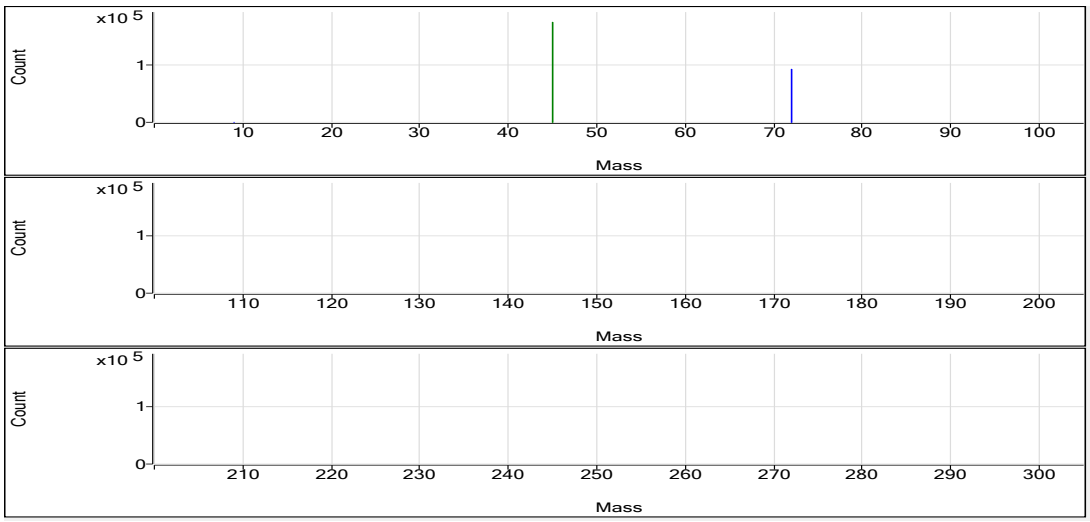
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.043	ppb	18.7	52.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.043	ppb	54.7	3.56	0.0000	Pulse	1.5000	3
Na	23	45	He	35991.160	ppb	2.2	2615380.12	91.2755	Analog	0.1000	3
Mg	24	45	He	4811.627	ppb	0.3	182179.18	6.3556	Pulse	0.1000	3
Al	27	45	He	9.419	ppb	30.8	160.01	0.0056	Pulse	0.1000	3
K	39	45	He	1308.067	ppb	1.6	46832.79	1.6336	Pulse	0.1000	3
Ca	44	45	He	14360.840	ppb	1.3	23987.09	0.8368	Pulse	0.1000	3
Ti	47	45	He	2.017	ppb	18.2	33.33	0.0012	Pulse	0.1000	3
V	51	45	He	0.127	ppb	14.2	405.34	0.0141	Pulse	0.5000	3
Cr	52	45	He	0.291	ppb	85.0	2163.56	0.0755	Pulse	0.1000	3
Mn	55	45	He	470.232	ppb	1.5	152797.67	5.3317	Pulse	0.1000	3
Fe	57	45	He	7911.732	ppb	2.6	115842.91	4.0426	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	76.3	193.34	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.215	ppb	122.4	476.69	0.0083	Pulse	0.1000	3
Cu	63	72	He	0.081	ppb	68.1	286.68	0.0050	Pulse	0.1000	3
Zn	66	72	He	5.273	ppb	4.4	970.07	0.0168	Pulse	0.1000	3
As	75	72	He	0.350	ppb	24.7	68.00	0.0012	Pulse	0.5000	3
Sr	88	115	He	59.212	ppb	5.1	26475.53	0.4811	Pulse	0.1000	3
Mo	98	115	He	0.680	ppb	8.0	796.72	0.0145	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	62.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.437	ppb	43.0	1086.75	0.0197	Pulse	0.1000	3
Sb	121	115	He	0.079	ppb	33.4	143.34	0.0026	Pulse	0.1000	3
Ba	137	115	He	23.521	ppb	3.5	5984.84	0.1087	Pulse	0.1000	3
Tl	205	209	He	0.011	ppb	93.1	100.00	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.059	ppb	6.5	616.70	0.0032	Pulse	0.1000	3
U	238	209	He	0.009	ppb	32.9	86.67	0.0004	Pulse	0.1000	3

ISTD Table:

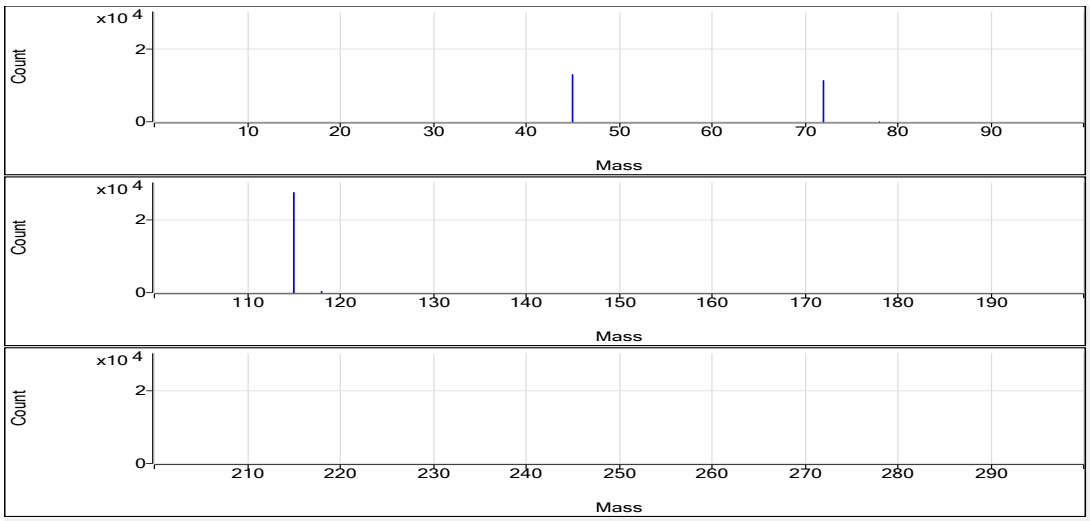
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735332.21	1.0	98.5	Analog	0.1000	3
No Gas	Ge	72	921524.70	0.3	103.3	Pulse	0.1000	3
H2	Sc	45	129797.67	1.0	101.9	Pulse	0.1000	3
H2	Ge	72	113336.80	1.0	105.7	Pulse	0.1000	3
H2	In	115	275332.91	1.7	103.4	Pulse	0.1000	3
He	Sc	45	28665.78	2.9	100.6	Pulse	0.1000	3
He	Ge	72	57683.51	2.5	104.3	Pulse	0.1000	3
He	In	115	55062.05	2.2	102.6	Pulse	0.1000	3
He	Tb	159	250597.21	1.4	102.0	Pulse	0.1000	3
He	Bi	209	193398.38	0.4	101.3	Pulse	0.1000	3

No Gas

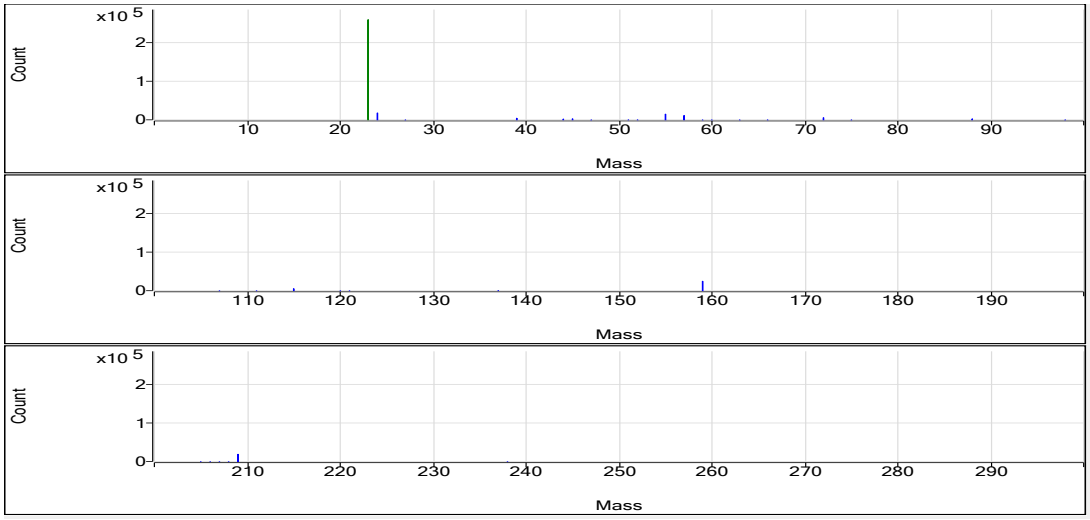


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.047	0	54.00	0.0004	1.287E-05
Be	9	1	No Gas	0.049	0	56.00	0.0004	1.287E-05
Be	9	1	No Gas	0.034	0	46.00	0.0004	1.287E-05
Se	78	2	H2	0.022	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.038	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.069	0	4.67	0.0004	1.451E-05
Na	23	3	He	35172.149	89.2045	2635170.27	0.0025	0.2648
Na	23	3	He	36046.864	91.4164	2610761.37	0.0025	0.2648
Na	23	3	He	36754.468	93.2057	2600208.71	0.0025	0.2648
Mg	24	3	He	4798.624	6.3385	187243.65	0.0013	0.005032
Mg	24	3	He	4808.781	6.3519	181403.57	0.0013	0.005032
Mg	24	3	He	4827.477	6.3766	177890.33	0.0013	0.005032
Al	27	3	He	8.254	0.0051	150.01	0.0004	0.001519
Al	27	3	He	12.719	0.007	200.01	0.0004	0.001519
Al	27	3	He	7.285	0.0047	130.01	0.0004	0.001519
K	39	3	He	1325.288	1.6503	48752.14	0.001	0.3627
K	39	3	He	1285.357	1.6115	46023.95	0.001	0.3627
K	39	3	He	1313.557	1.6389	45722.28	0.001	0.3627
Ca	44	3	He	14250.858	0.8304	24531.27	0.0001	0.002571
Ca	44	3	He	14579.329	0.8495	24260.93	0.0001	0.002571
Ca	44	3	He	14252.332	0.8305	23169.07	0.0001	0.002571
Ti	47	3	He	2.44	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	1.779	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	1.833	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.12	0.014	414.01	0.0201	0.0116
V	51	3	He	0.113	0.0139	396.01	0.0201	0.0116
V	51	3	He	0.147	0.0146	406.01	0.0201	0.0116
Cr	52	3	He	0.384	0.0779	2300.24	0.0257	0.06801
Cr	52	3	He	0.011	0.0683	1950.20	0.0257	0.06801
Cr	52	3	He	0.478	0.0803	2240.24	0.0257	0.06801
Mn	55	3	He	462.316	5.242	154853.04	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	474.034	5.3748	153498.32	0.0113	0.004215
Mn	55	3	He	474.346	5.3783	150041.64	0.0113	0.004215
Fe	57	3	He	7815.351	3.9934	117969.37	0.0005	0.004099
Fe	57	3	He	7773.896	3.9723	113444.41	0.0005	0.004099
Fe	57	3	He	8145.949	4.1622	116114.96	0.0005	0.004099
Co	59	3	He	0.01	0.0054	160.01	0.0518	0.004913
Co	59	3	He	0.034	0.0067	190.01	0.0518	0.004913
Co	59	3	He	0.064	0.0082	230.01	0.0518	0.004913
Ni	60	3	He	0.107	0.0075	440.02	0.0075	0.006695
Ni	60	3	He	0.022	0.0069	400.02	0.0075	0.006695
Ni	60	3	He	0.514	0.0105	590.03	0.0075	0.006695
Cu	63	3	He	0.136	0.0061	360.02	0.0216	0.003198
Cu	63	3	He	0.082	0.005	290.01	0.0216	0.003198
Cu	63	3	He	0.025	0.0037	210.01	0.0216	0.003198
Zn	66	3	He	5.355	0.017	1000.07	0.0026	0.002954
Zn	66	3	He	5.009	0.0161	940.06	0.0026	0.002954
Zn	66	3	He	5.456	0.0173	970.07	0.0026	0.002954
As	75	3	He	0.305	0.0011	64.00	0.002	0.0004943
As	75	3	He	0.45	0.0014	80.00	0.002	0.0004943
As	75	3	He	0.295	0.0011	60.00	0.002	0.0004943
Sr	88	3	He	56.711	0.4608	26014.66	0.0081	0.0006852
Sr	88	3	He	62.535	0.508	27647.64	0.0081	0.0006852
Sr	88	3	He	58.39	0.4744	25764.29	0.0081	0.0006852
Mo	98	3	He	0.622	0.0133	750.05	0.0205	0.0005587
Mo	98	3	He	0.691	0.0147	800.05	0.0205	0.0005587
Mo	98	3	He	0.728	0.0155	840.06	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.033	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	0.481	0.0204	1150.10	0.0146	0.01334
Sn	120	3	He	0.231	0.0167	910.07	0.0146	0.01334
Sn	120	3	He	0.599	0.0221	1200.08	0.0146	0.01334
Sb	121	3	He	0.082	0.0027	150.01	0.0142	0.001484
Sb	121	3	He	0.051	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	0.103	0.0029	160.01	0.0142	0.001484
Ba	137	3	He	22.801	0.1054	5951.52	0.0046	0.000374
Ba	137	3	He	24.415	0.1129	6141.56	0.0046	0.000374
Ba	137	3	He	23.346	0.1079	5861.45	0.0046	0.000374
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.002	0.0003	50.00	0.0282	0.00021
Pb	208	3	He	0.064	0.0033	380.02	0.0372	0.0009772
Pb	208	3	He	0.056	0.0031	290.01	0.0372	0.0009772
Pb	208	3	He	0.059	0.0032	350.02	0.0372	0.0009772
U	238	3	He	0.01	0.0005	100.00	0.0417	8.729E-05
U	238	3	He	0.01	0.0005	100.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1716152.32		
Sc	45	1	No Gas			1741601.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1748242.63		
Ge	72	1	No Gas			923259.05		
Ge	72	1	No Gas			918482.56		
Ge	72	1	No Gas			922832.49		
Sc	45	2	H2			128643.90		
Sc	45	2	H2			129624.11		
Sc	45	2	H2			131125.00		
Ge	72	2	H2			114577.04		
Ge	72	2	H2			112934.19		
Ge	72	2	H2			112499.17		
In	115	2	H2			270262.55		
In	115	2	H2			276701.87		
In	115	2	H2			279034.31		
Sc	45	3	He			29540.79		
Sc	45	3	He			28559.02		
Sc	45	3	He			27897.54		
Ge	72	3	He			58701.18		
Ge	72	3	He			58289.45		
Ge	72	3	He			56059.90		
In	115	3	He			56465.13		
In	115	3	He			54426.99		
In	115	3	He			54316.84		
Tb	159	3	He			254350.54		
Tb	159	3	He			247751.40		
Tb	159	3	He			249689.68		
Bi	209	3	He			194379.04		
Bi	209	3	He			192800.21		
Bi	209	3	He			193015.90		

Quantitation Report

Data File Name	065SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:17:30 PM
Sample Name	410-135926-T-1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

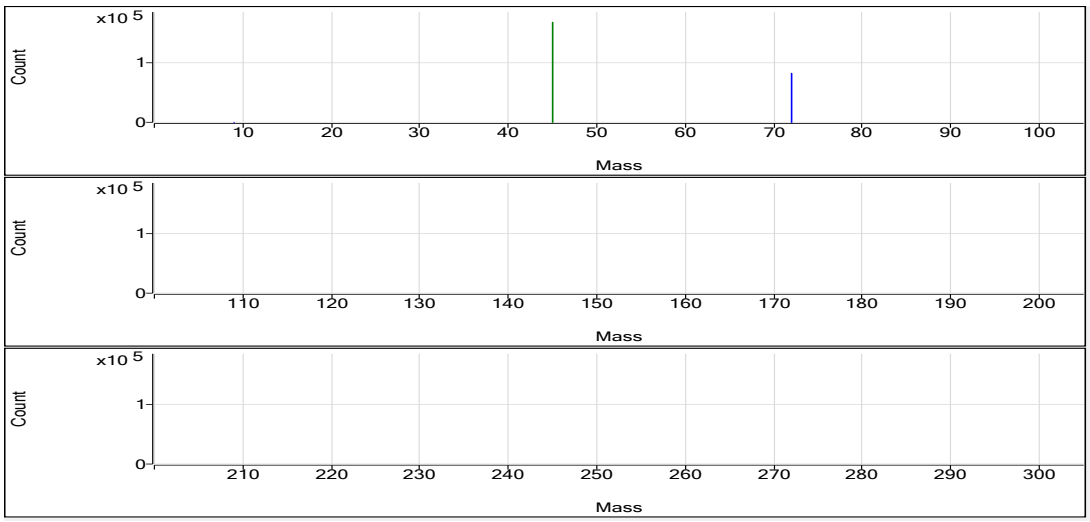
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.226	ppb	6.2	172.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.607	ppb	26.8	26.22	0.0003	Pulse	1.5000	3
Na	23	45	He	4635769.008	ppb	0.6	333058508.37	11,722.7085	Analog	0.1000	3
Mg	24	45	He	560049.640	ppb	0.6	21001248.44	739.1845	Analog	0.1000	3
Al	27	45	He	8669.406	ppb	0.6	106264.98	3.7402	Pulse	0.1000	3
K	39	45	He	175622.441	ppb	0.4	4858091.60	170.9906	Analog	0.1000	3
Ca	44	45	He	229020.122	ppb	0.9	378056.47	13.3066	Pulse	0.1000	3
Ti	47	45	He	274.007	ppb	7.1	3583.90	0.1262	Pulse	0.1000	3
V	51	45	He	25.795	ppb	1.8	15029.14	0.5290	Pulse	0.5000	3
Cr	52	45	He	21.888	ppb	1.3	17914.98	0.6305	Pulse	0.1000	3
Mn	55	45	He	332.940	ppb	0.9	107289.99	3.7763	Pulse	0.1000	3
Fe	57	45	He	9184.765	ppb	0.3	133320.54	4.6925	Pulse	0.1000	3
Co	59	45	He	3.785	ppb	1.3	5711.30	0.2010	Pulse	0.1000	3
Ni	60	72	He	22.217	ppb	5.9	9126.54	0.1722	Pulse	0.1000	3
Cu	63	72	He	15.917	ppb	3.9	18379.00	0.3468	Pulse	0.1000	3
Zn	66	72	He	36.744	ppb	1.9	5277.83	0.0996	Pulse	0.1000	3
As	75	72	He	25.979	ppb	1.9	2714.28	0.0512	Pulse	0.5000	3
Sr	88	115	He	3931.313	ppb	2.0	1573807.84	31.8958	Analog	0.1000	3
Mo	98	115	He	6.460	ppb	11.3	6548.43	0.1328	Pulse	0.1000	3
Ag	107	115	He	0.084	ppb	15.8	200.01	0.0041	Pulse	0.1000	3
Cd	111	115	He	0.160	ppb	15.4	40.00	0.0008	Pulse	0.5000	3
Sn	120	115	He	0.675	ppb	52.6	1143.42	0.0232	Pulse	0.1000	3
Sb	121	115	He	1.012	ppb	12.4	783.38	0.0159	Pulse	0.1000	3
Ba	137	115	He	93.639	ppb	2.7	21303.91	0.4318	Pulse	0.1000	3
Tl	205	209	He	0.063	ppb	17.8	326.68	0.0020	Pulse	0.1000	3
Pb	208	209	He	8.936	ppb	1.7	54619.61	0.3337	Pulse	0.1000	3
U	238	209	He	2.590	ppb	1.8	17702.71	0.1081	Pulse	0.1000	3

ISTD Table:

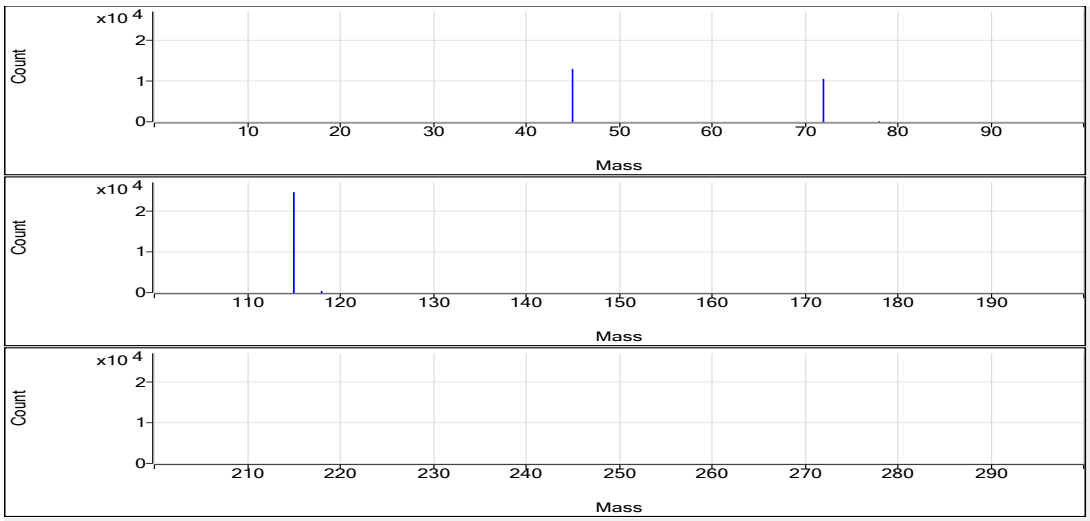
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1692327.27	0.4	96.1	Analog	0.1000	3
No Gas	Ge	72	829988.06	0.9	93.0	Pulse	0.1000	3
H2	Sc	45	128157.64	1.9	100.7	Pulse	0.1000	3
H2	Ge	72	104188.39	2.3	97.2	Pulse	0.1000	3
H2	In	115	244117.79	1.3	91.7	Pulse	0.1000	3
He	Sc	45	28411.78	0.4	99.7	Pulse	0.1000	3
He	Ge	72	52995.46	0.2	95.8	Pulse	0.1000	3
He	In	115	49347.02	1.0	91.9	Pulse	0.1000	3
He	Tb	159	228896.18	0.6	93.1	Pulse	0.1000	3
He	Bi	209	163689.16	1.0	85.8	Pulse	0.1000	3

No Gas

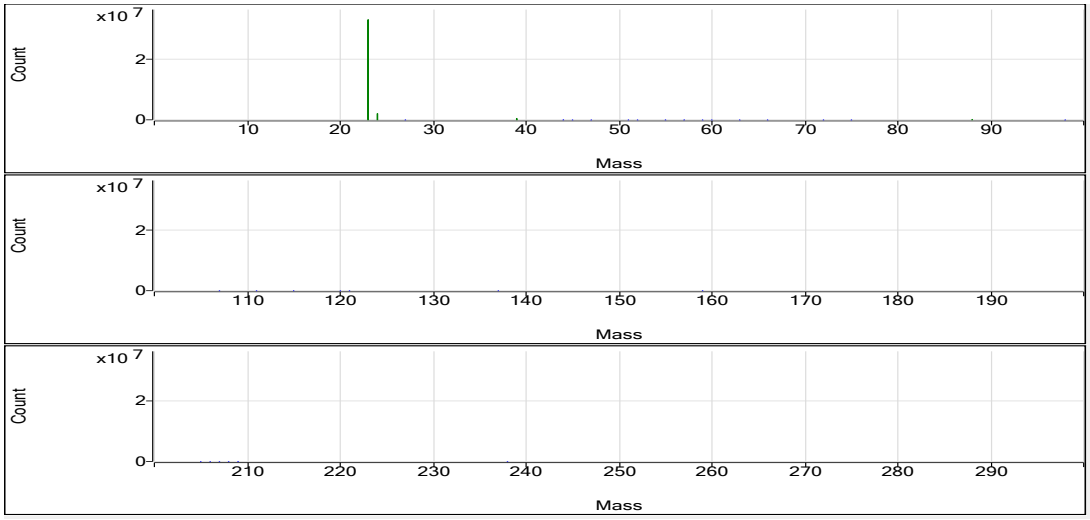


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.236	0.0001	178.00	0.0004	1.287E-05
Be	9	1	No Gas	0.21	0.0001	162.00	0.0004	1.287E-05
Be	9	1	No Gas	0.233	0.0001	178.00	0.0004	1.287E-05
Se	78	2	H2	0.732	0.0003	30.67	0.0004	1.451E-05
Se	78	2	H2	0.665	0.0003	29.33	0.0004	1.451E-05
Se	78	2	H2	0.423	0.0002	18.67	0.0004	1.451E-05
Na	23	3	He	4608568.886	11653.9277	332588995.04	0.0025	0.2648
Na	23	3	He	4639134.023	11731.2176	332680555.04	0.0025	0.2648
Na	23	3	He	4659604.116	11782.9802	333905975.02	0.0025	0.2648
Mg	24	3	He	556398.764	734.3659	20957913.44	0.0013	0.005032
Mg	24	3	He	562481.586	742.3943	21053239.69	0.0013	0.005032
Mg	24	3	He	561268.569	740.7933	20992592.19	0.0013	0.005032
Al	27	3	He	8625.523	3.7213	106201.03	0.0004	0.001519
Al	27	3	He	8723.195	3.7634	106724.87	0.0004	0.001519
Al	27	3	He	8659.501	3.7359	105869.03	0.0004	0.001519
K	39	3	He	174737.902	170.1312	4855338.37	0.001	0.3627
K	39	3	He	175914.95	171.2748	4857107.43	0.001	0.3627
K	39	3	He	176214.47	171.5658	4861828.99	0.001	0.3627
Ca	44	3	He	226867.486	13.1816	376186.05	0.0001	0.002571
Ca	44	3	He	229182.827	13.3161	377624.72	0.0001	0.002571
Ca	44	3	He	231010.052	13.4222	380358.63	0.0001	0.002571
Ti	47	3	He	267.171	0.123	3510.53	0.0005	0.0002328
Ti	47	3	He	258.895	0.1192	3380.51	0.0005	0.0002328
Ti	47	3	He	295.954	0.1362	3860.65	0.0005	0.0002328
V	51	3	He	25.289	0.5189	14807.59	0.0201	0.0116
V	51	3	He	25.862	0.5303	15039.82	0.0201	0.0116
V	51	3	He	26.234	0.5378	15240.02	0.0201	0.0116
Cr	52	3	He	21.829	0.629	17951.66	0.0257	0.06801
Cr	52	3	He	22.204	0.6387	18111.86	0.0257	0.06801
Cr	52	3	He	21.631	0.6239	17681.43	0.0257	0.06801
Mn	55	3	He	333.161	3.7788	107841.10	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	329.699	3.7395	106047.65	0.0113	0.004215
Mn	55	3	He	335.961	3.8105	107981.21	0.0113	0.004215
Fe	57	3	He	9170.822	4.6853	133713.92	0.0005	0.004099
Fe	57	3	He	9169.905	4.6849	132856.25	0.0005	0.004099
Fe	57	3	He	9213.569	4.7072	133391.44	0.0005	0.004099
Co	59	3	He	3.801	0.2019	5761.31	0.0518	0.004913
Co	59	3	He	3.731	0.1982	5621.29	0.0518	0.004913
Co	59	3	He	3.822	0.203	5751.30	0.0518	0.004913
Ni	60	3	He	23.26	0.18	9553.50	0.0075	0.006695
Ni	60	3	He	20.741	0.1612	8542.76	0.0075	0.006695
Ni	60	3	He	22.649	0.1754	9283.35	0.0075	0.006695
Cu	63	3	He	15.449	0.3367	17871.61	0.0216	0.003198
Cu	63	3	He	15.677	0.3416	18101.85	0.0216	0.003198
Cu	63	3	He	16.627	0.3621	19163.53	0.0216	0.003198
Zn	66	3	He	36.421	0.0987	5241.13	0.0026	0.002954
Zn	66	3	He	36.27	0.0983	5211.15	0.0026	0.002954
Zn	66	3	He	37.542	0.1017	5381.21	0.0026	0.002954
As	75	3	He	26.556	0.0523	2778.29	0.002	0.0004943
As	75	3	He	25.771	0.0508	2692.27	0.002	0.0004943
As	75	3	He	25.611	0.0505	2672.27	0.002	0.0004943
Sr	88	3	He	3861.408	31.3286	1563744.82	0.0081	0.0006852
Sr	88	3	He	3914.412	31.7587	1557382.63	0.0081	0.0006852
Sr	88	3	He	4018.12	32.6001	1600296.07	0.0081	0.0006852
Mo	98	3	He	5.641	0.116	5791.35	0.0205	0.0005587
Mo	98	3	He	7.028	0.1444	7082.08	0.0205	0.0005587
Mo	98	3	He	6.712	0.138	6771.85	0.0205	0.0005587
Ag	107	3	He	0.069	0.0034	170.01	0.043	0.0004367
Ag	107	3	He	0.089	0.0043	210.01	0.043	0.0004367
Ag	107	3	He	0.094	0.0045	220.01	0.043	0.0004367
Cd	111	3	He	0.158	0.0008	40.00	0.005	1.253E-05
Cd	111	3	He	0.185	0.0009	46.00	0.005	1.253E-05
Cd	111	3	He	0.136	0.0007	34.00	0.005	1.253E-05
Sn	120	3	He	0.266	0.0172	860.05	0.0146	0.01334
Sn	120	3	He	0.901	0.0265	1300.11	0.0146	0.01334
Sn	120	3	He	0.857	0.0259	1270.10	0.0146	0.01334
Sb	121	3	He	0.938	0.0148	740.05	0.0142	0.001484
Sb	121	3	He	1.157	0.0179	880.06	0.0142	0.001484
Sb	121	3	He	0.941	0.0149	730.04	0.0142	0.001484
Ba	137	3	He	91.837	0.4235	21136.90	0.0046	0.000374
Ba	137	3	He	96.494	0.4449	21818.09	0.0046	0.000374
Ba	137	3	He	92.586	0.4269	20956.75	0.0046	0.000374
Tl	205	3	He	0.05	0.0016	270.01	0.0282	0.00021
Tl	205	3	He	0.071	0.0022	360.02	0.0282	0.00021
Tl	205	3	He	0.068	0.0021	350.02	0.0282	0.00021
Pb	208	3	He	8.856	0.3307	28752.29	0.0372	0.0009772
Pb	208	3	He	9.115	0.3404	29433.71	0.0372	0.0009772
Pb	208	3	He	8.836	0.33	28732.46	0.0372	0.0009772
U	238	3	He	2.641	0.1103	18213.44	0.0417	8.729E-05
U	238	3	He	2.551	0.1065	17242.10	0.0417	8.729E-05
U	238	3	He	2.578	0.1076	17652.60	0.0417	8.729E-05
Sc	45	1	No Gas			1684897.32		
Sc	45	1	No Gas			1692613.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1699470.76		
Ge	72	1	No Gas			838778.74		
Ge	72	1	No Gas			824503.11		
Ge	72	1	No Gas			826682.33		
Sc	45	2	H2			129080.27		
Sc	45	2	H2			130005.85		
Sc	45	2	H2			125386.80		
Ge	72	2	H2			101992.76		
Ge	72	2	H2			106736.97		
Ge	72	2	H2			103835.43		
In	115	2	H2			246461.23		
In	115	2	H2			245331.32		
In	115	2	H2			240560.82		
Sc	45	3	He			28538.79		
Sc	45	3	He			28358.57		
Sc	45	3	He			28337.99		
Ge	72	3	He			53079.36		
Ge	72	3	He			52988.46		
Ge	72	3	He			52918.56		
In	115	3	He			49920.26		
In	115	3	He			49047.15		
In	115	3	He			49097.65		
Tb	159	3	He			227509.84		
Tb	159	3	He			230092.48		
Tb	159	3	He			229086.21		
Bi	209	3	He			165191.36		
Bi	209	3	He			161890.65		
Bi	209	3	He			163985.47		

Quantitation Report

Data File Name	066SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:19:34 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

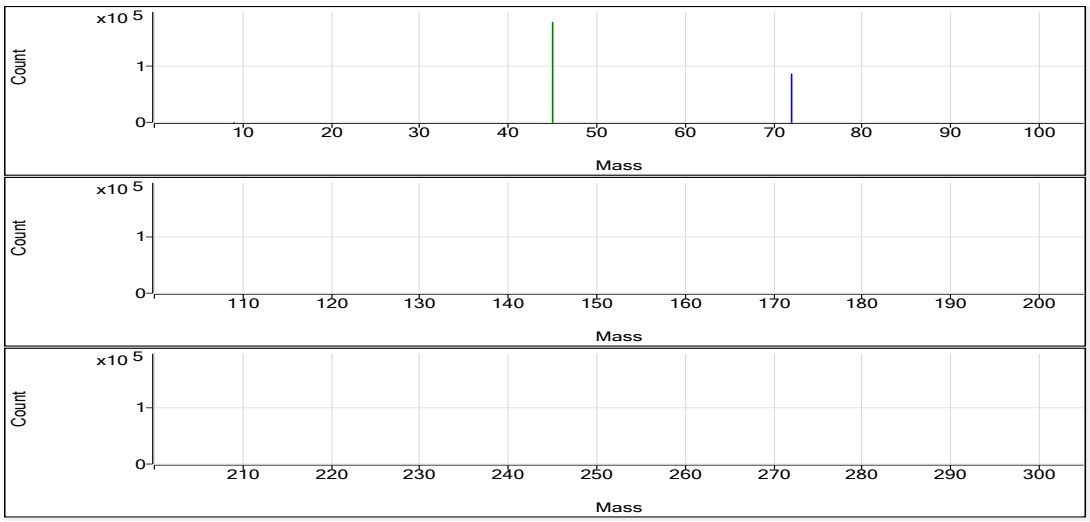
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.040	ppb	67.7	50.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	122.3	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	967.701	ppb	13.8	80040.50	2.7119	Pulse	0.1000	3
Mg	24	45	He	115.217	ppb	17.5	4640.91	0.1571	Pulse	0.1000	3
Al	27	45	He	4.308	ppb	50.2	100.00	0.0034	Pulse	0.1000	3
K	39	45	He	27.866	ppb	131.6	11505.01	0.3898	Pulse	0.1000	3
Ca	44	45	He	74.884	ppb	28.0	203.34	0.0069	Pulse	0.1000	3
Ti	47	45	He	-0.021	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.159	ppb	53.4	435.34	0.0148	Pulse	0.5000	3
Cr	52	45	He	0.106	ppb	141.6	2086.89	0.0707	Pulse	0.1000	3
Mn	55	45	He	0.385	ppb	34.3	253.34	0.0086	Pulse	0.1000	3
Fe	57	45	He	6.666	ppb	56.5	220.01	0.0075	Pulse	0.1000	3
Co	59	45	He	0.014	ppb	130.3	166.68	0.0056	Pulse	0.1000	3
Ni	60	72	He	0.276	ppb	65.7	483.36	0.0087	Pulse	0.1000	3
Cu	63	72	He	0.176	ppb	23.6	386.69	0.0070	Pulse	0.1000	3
Zn	66	72	He	0.184	ppb	76.6	190.01	0.0034	Pulse	0.1000	3
As	75	72	He	0.147	ppb	27.1	43.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.688	ppb	29.3	346.68	0.0063	Pulse	0.1000	3
Mo	98	115	He	0.011	ppb	123.3	43.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	68.7	46.67	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.039	ppb	N/A	706.71	0.0128	Pulse	0.1000	3
Sb	121	115	He	0.044	ppb	147.0	116.67	0.0021	Pulse	0.1000	3
Ba	137	115	He	0.076	ppb	50.3	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	67.0	126.67	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	60.4	356.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.004	ppb	29.9	50.00	0.0003	Pulse	0.1000	3

ISTD Table:

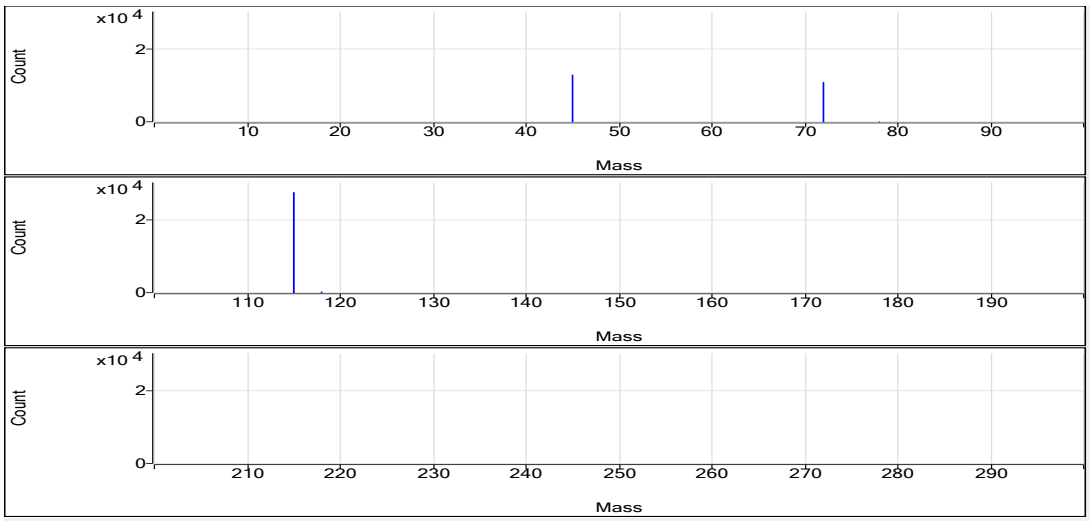
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1777517.47	0.7	100.9	Analog	0.1000	3
No Gas	Ge	72	859556.55	0.1	96.3	Pulse	0.1000	3
H2	Sc	45	129834.65	1.4	102.0	Pulse	0.1000	3
H2	Ge	72	109373.37	0.5	102.0	Pulse	0.1000	3
H2	In	115	276944.79	0.8	104.0	Pulse	0.1000	3
He	Sc	45	29470.79	3.0	103.4	Pulse	0.1000	3
He	Ge	72	55334.45	1.7	100.0	Pulse	0.1000	3
He	In	115	55319.05	0.8	103.1	Pulse	0.1000	3
He	Tb	159	248286.55	0.3	101.0	Pulse	0.1000	3
He	Bi	209	193007.52	0.4	101.1	Pulse	0.1000	3

No Gas

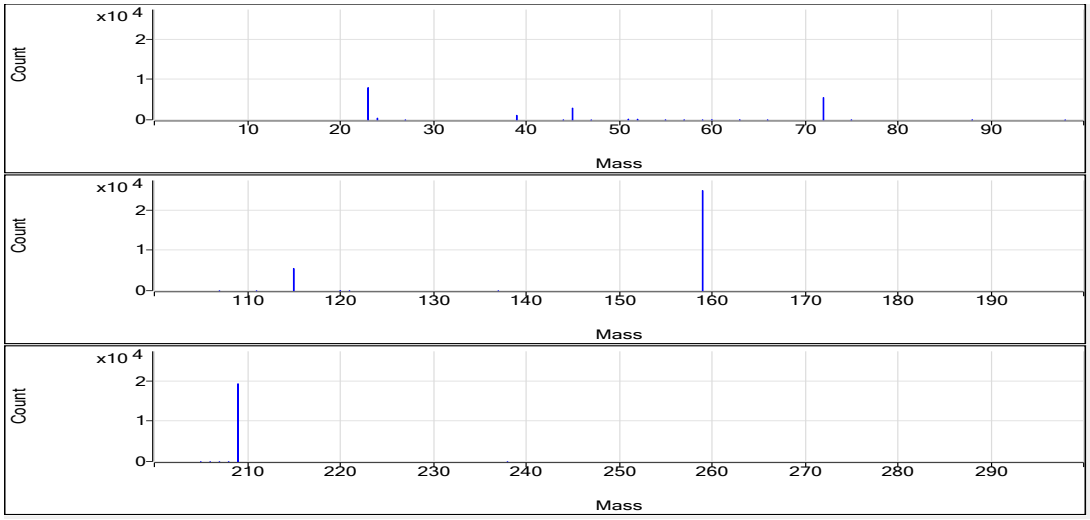


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.022	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.071	0	72.00	0.0004	1.287E-05
Be	9	1	No Gas	0.027	0	42.00	0.0004	1.287E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.026	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.025	0	2.67	0.0004	1.451E-05
Na	23	3	He	1117.579	3.0909	92360.10	0.0025	0.2648
Na	23	3	He	923.594	2.6003	78196.91	0.0025	0.2648
Na	23	3	He	861.929	2.4444	69564.48	0.0025	0.2648
Mg	24	3	He	136.942	0.1858	5551.27	0.0013	0.005032
Mg	24	3	He	111.603	0.1523	4580.86	0.0013	0.005032
Mg	24	3	He	97.106	0.1332	3790.61	0.0013	0.005032
Al	27	3	He	4.239	0.0033	100.00	0.0004	0.001519
Al	27	3	He	6.504	0.0043	130.01	0.0004	0.001519
Al	27	3	He	2.182	0.0025	70.00	0.0004	0.001519
K	39	3	He	64.304	0.4252	12706.04	0.001	0.3627
K	39	3	He	28.304	0.3902	11735.12	0.001	0.3627
K	39	3	He	-9.01	0.354	10073.88	0.001	0.3627
Ca	44	3	He	76.722	0.007	210.01	0.0001	0.002571
Ca	44	3	He	53.06	0.0057	170.01	0.0001	0.002571
Ca	44	3	He	94.869	0.0081	230.01	0.0001	0.002571
Ti	47	3	He	0.95	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.199	0.0156	466.01	0.0201	0.0116
V	51	3	He	0.062	0.0128	386.01	0.0201	0.0116
V	51	3	He	0.217	0.016	454.01	0.0201	0.0116
Cr	52	3	He	0.115	0.071	2120.23	0.0257	0.06801
Cr	52	3	He	0.252	0.0745	2240.25	0.0257	0.06801
Cr	52	3	He	-0.048	0.0668	1900.19	0.0257	0.06801
Mn	55	3	He	0.307	0.0077	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.538	0.0103	310.01	0.0113	0.004215
Mn	55	3	He	0.31	0.0077	220.01	0.0113	0.004215
Fe	57	3	He	6.395	0.0074	220.01	0.0005	0.004099
Fe	57	3	He	3.046	0.0057	170.01	0.0005	0.004099
Fe	57	3	He	10.558	0.0095	270.01	0.0005	0.004099
Co	59	3	He	0.028	0.0064	190.01	0.0518	0.004913
Co	59	3	He	0.021	0.006	180.01	0.0518	0.004913
Co	59	3	He	-0.007	0.0046	130.01	0.0518	0.004913
Ni	60	3	He	0.177	0.008	450.02	0.0075	0.006695
Ni	60	3	He	0.485	0.0103	560.03	0.0075	0.006695
Ni	60	3	He	0.166	0.0079	440.02	0.0075	0.006695
Cu	63	3	He	0.173	0.0069	390.02	0.0216	0.003198
Cu	63	3	He	0.218	0.0079	430.03	0.0216	0.003198
Cu	63	3	He	0.136	0.0061	340.02	0.0216	0.003198
Zn	66	3	He	0.095	0.0032	180.01	0.0026	0.002954
Zn	66	3	He	0.347	0.0039	210.01	0.0026	0.002954
Zn	66	3	He	0.11	0.0032	180.01	0.0026	0.002954
As	75	3	He	0.184	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.105	0.0007	38.00	0.002	0.0004943
As	75	3	He	0.153	0.0008	44.00	0.002	0.0004943
Sr	88	3	He	0.921	0.0082	450.02	0.0081	0.0006852
Sr	88	3	He	0.578	0.0054	300.01	0.0081	0.0006852
Sr	88	3	He	0.566	0.0053	290.02	0.0081	0.0006852
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	-0.001	0.0005	30.00	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.002	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	-0.082	0.0121	670.04	0.0146	0.01334
Sn	120	3	He	-0.091	0.012	670.04	0.0146	0.01334
Sn	120	3	He	0.058	0.0142	780.05	0.0146	0.01334
Sb	121	3	He	0.036	0.002	110.00	0.0142	0.001484
Sb	121	3	He	-0.016	0.0013	70.00	0.0142	0.001484
Sb	121	3	He	0.113	0.0031	170.01	0.0142	0.001484
Ba	137	3	He	0.076	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.113	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.037	0.0005	30.00	0.0046	0.000374
Tl	205	3	He	0.004	0.0003	60.00	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Pb	208	3	He	0.018	0.0017	110.00	0.0372	0.0009772
Pb	208	3	He	0.039	0.0024	200.01	0.0372	0.0009772
Pb	208	3	He	0.013	0.0014	160.01	0.0372	0.0009772
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
Sc	45	1	No Gas			1773493.72		
Sc	45	1	No Gas			1768241.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1790817.32		
Ge	72	1	No Gas			860887.17		
Ge	72	1	No Gas			858827.64		
Ge	72	1	No Gas			858954.83		
Sc	45	2	H2			130773.41		
Sc	45	2	H2			130964.99		
Sc	45	2	H2			127765.55		
Ge	72	2	H2			109899.62		
Ge	72	2	H2			108873.94		
Ge	72	2	H2			109346.55		
In	115	2	H2			276505.93		
In	115	2	H2			279300.52		
In	115	2	H2			275027.91		
Sc	45	3	He			29881.70		
Sc	45	3	He			30071.92		
Sc	45	3	He			28458.74		
Ge	72	3	He			56181.46		
Ge	72	3	He			54333.42		
Ge	72	3	He			55488.48		
In	115	3	He			55179.91		
In	115	3	He			55802.87		
In	115	3	He			54989.22		
Tb	159	3	He			248652.69		
Tb	159	3	He			248715.11		
Tb	159	3	He			247491.85		
Bi	209	3	He			193013.94		
Bi	209	3	He			192243.10		
Bi	209	3	He			193765.52		

Quantitation Report

Data File Name	067_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:21:34 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

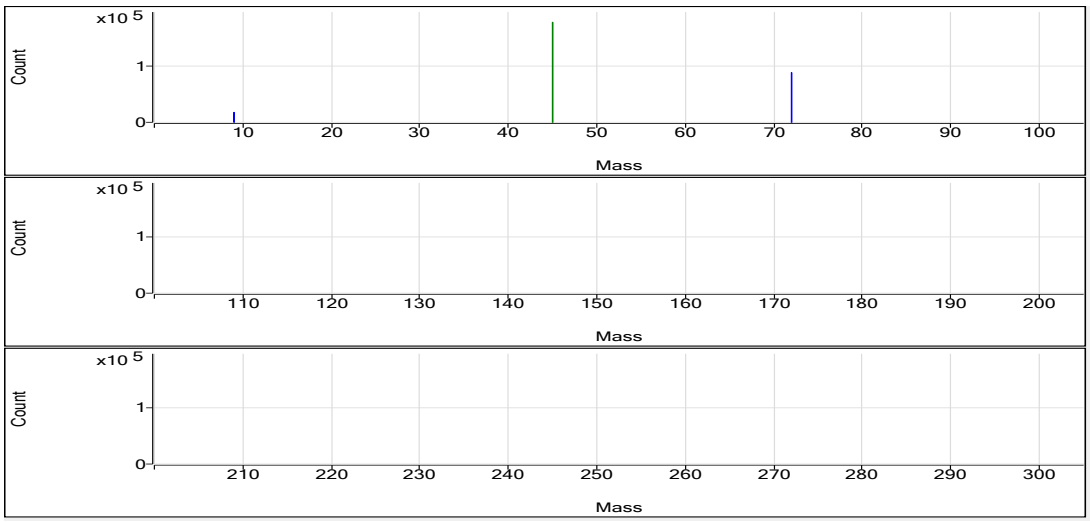
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.983	ppb	7.1	35839.61	0.0201	Pulse	0.5000	3
Se	78	72	H2	52.267	ppb	1.4	2307.30	0.0205	Pulse	1.5000	3
Na	23	45	He	5556.699	ppb	3.8	423875.33	14.3160	Pulse	0.1000	3
Mg	24	45	He	5122.528	ppb	3.6	200334.31	6.7660	Pulse	0.1000	3
Al	27	45	He	5132.676	ppb	3.1	65590.04	2.2150	Pulse	0.1000	3
K	39	45	He	5273.959	ppb	3.4	162468.66	5.4867	Pulse	0.1000	3
Ca	44	45	He	5168.666	ppb	0.3	8973.07	0.3028	Pulse	0.1000	3
Ti	47	45	He	5153.054	ppb	1.5	70159.69	2.3683	Pulse	0.1000	3
V	51	45	He	515.153	ppb	2.5	306360.65	10.3446	Pulse	0.5000	3
Cr	52	45	He	514.609	ppb	2.5	393708.80	13.2940	Pulse	0.1000	3
Mn	55	45	He	513.401	ppb	3.3	172355.79	5.8208	Pulse	0.1000	3
Fe	57	45	He	5118.519	ppb	2.7	77497.99	2.6168	Pulse	0.1000	3
Co	59	45	He	503.953	ppb	1.6	773629.18	26.1176	Pulse	0.1000	3
Ni	60	72	He	520.259	ppb	1.7	218870.23	3.8826	Pulse	0.1000	3
Cu	63	72	He	519.191	ppb	0.4	632091.98	11.2113	Pulse	0.1000	3
Zn	66	72	He	515.420	ppb	3.4	76567.54	1.3585	Pulse	0.1000	3
As	75	72	He	517.165	ppb	0.9	56951.96	1.0102	Pulse	0.5000	3
Sr	88	115	He	52.544	ppb	4.7	23052.81	0.4270	Pulse	0.1000	3
Mo	98	115	He	52.207	ppb	0.6	57732.73	1.0692	Pulse	0.1000	3
Ag	107	115	He	52.822	ppb	0.9	122796.95	2.2742	Pulse	0.1000	3
Cd	111	115	He	52.051	ppb	2.2	14047.78	0.2602	Pulse	0.5000	3
Sn	120	115	He	51.618	ppb	3.3	41456.39	0.7678	Pulse	0.1000	3
Sb	121	115	He	51.480	ppb	2.9	39627.76	0.7340	Pulse	0.1000	3
Ba	137	115	He	517.424	ppb	0.9	128730.33	2.3841	Pulse	0.1000	3
Tl	205	209	He	50.827	ppb	0.8	277887.49	1.4347	Pulse	0.1000	3
Pb	208	209	He	50.938	ppb	1.7	367568.71	1.8978	Pulse	0.1000	3
U	238	209	He	50.707	ppb	2.0	409716.17	2.1155	Pulse	0.1000	3

ISTD Table:

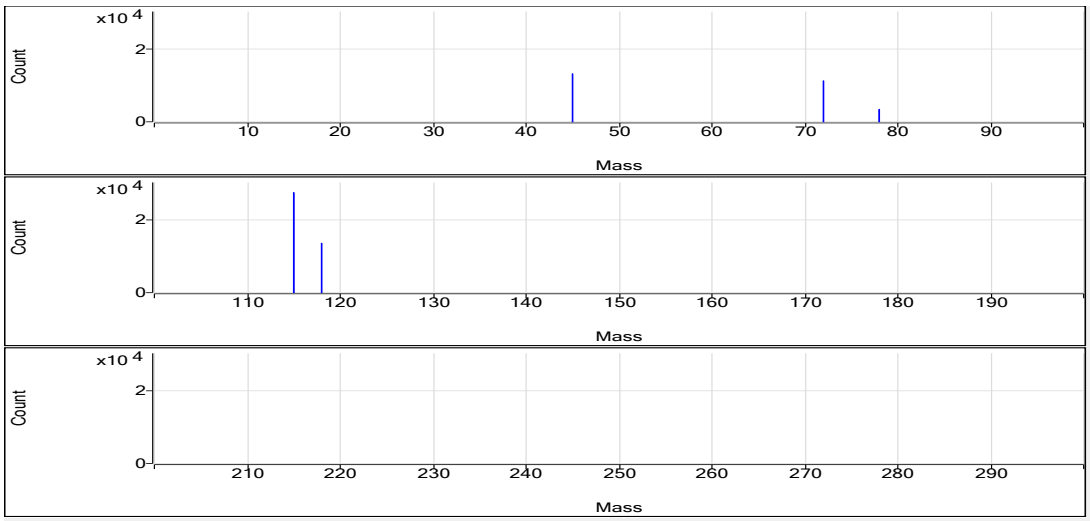
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1783289.92	1.5	101.2	Analog	0.1000	3
No Gas	Ge	72	886605.93	0.8	99.3	Pulse	0.1000	3
H2	Sc	45	132240.24	0.9	103.9	Pulse	0.1000	3
H2	Ge	72	112782.33	0.6	105.2	Pulse	0.1000	3
H2	In	115	275493.84	0.3	103.4	Pulse	0.1000	3
He	Sc	45	29630.97	3.1	103.9	Pulse	0.1000	3
He	Ge	72	56381.98	1.6	101.9	Pulse	0.1000	3
He	In	115	53996.31	0.6	100.6	Pulse	0.1000	3
He	Tb	159	252014.83	0.2	102.5	Pulse	0.1000	3
He	Bi	209	193701.92	1.0	101.5	Pulse	0.1000	3

No Gas

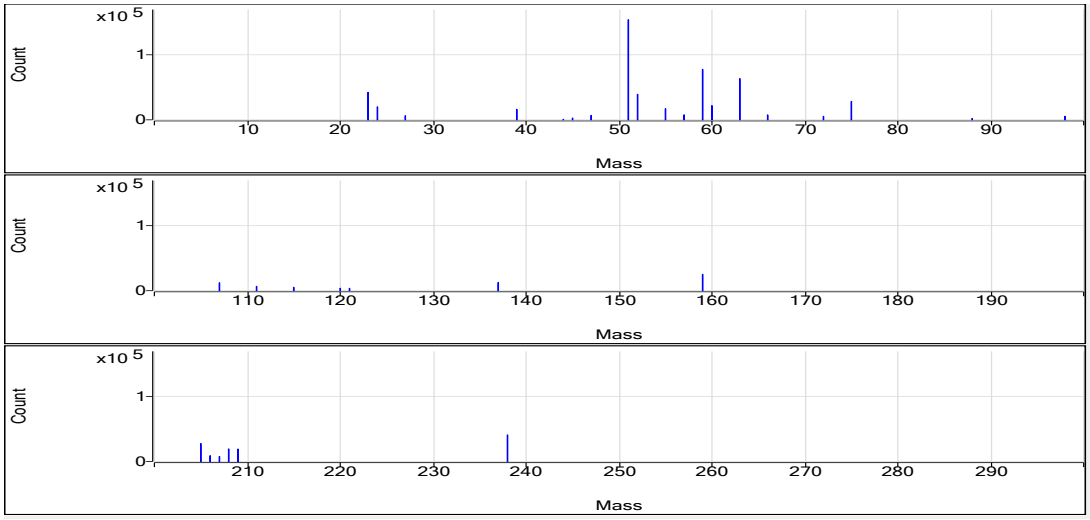


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.872	0.0185	32964.20	0.0004	1.287E-05
Be	9	1	No Gas	52.312	0.0206	36213.70	0.0004	1.287E-05
Be	9	1	No Gas	53.765	0.0212	38340.93	0.0004	1.287E-05
Se	78	2	H2	53.072	0.0208	2341.53	0.0004	1.451E-05
Se	78	2	H2	51.6	0.0202	2264.85	0.0004	1.451E-05
Se	78	2	H2	52.128	0.0204	2315.53	0.0004	1.451E-05
Na	23	3	He	5715.023	14.7164	428982.30	0.0025	0.2648
Na	23	3	He	5316.077	13.7076	420866.05	0.0025	0.2648
Na	23	3	He	5638.997	14.5241	421777.65	0.0025	0.2648
Mg	24	3	He	5232.768	6.9115	201469.49	0.0013	0.005032
Mg	24	3	He	4912.634	6.489	199231.46	0.0013	0.005032
Mg	24	3	He	5222.181	6.8975	200301.97	0.0013	0.005032
Al	27	3	He	5221.821	2.2534	65687.59	0.0004	0.001519
Al	27	3	He	4949.803	2.1361	65585.89	0.0004	0.001519
Al	27	3	He	5226.405	2.2554	65496.65	0.0004	0.001519
K	39	3	He	5364.292	5.5745	162495.64	0.001	0.3627
K	39	3	He	5067.923	5.2865	162313.24	0.001	0.3627
K	39	3	He	5389.663	5.5991	162597.09	0.001	0.3627
Ca	44	3	He	5154.333	0.302	8803.07	0.0001	0.002571
Ca	44	3	He	5171.756	0.303	9303.20	0.0001	0.002571
Ca	44	3	He	5179.908	0.3035	8812.93	0.0001	0.002571
Ti	47	3	He	5119.977	2.3531	68592.02	0.0005	0.0002328
Ti	47	3	He	5098.127	2.343	71938.52	0.0005	0.0002328
Ti	47	3	He	5241.06	2.4087	69948.53	0.0005	0.0002328
V	51	3	He	522.272	10.4874	305707.56	0.0201	0.0116
V	51	3	He	500.254	10.0458	308436.88	0.0201	0.0116
V	51	3	He	522.934	10.5007	304937.50	0.0201	0.0116
Cr	52	3	He	523.482	13.5221	394167.53	0.0257	0.06801
Cr	52	3	He	499.554	12.9071	396288.24	0.0257	0.06801
Cr	52	3	He	520.793	13.453	390670.62	0.0257	0.06801
Mn	55	3	He	520.018	5.8957	171860.64	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	493.953	5.6004	171951.42	0.0113	0.004215
Mn	55	3	He	526.232	5.9661	173255.31	0.0113	0.004215
Fe	57	3	He	5224.63	2.671	77859.81	0.0005	0.004099
Fe	57	3	He	4964.464	2.5382	77930.98	0.0005	0.004099
Fe	57	3	He	5166.462	2.6413	76703.19	0.0005	0.004099
Co	59	3	He	509.509	26.4054	769717.80	0.0518	0.004913
Co	59	3	He	494.564	25.6311	786955.22	0.0518	0.004913
Co	59	3	He	507.786	26.3161	764214.52	0.0518	0.004913
Ni	60	3	He	527.233	3.9346	218523.98	0.0075	0.006695
Ni	60	3	He	510.211	3.8078	218434.59	0.0075	0.006695
Ni	60	3	He	523.333	3.9055	219652.11	0.0075	0.006695
Cu	63	3	He	521.794	11.2675	625788.15	0.0216	0.003198
Cu	63	3	He	517.796	11.1812	641414.72	0.0216	0.003198
Cu	63	3	He	517.984	11.1853	629073.08	0.0216	0.003198
Zn	66	3	He	532.749	1.4041	77981.83	0.0026	0.002954
Zn	66	3	He	497.76	1.3121	75267.31	0.0026	0.002954
Zn	66	3	He	515.751	1.3594	76453.49	0.0026	0.002954
As	75	3	He	521.788	1.0192	56607.28	0.002	0.0004943
As	75	3	He	512.662	1.0014	57446.55	0.002	0.0004943
As	75	3	He	517.045	1.01	56802.04	0.002	0.0004943
Sr	88	3	He	55.315	0.4495	24141.28	0.0081	0.0006852
Sr	88	3	He	50.631	0.4115	22187.88	0.0081	0.0006852
Sr	88	3	He	51.687	0.42	22829.27	0.0081	0.0006852
Mo	98	3	He	52.543	1.0761	57798.94	0.0205	0.0005587
Mo	98	3	He	52.017	1.0653	57448.35	0.0205	0.0005587
Mo	98	3	He	52.06	1.0662	57950.91	0.0205	0.0005587
Ag	107	3	He	53.362	2.2975	123401.81	0.043	0.0004367
Ag	107	3	He	52.568	2.2633	122049.92	0.043	0.0004367
Ag	107	3	He	52.535	2.2619	122939.12	0.043	0.0004367
Cd	111	3	He	52.619	0.263	14127.18	0.005	1.253E-05
Cd	111	3	He	52.819	0.264	14237.33	0.005	1.253E-05
Cd	111	3	He	50.716	0.2535	13778.82	0.005	1.253E-05
Sn	120	3	He	50.816	0.7561	40610.18	0.0146	0.01334
Sn	120	3	He	53.564	0.7962	42937.72	0.0146	0.01334
Sn	120	3	He	50.472	0.7511	40821.28	0.0146	0.01334
Sb	121	3	He	51.605	0.7357	39517.33	0.0142	0.001484
Sb	121	3	He	52.929	0.7546	40690.63	0.0142	0.001484
Sb	121	3	He	49.907	0.7116	38675.33	0.0142	0.001484
Ba	137	3	He	522.152	2.4059	129225.26	0.0046	0.000374
Ba	137	3	He	517.147	2.3829	128497.07	0.0046	0.000374
Ba	137	3	He	512.972	2.3636	128468.65	0.0046	0.000374
Tl	205	3	He	50.391	1.4224	278828.86	0.0282	0.00021
Tl	205	3	He	51.248	1.4466	278726.28	0.0282	0.00021
Tl	205	3	He	50.842	1.4351	276107.34	0.0282	0.00021
Pb	208	3	He	49.998	1.8628	195349.65	0.0372	0.0009772
Pb	208	3	He	51.714	1.9267	196158.53	0.0372	0.0009772
Pb	208	3	He	51.103	1.9039	194485.41	0.0372	0.0009772
U	238	3	He	49.697	2.0733	406424.49	0.0417	8.729E-05
U	238	3	He	50.751	2.1173	407959.53	0.0417	8.729E-05
U	238	3	He	51.674	2.1558	414764.49	0.0417	8.729E-05
Sc	45	1	No Gas			1784191.85		
Sc	45	1	No Gas			1756379.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1809297.94		
Ge	72	1	No Gas			887636.24		
Ge	72	1	No Gas			878698.19		
Ge	72	1	No Gas			893483.35		
Sc	45	2	H2			132429.06		
Sc	45	2	H2			130914.45		
Sc	45	2	H2			133377.22		
Ge	72	2	H2			112721.87		
Ge	72	2	H2			112137.39		
Ge	72	2	H2			113487.72		
In	115	2	H2			276271.44		
In	115	2	H2			274894.43		
In	115	2	H2			275315.64		
Sc	45	3	He			29149.97		
Sc	45	3	He			30703.17		
Sc	45	3	He			29039.76		
Ge	72	3	He			55539.18		
Ge	72	3	He			57365.47		
Ge	72	3	He			56241.28		
In	115	3	He			53995.60		
In	115	3	He			54225.97		
In	115	3	He			54637.95		
Tb	159	3	He			252430.97		
Tb	159	3	He			252127.61		
Tb	159	3	He			251485.91		
Bi	209	3	He			196028.36		
Bi	209	3	He			192680.90		
Bi	209	3	He			192396.50		

Quantitation Report

Data File Name	068_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:23:34 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

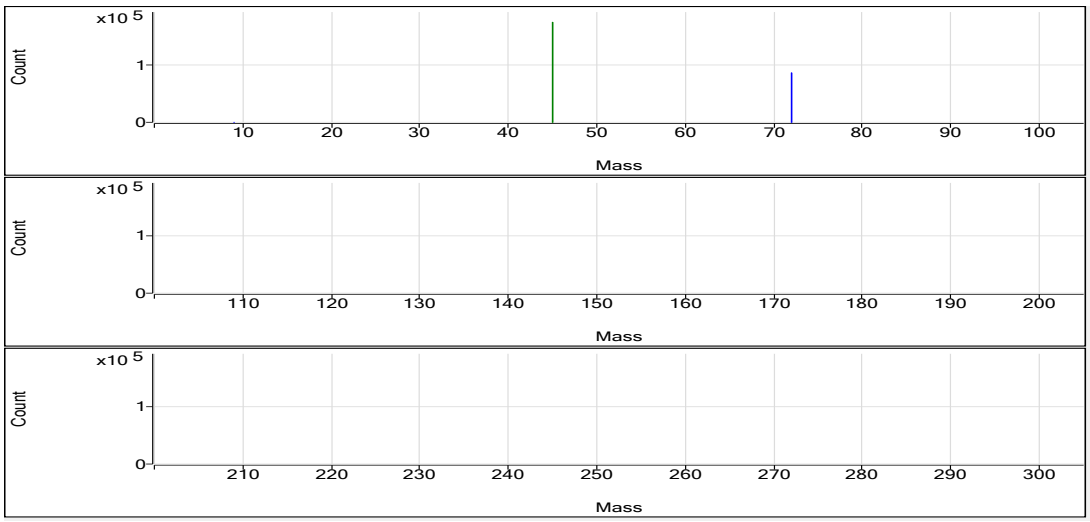
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.224	ppb	7.5	177.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.142	ppb	23.9	7.56	0.0001	Pulse	1.5000	3
Na	23	45	He	308.159	ppb	11.8	29871.13	1.0441	Pulse	0.1000	3
Mg	24	45	He	35.786	ppb	23.6	1493.46	0.0523	Pulse	0.1000	3
Al	27	45	He	1.080	ppb	161.6	56.67	0.0020	Pulse	0.1000	3
K	39	45	He	28.925	ppb	116.0	11181.32	0.3908	Pulse	0.1000	3
Ca	44	45	He	39.682	ppb	57.1	140.01	0.0049	Pulse	0.1000	3
Ti	47	45	He	3.319	ppb	70.4	50.00	0.0018	Pulse	0.1000	3
V	51	45	He	0.295	ppb	8.6	501.34	0.0175	Pulse	0.5000	3
Cr	52	45	He	0.313	ppb	33.2	2176.91	0.0761	Pulse	0.1000	3
Mn	55	45	He	0.667	ppb	62.3	336.68	0.0118	Pulse	0.1000	3
Fe	57	45	He	0.401	ppb	510.4	123.34	0.0043	Pulse	0.1000	3
Co	59	45	He	0.098	ppb	50.5	286.68	0.0100	Pulse	0.1000	3
Ni	60	72	He	0.461	ppb	12.5	553.37	0.0101	Pulse	0.1000	3
Cu	63	72	He	0.191	ppb	25.9	400.02	0.0073	Pulse	0.1000	3
Zn	66	72	He	0.499	ppb	88.6	233.35	0.0043	Pulse	0.1000	3
As	75	72	He	0.459	ppb	26.4	76.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.285	ppb	14.4	163.34	0.0030	Pulse	0.1000	3
Mo	98	115	He	0.077	ppb	52.4	116.67	0.0021	Pulse	0.1000	3
Ag	107	115	He	0.021	ppb	25.4	73.33	0.0014	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	67.6	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.172	ppb	49.9	863.42	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.107	ppb	10.1	163.34	0.0030	Pulse	0.1000	3
Ba	137	115	He	0.200	ppb	75.5	70.00	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.087	ppb	20.1	510.03	0.0027	Pulse	0.1000	3
Pb	208	209	He	0.032	ppb	51.8	413.35	0.0022	Pulse	0.1000	3
U	238	209	He	0.020	ppb	64.3	173.34	0.0009	Pulse	0.1000	3

ISTD Table:

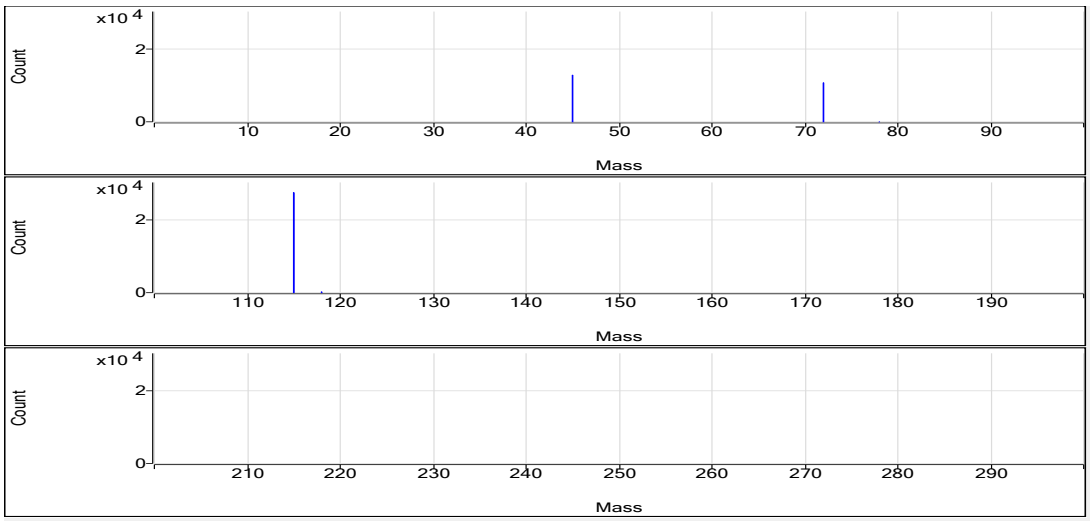
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1751341.95	0.7	99.4	Analog	0.1000	3
No Gas	Ge	72	866366.42	0.7	97.1	Pulse	0.1000	3
H2	Sc	45	129336.85	0.3	101.6	Pulse	0.1000	3
H2	Ge	72	107989.53	1.5	100.7	Pulse	0.1000	3
H2	In	115	276748.73	0.8	103.9	Pulse	0.1000	3
He	Sc	45	28628.94	1.6	100.4	Pulse	0.1000	3
He	Ge	72	54628.91	0.7	98.7	Pulse	0.1000	3
He	In	115	54397.97	2.1	101.4	Pulse	0.1000	3
He	Tb	159	249818.38	0.6	101.6	Pulse	0.1000	3
He	Bi	209	192063.04	0.7	100.6	Pulse	0.1000	3

No Gas

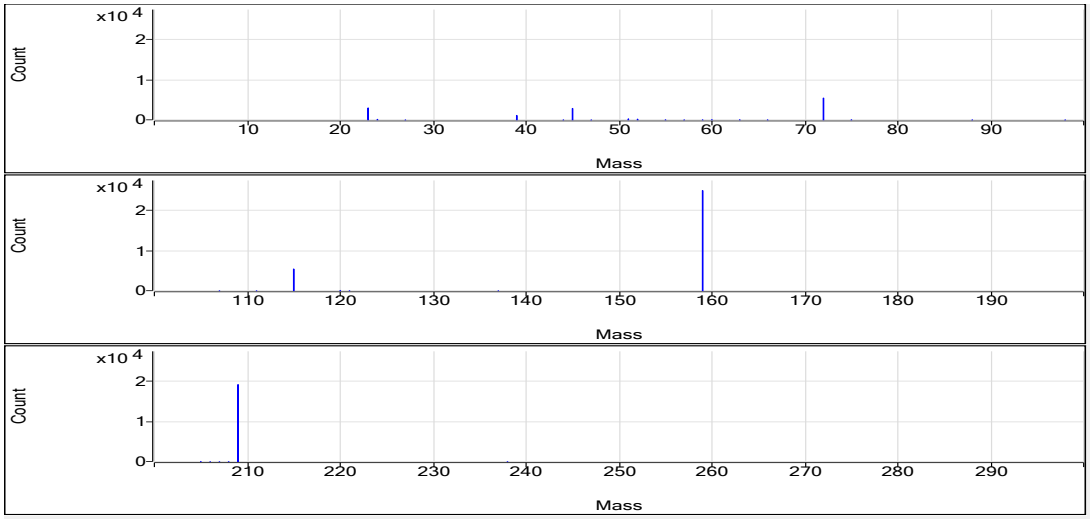


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.243	0.0001	192.00	0.0004	1.287E-05
Be	9	1	No Gas	0.212	0.0001	168.00	0.0004	1.287E-05
Be	9	1	No Gas	0.218	0.0001	172.00	0.0004	1.287E-05
Se	78	2	H2	0.171	0.0001	8.67	0.0004	1.451E-05
Se	78	2	H2	0.105	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.15	0.0001	8.00	0.0004	1.451E-05
Na	23	3	He	344.514	1.136	32386.35	0.0025	0.2648
Na	23	3	He	308.403	1.0447	29490.00	0.0025	0.2648
Na	23	3	He	271.561	0.9515	27737.03	0.0025	0.2648
Mg	24	3	He	43.232	0.0621	1770.17	0.0013	0.005032
Mg	24	3	He	37.525	0.0546	1540.12	0.0013	0.005032
Mg	24	3	He	26.601	0.0401	1170.10	0.0013	0.005032
Al	27	3	He	-0.268	0.0014	40.00	0.0004	0.001519
Al	27	3	He	3.051	0.0028	80.00	0.0004	0.001519
Al	27	3	He	0.456	0.0017	50.00	0.0004	0.001519
K	39	3	He	59.357	0.4204	11985.25	0.001	0.3627
K	39	3	He	34.465	0.3962	11184.61	0.001	0.3627
K	39	3	He	-7.047	0.3559	10374.09	0.001	0.3627
Ca	44	3	He	40.281	0.0049	140.01	0.0001	0.002571
Ca	44	3	He	16.722	0.0035	100.00	0.0001	0.002571
Ca	44	3	He	62.044	0.0062	180.01	0.0001	0.002571
Ti	47	3	He	3.31	0.0018	50.00	0.0005	0.0002328
Ti	47	3	He	5.66	0.0028	80.00	0.0005	0.0002328
Ti	47	3	He	0.986	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.321	0.018	514.01	0.0201	0.0116
V	51	3	He	0.294	0.0175	494.01	0.0201	0.0116
V	51	3	He	0.27	0.017	496.01	0.0201	0.0116
Cr	52	3	He	0.398	0.0782	2230.25	0.0257	0.06801
Cr	52	3	He	0.345	0.0769	2170.24	0.0257	0.06801
Cr	52	3	He	0.197	0.0731	2130.24	0.0257	0.06801
Mn	55	3	He	1.145	0.0172	490.03	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.472	0.0096	270.01	0.0113	0.004215
Mn	55	3	He	0.385	0.0086	250.01	0.0113	0.004215
Fe	57	3	He	2.279	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	-1.783	0.0032	90.00	0.0005	0.004099
Fe	57	3	He	0.708	0.0045	130.01	0.0005	0.004099
Co	59	3	He	0.135	0.0119	340.02	0.0518	0.004913
Co	59	3	He	0.042	0.0071	200.01	0.0518	0.004913
Co	59	3	He	0.117	0.011	320.02	0.0518	0.004913
Ni	60	3	He	0.395	0.0096	530.03	0.0075	0.006695
Ni	60	3	He	0.487	0.0103	560.04	0.0075	0.006695
Ni	60	3	He	0.502	0.0104	570.03	0.0075	0.006695
Cu	63	3	He	0.147	0.0064	350.02	0.0216	0.003198
Cu	63	3	He	0.245	0.0085	460.02	0.0216	0.003198
Cu	63	3	He	0.183	0.0071	390.02	0.0216	0.003198
Zn	66	3	He	0.951	0.0055	300.01	0.0026	0.002954
Zn	66	3	He	0.068	0.0031	170.01	0.0026	0.002954
Zn	66	3	He	0.478	0.0042	230.02	0.0026	0.002954
As	75	3	He	0.567	0.0016	88.00	0.002	0.0004943
As	75	3	He	0.483	0.0014	78.00	0.002	0.0004943
As	75	3	He	0.328	0.0011	62.00	0.002	0.0004943
Sr	88	3	He	0.294	0.0031	170.01	0.0081	0.0006852
Sr	88	3	He	0.321	0.0033	180.01	0.0081	0.0006852
Sr	88	3	He	0.241	0.0026	140.01	0.0081	0.0006852
Mo	98	3	He	0.123	0.0031	170.01	0.0205	0.0005587
Mo	98	3	He	0.062	0.0018	100.00	0.0205	0.0005587
Mo	98	3	He	0.046	0.0015	80.00	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.024	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.025	0.0015	80.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Sn	120	3	He	0.162	0.0157	870.06	0.0146	0.01334
Sn	120	3	He	0.263	0.0172	940.16	0.0146	0.01334
Sn	120	3	He	0.092	0.0147	780.05	0.0146	0.01334
Sb	121	3	He	0.111	0.0031	170.01	0.0142	0.001484
Sb	121	3	He	0.114	0.0031	170.01	0.0142	0.001484
Sb	121	3	He	0.094	0.0028	150.01	0.0142	0.001484
Ba	137	3	He	0.076	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.157	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.368	0.0021	110.01	0.0046	0.000374
Tl	205	3	He	0.107	0.0032	620.04	0.0282	0.00021
Tl	205	3	He	0.078	0.0024	460.03	0.0282	0.00021
Tl	205	3	He	0.075	0.0023	450.02	0.0282	0.00021
Pb	208	3	He	0.027	0.002	190.01	0.0372	0.0009772
Pb	208	3	He	0.05	0.0028	300.01	0.0372	0.0009772
Pb	208	3	He	0.018	0.0017	150.01	0.0372	0.0009772
U	238	3	He	0.034	0.0015	290.01	0.0417	8.729E-05
U	238	3	He	0.012	0.0006	110.00	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
Sc	45	1	No Gas			1765834.50		
Sc	45	1	No Gas			1745861.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1742330.29		
Ge	72	1	No Gas			868765.46		
Ge	72	1	No Gas			859497.96		
Ge	72	1	No Gas			870835.85		
Sc	45	2	H2			128967.22		
Sc	45	2	H2			129652.95		
Sc	45	2	H2			129390.37		
Ge	72	2	H2			106273.69		
Ge	72	2	H2			108106.62		
Ge	72	2	H2			109588.28		
In	115	2	H2			278315.21		
In	115	2	H2			277556.40		
In	115	2	H2			274374.57		
Sc	45	3	He			28508.82		
Sc	45	3	He			28228.24		
Sc	45	3	He			29149.75		
Ge	72	3	He			54987.44		
Ge	72	3	He			54264.27		
Ge	72	3	He			54635.01		
In	115	3	He			55390.98		
In	115	3	He			54708.93		
In	115	3	He			53112.12		
Tb	159	3	He			251403.45		
Tb	159	3	He			248857.42		
Tb	159	3	He			249194.27		
Bi	209	3	He			192549.59		
Bi	209	3	He			190490.31		
Bi	209	3	He			193149.22		

Quantitation Report

Data File Name	069SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:25:34 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

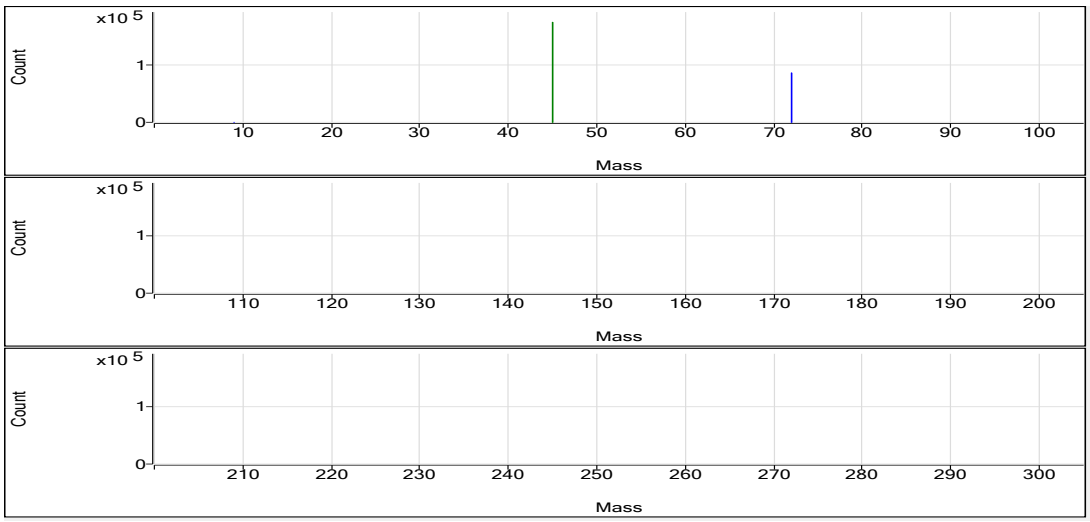
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.060	ppb	32.6	64.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	62.0	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	255.521	ppb	9.8	26384.27	0.9110	Pulse	0.1000	3
Mg	24	45	He	27.381	ppb	19.2	1193.42	0.0412	Pulse	0.1000	3
Al	27	45	He	-0.328	ppb	N/A	40.00	0.0014	Pulse	0.1000	3
K	39	45	He	-2.580	ppb	N/A	10434.08	0.3602	Pulse	0.1000	3
Ca	44	45	He	27.263	ppb	102.9	120.00	0.0042	Pulse	0.1000	3
Ti	47	45	He	-0.005	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.198	ppb	17.2	450.68	0.0156	Pulse	0.5000	3
Cr	52	45	He	0.203	ppb	45.3	2120.22	0.0732	Pulse	0.1000	3
Mn	55	45	He	0.228	ppb	47.4	196.68	0.0068	Pulse	0.1000	3
Fe	57	45	He	4.840	ppb	75.5	190.01	0.0066	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	60.9	196.68	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.184	ppb	152.4	440.02	0.0081	Pulse	0.1000	3
Cu	63	72	He	0.131	ppb	50.8	330.02	0.0060	Pulse	0.1000	3
Zn	66	72	He	0.269	ppb	46.9	200.01	0.0037	Pulse	0.1000	3
As	75	72	He	0.240	ppb	26.3	52.67	0.0010	Pulse	0.5000	3
Sr	88	115	He	0.193	ppb	47.0	123.34	0.0023	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	92.0	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	195.8	36.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	59.9	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.039	ppb	274.4	760.05	0.0139	Pulse	0.1000	3
Sb	121	115	He	0.049	ppb	156.9	120.01	0.0022	Pulse	0.1000	3
Ba	137	115	He	0.077	ppb	136.1	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.035	ppb	37.2	230.01	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.025	ppb	23.1	370.01	0.0019	Pulse	0.1000	3
U	238	209	He	0.007	ppb	19.0	70.00	0.0004	Pulse	0.1000	3

ISTD Table:

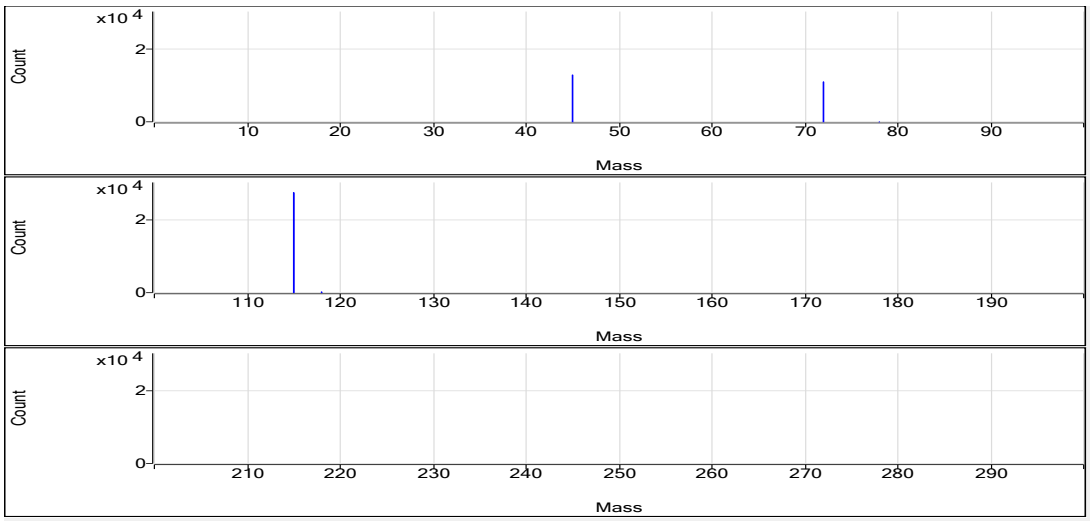
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1758165.91	1.7	99.8	Analog	0.1000	3
No Gas	Ge	72	868789.52	1.0	97.4	Pulse	0.1000	3
H2	Sc	45	129181.77	1.3	101.5	Pulse	0.1000	3
H2	Ge	72	110062.30	1.4	102.6	Pulse	0.1000	3
H2	In	115	275570.80	1.2	103.5	Pulse	0.1000	3
He	Sc	45	28956.13	1.0	101.6	Pulse	0.1000	3
He	Ge	72	54661.67	2.3	98.8	Pulse	0.1000	3
He	In	115	54723.03	1.9	102.0	Pulse	0.1000	3
He	Tb	159	248918.65	0.5	101.3	Pulse	0.1000	3
He	Bi	209	192639.64	0.9	100.9	Pulse	0.1000	3

No Gas

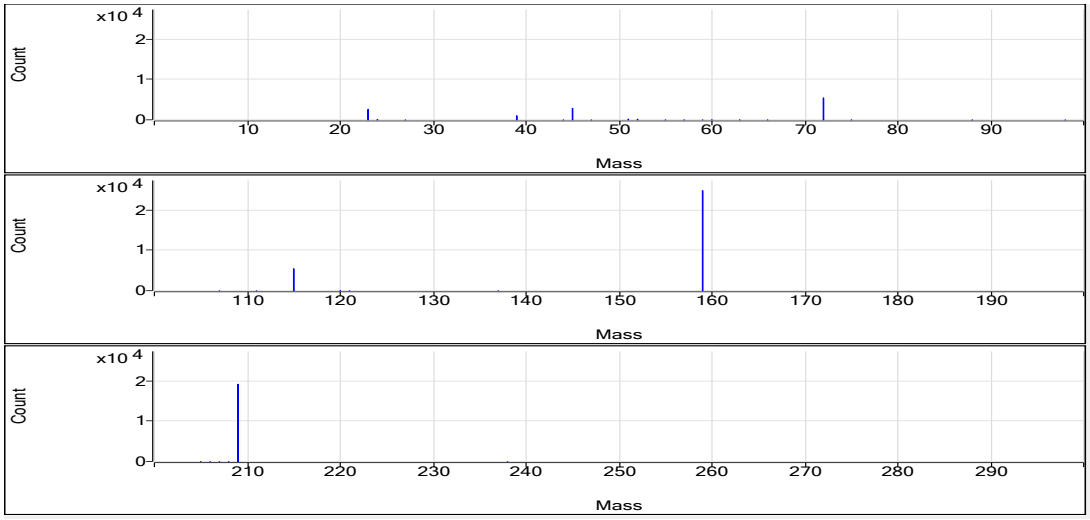


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.038	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.075	0	74.00	0.0004	1.287E-05
Be	9	1	No Gas	0.067	0	70.00	0.0004	1.287E-05
Se	78	2	H2	0.025	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Na	23	3	He	284.179	0.9834	28598.49	0.0025	0.2648
Na	23	3	He	244.388	0.8828	25742.95	0.0025	0.2648
Na	23	3	He	237.996	0.8667	24811.36	0.0025	0.2648
Mg	24	3	He	30.843	0.0457	1330.10	0.0013	0.005032
Mg	24	3	He	29.968	0.0446	1300.11	0.0013	0.005032
Mg	24	3	He	21.331	0.0332	950.06	0.0013	0.005032
Al	27	3	He	-0.332	0.0014	40.00	0.0004	0.001519
Al	27	3	He	1.25	0.0021	60.00	0.0004	0.001519
Al	27	3	He	-1.901	0.0007	20.00	0.0004	0.001519
K	39	3	He	37.044	0.3987	11594.94	0.001	0.3627
K	39	3	He	-17.419	0.3458	10083.82	0.001	0.3627
K	39	3	He	-27.366	0.3361	9623.48	0.001	0.3627
Ca	44	3	He	20.856	0.0038	110.00	0.0001	0.002571
Ca	44	3	He	2.967	0.0027	80.00	0.0001	0.002571
Ca	44	3	He	57.966	0.0059	170.01	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.24	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.253	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.159	0.0148	430.01	0.0201	0.0116
V	51	3	He	0.212	0.0158	462.01	0.0201	0.0116
V	51	3	He	0.223	0.0161	460.01	0.0201	0.0116
Cr	52	3	He	0.097	0.0705	2050.22	0.0257	0.06801
Cr	52	3	He	0.25	0.0744	2170.22	0.0257	0.06801
Cr	52	3	He	0.263	0.0748	2140.22	0.0257	0.06801
Mn	55	3	He	0.326	0.0079	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.112	0.0055	160.01	0.0113	0.004215
Mn	55	3	He	0.245	0.007	200.01	0.0113	0.004215
Fe	57	3	He	0.729	0.0045	130.01	0.0005	0.004099
Fe	57	3	He	6.08	0.0072	210.01	0.0005	0.004099
Fe	57	3	He	7.71	0.008	230.01	0.0005	0.004099
Co	59	3	He	0.011	0.0055	160.01	0.0518	0.004913
Co	59	3	He	0.044	0.0072	210.01	0.0518	0.004913
Co	59	3	He	0.054	0.0077	220.01	0.0518	0.004913
Ni	60	3	He	-0.082	0.0061	340.02	0.0075	0.006695
Ni	60	3	He	0.157	0.0079	420.02	0.0075	0.006695
Ni	60	3	He	0.476	0.0102	560.03	0.0075	0.006695
Cu	63	3	He	0.192	0.0073	410.02	0.0216	0.003198
Cu	63	3	He	0.06	0.0045	240.01	0.0216	0.003198
Cu	63	3	He	0.14	0.0062	340.02	0.0216	0.003198
Zn	66	3	He	0.306	0.0038	210.01	0.0026	0.002954
Zn	66	3	He	0.372	0.0039	210.01	0.0026	0.002954
Zn	66	3	He	0.128	0.0033	180.01	0.0026	0.002954
As	75	3	He	0.26	0.001	56.00	0.002	0.0004943
As	75	3	He	0.169	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.29	0.0011	58.00	0.002	0.0004943
Sr	88	3	He	0.202	0.0023	130.01	0.0081	0.0006852
Sr	88	3	He	0.098	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.279	0.0029	160.01	0.0081	0.0006852
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.036	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.081	0.0122	680.05	0.0146	0.01334
Sn	120	3	He	0.075	0.0144	780.05	0.0146	0.01334
Sn	120	3	He	0.121	0.0151	820.06	0.0146	0.01334
Sb	121	3	He	0.134	0.0034	190.01	0.0142	0.001484
Sb	121	3	He	0.026	0.0019	100.01	0.0142	0.001484
Sb	121	3	He	-0.014	0.0013	70.00	0.0142	0.001484
Ba	137	3	He	0.113	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.041	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.159	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.027	0.001	190.01	0.0282	0.00021
Tl	205	3	He	0.05	0.0016	310.02	0.0282	0.00021
Tl	205	3	He	0.028	0.001	190.01	0.0282	0.00021
Pb	208	3	He	0.029	0.0021	230.01	0.0372	0.0009772
Pb	208	3	He	0.028	0.002	190.01	0.0372	0.0009772
Pb	208	3	He	0.019	0.0017	130.00	0.0372	0.0009772
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1732578.26		
Sc	45	1	No Gas			1750889.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1791029.66		
Ge	72	1	No Gas			858988.11		
Ge	72	1	No Gas			873371.63		
Ge	72	1	No Gas			874008.82		
Sc	45	2	H2			129672.78		
Sc	45	2	H2			127371.98		
Sc	45	2	H2			130500.54		
Ge	72	2	H2			110001.04		
Ge	72	2	H2			108511.30		
Ge	72	2	H2			111674.55		
In	115	2	H2			277219.08		
In	115	2	H2			271891.77		
In	115	2	H2			277601.56		
Sc	45	3	He			29079.92		
Sc	45	3	He			29159.79		
Sc	45	3	He			28628.67		
Ge	72	3	He			55889.90		
Ge	72	3	He			53400.08		
Ge	72	3	He			54695.03		
In	115	3	He			55923.06		
In	115	3	He			54015.34		
In	115	3	He			54246.65		
Tb	159	3	He			250180.74		
Tb	159	3	He			248906.66		
Tb	159	3	He			247668.55		
Bi	209	3	He			194648.90		
Bi	209	3	He			191563.59		
Bi	209	3	He			191706.42		

Quantitation Report

Data File Name	070SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:27:33 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

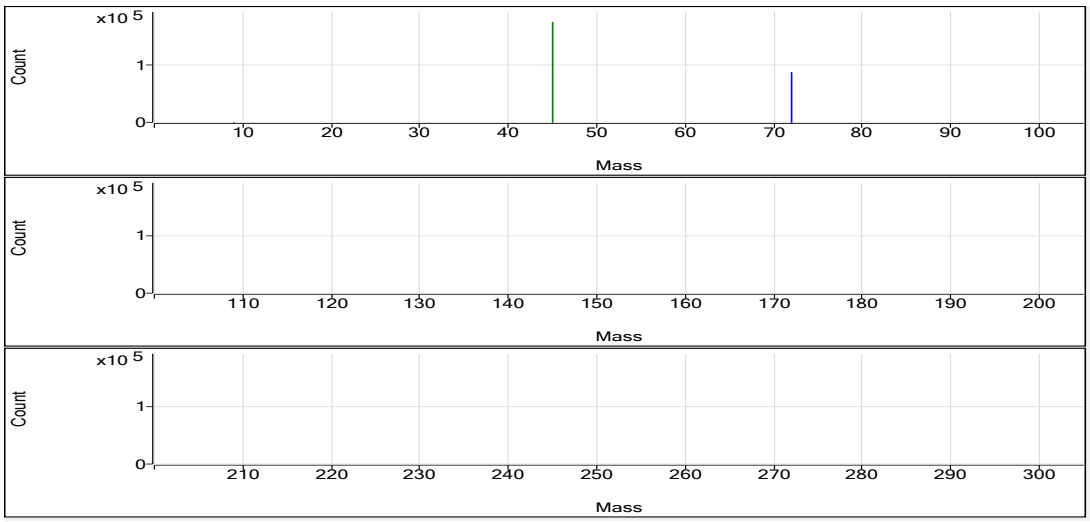
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.039	ppb	24.6	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.046	ppb	20.5	3.55	0.0000	Pulse	1.5000	3
Na	23	45	He	218.259	ppb	8.3	22968.40	0.8168	Pulse	0.1000	3
Mg	24	45	He	19.797	ppb	8.9	876.72	0.0312	Pulse	0.1000	3
Al	27	45	He	0.600	ppb	11.0	50.00	0.0018	Pulse	0.1000	3
K	39	45	He	33.912	ppb	108.9	11124.64	0.3957	Pulse	0.1000	3
Ca	44	45	He	45.485	ppb	28.0	146.68	0.0052	Pulse	0.1000	3
Ti	47	45	He	0.537	ppb	223.6	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.218	ppb	28.6	449.34	0.0160	Pulse	0.5000	3
Cr	52	45	He	0.213	ppb	89.1	2066.89	0.0735	Pulse	0.1000	3
Mn	55	45	He	0.204	ppb	72.1	183.34	0.0065	Pulse	0.1000	3
Fe	57	45	He	2.414	ppb	99.4	150.01	0.0053	Pulse	0.1000	3
Co	59	45	He	0.043	ppb	147.0	200.01	0.0071	Pulse	0.1000	3
Ni	60	72	He	0.266	ppb	59.3	480.03	0.0087	Pulse	0.1000	3
Cu	63	72	He	0.089	ppb	39.1	283.35	0.0051	Pulse	0.1000	3
Zn	66	72	He	0.184	ppb	45.7	190.01	0.0034	Pulse	0.1000	3
As	75	72	He	0.085	ppb	140.6	36.67	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.058	ppb	61.2	63.33	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.017	ppb	54.3	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	166.7	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.014	ppb	57.5	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.003	ppb	2968.3	736.71	0.0134	Pulse	0.1000	3
Sb	121	115	He	0.028	ppb	193.7	103.34	0.0019	Pulse	0.1000	3
Ba	137	115	He	0.064	ppb	156.2	36.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.028	ppb	29.0	193.34	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	26.2	326.68	0.0017	Pulse	0.1000	3
U	238	209	He	0.006	ppb	11.0	63.33	0.0003	Pulse	0.1000	3

ISTD Table:

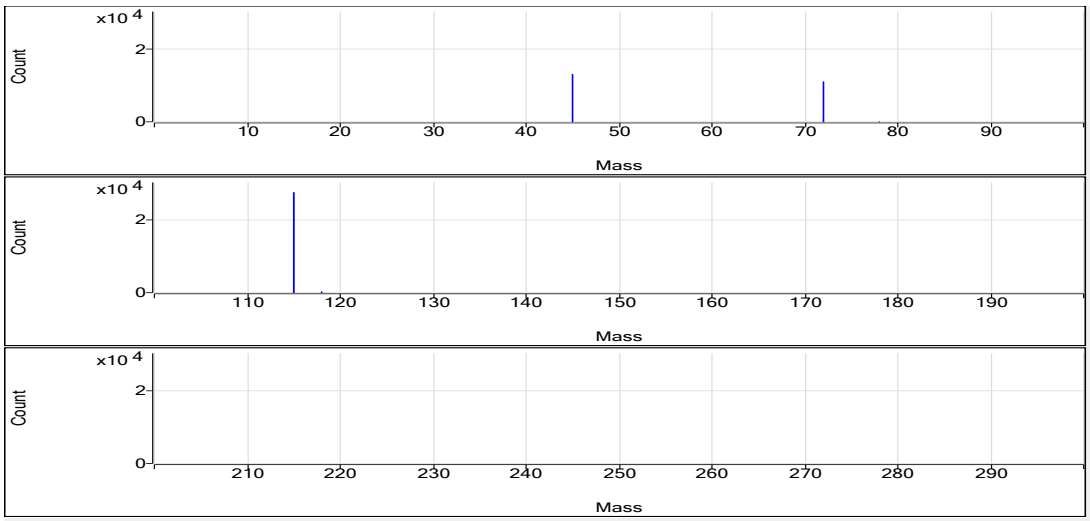
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1747946.33	1.1	99.2	Analog	0.1000	3
No Gas	Ge	72	868694.20	0.5	97.3	Pulse	0.1000	3
H2	Sc	45	129973.76	1.1	102.1	Pulse	0.1000	3
H2	Ge	72	109255.61	0.5	101.9	Pulse	0.1000	3
H2	In	115	273674.08	0.9	102.8	Pulse	0.1000	3
He	Sc	45	28134.76	1.6	98.7	Pulse	0.1000	3
He	Ge	72	55314.73	1.4	100.0	Pulse	0.1000	3
He	In	115	55024.54	1.4	102.5	Pulse	0.1000	3
He	Tb	159	247187.85	1.0	100.6	Pulse	0.1000	3
He	Bi	209	192110.58	1.8	100.7	Pulse	0.1000	3

No Gas

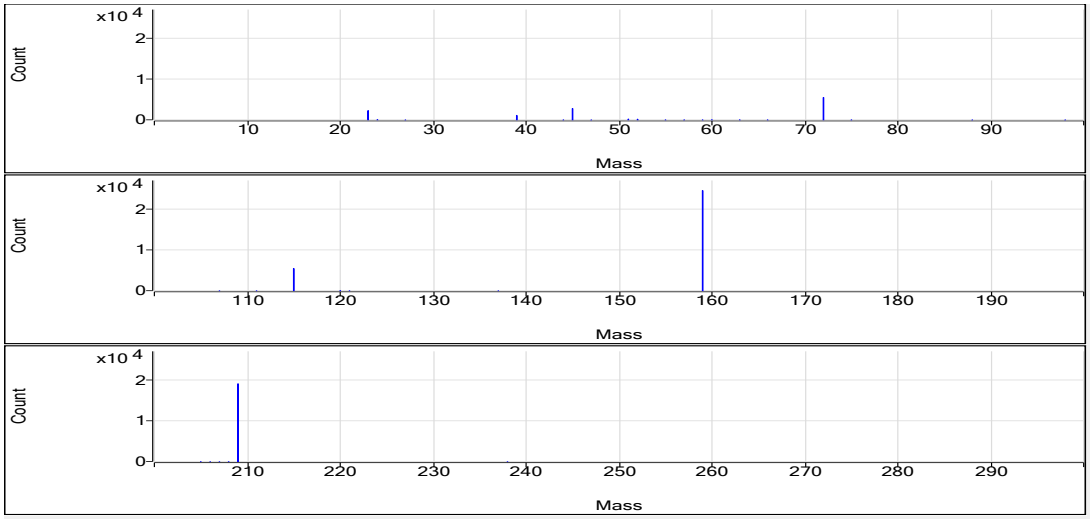


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.048	0	56.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.039	0	50.00	0.0004	1.287E-05
Se	78	2	H2	0.04	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.057	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.041	0	3.33	0.0004	1.451E-05
Na	23	3	He	239.282	0.8699	24120.35	0.0025	0.2648
Na	23	3	He	207.937	0.7907	22627.77	0.0025	0.2648
Na	23	3	He	207.558	0.7897	22157.09	0.0025	0.2648
Mg	24	3	He	21.055	0.0328	910.06	0.0013	0.005032
Mg	24	3	He	20.545	0.0321	920.06	0.0013	0.005032
Mg	24	3	He	17.791	0.0285	800.04	0.0013	0.005032
Al	27	3	He	0.66	0.0018	50.00	0.0004	0.001519
Al	27	3	He	0.53	0.0017	50.00	0.0004	0.001519
Al	27	3	He	0.611	0.0018	50.00	0.0004	0.001519
K	39	3	He	76.386	0.4369	12115.44	0.001	0.3627
K	39	3	He	15.938	0.3782	10824.35	0.001	0.3627
K	39	3	He	9.411	0.3719	10434.12	0.001	0.3627
Ca	44	3	He	36.455	0.0047	130.01	0.0001	0.002571
Ca	44	3	He	39.955	0.0049	140.01	0.0001	0.002571
Ca	44	3	He	60.046	0.0061	170.01	0.0001	0.002571
Ti	47	3	He	1.848	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.269	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.224	0.0161	446.01	0.0201	0.0116
V	51	3	He	0.153	0.0147	420.01	0.0201	0.0116
V	51	3	He	0.278	0.0172	482.01	0.0201	0.0116
Cr	52	3	He	0.371	0.0775	2150.24	0.0257	0.06801
Cr	52	3	He	0.264	0.0748	2140.22	0.0257	0.06801
Cr	52	3	He	0.003	0.0681	1910.20	0.0257	0.06801
Mn	55	3	He	0.36	0.0083	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.183	0.0063	180.01	0.0113	0.004215
Mn	55	3	He	0.068	0.005	140.01	0.0113	0.004215
Fe	57	3	He	3.983	0.0061	170.01	0.0005	0.004099
Fe	57	3	He	3.608	0.0059	170.01	0.0005	0.004099
Fe	57	3	He	-0.348	0.0039	110.01	0.0005	0.004099
Co	59	3	He	0.114	0.0108	300.02	0.0518	0.004913
Co	59	3	He	0.02	0.0059	170.01	0.0518	0.004913
Co	59	3	He	-0.005	0.0046	130.01	0.0518	0.004913
Ni	60	3	He	0.091	0.0074	410.02	0.0075	0.006695
Ni	60	3	He	0.398	0.0097	540.03	0.0075	0.006695
Ni	60	3	He	0.31	0.009	490.03	0.0075	0.006695
Cu	63	3	He	0.085	0.005	280.02	0.0216	0.003198
Cu	63	3	He	0.125	0.0059	330.02	0.0216	0.003198
Cu	63	3	He	0.056	0.0044	240.01	0.0216	0.003198
Zn	66	3	He	0.108	0.0032	180.01	0.0026	0.002954
Zn	66	3	He	0.169	0.0034	190.01	0.0026	0.002954
Zn	66	3	He	0.274	0.0037	200.01	0.0026	0.002954
As	75	3	He	0.189	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.113	0.0007	40.00	0.002	0.0004943
As	75	3	He	-0.046	0.0004	22.00	0.002	0.0004943
Sr	88	3	He	0.048	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.097	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.028	0.0009	50.00	0.0081	0.0006852
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	0.002	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.079	0.0145	810.06	0.0146	0.01334
Sn	120	3	He	0.004	0.0134	730.04	0.0146	0.01334
Sn	120	3	He	-0.075	0.0122	670.04	0.0146	0.01334
Sb	121	3	He	0.009	0.0016	90.00	0.0142	0.001484
Sb	121	3	He	-0.014	0.0013	70.00	0.0142	0.001484
Sb	121	3	He	0.088	0.0027	150.01	0.0142	0.001484
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.078	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.157	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.034	0.0012	230.01	0.0282	0.00021
Tl	205	3	He	0.031	0.0011	210.01	0.0282	0.00021
Tl	205	3	He	0.019	0.0007	140.01	0.0282	0.00021
Pb	208	3	He	0.014	0.0015	170.01	0.0372	0.0009772
Pb	208	3	He	0.024	0.0019	210.01	0.0372	0.0009772
Pb	208	3	He	0.021	0.0018	170.01	0.0372	0.0009772
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.006	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1757965.44		
Sc	45	1	No Gas			1725801.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1760072.16		
Ge	72	1	No Gas			870093.89		
Ge	72	1	No Gas			864218.42		
Ge	72	1	No Gas			871770.30		
Sc	45	2	H2			128291.80		
Sc	45	2	H2			131137.93		
Sc	45	2	H2			130491.56		
Ge	72	2	H2			109890.78		
Ge	72	2	H2			108701.15		
Ge	72	2	H2			109174.89		
In	115	2	H2			275730.35		
In	115	2	H2			274283.39		
In	115	2	H2			271008.49		
Sc	45	3	He			27727.30		
Sc	45	3	He			28619.15		
Sc	45	3	He			28057.83		
Ge	72	3	He			55599.17		
Ge	72	3	He			55910.36		
Ge	72	3	He			54434.67		
In	115	3	He			55903.62		
In	115	3	He			54467.22		
In	115	3	He			54718.26		
Tb	159	3	He			246099.29		
Tb	159	3	He			249935.86		
Tb	159	3	He			245528.39		
Bi	209	3	He			194517.99		
Bi	209	3	He			193564.43		
Bi	209	3	He			188249.31		

Quantitation Report

Data File Name	071SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:29:32 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

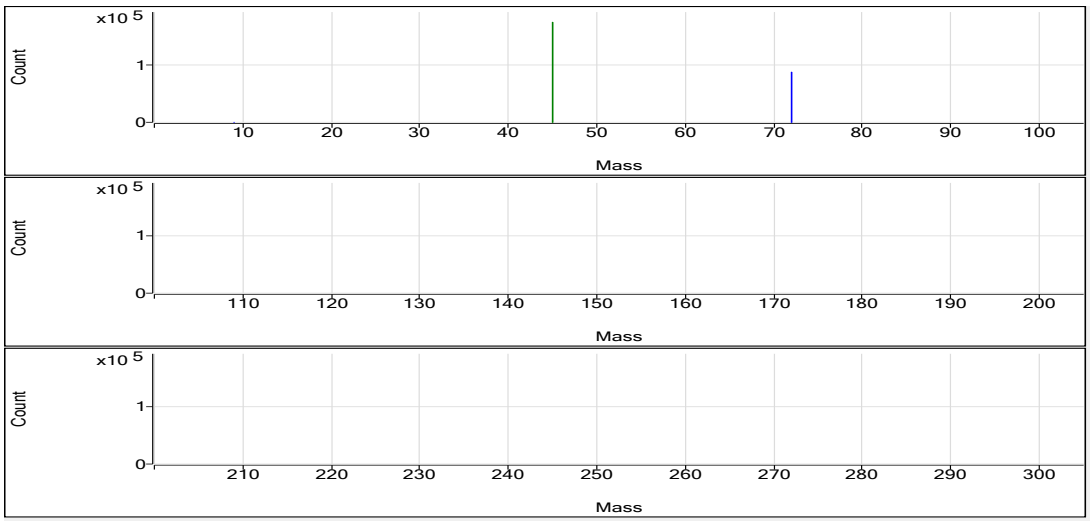
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.028	ppb	35.8	41.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.020	ppb	236.9	2.45	0.0000	Pulse	1.5000	3
Na	23	45	He	184.775	ppb	3.3	21005.53	0.7321	Pulse	0.1000	3
Mg	24	45	He	12.987	ppb	19.1	636.70	0.0222	Pulse	0.1000	3
Al	27	45	He	0.259	ppb	211.3	46.67	0.0016	Pulse	0.1000	3
K	39	45	He	0.121	ppb	5355.7	10414.04	0.3629	Pulse	0.1000	3
Ca	44	45	He	3.568	ppb	428.1	80.00	0.0028	Pulse	0.1000	3
Ti	47	45	He	0.752	ppb	55.5	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.176	ppb	12.8	434.01	0.0151	Pulse	0.5000	3
Cr	52	45	He	0.328	ppb	64.9	2193.57	0.0764	Pulse	0.1000	3
Mn	55	45	He	0.348	ppb	36.2	233.34	0.0082	Pulse	0.1000	3
Fe	57	45	He	2.193	ppb	72.3	150.01	0.0052	Pulse	0.1000	3
Co	59	45	He	0.054	ppb	94.3	220.01	0.0077	Pulse	0.1000	3
Ni	60	72	He	0.394	ppb	49.9	540.03	0.0096	Pulse	0.1000	3
Cu	63	72	He	0.106	ppb	64.2	306.68	0.0055	Pulse	0.1000	3
Zn	66	72	He	0.142	ppb	151.7	186.68	0.0033	Pulse	0.1000	3
As	75	72	He	0.070	ppb	164.3	35.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.096	ppb	45.4	80.00	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.014	ppb	92.4	46.67	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.005	ppb	117.8	36.67	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	177.3	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.087	ppb	165.7	796.72	0.0146	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	156.3	110.01	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.092	ppb	110.7	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.019	ppb	47.8	143.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	56.8	323.35	0.0017	Pulse	0.1000	3
U	238	209	He	0.005	ppb	13.8	56.67	0.0003	Pulse	0.1000	3

ISTD Table:

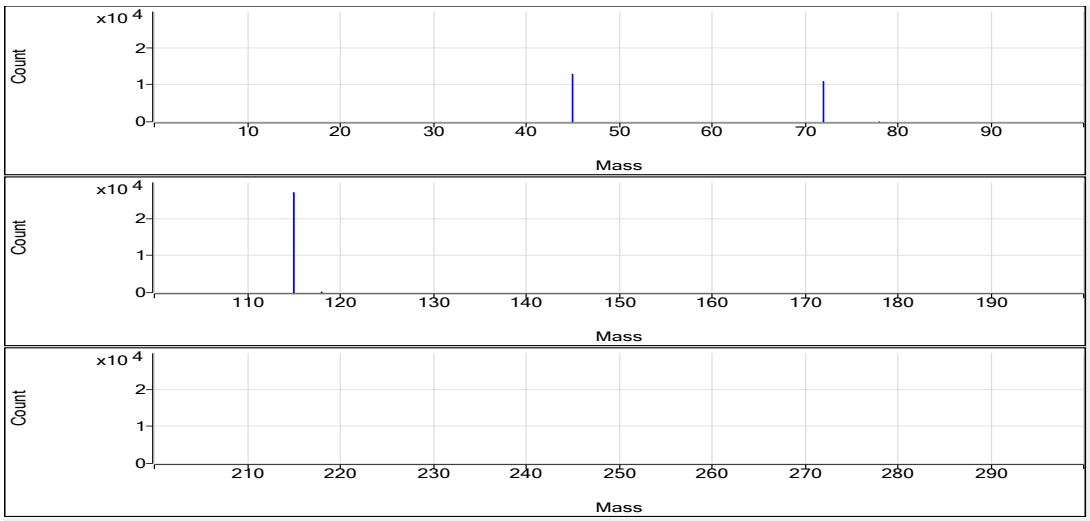
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1743127.47	0.9	99.0	Analog	0.1000	3
No Gas	Ge	72	875503.29	1.4	98.1	Pulse	0.1000	3
H2	Sc	45	129071.88	1.6	101.4	Pulse	0.1000	3
H2	Ge	72	109359.89	0.7	102.0	Pulse	0.1000	3
H2	In	115	270657.33	0.2	101.6	Pulse	0.1000	3
He	Sc	45	28692.39	2.5	100.6	Pulse	0.1000	3
He	Ge	72	56204.64	2.5	101.6	Pulse	0.1000	3
He	In	115	54465.09	0.8	101.5	Pulse	0.1000	3
He	Tb	159	246856.72	0.5	100.4	Pulse	0.1000	3
He	Bi	209	191719.29	0.6	100.5	Pulse	0.1000	3

No Gas

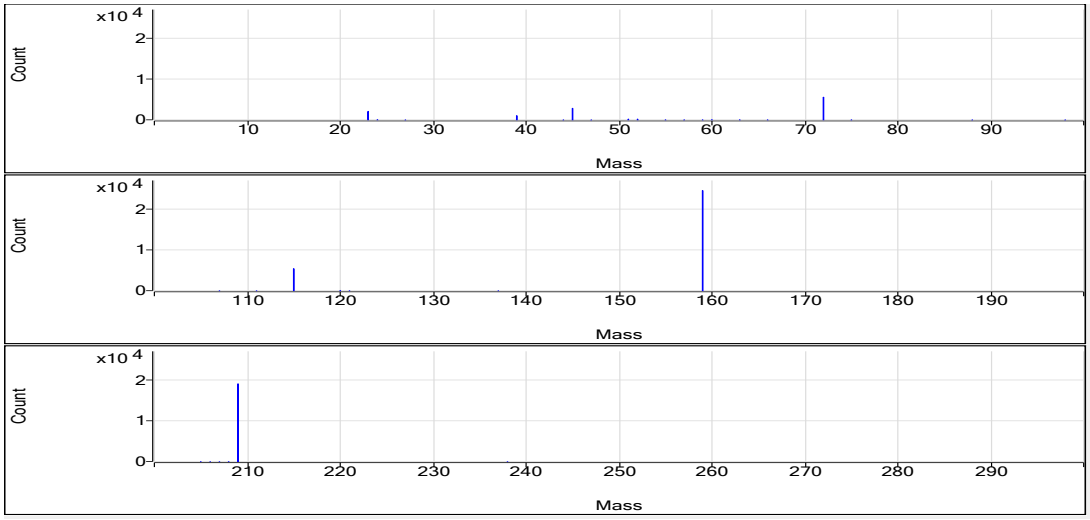


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.016	0	34.00	0.0004	1.287E-05
Be	9	1	No Gas	0.035	0	46.00	0.0004	1.287E-05
Se	78	2	H2	0.073	0	4.67	0.0004	1.451E-05
Se	78	2	H2	-0.022	0	0.67	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Na	23	3	He	188.184	0.7407	21806.60	0.0025	0.2648
Na	23	3	He	177.677	0.7141	20444.86	0.0025	0.2648
Na	23	3	He	188.463	0.7414	20765.14	0.0025	0.2648
Mg	24	3	He	14.975	0.0248	730.04	0.0013	0.005032
Mg	24	3	He	10.215	0.0185	530.03	0.0013	0.005032
Mg	24	3	He	13.772	0.0232	650.04	0.0013	0.005032
Al	27	3	He	-0.371	0.0014	40.00	0.0004	0.001519
Al	27	3	He	0.529	0.0017	50.00	0.0004	0.001519
Al	27	3	He	0.618	0.0018	50.00	0.0004	0.001519
K	39	3	He	7.526	0.37	10894.38	0.001	0.3627
K	39	3	He	-2.546	0.3603	10313.92	0.001	0.3627
K	39	3	He	-4.615	0.3583	10033.81	0.001	0.3627
Ca	44	3	He	8.364	0.0031	90.00	0.0001	0.002571
Ca	44	3	He	15.868	0.0035	100.00	0.0001	0.002571
Ca	44	3	He	-13.529	0.0018	50.00	0.0001	0.002571
Ti	47	3	He	0.972	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.014	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.27	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.153	0.0147	432.01	0.0201	0.0116
V	51	3	He	0.198	0.0156	446.01	0.0201	0.0116
V	51	3	He	0.177	0.0151	424.01	0.0201	0.0116
Cr	52	3	He	0.486	0.0805	2370.27	0.0257	0.06801
Cr	52	3	He	0.086	0.0702	2010.21	0.0257	0.06801
Cr	52	3	He	0.41	0.0786	2200.24	0.0257	0.06801
Mn	55	3	He	0.228	0.0068	200.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.337	0.008	230.01	0.0113	0.004215
Mn	55	3	He	0.479	0.0096	270.01	0.0113	0.004215
Fe	57	3	He	3.949	0.0061	180.01	0.0005	0.004099
Fe	57	3	He	0.866	0.0045	130.00	0.0005	0.004099
Fe	57	3	He	1.764	0.005	140.01	0.0005	0.004099
Co	59	3	He	0.017	0.0058	170.01	0.0518	0.004913
Co	59	3	He	0.033	0.0066	190.01	0.0518	0.004913
Co	59	3	He	0.112	0.0107	300.01	0.0518	0.004913
Ni	60	3	He	0.529	0.0106	590.03	0.0075	0.006695
Ni	60	3	He	0.485	0.0103	570.03	0.0075	0.006695
Ni	60	3	He	0.169	0.008	460.03	0.0075	0.006695
Cu	63	3	He	0.136	0.0061	340.02	0.0216	0.003198
Cu	63	3	He	0.153	0.0065	360.02	0.0216	0.003198
Cu	63	3	He	0.028	0.0038	220.01	0.0216	0.003198
Zn	66	3	He	0.043	0.0031	170.01	0.0026	0.002954
Zn	66	3	He	0.389	0.004	220.01	0.0026	0.002954
Zn	66	3	He	-0.006	0.0029	170.01	0.0026	0.002954
As	75	3	He	0.19	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.062	0.0006	34.00	0.002	0.0004943
As	75	3	He	-0.041	0.0004	24.00	0.002	0.0004943
Sr	88	3	He	0.14	0.0018	100.01	0.0081	0.0006852
Sr	88	3	He	0.053	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.096	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	0.196	0.0162	890.08	0.0146	0.01334
Sn	120	3	He	-0.077	0.0122	660.03	0.0146	0.01334
Sn	120	3	He	0.141	0.0154	840.06	0.0146	0.01334
Sb	121	3	He	0.088	0.0027	150.01	0.0142	0.001484
Sb	121	3	He	0.052	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	-0.027	0.0011	60.00	0.0142	0.001484
Ba	137	3	He	0.077	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.2	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Tl	205	3	He	0.03	0.001	200.01	0.0282	0.00021
Tl	205	3	He	0.013	0.0006	110.00	0.0282	0.00021
Pb	208	3	He	0.016	0.0016	180.01	0.0372	0.0009772
Pb	208	3	He	0.031	0.0021	270.02	0.0372	0.0009772
Pb	208	3	He	0.01	0.0014	150.01	0.0372	0.0009772
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
Sc	45	1	No Gas			1737583.88		
Sc	45	1	No Gas			1760954.66		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1730843.88		
Ge	72	1	No Gas			878603.42		
Ge	72	1	No Gas			885745.69		
Ge	72	1	No Gas			862160.77		
Sc	45	2	H2			127374.05		
Sc	45	2	H2			131318.15		
Sc	45	2	H2			128523.44		
Ge	72	2	H2			108470.04		
Ge	72	2	H2			109940.71		
Ge	72	2	H2			109668.91		
In	115	2	H2			270324.29		
In	115	2	H2			271207.57		
In	115	2	H2			270440.13		
Sc	45	3	He			29440.50		
Sc	45	3	He			28628.96		
Sc	45	3	He			28007.71		
Ge	72	3	He			55457.87		
Ge	72	3	He			55308.02		
Ge	72	3	He			57848.04		
In	115	3	He			54898.80		
In	115	3	He			53995.54		
In	115	3	He			54517.66		
Tb	159	3	He			247361.83		
Tb	159	3	He			247648.36		
Tb	159	3	He			245559.98		
Bi	209	3	He			192790.86		
Bi	209	3	He			191827.28		
Bi	209	3	He			190539.72		

Quantitation Report

Data File Name	072SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:31:31 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

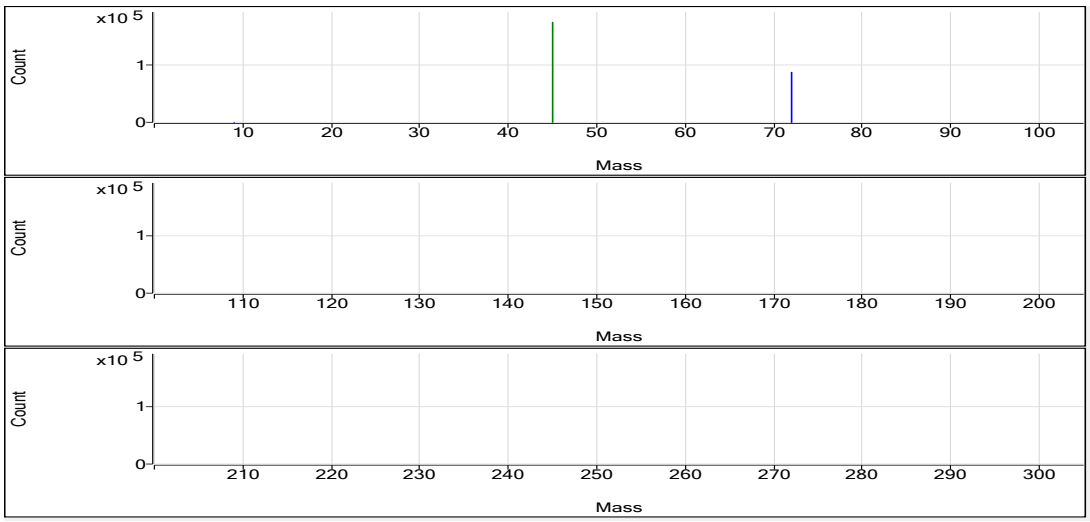
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.022	ppb	93.6	38.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.051	ppb	37.8	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	158.937	ppb	5.9	19463.37	0.6667	Pulse	0.1000	3
Mg	24	45	He	12.544	ppb	13.9	630.03	0.0216	Pulse	0.1000	3
Al	27	45	He	2.048	ppb	103.8	70.00	0.0024	Pulse	0.1000	3
K	39	45	He	-9.478	ppb	N/A	10314.10	0.3535	Pulse	0.1000	3
Ca	44	45	He	6.788	ppb	175.1	86.67	0.0030	Pulse	0.1000	3
Ti	47	45	He	-0.259	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.148	ppb	84.0	424.68	0.0146	Pulse	0.5000	3
Cr	52	45	He	0.143	ppb	259.2	2093.57	0.0717	Pulse	0.1000	3
Mn	55	45	He	0.333	ppb	14.1	233.34	0.0080	Pulse	0.1000	3
Fe	57	45	He	-0.453	ppb	N/A	113.34	0.0039	Pulse	0.1000	3
Co	59	45	He	-0.002	ppb	N/A	140.00	0.0048	Pulse	0.1000	3
Ni	60	72	He	0.364	ppb	53.7	513.37	0.0094	Pulse	0.1000	3
Cu	63	72	He	0.050	ppb	138.7	233.35	0.0043	Pulse	0.1000	3
Zn	66	72	He	0.363	ppb	78.6	213.34	0.0039	Pulse	0.1000	3
As	75	72	He	0.103	ppb	79.7	38.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.098	ppb	21.0	80.00	0.0015	Pulse	0.1000	3
Mo	98	115	He	0.009	ppb	102.5	40.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	117.1	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	150.8	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.041	ppb	453.2	753.39	0.0139	Pulse	0.1000	3
Sb	121	115	He	0.060	ppb	89.1	126.67	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.092	ppb	164.0	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.013	ppb	37.3	110.01	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.009	ppb	37.9	253.34	0.0013	Pulse	0.1000	3
U	238	209	He	0.002	ppb	125.7	33.33	0.0002	Pulse	0.1000	3

ISTD Table:

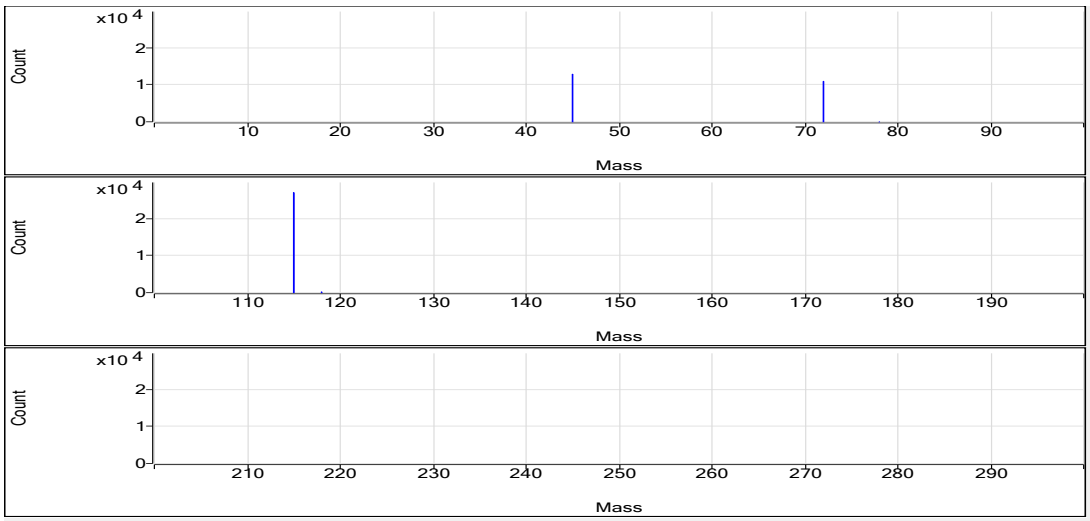
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1752917.37	0.9	99.5	Analog	0.1000	3
No Gas	Ge	72	877851.00	0.8	98.4	Pulse	0.1000	3
H2	Sc	45	129374.36	1.0	101.6	Pulse	0.1000	3
H2	Ge	72	109870.43	1.3	102.5	Pulse	0.1000	3
H2	In	115	271188.20	0.1	101.8	Pulse	0.1000	3
He	Sc	45	29199.89	1.3	102.4	Pulse	0.1000	3
He	Ge	72	54604.84	0.3	98.7	Pulse	0.1000	3
He	In	115	54131.04	1.7	100.9	Pulse	0.1000	3
He	Tb	159	248496.56	1.4	101.1	Pulse	0.1000	3
He	Bi	209	192079.31	0.6	100.6	Pulse	0.1000	3

No Gas

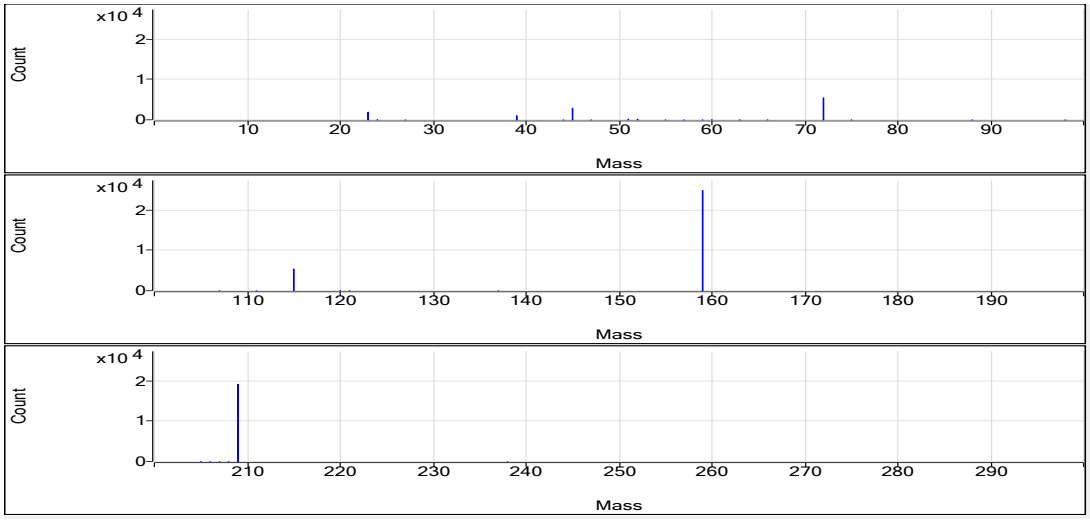


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	26.00	0.0004	1.287E-05
Be	9	1	No Gas	0.017	0	34.00	0.0004	1.287E-05
Be	9	1	No Gas	0.046	0	54.00	0.0004	1.287E-05
Se	78	2	H2	0.04	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.073	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.04	0	3.33	0.0004	1.451E-05
Na	23	3	He	169.598	0.6937	19964.07	0.0025	0.2648
Na	23	3	He	154.92	0.6566	19363.24	0.0025	0.2648
Na	23	3	He	152.292	0.6499	19062.79	0.0025	0.2648
Mg	24	3	He	14.091	0.0236	680.04	0.0013	0.005032
Mg	24	3	He	12.888	0.022	650.03	0.0013	0.005032
Mg	24	3	He	10.654	0.0191	560.03	0.0013	0.005032
Al	27	3	He	2.925	0.0028	80.00	0.0004	0.001519
Al	27	3	He	-0.376	0.0014	40.00	0.0004	0.001519
Al	27	3	He	3.594	0.0031	90.00	0.0004	0.001519
K	39	3	He	37.761	0.3994	11494.96	0.001	0.3627
K	39	3	He	-17.915	0.3453	10184.04	0.001	0.3627
K	39	3	He	-48.279	0.3158	9263.29	0.001	0.3627
Ca	44	3	He	3.592	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	19.949	0.0037	110.00	0.0001	0.002571
Ca	44	3	He	-3.176	0.0024	70.00	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.235	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.278	0.0172	494.01	0.0201	0.0116
V	51	3	He	0.135	0.0143	422.01	0.0201	0.0116
V	51	3	He	0.03	0.0122	358.01	0.0201	0.0116
Cr	52	3	He	0.18	0.0726	2090.23	0.0257	0.06801
Cr	52	3	He	0.494	0.0807	2380.31	0.0257	0.06801
Cr	52	3	He	-0.245	0.0617	1810.17	0.0257	0.06801
Mn	55	3	He	0.333	0.008	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.286	0.0075	220.01	0.0113	0.004215
Mn	55	3	He	0.38	0.0085	250.01	0.0113	0.004215
Fe	57	3	He	-4.626	0.0017	50.00	0.0005	0.004099
Fe	57	3	He	0.607	0.0044	130.01	0.0005	0.004099
Fe	57	3	He	2.658	0.0055	160.01	0.0005	0.004099
Co	59	3	He	-0.041	0.0028	80.00	0.0518	0.004913
Co	59	3	He	-0.029	0.0034	100.00	0.0518	0.004913
Co	59	3	He	0.063	0.0082	240.01	0.0518	0.004913
Ni	60	3	He	0.582	0.011	600.04	0.0075	0.006695
Ni	60	3	He	0.206	0.0082	450.03	0.0075	0.006695
Ni	60	3	He	0.303	0.009	490.03	0.0075	0.006695
Cu	63	3	He	0.124	0.0059	320.02	0.0216	0.003198
Cu	63	3	He	0.038	0.004	220.01	0.0216	0.003198
Cu	63	3	He	-0.013	0.0029	160.01	0.0216	0.003198
Zn	66	3	He	0.625	0.0046	250.01	0.0026	0.002954
Zn	66	3	He	0.059	0.0031	170.01	0.0026	0.002954
Zn	66	3	He	0.406	0.004	220.01	0.0026	0.002954
As	75	3	He	0.161	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.009	0.0005	28.00	0.002	0.0004943
As	75	3	He	0.14	0.0008	42.00	0.002	0.0004943
Sr	88	3	He	0.117	0.0016	90.00	0.0081	0.0006852
Sr	88	3	He	0.076	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.1	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	-0.132	0.0114	630.04	0.0146	0.01334
Sn	120	3	He	0.016	0.0136	730.05	0.0146	0.01334
Sn	120	3	He	0.239	0.0168	900.07	0.0146	0.01334
Sb	121	3	He	0.074	0.0025	140.01	0.0142	0.001484
Sb	121	3	He	0.105	0.003	160.01	0.0142	0.001484
Sb	121	3	He	0.001	0.0015	80.00	0.0142	0.001484
Ba	137	3	He	0.194	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	-0.081	0	0.00	0.0046	0.000374
Ba	137	3	He	0.163	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.015	0.0006	120.01	0.0282	0.00021
Tl	205	3	He	0.016	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.007	0.0004	80.00	0.0282	0.00021
Pb	208	3	He	0.013	0.0015	150.01	0.0372	0.0009772
Pb	208	3	He	0.008	0.0013	160.01	0.0372	0.0009772
Pb	208	3	He	0.006	0.0012	140.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	-0.001	0.0001	10.00	0.0417	8.729E-05
Sc	45	1	No Gas			1768166.38		
Sc	45	1	No Gas			1737094.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1753491.22		
Ge	72	1	No Gas			869578.97		
Ge	72	1	No Gas			882912.25		
Ge	72	1	No Gas			881061.78		
Sc	45	2	H2			128069.68		
Sc	45	2	H2			130530.74		
Sc	45	2	H2			129522.65		
Ge	72	2	H2			110223.10		
Ge	72	2	H2			108248.79		
Ge	72	2	H2			111139.41		
In	115	2	H2			270907.24		
In	115	2	H2			271483.06		
In	115	2	H2			271174.31		
Sc	45	3	He			28778.93		
Sc	45	3	He			29490.70		
Sc	45	3	He			29330.03		
Ge	72	3	He			54394.47		
Ge	72	3	He			54695.08		
Ge	72	3	He			54724.97		
In	115	3	He			55169.93		
In	115	3	He			53795.80		
In	115	3	He			53443.21		
Tb	159	3	He			252609.86		
Tb	159	3	He			246699.12		
Tb	159	3	He			246180.70		
Bi	209	3	He			191910.82		
Bi	209	3	He			193260.27		
Bi	209	3	He			191066.85		

Quantitation Report

Data File Name	073SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:33:30 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

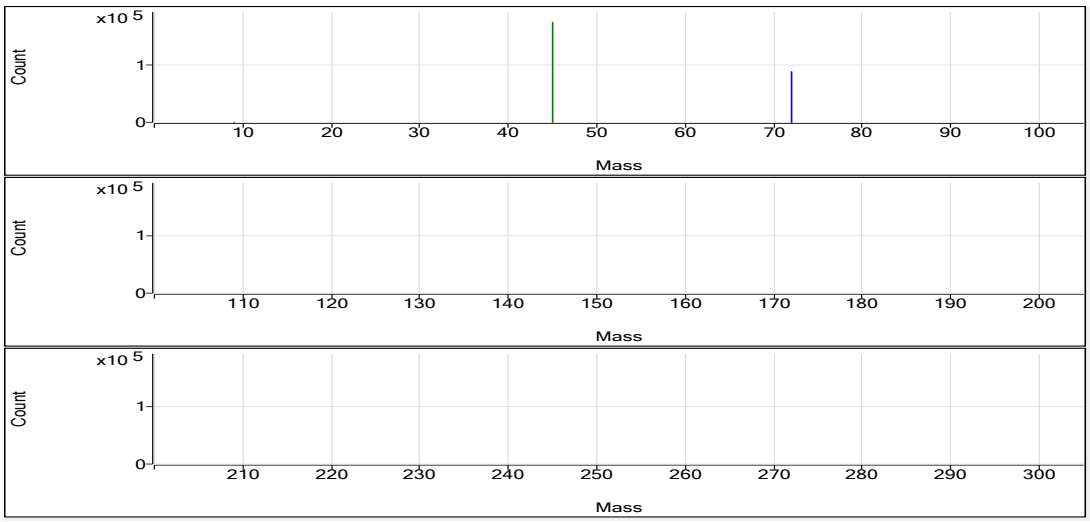
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.037	ppb	27.0	48.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.015	ppb	62.0	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	162.271	ppb	6.3	19079.62	0.6752	Pulse	0.1000	3
Mg	24	45	He	11.726	ppb	29.6	580.04	0.0205	Pulse	0.1000	3
Al	27	45	He	3.063	ppb	74.3	80.00	0.0028	Pulse	0.1000	3
K	39	45	He	12.663	ppb	301.2	10597.59	0.3750	Pulse	0.1000	3
Ca	44	45	He	22.670	ppb	43.2	110.00	0.0039	Pulse	0.1000	3
Ti	47	45	He	-0.246	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.120	ppb	32.6	396.01	0.0140	Pulse	0.5000	3
Cr	52	45	He	0.088	ppb	237.3	1986.87	0.0703	Pulse	0.1000	3
Mn	55	45	He	0.335	ppb	30.9	226.68	0.0080	Pulse	0.1000	3
Fe	57	45	He	-0.396	ppb	N/A	110.00	0.0039	Pulse	0.1000	3
Co	59	45	He	0.015	ppb	445.7	160.01	0.0057	Pulse	0.1000	3
Ni	60	72	He	0.247	ppb	41.5	470.03	0.0085	Pulse	0.1000	3
Cu	63	72	He	0.023	ppb	174.0	203.34	0.0037	Pulse	0.1000	3
Zn	66	72	He	0.420	ppb	74.2	223.34	0.0041	Pulse	0.1000	3
As	75	72	He	0.038	ppb	386.5	31.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.152	ppb	59.6	103.34	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.049	ppb	41.0	83.33	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	58.6	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	350.0	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.012	ppb	N/A	706.71	0.0132	Pulse	0.1000	3
Sb	121	115	He	0.070	ppb	42.9	133.34	0.0025	Pulse	0.1000	3
Ba	137	115	He	0.027	ppb	181.4	26.67	0.0005	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	59.4	90.00	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.022	ppb	42.4	346.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.003	ppb	41.2	40.00	0.0002	Pulse	0.1000	3

ISTD Table:

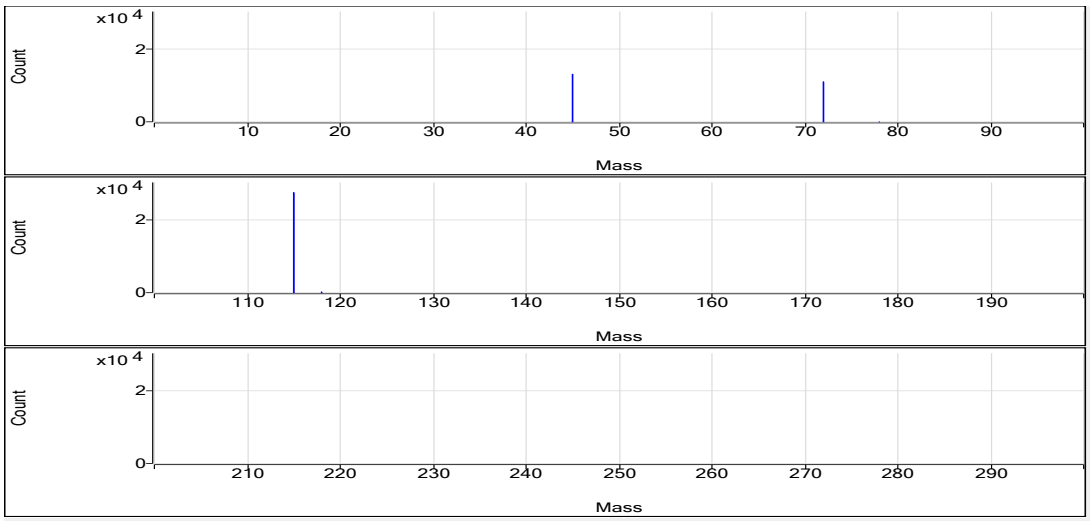
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1743189.82	0.7	99.0	Analog	0.1000	3
No Gas	Ge	72	881544.03	1.9	98.8	Pulse	0.1000	3
H2	Sc	45	130508.10	1.1	102.5	Pulse	0.1000	3
H2	Ge	72	109501.24	0.3	102.1	Pulse	0.1000	3
H2	In	115	273875.35	0.4	102.8	Pulse	0.1000	3
He	Sc	45	28264.93	1.4	99.1	Pulse	0.1000	3
He	Ge	72	55056.96	1.6	99.5	Pulse	0.1000	3
He	In	115	53666.04	2.5	100.0	Pulse	0.1000	3
He	Tb	159	247865.41	1.5	100.9	Pulse	0.1000	3
He	Bi	209	191295.49	1.1	100.2	Pulse	0.1000	3

No Gas

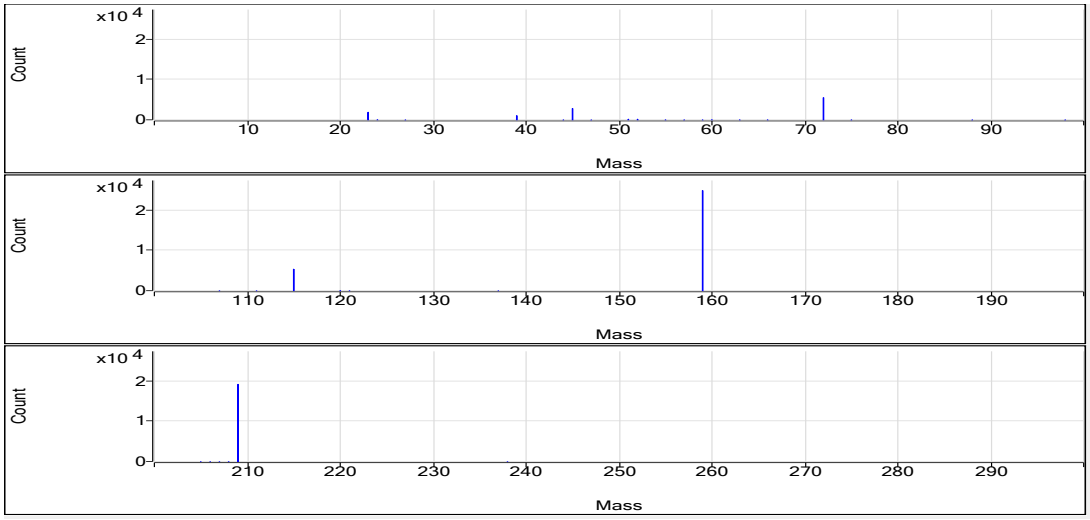


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.048	0	56.00	0.0004	1.287E-05
Be	9	1	No Gas	0.034	0	46.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.025	0	2.67	0.0004	1.451E-05
Na	23	3	He	170.133	0.6951	19703.75	0.0025	0.2648
Na	23	3	He	166.075	0.6848	19062.96	0.0025	0.2648
Na	23	3	He	150.606	0.6457	18472.16	0.0025	0.2648
Mg	24	3	He	15.699	0.0258	730.05	0.0013	0.005032
Mg	24	3	He	9.253	0.0172	480.03	0.0013	0.005032
Mg	24	3	He	10.225	0.0185	530.03	0.0013	0.005032
Al	27	3	He	2.205	0.0025	70.00	0.0004	0.001519
Al	27	3	He	5.642	0.004	110.00	0.0004	0.001519
Al	27	3	He	1.342	0.0021	60.00	0.0004	0.001519
K	39	3	He	51.633	0.4129	11705.10	0.001	0.3627
K	39	3	He	10.961	0.3734	10394.10	0.001	0.3627
K	39	3	He	-24.604	0.3388	9693.58	0.001	0.3627
Ca	44	3	He	16.463	0.0035	100.00	0.0001	0.002571
Ca	44	3	He	17.578	0.0036	100.00	0.0001	0.002571
Ca	44	3	He	33.968	0.0045	130.01	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.275	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.153	0.0147	416.01	0.0201	0.0116
V	51	3	He	0.131	0.0142	396.01	0.0201	0.0116
V	51	3	He	0.077	0.0131	376.01	0.0201	0.0116
Cr	52	3	He	0.319	0.0762	2160.23	0.0257	0.06801
Cr	52	3	He	-0.088	0.0657	1830.17	0.0257	0.06801
Cr	52	3	He	0.033	0.0689	1970.21	0.0257	0.06801
Mn	55	3	He	0.438	0.0092	260.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.23	0.0068	190.01	0.0113	0.004215
Mn	55	3	He	0.338	0.008	230.01	0.0113	0.004215
Fe	57	3	He	2.337	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	-0.288	0.004	110.00	0.0005	0.004099
Fe	57	3	He	-3.236	0.0024	70.00	0.0005	0.004099
Co	59	3	He	0.082	0.0092	260.01	0.0518	0.004913
Co	59	3	He	0.009	0.0054	150.01	0.0518	0.004913
Co	59	3	He	-0.048	0.0024	70.00	0.0518	0.004913
Ni	60	3	He	0.361	0.0094	520.03	0.0075	0.006695
Ni	60	3	He	0.218	0.0083	450.03	0.0075	0.006695
Ni	60	3	He	0.162	0.0079	440.02	0.0075	0.006695
Cu	63	3	He	0.044	0.0042	230.01	0.0216	0.003198
Cu	63	3	He	0.049	0.0043	230.01	0.0216	0.003198
Cu	63	3	He	-0.023	0.0027	150.01	0.0216	0.003198
Zn	66	3	He	0.729	0.0049	270.01	0.0026	0.002954
Zn	66	3	He	0.424	0.0041	220.01	0.0026	0.002954
Zn	66	3	He	0.106	0.0032	180.01	0.0026	0.002954
As	75	3	He	-0.105	0.0003	16.00	0.002	0.0004943
As	75	3	He	0.031	0.0006	30.00	0.002	0.0004943
As	75	3	He	0.188	0.0009	48.00	0.002	0.0004943
Sr	88	3	He	0.128	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.252	0.0027	150.01	0.0081	0.0006852
Sr	88	3	He	0.076	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.057	0.0017	90.00	0.0205	0.0005587
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.064	0.0019	100.00	0.0205	0.0005587
Ag	107	3	He	0.012	0.001	50.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	-0.063	0.0124	650.04	0.0146	0.01334
Sn	120	3	He	-0.066	0.0124	680.04	0.0146	0.01334
Sn	120	3	He	0.093	0.0147	790.05	0.0146	0.01334
Sb	121	3	He	0.057	0.0023	120.00	0.0142	0.001484
Sb	121	3	He	0.049	0.0022	120.00	0.0142	0.001484
Sb	121	3	He	0.105	0.003	160.01	0.0142	0.001484
Ba	137	3	He	0.085	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.015	0.0006	120.01	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.004	0.0003	60.00	0.0282	0.00021
Pb	208	3	He	0.012	0.0014	100.01	0.0372	0.0009772
Pb	208	3	He	0.029	0.0021	210.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.002	200.01	0.0372	0.0009772
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1754313.72		
Sc	45	1	No Gas			1746242.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1729013.10		
Ge	72	1	No Gas			898828.74		
Ge	72	1	No Gas			880452.49		
Ge	72	1	No Gas			865350.85		
Sc	45	2	H2			129410.59		
Sc	45	2	H2			132177.78		
Sc	45	2	H2			129935.94		
Ge	72	2	H2			109780.55		
Ge	72	2	H2			109588.70		
Ge	72	2	H2			109134.48		
In	115	2	H2			273770.07		
In	115	2	H2			275091.42		
In	115	2	H2			272764.55		
Sc	45	3	He			28348.46		
Sc	45	3	He			27837.45		
Sc	45	3	He			28608.88		
Ge	72	3	He			55418.67		
Ge	72	3	He			54073.11		
Ge	72	3	He			55679.10		
In	115	3	He			52309.04		
In	115	3	He			54949.58		
In	115	3	He			53754.35		
Tb	159	3	He			244913.10		
Tb	159	3	He			252013.28		
Tb	159	3	He			246669.84		
Bi	209	3	He			191714.84		
Bi	209	3	He			193164.04		
Bi	209	3	He			189007.58		

Quantitation Report

Data File Name	074SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:35:30 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

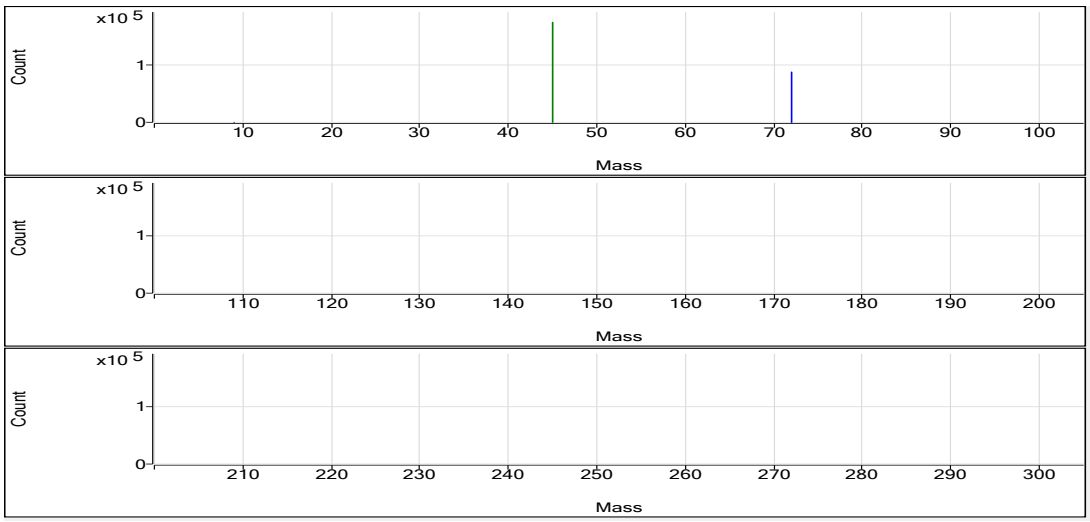
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.021	ppb	65.4	36.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.011	ppb	N/A	1.11	0.0000	Pulse	1.5000	3
Na	23	45	He	141.569	ppb	3.5	18061.47	0.6228	Pulse	0.1000	3
Mg	24	45	He	12.020	ppb	28.5	606.70	0.0209	Pulse	0.1000	3
Al	27	45	He	1.794	ppb	87.7	66.67	0.0023	Pulse	0.1000	3
K	39	45	He	15.015	ppb	304.7	10954.49	0.3773	Pulse	0.1000	3
Ca	44	45	He	-4.636	ppb	N/A	66.67	0.0023	Pulse	0.1000	3
Ti	47	45	He	0.244	ppb	310.1	10.00	0.0003	Pulse	0.1000	3
V	51	45	He	0.122	ppb	42.2	407.34	0.0140	Pulse	0.5000	3
Cr	52	45	He	0.178	ppb	157.2	2103.56	0.0726	Pulse	0.1000	3
Mn	55	45	He	0.266	ppb	68.9	210.01	0.0072	Pulse	0.1000	3
Fe	57	45	He	3.674	ppb	35.4	173.34	0.0060	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	121.3	196.67	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.277	ppb	46.4	483.36	0.0088	Pulse	0.1000	3
Cu	63	72	He	0.072	ppb	81.5	263.35	0.0047	Pulse	0.1000	3
Zn	66	72	He	0.089	ppb	208.0	176.68	0.0032	Pulse	0.1000	3
As	75	72	He	0.097	ppb	93.6	38.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.158	ppb	102.9	106.67	0.0020	Pulse	0.1000	3
Mo	98	115	He	0.003	ppb	374.2	33.33	0.0006	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	2.2	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.010	ppb	456.1	730.05	0.0135	Pulse	0.1000	3
Sb	121	115	He	0.055	ppb	79.0	123.34	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.066	ppb	92.8	36.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	122.9	90.00	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.015	ppb	42.7	293.34	0.0015	Pulse	0.1000	3
U	238	209	He	0.002	ppb	116.1	36.67	0.0002	Pulse	0.1000	3

ISTD Table:

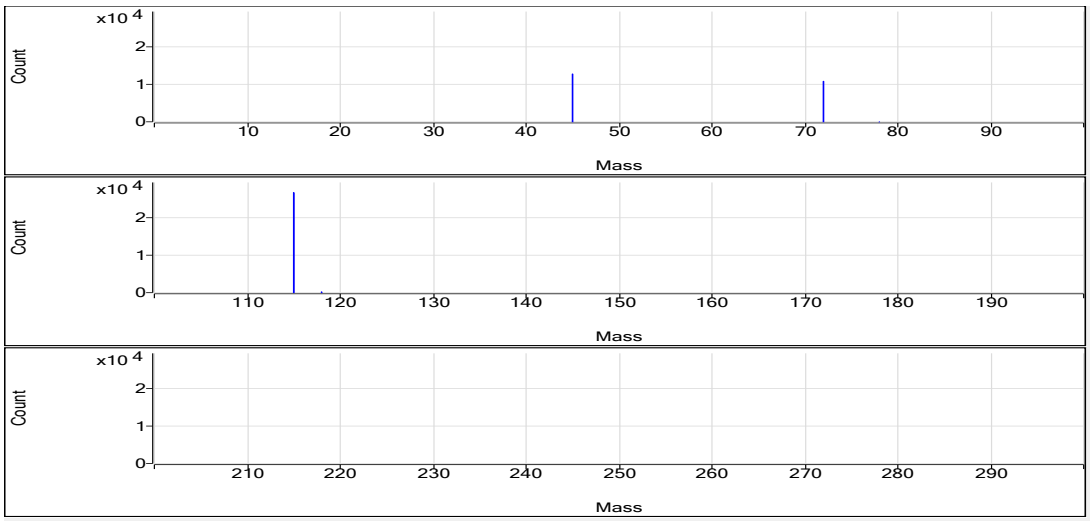
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1747500.91	1.5	99.2	Analog	0.1000	3
No Gas	Ge	72	879233.71	0.8	98.5	Pulse	0.1000	3
H2	Sc	45	128365.59	0.7	100.8	Pulse	0.1000	3
H2	Ge	72	108862.20	1.5	101.5	Pulse	0.1000	3
H2	In	115	268221.46	0.6	100.7	Pulse	0.1000	3
He	Sc	45	28999.54	1.5	101.7	Pulse	0.1000	3
He	Ge	72	55298.07	2.2	99.9	Pulse	0.1000	3
He	In	115	54144.92	1.5	100.9	Pulse	0.1000	3
He	Tb	159	244714.69	0.5	99.6	Pulse	0.1000	3
He	Bi	209	192307.14	1.3	100.8	Pulse	0.1000	3

No Gas

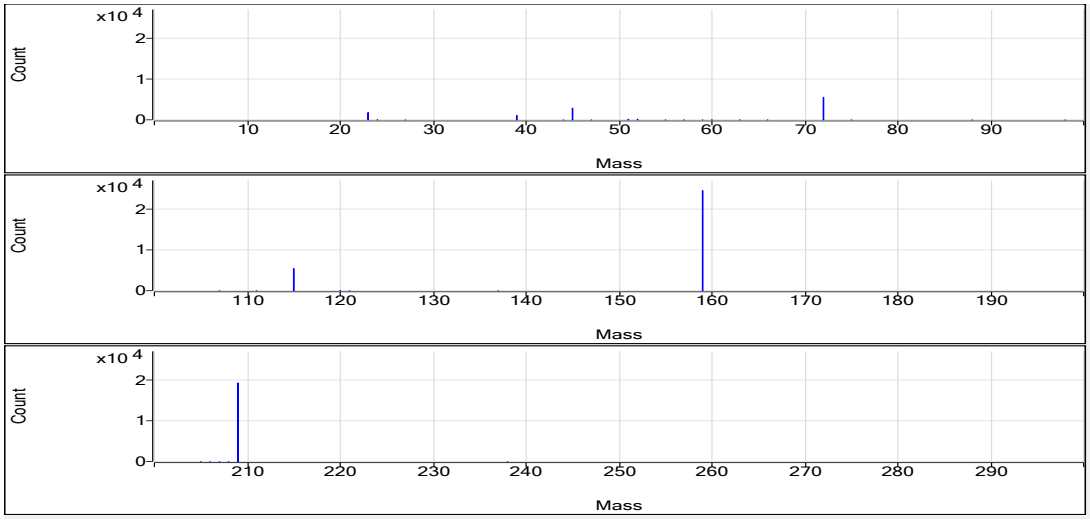


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	26.00	0.0004	1.287E-05
Be	9	1	No Gas	0.032	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.024	0	40.00	0.0004	1.287E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Na	23	3	He	141.73	0.6232	18391.96	0.0025	0.2648
Na	23	3	He	146.404	0.6351	18231.62	0.0025	0.2648
Na	23	3	He	136.572	0.6102	17560.83	0.0025	0.2648
Mg	24	3	He	13.904	0.0234	690.04	0.0013	0.005032
Mg	24	3	He	8.064	0.0157	450.02	0.0013	0.005032
Mg	24	3	He	14.091	0.0236	680.04	0.0013	0.005032
Al	27	3	He	3.551	0.003	90.00	0.0004	0.001519
Al	27	3	He	0.517	0.0017	50.00	0.0004	0.001519
Al	27	3	He	1.313	0.0021	60.00	0.0004	0.001519
K	39	3	He	65.616	0.4265	12585.83	0.001	0.3627
K	39	3	He	2.878	0.3655	10494.02	0.001	0.3627
K	39	3	He	-23.448	0.34	9783.62	0.001	0.3627
Ca	44	3	He	-9.261	0.002	60.00	0.0001	0.002571
Ca	44	3	He	9.705	0.0031	90.00	0.0001	0.002571
Ca	44	3	He	-14.353	0.0017	50.00	0.0001	0.002571
Ti	47	3	He	0.231	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	1.009	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.175	0.0151	446.01	0.0201	0.0116
V	51	3	He	0.116	0.0139	400.01	0.0201	0.0116
V	51	3	He	0.073	0.0131	376.01	0.0201	0.0116
Cr	52	3	He	-0.049	0.0668	1970.20	0.0257	0.06801
Cr	52	3	He	0.092	0.0704	2020.20	0.0257	0.06801
Cr	52	3	He	0.491	0.0806	2320.28	0.0257	0.06801
Mn	55	3	He	0.406	0.0088	260.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.058	0.0049	140.01	0.0113	0.004215
Mn	55	3	He	0.333	0.008	230.01	0.0113	0.004215
Fe	57	3	He	4.584	0.0064	190.01	0.0005	0.004099
Fe	57	3	He	4.254	0.0063	180.01	0.0005	0.004099
Fe	57	3	He	2.182	0.0052	150.01	0.0005	0.004099
Co	59	3	He	0.062	0.0081	240.01	0.0518	0.004913
Co	59	3	He	0.06	0.008	230.01	0.0518	0.004913
Co	59	3	He	-0.014	0.0042	120.00	0.0518	0.004913
Ni	60	3	He	0.174	0.008	450.02	0.0075	0.006695
Ni	60	3	He	0.42	0.0098	530.03	0.0075	0.006695
Ni	60	3	He	0.235	0.0084	470.02	0.0075	0.006695
Cu	63	3	He	0.132	0.006	340.02	0.0216	0.003198
Cu	63	3	He	0.015	0.0035	190.01	0.0216	0.003198
Cu	63	3	He	0.068	0.0047	260.01	0.0216	0.003198
Zn	66	3	He	0.295	0.0037	210.01	0.0026	0.002954
Zn	66	3	He	-0.066	0.0028	150.01	0.0026	0.002954
Zn	66	3	He	0.038	0.0031	170.01	0.0026	0.002954
As	75	3	He	0.165	0.0008	46.00	0.002	0.0004943
As	75	3	He	-0.006	0.0005	26.00	0.002	0.0004943
As	75	3	He	0.133	0.0008	42.00	0.002	0.0004943
Sr	88	3	He	0.345	0.0035	190.01	0.0081	0.0006852
Sr	88	3	He	0.051	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.078	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0008	40.00	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.036	0.0128	700.05	0.0146	0.01334
Sn	120	3	He	0.052	0.0141	770.05	0.0146	0.01334
Sn	120	3	He	0.012	0.0135	720.05	0.0146	0.01334
Sb	121	3	He	0.05	0.0022	120.00	0.0142	0.001484
Sb	121	3	He	0.102	0.0029	160.01	0.0142	0.001484
Sb	121	3	He	0.014	0.0017	90.00	0.0142	0.001484
Ba	137	3	He	0.118	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.082	0.0008	40.00	0.0046	0.000374
Tl	205	3	He	0.002	0.0003	50.00	0.0282	0.00021
Tl	205	3	He	0.004	0.0003	60.00	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Pb	208	3	He	0.01	0.0013	100.00	0.0372	0.0009772
Pb	208	3	He	0.022	0.0018	170.01	0.0372	0.0009772
Pb	208	3	He	0.013	0.0015	180.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	-0.001	0.0001	10.00	0.0417	8.729E-05
Sc	45	1	No Gas			1725496.22		
Sc	45	1	No Gas			1739266.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1777740.44		
Ge	72	1	No Gas			873884.83		
Ge	72	1	No Gas			876674.21		
Ge	72	1	No Gas			887142.10		
Sc	45	2	H2			128745.80		
Sc	45	2	H2			127302.27		
Sc	45	2	H2			129048.69		
Ge	72	2	H2			110686.30		
Ge	72	2	H2			108469.54		
Ge	72	2	H2			107430.76		
In	115	2	H2			266584.84		
In	115	2	H2			268403.90		
In	115	2	H2			269675.64		
Sc	45	3	He			29510.53		
Sc	45	3	He			28708.87		
Sc	45	3	He			28779.23		
Ge	72	3	He			56291.59		
Ge	72	3	He			53932.88		
Ge	72	3	He			55669.73		
In	115	3	He			54598.36		
In	115	3	He			54608.57		
In	115	3	He			53243.16		
Tb	159	3	He			245843.79		
Tb	159	3	He			243371.64		
Tb	159	3	He			244928.63		
Bi	209	3	He			194992.69		
Bi	209	3	He			190153.57		
Bi	209	3	He			191775.17		

Quantitation Report

Data File Name	075_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:37:30 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

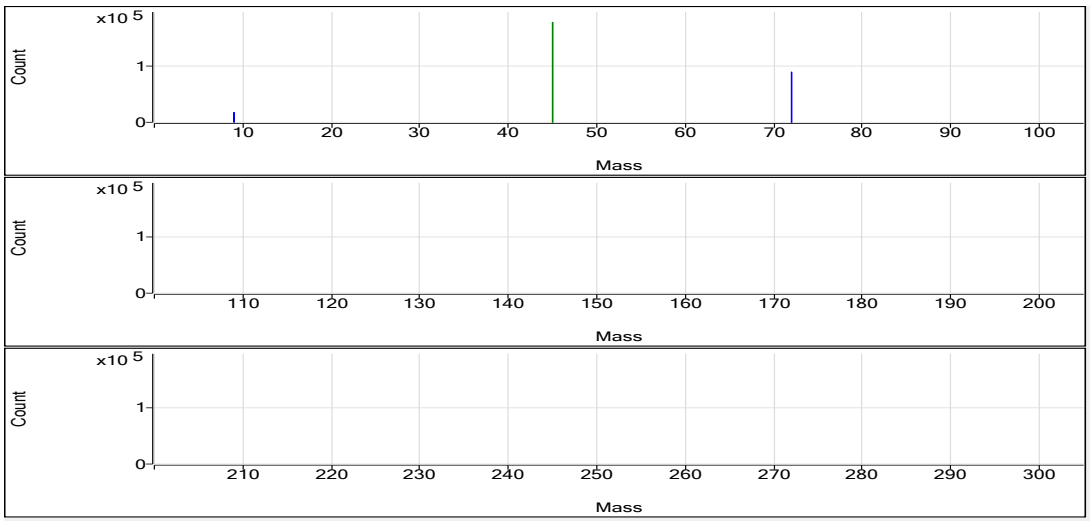
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.586	ppb	7.2	35582.37	0.0199	Pulse	0.5000	3
Se	78	72	H2	52.116	ppb	1.5	2286.41	0.0204	Pulse	1.5000	3
Na	23	45	He	5124.165	ppb	2.6	398974.99	13.2223	Pulse	0.1000	3
Mg	24	45	He	5017.904	ppb	2.5	199995.13	6.6279	Pulse	0.1000	3
Al	27	45	He	5058.489	ppb	2.9	65870.96	2.1830	Pulse	0.1000	3
K	39	45	He	5033.684	ppb	3.5	158498.64	5.2533	Pulse	0.1000	3
Ca	44	45	He	5137.172	ppb	5.5	9083.13	0.3010	Pulse	0.1000	3
Ti	47	45	He	5005.446	ppb	4.7	69392.79	2.3004	Pulse	0.1000	3
V	51	45	He	501.797	ppb	2.9	304044.62	10.0767	Pulse	0.5000	3
Cr	52	45	He	500.381	ppb	2.0	390134.69	12.9283	Pulse	0.1000	3
Mn	55	45	He	504.896	ppb	2.4	172739.33	5.7244	Pulse	0.1000	3
Fe	57	45	He	5059.677	ppb	2.0	78061.32	2.5868	Pulse	0.1000	3
Co	59	45	He	493.507	ppb	2.6	771745.72	25.5763	Pulse	0.1000	3
Ni	60	72	He	520.893	ppb	0.5	217921.93	3.8874	Pulse	0.1000	3
Cu	63	72	He	516.883	ppb	0.4	625723.35	11.1615	Pulse	0.1000	3
Zn	66	72	He	516.586	ppb	0.5	76329.59	1.3616	Pulse	0.1000	3
As	75	72	He	515.191	ppb	0.7	56415.86	1.0064	Pulse	0.5000	3
Sr	88	115	He	51.374	ppb	3.0	23092.86	0.4175	Pulse	0.1000	3
Mo	98	115	He	50.103	ppb	1.2	56768.56	1.0262	Pulse	0.1000	3
Ag	107	115	He	51.246	ppb	1.2	122066.17	2.2064	Pulse	0.1000	3
Cd	111	115	He	49.699	ppb	1.7	13742.81	0.2484	Pulse	0.5000	3
Sn	120	115	He	50.623	ppb	0.9	41673.40	0.7533	Pulse	0.1000	3
Sb	121	115	He	50.127	ppb	0.3	39543.90	0.7147	Pulse	0.1000	3
Ba	137	115	He	503.087	ppb	1.0	128256.64	2.3181	Pulse	0.1000	3
Tl	205	209	He	50.650	ppb	1.8	275474.91	1.4297	Pulse	0.1000	3
Pb	208	209	He	51.378	ppb	1.4	368839.31	1.9142	Pulse	0.1000	3
U	238	209	He	51.346	ppb	1.9	412725.21	2.1421	Pulse	0.1000	3

ISTD Table:

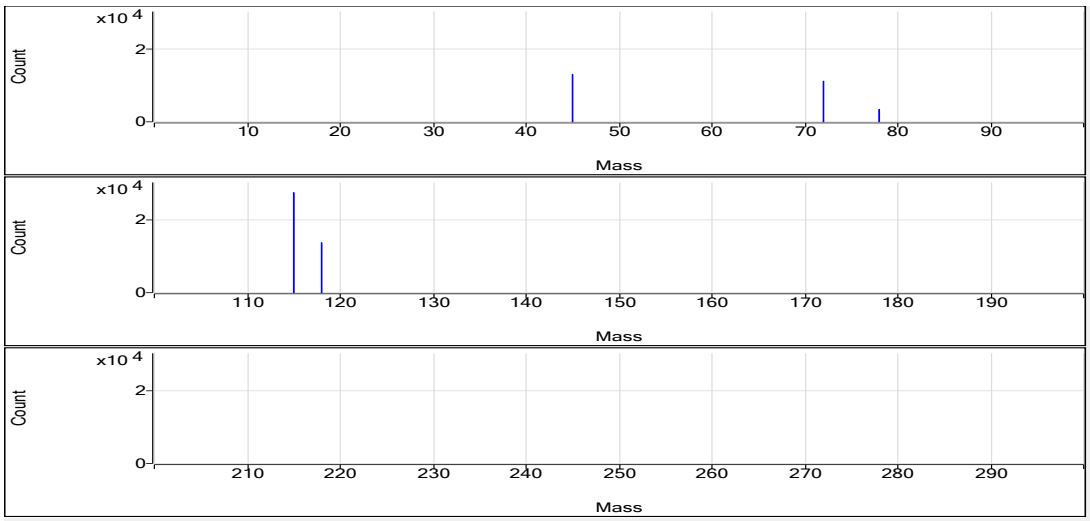
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1783929.09	1.3	101.3	Analog	0.1000	3
No Gas	Ge	72	897876.47	0.3	100.6	Pulse	0.1000	3
H2	Sc	45	130481.00	2.6	102.5	Pulse	0.1000	3
H2	Ge	72	112083.70	1.8	104.5	Pulse	0.1000	3
H2	In	115	275096.35	1.5	103.3	Pulse	0.1000	3
He	Sc	45	30185.35	2.1	105.9	Pulse	0.1000	3
He	Ge	72	56060.48	0.7	101.3	Pulse	0.1000	3
He	In	115	55327.00	1.2	103.1	Pulse	0.1000	3
He	Tb	159	250048.61	1.2	101.7	Pulse	0.1000	3
He	Bi	209	192695.15	1.0	101.0	Pulse	0.1000	3

No Gas

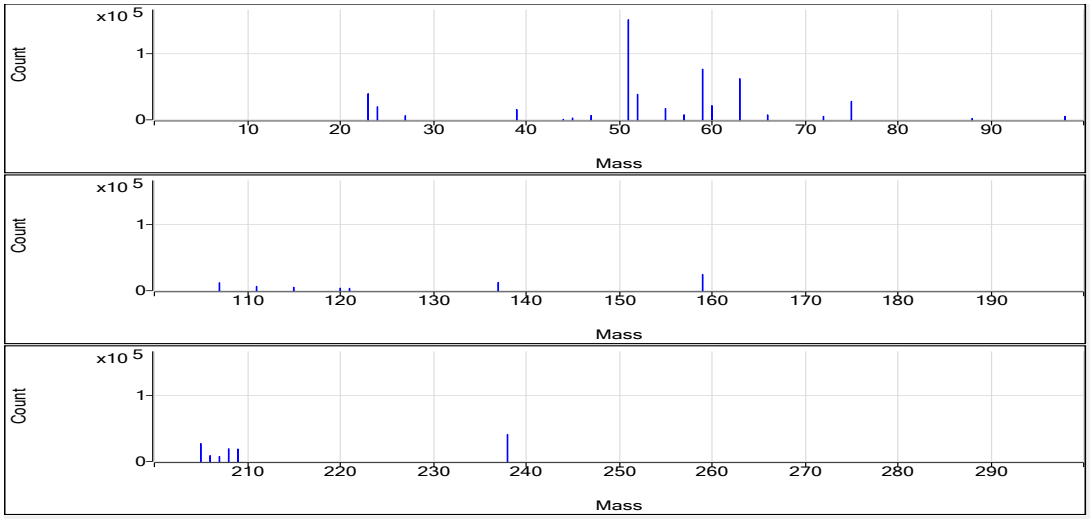


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.152	0.0186	32675.70	0.0004	1.287E-05
Be	9	1	No Gas	50.201	0.0198	35700.39	0.0004	1.287E-05
Be	9	1	No Gas	54.404	0.0214	38371.02	0.0004	1.287E-05
Se	78	2	H2	52.718	0.0206	2280.19	0.0004	1.451E-05
Se	78	2	H2	51.232	0.0201	2233.51	0.0004	1.451E-05
Se	78	2	H2	52.398	0.0205	2345.53	0.0004	1.451E-05
Na	23	3	He	5238.123	13.5105	401409.64	0.0025	0.2648
Na	23	3	He	5157.359	13.3062	398139.49	0.0025	0.2648
Na	23	3	He	4977.015	12.8502	397375.85	0.0025	0.2648
Mg	24	3	He	5138.447	6.787	201648.61	0.0013	0.005032
Mg	24	3	He	5031.257	6.6455	198842.46	0.0013	0.005032
Mg	24	3	He	4884.008	6.4512	199494.31	0.0013	0.005032
Al	27	3	He	5081.579	2.193	65155.02	0.0004	0.001519
Al	27	3	He	5194.471	2.2416	67072.80	0.0004	0.001519
Al	27	3	He	4899.415	2.1144	65385.07	0.0004	0.001519
K	39	3	He	5146.97	5.3633	159350.07	0.001	0.3627
K	39	3	He	5121.495	5.3386	159737.15	0.001	0.3627
K	39	3	He	4832.586	5.0579	156408.71	0.001	0.3627
Ca	44	3	He	4974.92	0.2916	8662.85	0.0001	0.002571
Ca	44	3	He	5463.52	0.32	9573.42	0.0001	0.002571
Ca	44	3	He	4973.075	0.2915	9013.12	0.0001	0.002571
Ti	47	3	He	5164.605	2.3736	70521.59	0.0005	0.0002328
Ti	47	3	He	5118.056	2.3522	70380.58	0.0005	0.0002328
Ti	47	3	He	4733.677	2.1756	67276.20	0.0005	0.0002328
V	51	3	He	511.577	10.2729	305218.19	0.0201	0.0116
V	51	3	He	508.609	10.2134	305596.84	0.0201	0.0116
V	51	3	He	485.206	9.7439	301318.84	0.0201	0.0116
Cr	52	3	He	505.944	13.0713	388362.53	0.0257	0.06801
Cr	52	3	He	506.652	13.0895	391655.27	0.0257	0.06801
Cr	52	3	He	488.546	12.6242	390386.28	0.0257	0.06801
Mn	55	3	He	517.347	5.8655	174269.78	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	504.19	5.7164	171042.87	0.0113	0.004215
Mn	55	3	He	493.15	5.5913	172905.35	0.0113	0.004215
Fe	57	3	He	5119.889	2.6175	77769.92	0.0005	0.004099
Fe	57	3	He	5118.114	2.6166	78293.16	0.0005	0.004099
Fe	57	3	He	4941.028	2.5262	78120.88	0.0005	0.004099
Co	59	3	He	502.334	26.0337	773487.57	0.0518	0.004913
Co	59	3	He	499.238	25.8733	774161.55	0.0518	0.004913
Co	59	3	He	478.949	24.822	767588.04	0.0518	0.004913
Ni	60	3	He	518.128	3.8668	218558.84	0.0075	0.006695
Ni	60	3	He	521.242	3.89	217369.49	0.0075	0.006695
Ni	60	3	He	523.308	3.9054	217837.46	0.0075	0.006695
Cu	63	3	He	517.51	11.175	631641.16	0.0216	0.003198
Cu	63	3	He	518.718	11.2011	625914.52	0.0216	0.003198
Cu	63	3	He	514.42	11.1083	619614.37	0.0216	0.003198
Zn	66	3	He	514.325	1.3556	76623.68	0.0026	0.002954
Zn	66	3	He	519.645	1.3696	76534.15	0.0026	0.002954
Zn	66	3	He	515.789	1.3595	75830.95	0.0026	0.002954
As	75	3	He	513.052	1.0022	56645.44	0.002	0.0004943
As	75	3	He	519.49	1.0147	56703.71	0.002	0.0004943
As	75	3	He	513.032	1.0021	55898.43	0.002	0.0004943
Sr	88	3	He	49.908	0.4056	22758.96	0.0081	0.0006852
Sr	88	3	He	51.225	0.4163	22919.36	0.0081	0.0006852
Sr	88	3	He	52.988	0.4306	23600.27	0.0081	0.0006852
Mo	98	3	He	49.411	1.012	56785.19	0.0205	0.0005587
Mo	98	3	He	50.536	1.035	56986.18	0.0205	0.0005587
Mo	98	3	He	50.362	1.0315	56534.31	0.0205	0.0005587
Ag	107	3	He	50.844	2.1891	122836.16	0.043	0.0004367
Ag	107	3	He	50.946	2.1935	120769.09	0.043	0.0004367
Ag	107	3	He	51.949	2.2367	122593.27	0.043	0.0004367
Cd	111	3	He	48.818	0.244	13692.78	0.005	1.253E-05
Cd	111	3	He	49.767	0.2488	13696.75	0.005	1.253E-05
Cd	111	3	He	50.511	0.2525	13838.90	0.005	1.253E-05
Sn	120	3	He	50.181	0.7468	41904.35	0.0146	0.01334
Sn	120	3	He	51.046	0.7594	41813.49	0.0146	0.01334
Sn	120	3	He	50.643	0.7535	41302.37	0.0146	0.01334
Sb	121	3	He	50.31	0.7173	40249.71	0.0142	0.001484
Sb	121	3	He	50.071	0.7139	39306.32	0.0142	0.001484
Sb	121	3	He	50.002	0.7129	39075.67	0.0142	0.001484
Ba	137	3	He	503.945	2.322	130295.38	0.0046	0.000374
Ba	137	3	He	507.742	2.3395	128810.67	0.0046	0.000374
Ba	137	3	He	497.575	2.2927	125663.88	0.0046	0.000374
Tl	205	3	He	51.202	1.4453	279841.25	0.0282	0.00021
Tl	205	3	He	49.595	1.3999	271541.27	0.0282	0.00021
Tl	205	3	He	51.152	1.4439	275042.22	0.0282	0.00021
Pb	208	3	He	51.993	1.9371	200992.95	0.0372	0.0009772
Pb	208	3	He	50.591	1.8849	193824.47	0.0372	0.0009772
Pb	208	3	He	51.549	1.9205	194956.05	0.0372	0.0009772
U	238	3	He	51.433	2.1457	415464.29	0.0417	8.729E-05
U	238	3	He	50.341	2.1002	407372.18	0.0417	8.729E-05
U	238	3	He	52.263	2.1804	415339.17	0.0417	8.729E-05
Sc	45	1	No Gas			1758091.38		
Sc	45	1	No Gas			1804216.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1789479.82		
Ge	72	1	No Gas			894624.36		
Ge	72	1	No Gas			899605.69		
Ge	72	1	No Gas			899399.36		
Sc	45	2	H2			129856.51		
Sc	45	2	H2			127463.37		
Sc	45	2	H2			134123.12		
Ge	72	2	H2			110504.75		
Ge	72	2	H2			111380.99		
Ge	72	2	H2			114365.37		
In	115	2	H2			272470.41		
In	115	2	H2			273040.13		
In	115	2	H2			279778.51		
Sc	45	3	He			29711.04		
Sc	45	3	He			29921.29		
Sc	45	3	He			30923.73		
Ge	72	3	He			56522.50		
Ge	72	3	He			55879.72		
Ge	72	3	He			55779.23		
In	115	3	He			56405.66		
In	115	3	He			55350.91		
In	115	3	He			55099.56		
Tb	159	3	He			251993.22		
Tb	159	3	He			246639.02		
Tb	159	3	He			251513.59		
Bi	209	3	He			193624.84		
Bi	209	3	He			193969.20		
Bi	209	3	He			190491.40		

Quantitation Report

Data File Name	076_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:39:31 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

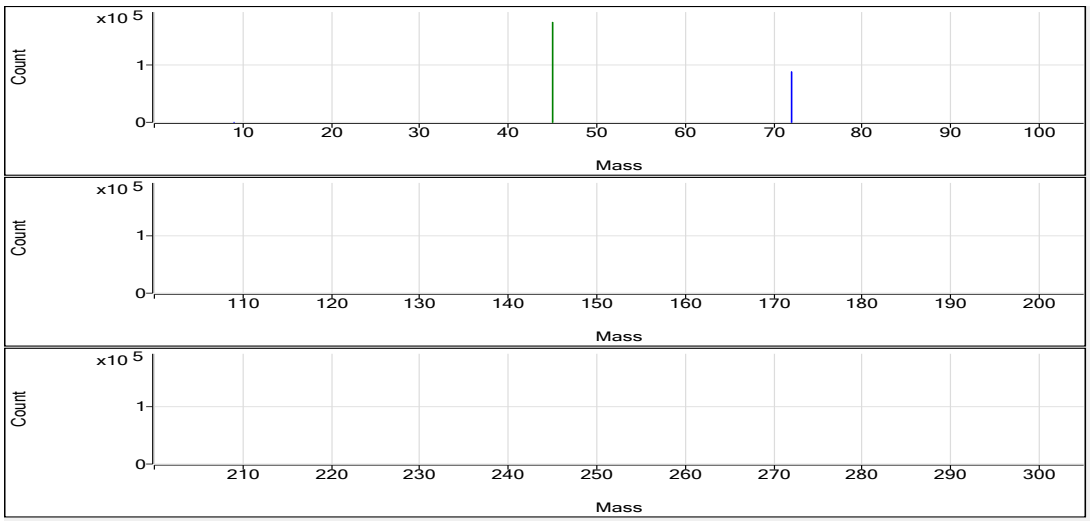
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.255	ppb	6.7	196.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.109	ppb	20.6	6.22	0.0001	Pulse	1.5000	3
Na	23	45	He	116.544	ppb	5.5	15962.45	0.5595	Pulse	0.1000	3
Mg	24	45	He	9.811	ppb	30.1	513.36	0.0180	Pulse	0.1000	3
Al	27	45	He	2.954	ppb	67.7	80.00	0.0028	Pulse	0.1000	3
K	39	45	He	15.300	ppb	191.5	10771.00	0.3776	Pulse	0.1000	3
Ca	44	45	He	32.157	ppb	9.1	126.67	0.0044	Pulse	0.1000	3
Ti	47	45	He	1.019	ppb	3.0	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.231	ppb	17.0	462.68	0.0162	Pulse	0.5000	3
Cr	52	45	He	0.288	ppb	71.3	2150.24	0.0754	Pulse	0.1000	3
Mn	55	45	He	0.247	ppb	34.9	200.01	0.0070	Pulse	0.1000	3
Fe	57	45	He	2.963	ppb	131.0	160.01	0.0056	Pulse	0.1000	3
Co	59	45	He	0.139	ppb	27.0	346.68	0.0121	Pulse	0.1000	3
Ni	60	72	He	0.446	ppb	20.4	560.03	0.0100	Pulse	0.1000	3
Cu	63	72	He	0.136	ppb	28.5	343.35	0.0061	Pulse	0.1000	3
Zn	66	72	He	0.442	ppb	68.2	230.01	0.0041	Pulse	0.1000	3
As	75	72	He	0.400	ppb	10.1	71.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.142	ppb	40.9	100.00	0.0018	Pulse	0.1000	3
Mo	98	115	He	0.089	ppb	43.3	130.01	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	18.0	53.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.019	ppb	74.5	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.082	ppb	169.1	790.05	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.111	ppb	19.1	166.68	0.0031	Pulse	0.1000	3
Ba	137	115	He	0.092	ppb	66.9	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.096	ppb	3.6	560.03	0.0029	Pulse	0.1000	3
Pb	208	209	He	0.026	ppb	21.6	373.35	0.0020	Pulse	0.1000	3
U	238	209	He	0.026	ppb	22.2	223.34	0.0012	Pulse	0.1000	3

ISTD Table:

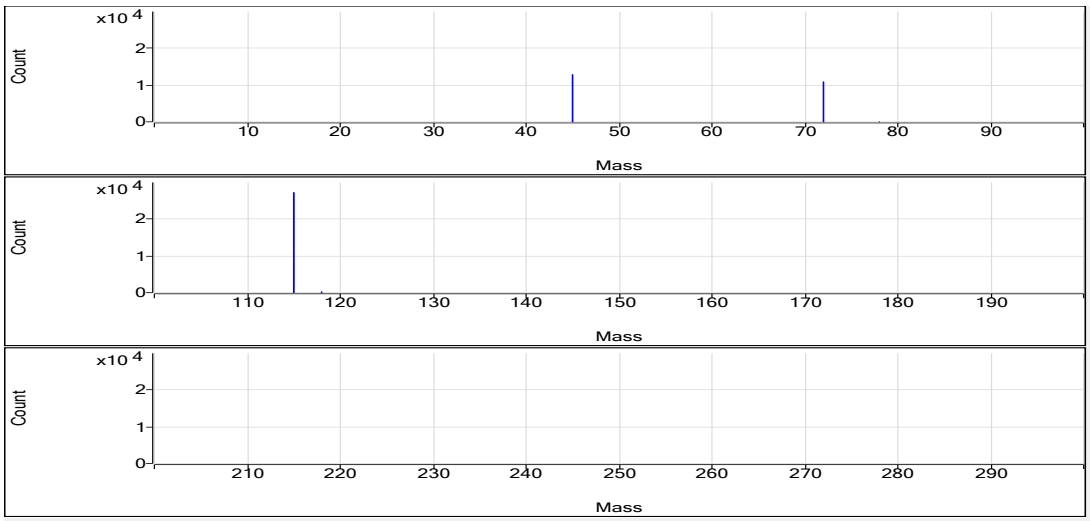
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735662.37	2.1	98.5	Analog	0.1000	3
No Gas	Ge	72	876686.71	0.8	98.2	Pulse	0.1000	3
H2	Sc	45	128036.18	0.6	100.6	Pulse	0.1000	3
H2	Ge	72	108597.66	1.5	101.3	Pulse	0.1000	3
H2	In	115	271961.16	0.6	102.1	Pulse	0.1000	3
He	Sc	45	28532.00	2.0	100.1	Pulse	0.1000	3
He	Ge	72	55916.48	0.6	101.1	Pulse	0.1000	3
He	In	115	54394.97	0.8	101.3	Pulse	0.1000	3
He	Tb	159	245636.11	0.5	99.9	Pulse	0.1000	3
He	Bi	209	191228.28	1.0	100.2	Pulse	0.1000	3

No Gas

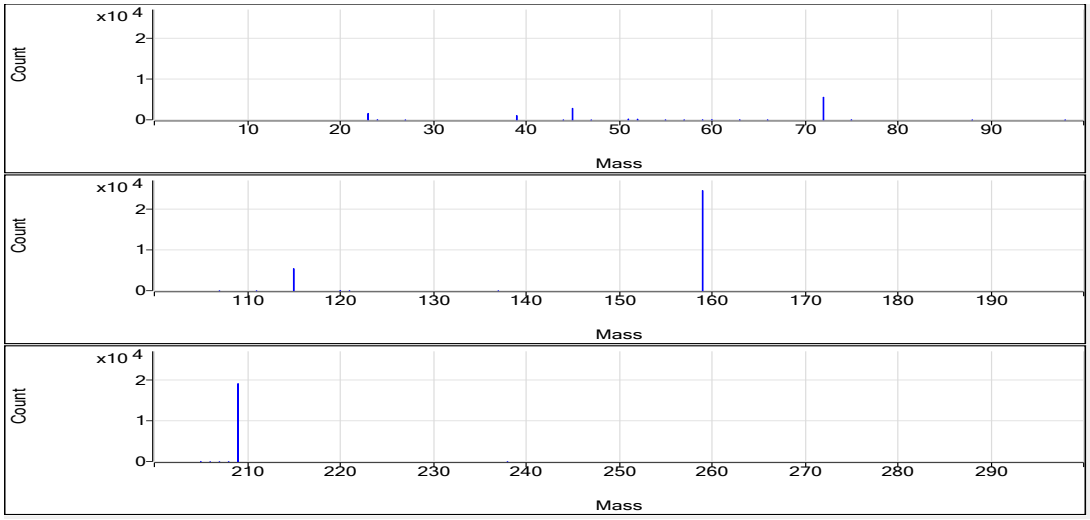


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.274	0.0001	214.00	0.0004	1.287E-05
Be	9	1	No Gas	0.248	0.0001	192.00	0.0004	1.287E-05
Be	9	1	No Gas	0.242	0.0001	184.00	0.0004	1.287E-05
Se	78	2	H2	0.088	0	5.33	0.0004	1.451E-05
Se	78	2	H2	0.133	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.106	0.0001	6.00	0.0004	1.451E-05
Na	23	3	He	111.604	0.5471	15458.64	0.0025	0.2648
Na	23	3	He	114.188	0.5536	16159.22	0.0025	0.2648
Na	23	3	He	123.841	0.578	16269.50	0.0025	0.2648
Mg	24	3	He	12.544	0.0216	610.03	0.0013	0.005032
Mg	24	3	He	10.205	0.0185	540.03	0.0013	0.005032
Mg	24	3	He	6.686	0.0139	390.02	0.0013	0.005032
Al	27	3	He	2.223	0.0025	70.00	0.0004	0.001519
Al	27	3	He	5.217	0.0038	110.00	0.0004	0.001519
Al	27	3	He	1.422	0.0021	60.00	0.0004	0.001519
K	39	3	He	48.619	0.41	11585.00	0.001	0.3627
K	39	3	He	3.74	0.3664	10694.30	0.001	0.3627
K	39	3	He	-6.458	0.3565	10033.70	0.001	0.3627
Ca	44	3	He	34.933	0.0046	130.00	0.0001	0.002571
Ca	44	3	He	32.411	0.0045	130.01	0.0001	0.002571
Ca	44	3	He	29.127	0.0043	120.00	0.0001	0.002571
Ti	47	3	He	1.033	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.984	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.039	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.269	0.017	480.01	0.0201	0.0116
V	51	3	He	0.19	0.0154	450.01	0.0201	0.0116
V	51	3	He	0.233	0.0163	458.01	0.0201	0.0116
Cr	52	3	He	0.507	0.081	2290.27	0.0257	0.06801
Cr	52	3	He	0.1	0.0706	2060.23	0.0257	0.06801
Cr	52	3	He	0.257	0.0746	2100.21	0.0257	0.06801
Mn	55	3	He	0.346	0.0081	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.203	0.0065	190.01	0.0113	0.004215
Mn	55	3	He	0.192	0.0064	180.01	0.0113	0.004215
Fe	57	3	He	7.223	0.0078	220.01	0.0005	0.004099
Fe	57	3	He	2.038	0.0051	150.01	0.0005	0.004099
Fe	57	3	He	-0.374	0.0039	110.00	0.0005	0.004099
Co	59	3	He	0.151	0.0127	360.02	0.0518	0.004913
Co	59	3	He	0.17	0.0137	400.02	0.0518	0.004913
Co	59	3	He	0.097	0.0099	280.01	0.0518	0.004913
Ni	60	3	He	0.341	0.0092	520.03	0.0075	0.006695
Ni	60	3	He	0.497	0.0104	580.03	0.0075	0.006695
Ni	60	3	He	0.5	0.0104	580.03	0.0075	0.006695
Cu	63	3	He	0.099	0.0053	300.01	0.0216	0.003198
Cu	63	3	He	0.134	0.0061	340.02	0.0216	0.003198
Cu	63	3	He	0.176	0.007	390.02	0.0216	0.003198
Zn	66	3	He	0.227	0.0036	200.01	0.0026	0.002954
Zn	66	3	He	0.786	0.005	280.02	0.0026	0.002954
Zn	66	3	He	0.312	0.0038	210.01	0.0026	0.002954
As	75	3	He	0.365	0.0012	68.00	0.002	0.0004943
As	75	3	He	0.445	0.0014	76.00	0.002	0.0004943
As	75	3	He	0.391	0.0013	70.00	0.002	0.0004943
Sr	88	3	He	0.208	0.0024	130.01	0.0081	0.0006852
Sr	88	3	He	0.12	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.098	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	0.115	0.0029	160.01	0.0205	0.0005587
Mo	98	3	He	0.045	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.108	0.0028	150.01	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.034	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	-0.078	0.0122	670.04	0.0146	0.01334
Sn	120	3	He	0.161	0.0157	850.06	0.0146	0.01334
Sn	120	3	He	0.161	0.0157	850.06	0.0146	0.01334
Sb	121	3	He	0.088	0.0027	150.01	0.0142	0.001484
Sb	121	3	He	0.129	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.116	0.0031	170.01	0.0142	0.001484
Ba	137	3	He	0.077	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.159	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.093	0.0028	540.04	0.0282	0.00021
Tl	205	3	He	0.097	0.003	570.03	0.0282	0.00021
Tl	205	3	He	0.099	0.003	570.03	0.0282	0.00021
Pb	208	3	He	0.03	0.0021	180.01	0.0372	0.0009772
Pb	208	3	He	0.02	0.0017	190.01	0.0372	0.0009772
Pb	208	3	He	0.029	0.0021	230.01	0.0372	0.0009772
U	238	3	He	0.03	0.0014	260.01	0.0417	8.729E-05
U	238	3	He	0.028	0.0012	240.01	0.0417	8.729E-05
U	238	3	He	0.019	0.0009	170.01	0.0417	8.729E-05
Sc	45	1	No Gas			1770294.82		
Sc	45	1	No Gas			1738397.63		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1698294.66		
Ge	72	1	No Gas			884073.74		
Ge	72	1	No Gas			875287.80		
Ge	72	1	No Gas			870698.58		
Sc	45	2	H2			127525.99		
Sc	45	2	H2			128876.68		
Sc	45	2	H2			127705.88		
Ge	72	2	H2			108693.05		
Ge	72	2	H2			110131.89		
Ge	72	2	H2			106968.05		
In	115	2	H2			273760.89		
In	115	2	H2			271743.53		
In	115	2	H2			270379.06		
Sc	45	3	He			28257.99		
Sc	45	3	He			29189.93		
Sc	45	3	He			28148.08		
Ge	72	3	He			56311.14		
Ge	72	3	He			55779.51		
Ge	72	3	He			55658.80		
In	115	3	He			54889.25		
In	115	3	He			54165.92		
In	115	3	He			54146.34		
Tb	159	3	He			246993.18		
Tb	159	3	He			244498.67		
Tb	159	3	He			245416.48		
Bi	209	3	He			191403.63		
Bi	209	3	He			192985.64		
Bi	209	3	He			189295.56		

Quantitation Report

Data File Name	077SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:42:22 PM
Sample Name	410-136258-U-30-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

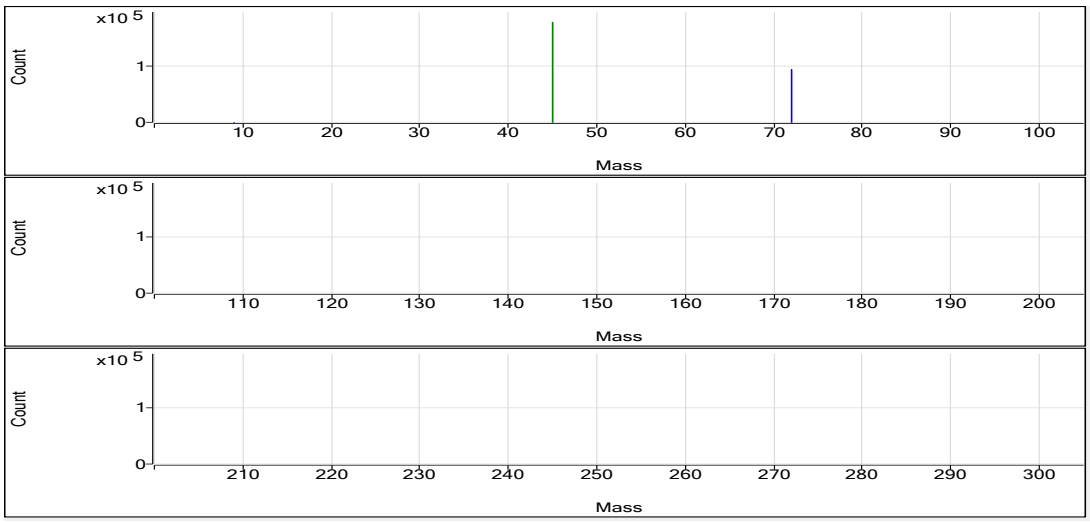
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.092	ppb	17.4	86.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.076	ppb	81.6	5.11	0.0000	Pulse	1.5000	3
Na	23	45	He	2835.987	ppb	3.9	213701.49	7.4362	Pulse	0.1000	3
Mg	24	45	He	18294.976	ppb	3.9	694060.59	24.1516	Pulse	0.1000	3
Al	27	45	He	9.602	ppb	19.8	163.34	0.0057	Pulse	0.1000	3
K	39	45	He	1257.547	ppb	0.6	45575.37	1.5845	Pulse	0.1000	3
Ca	44	45	He	159242.985	ppb	3.2	265967.81	9.2532	Pulse	0.1000	3
Ti	47	45	He	-0.013	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.284	ppb	17.2	497.34	0.0173	Pulse	0.5000	3
Cr	52	45	He	0.254	ppb	137.1	2146.90	0.0745	Pulse	0.1000	3
Mn	55	45	He	2143.347	ppb	3.2	698089.18	24.2872	Pulse	0.1000	3
Fe	57	45	He	6693.970	ppb	3.3	98330.88	3.4210	Pulse	0.1000	3
Co	59	45	He	0.093	ppb	6.1	280.01	0.0097	Pulse	0.1000	3
Ni	60	72	He	0.351	ppb	53.7	543.36	0.0093	Pulse	0.1000	3
Cu	63	72	He	0.190	ppb	25.3	426.69	0.0073	Pulse	0.1000	3
Zn	66	72	He	0.004	ppb	5769.3	173.34	0.0030	Pulse	0.1000	3
As	75	72	He	1.252	ppb	20.1	172.00	0.0029	Pulse	0.5000	3
Sr	88	115	He	495.451	ppb	0.1	218967.73	4.0203	Pulse	0.1000	3
Mo	98	115	He	0.442	ppb	14.6	523.37	0.0096	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	63.5	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	56.5	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.121	ppb	101.0	823.39	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.051	ppb	3.7	120.00	0.0022	Pulse	0.1000	3
Ba	137	115	He	82.707	ppb	2.2	20769.67	0.3814	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	25.9	180.01	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.074	ppb	5.9	720.04	0.0037	Pulse	0.1000	3
U	238	209	He	1.519	ppb	4.3	12246.27	0.0635	Pulse	0.1000	3

ISTD Table:

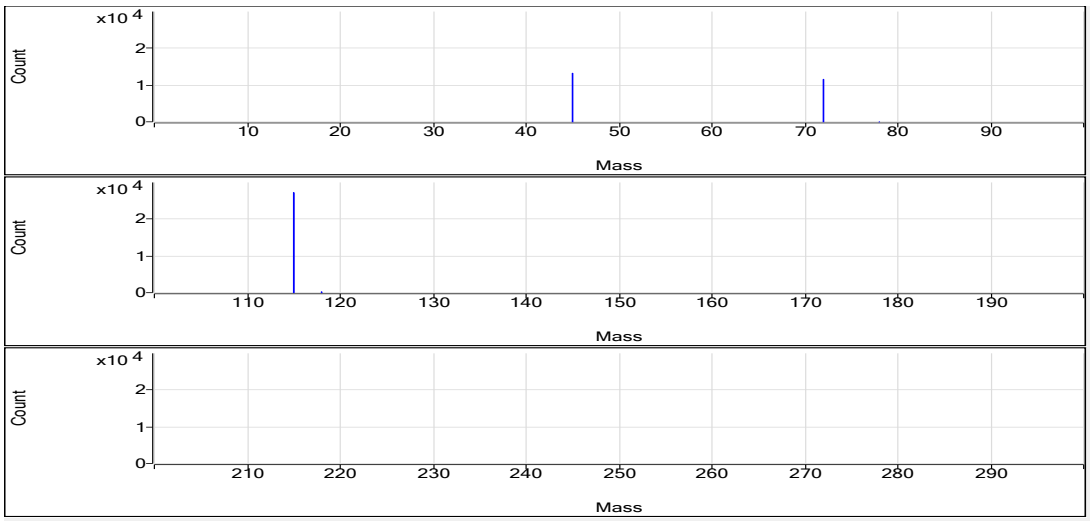
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1768482.53	0.5	100.4	Analog	0.1000	3
No Gas	Ge	72	932289.62	0.4	104.5	Pulse	0.1000	3
H2	Sc	45	132461.43	0.8	104.0	Pulse	0.1000	3
H2	Ge	72	115749.39	1.9	107.9	Pulse	0.1000	3
H2	In	115	272287.44	0.9	102.2	Pulse	0.1000	3
He	Sc	45	28765.82	3.9	100.9	Pulse	0.1000	3
He	Ge	72	58436.56	1.2	105.6	Pulse	0.1000	3
He	In	115	54465.11	1.2	101.5	Pulse	0.1000	3
He	Tb	159	250812.83	1.7	102.1	Pulse	0.1000	3
He	Bi	209	192999.46	0.8	101.1	Pulse	0.1000	3

No Gas

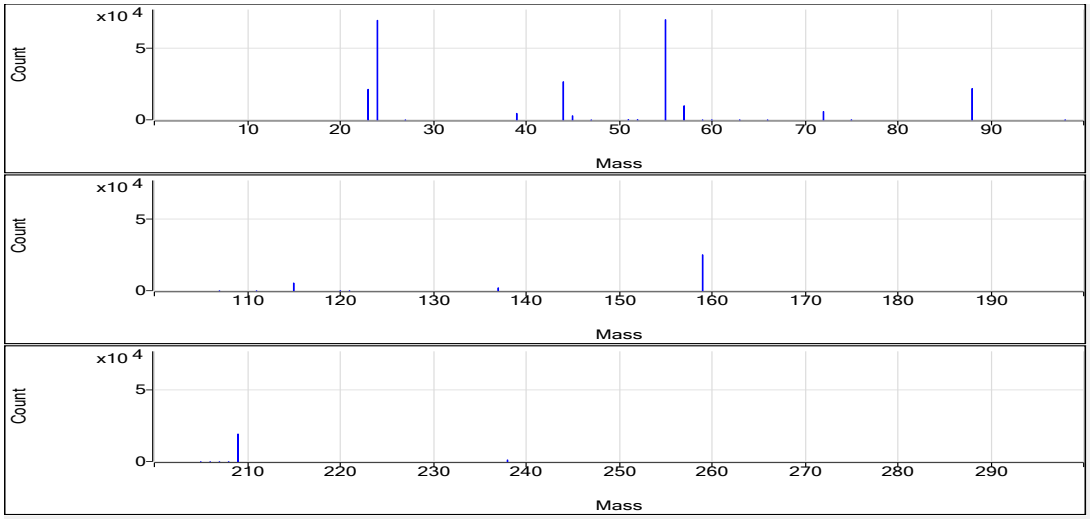


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.082	0	80.00	0.0004	1.287E-05
Be	9	1	No Gas	0.083	0	80.00	0.0004	1.287E-05
Be	9	1	No Gas	0.11	0.0001	100.00	0.0004	1.287E-05
Se	78	2	H2	0.007	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.093	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.128	0.0001	7.33	0.0004	1.451E-05
Na	23	3	He	2752.759	7.2257	214829.45	0.0025	0.2648
Na	23	3	He	2791.925	7.3248	212487.75	0.0025	0.2648
Na	23	3	He	2963.277	7.7581	213787.28	0.0025	0.2648
Mg	24	3	He	17800.083	23.4984	698635.30	0.0013	0.005032
Mg	24	3	He	17972.414	23.7259	688274.99	0.0013	0.005032
Mg	24	3	He	19112.432	25.2305	695271.47	0.0013	0.005032
Al	27	3	He	10.518	0.0061	180.01	0.0004	0.001519
Al	27	3	He	10.868	0.0062	180.01	0.0004	0.001519
Al	27	3	He	7.419	0.0047	130.01	0.0004	0.001519
K	39	3	He	1255.359	1.5824	47046.42	0.001	0.3627
K	39	3	He	1251.039	1.5782	45782.66	0.001	0.3627
K	39	3	He	1266.242	1.593	43897.04	0.001	0.3627
Ca	44	3	He	156386.719	9.0873	270174.94	0.0001	0.002571
Ca	44	3	He	156139.67	9.0729	263200.43	0.0001	0.002571
Ca	44	3	He	165202.565	9.5994	264528.06	0.0001	0.002571
Ti	47	3	He	0.225	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.243	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.25	0.0166	494.01	0.0201	0.0116
V	51	3	He	0.339	0.0184	534.01	0.0201	0.0116
V	51	3	He	0.261	0.0168	464.01	0.0201	0.0116
Cr	52	3	He	0.155	0.072	2140.24	0.0257	0.06801
Cr	52	3	He	0.64	0.0845	2450.30	0.0257	0.06801
Cr	52	3	He	-0.034	0.0671	1850.17	0.0257	0.06801
Mn	55	3	He	2099.866	23.7946	707441.47	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	2107.753	23.884	692861.32	0.0113	0.004215
Mn	55	3	He	2222.422	25.1831	693964.76	0.0113	0.004215
Fe	57	3	He	6577.568	3.3616	99944.77	0.0005	0.004099
Fe	57	3	He	6553.069	3.3491	97155.95	0.0005	0.004099
Fe	57	3	He	6951.273	3.5524	97891.93	0.0005	0.004099
Co	59	3	He	0.087	0.0094	280.01	0.0518	0.004913
Co	59	3	He	0.098	0.01	290.01	0.0518	0.004913
Co	59	3	He	0.094	0.0098	270.01	0.0518	0.004913
Ni	60	3	He	0.213	0.0083	490.02	0.0075	0.006695
Ni	60	3	He	0.274	0.0087	510.03	0.0075	0.006695
Ni	60	3	He	0.565	0.0109	630.03	0.0075	0.006695
Cu	63	3	He	0.173	0.0069	410.03	0.0216	0.003198
Cu	63	3	He	0.153	0.0065	380.02	0.0216	0.003198
Cu	63	3	He	0.245	0.0085	490.03	0.0216	0.003198
Zn	66	3	He	0.227	0.0036	210.01	0.0026	0.002954
Zn	66	3	He	-0.211	0.0024	140.01	0.0026	0.002954
Zn	66	3	He	-0.004	0.0029	170.01	0.0026	0.002954
As	75	3	He	1.531	0.0035	206.00	0.002	0.0004943
As	75	3	He	1.185	0.0028	164.00	0.002	0.0004943
As	75	3	He	1.041	0.0025	146.00	0.002	0.0004943
Sr	88	3	He	495.681	4.0222	222081.66	0.0081	0.0006852
Sr	88	3	He	495.783	4.023	216964.45	0.0081	0.0006852
Sr	88	3	He	494.889	4.0158	217857.09	0.0081	0.0006852
Mo	98	3	He	0.415	0.0091	500.03	0.0205	0.0005587
Mo	98	3	He	0.516	0.0111	600.04	0.0205	0.0005587
Mo	98	3	He	0.396	0.0087	470.03	0.0205	0.0005587
Ag	107	3	He	0.002	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.227	0.0167	920.06	0.0146	0.01334
Sn	120	3	He	-0.012	0.0132	710.04	0.0146	0.01334
Sn	120	3	He	0.147	0.0155	840.06	0.0146	0.01334
Sb	121	3	He	0.048	0.0022	120.00	0.0142	0.001484
Sb	121	3	He	0.052	0.0022	120.00	0.0142	0.001484
Sb	121	3	He	0.051	0.0022	120.01	0.0142	0.001484
Ba	137	3	He	80.612	0.3718	20525.99	0.0046	0.000374
Ba	137	3	He	83.54	0.3852	20776.36	0.0046	0.000374
Ba	137	3	He	83.969	0.3872	21006.66	0.0046	0.000374
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.033	0.0012	220.01	0.0282	0.00021
Pb	208	3	He	0.079	0.0039	370.02	0.0372	0.0009772
Pb	208	3	He	0.072	0.0037	340.02	0.0372	0.0009772
Pb	208	3	He	0.071	0.0036	400.02	0.0372	0.0009772
U	238	3	He	1.465	0.0612	11885.96	0.0417	8.729E-05
U	238	3	He	1.5	0.0626	12126.13	0.0417	8.729E-05
U	238	3	He	1.593	0.0665	12726.72	0.0417	8.729E-05
Sc	45	1	No Gas			1766981.38		
Sc	45	1	No Gas			1760798.26		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1777667.94		
Ge	72	1	No Gas			935331.24		
Ge	72	1	No Gas			928401.31		
Ge	72	1	No Gas			933136.31		
Sc	45	2	H2			131822.37		
Sc	45	2	H2			133679.38		
Sc	45	2	H2			131882.53		
Ge	72	2	H2			115343.07		
Ge	72	2	H2			118114.57		
Ge	72	2	H2			113790.54		
In	115	2	H2			270622.28		
In	115	2	H2			271053.14		
In	115	2	H2			275186.89		
Sc	45	3	He			29731.18		
Sc	45	3	He			29009.49		
Sc	45	3	He			27556.78		
Ge	72	3	He			59153.01		
Ge	72	3	He			58389.50		
Ge	72	3	He			57767.17		
In	115	3	He			55220.57		
In	115	3	He			53935.73		
In	115	3	He			54256.32		
Tb	159	3	He			255660.04		
Tb	159	3	He			249466.70		
Tb	159	3	He			247311.75		
Bi	209	3	He			194161.99		
Bi	209	3	He			193554.47		
Bi	209	3	He			191281.91		

Quantitation Report

Data File Name	078SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:44:21 PM
Sample Name	410-136258-S-28-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

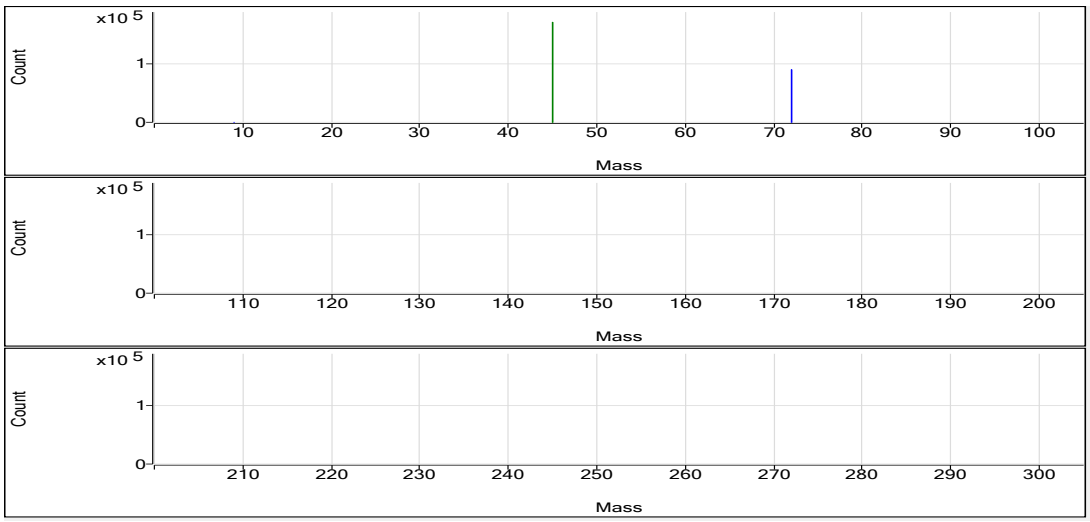
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.039	ppb	37.6	48.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.033	ppb	54.5	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	136.833	ppb	6.1	17701.19	0.6108	Pulse	0.1000	3
Mg	24	45	He	22.430	ppb	6.9	1003.40	0.0346	Pulse	0.1000	3
Al	27	45	He	38.298	ppb	10.1	523.36	0.0180	Pulse	0.1000	3
K	39	45	He	27.639	ppb	140.3	11284.76	0.3896	Pulse	0.1000	3
Ca	44	45	He	100.617	ppb	33.0	243.35	0.0084	Pulse	0.1000	3
Ti	47	45	He	1.235	ppb	91.1	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.157	ppb	19.1	427.34	0.0147	Pulse	0.5000	3
Cr	52	45	He	0.373	ppb	22.1	2250.26	0.0776	Pulse	0.1000	3
Mn	55	45	He	3.242	ppb	2.4	1186.76	0.0409	Pulse	0.1000	3
Fe	57	45	He	45.763	ppb	9.2	796.72	0.0275	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	36.8	196.68	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.425	ppb	38.6	556.70	0.0099	Pulse	0.1000	3
Cu	63	72	He	0.248	ppb	22.5	483.36	0.0086	Pulse	0.1000	3
Zn	66	72	He	3.153	ppb	34.5	636.71	0.0112	Pulse	0.1000	3
As	75	72	He	-0.006	ppb	N/A	27.33	0.0005	Pulse	0.5000	3
Sr	88	115	He	0.351	ppb	8.0	196.68	0.0035	Pulse	0.1000	3
Mo	98	115	He	0.031	ppb	90.6	66.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	29.3	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	57.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.047	ppb	N/A	703.38	0.0127	Pulse	0.1000	3
Sb	121	115	He	0.014	ppb	110.5	93.34	0.0017	Pulse	0.1000	3
Ba	137	115	He	0.373	ppb	65.9	116.67	0.0021	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	44.5	133.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.397	ppb	1.2	3086.93	0.0158	Pulse	0.1000	3
U	238	209	He	0.004	ppb	83.7	53.33	0.0003	Pulse	0.1000	3

ISTD Table:

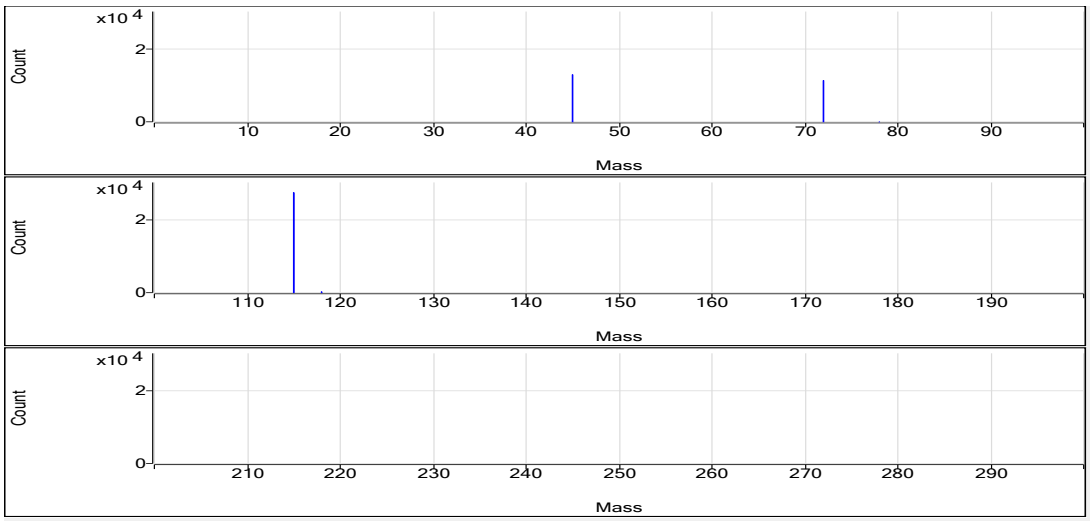
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1725015.13	0.5	97.9	Analog	0.1000	3
No Gas	Ge	72	907713.35	0.9	101.7	Pulse	0.1000	3
H2	Sc	45	128980.66	0.2	101.3	Pulse	0.1000	3
H2	Ge	72	113047.98	1.0	105.4	Pulse	0.1000	3
H2	In	115	273661.60	0.4	102.8	Pulse	0.1000	3
He	Sc	45	28989.62	1.8	101.7	Pulse	0.1000	3
He	Ge	72	56529.53	2.4	102.2	Pulse	0.1000	3
He	In	115	55583.63	1.4	103.6	Pulse	0.1000	3
He	Tb	159	250469.23	1.9	101.9	Pulse	0.1000	3
He	Bi	209	195999.00	1.1	102.7	Pulse	0.1000	3

No Gas

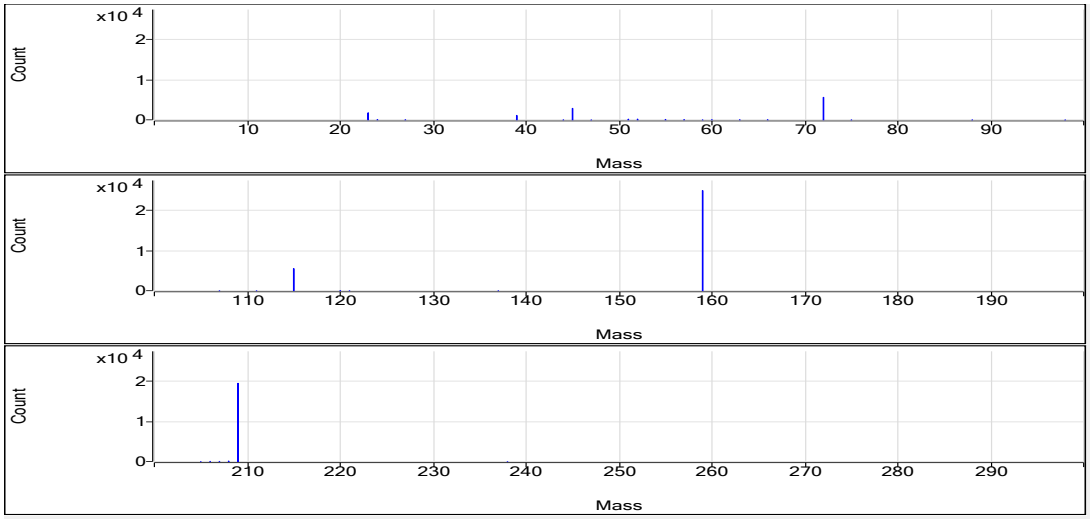


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.041	0	50.00	0.0004	1.287E-05
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.052	0	58.00	0.0004	1.287E-05
Se	78	2	H2	0.023	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.023	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.054	0	4.00	0.0004	1.451E-05
Na	23	3	He	146.363	0.6349	18031.53	0.0025	0.2648
Na	23	3	He	131.366	0.597	17481.01	0.0025	0.2648
Na	23	3	He	132.77	0.6006	17591.02	0.0025	0.2648
Mg	24	3	He	24.203	0.037	1050.08	0.0013	0.005032
Mg	24	3	He	21.289	0.0331	970.06	0.0013	0.005032
Mg	24	3	He	21.798	0.0338	990.07	0.0013	0.005032
Al	27	3	He	34.041	0.0162	460.02	0.0004	0.001519
Al	27	3	He	39.246	0.0184	540.03	0.0004	0.001519
Al	27	3	He	41.607	0.0195	570.03	0.0004	0.001519
K	39	3	He	59.59	0.4206	11945.27	0.001	0.3627
K	39	3	He	38.813	0.4004	11725.10	0.001	0.3627
K	39	3	He	-15.487	0.3477	10183.92	0.001	0.3627
Ca	44	3	He	137.603	0.0106	300.02	0.0001	0.002571
Ca	44	3	He	73.329	0.0068	200.01	0.0001	0.002571
Ca	44	3	He	90.92	0.0079	230.01	0.0001	0.002571
Ti	47	3	He	0.26	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.98	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	2.465	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.191	0.0154	438.01	0.0201	0.0116
V	51	3	He	0.147	0.0145	426.01	0.0201	0.0116
V	51	3	He	0.133	0.0143	418.01	0.0201	0.0116
Cr	52	3	He	0.3	0.0757	2150.25	0.0257	0.06801
Cr	52	3	He	0.357	0.0772	2260.26	0.0257	0.06801
Cr	52	3	He	0.463	0.0799	2340.26	0.0257	0.06801
Mn	55	3	He	3.296	0.0416	1180.08	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.276	0.0413	1210.10	0.0113	0.004215
Mn	55	3	He	3.154	0.0399	1170.09	0.0113	0.004215
Fe	57	3	He	40.953	0.025	710.05	0.0005	0.004099
Fe	57	3	He	48.846	0.029	850.06	0.0005	0.004099
Fe	57	3	He	47.489	0.0283	830.06	0.0005	0.004099
Co	59	3	He	0.034	0.0067	190.01	0.0518	0.004913
Co	59	3	He	0.05	0.0075	220.01	0.0518	0.004913
Co	59	3	He	0.024	0.0061	180.01	0.0518	0.004913
Ni	60	3	He	0.246	0.0085	490.03	0.0075	0.006695
Ni	60	3	He	0.463	0.0101	580.04	0.0075	0.006695
Ni	60	3	He	0.567	0.0109	600.04	0.0075	0.006695
Cu	63	3	He	0.287	0.0094	540.03	0.0216	0.003198
Cu	63	3	He	0.184	0.0072	410.02	0.0216	0.003198
Cu	63	3	He	0.273	0.0091	500.03	0.0216	0.003198
Zn	66	3	He	4.368	0.0144	830.06	0.0026	0.002954
Zn	66	3	He	2.269	0.0089	510.03	0.0026	0.002954
Zn	66	3	He	2.822	0.0104	570.04	0.0026	0.002954
As	75	3	He	0.014	0.0005	30.00	0.002	0.0004943
As	75	3	He	-0.02	0.0005	26.00	0.002	0.0004943
As	75	3	He	-0.011	0.0005	26.00	0.002	0.0004943
Sr	88	3	He	0.357	0.0036	200.01	0.0081	0.0006852
Sr	88	3	He	0.321	0.0033	180.01	0.0081	0.0006852
Sr	88	3	He	0.377	0.0037	210.01	0.0081	0.0006852
Mo	98	3	He	0.051	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.044	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	-0.001	0.0005	30.00	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.006	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	0.152	0.0156	870.06	0.0146	0.01334
Sn	120	3	He	-0.1	0.0119	650.03	0.0146	0.01334
Sn	120	3	He	-0.194	0.0105	590.04	0.0146	0.01334
Sb	121	3	He	-0.004	0.0014	80.00	0.0142	0.001484
Sb	121	3	He	0.024	0.0018	100.00	0.0142	0.001484
Sb	121	3	He	0.021	0.0018	100.01	0.0142	0.001484
Ba	137	3	He	0.268	0.0016	90.00	0.0046	0.000374
Ba	137	3	He	0.196	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.653	0.0034	190.01	0.0046	0.000374
Tl	205	3	He	0.023	0.0009	170.01	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.018	0.0007	140.01	0.0282	0.00021
Pb	208	3	He	0.396	0.0157	1610.15	0.0372	0.0009772
Pb	208	3	He	0.393	0.0156	1750.19	0.0372	0.0009772
Pb	208	3	He	0.402	0.0159	1600.16	0.0372	0.0009772
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1716345.44		
Sc	45	1	No Gas			1724557.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1734142.16		
Ge	72	1	No Gas			901042.96		
Ge	72	1	No Gas			905926.08		
Ge	72	1	No Gas			916171.00		
Sc	45	2	H2			129219.25		
Sc	45	2	H2			128987.06		
Sc	45	2	H2			128735.67		
Ge	72	2	H2			113668.73		
Ge	72	2	H2			113781.62		
Ge	72	2	H2			111693.59		
In	115	2	H2			272404.86		
In	115	2	H2			274438.41		
In	115	2	H2			274141.54		
Sc	45	3	He			28398.44		
Sc	45	3	He			29280.16		
Sc	45	3	He			29290.26		
Ge	72	3	He			57476.67		
Ge	72	3	He			57165.41		
Ge	72	3	He			54946.51		
In	115	3	He			55882.85		
In	115	3	He			54728.89		
In	115	3	He			56153.91		
Tb	159	3	He			255444.33		
Tb	159	3	He			250201.30		
Tb	159	3	He			245762.07		
Bi	209	3	He			195958.83		
Bi	209	3	He			198181.48		
Bi	209	3	He			193856.68		

Quantitation Report

Data File Name	079SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:46:20 PM
Sample Name	410-136258-Y-25-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

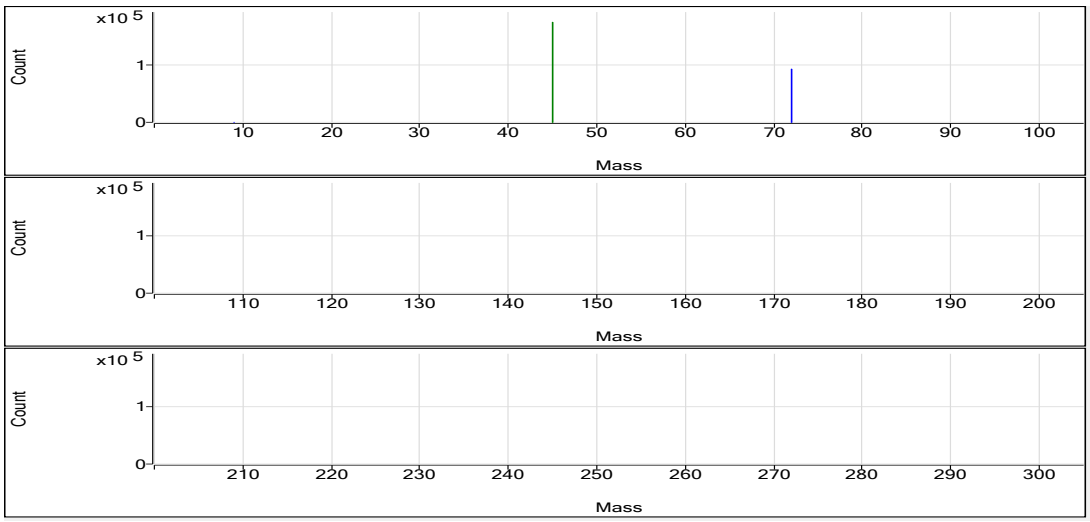
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.030	ppb	14.2	43.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.056	ppb	79.2	4.22	0.0000	Pulse	1.5000	3
Na	23	45	He	4325.581	ppb	0.4	328091.20	11.2029	Pulse	0.1000	3
Mg	24	45	He	6013.624	ppb	1.5	232568.53	7.9421	Pulse	0.1000	3
Al	27	45	He	4.401	ppb	19.2	100.00	0.0034	Pulse	0.1000	3
K	39	45	He	1212.598	ppb	4.5	45113.73	1.5408	Pulse	0.1000	3
Ca	44	45	He	31933.456	ppb	2.3	54395.78	1.8576	Pulse	0.1000	3
Ti	47	45	He	-0.262	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.182	ppb	11.7	446.68	0.0153	Pulse	0.5000	3
Cr	52	45	He	0.003	ppb	8737.5	1993.54	0.0681	Pulse	0.1000	3
Mn	55	45	He	290.137	ppb	1.9	96376.57	3.2913	Pulse	0.1000	3
Fe	57	45	He	5.335	ppb	41.2	200.01	0.0068	Pulse	0.1000	3
Co	59	45	He	0.054	ppb	73.5	226.68	0.0077	Pulse	0.1000	3
Ni	60	72	He	0.251	ppb	15.7	500.03	0.0086	Pulse	0.1000	3
Cu	63	72	He	0.325	ppb	16.6	596.70	0.0102	Pulse	0.1000	3
Zn	66	72	He	3.694	ppb	16.2	740.05	0.0127	Pulse	0.1000	3
As	75	72	He	0.185	ppb	52.0	50.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	85.248	ppb	2.4	37580.78	0.6923	Pulse	0.1000	3
Mo	98	115	He	0.039	ppb	33.8	73.33	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	104.4	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	2.0	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.134	ppb	58.7	830.05	0.0153	Pulse	0.1000	3
Sb	121	115	He	0.094	ppb	52.7	153.34	0.0028	Pulse	0.1000	3
Ba	137	115	He	3.319	ppb	5.4	850.06	0.0157	Pulse	0.1000	3
Tl	205	209	He	0.022	ppb	59.4	163.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.022	ppb	21.9	346.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.023	ppb	13.6	203.34	0.0010	Pulse	0.1000	3

ISTD Table:

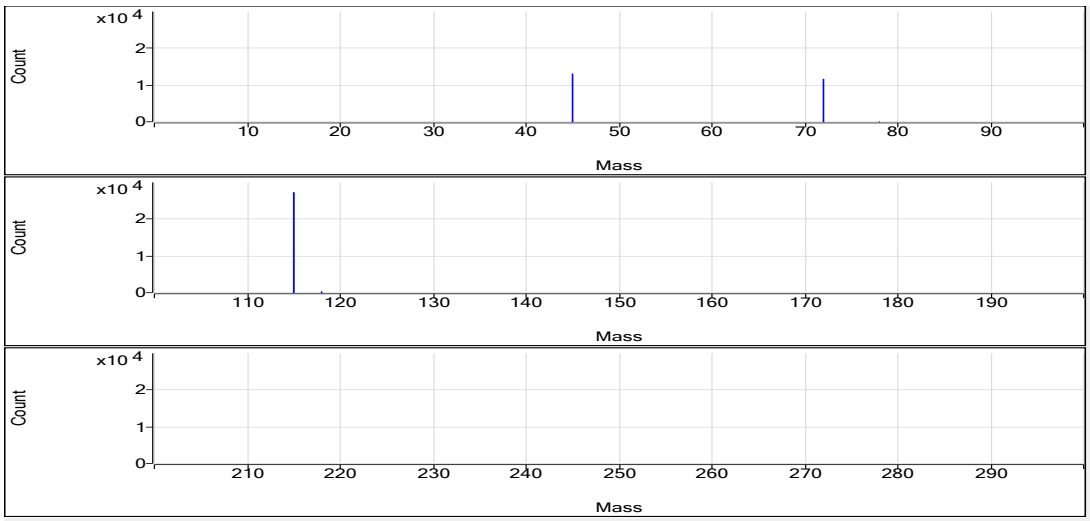
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1746260.39	0.2	99.1	Analog	0.1000	3
No Gas	Ge	72	929816.99	0.8	104.2	Pulse	0.1000	3
H2	Sc	45	129969.82	0.1	102.1	Pulse	0.1000	3
H2	Ge	72	115851.23	1.0	108.0	Pulse	0.1000	3
H2	In	115	271417.82	1.6	101.9	Pulse	0.1000	3
He	Sc	45	29286.66	1.3	102.7	Pulse	0.1000	3
He	Ge	72	58390.00	0.8	105.5	Pulse	0.1000	3
He	In	115	54297.75	1.7	101.2	Pulse	0.1000	3
He	Tb	159	250860.33	1.4	102.1	Pulse	0.1000	3
He	Bi	209	194858.88	1.1	102.1	Pulse	0.1000	3

No Gas

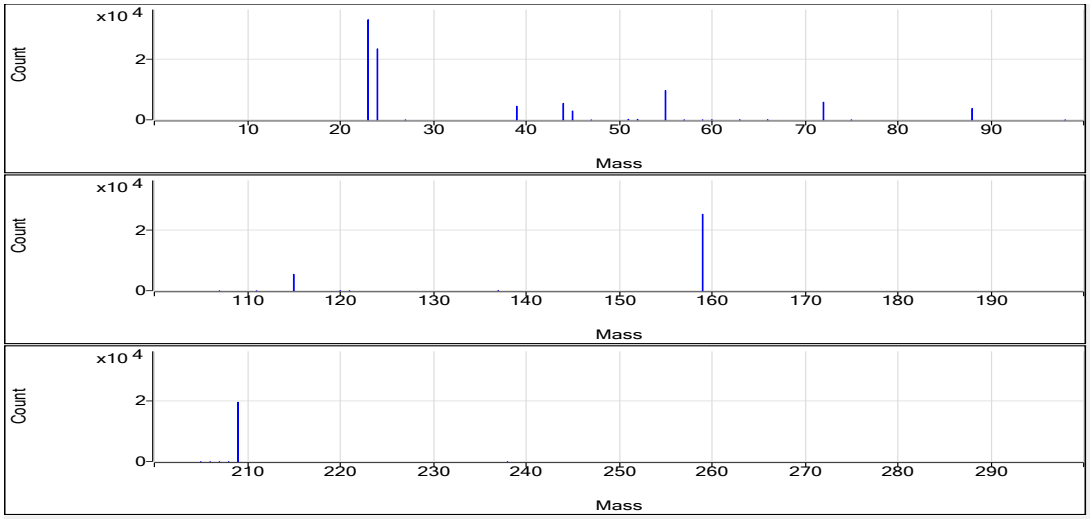


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.034	0	46.00	0.0004	1.287E-05
Be	9	1	No Gas	0.031	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.026	0	40.00	0.0004	1.287E-05
Se	78	2	H2	0.094	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.008	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.066	0	4.67	0.0004	1.451E-05
Na	23	3	He	4341.646	11.2435	328873.94	0.0025	0.2648
Na	23	3	He	4323.94	11.1988	324082.28	0.0025	0.2648
Na	23	3	He	4311.156	11.1664	331317.38	0.0025	0.2648
Mg	24	3	He	6005.97	7.932	232010.99	0.0013	0.005032
Mg	24	3	He	6107.462	8.0659	233421.21	0.0013	0.005032
Mg	24	3	He	5927.442	7.8283	232273.38	0.0013	0.005032
Al	27	3	He	5.199	0.0038	110.00	0.0004	0.001519
Al	27	3	He	4.492	0.0035	100.00	0.0004	0.001519
Al	27	3	He	3.513	0.003	90.00	0.0004	0.001519
K	39	3	He	1235.546	1.5631	45722.02	0.001	0.3627
K	39	3	He	1252.486	1.5796	45712.26	0.001	0.3627
K	39	3	He	1149.764	1.4798	43906.90	0.001	0.3627
Ca	44	3	He	32575.34	1.8949	55426.22	0.0001	0.002571
Ca	44	3	He	32113.862	1.8681	54061.24	0.0001	0.002571
Ca	44	3	He	31111.165	1.8099	53699.89	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.227	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.182	0.0152	446.01	0.0201	0.0116
V	51	3	He	0.204	0.0157	454.01	0.0201	0.0116
V	51	3	He	0.161	0.0148	440.01	0.0201	0.0116
Cr	52	3	He	0.321	0.0762	2230.24	0.0257	0.06801
Cr	52	3	He	-0.064	0.0664	1920.20	0.0257	0.06801
Cr	52	3	He	-0.246	0.0617	1830.18	0.0257	0.06801
Mn	55	3	He	291.316	3.3047	96661.68	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	294.91	3.3454	96812.46	0.0113	0.004215
Mn	55	3	He	284.186	3.2239	95655.57	0.0113	0.004215
Fe	57	3	He	6.706	0.0075	220.01	0.0005	0.004099
Fe	57	3	He	2.803	0.0055	160.01	0.0005	0.004099
Fe	57	3	He	6.497	0.0074	220.01	0.0005	0.004099
Co	59	3	He	0.031	0.0065	190.01	0.0518	0.004913
Co	59	3	He	0.032	0.0066	190.01	0.0518	0.004913
Co	59	3	He	0.1	0.0101	300.02	0.0518	0.004913
Ni	60	3	He	0.22	0.0083	490.02	0.0075	0.006695
Ni	60	3	He	0.295	0.0089	520.03	0.0075	0.006695
Ni	60	3	He	0.237	0.0085	490.03	0.0075	0.006695
Cu	63	3	He	0.333	0.0104	610.04	0.0216	0.003198
Cu	63	3	He	0.375	0.0113	660.04	0.0216	0.003198
Cu	63	3	He	0.268	0.009	520.03	0.0216	0.003198
Zn	66	3	He	3.728	0.0128	750.05	0.0026	0.002954
Zn	66	3	He	4.276	0.0142	830.05	0.0026	0.002954
Zn	66	3	He	3.079	0.0111	640.05	0.0026	0.002954
As	75	3	He	0.165	0.0008	48.00	0.002	0.0004943
As	75	3	He	0.29	0.0011	62.00	0.002	0.0004943
As	75	3	He	0.101	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	84.118	0.6831	37540.70	0.0081	0.0006852
Sr	88	3	He	84.058	0.6827	37350.03	0.0081	0.0006852
Sr	88	3	He	87.568	0.7111	37851.62	0.0081	0.0006852
Mo	98	3	He	0.035	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.053	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.028	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.145	0.0155	850.05	0.0146	0.01334
Sn	120	3	He	0.05	0.0141	770.05	0.0146	0.01334
Sn	120	3	He	0.205	0.0163	870.05	0.0146	0.01334
Sb	121	3	He	0.126	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.037	0.002	110.00	0.0142	0.001484
Sb	121	3	He	0.12	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	3.118	0.0147	810.05	0.0046	0.000374
Ba	137	3	He	3.371	0.0159	870.06	0.0046	0.000374
Ba	137	3	He	3.467	0.0163	870.06	0.0046	0.000374
Tl	205	3	He	0.011	0.0005	100.00	0.0282	0.00021
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Tl	205	3	He	0.037	0.0012	240.01	0.0282	0.00021
Pb	208	3	He	0.018	0.0016	200.01	0.0372	0.0009772
Pb	208	3	He	0.02	0.0017	180.01	0.0372	0.0009772
Pb	208	3	He	0.027	0.002	180.01	0.0372	0.0009772
U	238	3	He	0.026	0.0012	230.01	0.0417	8.729E-05
U	238	3	He	0.02	0.0009	180.01	0.0417	8.729E-05
U	238	3	He	0.023	0.001	200.01	0.0417	8.729E-05
Sc	45	1	No Gas			1749552.16		
Sc	45	1	No Gas			1747584.04		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1741644.97		
Ge	72	1	No Gas			935613.81		
Ge	72	1	No Gas			921309.83		
Ge	72	1	No Gas			932527.33		
Sc	45	2	H2			129985.93		
Sc	45	2	H2			129845.56		
Sc	45	2	H2			130077.97		
Ge	72	2	H2			116804.92		
Ge	72	2	H2			114527.49		
Ge	72	2	H2			116221.28		
In	115	2	H2			271403.77		
In	115	2	H2			267086.07		
In	115	2	H2			275763.63		
Sc	45	3	He			29250.04		
Sc	45	3	He			28939.11		
Sc	45	3	He			29670.82		
Ge	72	3	He			58792.07		
Ge	72	3	He			58460.11		
Ge	72	3	He			57917.83		
In	115	3	He			54959.12		
In	115	3	He			54718.47		
In	115	3	He			53233.08		
Tb	159	3	He			254681.19		
Tb	159	3	He			248034.43		
Tb	159	3	He			249865.37		
Bi	209	3	He			195693.57		
Bi	209	3	He			196507.58		
Bi	209	3	He			192375.50		

Quantitation Report

Data File Name	080SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:48:19 PM
Sample Name	410-136258-S-31-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

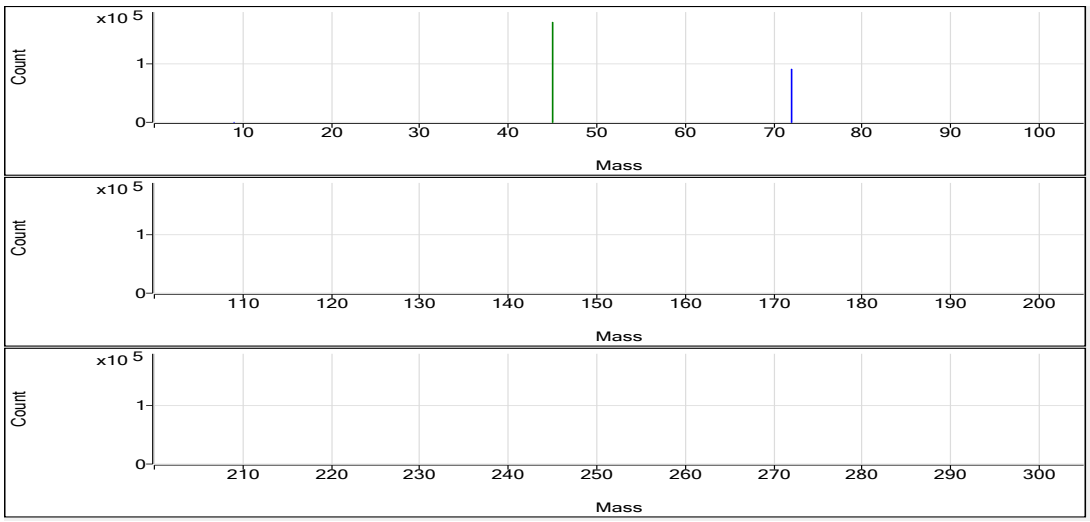
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.035	ppb	41.6	46.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.201	ppb	15.6	10.44	0.0001	Pulse	1.5000	3
Na	23	45	He	4340.415	ppb	2.3	326726.15	11.2404	Pulse	0.1000	3
Mg	24	45	He	16373.589	ppb	2.3	628305.02	21.6157	Pulse	0.1000	3
Al	27	45	He	36.617	ppb	3.3	503.36	0.0173	Pulse	0.1000	3
K	39	45	He	3466.891	ppb	0.5	108487.16	3.7310	Pulse	0.1000	3
Ca	44	45	He	128973.905	ppb	1.3	217883.52	7.4948	Pulse	0.1000	3
Ti	47	45	He	0.996	ppb	77.7	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.530	ppb	9.5	646.69	0.0222	Pulse	0.5000	3
Cr	52	45	He	0.423	ppb	54.0	2293.61	0.0789	Pulse	0.1000	3
Mn	55	45	He	1294.886	ppb	2.3	426545.97	14.6746	Pulse	0.1000	3
Fe	57	45	He	1779.321	ppb	1.0	26531.78	0.9124	Pulse	0.1000	3
Co	59	45	He	0.574	ppb	7.7	1006.74	0.0346	Pulse	0.1000	3
Ni	60	72	He	1.309	ppb	9.5	953.40	0.0164	Pulse	0.1000	3
Cu	63	72	He	0.770	ppb	15.0	1150.09	0.0198	Pulse	0.1000	3
Zn	66	72	He	0.058	ppb	822.4	180.01	0.0031	Pulse	0.1000	3
As	75	72	He	3.826	ppb	6.4	462.01	0.0080	Pulse	0.5000	3
Sr	88	115	He	351.985	ppb	1.0	157385.41	2.8564	Pulse	0.1000	3
Mo	98	115	He	0.759	ppb	16.0	886.73	0.0161	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	105.2	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.064	ppb	84.9	786.72	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.087	ppb	29.4	150.01	0.0027	Pulse	0.1000	3
Ba	137	115	He	36.757	ppb	4.6	9350.21	0.1697	Pulse	0.1000	3
Tl	205	209	He	0.016	ppb	38.2	130.01	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.218	ppb	18.0	1760.12	0.0091	Pulse	0.1000	3
U	238	209	He	0.925	ppb	2.2	7479.08	0.0387	Pulse	0.1000	3

ISTD Table:

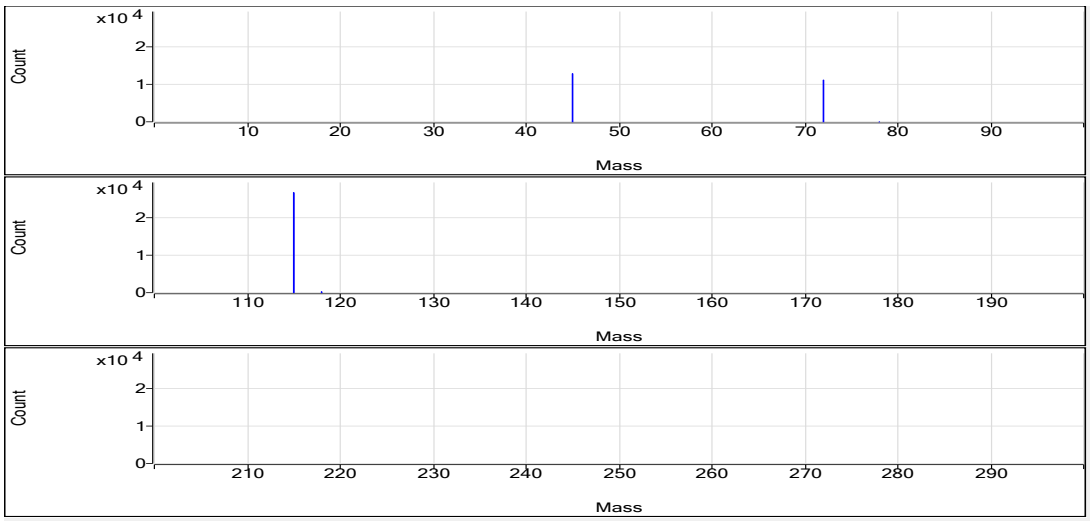
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1727835.29	1.5	98.1	Analog	0.1000	3
No Gas	Ge	72	919442.17	1.1	103.0	Pulse	0.1000	3
H2	Sc	45	129226.78	1.6	101.5	Pulse	0.1000	3
H2	Ge	72	112200.67	1.0	104.6	Pulse	0.1000	3
H2	In	115	268324.01	0.6	100.8	Pulse	0.1000	3
He	Sc	45	29076.51	2.2	102.0	Pulse	0.1000	3
He	Ge	72	57998.55	0.9	104.8	Pulse	0.1000	3
He	In	115	55101.48	0.5	102.7	Pulse	0.1000	3
He	Tb	159	248919.66	1.3	101.3	Pulse	0.1000	3
He	Bi	209	193384.46	0.7	101.3	Pulse	0.1000	3

No Gas

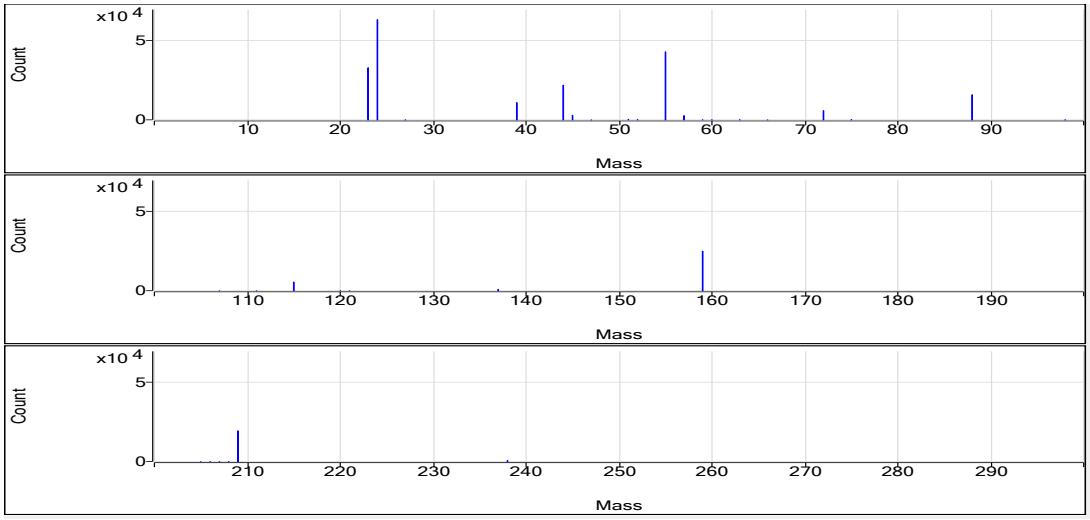


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.024	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.051	0	58.00	0.0004	1.287E-05
Se	78	2	H2	0.235	0.0001	12.00	0.0004	1.451E-05
Se	78	2	H2	0.174	0.0001	9.33	0.0004	1.451E-05
Se	78	2	H2	0.193	0.0001	10.00	0.0004	1.451E-05
Na	23	3	He	4255.697	11.0262	327711.32	0.0025	0.2648
Na	23	3	He	4312.957	11.171	324738.16	0.0025	0.2648
Na	23	3	He	4452.59	11.5241	327728.98	0.0025	0.2648
Mg	24	3	He	16075.897	21.2227	630764.37	0.0013	0.005032
Mg	24	3	He	16248.144	21.4501	623549.01	0.0013	0.005032
Mg	24	3	He	16796.728	22.1741	630601.67	0.0013	0.005032
Al	27	3	He	36.271	0.0172	510.03	0.0004	0.001519
Al	27	3	He	37.961	0.0179	520.03	0.0004	0.001519
Al	27	3	He	35.619	0.0169	480.02	0.0004	0.001519
K	39	3	He	3461.229	3.7255	110727.03	0.001	0.3627
K	39	3	He	3487.21	3.7508	109034.08	0.001	0.3627
K	39	3	He	3452.233	3.7168	105700.36	0.001	0.3627
Ca	44	3	He	127039.233	7.3824	219414.29	0.0001	0.002571
Ca	44	3	He	129663.296	7.5349	219036.77	0.0001	0.002571
Ca	44	3	He	130219.187	7.5672	215199.49	0.0001	0.002571
Ti	47	3	He	0.958	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.242	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	1.789	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.586	0.0234	694.02	0.0201	0.0116
V	51	3	He	0.516	0.0219	638.02	0.0201	0.0116
V	51	3	He	0.488	0.0214	608.02	0.0201	0.0116
Cr	52	3	He	0.287	0.0754	2240.28	0.0257	0.06801
Cr	52	3	He	0.687	0.0857	2490.30	0.0257	0.06801
Cr	52	3	He	0.296	0.0756	2150.25	0.0257	0.06801
Mn	55	3	He	1270.674	14.4003	427992.85	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1285.371	14.5668	423453.47	0.0113	0.004215
Mn	55	3	He	1328.612	15.0567	428191.60	0.0113	0.004215
Fe	57	3	He	1794.512	0.9201	27346.62	0.0005	0.004099
Fe	57	3	He	1783.582	0.9145	26585.09	0.0005	0.004099
Fe	57	3	He	1759.868	0.9024	25663.64	0.0005	0.004099
Co	59	3	He	0.535	0.0326	970.07	0.0518	0.004913
Co	59	3	He	0.622	0.0372	1080.08	0.0518	0.004913
Co	59	3	He	0.563	0.0341	970.06	0.0518	0.004913
Ni	60	3	He	1.164	0.0154	900.06	0.0075	0.006695
Ni	60	3	He	1.386	0.017	980.07	0.0075	0.006695
Ni	60	3	He	1.375	0.0169	980.07	0.0075	0.006695
Cu	63	3	He	0.896	0.0225	1320.11	0.0216	0.003198
Cu	63	3	He	0.745	0.0193	1110.09	0.0216	0.003198
Cu	63	3	He	0.669	0.0176	1020.07	0.0216	0.003198
Zn	66	3	He	-0.084	0.0027	160.01	0.0026	0.002954
Zn	66	3	He	0.594	0.0045	260.01	0.0026	0.002954
Zn	66	3	He	-0.334	0.0021	120.00	0.0026	0.002954
As	75	3	He	3.893	0.0081	474.01	0.002	0.0004943
As	75	3	He	3.554	0.0074	428.01	0.002	0.0004943
As	75	3	He	4.032	0.0084	484.01	0.002	0.0004943
Sr	88	3	He	351.911	2.8558	157653.20	0.0081	0.0006852
Sr	88	3	He	348.425	2.8275	156377.33	0.0081	0.0006852
Sr	88	3	He	355.62	2.8859	158125.70	0.0081	0.0006852
Mo	98	3	He	0.787	0.0167	920.06	0.0205	0.0005587
Mo	98	3	He	0.626	0.0134	740.05	0.0205	0.0005587
Mo	98	3	He	0.864	0.0183	1000.08	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.017	0.0136	750.05	0.0146	0.01334
Sn	120	3	He	0.052	0.0141	780.06	0.0146	0.01334
Sn	120	3	He	0.124	0.0151	830.06	0.0146	0.01334
Sb	121	3	He	0.112	0.0031	170.01	0.0142	0.001484
Sb	121	3	He	0.061	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.088	0.0027	150.01	0.0142	0.001484
Ba	137	3	He	35.555	0.1642	9063.45	0.0046	0.000374
Ba	137	3	He	36.04	0.1664	9203.36	0.0046	0.000374
Ba	137	3	He	38.677	0.1786	9783.83	0.0046	0.000374
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Pb	208	3	He	0.184	0.0078	690.04	0.0372	0.0009772
Pb	208	3	He	0.261	0.0107	990.08	0.0372	0.0009772
Pb	208	3	He	0.209	0.0088	920.08	0.0372	0.0009772
U	238	3	He	0.947	0.0396	7722.57	0.0417	8.729E-05
U	238	3	He	0.919	0.0384	7392.36	0.0417	8.729E-05
U	238	3	He	0.908	0.038	7322.31	0.0417	8.729E-05
Sc	45	1	No Gas			1702200.60		
Sc	45	1	No Gas			1726369.66		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1754935.60		
Ge	72	1	No Gas			918446.86		
Ge	72	1	No Gas			910297.02		
Ge	72	1	No Gas			929582.64		
Sc	45	2	H2			127020.20		
Sc	45	2	H2			130946.24		
Sc	45	2	H2			129713.89		
Ge	72	2	H2			112599.41		
Ge	72	2	H2			113055.05		
Ge	72	2	H2			110947.54		
In	115	2	H2			267627.05		
In	115	2	H2			267294.12		
In	115	2	H2			270050.87		
Sc	45	3	He			29721.15		
Sc	45	3	He			29069.77		
Sc	45	3	He			28438.62		
Ge	72	3	He			58561.06		
Ge	72	3	He			57586.84		
Ge	72	3	He			57847.74		
In	115	3	He			55210.38		
In	115	3	He			55311.54		
In	115	3	He			54799.04		
Tb	159	3	He			252737.95		
Tb	159	3	He			247403.00		
Tb	159	3	He			246618.04		
Bi	209	3	He			195013.49		
Bi	209	3	He			192316.52		
Bi	209	3	He			192823.38		

Quantitation Report

Data File Name	081SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:50:20 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

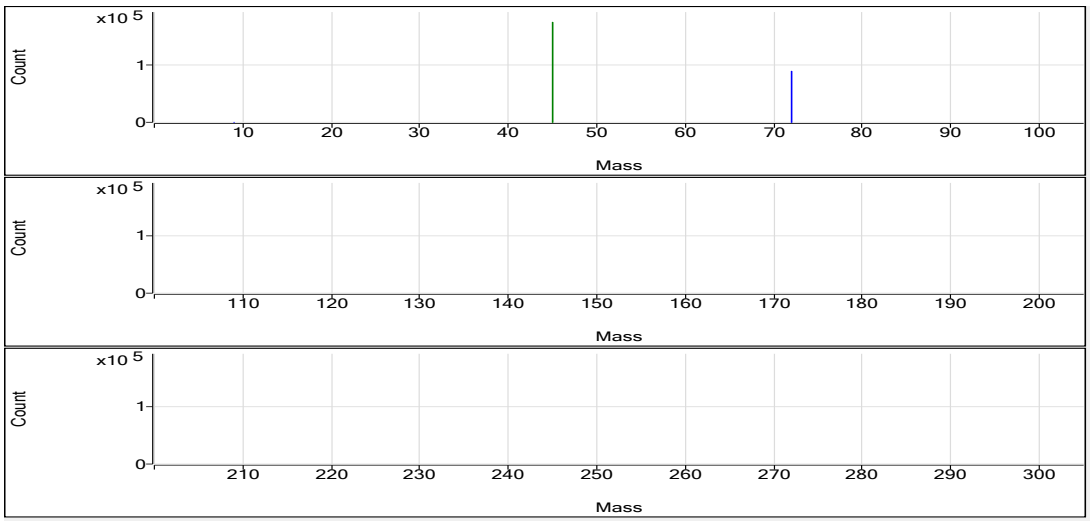
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	30.0	40.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.005	ppb	N/A	1.33	0.0000	Pulse	1.5000	3
Na	23	45	He	94.918	ppb	6.8	14273.94	0.5049	Pulse	0.1000	3
Mg	24	45	He	10.745	ppb	28.6	543.36	0.0192	Pulse	0.1000	3
Al	27	45	He	2.755	ppb	88.8	76.67	0.0027	Pulse	0.1000	3
K	39	45	He	8.248	ppb	303.5	10484.17	0.3707	Pulse	0.1000	3
Ca	44	45	He	67.404	ppb	6.0	183.34	0.0065	Pulse	0.1000	3
Ti	47	45	He	0.775	ppb	152.1	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.093	ppb	62.9	380.68	0.0135	Pulse	0.5000	3
Cr	52	45	He	0.273	ppb	136.2	2120.23	0.0750	Pulse	0.1000	3
Mn	55	45	He	0.430	ppb	49.0	256.68	0.0091	Pulse	0.1000	3
Fe	57	45	He	3.053	ppb	42.6	160.01	0.0057	Pulse	0.1000	3
Co	59	45	He	0.008	ppb	590.9	150.01	0.0053	Pulse	0.1000	3
Ni	60	72	He	0.291	ppb	25.5	476.69	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.090	ppb	41.9	276.68	0.0051	Pulse	0.1000	3
Zn	66	72	He	0.150	ppb	210.4	180.01	0.0033	Pulse	0.1000	3
As	75	72	He	0.050	ppb	297.7	32.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.251	ppb	18.1	146.68	0.0027	Pulse	0.1000	3
Mo	98	115	He	0.006	ppb	93.4	36.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	55.7	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	177.7	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.033	ppb	N/A	693.38	0.0129	Pulse	0.1000	3
Sb	121	115	He	0.078	ppb	26.7	140.01	0.0026	Pulse	0.1000	3
Ba	137	115	He	-0.001	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.010	ppb	27.2	93.33	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.021	ppb	28.4	336.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.003	ppb	44.3	43.33	0.0002	Pulse	0.1000	3

ISTD Table:

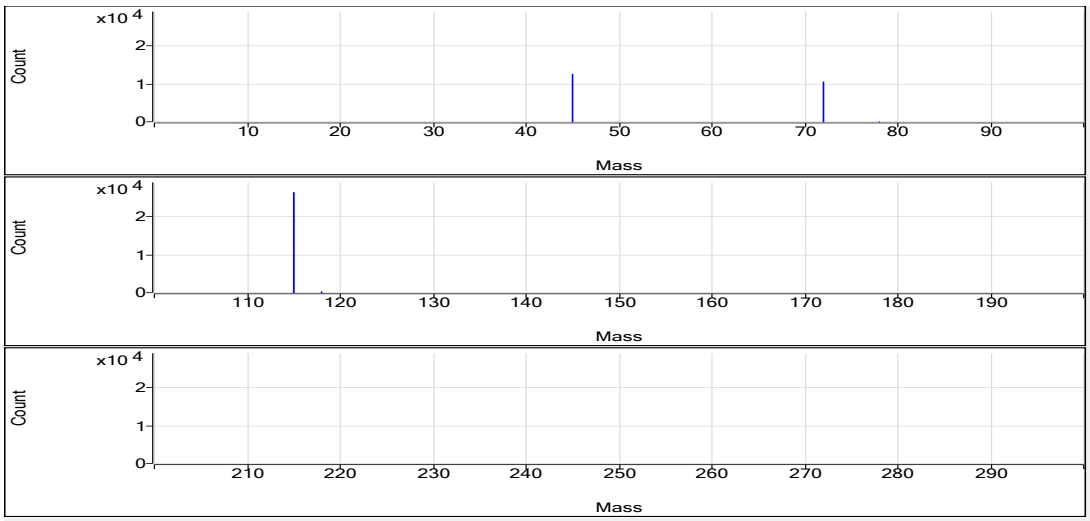
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1734282.79	0.3	98.5	Analog	0.1000	3
No Gas	Ge	72	886729.23	0.7	99.4	Pulse	0.1000	3
H2	Sc	45	125598.62	1.8	98.6	Pulse	0.1000	3
H2	Ge	72	105577.80	0.9	98.5	Pulse	0.1000	3
H2	In	115	264699.47	0.8	99.4	Pulse	0.1000	3
He	Sc	45	28268.12	0.9	99.2	Pulse	0.1000	3
He	Ge	72	53825.48	1.8	97.3	Pulse	0.1000	3
He	In	115	53917.12	2.1	100.5	Pulse	0.1000	3
He	Tb	159	245204.18	1.4	99.8	Pulse	0.1000	3
He	Bi	209	191010.45	0.9	100.1	Pulse	0.1000	3

No Gas

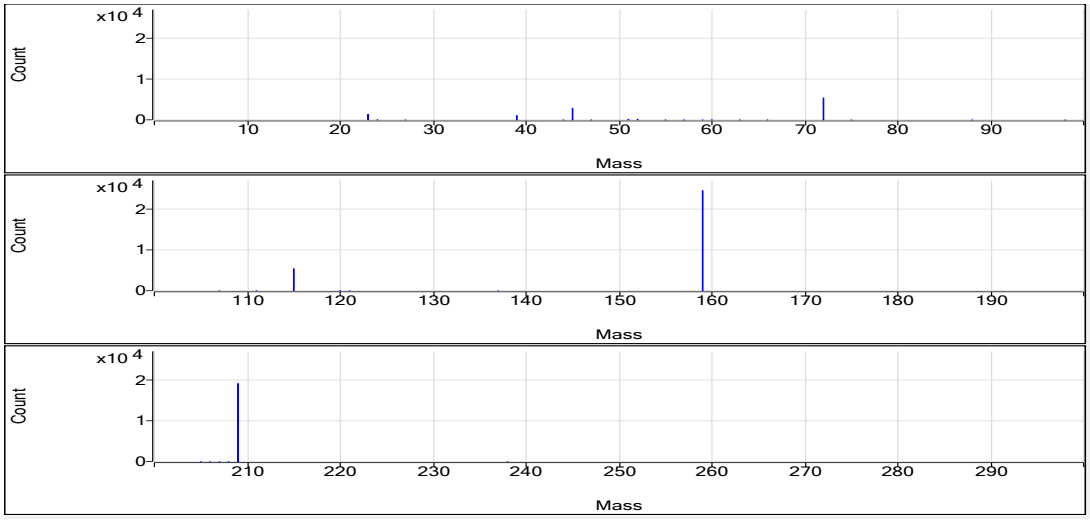


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.035	0	46.00	0.0004	1.287E-05
Be	9	1	No Gas	0.02	0	36.00	0.0004	1.287E-05
Se	78	2	H2	0.012	0	2.00	0.0004	1.451E-05
Se	78	2	H2	-0.005	0	1.33	0.0004	1.451E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Na	23	3	He	101.772	0.5222	14907.86	0.0025	0.2648
Na	23	3	He	88.887	0.4896	13766.87	0.0025	0.2648
Na	23	3	He	94.096	0.5028	14147.08	0.0025	0.2648
Mg	24	3	He	12.112	0.021	600.03	0.0013	0.005032
Mg	24	3	He	12.895	0.0221	620.03	0.0013	0.005032
Mg	24	3	He	7.228	0.0146	410.02	0.0013	0.005032
Al	27	3	He	5.413	0.0039	110.00	0.0004	0.001519
Al	27	3	He	2.252	0.0025	70.00	0.0004	0.001519
Al	27	3	He	0.599	0.0018	50.00	0.0004	0.001519
K	39	3	He	35.661	0.3974	11344.73	0.001	0.3627
K	39	3	He	-13.386	0.3497	9833.76	0.001	0.3627
K	39	3	He	2.469	0.3651	10274.02	0.001	0.3627
Ca	44	3	He	64.282	0.0063	180.01	0.0001	0.002571
Ca	44	3	He	65.944	0.0064	180.01	0.0001	0.002571
Ca	44	3	He	71.986	0.0068	190.01	0.0001	0.002571
Ti	47	3	He	1.018	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.815	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.075	0.0131	374.01	0.0201	0.0116
V	51	3	He	0.046	0.0125	352.01	0.0201	0.0116
V	51	3	He	0.159	0.0148	416.01	0.0201	0.0116
Cr	52	3	He	0.066	0.0697	1990.20	0.0257	0.06801
Cr	52	3	He	0.703	0.0861	2420.29	0.0257	0.06801
Cr	52	3	He	0.051	0.0693	1950.21	0.0257	0.06801
Mn	55	3	He	0.37	0.0084	240.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.664	0.0117	330.02	0.0113	0.004215
Mn	55	3	He	0.255	0.0071	200.01	0.0113	0.004215
Fe	57	3	He	4.323	0.0063	180.01	0.0005	0.004099
Fe	57	3	He	1.726	0.005	140.01	0.0005	0.004099
Fe	57	3	He	3.111	0.0057	160.01	0.0005	0.004099
Co	59	3	He	0	0.0049	140.01	0.0518	0.004913
Co	59	3	He	-0.033	0.0032	90.00	0.0518	0.004913
Co	59	3	He	0.056	0.0078	220.01	0.0518	0.004913
Ni	60	3	He	0.236	0.0085	460.02	0.0075	0.006695
Ni	60	3	He	0.262	0.0086	470.03	0.0075	0.006695
Ni	60	3	He	0.375	0.0095	500.03	0.0075	0.006695
Cu	63	3	He	0.065	0.0046	250.01	0.0216	0.003198
Cu	63	3	He	0.133	0.0061	330.02	0.0216	0.003198
Cu	63	3	He	0.072	0.0047	250.01	0.0216	0.003198
Zn	66	3	He	-0.215	0.0024	130.01	0.0026	0.002954
Zn	66	3	He	0.346	0.0039	210.01	0.0026	0.002954
Zn	66	3	He	0.32	0.0038	200.01	0.0026	0.002954
As	75	3	He	0.199	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.048	0.0006	32.00	0.002	0.0004943
As	75	3	He	-0.098	0.0003	16.00	0.002	0.0004943
Sr	88	3	He	0.299	0.0031	170.01	0.0081	0.0006852
Sr	88	3	He	0.243	0.0027	140.01	0.0081	0.0006852
Sr	88	3	He	0.209	0.0024	130.01	0.0081	0.0006852
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.01	0.0008	40.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.035	0.0128	700.04	0.0146	0.01334
Sn	120	3	He	-0.029	0.0129	680.05	0.0146	0.01334
Sn	120	3	He	-0.035	0.0128	700.04	0.0146	0.01334
Sb	121	3	He	0.063	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.069	0.0025	130.01	0.0142	0.001484
Sb	121	3	He	0.102	0.0029	160.01	0.0142	0.001484
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.038	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.013	0.0006	110.00	0.0282	0.00021
Tl	205	3	He	0.008	0.0004	80.00	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Pb	208	3	He	0.023	0.0018	160.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.002	260.01	0.0372	0.0009772
Pb	208	3	He	0.015	0.0015	130.01	0.0372	0.0009772
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
Sc	45	1	No Gas			1729412.32		
Sc	45	1	No Gas			1734351.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739084.19		
Ge	72	1	No Gas			883569.60		
Ge	72	1	No Gas			883209.52		
Ge	72	1	No Gas			893408.58		
Sc	45	2	H2			123592.37		
Sc	45	2	H2			125223.39		
Sc	45	2	H2			127980.11		
Ge	72	2	H2			104923.06		
Ge	72	2	H2			106716.43		
Ge	72	2	H2			105093.90		
In	115	2	H2			265597.59		
In	115	2	H2			262335.56		
In	115	2	H2			266165.25		
Sc	45	3	He			28548.61		
Sc	45	3	He			28118.09		
Sc	45	3	He			28137.66		
Ge	72	3	He			54424.23		
Ge	72	3	He			54363.55		
Ge	72	3	He			52688.65		
In	115	3	He			54587.93		
In	115	3	He			52640.34		
In	115	3	He			54537.64		
Tb	159	3	He			248311.09		
Tb	159	3	He			245630.68		
Tb	159	3	He			241670.78		
Bi	209	3	He			192660.37		
Bi	209	3	He			189323.49		
Bi	209	3	He			191047.48		

Quantitation Report

Data File Name	082SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:52:21 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

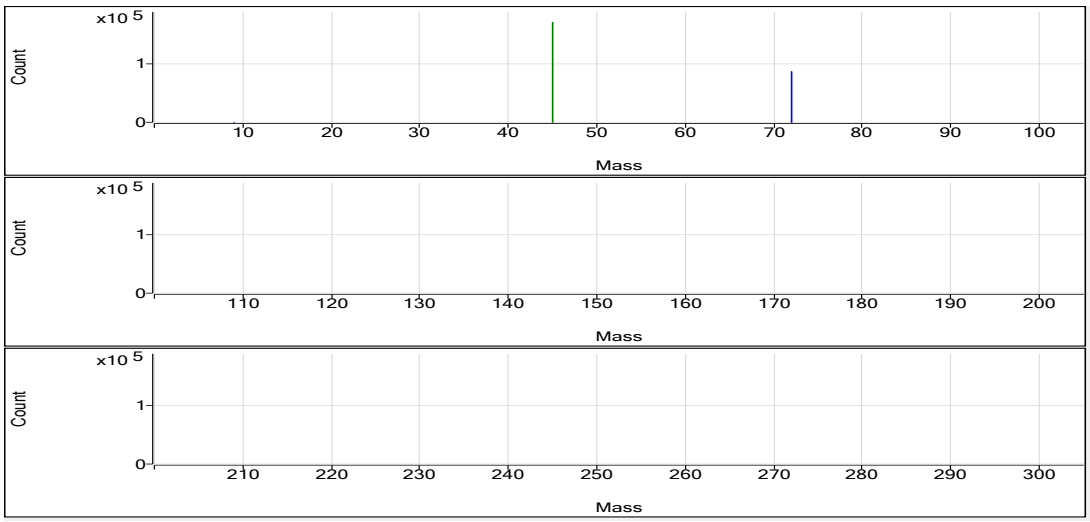
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.009	ppb	146.3	28.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.021	ppb	45.2	2.45	0.0000	Pulse	1.5000	3
Na	23	45	He	80.421	ppb	4.9	13239.68	0.4682	Pulse	0.1000	3
Mg	24	45	He	8.075	ppb	43.3	443.36	0.0157	Pulse	0.1000	3
Al	27	45	He	0.034	ppb	1455.7	43.33	0.0015	Pulse	0.1000	3
K	39	45	He	20.202	ppb	106.9	10811.06	0.3824	Pulse	0.1000	3
Ca	44	45	He	24.686	ppb	70.2	113.34	0.0040	Pulse	0.1000	3
Ti	47	45	He	-0.249	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.105	ppb	56.7	387.34	0.0137	Pulse	0.5000	3
Cr	52	45	He	0.038	ppb	396.2	1950.20	0.0690	Pulse	0.1000	3
Mn	55	45	He	0.388	ppb	49.9	243.35	0.0086	Pulse	0.1000	3
Fe	57	45	He	1.452	ppb	277.8	136.67	0.0048	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	62.3	173.34	0.0061	Pulse	0.1000	3
Ni	60	72	He	0.102	ppb	91.1	406.69	0.0075	Pulse	0.1000	3
Cu	63	72	He	0.047	ppb	64.9	230.01	0.0042	Pulse	0.1000	3
Zn	66	72	He	0.527	ppb	94.7	236.68	0.0043	Pulse	0.1000	3
As	75	72	He	-0.041	ppb	N/A	22.67	0.0004	Pulse	0.5000	3
Sr	88	115	He	0.109	ppb	68.8	83.33	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.010	ppb	289.3	40.00	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.009	ppb	103.6	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.003	ppb	172.4	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.045	ppb	N/A	673.38	0.0127	Pulse	0.1000	3
Sb	121	115	He	0.068	ppb	52.3	130.00	0.0024	Pulse	0.1000	3
Ba	137	115	He	0.041	ppb	170.0	30.00	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.010	ppb	60.9	93.34	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	33.1	320.01	0.0017	Pulse	0.1000	3
U	238	209	He	0.002	ppb	91.8	33.33	0.0002	Pulse	0.1000	3

ISTD Table:

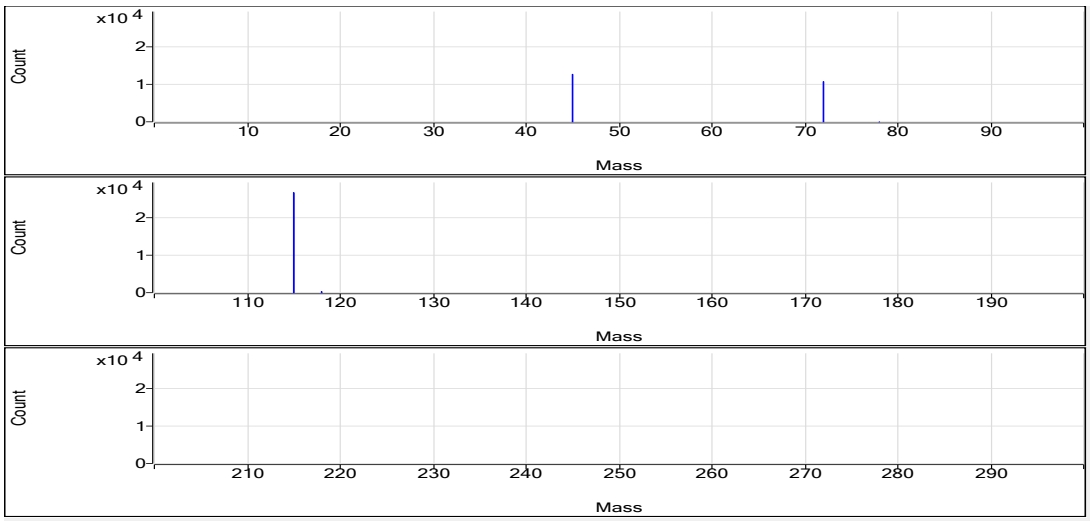
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1726911.75	1.2	98.0	Analog	0.1000	3
No Gas	Ge	72	874732.96	1.3	98.0	Pulse	0.1000	3
H2	Sc	45	126786.03	1.7	99.6	Pulse	0.1000	3
H2	Ge	72	107264.39	0.9	100.0	Pulse	0.1000	3
H2	In	115	266649.66	0.7	100.1	Pulse	0.1000	3
He	Sc	45	28277.98	0.5	99.2	Pulse	0.1000	3
He	Ge	72	54524.55	1.1	98.5	Pulse	0.1000	3
He	In	115	53087.84	0.4	98.9	Pulse	0.1000	3
He	Tb	159	244263.47	0.2	99.4	Pulse	0.1000	3
He	Bi	209	191245.62	0.2	100.2	Pulse	0.1000	3

No Gas

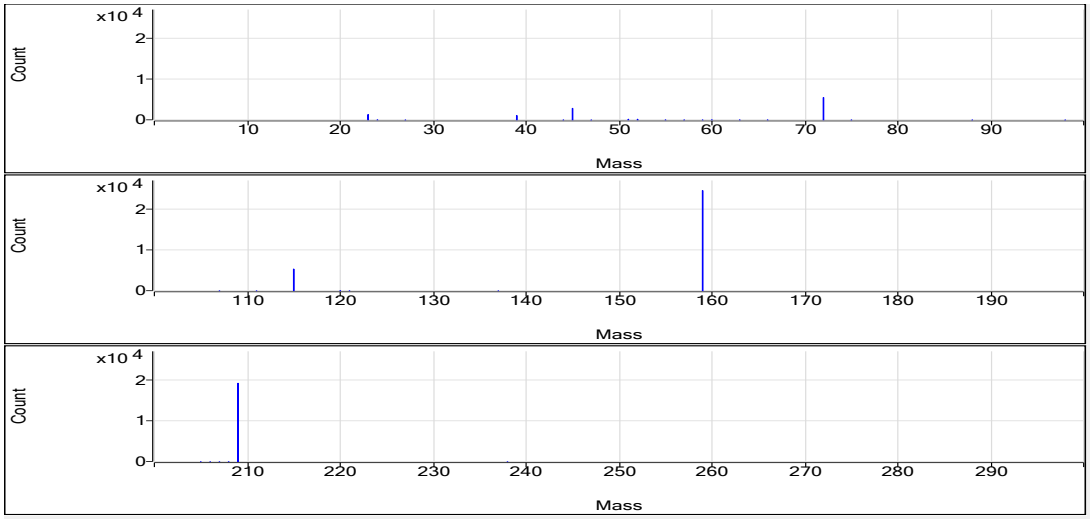


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.014	0	32.00	0.0004	1.287E-05
Be	9	1	No Gas	0.021	0	36.00	0.0004	1.287E-05
Be	9	1	No Gas	-0.006	0	18.00	0.0004	1.287E-05
Se	78	2	H2	0.027	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.026	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Na	23	3	He	83.546	0.4761	13396.49	0.0025	0.2648
Na	23	3	He	81.694	0.4714	13406.43	0.0025	0.2648
Na	23	3	He	76.022	0.4571	12916.13	0.0025	0.2648
Mg	24	3	He	12.075	0.021	590.03	0.0013	0.005032
Mg	24	3	He	6.579	0.0137	390.02	0.0013	0.005032
Mg	24	3	He	5.572	0.0124	350.02	0.0013	0.005032
Al	27	3	He	0.599	0.0018	50.00	0.0004	0.001519
Al	27	3	He	-0.26	0.0014	40.00	0.0004	0.001519
Al	27	3	He	-0.239	0.0014	40.00	0.0004	0.001519
K	39	3	He	44.566	0.406	11424.86	0.001	0.3627
K	39	3	He	12.619	0.375	10664.25	0.001	0.3627
K	39	3	He	3.419	0.3661	10344.06	0.001	0.3627
Ca	44	3	He	4.683	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	34.437	0.0046	130.01	0.0001	0.002571
Ca	44	3	He	34.939	0.0046	130.01	0.0001	0.002571
Ti	47	3	He	0.267	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.173	0.0151	424.01	0.0201	0.0116
V	51	3	He	0.077	0.0132	374.01	0.0201	0.0116
V	51	3	He	0.064	0.0129	364.01	0.0201	0.0116
Cr	52	3	He	0.161	0.0722	2030.22	0.0257	0.06801
Cr	52	3	He	-0.128	0.0647	1840.20	0.0257	0.06801
Cr	52	3	He	0.08	0.0701	1980.19	0.0257	0.06801
Mn	55	3	He	0.601	0.011	310.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.342	0.0081	230.01	0.0113	0.004215
Mn	55	3	He	0.222	0.0067	190.01	0.0113	0.004215
Fe	57	3	He	3.807	0.006	170.01	0.0005	0.004099
Fe	57	3	He	-3.207	0.0025	70.00	0.0005	0.004099
Fe	57	3	He	3.757	0.006	170.01	0.0005	0.004099
Co	59	3	He	0.029	0.0064	180.01	0.0518	0.004913
Co	59	3	He	0.007	0.0053	150.01	0.0518	0.004913
Co	59	3	He	0.035	0.0067	190.01	0.0518	0.004913
Ni	60	3	He	0.205	0.0082	450.03	0.0075	0.006695
Ni	60	3	He	0.078	0.0073	400.02	0.0075	0.006695
Ni	60	3	He	0.023	0.0069	370.02	0.0075	0.006695
Cu	63	3	He	0.013	0.0035	190.01	0.0216	0.003198
Cu	63	3	He	0.071	0.0047	260.01	0.0216	0.003198
Cu	63	3	He	0.058	0.0045	240.01	0.0216	0.003198
Zn	66	3	He	1.099	0.0058	320.01	0.0026	0.002954
Zn	66	3	He	0.192	0.0035	190.01	0.0026	0.002954
Zn	66	3	He	0.289	0.0037	200.01	0.0026	0.002954
As	75	3	He	-0.103	0.0003	16.00	0.002	0.0004943
As	75	3	He	0.064	0.0006	34.00	0.002	0.0004943
As	75	3	He	-0.082	0.0003	18.00	0.002	0.0004943
Sr	88	3	He	0.195	0.0023	120.00	0.0081	0.0006852
Sr	88	3	He	0.077	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.055	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.01	0.0008	40.00	0.0205	0.0005587
Mo	98	3	He	-0.018	0.0002	10.00	0.0205	0.0005587
Mo	98	3	He	0.037	0.0013	70.00	0.0205	0.0005587
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.035	0.0128	680.04	0.0146	0.01334
Sn	120	3	He	-0.207	0.0103	550.03	0.0146	0.01334
Sn	120	3	He	0.107	0.0149	790.06	0.0146	0.01334
Sb	121	3	He	0.055	0.0023	120.00	0.0142	0.001484
Sb	121	3	He	0.041	0.0021	110.00	0.0142	0.001484
Sb	121	3	He	0.108	0.003	160.01	0.0142	0.001484
Ba	137	3	He	0.001	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.122	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.001	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.007	0.0004	80.01	0.0282	0.00021
Tl	205	3	He	0.017	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.005	0.0004	70.00	0.0282	0.00021
Pb	208	3	He	0.023	0.0018	200.01	0.0372	0.0009772
Pb	208	3	He	0.022	0.0018	190.01	0.0372	0.0009772
Pb	208	3	He	0.012	0.0014	140.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
Sc	45	1	No Gas			1749882.79		
Sc	45	1	No Gas			1717239.35		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1713613.10		
Ge	72	1	No Gas			885910.77		
Ge	72	1	No Gas			875637.72		
Ge	72	1	No Gas			862650.38		
Sc	45	2	H2			128584.00		
Sc	45	2	H2			124408.98		
Sc	45	2	H2			127365.12		
Ge	72	2	H2			106263.05		
Ge	72	2	H2			107361.81		
Ge	72	2	H2			108168.32		
In	115	2	H2			265141.87		
In	115	2	H2			266081.46		
In	115	2	H2			268725.66		
Sc	45	3	He			28137.66		
Sc	45	3	He			28438.30		
Sc	45	3	He			28257.98		
Ge	72	3	He			54745.60		
Ge	72	3	He			54955.85		
Ge	72	3	He			53872.19		
In	115	3	He			52972.36		
In	115	3	He			53323.30		
In	115	3	He			52982.00		
Tb	159	3	He			244644.41		
Tb	159	3	He			243626.95		
Tb	159	3	He			244519.06		
Bi	209	3	He			191290.00		
Bi	209	3	He			190783.00		
Bi	209	3	He			191663.86		

Quantitation Report

Data File Name	083_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:54:20 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

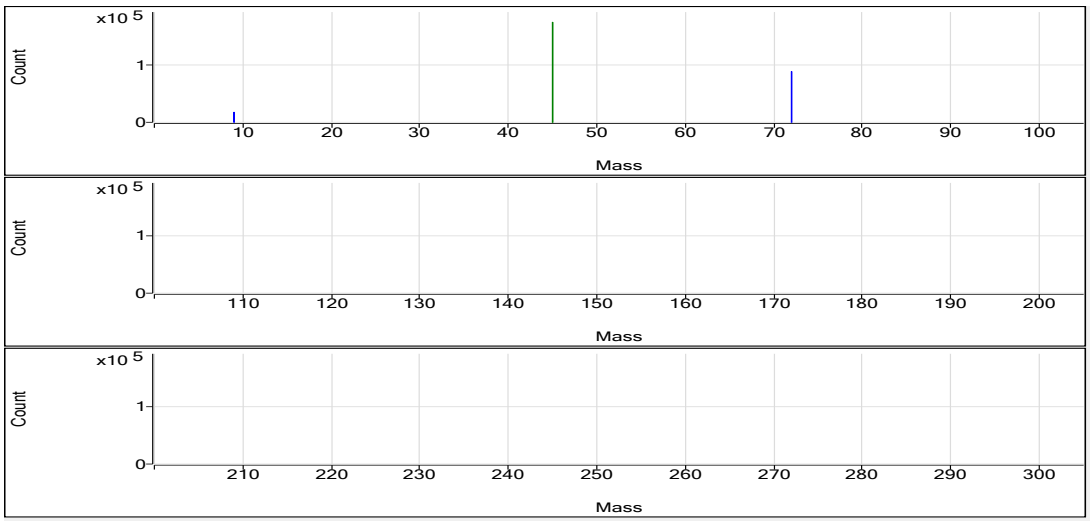
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.899	ppb	7.3	35542.92	0.0205	Pulse	0.5000	3
Se	78	72	H2	52.625	ppb	1.9	2250.40	0.0206	Pulse	1.5000	3
Na	23	45	He	5228.868	ppb	2.2	389001.47	13.4871	Pulse	0.1000	3
Mg	24	45	He	5117.264	ppb	2.5	194950.72	6.7590	Pulse	0.1000	3
Al	27	45	He	5191.889	ppb	2.7	64635.70	2.2405	Pulse	0.1000	3
K	39	45	He	5149.286	ppb	2.7	154752.40	5.3656	Pulse	0.1000	3
Ca	44	45	He	5236.253	ppb	3.5	8846.31	0.3068	Pulse	0.1000	3
Ti	47	45	He	5171.812	ppb	2.1	68558.64	2.3769	Pulse	0.1000	3
V	51	45	He	513.746	ppb	2.2	297552.31	10.3164	Pulse	0.5000	3
Cr	52	45	He	513.644	ppb	2.2	382722.60	13.2692	Pulse	0.1000	3
Mn	55	45	He	514.594	ppb	1.8	168282.95	5.8343	Pulse	0.1000	3
Fe	57	45	He	5235.734	ppb	2.1	77203.37	2.6767	Pulse	0.1000	3
Co	59	45	He	507.236	ppb	2.2	758201.39	26.2877	Pulse	0.1000	3
Ni	60	72	He	515.324	ppb	0.9	213080.49	3.8459	Pulse	0.1000	3
Cu	63	72	He	513.746	ppb	1.1	614648.71	11.0938	Pulse	0.1000	3
Zn	66	72	He	515.555	ppb	1.6	75287.66	1.3589	Pulse	0.1000	3
As	75	72	He	514.880	ppb	0.9	55723.14	1.0057	Pulse	0.5000	3
Sr	88	115	He	51.377	ppb	1.1	22388.47	0.4175	Pulse	0.1000	3
Mo	98	115	He	51.485	ppb	1.1	56544.25	1.0544	Pulse	0.1000	3
Ag	107	115	He	52.274	ppb	1.3	120691.58	2.2507	Pulse	0.1000	3
Cd	111	115	He	51.158	ppb	2.4	13710.76	0.2557	Pulse	0.5000	3
Sn	120	115	He	51.382	ppb	3.8	40978.15	0.7644	Pulse	0.1000	3
Sb	121	115	He	51.491	ppb	1.9	39363.38	0.7341	Pulse	0.1000	3
Ba	137	115	He	505.555	ppb	1.8	124905.30	2.3295	Pulse	0.1000	3
Tl	205	209	He	50.559	ppb	2.4	273842.36	1.4271	Pulse	0.1000	3
Pb	208	209	He	50.804	ppb	1.2	363212.42	1.8928	Pulse	0.1000	3
U	238	209	He	50.548	ppb	0.7	404670.83	2.1088	Pulse	0.1000	3

ISTD Table:

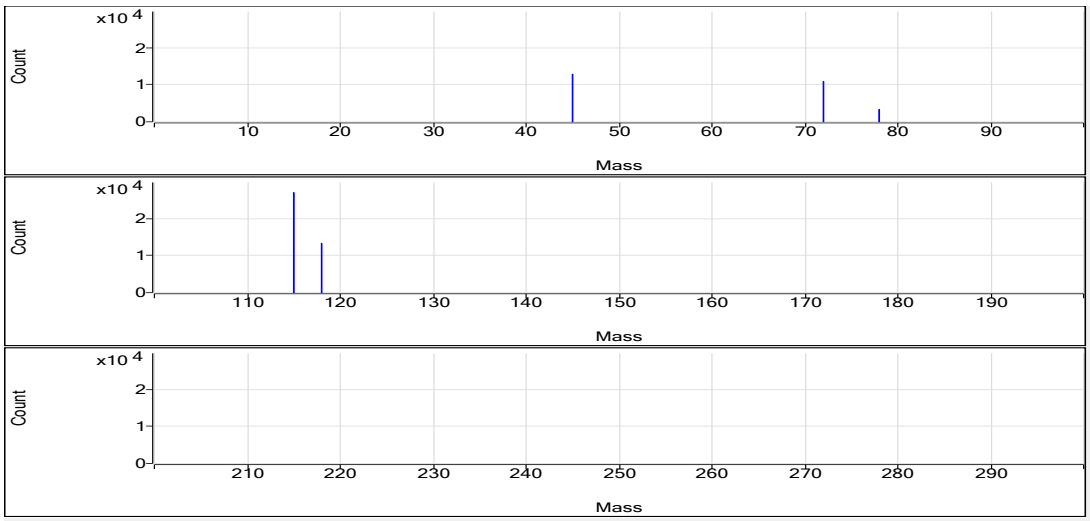
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1737550.86	1.0	98.7	Analog	0.1000	3
No Gas	Ge	72	882326.24	1.2	98.9	Pulse	0.1000	3
H2	Sc	45	128826.02	0.5	101.2	Pulse	0.1000	3
H2	Ge	72	109261.60	0.6	101.9	Pulse	0.1000	3
H2	In	115	269993.62	0.6	101.4	Pulse	0.1000	3
He	Sc	45	28849.25	1.6	101.2	Pulse	0.1000	3
He	Ge	72	55404.98	0.1	100.1	Pulse	0.1000	3
He	In	115	53628.62	1.5	99.9	Pulse	0.1000	3
He	Tb	159	245969.07	0.8	100.1	Pulse	0.1000	3
He	Bi	209	191897.80	0.5	100.5	Pulse	0.1000	3

No Gas

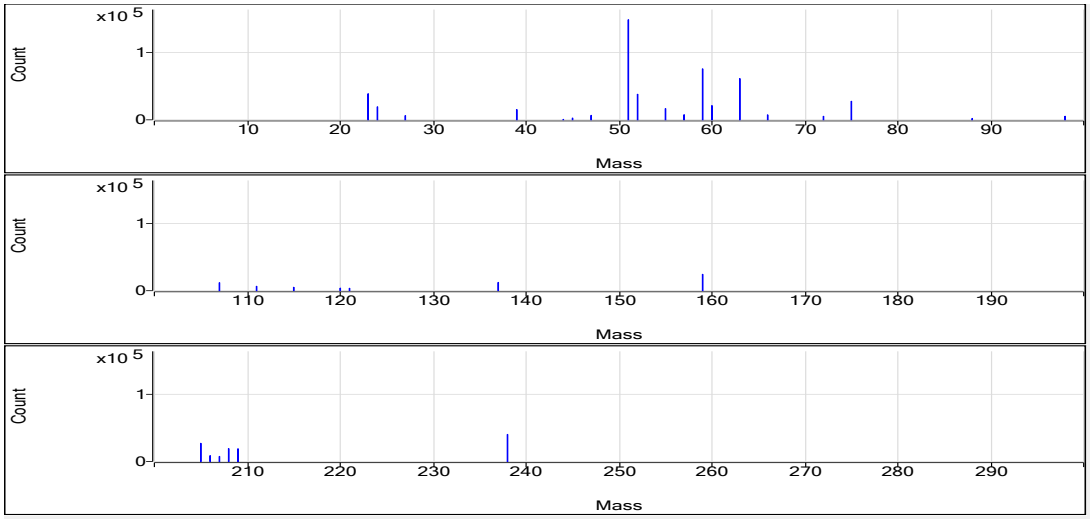


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.657	0.0188	32745.78	0.0004	1.287E-05
Be	9	1	No Gas	53.048	0.0209	35902.97	0.0004	1.287E-05
Be	9	1	No Gas	54.993	0.0217	37980.00	0.0004	1.287E-05
Se	78	2	H2	51.817	0.0203	2217.51	0.0004	1.451E-05
Se	78	2	H2	52.289	0.0205	2248.85	0.0004	1.451E-05
Se	78	2	H2	53.768	0.021	2284.85	0.0004	1.451E-05
Na	23	3	He	5266.86	13.5831	390501.83	0.0025	0.2648
Na	23	3	He	5321.805	13.7221	390372.30	0.0025	0.2648
Na	23	3	He	5097.939	13.156	386130.27	0.0025	0.2648
Mg	24	3	He	5218.231	6.8923	198146.91	0.0013	0.005032
Mg	24	3	He	5156.737	6.8111	193766.62	0.0013	0.005032
Mg	24	3	He	4976.825	6.5737	192938.63	0.0013	0.005032
Al	27	3	He	5352.141	2.3096	66399.86	0.0004	0.001519
Al	27	3	He	5099.299	2.2006	62603.76	0.0004	0.001519
Al	27	3	He	5124.226	2.2113	64903.48	0.0004	0.001519
K	39	3	He	5211.906	5.4264	156004.37	0.001	0.3627
K	39	3	He	5246.451	5.46	155328.36	0.001	0.3627
K	39	3	He	4989.502	5.2103	152924.46	0.001	0.3627
Ca	44	3	He	5244.74	0.3072	8832.98	0.0001	0.002571
Ca	44	3	He	5415.667	0.3172	9023.12	0.0001	0.002571
Ca	44	3	He	5048.353	0.2958	8682.84	0.0001	0.002571
Ti	47	3	He	5262.066	2.4184	69525.82	0.0005	0.0002328
Ti	47	3	He	5205.53	2.3924	68059.91	0.0005	0.0002328
Ti	47	3	He	5047.84	2.3199	68090.19	0.0005	0.0002328
V	51	3	He	518.289	10.4075	299206.41	0.0201	0.0116
V	51	3	He	522.036	10.4827	298216.47	0.0201	0.0116
V	51	3	He	500.914	10.059	295234.06	0.0201	0.0116
Cr	52	3	He	519.951	13.4313	386137.26	0.0257	0.06801
Cr	52	3	He	520.354	13.4417	382395.62	0.0257	0.06801
Cr	52	3	He	500.627	12.9347	379634.92	0.0257	0.06801
Mn	55	3	He	517.06	5.8622	168533.77	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	522.363	5.9223	168481.15	0.0113	0.004215
Mn	55	3	He	504.358	5.7183	167833.92	0.0113	0.004215
Fe	57	3	He	5240.094	2.6789	77015.87	0.0005	0.004099
Fe	57	3	He	5341.909	2.7309	77689.30	0.0005	0.004099
Fe	57	3	He	5125.198	2.6203	76904.93	0.0005	0.004099
Co	59	3	He	511.744	26.5212	762460.30	0.0518	0.004913
Co	59	3	He	515.684	26.7254	760297.80	0.0518	0.004913
Co	59	3	He	494.281	25.6164	751846.08	0.0518	0.004913
Ni	60	3	He	515.342	3.846	212984.10	0.0075	0.006695
Ni	60	3	He	510.634	3.8109	211119.39	0.0075	0.006695
Ni	60	3	He	519.995	3.8807	215137.99	0.0075	0.006695
Cu	63	3	He	520.063	11.2302	621904.09	0.0216	0.003198
Cu	63	3	He	511.351	11.0421	611714.48	0.0216	0.003198
Cu	63	3	He	509.824	11.0091	610327.57	0.0216	0.003198
Zn	66	3	He	523.949	1.3809	76474.02	0.0026	0.002954
Zn	66	3	He	514.785	1.3568	75166.94	0.0026	0.002954
Zn	66	3	He	507.932	1.3388	74222.01	0.0026	0.002954
As	75	3	He	520.039	1.0158	56253.95	0.002	0.0004943
As	75	3	He	512.42	1.0009	55450.66	0.002	0.0004943
As	75	3	He	512.182	1.0005	55464.81	0.002	0.0004943
Sr	88	3	He	51.981	0.4224	22378.23	0.0081	0.0006852
Sr	88	3	He	51.3	0.4169	22258.17	0.0081	0.0006852
Sr	88	3	He	50.852	0.4133	22529.00	0.0081	0.0006852
Mo	98	3	He	52.123	1.0675	56554.15	0.0205	0.0005587
Mo	98	3	He	51.094	1.0464	55871.42	0.0205	0.0005587
Mo	98	3	He	51.237	1.0494	57207.18	0.0205	0.0005587
Ag	107	3	He	53.03	2.2832	120959.77	0.043	0.0004367
Ag	107	3	He	51.742	2.2277	118943.18	0.043	0.0004367
Ag	107	3	He	52.05	2.241	122171.79	0.043	0.0004367
Cd	111	3	He	51.858	0.2592	13732.76	0.005	1.253E-05
Cd	111	3	He	51.854	0.2592	13838.90	0.005	1.253E-05
Cd	111	3	He	49.762	0.2487	13560.61	0.005	1.253E-05
Sn	120	3	He	53.554	0.7961	42175.12	0.0146	0.01334
Sn	120	3	He	50.766	0.7553	40329.31	0.0146	0.01334
Sn	120	3	He	49.826	0.7416	40430.01	0.0146	0.01334
Sb	121	3	He	52.613	0.7501	39737.64	0.0142	0.001484
Sb	121	3	He	51.123	0.7289	38915.72	0.0142	0.001484
Sb	121	3	He	50.738	0.7234	39436.77	0.0142	0.001484
Ba	137	3	He	515.654	2.376	125874.61	0.0046	0.000374
Ba	137	3	He	503.571	2.3203	123885.69	0.0046	0.000374
Ba	137	3	He	497.439	2.2921	124955.60	0.0046	0.000374
Tl	205	3	He	51.906	1.4651	279968.12	0.0282	0.00021
Tl	205	3	He	49.472	1.3964	269334.94	0.0282	0.00021
Tl	205	3	He	50.299	1.4198	272224.02	0.0282	0.00021
Pb	208	3	He	51.521	1.9195	198262.34	0.0372	0.0009772
Pb	208	3	He	50.37	1.8766	192973.38	0.0372	0.0009772
Pb	208	3	He	50.522	1.8823	192982.24	0.0372	0.0009772
U	238	3	He	50.899	2.1234	405759.02	0.0417	8.729E-05
U	238	3	He	50.172	2.0931	403708.82	0.0417	8.729E-05
U	238	3	He	50.574	2.1099	404544.64	0.0417	8.729E-05
Sc	45	1	No Gas			1743197.47		
Sc	45	1	No Gas			1717160.44		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1752294.66		
Ge	72	1	No Gas			894302.41		
Ge	72	1	No Gas			876500.46		
Ge	72	1	No Gas			876175.85		
Sc	45	2	H2			128745.09		
Sc	45	2	H2			128260.54		
Sc	45	2	H2			129472.44		
Ge	72	2	H2			109334.72		
Ge	72	2	H2			109880.22		
Ge	72	2	H2			108569.86		
In	115	2	H2			269411.70		
In	115	2	H2			268752.57		
In	115	2	H2			271816.60		
Sc	45	3	He			28749.05		
Sc	45	3	He			28448.52		
Sc	45	3	He			29350.19		
Ge	72	3	He			55378.06		
Ge	72	3	He			55398.47		
Ge	72	3	He			55438.42		
In	115	3	He			53273.02		
In	115	3	He			53673.96		
In	115	3	He			54799.43		
Tb	159	3	He			244836.23		
Tb	159	3	He			248297.44		
Tb	159	3	He			244773.55		
Bi	209	3	He			191085.80		
Bi	209	3	He			192872.15		
Bi	209	3	He			191735.45		

Quantitation Report

Data File Name	084_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:56:19 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

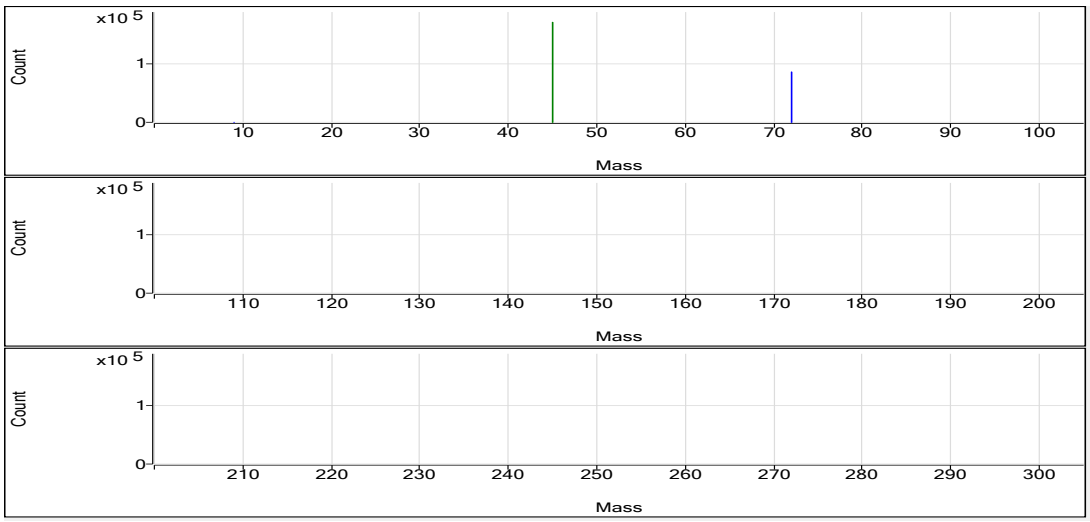
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.214	ppb	6.8	167.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.096	ppb	42.3	5.55	0.0001	Pulse	1.5000	3
Na	23	45	He	76.726	ppb	13.6	13102.94	0.4589	Pulse	0.1000	3
Mg	24	45	He	5.569	ppb	29.7	353.35	0.0124	Pulse	0.1000	3
Al	27	45	He	2.710	ppb	113.9	76.67	0.0027	Pulse	0.1000	3
K	39	45	He	13.318	ppb	255.0	10734.35	0.3757	Pulse	0.1000	3
Ca	44	45	He	36.132	ppb	10.2	133.34	0.0047	Pulse	0.1000	3
Ti	47	45	He	3.551	ppb	64.8	53.33	0.0019	Pulse	0.1000	3
V	51	45	He	0.179	ppb	25.2	434.01	0.0152	Pulse	0.5000	3
Cr	52	45	He	0.371	ppb	21.2	2213.58	0.0775	Pulse	0.1000	3
Mn	55	45	He	0.328	ppb	17.0	226.68	0.0079	Pulse	0.1000	3
Fe	57	45	He	-1.857	ppb	N/A	90.00	0.0032	Pulse	0.1000	3
Co	59	45	He	0.119	ppb	46.2	316.68	0.0111	Pulse	0.1000	3
Ni	60	72	He	0.210	ppb	73.0	446.69	0.0083	Pulse	0.1000	3
Cu	63	72	He	0.252	ppb	14.8	466.69	0.0086	Pulse	0.1000	3
Zn	66	72	He	0.167	ppb	194.7	183.34	0.0034	Pulse	0.1000	3
As	75	72	He	0.587	ppb	18.6	88.67	0.0016	Pulse	0.5000	3
Sr	88	115	He	0.023	ppb	155.9	46.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.043	ppb	54.8	76.67	0.0014	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	63.7	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	86.8	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.052	ppb	N/A	673.37	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.102	ppb	104.9	156.67	0.0029	Pulse	0.1000	3
Ba	137	115	He	0.189	ppb	11.0	66.67	0.0012	Pulse	0.1000	3
Tl	205	209	He	0.087	ppb	16.3	506.69	0.0027	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	40.6	373.35	0.0020	Pulse	0.1000	3
U	238	209	He	0.025	ppb	27.9	216.68	0.0011	Pulse	0.1000	3

ISTD Table:

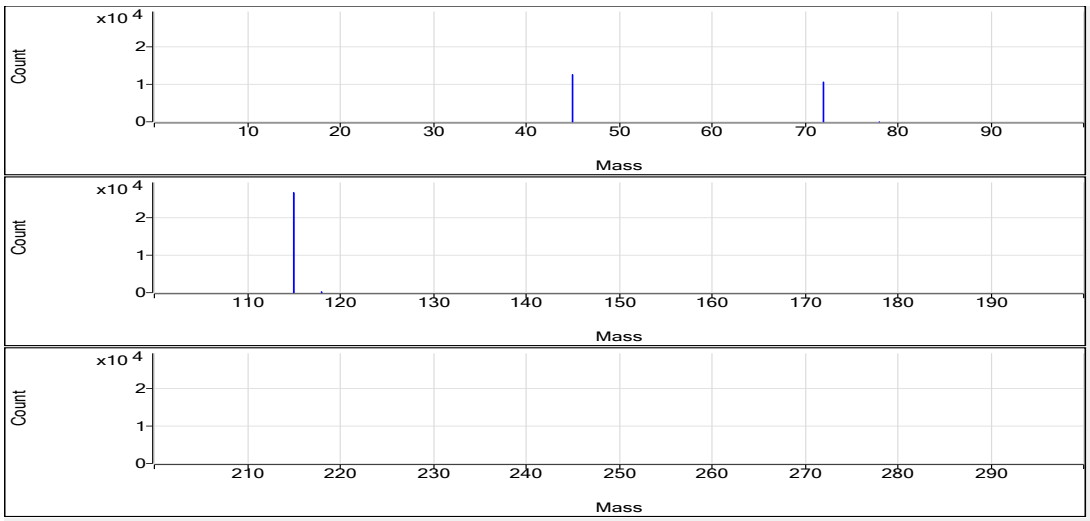
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1723080.44	1.0	97.8	Analog	0.1000	3
No Gas	Ge	72	867914.13	0.7	97.3	Pulse	0.1000	3
H2	Sc	45	126325.48	1.4	99.2	Pulse	0.1000	3
H2	Ge	72	106672.98	1.3	99.5	Pulse	0.1000	3
H2	In	115	267673.97	1.5	100.5	Pulse	0.1000	3
He	Sc	45	28555.36	1.2	100.2	Pulse	0.1000	3
He	Ge	72	54046.21	0.6	97.7	Pulse	0.1000	3
He	In	115	53505.87	1.2	99.7	Pulse	0.1000	3
He	Tb	159	244909.88	0.6	99.7	Pulse	0.1000	3
He	Bi	209	189906.93	0.4	99.5	Pulse	0.1000	3

No Gas

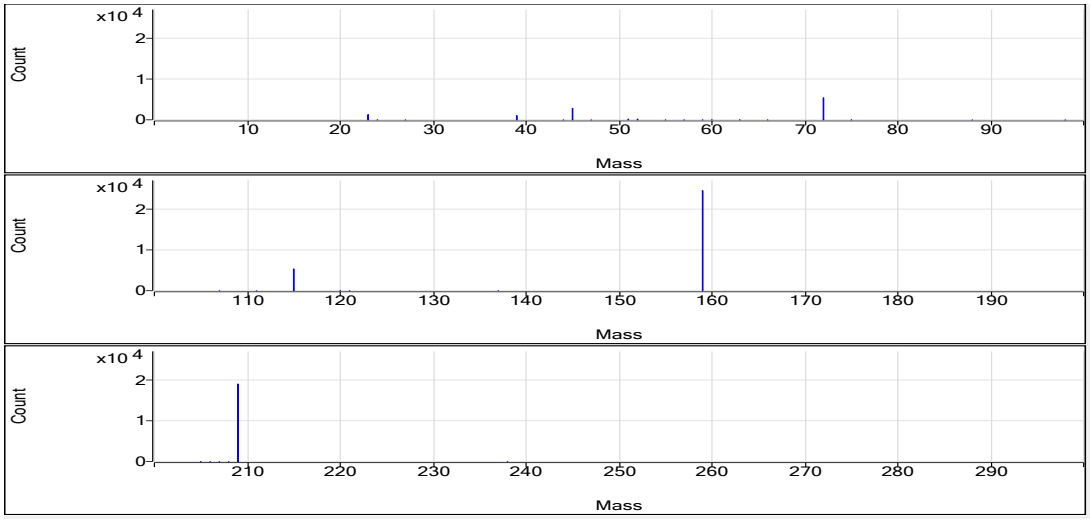


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.23	0.0001	178.00	0.0004	1.287E-05
Be	9	1	No Gas	0.211	0.0001	164.00	0.0004	1.287E-05
Be	9	1	No Gas	0.201	0.0001	160.00	0.0004	1.287E-05
Se	78	2	H2	0.092	0.0001	5.33	0.0004	1.451E-05
Se	78	2	H2	0.139	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.058	0	4.00	0.0004	1.451E-05
Na	23	3	He	71.48	0.4456	12886.18	0.0025	0.2648
Na	23	3	He	69.964	0.4418	12465.55	0.0025	0.2648
Na	23	3	He	88.736	0.4892	13957.10	0.0025	0.2648
Mg	24	3	He	5.62	0.0124	360.02	0.0013	0.005032
Mg	24	3	He	7.197	0.0145	410.02	0.0013	0.005032
Mg	24	3	He	3.889	0.0102	290.01	0.0013	0.005032
Al	27	3	He	0.488	0.0017	50.00	0.0004	0.001519
Al	27	3	He	1.409	0.0021	60.00	0.0004	0.001519
Al	27	3	He	6.233	0.0042	120.01	0.0004	0.001519
K	39	3	He	52.509	0.4138	11965.37	0.001	0.3627
K	39	3	He	-5.175	0.3577	10093.79	0.001	0.3627
K	39	3	He	-7.38	0.3556	10143.90	0.001	0.3627
Ca	44	3	He	33.123	0.0045	130.00	0.0001	0.002571
Ca	44	3	He	35.052	0.0046	130.01	0.0001	0.002571
Ca	44	3	He	40.221	0.0049	140.01	0.0001	0.002571
Ti	47	3	He	5.513	0.0028	80.00	0.0005	0.0002328
Ti	47	3	He	4.12	0.0021	60.00	0.0005	0.0002328
Ti	47	3	He	1.019	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.215	0.0159	460.01	0.0201	0.0116
V	51	3	He	0.128	0.0142	400.01	0.0201	0.0116
V	51	3	He	0.194	0.0155	442.01	0.0201	0.0116
Cr	52	3	He	0.287	0.0754	2180.23	0.0257	0.06801
Cr	52	3	He	0.443	0.0794	2240.26	0.0257	0.06801
Cr	52	3	He	0.382	0.0778	2220.26	0.0257	0.06801
Mn	55	3	He	0.391	0.0086	250.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.285	0.0074	210.01	0.0113	0.004215
Mn	55	3	He	0.309	0.0077	220.01	0.0113	0.004215
Fe	57	3	He	-1.255	0.0035	100.00	0.0005	0.004099
Fe	57	3	He	-1.781	0.0032	90.00	0.0005	0.004099
Fe	57	3	He	-2.536	0.0028	80.00	0.0005	0.004099
Co	59	3	He	0.145	0.0124	360.02	0.0518	0.004913
Co	59	3	He	0.056	0.0078	220.01	0.0518	0.004913
Co	59	3	He	0.155	0.013	370.02	0.0518	0.004913
Ni	60	3	He	0.096	0.0074	400.02	0.0075	0.006695
Ni	60	3	He	0.385	0.0096	520.03	0.0075	0.006695
Ni	60	3	He	0.15	0.0078	420.02	0.0075	0.006695
Cu	63	3	He	0.229	0.0081	440.02	0.0216	0.003198
Cu	63	3	He	0.295	0.0096	520.03	0.0216	0.003198
Cu	63	3	He	0.231	0.0082	440.02	0.0216	0.003198
Zn	66	3	He	-0.208	0.0024	130.00	0.0026	0.002954
Zn	66	3	He	0.345	0.0039	210.01	0.0026	0.002954
Zn	66	3	He	0.363	0.0039	210.01	0.0026	0.002954
As	75	3	He	0.468	0.0014	76.00	0.002	0.0004943
As	75	3	He	0.613	0.0017	92.00	0.002	0.0004943
As	75	3	He	0.681	0.0018	98.00	0.002	0.0004943
Sr	88	3	He	-0.016	0.0006	30.00	0.0081	0.0006852
Sr	88	3	He	0.031	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.055	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.045	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.065	0.0019	100.00	0.0205	0.0005587
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.054	0.0126	680.04	0.0146	0.01334
Sn	120	3	He	-0.017	0.0131	700.04	0.0146	0.01334
Sn	120	3	He	-0.085	0.0121	640.04	0.0146	0.01334
Sb	121	3	He	-0.013	0.0013	70.00	0.0142	0.001484
Sb	121	3	He	0.198	0.0043	230.01	0.0142	0.001484
Sb	121	3	He	0.122	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	0.199	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.203	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.165	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.088	0.0027	510.03	0.0282	0.00021
Tl	205	3	He	0.101	0.0031	580.03	0.0282	0.00021
Tl	205	3	He	0.072	0.0023	430.02	0.0282	0.00021
Pb	208	3	He	0.018	0.0016	180.01	0.0372	0.0009772
Pb	208	3	He	0.023	0.0018	170.01	0.0372	0.0009772
Pb	208	3	He	0.039	0.0024	300.02	0.0372	0.0009772
U	238	3	He	0.032	0.0014	270.01	0.0417	8.729E-05
U	238	3	He	0.026	0.0012	220.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
Sc	45	1	No Gas			1722887.16		
Sc	45	1	No Gas			1706630.29		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739723.88		
Ge	72	1	No Gas			874128.03		
Ge	72	1	No Gas			866732.64		
Ge	72	1	No Gas			862881.71		
Sc	45	2	H2			127536.75		
Sc	45	2	H2			124277.92		
Sc	45	2	H2			127161.77		
Ge	72	2	H2			105326.55		
Ge	72	2	H2			106676.54		
Ge	72	2	H2			108015.85		
In	115	2	H2			263169.72		
In	115	2	H2			269810.17		
In	115	2	H2			270042.01		
Sc	45	3	He			28919.22		
Sc	45	3	He			28217.97		
Sc	45	3	He			28528.89		
Ge	72	3	He			54003.12		
Ge	72	3	He			54393.92		
Ge	72	3	He			53741.60		
In	115	3	He			54166.49		
In	115	3	He			53493.76		
In	115	3	He			52871.49		
Tb	159	3	He			245755.58		
Tb	159	3	He			243138.84		
Tb	159	3	He			245835.23		
Bi	209	3	He			189170.41		
Bi	209	3	He			189859.08		
Bi	209	3	He			190691.31		

Quantitation Report

Data File Name	085SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 5:58:18 PM
Sample Name	410-136111-O-1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

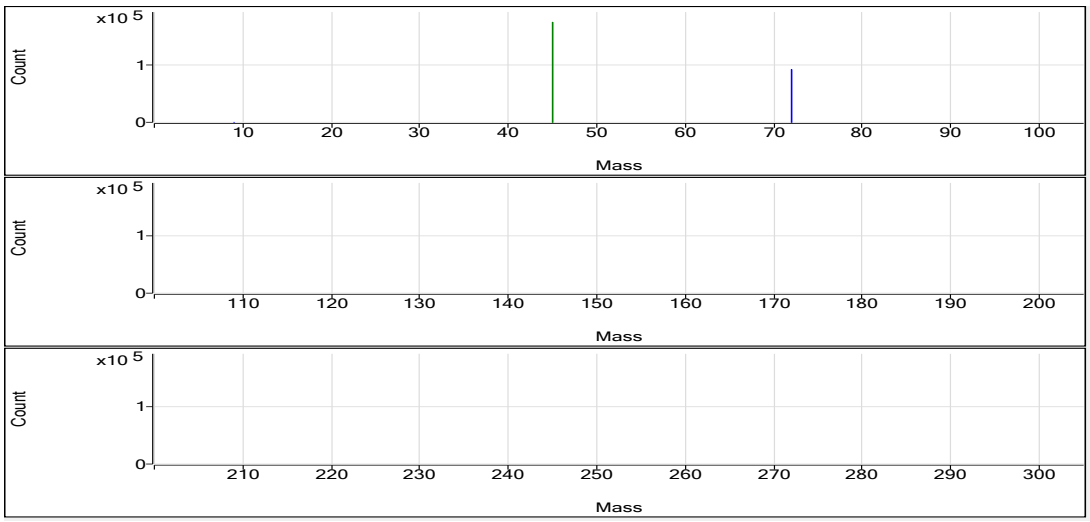
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.107	ppb	19.5	96.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.068	ppb	45.3	4.67	0.0000	Pulse	1.5000	3
Na	23	45	He	6440.762	ppb	0.6	476170.42	16.5516	Pulse	0.1000	3
Mg	24	45	He	5921.474	ppb	0.8	224991.79	7.8205	Pulse	0.1000	3
Al	27	45	He	9.634	ppb	50.0	163.34	0.0057	Pulse	0.1000	3
K	39	45	He	1516.925	ppb	2.0	52836.15	1.8365	Pulse	0.1000	3
Ca	44	45	He	6078.940	ppb	2.5	10233.92	0.3557	Pulse	0.1000	3
Ti	47	45	He	2.770	ppb	31.3	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.133	ppb	44.6	410.68	0.0143	Pulse	0.5000	3
Cr	52	45	He	0.393	ppb	40.1	2246.93	0.0781	Pulse	0.1000	3
Mn	55	45	He	1980.438	ppb	0.3	645620.59	22.4415	Pulse	0.1000	3
Fe	57	45	He	24543.913	ppb	0.5	360554.59	12.5325	Pulse	0.1000	3
Co	59	45	He	13.266	ppb	0.9	19917.68	0.6923	Pulse	0.1000	3
Ni	60	72	He	28.342	ppb	2.5	12575.86	0.2178	Pulse	0.1000	3
Cu	63	72	He	33.644	ppb	0.9	42102.28	0.7295	Pulse	0.1000	3
Zn	66	72	He	180.092	ppb	2.9	27503.69	0.4766	Pulse	0.1000	3
As	75	72	He	1.172	ppb	13.0	160.67	0.0028	Pulse	0.5000	3
Sr	88	115	He	77.080	ppb	0.9	34115.30	0.6260	Pulse	0.1000	3
Mo	98	115	He	0.038	ppb	48.2	73.33	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	69.4	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.066	ppb	35.6	18.67	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.235	ppb	60.5	913.39	0.0168	Pulse	0.1000	3
Sb	121	115	He	0.123	ppb	87.6	176.67	0.0032	Pulse	0.1000	3
Ba	137	115	He	17.147	ppb	6.1	4324.20	0.0794	Pulse	0.1000	3
Tl	205	209	He	0.035	ppb	11.9	236.68	0.0012	Pulse	0.1000	3
Pb	208	209	He	2.735	ppb	5.3	20086.92	0.1028	Pulse	0.1000	3
U	238	209	He	0.018	ppb	42.8	160.01	0.0008	Pulse	0.1000	3

ISTD Table:

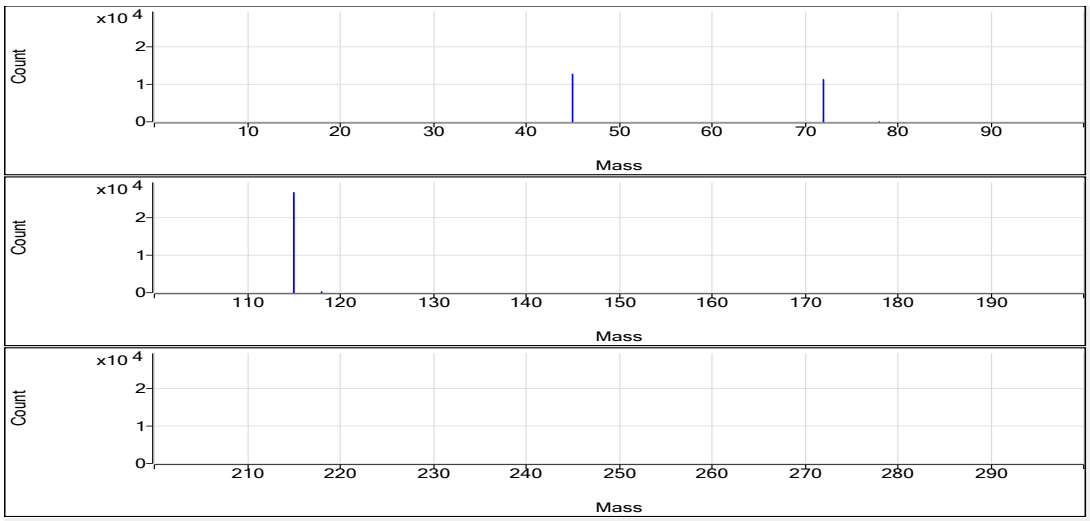
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1762773.26	1.1	100.1	Analog	0.1000	3
No Gas	Ge	72	930659.88	2.0	104.3	Pulse	0.1000	3
H2	Sc	45	128274.17	0.7	100.7	Pulse	0.1000	3
H2	Ge	72	113373.30	0.9	105.7	Pulse	0.1000	3
H2	In	115	268395.77	0.6	100.8	Pulse	0.1000	3
He	Sc	45	28769.18	0.4	100.9	Pulse	0.1000	3
He	Ge	72	57717.53	1.5	104.3	Pulse	0.1000	3
He	In	115	54491.09	1.0	101.5	Pulse	0.1000	3
He	Tb	159	248565.66	0.9	101.1	Pulse	0.1000	3
He	Bi	209	195363.41	0.8	102.4	Pulse	0.1000	3

No Gas

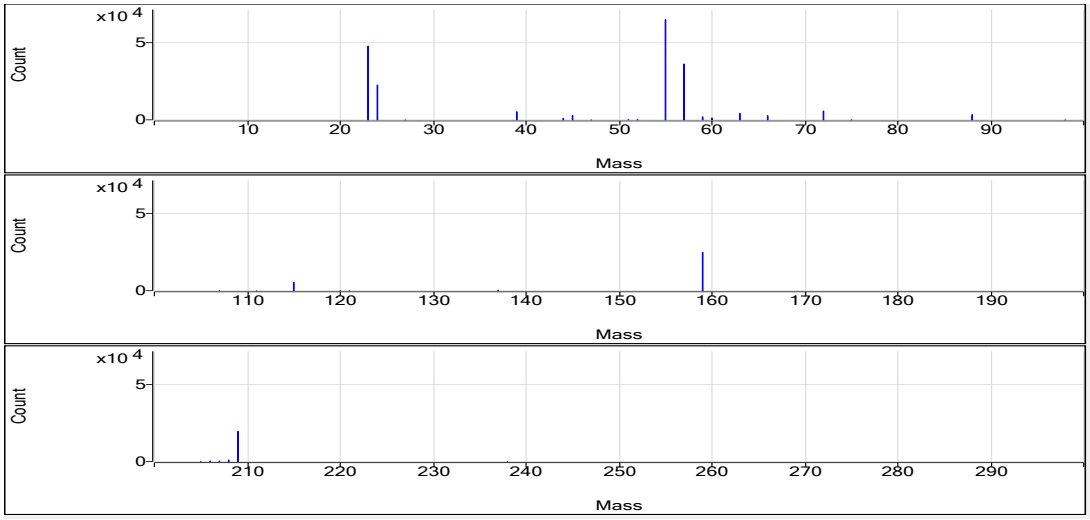


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.091	0	86.00	0.0004	1.287E-05
Be	9	1	No Gas	0.098	0.0001	92.00	0.0004	1.287E-05
Be	9	1	No Gas	0.13	0.0001	112.00	0.0004	1.287E-05
Se	78	2	H2	0.068	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.037	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.099	0.0001	6.00	0.0004	1.451E-05
Na	23	3	He	6414.317	16.4847	476234.60	0.0025	0.2648
Na	23	3	He	6426.739	16.5161	474326.91	0.0025	0.2648
Na	23	3	He	6481.23	16.6539	477949.76	0.0025	0.2648
Mg	24	3	He	5965.913	7.8791	227623.92	0.0013	0.005032
Mg	24	3	He	5875.589	7.7599	222857.22	0.0013	0.005032
Mg	24	3	He	5922.92	7.8224	224494.22	0.0013	0.005032
Al	27	3	He	14.138	0.0076	220.01	0.0004	0.001519
Al	27	3	He	10.206	0.0059	170.01	0.0004	0.001519
Al	27	3	He	4.559	0.0035	100.00	0.0004	0.001519
K	39	3	He	1530.171	1.8494	53427.95	0.001	0.3627
K	39	3	He	1538.611	1.8576	53348.24	0.001	0.3627
K	39	3	He	1481.993	1.8026	51732.25	0.001	0.3627
Ca	44	3	He	6250.591	0.3657	10564.18	0.0001	0.002571
Ca	44	3	He	6023.962	0.3525	10123.76	0.0001	0.002571
Ca	44	3	He	5962.269	0.3489	10013.83	0.0001	0.002571
Ti	47	3	He	3.26	0.0017	50.00	0.0005	0.0002328
Ti	47	3	He	3.282	0.0017	50.00	0.0005	0.0002328
Ti	47	3	He	1.768	0.001	30.00	0.0005	0.0002328
V	51	3	He	0.202	0.0156	452.01	0.0201	0.0116
V	51	3	He	0.095	0.0135	388.01	0.0201	0.0116
V	51	3	He	0.103	0.0137	392.01	0.0201	0.0116
Cr	52	3	He	0.236	0.0741	2140.25	0.0257	0.06801
Cr	52	3	He	0.552	0.0822	2360.27	0.0257	0.06801
Cr	52	3	He	0.391	0.0781	2240.26	0.0257	0.06801
Mn	55	3	He	1974.751	22.3771	646463.62	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	1979.706	22.4332	644261.51	0.0113	0.004215
Mn	55	3	He	1986.858	22.5143	646136.63	0.0113	0.004215
Fe	57	3	He	24675.428	12.5997	363997.92	0.0005	0.004099
Fe	57	3	He	24489.592	12.5048	359126.01	0.0005	0.004099
Fe	57	3	He	24466.719	12.4931	358539.84	0.0005	0.004099
Co	59	3	He	13.342	0.6963	20114.69	0.0518	0.004913
Co	59	3	He	13.328	0.6955	19974.43	0.0518	0.004913
Co	59	3	He	13.129	0.6852	19663.93	0.0518	0.004913
Ni	60	3	He	29.021	0.2229	12966.28	0.0075	0.006695
Ni	60	3	He	27.6	0.2123	12045.37	0.0075	0.006695
Ni	60	3	He	28.403	0.2183	12715.94	0.0075	0.006695
Cu	63	3	He	33.316	0.7224	42022.17	0.0216	0.003198
Cu	63	3	He	33.86	0.7341	41650.90	0.0216	0.003198
Cu	63	3	He	33.756	0.7319	42633.78	0.0216	0.003198
Zn	66	3	He	174.027	0.4606	26795.61	0.0026	0.002954
Zn	66	3	He	183.631	0.4859	27567.11	0.0026	0.002954
Zn	66	3	He	182.617	0.4832	28148.35	0.0026	0.002954
As	75	3	He	1.085	0.0026	152.00	0.002	0.0004943
As	75	3	He	1.083	0.0026	148.00	0.002	0.0004943
As	75	3	He	1.347	0.0031	182.00	0.002	0.0004943
Sr	88	3	He	77.891	0.6326	34783.65	0.0081	0.0006852
Sr	88	3	He	76.767	0.6235	33630.56	0.0081	0.0006852
Sr	88	3	He	76.583	0.622	33931.68	0.0081	0.0006852
Mo	98	3	He	0.053	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.045	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	0.019	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Cd	111	3	He	0.056	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.049	0.0003	14.00	0.005	1.253E-05
Cd	111	3	He	0.093	0.0005	26.00	0.005	1.253E-05
Sn	120	3	He	0.12	0.0151	830.06	0.0146	0.01334
Sn	120	3	He	0.394	0.0191	1030.07	0.0146	0.01334
Sn	120	3	He	0.191	0.0161	880.05	0.0146	0.01334
Sb	121	3	He	0.228	0.0047	260.01	0.0142	0.001484
Sb	121	3	He	0.013	0.0017	90.00	0.0142	0.001484
Sb	121	3	He	0.128	0.0033	180.01	0.0142	0.001484
Ba	137	3	He	17.292	0.08	4400.90	0.0046	0.000374
Ba	137	3	He	18.112	0.0838	4520.94	0.0046	0.000374
Ba	137	3	He	16.037	0.0743	4050.76	0.0046	0.000374
Tl	205	3	He	0.036	0.0012	240.01	0.0282	0.00021
Tl	205	3	He	0.031	0.0011	210.01	0.0282	0.00021
Tl	205	3	He	0.039	0.0013	260.01	0.0282	0.00021
Pb	208	3	He	2.872	0.1079	11285.23	0.0372	0.0009772
Pb	208	3	He	2.752	0.1035	11145.15	0.0372	0.0009772
Pb	208	3	He	2.582	0.0971	10524.62	0.0372	0.0009772
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
U	238	3	He	0.025	0.0011	220.01	0.0417	8.729E-05
U	238	3	He	0.01	0.0005	100.00	0.0417	8.729E-05
Sc	45	1	No Gas			1761582.79		
Sc	45	1	No Gas			1781880.29		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1744856.69		
Ge	72	1	No Gas			936169.60		
Ge	72	1	No Gas			945635.30		
Ge	72	1	No Gas			910174.75		
Sc	45	2	H2			127211.53		
Sc	45	2	H2			128845.55		
Sc	45	2	H2			128765.43		
Ge	72	2	H2			113125.02		
Ge	72	2	H2			114465.32		
Ge	72	2	H2			112529.55		
In	115	2	H2			268589.04		
In	115	2	H2			269980.72		
In	115	2	H2			266617.55		
Sc	45	3	He			28889.51		
Sc	45	3	He			28719.06		
Sc	45	3	He			28698.98		
Ge	72	3	He			58169.48		
Ge	72	3	He			56733.57		
Ge	72	3	He			58249.54		
In	115	3	He			54989.32		
In	115	3	He			53945.51		
In	115	3	He			54557.61		
Tb	159	3	He			250947.95		
Tb	159	3	He			246509.43		
Tb	159	3	He			248239.61		
Bi	209	3	He			195684.27		
Bi	209	3	He			193685.62		
Bi	209	3	He			196720.35		

Quantitation Report

Data File Name	086SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:00:18 PM
Sample Name	410-136093-E-6-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

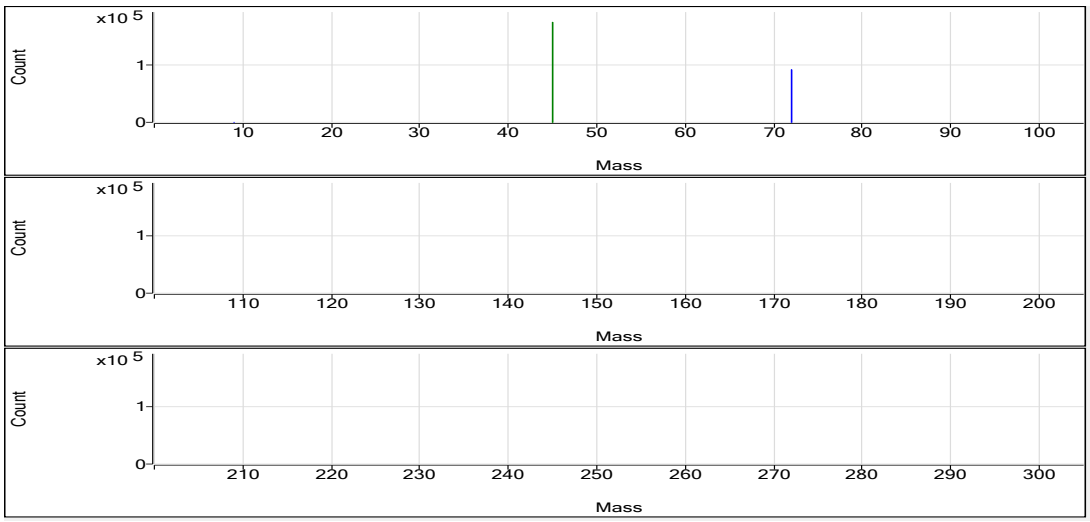
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.069	ppb	16.5	69.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.368	ppb	24.4	17.78	0.0002	Pulse	1.5000	3
Na	23	45	He	87938.234	ppb	1.9	6446070.74	222.6338	Analog	0.1000	3
Mg	24	45	He	14142.671	ppb	2.2	540572.95	18.6712	Pulse	0.1000	3
Al	27	45	He	37.797	ppb	25.3	516.70	0.0178	Pulse	0.1000	3
K	39	45	He	839.313	ppb	2.8	34130.83	1.1782	Pulse	0.1000	3
Ca	44	45	He	118978.125	ppb	2.3	200179.55	6.9142	Pulse	0.1000	3
Ti	47	45	He	2.758	ppb	18.9	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.863	ppb	5.8	837.36	0.0289	Pulse	0.5000	3
Cr	52	45	He	0.094	ppb	262.3	2036.88	0.0704	Pulse	0.1000	3
Mn	55	45	He	4492.047	ppb	3.3	1473306.70	50.8968	Analog	0.1000	3
Fe	57	45	He	7636.651	ppb	2.0	112983.69	3.9022	Pulse	0.1000	3
Co	59	45	He	0.576	ppb	18.6	1003.40	0.0347	Pulse	0.1000	3
Ni	60	72	He	14.397	ppb	0.8	6518.40	0.1140	Pulse	0.1000	3
Cu	63	72	He	3.332	ppb	1.3	4297.45	0.0751	Pulse	0.1000	3
Zn	66	72	He	17.159	ppb	0.9	2750.35	0.0481	Pulse	0.1000	3
As	75	72	He	5.335	ppb	5.3	624.02	0.0109	Pulse	0.5000	3
Sr	88	115	He	265.133	ppb	1.9	114528.42	2.1517	Pulse	0.1000	3
Mo	98	115	He	1.206	ppb	15.7	1343.44	0.0253	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	335.7	26.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.701	ppb	9.0	187.33	0.0035	Pulse	0.5000	3
Sn	120	115	He	0.227	ppb	20.7	886.73	0.0167	Pulse	0.1000	3
Sb	121	115	He	0.111	ppb	38.7	163.34	0.0031	Pulse	0.1000	3
Ba	137	115	He	942.431	ppb	0.5	231118.74	4.3421	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	48.4	103.34	0.0005	Pulse	0.1000	3
Pb	208	209	He	1.965	ppb	4.4	14066.78	0.0741	Pulse	0.1000	3
U	238	209	He	0.025	ppb	7.4	213.34	0.0011	Pulse	0.1000	3

ISTD Table:

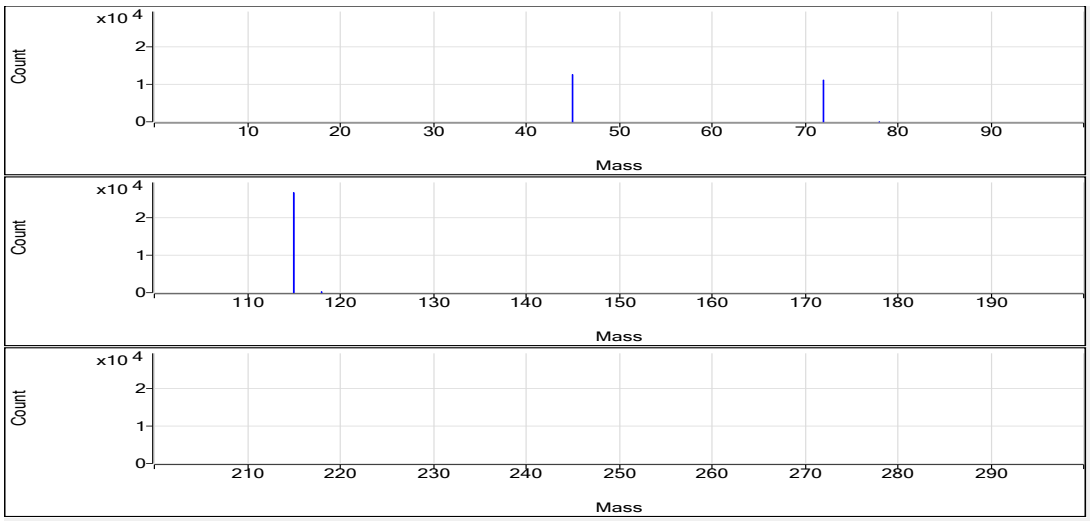
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1734598.15	1.1	98.5	Analog	0.1000	3
No Gas	Ge	72	911911.86	0.9	102.2	Pulse	0.1000	3
H2	Sc	45	126694.00	0.3	99.5	Pulse	0.1000	3
H2	Ge	72	112147.42	1.5	104.6	Pulse	0.1000	3
H2	In	115	268160.17	1.6	100.7	Pulse	0.1000	3
He	Sc	45	28962.95	2.5	101.6	Pulse	0.1000	3
He	Ge	72	57201.83	0.6	103.4	Pulse	0.1000	3
He	In	115	53226.67	0.7	99.2	Pulse	0.1000	3
He	Tb	159	248380.33	0.2	101.1	Pulse	0.1000	3
He	Bi	209	189780.81	0.4	99.4	Pulse	0.1000	3

No Gas

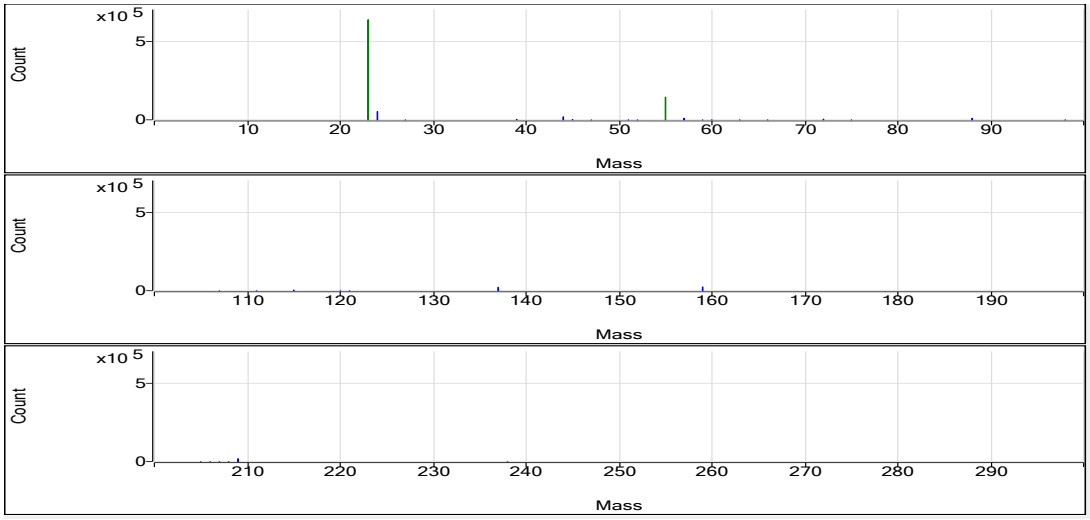


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.07	0	70.00	0.0004	1.287E-05
Be	9	1	No Gas	0.057	0	62.00	0.0004	1.287E-05
Be	9	1	No Gas	0.08	0	76.00	0.0004	1.287E-05
Se	78	2	H2	0.271	0.0001	13.33	0.0004	1.451E-05
Se	78	2	H2	0.449	0.0002	21.33	0.0004	1.451E-05
Se	78	2	H2	0.382	0.0002	18.67	0.0004	1.451E-05
Na	23	3	He	86680.552	219.4535	6491659.90	0.0025	0.2648
Na	23	3	He	87279.599	220.9683	6441196.78	0.0025	0.2648
Na	23	3	He	89854.55	227.4796	6405355.53	0.0025	0.2648
Mg	24	3	He	13922.474	18.3806	543715.81	0.0013	0.005032
Mg	24	3	He	14001.349	18.4847	538825.46	0.0013	0.005032
Mg	24	3	He	14504.189	19.1483	539177.57	0.0013	0.005032
Al	27	3	He	47.435	0.022	650.04	0.0004	0.001519
Al	27	3	He	28.3	0.0137	400.02	0.0004	0.001519
Al	27	3	He	37.657	0.0178	500.03	0.0004	0.001519
K	39	3	He	866.539	1.2046	35634.22	0.001	0.3627
K	39	3	He	822.948	1.1623	33880.30	0.001	0.3627
K	39	3	He	828.452	1.1676	32877.96	0.001	0.3627
Ca	44	3	He	117280.943	6.8156	201611.25	0.0001	0.002571
Ca	44	3	He	117528.592	6.8299	199092.01	0.0001	0.002571
Ca	44	3	He	122124.838	7.0969	199835.39	0.0001	0.002571
Ti	47	3	He	2.436	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	2.479	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	3.357	0.0018	50.00	0.0005	0.0002328
V	51	3	He	0.881	0.0293	866.03	0.0201	0.0116
V	51	3	He	0.807	0.0278	810.03	0.0201	0.0116
V	51	3	He	0.902	0.0297	836.03	0.0201	0.0116
Cr	52	3	He	0.024	0.0686	2030.22	0.0257	0.06801
Cr	52	3	He	-0.11	0.0652	1900.19	0.0257	0.06801
Cr	52	3	He	0.367	0.0774	2180.24	0.0257	0.06801
Mn	55	3	He	4390.214	49.743	1471450.13	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	4421.07	50.0926	1460193.26	0.0113	0.004215
Mn	55	3	He	4664.858	52.8546	1488276.70	0.0113	0.004215
Fe	57	3	He	7546.376	3.8561	114068.65	0.0005	0.004099
Fe	57	3	He	7551.82	3.8589	112487.04	0.0005	0.004099
Fe	57	3	He	7811.756	3.9916	112395.38	0.0005	0.004099
Co	59	3	He	0.466	0.0291	860.05	0.0518	0.004913
Co	59	3	He	0.581	0.035	1020.07	0.0518	0.004913
Co	59	3	He	0.68	0.0401	1130.08	0.0518	0.004913
Ni	60	3	He	14.32	0.1134	6451.67	0.0075	0.006695
Ni	60	3	He	14.339	0.1135	6531.78	0.0075	0.006695
Ni	60	3	He	14.532	0.115	6571.76	0.0075	0.006695
Cu	63	3	He	3.345	0.0754	4290.81	0.0216	0.003198
Cu	63	3	He	3.282	0.0741	4260.76	0.0216	0.003198
Cu	63	3	He	3.369	0.0759	4340.79	0.0216	0.003198
Zn	66	3	He	17.188	0.0482	2740.34	0.0026	0.002954
Zn	66	3	He	16.986	0.0476	2740.36	0.0026	0.002954
Zn	66	3	He	17.304	0.0485	2770.36	0.0026	0.002954
As	75	3	He	5.436	0.0111	632.02	0.002	0.0004943
As	75	3	He	5.017	0.0103	592.02	0.002	0.0004943
As	75	3	He	5.553	0.0113	648.02	0.002	0.0004943
Sr	88	3	He	265.489	2.1546	115590.16	0.0081	0.0006852
Sr	88	3	He	259.869	2.109	111961.20	0.0081	0.0006852
Sr	88	3	He	270.042	2.1916	116033.90	0.0081	0.0006852
Mo	98	3	He	1.066	0.0224	1200.10	0.0205	0.0005587
Mo	98	3	He	1.132	0.0237	1260.10	0.0205	0.0005587
Mo	98	3	He	1.421	0.0297	1570.13	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.773	0.0039	208.00	0.005	1.253E-05
Cd	111	3	He	0.653	0.0033	174.00	0.005	1.253E-05
Cd	111	3	He	0.678	0.0034	180.00	0.005	1.253E-05
Sn	120	3	He	0.222	0.0166	890.06	0.0146	0.01334
Sn	120	3	He	0.183	0.016	850.06	0.0146	0.01334
Sn	120	3	He	0.276	0.0174	920.07	0.0146	0.01334
Sb	121	3	He	0.079	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.16	0.0038	200.01	0.0142	0.001484
Sb	121	3	He	0.095	0.0028	150.01	0.0142	0.001484
Ba	137	3	He	942.179	4.341	232882.97	0.0046	0.000374
Ba	137	3	He	947.221	4.3642	231681.87	0.0046	0.000374
Ba	137	3	He	937.894	4.3212	228791.38	0.0046	0.000374
Tl	205	3	He	0.006	0.0004	70.00	0.0282	0.00021
Tl	205	3	He	0.017	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.013	0.0006	110.00	0.0282	0.00021
Pb	208	3	He	1.972	0.0744	7562.42	0.0372	0.0009772
Pb	208	3	He	2.047	0.0772	7462.45	0.0372	0.0009772
Pb	208	3	He	1.875	0.0708	6942.09	0.0372	0.0009772
U	238	3	He	0.023	0.0011	200.01	0.0417	8.729E-05
U	238	3	He	0.025	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.027	0.0012	230.01	0.0417	8.729E-05
Sc	45	1	No Gas			1731606.85		
Sc	45	1	No Gas			1754357.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1717830.60		
Ge	72	1	No Gas			906619.52		
Ge	72	1	No Gas			921641.31		
Ge	72	1	No Gas			907474.75		
Sc	45	2	H2			126979.04		
Sc	45	2	H2			126767.83		
Sc	45	2	H2			126335.12		
Ge	72	2	H2			110515.02		
Ge	72	2	H2			112158.11		
Ge	72	2	H2			113769.12		
In	115	2	H2			269675.66		
In	115	2	H2			263181.97		
In	115	2	H2			271622.89		
Sc	45	3	He			29581.03		
Sc	45	3	He			29149.87		
Sc	45	3	He			28157.94		
Ge	72	3	He			56904.11		
Ge	72	3	He			57536.77		
Ge	72	3	He			57164.62		
In	115	3	He			53653.72		
In	115	3	He			53092.71		
In	115	3	He			52952.19		
Tb	159	3	He			248408.22		
Tb	159	3	He			247843.47		
Tb	159	3	He			248889.31		
Bi	209	3	He			189787.07		
Bi	209	3	He			188924.22		
Bi	209	3	He			190631.13		

Quantitation Report

Data File Name	087SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:02:19 PM
Sample Name	410-135871-T-1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

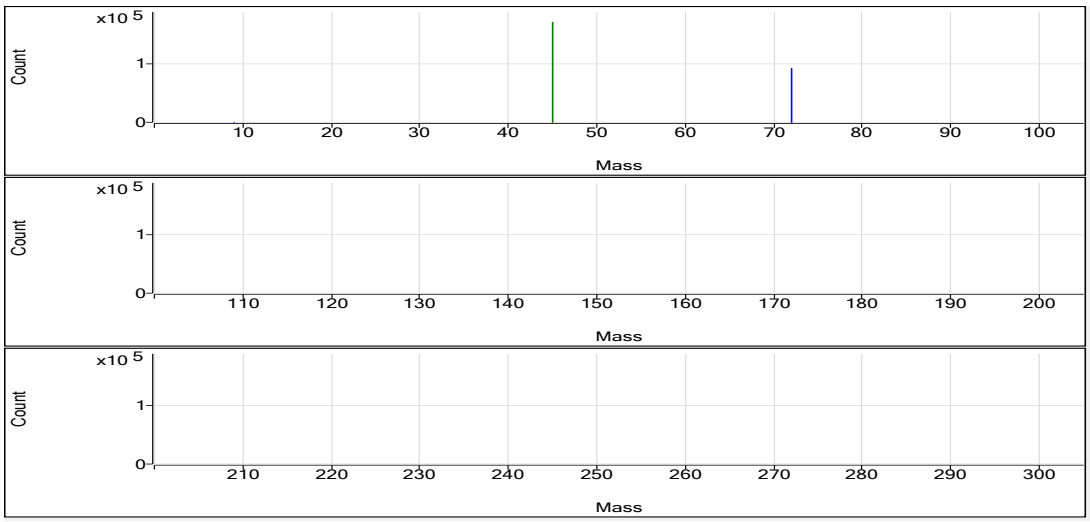
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.040	ppb	43.4	49.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.092	ppb	31.9	5.78	0.0001	Pulse	1.5000	3
Na	23	45	He	2626.027	ppb	1.0	201102.82	6.9053	Pulse	0.1000	3
Mg	24	45	He	1865.394	ppb	0.8	71848.39	2.4671	Pulse	0.1000	3
Al	27	45	He	186.822	ppb	5.0	2390.29	0.0821	Pulse	0.1000	3
K	39	45	He	1050.858	ppb	9.7	40303.16	1.3837	Pulse	0.1000	3
Ca	44	45	He	7136.728	ppb	4.8	12148.86	0.4172	Pulse	0.1000	3
Ti	47	45	He	0.986	ppb	75.3	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.418	ppb	8.2	582.02	0.0200	Pulse	0.5000	3
Cr	52	45	He	0.458	ppb	41.9	2323.61	0.0798	Pulse	0.1000	3
Mn	55	45	He	104.841	ppb	0.9	34715.72	1.1920	Pulse	0.1000	3
Fe	57	45	He	451.737	ppb	3.5	6835.16	0.2347	Pulse	0.1000	3
Co	59	45	He	0.168	ppb	25.7	396.69	0.0136	Pulse	0.1000	3
Ni	60	72	He	0.592	ppb	30.5	643.37	0.0111	Pulse	0.1000	3
Cu	63	72	He	0.513	ppb	18.4	826.73	0.0143	Pulse	0.1000	3
Zn	66	72	He	0.036	ppb	454.9	176.68	0.0030	Pulse	0.1000	3
As	75	72	He	2.557	ppb	10.2	318.01	0.0055	Pulse	0.5000	3
Sr	88	115	He	17.211	ppb	1.0	7622.31	0.1403	Pulse	0.1000	3
Mo	98	115	He	0.102	ppb	20.5	143.34	0.0026	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	114.9	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.095	ppb	44.2	800.06	0.0147	Pulse	0.1000	3
Sb	121	115	He	0.137	ppb	14.1	186.68	0.0034	Pulse	0.1000	3
Ba	137	115	He	8.017	ppb	7.2	2026.90	0.0373	Pulse	0.1000	3
Tl	205	209	He	0.021	ppb	29.4	153.34	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.197	ppb	4.6	1616.77	0.0083	Pulse	0.1000	3
U	238	209	He	0.018	ppb	43.7	163.34	0.0008	Pulse	0.1000	3

ISTD Table:

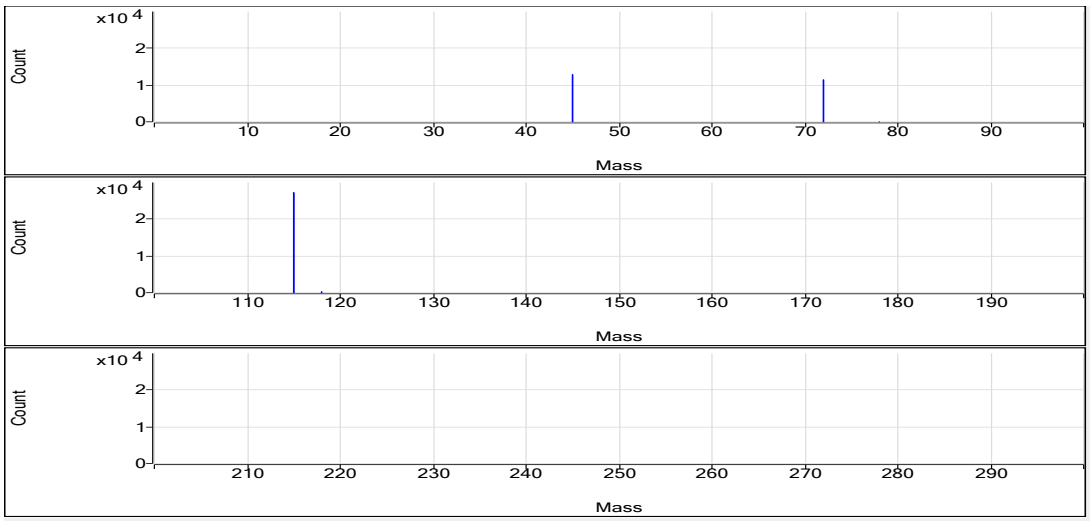
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1724158.20	0.6	97.9	Analog	0.1000	3
No Gas	Ge	72	926860.48	1.0	103.9	Pulse	0.1000	3
H2	Sc	45	128234.17	1.2	100.7	Pulse	0.1000	3
H2	Ge	72	114090.11	1.4	106.4	Pulse	0.1000	3
H2	In	115	271798.75	0.8	102.1	Pulse	0.1000	3
He	Sc	45	29123.24	0.4	102.2	Pulse	0.1000	3
He	Ge	72	57944.63	0.3	104.7	Pulse	0.1000	3
He	In	115	54321.03	1.8	101.2	Pulse	0.1000	3
He	Tb	159	246640.49	1.8	100.4	Pulse	0.1000	3
He	Bi	209	194104.17	1.3	101.7	Pulse	0.1000	3

No Gas

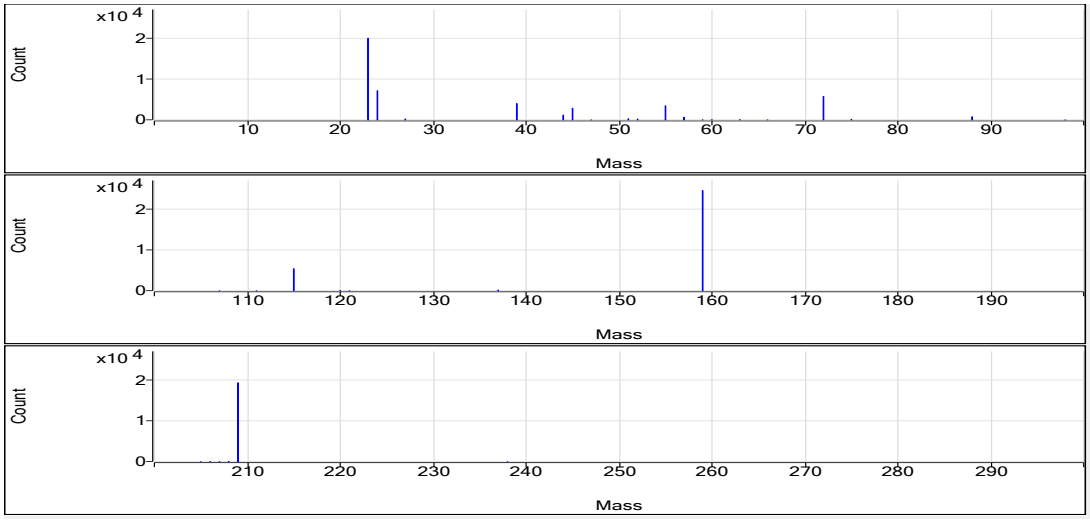


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.038	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.058	0	62.00	0.0004	1.287E-05
Se	78	2	H2	0.125	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.068	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.084	0	5.33	0.0004	1.451E-05
Na	23	3	He	2647.254	6.9589	203270.91	0.0025	0.2648
Na	23	3	He	2594.968	6.8267	199135.45	0.0025	0.2648
Na	23	3	He	2635.859	6.9301	200902.09	0.0025	0.2648
Mg	24	3	He	1874.328	2.4789	72407.54	0.0013	0.005032
Mg	24	3	He	1847.681	2.4437	71282.34	0.0013	0.005032
Mg	24	3	He	1874.172	2.4787	71855.28	0.0013	0.005032
Al	27	3	He	179.086	0.0787	2300.28	0.0004	0.001519
Al	27	3	He	184.107	0.0809	2360.29	0.0004	0.001519
Al	27	3	He	197.274	0.0866	2510.31	0.0004	0.001519
K	39	3	He	1168.132	1.4976	43746.35	0.001	0.3627
K	39	3	He	994.725	1.3292	38771.92	0.001	0.3627
K	39	3	He	989.717	1.3243	38391.20	0.001	0.3627
Ca	44	3	He	6842.098	0.4	11685.09	0.0001	0.002571
Ca	44	3	He	7507.263	0.4387	12796.20	0.0001	0.002571
Ca	44	3	He	7060.825	0.4127	11965.28	0.0001	0.002571
Ti	47	3	He	1.728	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	0.985	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.244	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.449	0.0206	602.02	0.0201	0.0116
V	51	3	He	0.423	0.0201	586.02	0.0201	0.0116
V	51	3	He	0.381	0.0192	558.01	0.0201	0.0116
Cr	52	3	He	0.658	0.0849	2480.31	0.0257	0.06801
Cr	52	3	He	0.275	0.0751	2190.25	0.0257	0.06801
Cr	52	3	He	0.441	0.0793	2300.26	0.0257	0.06801
Mn	55	3	He	104.52	1.1884	34712.32	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	105.908	1.2041	35123.38	0.0113	0.004215
Mn	55	3	He	104.097	1.1836	34311.45	0.0113	0.004215
Fe	57	3	He	469.63	0.2438	7122.02	0.0005	0.004099
Fe	57	3	He	439.372	0.2284	6661.72	0.0005	0.004099
Fe	57	3	He	446.21	0.2319	6721.73	0.0005	0.004099
Co	59	3	He	0.196	0.0151	440.02	0.0518	0.004913
Co	59	3	He	0.19	0.0147	430.02	0.0518	0.004913
Co	59	3	He	0.118	0.011	320.02	0.0518	0.004913
Ni	60	3	He	0.396	0.0096	560.04	0.0075	0.006695
Ni	60	3	He	0.628	0.0114	660.04	0.0075	0.006695
Ni	60	3	He	0.752	0.0123	710.04	0.0075	0.006695
Cu	63	3	He	0.498	0.014	810.06	0.0216	0.003198
Cu	63	3	He	0.427	0.0124	720.05	0.0216	0.003198
Cu	63	3	He	0.614	0.0165	950.07	0.0216	0.003198
Zn	66	3	He	0.187	0.0034	200.01	0.0026	0.002954
Zn	66	3	He	-0.14	0.0026	150.01	0.0026	0.002954
Zn	66	3	He	0.062	0.0031	180.01	0.0026	0.002954
As	75	3	He	2.517	0.0054	314.01	0.002	0.0004943
As	75	3	He	2.836	0.006	350.01	0.002	0.0004943
As	75	3	He	2.32	0.005	290.01	0.002	0.0004943
Sr	88	3	He	17.232	0.1405	7792.40	0.0081	0.0006852
Sr	88	3	He	17.372	0.1416	7622.30	0.0081	0.0006852
Sr	88	3	He	17.028	0.1388	7452.24	0.0081	0.0006852
Mo	98	3	He	0.078	0.0022	120.00	0.0205	0.0005587
Mo	98	3	He	0.109	0.0028	150.01	0.0205	0.0005587
Mo	98	3	He	0.118	0.003	160.01	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.062	0.0142	790.06	0.0146	0.01334
Sn	120	3	He	0.142	0.0154	830.06	0.0146	0.01334
Sn	120	3	He	0.081	0.0145	780.05	0.0146	0.01334
Sb	121	3	He	0.136	0.0034	190.01	0.0142	0.001484
Sb	121	3	He	0.157	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.118	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	8.099	0.0377	2090.23	0.0046	0.000374
Ba	137	3	He	8.551	0.0398	2140.25	0.0046	0.000374
Ba	137	3	He	7.401	0.0345	1850.21	0.0046	0.000374
Tl	205	3	He	0.018	0.0007	140.01	0.0282	0.00021
Tl	205	3	He	0.016	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.028	0.001	190.01	0.0282	0.00021
Pb	208	3	He	0.192	0.0081	910.06	0.0372	0.0009772
Pb	208	3	He	0.208	0.0087	890.07	0.0372	0.0009772
Pb	208	3	He	0.193	0.0082	780.06	0.0372	0.0009772
U	238	3	He	0.021	0.001	190.01	0.0417	8.729E-05
U	238	3	He	0.024	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.009	0.0005	90.00	0.0417	8.729E-05
Sc	45	1	No Gas			1719238.10		
Sc	45	1	No Gas			1716552.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1736683.72		
Ge	72	1	No Gas			920300.69		
Ge	72	1	No Gas			937214.75		
Ge	72	1	No Gas			923066.00		
Sc	45	2	H2			130057.84		
Sc	45	2	H2			127091.07		
Sc	45	2	H2			127553.59		
Ge	72	2	H2			115787.93		
Ge	72	2	H2			113920.97		
Ge	72	2	H2			112561.44		
In	115	2	H2			273987.91		
In	115	2	H2			269593.16		
In	115	2	H2			271815.17		
Sc	45	3	He			29210.05		
Sc	45	3	He			29169.99		
Sc	45	3	He			28989.68		
Ge	72	3	He			58068.29		
Ge	72	3	He			58028.63		
Ge	72	3	He			57736.96		
In	115	3	He			55471.01		
In	115	3	He			53825.16		
In	115	3	He			53683.71		
Tb	159	3	He			251428.94		
Tb	159	3	He			245692.16		
Tb	159	3	He			242800.37		
Bi	209	3	He			197125.47		
Bi	209	3	He			192668.32		
Bi	209	3	He			192518.73		

Quantitation Report

Data File Name	088SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:04:18 PM
Sample Name	410-136258-U-30-A @5
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

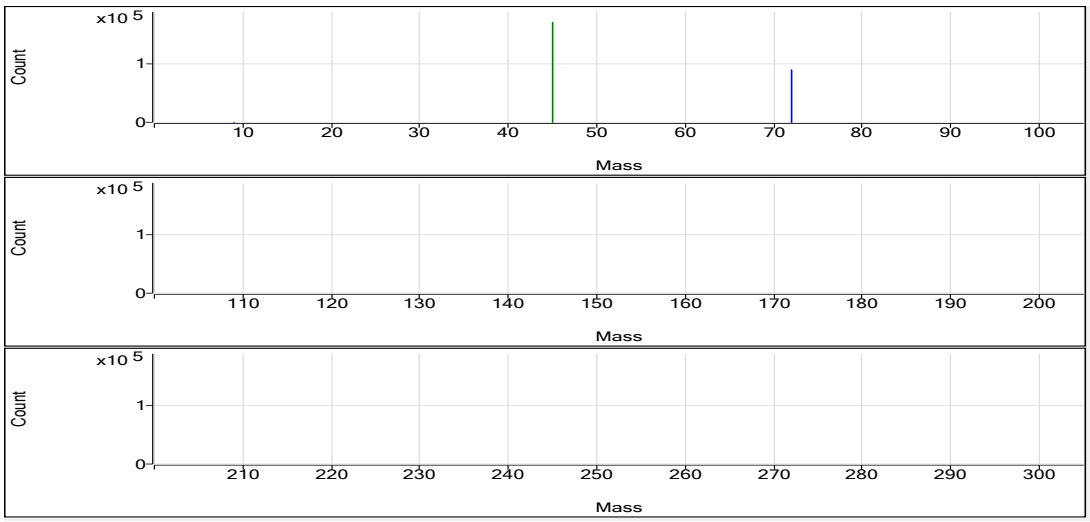
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.035	ppb	31.2	46.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.024	ppb	126.5	2.67	0.0000	Pulse	1.5000	3
Na	23	45	He	578.119	ppb	3.9	49409.93	1.7267	Pulse	0.1000	3
Mg	24	45	He	3455.210	ppb	3.2	130638.29	4.5654	Pulse	0.1000	3
Al	27	45	He	2.667	ppb	90.0	76.67	0.0027	Pulse	0.1000	3
K	39	45	He	236.598	ppb	15.4	16967.08	0.5926	Pulse	0.1000	3
Ca	44	45	He	29844.634	ppb	2.9	49682.22	1.7363	Pulse	0.1000	3
Ti	47	45	He	-0.255	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.094	ppb	33.9	386.01	0.0135	Pulse	0.5000	3
Cr	52	45	He	0.235	ppb	116.1	2116.90	0.0741	Pulse	0.1000	3
Mn	55	45	He	406.275	ppb	2.4	131841.00	4.6071	Pulse	0.1000	3
Fe	57	45	He	1265.482	ppb	2.0	18605.85	0.6501	Pulse	0.1000	3
Co	59	45	He	0.020	ppb	97.3	170.01	0.0059	Pulse	0.1000	3
Ni	60	72	He	0.049	ppb	241.6	393.35	0.0071	Pulse	0.1000	3
Cu	63	72	He	0.107	ppb	16.2	306.68	0.0055	Pulse	0.1000	3
Zn	66	72	He	0.334	ppb	69.0	213.35	0.0038	Pulse	0.1000	3
As	75	72	He	0.361	ppb	28.4	66.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	93.514	ppb	2.7	40906.80	0.7594	Pulse	0.1000	3
Mo	98	115	He	0.085	ppb	14.2	123.34	0.0023	Pulse	0.1000	3
Ag	107	115	He	-0.001	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	2.9	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.020	ppb	N/A	703.38	0.0130	Pulse	0.1000	3
Sb	121	115	He	0.043	ppb	91.5	113.34	0.0021	Pulse	0.1000	3
Ba	137	115	He	15.088	ppb	5.7	3764.00	0.0699	Pulse	0.1000	3
Tl	205	209	He	0.013	ppb	24.7	110.00	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.037	ppb	17.0	450.02	0.0024	Pulse	0.1000	3
U	238	209	He	0.306	ppb	5.3	2460.34	0.0129	Pulse	0.1000	3

ISTD Table:

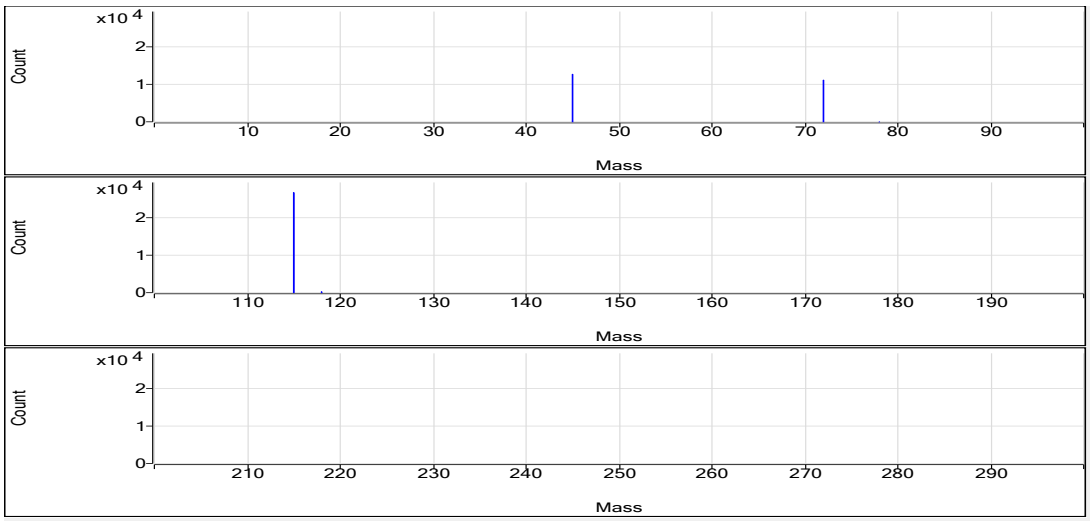
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1722821.90	0.5	97.8	Analog	0.1000	3
No Gas	Ge	72	903735.51	0.6	101.3	Pulse	0.1000	3
H2	Sc	45	126633.34	0.6	99.5	Pulse	0.1000	3
H2	Ge	72	111140.02	0.1	103.6	Pulse	0.1000	3
H2	In	115	266113.19	0.7	99.9	Pulse	0.1000	3
He	Sc	45	28629.05	2.7	100.4	Pulse	0.1000	3
He	Ge	72	55779.53	2.8	100.8	Pulse	0.1000	3
He	In	115	53877.07	1.9	100.4	Pulse	0.1000	3
He	Tb	159	246749.81	0.8	100.4	Pulse	0.1000	3
He	Bi	209	191206.91	0.3	100.2	Pulse	0.1000	3

No Gas

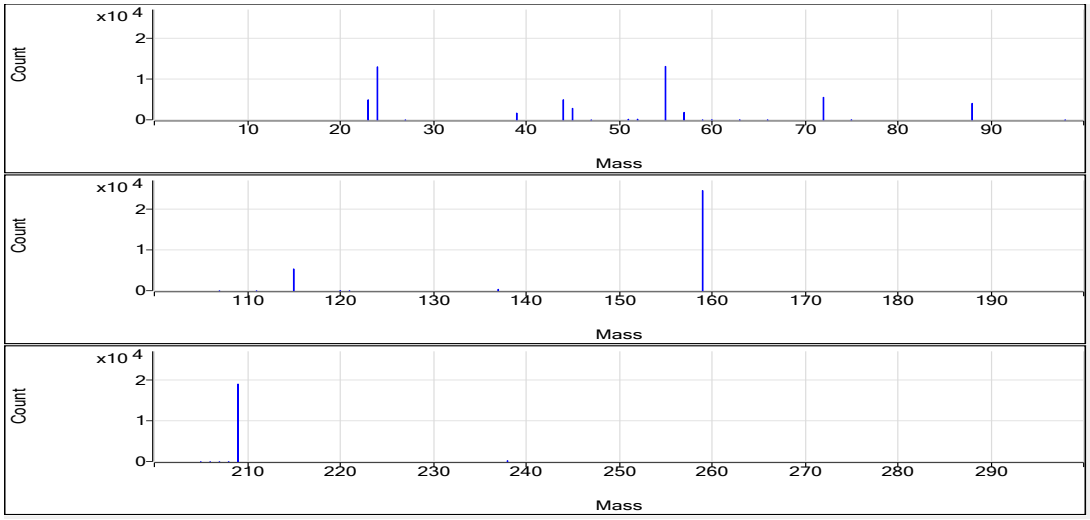


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.026	0	40.00	0.0004	1.287E-05
Be	9	1	No Gas	0.047	0	54.00	0.0004	1.287E-05
Se	78	2	H2	0.024	0	2.67	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.055	0	4.00	0.0004	1.451E-05
Na	23	3	He	586.198	1.7472	50386.66	0.0025	0.2648
Na	23	3	He	552.513	1.662	48630.43	0.0025	0.2648
Na	23	3	He	595.644	1.771	49212.71	0.0025	0.2648
Mg	24	3	He	3490.231	4.6116	132994.92	0.0013	0.005032
Mg	24	3	He	3331.247	4.4018	128798.11	0.0013	0.005032
Mg	24	3	He	3544.15	4.6828	130121.83	0.0013	0.005032
Al	27	3	He	5.323	0.0038	110.00	0.0004	0.001519
Al	27	3	He	2.026	0.0024	70.00	0.0004	0.001519
Al	27	3	He	0.651	0.0018	50.00	0.0004	0.001519
K	39	3	He	278.058	0.6329	18251.94	0.001	0.3627
K	39	3	He	209.862	0.5666	16579.89	0.001	0.3627
K	39	3	He	221.873	0.5783	16069.42	0.001	0.3627
Ca	44	3	He	29613.326	1.7228	49685.46	0.0001	0.002571
Ca	44	3	He	29103.54	1.6932	49544.84	0.0001	0.002571
Ca	44	3	He	30817.036	1.7928	49816.37	0.0001	0.002571
Ti	47	3	He	0.248	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.124	0.0141	406.01	0.0201	0.0116
V	51	3	He	0.096	0.0135	396.01	0.0201	0.0116
V	51	3	He	0.06	0.0128	356.01	0.0201	0.0116
Cr	52	3	He	0.268	0.0749	2160.23	0.0257	0.06801
Cr	52	3	He	-0.053	0.0666	1950.21	0.0257	0.06801
Cr	52	3	He	0.491	0.0806	2240.27	0.0257	0.06801
Mn	55	3	He	404.183	4.5834	132181.61	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	397.718	4.5102	131969.47	0.0113	0.004215
Mn	55	3	He	416.925	4.7278	131371.93	0.0113	0.004215
Fe	57	3	He	1242.041	0.6381	18402.24	0.0005	0.004099
Fe	57	3	He	1262.919	0.6488	18982.93	0.0005	0.004099
Fe	57	3	He	1291.484	0.6633	18432.37	0.0005	0.004099
Co	59	3	He	-0.001	0.0049	140.01	0.0518	0.004913
Co	59	3	He	0.024	0.0062	180.01	0.0518	0.004913
Co	59	3	He	0.037	0.0068	190.01	0.0518	0.004913
Ni	60	3	He	0.157	0.0079	440.02	0.0075	0.006695
Ni	60	3	He	-0.078	0.0061	350.02	0.0075	0.006695
Ni	60	3	He	0.069	0.0072	390.02	0.0075	0.006695
Cu	63	3	He	0.092	0.0052	290.01	0.0216	0.003198
Cu	63	3	He	0.103	0.0054	310.01	0.0216	0.003198
Cu	63	3	He	0.126	0.0059	320.02	0.0216	0.003198
Zn	66	3	He	0.508	0.0043	240.01	0.0026	0.002954
Zn	66	3	He	0.072	0.0031	180.01	0.0026	0.002954
Zn	66	3	He	0.423	0.0041	220.02	0.0026	0.002954
As	75	3	He	0.388	0.0013	70.00	0.002	0.0004943
As	75	3	He	0.248	0.001	56.00	0.002	0.0004943
As	75	3	He	0.447	0.0014	74.00	0.002	0.0004943
Sr	88	3	He	95.398	0.7747	40860.11	0.0081	0.0006852
Sr	88	3	He	94.478	0.7672	41983.21	0.0081	0.0006852
Sr	88	3	He	90.664	0.7363	39877.08	0.0081	0.0006852
Mo	98	3	He	0.093	0.0025	130.01	0.0205	0.0005587
Mo	98	3	He	0.071	0.002	110.00	0.0205	0.0005587
Mo	98	3	He	0.09	0.0024	130.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.01	0	0.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.044	0.0127	670.05	0.0146	0.01334
Sn	120	3	He	0.037	0.0139	760.05	0.0146	0.01334
Sn	120	3	He	-0.054	0.0126	680.05	0.0146	0.01334
Sb	121	3	He	0.016	0.0017	90.00	0.0142	0.001484
Sb	121	3	He	0.088	0.0027	150.01	0.0142	0.001484
Sb	121	3	He	0.025	0.0018	100.00	0.0142	0.001484
Ba	137	3	He	15.724	0.0728	3840.68	0.0046	0.000374
Ba	137	3	He	15.431	0.0715	3910.73	0.0046	0.000374
Ba	137	3	He	14.108	0.0654	3540.59	0.0046	0.000374
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.01	0.0282	0.00021
Pb	208	3	He	0.034	0.0023	230.01	0.0372	0.0009772
Pb	208	3	He	0.044	0.0026	300.01	0.0372	0.0009772
Pb	208	3	He	0.033	0.0022	150.01	0.0372	0.0009772
U	238	3	He	0.314	0.0132	2520.33	0.0417	8.729E-05
U	238	3	He	0.317	0.0133	2540.36	0.0417	8.729E-05
U	238	3	He	0.288	0.0121	2320.32	0.0417	8.729E-05
Sc	45	1	No Gas			1722768.88		
Sc	45	1	No Gas			1731421.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1714275.60		
Ge	72	1	No Gas			903737.33		
Ge	72	1	No Gas			898291.16		
Ge	72	1	No Gas			909178.03		
Sc	45	2	H2			126526.94		
Sc	45	2	H2			125909.40		
Sc	45	2	H2			127463.67		
Ge	72	2	H2			111059.68		
Ge	72	2	H2			111100.43		
Ge	72	2	H2			111259.96		
In	115	2	H2			267166.07		
In	115	2	H2			267289.08		
In	115	2	H2			263884.41		
Sc	45	3	He			28839.21		
Sc	45	3	He			29260.55		
Sc	45	3	He			27787.39		
Ge	72	3	He			55960.03		
Ge	72	3	He			57255.88		
Ge	72	3	He			54122.67		
In	115	3	He			52750.54		
In	115	3	He			54728.57		
In	115	3	He			54166.87		
Tb	159	3	He			245662.22		
Tb	159	3	He			248908.57		
Tb	159	3	He			245678.63		
Bi	209	3	He			191080.04		
Bi	209	3	He			190682.34		
Bi	209	3	He			191858.36		

Quantitation Report

Data File Name	089SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:06:19 PM
Sample Name	410-136258-S-31-A @5
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

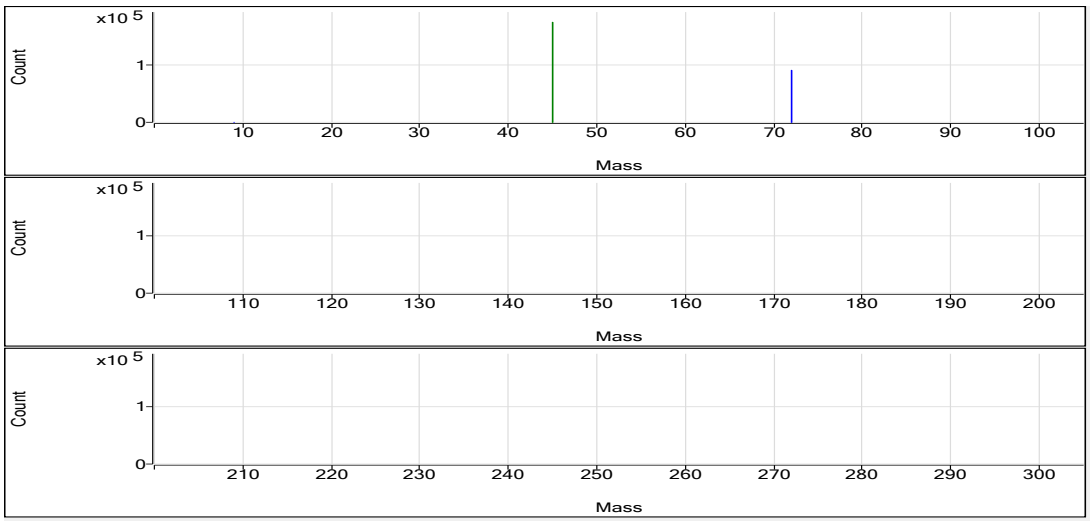
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	65.3	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.051	ppb	91.5	3.78	0.0000	Pulse	1.5000	3
Na	23	45	He	847.039	ppb	4.2	68325.28	2.4067	Pulse	0.1000	3
Mg	24	45	He	3008.343	ppb	0.9	112860.08	3.9756	Pulse	0.1000	3
Al	27	45	He	7.916	ppb	20.9	140.00	0.0049	Pulse	0.1000	3
K	39	45	He	635.967	ppb	5.9	27840.63	0.9806	Pulse	0.1000	3
Ca	44	45	He	23912.428	ppb	0.5	39507.62	1.3917	Pulse	0.1000	3
Ti	47	45	He	0.260	ppb	1.1	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.128	ppb	49.0	402.01	0.0142	Pulse	0.5000	3
Cr	52	45	He	0.177	ppb	116.4	2060.21	0.0726	Pulse	0.1000	3
Mn	55	45	He	237.639	ppb	0.7	76549.55	2.6965	Pulse	0.1000	3
Fe	57	45	He	322.331	ppb	4.8	4787.62	0.1686	Pulse	0.1000	3
Co	59	45	He	0.098	ppb	38.2	283.35	0.0100	Pulse	0.1000	3
Ni	60	72	He	0.485	ppb	24.0	583.36	0.0103	Pulse	0.1000	3
Cu	63	72	He	0.692	ppb	4.1	1026.75	0.0181	Pulse	0.1000	3
Zn	66	72	He	3.246	ppb	24.5	650.04	0.0115	Pulse	0.1000	3
As	75	72	He	0.615	ppb	10.7	96.00	0.0017	Pulse	0.5000	3
Sr	88	115	He	64.339	ppb	1.7	27734.62	0.5227	Pulse	0.1000	3
Mo	98	115	He	0.148	ppb	21.0	190.01	0.0036	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	814.3	26.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	57.8	2.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.063	ppb	66.2	756.72	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.103	ppb	30.4	156.67	0.0030	Pulse	0.1000	3
Ba	137	115	He	6.588	ppb	5.2	1630.16	0.0307	Pulse	0.1000	3
Tl	205	209	He	0.008	ppb	37.5	83.33	0.0004	Pulse	0.1000	3
Pb	208	209	He	0.097	ppb	16.9	883.38	0.0046	Pulse	0.1000	3
U	238	209	He	0.159	ppb	7.0	1293.45	0.0067	Pulse	0.1000	3

ISTD Table:

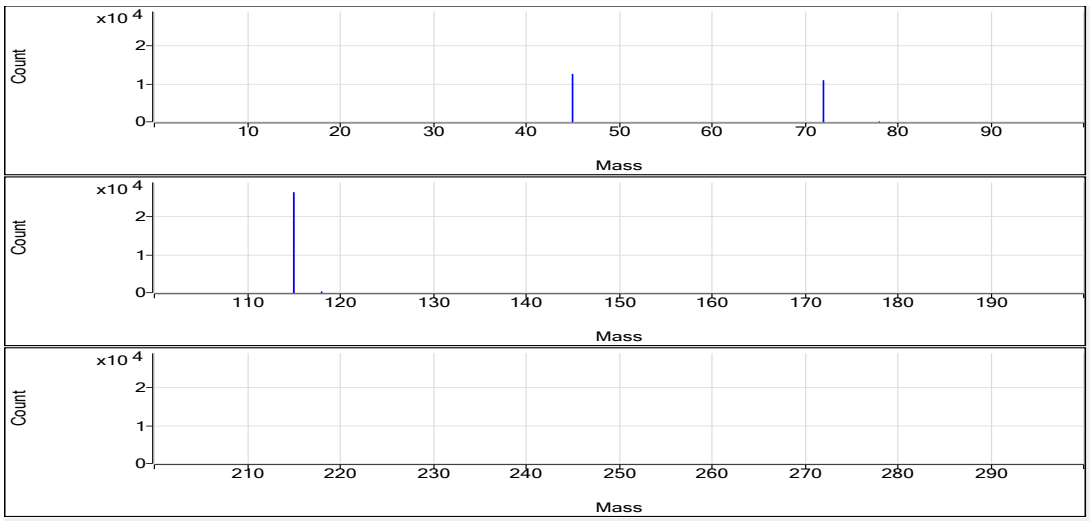
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1747865.39	1.1	99.2	Analog	0.1000	3
No Gas	Ge	72	909852.67	1.5	102.0	Pulse	0.1000	3
H2	Sc	45	126428.94	1.3	99.3	Pulse	0.1000	3
H2	Ge	72	109264.88	1.0	101.9	Pulse	0.1000	3
H2	In	115	265180.86	0.7	99.6	Pulse	0.1000	3
He	Sc	45	28388.48	0.4	99.6	Pulse	0.1000	3
He	Ge	72	56622.92	1.5	102.3	Pulse	0.1000	3
He	In	115	53063.66	0.5	98.9	Pulse	0.1000	3
He	Tb	159	247093.03	0.6	100.5	Pulse	0.1000	3
He	Bi	209	192773.75	1.3	101.0	Pulse	0.1000	3

No Gas

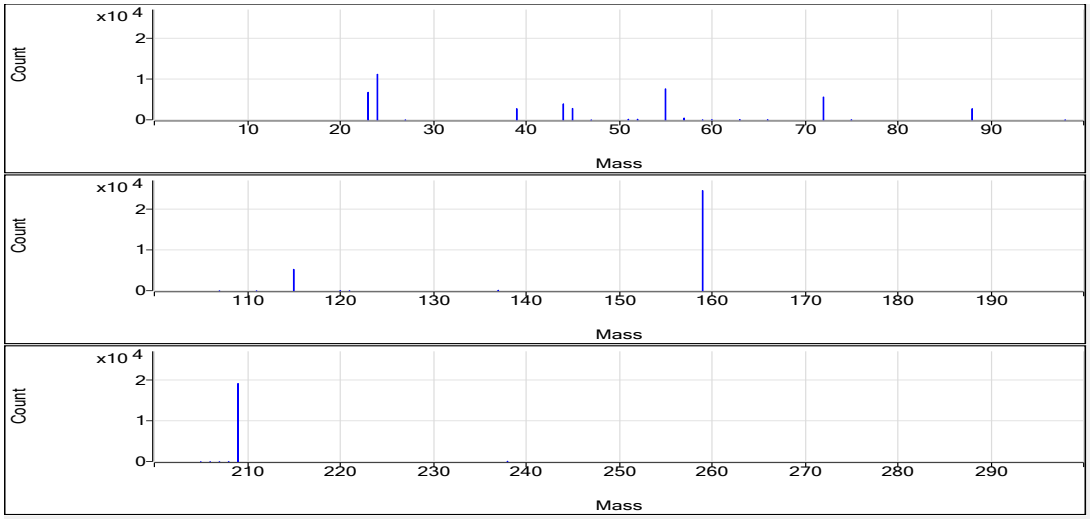


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.013	0	32.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.008	0	28.00	0.0004	1.287E-05
Se	78	2	H2	0.041	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.102	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Na	23	3	He	842.455	2.3952	68258.21	0.0025	0.2648
Na	23	3	He	884.611	2.5018	70971.09	0.0025	0.2648
Na	23	3	He	814.052	2.3233	65746.55	0.0025	0.2648
Mg	24	3	He	2990.515	3.9521	112627.49	0.0013	0.005032
Mg	24	3	He	3037.682	4.0143	113880.06	0.0013	0.005032
Mg	24	3	He	2996.831	3.9604	112072.69	0.0013	0.005032
Al	27	3	He	7.87	0.0049	140.00	0.0004	0.001519
Al	27	3	He	6.288	0.0042	120.00	0.0004	0.001519
Al	27	3	He	9.59	0.0057	160.01	0.0004	0.001519
K	39	3	He	673.296	1.0169	28979.64	0.001	0.3627
K	39	3	He	635.91	0.9806	27817.09	0.001	0.3627
K	39	3	He	598.696	0.9444	26725.17	0.001	0.3627
Ca	44	3	He	23915	1.3918	39664.80	0.0001	0.002571
Ca	44	3	He	24018.732	1.3978	39654.92	0.0001	0.002571
Ca	44	3	He	23803.552	1.3853	39203.13	0.0001	0.002571
Ti	47	3	He	0.257	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.26	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.262	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.132	0.0142	406.01	0.0201	0.0116
V	51	3	He	0.188	0.0154	436.01	0.0201	0.0116
V	51	3	He	0.063	0.0129	364.01	0.0201	0.0116
Cr	52	3	He	0.412	0.0786	2240.25	0.0257	0.06801
Cr	52	3	He	0.029	0.0687	1950.19	0.0257	0.06801
Cr	52	3	He	0.09	0.0703	1990.20	0.0257	0.06801
Mn	55	3	He	236.259	2.6809	76401.70	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	237.22	2.6918	76362.43	0.0113	0.004215
Mn	55	3	He	239.438	2.7169	76884.53	0.0113	0.004215
Fe	57	3	He	339.194	0.1772	5051.07	0.0005	0.004099
Fe	57	3	He	309.005	0.1618	4590.89	0.0005	0.004099
Fe	57	3	He	318.792	0.1668	4720.91	0.0005	0.004099
Co	59	3	He	0.095	0.0098	280.01	0.0518	0.004913
Co	59	3	He	0.137	0.012	340.02	0.0518	0.004913
Co	59	3	He	0.062	0.0081	230.01	0.0518	0.004913
Ni	60	3	He	0.461	0.0101	570.03	0.0075	0.006695
Ni	60	3	He	0.383	0.0095	550.03	0.0075	0.006695
Ni	60	3	He	0.612	0.0113	630.03	0.0075	0.006695
Cu	63	3	He	0.691	0.0181	1020.08	0.0216	0.003198
Cu	63	3	He	0.72	0.0187	1080.09	0.0216	0.003198
Cu	63	3	He	0.663	0.0175	980.07	0.0216	0.003198
Zn	66	3	He	4.146	0.0139	780.05	0.0026	0.002954
Zn	66	3	He	2.639	0.0099	570.03	0.0026	0.002954
Zn	66	3	He	2.953	0.0107	600.03	0.0026	0.002954
As	75	3	He	0.566	0.0016	90.00	0.002	0.0004943
As	75	3	He	0.689	0.0018	106.00	0.002	0.0004943
As	75	3	He	0.589	0.0016	92.00	0.002	0.0004943
Sr	88	3	He	63.737	0.5178	27617.62	0.0081	0.0006852
Sr	88	3	He	63.676	0.5173	27337.02	0.0081	0.0006852
Sr	88	3	He	65.604	0.5329	28249.22	0.0081	0.0006852
Mo	98	3	He	0.183	0.0043	230.01	0.0205	0.0005587
Mo	98	3	He	0.13	0.0032	170.01	0.0205	0.0005587
Mo	98	3	He	0.129	0.0032	170.01	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	0.075	0.0144	770.06	0.0146	0.01334
Sn	120	3	He	0.097	0.0148	780.05	0.0146	0.01334
Sn	120	3	He	0.016	0.0136	720.05	0.0146	0.01334
Sb	121	3	He	0.067	0.0024	130.00	0.0142	0.001484
Sb	121	3	He	0.122	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.121	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	6.39	0.0298	1590.15	0.0046	0.000374
Ba	137	3	He	6.984	0.0326	1720.16	0.0046	0.000374
Ba	137	3	He	6.39	0.0298	1580.16	0.0046	0.000374
Tl	205	3	He	0.007	0.0004	80.00	0.0282	0.00021
Tl	205	3	He	0.005	0.0004	70.00	0.0282	0.00021
Tl	205	3	He	0.011	0.0005	100.00	0.0282	0.00021
Pb	208	3	He	0.078	0.0039	430.02	0.0372	0.0009772
Pb	208	3	He	0.109	0.005	480.03	0.0372	0.0009772
Pb	208	3	He	0.104	0.0048	500.03	0.0372	0.0009772
U	238	3	He	0.156	0.0066	1290.12	0.0417	8.729E-05
U	238	3	He	0.171	0.0072	1390.14	0.0417	8.729E-05
U	238	3	He	0.149	0.0063	1200.09	0.0417	8.729E-05
Sc	45	1	No Gas			1768123.10		
Sc	45	1	No Gas			1728026.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1747446.69		
Ge	72	1	No Gas			925440.45		
Ge	72	1	No Gas			903503.27		
Ge	72	1	No Gas			900614.28		
Sc	45	2	H2			126406.45		
Sc	45	2	H2			128139.91		
Sc	45	2	H2			124740.47		
Ge	72	2	H2			109002.52		
Ge	72	2	H2			110444.07		
Ge	72	2	H2			108348.06		
In	115	2	H2			263735.68		
In	115	2	H2			264493.96		
In	115	2	H2			267312.93		
Sc	45	3	He			28498.48		
Sc	45	3	He			28368.56		
Sc	45	3	He			28298.41		
Ge	72	3	He			56291.77		
Ge	72	3	He			57606.67		
Ge	72	3	He			55970.33		
In	115	3	He			53343.23		
In	115	3	He			52851.73		
In	115	3	He			53011.90		
Tb	159	3	He			248032.46		
Tb	159	3	He			247884.12		
Tb	159	3	He			245362.52		
Bi	209	3	He			195230.76		
Bi	209	3	He			192763.28		
Bi	209	3	He			190327.20		

Quantitation Report

Data File Name	090SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:08:20 PM
Sample Name	410-136258-S-28-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

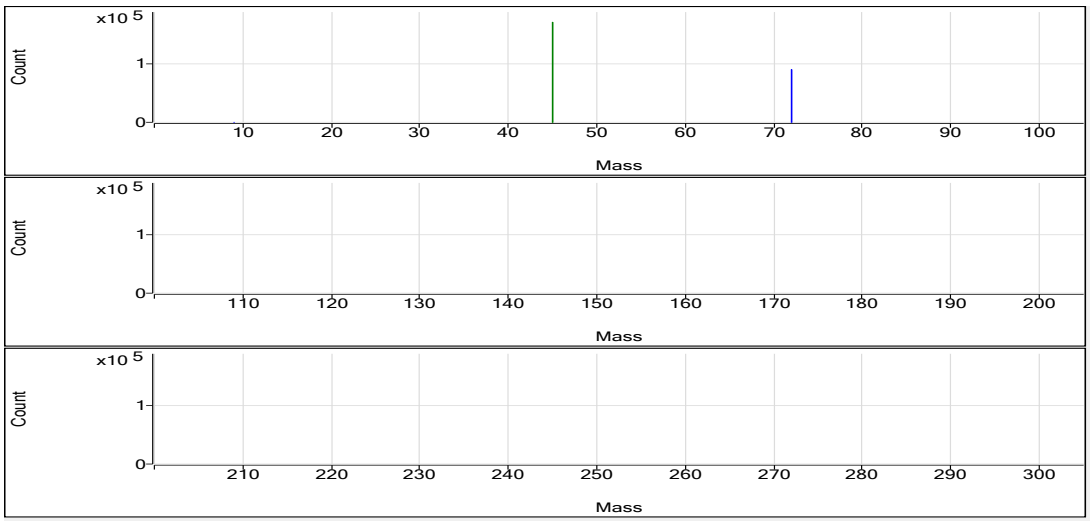
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.013	ppb	102.9	31.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	90.2	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	98.154	ppb	7.3	14474.15	0.5130	Pulse	0.1000	3
Mg	24	45	He	15.803	ppb	16.2	730.04	0.0259	Pulse	0.1000	3
Al	27	45	He	33.726	ppb	5.0	453.35	0.0161	Pulse	0.1000	3
K	39	45	He	33.824	ppb	29.0	11171.29	0.3956	Pulse	0.1000	3
Ca	44	45	He	82.236	ppb	50.3	206.68	0.0073	Pulse	0.1000	3
Ti	47	45	He	0.785	ppb	207.8	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.133	ppb	45.2	402.68	0.0143	Pulse	0.5000	3
Cr	52	45	He	0.210	ppb	73.1	2073.54	0.0734	Pulse	0.1000	3
Mn	55	45	He	3.102	ppb	8.0	1110.08	0.0394	Pulse	0.1000	3
Fe	57	45	He	34.251	ppb	15.1	610.04	0.0216	Pulse	0.1000	3
Co	59	45	He	0.024	ppb	80.9	173.34	0.0062	Pulse	0.1000	3
Ni	60	72	He	0.228	ppb	34.4	473.36	0.0084	Pulse	0.1000	3
Cu	63	72	He	0.180	ppb	20.0	400.02	0.0071	Pulse	0.1000	3
Zn	66	72	He	3.218	ppb	23.1	643.37	0.0114	Pulse	0.1000	3
As	75	72	He	0.061	ppb	72.1	34.67	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.301	ppb	18.6	166.67	0.0031	Pulse	0.1000	3
Mo	98	115	He	0.034	ppb	41.3	66.67	0.0013	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	4811.0	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.008	ppb	58.8	2.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.102	ppb	88.0	790.06	0.0148	Pulse	0.1000	3
Sb	121	115	He	0.045	ppb	145.6	113.34	0.0021	Pulse	0.1000	3
Ba	137	115	He	0.272	ppb	30.7	86.67	0.0016	Pulse	0.1000	3
Tl	205	209	He	0.007	ppb	88.4	80.00	0.0004	Pulse	0.1000	3
Pb	208	209	He	0.368	ppb	2.7	2856.91	0.0147	Pulse	0.1000	3
U	238	209	He	0.003	ppb	76.6	40.00	0.0002	Pulse	0.1000	3

ISTD Table:

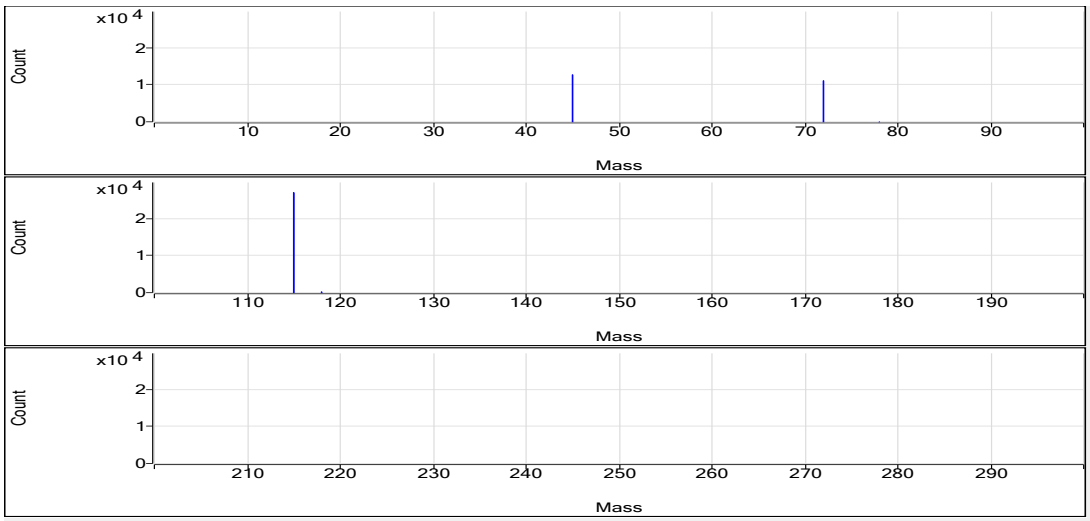
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1725468.62	1.5	98.0	Analog	0.1000	3
No Gas	Ge	72	909326.39	0.5	101.9	Pulse	0.1000	3
H2	Sc	45	127465.21	0.8	100.1	Pulse	0.1000	3
H2	Ge	72	111341.61	1.4	103.8	Pulse	0.1000	3
H2	In	115	271139.26	1.0	101.8	Pulse	0.1000	3
He	Sc	45	28228.14	2.4	99.0	Pulse	0.1000	3
He	Ge	72	56402.11	0.8	101.9	Pulse	0.1000	3
He	In	115	53217.29	0.7	99.2	Pulse	0.1000	3
He	Tb	159	246361.27	0.7	100.2	Pulse	0.1000	3
He	Bi	209	194751.98	1.0	102.0	Pulse	0.1000	3

No Gas

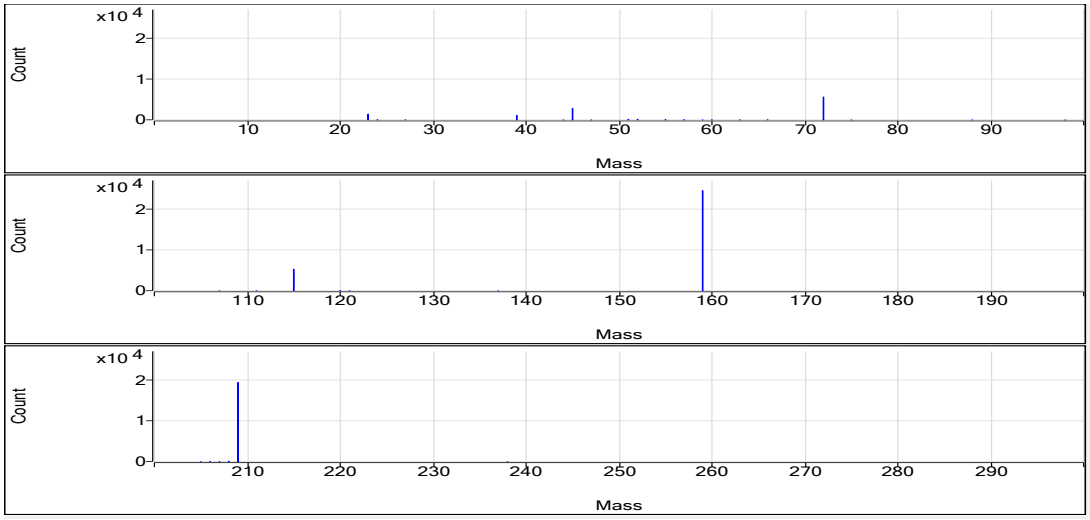


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.006	0	26.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.005	0	26.00	0.0004	1.287E-05
Se	78	2	H2	0.039	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Na	23	3	He	90.03	0.4925	14287.31	0.0025	0.2648
Na	23	3	He	100.854	0.5199	14487.52	0.0025	0.2648
Na	23	3	He	103.578	0.5268	14647.62	0.0025	0.2648
Mg	24	3	He	14.21	0.0238	690.04	0.0013	0.005032
Mg	24	3	He	18.755	0.0298	830.05	0.0013	0.005032
Mg	24	3	He	14.444	0.0241	670.04	0.0013	0.005032
Al	27	3	He	33.25	0.0159	460.02	0.0004	0.001519
Al	27	3	He	35.589	0.0169	470.02	0.0004	0.001519
Al	27	3	He	32.338	0.0155	430.02	0.0004	0.001519
K	39	3	He	45.143	0.4066	11795.20	0.001	0.3627
K	39	3	He	27.916	0.3899	10864.40	0.001	0.3627
K	39	3	He	28.414	0.3903	10854.28	0.001	0.3627
Ca	44	3	He	50.689	0.0055	160.01	0.0001	0.002571
Ca	44	3	He	66.935	0.0065	180.01	0.0001	0.002571
Ca	44	3	He	129.083	0.0101	280.01	0.0001	0.002571
Ti	47	3	He	0.243	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	2.617	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.126	0.0141	410.01	0.0201	0.0116
V	51	3	He	0.077	0.0131	366.01	0.0201	0.0116
V	51	3	He	0.196	0.0155	432.01	0.0201	0.0116
Cr	52	3	He	0.385	0.0779	2260.24	0.0257	0.06801
Cr	52	3	He	0.105	0.0707	1970.18	0.0257	0.06801
Cr	52	3	He	0.139	0.0716	1990.21	0.0257	0.06801
Mn	55	3	He	2.884	0.0369	1070.08	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	3.049	0.0388	1080.08	0.0113	0.004215
Mn	55	3	He	3.374	0.0424	1180.09	0.0113	0.004215
Fe	57	3	He	38.57	0.0238	690.04	0.0005	0.004099
Fe	57	3	He	28.528	0.0187	520.03	0.0005	0.004099
Fe	57	3	He	35.654	0.0223	620.04	0.0005	0.004099
Co	59	3	He	0.005	0.0052	150.01	0.0518	0.004913
Co	59	3	He	0.044	0.0072	200.01	0.0518	0.004913
Co	59	3	He	0.023	0.0061	170.01	0.0518	0.004913
Ni	60	3	He	0.212	0.0083	470.02	0.0075	0.006695
Ni	60	3	He	0.158	0.0079	440.02	0.0075	0.006695
Ni	60	3	He	0.313	0.009	510.03	0.0075	0.006695
Cu	63	3	He	0.203	0.0076	430.02	0.0216	0.003198
Cu	63	3	He	0.2	0.0075	420.02	0.0216	0.003198
Cu	63	3	He	0.139	0.0062	350.02	0.0216	0.003198
Zn	66	3	He	2.492	0.0095	540.03	0.0026	0.002954
Zn	66	3	He	3.979	0.0134	750.04	0.0026	0.002954
Zn	66	3	He	3.182	0.0113	640.04	0.0026	0.002954
As	75	3	He	0.053	0.0006	34.00	0.002	0.0004943
As	75	3	He	0.022	0.0005	30.00	0.002	0.0004943
As	75	3	He	0.109	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	0.354	0.0036	190.01	0.0081	0.0006852
Sr	88	3	He	0.243	0.0027	140.00	0.0081	0.0006852
Sr	88	3	He	0.307	0.0032	170.01	0.0081	0.0006852
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.038	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.046	0.0015	80.00	0.0205	0.0005587
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.112	0.015	800.06	0.0146	0.01334
Sn	120	3	He	0.008	0.0135	710.05	0.0146	0.01334
Sn	120	3	He	0.187	0.0161	860.06	0.0146	0.01334
Sb	121	3	He	0.054	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	-0.024	0.0011	60.00	0.0142	0.001484
Sb	121	3	He	0.106	0.003	160.01	0.0142	0.001484
Ba	137	3	He	0.203	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.248	0.0015	80.00	0.0046	0.000374
Ba	137	3	He	0.365	0.0021	110.00	0.0046	0.000374
Tl	205	3	He	0.011	0.0005	100.00	0.0282	0.00021
Tl	205	3	He	0.011	0.0005	100.00	0.0282	0.00021
Tl	205	3	He	0	0.0002	40.00	0.0282	0.00021
Pb	208	3	He	0.376	0.015	1500.16	0.0372	0.0009772
Pb	208	3	He	0.37	0.0148	1470.15	0.0372	0.0009772
Pb	208	3	He	0.357	0.0143	1490.13	0.0372	0.0009772
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1705294.04		
Sc	45	1	No Gas			1715558.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1755553.41		
Ge	72	1	No Gas			906103.42		
Ge	72	1	No Gas			906994.44		
Ge	72	1	No Gas			914881.31		
Sc	45	2	H2			127345.15		
Sc	45	2	H2			126496.69		
Sc	45	2	H2			128553.79		
Ge	72	2	H2			112481.32		
Ge	72	2	H2			109607.76		
Ge	72	2	H2			111935.75		
In	115	2	H2			268491.23		
In	115	2	H2			270857.87		
In	115	2	H2			274068.69		
Sc	45	3	He			29009.69		
Sc	45	3	He			27867.60		
Sc	45	3	He			27807.13		
Ge	72	3	He			56793.53		
Ge	72	3	He			55890.59		
Ge	72	3	He			56522.22		
In	115	3	He			53403.38		
In	115	3	He			52770.89		
In	115	3	He			53494.20		
Tb	159	3	He			248142.09		
Tb	159	3	He			244968.59		
Tb	159	3	He			245973.12		
Bi	209	3	He			196984.18		
Bi	209	3	He			193100.31		
Bi	209	3	He			194171.46		

Quantitation Report

Data File Name	091SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:10:19 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

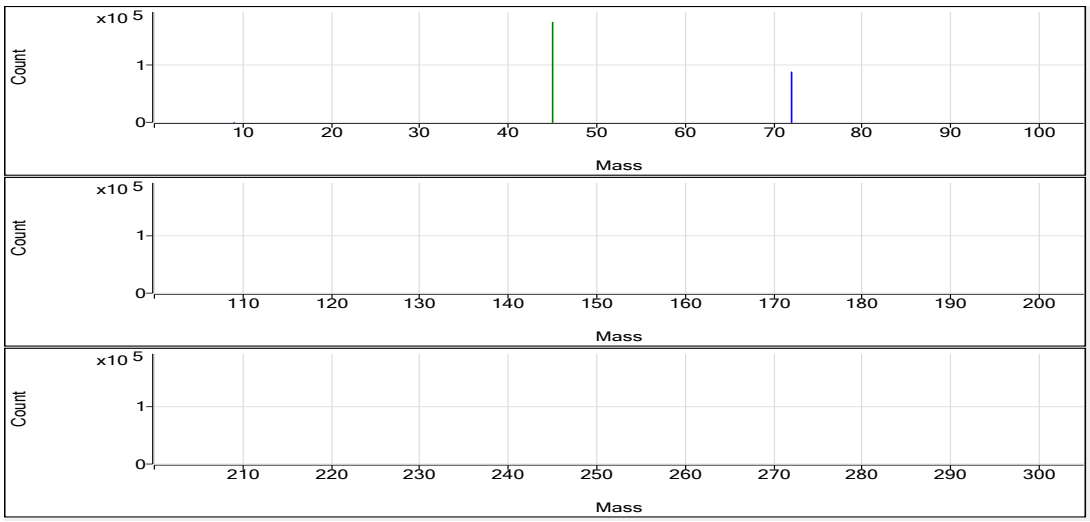
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.024	ppb	32.8	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	112.8	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	85.595	ppb	6.1	13693.38	0.4813	Pulse	0.1000	3
Mg	24	45	He	8.423	ppb	25.7	460.02	0.0161	Pulse	0.1000	3
Al	27	45	He	-0.532	ppb	N/A	36.67	0.0013	Pulse	0.1000	3
K	39	45	He	17.885	ppb	101.4	10821.12	0.3801	Pulse	0.1000	3
Ca	44	45	He	24.209	ppb	49.1	113.33	0.0040	Pulse	0.1000	3
Ti	47	45	He	0.517	ppb	228.7	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.052	ppb	88.7	360.01	0.0126	Pulse	0.5000	3
Cr	52	45	He	0.070	ppb	107.5	1986.88	0.0698	Pulse	0.1000	3
Mn	55	45	He	0.683	ppb	13.5	340.02	0.0119	Pulse	0.1000	3
Fe	57	45	He	3.712	ppb	137.5	170.01	0.0060	Pulse	0.1000	3
Co	59	45	He	0.036	ppb	112.5	193.34	0.0068	Pulse	0.1000	3
Ni	60	72	He	0.107	ppb	132.3	406.69	0.0075	Pulse	0.1000	3
Cu	63	72	He	0.062	ppb	28.3	246.68	0.0045	Pulse	0.1000	3
Zn	66	72	He	0.255	ppb	183.2	196.68	0.0036	Pulse	0.1000	3
As	75	72	He	0.068	ppb	154.9	34.00	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.154	ppb	36.8	103.34	0.0019	Pulse	0.1000	3
Mo	98	115	He	-0.012	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	208.3	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	86.4	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.000	ppb	8942.4	713.37	0.0133	Pulse	0.1000	3
Sb	121	115	He	0.032	ppb	229.9	103.34	0.0019	Pulse	0.1000	3
Ba	137	115	He	0.081	ppb	2.7	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	26.2	133.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.020	ppb	29.1	326.68	0.0017	Pulse	0.1000	3
U	238	209	He	0.007	ppb	83.1	73.34	0.0004	Pulse	0.1000	3

ISTD Table:

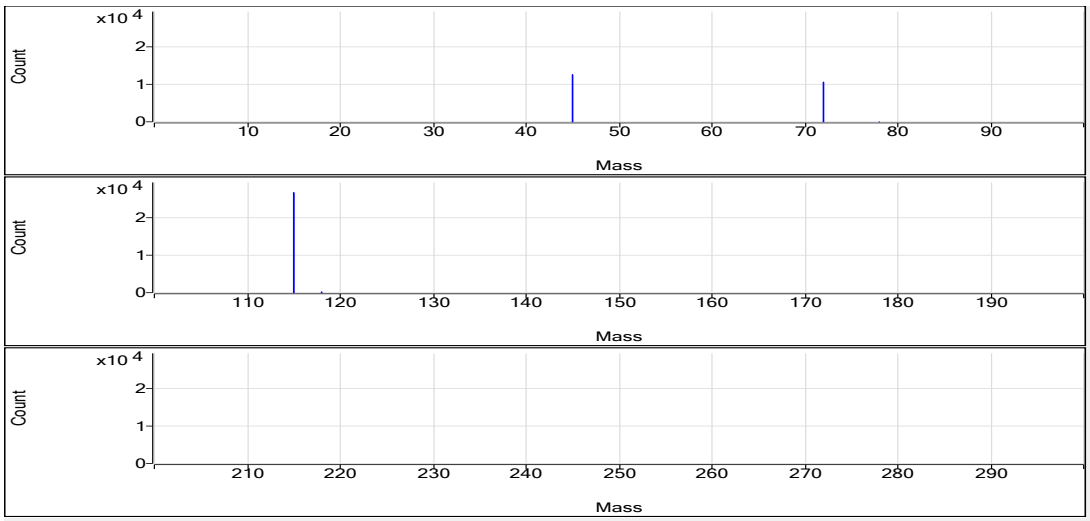
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1738300.60	0.8	98.7	Analog	0.1000	3
No Gas	Ge	72	875341.05	0.8	98.1	Pulse	0.1000	3
H2	Sc	45	125843.91	0.9	98.8	Pulse	0.1000	3
H2	Ge	72	106161.83	0.2	99.0	Pulse	0.1000	3
H2	In	115	266841.54	0.7	100.2	Pulse	0.1000	3
He	Sc	45	28458.71	1.3	99.8	Pulse	0.1000	3
He	Ge	72	54283.78	0.2	98.1	Pulse	0.1000	3
He	In	115	53458.34	1.4	99.6	Pulse	0.1000	3
He	Tb	159	246140.02	0.8	100.2	Pulse	0.1000	3
He	Bi	209	189872.56	0.9	99.5	Pulse	0.1000	3

No Gas

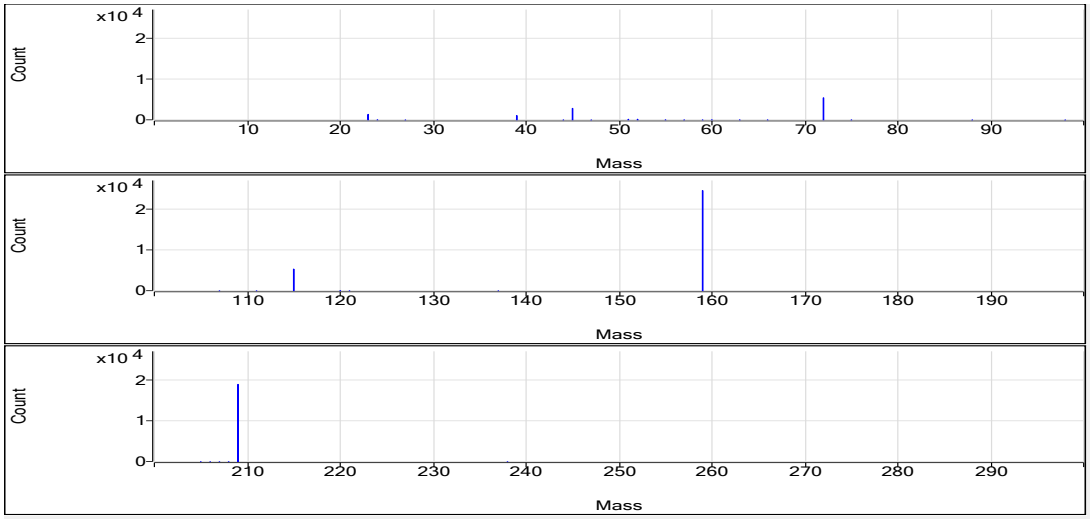


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.032	0	44.00	0.0004	1.287E-05
Be	9	1	No Gas	0.017	0	34.00	0.0004	1.287E-05
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Se	78	2	H2	0.027	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.043	0	3.33	0.0004	1.451E-05
Se	78	2	H2	-0.005	0	1.33	0.0004	1.451E-05
Na	23	3	He	79.604	0.4661	13466.44	0.0025	0.2648
Na	23	3	He	87.796	0.4868	13786.88	0.0025	0.2648
Na	23	3	He	89.385	0.4909	13826.82	0.0025	0.2648
Mg	24	3	He	10.35	0.0187	540.03	0.0013	0.005032
Mg	24	3	He	6.087	0.0131	370.02	0.0013	0.005032
Mg	24	3	He	8.83	0.0167	470.02	0.0013	0.005032
Al	27	3	He	-1.113	0.001	30.00	0.0004	0.001519
Al	27	3	He	1.392	0.0021	60.00	0.0004	0.001519
Al	27	3	He	-1.875	0.0007	20.00	0.0004	0.001519
K	39	3	He	36.904	0.3986	11515.09	0.001	0.3627
K	39	3	He	0.791	0.3635	10293.91	0.001	0.3627
K	39	3	He	15.961	0.3782	10654.36	0.001	0.3627
Ca	44	3	He	33.202	0.0045	130.00	0.0001	0.002571
Ca	44	3	He	28.685	0.0042	120.00	0.0001	0.002571
Ca	44	3	He	10.741	0.0032	90.00	0.0001	0.002571
Ti	47	3	He	0.247	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	1.811	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.081	0.0132	382.01	0.0201	0.0116
V	51	3	He	0.077	0.0131	372.01	0.0201	0.0116
V	51	3	He	-0.001	0.0116	326.01	0.0201	0.0116
Cr	52	3	He	0.142	0.0717	2070.23	0.0257	0.06801
Cr	52	3	He	0.075	0.0699	1980.20	0.0257	0.06801
Cr	52	3	He	-0.008	0.0678	1910.21	0.0257	0.06801
Mn	55	3	He	0.667	0.0118	340.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.781	0.0131	370.02	0.0113	0.004215
Mn	55	3	He	0.599	0.011	310.01	0.0113	0.004215
Fe	57	3	He	-0.57	0.0038	110.00	0.0005	0.004099
Fe	57	3	He	2.348	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	9.359	0.0089	250.01	0.0005	0.004099
Co	59	3	He	0.039	0.0069	200.01	0.0518	0.004913
Co	59	3	He	0.076	0.0088	250.01	0.0518	0.004913
Co	59	3	He	-0.006	0.0046	130.00	0.0518	0.004913
Ni	60	3	He	0.189	0.0081	440.02	0.0075	0.006695
Ni	60	3	He	0.188	0.0081	440.02	0.0075	0.006695
Ni	60	3	He	-0.056	0.0063	340.02	0.0075	0.006695
Cu	63	3	He	0.082	0.005	270.01	0.0216	0.003198
Cu	63	3	He	0.056	0.0044	240.01	0.0216	0.003198
Cu	63	3	He	0.048	0.0042	230.01	0.0216	0.003198
Zn	66	3	He	0.767	0.005	270.01	0.0026	0.002954
Zn	66	3	He	-0.144	0.0026	140.01	0.0026	0.002954
Zn	66	3	He	0.14	0.0033	180.01	0.0026	0.002954
As	75	3	He	0.086	0.0007	36.00	0.002	0.0004943
As	75	3	He	0.161	0.0008	44.00	0.002	0.0004943
As	75	3	He	-0.045	0.0004	22.00	0.002	0.0004943
Sr	88	3	He	0.121	0.0017	90.01	0.0081	0.0006852
Sr	88	3	He	0.122	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.22	0.0025	130.01	0.0081	0.0006852
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	-0.018	0.0002	10.00	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.002	0.0133	720.04	0.0146	0.01334
Sn	120	3	He	-0.02	0.0131	700.04	0.0146	0.01334
Sn	120	3	He	0.023	0.0137	720.04	0.0146	0.01334
Sb	121	3	He	0.065	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	-0.052	0.0007	40.00	0.0142	0.001484
Sb	121	3	He	0.083	0.0027	140.01	0.0142	0.001484
Ba	137	3	He	0.079	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.084	0.0008	40.00	0.0046	0.000374
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Tl	205	3	He	0.023	0.0009	160.01	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Pb	208	3	He	0.016	0.0016	140.01	0.0372	0.0009772
Pb	208	3	He	0.027	0.002	200.01	0.0372	0.0009772
Pb	208	3	He	0.017	0.0016	170.01	0.0372	0.0009772
U	238	3	He	0	0.0001	20.00	0.0417	8.729E-05
U	238	3	He	0.009	0.0005	90.01	0.0417	8.729E-05
U	238	3	He	0.012	0.0006	110.01	0.0417	8.729E-05
Sc	45	1	No Gas			1723455.44		
Sc	45	1	No Gas			1751956.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739489.82		
Ge	72	1	No Gas			873179.75		
Ge	72	1	No Gas			882944.67		
Ge	72	1	No Gas			869898.74		
Sc	45	2	H2			126869.33		
Sc	45	2	H2			124610.33		
Sc	45	2	H2			126052.07		
Ge	72	2	H2			106322.56		
Ge	72	2	H2			106172.30		
Ge	72	2	H2			105990.63		
In	115	2	H2			264619.23		
In	115	2	H2			267697.34		
In	115	2	H2			268208.06		
Sc	45	3	He			28889.55		
Sc	45	3	He			28318.54		
Sc	45	3	He			28168.03		
Ge	72	3	He			54304.24		
Ge	72	3	He			54363.90		
Ge	72	3	He			54183.19		
In	115	3	He			54095.94		
In	115	3	He			53623.95		
In	115	3	He			52670.12		
Tb	159	3	He			248492.73		
Tb	159	3	He			244796.52		
Tb	159	3	He			245130.82		
Bi	209	3	He			190660.84		
Bi	209	3	He			187819.68		
Bi	209	3	He			191137.15		

Quantitation Report

Data File Name	092_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:12:20 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

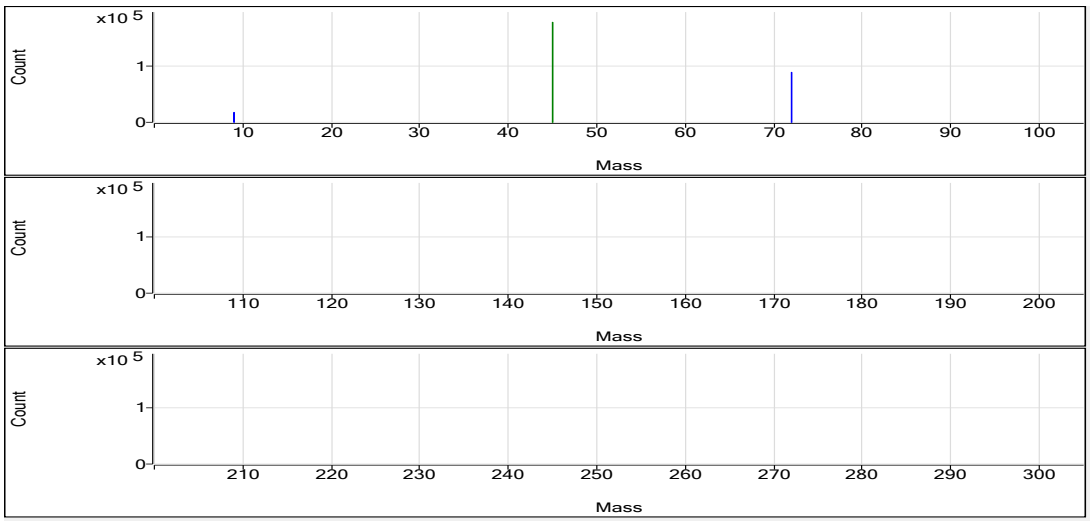
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.687	ppb	7.2	35401.21	0.0200	Pulse	0.5000	3
Se	78	72	H2	53.762	ppb	0.5	2285.52	0.0210	Pulse	1.5000	3
Na	23	45	He	5241.495	ppb	0.3	387800.93	13.5190	Pulse	0.1000	3
Mg	24	45	He	5202.202	ppb	0.9	197103.92	6.8711	Pulse	0.1000	3
Al	27	45	He	5158.000	ppb	1.3	63852.48	2.2259	Pulse	0.1000	3
K	39	45	He	5150.223	ppb	1.5	153937.33	5.3665	Pulse	0.1000	3
Ca	44	45	He	5204.767	ppb	6.1	8746.27	0.3049	Pulse	0.1000	3
Ti	47	45	He	5162.804	ppb	1.6	68063.20	2.3728	Pulse	0.1000	3
V	51	45	He	518.643	ppb	0.3	298749.32	10.4146	Pulse	0.5000	3
Cr	52	45	He	521.453	ppb	0.8	386391.39	13.4699	Pulse	0.1000	3
Mn	55	45	He	518.153	ppb	0.7	168515.98	5.8746	Pulse	0.1000	3
Fe	57	45	He	5181.911	ppb	0.7	75993.29	2.6492	Pulse	0.1000	3
Co	59	45	He	512.111	ppb	0.4	761320.04	26.5403	Pulse	0.1000	3
Ni	60	72	He	529.968	ppb	3.8	214651.65	3.9550	Pulse	0.1000	3
Cu	63	72	He	528.235	ppb	3.9	619065.71	11.4066	Pulse	0.1000	3
Zn	66	72	He	525.702	ppb	2.1	75237.61	1.3856	Pulse	0.1000	3
As	75	72	He	524.826	ppb	2.8	55652.86	1.0252	Pulse	0.5000	3
Sr	88	115	He	52.652	ppb	1.5	22621.98	0.4279	Pulse	0.1000	3
Mo	98	115	He	51.384	ppb	2.8	55627.51	1.0524	Pulse	0.1000	3
Ag	107	115	He	52.619	ppb	2.5	119752.91	2.2655	Pulse	0.1000	3
Cd	111	115	He	52.193	ppb	0.9	13792.85	0.2609	Pulse	0.5000	3
Sn	120	115	He	52.220	ppb	1.6	41065.05	0.7766	Pulse	0.1000	3
Sb	121	115	He	51.431	ppb	1.5	38765.02	0.7333	Pulse	0.1000	3
Ba	137	115	He	516.881	ppb	1.8	125901.47	2.3816	Pulse	0.1000	3
Tl	205	209	He	51.372	ppb	1.0	278501.32	1.4501	Pulse	0.1000	3
Pb	208	209	He	50.902	ppb	0.7	364230.53	1.8964	Pulse	0.1000	3
U	238	209	He	51.022	ppb	0.3	408824.54	2.1286	Pulse	0.1000	3

ISTD Table:

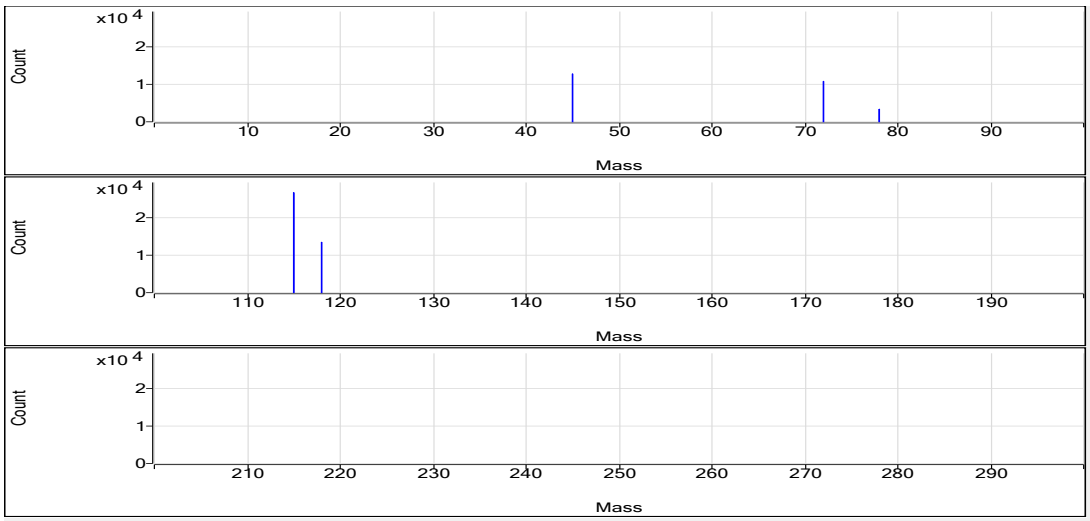
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1772243.88	0.6	100.6	Analog	0.1000	3
No Gas	Ge	72	886638.19	0.3	99.4	Pulse	0.1000	3
H2	Sc	45	128392.41	1.7	100.8	Pulse	0.1000	3
H2	Ge	72	108614.69	0.1	101.3	Pulse	0.1000	3
H2	In	115	267977.61	0.3	100.6	Pulse	0.1000	3
He	Sc	45	28685.71	0.3	100.6	Pulse	0.1000	3
He	Ge	72	54323.67	3.6	98.2	Pulse	0.1000	3
He	In	115	52871.78	1.5	98.5	Pulse	0.1000	3
He	Tb	159	244778.92	1.1	99.6	Pulse	0.1000	3
He	Bi	209	192066.01	0.8	100.6	Pulse	0.1000	3

No Gas

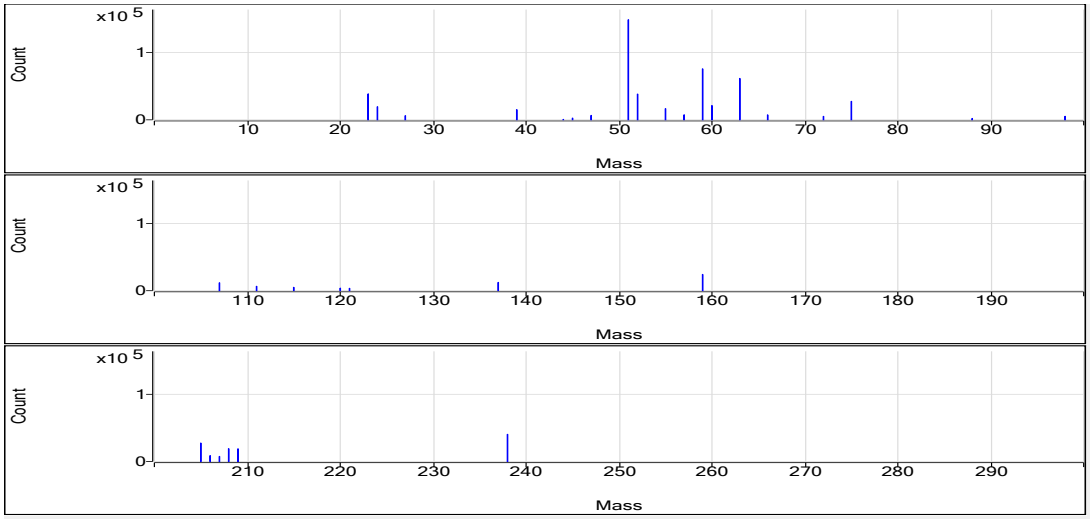


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.795	0.0184	32876.04	0.0004	1.287E-05
Be	9	1	No Gas	51.175	0.0202	35546.02	0.0004	1.287E-05
Be	9	1	No Gas	54.092	0.0213	37781.56	0.0004	1.287E-05
Se	78	2	H2	53.654	0.021	2280.85	0.0004	1.451E-05
Se	78	2	H2	53.584	0.021	2276.19	0.0004	1.451E-05
Se	78	2	H2	54.047	0.0212	2299.52	0.0004	1.451E-05
Na	23	3	He	5241.927	13.5201	389233.04	0.0025	0.2648
Na	23	3	He	5224.4	13.4758	386199.60	0.0025	0.2648
Na	23	3	He	5258.158	13.5611	387970.15	0.0025	0.2648
Mg	24	3	He	5221.815	6.897	198560.33	0.0013	0.005032
Mg	24	3	He	5150.732	6.8032	194972.09	0.0013	0.005032
Mg	24	3	He	5234.058	6.9132	197779.35	0.0013	0.005032
Al	27	3	He	5163.47	2.2283	64150.32	0.0004	0.001519
Al	27	3	He	5220.324	2.2528	64562.38	0.0004	0.001519
Al	27	3	He	5090.206	2.1967	62844.75	0.0004	0.001519
K	39	3	He	5063.249	5.282	152064.60	0.001	0.3627
K	39	3	He	5203.045	5.4178	155268.18	0.001	0.3627
K	39	3	He	5184.375	5.3997	154479.22	0.001	0.3627
Ca	44	3	He	4926.253	0.2887	8312.70	0.0001	0.002571
Ca	44	3	He	5549.867	0.325	9313.25	0.0001	0.002571
Ca	44	3	He	5138.181	0.3011	8612.86	0.0001	0.002571
Ti	47	3	He	5103.633	2.3456	67527.04	0.0005	0.0002328
Ti	47	3	He	5255.068	2.4152	69215.52	0.0005	0.0002328
Ti	47	3	He	5129.709	2.3575	67447.05	0.0005	0.0002328
V	51	3	He	517.015	10.382	298889.09	0.0201	0.0116
V	51	3	He	520.326	10.4484	299438.69	0.0201	0.0116
V	51	3	He	518.587	10.4135	297920.19	0.0201	0.0116
Cr	52	3	He	518.413	13.3918	385539.88	0.0257	0.06801
Cr	52	3	He	525.867	13.5834	389283.63	0.0257	0.06801
Cr	52	3	He	520.079	13.4346	384350.66	0.0257	0.06801
Mn	55	3	He	514.693	5.8354	167997.22	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	522.208	5.9206	169676.44	0.0113	0.004215
Mn	55	3	He	517.559	5.8679	167874.29	0.0113	0.004215
Fe	57	3	He	5154.744	2.6353	75869.37	0.0005	0.004099
Fe	57	3	He	5167.923	2.6421	75718.46	0.0005	0.004099
Fe	57	3	He	5223.066	2.6702	76392.05	0.0005	0.004099
Co	59	3	He	509.687	26.4147	760458.74	0.0518	0.004913
Co	59	3	He	513.644	26.6197	762890.46	0.0518	0.004913
Co	59	3	He	513.002	26.5864	760610.93	0.0518	0.004913
Ni	60	3	He	518.309	3.8681	214788.82	0.0075	0.006695
Ni	60	3	He	518.274	3.8678	214191.21	0.0075	0.006695
Ni	60	3	He	553.32	4.1289	214974.92	0.0075	0.006695
Cu	63	3	He	515.183	11.1248	617739.37	0.0216	0.003198
Cu	63	3	He	517.515	11.1751	618850.73	0.0216	0.003198
Cu	63	3	He	552.007	11.9198	620607.02	0.0216	0.003198
Zn	66	3	He	526.59	1.3879	77066.93	0.0026	0.002954
Zn	66	3	He	514.155	1.3552	75046.70	0.0026	0.002954
Zn	66	3	He	536.362	1.4136	73599.20	0.0026	0.002954
As	75	3	He	516.409	1.0087	56012.91	0.002	0.0004943
As	75	3	He	516.107	1.0081	55828.20	0.002	0.0004943
As	75	3	He	541.962	1.0586	55117.48	0.002	0.0004943
Sr	88	3	He	52.982	0.4305	23149.58	0.0081	0.0006852
Sr	88	3	He	51.748	0.4205	22127.82	0.0081	0.0006852
Sr	88	3	He	53.226	0.4325	22588.53	0.0081	0.0006852
Mo	98	3	He	50.27	1.0296	55359.54	0.0205	0.0005587
Mo	98	3	He	50.856	1.0416	54807.71	0.0205	0.0005587
Mo	98	3	He	53.025	1.086	56715.29	0.0205	0.0005587
Ag	107	3	He	51.121	2.201	118348.01	0.043	0.0004367
Ag	107	3	He	53.489	2.303	121182.03	0.043	0.0004367
Ag	107	3	He	53.246	2.2925	119728.68	0.043	0.0004367
Cd	111	3	He	51.683	0.2583	13890.93	0.005	1.253E-05
Cd	111	3	He	52.667	0.2633	13852.91	0.005	1.253E-05
Cd	111	3	He	52.229	0.2611	13634.71	0.005	1.253E-05
Sn	120	3	He	53.058	0.7889	42415.78	0.0146	0.01334
Sn	120	3	He	51.433	0.7651	40259.11	0.0146	0.01334
Sn	120	3	He	52.17	0.7759	40520.25	0.0146	0.01334
Sb	121	3	He	50.684	0.7226	38855.40	0.0142	0.001484
Sb	121	3	He	52.222	0.7445	39176.05	0.0142	0.001484
Sb	121	3	He	51.388	0.7327	38263.62	0.0142	0.001484
Ba	137	3	He	506.598	2.3343	125511.43	0.0046	0.000374
Ba	137	3	He	524.152	2.4151	127084.68	0.0046	0.000374
Ba	137	3	He	519.892	2.3955	125108.30	0.0046	0.000374
Tl	205	3	He	50.795	1.4338	275783.82	0.0282	0.00021
Tl	205	3	He	51.521	1.4543	281212.95	0.0282	0.00021
Tl	205	3	He	51.8	1.4621	278507.20	0.0282	0.00021
Pb	208	3	He	51.026	1.9011	195826.74	0.0372	0.0009772
Pb	208	3	He	50.48	1.8807	192334.72	0.0372	0.0009772
Pb	208	3	He	51.2	1.9075	194962.85	0.0372	0.0009772
U	238	3	He	51.09	2.1314	409974.33	0.0417	8.729E-05
U	238	3	He	50.836	2.1208	410100.97	0.0417	8.729E-05
U	238	3	He	51.141	2.1336	406398.31	0.0417	8.729E-05
Sc	45	1	No Gas			1782345.60		
Sc	45	1	No Gas			1762251.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1772134.50		
Ge	72	1	No Gas			887519.99		
Ge	72	1	No Gas			883366.16		
Ge	72	1	No Gas			889028.42		
Sc	45	2	H2			127635.95		
Sc	45	2	H2			130833.51		
Sc	45	2	H2			126707.76		
Ge	72	2	H2			108611.13		
Ge	72	2	H2			108529.89		
Ge	72	2	H2			108703.04		
In	115	2	H2			268471.17		
In	115	2	H2			268490.70		
In	115	2	H2			266970.95		
Sc	45	3	He			28789.27		
Sc	45	3	He			28658.85		
Sc	45	3	He			28609.01		
Ge	72	3	He			55528.13		
Ge	72	3	He			55377.46		
Ge	72	3	He			52065.43		
In	115	3	He			54066.04		
In	115	3	He			52901.85		
In	115	3	He			52509.80		
Tb	159	3	He			244652.81		
Tb	159	3	He			247515.45		
Tb	159	3	He			242168.49		
Bi	209	3	He			192348.92		
Bi	209	3	He			193370.49		
Bi	209	3	He			190478.63		

Quantitation Report

Data File Name	093_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:14:19 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

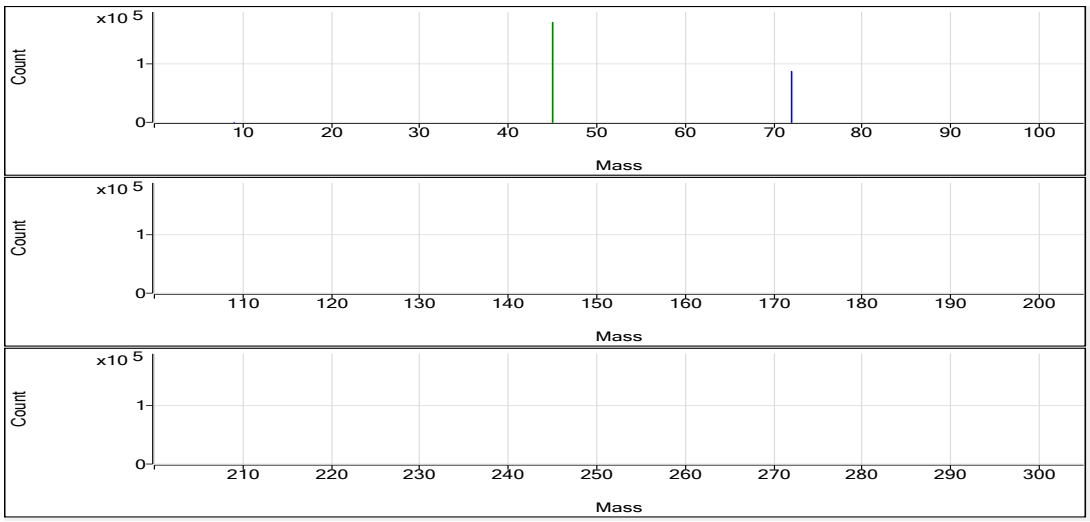
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.227	ppb	3.3	176.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.091	ppb	46.5	5.33	0.0001	Pulse	1.5000	3
Na	23	45	He	60.989	ppb	10.8	11925.18	0.4191	Pulse	0.1000	3
Mg	24	45	He	6.387	ppb	9.4	383.35	0.0135	Pulse	0.1000	3
Al	27	45	He	0.783	ppb	245.1	53.33	0.0019	Pulse	0.1000	3
K	39	45	He	0.537	ppb	8101.6	10324.04	0.3633	Pulse	0.1000	3
Ca	44	45	He	14.186	ppb	64.1	96.67	0.0034	Pulse	0.1000	3
Ti	47	45	He	5.057	ppb	41.1	73.34	0.0026	Pulse	0.1000	3
V	51	45	He	0.213	ppb	14.6	452.01	0.0159	Pulse	0.5000	3
Cr	52	45	He	0.124	ppb	231.9	2023.55	0.0712	Pulse	0.1000	3
Mn	55	45	He	0.340	ppb	26.6	230.01	0.0081	Pulse	0.1000	3
Fe	57	45	He	5.235	ppb	32.6	193.34	0.0068	Pulse	0.1000	3
Co	59	45	He	0.164	ppb	34.8	380.02	0.0134	Pulse	0.1000	3
Ni	60	72	He	0.477	ppb	13.4	553.36	0.0103	Pulse	0.1000	3
Cu	63	72	He	0.154	ppb	56.9	353.35	0.0065	Pulse	0.1000	3
Zn	66	72	He	0.592	ppb	32.3	243.34	0.0045	Pulse	0.1000	3
As	75	72	He	0.449	ppb	13.2	74.00	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.083	ppb	31.6	73.33	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.033	ppb	56.8	66.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	19.6	53.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	161.1	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.104	ppb	130.1	803.39	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.091	ppb	29.0	150.01	0.0028	Pulse	0.1000	3
Ba	137	115	He	0.093	ppb	66.2	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.110	ppb	10.8	630.05	0.0033	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	64.2	316.68	0.0017	Pulse	0.1000	3
U	238	209	He	0.030	ppb	34.0	250.02	0.0013	Pulse	0.1000	3

ISTD Table:

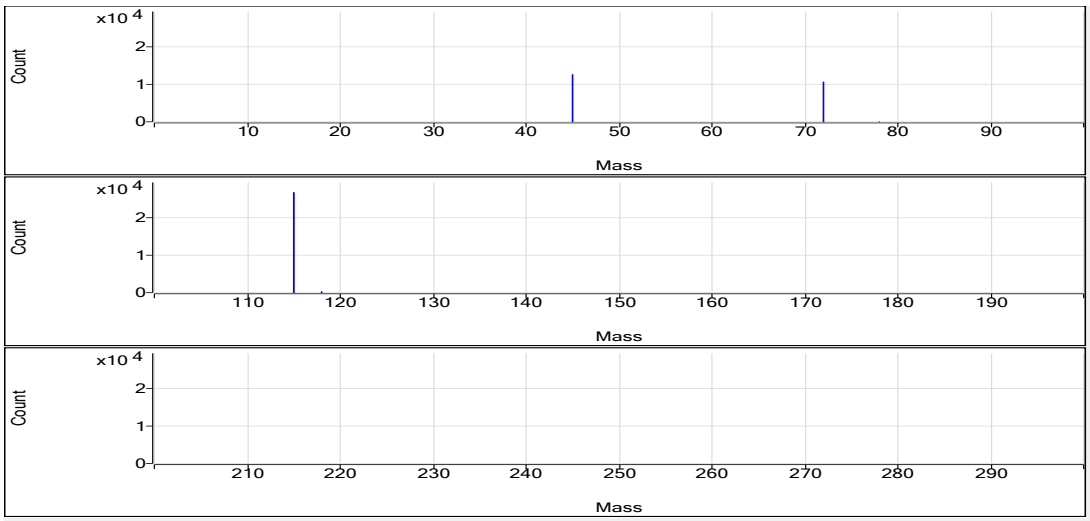
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1724511.64	1.9	97.9	Analog	0.1000	3
No Gas	Ge	72	878279.13	0.7	98.4	Pulse	0.1000	3
H2	Sc	45	125588.16	0.5	98.6	Pulse	0.1000	3
H2	Ge	72	106098.53	1.3	98.9	Pulse	0.1000	3
H2	In	115	266409.53	1.6	100.0	Pulse	0.1000	3
He	Sc	45	28478.64	3.1	99.9	Pulse	0.1000	3
He	Ge	72	53989.54	1.2	97.6	Pulse	0.1000	3
He	In	115	54063.55	0.2	100.7	Pulse	0.1000	3
He	Tb	159	243630.57	1.4	99.1	Pulse	0.1000	3
He	Bi	209	189533.38	0.7	99.3	Pulse	0.1000	3

No Gas

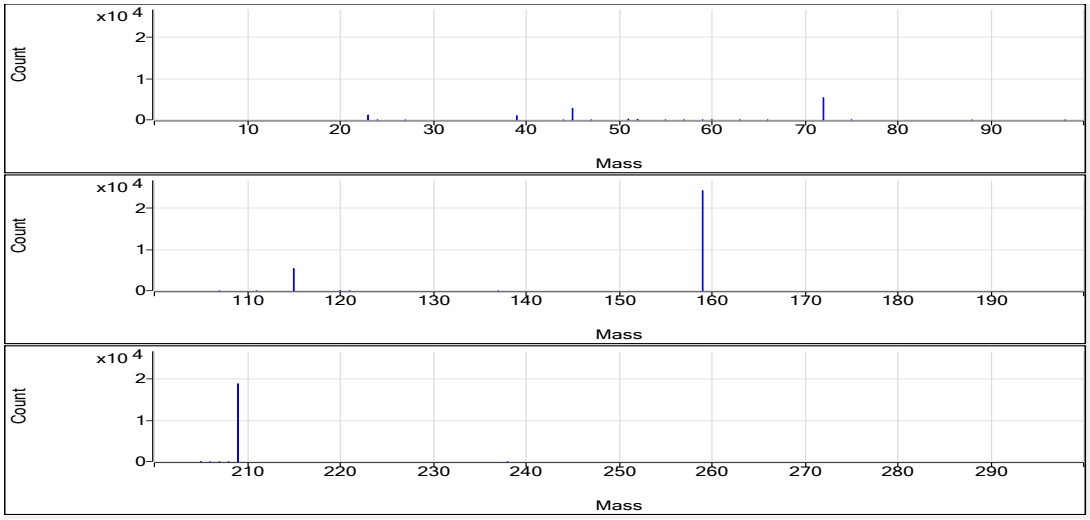


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.219	0.0001	168.00	0.0004	1.287E-05
Be	9	1	No Gas	0.233	0.0001	184.00	0.0004	1.287E-05
Be	9	1	No Gas	0.231	0.0001	178.00	0.0004	1.287E-05
Se	78	2	H2	0.044	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.105	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.125	0.0001	6.67	0.0004	1.451E-05
Na	23	3	He	68.582	0.4383	12055.28	0.0025	0.2648
Na	23	3	He	57.44	0.4101	11995.21	0.0025	0.2648
Na	23	3	He	56.945	0.4088	11725.04	0.0025	0.2648
Mg	24	3	He	6.655	0.0138	380.02	0.0013	0.005032
Mg	24	3	He	6.808	0.014	410.02	0.0013	0.005032
Mg	24	3	He	5.699	0.0126	360.02	0.0013	0.005032
Al	27	3	He	-0.992	0.0011	30.00	0.0004	0.001519
Al	27	3	He	2.821	0.0027	80.00	0.0004	0.001519
Al	27	3	He	0.522	0.0017	50.00	0.0004	0.001519
K	39	3	He	49.282	0.4106	11294.74	0.001	0.3627
K	39	3	He	-13.236	0.3499	10233.92	0.001	0.3627
K	39	3	He	-34.434	0.3293	9443.45	0.001	0.3627
Ca	44	3	He	18.321	0.0036	100.00	0.0001	0.002571
Ca	44	3	He	20.477	0.0038	110.00	0.0001	0.002571
Ca	44	3	He	3.759	0.0028	80.00	0.0001	0.002571
Ti	47	3	He	2.658	0.0015	40.00	0.0005	0.0002328
Ti	47	3	He	6.189	0.0031	90.00	0.0005	0.0002328
Ti	47	3	He	6.323	0.0031	90.01	0.0005	0.0002328
V	51	3	He	0.223	0.0161	442.01	0.0201	0.0116
V	51	3	He	0.179	0.0152	444.01	0.0201	0.0116
V	51	3	He	0.239	0.0164	470.01	0.0201	0.0116
Cr	52	3	He	0.452	0.0796	2190.23	0.0257	0.06801
Cr	52	3	He	0.001	0.068	1990.21	0.0257	0.06801
Cr	52	3	He	-0.082	0.0659	1890.21	0.0257	0.06801
Mn	55	3	He	0.302	0.0076	210.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.443	0.0092	270.01	0.0113	0.004215
Mn	55	3	He	0.274	0.0073	210.01	0.0113	0.004215
Fe	57	3	He	3.367	0.0058	160.01	0.0005	0.004099
Fe	57	3	He	6.706	0.0075	220.01	0.0005	0.004099
Fe	57	3	He	5.633	0.007	200.01	0.0005	0.004099
Co	59	3	He	0.221	0.0164	450.02	0.0518	0.004913
Co	59	3	He	0.163	0.0133	390.02	0.0518	0.004913
Co	59	3	He	0.107	0.0105	300.02	0.0518	0.004913
Ni	60	3	He	0.451	0.0101	550.03	0.0075	0.006695
Ni	60	3	He	0.55	0.0108	580.03	0.0075	0.006695
Ni	60	3	He	0.431	0.0099	530.03	0.0075	0.006695
Cu	63	3	He	0.233	0.0082	450.02	0.0216	0.003198
Cu	63	3	He	0.171	0.0069	370.02	0.0216	0.003198
Cu	63	3	He	0.06	0.0045	240.01	0.0216	0.003198
Zn	66	3	He	0.406	0.004	220.01	0.0026	0.002954
Zn	66	3	He	0.788	0.005	270.01	0.0026	0.002954
Zn	66	3	He	0.582	0.0045	240.01	0.0026	0.002954
As	75	3	He	0.44	0.0014	74.00	0.002	0.0004943
As	75	3	He	0.395	0.0013	68.00	0.002	0.0004943
As	75	3	He	0.512	0.0015	80.00	0.002	0.0004943
Sr	88	3	He	0.098	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.053	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.098	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	0.054	0.0017	90.00	0.0205	0.0005587
Mo	98	3	He	0.027	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	0.174	0.0159	860.06	0.0146	0.01334
Sn	120	3	He	0.189	0.0161	870.06	0.0146	0.01334
Sn	120	3	He	-0.052	0.0126	680.04	0.0146	0.01334
Sb	121	3	He	0.064	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.117	0.0031	170.01	0.0142	0.001484
Sb	121	3	He	0.091	0.0028	150.01	0.0142	0.001484
Ba	137	3	He	0.079	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.16	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.122	0.0037	690.05	0.0282	0.00021
Tl	205	3	He	0.098	0.003	570.04	0.0282	0.00021
Tl	205	3	He	0.111	0.0033	630.05	0.0282	0.00021
Pb	208	3	He	0.032	0.0022	190.01	0.0372	0.0009772
Pb	208	3	He	0.015	0.0015	130.01	0.0372	0.0009772
Pb	208	3	He	0.009	0.0013	160.01	0.0372	0.0009772
U	238	3	He	0.036	0.0016	300.02	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
U	238	3	He	0.035	0.0015	290.02	0.0417	8.729E-05
Sc	45	1	No Gas			1696996.38		
Sc	45	1	No Gas			1759731.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1716807.01		
Ge	72	1	No Gas			885083.42		
Ge	72	1	No Gas			873011.86		
Ge	72	1	No Gas			876742.10		
Sc	45	2	H2			124852.11		
Sc	45	2	H2			126174.06		
Sc	45	2	H2			125738.31		
Ge	72	2	H2			105497.66		
Ge	72	2	H2			107682.98		
Ge	72	2	H2			105114.94		
In	115	2	H2			263088.08		
In	115	2	H2			271356.87		
In	115	2	H2			264783.65		
Sc	45	3	He			27506.83		
Sc	45	3	He			29250.13		
Sc	45	3	He			28678.97		
Ge	72	3	He			54715.44		
Ge	72	3	He			53731.78		
Ge	72	3	He			53521.39		
In	115	3	He			54166.15		
In	115	3	He			54005.66		
In	115	3	He			54035.70		
Tb	159	3	He			241272.98		
Tb	159	3	He			247573.24		
Tb	159	3	He			242045.48		
Bi	209	3	He			188572.03		
Bi	209	3	He			190927.63		
Bi	209	3	He			189100.47		

Quantitation Report

Data File Name	094SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:16:18 PM
Sample Name	MB 410-401990/1-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

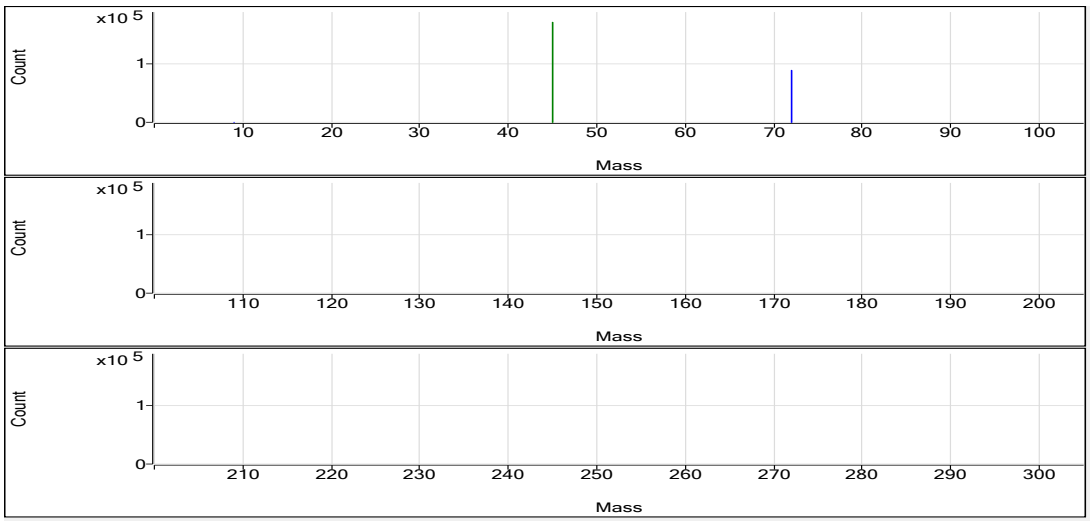
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.033	ppb	88.1	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	169.4	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	86.659	ppb	6.4	13670.11	0.4840	Pulse	0.1000	3
Mg	24	45	He	8.347	ppb	17.1	453.36	0.0160	Pulse	0.1000	3
Al	27	45	He	6.893	ppb	9.8	126.67	0.0045	Pulse	0.1000	3
K	39	45	He	2.092	ppb	1464.7	10297.32	0.3648	Pulse	0.1000	3
Ca	44	45	He	48.941	ppb	61.1	153.34	0.0054	Pulse	0.1000	3
Ti	47	45	He	0.771	ppb	54.3	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.103	ppb	29.1	385.34	0.0137	Pulse	0.5000	3
Cr	52	45	He	-0.001	ppb	N/A	1916.86	0.0680	Pulse	0.1000	3
Mn	55	45	He	0.599	ppb	24.5	310.01	0.0110	Pulse	0.1000	3
Fe	57	45	He	0.581	ppb	527.8	123.34	0.0044	Pulse	0.1000	3
Co	59	45	He	0.089	ppb	76.2	266.68	0.0095	Pulse	0.1000	3
Ni	60	72	He	0.067	ppb	254.0	400.02	0.0072	Pulse	0.1000	3
Cu	63	72	He	0.148	ppb	5.8	356.69	0.0064	Pulse	0.1000	3
Zn	66	72	He	-0.306	ppb	N/A	120.00	0.0021	Pulse	0.1000	3
As	75	72	He	0.226	ppb	45.1	52.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.145	ppb	40.9	100.00	0.0019	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	49.6	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.001	ppb	357.6	26.67	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	350.8	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.124	ppb	120.9	813.39	0.0152	Pulse	0.1000	3
Sb	121	115	He	0.136	ppb	64.0	183.34	0.0034	Pulse	0.1000	3
Ba	137	115	He	0.053	ppb	190.2	33.33	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.035	ppb	11.4	230.01	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.030	ppb	19.8	403.35	0.0021	Pulse	0.1000	3
U	238	209	He	0.008	ppb	56.0	80.00	0.0004	Pulse	0.1000	3

ISTD Table:

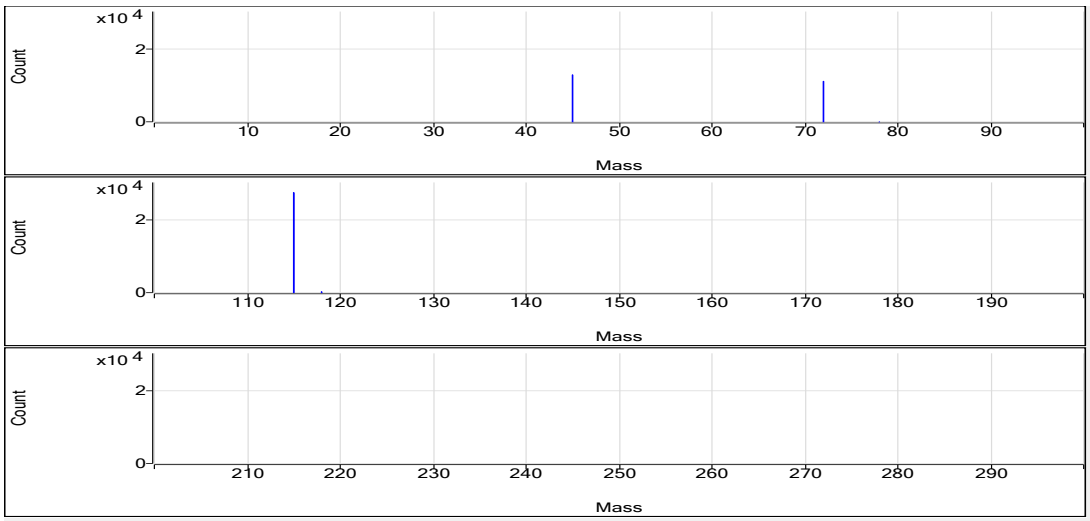
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1730504.04	0.3	98.3	Analog	0.1000	3
No Gas	Ge	72	900000.17	0.3	100.8	Pulse	0.1000	3
H2	Sc	45	129333.97	0.8	101.6	Pulse	0.1000	3
H2	Ge	72	111737.78	0.9	104.2	Pulse	0.1000	3
H2	In	115	275599.88	0.6	103.5	Pulse	0.1000	3
He	Sc	45	28231.40	2.6	99.0	Pulse	0.1000	3
He	Ge	72	55739.32	2.0	100.7	Pulse	0.1000	3
He	In	115	53685.64	0.8	100.0	Pulse	0.1000	3
He	Tb	159	247277.13	0.7	100.6	Pulse	0.1000	3
He	Bi	209	193822.97	0.9	101.6	Pulse	0.1000	3

No Gas

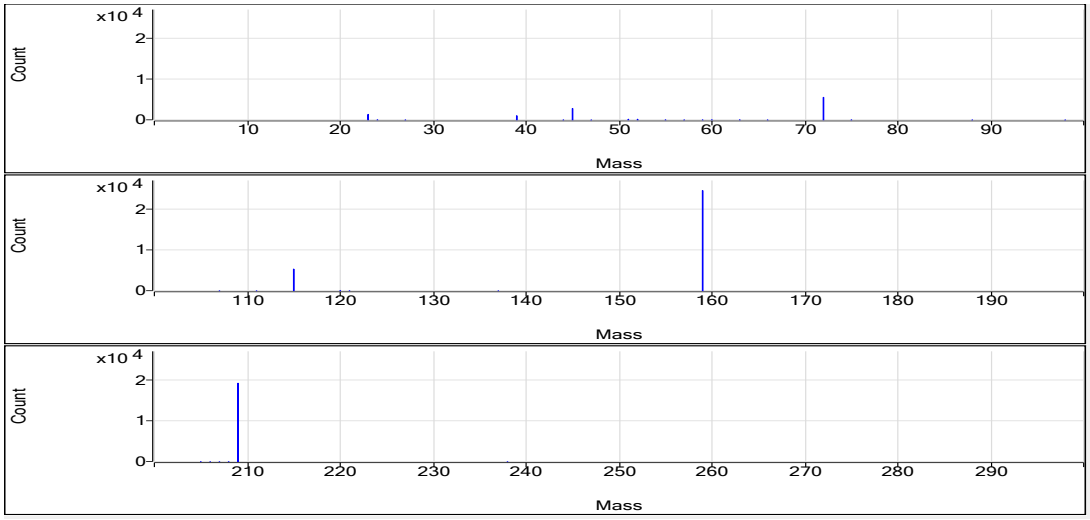


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.046	0	54.00	0.0004	1.287E-05
Be	9	1	No Gas	0.053	0	58.00	0.0004	1.287E-05
Be	9	1	No Gas	0	0	22.00	0.0004	1.287E-05
Se	78	2	H2	0.055	0	4.00	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.008	0	2.00	0.0004	1.451E-05
Na	23	3	He	90.832	0.4945	14217.31	0.0025	0.2648
Na	23	3	He	80.338	0.468	12825.93	0.0025	0.2648
Na	23	3	He	88.808	0.4894	13967.08	0.0025	0.2648
Mg	24	3	He	9.892	0.0181	520.03	0.0013	0.005032
Mg	24	3	He	8.076	0.0157	430.02	0.0013	0.005032
Mg	24	3	He	7.073	0.0144	410.02	0.0013	0.005032
Al	27	3	He	6.158	0.0042	120.00	0.0004	0.001519
Al	27	3	He	7.479	0.0047	130.01	0.0004	0.001519
Al	27	3	He	7.042	0.0046	130.01	0.0004	0.001519
K	39	3	He	28.87	0.3908	11234.74	0.001	0.3627
K	39	3	He	8.736	0.3712	10173.86	0.001	0.3627
K	39	3	He	-31.329	0.3323	9483.35	0.001	0.3627
Ca	44	3	He	39.574	0.0049	140.01	0.0001	0.002571
Ca	44	3	He	24.832	0.004	110.00	0.0001	0.002571
Ca	44	3	He	82.416	0.0074	210.01	0.0001	0.002571
Ti	47	3	He	1.007	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.287	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	1.018	0.0007	20.00	0.0005	0.0002328
V	51	3	He	0.105	0.0137	394.01	0.0201	0.0116
V	51	3	He	0.131	0.0142	390.01	0.0201	0.0116
V	51	3	He	0.072	0.013	372.01	0.0201	0.0116
Cr	52	3	He	-0.102	0.0654	1880.20	0.0257	0.06801
Cr	52	3	He	0.208	0.0733	2010.20	0.0257	0.06801
Cr	52	3	He	-0.11	0.0652	1860.19	0.0257	0.06801
Mn	55	3	He	0.58	0.0108	310.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.755	0.0128	350.02	0.0113	0.004215
Mn	55	3	He	0.463	0.0095	270.01	0.0113	0.004215
Fe	57	3	He	-1.215	0.0035	100.00	0.0005	0.004099
Fe	57	3	He	4.123	0.0062	170.01	0.0005	0.004099
Fe	57	3	He	-1.165	0.0035	100.00	0.0005	0.004099
Co	59	3	He	0.06	0.008	230.01	0.0518	0.004913
Co	59	3	He	0.166	0.0135	370.02	0.0518	0.004913
Co	59	3	He	0.04	0.007	200.01	0.0518	0.004913
Ni	60	3	He	0.259	0.0086	470.03	0.0075	0.006695
Ni	60	3	He	0.002	0.0067	380.02	0.0075	0.006695
Ni	60	3	He	-0.06	0.0062	350.02	0.0075	0.006695
Cu	63	3	He	0.141	0.0062	340.02	0.0216	0.003198
Cu	63	3	He	0.146	0.0064	360.02	0.0216	0.003198
Cu	63	3	He	0.158	0.0066	370.02	0.0216	0.003198
Zn	66	3	He	-0.425	0.0018	100.00	0.0026	0.002954
Zn	66	3	He	-0.251	0.0023	130.00	0.0026	0.002954
Zn	66	3	He	-0.241	0.0023	130.00	0.0026	0.002954
As	75	3	He	0.292	0.0011	58.00	0.002	0.0004943
As	75	3	He	0.108	0.0007	40.00	0.002	0.0004943
As	75	3	He	0.277	0.001	58.00	0.002	0.0004943
Sr	88	3	He	0.167	0.002	110.00	0.0081	0.0006852
Sr	88	3	He	0.19	0.0022	120.00	0.0081	0.0006852
Sr	88	3	He	0.078	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.027	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.019	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	0.014	0.0136	730.05	0.0146	0.01334
Sn	120	3	He	0.063	0.0143	770.05	0.0146	0.01334
Sn	120	3	He	0.296	0.0177	940.06	0.0146	0.01334
Sb	121	3	He	0.131	0.0033	180.01	0.0142	0.001484
Sb	121	3	He	0.052	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	0.226	0.0047	250.01	0.0142	0.001484
Ba	137	3	He	0.161	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Tl	205	3	He	0.031	0.0011	210.01	0.0282	0.00021
Tl	205	3	He	0.038	0.0013	250.01	0.0282	0.00021
Tl	205	3	He	0.035	0.0012	230.01	0.0282	0.00021
Pb	208	3	He	0.027	0.002	210.01	0.0372	0.0009772
Pb	208	3	He	0.036	0.0023	260.01	0.0372	0.0009772
Pb	208	3	He	0.025	0.0019	150.01	0.0372	0.0009772
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
Sc	45	1	No Gas			1735433.88		
Sc	45	1	No Gas			1726807.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1729271.22		
Ge	72	1	No Gas			897381.39		
Ge	72	1	No Gas			901098.35		
Ge	72	1	No Gas			901520.77		
Sc	45	2	H2			130017.41		
Sc	45	2	H2			129805.18		
Sc	45	2	H2			128179.33		
Ge	72	2	H2			111562.95		
Ge	72	2	H2			110777.33		
Ge	72	2	H2			112873.05		
In	115	2	H2			276097.42		
In	115	2	H2			273842.14		
In	115	2	H2			276860.09		
Sc	45	3	He			28749.20		
Sc	45	3	He			27406.34		
Sc	45	3	He			28538.67		
Ge	72	3	He			54504.85		
Ge	72	3	He			56662.95		
Ge	72	3	He			56050.15		
In	115	3	He			53875.60		
In	115	3	He			53985.63		
In	115	3	He			53212.77		
Tb	159	3	He			249165.33		
Tb	159	3	He			246212.87		
Tb	159	3	He			246453.18		
Bi	209	3	He			195765.21		
Bi	209	3	He			193106.95		
Bi	209	3	He			192596.74		

Quantitation Report

Data File Name	095SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:18:18 PM
Sample Name	LCS 410-401990/2-A
Sample Type	Sample
Comment	E8
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

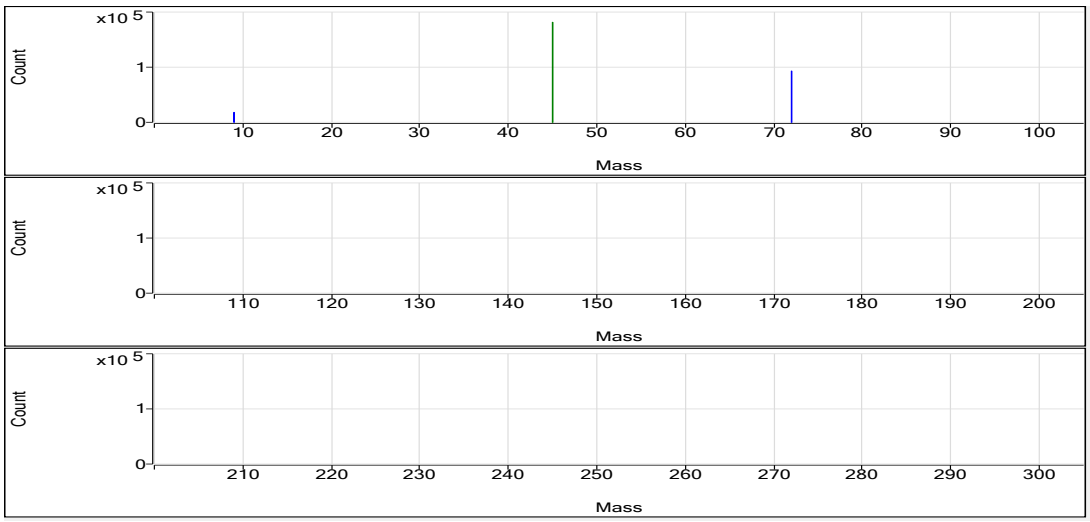
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.867	ppb	6.9	36456.38	0.0200	Pulse	0.5000	3
Se	78	72	H2	101.588	ppb	0.8	4554.51	0.0397	Pulse	1.5000	3
Na	23	45	He	5232.281	ppb	1.2	388927.59	13.4957	Pulse	0.1000	3
Mg	24	45	He	5095.752	ppb	1.8	193962.43	6.7306	Pulse	0.1000	3
Al	27	45	He	5032.175	ppb	1.9	62580.31	2.1717	Pulse	0.1000	3
K	39	45	He	5188.339	ppb	1.3	155725.70	5.4035	Pulse	0.1000	3
Ca	44	45	He	5419.581	ppb	5.2	9143.18	0.3174	Pulse	0.1000	3
Ti	47	45	He	552.128	ppb	1.6	7318.74	0.2540	Pulse	0.1000	3
V	51	45	He	512.748	ppb	1.5	296716.26	10.2964	Pulse	0.5000	3
Cr	52	45	He	514.250	ppb	1.5	382838.23	13.2848	Pulse	0.1000	3
Mn	55	45	He	518.542	ppb	2.1	169409.76	5.8790	Pulse	0.1000	3
Fe	57	45	He	5159.766	ppb	0.8	76030.75	2.6379	Pulse	0.1000	3
Co	59	45	He	506.839	ppb	1.5	756956.92	26.2671	Pulse	0.1000	3
Ni	60	72	He	492.975	ppb	1.6	212846.35	3.6794	Pulse	0.1000	3
Cu	63	72	He	496.083	ppb	2.0	619668.14	10.7125	Pulse	0.1000	3
Zn	66	72	He	498.741	ppb	1.5	76051.50	1.3146	Pulse	0.1000	3
As	75	72	He	494.730	ppb	2.0	55903.16	0.9664	Pulse	0.5000	3
Sr	88	115	He	50.007	ppb	2.6	22335.06	0.4064	Pulse	0.1000	3
Mo	98	115	He	49.167	ppb	1.3	55356.64	1.0070	Pulse	0.1000	3
Ag	107	115	He	50.564	ppb	3.0	119646.68	2.1771	Pulse	0.1000	3
Cd	111	115	He	49.963	ppb	3.7	13723.45	0.2497	Pulse	0.5000	3
Sn	120	115	He	98.691	ppb	2.0	80018.42	1.4558	Pulse	0.1000	3
Sb	121	115	He	97.964	ppb	2.2	76698.85	1.3953	Pulse	0.1000	3
Ba	137	115	He	501.351	ppb	2.5	126968.35	2.3101	Pulse	0.1000	3
Tl	205	209	He	101.276	ppb	0.9	550276.09	2.8585	Pulse	0.1000	3
Pb	208	209	He	50.922	ppb	0.7	365246.35	1.8972	Pulse	0.1000	3
U	238	209	He	50.221	ppb	1.1	403324.06	2.0952	Pulse	0.1000	3

ISTD Table:

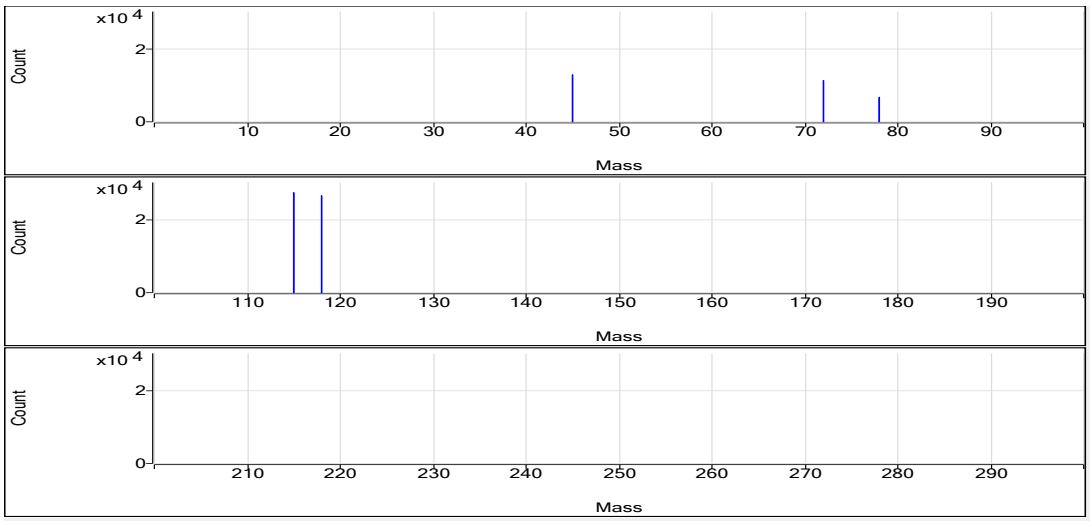
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1818502.52	0.2	103.2	Analog	0.1000	3
No Gas	Ge	72	932961.16	0.2	104.5	Pulse	0.1000	3
H2	Sc	45	130221.84	0.2	102.3	Pulse	0.1000	3
H2	Ge	72	114580.04	1.3	106.9	Pulse	0.1000	3
H2	In	115	276840.68	0.9	104.0	Pulse	0.1000	3
He	Sc	45	28822.64	1.7	101.1	Pulse	0.1000	3
He	Ge	72	57861.32	2.1	104.6	Pulse	0.1000	3
He	In	115	54981.77	2.4	102.4	Pulse	0.1000	3
He	Tb	159	249811.30	0.9	101.6	Pulse	0.1000	3
He	Bi	209	192520.96	1.3	100.9	Pulse	0.1000	3

No Gas

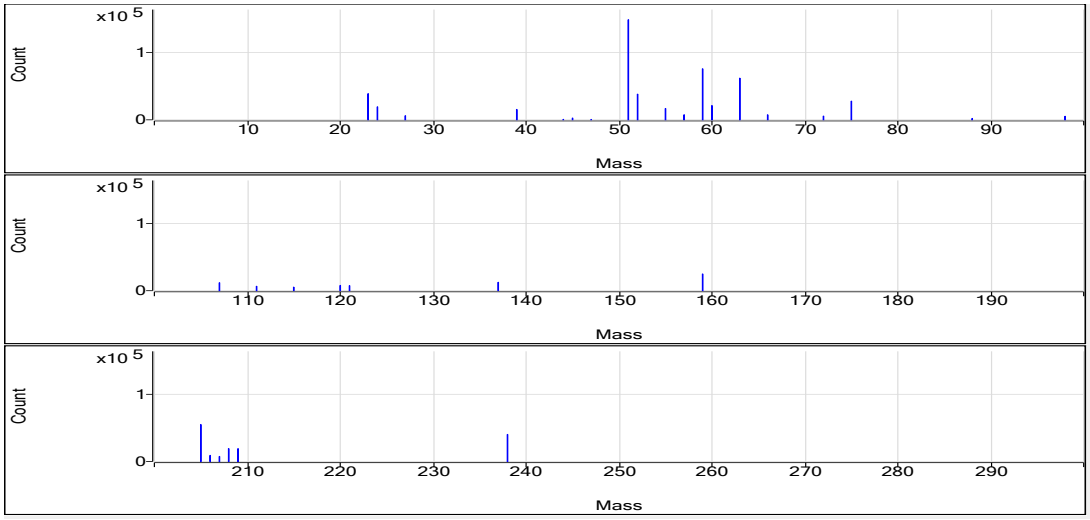


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.075	0.0186	33838.18	0.0004	1.287E-05
Be	9	1	No Gas	51.585	0.0203	36911.31	0.0004	1.287E-05
Be	9	1	No Gas	53.942	0.0213	38619.64	0.0004	1.287E-05
Se	78	2	H2	100.839	0.0395	4469.37	0.0004	1.451E-05
Se	78	2	H2	102.377	0.0401	4574.74	0.0004	1.451E-05
Se	78	2	H2	101.548	0.0397	4619.42	0.0004	1.451E-05
Na	23	3	He	5160.665	13.3146	391055.78	0.0025	0.2648
Na	23	3	He	5283.676	13.6256	386943.08	0.0025	0.2648
Na	23	3	He	5252.503	13.5468	388783.90	0.0025	0.2648
Mg	24	3	He	4996.623	6.5998	193839.47	0.0013	0.005032
Mg	24	3	He	5119.376	6.7618	192023.20	0.0013	0.005032
Mg	24	3	He	5171.258	6.8303	196024.63	0.0013	0.005032
Al	27	3	He	4923.276	2.1247	62403.11	0.0004	0.001519
Al	27	3	He	5075.514	2.1903	62201.63	0.0004	0.001519
Al	27	3	He	5097.733	2.1999	63136.20	0.0004	0.001519
K	39	3	He	5138.399	5.355	157278.96	0.001	0.3627
K	39	3	He	5261.917	5.475	155480.08	0.001	0.3627
K	39	3	He	5164.7	5.3806	154418.05	0.001	0.3627
Ca	44	3	He	5156.284	0.3021	8872.99	0.0001	0.002571
Ca	44	3	He	5716.505	0.3346	9503.43	0.0001	0.002571
Ca	44	3	He	5385.956	0.3154	9053.12	0.0001	0.002571
Ti	47	3	He	542.734	0.2496	7332.09	0.0005	0.0002328
Ti	47	3	He	552.904	0.2543	7222.07	0.0005	0.0002328
Ti	47	3	He	560.745	0.2579	7402.07	0.0005	0.0002328
V	51	3	He	504.155	10.124	297347.59	0.0201	0.0116
V	51	3	He	519.59	10.4336	296295.44	0.0201	0.0116
V	51	3	He	514.497	10.3315	296505.75	0.0201	0.0116
Cr	52	3	He	505.065	13.0487	383247.14	0.0257	0.06801
Cr	52	3	He	518.737	13.4001	380538.35	0.0257	0.06801
Cr	52	3	He	518.948	13.4055	384729.21	0.0257	0.06801
Mn	55	3	He	508.173	5.7615	169219.41	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	529.773	6.0063	170566.91	0.0113	0.004215
Mn	55	3	He	517.678	5.8692	168442.95	0.0113	0.004215
Fe	57	3	He	5172.003	2.6441	77659.79	0.0005	0.004099
Fe	57	3	He	5195.353	2.6561	75427.29	0.0005	0.004099
Fe	57	3	He	5111.942	2.6135	75005.18	0.0005	0.004099
Co	59	3	He	498.242	25.8216	758393.27	0.0518	0.004913
Co	59	3	He	512.675	26.5695	754524.52	0.0518	0.004913
Co	59	3	He	509.6	26.4102	757952.96	0.0518	0.004913
Ni	60	3	He	484.37	3.6153	214144.65	0.0075	0.006695
Ni	60	3	He	499.174	3.7255	211959.74	0.0075	0.006695
Ni	60	3	He	495.381	3.6973	212434.66	0.0075	0.006695
Cu	63	3	He	485.57	10.4855	621094.21	0.0216	0.003198
Cu	63	3	He	504.782	10.9003	620155.85	0.0216	0.003198
Cu	63	3	He	497.897	10.7516	617754.37	0.0216	0.003198
Zn	66	3	He	490.352	1.2926	76564.34	0.0026	0.002954
Zn	66	3	He	503.98	1.3284	75578.84	0.0026	0.002954
Zn	66	3	He	501.891	1.3229	76011.33	0.0026	0.002954
As	75	3	He	483.585	0.9446	55954.64	0.002	0.0004943
As	75	3	He	498.514	0.9738	55402.56	0.002	0.0004943
As	75	3	He	502.092	0.9808	56352.28	0.002	0.0004943
Sr	88	3	He	48.648	0.3954	22268.39	0.0081	0.0006852
Sr	88	3	He	51.289	0.4168	22368.37	0.0081	0.0006852
Sr	88	3	He	50.086	0.407	22368.42	0.0081	0.0006852
Mo	98	3	He	48.425	0.9918	55861.88	0.0205	0.0005587
Mo	98	3	He	49.489	1.0136	54396.17	0.0205	0.0005587
Mo	98	3	He	49.587	1.0156	55811.86	0.0205	0.0005587
Ag	107	3	He	49.564	2.134	120193.86	0.043	0.0004367
Ag	107	3	He	52.305	2.252	120859.79	0.043	0.0004367
Ag	107	3	He	49.823	2.1452	117886.40	0.043	0.0004367
Cd	111	3	He	48.209	0.241	13572.64	0.005	1.253E-05
Cd	111	3	He	51.863	0.2592	13912.95	0.005	1.253E-05
Cd	111	3	He	49.818	0.249	13684.77	0.005	1.253E-05
Sn	120	3	He	97.001	1.4311	80604.88	0.0146	0.01334
Sn	120	3	He	100.897	1.4881	79860.75	0.0146	0.01334
Sn	120	3	He	98.175	1.4483	79589.64	0.0146	0.01334
Sb	121	3	He	95.533	1.3608	76641.81	0.0142	0.001484
Sb	121	3	He	98.632	1.4048	75394.59	0.0142	0.001484
Sb	121	3	He	99.728	1.4204	78060.14	0.0142	0.001484
Ba	137	3	He	493.537	2.2741	128084.16	0.0046	0.000374
Ba	137	3	He	515.684	2.3761	127520.89	0.0046	0.000374
Ba	137	3	He	494.833	2.2801	125299.99	0.0046	0.000374
Tl	205	3	He	100.298	2.8309	553089.84	0.0282	0.00021
Tl	205	3	He	102.112	2.8821	549971.87	0.0282	0.00021
Tl	205	3	He	101.417	2.8625	547766.55	0.0282	0.00021
Pb	208	3	He	50.874	1.8954	197194.61	0.0372	0.0009772
Pb	208	3	He	51.318	1.9119	192100.56	0.0372	0.0009772
Pb	208	3	He	50.575	1.8843	192611.83	0.0372	0.0009772
U	238	3	He	49.603	2.0694	404308.16	0.0417	8.729E-05
U	238	3	He	50.684	2.1145	403492.18	0.0417	8.729E-05
U	238	3	He	50.376	2.1016	402171.83	0.0417	8.729E-05
Sc	45	1	No Gas			1823589.19		
Sc	45	1	No Gas			1815416.22		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1816502.16		
Ge	72	1	No Gas			934558.35		
Ge	72	1	No Gas			931832.41		
Ge	72	1	No Gas			932492.72		
Sc	45	2	H2			129995.30		
Sc	45	2	H2			130239.00		
Sc	45	2	H2			130431.22		
Ge	72	2	H2			113275.29		
Ge	72	2	H2			114204.27		
Ge	72	2	H2			116260.56		
In	115	2	H2			274138.47		
In	115	2	H2			279232.91		
In	115	2	H2			277150.66		
Sc	45	3	He			29370.48		
Sc	45	3	He			28398.15		
Sc	45	3	He			28699.28		
Ge	72	3	He			59233.56		
Ge	72	3	He			56893.61		
Ge	72	3	He			57456.80		
In	115	3	He			56887.42		
In	115	3	He			54226.57		
In	115	3	He			55511.71		
Tb	159	3	He			250954.80		
Tb	159	3	He			251128.55		
Tb	159	3	He			247350.54		
Bi	209	3	He			195376.95		
Bi	209	3	He			190824.61		
Bi	209	3	He			191361.31		

Quantitation Report

Data File Name	096SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:20:17 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

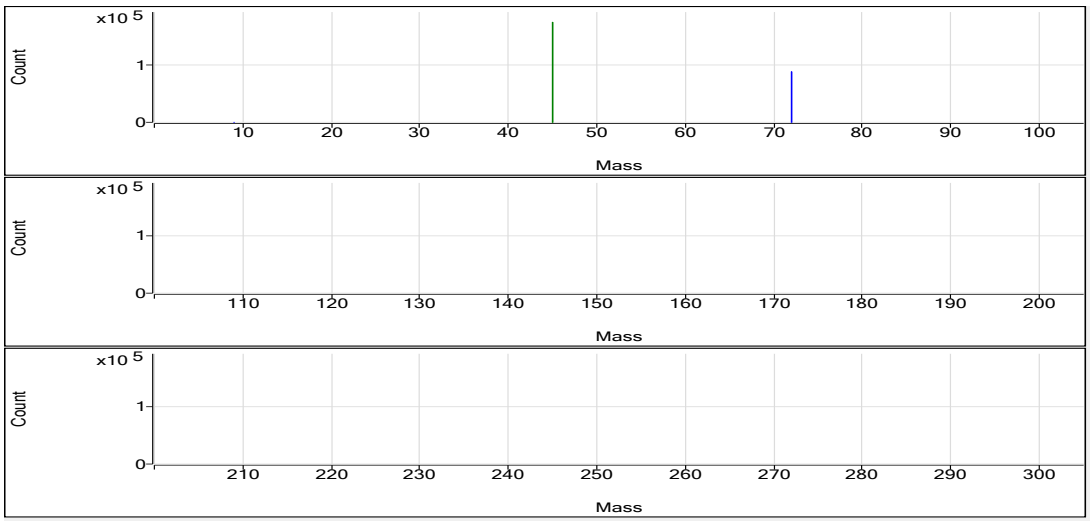
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.200	ppb	14.9	160.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.217	ppb	6.4	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	63.253	ppb	6.7	12058.63	0.4248	Pulse	0.1000	3
Mg	24	45	He	6.156	ppb	31.2	373.35	0.0132	Pulse	0.1000	3
Al	27	45	He	1.096	ppb	150.4	56.67	0.0020	Pulse	0.1000	3
K	39	45	He	6.420	ppb	638.8	10474.10	0.3690	Pulse	0.1000	3
Ca	44	45	He	8.120	ppb	294.6	86.67	0.0030	Pulse	0.1000	3
Ti	47	45	He	1.276	ppb	68.4	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.156	ppb	46.8	418.01	0.0147	Pulse	0.5000	3
Cr	52	45	He	0.318	ppb	60.3	2163.57	0.0762	Pulse	0.1000	3
Mn	55	45	He	0.529	ppb	45.7	290.01	0.0102	Pulse	0.1000	3
Fe	57	45	He	4.846	ppb	66.7	186.68	0.0066	Pulse	0.1000	3
Co	59	45	He	0.132	ppb	31.9	333.35	0.0117	Pulse	0.1000	3
Ni	60	72	He	0.313	ppb	22.4	483.36	0.0090	Pulse	0.1000	3
Cu	63	72	He	0.146	ppb	31.1	340.02	0.0064	Pulse	0.1000	3
Zn	66	72	He	0.465	ppb	60.6	223.34	0.0042	Pulse	0.1000	3
As	75	72	He	0.467	ppb	35.8	75.33	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.113	ppb	29.2	86.67	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.066	ppb	19.0	103.33	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.014	ppb	19.7	56.67	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.022	ppb	20.3	6.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	-0.019	ppb	N/A	706.71	0.0131	Pulse	0.1000	3
Sb	121	115	He	0.173	ppb	10.8	213.34	0.0039	Pulse	0.1000	3
Ba	137	115	He	0.146	ppb	15.2	56.67	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.210	ppb	2.0	1163.43	0.0061	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	19.2	350.01	0.0018	Pulse	0.1000	3
U	238	209	He	0.026	ppb	23.4	220.01	0.0012	Pulse	0.1000	3

ISTD Table:

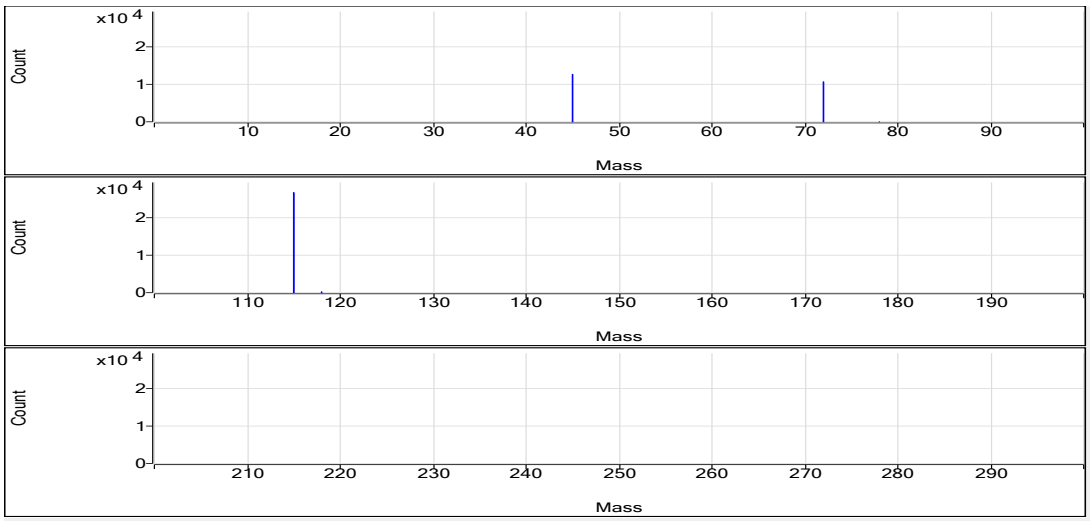
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1744910.55	0.7	99.1	Analog	0.1000	3
No Gas	Ge	72	882362.85	0.3	98.9	Pulse	0.1000	3
H2	Sc	45	127643.54	0.8	100.3	Pulse	0.1000	3
H2	Ge	72	107502.37	0.8	100.3	Pulse	0.1000	3
H2	In	115	268961.97	0.9	101.0	Pulse	0.1000	3
He	Sc	45	28391.79	1.1	99.6	Pulse	0.1000	3
He	Ge	72	53524.35	1.2	96.7	Pulse	0.1000	3
He	In	115	54168.07	1.4	100.9	Pulse	0.1000	3
He	Tb	159	246304.46	1.2	100.2	Pulse	0.1000	3
He	Bi	209	189268.65	1.0	99.2	Pulse	0.1000	3

No Gas

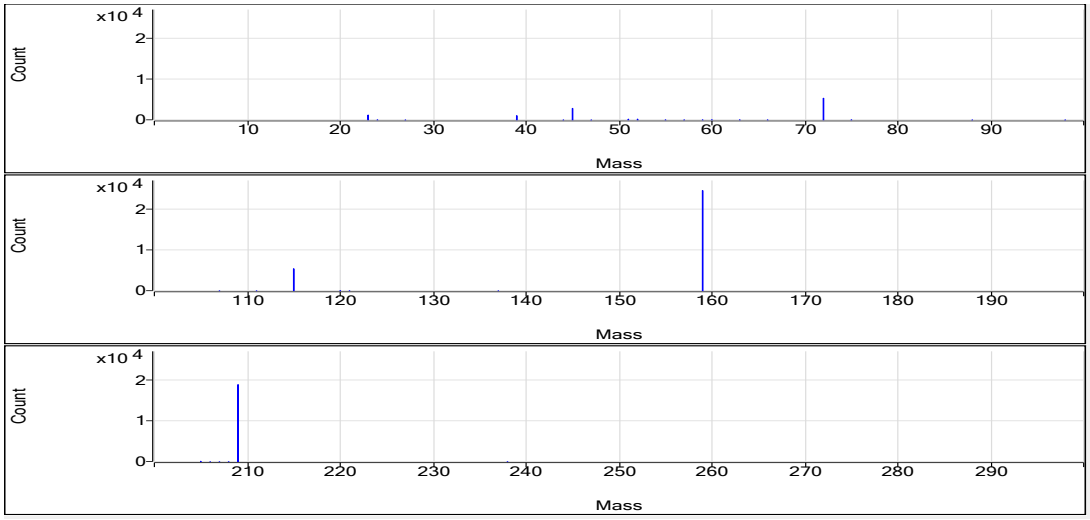


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.233	0.0001	184.00	0.0004	1.287E-05
Be	9	1	No Gas	0.192	0.0001	154.00	0.0004	1.287E-05
Be	9	1	No Gas	0.175	0.0001	142.00	0.0004	1.287E-05
Se	78	2	H2	0.231	0.0001	11.33	0.0004	1.451E-05
Se	78	2	H2	0.203	0.0001	10.00	0.0004	1.451E-05
Se	78	2	H2	0.216	0.0001	10.67	0.0004	1.451E-05
Na	23	3	He	60.713	0.4184	11885.20	0.0025	0.2648
Na	23	3	He	68.16	0.4372	12275.49	0.0025	0.2648
Na	23	3	He	60.887	0.4188	12015.19	0.0025	0.2648
Mg	24	3	He	8.19	0.0158	450.02	0.0013	0.005032
Mg	24	3	He	5.902	0.0128	360.02	0.0013	0.005032
Mg	24	3	He	4.375	0.0108	310.01	0.0013	0.005032
Al	27	3	He	0.56	0.0018	50.00	0.0004	0.001519
Al	27	3	He	-0.218	0.0014	40.00	0.0004	0.001519
Al	27	3	He	2.945	0.0028	80.00	0.0004	0.001519
K	39	3	He	52.186	0.4134	11745.15	0.001	0.3627
K	39	3	He	-5.906	0.357	10023.66	0.001	0.3627
K	39	3	He	-27.018	0.3365	9653.50	0.001	0.3627
Ca	44	3	He	4.216	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	-13.606	0.0018	50.00	0.0001	0.002571
Ca	44	3	He	33.749	0.0045	130.01	0.0001	0.002571
Ti	47	3	He	1.791	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	0.268	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	1.769	0.001	30.00	0.0005	0.0002328
V	51	3	He	0.24	0.0164	466.01	0.0201	0.0116
V	51	3	He	0.107	0.0137	386.01	0.0201	0.0116
V	51	3	He	0.12	0.014	402.01	0.0201	0.0116
Cr	52	3	He	0.271	0.075	2130.22	0.0257	0.06801
Cr	52	3	He	0.153	0.072	2020.21	0.0257	0.06801
Cr	52	3	He	0.528	0.0816	2340.28	0.0257	0.06801
Mn	55	3	He	0.809	0.0134	380.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.383	0.0085	240.01	0.0113	0.004215
Mn	55	3	He	0.397	0.0087	250.01	0.0113	0.004215
Fe	57	3	He	8.522	0.0084	240.01	0.0005	0.004099
Fe	57	3	He	2.437	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	3.58	0.0059	170.01	0.0005	0.004099
Co	59	3	He	0.163	0.0134	380.02	0.0518	0.004913
Co	59	3	He	0.084	0.0093	260.01	0.0518	0.004913
Co	59	3	He	0.147	0.0125	360.02	0.0518	0.004913
Ni	60	3	He	0.391	0.0096	520.03	0.0075	0.006695
Ni	60	3	He	0.295	0.0089	470.03	0.0075	0.006695
Ni	60	3	He	0.254	0.0086	460.02	0.0075	0.006695
Cu	63	3	He	0.177	0.007	380.02	0.0216	0.003198
Cu	63	3	He	0.167	0.0068	360.02	0.0216	0.003198
Cu	63	3	He	0.094	0.0052	280.01	0.0216	0.003198
Zn	66	3	He	0.141	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	0.604	0.0045	240.01	0.0026	0.002954
Zn	66	3	He	0.651	0.0047	250.01	0.0026	0.002954
As	75	3	He	0.636	0.0017	94.00	0.002	0.0004943
As	75	3	He	0.464	0.0014	74.00	0.002	0.0004943
As	75	3	He	0.301	0.0011	58.00	0.002	0.0004943
Sr	88	3	He	0.122	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.139	0.0018	100.01	0.0081	0.0006852
Sr	88	3	He	0.076	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.064	0.0019	100.00	0.0205	0.0005587
Mo	98	3	He	0.079	0.0022	120.00	0.0205	0.0005587
Mo	98	3	He	0.054	0.0017	90.00	0.0205	0.0005587
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.184	0.016	860.06	0.0146	0.01334
Sn	120	3	He	-0.192	0.0105	580.03	0.0146	0.01334
Sn	120	3	He	-0.048	0.0126	680.04	0.0146	0.01334
Sb	121	3	He	0.184	0.0041	220.01	0.0142	0.001484
Sb	121	3	He	0.151	0.0036	200.01	0.0142	0.001484
Sb	121	3	He	0.183	0.0041	220.01	0.0142	0.001484
Ba	137	3	He	0.162	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.155	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.121	0.0009	50.00	0.0046	0.000374
Tl	205	3	He	0.215	0.0063	1200.10	0.0282	0.00021
Tl	205	3	He	0.208	0.0061	1140.10	0.0282	0.00021
Tl	205	3	He	0.208	0.0061	1150.10	0.0282	0.00021
Pb	208	3	He	0.026	0.0019	170.01	0.0372	0.0009772
Pb	208	3	He	0.018	0.0017	160.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.002	210.01	0.0372	0.0009772
U	238	3	He	0.024	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.032	0.0014	270.01	0.0417	8.729E-05
U	238	3	He	0.021	0.0009	180.01	0.0417	8.729E-05
Sc	45	1	No Gas			1757462.01		
Sc	45	1	No Gas			1742991.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1734278.10		
Ge	72	1	No Gas			882498.89		
Ge	72	1	No Gas			879943.27		
Ge	72	1	No Gas			884646.39		
Sc	45	2	H2			127223.49		
Sc	45	2	H2			126870.35		
Sc	45	2	H2			128836.79		
Ge	72	2	H2			108087.52		
Ge	72	2	H2			106474.73		
Ge	72	2	H2			107944.87		
In	115	2	H2			269722.83		
In	115	2	H2			266144.70		
In	115	2	H2			271018.39		
Sc	45	3	He			28408.51		
Sc	45	3	He			28077.67		
Sc	45	3	He			28689.18		
Ge	72	3	He			54143.31		
Ge	72	3	He			52848.69		
Ge	72	3	He			53581.05		
In	115	3	He			53654.16		
In	115	3	He			55049.96		
In	115	3	He			53814.93		
Tb	159	3	He			246861.83		
Tb	159	3	He			248889.02		
Tb	159	3	He			243162.54		
Bi	209	3	He			190915.95		
Bi	209	3	He			187314.67		
Bi	209	3	He			189575.33		

Quantitation Report

Data File Name	097_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:22:18 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

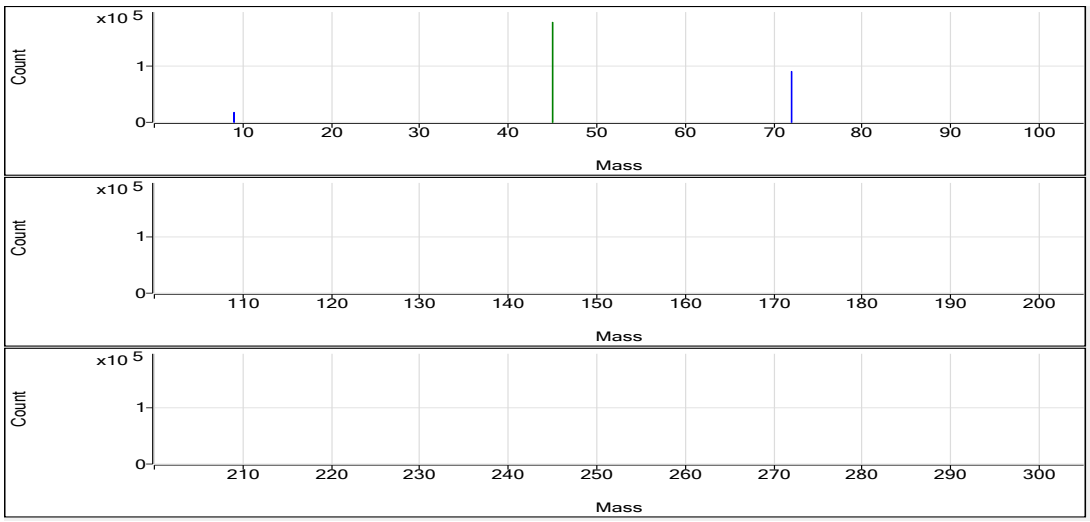
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.844	ppb	7.1	35498.07	0.0200	Pulse	0.5000	3
Se	78	72	H2	54.235	ppb	0.7	2321.97	0.0212	Pulse	1.5000	3
Na	23	45	He	5074.551	ppb	1.4	388652.28	13.0968	Pulse	0.1000	3
Mg	24	45	He	4986.310	ppb	2.3	195421.26	6.5862	Pulse	0.1000	3
Al	27	45	He	5027.109	ppb	1.7	64381.43	2.1695	Pulse	0.1000	3
K	39	45	He	5028.770	ppb	3.5	155719.27	5.2485	Pulse	0.1000	3
Ca	44	45	He	5089.324	ppb	1.4	8849.64	0.2982	Pulse	0.1000	3
Ti	47	45	He	5092.551	ppb	3.0	69439.62	2.3405	Pulse	0.1000	3
V	51	45	He	504.118	ppb	1.9	300391.68	10.1233	Pulse	0.5000	3
Cr	52	45	He	506.018	ppb	3.0	387867.61	13.0732	Pulse	0.1000	3
Mn	55	45	He	506.261	ppb	2.4	170309.76	5.7399	Pulse	0.1000	3
Fe	57	45	He	5073.891	ppb	3.6	76955.12	2.5941	Pulse	0.1000	3
Co	59	45	He	498.505	ppb	2.6	766557.28	25.8353	Pulse	0.1000	3
Ni	60	72	He	527.466	ppb	1.3	217202.68	3.9363	Pulse	0.1000	3
Cu	63	72	He	522.852	ppb	0.8	623013.40	11.2904	Pulse	0.1000	3
Zn	66	72	He	531.650	ppb	0.4	77321.76	1.4012	Pulse	0.1000	3
As	75	72	He	522.907	ppb	0.7	56362.97	1.0214	Pulse	0.5000	3
Sr	88	115	He	51.976	ppb	0.8	22642.12	0.4224	Pulse	0.1000	3
Mo	98	115	He	51.338	ppb	2.0	56350.44	1.0514	Pulse	0.1000	3
Ag	107	115	He	52.756	ppb	2.2	121730.48	2.2714	Pulse	0.1000	3
Cd	111	115	He	51.622	ppb	2.0	13829.56	0.2580	Pulse	0.5000	3
Sn	120	115	He	51.660	ppb	0.7	41192.02	0.7684	Pulse	0.1000	3
Sb	121	115	He	52.394	ppb	1.3	40035.50	0.7470	Pulse	0.1000	3
Ba	137	115	He	515.696	ppb	1.8	127354.90	2.3762	Pulse	0.1000	3
Tl	205	209	He	51.166	ppb	0.8	277089.23	1.4442	Pulse	0.1000	3
Pb	208	209	He	51.397	ppb	0.3	367391.47	1.9149	Pulse	0.1000	3
U	238	209	He	51.067	ppb	1.0	408748.12	2.1305	Pulse	0.1000	3

ISTD Table:

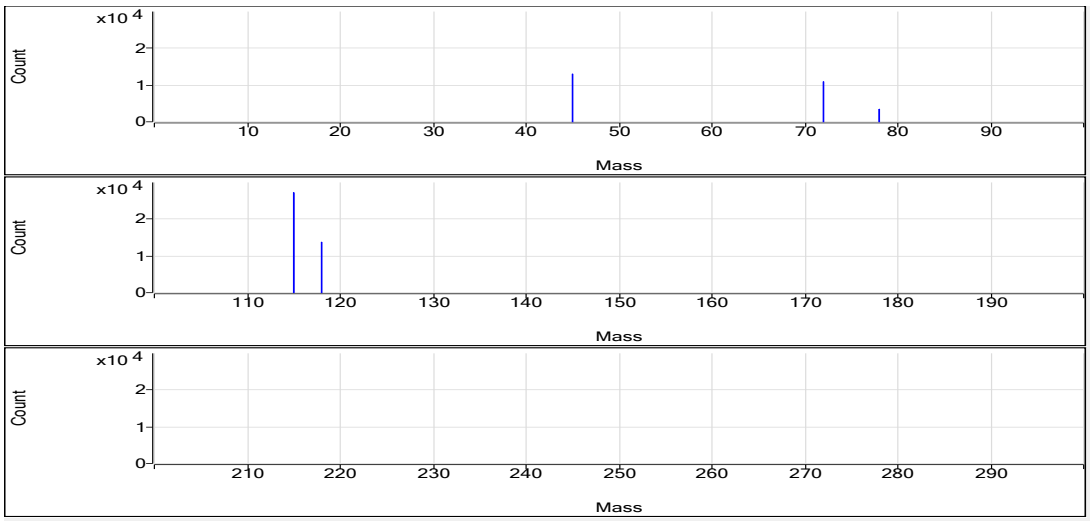
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1771586.12	0.5	100.6	Analog	0.1000	3
No Gas	Ge	72	901034.33	1.3	101.0	Pulse	0.1000	3
H2	Sc	45	130376.78	2.3	102.4	Pulse	0.1000	3
H2	Ge	72	109394.08	2.2	102.0	Pulse	0.1000	3
H2	In	115	272509.10	1.9	102.3	Pulse	0.1000	3
He	Sc	45	29681.01	2.1	104.1	Pulse	0.1000	3
He	Ge	72	55183.86	1.0	99.7	Pulse	0.1000	3
He	In	115	53603.45	1.3	99.9	Pulse	0.1000	3
He	Tb	159	248432.05	0.9	101.1	Pulse	0.1000	3
He	Bi	209	191862.46	0.6	100.5	Pulse	0.1000	3

No Gas

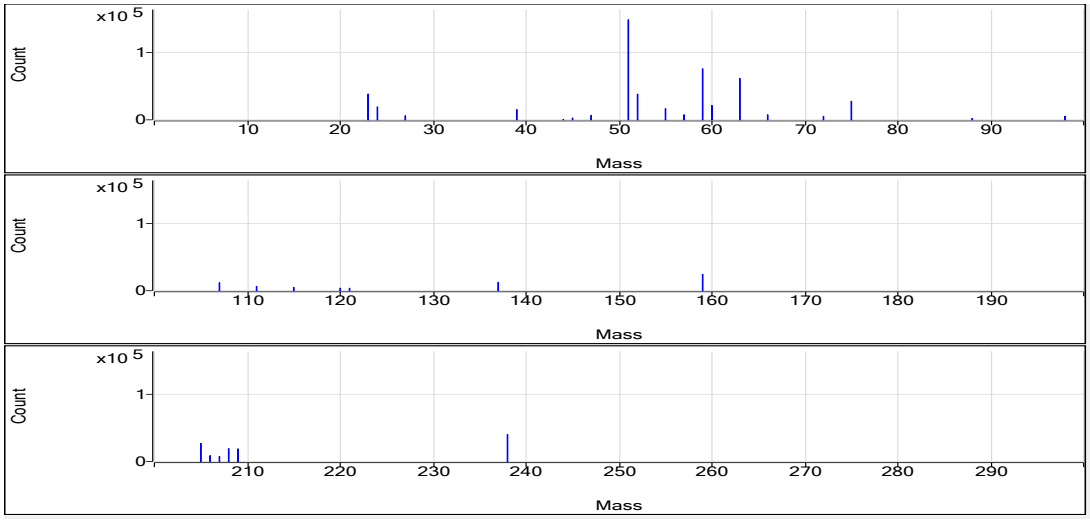


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.073	0.0186	32932.16	0.0004	1.287E-05
Be	9	1	No Gas	51.217	0.0202	35880.81	0.0004	1.287E-05
Be	9	1	No Gas	54.244	0.0214	37681.25	0.0004	1.287E-05
Se	78	2	H2	54.044	0.0212	2368.20	0.0004	1.451E-05
Se	78	2	H2	53.969	0.0211	2306.19	0.0004	1.451E-05
Se	78	2	H2	54.691	0.0214	2291.52	0.0004	1.451E-05
Na	23	3	He	5043.805	13.0191	387331.40	0.0025	0.2648
Na	23	3	He	5158.28	13.3086	386208.31	0.0025	0.2648
Na	23	3	He	5021.569	12.9629	392417.14	0.0025	0.2648
Mg	24	3	He	4964.051	6.5568	195072.18	0.0013	0.005032
Mg	24	3	He	5111.027	6.7508	195905.23	0.0013	0.005032
Mg	24	3	He	4883.851	6.451	195286.38	0.0013	0.005032
Al	27	3	He	4951.823	2.137	63577.96	0.0004	0.001519
Al	27	3	He	5116.827	2.2082	64079.73	0.0004	0.001519
Al	27	3	He	5012.678	2.1632	65486.61	0.0004	0.001519
K	39	3	He	5113.376	5.3307	158593.62	0.001	0.3627
K	39	3	He	5144.461	5.3609	155570.64	0.001	0.3627
K	39	3	He	4828.474	5.0539	152993.55	0.001	0.3627
Ca	44	3	He	5089.725	0.2982	8872.93	0.0001	0.002571
Ca	44	3	He	5159.806	0.3023	8772.91	0.0001	0.002571
Ca	44	3	He	5018.441	0.2941	8903.07	0.0001	0.002571
Ti	47	3	He	5130.492	2.3579	70150.17	0.0005	0.0002328
Ti	47	3	He	5222.123	2.4	69647.32	0.0005	0.0002328
Ti	47	3	He	4925.037	2.2635	68521.36	0.0005	0.0002328
V	51	3	He	501.406	10.0689	299559.75	0.0201	0.0116
V	51	3	He	514.505	10.3316	299818.94	0.0201	0.0116
V	51	3	He	496.444	9.9693	301796.34	0.0201	0.0116
Cr	52	3	He	507.987	13.1238	390447.96	0.0257	0.06801
Cr	52	3	He	520.024	13.4332	389825.46	0.0257	0.06801
Cr	52	3	He	490.043	12.6627	383329.41	0.0257	0.06801
Mn	55	3	He	502.812	5.7008	169605.02	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	519.526	5.8902	170930.10	0.0113	0.004215
Mn	55	3	He	496.446	5.6287	170394.16	0.0113	0.004215
Fe	57	3	He	5081.833	2.5981	77296.72	0.0005	0.004099
Fe	57	3	He	5254.955	2.6865	77960.66	0.0005	0.004099
Fe	57	3	He	4884.884	2.4976	75607.97	0.0005	0.004099
Co	59	3	He	502.694	26.0523	775084.13	0.0518	0.004913
Co	59	3	He	508.785	26.3679	765185.46	0.0518	0.004913
Co	59	3	He	484.037	25.0856	759402.25	0.0518	0.004913
Ni	60	3	He	523.758	3.9087	216456.54	0.0075	0.006695
Ni	60	3	He	535.565	3.9967	218077.54	0.0075	0.006695
Ni	60	3	He	523.074	3.9036	217073.96	0.0075	0.006695
Cu	63	3	He	523.09	11.2955	625523.66	0.0216	0.003198
Cu	63	3	He	527.039	11.3807	620988.86	0.0216	0.003198
Cu	63	3	He	518.426	11.1948	622527.69	0.0216	0.003198
Zn	66	3	He	530.229	1.3975	77388.68	0.0026	0.002954
Zn	66	3	He	533.802	1.4069	76764.97	0.0026	0.002954
Zn	66	3	He	530.919	1.3993	77811.64	0.0026	0.002954
As	75	3	He	520.501	1.0167	56304.00	0.002	0.0004943
As	75	3	He	527.396	1.0302	56211.69	0.002	0.0004943
As	75	3	He	520.823	1.0173	56573.22	0.002	0.0004943
Sr	88	3	He	51.792	0.4209	22478.33	0.0081	0.0006852
Sr	88	3	He	52.432	0.4261	23179.73	0.0081	0.0006852
Sr	88	3	He	51.704	0.4202	22268.31	0.0081	0.0006852
Mo	98	3	He	51.841	1.0617	56705.35	0.0205	0.0005587
Mo	98	3	He	50.135	1.0268	55861.47	0.0205	0.0005587
Mo	98	3	He	52.038	1.0658	56484.50	0.0205	0.0005587
Ag	107	3	He	53.016	2.2826	121908.96	0.043	0.0004367
Ag	107	3	He	51.494	2.2171	120617.41	0.043	0.0004367
Ag	107	3	He	53.757	2.3145	122665.07	0.043	0.0004367
Cd	111	3	He	52.452	0.2622	14003.06	0.005	1.253E-05
Cd	111	3	He	50.448	0.2522	13718.80	0.005	1.253E-05
Cd	111	3	He	51.966	0.2598	13766.82	0.005	1.253E-05
Sn	120	3	He	51.405	0.7647	40840.77	0.0146	0.01334
Sn	120	3	He	52.101	0.7749	42154.91	0.0146	0.01334
Sn	120	3	He	51.474	0.7657	40580.39	0.0146	0.01334
Sb	121	3	He	52.584	0.7497	40038.73	0.0142	0.001484
Sb	121	3	He	51.66	0.7365	40068.97	0.0142	0.001484
Sb	121	3	He	52.939	0.7547	39998.81	0.0142	0.001484
Ba	137	3	He	523.638	2.4128	128861.93	0.0046	0.000374
Ba	137	3	He	505.686	2.3301	126763.09	0.0046	0.000374
Ba	137	3	He	517.765	2.3857	126439.68	0.0046	0.000374
Tl	205	3	He	51.298	1.448	276648.30	0.0282	0.00021
Tl	205	3	He	51.49	1.4534	278153.73	0.0282	0.00021
Tl	205	3	He	50.71	1.4314	276465.66	0.0282	0.00021
Pb	208	3	He	51.226	1.9085	194289.84	0.0372	0.0009772
Pb	208	3	He	51.552	1.9207	197395.56	0.0372	0.0009772
Pb	208	3	He	51.412	1.9154	197572.50	0.0372	0.0009772
U	238	3	He	50.834	2.1207	405183.31	0.0417	8.729E-05
U	238	3	He	51.679	2.156	412621.52	0.0417	8.729E-05
U	238	3	He	50.688	2.1146	408439.53	0.0417	8.729E-05
Sc	45	1	No Gas			1774851.69		
Sc	45	1	No Gas			1777411.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1762495.60		
Ge	72	1	No Gas			906108.89		
Ge	72	1	No Gas			909406.31		
Ge	72	1	No Gas			887587.80		
Sc	45	2	H2			133790.12		
Sc	45	2	H2			129290.51		
Sc	45	2	H2			128049.72		
Ge	72	2	H2			111956.65		
Ge	72	2	H2			109175.52		
Ge	72	2	H2			107050.08		
In	115	2	H2			278106.54		
In	115	2	H2			267818.92		
In	115	2	H2			271601.85		
Sc	45	3	He			29751.05		
Sc	45	3	He			29019.55		
Sc	45	3	He			30272.43		
Ge	72	3	He			55378.12		
Ge	72	3	He			54564.87		
Ge	72	3	He			55608.59		
In	115	3	He			53694.24		
In	115	3	He			54698.35		
In	115	3	He			53282.78		
Tb	159	3	He			246340.41		
Tb	159	3	He			250564.94		
Tb	159	3	He			248390.80		
Bi	209	3	He			191057.52		
Bi	209	3	He			191382.22		
Bi	209	3	He			193147.63		

Quantitation Report

Data File Name	098_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:24:17 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

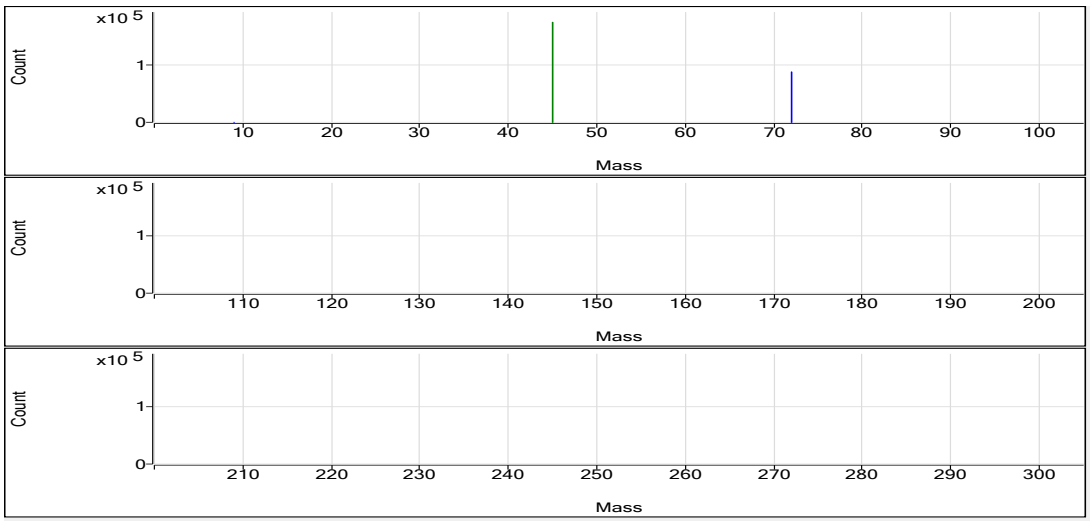
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.268	ppb	15.2	206.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.148	ppb	16.1	7.78	0.0001	Pulse	1.5000	3
Na	23	45	He	53.867	ppb	18.0	11374.73	0.4011	Pulse	0.1000	3
Mg	24	45	He	5.705	ppb	32.8	356.68	0.0126	Pulse	0.1000	3
Al	27	45	He	2.985	ppb	40.5	80.00	0.0028	Pulse	0.1000	3
K	39	45	He	13.333	ppb	163.5	10667.60	0.3757	Pulse	0.1000	3
Ca	44	45	He	52.709	ppb	4.5	160.01	0.0056	Pulse	0.1000	3
Ti	47	45	He	2.788	ppb	92.6	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.288	ppb	17.2	492.68	0.0174	Pulse	0.5000	3
Cr	52	45	He	0.305	ppb	51.6	2150.24	0.0758	Pulse	0.1000	3
Mn	55	45	He	0.293	ppb	43.9	213.34	0.0075	Pulse	0.1000	3
Fe	57	45	He	2.409	ppb	143.7	150.01	0.0053	Pulse	0.1000	3
Co	59	45	He	0.175	ppb	7.9	396.69	0.0140	Pulse	0.1000	3
Ni	60	72	He	0.263	ppb	35.9	476.69	0.0087	Pulse	0.1000	3
Cu	63	72	He	0.224	ppb	43.0	443.35	0.0080	Pulse	0.1000	3
Zn	66	72	He	0.372	ppb	69.4	216.68	0.0039	Pulse	0.1000	3
As	75	72	He	0.596	ppb	29.9	91.33	0.0017	Pulse	0.5000	3
Sr	88	115	He	0.110	ppb	165.5	86.67	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.056	ppb	60.5	93.33	0.0017	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	148.6	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	59.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.021	ppb	509.8	746.72	0.0137	Pulse	0.1000	3
Sb	121	115	He	0.140	ppb	47.2	190.01	0.0035	Pulse	0.1000	3
Ba	137	115	He	0.157	ppb	110.2	60.00	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.118	ppb	11.9	673.38	0.0035	Pulse	0.1000	3
Pb	208	209	He	0.035	ppb	3.8	430.02	0.0023	Pulse	0.1000	3
U	238	209	He	0.032	ppb	54.4	270.01	0.0014	Pulse	0.1000	3

ISTD Table:

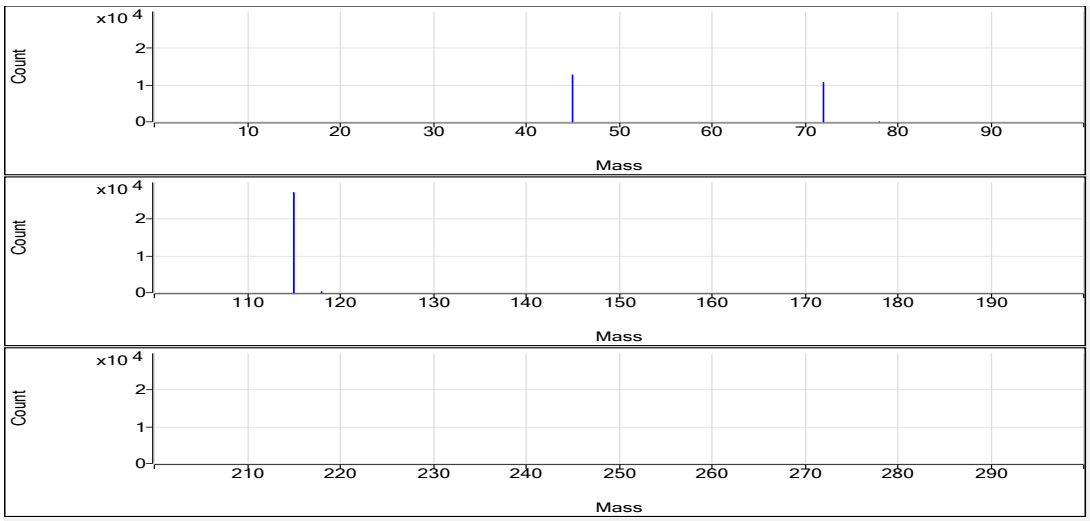
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1747258.05	1.3	99.2	Analog	0.1000	3
No Gas	Ge	72	880609.83	0.5	98.7	Pulse	0.1000	3
H2	Sc	45	127511.31	0.8	100.1	Pulse	0.1000	3
H2	Ge	72	107230.43	0.7	100.0	Pulse	0.1000	3
H2	In	115	271944.42	0.7	102.1	Pulse	0.1000	3
He	Sc	45	28388.50	3.9	99.6	Pulse	0.1000	3
He	Ge	72	55093.21	0.8	99.6	Pulse	0.1000	3
He	In	115	54733.50	0.8	102.0	Pulse	0.1000	3
He	Tb	159	245443.28	0.9	99.9	Pulse	0.1000	3
He	Bi	209	189637.57	0.8	99.4	Pulse	0.1000	3

No Gas

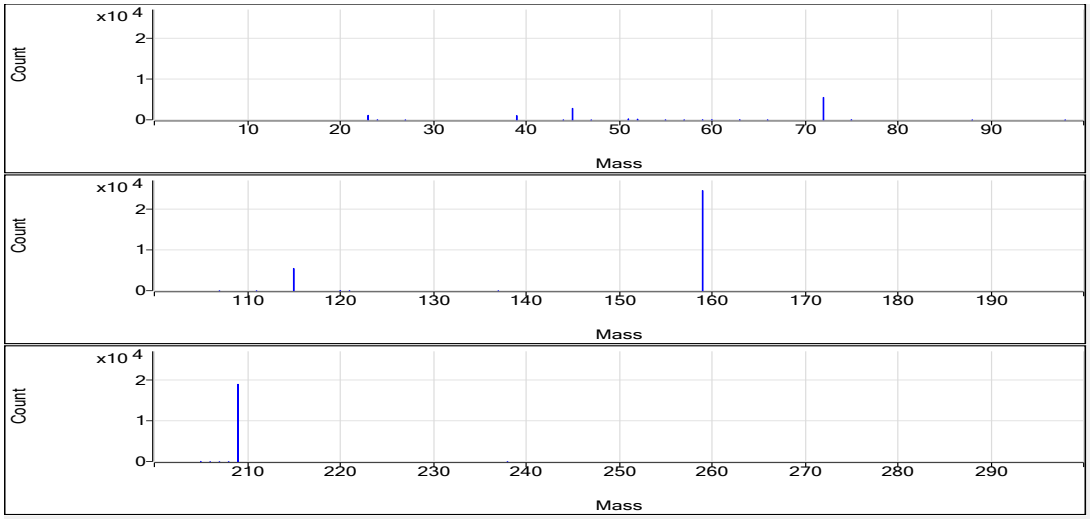


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.231	0.0001	184.00	0.0004	1.287E-05
Be	9	1	No Gas	0.312	0.0001	234.00	0.0004	1.287E-05
Be	9	1	No Gas	0.261	0.0001	202.00	0.0004	1.287E-05
Se	78	2	H2	0.168	0.0001	8.67	0.0004	1.451E-05
Se	78	2	H2	0.155	0.0001	8.00	0.0004	1.451E-05
Se	78	2	H2	0.122	0.0001	6.67	0.0004	1.451E-05
Na	23	3	He	54.243	0.402	11815.16	0.0025	0.2648
Na	23	3	He	63.368	0.4251	11564.83	0.0025	0.2648
Na	23	3	He	43.992	0.3761	10744.21	0.0025	0.2648
Mg	24	3	He	4.437	0.0109	320.01	0.0013	0.005032
Mg	24	3	He	4.821	0.0114	310.02	0.0013	0.005032
Mg	24	3	He	7.857	0.0154	440.02	0.0013	0.005032
Al	27	3	He	3.58	0.0031	90.00	0.0004	0.001519
Al	27	3	He	1.593	0.0022	60.00	0.0004	0.001519
Al	27	3	He	3.784	0.0032	90.00	0.0004	0.001519
K	39	3	He	31.656	0.3935	11564.95	0.001	0.3627
K	39	3	He	19.12	0.3813	10374.05	0.001	0.3627
K	39	3	He	-10.775	0.3523	10063.80	0.001	0.3627
Ca	44	3	He	55.316	0.0058	170.01	0.0001	0.002571
Ca	44	3	He	50.656	0.0055	150.01	0.0001	0.002571
Ca	44	3	He	52.155	0.0056	160.01	0.0001	0.002571
Ti	47	3	He	5.417	0.0027	80.00	0.0005	0.0002328
Ti	47	3	He	2.693	0.0015	40.00	0.0005	0.0002328
Ti	47	3	He	0.255	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.26	0.0168	494.01	0.0201	0.0116
V	51	3	He	0.345	0.0185	504.01	0.0201	0.0116
V	51	3	He	0.259	0.0168	480.01	0.0201	0.0116
Cr	52	3	He	0.214	0.0735	2160.24	0.0257	0.06801
Cr	52	3	He	0.486	0.0805	2190.27	0.0257	0.06801
Cr	52	3	He	0.214	0.0735	2100.21	0.0257	0.06801
Mn	55	3	He	0.319	0.0078	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.407	0.0088	240.01	0.0113	0.004215
Mn	55	3	He	0.153	0.006	170.01	0.0113	0.004215
Fe	57	3	He	-0.031	0.0041	120.00	0.0005	0.004099
Fe	57	3	He	6.373	0.0074	200.01	0.0005	0.004099
Fe	57	3	He	0.886	0.0046	130.01	0.0005	0.004099
Co	59	3	He	0.161	0.0133	390.02	0.0518	0.004913
Co	59	3	He	0.175	0.014	380.02	0.0518	0.004913
Co	59	3	He	0.189	0.0147	420.02	0.0518	0.004913
Ni	60	3	He	0.267	0.0087	480.02	0.0075	0.006695
Ni	60	3	He	0.167	0.0079	440.02	0.0075	0.006695
Ni	60	3	He	0.356	0.0093	510.03	0.0075	0.006695
Cu	63	3	He	0.33	0.0103	570.03	0.0216	0.003198
Cu	63	3	He	0.203	0.0076	420.02	0.0216	0.003198
Cu	63	3	He	0.14	0.0062	340.01	0.0216	0.003198
Zn	66	3	He	0.666	0.0047	260.02	0.0026	0.002954
Zn	66	3	He	0.18	0.0034	190.01	0.0026	0.002954
Zn	66	3	He	0.27	0.0037	200.01	0.0026	0.002954
As	75	3	He	0.729	0.0019	106.00	0.002	0.0004943
As	75	3	He	0.394	0.0013	70.00	0.002	0.0004943
As	75	3	He	0.666	0.0018	98.00	0.002	0.0004943
Sr	88	3	He	0.319	0.0033	180.01	0.0081	0.0006852
Sr	88	3	He	0.028	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	-0.016	0.0006	30.00	0.0081	0.0006852
Mo	98	3	He	0.079	0.0022	120.00	0.0205	0.0005587
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.072	0.002	110.00	0.0205	0.0005587
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.079	0.0122	670.04	0.0146	0.01334
Sn	120	3	He	0.008	0.0135	740.05	0.0146	0.01334
Sn	120	3	He	0.134	0.0153	830.06	0.0146	0.01334
Sb	121	3	He	0.075	0.0025	140.01	0.0142	0.001484
Sb	121	3	He	0.139	0.0035	190.01	0.0142	0.001484
Sb	121	3	He	0.207	0.0044	240.01	0.0142	0.001484
Ba	137	3	He	0.274	0.0016	90.00	0.0046	0.000374
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.239	0.0015	80.00	0.0046	0.000374
Tl	205	3	He	0.132	0.0039	750.06	0.0282	0.00021
Tl	205	3	He	0.104	0.0031	590.04	0.0282	0.00021
Tl	205	3	He	0.12	0.0036	680.05	0.0282	0.00021
Pb	208	3	He	0.034	0.0022	180.01	0.0372	0.0009772
Pb	208	3	He	0.034	0.0022	220.01	0.0372	0.0009772
Pb	208	3	He	0.036	0.0023	180.01	0.0372	0.0009772
U	238	3	He	0.052	0.0022	430.02	0.0417	8.729E-05
U	238	3	He	0.025	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.019	0.0009	170.01	0.0417	8.729E-05
Sc	45	1	No Gas			1768789.35		
Sc	45	1	No Gas			1724101.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1748883.41		
Ge	72	1	No Gas			885716.47		
Ge	72	1	No Gas			877904.21		
Ge	72	1	No Gas			878208.82		
Sc	45	2	H2			126747.69		
Sc	45	2	H2			128644.35		
Sc	45	2	H2			127141.88		
Ge	72	2	H2			107944.96		
Ge	72	2	H2			106435.61		
Ge	72	2	H2			107310.71		
In	115	2	H2			269835.25		
In	115	2	H2			273456.89		
In	115	2	H2			272541.11		
Sc	45	3	He			29390.57		
Sc	45	3	He			27206.23		
Sc	45	3	He			28568.69		
Ge	72	3	He			55266.98		
Ge	72	3	He			55428.03		
Ge	72	3	He			54584.63		
In	115	3	He			54969.74		
In	115	3	He			54999.80		
In	115	3	He			54246.65		
Tb	159	3	He			245424.90		
Tb	159	3	He			247666.77		
Tb	159	3	He			243238.16		
Bi	209	3	He			191231.62		
Bi	209	3	He			188316.99		
Bi	209	3	He			189364.10		

Quantitation Report

Data File Name	099SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:35:27 PM
Sample Name	MB 410-401731/1-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

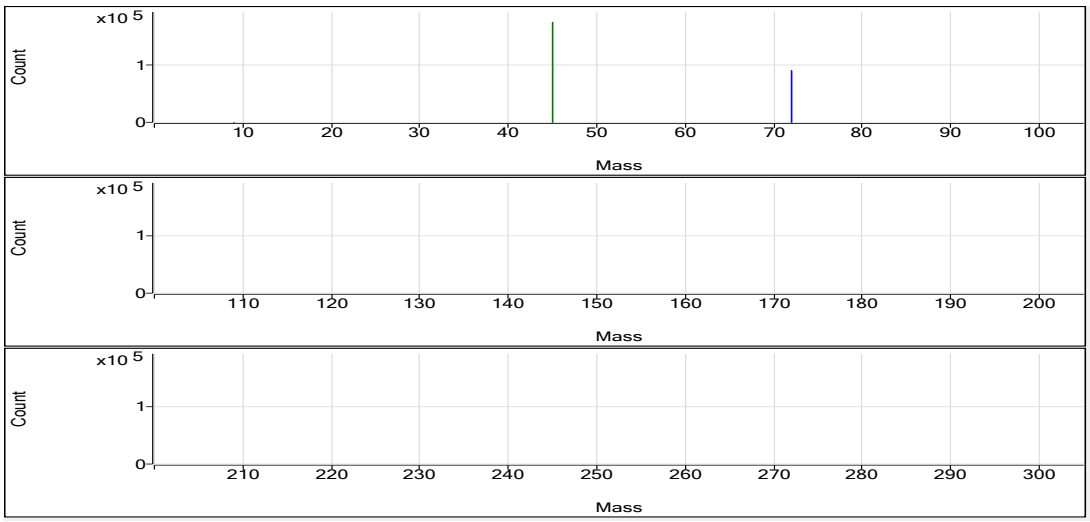
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.015	ppb	75.5	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.012	ppb	N/A	1.11	0.0000	Pulse	1.5000	3
Na	23	45	He	34.707	ppb	21.1	10130.43	0.3526	Pulse	0.1000	3
Mg	24	45	He	3.048	ppb	64.5	260.01	0.0091	Pulse	0.1000	3
Al	27	45	He	2.147	ppb	79.8	70.00	0.0024	Pulse	0.1000	3
K	39	45	He	5.952	ppb	372.3	10604.28	0.3685	Pulse	0.1000	3
Ca	44	45	He	7.464	ppb	189.0	86.67	0.0030	Pulse	0.1000	3
Ti	47	45	He	-0.005	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	0.008	ppb	204.5	338.01	0.0118	Pulse	0.5000	3
Cr	52	45	He	0.031	ppb	493.5	1976.87	0.0688	Pulse	0.1000	3
Mn	55	45	He	0.357	ppb	52.3	236.68	0.0083	Pulse	0.1000	3
Fe	57	45	He	-0.089	ppb	N/A	116.67	0.0041	Pulse	0.1000	3
Co	59	45	He	0.013	ppb	348.4	160.01	0.0056	Pulse	0.1000	3
Ni	60	72	He	0.085	ppb	225.0	410.03	0.0073	Pulse	0.1000	3
Cu	63	72	He	0.023	ppb	144.1	206.68	0.0037	Pulse	0.1000	3
Zn	66	72	He	-0.486	ppb	N/A	93.34	0.0017	Pulse	0.1000	3
As	75	72	He	0.089	ppb	64.0	37.33	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.049	ppb	119.7	60.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.026	ppb	69.3	60.00	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	171.0	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	58.9	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.221	ppb	N/A	560.03	0.0101	Pulse	0.1000	3
Sb	121	115	He	0.031	ppb	249.1	106.67	0.0019	Pulse	0.1000	3
Ba	137	115	He	0.010	ppb	219.1	23.33	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	34.9	186.67	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.019	ppb	10.2	333.35	0.0017	Pulse	0.1000	3
U	238	209	He	0.002	ppb	37.1	33.33	0.0002	Pulse	0.1000	3

ISTD Table:

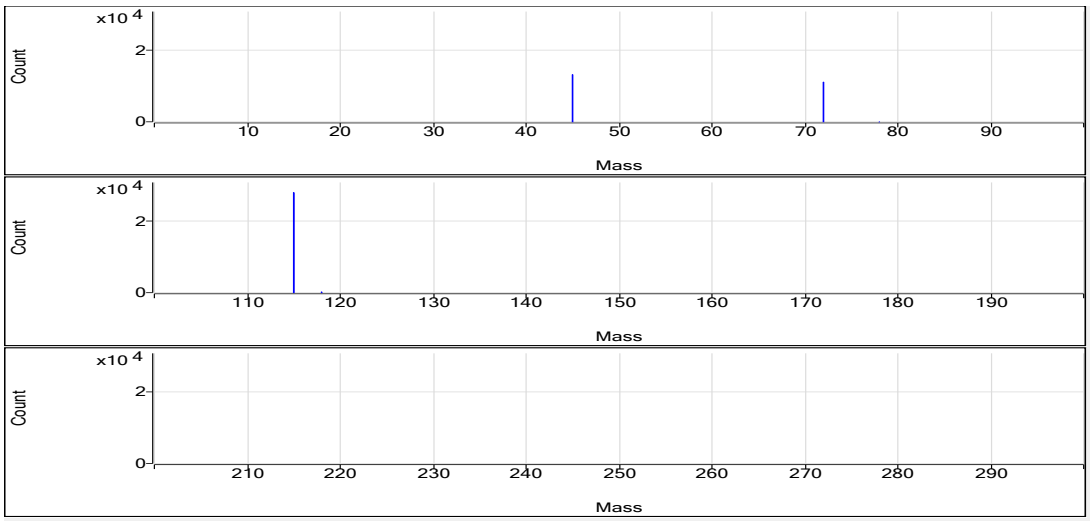
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1756957.58	0.6	99.8	Analog	0.1000	3
No Gas	Ge	72	906956.52	0.4	101.6	Pulse	0.1000	3
H2	Sc	45	132919.32	1.7	104.4	Pulse	0.1000	3
H2	Ge	72	112063.92	2.5	104.5	Pulse	0.1000	3
H2	In	115	281809.16	0.4	105.8	Pulse	0.1000	3
He	Sc	45	28752.48	2.3	100.9	Pulse	0.1000	3
He	Ge	72	55926.87	1.7	101.1	Pulse	0.1000	3
He	In	115	55360.57	0.3	103.1	Pulse	0.1000	3
He	Tb	159	250474.05	0.4	101.9	Pulse	0.1000	3
He	Bi	209	198427.91	0.5	104.0	Pulse	0.1000	3

No Gas

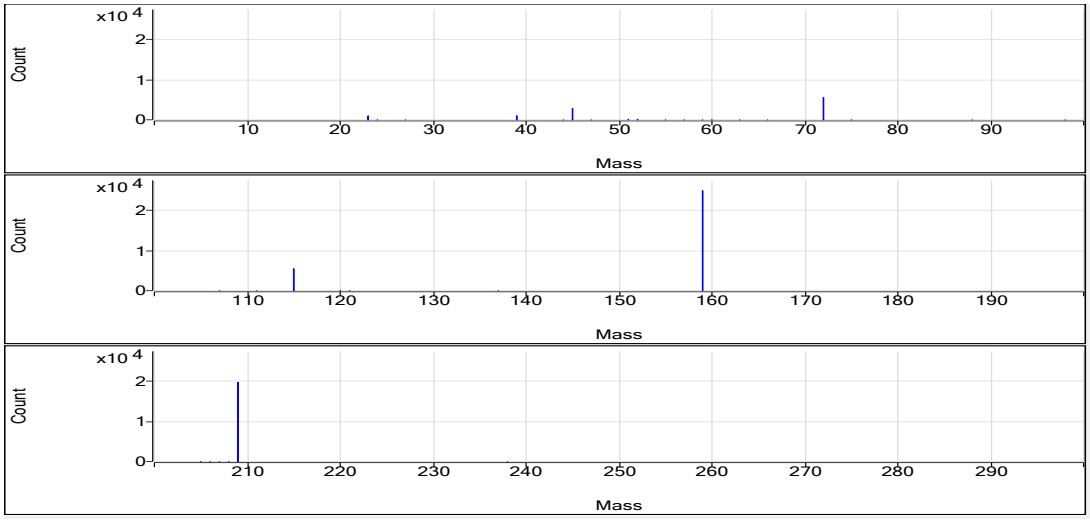


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.005	0	26.00	0.0004	1.287E-05
Be	9	1	No Gas	0.028	0	42.00	0.0004	1.287E-05
Be	9	1	No Gas	0.013	0	32.00	0.0004	1.287E-05
Se	78	2	H2	0.024	0	2.67	0.0004	1.451E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Se	78	2	H2	-0.037	0	0.00	0.0004	1.451E-05
Na	23	3	He	26.506	0.3319	9793.55	0.0025	0.2648
Na	23	3	He	37.089	0.3586	10173.77	0.0025	0.2648
Na	23	3	He	40.526	0.3673	10423.96	0.0025	0.2648
Mg	24	3	He	2.35	0.0081	240.01	0.0013	0.005032
Mg	24	3	He	5.268	0.012	340.01	0.0013	0.005032
Mg	24	3	He	1.527	0.007	200.01	0.0013	0.005032
Al	27	3	He	0.408	0.0017	50.00	0.0004	0.001519
Al	27	3	He	2.201	0.0025	70.00	0.0004	0.001519
Al	27	3	He	3.833	0.0032	90.00	0.0004	0.001519
K	39	3	He	28.969	0.3909	11535.05	0.001	0.3627
K	39	3	He	4.13	0.3667	10404.10	0.001	0.3627
K	39	3	He	-15.241	0.3479	9873.68	0.001	0.3627
Ca	44	3	He	19.906	0.0037	110.00	0.0001	0.002571
Ca	44	3	He	10.352	0.0032	90.00	0.0001	0.002571
Ca	44	3	He	-7.865	0.0021	60.00	0.0001	0.002571
Ti	47	3	He	0.231	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.26	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.01	0.0118	348.01	0.0201	0.0116
V	51	3	He	0.023	0.0121	342.01	0.0201	0.0116
V	51	3	He	-0.009	0.0114	324.01	0.0201	0.0116
Cr	52	3	He	-0.128	0.0647	1910.19	0.0257	0.06801
Cr	52	3	He	0.042	0.0691	1960.20	0.0257	0.06801
Cr	52	3	He	0.179	0.0726	2060.21	0.0257	0.06801
Mn	55	3	He	0.196	0.0064	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.313	0.0078	220.01	0.0113	0.004215
Mn	55	3	He	0.561	0.0106	300.02	0.0113	0.004215
Fe	57	3	He	0.601	0.0044	130.01	0.0005	0.004099
Fe	57	3	He	-2.505	0.0028	80.00	0.0005	0.004099
Fe	57	3	He	1.636	0.0049	140.01	0.0005	0.004099
Co	59	3	He	-0.029	0.0034	100.00	0.0518	0.004913
Co	59	3	He	0.007	0.0053	150.01	0.0518	0.004913
Co	59	3	He	0.062	0.0081	230.01	0.0518	0.004913
Ni	60	3	He	0.067	0.0072	410.03	0.0075	0.006695
Ni	60	3	He	-0.097	0.006	330.02	0.0075	0.006695
Ni	60	3	He	0.286	0.0088	490.03	0.0075	0.006695
Cu	63	3	He	0.047	0.0042	240.01	0.0216	0.003198
Cu	63	3	He	0.036	0.004	220.01	0.0216	0.003198
Cu	63	3	He	-0.015	0.0029	160.01	0.0216	0.003198
Zn	66	3	He	-0.723	0.0011	60.00	0.0026	0.002954
Zn	66	3	He	-0.366	0.002	110.00	0.0026	0.002954
Zn	66	3	He	-0.37	0.002	110.01	0.0026	0.002954
As	75	3	He	0.052	0.0006	34.00	0.002	0.0004943
As	75	3	He	0.155	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.06	0.0006	34.00	0.002	0.0004943
Sr	88	3	He	0.116	0.0016	90.00	0.0081	0.0006852
Sr	88	3	He	0.004	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.027	0.0009	50.00	0.0081	0.0006852
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.044	0.0014	80.00	0.0205	0.0005587
Ag	107	3	He	0.002	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	-0.197	0.0105	580.03	0.0146	0.01334
Sn	120	3	He	-0.197	0.0105	580.04	0.0146	0.01334
Sn	120	3	He	-0.268	0.0094	520.03	0.0146	0.01334
Sb	121	3	He	-0.054	0.0007	40.00	0.0142	0.001484
Sb	121	3	He	0.098	0.0029	160.01	0.0142	0.001484
Sb	121	3	He	0.048	0.0022	120.01	0.0142	0.001484
Ba	137	3	He	0.036	0.0005	30.00	0.0046	0.000374
Ba	137	3	He	-0.003	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	-0.003	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.028	0.001	200.01	0.0282	0.00021
Tl	205	3	He	0.033	0.0012	230.01	0.0282	0.00021
Tl	205	3	He	0.016	0.0007	130.00	0.0282	0.00021
Pb	208	3	He	0.021	0.0018	210.01	0.0372	0.0009772
Pb	208	3	He	0.018	0.0017	210.01	0.0372	0.0009772
Pb	208	3	He	0.017	0.0016	120.00	0.0372	0.0009772
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
Sc	45	1	No Gas			1749063.88		
Sc	45	1	No Gas			1753971.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1767837.00		
Ge	72	1	No Gas			902678.11		
Ge	72	1	No Gas			908335.61		
Ge	72	1	No Gas			909855.85		
Sc	45	2	H2			131651.29		
Sc	45	2	H2			131620.44		
Sc	45	2	H2			135486.24		
Ge	72	2	H2			112631.26		
Ge	72	2	H2			108974.35		
Ge	72	2	H2			114586.16		
In	115	2	H2			282000.19		
In	115	2	H2			280699.55		
In	115	2	H2			282727.73		
Sc	45	3	He			29510.40		
Sc	45	3	He			28368.53		
Sc	45	3	He			28378.51		
Ge	72	3	He			57014.54		
Ge	72	3	He			55227.14		
Ge	72	3	He			55538.93		
In	115	3	He			55421.26		
In	115	3	He			55471.23		
In	115	3	He			55200.97		
Tb	159	3	He			251698.75		
Tb	159	3	He			249815.00		
Tb	159	3	He			249908.41		
Bi	209	3	He			198880.45		
Bi	209	3	He			199084.68		
Bi	209	3	He			197318.59		

Quantitation Report

Data File Name	100SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:37:28 PM
Sample Name	LCS 410-401731/2-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

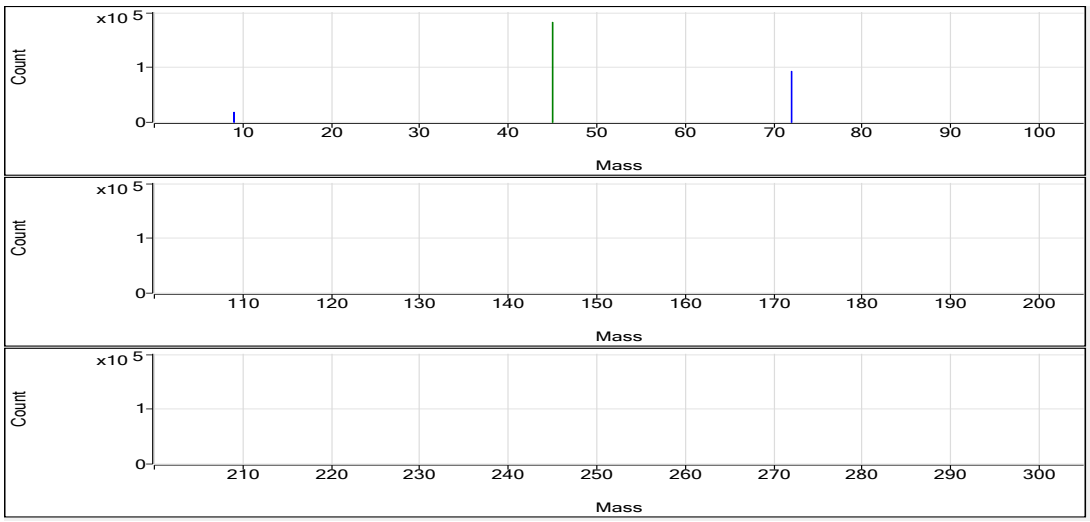
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.112	ppb	5.5	37692.74	0.0205	Pulse	0.5000	3
Se	78	72	H2	100.727	ppb	2.4	4576.30	0.0394	Pulse	1.5000	3
Na	23	45	He	5075.530	ppb	2.1	387736.24	13.0993	Pulse	0.1000	3
Mg	24	45	He	5041.792	ppb	1.3	197128.71	6.6594	Pulse	0.1000	3
Al	27	45	He	5066.495	ppb	0.5	64729.45	2.1865	Pulse	0.1000	3
K	39	45	He	5099.273	ppb	2.6	157376.74	5.3170	Pulse	0.1000	3
Ca	44	45	He	5048.219	ppb	2.7	8756.28	0.2958	Pulse	0.1000	3
Ti	47	45	He	498.497	ppb	1.4	6788.49	0.2293	Pulse	0.1000	3
V	51	45	He	505.871	ppb	1.9	300690.03	10.1584	Pulse	0.5000	3
Cr	52	45	He	504.214	ppb	1.2	385614.38	13.0269	Pulse	0.1000	3
Mn	55	45	He	507.855	ppb	2.2	170431.31	5.7579	Pulse	0.1000	3
Fe	57	45	He	5056.533	ppb	1.8	76523.13	2.5852	Pulse	0.1000	3
Co	59	45	He	498.693	ppb	0.7	765087.07	25.8450	Pulse	0.1000	3
Ni	60	72	He	499.872	ppb	0.8	216360.57	3.7307	Pulse	0.1000	3
Cu	63	72	He	498.946	ppb	2.0	624764.16	10.7743	Pulse	0.1000	3
Zn	66	72	He	500.397	ppb	3.4	76477.34	1.3190	Pulse	0.1000	3
As	75	72	He	492.817	ppb	1.8	55823.76	0.9627	Pulse	0.5000	3
Sr	88	115	He	50.707	ppb	1.5	23099.55	0.4121	Pulse	0.1000	3
Mo	98	115	He	47.548	ppb	1.9	54580.29	0.9739	Pulse	0.1000	3
Ag	107	115	He	50.374	ppb	0.9	121565.63	2.1689	Pulse	0.1000	3
Cd	111	115	He	49.966	ppb	1.5	13998.39	0.2498	Pulse	0.5000	3
Sn	120	115	He	98.213	ppb	3.3	81194.66	1.4488	Pulse	0.1000	3
Sb	121	115	He	96.230	ppb	1.7	76820.22	1.3707	Pulse	0.1000	3
Ba	137	115	He	495.470	ppb	2.2	127950.40	2.2830	Pulse	0.1000	3
Tl	205	209	He	99.582	ppb	0.5	552061.06	2.8107	Pulse	0.1000	3
Pb	208	209	He	50.194	ppb	0.3	367314.87	1.8701	Pulse	0.1000	3
U	238	209	He	49.773	ppb	0.7	407846.84	2.0765	Pulse	0.1000	3

ISTD Table:

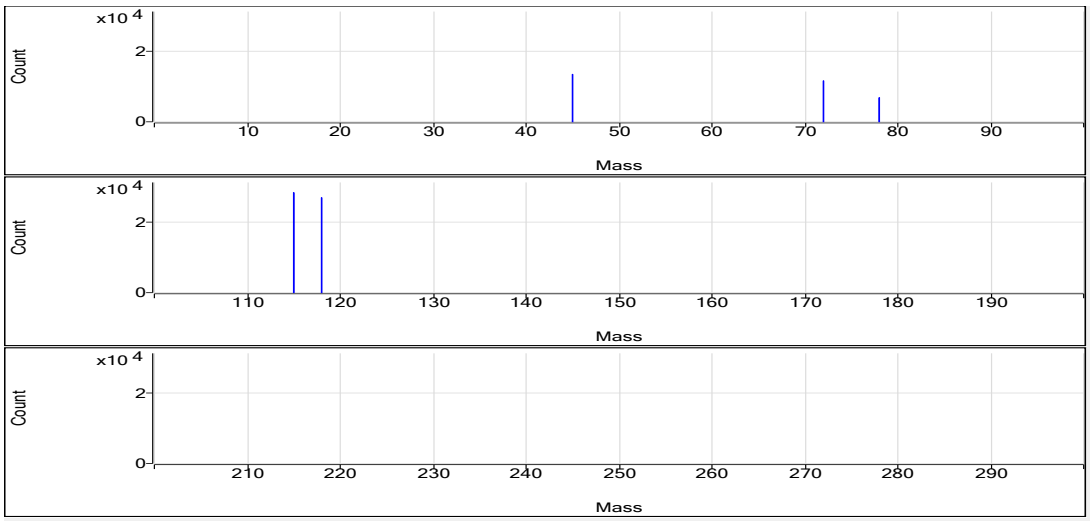
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1834730.18	1.2	104.2	Analog	0.1000	3
No Gas	Ge	72	936710.51	1.4	105.0	Pulse	0.1000	3
H2	Sc	45	134570.68	1.4	105.7	Pulse	0.1000	3
H2	Ge	72	116118.83	0.3	108.3	Pulse	0.1000	3
H2	In	115	283118.51	0.7	106.3	Pulse	0.1000	3
He	Sc	45	29604.31	1.2	103.8	Pulse	0.1000	3
He	Ge	72	57994.83	1.1	104.8	Pulse	0.1000	3
He	In	115	56051.44	0.9	104.4	Pulse	0.1000	3
He	Tb	159	252702.20	0.9	102.8	Pulse	0.1000	3
He	Bi	209	196420.20	0.8	102.9	Pulse	0.1000	3

No Gas

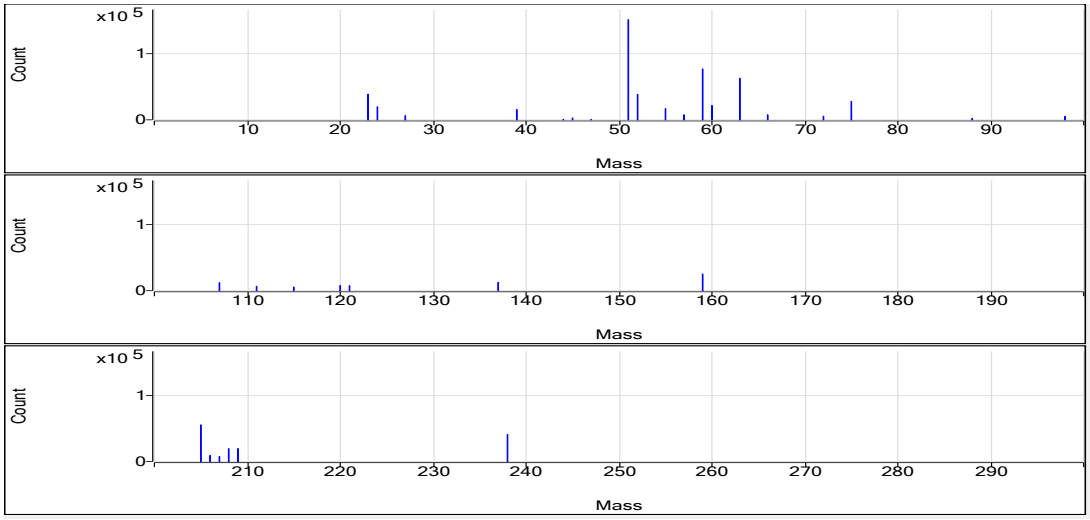


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.005	0.0193	35074.95	0.0004	1.287E-05
Be	9	1	No Gas	52.635	0.0207	38561.44	0.0004	1.287E-05
Be	9	1	No Gas	54.697	0.0216	39441.83	0.0004	1.287E-05
Se	78	2	H2	99.625	0.039	4541.39	0.0004	1.451E-05
Se	78	2	H2	99.042	0.0388	4500.72	0.0004	1.451E-05
Se	78	2	H2	103.516	0.0405	4686.78	0.0004	1.451E-05
Na	23	3	He	5162.044	13.3181	392225.38	0.0025	0.2648
Na	23	3	He	5111.445	13.1901	387267.77	0.0025	0.2648
Na	23	3	He	4953.1	12.7897	383715.58	0.0025	0.2648
Mg	24	3	He	5084.091	6.7153	197768.24	0.0013	0.005032
Mg	24	3	He	5072.327	6.6997	196706.79	0.0013	0.005032
Mg	24	3	He	4968.957	6.5633	196911.09	0.0013	0.005032
Al	27	3	He	5088.519	2.1959	64672.04	0.0004	0.001519
Al	27	3	He	5036.028	2.1733	63809.39	0.0004	0.001519
Al	27	3	He	5074.94	2.1901	65706.91	0.0004	0.001519
K	39	3	He	5131.149	5.348	157500.63	0.001	0.3627
K	39	3	He	5211.532	5.4261	159311.30	0.001	0.3627
K	39	3	He	4955.137	5.177	155318.29	0.001	0.3627
Ca	44	3	He	5013.453	0.2938	8652.84	0.0001	0.002571
Ca	44	3	He	5199.164	0.3046	8943.09	0.0001	0.002571
Ca	44	3	He	4932.041	0.2891	8672.92	0.0001	0.002571
Ti	47	3	He	506.51	0.233	6861.85	0.0005	0.0002328
Ti	47	3	He	493.24	0.2269	6661.79	0.0005	0.0002328
Ti	47	3	He	495.742	0.228	6841.83	0.0005	0.0002328
V	51	3	He	511.544	10.2722	302523.19	0.0201	0.0116
V	51	3	He	511.108	10.2635	301340.13	0.0201	0.0116
V	51	3	He	494.961	9.9396	298206.78	0.0201	0.0116
Cr	52	3	He	508.059	13.1257	386559.21	0.0257	0.06801
Cr	52	3	He	507.595	13.1138	385025.54	0.0257	0.06801
Cr	52	3	He	496.988	12.8411	385258.39	0.0257	0.06801
Mn	55	3	He	515.679	5.8466	172185.64	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	512.971	5.8159	170757.52	0.0113	0.004215
Mn	55	3	He	494.915	5.6113	168350.78	0.0113	0.004215
Fe	57	3	He	5129.106	2.6222	77226.80	0.0005	0.004099
Fe	57	3	He	5085.871	2.6002	76342.36	0.0005	0.004099
Fe	57	3	He	4954.621	2.5332	76000.22	0.0005	0.004099
Co	59	3	He	501.651	25.9983	765665.85	0.0518	0.004913
Co	59	3	He	499.387	25.8809	759875.77	0.0518	0.004913
Co	59	3	He	495.04	25.6557	769719.60	0.0518	0.004913
Ni	60	3	He	499.344	3.7268	213716.31	0.0075	0.006695
Ni	60	3	He	496.174	3.7032	216861.93	0.0075	0.006695
Ni	60	3	He	504.097	3.7622	218503.47	0.0075	0.006695
Cu	63	3	He	510.076	11.0146	631635.42	0.0216	0.003198
Cu	63	3	He	490.342	10.5885	620072.41	0.0216	0.003198
Cu	63	3	He	496.42	10.7198	622584.64	0.0216	0.003198
Zn	66	3	He	517.333	1.3635	78193.19	0.0026	0.002954
Zn	66	3	He	483.596	1.2748	74654.05	0.0026	0.002954
Zn	66	3	He	500.262	1.3186	76584.77	0.0026	0.002954
As	75	3	He	502.908	0.9824	56334.54	0.002	0.0004943
As	75	3	He	488.743	0.9547	55908.75	0.002	0.0004943
As	75	3	He	486.801	0.9509	55227.98	0.002	0.0004943
Sr	88	3	He	49.868	0.4053	22488.62	0.0081	0.0006852
Sr	88	3	He	50.89	0.4136	23259.69	0.0081	0.0006852
Sr	88	3	He	51.363	0.4174	23550.33	0.0081	0.0006852
Mo	98	3	He	48.596	0.9953	55229.44	0.0205	0.0005587
Mo	98	3	He	47.03	0.9633	54175.73	0.0205	0.0005587
Mo	98	3	He	47.019	0.963	54335.69	0.0205	0.0005587
Ag	107	3	He	50.637	2.1802	120979.92	0.043	0.0004367
Ag	107	3	He	49.852	2.1464	120718.30	0.043	0.0004367
Ag	107	3	He	50.632	2.18	122998.67	0.043	0.0004367
Cd	111	3	He	50.65	0.2532	14049.11	0.005	1.253E-05
Cd	111	3	He	50.059	0.2502	14073.14	0.005	1.253E-05
Cd	111	3	He	49.189	0.2459	13872.91	0.005	1.253E-05
Sn	120	3	He	101.868	1.5023	83361.22	0.0146	0.01334
Sn	120	3	He	95.648	1.4113	79377.10	0.0146	0.01334
Sn	120	3	He	97.122	1.4329	80845.65	0.0146	0.01334
Sb	121	3	He	98.051	1.3966	77497.41	0.0142	0.001484
Sb	121	3	He	95.759	1.364	76713.18	0.0142	0.001484
Sb	121	3	He	94.878	1.3514	76250.08	0.0142	0.001484
Ba	137	3	He	507.583	2.3388	129781.41	0.0046	0.000374
Ba	137	3	He	487.39	2.2458	126307.53	0.0046	0.000374
Ba	137	3	He	491.437	2.2644	127762.26	0.0046	0.000374
Tl	205	3	He	98.999	2.7942	553062.53	0.0282	0.00021
Tl	205	3	He	99.747	2.8153	548922.26	0.0282	0.00021
Tl	205	3	He	99.999	2.8225	554198.39	0.0282	0.00021
Pb	208	3	He	50.141	1.8681	196077.38	0.0372	0.0009772
Pb	208	3	He	50.381	1.877	193968.18	0.0372	0.0009772
Pb	208	3	He	50.059	1.8651	194857.65	0.0372	0.0009772
U	238	3	He	49.379	2.06	407745.58	0.0417	8.729E-05
U	238	3	He	49.975	2.0849	406510.54	0.0417	8.729E-05
U	238	3	He	49.964	2.0844	409284.41	0.0417	8.729E-05
Sc	45	1	No Gas			1815854.97		
Sc	45	1	No Gas			1858769.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1829566.38		
Ge	72	1	No Gas			922060.46		
Ge	72	1	No Gas			945392.64		
Ge	72	1	No Gas			942678.42		
Sc	45	2	H2			133154.58		
Sc	45	2	H2			133830.40		
Sc	45	2	H2			136727.06		
Ge	72	2	H2			116503.05		
Ge	72	2	H2			116138.51		
Ge	72	2	H2			115714.92		
In	115	2	H2			281086.01		
In	115	2	H2			283236.17		
In	115	2	H2			285033.34		
Sc	45	3	He			29450.61		
Sc	45	3	He			29360.43		
Sc	45	3	He			30001.88		
Ge	72	3	He			57345.54		
Ge	72	3	He			58560.68		
Ge	72	3	He			58078.27		
In	115	3	He			56074.04		
In	115	3	He			56797.88		
In	115	3	He			56987.50		
Tb	159	3	He			255271.64		
Tb	159	3	He			252000.82		
Tb	159	3	He			250834.14		
Bi	209	3	He			197931.38		
Bi	209	3	He			194975.97		
Bi	209	3	He			196353.26		

Quantitation Report

Data File Name	101SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:39:27 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

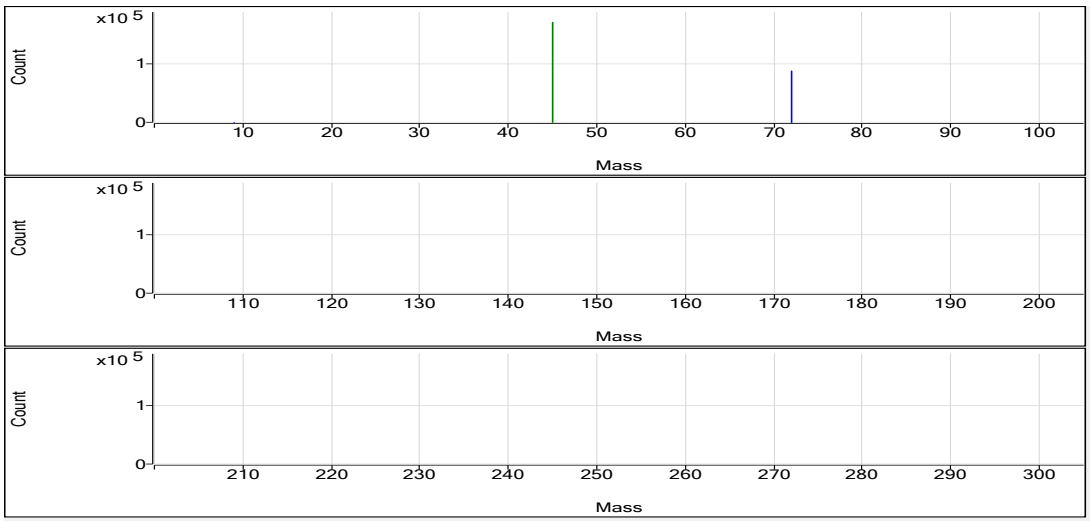
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.201	ppb	23.0	158.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.159	ppb	60.5	8.22	0.0001	Pulse	1.5000	3
Na	23	45	He	42.837	ppb	22.3	10323.97	0.3732	Pulse	0.1000	3
Mg	24	45	He	2.126	ppb	48.4	216.68	0.0078	Pulse	0.1000	3
Al	27	45	He	2.886	ppb	39.4	76.67	0.0028	Pulse	0.1000	3
K	39	45	He	24.014	ppb	58.6	10697.61	0.3861	Pulse	0.1000	3
Ca	44	45	He	12.060	ppb	119.2	90.00	0.0033	Pulse	0.1000	3
Ti	47	45	He	0.280	ppb	10.8	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.206	ppb	3.6	435.34	0.0157	Pulse	0.5000	3
Cr	52	45	He	0.524	ppb	58.0	2250.25	0.0815	Pulse	0.1000	3
Mn	55	45	He	0.407	ppb	37.5	243.34	0.0088	Pulse	0.1000	3
Fe	57	45	He	2.583	ppb	18.2	150.01	0.0054	Pulse	0.1000	3
Co	59	45	He	0.113	ppb	49.4	300.02	0.0108	Pulse	0.1000	3
Ni	60	72	He	0.298	ppb	59.6	486.69	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.174	ppb	10.4	380.02	0.0070	Pulse	0.1000	3
Zn	66	72	He	-0.010	ppb	N/A	160.01	0.0029	Pulse	0.1000	3
As	75	72	He	0.391	ppb	23.2	68.67	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.039	ppb	65.2	53.33	0.0010	Pulse	0.1000	3
Mo	98	115	He	0.086	ppb	69.2	123.34	0.0023	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	148.7	30.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.035	ppb	44.0	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.278	ppb	24.4	926.73	0.0174	Pulse	0.1000	3
Sb	121	115	He	0.182	ppb	17.1	216.68	0.0041	Pulse	0.1000	3
Ba	137	115	He	0.109	ppb	42.9	46.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.622	ppb	6.4	3357.22	0.0178	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	10.3	350.01	0.0019	Pulse	0.1000	3
U	238	209	He	0.035	ppb	35.3	296.68	0.0016	Pulse	0.1000	3

ISTD Table:

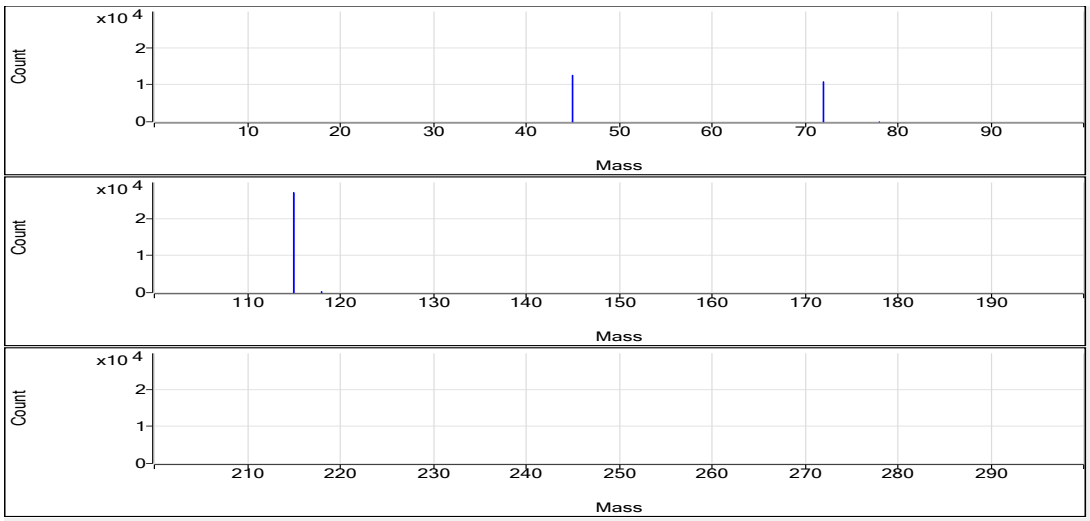
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1722527.32	0.2	97.8	Analog	0.1000	3
No Gas	Ge	72	883612.64	0.5	99.0	Pulse	0.1000	3
H2	Sc	45	125622.26	0.8	98.7	Pulse	0.1000	3
H2	Ge	72	107831.80	1.3	100.6	Pulse	0.1000	3
H2	In	115	269424.72	0.7	101.2	Pulse	0.1000	3
He	Sc	45	27683.61	3.9	97.1	Pulse	0.1000	3
He	Ge	72	54588.26	1.2	98.7	Pulse	0.1000	3
He	In	115	53229.39	1.5	99.2	Pulse	0.1000	3
He	Tb	159	243942.24	1.0	99.3	Pulse	0.1000	3
He	Bi	209	189054.75	0.5	99.1	Pulse	0.1000	3

No Gas

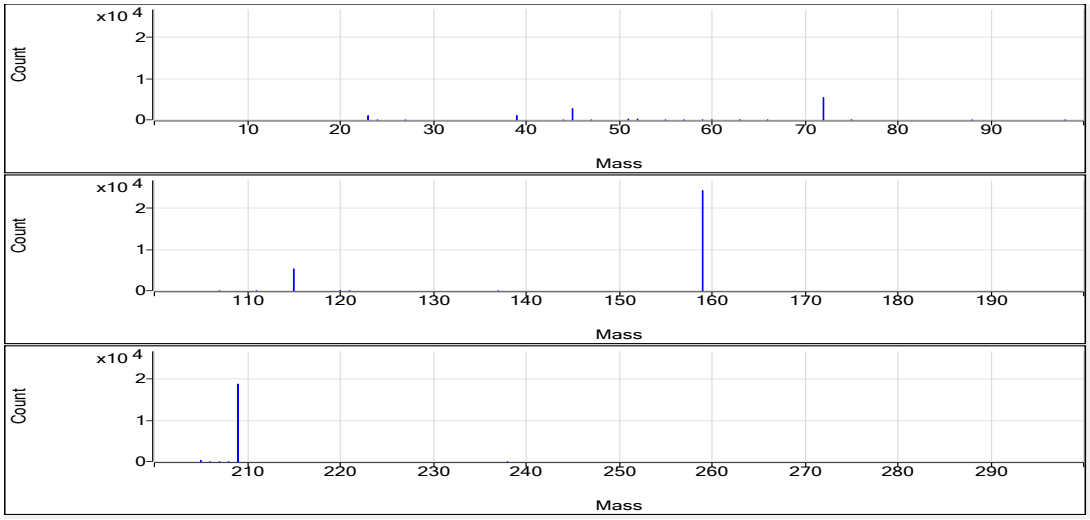


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.182	0.0001	146.00	0.0004	1.287E-05
Be	9	1	No Gas	0.254	0.0001	194.00	0.0004	1.287E-05
Be	9	1	No Gas	0.168	0.0001	136.00	0.0004	1.287E-05
Se	78	2	H2	0.268	0.0001	12.67	0.0004	1.451E-05
Se	78	2	H2	0.088	0	5.33	0.0004	1.451E-05
Se	78	2	H2	0.12	0.0001	6.67	0.0004	1.451E-05
Na	23	3	He	37.126	0.3587	10374.00	0.0025	0.2648
Na	23	3	He	53.885	0.4011	10924.36	0.0025	0.2648
Na	23	3	He	37.502	0.3597	9673.56	0.0025	0.2648
Mg	24	3	He	1.952	0.0076	220.01	0.0013	0.005032
Mg	24	3	He	1.195	0.0066	180.01	0.0013	0.005032
Mg	24	3	He	3.23	0.0093	250.01	0.0013	0.005032
Al	27	3	He	3.695	0.0031	90.00	0.0004	0.001519
Al	27	3	He	1.587	0.0022	60.00	0.0004	0.001519
Al	27	3	He	3.376	0.003	80.00	0.0004	0.001519
K	39	3	He	40.035	0.4016	11614.97	0.001	0.3627
K	39	3	He	18.312	0.3805	10364.03	0.001	0.3627
K	39	3	He	13.696	0.376	10113.82	0.001	0.3627
Ca	44	3	He	-2.593	0.0024	70.00	0.0001	0.002571
Ca	44	3	He	12.623	0.0033	90.00	0.0001	0.002571
Ca	44	3	He	26.151	0.0041	110.01	0.0001	0.002571
Ti	47	3	He	0.246	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.292	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.302	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.198	0.0156	450.01	0.0201	0.0116
V	51	3	He	0.209	0.0158	430.01	0.0201	0.0116
V	51	3	He	0.211	0.0158	426.01	0.0201	0.0116
Cr	52	3	He	0.18	0.0726	2100.22	0.0257	0.06801
Cr	52	3	He	0.754	0.0874	2380.28	0.0257	0.06801
Cr	52	3	He	0.638	0.0844	2270.24	0.0257	0.06801
Mn	55	3	He	0.238	0.0069	200.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.535	0.0103	280.01	0.0113	0.004215
Mn	55	3	He	0.448	0.0093	250.01	0.0113	0.004215
Fe	57	3	He	2.81	0.0055	160.01	0.0005	0.004099
Fe	57	3	He	2.041	0.0051	140.01	0.0005	0.004099
Fe	57	3	He	2.897	0.0056	150.01	0.0005	0.004099
Co	59	3	He	0.172	0.0138	400.03	0.0518	0.004913
Co	59	3	He	0.061	0.0081	220.01	0.0518	0.004913
Co	59	3	He	0.106	0.0104	280.01	0.0518	0.004913
Ni	60	3	He	0.196	0.0082	440.02	0.0075	0.006695
Ni	60	3	He	0.195	0.0081	450.02	0.0075	0.006695
Ni	60	3	He	0.503	0.0104	570.04	0.0075	0.006695
Cu	63	3	He	0.195	0.0074	400.02	0.0216	0.003198
Cu	63	3	He	0.162	0.0067	370.02	0.0216	0.003198
Cu	63	3	He	0.166	0.0068	370.02	0.0216	0.003198
Zn	66	3	He	-0.066	0.0028	150.01	0.0026	0.002954
Zn	66	3	He	0.322	0.0038	210.01	0.0026	0.002954
Zn	66	3	He	-0.287	0.0022	120.01	0.0026	0.002954
As	75	3	He	0.374	0.0012	66.00	0.002	0.0004943
As	75	3	He	0.488	0.0014	80.00	0.002	0.0004943
As	75	3	He	0.31	0.0011	60.00	0.002	0.0004943
Sr	88	3	He	0.053	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.01	0.0008	40.00	0.0081	0.0006852
Sr	88	3	He	0.054	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.081	0.0022	120.00	0.0205	0.0005587
Mo	98	3	He	0.029	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.147	0.0036	190.01	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.051	0.0003	14.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.355	0.0185	1000.08	0.0146	0.01334
Sn	120	3	He	0.249	0.017	890.06	0.0146	0.01334
Sn	120	3	He	0.229	0.0167	890.06	0.0146	0.01334
Sb	121	3	He	0.169	0.0039	210.01	0.0142	0.001484
Sb	121	3	He	0.218	0.0046	240.01	0.0142	0.001484
Sb	121	3	He	0.159	0.0038	200.01	0.0142	0.001484
Ba	137	3	He	0.08	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.084	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.163	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.665	0.019	3600.61	0.0282	0.00021
Tl	205	3	He	0.614	0.0175	3300.54	0.0282	0.00021
Tl	205	3	He	0.586	0.0168	3170.50	0.0282	0.00021
Pb	208	3	He	0.022	0.0018	160.01	0.0372	0.0009772
Pb	208	3	He	0.022	0.0018	190.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.002	200.01	0.0372	0.0009772
U	238	3	He	0.05	0.0022	410.03	0.0417	8.729E-05
U	238	3	He	0.026	0.0012	220.01	0.0417	8.729E-05
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
Sc	45	1	No Gas			1725390.60		
Sc	45	1	No Gas			1718559.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1723632.16		
Ge	72	1	No Gas			887430.77		
Ge	72	1	No Gas			878679.52		
Ge	72	1	No Gas			884727.64		
Sc	45	2	H2			124490.10		
Sc	45	2	H2			126496.01		
Sc	45	2	H2			125880.67		
Ge	72	2	H2			106163.56		
Ge	72	2	H2			108590.62		
Ge	72	2	H2			108741.21		
In	115	2	H2			267392.03		
In	115	2	H2			271235.82		
In	115	2	H2			269646.32		
Sc	45	3	He			28919.42		
Sc	45	3	He			27236.01		
Sc	45	3	He			26895.40		
Ge	72	3	He			53942.52		
Ge	72	3	He			55247.74		
Ge	72	3	He			54574.53		
In	115	3	He			53965.09		
In	115	3	He			52419.48		
In	115	3	He			53323.05		
Tb	159	3	He			246811.17		
Tb	159	3	He			242461.60		
Tb	159	3	He			242553.94		
Bi	209	3	He			189850.09		
Bi	209	3	He			188084.47		
Bi	209	3	He			189229.70		

Quantitation Report

Data File Name	102_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:41:29 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

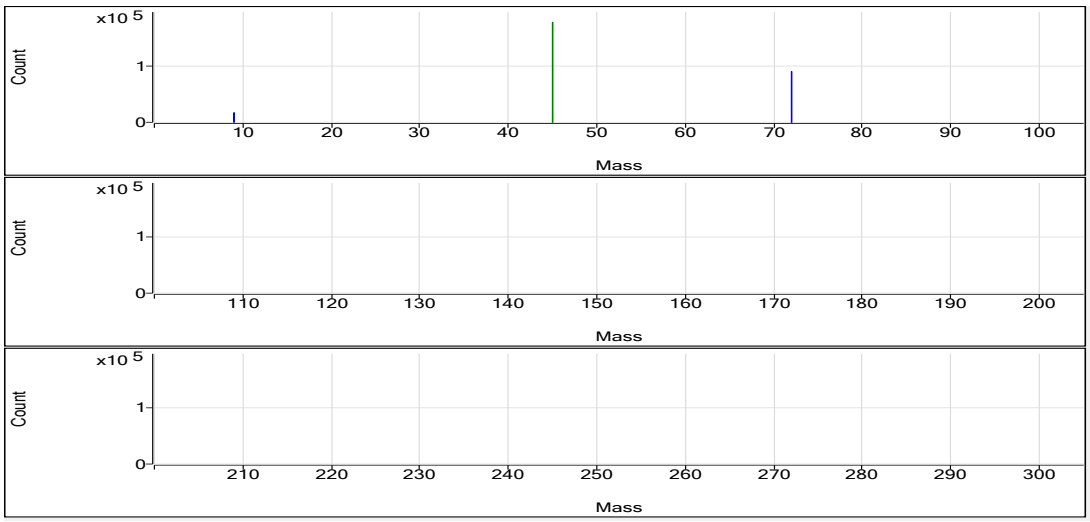
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.082	ppb	8.1	34382.18	0.0193	Pulse	0.5000	3
Se	78	72	H2	51.012	ppb	1.2	2200.17	0.0200	Pulse	1.5000	3
Na	23	45	He	5099.080	ppb	1.6	380231.65	13.1589	Pulse	0.1000	3
Mg	24	45	He	5107.160	ppb	2.0	194914.84	6.7457	Pulse	0.1000	3
Al	27	45	He	5045.948	ppb	1.6	62921.83	2.1776	Pulse	0.1000	3
K	39	45	He	5067.908	ppb	2.2	152752.35	5.2865	Pulse	0.1000	3
Ca	44	45	He	5190.434	ppb	4.2	8786.31	0.3041	Pulse	0.1000	3
Ti	47	45	He	5079.120	ppb	1.8	67453.59	2.3343	Pulse	0.1000	3
V	51	45	He	509.886	ppb	1.6	295857.24	10.2390	Pulse	0.5000	3
Cr	52	45	He	512.179	ppb	2.1	382308.07	13.2316	Pulse	0.1000	3
Mn	55	45	He	509.465	ppb	0.3	166926.89	5.7762	Pulse	0.1000	3
Fe	57	45	He	5209.570	ppb	1.7	76958.81	2.6633	Pulse	0.1000	3
Co	59	45	He	506.452	ppb	1.4	758423.19	26.2471	Pulse	0.1000	3
Ni	60	72	He	524.714	ppb	1.8	215078.65	3.9158	Pulse	0.1000	3
Cu	63	72	He	521.852	ppb	1.1	619002.01	11.2688	Pulse	0.1000	3
Zn	66	72	He	518.376	ppb	2.1	75043.11	1.3663	Pulse	0.1000	3
As	75	72	He	516.629	ppb	0.9	55434.16	1.0092	Pulse	0.5000	3
Sr	88	115	He	51.004	ppb	1.5	22187.97	0.4145	Pulse	0.1000	3
Mo	98	115	He	51.414	ppb	1.6	56367.12	1.0530	Pulse	0.1000	3
Ag	107	115	He	52.466	ppb	1.3	120923.66	2.2589	Pulse	0.1000	3
Cd	111	115	He	50.586	ppb	1.4	13537.27	0.2529	Pulse	0.5000	3
Sn	120	115	He	51.725	ppb	2.0	41181.96	0.7694	Pulse	0.1000	3
Sb	121	115	He	51.891	ppb	2.4	39600.87	0.7398	Pulse	0.1000	3
Ba	137	115	He	505.854	ppb	1.5	124774.43	2.3308	Pulse	0.1000	3
Tl	205	209	He	51.265	ppb	1.0	274830.31	1.4470	Pulse	0.1000	3
Pb	208	209	He	51.283	ppb	0.5	362896.36	1.9106	Pulse	0.1000	3
U	238	209	He	51.495	ppb	0.9	408039.66	2.1483	Pulse	0.1000	3

ISTD Table:

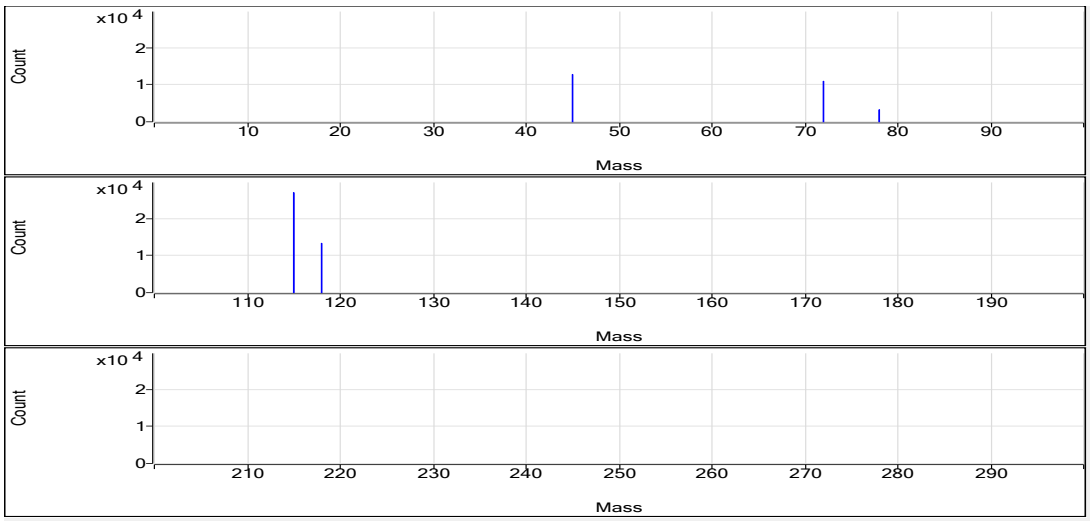
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1778152.79	1.0	101.0	Analog	0.1000	3
No Gas	Ge	72	903540.22	0.2	101.2	Pulse	0.1000	3
H2	Sc	45	128302.92	0.3	100.8	Pulse	0.1000	3
H2	Ge	72	110185.50	0.8	102.8	Pulse	0.1000	3
H2	In	115	270917.26	0.4	101.7	Pulse	0.1000	3
He	Sc	45	28899.52	1.4	101.4	Pulse	0.1000	3
He	Ge	72	54936.16	1.6	99.3	Pulse	0.1000	3
He	In	115	53536.99	1.3	99.7	Pulse	0.1000	3
He	Tb	159	246116.61	0.5	100.1	Pulse	0.1000	3
He	Bi	209	189931.69	0.5	99.5	Pulse	0.1000	3

No Gas

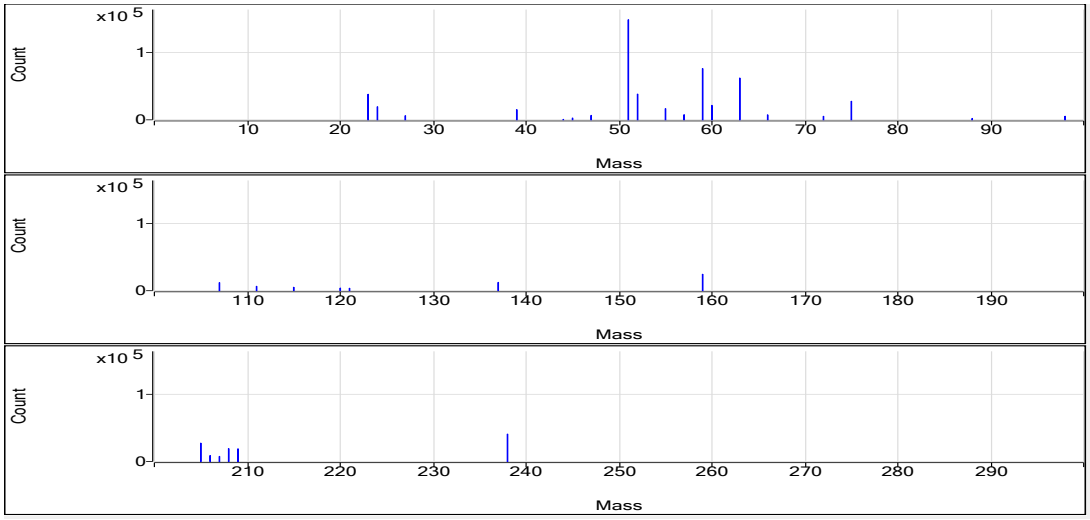


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	44.829	0.0177	31731.57	0.0004	1.287E-05
Be	9	1	No Gas	49.763	0.0196	34886.55	0.0004	1.287E-05
Be	9	1	No Gas	52.653	0.0208	36528.43	0.0004	1.287E-05
Se	78	2	H2	50.392	0.0197	2171.50	0.0004	1.451E-05
Se	78	2	H2	50.99	0.02	2182.17	0.0004	1.451E-05
Se	78	2	H2	51.655	0.0202	2246.85	0.0004	1.451E-05
Na	23	3	He	5029.343	12.9825	378049.10	0.0025	0.2648
Na	23	3	He	5080.321	13.1114	382333.35	0.0025	0.2648
Na	23	3	He	5187.576	13.3826	380312.49	0.0025	0.2648
Mg	24	3	He	5114.511	6.7554	196716.38	0.0013	0.005032
Mg	24	3	He	5000.445	6.6049	192599.61	0.0013	0.005032
Mg	24	3	He	5206.524	6.8768	195428.53	0.0013	0.005032
Al	27	3	He	4996.888	2.1564	62795.06	0.0004	0.001519
Al	27	3	He	5003.493	2.1593	62965.37	0.0004	0.001519
Al	27	3	He	5137.462	2.2171	63005.07	0.0004	0.001519
K	39	3	He	5084.068	5.3022	154399.83	0.001	0.3627
K	39	3	He	4947.007	5.1691	150731.27	0.001	0.3627
K	39	3	He	5172.649	5.3883	153125.95	0.001	0.3627
Ca	44	3	He	4940.803	0.2896	8432.77	0.0001	0.002571
Ca	44	3	He	5306.02	0.3108	9063.15	0.0001	0.002571
Ca	44	3	He	5324.478	0.3119	8863.01	0.0001	0.002571
Ti	47	3	He	5132.785	2.359	68692.59	0.0005	0.0002328
Ti	47	3	He	4971.244	2.2847	66623.32	0.0005	0.0002328
Ti	47	3	He	5133.33	2.3592	67044.85	0.0005	0.0002328
V	51	3	He	507.116	10.1834	296539.91	0.0201	0.0116
V	51	3	He	503.566	10.1122	294875.41	0.0201	0.0116
V	51	3	He	518.976	10.4213	296156.41	0.0201	0.0116
Cr	52	3	He	507.544	13.1124	381832.26	0.0257	0.06801
Cr	52	3	He	504.319	13.0296	379946.21	0.0257	0.06801
Cr	52	3	He	524.675	13.5527	385145.74	0.0257	0.06801
Mn	55	3	He	510.688	5.79	168605.10	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	507.566	5.7547	167808.02	0.0113	0.004215
Mn	55	3	He	510.142	5.7839	164367.54	0.0113	0.004215
Fe	57	3	He	5229.389	2.6734	77850.14	0.0005	0.004099
Fe	57	3	He	5112.715	2.6139	76221.63	0.0005	0.004099
Fe	57	3	He	5286.606	2.7026	76804.67	0.0005	0.004099
Co	59	3	He	502.103	26.0217	757748.82	0.0518	0.004913
Co	59	3	He	502.452	26.0398	759329.21	0.0518	0.004913
Co	59	3	He	514.801	26.6796	758191.55	0.0518	0.004913
Ni	60	3	He	520.13	3.8817	215076.34	0.0075	0.006695
Ni	60	3	He	518.55	3.8699	214772.26	0.0075	0.006695
Ni	60	3	He	535.462	3.9959	215387.34	0.0075	0.006695
Cu	63	3	He	522.87	11.2907	625600.07	0.0216	0.003198
Cu	63	3	He	515.556	11.1329	617852.37	0.0216	0.003198
Cu	63	3	He	527.131	11.3827	613553.58	0.0216	0.003198
Zn	66	3	He	508.966	1.3415	74332.26	0.0026	0.002954
Zn	66	3	He	516.201	1.3606	75508.89	0.0026	0.002954
Zn	66	3	He	529.962	1.3968	75288.19	0.0026	0.002954
As	75	3	He	515.561	1.0071	55800.18	0.002	0.0004943
As	75	3	He	512.632	1.0014	55573.36	0.002	0.0004943
As	75	3	He	521.695	1.019	54928.93	0.002	0.0004943
Sr	88	3	He	50.291	0.4087	22218.22	0.0081	0.0006852
Sr	88	3	He	51.778	0.4208	22328.07	0.0081	0.0006852
Sr	88	3	He	50.944	0.414	22017.63	0.0081	0.0006852
Mo	98	3	He	50.687	1.0381	56433.98	0.0205	0.0005587
Mo	98	3	He	52.297	1.0711	56835.76	0.0205	0.0005587
Mo	98	3	He	51.258	1.0498	55831.63	0.0205	0.0005587
Ag	107	3	He	51.796	2.2301	121233.14	0.043	0.0004367
Ag	107	3	He	53.203	2.2907	121554.74	0.043	0.0004367
Ag	107	3	He	52.399	2.256	119983.10	0.043	0.0004367
Cd	111	3	He	50.507	0.2525	13724.77	0.005	1.253E-05
Cd	111	3	He	49.916	0.2495	13240.33	0.005	1.253E-05
Cd	111	3	He	51.334	0.2566	13646.71	0.005	1.253E-05
Sn	120	3	He	50.525	0.7518	40870.94	0.0146	0.01334
Sn	120	3	He	52.158	0.7757	41161.87	0.0146	0.01334
Sn	120	3	He	52.492	0.7806	41513.06	0.0146	0.01334
Sb	121	3	He	50.973	0.7267	39507.39	0.0142	0.001484
Sb	121	3	He	53.297	0.7598	40319.58	0.0142	0.001484
Sb	121	3	He	51.403	0.7329	38975.64	0.0142	0.001484
Ba	137	3	He	500.216	2.3049	125298.46	0.0046	0.000374
Ba	137	3	He	514.388	2.3702	125772.64	0.0046	0.000374
Ba	137	3	He	502.959	2.3175	123252.20	0.0046	0.000374
Tl	205	3	He	50.694	1.4309	273288.16	0.0282	0.00021
Tl	205	3	He	51.568	1.4556	275415.07	0.0282	0.00021
Tl	205	3	He	51.533	1.4546	275787.69	0.0282	0.00021
Pb	208	3	He	51.556	1.9208	196149.31	0.0372	0.0009772
Pb	208	3	He	51.124	1.9047	192273.02	0.0372	0.0009772
Pb	208	3	He	51.169	1.9064	191979.22	0.0372	0.0009772
U	238	3	He	51.821	2.1619	412893.90	0.0417	8.729E-05
U	238	3	He	51.684	2.1562	407979.49	0.0417	8.729E-05
U	238	3	He	50.981	2.1269	403245.58	0.0417	8.729E-05
Sc	45	1	No Gas			1795697.16		
Sc	45	1	No Gas			1778592.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1760168.88		
Ge	72	1	No Gas			902925.61		
Ge	72	1	No Gas			901726.24		
Ge	72	1	No Gas			905968.81		
Sc	45	2	H2			128726.33		
Sc	45	2	H2			128021.04		
Sc	45	2	H2			128161.40		
Ge	72	2	H2			110091.58		
Ge	72	2	H2			109336.13		
Ge	72	2	H2			111128.78		
In	115	2	H2			271785.19		
In	115	2	H2			269703.28		
In	115	2	H2			271263.32		
Sc	45	3	He			29119.87		
Sc	45	3	He			29160.33		
Sc	45	3	He			28418.35		
Ge	72	3	He			55408.21		
Ge	72	3	He			55498.13		
Ge	72	3	He			53902.14		
In	115	3	He			54648.71		
In	115	3	He			53353.30		
In	115	3	He			53473.78		
Tb	159	3	He			247521.19		
Tb	159	3	He			245272.98		
Tb	159	3	He			245555.66		
Bi	209	3	He			190985.09		
Bi	209	3	He			189212.65		
Bi	209	3	He			189597.32		

Quantitation Report

Data File Name	103_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:43:27 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

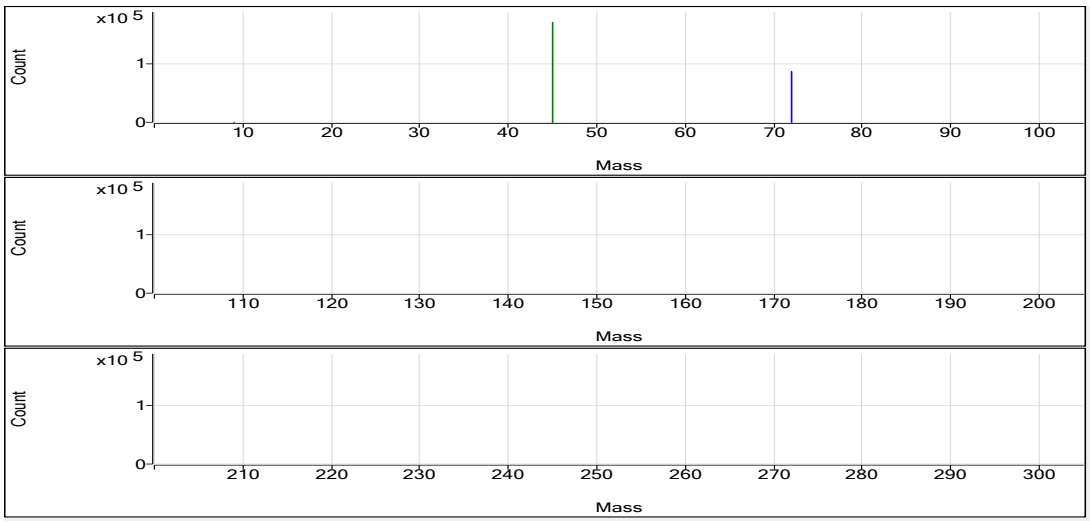
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.222	ppb	34.8	172.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.097	ppb	83.2	5.56	0.0001	Pulse	1.5000	3
Na	23	45	He	34.135	ppb	14.9	9833.63	0.3512	Pulse	0.1000	3
Mg	24	45	He	2.349	ppb	82.1	226.68	0.0081	Pulse	0.1000	3
Al	27	45	He	3.399	ppb	63.9	83.33	0.0030	Pulse	0.1000	3
K	39	45	He	8.572	ppb	308.8	10407.47	0.3711	Pulse	0.1000	3
Ca	44	45	He	5.092	ppb	445.1	80.00	0.0029	Pulse	0.1000	3
Ti	47	45	He	3.395	ppb	42.2	50.00	0.0018	Pulse	0.1000	3
V	51	45	He	0.216	ppb	50.0	447.34	0.0159	Pulse	0.5000	3
Cr	52	45	He	0.621	ppb	84.4	2346.94	0.0840	Pulse	0.1000	3
Mn	55	45	He	0.301	ppb	33.5	213.34	0.0076	Pulse	0.1000	3
Fe	57	45	He	3.658	ppb	78.6	166.68	0.0060	Pulse	0.1000	3
Co	59	45	He	0.171	ppb	7.8	386.69	0.0138	Pulse	0.1000	3
Ni	60	72	He	0.248	ppb	75.6	456.69	0.0085	Pulse	0.1000	3
Cu	63	72	He	0.170	ppb	81.4	366.68	0.0069	Pulse	0.1000	3
Zn	66	72	He	-0.031	ppb	N/A	153.34	0.0029	Pulse	0.1000	3
As	75	72	He	0.584	ppb	4.8	87.33	0.0016	Pulse	0.5000	3
Sr	88	115	He	0.047	ppb	57.3	56.67	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.084	ppb	41.6	120.01	0.0023	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	148.9	30.00	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.018	ppb	89.0	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.109	ppb	18.5	793.39	0.0149	Pulse	0.1000	3
Sb	121	115	He	0.147	ppb	16.2	190.01	0.0036	Pulse	0.1000	3
Ba	137	115	He	0.054	ppb	82.4	33.33	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.178	ppb	24.6	993.41	0.0052	Pulse	0.1000	3
Pb	208	209	He	0.023	ppb	23.3	346.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.030	ppb	23.5	253.34	0.0013	Pulse	0.1000	3

ISTD Table:

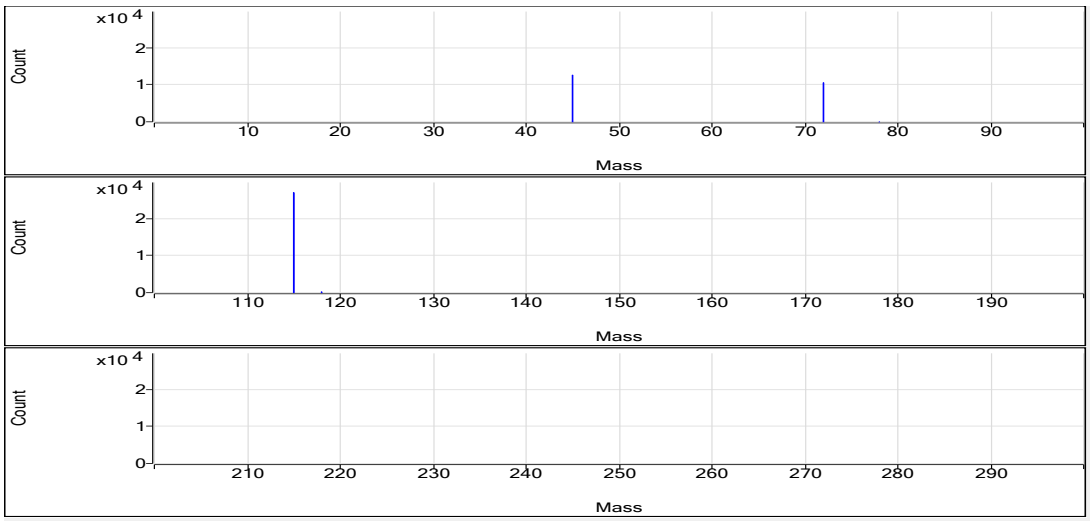
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1717920.44	1.5	97.5	Analog	0.1000	3
No Gas	Ge	72	872735.79	1.3	97.8	Pulse	0.1000	3
H2	Sc	45	126455.96	0.9	99.3	Pulse	0.1000	3
H2	Ge	72	105726.46	0.4	98.6	Pulse	0.1000	3
H2	In	115	270443.82	0.5	101.6	Pulse	0.1000	3
He	Sc	45	28017.64	2.5	98.3	Pulse	0.1000	3
He	Ge	72	53437.32	1.4	96.6	Pulse	0.1000	3
He	In	115	53119.98	2.6	99.0	Pulse	0.1000	3
He	Tb	159	242093.84	0.7	98.5	Pulse	0.1000	3
He	Bi	209	189413.60	0.2	99.2	Pulse	0.1000	3

No Gas

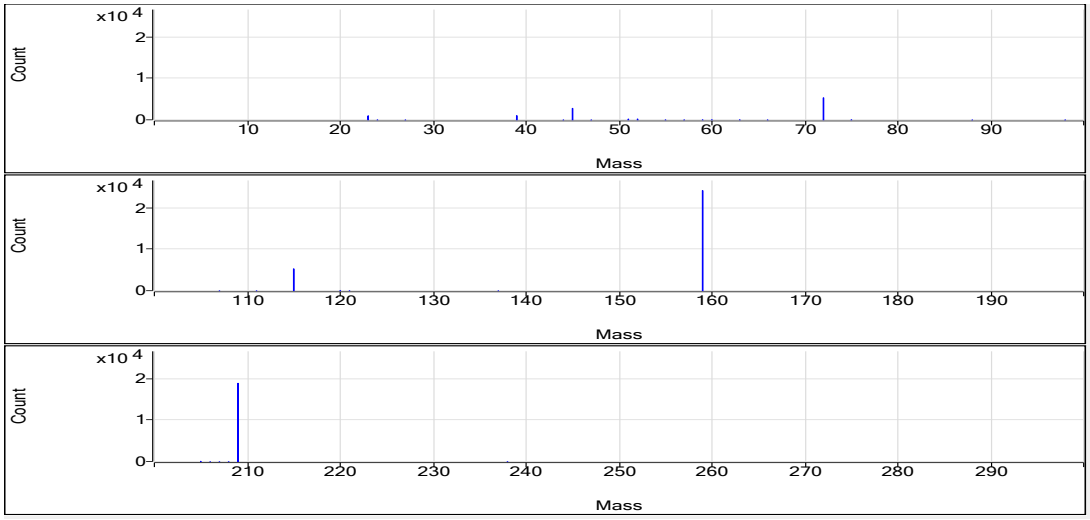


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.289	0.0001	216.00	0.0004	1.287E-05
Be	9	1	No Gas	0.24	0.0001	188.00	0.0004	1.287E-05
Be	9	1	No Gas	0.138	0.0001	114.00	0.0004	1.287E-05
Se	78	2	H2	0.012	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.108	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.172	0.0001	8.67	0.0004	1.451E-05
Na	23	3	He	30.436	0.3418	9843.72	0.0025	0.2648
Na	23	3	He	32.026	0.3458	9623.41	0.0025	0.2648
Na	23	3	He	39.942	0.3658	10033.77	0.0025	0.2648
Mg	24	3	He	0.134	0.0052	150.01	0.0013	0.005032
Mg	24	3	He	3.267	0.0093	260.01	0.0013	0.005032
Mg	24	3	He	3.647	0.0098	270.02	0.0013	0.005032
Al	27	3	He	1.31	0.0021	60.00	0.0004	0.001519
Al	27	3	He	5.645	0.004	110.00	0.0004	0.001519
Al	27	3	He	3.243	0.0029	80.00	0.0004	0.001519
K	39	3	He	32.111	0.3939	11344.97	0.001	0.3627
K	39	3	He	13.693	0.376	10464.14	0.001	0.3627
K	39	3	He	-20.087	0.3432	9413.30	0.001	0.3627
Ca	44	3	He	-14.374	0.0017	50.00	0.0001	0.002571
Ca	44	3	He	29.973	0.0043	120.00	0.0001	0.002571
Ca	44	3	He	-0.325	0.0026	70.00	0.0001	0.002571
Ti	47	3	He	2.516	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	2.621	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	5.047	0.0026	70.00	0.0005	0.0002328
V	51	3	He	0.339	0.0184	530.01	0.0201	0.0116
V	51	3	He	0.171	0.015	418.01	0.0201	0.0116
V	51	3	He	0.138	0.0144	394.01	0.0201	0.0116
Cr	52	3	He	0.218	0.0736	2120.24	0.0257	0.06801
Cr	52	3	He	0.43	0.0791	2200.24	0.0257	0.06801
Cr	52	3	He	1.213	0.0992	2720.35	0.0257	0.06801
Mn	55	3	He	0.302	0.0076	220.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.199	0.0065	180.01	0.0113	0.004215
Mn	55	3	He	0.4	0.0088	240.01	0.0113	0.004215
Fe	57	3	He	2.175	0.0052	150.01	0.0005	0.004099
Fe	57	3	He	1.827	0.005	140.01	0.0005	0.004099
Fe	57	3	He	6.972	0.0077	210.01	0.0005	0.004099
Co	59	3	He	0.187	0.0146	420.02	0.0518	0.004913
Co	59	3	He	0.162	0.0133	370.02	0.0518	0.004913
Co	59	3	He	0.166	0.0135	370.02	0.0518	0.004913
Ni	60	3	He	0.032	0.0069	370.02	0.0075	0.006695
Ni	60	3	He	0.374	0.0095	500.02	0.0075	0.006695
Ni	60	3	He	0.338	0.0092	500.03	0.0075	0.006695
Cu	63	3	He	0.33	0.0103	550.03	0.0216	0.003198
Cu	63	3	He	0.089	0.0051	270.01	0.0216	0.003198
Cu	63	3	He	0.091	0.0052	280.01	0.0216	0.003198
Zn	66	3	He	-0.268	0.0022	120.01	0.0026	0.002954
Zn	66	3	He	0.175	0.0034	180.01	0.0026	0.002954
Zn	66	3	He	-0.002	0.0029	160.01	0.0026	0.002954
As	75	3	He	0.573	0.0016	86.00	0.002	0.0004943
As	75	3	He	0.563	0.0016	84.00	0.002	0.0004943
As	75	3	He	0.615	0.0017	92.00	0.002	0.0004943
Sr	88	3	He	0.078	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.029	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.035	0.001	50.00	0.0081	0.0006852
Mo	98	3	He	0.111	0.0028	150.01	0.0205	0.0005587
Mo	98	3	He	0.044	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.095	0.0025	130.01	0.0205	0.0005587
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	0.131	0.0153	810.06	0.0146	0.01334
Sn	120	3	He	0.104	0.0149	810.05	0.0146	0.01334
Sn	120	3	He	0.092	0.0147	760.06	0.0146	0.01334
Sb	121	3	He	0.121	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.154	0.0037	200.01	0.0142	0.001484
Sb	121	3	He	0.167	0.0039	200.01	0.0142	0.001484
Ba	137	3	He	0.082	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.078	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.003	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.224	0.0065	1240.11	0.0282	0.00021
Tl	205	3	He	0.137	0.0041	770.05	0.0282	0.00021
Tl	205	3	He	0.174	0.0051	970.07	0.0282	0.00021
Pb	208	3	He	0.029	0.0021	200.01	0.0372	0.0009772
Pb	208	3	He	0.019	0.0017	130.01	0.0372	0.0009772
Pb	208	3	He	0.02	0.0017	170.01	0.0372	0.0009772
U	238	3	He	0.023	0.0011	200.01	0.0417	8.729E-05
U	238	3	He	0.037	0.0016	310.01	0.0417	8.729E-05
U	238	3	He	0.029	0.0013	250.01	0.0417	8.729E-05
Sc	45	1	No Gas			1705227.94		
Sc	45	1	No Gas			1748229.82		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1700303.57		
Ge	72	1	No Gas			868385.46		
Ge	72	1	No Gas			885263.42		
Ge	72	1	No Gas			864558.50		
Sc	45	2	H2			127001.28		
Sc	45	2	H2			125185.34		
Sc	45	2	H2			127181.27		
Ge	72	2	H2			105186.39		
Ge	72	2	H2			105940.14		
Ge	72	2	H2			106052.84		
In	115	2	H2			272039.27		
In	115	2	H2			269552.65		
In	115	2	H2			269739.53		
Sc	45	3	He			28799.22		
Sc	45	3	He			27827.25		
Sc	45	3	He			27426.44		
Ge	72	3	He			53340.76		
Ge	72	3	He			52717.70		
Ge	72	3	He			54253.51		
In	115	3	He			53101.80		
In	115	3	He			54497.27		
In	115	3	He			51777.53		
Tb	159	3	He			243620.39		
Tb	159	3	He			240428.41		
Tb	159	3	He			242232.71		
Bi	209	3	He			189497.11		
Bi	209	3	He			188905.39		
Bi	209	3	He			189838.30		

Quantitation Report

Data File Name	104SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:45:28 PM
Sample Name	630-67621-K-2-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

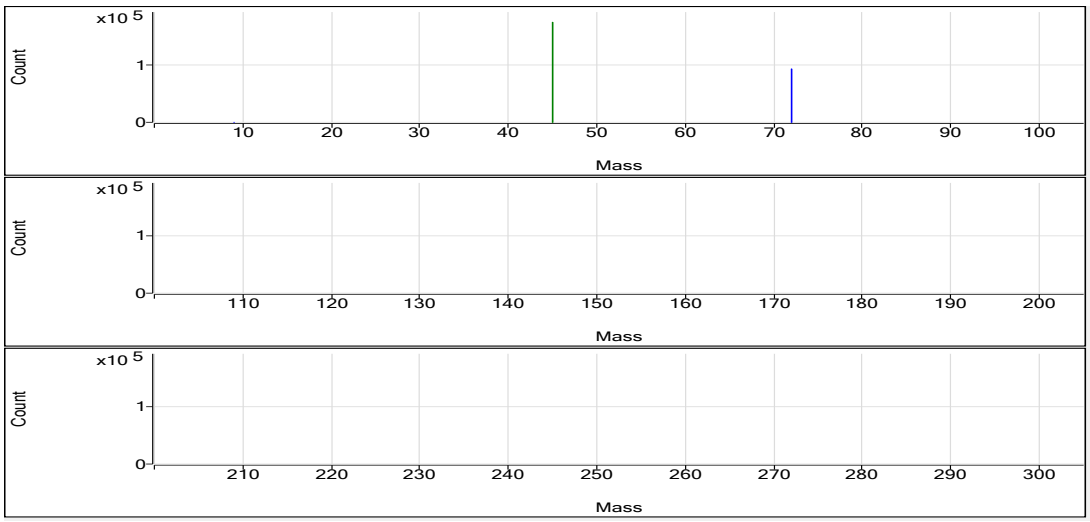
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.151	ppb	16.1	126.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.200	ppb	15.1	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	22441.587	ppb	0.3	1672790.55	57.0128	Analog	0.1000	3
Mg	24	45	He	7442.417	ppb	0.6	288344.14	9.8279	Pulse	0.1000	3
Al	27	45	He	218.884	ppb	3.6	2813.70	0.0959	Pulse	0.1000	3
K	39	45	He	2892.830	ppb	2.0	93096.08	3.1733	Pulse	0.1000	3
Ca	44	45	He	22732.784	ppb	1.8	38819.36	1.3231	Pulse	0.1000	3
Ti	47	45	He	6.665	ppb	17.4	96.67	0.0033	Pulse	0.1000	3
V	51	45	He	1.430	ppb	3.5	1182.06	0.0403	Pulse	0.5000	3
Cr	52	45	He	0.780	ppb	9.1	2583.66	0.0880	Pulse	0.1000	3
Mn	55	45	He	295.710	ppb	1.4	98417.51	3.3544	Pulse	0.1000	3
Fe	57	45	He	5680.205	ppb	1.0	85187.39	2.9036	Pulse	0.1000	3
Co	59	45	He	1.918	ppb	4.3	3060.43	0.1043	Pulse	0.1000	3
Ni	60	72	He	3.023	ppb	4.4	1673.50	0.0292	Pulse	0.1000	3
Cu	63	72	He	15.700	ppb	2.2	19600.56	0.3421	Pulse	0.1000	3
Zn	66	72	He	26.359	ppb	4.2	4144.09	0.0723	Pulse	0.1000	3
As	75	72	He	3.973	ppb	11.6	473.34	0.0083	Pulse	0.5000	3
Sr	88	115	He	158.094	ppb	3.6	71280.62	1.2833	Pulse	0.1000	3
Mo	98	115	He	1.920	ppb	6.9	2213.59	0.0399	Pulse	0.1000	3
Ag	107	115	He	0.015	ppb	30.3	60.00	0.0011	Pulse	0.1000	3
Cd	111	115	He	0.063	ppb	35.9	18.00	0.0003	Pulse	0.5000	3
Sn	120	115	He	0.069	ppb	189.4	796.72	0.0143	Pulse	0.1000	3
Sb	121	115	He	0.216	ppb	15.1	253.34	0.0046	Pulse	0.1000	3
Ba	137	115	He	40.764	ppb	2.3	10457.65	0.1882	Pulse	0.1000	3
Tl	205	209	He	0.076	ppb	16.3	456.70	0.0024	Pulse	0.1000	3
Pb	208	209	He	1.604	ppb	2.9	11809.21	0.0607	Pulse	0.1000	3
U	238	209	He	0.136	ppb	4.0	1120.10	0.0058	Pulse	0.1000	3

ISTD Table:

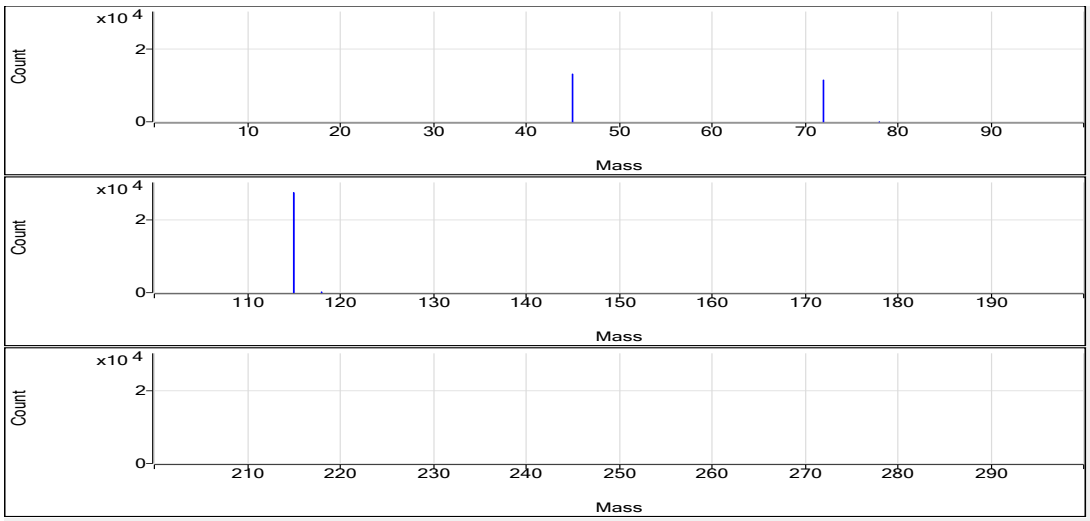
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1741339.40	3.0	98.9	Analog	0.1000	3
No Gas	Ge	72	929404.13	1.1	104.1	Pulse	0.1000	3
H2	Sc	45	131690.89	0.3	103.4	Pulse	0.1000	3
H2	Ge	72	115212.42	1.8	107.4	Pulse	0.1000	3
H2	In	115	275363.22	2.3	103.4	Pulse	0.1000	3
He	Sc	45	29340.31	0.9	102.9	Pulse	0.1000	3
He	Ge	72	57305.66	1.9	103.6	Pulse	0.1000	3
He	In	115	55566.33	1.8	103.5	Pulse	0.1000	3
He	Tb	159	251249.33	0.8	102.2	Pulse	0.1000	3
He	Bi	209	194481.51	0.9	101.9	Pulse	0.1000	3

No Gas

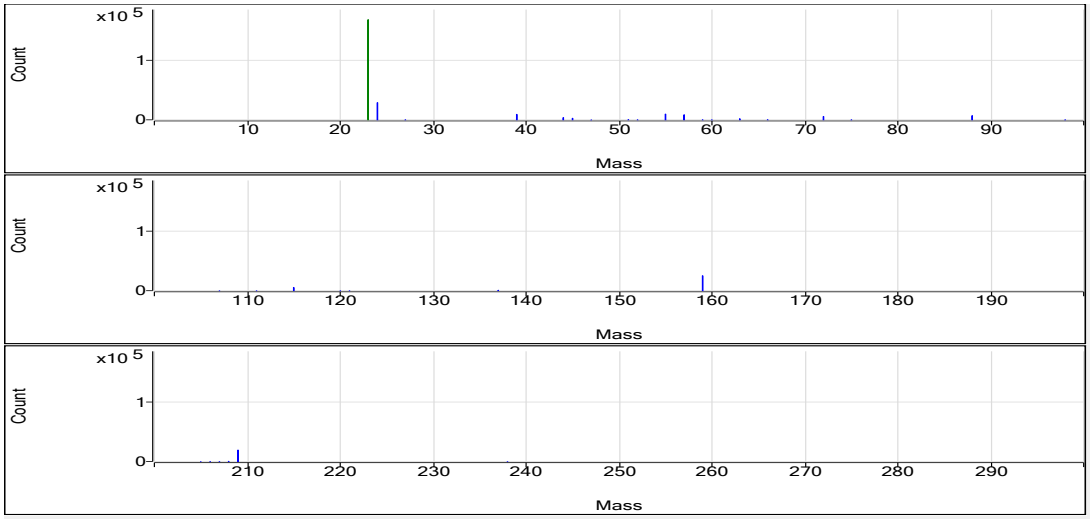


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.175	0.0001	138.00	0.0004	1.287E-05
Be	9	1	No Gas	0.127	0.0001	112.00	0.0004	1.287E-05
Be	9	1	No Gas	0.152	0.0001	128.00	0.0004	1.287E-05
Se	78	2	H2	0.195	0.0001	10.67	0.0004	1.451E-05
Se	78	2	H2	0.172	0.0001	9.33	0.0004	1.451E-05
Se	78	2	H2	0.232	0.0001	12.00	0.0004	1.451E-05
Na	23	3	He	22389.24	56.8804	1668874.66	0.0025	0.2648
Na	23	3	He	22511.521	57.1896	1692291.22	0.0025	0.2648
Na	23	3	He	22424	56.9683	1657205.76	0.0025	0.2648
Mg	24	3	He	7461.252	9.8527	289080.02	0.0013	0.005032
Mg	24	3	He	7392.817	9.7624	288878.53	0.0013	0.005032
Mg	24	3	He	7473.181	9.8685	287073.86	0.0013	0.005032
Al	27	3	He	212.267	0.0931	2730.36	0.0004	0.001519
Al	27	3	He	216.708	0.095	2810.37	0.0004	0.001519
Al	27	3	He	227.675	0.0997	2900.38	0.0004	0.001519
K	39	3	He	2906.688	3.1868	93499.75	0.001	0.3627
K	39	3	He	2828.071	3.1104	92038.85	0.001	0.3627
K	39	3	He	2943.73	3.2227	93749.63	0.001	0.3627
Ca	44	3	He	23145.349	1.3471	39524.35	0.0001	0.002571
Ca	44	3	He	22307.287	1.2984	38421.63	0.0001	0.002571
Ca	44	3	He	22745.716	1.3239	38512.11	0.0001	0.002571
Ti	47	3	He	5.427	0.0027	80.00	0.0005	0.0002328
Ti	47	3	He	6.847	0.0034	100.00	0.0005	0.0002328
Ti	47	3	He	7.722	0.0038	110.00	0.0005	0.0002328
V	51	3	He	1.379	0.0393	1152.05	0.0201	0.0116
V	51	3	He	1.434	0.0404	1194.06	0.0201	0.0116
V	51	3	He	1.478	0.0413	1200.06	0.0201	0.0116
Cr	52	3	He	0.815	0.089	2610.33	0.0257	0.06801
Cr	52	3	He	0.826	0.0892	2640.33	0.0257	0.06801
Cr	52	3	He	0.698	0.086	2500.32	0.0257	0.06801
Mn	55	3	He	300.172	3.405	99903.16	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	291.864	3.3109	97971.86	0.0113	0.004215
Mn	55	3	He	295.093	3.3475	97377.52	0.0113	0.004215
Fe	57	3	He	5723.878	2.9258	85844.61	0.0005	0.004099
Fe	57	3	He	5613.346	2.8694	84908.93	0.0005	0.004099
Fe	57	3	He	5703.39	2.9154	84808.63	0.0005	0.004099
Co	59	3	He	1.905	0.1036	3040.43	0.0518	0.004913
Co	59	3	He	2.006	0.1088	3220.49	0.0518	0.004913
Co	59	3	He	1.843	0.1004	2920.38	0.0518	0.004913
Ni	60	3	He	2.883	0.0282	1650.15	0.0075	0.006695
Ni	60	3	He	3.039	0.0293	1660.15	0.0075	0.006695
Ni	60	3	He	3.146	0.0301	1710.20	0.0075	0.006695
Cu	63	3	He	15.348	0.3345	19593.72	0.0216	0.003198
Cu	63	3	He	16.054	0.3498	19794.12	0.0216	0.003198
Cu	63	3	He	15.698	0.3421	19413.83	0.0216	0.003198
Zn	66	3	He	27.641	0.0756	4430.83	0.0026	0.002954
Zn	66	3	He	25.823	0.0709	4010.71	0.0026	0.002954
Zn	66	3	He	25.613	0.0703	3990.72	0.0026	0.002954
As	75	3	He	4.364	0.009	528.01	0.002	0.0004943
As	75	3	He	4.091	0.0085	480.01	0.002	0.0004943
As	75	3	He	3.465	0.0073	412.01	0.002	0.0004943
Sr	88	3	He	163.207	1.3248	72908.17	0.0081	0.0006852
Sr	88	3	He	151.907	1.2331	69944.23	0.0081	0.0006852
Sr	88	3	He	159.168	1.292	70989.46	0.0081	0.0006852
Mo	98	3	He	2.032	0.0422	2320.28	0.0205	0.0005587
Mo	98	3	He	1.773	0.0369	2090.23	0.0205	0.0005587
Mo	98	3	He	1.956	0.0406	2230.26	0.0205	0.0005587
Ag	107	3	He	0.019	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.01	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Cd	111	3	He	0.085	0.0004	24.00	0.005	1.253E-05
Cd	111	3	He	0.04	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.063	0.0003	18.00	0.005	1.253E-05
Sn	120	3	He	0.218	0.0165	910.06	0.0146	0.01334
Sn	120	3	He	0.004	0.0134	760.04	0.0146	0.01334
Sn	120	3	He	-0.016	0.0131	720.05	0.0146	0.01334
Sb	121	3	He	0.202	0.0044	240.01	0.0142	0.001484
Sb	121	3	He	0.193	0.0042	240.01	0.0142	0.001484
Sb	121	3	He	0.254	0.0051	280.01	0.0142	0.001484
Ba	137	3	He	41.271	0.1905	10484.35	0.0046	0.000374
Ba	137	3	He	41.343	0.1908	10824.62	0.0046	0.000374
Ba	137	3	He	39.677	0.1832	10063.98	0.0046	0.000374
Tl	205	3	He	0.067	0.0021	410.03	0.0282	0.00021
Tl	205	3	He	0.071	0.0022	430.03	0.0282	0.00021
Tl	205	3	He	0.09	0.0027	530.03	0.0282	0.00021
Pb	208	3	He	1.654	0.0626	6712.02	0.0372	0.0009772
Pb	208	3	He	1.596	0.0604	5971.58	0.0372	0.0009772
Pb	208	3	He	1.562	0.0591	5941.57	0.0372	0.0009772
U	238	3	He	0.137	0.0058	1140.10	0.0417	8.729E-05
U	238	3	He	0.13	0.0055	1070.09	0.0417	8.729E-05
U	238	3	He	0.141	0.006	1150.10	0.0417	8.729E-05
Sc	45	1	No Gas			1683540.60		
Sc	45	1	No Gas			1783044.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1757432.63		
Ge	72	1	No Gas			918162.02		
Ge	72	1	No Gas			931661.86		
Ge	72	1	No Gas			938388.50		
Sc	45	2	H2			131983.92		
Sc	45	2	H2			131297.08		
Sc	45	2	H2			131791.68		
Ge	72	2	H2			117540.37		
Ge	72	2	H2			114013.10		
Ge	72	2	H2			114083.78		
In	115	2	H2			282267.09		
In	115	2	H2			270183.08		
In	115	2	H2			273639.49		
Sc	45	3	He			29340.07		
Sc	45	3	He			29590.89		
Sc	45	3	He			29089.97		
Ge	72	3	He			58570.96		
Ge	72	3	He			56592.97		
Ge	72	3	He			56753.05		
In	115	3	He			55039.70		
In	115	3	He			56726.64		
In	115	3	He			54949.37		
Tb	159	3	He			252847.71		
Tb	159	3	He			251850.91		
Tb	159	3	He			249049.37		
Bi	209	3	He			196281.68		
Bi	209	3	He			194160.88		
Bi	209	3	He			193001.97		

Quantitation Report

Data File Name	105SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:47:28 PM
Sample Name	630-67621-K-2-A PDS
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

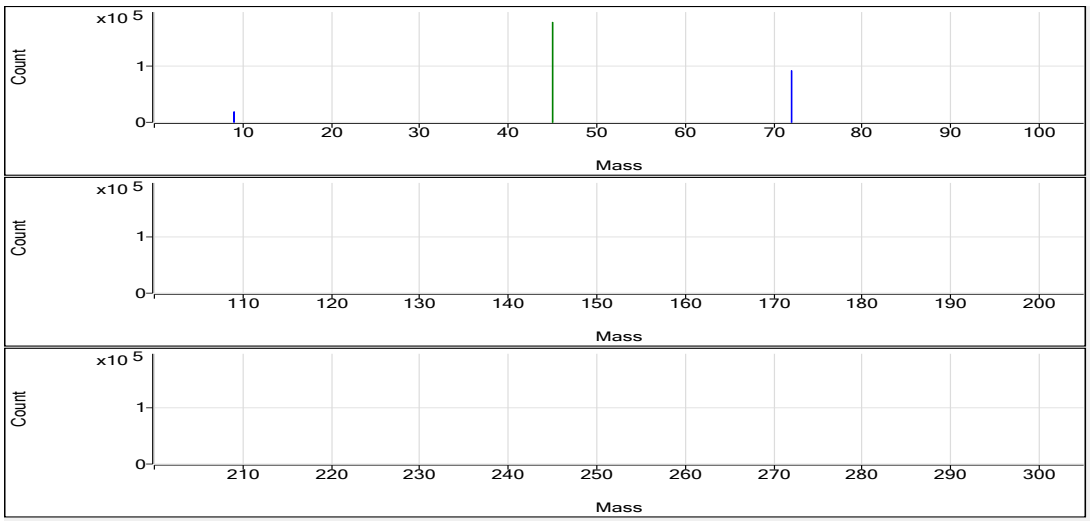
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	53.727	ppb	5.4	37636.61	0.0212	Pulse	0.5000	3
Se	78	72	H2	101.501	ppb	1.6	4535.84	0.0397	Pulse	1.5000	3
Na	23	45	He	26411.548	ppb	0.5	2019282.47	67.0516	Analog	0.1000	3
Mg	24	45	He	12091.875	ppb	0.6	480758.81	15.9644	Pulse	0.1000	3
Al	27	45	He	5274.100	ppb	1.3	68536.38	2.2760	Pulse	0.1000	3
K	39	45	He	7842.450	ppb	0.5	240384.08	7.9822	Pulse	0.1000	3
Ca	44	45	He	27312.197	ppb	0.5	47859.40	1.5892	Pulse	0.1000	3
Ti	47	45	He	506.173	ppb	2.6	7011.94	0.2328	Pulse	0.1000	3
V	51	45	He	505.221	ppb	0.3	305528.21	10.1454	Pulse	0.5000	3
Cr	52	45	He	498.861	ppb	0.5	388158.12	12.8893	Pulse	0.1000	3
Mn	55	45	He	781.356	ppb	0.5	266727.35	8.8566	Pulse	0.1000	3
Fe	57	45	He	10404.499	ppb	0.6	160062.57	5.3151	Pulse	0.1000	3
Co	59	45	He	489.857	ppb	0.7	764554.08	25.3872	Pulse	0.1000	3
Ni	60	72	He	509.005	ppb	1.1	216715.15	3.7988	Pulse	0.1000	3
Cu	63	72	He	525.752	ppb	0.9	647674.16	11.3530	Pulse	0.1000	3
Zn	66	72	He	541.309	ppb	0.6	81387.41	1.4266	Pulse	0.1000	3
As	75	72	He	511.153	ppb	2.8	56958.04	0.9985	Pulse	0.5000	3
Sr	88	115	He	206.349	ppb	1.4	92830.61	1.6748	Pulse	0.1000	3
Mo	98	115	He	52.094	ppb	2.0	59138.70	1.0669	Pulse	0.1000	3
Ag	107	115	He	56.082	ppb	1.0	133843.50	2.4146	Pulse	0.1000	3
Cd	111	115	He	50.116	ppb	1.8	13884.29	0.2505	Pulse	0.5000	3
Sn	120	115	He	98.873	ppb	2.2	80839.03	1.4585	Pulse	0.1000	3
Sb	121	115	He	96.908	ppb	3.0	76491.77	1.3803	Pulse	0.1000	3
Ba	137	115	He	533.025	ppb	2.0	136145.34	2.4560	Pulse	0.1000	3
Tl	205	209	He	100.639	ppb	1.0	552897.12	2.8405	Pulse	0.1000	3
Pb	208	209	He	52.040	ppb	1.2	377376.36	1.9388	Pulse	0.1000	3
U	238	209	He	50.986	ppb	0.6	414055.40	2.1271	Pulse	0.1000	3

ISTD Table:

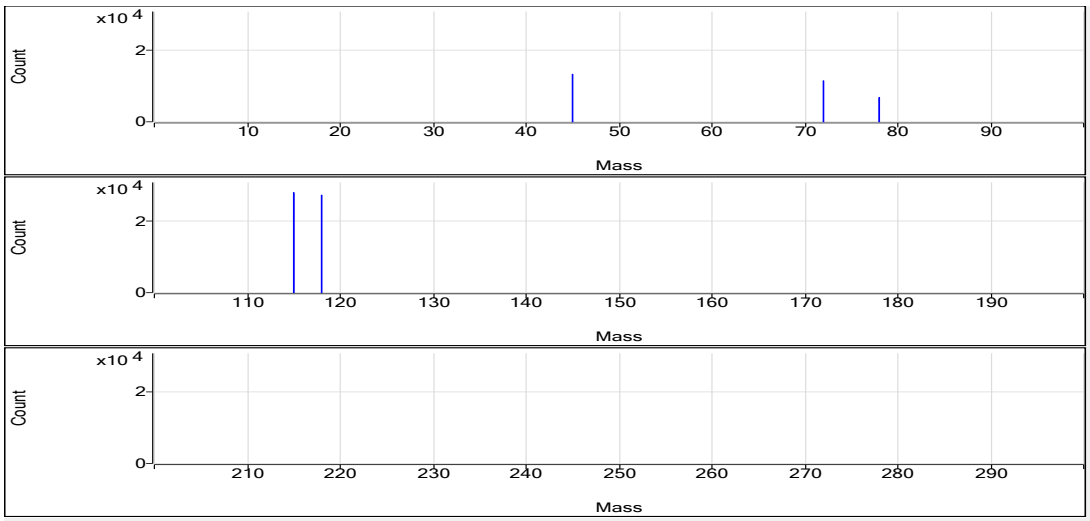
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1776897.89	1.5	100.9	Analog	0.1000	3
No Gas	Ge	72	917665.45	0.3	102.8	Pulse	0.1000	3
H2	Sc	45	132775.88	0.7	104.3	Pulse	0.1000	3
H2	Ge	72	114217.18	0.8	106.5	Pulse	0.1000	3
H2	In	115	278671.94	1.0	104.6	Pulse	0.1000	3
He	Sc	45	30115.52	1.0	105.6	Pulse	0.1000	3
He	Ge	72	57051.23	0.7	103.1	Pulse	0.1000	3
He	In	115	55434.58	1.7	103.3	Pulse	0.1000	3
He	Tb	159	252338.87	1.3	102.7	Pulse	0.1000	3
He	Bi	209	194660.82	1.4	102.0	Pulse	0.1000	3

No Gas

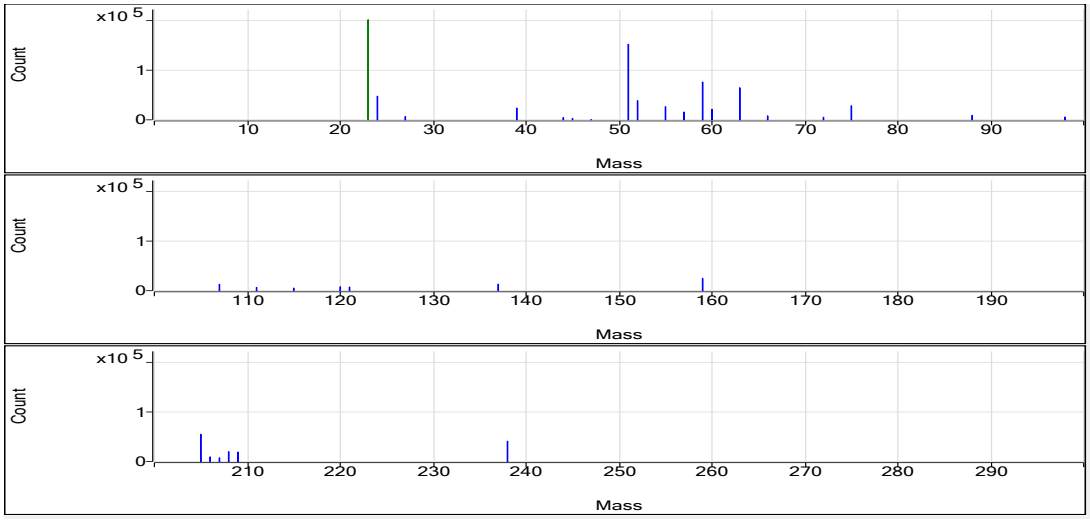


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	51.164	0.0202	35269.43	0.0004	1.287E-05
Be	9	1	No Gas	53.108	0.0209	37699.30	0.0004	1.287E-05
Be	9	1	No Gas	56.91	0.0224	39941.09	0.0004	1.287E-05
Se	78	2	H2	100.763	0.0394	4486.71	0.0004	1.451E-05
Se	78	2	H2	100.376	0.0393	4528.06	0.0004	1.451E-05
Se	78	2	H2	103.364	0.0404	4592.74	0.0004	1.451E-05
Na	23	3	He	26457.729	67.1684	2043438.72	0.0025	0.2648
Na	23	3	He	26275.421	66.7074	2008703.88	0.0025	0.2648
Na	23	3	He	26501.494	67.279	2005704.81	0.0025	0.2648
Mg	24	3	He	12039.87	15.8958	483592.49	0.0013	0.005032
Mg	24	3	He	12055.072	15.9159	479261.67	0.0013	0.005032
Mg	24	3	He	12180.682	16.0817	479422.26	0.0013	0.005032
Al	27	3	He	5215.996	2.2509	68479.05	0.0004	0.001519
Al	27	3	He	5253.609	2.2671	68268.66	0.0004	0.001519
Al	27	3	He	5352.696	2.3099	68861.42	0.0004	0.001519
K	39	3	He	7808.841	7.9495	241844.72	0.001	0.3627
K	39	3	He	7884.501	8.023	241590.21	0.001	0.3627
K	39	3	He	7834.008	7.9739	237717.30	0.001	0.3627
Ca	44	3	He	27450.947	1.5972	48591.92	0.0001	0.002571
Ca	44	3	He	27160.935	1.5804	47588.74	0.0001	0.002571
Ca	44	3	He	27324.707	1.5899	47397.55	0.0001	0.002571
Ti	47	3	He	511.78	0.2354	7162.00	0.0005	0.0002328
Ti	47	3	He	491.033	0.2259	6801.82	0.0005	0.0002328
Ti	47	3	He	515.707	0.2372	7071.99	0.0005	0.0002328
V	51	3	He	503.846	10.1178	307811.06	0.0201	0.0116
V	51	3	He	505.064	10.1423	305405.47	0.0201	0.0116
V	51	3	He	506.753	10.1761	303368.09	0.0201	0.0116
Cr	52	3	He	497.964	12.8662	391424.68	0.0257	0.06801
Cr	52	3	He	497.011	12.8417	386692.77	0.0257	0.06801
Cr	52	3	He	501.608	12.9599	386356.91	0.0257	0.06801
Mn	55	3	He	785.826	8.9072	270980.91	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	778.561	8.8249	265737.11	0.0113	0.004215
Mn	55	3	He	779.681	8.8376	263464.04	0.0113	0.004215
Fe	57	3	He	10399.284	5.3124	161617.46	0.0005	0.004099
Fe	57	3	He	10346.621	5.2855	159158.69	0.0005	0.004099
Fe	57	3	He	10467.591	5.3473	159411.55	0.0005	0.004099
Co	59	3	He	492.37	25.5174	776306.32	0.0518	0.004913
Co	59	3	He	485.888	25.1815	758269.36	0.0518	0.004913
Co	59	3	He	491.314	25.4627	759086.55	0.0518	0.004913
Ni	60	3	He	514.815	3.8421	217549.94	0.0075	0.006695
Ni	60	3	He	508.504	3.7951	216944.33	0.0075	0.006695
Ni	60	3	He	503.696	3.7592	215651.17	0.0075	0.006695
Cu	63	3	He	530.988	11.466	649239.64	0.0216	0.003198
Cu	63	3	He	524.287	11.3213	647182.96	0.0216	0.003198
Cu	63	3	He	521.981	11.2715	646599.87	0.0216	0.003198
Zn	66	3	He	545.085	1.4365	81340.85	0.0026	0.002954
Zn	66	3	He	538.496	1.4192	81128.56	0.0026	0.002954
Zn	66	3	He	540.347	1.4241	81692.81	0.0026	0.002954
As	75	3	He	526.652	1.0287	58249.74	0.002	0.0004943
As	75	3	He	497.894	0.9726	55597.50	0.002	0.0004943
As	75	3	He	508.913	0.9941	57026.89	0.002	0.0004943
Sr	88	3	He	203.814	1.6542	93498.30	0.0081	0.0006852
Sr	88	3	He	205.68	1.6694	91727.30	0.0081	0.0006852
Sr	88	3	He	209.551	1.7008	93266.24	0.0081	0.0006852
Mo	98	3	He	51.615	1.0571	59747.60	0.0205	0.0005587
Mo	98	3	He	53.272	1.091	59948.48	0.0205	0.0005587
Mo	98	3	He	51.394	1.0526	57720.02	0.0205	0.0005587
Ag	107	3	He	55.692	2.3978	135522.86	0.043	0.0004367
Ag	107	3	He	56.723	2.4422	134190.04	0.043	0.0004367
Ag	107	3	He	55.832	2.4038	131817.59	0.043	0.0004367
Cd	111	3	He	49.146	0.2457	13884.97	0.005	1.253E-05
Cd	111	3	He	50.955	0.2547	13995.08	0.005	1.253E-05
Cd	111	3	He	50.246	0.2512	13772.82	0.005	1.253E-05
Sn	120	3	He	97.352	1.4363	81177.31	0.0146	0.01334
Sn	120	3	He	101.344	1.4946	82123.50	0.0146	0.01334
Sn	120	3	He	97.922	1.4446	79216.28	0.0146	0.01334
Sb	121	3	He	93.612	1.3334	75365.23	0.0142	0.001484
Sb	121	3	He	98.766	1.4068	77296.50	0.0142	0.001484
Sb	121	3	He	98.345	1.4008	76813.59	0.0142	0.001484
Ba	137	3	He	531.216	2.4477	138343.31	0.0046	0.000374
Ba	137	3	He	544.435	2.5086	137838.14	0.0046	0.000374
Ba	137	3	He	523.423	2.4118	132254.56	0.0046	0.000374
Tl	205	3	He	100.339	2.832	558532.77	0.0282	0.00021
Tl	205	3	He	99.78	2.8163	548817.34	0.0282	0.00021
Tl	205	3	He	101.798	2.8732	551341.24	0.0282	0.00021
Pb	208	3	He	51.442	1.9166	202116.36	0.0372	0.0009772
Pb	208	3	He	52.021	1.9381	201260.47	0.0372	0.0009772
Pb	208	3	He	52.658	1.9619	200686.74	0.0372	0.0009772
U	238	3	He	51.09	2.1314	420353.47	0.0417	8.729E-05
U	238	3	He	50.654	2.1132	411813.78	0.0417	8.729E-05
U	238	3	He	51.215	2.1366	409998.94	0.0417	8.729E-05
Sc	45	1	No Gas			1748938.10		
Sc	45	1	No Gas			1801033.57		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1780722.00		
Ge	72	1	No Gas			917588.81		
Ge	72	1	No Gas			920753.50		
Ge	72	1	No Gas			914654.05		
Sc	45	2	H2			133641.21		
Sc	45	2	H2			132772.47		
Sc	45	2	H2			131913.97		
Ge	72	2	H2			113800.24		
Ge	72	2	H2			115292.27		
Ge	72	2	H2			113559.04		
In	115	2	H2			277410.82		
In	115	2	H2			276661.48		
In	115	2	H2			281943.53		
Sc	45	3	He			30422.64		
Sc	45	3	He			30112.18		
Sc	45	3	He			29811.74		
Ge	72	3	He			56623.08		
Ge	72	3	He			57164.94		
Ge	72	3	He			57365.66		
In	115	3	He			57088.36		
In	115	3	He			55521.54		
In	115	3	He			55391.46		
Tb	159	3	He			256028.57		
Tb	159	3	He			249410.48		
Tb	159	3	He			251577.57		
Bi	209	3	He			197218.69		
Bi	209	3	He			194873.45		
Bi	209	3	He			191890.31		

Quantitation Report

Data File Name	106SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:49:26 PM
Sample Name	630-67621-K-2-A SD@5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

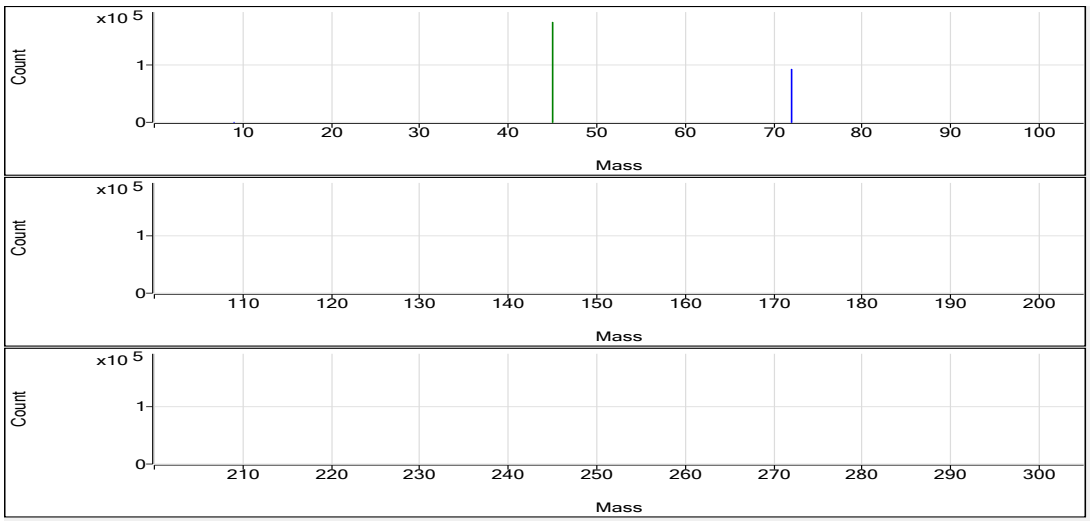
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.263	ppb	8.5	203.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.196	ppb	42.0	10.22	0.0001	Pulse	1.5000	3
Na	23	45	He	4326.404	ppb	1.9	317400.62	11.2050	Pulse	0.1000	3
Mg	24	45	He	1442.055	ppb	2.8	54049.65	1.9083	Pulse	0.1000	3
Al	27	45	He	35.263	ppb	8.5	473.36	0.0167	Pulse	0.1000	3
K	39	45	He	581.290	ppb	0.9	26281.00	0.9275	Pulse	0.1000	3
Ca	44	45	He	4574.055	ppb	2.5	7598.87	0.2683	Pulse	0.1000	3
Ti	47	45	He	2.589	ppb	62.4	40.00	0.0014	Pulse	0.1000	3
V	51	45	He	0.442	ppb	4.6	580.02	0.0205	Pulse	0.5000	3
Cr	52	45	He	0.768	ppb	10.2	2486.96	0.0877	Pulse	0.1000	3
Mn	55	45	He	57.292	ppb	5.3	18512.45	0.6533	Pulse	0.1000	3
Fe	57	45	He	1101.229	ppb	3.2	16039.38	0.5662	Pulse	0.1000	3
Co	59	45	He	0.547	ppb	14.0	943.39	0.0332	Pulse	0.1000	3
Ni	60	72	He	0.764	ppb	8.1	700.04	0.0124	Pulse	0.1000	3
Cu	63	72	He	3.194	ppb	2.9	4077.39	0.0721	Pulse	0.1000	3
Zn	66	72	He	5.655	ppb	12.4	1006.74	0.0178	Pulse	0.1000	3
As	75	72	He	1.257	ppb	13.1	166.67	0.0029	Pulse	0.5000	3
Sr	88	115	He	30.964	ppb	2.5	13493.56	0.2519	Pulse	0.1000	3
Mo	98	115	He	0.523	ppb	20.8	603.37	0.0113	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	90.7	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.017	ppb	25.0	5.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.322	ppb	8.4	966.73	0.0180	Pulse	0.1000	3
Sb	121	115	He	0.682	ppb	25.3	600.04	0.0112	Pulse	0.1000	3
Ba	137	115	He	8.445	ppb	4.3	2103.56	0.0393	Pulse	0.1000	3
Tl	205	209	He	0.526	ppb	5.3	2897.10	0.0150	Pulse	0.1000	3
Pb	208	209	He	0.342	ppb	1.1	2636.88	0.0137	Pulse	0.1000	3
U	238	209	He	0.062	ppb	4.5	513.36	0.0027	Pulse	0.1000	3

ISTD Table:

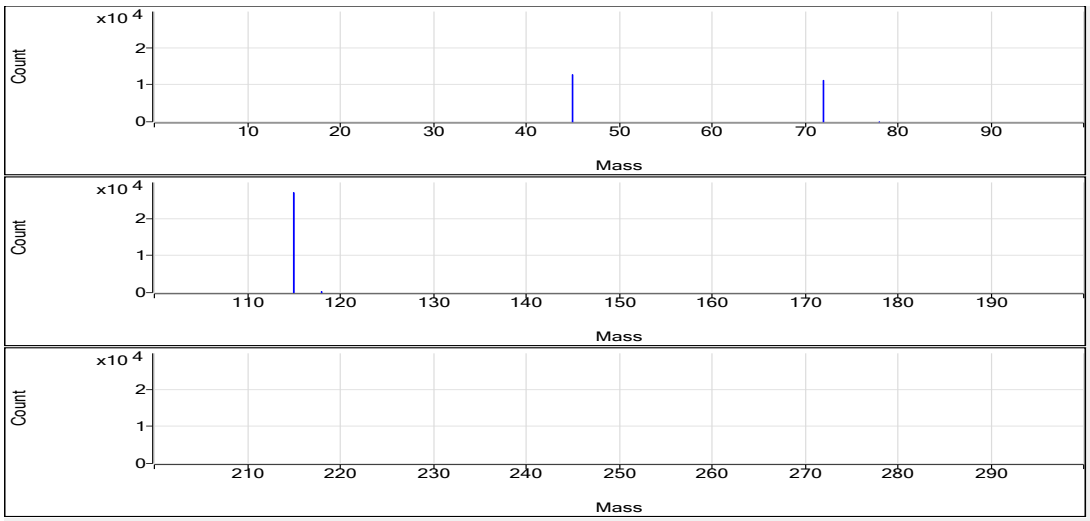
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1745519.14	1.0	99.1	Analog	0.1000	3
No Gas	Ge	72	926717.25	0.6	103.8	Pulse	0.1000	3
H2	Sc	45	127038.44	1.5	99.8	Pulse	0.1000	3
H2	Ge	72	111822.03	2.3	104.3	Pulse	0.1000	3
H2	In	115	269486.93	0.5	101.2	Pulse	0.1000	3
He	Sc	45	28334.97	2.4	99.4	Pulse	0.1000	3
He	Ge	72	56512.63	1.4	102.1	Pulse	0.1000	3
He	In	115	53563.91	0.7	99.8	Pulse	0.1000	3
He	Tb	159	246319.32	0.4	100.2	Pulse	0.1000	3
He	Bi	209	192467.27	1.5	100.8	Pulse	0.1000	3

No Gas

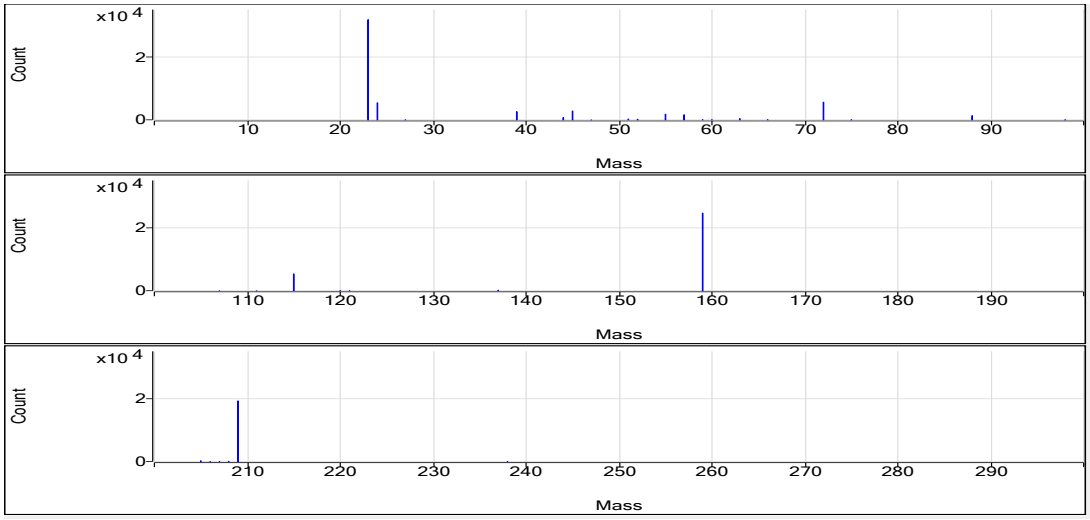


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.281	0.0001	216.00	0.0004	1.287E-05
Be	9	1	No Gas	0.27	0.0001	210.00	0.0004	1.287E-05
Be	9	1	No Gas	0.238	0.0001	184.00	0.0004	1.287E-05
Se	78	2	H2	0.283	0.0001	14.00	0.0004	1.451E-05
Se	78	2	H2	0.119	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.186	0.0001	10.00	0.0004	1.451E-05
Na	23	3	He	4276.73	11.0794	318635.13	0.0025	0.2648
Na	23	3	He	4283.366	11.0962	318451.01	0.0025	0.2648
Na	23	3	He	4419.116	11.4394	315115.72	0.0025	0.2648
Mg	24	3	He	1405.047	1.8595	53477.26	0.0013	0.005032
Mg	24	3	He	1436.361	1.9008	54551.63	0.0013	0.005032
Mg	24	3	He	1484.758	1.9647	54120.07	0.0013	0.005032
Al	27	3	He	32.764	0.0156	450.02	0.0004	0.001519
Al	27	3	He	34.455	0.0164	470.02	0.0004	0.001519
Al	27	3	He	38.571	0.0182	500.03	0.0004	0.001519
K	39	3	He	586.711	0.9328	26825.53	0.001	0.3627
K	39	3	He	576.859	0.9232	26494.78	0.001	0.3627
K	39	3	He	580.3	0.9265	25522.68	0.001	0.3627
Ca	44	3	He	4476.221	0.2626	7552.19	0.0001	0.002571
Ca	44	3	He	4545.686	0.2666	7652.22	0.0001	0.002571
Ca	44	3	He	4700.256	0.2756	7592.20	0.0001	0.002571
Ti	47	3	He	1.007	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	2.526	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	4.233	0.0022	60.00	0.0005	0.0002328
V	51	3	He	0.438	0.0204	586.02	0.0201	0.0116
V	51	3	He	0.464	0.0209	600.02	0.0201	0.0116
V	51	3	He	0.424	0.0201	554.01	0.0201	0.0116
Cr	52	3	He	0.845	0.0897	2580.30	0.0257	0.06801
Cr	52	3	He	0.771	0.0878	2520.30	0.0257	0.06801
Cr	52	3	He	0.688	0.0857	2360.28	0.0257	0.06801
Mn	55	3	He	60.378	0.6883	19794.16	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	54.316	0.6196	17781.52	0.0113	0.004215
Mn	55	3	He	57.181	0.6521	17961.66	0.0113	0.004215
Fe	57	3	He	1118.651	0.5751	16539.85	0.0005	0.004099
Fe	57	3	He	1060.193	0.5453	15648.91	0.0005	0.004099
Fe	57	3	He	1124.841	0.5783	15929.37	0.0005	0.004099
Co	59	3	He	0.596	0.0358	1030.06	0.0518	0.004913
Co	59	3	He	0.584	0.0352	1010.06	0.0518	0.004913
Co	59	3	He	0.459	0.0287	790.05	0.0518	0.004913
Ni	60	3	He	0.716	0.012	670.04	0.0075	0.006695
Ni	60	3	He	0.742	0.0122	700.04	0.0075	0.006695
Ni	60	3	He	0.833	0.0129	730.05	0.0075	0.006695
Cu	63	3	He	3.187	0.072	4010.68	0.0216	0.003198
Cu	63	3	He	3.29	0.0742	4250.79	0.0216	0.003198
Cu	63	3	He	3.103	0.0702	3970.70	0.0216	0.003198
Zn	66	3	He	5.977	0.0187	1040.09	0.0026	0.002954
Zn	66	3	He	4.853	0.0157	900.06	0.0026	0.002954
Zn	66	3	He	6.136	0.0191	1080.08	0.0026	0.002954
As	75	3	He	1.328	0.0031	172.00	0.002	0.0004943
As	75	3	He	1.375	0.0032	182.00	0.002	0.0004943
As	75	3	He	1.069	0.0026	146.00	0.002	0.0004943
Sr	88	3	He	31.841	0.259	13947.33	0.0081	0.0006852
Sr	88	3	He	30.603	0.249	13236.66	0.0081	0.0006852
Sr	88	3	He	30.448	0.2477	13296.68	0.0081	0.0006852
Mo	98	3	He	0.399	0.0087	470.02	0.0205	0.0005587
Mo	98	3	He	0.57	0.0122	650.05	0.0205	0.0005587
Mo	98	3	He	0.601	0.0129	690.04	0.0205	0.0005587
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.02	0.0013	70.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	0.294	0.0176	950.06	0.0146	0.01334
Sn	120	3	He	0.348	0.0184	980.07	0.0146	0.01334
Sn	120	3	He	0.324	0.0181	970.07	0.0146	0.01334
Sb	121	3	He	0.849	0.0136	730.05	0.0142	0.001484
Sb	121	3	He	0.504	0.0087	460.02	0.0142	0.001484
Sb	121	3	He	0.694	0.0114	610.04	0.0142	0.001484
Ba	137	3	He	8.264	0.0384	2070.22	0.0046	0.000374
Ba	137	3	He	8.861	0.0412	2190.25	0.0046	0.000374
Ba	137	3	He	8.209	0.0382	2050.21	0.0046	0.000374
Tl	205	3	He	0.532	0.0152	2970.46	0.0282	0.00021
Tl	205	3	He	0.55	0.0157	3030.46	0.0282	0.00021
Tl	205	3	He	0.496	0.0142	2690.37	0.0282	0.00021
Pb	208	3	He	0.34	0.0136	1640.16	0.0372	0.0009772
Pb	208	3	He	0.346	0.0139	1280.11	0.0372	0.0009772
Pb	208	3	He	0.339	0.0136	1300.11	0.0372	0.0009772
U	238	3	He	0.063	0.0027	530.03	0.0417	8.729E-05
U	238	3	He	0.064	0.0028	530.03	0.0417	8.729E-05
U	238	3	He	0.059	0.0025	480.02	0.0417	8.729E-05
Sc	45	1	No Gas			1749142.79		
Sc	45	1	No Gas			1760510.91		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1726903.72		
Ge	72	1	No Gas			923606.55		
Ge	72	1	No Gas			932611.63		
Ge	72	1	No Gas			923933.58		
Sc	45	2	H2			125851.92		
Sc	45	2	H2			125972.25		
Sc	45	2	H2			129291.14		
Ge	72	2	H2			111865.83		
Ge	72	2	H2			109235.70		
Ge	72	2	H2			114364.55		
In	115	2	H2			269143.00		
In	115	2	H2			268223.94		
In	115	2	H2			271093.86		
Sc	45	3	He			28759.28		
Sc	45	3	He			28699.19		
Sc	45	3	He			27546.44		
Ge	72	3	He			55699.63		
Ge	72	3	He			57265.39		
Ge	72	3	He			56572.88		
In	115	3	He			53855.04		
In	115	3	He			53172.67		
In	115	3	He			53684.32		
Tb	159	3	He			245303.53		
Tb	159	3	He			247147.71		
Tb	159	3	He			246506.73		
Bi	209	3	He			195156.01		
Bi	209	3	He			192718.32		
Bi	209	3	He			189527.48		

Quantitation Report

Data File Name	107SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:51:27 PM
Sample Name	630-67621-M-2-A DU
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

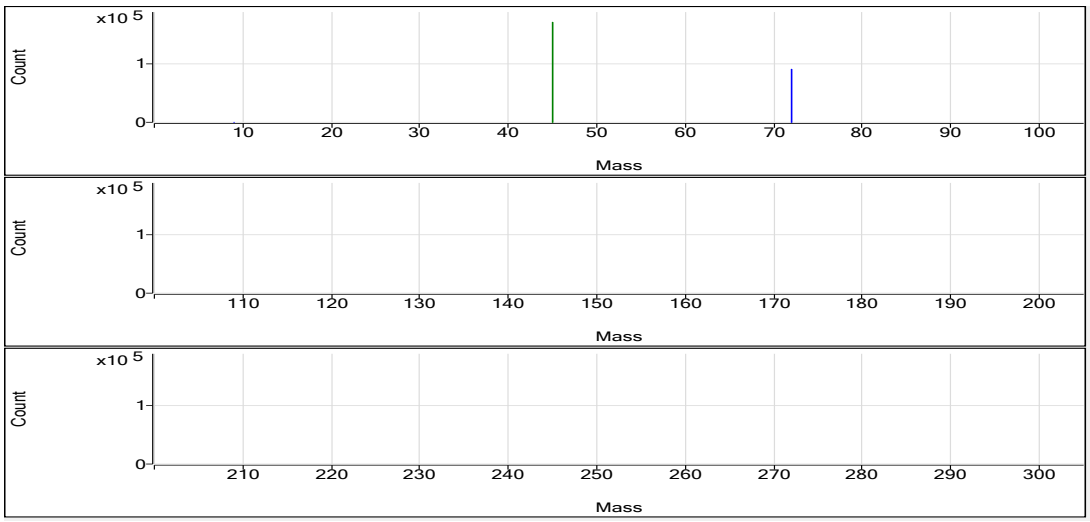
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.129	ppb	5.4	110.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.249	ppb	27.5	12.67	0.0001	Pulse	1.5000	3
Na	23	45	He	21979.288	ppb	1.6	1644559.09	55.8437	Analog	0.1000	3
Mg	24	45	He	7310.717	ppb	0.9	284329.44	9.6541	Pulse	0.1000	3
Al	27	45	He	206.163	ppb	5.2	2663.68	0.0904	Pulse	0.1000	3
K	39	45	He	2940.729	ppb	1.7	94830.77	3.2198	Pulse	0.1000	3
Ca	44	45	He	22360.536	ppb	3.2	38334.76	1.3015	Pulse	0.1000	3
Ti	47	45	He	4.183	ppb	71.7	63.33	0.0022	Pulse	0.1000	3
V	51	45	He	1.459	ppb	3.3	1203.39	0.0409	Pulse	0.5000	3
Cr	52	45	He	0.777	ppb	17.9	2590.33	0.0880	Pulse	0.1000	3
Mn	55	45	He	291.695	ppb	1.1	97451.38	3.3090	Pulse	0.1000	3
Fe	57	45	He	5532.433	ppb	0.1	83290.14	2.8281	Pulse	0.1000	3
Co	59	45	He	2.054	ppb	8.9	3280.50	0.1113	Pulse	0.1000	3
Ni	60	72	He	2.843	ppb	3.7	1603.49	0.0279	Pulse	0.1000	3
Cu	63	72	He	15.814	ppb	2.6	19817.64	0.3446	Pulse	0.1000	3
Zn	66	72	He	26.398	ppb	6.6	4164.06	0.0724	Pulse	0.1000	3
As	75	72	He	3.762	ppb	7.0	450.68	0.0078	Pulse	0.5000	3
Sr	88	115	He	159.489	ppb	0.3	71229.82	1.2946	Pulse	0.1000	3
Mo	98	115	He	1.942	ppb	3.2	2216.93	0.0403	Pulse	0.1000	3
Ag	107	115	He	0.008	ppb	26.8	43.33	0.0008	Pulse	0.1000	3
Cd	111	115	He	0.034	ppb	55.3	10.00	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.040	ppb	356.1	766.72	0.0139	Pulse	0.1000	3
Sb	121	115	He	0.338	ppb	32.0	346.68	0.0063	Pulse	0.1000	3
Ba	137	115	He	40.696	ppb	2.8	10334.26	0.1879	Pulse	0.1000	3
Tl	205	209	He	0.109	ppb	7.8	636.71	0.0033	Pulse	0.1000	3
Pb	208	209	He	1.633	ppb	3.2	11905.94	0.0618	Pulse	0.1000	3
U	238	209	He	0.138	ppb	6.1	1130.09	0.0059	Pulse	0.1000	3

ISTD Table:

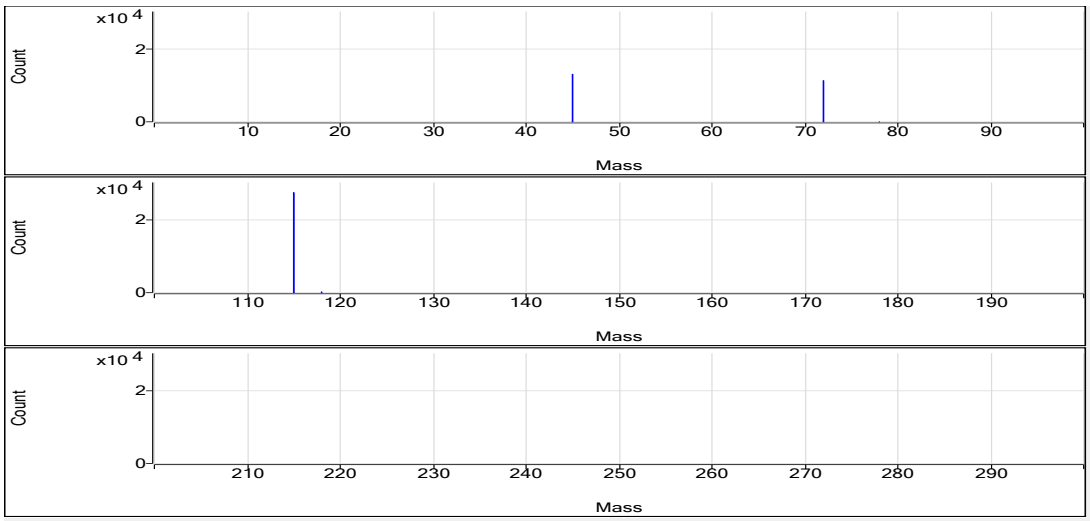
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1723417.84	2.1	97.9	Analog	0.1000	3
No Gas	Ge	72	915213.66	0.8	102.6	Pulse	0.1000	3
H2	Sc	45	131426.49	2.2	103.2	Pulse	0.1000	3
H2	Ge	72	113525.23	2.0	105.9	Pulse	0.1000	3
H2	In	115	275908.67	1.6	103.6	Pulse	0.1000	3
He	Sc	45	29450.64	0.7	103.3	Pulse	0.1000	3
He	Ge	72	57523.65	1.5	104.0	Pulse	0.1000	3
He	In	115	55020.72	1.3	102.5	Pulse	0.1000	3
He	Tb	159	252373.27	0.4	102.7	Pulse	0.1000	3
He	Bi	209	192804.44	2.0	101.0	Pulse	0.1000	3

No Gas

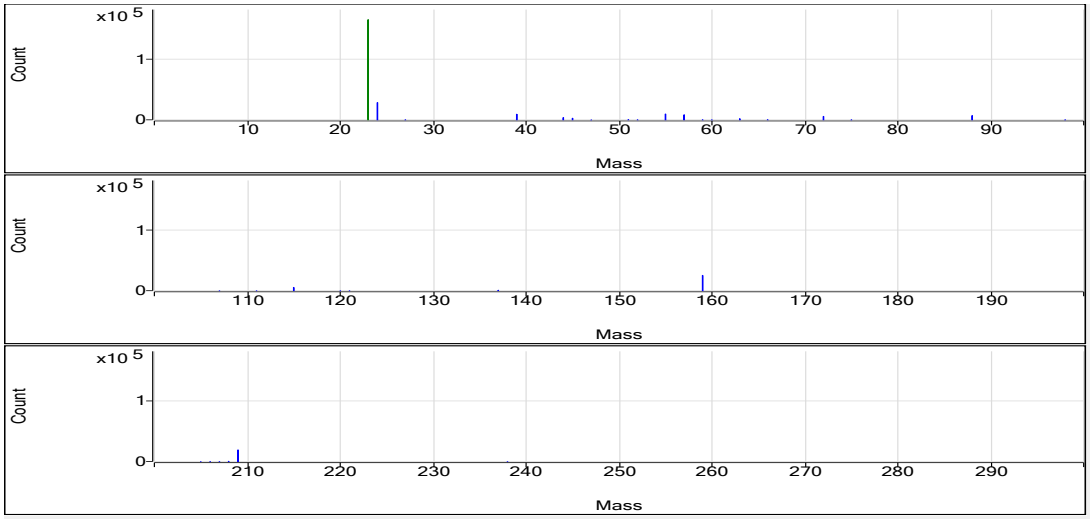


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.121	0.0001	102.00	0.0004	1.287E-05
Be	9	1	No Gas	0.134	0.0001	114.00	0.0004	1.287E-05
Be	9	1	No Gas	0.132	0.0001	114.00	0.0004	1.287E-05
Se	78	2	H2	0.17	0.0001	9.33	0.0004	1.451E-05
Se	78	2	H2	0.291	0.0001	14.67	0.0004	1.451E-05
Se	78	2	H2	0.285	0.0001	14.00	0.0004	1.451E-05
Na	23	3	He	21633.279	54.9688	1630981.85	0.0025	0.2648
Na	23	3	He	22333.303	56.7389	1668737.16	0.0025	0.2648
Na	23	3	He	21971.281	55.8235	1633958.26	0.0025	0.2648
Mg	24	3	He	7380.136	9.7457	289164.47	0.0013	0.005032
Mg	24	3	He	7296.48	9.6353	283380.74	0.0013	0.005032
Mg	24	3	He	7255.534	9.5812	280443.12	0.0013	0.005032
Al	27	3	He	218.458	0.0957	2840.38	0.0004	0.001519
Al	27	3	He	198.343	0.0871	2560.33	0.0004	0.001519
Al	27	3	He	201.689	0.0885	2590.32	0.0004	0.001519
K	39	3	He	2992.95	3.2706	97041.20	0.001	0.3627
K	39	3	He	2894.198	3.1746	93368.20	0.001	0.3627
K	39	3	He	2935.038	3.2143	94082.90	0.001	0.3627
Ca	44	3	He	23125.3	1.3459	39935.66	0.0001	0.002571
Ca	44	3	He	21698.93	1.2631	37148.40	0.0001	0.002571
Ca	44	3	He	22257.379	1.2955	37920.22	0.0001	0.002571
Ti	47	3	He	0.96	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	6.892	0.0034	100.00	0.0005	0.0002328
Ti	47	3	He	4.697	0.0024	70.00	0.0005	0.0002328
V	51	3	He	1.499	0.0417	1236.06	0.0201	0.0116
V	51	3	He	1.405	0.0398	1170.05	0.0201	0.0116
V	51	3	He	1.473	0.0411	1204.06	0.0201	0.0116
Cr	52	3	He	0.659	0.0849	2520.30	0.0257	0.06801
Cr	52	3	He	0.741	0.0871	2560.34	0.0257	0.06801
Cr	52	3	He	0.93	0.0919	2690.34	0.0257	0.06801
Mn	55	3	He	290.566	3.2962	97800.89	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	295.284	3.3496	98515.24	0.0113	0.004215
Mn	55	3	He	289.235	3.2811	96038.02	0.0113	0.004215
Fe	57	3	He	5530.523	2.8272	83884.53	0.0005	0.004099
Fe	57	3	He	5539.243	2.8316	83279.66	0.0005	0.004099
Fe	57	3	He	5527.532	2.8256	82706.24	0.0005	0.004099
Co	59	3	He	2.228	0.1203	3570.56	0.0518	0.004913
Co	59	3	He	2.071	0.1122	3300.49	0.0518	0.004913
Co	59	3	He	1.864	0.1015	2970.44	0.0518	0.004913
Ni	60	3	He	2.802	0.0276	1560.14	0.0075	0.006695
Ni	60	3	He	2.963	0.0288	1660.18	0.0075	0.006695
Ni	60	3	He	2.764	0.0273	1590.15	0.0075	0.006695
Cu	63	3	He	16.286	0.3548	20074.63	0.0216	0.003198
Cu	63	3	He	15.54	0.3387	19543.95	0.0216	0.003198
Cu	63	3	He	15.617	0.3403	19834.34	0.0216	0.003198
Zn	66	3	He	26.769	0.0734	4150.73	0.0026	0.002954
Zn	66	3	He	24.512	0.0674	3890.64	0.0026	0.002954
Zn	66	3	He	27.915	0.0764	4450.80	0.0026	0.002954
As	75	3	He	4.038	0.0084	474.01	0.002	0.0004943
As	75	3	He	3.741	0.0078	450.01	0.002	0.0004943
As	75	3	He	3.508	0.0073	428.01	0.002	0.0004943
Sr	88	3	He	159.003	1.2907	72094.01	0.0081	0.0006852
Sr	88	3	He	159.903	1.298	70898.70	0.0081	0.0006852
Sr	88	3	He	159.56	1.2952	70696.76	0.0081	0.0006852
Mo	98	3	He	1.871	0.0389	2170.23	0.0205	0.0005587
Mo	98	3	He	1.976	0.041	2240.27	0.0205	0.0005587
Mo	98	3	He	1.978	0.041	2240.28	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	0.055	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.104	0.0149	830.06	0.0146	0.01334
Sn	120	3	He	0.139	0.0154	840.06	0.0146	0.01334
Sn	120	3	He	-0.123	0.0115	630.04	0.0146	0.01334
Sb	121	3	He	0.462	0.0081	450.02	0.0142	0.001484
Sb	121	3	He	0.282	0.0055	300.01	0.0142	0.001484
Sb	121	3	He	0.269	0.0053	290.01	0.0142	0.001484
Ba	137	3	He	39.65	0.183	10224.25	0.0046	0.000374
Ba	137	3	He	40.509	0.187	10214.19	0.0046	0.000374
Ba	137	3	He	41.93	0.1935	10564.35	0.0046	0.000374
Tl	205	3	He	0.115	0.0035	680.05	0.0282	0.00021
Tl	205	3	He	0.113	0.0034	660.04	0.0282	0.00021
Tl	205	3	He	0.1	0.003	570.03	0.0282	0.00021
Pb	208	3	He	1.573	0.0596	6201.70	0.0372	0.0009772
Pb	208	3	He	1.651	0.0624	6621.92	0.0372	0.0009772
Pb	208	3	He	1.674	0.0633	6181.74	0.0372	0.0009772
U	238	3	He	0.147	0.0062	1220.10	0.0417	8.729E-05
U	238	3	He	0.138	0.0058	1130.10	0.0417	8.729E-05
U	238	3	He	0.13	0.0055	1040.08	0.0417	8.729E-05
Sc	45	1	No Gas			1682565.44		
Sc	45	1	No Gas			1733381.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1754306.22		
Ge	72	1	No Gas			909590.30		
Ge	72	1	No Gas			923543.81		
Ge	72	1	No Gas			912506.86		
Sc	45	2	H2			133730.43		
Sc	45	2	H2			132347.61		
Sc	45	2	H2			128201.42		
Ge	72	2	H2			115231.09		
Ge	72	2	H2			114345.10		
Ge	72	2	H2			110999.50		
In	115	2	H2			278790.23		
In	115	2	H2			278211.68		
In	115	2	H2			270724.10		
Sc	45	3	He			29671.05		
Sc	45	3	He			29410.79		
Sc	45	3	He			29270.08		
Ge	72	3	He			56583.20		
Ge	72	3	He			57708.05		
Ge	72	3	He			58279.71		
In	115	3	He			55862.91		
In	115	3	He			54627.62		
In	115	3	He			54587.72		
Tb	159	3	He			253439.39		
Tb	159	3	He			252443.34		
Tb	159	3	He			251237.07		
Bi	209	3	He			196321.48		
Bi	209	3	He			193491.07		
Bi	209	3	He			188600.78		

Quantitation Report

Data File Name	108SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:53:25 PM
Sample Name	630-67621-L-2-A MS
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

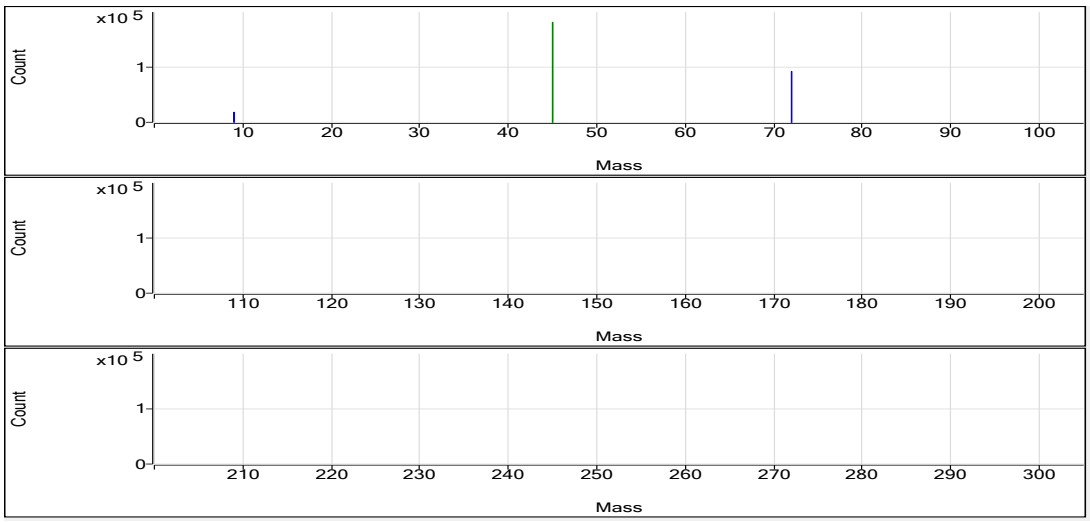
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.100	ppb	5.2	37179.45	0.0205	Pulse	0.5000	3
Se	78	72	H2	98.939	ppb	1.3	4410.69	0.0387	Pulse	1.5000	3
Na	23	45	He	27025.665	ppb	3.4	2011300.70	68.6045	Analog	0.1000	3
Mg	24	45	He	12308.890	ppb	2.4	476489.01	16.2509	Pulse	0.1000	3
Al	27	45	He	6086.472	ppb	2.5	77004.70	2.6263	Pulse	0.1000	3
K	39	45	He	8051.419	ppb	2.9	239982.20	8.1852	Pulse	0.1000	3
Ca	44	45	He	27565.652	ppb	0.8	47040.29	1.6039	Pulse	0.1000	3
Ti	47	45	He	500.908	ppb	0.7	6758.49	0.2304	Pulse	0.1000	3
V	51	45	He	503.022	ppb	2.1	296185.97	10.1013	Pulse	0.5000	3
Cr	52	45	He	498.629	ppb	1.5	377793.07	12.8833	Pulse	0.1000	3
Mn	55	45	He	779.994	ppb	3.2	259201.13	8.8411	Pulse	0.1000	3
Fe	57	45	He	10528.459	ppb	2.5	157696.51	5.3783	Pulse	0.1000	3
Co	59	45	He	492.814	ppb	2.3	748867.93	25.5404	Pulse	0.1000	3
Ni	60	72	He	491.648	ppb	1.7	212382.12	3.6695	Pulse	0.1000	3
Cu	63	72	He	502.509	ppb	2.0	628022.26	10.8512	Pulse	0.1000	3
Zn	66	72	He	516.012	ppb	2.5	78712.30	1.3601	Pulse	0.1000	3
As	75	72	He	490.791	ppb	1.6	55488.89	0.9587	Pulse	0.5000	3
Sr	88	115	He	209.596	ppb	2.5	92501.29	1.7012	Pulse	0.1000	3
Mo	98	115	He	50.564	ppb	1.9	56313.50	1.0356	Pulse	0.1000	3
Ag	107	115	He	50.664	ppb	2.0	118620.32	2.1813	Pulse	0.1000	3
Cd	111	115	He	49.916	ppb	0.6	13569.97	0.2495	Pulse	0.5000	3
Sn	120	115	He	98.367	ppb	1.4	78915.35	1.4511	Pulse	0.1000	3
Sb	121	115	He	97.557	ppb	0.4	75576.32	1.3896	Pulse	0.1000	3
Ba	137	115	He	538.715	ppb	2.0	134980.12	2.4822	Pulse	0.1000	3
Tl	205	209	He	100.355	ppb	0.5	541303.83	2.8325	Pulse	0.1000	3
Pb	208	209	He	51.970	ppb	0.1	370024.70	1.9362	Pulse	0.1000	3
U	238	209	He	50.137	ppb	0.7	399730.16	2.0917	Pulse	0.1000	3

ISTD Table:

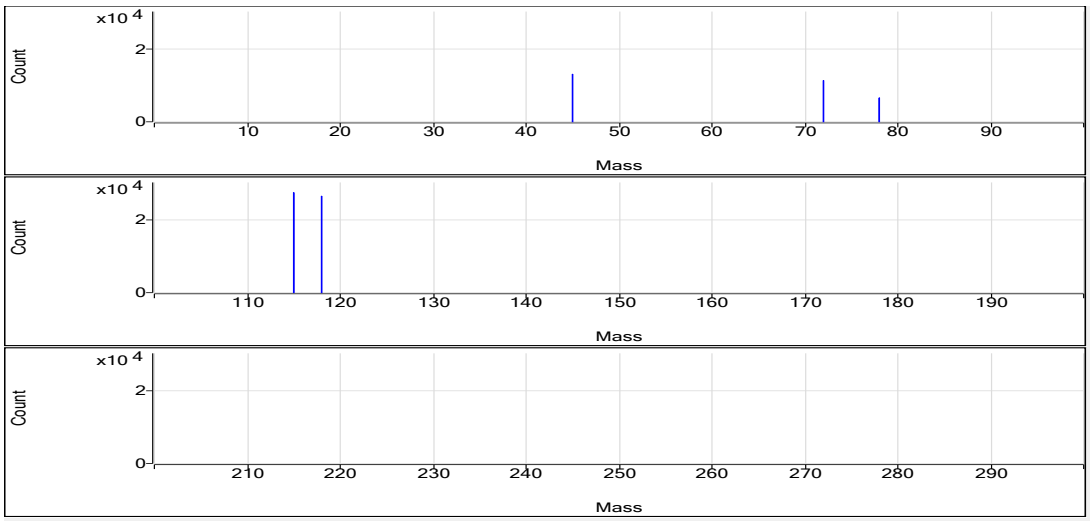
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1810488.10	0.9	102.8	Analog	0.1000	3
No Gas	Ge	72	922107.38	0.9	103.3	Pulse	0.1000	3
H2	Sc	45	131506.76	0.7	103.3	Pulse	0.1000	3
H2	Ge	72	113944.82	1.5	106.3	Pulse	0.1000	3
H2	In	115	275798.82	0.6	103.6	Pulse	0.1000	3
He	Sc	45	29330.16	2.1	102.9	Pulse	0.1000	3
He	Ge	72	57888.00	1.6	104.6	Pulse	0.1000	3
He	In	115	54390.45	1.7	101.3	Pulse	0.1000	3
He	Tb	159	248422.48	1.6	101.1	Pulse	0.1000	3
He	Bi	209	191106.28	0.4	100.1	Pulse	0.1000	3

No Gas

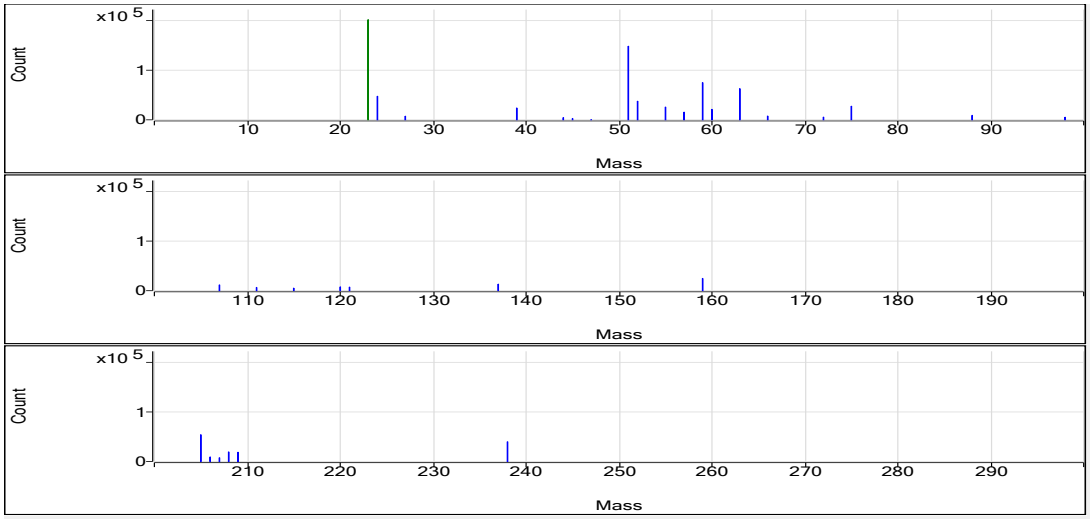


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	49.189	0.0194	35195.25	0.0004	1.287E-05
Be	9	1	No Gas	52.549	0.0207	37137.96	0.0004	1.287E-05
Be	9	1	No Gas	54.561	0.0215	39205.14	0.0004	1.287E-05
Se	78	2	H2	100.39	0.0393	4432.03	0.0004	1.451E-05
Se	78	2	H2	97.9	0.0383	4440.03	0.0004	1.451E-05
Se	78	2	H2	98.527	0.0386	4360.00	0.0004	1.451E-05
Na	23	3	He	25991.1	65.9884	1981070.60	0.0025	0.2648
Na	23	3	He	27351.418	69.4282	2007125.44	0.0025	0.2648
Na	23	3	He	27734.477	70.3969	2045706.06	0.0025	0.2648
Mg	24	3	He	11990.501	15.8307	475259.88	0.0013	0.005032
Mg	24	3	He	12566.472	16.5908	479630.66	0.0013	0.005032
Mg	24	3	He	12369.698	16.3311	474576.48	0.0013	0.005032
Al	27	3	He	5923.036	2.5558	76730.02	0.0004	0.001519
Al	27	3	He	6226.841	2.6869	77675.18	0.0004	0.001519
Al	27	3	He	6109.54	2.6363	76608.89	0.0004	0.001519
K	39	3	He	7791.676	7.9328	238155.19	0.001	0.3627
K	39	3	He	8245.402	8.3736	242076.68	0.001	0.3627
K	39	3	He	8117.179	8.2491	239714.74	0.001	0.3627
Ca	44	3	He	27490.617	1.5995	48020.39	0.0001	0.002571
Ca	44	3	He	27814.763	1.6184	46785.85	0.0001	0.002571
Ca	44	3	He	27391.576	1.5938	46314.64	0.0001	0.002571
Ti	47	3	He	502.675	0.2312	6941.95	0.0005	0.0002328
Ti	47	3	He	503.199	0.2315	6691.75	0.0005	0.0002328
Ti	47	3	He	496.851	0.2286	6641.76	0.0005	0.0002328
V	51	3	He	490.753	9.8552	295867.72	0.0201	0.0116
V	51	3	He	510.888	10.2591	296583.00	0.0201	0.0116
V	51	3	He	507.427	10.1896	296107.19	0.0201	0.0116
Cr	52	3	He	490.143	12.6652	380228.55	0.0257	0.06801
Cr	52	3	He	503.848	13.0175	376326.28	0.0257	0.06801
Cr	52	3	He	501.896	12.9673	376824.37	0.0257	0.06801
Mn	55	3	He	752.714	8.5321	256145.66	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	800.82	9.0771	262412.57	0.0113	0.004215
Mn	55	3	He	786.449	8.9143	259045.17	0.0113	0.004215
Fe	57	3	He	10231.511	5.2268	156915.40	0.0005	0.004099
Fe	57	3	He	10630.111	5.4302	156984.56	0.0005	0.004099
Fe	57	3	He	10723.755	5.478	159189.57	0.0005	0.004099
Co	59	3	He	479.885	24.8704	746648.04	0.0518	0.004913
Co	59	3	He	500.57	25.9423	749974.36	0.0518	0.004913
Co	59	3	He	497.986	25.8084	749981.40	0.0518	0.004913
Ni	60	3	He	484.9	3.6192	212669.33	0.0075	0.006695
Ni	60	3	He	501.056	3.7396	212984.74	0.0075	0.006695
Ni	60	3	He	488.989	3.6497	211492.30	0.0075	0.006695
Cu	63	3	He	492.762	10.6408	625266.48	0.0216	0.003198
Cu	63	3	He	512.982	11.0773	630899.17	0.0216	0.003198
Cu	63	3	He	501.783	10.8355	627901.12	0.0216	0.003198
Zn	66	3	He	501.978	1.3232	77750.57	0.0026	0.002954
Zn	66	3	He	526.869	1.3886	79088.07	0.0026	0.002954
Zn	66	3	He	519.191	1.3684	79298.25	0.0026	0.002954
As	75	3	He	482.941	0.9434	55434.62	0.002	0.0004943
As	75	3	He	498.38	0.9735	55446.74	0.002	0.0004943
As	75	3	He	491.052	0.9592	55585.31	0.002	0.0004943
Sr	88	3	He	215.241	1.747	93467.92	0.0081	0.0006852
Sr	88	3	He	208.658	1.6935	92048.40	0.0081	0.0006852
Sr	88	3	He	204.889	1.663	91987.54	0.0081	0.0006852
Mo	98	3	He	51.511	1.055	56444.18	0.0205	0.0005587
Mo	98	3	He	50.624	1.0368	56353.27	0.0205	0.0005587
Mo	98	3	He	49.556	1.015	56143.06	0.0205	0.0005587
Ag	107	3	He	51.827	2.2314	119387.24	0.043	0.0004367
Ag	107	3	He	50.193	2.1611	117460.91	0.043	0.0004367
Ag	107	3	He	49.971	2.1515	119012.80	0.043	0.0004367
Cd	111	3	He	50.211	0.251	13428.50	0.005	1.253E-05
Cd	111	3	He	49.942	0.2496	13568.64	0.005	1.253E-05
Cd	111	3	He	49.594	0.2479	13712.78	0.005	1.253E-05
Sn	120	3	He	99.962	1.4744	78885.38	0.0146	0.01334
Sn	120	3	He	97.511	1.4386	78190.58	0.0146	0.01334
Sn	120	3	He	97.628	1.4403	79670.10	0.0146	0.01334
Sb	121	3	He	97.972	1.3955	74661.89	0.0142	0.001484
Sb	121	3	He	97.297	1.3859	75324.79	0.0142	0.001484
Sb	121	3	He	97.403	1.3874	76742.28	0.0142	0.001484
Ba	137	3	He	548.638	2.5279	135253.72	0.0046	0.000374
Ba	137	3	He	540.016	2.4882	135241.26	0.0046	0.000374
Ba	137	3	He	527.492	2.4305	134445.37	0.0046	0.000374
Tl	205	3	He	100.935	2.8489	543337.73	0.0282	0.00021
Tl	205	3	He	100.214	2.8285	542979.87	0.0282	0.00021
Tl	205	3	He	99.915	2.8201	537593.90	0.0282	0.00021
Pb	208	3	He	51.931	1.9348	194567.26	0.0372	0.0009772
Pb	208	3	He	52.031	1.9385	196361.25	0.0372	0.0009772
Pb	208	3	He	51.949	1.9354	196751.13	0.0372	0.0009772
U	238	3	He	50.466	2.1054	401545.70	0.0417	8.729E-05
U	238	3	He	50.135	2.0916	401513.04	0.0417	8.729E-05
U	238	3	He	49.81	2.078	396131.75	0.0417	8.729E-05
Sc	45	1	No Gas			1815284.04		
Sc	45	1	No Gas			1793061.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1823118.72		
Ge	72	1	No Gas			912590.92		
Ge	72	1	No Gas			925144.52		
Ge	72	1	No Gas			928586.70		
Sc	45	2	H2			130863.88		
Sc	45	2	H2			132629.71		
Sc	45	2	H2			131026.68		
Ge	72	2	H2			112831.33		
Ge	72	2	H2			115908.42		
Ge	72	2	H2			113094.72		
In	115	2	H2			275875.21		
In	115	2	H2			277384.51		
In	115	2	H2			274136.75		
Sc	45	3	He			30021.50		
Sc	45	3	He			28909.36		
Sc	45	3	He			29059.62		
Ge	72	3	He			58761.33		
Ge	72	3	He			56954.33		
Ge	72	3	He			57948.34		
In	115	3	He			54055.61		
In	115	3	He			54899.87		
In	115	3	He			55873.09		
Tb	159	3	He			246380.68		
Tb	159	3	He			252909.37		
Tb	159	3	He			245977.38		
Bi	209	3	He			190721.50		
Bi	209	3	He			191966.81		
Bi	209	3	He			190630.52		

Quantitation Report

Data File Name	109SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:55:26 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

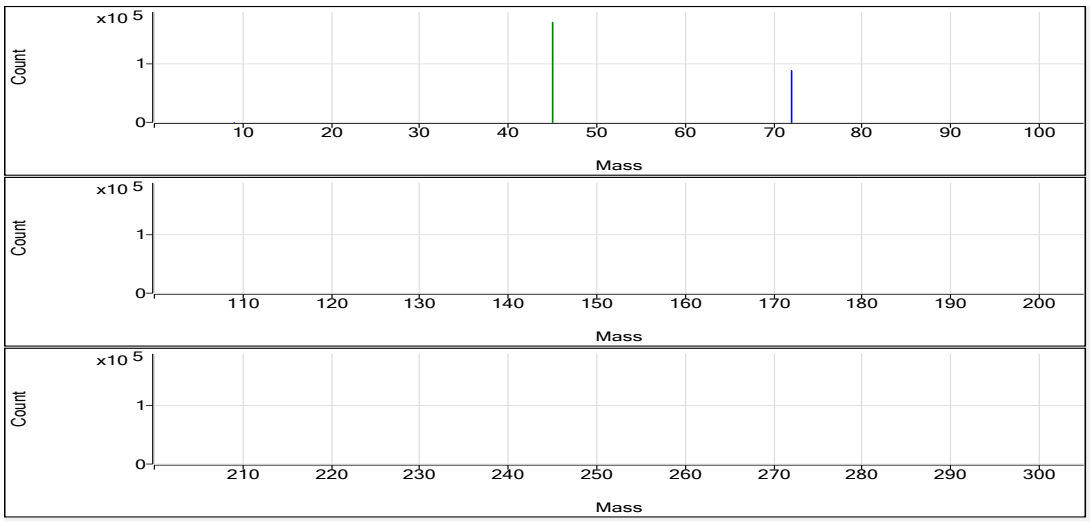
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.232	ppb	9.6	177.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.218	ppb	18.5	10.67	0.0001	Pulse	1.5000	3
Na	23	45	He	42.380	ppb	12.1	10267.21	0.3720	Pulse	0.1000	3
Mg	24	45	He	4.975	ppb	9.3	320.02	0.0116	Pulse	0.1000	3
Al	27	45	He	1.563	ppb	244.0	60.00	0.0022	Pulse	0.1000	3
K	39	45	He	12.938	ppb	245.2	10347.35	0.3753	Pulse	0.1000	3
Ca	44	45	He	20.713	ppb	98.0	103.33	0.0038	Pulse	0.1000	3
Ti	47	45	He	1.340	ppb	37.5	23.33	0.0008	Pulse	0.1000	3
V	51	45	He	0.215	ppb	34.4	438.68	0.0159	Pulse	0.5000	3
Cr	52	45	He	0.141	ppb	188.3	1973.54	0.0716	Pulse	0.1000	3
Mn	55	45	He	0.386	ppb	28.7	236.68	0.0086	Pulse	0.1000	3
Fe	57	45	He	6.587	ppb	23.7	206.68	0.0075	Pulse	0.1000	3
Co	59	45	He	0.182	ppb	63.2	396.69	0.0143	Pulse	0.1000	3
Ni	60	72	He	0.386	ppb	36.5	516.70	0.0096	Pulse	0.1000	3
Cu	63	72	He	0.220	ppb	18.5	430.02	0.0080	Pulse	0.1000	3
Zn	66	72	He	0.493	ppb	84.2	230.01	0.0042	Pulse	0.1000	3
As	75	72	He	0.361	ppb	31.0	64.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.072	ppb	70.1	66.67	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.090	ppb	16.9	126.67	0.0024	Pulse	0.1000	3
Ag	107	115	He	0.013	ppb	107.6	53.33	0.0010	Pulse	0.1000	3
Cd	111	115	He	0.020	ppb	75.8	6.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.165	ppb	83.4	830.05	0.0158	Pulse	0.1000	3
Sb	121	115	He	0.158	ppb	14.5	196.68	0.0037	Pulse	0.1000	3
Ba	137	115	He	0.097	ppb	48.7	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.555	ppb	9.7	2993.80	0.0159	Pulse	0.1000	3
Pb	208	209	He	0.036	ppb	33.1	436.68	0.0023	Pulse	0.1000	3
U	238	209	He	0.035	ppb	18.7	290.01	0.0015	Pulse	0.1000	3

ISTD Table:

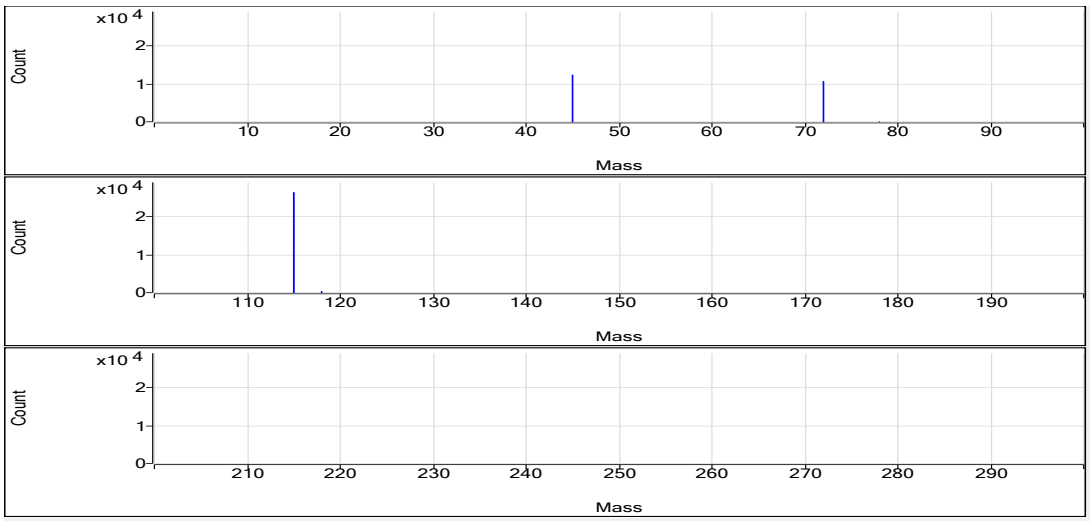
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1702428.99	0.5	96.7	Analog	0.1000	3
No Gas	Ge	72	878777.23	0.6	98.5	Pulse	0.1000	3
H2	Sc	45	123834.44	0.5	97.3	Pulse	0.1000	3
H2	Ge	72	106686.96	0.9	99.5	Pulse	0.1000	3
H2	In	115	264733.18	1.1	99.4	Pulse	0.1000	3
He	Sc	45	27626.84	4.3	96.9	Pulse	0.1000	3
He	Ge	72	53975.94	1.8	97.6	Pulse	0.1000	3
He	In	115	52684.87	1.3	98.2	Pulse	0.1000	3
He	Tb	159	241535.73	0.2	98.3	Pulse	0.1000	3
He	Bi	209	188527.07	0.2	98.8	Pulse	0.1000	3

No Gas

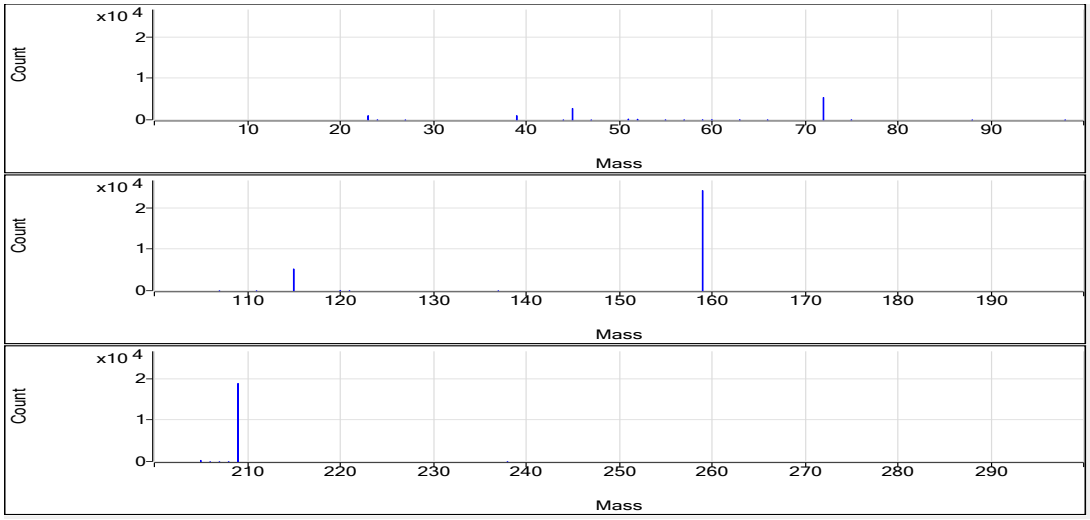


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.249	0.0001	190.00	0.0004	1.287E-05
Be	9	1	No Gas	0.207	0.0001	160.00	0.0004	1.287E-05
Be	9	1	No Gas	0.239	0.0001	182.00	0.0004	1.287E-05
Se	78	2	H2	0.25	0.0001	12.00	0.0004	1.451E-05
Se	78	2	H2	0.173	0.0001	8.67	0.0004	1.451E-05
Se	78	2	H2	0.233	0.0001	11.33	0.0004	1.451E-05
Na	23	3	He	46.162	0.3816	10273.97	0.0025	0.2648
Na	23	3	He	36.548	0.3573	10363.91	0.0025	0.2648
Na	23	3	He	44.432	0.3772	10163.76	0.0025	0.2648
Mg	24	3	He	4.911	0.0115	310.02	0.0013	0.005032
Mg	24	3	He	4.546	0.011	320.02	0.0013	0.005032
Mg	24	3	He	5.467	0.0122	330.02	0.0013	0.005032
Al	27	3	He	5.952	0.0041	110.00	0.0004	0.001519
Al	27	3	He	-0.324	0.0014	40.00	0.0004	0.001519
Al	27	3	He	-0.939	0.0011	30.00	0.0004	0.001519
K	39	3	He	45.018	0.4065	10944.47	0.001	0.3627
K	39	3	He	-18.418	0.3448	10003.69	0.001	0.3627
K	39	3	He	12.214	0.3746	10093.88	0.001	0.3627
Ca	44	3	He	32.459	0.0045	120.00	0.0001	0.002571
Ca	44	3	He	-2.722	0.0024	70.00	0.0001	0.002571
Ca	44	3	He	32.402	0.0045	120.00	0.0001	0.002571
Ti	47	3	He	1.11	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.994	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	1.916	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.296	0.0175	472.01	0.0201	0.0116
V	51	3	He	0.15	0.0146	424.01	0.0201	0.0116
V	51	3	He	0.199	0.0156	420.01	0.0201	0.0116
Cr	52	3	He	0.273	0.075	2020.20	0.0257	0.06801
Cr	52	3	He	-0.165	0.0638	1850.20	0.0257	0.06801
Cr	52	3	He	0.314	0.0761	2050.21	0.0257	0.06801
Mn	55	3	He	0.513	0.01	270.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.328	0.0079	230.01	0.0113	0.004215
Mn	55	3	He	0.316	0.0078	210.01	0.0113	0.004215
Fe	57	3	He	6.523	0.0074	200.01	0.0005	0.004099
Fe	57	3	He	8.179	0.0083	240.01	0.0005	0.004099
Fe	57	3	He	5.058	0.0067	180.01	0.0005	0.004099
Co	59	3	He	0.292	0.0201	540.03	0.0518	0.004913
Co	59	3	He	0.191	0.0148	430.02	0.0518	0.004913
Co	59	3	He	0.063	0.0082	220.01	0.0518	0.004913
Ni	60	3	He	0.467	0.0102	560.04	0.0075	0.006695
Ni	60	3	He	0.223	0.0084	450.02	0.0075	0.006695
Ni	60	3	He	0.467	0.0102	540.03	0.0075	0.006695
Cu	63	3	He	0.264	0.0089	490.02	0.0216	0.003198
Cu	63	3	He	0.213	0.0078	420.02	0.0216	0.003198
Cu	63	3	He	0.184	0.0072	380.02	0.0216	0.003198
Zn	66	3	He	0.811	0.0051	280.02	0.0026	0.002954
Zn	66	3	He	0.643	0.0046	250.01	0.0026	0.002954
Zn	66	3	He	0.024	0.003	160.01	0.0026	0.002954
As	75	3	He	0.305	0.0011	60.00	0.002	0.0004943
As	75	3	He	0.489	0.0014	78.00	0.002	0.0004943
As	75	3	He	0.287	0.0011	56.00	0.002	0.0004943
Sr	88	3	He	0.129	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.054	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.033	0.001	50.00	0.0081	0.0006852
Mo	98	3	He	0.095	0.0025	130.01	0.0205	0.0005587
Mo	98	3	He	0.073	0.0021	110.00	0.0205	0.0005587
Mo	98	3	He	0.103	0.0027	140.01	0.0205	0.0005587
Ag	107	3	He	0.03	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.036	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.099	0.0148	770.05	0.0146	0.01334
Sn	120	3	He	0.073	0.0144	770.05	0.0146	0.01334
Sn	120	3	He	0.324	0.0181	950.06	0.0146	0.01334
Sb	121	3	He	0.166	0.0038	200.01	0.0142	0.001484
Sb	121	3	He	0.132	0.0034	180.01	0.0142	0.001484
Sb	121	3	He	0.177	0.004	210.01	0.0142	0.001484
Ba	137	3	He	0.127	0.001	50.00	0.0046	0.000374
Ba	137	3	He	0.122	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.043	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.586	0.0167	3150.52	0.0282	0.00021
Tl	205	3	He	0.587	0.0168	3160.52	0.0282	0.00021
Tl	205	3	He	0.493	0.0141	2670.36	0.0282	0.00021
Pb	208	3	He	0.022	0.0018	200.01	0.0372	0.0009772
Pb	208	3	He	0.044	0.0026	290.01	0.0372	0.0009772
Pb	208	3	He	0.042	0.0025	230.01	0.0372	0.0009772
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
U	238	3	He	0.042	0.0019	350.02	0.0417	8.729E-05
Sc	45	1	No Gas			1711221.54		
Sc	45	1	No Gas			1696011.07		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1700054.35		
Ge	72	1	No Gas			884596.63		
Ge	72	1	No Gas			874599.13		
Ge	72	1	No Gas			877135.92		
Sc	45	2	H2			123469.79		
Sc	45	2	H2			123543.18		
Sc	45	2	H2			124490.36		
Ge	72	2	H2			107039.96		
Ge	72	2	H2			105598.96		
Ge	72	2	H2			107421.96		
In	115	2	H2			264559.74		
In	115	2	H2			261818.00		
In	115	2	H2			267821.79		
Sc	45	3	He			26925.45		
Sc	45	3	He			29009.49		
Sc	45	3	He			26945.59		
Ge	72	3	He			55036.91		
Ge	72	3	He			53831.84		
Ge	72	3	He			53059.06		
In	115	3	He			52078.38		
In	115	3	He			53433.28		
In	115	3	He			52560.39		
Tb	159	3	He			242073.69		
Tb	159	3	He			241587.71		
Tb	159	3	He			240945.80		
Bi	209	3	He			188266.11		
Bi	209	3	He			188247.48		
Bi	209	3	He			189067.61		

Quantitation Report

Data File Name	110_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:57:26 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

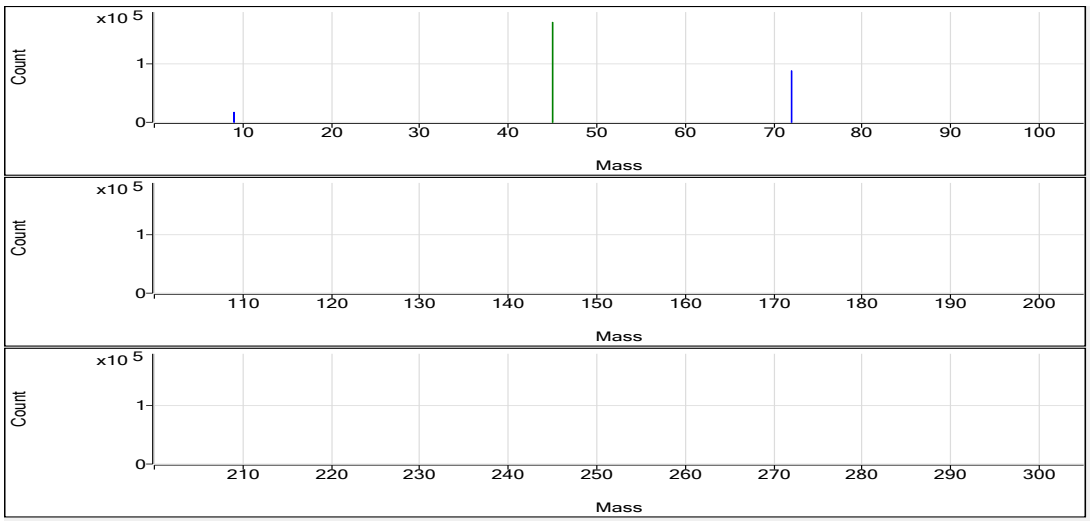
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	52.008	ppb	7.1	35159.93	0.0205	Pulse	0.5000	3
Se	78	72	H2	52.581	ppb	1.5	2179.95	0.0206	Pulse	1.5000	3
Na	23	45	He	5305.119	ppb	1.0	386599.80	13.6799	Pulse	0.1000	3
Mg	24	45	He	5128.905	ppb	1.3	191447.50	6.7744	Pulse	0.1000	3
Al	27	45	He	5080.030	ppb	2.1	61957.48	2.1923	Pulse	0.1000	3
K	39	45	He	5208.227	ppb	0.7	153263.17	5.4228	Pulse	0.1000	3
Ca	44	45	He	5165.488	ppb	1.9	8552.79	0.3026	Pulse	0.1000	3
Ti	47	45	He	5257.381	ppb	1.7	68290.99	2.4162	Pulse	0.1000	3
V	51	45	He	522.023	ppb	0.6	296244.52	10.4824	Pulse	0.5000	3
Cr	52	45	He	524.158	ppb	0.7	382657.92	13.5394	Pulse	0.1000	3
Mn	55	45	He	524.210	ppb	1.3	167956.39	5.9432	Pulse	0.1000	3
Fe	57	45	He	5252.406	ppb	0.9	75889.71	2.6852	Pulse	0.1000	3
Co	59	45	He	514.816	ppb	0.4	754030.46	26.6804	Pulse	0.1000	3
Ni	60	72	He	526.146	ppb	0.6	215129.21	3.9265	Pulse	0.1000	3
Cu	63	72	He	521.012	ppb	1.2	616413.42	11.2506	Pulse	0.1000	3
Zn	66	72	He	519.128	ppb	1.1	74966.03	1.3683	Pulse	0.1000	3
As	75	72	He	514.826	ppb	0.4	55098.08	1.0056	Pulse	0.5000	3
Sr	88	115	He	50.165	ppb	1.0	21907.55	0.4077	Pulse	0.1000	3
Mo	98	115	He	50.983	ppb	0.4	56109.44	1.0442	Pulse	0.1000	3
Ag	107	115	He	52.205	ppb	0.8	120782.10	2.2477	Pulse	0.1000	3
Cd	111	115	He	50.838	ppb	0.8	13655.37	0.2541	Pulse	0.5000	3
Sn	120	115	He	51.710	ppb	2.0	41329.13	0.7691	Pulse	0.1000	3
Sb	121	115	He	50.947	ppb	0.8	39032.53	0.7264	Pulse	0.1000	3
Ba	137	115	He	502.101	ppb	1.2	124319.63	2.3136	Pulse	0.1000	3
Tl	205	209	He	51.702	ppb	0.3	276672.04	1.4594	Pulse	0.1000	3
Pb	208	209	He	52.001	ppb	0.5	367283.34	1.9374	Pulse	0.1000	3
U	238	209	He	51.791	ppb	0.6	409615.97	2.1607	Pulse	0.1000	3

ISTD Table:

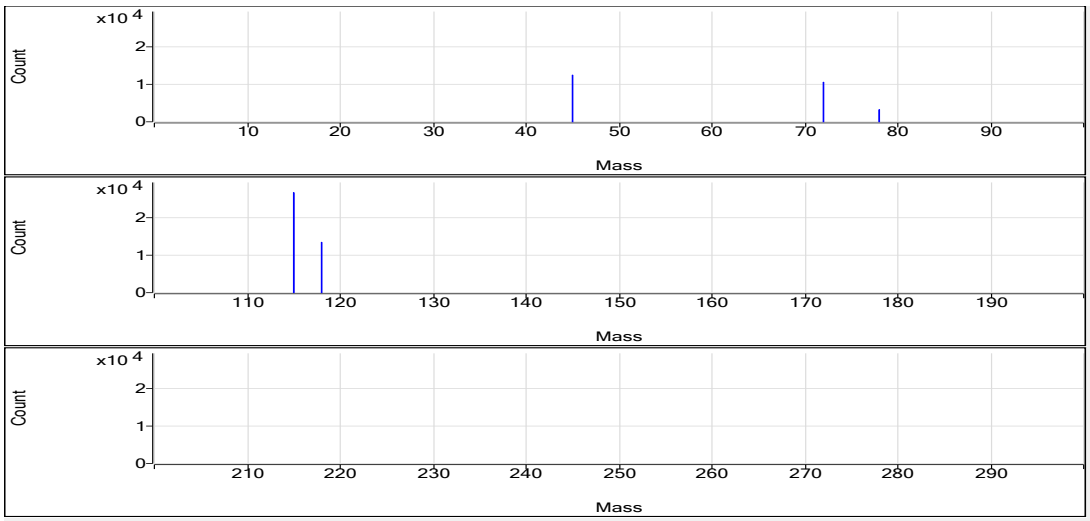
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1716298.05	1.5	97.4	Analog	0.1000	3
No Gas	Ge	72	883827.90	1.0	99.0	Pulse	0.1000	3
H2	Sc	45	124764.71	0.6	98.0	Pulse	0.1000	3
H2	Ge	72	105924.32	1.1	98.8	Pulse	0.1000	3
H2	In	115	266724.56	0.6	100.2	Pulse	0.1000	3
He	Sc	45	28261.66	0.7	99.1	Pulse	0.1000	3
He	Ge	72	54789.14	0.0	99.0	Pulse	0.1000	3
He	In	115	53736.57	0.4	100.1	Pulse	0.1000	3
He	Tb	159	245157.39	0.5	99.8	Pulse	0.1000	3
He	Bi	209	189582.20	0.6	99.3	Pulse	0.1000	3

No Gas

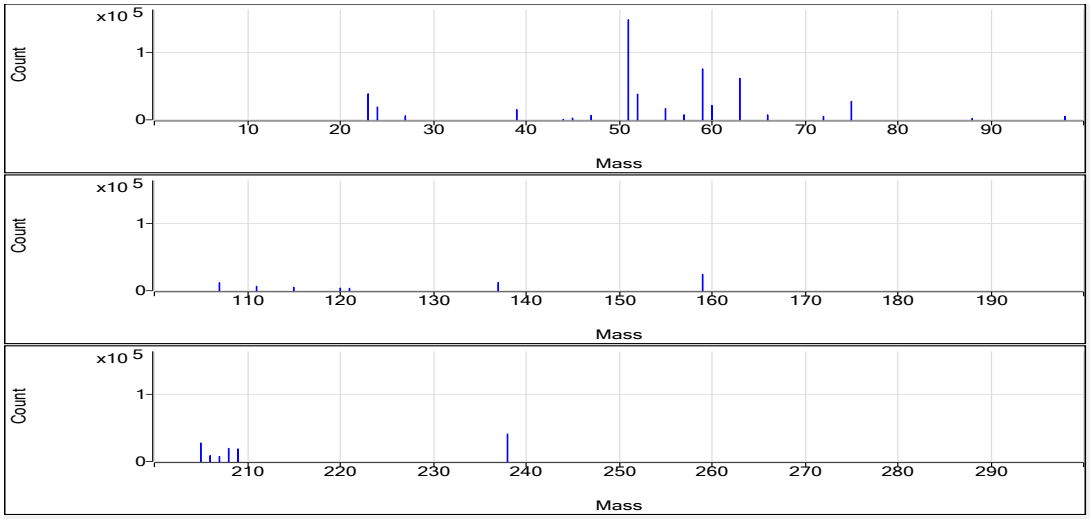


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	48.453	0.0191	33078.43	0.0004	1.287E-05
Be	9	1	No Gas	51.753	0.0204	35277.49	0.0004	1.287E-05
Be	9	1	No Gas	55.818	0.022	37123.88	0.0004	1.287E-05
Se	78	2	H2	52.722	0.0206	2211.51	0.0004	1.451E-05
Se	78	2	H2	53.269	0.0208	2186.17	0.0004	1.451E-05
Se	78	2	H2	51.753	0.0203	2142.17	0.0004	1.451E-05
Na	23	3	He	5274.039	13.6013	386121.01	0.0025	0.2648
Na	23	3	He	5277.062	13.6089	385791.91	0.0025	0.2648
Na	23	3	He	5364.258	13.8294	387886.48	0.0025	0.2648
Mg	24	3	He	5136.009	6.7838	192581.79	0.0013	0.005032
Mg	24	3	He	5058.281	6.6812	189401.33	0.0013	0.005032
Mg	24	3	He	5192.425	6.8582	192359.37	0.0013	0.005032
Al	27	3	He	4975.514	2.1472	60956.42	0.0004	0.001519
Al	27	3	He	5192.869	2.241	63527.49	0.0004	0.001519
Al	27	3	He	5071.709	2.1887	61388.52	0.0004	0.001519
K	39	3	He	5226.078	5.4402	154439.23	0.001	0.3627
K	39	3	He	5235.05	5.4489	154468.05	0.001	0.3627
K	39	3	He	5163.553	5.3794	150882.23	0.001	0.3627
Ca	44	3	He	5214.79	0.3055	8672.84	0.0001	0.002571
Ca	44	3	He	5052.117	0.2961	8392.69	0.0001	0.002571
Ca	44	3	He	5229.557	0.3064	8592.83	0.0001	0.002571
Ti	47	3	He	5285.054	2.4289	68953.99	0.0005	0.0002328
Ti	47	3	He	5328.064	2.4487	69416.81	0.0005	0.0002328
Ti	47	3	He	5159.025	2.371	66502.16	0.0005	0.0002328
V	51	3	He	521.843	10.4788	297478.69	0.0201	0.0116
V	51	3	He	519.24	10.4266	295578.00	0.0201	0.0116
V	51	3	He	524.985	10.5418	295676.88	0.0201	0.0116
Cr	52	3	He	528.124	13.6414	387259.56	0.0257	0.06801
Cr	52	3	He	524.015	13.5358	383717.81	0.0257	0.06801
Cr	52	3	He	520.333	13.4411	376996.40	0.0257	0.06801
Mn	55	3	He	520.232	5.8982	167440.70	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	520.56	5.9019	167309.26	0.0113	0.004215
Mn	55	3	He	531.837	6.0296	169119.20	0.0113	0.004215
Fe	57	3	He	5308.081	2.7136	77035.43	0.0005	0.004099
Fe	57	3	He	5226.014	2.6717	75738.99	0.0005	0.004099
Fe	57	3	He	5223.125	2.6702	74894.72	0.0005	0.004099
Co	59	3	He	516.411	26.7631	759765.54	0.0518	0.004913
Co	59	3	He	512.506	26.5607	752955.46	0.0518	0.004913
Co	59	3	He	515.531	26.7175	749370.38	0.0518	0.004913
Ni	60	3	He	529.901	3.9545	216688.55	0.0075	0.006695
Ni	60	3	He	523.955	3.9102	214221.50	0.0075	0.006695
Ni	60	3	He	524.582	3.9148	214477.57	0.0075	0.006695
Cu	63	3	He	528.142	11.4046	624923.47	0.0216	0.003198
Cu	63	3	He	517.369	11.172	612066.24	0.0216	0.003198
Cu	63	3	He	517.525	11.1754	612250.54	0.0216	0.003198
Zn	66	3	He	522.346	1.3767	75439.07	0.0026	0.002954
Zn	66	3	He	512.6	1.3511	74020.74	0.0026	0.002954
Zn	66	3	He	522.438	1.377	75438.28	0.0026	0.002954
As	75	3	He	514.642	1.0053	55085.27	0.002	0.0004943
As	75	3	He	517.142	1.0102	55342.43	0.002	0.0004943
As	75	3	He	512.693	1.0015	54866.53	0.002	0.0004943
Sr	88	3	He	50.336	0.4091	22077.69	0.0081	0.0006852
Sr	88	3	He	50.584	0.4111	22077.88	0.0081	0.0006852
Sr	88	3	He	49.575	0.4029	21567.09	0.0081	0.0006852
Mo	98	3	He	50.764	1.0397	56113.04	0.0205	0.0005587
Mo	98	3	He	51.186	1.0483	56303.41	0.0205	0.0005587
Mo	98	3	He	50.999	1.0445	55911.88	0.0205	0.0005587
Ag	107	3	He	52.094	2.2429	121052.54	0.043	0.0004367
Ag	107	3	He	51.877	2.2336	119960.78	0.043	0.0004367
Ag	107	3	He	52.645	2.2666	121332.99	0.043	0.0004367
Cd	111	3	He	50.74	0.2536	13688.75	0.005	1.253E-05
Cd	111	3	He	50.467	0.2523	13548.61	0.005	1.253E-05
Cd	111	3	He	51.308	0.2565	13728.76	0.005	1.253E-05
Sn	120	3	He	50.745	0.755	40750.61	0.0146	0.01334
Sn	120	3	He	51.6	0.7675	41222.15	0.0146	0.01334
Sn	120	3	He	52.786	0.7849	42014.63	0.0146	0.01334
Sb	121	3	He	50.65	0.7222	38975.62	0.0142	0.001484
Sb	121	3	He	51.411	0.733	39366.62	0.0142	0.001484
Sb	121	3	He	50.779	0.724	38755.34	0.0142	0.001484
Ba	137	3	He	495.969	2.2853	123340.98	0.0046	0.000374
Ba	137	3	He	507.578	2.3388	125610.46	0.0046	0.000374
Ba	137	3	He	502.758	2.3166	124007.46	0.0046	0.000374
Tl	205	3	He	51.793	1.462	278009.55	0.0282	0.00021
Tl	205	3	He	51.515	1.4541	276576.64	0.0282	0.00021
Tl	205	3	He	51.799	1.4621	275429.94	0.0282	0.00021
Pb	208	3	He	51.721	1.927	196865.82	0.0372	0.0009772
Pb	208	3	He	52.052	1.9393	199884.04	0.0372	0.0009772
Pb	208	3	He	52.228	1.9458	196991.70	0.0372	0.0009772
U	238	3	He	51.886	2.1646	411634.53	0.0417	8.729E-05
U	238	3	He	51.426	2.1454	408073.16	0.0417	8.729E-05
U	238	3	He	52.061	2.1719	409140.23	0.0417	8.729E-05
Sc	45	1	No Gas			1731993.41		
Sc	45	1	No Gas			1729412.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1687488.41		
Ge	72	1	No Gas			893886.63		
Ge	72	1	No Gas			878705.53		
Ge	72	1	No Gas			878891.55		
Sc	45	2	H2			124922.97		
Sc	45	2	H2			123975.22		
Sc	45	2	H2			125395.93		
Ge	72	2	H2			107169.57		
Ge	72	2	H2			104853.48		
Ge	72	2	H2			105749.90		
In	115	2	H2			265322.65		
In	115	2	H2			266564.86		
In	115	2	H2			268286.17		
Sc	45	3	He			28388.59		
Sc	45	3	He			28348.46		
Sc	45	3	He			28047.94		
Ge	72	3	He			54795.93		
Ge	72	3	He			54785.75		
Ge	72	3	He			54785.75		
In	115	3	He			54256.78		
In	115	3	He			53996.25		
In	115	3	He			53824.59		
Tb	159	3	He			244657.30		
Tb	159	3	He			246577.91		
Tb	159	3	He			244236.97		
Bi	209	3	He			190163.47		
Bi	209	3	He			190205.97		
Bi	209	3	He			188377.15		

Quantitation Report

Data File Name	111_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 6:59:25 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

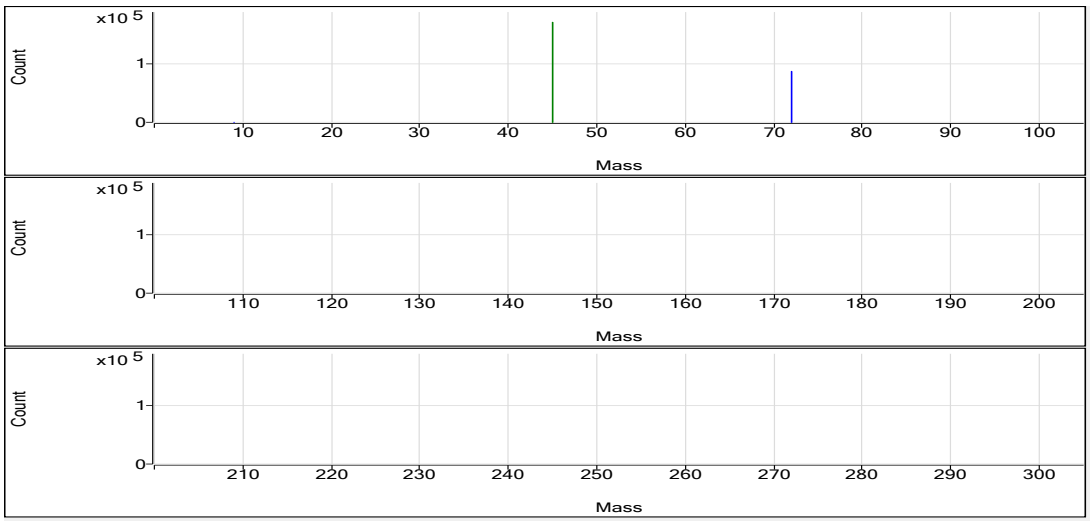
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.284	ppb	20.0	212.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.157	ppb	20.6	8.00	0.0001	Pulse	1.5000	3
Na	23	45	He	30.425	ppb	16.8	9683.45	0.3418	Pulse	0.1000	3
Mg	24	45	He	4.210	ppb	64.3	300.01	0.0106	Pulse	0.1000	3
Al	27	45	He	3.841	ppb	36.1	90.00	0.0032	Pulse	0.1000	3
K	39	45	He	7.695	ppb	165.2	10490.83	0.3702	Pulse	0.1000	3
Ca	44	45	He	16.371	ppb	194.8	100.00	0.0035	Pulse	0.1000	3
Ti	47	45	He	2.829	ppb	69.1	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.161	ppb	48.0	420.01	0.0148	Pulse	0.5000	3
Cr	52	45	He	0.425	ppb	48.9	2236.93	0.0789	Pulse	0.1000	3
Mn	55	45	He	0.303	ppb	33.7	216.68	0.0076	Pulse	0.1000	3
Fe	57	45	He	0.716	ppb	490.5	126.67	0.0045	Pulse	0.1000	3
Co	59	45	He	0.184	ppb	5.8	410.02	0.0145	Pulse	0.1000	3
Ni	60	72	He	0.179	ppb	86.0	430.02	0.0080	Pulse	0.1000	3
Cu	63	72	He	0.140	ppb	42.4	333.35	0.0062	Pulse	0.1000	3
Zn	66	72	He	-0.058	ppb	N/A	150.01	0.0028	Pulse	0.1000	3
As	75	72	He	0.544	ppb	14.4	83.33	0.0016	Pulse	0.5000	3
Sr	88	115	He	0.078	ppb	49.9	70.00	0.0013	Pulse	0.1000	3
Mo	98	115	He	0.065	ppb	74.7	100.00	0.0019	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	147.1	66.67	0.0013	Pulse	0.1000	3
Cd	111	115	He	0.015	ppb	75.6	4.67	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.225	ppb	28.1	880.06	0.0166	Pulse	0.1000	3
Sb	121	115	He	0.205	ppb	26.0	233.34	0.0044	Pulse	0.1000	3
Ba	137	115	He	0.137	ppb	123.3	53.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.190	ppb	19.5	1050.09	0.0056	Pulse	0.1000	3
Pb	208	209	He	0.021	ppb	30.4	330.02	0.0017	Pulse	0.1000	3
U	238	209	He	0.037	ppb	25.6	306.68	0.0016	Pulse	0.1000	3

ISTD Table:

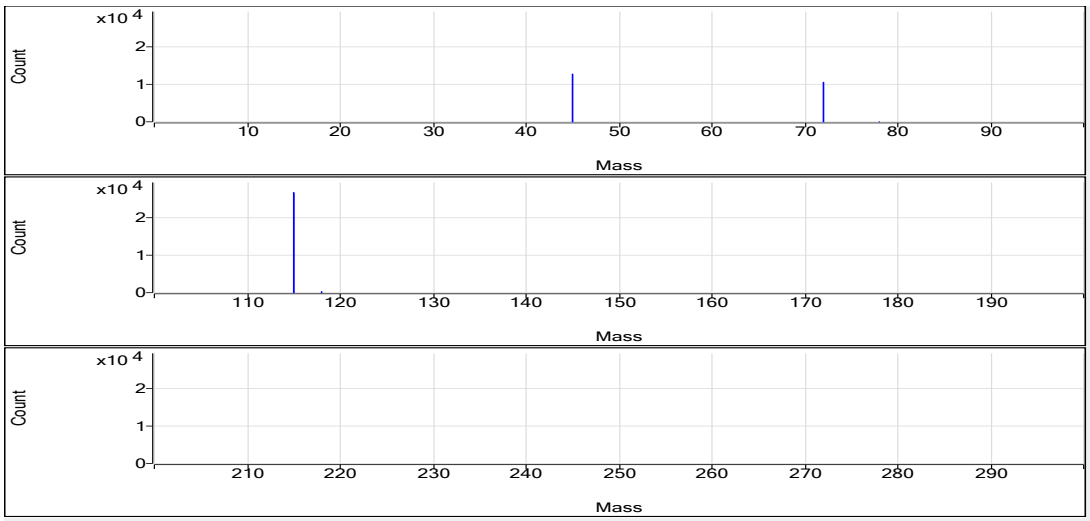
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1702931.59	0.7	96.7	Analog	0.1000	3
No Gas	Ge	72	867661.37	0.7	97.2	Pulse	0.1000	3
H2	Sc	45	126973.77	0.1	99.7	Pulse	0.1000	3
H2	Ge	72	105286.43	1.5	98.2	Pulse	0.1000	3
H2	In	115	265564.40	0.4	99.7	Pulse	0.1000	3
He	Sc	45	28334.99	0.6	99.4	Pulse	0.1000	3
He	Ge	72	53477.16	2.1	96.7	Pulse	0.1000	3
He	In	115	52915.40	0.7	98.6	Pulse	0.1000	3
He	Tb	159	242714.84	0.4	98.8	Pulse	0.1000	3
He	Bi	209	188850.10	0.6	99.0	Pulse	0.1000	3

No Gas

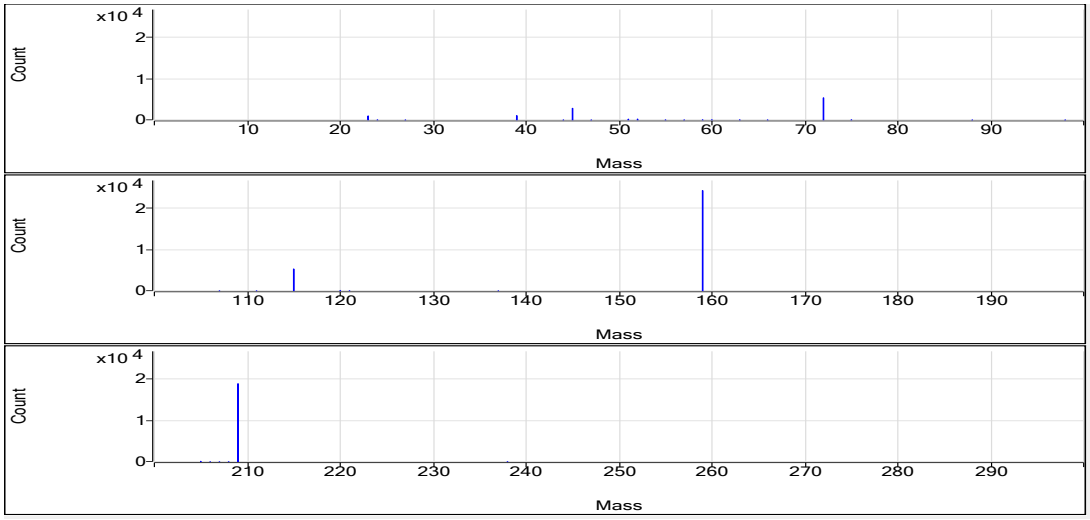


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.341	0.0001	250.00	0.0004	1.287E-05
Be	9	1	No Gas	0.228	0.0001	174.00	0.0004	1.287E-05
Be	9	1	No Gas	0.284	0.0001	214.00	0.0004	1.287E-05
Se	78	2	H2	0.127	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.154	0.0001	8.00	0.0004	1.451E-05
Se	78	2	H2	0.191	0.0001	9.33	0.0004	1.451E-05
Na	23	3	He	33.735	0.3501	9943.64	0.0025	0.2648
Na	23	3	He	24.543	0.3269	9303.21	0.0025	0.2648
Na	23	3	He	32.998	0.3483	9803.51	0.0025	0.2648
Mg	24	3	He	7.127	0.0144	410.02	0.0013	0.005032
Mg	24	3	He	1.779	0.0074	210.01	0.0013	0.005032
Mg	24	3	He	3.725	0.0099	280.01	0.0013	0.005032
Al	27	3	He	3.011	0.0028	80.00	0.0004	0.001519
Al	27	3	He	5.442	0.0039	110.00	0.0004	0.001519
Al	27	3	He	3.069	0.0028	80.00	0.0004	0.001519
K	39	3	He	21.503	0.3836	10894.42	0.001	0.3627
K	39	3	He	5.108	0.3677	10464.17	0.001	0.3627
K	39	3	He	-3.524	0.3593	10113.89	0.001	0.3627
Ca	44	3	He	28.486	0.0042	120.01	0.0001	0.002571
Ca	44	3	He	40.424	0.0049	140.00	0.0001	0.002571
Ca	44	3	He	-19.798	0.0014	40.00	0.0001	0.002571
Ti	47	3	He	2.558	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	1.023	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	4.905	0.0025	70.00	0.0005	0.0002328
V	51	3	He	0.247	0.0166	470.01	0.0201	0.0116
V	51	3	He	0.137	0.0143	408.01	0.0201	0.0116
V	51	3	He	0.098	0.0136	382.01	0.0201	0.0116
Cr	52	3	He	0.656	0.0849	2410.28	0.0257	0.06801
Cr	52	3	He	0.253	0.0745	2120.24	0.0257	0.06801
Cr	52	3	He	0.368	0.0775	2180.28	0.0257	0.06801
Mn	55	3	He	0.187	0.0063	180.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.341	0.0081	230.01	0.0113	0.004215
Mn	55	3	He	0.381	0.0085	240.01	0.0113	0.004215
Fe	57	3	He	3.699	0.006	170.01	0.0005	0.004099
Fe	57	3	He	1.608	0.0049	140.00	0.0005	0.004099
Fe	57	3	He	-3.157	0.0025	70.00	0.0005	0.004099
Co	59	3	He	0.177	0.0141	400.02	0.0518	0.004913
Co	59	3	He	0.197	0.0151	430.02	0.0518	0.004913
Co	59	3	He	0.179	0.0142	400.02	0.0518	0.004913
Ni	60	3	He	0.356	0.0093	510.03	0.0075	0.006695
Ni	60	3	He	0.105	0.0075	400.02	0.0075	0.006695
Ni	60	3	He	0.076	0.0073	380.02	0.0075	0.006695
Cu	63	3	He	0.208	0.0077	420.02	0.0216	0.003198
Cu	63	3	He	0.103	0.0054	290.01	0.0216	0.003198
Cu	63	3	He	0.108	0.0055	290.01	0.0216	0.003198
Zn	66	3	He	0.131	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	-0.199	0.0024	130.01	0.0026	0.002954
Zn	66	3	He	-0.106	0.0027	140.00	0.0026	0.002954
As	75	3	He	0.629	0.0017	94.00	0.002	0.0004943
As	75	3	He	0.475	0.0014	76.00	0.002	0.0004943
As	75	3	He	0.529	0.0015	80.00	0.002	0.0004943
Sr	88	3	He	0.124	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.056	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.055	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.037	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.122	0.003	160.01	0.0205	0.0005587
Mo	98	3	He	0.037	0.0013	70.00	0.0205	0.0005587
Ag	107	3	He	0.051	0.0026	140.01	0.043	0.0004367
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	0.028	0.0002	8.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.152	0.0156	830.05	0.0146	0.01334
Sn	120	3	He	0.26	0.0171	900.07	0.0146	0.01334
Sn	120	3	He	0.264	0.0172	910.07	0.0146	0.01334
Sb	121	3	He	0.265	0.0053	280.01	0.0142	0.001484
Sb	121	3	He	0.19	0.0042	220.01	0.0142	0.001484
Sb	121	3	He	0.161	0.0038	200.01	0.0142	0.001484
Ba	137	3	He	0.326	0.0019	100.00	0.0046	0.000374
Ba	137	3	He	0.084	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.001	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.229	0.0067	1250.11	0.0282	0.00021
Tl	205	3	He	0.155	0.0046	870.06	0.0282	0.00021
Tl	205	3	He	0.185	0.0054	1030.09	0.0282	0.00021
Pb	208	3	He	0.024	0.0019	160.01	0.0372	0.0009772
Pb	208	3	He	0.013	0.0015	130.01	0.0372	0.0009772
Pb	208	3	He	0.025	0.0019	190.01	0.0372	0.0009772
U	238	3	He	0.048	0.0021	390.02	0.0417	8.729E-05
U	238	3	He	0.032	0.0014	270.01	0.0417	8.729E-05
U	238	3	He	0.031	0.0014	260.01	0.0417	8.729E-05
Sc	45	1	No Gas			1697197.32		
Sc	45	1	No Gas			1695760.60		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1715836.85		
Ge	72	1	No Gas			872206.55		
Ge	72	1	No Gas			869691.39		
Ge	72	1	No Gas			861086.16		
Sc	45	2	H2			126849.17		
Sc	45	2	H2			127091.37		
Sc	45	2	H2			126980.78		
Ge	72	2	H2			104198.28		
Ge	72	2	H2			107059.62		
Ge	72	2	H2			104601.39		
In	115	2	H2			266313.67		
In	115	2	H2			264384.47		
In	115	2	H2			265995.07		
Sc	45	3	He			28398.48		
Sc	45	3	He			28458.54		
Sc	45	3	He			28147.96		
Ge	72	3	He			54584.52		
Ge	72	3	He			53490.49		
Ge	72	3	He			52356.46		
In	115	3	He			53322.68		
In	115	3	He			52530.45		
In	115	3	He			52911.54		
Tb	159	3	He			243827.73		
Tb	159	3	He			241791.70		
Tb	159	3	He			242525.09		
Bi	209	3	He			187557.13		
Bi	209	3	He			189426.38		
Bi	209	3	He			189566.79		

Quantitation Report

Data File Name	112SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:01:24 PM
Sample Name	410-134023-A-1-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

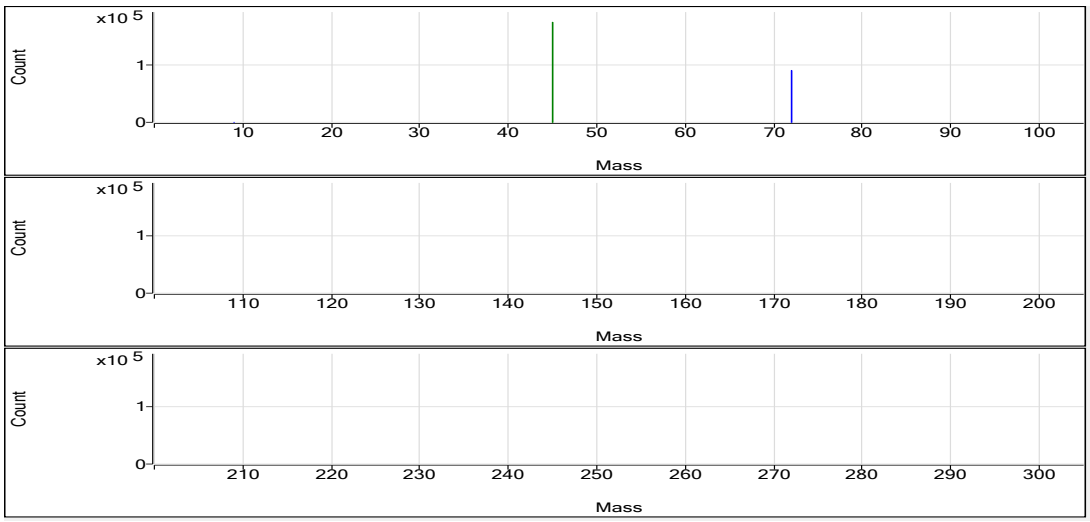
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.068	ppb	40.4	68.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.066	ppb	74.4	4.44	0.0000	Pulse	1.5000	3
Na	23	45	He	35.126	ppb	11.3	10247.20	0.3537	Pulse	0.1000	3
Mg	24	45	He	2.190	ppb	76.1	230.01	0.0079	Pulse	0.1000	3
Al	27	45	He	7.922	ppb	32.5	143.34	0.0049	Pulse	0.1000	3
K	39	45	He	4.054	ppb	704.5	10634.23	0.3667	Pulse	0.1000	3
Ca	44	45	He	18.884	ppb	54.5	106.67	0.0037	Pulse	0.1000	3
Ti	47	45	He	1.529	ppb	115.3	26.67	0.0009	Pulse	0.1000	3
V	51	45	He	0.060	ppb	35.3	371.34	0.0128	Pulse	0.5000	3
Cr	52	45	He	0.062	ppb	407.7	2013.54	0.0696	Pulse	0.1000	3
Mn	55	45	He	0.196	ppb	10.7	186.68	0.0064	Pulse	0.1000	3
Fe	57	45	He	1.260	ppb	226.6	136.67	0.0047	Pulse	0.1000	3
Co	59	45	He	0.110	ppb	20.9	306.68	0.0106	Pulse	0.1000	3
Ni	60	72	He	0.048	ppb	190.8	393.35	0.0071	Pulse	0.1000	3
Cu	63	72	He	0.165	ppb	13.5	376.69	0.0068	Pulse	0.1000	3
Zn	66	72	He	0.195	ppb	173.8	193.35	0.0035	Pulse	0.1000	3
As	75	72	He	0.157	ppb	28.9	44.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.021	ppb	162.9	46.67	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.020	ppb	66.2	53.33	0.0010	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.032	ppb	35.7	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	-0.068	ppb	N/A	673.37	0.0123	Pulse	0.1000	3
Sb	121	115	He	0.128	ppb	97.1	180.01	0.0033	Pulse	0.1000	3
Ba	137	115	He	0.131	ppb	106.4	53.33	0.0010	Pulse	0.1000	3
Tl	205	209	He	0.044	ppb	21.5	283.35	0.0015	Pulse	0.1000	3
Pb	208	209	He	0.025	ppb	33.9	366.68	0.0019	Pulse	0.1000	3
U	238	209	He	68.574	ppb	1.6	554171.70	2.8608	Pulse	0.1000	3

ISTD Table:

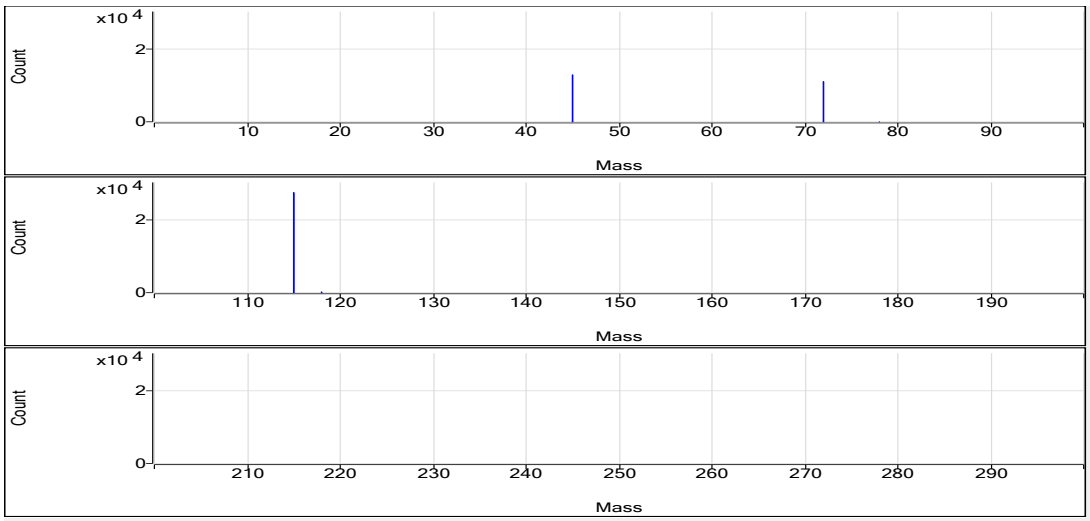
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735007.53	1.0	98.5	Analog	0.1000	3
No Gas	Ge	72	899098.19	0.9	100.7	Pulse	0.1000	3
H2	Sc	45	128466.74	2.6	100.9	Pulse	0.1000	3
H2	Ge	72	110172.00	2.1	102.7	Pulse	0.1000	3
H2	In	115	273902.22	1.4	102.8	Pulse	0.1000	3
He	Sc	45	28983.01	3.3	101.7	Pulse	0.1000	3
He	Ge	72	55759.55	0.7	100.8	Pulse	0.1000	3
He	In	115	54530.01	0.5	101.6	Pulse	0.1000	3
He	Tb	159	246713.05	0.5	100.4	Pulse	0.1000	3
He	Bi	209	193732.93	1.0	101.5	Pulse	0.1000	3

No Gas

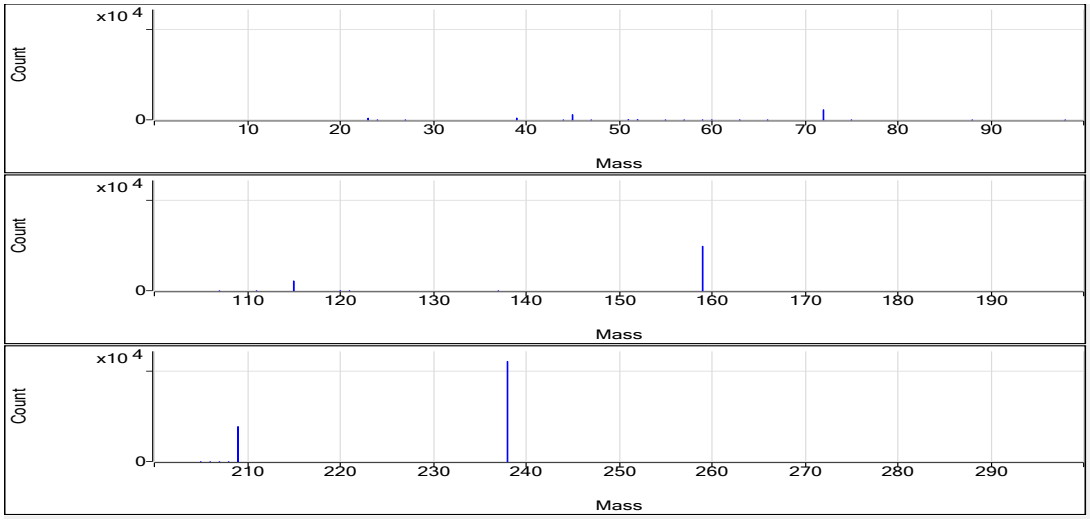


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.089	0	82.00	0.0004	1.287E-05
Be	9	1	No Gas	0.079	0	76.00	0.0004	1.287E-05
Be	9	1	No Gas	0.037	0	48.00	0.0004	1.287E-05
Se	78	2	H2	0.099	0.0001	6.00	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.089	0	5.33	0.0004	1.451E-05
Na	23	3	He	39.104	0.3637	10544.18	0.0025	0.2648
Na	23	3	He	31.182	0.3437	10283.85	0.0025	0.2648
Na	23	3	He	35.093	0.3536	9913.58	0.0025	0.2648
Mg	24	3	He	4.028	0.0103	300.01	0.0013	0.005032
Mg	24	3	He	1.758	0.0074	220.01	0.0013	0.005032
Mg	24	3	He	0.782	0.0061	170.01	0.0013	0.005032
Al	27	3	He	5.278	0.0038	110.00	0.0004	0.001519
Al	27	3	He	10.429	0.006	180.01	0.0004	0.001519
Al	27	3	He	8.058	0.005	140.01	0.0004	0.001519
K	39	3	He	34.416	0.3962	11484.86	0.001	0.3627
K	39	3	He	0.022	0.3628	10854.37	0.001	0.3627
K	39	3	He	-22.276	0.3411	9563.47	0.001	0.3627
Ca	44	3	He	15.121	0.0034	100.00	0.0001	0.002571
Ca	44	3	He	30.535	0.0043	130.01	0.0001	0.002571
Ca	44	3	He	10.997	0.0032	90.00	0.0001	0.002571
Ti	47	3	He	2.496	0.0014	40.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	2.598	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.079	0.0132	382.01	0.0201	0.0116
V	51	3	He	0.065	0.0129	386.01	0.0201	0.0116
V	51	3	He	0.037	0.0123	346.01	0.0201	0.0116
Cr	52	3	He	0.173	0.0724	2100.23	0.0257	0.06801
Cr	52	3	He	-0.227	0.0622	1860.17	0.0257	0.06801
Cr	52	3	He	0.241	0.0742	2080.22	0.0257	0.06801
Mn	55	3	He	0.176	0.0062	180.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.218	0.0067	200.01	0.0113	0.004215
Mn	55	3	He	0.195	0.0064	180.01	0.0113	0.004215
Fe	57	3	He	-0.596	0.0038	110.00	0.0005	0.004099
Fe	57	3	He	-0.172	0.004	120.01	0.0005	0.004099
Fe	57	3	He	4.548	0.0064	180.01	0.0005	0.004099
Co	59	3	He	0.132	0.0117	340.02	0.0518	0.004913
Co	59	3	He	0.086	0.0094	280.01	0.0518	0.004913
Co	59	3	He	0.112	0.0107	300.02	0.0518	0.004913
Ni	60	3	He	-0.056	0.0063	350.02	0.0075	0.006695
Ni	60	3	He	0.081	0.0073	410.02	0.0075	0.006695
Ni	60	3	He	0.12	0.0076	420.02	0.0075	0.006695
Cu	63	3	He	0.184	0.0072	400.02	0.0216	0.003198
Cu	63	3	He	0.14	0.0062	350.02	0.0216	0.003198
Cu	63	3	He	0.17	0.0069	380.02	0.0216	0.003198
Zn	66	3	He	-0.168	0.0025	140.01	0.0026	0.002954
Zn	66	3	He	0.502	0.0043	240.02	0.0026	0.002954
Zn	66	3	He	0.25	0.0036	200.01	0.0026	0.002954
As	75	3	He	0.206	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.148	0.0008	44.00	0.002	0.0004943
As	75	3	He	0.117	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	0.028	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	-0.016	0.0006	30.00	0.0081	0.0006852
Sr	88	3	He	0.051	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.018	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.035	0.0013	70.00	0.0205	0.0005587
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Cd	111	3	He	0.034	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.019	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	-0.098	0.0119	650.04	0.0146	0.01334
Sn	120	3	He	-0.03	0.0129	700.04	0.0146	0.01334
Sn	120	3	He	-0.075	0.0122	670.04	0.0146	0.01334
Sb	121	3	He	0.05	0.0022	120.01	0.0142	0.001484
Sb	121	3	He	0.271	0.0053	290.02	0.0142	0.001484
Sb	121	3	He	0.063	0.0024	130.01	0.0142	0.001484
Ba	137	3	He	0.277	0.0016	90.00	0.0046	0.000374
Ba	137	3	He	0.119	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.002	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.055	0.0018	340.02	0.0282	0.00021
Tl	205	3	He	0.038	0.0013	250.01	0.0282	0.00021
Tl	205	3	He	0.04	0.0013	260.01	0.0282	0.00021
Pb	208	3	He	0.034	0.0022	190.01	0.0372	0.0009772
Pb	208	3	He	0.022	0.0018	210.01	0.0372	0.0009772
Pb	208	3	He	0.018	0.0016	140.01	0.0372	0.0009772
U	238	3	He	69.868	2.9148	558699.44	0.0417	8.729E-05
U	238	3	He	67.829	2.8297	553018.59	0.0417	8.729E-05
U	238	3	He	68.024	2.8379	550797.06	0.0417	8.729E-05
Sc	45	1	No Gas			1717610.60		
Sc	45	1	No Gas			1733574.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1753837.01		
Ge	72	1	No Gas			903206.00		
Ge	72	1	No Gas			904596.55		
Ge	72	1	No Gas			889492.02		
Sc	45	2	H2			131338.51		
Sc	45	2	H2			129189.96		
Sc	45	2	H2			124871.76		
Ge	72	2	H2			112711.76		
Ge	72	2	H2			109556.95		
Ge	72	2	H2			108247.30		
In	115	2	H2			277914.10		
In	115	2	H2			273515.80		
In	115	2	H2			270276.77		
Sc	45	3	He			28989.53		
Sc	45	3	He			29921.83		
Sc	45	3	He			28037.68		
Ge	72	3	He			55739.38		
Ge	72	3	He			56171.18		
Ge	72	3	He			55368.08		
In	115	3	He			54608.37		
In	115	3	He			54257.43		
In	115	3	He			54738.36		
Tb	159	3	He			247270.04		
Tb	159	3	He			247625.78		
Tb	159	3	He			245243.34		
Bi	209	3	He			191676.31		
Bi	209	3	He			195433.14		
Bi	209	3	He			194089.33		

Quantitation Report

Data File Name	113SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:03:25 PM
Sample Name	410-134023-A-1-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

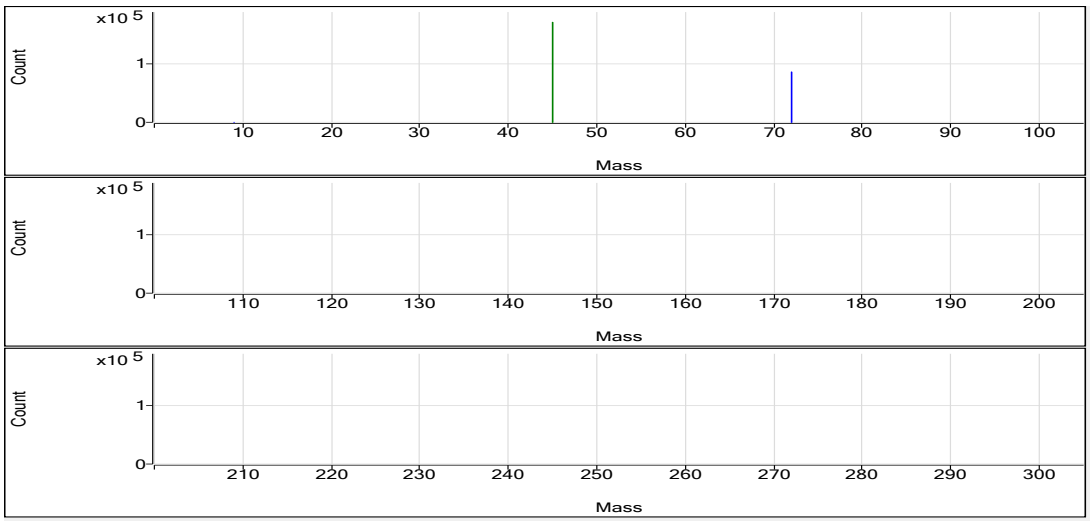
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.041	ppb	24.1	50.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.011	ppb	1.7	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	36.381	ppb	26.0	10120.44	0.3568	Pulse	0.1000	3
Mg	24	45	He	3.797	ppb	56.2	283.35	0.0100	Pulse	0.1000	3
Al	27	45	He	4.928	ppb	21.9	103.34	0.0036	Pulse	0.1000	3
K	39	45	He	9.836	ppb	312.4	10577.54	0.3723	Pulse	0.1000	3
Ca	44	45	He	53.301	ppb	47.0	160.00	0.0057	Pulse	0.1000	3
Ti	47	45	He	1.022	ppb	195.3	20.00	0.0007	Pulse	0.1000	3
V	51	45	He	0.103	ppb	7.0	388.01	0.0137	Pulse	0.5000	3
Cr	52	45	He	0.122	ppb	286.2	2016.88	0.0711	Pulse	0.1000	3
Mn	55	45	He	0.164	ppb	87.6	173.34	0.0061	Pulse	0.1000	3
Fe	57	45	He	2.131	ppb	86.5	146.67	0.0052	Pulse	0.1000	3
Co	59	45	He	0.046	ppb	42.0	206.68	0.0073	Pulse	0.1000	3
Ni	60	72	He	0.263	ppb	24.8	466.69	0.0087	Pulse	0.1000	3
Cu	63	72	He	0.138	ppb	20.7	333.35	0.0062	Pulse	0.1000	3
Zn	66	72	He	1.485	ppb	33.7	370.02	0.0069	Pulse	0.1000	3
As	75	72	He	0.196	ppb	50.8	47.33	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.084	ppb	82.7	73.33	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	172.2	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	118.3	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.012	ppb	119.8	4.00	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.123	ppb	89.5	813.39	0.0151	Pulse	0.1000	3
Sb	121	115	He	0.092	ppb	29.7	150.01	0.0028	Pulse	0.1000	3
Ba	137	115	He	0.094	ppb	23.3	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.049	ppb	24.9	303.35	0.0016	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	25.4	383.35	0.0020	Pulse	0.1000	3
U	238	209	He	12.395	ppb	2.2	99258.50	0.5172	Pulse	0.1000	3

ISTD Table:

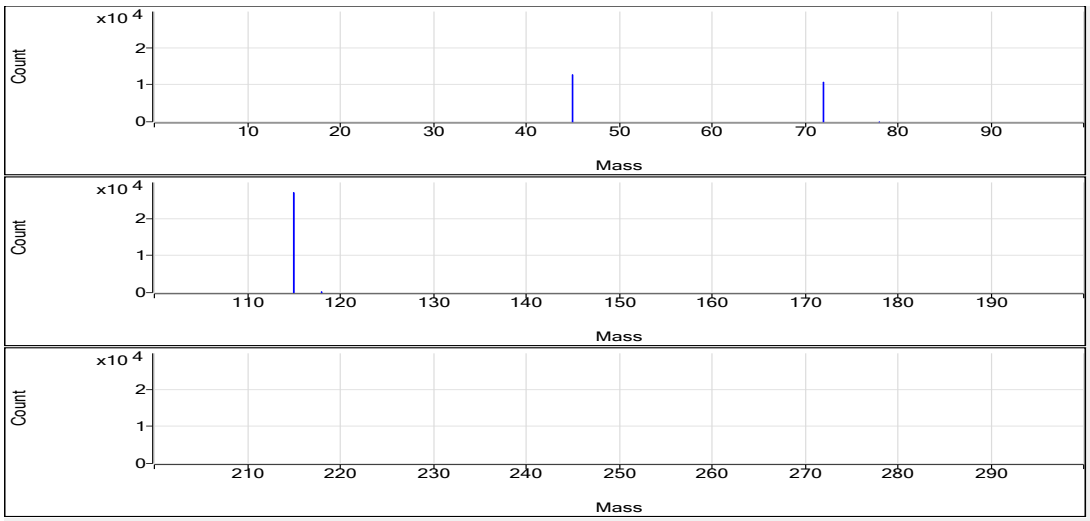
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1721090.13	1.5	97.7	Analog	0.1000	3
No Gas	Ge	72	866813.06	0.7	97.1	Pulse	0.1000	3
H2	Sc	45	127094.41	1.6	99.8	Pulse	0.1000	3
H2	Ge	72	107361.33	0.4	100.1	Pulse	0.1000	3
H2	In	115	270033.70	1.3	101.4	Pulse	0.1000	3
He	Sc	45	28408.59	3.7	99.6	Pulse	0.1000	3
He	Ge	72	53959.59	1.5	97.5	Pulse	0.1000	3
He	In	115	53725.82	0.8	100.1	Pulse	0.1000	3
He	Tb	159	244822.28	0.7	99.6	Pulse	0.1000	3
He	Bi	209	191916.68	0.5	100.6	Pulse	0.1000	3

No Gas

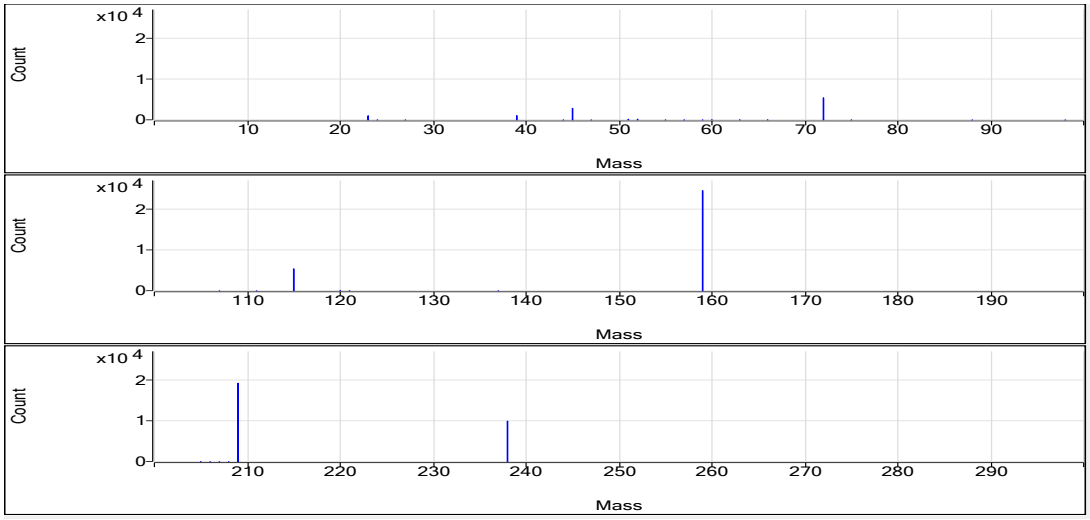


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.048	0	56.00	0.0004	1.287E-05
Be	9	1	No Gas	0.045	0	52.00	0.0004	1.287E-05
Be	9	1	No Gas	0.03	0	42.00	0.0004	1.287E-05
Se	78	2	H2	0.011	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.01	0	2.00	0.0004	1.451E-05
Se	78	2	H2	0.011	0	2.00	0.0004	1.451E-05
Na	23	3	He	34.343	0.3517	10103.73	0.0025	0.2648
Na	23	3	He	28.124	0.336	9833.59	0.0025	0.2648
Na	23	3	He	46.675	0.3829	10424.00	0.0025	0.2648
Mg	24	3	He	3.045	0.0091	260.01	0.0013	0.005032
Mg	24	3	He	2.141	0.0079	230.01	0.0013	0.005032
Mg	24	3	He	6.206	0.0132	360.02	0.0013	0.005032
Al	27	3	He	3.743	0.0031	90.00	0.0004	0.001519
Al	27	3	He	5.193	0.0038	110.00	0.0004	0.001519
Al	27	3	He	5.848	0.004	110.01	0.0004	0.001519
K	39	3	He	44.563	0.406	11665.10	0.001	0.3627
K	39	3	He	-13.837	0.3493	10223.87	0.001	0.3627
K	39	3	He	-1.217	0.3616	9843.64	0.001	0.3627
Ca	44	3	He	39.625	0.0049	140.00	0.0001	0.002571
Ca	44	3	He	38.076	0.0048	140.00	0.0001	0.002571
Ca	44	3	He	82.201	0.0073	200.01	0.0001	0.002571
Ti	47	3	He	3.281	0.0017	50.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.293	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.102	0.0136	392.01	0.0201	0.0116
V	51	3	He	0.11	0.0138	404.01	0.0201	0.0116
V	51	3	He	0.096	0.0135	368.01	0.0201	0.0116
Cr	52	3	He	-0.249	0.0616	1770.17	0.0257	0.06801
Cr	52	3	He	0.172	0.0724	2120.24	0.0257	0.06801
Cr	52	3	He	0.441	0.0793	2160.24	0.0257	0.06801
Mn	55	3	He	0.304	0.0077	220.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.171	0.0061	180.01	0.0113	0.004215
Mn	55	3	He	0.017	0.0044	120.00	0.0113	0.004215
Fe	57	3	He	1.518	0.0049	140.01	0.0005	0.004099
Fe	57	3	He	0.672	0.0044	130.00	0.0005	0.004099
Fe	57	3	He	4.204	0.0062	170.01	0.0005	0.004099
Co	59	3	He	0.033	0.0066	190.01	0.0518	0.004913
Co	59	3	He	0.037	0.0068	200.01	0.0518	0.004913
Co	59	3	He	0.068	0.0084	230.01	0.0518	0.004913
Ni	60	3	He	0.229	0.0084	460.02	0.0075	0.006695
Ni	60	3	He	0.222	0.0083	450.02	0.0075	0.006695
Ni	60	3	He	0.338	0.0092	490.03	0.0075	0.006695
Cu	63	3	He	0.114	0.0057	310.01	0.0216	0.003198
Cu	63	3	He	0.17	0.0069	370.02	0.0216	0.003198
Cu	63	3	He	0.131	0.006	320.01	0.0216	0.003198
Zn	66	3	He	1.654	0.0073	400.02	0.0026	0.002954
Zn	66	3	He	0.922	0.0054	290.01	0.0026	0.002954
Zn	66	3	He	1.879	0.0079	420.02	0.0026	0.002954
As	75	3	He	0.214	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.089	0.0007	36.00	0.002	0.0004943
As	75	3	He	0.286	0.0011	56.00	0.002	0.0004943
Sr	88	3	He	0.1	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.008	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.143	0.0018	100.00	0.0081	0.0006852
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Mo	98	3	He	0.054	0.0017	90.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Sn	120	3	He	0.239	0.0168	900.06	0.0146	0.01334
Sn	120	3	He	0.02	0.0136	730.05	0.0146	0.01334
Sn	120	3	He	0.109	0.0149	810.05	0.0146	0.01334
Sb	121	3	He	0.093	0.0028	150.01	0.0142	0.001484
Sb	121	3	He	0.119	0.0032	170.01	0.0142	0.001484
Sb	121	3	He	0.064	0.0024	130.00	0.0142	0.001484
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.119	0.0009	50.00	0.0046	0.000374
Tl	205	3	He	0.057	0.0018	350.02	0.0282	0.00021
Tl	205	3	He	0.035	0.0012	230.01	0.0282	0.00021
Tl	205	3	He	0.054	0.0017	330.02	0.0282	0.00021
Pb	208	3	He	0.026	0.0019	180.01	0.0372	0.0009772
Pb	208	3	He	0.035	0.0023	210.01	0.0372	0.0009772
Pb	208	3	He	0.021	0.0018	180.01	0.0372	0.0009772
U	238	3	He	12.129	0.5061	96653.10	0.0417	8.729E-05
U	238	3	He	12.389	0.5169	99734.93	0.0417	8.729E-05
U	238	3	He	12.668	0.5286	101387.47	0.0417	8.729E-05
Sc	45	1	No Gas			1751377.94		
Sc	45	1	No Gas			1705679.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1706213.26		
Ge	72	1	No Gas			862953.03		
Ge	72	1	No Gas			863275.92		
Ge	72	1	No Gas			874210.22		
Sc	45	2	H2			127554.51		
Sc	45	2	H2			124821.48		
Sc	45	2	H2			128907.24		
Ge	72	2	H2			107341.24		
Ge	72	2	H2			107764.12		
Ge	72	2	H2			106978.62		
In	115	2	H2			270599.59		
In	115	2	H2			266321.95		
In	115	2	H2			273179.57		
Sc	45	3	He			28729.53		
Sc	45	3	He			29270.28		
Sc	45	3	He			27225.96		
Ge	72	3	He			54766.09		
Ge	72	3	He			53922.70		
Ge	72	3	He			53189.99		
In	115	3	He			53453.49		
In	115	3	He			53524.34		
In	115	3	He			54216.70		
Tb	159	3	He			246574.88		
Tb	159	3	He			243291.21		
Tb	159	3	He			244600.76		
Bi	209	3	He			190986.56		
Bi	209	3	He			192946.60		
Bi	209	3	He			191816.89		

Quantitation Report

Data File Name	114SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:05:24 PM
Sample Name	410-134023-A-2-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

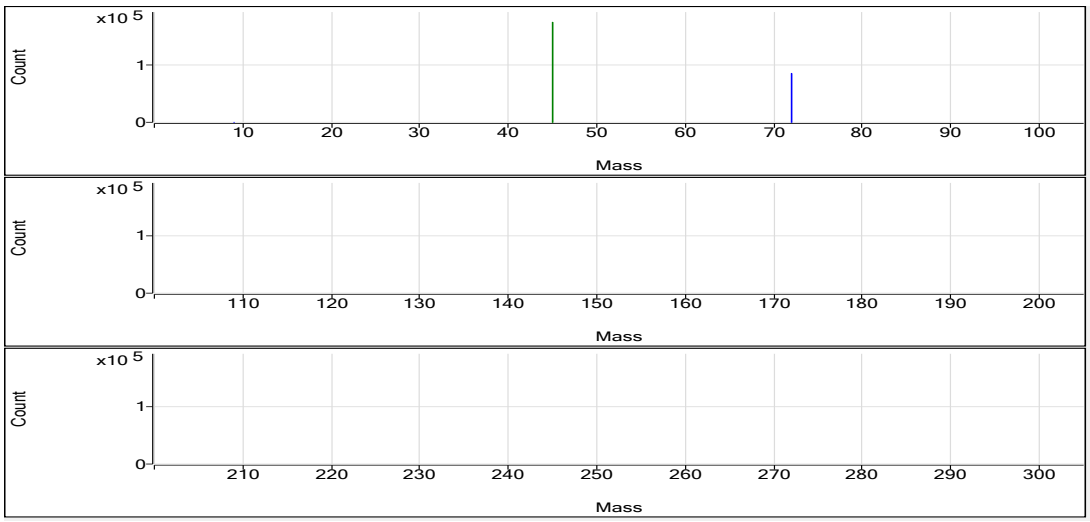
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.045	ppb	24.9	53.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.022	ppb	183.1	2.45	0.0000	Pulse	1.5000	3
Na	23	45	He	72505.229	ppb	1.5	5396537.21	183.6084	Analog	0.1000	3
Mg	24	45	He	2.195	ppb	30.0	233.34	0.0079	Pulse	0.1000	3
Al	27	45	He	1.750	ppb	72.4	66.67	0.0023	Pulse	0.1000	3
K	39	45	He	15910.269	ppb	2.1	464956.14	15.8205	Pulse	0.1000	3
Ca	44	45	He	0.565	ppb	1045.4	76.67	0.0026	Pulse	0.1000	3
Ti	47	45	He	-0.008	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	-0.009	ppb	N/A	336.01	0.0114	Pulse	0.5000	3
Cr	52	45	He	0.044	ppb	698.7	2030.21	0.0691	Pulse	0.1000	3
Mn	55	45	He	0.198	ppb	83.7	190.01	0.0065	Pulse	0.1000	3
Fe	57	45	He	1.301	ppb	135.5	140.01	0.0048	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	168.2	180.01	0.0061	Pulse	0.1000	3
Ni	60	72	He	0.274	ppb	45.1	470.03	0.0087	Pulse	0.1000	3
Cu	63	72	He	0.096	ppb	56.7	283.35	0.0053	Pulse	0.1000	3
Zn	66	72	He	-0.416	ppb	N/A	100.00	0.0019	Pulse	0.1000	3
As	75	72	He	1.023	ppb	16.6	134.00	0.0025	Pulse	0.5000	3
Sr	88	115	He	0.088	ppb	63.5	76.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.011	ppb	45.7	43.33	0.0008	Pulse	0.1000	3
Ag	107	115	He	0.003	ppb	324.7	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	116.3	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.067	ppb	N/A	676.71	0.0124	Pulse	0.1000	3
Sb	121	115	He	0.109	ppb	33.3	166.68	0.0030	Pulse	0.1000	3
Ba	137	115	He	0.011	ppb	202.7	23.33	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.017	ppb	44.1	133.34	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.022	ppb	26.7	346.68	0.0018	Pulse	0.1000	3
U	238	209	He	0.023	ppb	24.1	200.01	0.0010	Pulse	0.1000	3

ISTD Table:

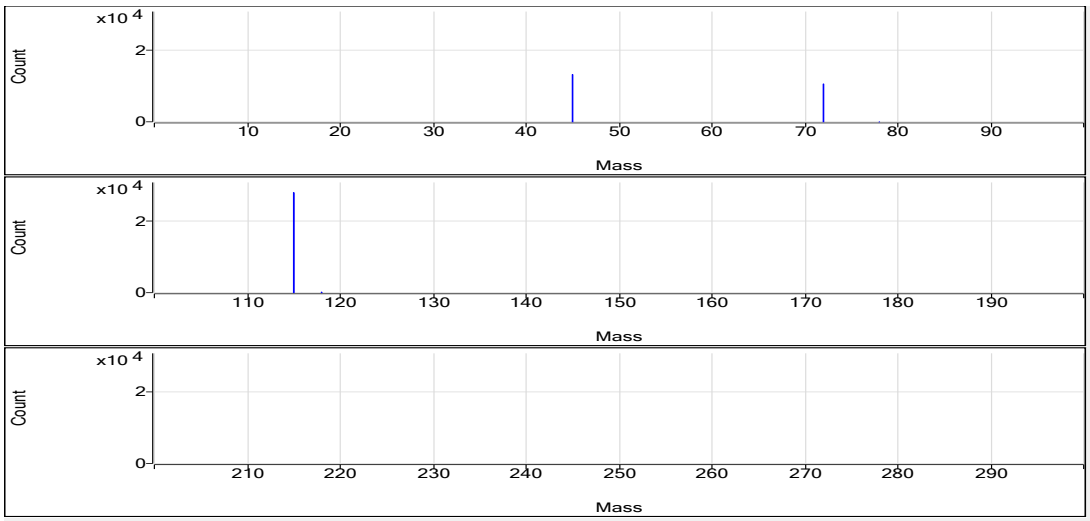
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1740544.77	0.7	98.8	Analog	0.1000	3
No Gas	Ge	72	850822.12	0.7	95.3	Pulse	0.1000	3
H2	Sc	45	131661.54	1.1	103.4	Pulse	0.1000	3
H2	Ge	72	105521.51	0.9	98.4	Pulse	0.1000	3
H2	In	115	278409.69	0.7	104.5	Pulse	0.1000	3
He	Sc	45	29397.18	2.0	103.1	Pulse	0.1000	3
He	Ge	72	53788.62	0.6	97.2	Pulse	0.1000	3
He	In	115	54757.52	1.3	102.0	Pulse	0.1000	3
He	Tb	159	249136.25	0.6	101.4	Pulse	0.1000	3
He	Bi	209	195034.50	0.5	102.2	Pulse	0.1000	3

No Gas

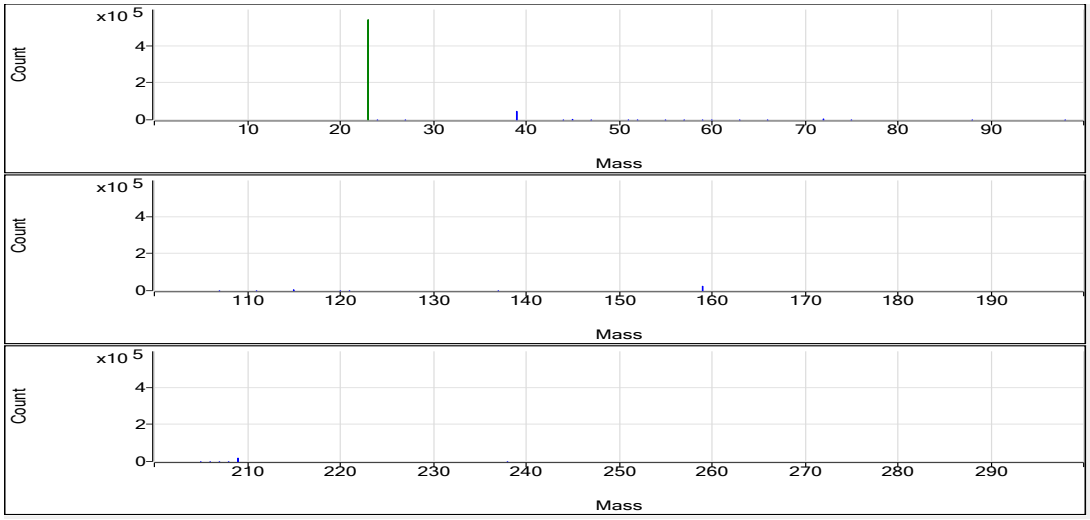


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.035	0	46.00	0.0004	1.287E-05
Be	9	1	No Gas	0.057	0	62.00	0.0004	1.287E-05
Be	9	1	No Gas	0.043	0	52.00	0.0004	1.287E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Se	78	2	H2	0.059	0	4.00	0.0004	1.451E-05
Se	78	2	H2	0.027	0	2.67	0.0004	1.451E-05
Na	23	3	He	73586.878	186.3436	5377784.29	0.0025	0.2648
Na	23	3	He	71440.227	180.9154	5427751.79	0.0025	0.2648
Na	23	3	He	72488.583	183.5663	5384075.54	0.0025	0.2648
Mg	24	3	He	1.438	0.0069	200.01	0.0013	0.005032
Mg	24	3	He	2.501	0.0083	250.01	0.0013	0.005032
Mg	24	3	He	2.646	0.0085	250.01	0.0013	0.005032
Al	27	3	He	2.103	0.0024	70.00	0.0004	0.001519
Al	27	3	He	0.343	0.0017	50.00	0.0004	0.001519
Al	27	3	He	2.804	0.0027	80.00	0.0004	0.001519
K	39	3	He	16247.827	16.1485	466037.34	0.001	0.3627
K	39	3	He	15582.849	15.5024	465097.49	0.001	0.3627
K	39	3	He	15900.13	15.8107	463733.59	0.001	0.3627
Ca	44	3	He	-2.506	0.0024	70.00	0.0001	0.002571
Ca	44	3	He	7.38	0.003	90.00	0.0001	0.002571
Ca	44	3	He	-3.177	0.0024	70.00	0.0001	0.002571
Ti	47	3	He	0.247	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.235	0.0003	10.00	0.0005	0.0002328
V	51	3	He	-0.074	0.0101	292.01	0.0201	0.0116
V	51	3	He	0.02	0.012	360.01	0.0201	0.0116
V	51	3	He	0.027	0.0121	356.01	0.0201	0.0116
Cr	52	3	He	0.388	0.078	2250.24	0.0257	0.06801
Cr	52	3	He	-0.065	0.0663	1990.21	0.0257	0.06801
Cr	52	3	He	-0.192	0.0631	1850.18	0.0257	0.06801
Mn	55	3	He	0.056	0.0049	140.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.158	0.006	180.01	0.0113	0.004215
Mn	55	3	He	0.38	0.0085	250.01	0.0113	0.004215
Fe	57	3	He	0.117	0.0042	120.00	0.0005	0.004099
Fe	57	3	He	0.46	0.0043	130.01	0.0005	0.004099
Fe	57	3	He	3.326	0.0058	170.01	0.0005	0.004099
Co	59	3	He	-0.008	0.0045	130.01	0.0518	0.004913
Co	59	3	He	0.066	0.0083	250.01	0.0518	0.004913
Co	59	3	He	0.01	0.0055	160.01	0.0518	0.004913
Ni	60	3	He	0.131	0.0077	410.02	0.0075	0.006695
Ni	60	3	He	0.347	0.0093	500.03	0.0075	0.006695
Ni	60	3	He	0.343	0.0093	500.03	0.0075	0.006695
Cu	63	3	He	0.034	0.0039	210.01	0.0216	0.003198
Cu	63	3	He	0.136	0.0061	330.02	0.0216	0.003198
Cu	63	3	He	0.118	0.0057	310.02	0.0216	0.003198
Zn	66	3	He	-0.269	0.0022	120.00	0.0026	0.002954
Zn	66	3	He	-0.629	0.0013	70.00	0.0026	0.002954
Zn	66	3	He	-0.349	0.002	110.00	0.0026	0.002954
As	75	3	He	1.204	0.0028	152.00	0.002	0.0004943
As	75	3	He	1.002	0.0025	132.00	0.002	0.0004943
As	75	3	He	0.865	0.0022	118.00	0.002	0.0004943
Sr	88	3	He	0.141	0.0018	100.00	0.0081	0.0006852
Sr	88	3	He	0.03	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.093	0.0014	80.00	0.0081	0.0006852
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Mo	98	3	He	0.008	0.0007	40.00	0.0205	0.0005587
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	0.037	0.0139	760.05	0.0146	0.01334
Sn	120	3	He	-0.027	0.0129	700.04	0.0146	0.01334
Sn	120	3	He	-0.21	0.0103	570.04	0.0146	0.01334
Sb	121	3	He	0.101	0.0029	160.01	0.0142	0.001484
Sb	121	3	He	0.078	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.149	0.0036	200.01	0.0142	0.001484
Ba	137	3	He	0.038	0.0005	30.00	0.0046	0.000374
Ba	137	3	He	-0.001	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	-0.003	0.0004	20.00	0.0046	0.000374
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.018	0.0007	140.01	0.0282	0.00021
Tl	205	3	He	0.024	0.0009	170.01	0.0282	0.00021
Pb	208	3	He	0.025	0.0019	200.01	0.0372	0.0009772
Pb	208	3	He	0.015	0.0015	180.01	0.0372	0.0009772
Pb	208	3	He	0.025	0.0019	220.01	0.0372	0.0009772
U	238	3	He	0.026	0.0012	230.01	0.0417	8.729E-05
U	238	3	He	0.016	0.0008	150.01	0.0417	8.729E-05
U	238	3	He	0.025	0.0011	220.01	0.0417	8.729E-05
Sc	45	1	No Gas			1728674.82		
Sc	45	1	No Gas			1753197.47		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739762.01		
Ge	72	1	No Gas			843687.17		
Ge	72	1	No Gas			852822.57		
Ge	72	1	No Gas			855956.63		
Sc	45	2	H2			131833.12		
Sc	45	2	H2			132993.67		
Sc	45	2	H2			130157.84		
Ge	72	2	H2			104430.57		
Ge	72	2	H2			106394.16		
Ge	72	2	H2			105739.79		
In	115	2	H2			280498.61		
In	115	2	H2			277299.31		
In	115	2	H2			277431.15		
Sc	45	3	He			28859.51		
Sc	45	3	He			30001.61		
Sc	45	3	He			29330.41		
Ge	72	3	He			53440.27		
Ge	72	3	He			53872.26		
Ge	72	3	He			54053.34		
In	115	3	He			54728.97		
In	115	3	He			54066.36		
In	115	3	He			55491.44		
Tb	159	3	He			250964.27		
Tb	159	3	He			248525.74		
Tb	159	3	He			247918.75		
Bi	209	3	He			195115.19		
Bi	209	3	He			195895.45		
Bi	209	3	He			194092.85		

Quantitation Report

Data File Name	115SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:07:23 PM
Sample Name	410-134023-A-2-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

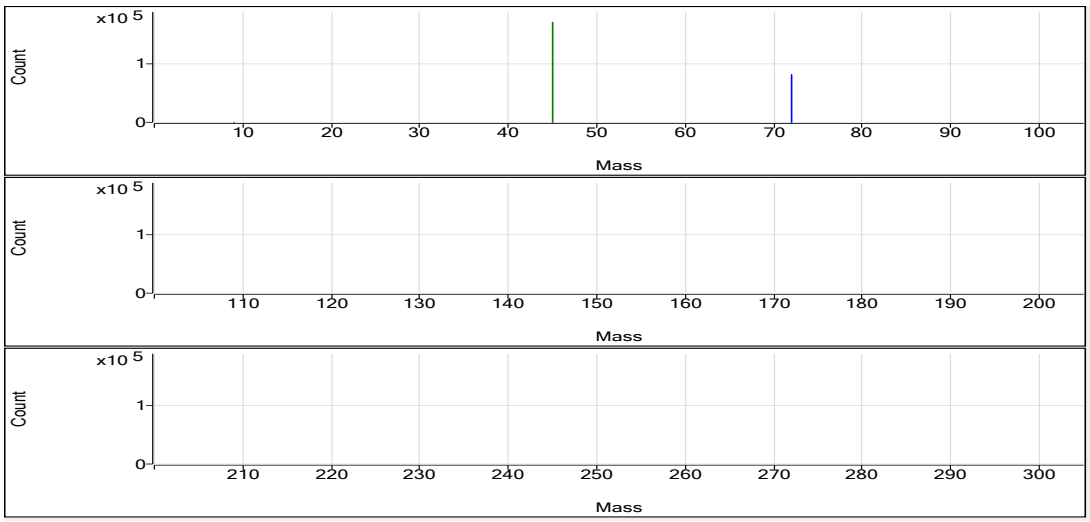
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.033	ppb	41.5	44.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.019	ppb	224.7	2.22	0.0000	Pulse	1.5000	3
Na	23	45	He	13032.252	ppb	2.6	949618.79	33.2194	Pulse	0.1000	3
Mg	24	45	He	1.766	ppb	59.6	210.01	0.0074	Pulse	0.1000	3
Al	27	45	He	2.195	ppb	136.4	70.00	0.0025	Pulse	0.1000	3
K	39	45	He	2905.648	ppb	2.9	91069.94	3.1857	Pulse	0.1000	3
Ca	44	45	He	22.212	ppb	104.1	110.00	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.516	ppb	225.4	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	0.136	ppb	42.3	409.34	0.0143	Pulse	0.5000	3
Cr	52	45	He	0.326	ppb	18.7	2183.57	0.0764	Pulse	0.1000	3
Mn	55	45	He	0.182	ppb	74.5	180.01	0.0063	Pulse	0.1000	3
Fe	57	45	He	3.621	ppb	83.0	170.01	0.0059	Pulse	0.1000	3
Co	59	45	He	0.049	ppb	33.1	213.34	0.0075	Pulse	0.1000	3
Ni	60	72	He	0.120	ppb	197.3	400.02	0.0076	Pulse	0.1000	3
Cu	63	72	He	0.107	ppb	41.9	290.01	0.0055	Pulse	0.1000	3
Zn	66	72	He	1.935	ppb	12.5	423.36	0.0080	Pulse	0.1000	3
As	75	72	He	0.421	ppb	27.1	69.33	0.0013	Pulse	0.5000	3
Sr	88	115	He	0.126	ppb	40.8	93.33	0.0017	Pulse	0.1000	3
Mo	98	115	He	0.029	ppb	62.5	63.33	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	24.8	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.030	ppb	343.0	756.72	0.0138	Pulse	0.1000	3
Sb	121	115	He	0.059	ppb	88.7	126.67	0.0023	Pulse	0.1000	3
Ba	137	115	He	0.075	ppb	182.8	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.035	ppb	31.4	230.01	0.0012	Pulse	0.1000	3
Pb	208	209	He	0.031	ppb	5.1	410.01	0.0021	Pulse	0.1000	3
U	238	209	He	0.013	ppb	25.6	120.00	0.0006	Pulse	0.1000	3

ISTD Table:

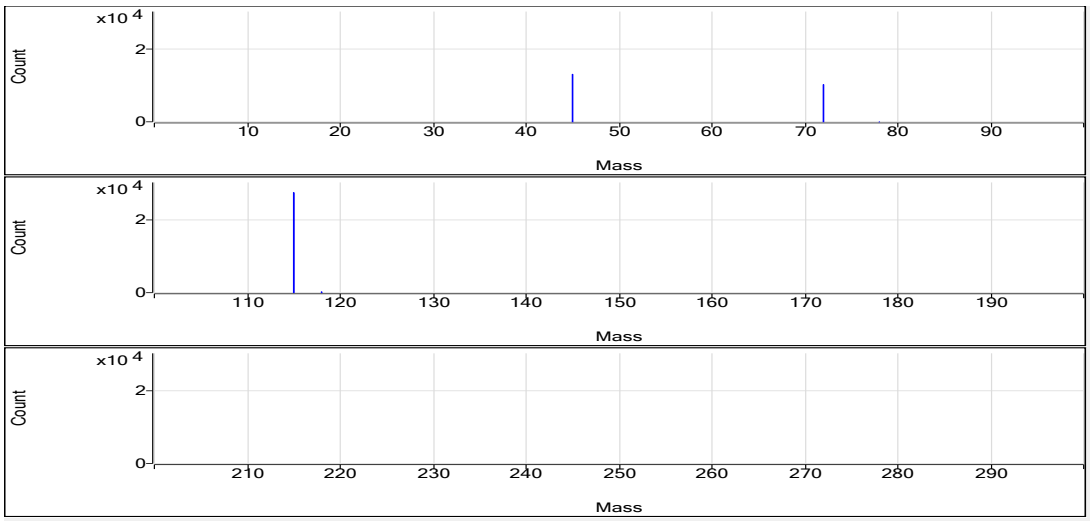
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1723770.81	1.4	97.9	Analog	0.1000	3
No Gas	Ge	72	820524.05	1.1	91.9	Pulse	0.1000	3
H2	Sc	45	130521.36	0.3	102.5	Pulse	0.1000	3
H2	Ge	72	102201.12	1.4	95.3	Pulse	0.1000	3
H2	In	115	274448.58	0.3	103.1	Pulse	0.1000	3
He	Sc	45	28598.74	2.6	100.3	Pulse	0.1000	3
He	Ge	72	52624.39	1.0	95.1	Pulse	0.1000	3
He	In	115	54816.99	2.5	102.1	Pulse	0.1000	3
He	Tb	159	248253.32	0.9	101.0	Pulse	0.1000	3
He	Bi	209	193494.82	0.7	101.4	Pulse	0.1000	3

No Gas

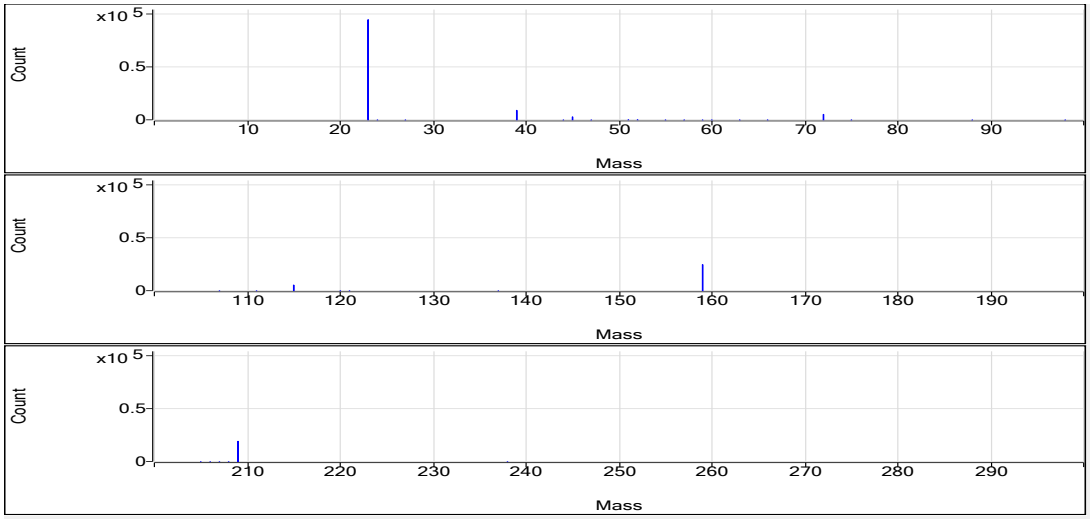


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.039	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.017	0	34.00	0.0004	1.287E-05
Be	9	1	No Gas	0.043	0	52.00	0.0004	1.287E-05
Se	78	2	H2	0.063	0	4.00	0.0004	1.451E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Se	78	2	H2	0.014	0	2.00	0.0004	1.451E-05
Na	23	3	He	13337.155	33.9904	948919.05	0.0025	0.2648
Na	23	3	He	12670.47	32.3046	948799.67	0.0025	0.2648
Na	23	3	He	13089.13	33.3633	951137.64	0.0025	0.2648
Mg	24	3	He	2.158	0.0079	220.01	0.0013	0.005032
Mg	24	3	He	0.573	0.0058	170.01	0.0013	0.005032
Mg	24	3	He	2.566	0.0084	240.01	0.0013	0.005032
Al	27	3	He	3.124	0.0029	80.00	0.0004	0.001519
Al	27	3	He	-1.153	0.001	30.00	0.0004	0.001519
Al	27	3	He	4.613	0.0035	100.00	0.0004	0.001519
K	39	3	He	2963.609	3.2421	90509.42	0.001	0.3627
K	39	3	He	2807.69	3.0906	90771.56	0.001	0.3627
K	39	3	He	2945.643	3.2246	91928.83	0.001	0.3627
Ca	44	3	He	48.239	0.0054	150.01	0.0001	0.002571
Ca	44	3	He	14.35	0.0034	100.00	0.0001	0.002571
Ca	44	3	He	4.046	0.0028	80.00	0.0001	0.002571
Ti	47	3	He	0.273	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	1.783	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.197	0.0155	434.01	0.0201	0.0116
V	51	3	He	0.128	0.0142	416.01	0.0201	0.0116
V	51	3	He	0.083	0.0133	378.01	0.0201	0.0116
Cr	52	3	He	0.365	0.0774	2160.24	0.0257	0.06801
Cr	52	3	He	0.255	0.0746	2190.24	0.0257	0.06801
Cr	52	3	He	0.357	0.0772	2200.23	0.0257	0.06801
Mn	55	3	He	0.039	0.0047	130.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.199	0.0065	190.01	0.0113	0.004215
Mn	55	3	He	0.309	0.0077	220.01	0.0113	0.004215
Fe	57	3	He	1.796	0.005	140.01	0.0005	0.004099
Fe	57	3	He	1.977	0.0051	150.01	0.0005	0.004099
Fe	57	3	He	7.089	0.0077	220.01	0.0005	0.004099
Co	59	3	He	0.043	0.0072	200.01	0.0518	0.004913
Co	59	3	He	0.037	0.0068	200.01	0.0518	0.004913
Co	59	3	He	0.068	0.0084	240.01	0.0518	0.004913
Ni	60	3	He	-0.151	0.0056	290.01	0.0075	0.006695
Ni	60	3	He	0.29	0.0089	470.02	0.0075	0.006695
Ni	60	3	He	0.221	0.0083	440.02	0.0075	0.006695
Cu	63	3	He	0.092	0.0052	270.01	0.0216	0.003198
Cu	63	3	He	0.157	0.0066	350.02	0.0216	0.003198
Cu	63	3	He	0.071	0.0047	250.01	0.0216	0.003198
Zn	66	3	He	1.946	0.0081	420.03	0.0026	0.002954
Zn	66	3	He	2.172	0.0087	460.02	0.0026	0.002954
Zn	66	3	He	1.688	0.0074	390.03	0.0026	0.002954
As	75	3	He	0.298	0.0011	56.00	0.002	0.0004943
As	75	3	He	0.442	0.0014	72.00	0.002	0.0004943
As	75	3	He	0.523	0.0015	80.00	0.002	0.0004943
Sr	88	3	He	0.142	0.0018	100.00	0.0081	0.0006852
Sr	88	3	He	0.069	0.0012	70.00	0.0081	0.0006852
Sr	88	3	He	0.168	0.002	110.00	0.0081	0.0006852
Mo	98	3	He	0.045	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.033	0.0012	70.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.01	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.011	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	-0.058	0.0125	680.04	0.0146	0.01334
Sn	120	3	He	0.144	0.0154	870.06	0.0146	0.01334
Sn	120	3	He	0.005	0.0134	720.05	0.0146	0.01334
Sb	121	3	He	0.038	0.002	110.00	0.0142	0.001484
Sb	121	3	He	0.02	0.0018	100.00	0.0142	0.001484
Sb	121	3	He	0.118	0.0032	170.01	0.0142	0.001484
Ba	137	3	He	-0.041	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.227	0.0014	80.00	0.0046	0.000374
Ba	137	3	He	0.04	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.029	0.001	200.01	0.0282	0.00021
Tl	205	3	He	0.028	0.001	190.01	0.0282	0.00021
Tl	205	3	He	0.047	0.0015	300.02	0.0282	0.00021
Pb	208	3	He	0.032	0.0022	260.01	0.0372	0.0009772
Pb	208	3	He	0.031	0.0021	270.01	0.0372	0.0009772
Pb	208	3	He	0.029	0.0021	210.01	0.0372	0.0009772
U	238	3	He	0.016	0.0008	150.01	0.0417	8.729E-05
U	238	3	He	0.012	0.0006	110.00	0.0417	8.729E-05
U	238	3	He	0.01	0.0005	100.00	0.0417	8.729E-05
Sc	45	1	No Gas			1700421.69		
Sc	45	1	No Gas			1723449.19		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1747441.54		
Ge	72	1	No Gas			813322.49		
Ge	72	1	No Gas			817387.96		
Ge	72	1	No Gas			830861.71		
Sc	45	2	H2			130561.64		
Sc	45	2	H2			130832.91		
Sc	45	2	H2			130169.53		
Ge	72	2	H2			102506.81		
Ge	72	2	H2			103413.63		
Ge	72	2	H2			100682.92		
In	115	2	H2			275276.70		
In	115	2	H2			274670.58		
In	115	2	H2			273398.47		
Sc	45	3	He			27917.24		
Sc	45	3	He			29370.43		
Sc	45	3	He			28508.54		
Ge	72	3	He			52035.22		
Ge	72	3	He			53079.66		
Ge	72	3	He			52758.30		
In	115	3	He			54427.94		
In	115	3	He			56334.23		
In	115	3	He			53704.68		
Tb	159	3	He			248929.68		
Tb	159	3	He			250069.12		
Tb	159	3	He			245761.15		
Bi	209	3	He			193865.88		
Bi	209	3	He			191939.20		
Bi	209	3	He			194679.37		

Quantitation Report

Data File Name	116SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:09:23 PM
Sample Name	410-134023-A-3-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

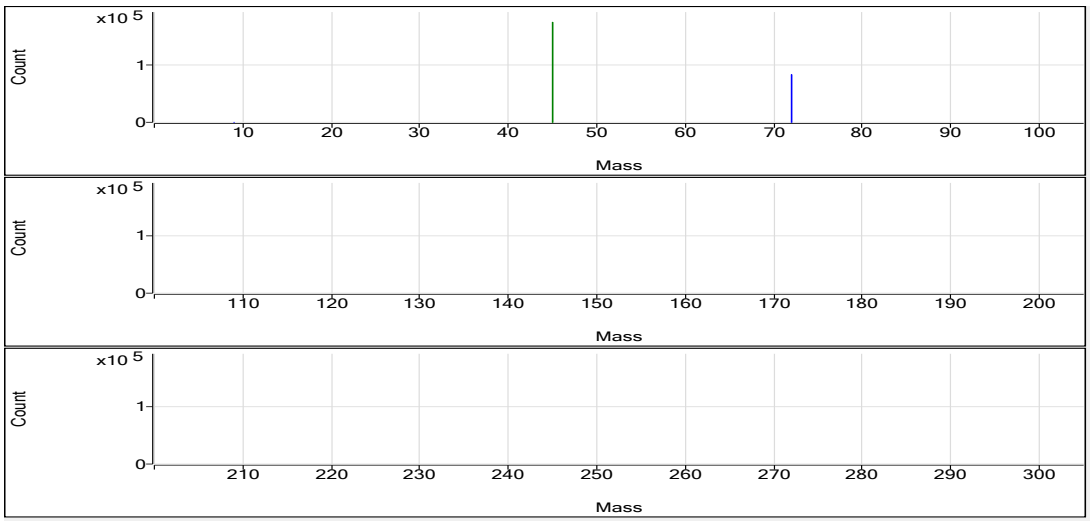
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.023	ppb	50.2	38.67	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.001	ppb	3311.8	1.55	0.0000	Pulse	1.5000	3
Na	23	45	He	220.258	ppb	4.6	24290.58	0.8218	Pulse	0.1000	3
Mg	24	45	He	22322.489	ppb	0.8	870917.77	29.4673	Pulse	0.1000	3
Al	27	45	He	28.339	ppb	17.9	406.69	0.0137	Pulse	0.1000	3
K	39	45	He	12.552	ppb	314.6	11087.88	0.3749	Pulse	0.1000	3
Ca	44	45	He	44504.293	ppb	1.1	76484.04	2.5879	Pulse	0.1000	3
Ti	47	45	He	2.693	ppb	43.3	43.33	0.0015	Pulse	0.1000	3
V	51	45	He	0.128	ppb	13.5	418.68	0.0142	Pulse	0.5000	3
Cr	52	45	He	-0.012	ppb	N/A	2000.22	0.0677	Pulse	0.1000	3
Mn	55	45	He	0.206	ppb	24.6	193.34	0.0065	Pulse	0.1000	3
Fe	57	45	He	22.910	ppb	8.0	466.69	0.0158	Pulse	0.1000	3
Co	59	45	He	0.023	ppb	109.3	180.01	0.0061	Pulse	0.1000	3
Ni	60	72	He	0.167	ppb	36.6	420.02	0.0079	Pulse	0.1000	3
Cu	63	72	He	0.163	ppb	86.7	356.68	0.0067	Pulse	0.1000	3
Zn	66	72	He	0.837	ppb	53.9	273.35	0.0052	Pulse	0.1000	3
As	75	72	He	0.095	ppb	82.3	36.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	3.034	ppb	12.4	1376.78	0.0253	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	54.2	66.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	0.007	ppb	6.4	40.00	0.0007	Pulse	0.1000	3
Cd	111	115	He	0.007	ppb	61.9	2.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	-0.049	ppb	N/A	686.71	0.0126	Pulse	0.1000	3
Sb	121	115	He	0.084	ppb	82.7	146.67	0.0027	Pulse	0.1000	3
Ba	137	115	He	0.571	ppb	3.7	163.34	0.0030	Pulse	0.1000	3
Tl	205	209	He	0.013	ppb	28.1	113.34	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.053	ppb	27.5	580.03	0.0030	Pulse	0.1000	3
U	238	209	He	0.010	ppb	26.2	96.67	0.0005	Pulse	0.1000	3

ISTD Table:

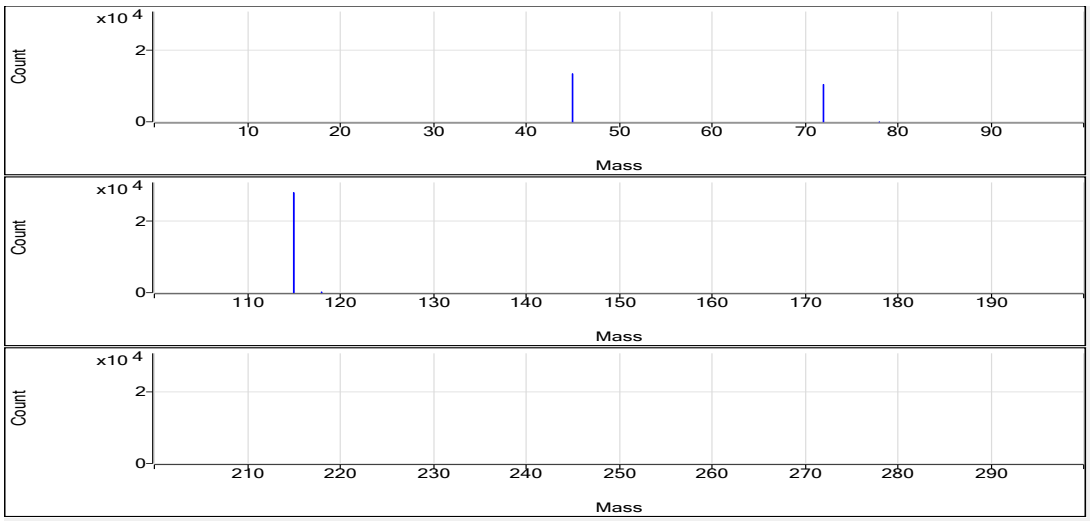
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1750704.97	0.6	99.4	Analog	0.1000	3
No Gas	Ge	72	834978.58	0.9	93.6	Pulse	0.1000	3
H2	Sc	45	133763.64	1.1	105.1	Pulse	0.1000	3
H2	Ge	72	103991.01	0.7	97.0	Pulse	0.1000	3
H2	In	115	278386.45	1.0	104.5	Pulse	0.1000	3
He	Sc	45	29557.54	1.3	103.7	Pulse	0.1000	3
He	Ge	72	52888.47	1.8	95.6	Pulse	0.1000	3
He	In	115	54348.82	2.6	101.3	Pulse	0.1000	3
He	Tb	159	252427.77	0.5	102.7	Pulse	0.1000	3
He	Bi	209	196330.91	1.5	102.9	Pulse	0.1000	3

No Gas

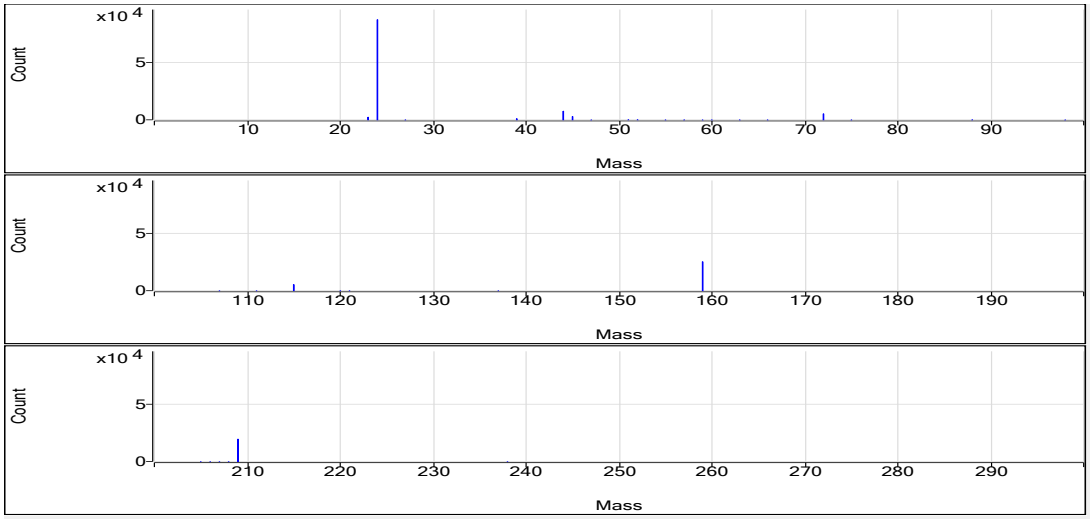


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.02	0	36.00	0.0004	1.287E-05
Be	9	1	No Gas	0.036	0	48.00	0.0004	1.287E-05
Be	9	1	No Gas	0.014	0	32.00	0.0004	1.287E-05
Se	78	2	H2	0.045	0	3.33	0.0004	1.451E-05
Se	78	2	H2	-0.037	0	0.00	0.0004	1.451E-05
Se	78	2	H2	-0.004	0	1.33	0.0004	1.451E-05
Na	23	3	He	215.926	0.8109	24310.67	0.0025	0.2648
Na	23	3	He	212.975	0.8034	23459.21	0.0025	0.2648
Na	23	3	He	231.873	0.8512	25101.86	0.0025	0.2648
Mg	24	3	He	22104.024	29.1789	874831.78	0.0013	0.005032
Mg	24	3	He	22444.934	29.6289	865171.71	0.0013	0.005032
Mg	24	3	He	22418.51	29.594	872749.83	0.0013	0.005032
Al	27	3	He	33.604	0.016	480.02	0.0004	0.001519
Al	27	3	He	23.48	0.0116	340.02	0.0004	0.001519
Al	27	3	He	27.932	0.0136	400.02	0.0004	0.001519
K	39	3	He	50.814	0.4121	12355.55	0.001	0.3627
K	39	3	He	14.891	0.3772	11014.45	0.001	0.3627
K	39	3	He	-28.05	0.3355	9893.65	0.001	0.3627
Ca	44	3	He	43914.19	2.5536	76560.98	0.0001	0.002571
Ca	44	3	He	44800.229	2.6051	76068.72	0.0001	0.002571
Ca	44	3	He	44798.46	2.605	76822.41	0.0001	0.002571
Ti	47	3	He	1.671	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	3.965	0.0021	60.00	0.0005	0.0002328
Ti	47	3	He	2.445	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.14	0.0144	432.01	0.0201	0.0116
V	51	3	He	0.108	0.0138	402.01	0.0201	0.0116
V	51	3	He	0.135	0.0143	422.01	0.0201	0.0116
Cr	52	3	He	-0.206	0.0627	1880.20	0.0257	0.06801
Cr	52	3	He	-0.021	0.0675	1970.22	0.0257	0.06801
Cr	52	3	He	0.191	0.0729	2150.24	0.0257	0.06801
Mn	55	3	He	0.187	0.0063	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.263	0.0072	210.01	0.0113	0.004215
Mn	55	3	He	0.167	0.0061	180.01	0.0113	0.004215
Fe	57	3	He	22.683	0.0157	470.02	0.0005	0.004099
Fe	57	3	He	24.847	0.0168	490.03	0.0005	0.004099
Fe	57	3	He	21.201	0.0149	440.02	0.0005	0.004099
Co	59	3	He	0.002	0.005	150.01	0.0518	0.004913
Co	59	3	He	0.051	0.0075	220.01	0.0518	0.004913
Co	59	3	He	0.016	0.0058	170.01	0.0518	0.004913
Ni	60	3	He	0.196	0.0082	440.02	0.0075	0.006695
Ni	60	3	He	0.097	0.0074	390.02	0.0075	0.006695
Ni	60	3	He	0.209	0.0082	430.02	0.0075	0.006695
Cu	63	3	He	0.324	0.0102	550.03	0.0216	0.003198
Cu	63	3	He	0.063	0.0046	240.01	0.0216	0.003198
Cu	63	3	He	0.101	0.0054	280.01	0.0216	0.003198
Zn	66	3	He	1.344	0.0065	350.02	0.0026	0.002954
Zn	66	3	He	0.685	0.0048	250.01	0.0026	0.002954
Zn	66	3	He	0.482	0.0042	220.01	0.0026	0.002954
As	75	3	He	0.184	0.0009	46.00	0.002	0.0004943
As	75	3	He	0.039	0.0006	30.00	0.002	0.0004943
As	75	3	He	0.061	0.0006	32.00	0.002	0.0004943
Sr	88	3	He	2.928	0.0244	1350.11	0.0081	0.0006852
Sr	88	3	He	3.453	0.0287	1580.13	0.0081	0.0006852
Sr	88	3	He	2.72	0.0228	1200.10	0.0081	0.0006852
Mo	98	3	He	0.052	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.019	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.013	0.0001	4.00	0.005	1.253E-05
Sn	120	3	He	-0.058	0.0125	690.04	0.0146	0.01334
Sn	120	3	He	-0.018	0.0131	720.05	0.0146	0.01334
Sn	120	3	He	-0.07	0.0123	650.04	0.0146	0.01334
Sb	121	3	He	0.163	0.0038	210.01	0.0142	0.001484
Sb	121	3	He	0.062	0.0024	130.01	0.0142	0.001484
Sb	121	3	He	0.029	0.0019	100.00	0.0142	0.001484
Ba	137	3	He	0.547	0.0029	160.01	0.0046	0.000374
Ba	137	3	He	0.589	0.0031	170.01	0.0046	0.000374
Ba	137	3	He	0.577	0.003	160.01	0.0046	0.000374
Tl	205	3	He	0.016	0.0007	130.01	0.0282	0.00021
Tl	205	3	He	0.009	0.0005	90.00	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.01	0.0282	0.00021
Pb	208	3	He	0.049	0.0028	250.01	0.0372	0.0009772
Pb	208	3	He	0.041	0.0025	290.01	0.0372	0.0009772
Pb	208	3	He	0.069	0.0036	330.02	0.0372	0.0009772
U	238	3	He	0.009	0.0005	90.00	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
Sc	45	1	No Gas			1744809.66		
Sc	45	1	No Gas			1762851.69		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1744453.57		
Ge	72	1	No Gas			827995.30		
Ge	72	1	No Gas			834402.10		
Ge	72	1	No Gas			842538.35		
Sc	45	2	H2			134264.03		
Sc	45	2	H2			134981.90		
Sc	45	2	H2			132044.99		
Ge	72	2	H2			103494.26		
Ge	72	2	H2			104762.68		
Ge	72	2	H2			103716.10		
In	115	2	H2			281185.43		
In	115	2	H2			278086.56		
In	115	2	H2			275887.36		
Sc	45	3	He			29981.61		
Sc	45	3	He			29200.27		
Sc	45	3	He			29490.75		
Ge	72	3	He			53952.05		
Ge	72	3	He			52587.58		
Ge	72	3	He			52125.78		
In	115	3	He			55250.49		
In	115	3	He			55069.90		
In	115	3	He			52740.50		
Tb	159	3	He			253480.31		
Tb	159	3	He			252921.60		
Tb	159	3	He			250881.40		
Bi	209	3	He			199421.52		
Bi	209	3	He			195825.43		
Bi	209	3	He			193745.78		

Quantitation Report

Data File Name	117SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:11:24 PM
Sample Name	410-134023-A-3-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

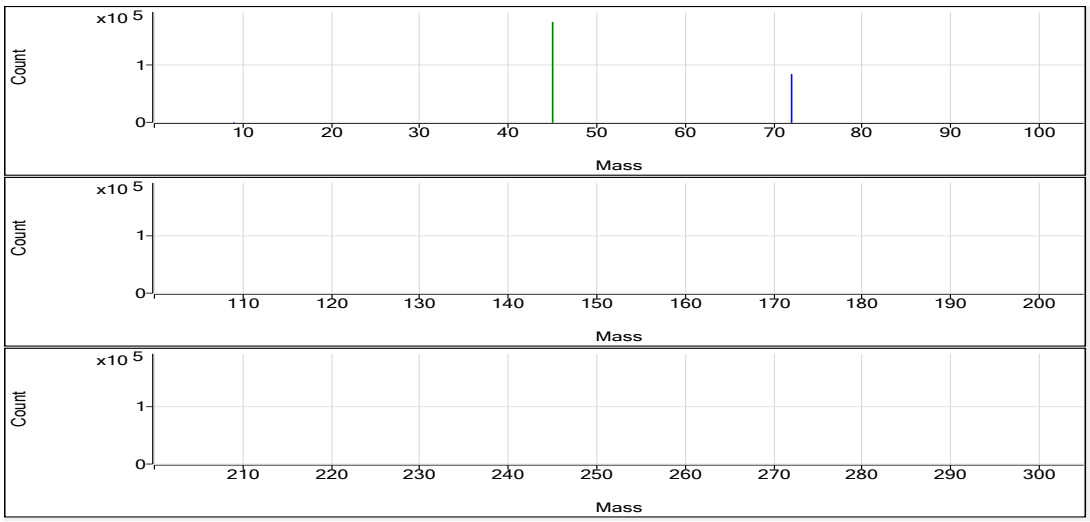
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	47.3	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.024	ppb	105.4	2.44	0.0000	Pulse	1.5000	3
Na	23	45	He	59.917	ppb	8.8	12208.75	0.4164	Pulse	0.1000	3
Mg	24	45	He	4105.240	ppb	0.4	159062.32	5.4233	Pulse	0.1000	3
Al	27	45	He	9.942	ppb	45.6	170.01	0.0058	Pulse	0.1000	3
K	39	45	He	-6.779	ppb	N/A	10447.36	0.3561	Pulse	0.1000	3
Ca	44	45	He	8365.056	ppb	4.7	14327.58	0.4885	Pulse	0.1000	3
Ti	47	45	He	0.724	ppb	115.9	16.67	0.0006	Pulse	0.1000	3
V	51	45	He	0.129	ppb	7.6	416.01	0.0142	Pulse	0.5000	3
Cr	52	45	He	0.260	ppb	22.2	2190.25	0.0747	Pulse	0.1000	3
Mn	55	45	He	0.180	ppb	67.8	183.34	0.0063	Pulse	0.1000	3
Fe	57	45	He	6.463	ppb	38.9	216.68	0.0074	Pulse	0.1000	3
Co	59	45	He	0.043	ppb	68.2	210.01	0.0072	Pulse	0.1000	3
Ni	60	72	He	0.475	ppb	19.4	526.70	0.0102	Pulse	0.1000	3
Cu	63	72	He	0.222	ppb	40.1	410.02	0.0080	Pulse	0.1000	3
Zn	66	72	He	1.075	ppb	52.8	296.68	0.0058	Pulse	0.1000	3
As	75	72	He	0.059	ppb	136.5	31.33	0.0006	Pulse	0.5000	3
Sr	88	115	He	0.711	ppb	8.7	350.02	0.0065	Pulse	0.1000	3
Mo	98	115	He	0.018	ppb	176.3	50.00	0.0009	Pulse	0.1000	3
Ag	107	115	He	-0.002	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	177.2	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.160	ppb	159.0	850.06	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.038	ppb	88.8	110.00	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.092	ppb	67.2	43.33	0.0008	Pulse	0.1000	3
Tl	205	209	He	0.018	ppb	34.7	140.01	0.0007	Pulse	0.1000	3
Pb	208	209	He	0.027	ppb	39.3	383.35	0.0020	Pulse	0.1000	3
U	238	209	He	0.007	ppb	58.0	76.67	0.0004	Pulse	0.1000	3

ISTD Table:

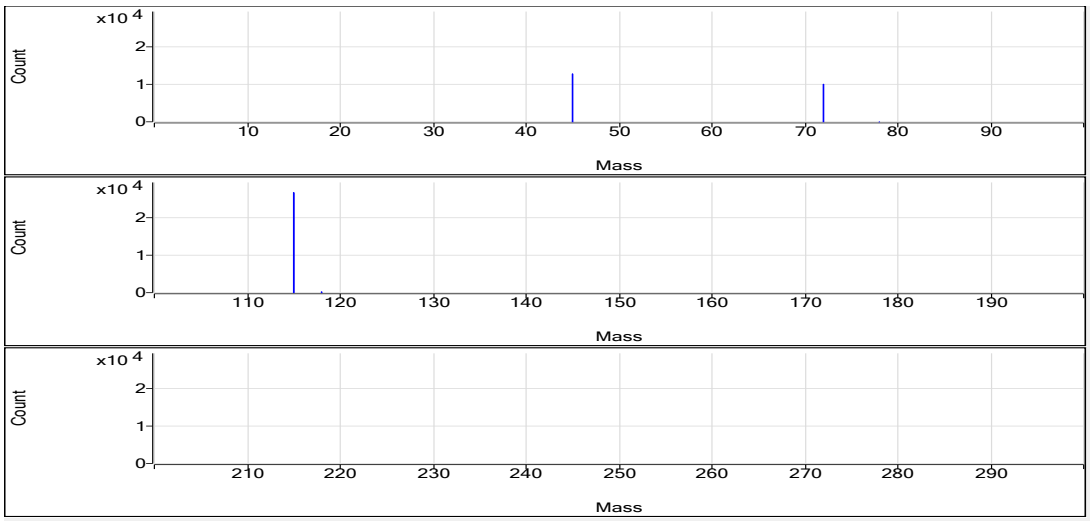
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1738671.90	0.7	98.7	Analog	0.1000	3
No Gas	Ge	72	834970.22	0.3	93.6	Pulse	0.1000	3
H2	Sc	45	128920.85	0.2	101.3	Pulse	0.1000	3
H2	Ge	72	101465.29	1.1	94.6	Pulse	0.1000	3
H2	In	115	269114.11	0.4	101.1	Pulse	0.1000	3
He	Sc	45	29330.29	1.2	102.9	Pulse	0.1000	3
He	Ge	72	51523.54	2.3	93.1	Pulse	0.1000	3
He	In	115	54257.31	0.5	101.1	Pulse	0.1000	3
He	Tb	159	247481.02	0.8	100.7	Pulse	0.1000	3
He	Bi	209	193269.39	0.8	101.3	Pulse	0.1000	3

No Gas

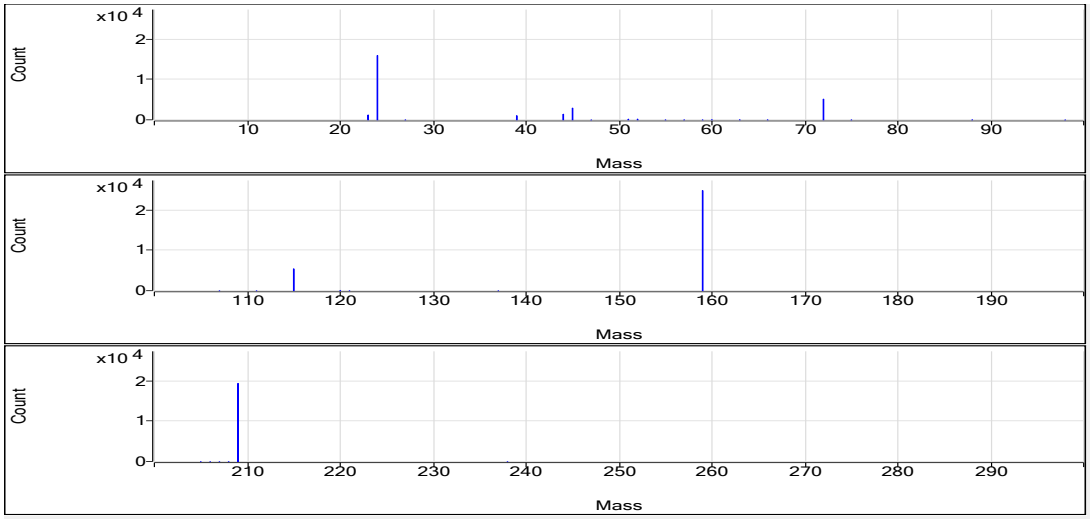


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.02	0	36.00	0.0004	1.287E-05
Be	9	1	No Gas	0.008	0	28.00	0.0004	1.287E-05
Se	78	2	H2	0.029	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.047	0	3.33	0.0004	1.451E-05
Se	78	2	H2	-0.003	0	1.33	0.0004	1.451E-05
Na	23	3	He	58.944	0.4139	12135.47	0.0025	0.2648
Na	23	3	He	55.22	0.4045	12005.23	0.0025	0.2648
Na	23	3	He	65.586	0.4307	12485.56	0.0025	0.2648
Mg	24	3	He	4101.21	5.418	158857.53	0.0013	0.005032
Mg	24	3	He	4090.257	5.4035	160381.63	0.0013	0.005032
Mg	24	3	He	4124.251	5.4484	157947.81	0.0013	0.005032
Al	27	3	He	5.969	0.0041	120.00	0.0004	0.001519
Al	27	3	He	8.98	0.0054	160.01	0.0004	0.001519
Al	27	3	He	14.877	0.0079	230.01	0.0004	0.001519
K	39	3	He	20.33	0.3825	11214.66	0.001	0.3627
K	39	3	He	-13.606	0.3495	10373.95	0.001	0.3627
K	39	3	He	-27.06	0.3364	9753.46	0.001	0.3627
Ca	44	3	He	8814.321	0.5146	15088.40	0.0001	0.002571
Ca	44	3	He	8114.49	0.474	14067.27	0.0001	0.002571
Ca	44	3	He	8166.357	0.477	13827.06	0.0001	0.002571
Ti	47	3	He	0.236	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	1.693	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	0.244	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.139	0.0144	422.01	0.0201	0.0116
V	51	3	He	0.127	0.0142	420.01	0.0201	0.0116
V	51	3	He	0.12	0.014	406.01	0.0201	0.0116
Cr	52	3	He	0.313	0.0761	2230.25	0.0257	0.06801
Cr	52	3	He	0.199	0.0731	2170.26	0.0257	0.06801
Cr	52	3	He	0.267	0.0749	2170.24	0.0257	0.06801
Mn	55	3	He	0.32	0.0078	230.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.104	0.0054	160.01	0.0113	0.004215
Mn	55	3	He	0.115	0.0055	160.01	0.0113	0.004215
Fe	57	3	He	6.671	0.0075	220.01	0.0005	0.004099
Fe	57	3	He	3.852	0.0061	180.01	0.0005	0.004099
Fe	57	3	He	8.866	0.0086	250.01	0.0005	0.004099
Co	59	3	He	0.011	0.0055	160.01	0.0518	0.004913
Co	59	3	He	0.068	0.0084	250.01	0.0518	0.004913
Co	59	3	He	0.052	0.0076	220.01	0.0518	0.004913
Ni	60	3	He	0.548	0.0108	550.03	0.0075	0.006695
Ni	60	3	He	0.371	0.0095	500.03	0.0075	0.006695
Ni	60	3	He	0.505	0.0105	530.03	0.0075	0.006695
Cu	63	3	He	0.297	0.0096	490.03	0.0216	0.003198
Cu	63	3	He	0.124	0.0059	310.02	0.0216	0.003198
Cu	63	3	He	0.245	0.0085	430.02	0.0216	0.003198
Zn	66	3	He	1.186	0.0061	310.02	0.0026	0.002954
Zn	66	3	He	0.46	0.0042	220.01	0.0026	0.002954
Zn	66	3	He	1.578	0.0071	360.02	0.0026	0.002954
As	75	3	He	0.028	0.0005	28.00	0.002	0.0004943
As	75	3	He	-0.001	0.0005	26.00	0.002	0.0004943
As	75	3	He	0.151	0.0008	40.00	0.002	0.0004943
Sr	88	3	He	0.738	0.0067	360.02	0.0081	0.0006852
Sr	88	3	He	0.64	0.0059	320.01	0.0081	0.0006852
Sr	88	3	He	0.755	0.0068	370.02	0.0081	0.0006852
Mo	98	3	He	-0.018	0.0002	10.00	0.0205	0.0005587
Mo	98	3	He	0.035	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.036	0.0013	70.00	0.0205	0.0005587
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	0.444	0.0198	1070.09	0.0146	0.01334
Sn	120	3	He	0.08	0.0145	790.04	0.0146	0.01334
Sn	120	3	He	-0.044	0.0127	690.05	0.0146	0.01334
Sb	121	3	He	0.026	0.0019	100.00	0.0142	0.001484
Sb	121	3	He	0.076	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.012	0.0017	90.00	0.0142	0.001484
Ba	137	3	He	0.16	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.078	0.0007	40.00	0.0046	0.000374
Ba	137	3	He	0.039	0.0006	30.00	0.0046	0.000374
Tl	205	3	He	0.011	0.0005	100.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.022	0.0008	160.01	0.0282	0.00021
Pb	208	3	He	0.017	0.0016	160.01	0.0372	0.0009772
Pb	208	3	He	0.038	0.0024	220.01	0.0372	0.0009772
Pb	208	3	He	0.026	0.002	190.01	0.0372	0.0009772
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.011	0.0006	110.00	0.0417	8.729E-05
Sc	45	1	No Gas			1727474.66		
Sc	45	1	No Gas			1737019.35		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1751521.69		
Ge	72	1	No Gas			837466.32		
Ge	72	1	No Gas			834049.99		
Ge	72	1	No Gas			833394.36		
Sc	45	2	H2			128988.26		
Sc	45	2	H2			129130.05		
Sc	45	2	H2			128644.25		
Ge	72	2	H2			102777.24		
Ge	72	2	H2			100714.33		
Ge	72	2	H2			100904.31		
In	115	2	H2			270255.17		
In	115	2	H2			268542.55		
In	115	2	H2			268544.62		
Sc	45	3	He			29320.33		
Sc	45	3	He			29680.83		
Sc	45	3	He			28989.71		
Ge	72	3	He			51041.56		
Ge	72	3	He			52848.73		
Ge	72	3	He			50680.32		
In	115	3	He			53955.05		
In	115	3	He			54467.45		
In	115	3	He			54367.27		
Tb	159	3	He			249052.63		
Tb	159	3	He			248191.73		
Tb	159	3	He			245198.69		
Bi	209	3	He			192944.10		
Bi	209	3	He			192002.58		
Bi	209	3	He			194861.50		

Quantitation Report

Data File Name	118SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:13:24 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

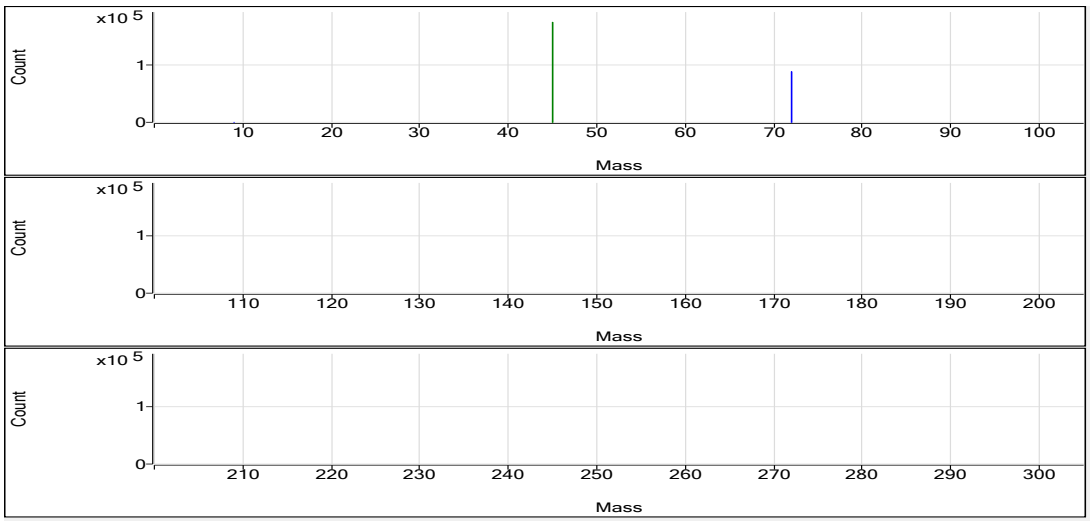
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.017	ppb	46.5	34.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.032	ppb	152.6	2.89	0.0000	Pulse	1.5000	3
Na	23	45	He	29.709	ppb	18.9	9723.54	0.3400	Pulse	0.1000	3
Mg	24	45	He	3.536	ppb	41.3	276.68	0.0097	Pulse	0.1000	3
Al	27	45	He	2.421	ppb	68.9	73.33	0.0026	Pulse	0.1000	3
K	39	45	He	-6.599	ppb	N/A	10200.58	0.3563	Pulse	0.1000	3
Ca	44	45	He	-6.360	ppb	N/A	63.33	0.0022	Pulse	0.1000	3
Ti	47	45	He	-0.255	ppb	N/A	3.33	0.0001	Pulse	0.1000	3
V	51	45	He	0.086	ppb	110.5	380.01	0.0133	Pulse	0.5000	3
Cr	52	45	He	0.128	ppb	150.0	2040.21	0.0713	Pulse	0.1000	3
Mn	55	45	He	0.214	ppb	8.6	190.01	0.0066	Pulse	0.1000	3
Fe	57	45	He	1.555	ppb	40.8	140.01	0.0049	Pulse	0.1000	3
Co	59	45	He	0.038	ppb	31.2	196.68	0.0069	Pulse	0.1000	3
Ni	60	72	He	0.168	ppb	86.0	433.36	0.0079	Pulse	0.1000	3
Cu	63	72	He	0.033	ppb	90.3	213.34	0.0039	Pulse	0.1000	3
Zn	66	72	He	-0.333	ppb	N/A	113.34	0.0021	Pulse	0.1000	3
As	75	72	He	0.085	ppb	88.6	36.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.045	ppb	205.2	56.67	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.006	ppb	227.4	36.67	0.0007	Pulse	0.1000	3
Ag	107	115	He	0.004	ppb	60.1	33.33	0.0006	Pulse	0.1000	3
Cd	111	115	He	0.002	ppb	356.5	1.33	0.0000	Pulse	0.5000	3
Sn	120	115	He	0.015	ppb	1143.1	730.05	0.0136	Pulse	0.1000	3
Sb	121	115	He	0.005	ppb	773.8	83.33	0.0016	Pulse	0.1000	3
Ba	137	115	He	0.000	ppb	N/A	20.00	0.0004	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	15.9	176.68	0.0009	Pulse	0.1000	3
Pb	208	209	He	0.017	ppb	93.5	303.34	0.0016	Pulse	0.1000	3
U	238	209	He	0.006	ppb	46.2	60.00	0.0003	Pulse	0.1000	3

ISTD Table:

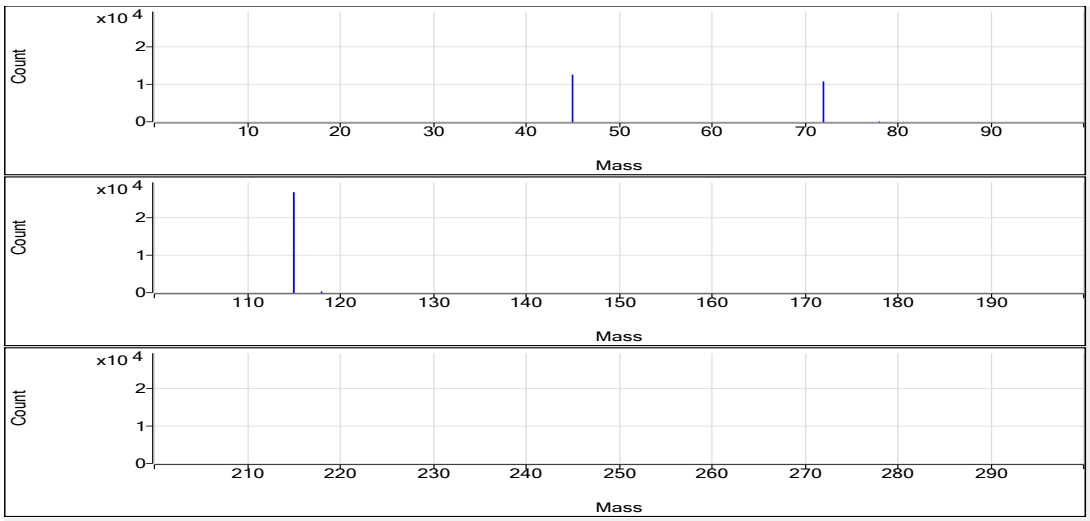
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1742115.86	0.3	98.9	Analog	0.1000	3
No Gas	Ge	72	882294.75	0.6	98.9	Pulse	0.1000	3
H2	Sc	45	126068.91	1.2	99.0	Pulse	0.1000	3
H2	Ge	72	107543.22	0.8	100.3	Pulse	0.1000	3
H2	In	115	269176.70	1.9	101.1	Pulse	0.1000	3
He	Sc	45	28622.10	3.1	100.4	Pulse	0.1000	3
He	Ge	72	54535.04	0.0	98.6	Pulse	0.1000	3
He	In	115	53746.20	1.6	100.1	Pulse	0.1000	3
He	Tb	159	244289.42	1.0	99.4	Pulse	0.1000	3
He	Bi	209	188015.93	0.6	98.5	Pulse	0.1000	3

No Gas

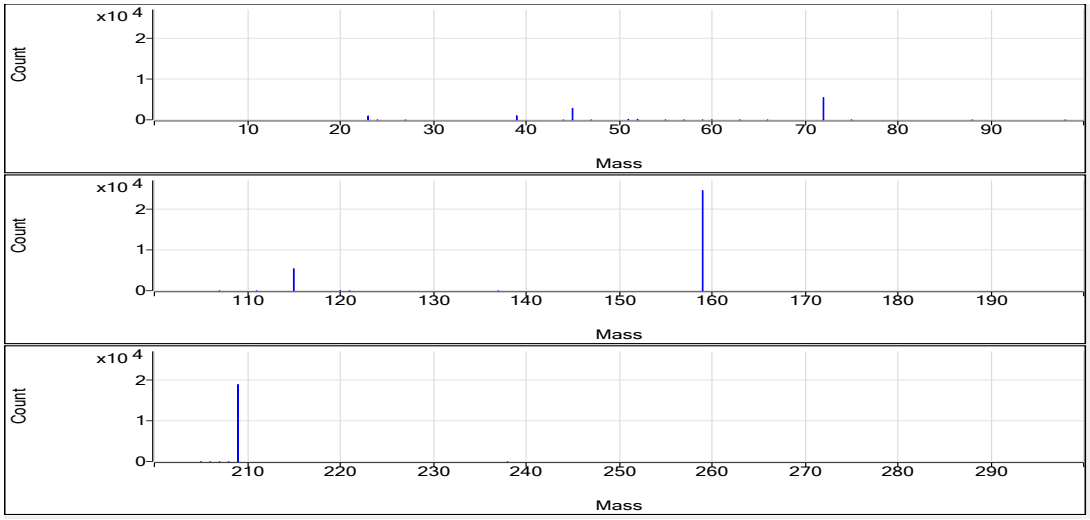


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.008	0	28.00	0.0004	1.287E-05
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.02	0	36.00	0.0004	1.287E-05
Se	78	2	H2	0.043	0	3.33	0.0004	1.451E-05
Se	78	2	H2	-0.021	0	0.67	0.0004	1.451E-05
Se	78	2	H2	0.073	0	4.67	0.0004	1.451E-05
Na	23	3	He	32.501	0.347	9983.71	0.0025	0.2648
Na	23	3	He	23.232	0.3236	9523.31	0.0025	0.2648
Na	23	3	He	33.394	0.3493	9663.59	0.0025	0.2648
Mg	24	3	He	4.352	0.0108	310.01	0.0013	0.005032
Mg	24	3	He	1.851	0.0075	220.01	0.0013	0.005032
Mg	24	3	He	4.404	0.0108	300.02	0.0013	0.005032
Al	27	3	He	0.509	0.0017	50.00	0.0004	0.001519
Al	27	3	He	3.57	0.0031	90.00	0.0004	0.001519
Al	27	3	He	3.184	0.0029	80.00	0.0004	0.001519
K	39	3	He	3.172	0.3658	10524.29	0.001	0.3627
K	39	3	He	-9.492	0.3535	10403.98	0.001	0.3627
K	39	3	He	-13.478	0.3496	9673.48	0.001	0.3627
Ca	44	3	He	3.608	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	-3.316	0.0024	70.00	0.0001	0.002571
Ca	44	3	He	-19.373	0.0014	40.00	0.0001	0.002571
Ti	47	3	He	0.25	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	0.073	0.0131	376.01	0.0201	0.0116
V	51	3	He	-0.002	0.0116	340.01	0.0201	0.0116
V	51	3	He	0.186	0.0153	424.01	0.0201	0.0116
Cr	52	3	He	0.33	0.0765	2200.25	0.0257	0.06801
Cr	52	3	He	-0.055	0.0666	1960.19	0.0257	0.06801
Cr	52	3	He	0.111	0.0708	1960.19	0.0257	0.06801
Mn	55	3	He	0.211	0.0066	190.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.198	0.0065	190.01	0.0113	0.004215
Mn	55	3	He	0.234	0.0069	190.01	0.0113	0.004215
Fe	57	3	He	0.824	0.0045	130.01	0.0005	0.004099
Fe	57	3	He	1.956	0.0051	150.01	0.0005	0.004099
Fe	57	3	He	1.884	0.0051	140.00	0.0005	0.004099
Co	59	3	He	0.026	0.0063	180.01	0.0518	0.004913
Co	59	3	He	0.049	0.0075	220.01	0.0518	0.004913
Co	59	3	He	0.038	0.0069	190.01	0.0518	0.004913
Ni	60	3	He	0.332	0.0092	500.03	0.0075	0.006695
Ni	60	3	He	0.11	0.0075	410.02	0.0075	0.006695
Ni	60	3	He	0.061	0.0072	390.02	0.0075	0.006695
Cu	63	3	He	0.064	0.0046	250.01	0.0216	0.003198
Cu	63	3	He	0.03	0.0038	210.01	0.0216	0.003198
Cu	63	3	He	0.005	0.0033	180.01	0.0216	0.003198
Zn	66	3	He	-0.286	0.0022	120.01	0.0026	0.002954
Zn	66	3	He	-0.356	0.002	110.00	0.0026	0.002954
Zn	66	3	He	-0.356	0.002	110.00	0.0026	0.002954
As	75	3	He	0.085	0.0007	36.00	0.002	0.0004943
As	75	3	He	0.01	0.0005	28.00	0.002	0.0004943
As	75	3	He	0.16	0.0008	44.00	0.002	0.0004943
Sr	88	3	He	-0.038	0.0004	20.00	0.0081	0.0006852
Sr	88	3	He	0.028	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.146	0.0019	100.00	0.0081	0.0006852
Mo	98	3	He	-0.009	0.0004	20.00	0.0205	0.0005587
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.009	0.0007	40.00	0.0205	0.0005587
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	0.016	0.0136	720.05	0.0146	0.01334
Sn	120	3	He	0.188	0.0161	880.06	0.0146	0.01334
Sn	120	3	He	-0.158	0.011	590.03	0.0146	0.01334
Sb	121	3	He	0.028	0.0019	100.00	0.0142	0.001484
Sb	121	3	He	-0.04	0.0009	50.00	0.0142	0.001484
Sb	121	3	He	0.027	0.0019	100.00	0.0142	0.001484
Ba	137	3	He	-0.081	0	0.00	0.0046	0.000374
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.122	0.0009	50.00	0.0046	0.000374
Tl	205	3	He	0.03	0.0011	200.01	0.0282	0.00021
Tl	205	3	He	0.025	0.0009	170.01	0.0282	0.00021
Tl	205	3	He	0.023	0.0008	160.01	0.0282	0.00021
Pb	208	3	He	0.011	0.0014	130.01	0.0372	0.0009772
Pb	208	3	He	0.035	0.0023	210.01	0.0372	0.0009772
Pb	208	3	He	0.005	0.0012	90.00	0.0372	0.0009772
U	238	3	He	0.006	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
Sc	45	1	No Gas			1747502.63		
Sc	45	1	No Gas			1737392.01		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1741452.94		
Ge	72	1	No Gas			888242.33		
Ge	72	1	No Gas			879946.16		
Ge	72	1	No Gas			878695.77		
Sc	45	2	H2			124639.45		
Sc	45	2	H2			127575.94		
Sc	45	2	H2			125991.34		
Ge	72	2	H2			106566.53		
Ge	72	2	H2			108016.78		
Ge	72	2	H2			108046.35		
In	115	2	H2			263546.99		
In	115	2	H2			273667.89		
In	115	2	H2			270315.21		
Sc	45	3	He			28769.20		
Sc	45	3	He			29430.23		
Sc	45	3	He			27666.86		
Ge	72	3	He			54524.82		
Ge	72	3	He			54555.64		
Ge	72	3	He			54524.65		
In	115	3	He			53041.44		
In	115	3	He			54718.20		
In	115	3	He			53494.29		
Tb	159	3	He			243296.05		
Tb	159	3	He			247152.36		
Tb	159	3	He			242419.86		
Bi	209	3	He			186967.05		
Bi	209	3	He			187901.36		
Bi	209	3	He			189179.39		

Quantitation Report

Data File Name	119_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:15:26 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

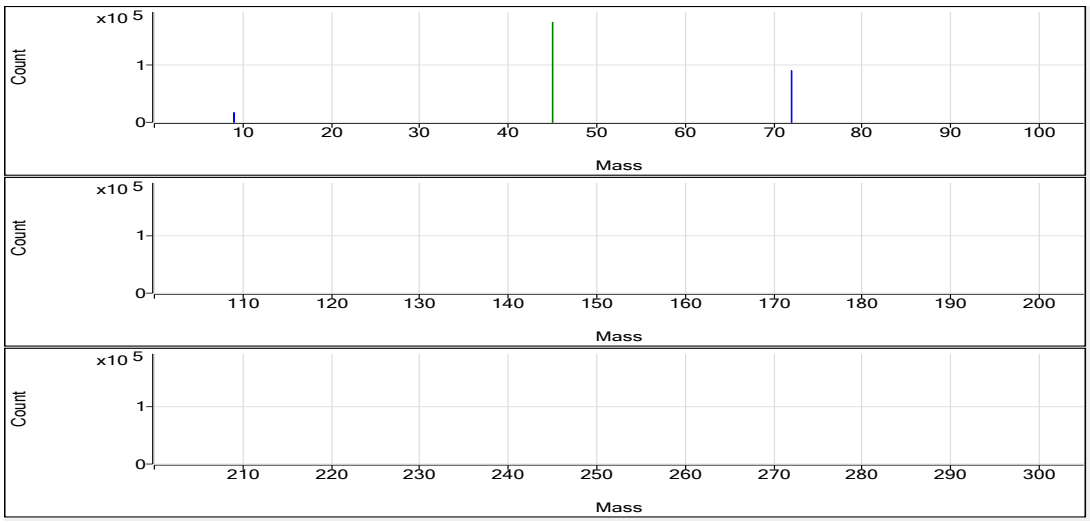
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	49.784	ppb	8.3	34432.99	0.0196	Pulse	0.5000	3
Se	78	72	H2	51.139	ppb	1.7	2221.07	0.0200	Pulse	1.5000	3
Na	23	45	He	5112.292	ppb	1.3	379678.00	13.1923	Pulse	0.1000	3
Mg	24	45	He	5030.601	ppb	1.5	191235.08	6.6447	Pulse	0.1000	3
Al	27	45	He	5008.986	ppb	1.6	62215.30	2.1617	Pulse	0.1000	3
K	39	45	He	5116.453	ppb	1.2	153519.21	5.3337	Pulse	0.1000	3
Ca	44	45	He	5324.977	ppb	2.2	8976.35	0.3119	Pulse	0.1000	3
Ti	47	45	He	5152.109	ppb	1.6	68153.71	2.3678	Pulse	0.1000	3
V	51	45	He	509.690	ppb	0.6	294580.69	10.2350	Pulse	0.5000	3
Cr	52	45	He	510.588	ppb	0.6	379648.58	13.1907	Pulse	0.1000	3
Mn	55	45	He	515.262	ppb	1.2	168135.15	5.8419	Pulse	0.1000	3
Fe	57	45	He	5123.735	ppb	0.6	75393.75	2.6195	Pulse	0.1000	3
Co	59	45	He	504.158	ppb	0.8	752003.22	26.1282	Pulse	0.1000	3
Ni	60	72	He	509.952	ppb	0.5	213333.32	3.8058	Pulse	0.1000	3
Cu	63	72	He	509.328	ppb	0.2	616506.89	10.9984	Pulse	0.1000	3
Zn	66	72	He	505.780	ppb	1.1	74727.83	1.3332	Pulse	0.1000	3
As	75	72	He	504.870	ppb	0.5	55280.84	0.9862	Pulse	0.5000	3
Sr	88	115	He	49.538	ppb	1.9	21714.10	0.4026	Pulse	0.1000	3
Mo	98	115	He	50.289	ppb	2.5	55540.27	1.0300	Pulse	0.1000	3
Ag	107	115	He	51.843	ppb	2.5	120359.31	2.2321	Pulse	0.1000	3
Cd	111	115	He	50.276	ppb	2.3	13551.96	0.2513	Pulse	0.5000	3
Sn	120	115	He	50.608	ppb	1.8	40617.10	0.7530	Pulse	0.1000	3
Sb	121	115	He	50.627	ppb	2.5	38928.87	0.7218	Pulse	0.1000	3
Ba	137	115	He	500.219	ppb	1.7	124293.38	2.3049	Pulse	0.1000	3
Tl	205	209	He	51.259	ppb	1.0	275142.87	1.4469	Pulse	0.1000	3
Pb	208	209	He	51.260	ppb	0.6	363183.33	1.9098	Pulse	0.1000	3
U	238	209	He	50.752	ppb	0.5	402644.74	2.1173	Pulse	0.1000	3

ISTD Table:

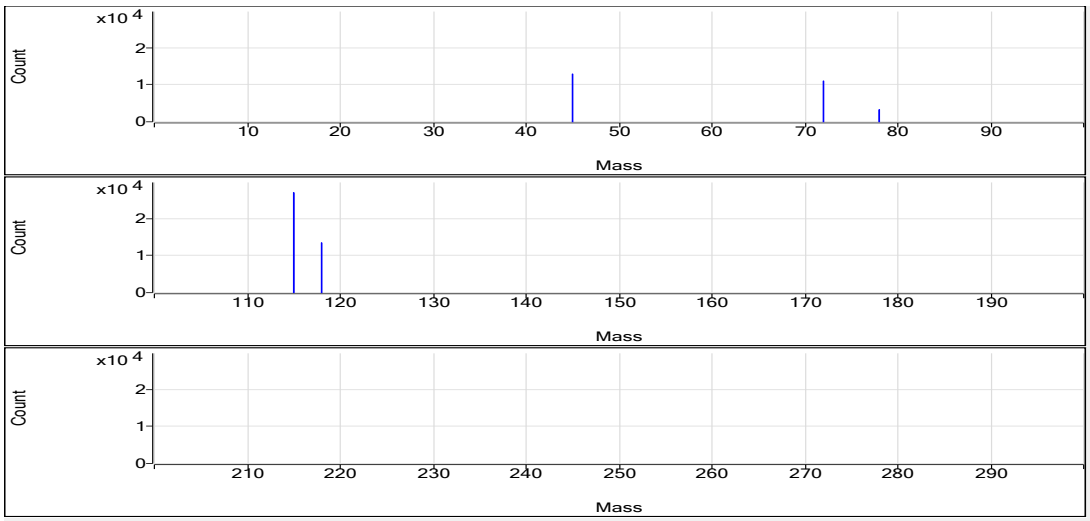
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1755442.01	1.0	99.7	Analog	0.1000	3
No Gas	Ge	72	906606.92	0.4	101.6	Pulse	0.1000	3
H2	Sc	45	129842.22	2.0	102.0	Pulse	0.1000	3
H2	Ge	72	110953.09	0.7	103.5	Pulse	0.1000	3
H2	In	115	271275.83	0.8	101.9	Pulse	0.1000	3
He	Sc	45	28782.42	0.8	101.0	Pulse	0.1000	3
He	Ge	72	56054.09	0.2	101.3	Pulse	0.1000	3
He	In	115	53935.67	1.5	100.5	Pulse	0.1000	3
He	Tb	159	244213.34	0.8	99.4	Pulse	0.1000	3
He	Bi	209	190172.33	0.8	99.6	Pulse	0.1000	3

No Gas

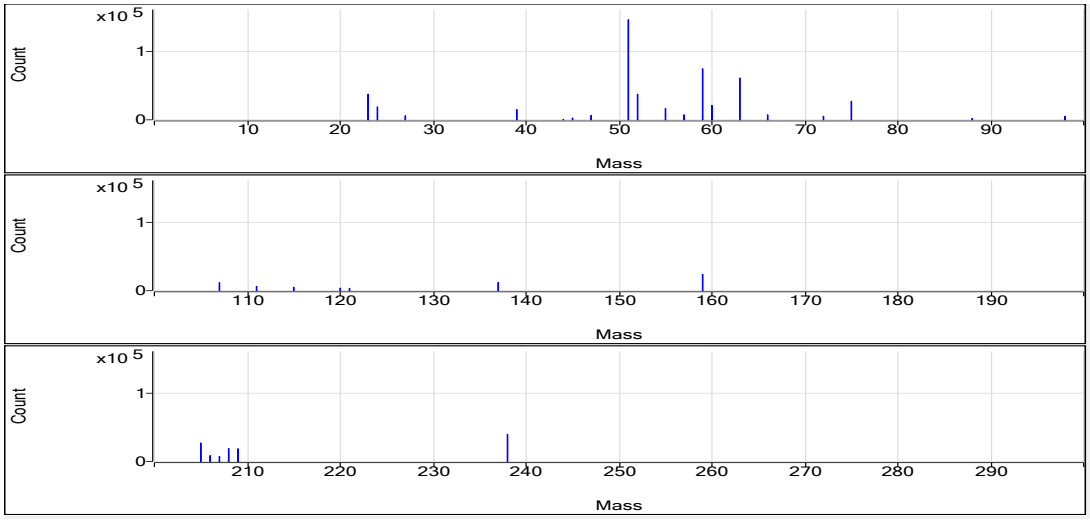


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	45.473	0.0179	31609.37	0.0004	1.287E-05
Be	9	1	No Gas	50.208	0.0198	34966.73	0.0004	1.287E-05
Be	9	1	No Gas	53.672	0.0212	36722.86	0.0004	1.287E-05
Se	78	2	H2	51.04	0.02	2209.51	0.0004	1.451E-05
Se	78	2	H2	50.309	0.0197	2173.50	0.0004	1.451E-05
Se	78	2	H2	52.067	0.0204	2280.19	0.0004	1.451E-05
Na	23	3	He	5080.857	13.1128	378820.89	0.0025	0.2648
Na	23	3	He	5065.799	13.0747	378503.90	0.0025	0.2648
Na	23	3	He	5190.22	13.3893	381709.21	0.0025	0.2648
Mg	24	3	He	4962.701	6.555	189371.34	0.0013	0.005032
Mg	24	3	He	5016.59	6.6262	191822.95	0.0013	0.005032
Mg	24	3	He	5112.511	6.7528	192510.95	0.0013	0.005032
Al	27	3	He	4917.455	2.1222	61308.54	0.0004	0.001519
Al	27	3	He	5052.826	2.1806	63125.67	0.0004	0.001519
Al	27	3	He	5056.677	2.1822	62211.70	0.0004	0.001519
K	39	3	He	5185.894	5.4011	156036.13	0.001	0.3627
K	39	3	He	5077.368	5.2957	153307.21	0.001	0.3627
K	39	3	He	5086.097	5.3042	151214.30	0.001	0.3627
Ca	44	3	He	5242.847	0.3071	8872.94	0.0001	0.002571
Ca	44	3	He	5273.557	0.3089	8942.98	0.0001	0.002571
Ca	44	3	He	5458.529	0.3197	9113.12	0.0001	0.002571
Ti	47	3	He	5244.895	2.4105	69637.40	0.0005	0.0002328
Ti	47	3	He	5095.053	2.3416	67788.35	0.0005	0.0002328
Ti	47	3	He	5116.378	2.3514	67035.39	0.0005	0.0002328
V	51	3	He	510.253	10.2463	296010.91	0.0201	0.0116
V	51	3	He	506.284	10.1667	294319.81	0.0201	0.0116
V	51	3	He	512.533	10.2921	293411.34	0.0201	0.0116
Cr	52	3	He	508.019	13.1247	379164.10	0.0257	0.06801
Cr	52	3	He	509.915	13.1734	381360.46	0.0257	0.06801
Cr	52	3	He	513.83	13.274	378421.17	0.0257	0.06801
Mn	55	3	He	508.763	5.7682	166641.19	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	516.101	5.8514	169393.16	0.0113	0.004215
Mn	55	3	He	520.923	5.906	168371.09	0.0113	0.004215
Fe	57	3	He	5128.03	2.6217	75739.43	0.0005	0.004099
Fe	57	3	He	5093.524	2.6041	75386.55	0.0005	0.004099
Fe	57	3	He	5149.65	2.6327	75055.26	0.0005	0.004099
Co	59	3	He	500.93	25.9609	749996.71	0.0518	0.004913
Co	59	3	He	503.192	26.0781	754945.22	0.0518	0.004913
Co	59	3	He	508.35	26.3454	751067.72	0.0518	0.004913
Ni	60	3	He	507.094	3.7846	212050.11	0.0075	0.006695
Ni	60	3	He	511.29	3.8158	214416.70	0.0075	0.006695
Ni	60	3	He	511.472	3.8172	213533.14	0.0075	0.006695
Cu	63	3	He	509.796	11.0085	616811.08	0.0216	0.003198
Cu	63	3	He	510.245	11.0182	619130.15	0.0216	0.003198
Cu	63	3	He	507.942	10.9685	613579.44	0.0216	0.003198
Zn	66	3	He	509.167	1.3421	75196.64	0.0026	0.002954
Zn	66	3	He	499.27	1.316	73950.35	0.0026	0.002954
Zn	66	3	He	508.902	1.3414	75036.49	0.0026	0.002954
As	75	3	He	502.308	0.9812	54976.95	0.002	0.0004943
As	75	3	He	506.924	0.9902	55641.56	0.002	0.0004943
As	75	3	He	505.38	0.9872	55224.00	0.002	0.0004943
Sr	88	3	He	49.883	0.4054	21507.04	0.0081	0.0006852
Sr	88	3	He	48.453	0.3938	21306.79	0.0081	0.0006852
Sr	88	3	He	50.278	0.4086	22328.48	0.0081	0.0006852
Mo	98	3	He	51.153	1.0476	55580.26	0.0205	0.0005587
Mo	98	3	He	50.89	1.0423	56393.66	0.0205	0.0005587
Mo	98	3	He	48.825	1	54646.89	0.0205	0.0005587
Ag	107	3	He	53.164	2.289	121434.93	0.043	0.0004367
Ag	107	3	He	51.802	2.2303	120677.74	0.043	0.0004367
Ag	107	3	He	50.562	2.177	118965.25	0.043	0.0004367
Cd	111	3	He	51.174	0.2558	13570.67	0.005	1.253E-05
Cd	111	3	He	50.687	0.2534	13708.76	0.005	1.253E-05
Cd	111	3	He	48.969	0.2448	13376.45	0.005	1.253E-05
Sn	120	3	He	50.761	0.7553	40068.77	0.0146	0.01334
Sn	120	3	He	49.639	0.7389	39978.51	0.0146	0.01334
Sn	120	3	He	51.425	0.765	41804.03	0.0146	0.01334
Sb	121	3	He	51.516	0.7345	38965.41	0.0142	0.001484
Sb	121	3	He	49.208	0.7016	37963.05	0.0142	0.001484
Sb	121	3	He	51.158	0.7294	39858.15	0.0142	0.001484
Ba	137	3	He	509.475	2.3475	124541.87	0.0046	0.000374
Ba	137	3	He	499.058	2.2995	124421.48	0.0046	0.000374
Ba	137	3	He	492.123	2.2676	123916.79	0.0046	0.000374
Tl	205	3	He	50.677	1.4304	274080.54	0.0282	0.00021
Tl	205	3	He	51.444	1.4521	276475.11	0.0282	0.00021
Tl	205	3	He	51.657	1.4581	274872.96	0.0282	0.00021
Pb	208	3	He	50.945	1.8981	192596.33	0.0372	0.0009772
Pb	208	3	He	51.499	1.9187	195745.49	0.0372	0.0009772
Pb	208	3	He	51.337	1.9126	192910.68	0.0372	0.0009772
U	238	3	He	50.646	2.1129	404843.82	0.0417	8.729E-05
U	238	3	He	50.592	2.1106	401860.42	0.0417	8.729E-05
U	238	3	He	51.017	2.1284	401229.99	0.0417	8.729E-05
Sc	45	1	No Gas			1763456.85		
Sc	45	1	No Gas			1766917.79		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1735951.38		
Ge	72	1	No Gas			906794.13		
Ge	72	1	No Gas			903027.96		
Ge	72	1	No Gas			909998.66		
Sc	45	2	H2			130350.16		
Sc	45	2	H2			127070.73		
Sc	45	2	H2			132105.77		
Ge	72	2	H2			110597.19		
Ge	72	2	H2			110375.68		
Ge	72	2	H2			111886.39		
In	115	2	H2			273602.75		
In	115	2	H2			270602.07		
In	115	2	H2			269622.67		
Sc	45	3	He			28889.45		
Sc	45	3	He			28949.34		
Sc	45	3	He			28508.48		
Ge	72	3	He			56030.42		
Ge	72	3	He			56191.62		
Ge	72	3	He			55940.23		
In	115	3	He			53332.94		
In	115	3	He			54387.23		
In	115	3	He			54939.79		
Tb	159	3	He			243644.45		
Tb	159	3	He			246481.91		
Tb	159	3	He			242513.65		
Bi	209	3	He			191605.31		
Bi	209	3	He			190397.30		
Bi	209	3	He			188514.37		

Quantitation Report

Data File Name	120_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:17:25 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

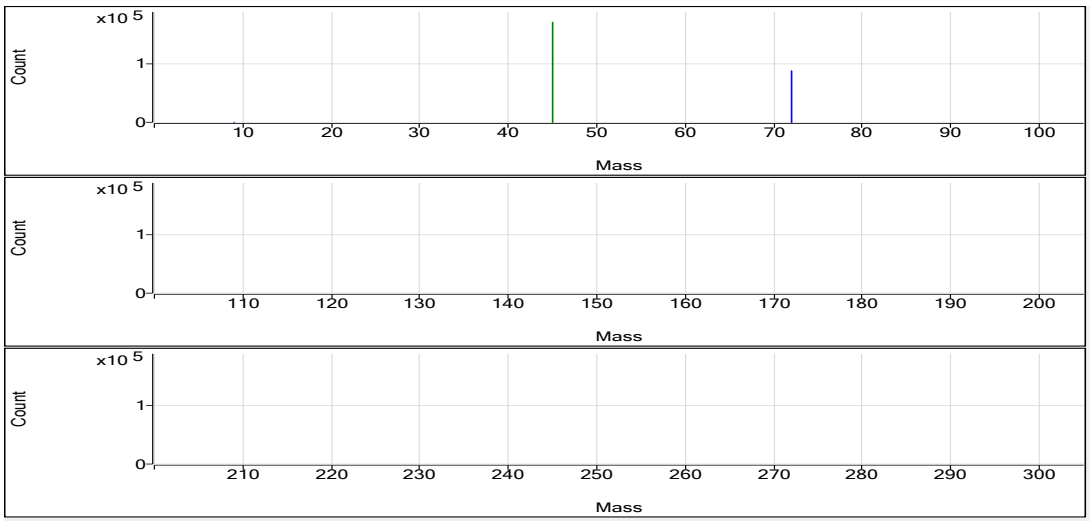
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.223	ppb	14.6	172.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.107	ppb	29.9	6.00	0.0001	Pulse	1.5000	3
Na	23	45	He	33.872	ppb	10.6	9680.13	0.3505	Pulse	0.1000	3
Mg	24	45	He	1.403	ppb	79.5	190.01	0.0069	Pulse	0.1000	3
Al	27	45	He	1.514	ppb	146.2	60.00	0.0022	Pulse	0.1000	3
K	39	45	He	14.469	ppb	218.7	10404.02	0.3768	Pulse	0.1000	3
Ca	44	45	He	5.572	ppb	384.8	80.00	0.0029	Pulse	0.1000	3
Ti	47	45	He	2.382	ppb	38.1	36.67	0.0013	Pulse	0.1000	3
V	51	45	He	0.187	ppb	53.2	424.01	0.0154	Pulse	0.5000	3
Cr	52	45	He	0.477	ppb	61.1	2216.92	0.0803	Pulse	0.1000	3
Mn	55	45	He	0.161	ppb	93.6	166.68	0.0060	Pulse	0.1000	3
Fe	57	45	He	1.201	ppb	415.9	130.01	0.0047	Pulse	0.1000	3
Co	59	45	He	0.168	ppb	19.1	376.68	0.0136	Pulse	0.1000	3
Ni	60	72	He	0.315	ppb	43.8	486.70	0.0090	Pulse	0.1000	3
Cu	63	72	He	0.196	ppb	41.8	400.02	0.0074	Pulse	0.1000	3
Zn	66	72	He	0.360	ppb	56.3	210.01	0.0039	Pulse	0.1000	3
As	75	72	He	0.458	ppb	33.4	74.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.029	ppb	201.6	50.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.048	ppb	9.7	83.33	0.0015	Pulse	0.1000	3
Ag	107	115	He	0.010	ppb	95.8	46.67	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.010	ppb	116.3	3.33	0.0001	Pulse	0.5000	3
Sn	120	115	He	0.078	ppb	159.0	783.39	0.0145	Pulse	0.1000	3
Sb	121	115	He	0.138	ppb	66.3	186.67	0.0035	Pulse	0.1000	3
Ba	137	115	He	0.147	ppb	64.7	56.67	0.0011	Pulse	0.1000	3
Tl	205	209	He	0.101	ppb	5.2	583.37	0.0031	Pulse	0.1000	3
Pb	208	209	He	0.038	ppb	29.5	460.01	0.0024	Pulse	0.1000	3
U	238	209	He	0.025	ppb	47.2	213.34	0.0011	Pulse	0.1000	3

ISTD Table:

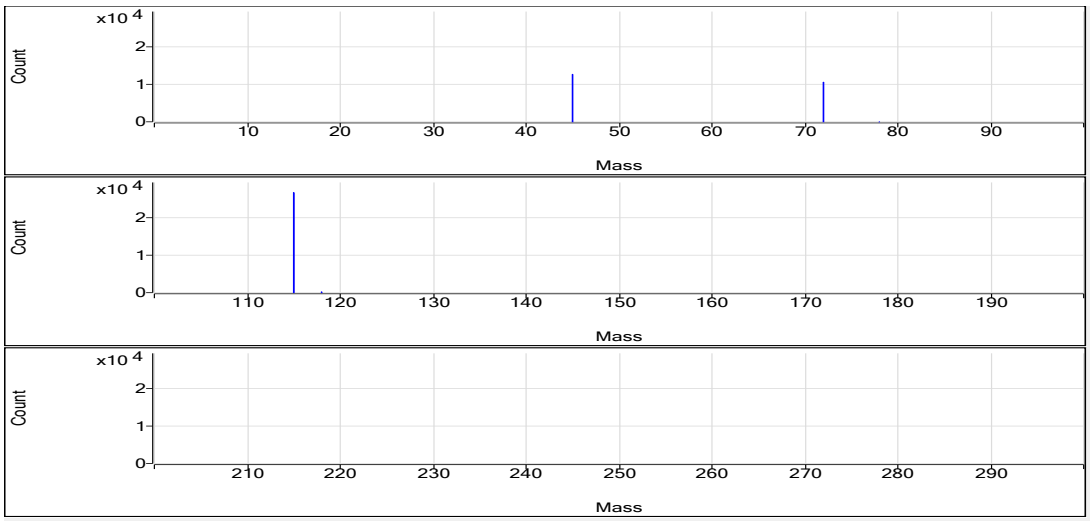
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1719300.39	1.1	97.6	Analog	0.1000	3
No Gas	Ge	72	884200.85	1.3	99.1	Pulse	0.1000	3
H2	Sc	45	127649.41	1.0	100.3	Pulse	0.1000	3
H2	Ge	72	106743.36	1.1	99.5	Pulse	0.1000	3
H2	In	115	268861.07	0.8	101.0	Pulse	0.1000	3
He	Sc	45	27616.83	0.4	96.9	Pulse	0.1000	3
He	Ge	72	53795.20	0.7	97.2	Pulse	0.1000	3
He	In	115	54127.57	2.8	100.8	Pulse	0.1000	3
He	Tb	159	243706.29	0.6	99.2	Pulse	0.1000	3
He	Bi	209	191131.60	0.3	100.1	Pulse	0.1000	3

No Gas

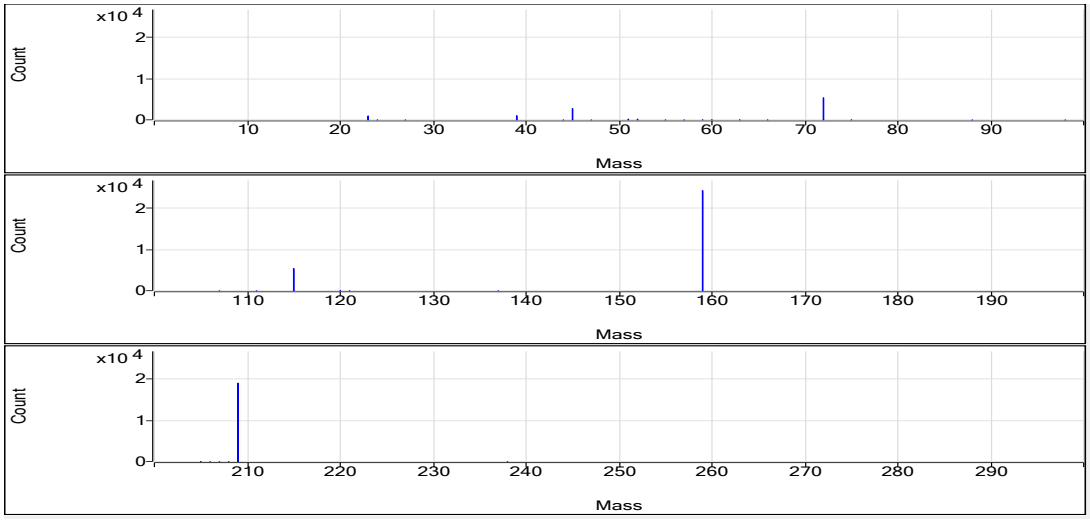


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.257	0.0001	194.00	0.0004	1.287E-05
Be	9	1	No Gas	0.218	0.0001	170.00	0.0004	1.287E-05
Be	9	1	No Gas	0.192	0.0001	154.00	0.0004	1.287E-05
Se	78	2	H2	0.139	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.076	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.105	0.0001	6.00	0.0004	1.451E-05
Na	23	3	He	29.736	0.34	9353.19	0.0025	0.2648
Na	23	3	He	35.783	0.3553	9823.63	0.0025	0.2648
Na	23	3	He	36.098	0.3561	9863.57	0.0025	0.2648
Mg	24	3	He	2.523	0.0084	230.01	0.0013	0.005032
Mg	24	3	He	1.395	0.0069	190.01	0.0013	0.005032
Mg	24	3	He	0.291	0.0054	150.01	0.0013	0.005032
Al	27	3	He	-0.149	0.0015	40.00	0.0004	0.001519
Al	27	3	He	4.027	0.0033	90.00	0.0004	0.001519
Al	27	3	He	0.665	0.0018	50.00	0.0004	0.001519
K	39	3	He	42.541	0.4041	11114.50	0.001	0.3627
K	39	3	He	20.686	0.3828	10584.14	0.001	0.3627
K	39	3	He	-19.818	0.3435	9513.41	0.001	0.3627
Ca	44	3	He	-6.711	0.0022	60.00	0.0001	0.002571
Ca	44	3	He	-6.902	0.0022	60.00	0.0001	0.002571
Ca	44	3	He	30.328	0.0043	120.01	0.0001	0.002571
Ti	47	3	He	1.867	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	3.429	0.0018	50.00	0.0005	0.0002328
Ti	47	3	He	1.85	0.0011	30.00	0.0005	0.0002328
V	51	3	He	0.23	0.0162	446.01	0.0201	0.0116
V	51	3	He	0.258	0.0168	464.01	0.0201	0.0116
V	51	3	He	0.073	0.0131	362.01	0.0201	0.0116
Cr	52	3	He	0.636	0.0844	2320.26	0.0257	0.06801
Cr	52	3	He	0.141	0.0716	1980.21	0.0257	0.06801
Cr	52	3	He	0.656	0.0849	2350.29	0.0257	0.06801
Mn	55	3	He	0.045	0.0047	130.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.33	0.008	220.01	0.0113	0.004215
Mn	55	3	He	0.106	0.0054	150.01	0.0113	0.004215
Fe	57	3	He	6.216	0.0073	200.01	0.0005	0.004099
Fe	57	3	He	-3.778	0.0022	60.00	0.0005	0.004099
Fe	57	3	He	1.166	0.0047	130.01	0.0005	0.004099
Co	59	3	He	0.2	0.0153	420.02	0.0518	0.004913
Co	59	3	He	0.136	0.0119	330.01	0.0518	0.004913
Co	59	3	He	0.17	0.0137	380.02	0.0518	0.004913
Ni	60	3	He	0.418	0.0098	530.03	0.0075	0.006695
Ni	60	3	He	0.158	0.0079	420.02	0.0075	0.006695
Ni	60	3	He	0.369	0.0094	510.04	0.0075	0.006695
Cu	63	3	He	0.289	0.0094	510.03	0.0216	0.003198
Cu	63	3	He	0.165	0.0067	360.02	0.0216	0.003198
Cu	63	3	He	0.135	0.0061	330.02	0.0216	0.003198
Zn	66	3	He	0.566	0.0044	240.01	0.0026	0.002954
Zn	66	3	He	0.16	0.0034	180.01	0.0026	0.002954
Zn	66	3	He	0.355	0.0039	210.01	0.0026	0.002954
As	75	3	He	0.619	0.0017	92.00	0.002	0.0004943
As	75	3	He	0.438	0.0013	72.00	0.002	0.0004943
As	75	3	He	0.316	0.0011	60.00	0.002	0.0004943
Sr	88	3	He	0.094	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.005	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	-0.014	0.0006	30.00	0.0081	0.0006852
Mo	98	3	He	0.044	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.053	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.047	0.0015	80.00	0.0205	0.0005587
Ag	107	3	He	0.002	0.0005	30.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	0.021	0.0013	70.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Sn	120	3	He	0.154	0.0156	860.06	0.0146	0.01334
Sn	120	3	He	-0.065	0.0124	680.04	0.0146	0.01334
Sn	120	3	He	0.146	0.0155	810.06	0.0146	0.01334
Sb	121	3	He	0.214	0.0045	250.01	0.0142	0.001484
Sb	121	3	He	0.037	0.002	110.00	0.0142	0.001484
Sb	121	3	He	0.164	0.0038	200.01	0.0142	0.001484
Ba	137	3	He	0.194	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.037	0.0005	30.00	0.0046	0.000374
Ba	137	3	He	0.209	0.0013	70.00	0.0046	0.000374
Tl	205	3	He	0.104	0.0031	600.04	0.0282	0.00021
Tl	205	3	He	0.103	0.0031	600.03	0.0282	0.00021
Tl	205	3	He	0.095	0.0029	550.03	0.0282	0.00021
Pb	208	3	He	0.051	0.0029	270.01	0.0372	0.0009772
Pb	208	3	He	0.03	0.0021	190.01	0.0372	0.0009772
Pb	208	3	He	0.034	0.0023	270.01	0.0372	0.0009772
U	238	3	He	0.038	0.0017	320.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
U	238	3	He	0.018	0.0008	160.01	0.0417	8.729E-05
Sc	45	1	No Gas			1700616.22		
Sc	45	1	No Gas			1720051.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1737233.10		
Ge	72	1	No Gas			880104.75		
Ge	72	1	No Gas			875061.08		
Ge	72	1	No Gas			897436.71		
Sc	45	2	H2			126607.41		
Sc	45	2	H2			127282.85		
Sc	45	2	H2			129057.96		
Ge	72	2	H2			106222.92		
Ge	72	2	H2			105960.68		
Ge	72	2	H2			108046.48		
In	115	2	H2			266886.70		
In	115	2	H2			268738.47		
In	115	2	H2			270958.04		
Sc	45	3	He			27506.59		
Sc	45	3	He			27646.88		
Sc	45	3	He			27697.03		
Ge	72	3	He			54022.75		
Ge	72	3	He			53340.50		
Ge	72	3	He			54022.35		
In	115	3	He			55140.46		
In	115	3	He			54899.34		
In	115	3	He			52359.36		
Tb	159	3	He			242973.36		
Tb	159	3	He			245385.70		
Tb	159	3	He			242759.82		
Bi	209	3	He			190693.36		
Bi	209	3	He			191837.59		
Bi	209	3	He			190863.86		

Quantitation Report

Data File Name	121SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:19:25 PM
Sample Name	410-134023-A-4-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

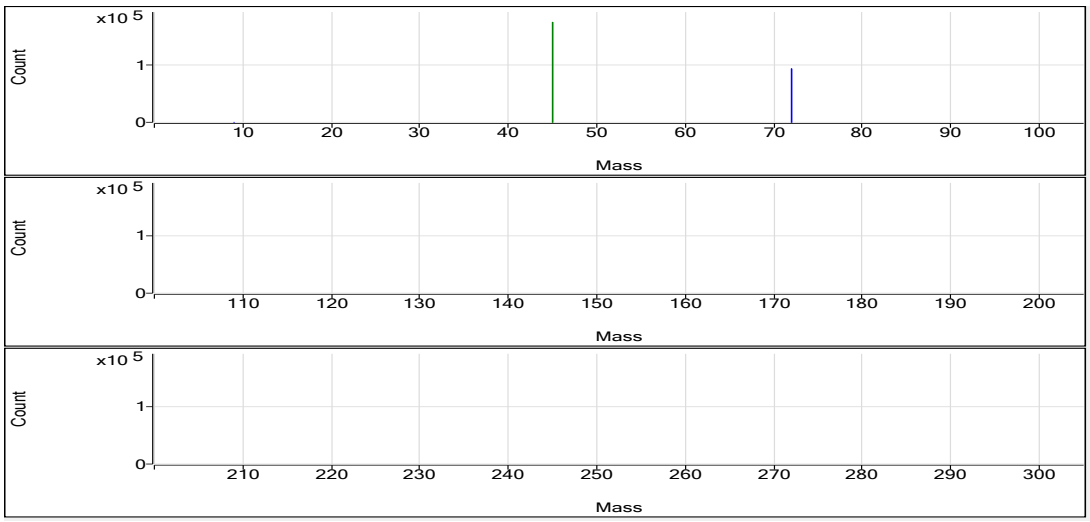
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.042	ppb	59.5	51.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.037	ppb	1.9	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	99.383	ppb	9.4	14791.17	0.5162	Pulse	0.1000	3
Mg	24	45	He	5.261	ppb	11.0	343.35	0.0120	Pulse	0.1000	3
Al	27	45	He	50.810	ppb	16.5	670.04	0.0234	Pulse	0.1000	3
K	39	45	He	37.535	ppb	50.8	11458.21	0.3992	Pulse	0.1000	3
Ca	44	45	He	1.549	ppb	712.8	76.67	0.0027	Pulse	0.1000	3
Ti	47	45	He	273.680	ppb	9.5	3607.25	0.1260	Pulse	0.1000	3
V	51	45	He	0.067	ppb	103.6	370.68	0.0129	Pulse	0.5000	3
Cr	52	45	He	-0.046	ppb	N/A	1913.54	0.0668	Pulse	0.1000	3
Mn	55	45	He	0.286	ppb	21.5	213.34	0.0074	Pulse	0.1000	3
Fe	57	45	He	2.007	ppb	110.9	146.68	0.0051	Pulse	0.1000	3
Co	59	45	He	0.118	ppb	16.2	316.68	0.0110	Pulse	0.1000	3
Ni	60	72	He	0.591	ppb	20.6	633.37	0.0111	Pulse	0.1000	3
Cu	63	72	He	0.357	ppb	23.3	623.37	0.0109	Pulse	0.1000	3
Zn	66	72	He	-0.213	ppb	N/A	136.67	0.0024	Pulse	0.1000	3
As	75	72	He	0.166	ppb	63.2	46.67	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.114	ppb	73.4	90.00	0.0016	Pulse	0.1000	3
Mo	98	115	He	0.025	ppb	40.6	60.00	0.0011	Pulse	0.1000	3
Ag	107	115	He	0.002	ppb	317.4	30.00	0.0005	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	1773.067	ppb	2.7	1457294.35	25.9287	Pulse	0.1000	3
Sb	121	115	He	0.061	ppb	109.9	133.34	0.0024	Pulse	0.1000	3
Ba	137	115	He	0.202	ppb	28.3	73.33	0.0013	Pulse	0.1000	3
Tl	205	209	He	0.022	ppb	6.7	160.01	0.0008	Pulse	0.1000	3
Pb	208	209	He	0.074	ppb	6.2	726.70	0.0037	Pulse	0.1000	3
U	238	209	He	0.014	ppb	10.4	130.01	0.0007	Pulse	0.1000	3

ISTD Table:

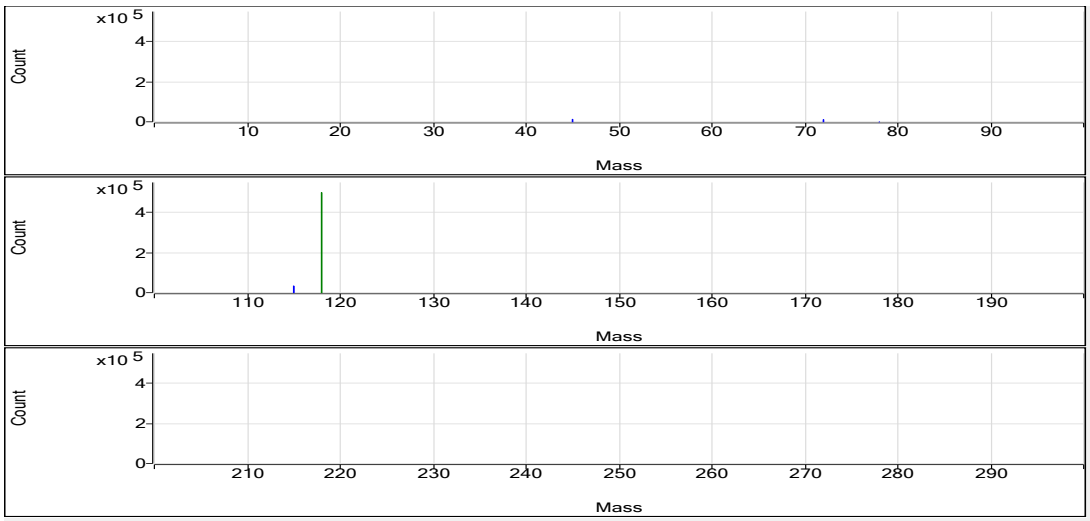
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1735852.63	0.6	98.6	Analog	0.1000	3
No Gas	Ge	72	929047.77	0.5	104.1	Pulse	0.1000	3
H2	Sc	45	130965.09	1.1	102.9	Pulse	0.1000	3
H2	Ge	72	115113.98	0.9	107.4	Pulse	0.1000	3
H2	In	115	339928.35	0.4	127.6	Pulse	0.1000	3
He	Sc	45	28682.31	3.0	100.6	Pulse	0.1000	3
He	Ge	72	57084.80	0.8	103.2	Pulse	0.1000	3
He	In	115	56231.70	2.8	104.8	Pulse	0.1000	3
He	Tb	159	250700.77	1.3	102.0	Pulse	0.1000	3
He	Bi	209	194872.74	1.4	102.1	Pulse	0.1000	3

No Gas

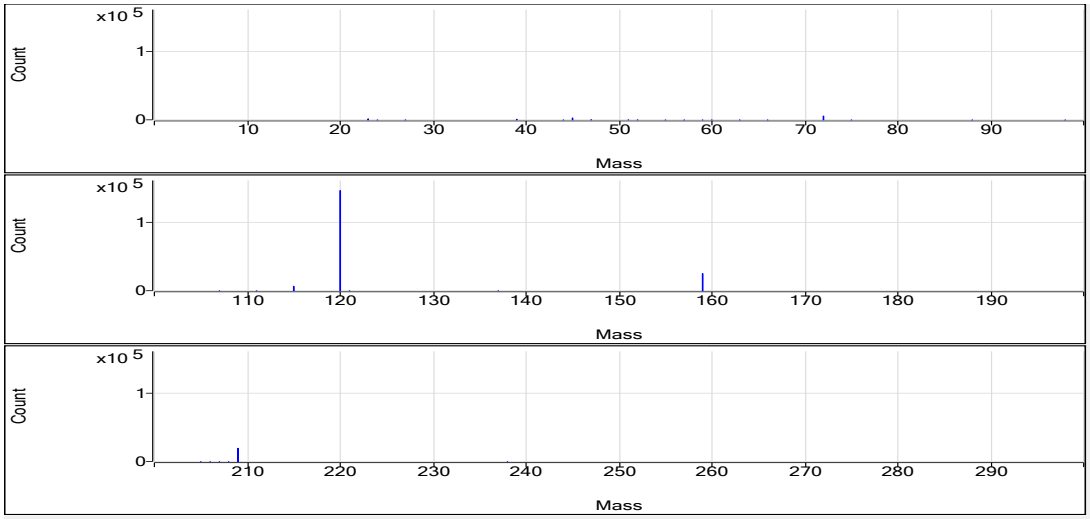


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.07	0	70.00	0.0004	1.287E-05
Be	9	1	No Gas	0.02	0	36.00	0.0004	1.287E-05
Be	9	1	No Gas	0.037	0	48.00	0.0004	1.287E-05
Se	78	2	H2	0.036	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.037	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.037	0	3.33	0.0004	1.451E-05
Na	23	3	He	89.161	0.4903	14547.72	0.0025	0.2648
Na	23	3	He	101.367	0.5212	14737.70	0.0025	0.2648
Na	23	3	He	107.622	0.537	15088.08	0.0025	0.2648
Mg	24	3	He	5.125	0.0118	350.02	0.0013	0.005032
Mg	24	3	He	4.762	0.0113	320.02	0.0013	0.005032
Mg	24	3	He	5.895	0.0128	360.02	0.0013	0.005032
Al	27	3	He	41.809	0.0195	580.03	0.0004	0.001519
Al	27	3	He	52.243	0.024	680.04	0.0004	0.001519
Al	27	3	He	58.378	0.0267	750.05	0.0004	0.001519
K	39	3	He	52.828	0.4141	12285.59	0.001	0.3627
K	39	3	He	43.582	0.4051	11454.88	0.001	0.3627
K	39	3	He	16.194	0.3785	10634.16	0.001	0.3627
Ca	44	3	He	13.757	0.0034	100.00	0.0001	0.002571
Ca	44	3	He	-7.736	0.0021	60.00	0.0001	0.002571
Ca	44	3	He	-1.375	0.0025	70.00	0.0001	0.002571
Ti	47	3	He	243.753	0.1122	3330.49	0.0005	0.0002328
Ti	47	3	He	291.193	0.134	3790.64	0.0005	0.0002328
Ti	47	3	He	286.094	0.1317	3700.62	0.0005	0.0002328
V	51	3	He	0.003	0.0117	346.01	0.0201	0.0116
V	51	3	He	0.141	0.0144	408.01	0.0201	0.0116
V	51	3	He	0.057	0.0127	358.01	0.0201	0.0116
Cr	52	3	He	-0.338	0.0593	1760.18	0.0257	0.06801
Cr	52	3	He	0.244	0.0743	2100.25	0.0257	0.06801
Cr	52	3	He	-0.043	0.0669	1880.20	0.0257	0.06801
Mn	55	3	He	0.223	0.0067	200.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.346	0.0081	230.01	0.0113	0.004215
Mn	55	3	He	0.288	0.0075	210.01	0.0113	0.004215
Fe	57	3	He	1.215	0.0047	140.01	0.0005	0.004099
Fe	57	3	He	0.285	0.0042	120.01	0.0005	0.004099
Fe	57	3	He	4.521	0.0064	180.01	0.0005	0.004099
Co	59	3	He	0.126	0.0115	340.02	0.0518	0.004913
Co	59	3	He	0.096	0.0099	280.01	0.0518	0.004913
Co	59	3	He	0.132	0.0117	330.01	0.0518	0.004913
Ni	60	3	He	0.72	0.0121	690.04	0.0075	0.006695
Ni	60	3	He	0.573	0.011	620.04	0.0075	0.006695
Ni	60	3	He	0.479	0.0103	590.03	0.0075	0.006695
Cu	63	3	He	0.435	0.0126	720.05	0.0216	0.003198
Cu	63	3	He	0.27	0.009	510.02	0.0216	0.003198
Cu	63	3	He	0.368	0.0111	640.04	0.0216	0.003198
Zn	66	3	He	0.073	0.0031	180.01	0.0026	0.002954
Zn	66	3	He	-0.316	0.0021	120.00	0.0026	0.002954
Zn	66	3	He	-0.395	0.0019	110.00	0.0026	0.002954
As	75	3	He	0.194	0.0009	50.00	0.002	0.0004943
As	75	3	He	0.254	0.001	56.00	0.002	0.0004943
As	75	3	He	0.05	0.0006	34.00	0.002	0.0004943
Sr	88	3	He	0.022	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.186	0.0022	120.01	0.0081	0.0006852
Sr	88	3	He	0.135	0.0018	100.00	0.0081	0.0006852
Mo	98	3	He	0.015	0.0009	50.00	0.0205	0.0005587
Mo	98	3	He	0.035	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.025	0.0011	60.00	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0003	20.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	0.01	0.0009	50.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	1730.391	25.3049	1462379.35	0.0146	0.01334
Sn	120	3	He	1823.935	26.6722	1457374.82	0.0146	0.01334
Sn	120	3	He	1764.874	25.8089	1452128.88	0.0146	0.01334
Sb	121	3	He	0.115	0.0031	180.01	0.0142	0.001484
Sb	121	3	He	-0.014	0.0013	70.00	0.0142	0.001484
Sb	121	3	He	0.083	0.0027	150.01	0.0142	0.001484
Ba	137	3	He	0.182	0.0012	70.00	0.0046	0.000374
Ba	137	3	He	0.157	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.266	0.0016	90.00	0.0046	0.000374
Tl	205	3	He	0.021	0.0008	160.01	0.0282	0.00021
Tl	205	3	He	0.02	0.0008	150.01	0.0282	0.00021
Tl	205	3	He	0.023	0.0009	170.01	0.0282	0.00021
Pb	208	3	He	0.07	0.0036	440.02	0.0372	0.0009772
Pb	208	3	He	0.079	0.0039	470.03	0.0372	0.0009772
Pb	208	3	He	0.073	0.0037	350.02	0.0372	0.0009772
U	238	3	He	0.014	0.0007	130.01	0.0417	8.729E-05
U	238	3	He	0.015	0.0007	140.01	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
Sc	45	1	No Gas			1733315.60		
Sc	45	1	No Gas			1727058.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1747183.41		
Ge	72	1	No Gas			923290.06		
Ge	72	1	No Gas			932531.70		
Ge	72	1	No Gas			931321.55		
Sc	45	2	H2			132669.79		
Sc	45	2	H2			129905.65		
Sc	45	2	H2			130319.82		
Ge	72	2	H2			116340.06		
Ge	72	2	H2			114274.00		
Ge	72	2	H2			114727.89		
In	115	2	H2			341402.26		
In	115	2	H2			339251.52		
In	115	2	H2			339131.28		
Sc	45	3	He			29670.92		
Sc	45	3	He			28278.19		
Sc	45	3	He			28097.81		
Ge	72	3	He			57215.80		
Ge	72	3	He			56562.44		
Ge	72	3	He			57476.16		
In	115	3	He			68026.94		
In	115	3	He			64841.88		
In	115	3	He			66429.45		
Tb	159	3	He			254345.02		
Tb	159	3	He			248706.72		
Tb	159	3	He			249050.58		
Bi	209	3	He			195988.59		
Bi	209	3	He			191777.81		
Bi	209	3	He			196851.83		

Quantitation Report

Data File Name	122SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:21:23 PM
Sample Name	410-134023-A-4-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

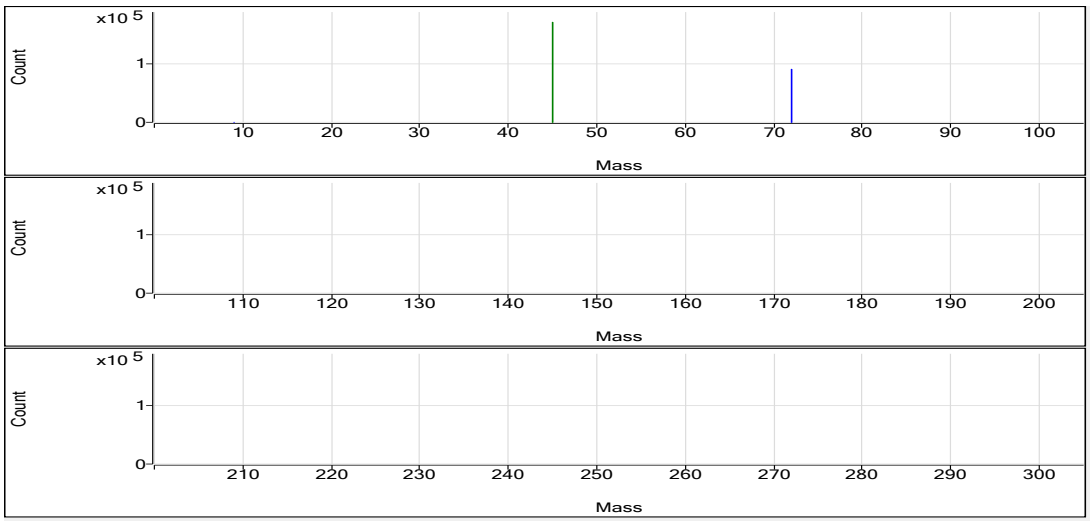
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.026	ppb	84.2	40.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.035	ppb	111.9	3.11	0.0000	Pulse	1.5000	3
Na	23	45	He	39.953	ppb	15.5	10540.75	0.3659	Pulse	0.1000	3
Mg	24	45	He	1.631	ppb	48.1	206.68	0.0072	Pulse	0.1000	3
Al	27	45	He	9.391	ppb	28.9	160.01	0.0056	Pulse	0.1000	3
K	39	45	He	4.896	ppb	815.6	10580.85	0.3675	Pulse	0.1000	3
Ca	44	45	He	15.449	ppb	133.3	100.00	0.0035	Pulse	0.1000	3
Ti	47	45	He	50.582	ppb	5.6	676.71	0.0235	Pulse	0.1000	3
V	51	45	He	0.128	ppb	67.3	409.34	0.0142	Pulse	0.5000	3
Cr	52	45	He	0.330	ppb	72.6	2203.58	0.0765	Pulse	0.1000	3
Mn	55	45	He	0.379	ppb	76.4	246.68	0.0085	Pulse	0.1000	3
Fe	57	45	He	7.744	ppb	69.9	233.34	0.0081	Pulse	0.1000	3
Co	59	45	He	0.081	ppb	35.7	263.35	0.0091	Pulse	0.1000	3
Ni	60	72	He	0.552	ppb	64.0	606.70	0.0108	Pulse	0.1000	3
Cu	63	72	He	0.198	ppb	9.2	420.02	0.0075	Pulse	0.1000	3
Zn	66	72	He	0.999	ppb	52.8	313.35	0.0056	Pulse	0.1000	3
As	75	72	He	0.184	ppb	41.9	48.00	0.0009	Pulse	0.5000	3
Sr	88	115	He	0.089	ppb	16.6	76.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.008	ppb	179.4	40.00	0.0007	Pulse	0.1000	3
Ag	107	115	He	-0.003	ppb	N/A	16.67	0.0003	Pulse	0.1000	3
Cd	111	115	He	0.005	ppb	150.3	2.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	349.015	ppb	1.1	279063.19	5.1146	Pulse	0.1000	3
Sb	121	115	He	0.063	ppb	78.4	130.00	0.0024	Pulse	0.1000	3
Ba	137	115	He	0.104	ppb	152.2	46.67	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.026	ppb	65.4	183.35	0.0010	Pulse	0.1000	3
Pb	208	209	He	0.076	ppb	15.8	730.04	0.0038	Pulse	0.1000	3
U	238	209	He	0.006	ppb	31.0	66.67	0.0003	Pulse	0.1000	3

ISTD Table:

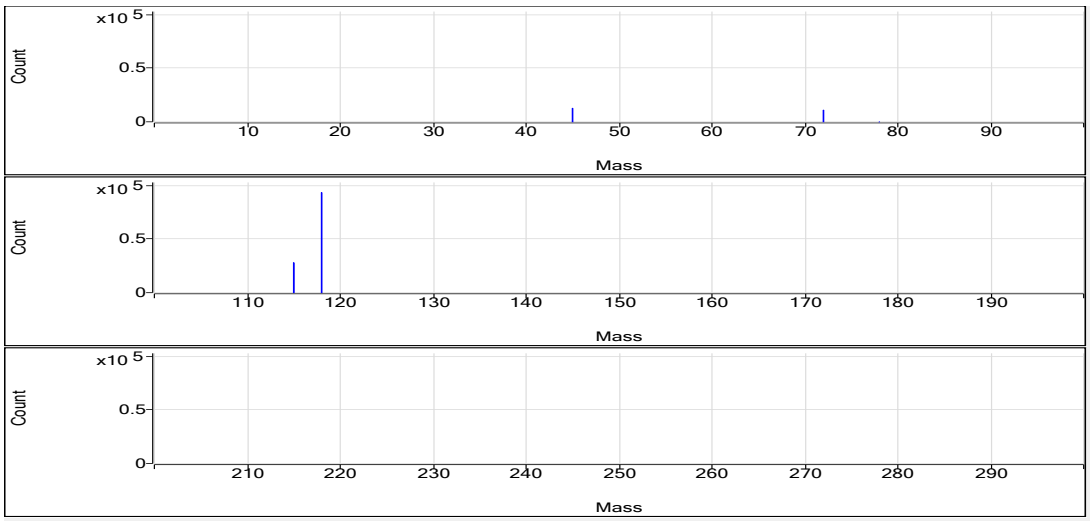
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1719187.63	0.6	97.6	Analog	0.1000	3
No Gas	Ge	72	912457.95	0.6	102.2	Pulse	0.1000	3
H2	Sc	45	127841.25	0.5	100.4	Pulse	0.1000	3
H2	Ge	72	110632.82	0.2	103.2	Pulse	0.1000	3
H2	In	115	281169.64	0.7	105.6	Pulse	0.1000	3
He	Sc	45	28829.09	2.3	101.1	Pulse	0.1000	3
He	Ge	72	56254.94	1.4	101.7	Pulse	0.1000	3
He	In	115	54569.13	1.8	101.7	Pulse	0.1000	3
He	Tb	159	247178.28	0.8	100.6	Pulse	0.1000	3
He	Bi	209	192646.27	1.3	100.9	Pulse	0.1000	3

No Gas

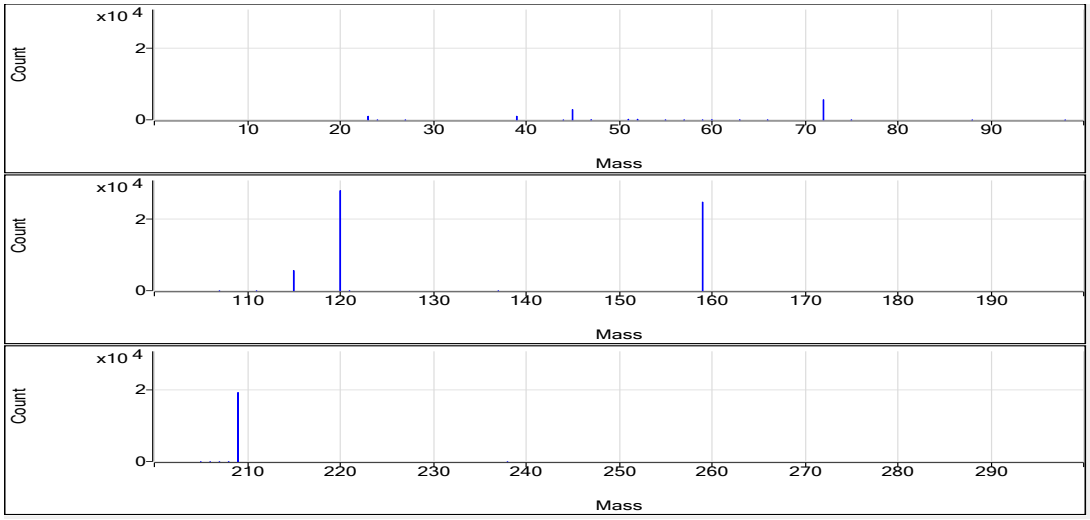


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.047	0	54.00	0.0004	1.287E-05
Be	9	1	No Gas	0.003	0	24.00	0.0004	1.287E-05
Be	9	1	No Gas	0.029	0	42.00	0.0004	1.287E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.04	0	3.33	0.0004	1.451E-05
Se	78	2	H2	0.071	0	4.67	0.0004	1.451E-05
Na	23	3	He	46.27	0.3818	10744.23	0.0025	0.2648
Na	23	3	He	33.935	0.3507	10333.83	0.0025	0.2648
Na	23	3	He	39.653	0.3651	10544.18	0.0025	0.2648
Mg	24	3	He	2.381	0.0082	230.01	0.0013	0.005032
Mg	24	3	He	0.815	0.0061	180.01	0.0013	0.005032
Mg	24	3	He	1.697	0.0073	210.01	0.0013	0.005032
Al	27	3	He	12.138	0.0068	190.01	0.0004	0.001519
Al	27	3	He	6.708	0.0044	130.00	0.0004	0.001519
Al	27	3	He	9.327	0.0055	160.01	0.0004	0.001519
K	39	3	He	50.056	0.4114	11574.96	0.001	0.3627
K	39	3	He	-9.632	0.3534	10414.12	0.001	0.3627
K	39	3	He	-25.736	0.3377	9753.46	0.001	0.3627
Ca	44	3	He	4.682	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	2.469	0.0027	80.00	0.0001	0.002571
Ca	44	3	He	39.196	0.0048	140.01	0.0001	0.002571
Ti	47	3	He	49.765	0.0231	650.04	0.0005	0.0002328
Ti	47	3	He	48.231	0.0224	660.04	0.0005	0.0002328
Ti	47	3	He	53.75	0.0249	720.05	0.0005	0.0002328
V	51	3	He	0.031	0.0122	344.01	0.0201	0.0116
V	51	3	He	0.197	0.0155	458.01	0.0201	0.0116
V	51	3	He	0.157	0.0148	426.01	0.0201	0.0116
Cr	52	3	He	0.41	0.0786	2210.24	0.0257	0.06801
Cr	52	3	He	0.061	0.0696	2050.23	0.0257	0.06801
Cr	52	3	He	0.52	0.0814	2350.28	0.0257	0.06801
Mn	55	3	He	0.099	0.0053	150.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.676	0.0119	350.01	0.0113	0.004215
Mn	55	3	He	0.362	0.0083	240.01	0.0113	0.004215
Fe	57	3	He	2.415	0.0053	150.01	0.0005	0.004099
Fe	57	3	He	13.244	0.0109	320.01	0.0005	0.004099
Fe	57	3	He	7.574	0.008	230.01	0.0005	0.004099
Co	59	3	He	0.049	0.0075	210.01	0.0518	0.004913
Co	59	3	He	0.089	0.0095	280.01	0.0518	0.004913
Co	59	3	He	0.106	0.0104	300.02	0.0518	0.004913
Ni	60	3	He	0.541	0.0107	600.03	0.0075	0.006695
Ni	60	3	He	0.911	0.0135	750.05	0.0075	0.006695
Ni	60	3	He	0.205	0.0082	470.02	0.0075	0.006695
Cu	63	3	He	0.183	0.0071	400.02	0.0216	0.003198
Cu	63	3	He	0.218	0.0079	440.02	0.0216	0.003198
Cu	63	3	He	0.192	0.0073	420.02	0.0216	0.003198
Zn	66	3	He	1.527	0.007	390.02	0.0026	0.002954
Zn	66	3	He	0.995	0.0056	310.01	0.0026	0.002954
Zn	66	3	He	0.473	0.0042	240.01	0.0026	0.002954
As	75	3	He	0.259	0.001	56.00	0.002	0.0004943
As	75	3	He	0.189	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.105	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	0.094	0.0014	80.00	0.0081	0.0006852
Sr	88	3	He	0.072	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.1	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	-0.001	0.0005	30.00	0.0205	0.0005587
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.002	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Sn	120	3	He	347.443	5.0916	281011.01	0.0146	0.01334
Sn	120	3	He	346.38	5.0761	279742.34	0.0146	0.01334
Sn	120	3	He	353.222	5.1761	276436.23	0.0146	0.01334
Sb	121	3	He	0.112	0.0031	170.01	0.0142	0.001484
Sb	121	3	He	0.061	0.0024	130.00	0.0142	0.001484
Sb	121	3	He	0.014	0.0017	90.00	0.0142	0.001484
Ba	137	3	He	0.273	0.0016	90.00	0.0046	0.000374
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.018	0.0007	140.01	0.0282	0.00021
Tl	205	3	He	0.046	0.0015	290.02	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.01	0.0282	0.00021
Pb	208	3	He	0.07	0.0036	380.02	0.0372	0.0009772
Pb	208	3	He	0.067	0.0035	280.01	0.0372	0.0009772
Pb	208	3	He	0.089	0.0043	420.02	0.0372	0.0009772
U	238	3	He	0.006	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
Sc	45	1	No Gas			1719220.29		
Sc	45	1	No Gas			1709272.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1729070.29		
Ge	72	1	No Gas			916206.47		
Ge	72	1	No Gas			914744.28		
Ge	72	1	No Gas			906423.11		
Sc	45	2	H2			127172.04		
Sc	45	2	H2			127948.76		
Sc	45	2	H2			128402.95		
Ge	72	2	H2			110616.98		
Ge	72	2	H2			110868.42		
Ge	72	2	H2			110413.05		
In	115	2	H2			279048.18		
In	115	2	H2			281806.89		
In	115	2	H2			282653.86		
Sc	45	3	He			28137.73		
Sc	45	3	He			29470.26		
Sc	45	3	He			28879.29		
Ge	72	3	He			55950.33		
Ge	72	3	He			55639.48		
Ge	72	3	He			57175.02		
In	115	3	He			57158.04		
In	115	3	He			57068.18		
In	115	3	He			55341.51		
Tb	159	3	He			248268.49		
Tb	159	3	He			248399.55		
Tb	159	3	He			244866.79		
Bi	209	3	He			195337.50		
Bi	209	3	He			191970.33		
Bi	209	3	He			190630.99		

Quantitation Report

Data File Name	123SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:23:23 PM
Sample Name	410-134023-A-4-B
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

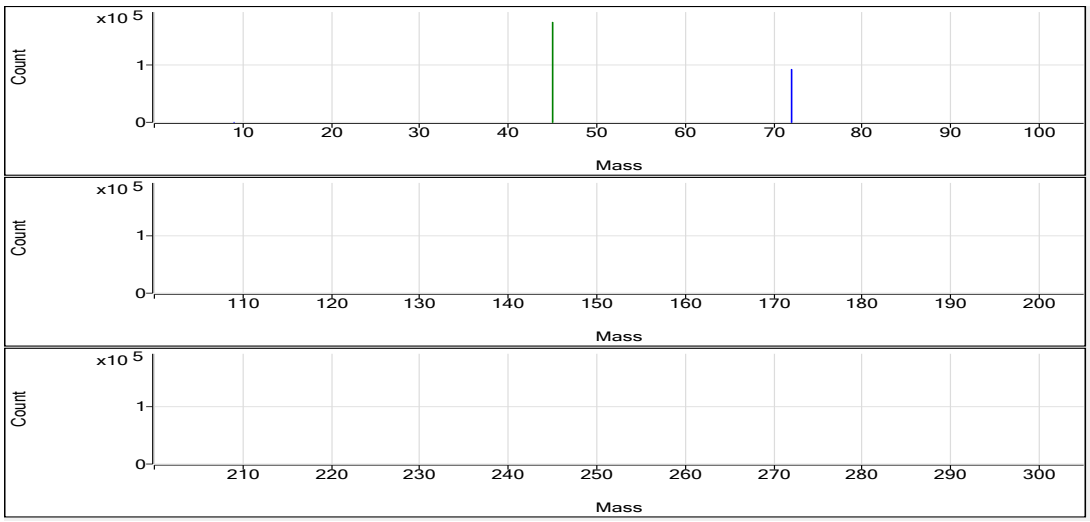
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.020	ppb	23.6	36.00	0.0000	Pulse	0.5000	3
Se	78	72	H2	-0.007	ppb	N/A	1.33	0.0000	Pulse	1.5000	3
Na	23	45	He	40.526	ppb	14.2	10397.29	0.3673	Pulse	0.1000	3
Mg	24	45	He	1.540	ppb	102.6	200.01	0.0071	Pulse	0.1000	3
Al	27	45	He	13.686	ppb	24.0	210.01	0.0074	Pulse	0.1000	3
K	39	45	He	18.700	ppb	213.8	10794.38	0.3809	Pulse	0.1000	3
Ca	44	45	He	4.291	ppb	360.0	80.00	0.0028	Pulse	0.1000	3
Ti	47	45	He	52.847	ppb	30.3	690.05	0.0245	Pulse	0.1000	3
V	51	45	He	0.026	ppb	314.7	342.68	0.0121	Pulse	0.5000	3
Cr	52	45	He	0.040	ppb	584.5	1953.54	0.0690	Pulse	0.1000	3
Mn	55	45	He	0.349	ppb	62.0	230.01	0.0082	Pulse	0.1000	3
Fe	57	45	He	-0.188	ppb	N/A	113.34	0.0040	Pulse	0.1000	3
Co	59	45	He	0.017	ppb	219.2	163.34	0.0058	Pulse	0.1000	3
Ni	60	72	He	-0.061	ppb	N/A	356.69	0.0062	Pulse	0.1000	3
Cu	63	72	He	0.138	ppb	34.1	353.35	0.0062	Pulse	0.1000	3
Zn	66	72	He	-0.171	ppb	N/A	143.34	0.0025	Pulse	0.1000	3
As	75	72	He	0.124	ppb	83.3	42.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.028	ppb	214.3	50.00	0.0009	Pulse	0.1000	3
Mo	98	115	He	0.032	ppb	57.9	66.67	0.0012	Pulse	0.1000	3
Ag	107	115	He	-0.005	ppb	N/A	13.33	0.0002	Pulse	0.1000	3
Cd	111	115	He	0.000	ppb	N/A	0.67	0.0000	Pulse	0.5000	3
Sn	120	115	He	355.397	ppb	1.2	286106.71	5.2079	Pulse	0.1000	3
Sb	121	115	He	0.036	ppb	105.8	110.00	0.0020	Pulse	0.1000	3
Ba	137	115	He	0.077	ppb	136.0	40.00	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.009	ppb	53.8	90.00	0.0005	Pulse	0.1000	3
Pb	208	209	He	0.037	ppb	32.6	456.69	0.0024	Pulse	0.1000	3
U	238	209	He	0.006	ppb	50.0	63.33	0.0003	Pulse	0.1000	3

ISTD Table:

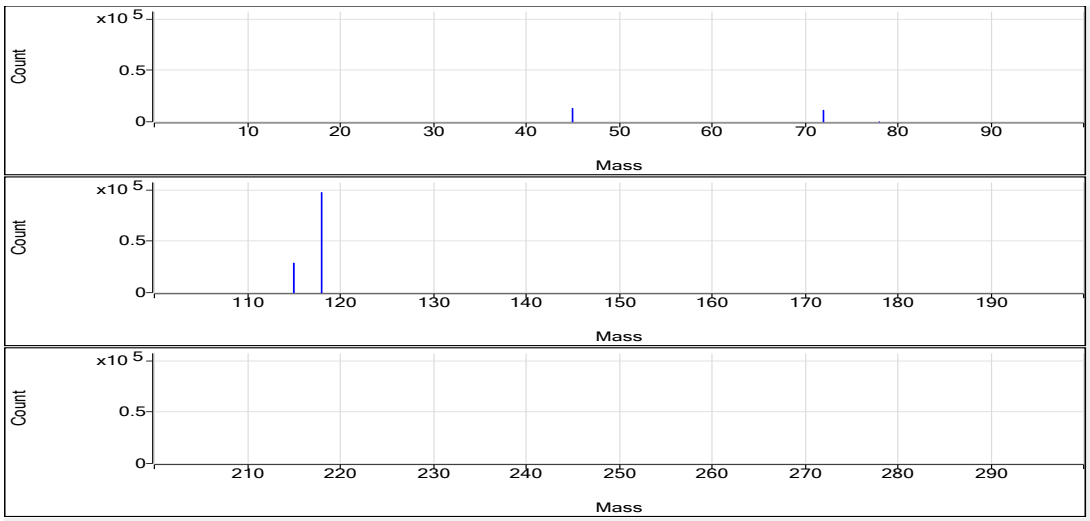
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1745716.22	1.2	99.1	Analog	0.1000	3
No Gas	Ge	72	923518.79	0.7	103.5	Pulse	0.1000	3
H2	Sc	45	131234.65	0.9	103.1	Pulse	0.1000	3
H2	Ge	72	113622.96	0.1	106.0	Pulse	0.1000	3
H2	In	115	288940.80	0.2	108.5	Pulse	0.1000	3
He	Sc	45	28324.99	3.2	99.4	Pulse	0.1000	3
He	Ge	72	57175.11	1.0	103.3	Pulse	0.1000	3
He	In	115	54937.91	0.1	102.4	Pulse	0.1000	3
He	Tb	159	249193.98	0.6	101.4	Pulse	0.1000	3
He	Bi	209	194023.02	0.7	101.7	Pulse	0.1000	3

No Gas

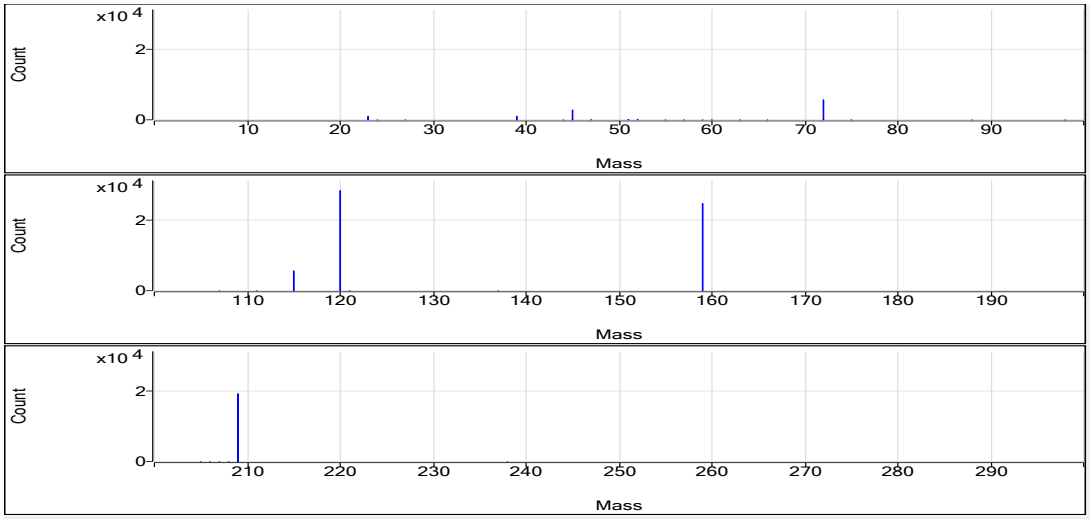


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.023	0	38.00	0.0004	1.287E-05
Be	9	1	No Gas	0.014	0	32.00	0.0004	1.287E-05
Be	9	1	No Gas	0.022	0	38.00	0.0004	1.287E-05
Se	78	2	H2	0.008	0	2.00	0.0004	1.451E-05
Se	78	2	H2	-0.007	0	1.33	0.0004	1.451E-05
Se	78	2	H2	-0.022	0	0.67	0.0004	1.451E-05
Na	23	3	He	34.307	0.3516	10153.77	0.0025	0.2648
Na	23	3	He	45.671	0.3803	10373.95	0.0025	0.2648
Na	23	3	He	41.599	0.37	10664.16	0.0025	0.2648
Mg	24	3	He	3.009	0.009	260.01	0.0013	0.005032
Mg	24	3	He	1.743	0.0073	200.01	0.0013	0.005032
Mg	24	3	He	-0.132	0.0049	140.01	0.0013	0.005032
Al	27	3	He	10.13	0.0059	170.01	0.0004	0.001519
Al	27	3	He	14.332	0.0077	210.01	0.0004	0.001519
Al	27	3	He	16.595	0.0087	250.01	0.0004	0.001519
K	39	3	He	62.37	0.4233	12225.54	0.001	0.3627
K	39	3	He	9.803	0.3723	10153.85	0.001	0.3627
K	39	3	He	-16.074	0.3471	10003.76	0.001	0.3627
Ca	44	3	He	-8.496	0.0021	60.00	0.0001	0.002571
Ca	44	3	He	-0.083	0.0026	70.00	0.0001	0.002571
Ca	44	3	He	21.45	0.0038	110.01	0.0001	0.002571
Ti	47	3	He	44.706	0.0208	600.03	0.0005	0.0002328
Ti	47	3	He	71.3	0.033	900.07	0.0005	0.0002328
Ti	47	3	He	42.536	0.0198	570.04	0.0005	0.0002328
V	51	3	He	-0.067	0.0102	296.01	0.0201	0.0116
V	51	3	He	0.087	0.0133	364.01	0.0201	0.0116
V	51	3	He	0.058	0.0128	368.01	0.0201	0.0116
Cr	52	3	He	0.156	0.072	2080.20	0.0257	0.06801
Cr	52	3	He	0.193	0.073	1990.23	0.0257	0.06801
Cr	52	3	He	-0.229	0.0621	1790.18	0.0257	0.06801
Mn	55	3	He	0.239	0.0069	200.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.599	0.011	300.01	0.0113	0.004215
Mn	55	3	He	0.21	0.0066	190.01	0.0113	0.004215
Fe	57	3	He	-1.924	0.0031	90.00	0.0005	0.004099
Fe	57	3	He	-0.129	0.004	110.00	0.0005	0.004099
Fe	57	3	He	1.488	0.0049	140.01	0.0005	0.004099
Co	59	3	He	-0.008	0.0045	130.00	0.0518	0.004913
Co	59	3	He	0.061	0.0081	220.01	0.0518	0.004913
Co	59	3	He	-0.001	0.0049	140.01	0.0518	0.004913
Ni	60	3	He	0.047	0.007	400.02	0.0075	0.006695
Ni	60	3	He	-0.04	0.0064	370.02	0.0075	0.006695
Ni	60	3	He	-0.191	0.0053	300.02	0.0075	0.006695
Cu	63	3	He	0.17	0.0069	390.02	0.0216	0.003198
Cu	63	3	He	0.084	0.005	290.01	0.0216	0.003198
Cu	63	3	He	0.161	0.0067	380.02	0.0216	0.003198
Zn	66	3	He	-0.453	0.0018	100.00	0.0026	0.002954
Zn	66	3	He	-0.071	0.0028	160.01	0.0026	0.002954
Zn	66	3	He	0.012	0.003	170.01	0.0026	0.002954
As	75	3	He	0.234	0.001	54.00	0.002	0.0004943
As	75	3	He	0.03	0.0006	32.00	0.002	0.0004943
As	75	3	He	0.107	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	0.095	0.0015	80.00	0.0081	0.0006852
Sr	88	3	He	0.005	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	-0.017	0.0005	30.00	0.0081	0.0006852
Mo	98	3	He	0.026	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.053	0.0016	90.00	0.0205	0.0005587
Mo	98	3	He	0.017	0.0009	50.00	0.0205	0.0005587
Ag	107	3	He	-0.01	0	0.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0007	40.00	0.043	0.0004367
Ag	107	3	He	-0.01	0	0.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	0.005	0	2.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	359.425	5.2667	289007.94	0.0146	0.01334
Sn	120	3	He	355.656	5.2117	286342.03	0.0146	0.01334
Sn	120	3	He	351.109	5.1452	282970.17	0.0146	0.01334
Sb	121	3	He	0.075	0.0026	140.01	0.0142	0.001484
Sb	121	3	He	0.036	0.002	110.00	0.0142	0.001484
Sb	121	3	He	-0.002	0.0015	80.00	0.0142	0.001484
Ba	137	3	He	0.117	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	0.156	0.0011	60.00	0.0046	0.000374
Tl	205	3	He	0.007	0.0004	80.00	0.0282	0.00021
Tl	205	3	He	0.015	0.0006	120.00	0.0282	0.00021
Tl	205	3	He	0.005	0.0004	70.00	0.0282	0.00021
Pb	208	3	He	0.049	0.0028	310.02	0.0372	0.0009772
Pb	208	3	He	0.036	0.0023	200.01	0.0372	0.0009772
Pb	208	3	He	0.025	0.0019	170.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.009	0.0005	90.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
Sc	45	1	No Gas			1740233.72		
Sc	45	1	No Gas			1728534.97		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1768379.97		
Ge	72	1	No Gas			927692.56		
Ge	72	1	No Gas			915663.50		
Ge	72	1	No Gas			927200.30		
Sc	45	2	H2			131620.72		
Sc	45	2	H2			129896.00		
Sc	45	2	H2			132187.23		
Ge	72	2	H2			113539.37		
Ge	72	2	H2			113760.72		
Ge	72	2	H2			113568.80		
In	115	2	H2			288668.43		
In	115	2	H2			288678.10		
In	115	2	H2			289475.87		
Sc	45	3	He			28879.34		
Sc	45	3	He			27276.23		
Sc	45	3	He			28819.39		
Ge	72	3	He			56753.43		
Ge	72	3	He			57837.97		
Ge	72	3	He			56933.94		
In	115	3	He			56897.15		
In	115	3	He			56947.05		
In	115	3	He			56977.77		
Tb	159	3	He			248289.59		
Tb	159	3	He			250884.27		
Tb	159	3	He			248408.08		
Bi	209	3	He			195503.32		
Bi	209	3	He			193734.24		
Bi	209	3	He			192831.50		

Quantitation Report

Data File Name	124SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:25:22 PM
Sample Name	410-134023-A-4-B @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

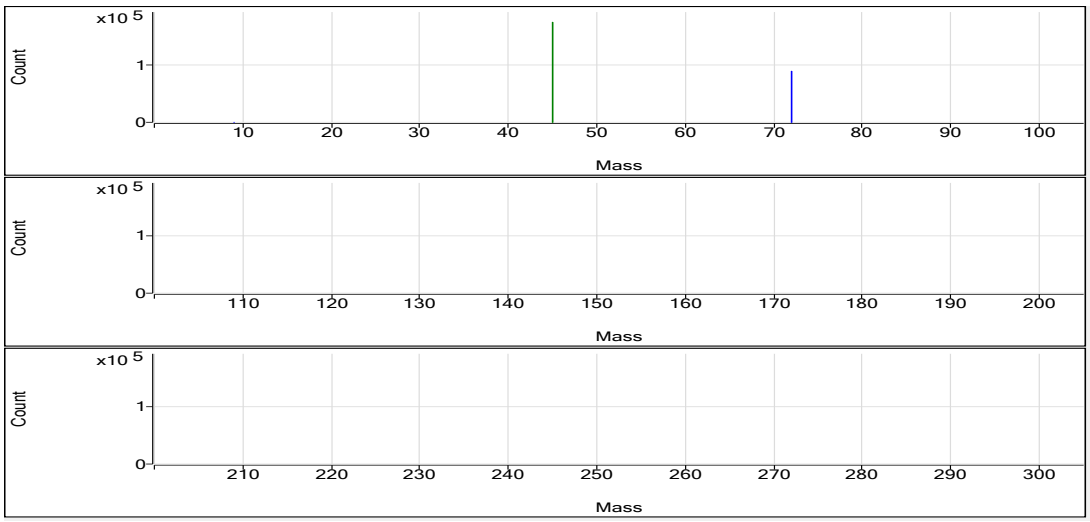
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.016	ppb	53.4	33.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.010	ppb	161.9	2.00	0.0000	Pulse	1.5000	3
Na	23	45	He	32.001	ppb	16.6	9730.19	0.3458	Pulse	0.1000	3
Mg	24	45	He	0.320	ppb	184.9	153.34	0.0055	Pulse	0.1000	3
Al	27	45	He	2.260	ppb	127.5	70.00	0.0025	Pulse	0.1000	3
K	39	45	He	6.672	ppb	491.2	10387.29	0.3692	Pulse	0.1000	3
Ca	44	45	He	29.261	ppb	92.1	120.01	0.0043	Pulse	0.1000	3
Ti	47	45	He	11.863	ppb	23.0	160.01	0.0057	Pulse	0.1000	3
V	51	45	He	0.082	ppb	82.2	372.68	0.0132	Pulse	0.5000	3
Cr	52	45	He	0.530	ppb	34.2	2296.92	0.0816	Pulse	0.1000	3
Mn	55	45	He	0.246	ppb	42.8	196.68	0.0070	Pulse	0.1000	3
Fe	57	45	He	1.029	ppb	122.3	130.01	0.0046	Pulse	0.1000	3
Co	59	45	He	0.006	ppb	295.7	146.68	0.0052	Pulse	0.1000	3
Ni	60	72	He	0.293	ppb	25.8	496.69	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.141	ppb	11.3	350.02	0.0063	Pulse	0.1000	3
Zn	66	72	He	0.389	ppb	97.8	223.34	0.0040	Pulse	0.1000	3
As	75	72	He	0.113	ppb	21.9	40.00	0.0007	Pulse	0.5000	3
Sr	88	115	He	0.068	ppb	72.1	66.67	0.0012	Pulse	0.1000	3
Mo	98	115	He	0.000	ppb	N/A	30.00	0.0006	Pulse	0.1000	3
Ag	107	115	He	0.000	ppb	N/A	23.33	0.0004	Pulse	0.1000	3
Cd	111	115	He	-0.003	ppb	0.0	0.00	0.0000	Pulse	0.5000	3
Sn	120	115	He	68.916	ppb	1.9	55180.55	1.0206	Pulse	0.1000	3
Sb	121	115	He	0.026	ppb	188.2	100.00	0.0019	Pulse	0.1000	3
Ba	137	115	He	-0.041	ppb	N/A	10.00	0.0002	Pulse	0.1000	3
Tl	205	209	He	0.012	ppb	63.2	106.67	0.0006	Pulse	0.1000	3
Pb	208	209	He	0.032	ppb	35.3	413.35	0.0022	Pulse	0.1000	3
U	238	209	He	0.005	ppb	70.2	53.33	0.0003	Pulse	0.1000	3

ISTD Table:

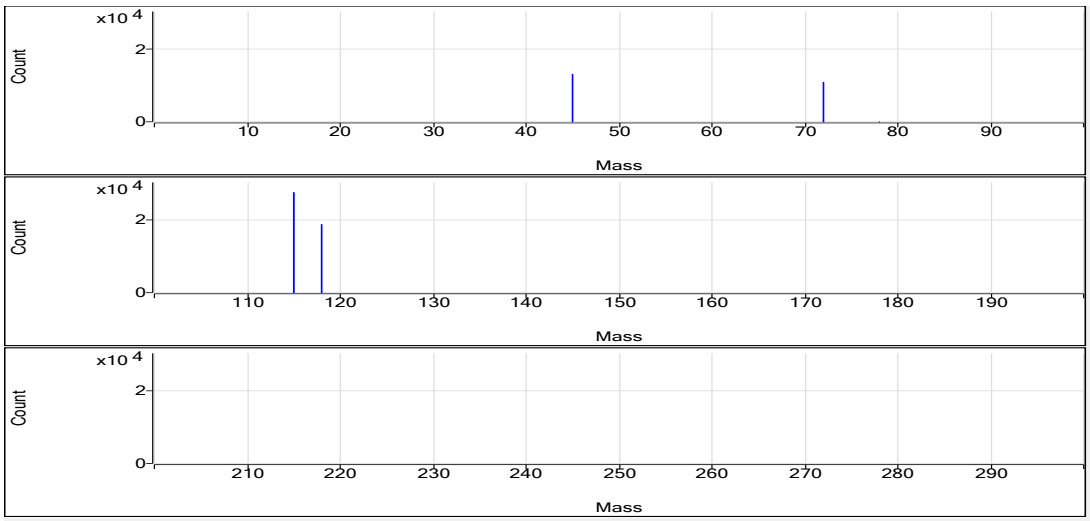
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1733172.48	0.6	98.4	Analog	0.1000	3
No Gas	Ge	72	886551.63	0.3	99.3	Pulse	0.1000	3
H2	Sc	45	130110.00	1.7	102.2	Pulse	0.1000	3
H2	Ge	72	108483.10	2.1	101.2	Pulse	0.1000	3
H2	In	115	273573.13	0.5	102.7	Pulse	0.1000	3
He	Sc	45	28134.60	0.9	98.7	Pulse	0.1000	3
He	Ge	72	55960.27	2.1	101.1	Pulse	0.1000	3
He	In	115	54074.83	2.3	100.7	Pulse	0.1000	3
He	Tb	159	246781.06	1.3	100.4	Pulse	0.1000	3
He	Bi	209	191304.20	1.3	100.2	Pulse	0.1000	3

No Gas

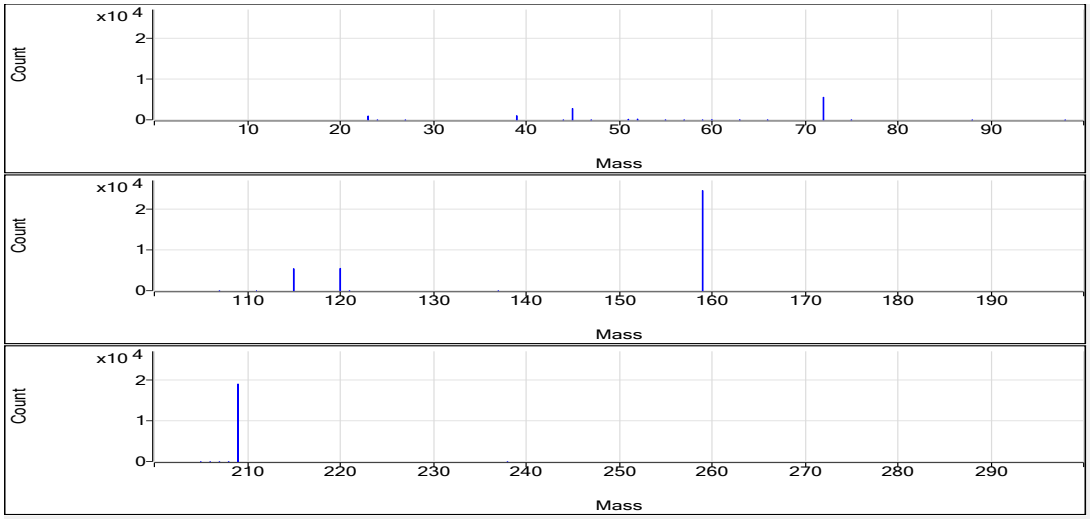


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.011	0	30.00	0.0004	1.287E-05
Be	9	1	No Gas	0.011	0	30.00	0.0004	1.287E-05
Be	9	1	No Gas	0.026	0	40.00	0.0004	1.287E-05
Se	78	2	H2	0.027	0	2.67	0.0004	1.451E-05
Se	78	2	H2	0.009	0	2.00	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Na	23	3	He	35.363	0.3543	10003.69	0.0025	0.2648
Na	23	3	He	34.777	0.3528	9993.71	0.0025	0.2648
Na	23	3	He	25.864	0.3302	9193.16	0.0025	0.2648
Mg	24	3	He	0.481	0.0057	160.01	0.0013	0.005032
Mg	24	3	He	-0.335	0.0046	130.01	0.0013	0.005032
Mg	24	3	He	0.815	0.0061	170.01	0.0013	0.005032
Al	27	3	He	3.869	0.0032	90.00	0.0004	0.001519
Al	27	3	He	-1.065	0.0011	30.00	0.0004	0.001519
Al	27	3	He	3.976	0.0032	90.00	0.0004	0.001519
K	39	3	He	40.887	0.4025	11364.67	0.001	0.3627
K	39	3	He	-24.428	0.339	9603.37	0.001	0.3627
K	39	3	He	3.556	0.3662	10193.82	0.001	0.3627
Ca	44	3	He	47.188	0.0053	150.01	0.0001	0.002571
Ca	44	3	He	-1.724	0.0025	70.00	0.0001	0.002571
Ca	44	3	He	42.32	0.005	140.01	0.0001	0.002571
Ti	47	3	He	9.512	0.0046	130.01	0.0005	0.0002328
Ti	47	3	He	14.857	0.0071	200.01	0.0005	0.0002328
Ti	47	3	He	11.22	0.0054	150.01	0.0005	0.0002328
V	51	3	He	0.107	0.0137	388.01	0.0201	0.0116
V	51	3	He	0.133	0.0143	404.01	0.0201	0.0116
V	51	3	He	0.006	0.0117	326.01	0.0201	0.0116
Cr	52	3	He	0.358	0.0772	2180.24	0.0257	0.06801
Cr	52	3	He	0.719	0.0865	2450.29	0.0257	0.06801
Cr	52	3	He	0.513	0.0812	2260.24	0.0257	0.06801
Mn	55	3	He	0.284	0.0074	210.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.127	0.0056	160.01	0.0113	0.004215
Mn	55	3	He	0.326	0.0079	220.01	0.0113	0.004215
Fe	57	3	He	1.684	0.005	140.01	0.0005	0.004099
Fe	57	3	He	-0.422	0.0039	110.00	0.0005	0.004099
Fe	57	3	He	1.824	0.005	140.01	0.0005	0.004099
Co	59	3	He	-0.013	0.0042	120.01	0.0518	0.004913
Co	59	3	He	0.021	0.006	170.01	0.0518	0.004913
Co	59	3	He	0.009	0.0054	150.01	0.0518	0.004913
Ni	60	3	He	0.367	0.0094	520.02	0.0075	0.006695
Ni	60	3	He	0.295	0.0089	510.03	0.0075	0.006695
Ni	60	3	He	0.216	0.0083	460.02	0.0075	0.006695
Cu	63	3	He	0.137	0.0062	340.02	0.0216	0.003198
Cu	63	3	He	0.159	0.0066	380.02	0.0216	0.003198
Cu	63	3	He	0.128	0.006	330.01	0.0216	0.003198
Zn	66	3	He	0.049	0.0031	170.01	0.0026	0.002954
Zn	66	3	He	0.8	0.0051	290.01	0.0026	0.002954
Zn	66	3	He	0.318	0.0038	210.01	0.0026	0.002954
As	75	3	He	0.118	0.0007	40.00	0.002	0.0004943
As	75	3	He	0.086	0.0007	38.00	0.002	0.0004943
As	75	3	He	0.135	0.0008	42.00	0.002	0.0004943
Sr	88	3	He	0.122	0.0017	90.00	0.0081	0.0006852
Sr	88	3	He	0.027	0.0009	50.00	0.0081	0.0006852
Sr	88	3	He	0.055	0.0011	60.00	0.0081	0.0006852
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Mo	98	3	He	-0.001	0.0005	30.00	0.0205	0.0005587
Mo	98	3	He	0	0.0006	30.00	0.0205	0.0005587
Ag	107	3	He	-0.001	0.0004	20.00	0.043	0.0004367
Ag	107	3	He	-0.006	0.0002	10.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Cd	111	3	He	-0.003	0	0.00	0.005	1.253E-05
Sn	120	3	He	70.292	1.0407	55923.53	0.0146	0.01334
Sn	120	3	He	67.687	1.0027	55582.36	0.0146	0.01334
Sn	120	3	He	68.769	1.0185	54035.75	0.0146	0.01334
Sb	121	3	He	-0.013	0.0013	70.00	0.0142	0.001484
Sb	121	3	He	0.01	0.0016	90.00	0.0142	0.001484
Sb	121	3	He	0.081	0.0026	140.01	0.0142	0.001484
Ba	137	3	He	-0.041	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	-0.042	0.0002	10.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Tl	205	3	He	0.004	0.0003	60.00	0.0282	0.00021
Tl	205	3	He	0.014	0.0006	120.01	0.0282	0.00021
Tl	205	3	He	0.019	0.0007	140.01	0.0282	0.00021
Pb	208	3	He	0.031	0.0021	240.01	0.0372	0.0009772
Pb	208	3	He	0.043	0.0026	330.02	0.0372	0.0009772
Pb	208	3	He	0.021	0.0017	160.01	0.0372	0.0009772
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
Sc	45	1	No Gas			1726836.38		
Sc	45	1	No Gas			1745881.54		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1726799.51		
Ge	72	1	No Gas			888768.27		
Ge	72	1	No Gas			883391.39		
Ge	72	1	No Gas			887495.22		
Sc	45	2	H2			128705.29		
Sc	45	2	H2			132718.53		
Sc	45	2	H2			128906.19		
Ge	72	2	H2			106303.36		
Ge	72	2	H2			110878.11		
Ge	72	2	H2			108267.84		
In	115	2	H2			271878.37		
In	115	2	H2			274507.01		
In	115	2	H2			274334.02		
Sc	45	3	He			28238.03		
Sc	45	3	He			28328.34		
Sc	45	3	He			27837.44		
Ge	72	3	He			55146.50		
Ge	72	3	He			57335.96		
Ge	72	3	He			55398.35		
In	115	3	He			54126.15		
In	115	3	He			55823.50		
In	115	3	He			53433.64		
Tb	159	3	He			244776.11		
Tb	159	3	He			250435.29		
Tb	159	3	He			245131.77		
Bi	209	3	He			191048.12		
Bi	209	3	He			193866.56		
Bi	209	3	He			188997.91		

Quantitation Report

Data File Name	125SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:27:21 PM
Sample Name	410-134023-A-6-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

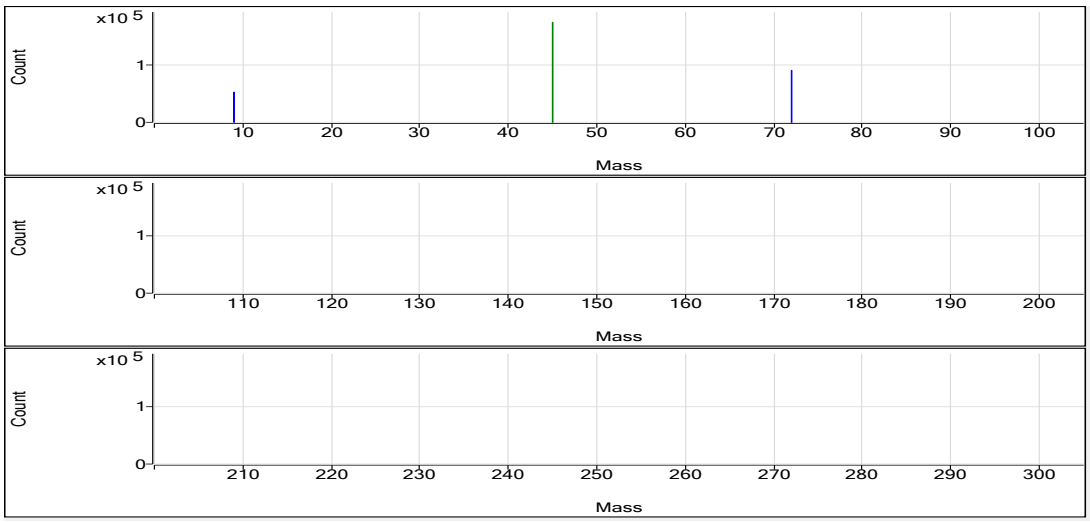
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	153.885	ppb	5.8	105956.98	0.0606	Pulse	0.5000	3
Se	78	72	H2	203.672	ppb	1.2	9091.34	0.0797	Pulse	1.5000	3
Na	23	45	He	37.123	ppb	18.7	10734.22	0.3587	Pulse	0.1000	3
Mg	24	45	He	1.657	ppb	70.5	216.68	0.0072	Pulse	0.1000	3
Al	27	45	He	1556.129	ppb	3.0	20137.68	0.6726	Pulse	0.1000	3
K	39	45	He	-5.294	ppb	N/A	10704.26	0.3576	Pulse	0.1000	3
Ca	44	45	He	852.624	ppb	1.7	1560.14	0.0521	Pulse	0.1000	3
Ti	47	45	He	-0.026	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	1478.476	ppb	2.2	888200.11	29.6671	Pulse	0.5000	3
Cr	52	45	He	855.184	ppb	2.8	659994.70	22.0472	Pulse	0.1000	3
Mn	55	45	He	864.346	ppb	2.2	293307.28	9.7968	Pulse	0.1000	3
Fe	57	45	He	1434.128	ppb	3.6	22034.07	0.7361	Pulse	0.1000	3
Co	59	45	He	734.595	ppb	2.6	1139638.65	38.0684	Pulse	0.1000	3
Ni	60	72	He	1443.936	ppb	1.4	615358.23	10.7640	Pulse	0.1000	3
Cu	63	72	He	597.842	ppb	2.0	737936.27	12.9092	Pulse	0.1000	3
Zn	66	72	He	660.184	ppb	3.0	99413.32	1.7392	Pulse	0.1000	3
As	75	72	He	463.308	ppb	1.7	51738.26	0.9051	Pulse	0.5000	3
Sr	88	115	He	356.105	ppb	2.8	160701.45	2.8898	Pulse	0.1000	3
Mo	98	115	He	289.149	ppb	2.4	329210.66	5.9194	Pulse	0.1000	3
Ag	107	115	He	200.461	ppb	6.6	480457.82	8.6296	Pulse	0.1000	3
Cd	111	115	He	817.213	ppb	1.5	227196.49	4.0847	Pulse	0.5000	3
Sn	120	115	He	0.750	ppb	15.1	1353.45	0.0243	Pulse	0.1000	3
Sb	121	115	He	310.278	ppb	2.0	245614.97	4.4162	Pulse	0.1000	3
Ba	137	115	He	1855.613	ppb	1.7	475521.67	8.5492	Pulse	0.1000	3
Tl	205	209	He	222.668	ppb	0.6	1242918.05	6.2845	Pulse	0.1000	3
Pb	208	209	He	1227.867	ppb	0.7	9043299.71	45.7239	Analog	0.1000	3
U	238	209	He	0.004	ppb	51.5	46.67	0.0002	Pulse	0.1000	3

ISTD Table:

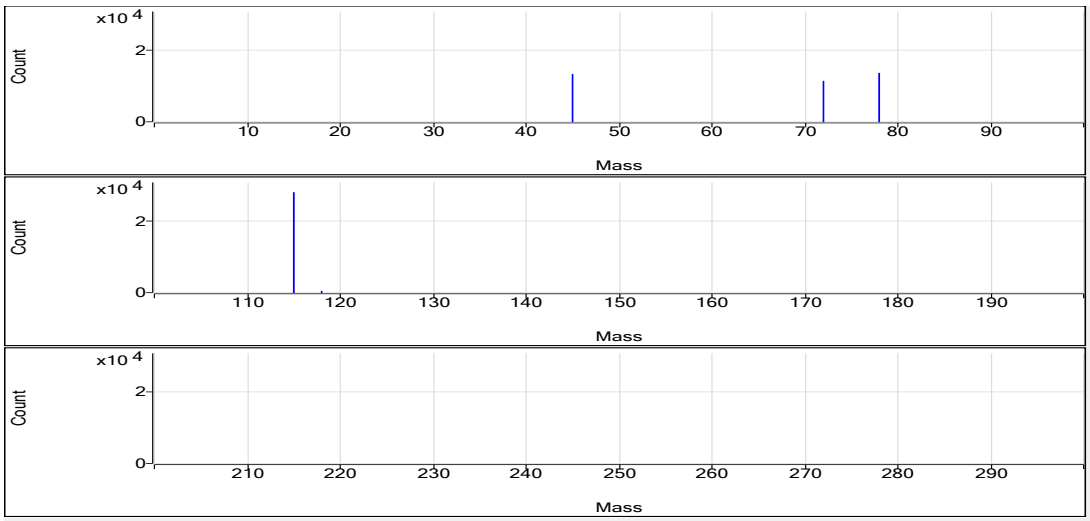
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1748266.33	1.3	99.3	Analog	0.1000	3
No Gas	Ge	72	907841.39	0.5	101.7	Pulse	0.1000	3
H2	Sc	45	133450.59	0.8	104.8	Pulse	0.1000	3
H2	Ge	72	114099.90	0.3	106.4	Pulse	0.1000	3
H2	In	115	280425.98	1.3	105.3	Pulse	0.1000	3
He	Sc	45	29951.48	2.9	105.1	Pulse	0.1000	3
He	Ge	72	57175.14	1.5	103.3	Pulse	0.1000	3
He	In	115	55632.52	2.2	103.7	Pulse	0.1000	3
He	Tb	159	253723.61	0.3	103.2	Pulse	0.1000	3
He	Bi	209	197779.97	0.6	103.6	Pulse	0.1000	3

No Gas

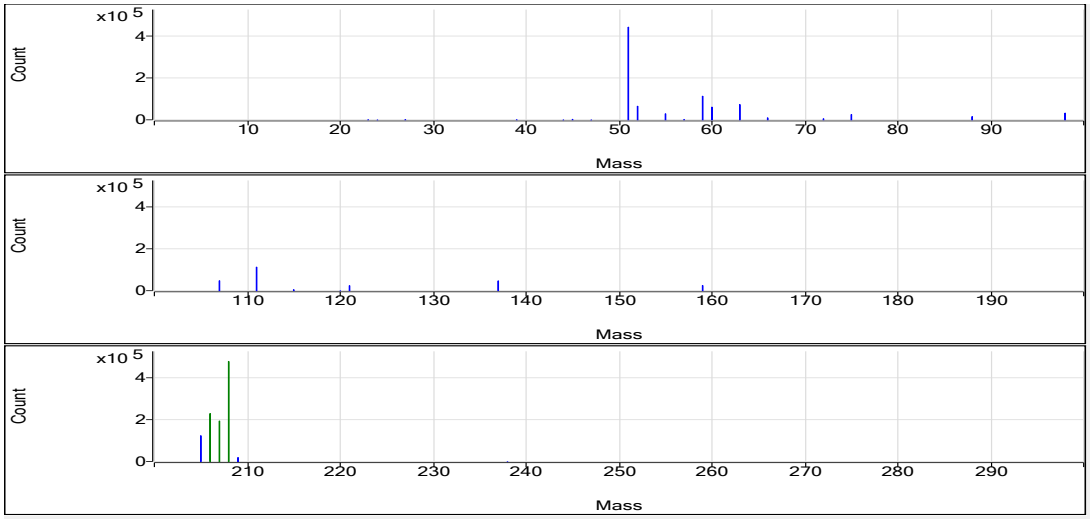


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	143.61	0.0566	99924.75	0.0004	1.287E-05
Be	9	1	No Gas	159.269	0.0627	108138.71	0.0004	1.287E-05
Be	9	1	No Gas	158.776	0.0626	109807.47	0.0004	1.287E-05
Se	78	2	H2	203.481	0.0796	9066.88	0.0004	1.451E-05
Se	78	2	H2	206.18	0.0807	9230.98	0.0004	1.451E-05
Se	78	2	H2	201.355	0.0788	8976.15	0.0004	1.451E-05
Na	23	3	He	42.781	0.373	10974.43	0.0025	0.2648
Na	23	3	He	29.38	0.3391	10494.06	0.0025	0.2648
Na	23	3	He	39.208	0.364	10734.16	0.0025	0.2648
Mg	24	3	He	0.308	0.0054	160.01	0.0013	0.005032
Mg	24	3	He	2.309	0.0081	250.01	0.0013	0.005032
Mg	24	3	He	2.354	0.0081	240.01	0.0013	0.005032
Al	27	3	He	1610.247	0.6959	20474.79	0.0004	0.001519
Al	27	3	He	1521.798	0.6578	20354.62	0.0004	0.001519
Al	27	3	He	1536.341	0.6641	19583.63	0.0004	0.001519
K	39	3	He	17.591	0.3798	11174.64	0.001	0.3627
K	39	3	He	-17.298	0.3459	10704.32	0.001	0.3627
K	39	3	He	-16.174	0.347	10233.83	0.001	0.3627
Ca	44	3	He	868.602	0.053	1560.14	0.0001	0.002571
Ca	44	3	He	840.347	0.0514	1590.13	0.0001	0.002571
Ca	44	3	He	848.922	0.0519	1530.14	0.0001	0.002571
Ti	47	3	He	0.233	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.197	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	1503.531	30.1697	887602.38	0.0201	0.0116
V	51	3	He	1441.215	28.9197	894882.00	0.0201	0.0116
V	51	3	He	1490.683	29.9119	882115.94	0.0201	0.0116
Cr	52	3	He	873.849	22.5269	662748.58	0.0257	0.06801
Cr	52	3	He	827.911	21.3462	660530.22	0.0257	0.06801
Cr	52	3	He	863.793	22.2684	656705.30	0.0257	0.06801
Mn	55	3	He	876.154	9.9306	292161.09	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	842.797	9.5527	295594.37	0.0113	0.004215
Mn	55	3	He	874.087	9.9072	292166.38	0.0113	0.004215
Fe	57	3	He	1452.742	0.7456	21937.28	0.0005	0.004099
Fe	57	3	He	1375.747	0.7063	21856.98	0.0005	0.004099
Fe	57	3	He	1473.895	0.7564	22307.95	0.0005	0.004099
Co	59	3	He	747.091	38.7159	1139035.69	0.0518	0.004913
Co	59	3	He	712.605	36.929	1142717.87	0.0518	0.004913
Co	59	3	He	744.09	38.5604	1137162.40	0.0518	0.004913
Ni	60	3	He	1461.329	10.8936	618253.74	0.0075	0.006695
Ni	60	3	He	1422.362	10.6033	616788.00	0.0075	0.006695
Ni	60	3	He	1448.118	10.7952	611032.96	0.0075	0.006695
Cu	63	3	He	601.735	12.9933	737416.32	0.0216	0.003198
Cu	63	3	He	584.138	12.6134	733711.63	0.0216	0.003198
Cu	63	3	He	607.654	13.121	742680.85	0.0216	0.003198
Zn	66	3	He	662.207	1.7446	99010.53	0.0026	0.002954
Zn	66	3	He	639.545	1.685	98013.23	0.0026	0.002954
Zn	66	3	He	678.799	1.7882	101216.21	0.0026	0.002954
As	75	3	He	468.89	0.916	51983.79	0.002	0.0004943
As	75	3	He	454.521	0.8879	51648.58	0.002	0.0004943
As	75	3	He	466.513	0.9113	51582.42	0.002	0.0004943
Sr	88	3	He	354.86	2.8797	160292.60	0.0081	0.0006852
Sr	88	3	He	346.866	2.8148	159985.65	0.0081	0.0006852
Sr	88	3	He	366.589	2.9749	161826.10	0.0081	0.0006852
Mo	98	3	He	293.367	6.0057	334295.97	0.0205	0.0005587
Mo	98	3	He	281.08	5.7542	327047.10	0.0205	0.0005587
Mo	98	3	He	293	5.9982	326288.90	0.0205	0.0005587
Ag	107	3	He	191.524	8.2449	458936.32	0.043	0.0004367
Ag	107	3	He	215.679	9.2847	527710.11	0.043	0.0004367
Ag	107	3	He	194.181	8.3593	454727.02	0.043	0.0004367
Cd	111	3	He	821.287	4.1051	228502.88	0.005	1.253E-05
Cd	111	3	He	803.33	4.0153	228218.30	0.005	1.253E-05
Cd	111	3	He	827.021	4.1338	224868.30	0.005	1.253E-05
Sn	120	3	He	0.685	0.0234	1300.11	0.0146	0.01334
Sn	120	3	He	0.881	0.0262	1490.14	0.0146	0.01334
Sn	120	3	He	0.685	0.0233	1270.11	0.0146	0.01334
Sb	121	3	He	312.413	4.4466	247510.99	0.0142	0.001484
Sb	121	3	He	303.144	4.3147	245232.61	0.0142	0.001484
Sb	121	3	He	315.276	4.4873	244101.32	0.0142	0.001484
Ba	137	3	He	1878.189	8.6532	481662.49	0.0046	0.000374
Ba	137	3	He	1819.897	8.3846	476552.45	0.0046	0.000374
Ba	137	3	He	1868.752	8.6097	468350.07	0.0046	0.000374
Tl	205	3	He	223.078	6.2961	1246817.56	0.0282	0.00021
Tl	205	3	He	221.169	6.2422	1240694.90	0.0282	0.00021
Tl	205	3	He	223.756	6.3152	1241241.70	0.0282	0.00021
Pb	208	3	He	1237.749	46.0919	4826022.74	0.0372	0.0009772
Pb	208	3	He	1222.406	45.5205	4791038.05	0.0372	0.0009772
Pb	208	3	He	1223.448	45.5593	4763515.87	0.0372	0.0009772
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.004	0.0003	50.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1766055.75		
Sc	45	1	No Gas			1723361.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1755381.85		
Ge	72	1	No Gas			909344.75		
Ge	72	1	No Gas			911420.92		
Ge	72	1	No Gas			902758.50		
Sc	45	2	H2			134243.46		
Sc	45	2	H2			132167.41		
Sc	45	2	H2			133940.91		
Ge	72	2	H2			113901.71		
Ge	72	2	H2			114445.69		
Ge	72	2	H2			113952.29		
In	115	2	H2			282123.73		
In	115	2	H2			282780.93		
In	115	2	H2			276373.28		
Sc	45	3	He			29420.35		
Sc	45	3	He			30943.66		
Sc	45	3	He			29490.42		
Ge	72	3	He			56753.77		
Ge	72	3	He			58169.37		
Ge	72	3	He			56602.29		
In	115	3	He			55672.20		
In	115	3	He			56846.92		
In	115	3	He			54406.85		
Tb	159	3	He			254326.44		
Tb	159	3	He			253940.09		
Tb	159	3	He			252904.31		
Bi	209	3	He			198031.27		
Bi	209	3	He			198760.04		
Bi	209	3	He			196548.59		

Quantitation Report

Data File Name	126SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:29:19 PM
Sample Name	410-134023-A-6-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

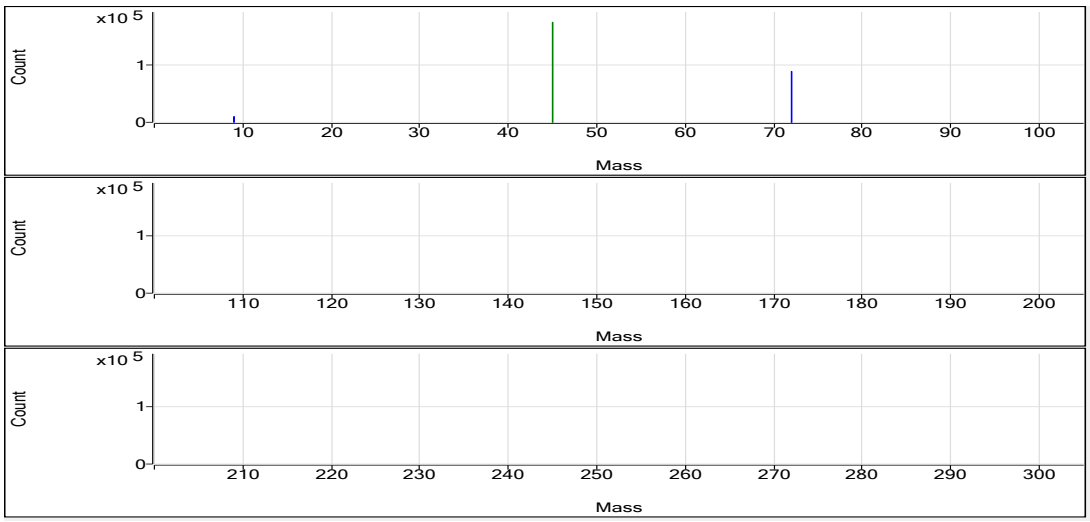
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	29.489	ppb	6.2	20433.33	0.0116	Pulse	0.5000	3
Se	78	72	H2	40.954	ppb	2.7	1763.66	0.0160	Pulse	1.5000	3
Na	23	45	He	23.555	ppb	12.1	9226.47	0.3244	Pulse	0.1000	3
Mg	24	45	He	2.495	ppb	11.1	236.68	0.0083	Pulse	0.1000	3
Al	27	45	He	319.777	ppb	7.2	3967.35	0.1394	Pulse	0.1000	3
K	39	45	He	9.832	ppb	355.2	10577.52	0.3723	Pulse	0.1000	3
Ca	44	45	He	205.881	ppb	11.0	413.36	0.0145	Pulse	0.1000	3
Ti	47	45	He	-0.002	ppb	N/A	6.67	0.0002	Pulse	0.1000	3
V	51	45	He	303.241	ppb	2.2	173313.87	6.0940	Pulse	0.5000	3
Cr	52	45	He	175.392	ppb	2.6	130127.87	4.5758	Pulse	0.1000	3
Mn	55	45	He	177.212	ppb	2.8	57214.00	2.0119	Pulse	0.1000	3
Fe	57	45	He	283.606	ppb	7.6	4230.77	0.1489	Pulse	0.1000	3
Co	59	45	He	151.659	ppb	1.7	223648.91	7.8632	Pulse	0.1000	3
Ni	60	72	He	293.537	ppb	1.2	121599.88	2.1935	Pulse	0.1000	3
Cu	63	72	He	119.787	ppb	2.0	143514.38	2.5891	Pulse	0.1000	3
Zn	66	72	He	134.362	ppb	1.1	19754.30	0.3563	Pulse	0.1000	3
As	75	72	He	93.929	ppb	2.1	10192.34	0.1839	Pulse	0.5000	3
Sr	88	115	He	71.257	ppb	1.9	31389.06	0.5788	Pulse	0.1000	3
Mo	98	115	He	58.621	ppb	1.6	65107.99	1.2005	Pulse	0.1000	3
Ag	107	115	He	36.956	ppb	2.6	86292.84	1.5913	Pulse	0.1000	3
Cd	111	115	He	163.465	ppb	0.9	44315.27	0.8171	Pulse	0.5000	3
Sn	120	115	He	0.718	ppb	22.1	1293.44	0.0238	Pulse	0.1000	3
Sb	121	115	He	66.343	ppb	0.8	51279.16	0.9454	Pulse	0.1000	3
Ba	137	115	He	374.015	ppb	1.9	93467.81	1.7235	Pulse	0.1000	3
Tl	205	209	He	45.344	ppb	1.4	245330.72	1.2799	Pulse	0.1000	3
Pb	208	209	He	239.925	ppb	0.8	1712718.61	8.9352	Pulse	0.1000	3
U	238	209	He	0.006	ppb	63.9	66.67	0.0003	Pulse	0.1000	3

ISTD Table:

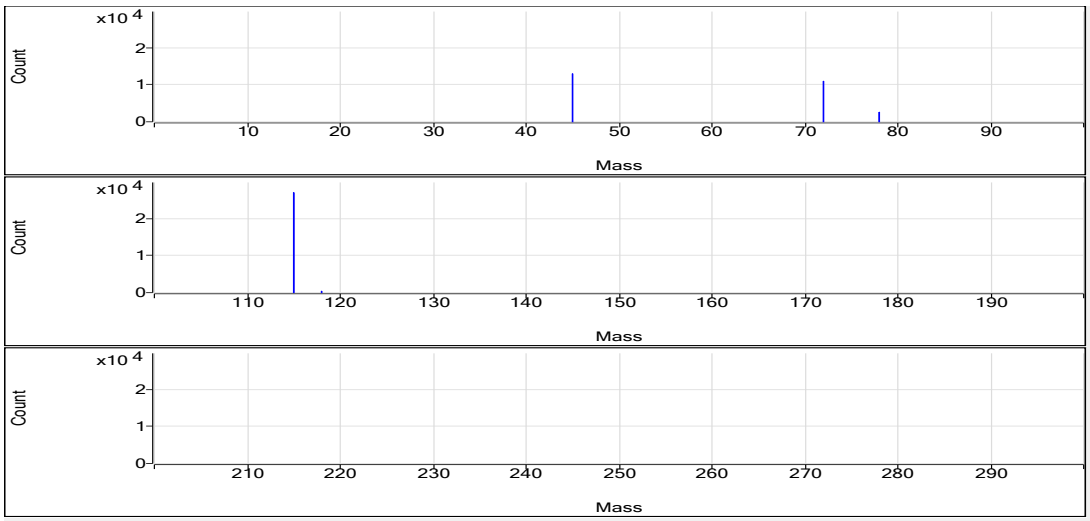
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1756925.39	0.8	99.8	Analog	0.1000	3
No Gas	Ge	72	894780.66	0.4	100.3	Pulse	0.1000	3
H2	Sc	45	130026.79	1.2	102.1	Pulse	0.1000	3
H2	Ge	72	110045.08	2.2	102.6	Pulse	0.1000	3
H2	In	115	270537.76	1.0	101.6	Pulse	0.1000	3
He	Sc	45	28448.52	2.1	99.8	Pulse	0.1000	3
He	Ge	72	55444.74	2.1	100.2	Pulse	0.1000	3
He	In	115	54241.10	1.4	101.1	Pulse	0.1000	3
He	Tb	159	248134.46	0.2	101.0	Pulse	0.1000	3
He	Bi	209	191692.51	1.0	100.4	Pulse	0.1000	3

No Gas

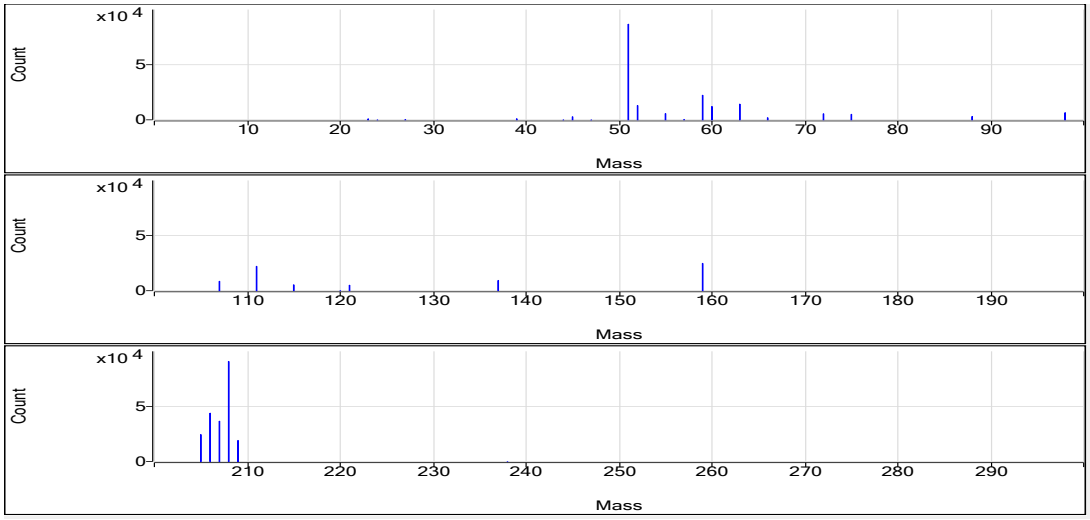


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	27.467	0.0108	19006.08	0.0004	1.287E-05
Be	9	1	No Gas	29.935	0.0118	20582.13	0.0004	1.287E-05
Be	9	1	No Gas	31.064	0.0122	21711.77	0.0004	1.287E-05
Se	78	2	H2	40.696	0.0159	1755.44	0.0004	1.451E-05
Se	78	2	H2	40.011	0.0157	1761.44	0.0004	1.451E-05
Se	78	2	H2	42.155	0.0165	1774.11	0.0004	1.451E-05
Na	23	3	He	26.858	0.3328	9273.18	0.0025	0.2648
Na	23	3	He	21.846	0.3201	9093.02	0.0025	0.2648
Na	23	3	He	21.962	0.3204	9313.20	0.0025	0.2648
Mg	24	3	He	2.713	0.0086	240.01	0.0013	0.005032
Mg	24	3	He	2.589	0.0084	240.01	0.0013	0.005032
Mg	24	3	He	2.182	0.0079	230.01	0.0013	0.005032
Al	27	3	He	300.241	0.131	3650.60	0.0004	0.001519
Al	27	3	He	345.081	0.1503	4270.78	0.0004	0.001519
Al	27	3	He	314.01	0.1369	3980.66	0.0004	0.001519
K	39	3	He	45.66	0.4071	11344.84	0.001	0.3627
K	39	3	He	7.947	0.3705	10524.06	0.001	0.3627
K	39	3	He	-24.109	0.3393	9863.66	0.001	0.3627
Ca	44	3	He	221.377	0.0154	430.03	0.0001	0.002571
Ca	44	3	He	179.957	0.013	370.02	0.0001	0.002571
Ca	44	3	He	216.309	0.0151	440.02	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.259	0.0004	10.00	0.0005	0.0002328
Ti	47	3	He	0.242	0.0003	10.00	0.0005	0.0002328
V	51	3	He	309.812	6.2259	173499.98	0.0201	0.0116
V	51	3	He	303.222	6.0937	173111.41	0.0201	0.0116
V	51	3	He	296.687	5.9626	173330.23	0.0201	0.0116
Cr	52	3	He	180.229	4.7001	130980.42	0.0257	0.06801
Cr	52	3	He	174.701	4.558	129485.55	0.0257	0.06801
Cr	52	3	He	171.245	4.4692	129917.64	0.0257	0.06801
Mn	55	3	He	181.288	2.0581	57354.60	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	178.765	2.0295	57655.67	0.0113	0.004215
Mn	55	3	He	171.582	1.9481	56631.73	0.0113	0.004215
Fe	57	3	He	299.231	0.1568	4370.78	0.0005	0.004099
Fe	57	3	He	292.696	0.1535	4360.83	0.0005	0.004099
Fe	57	3	He	258.891	0.1362	3960.71	0.0005	0.004099
Co	59	3	He	153.23	7.9446	221397.03	0.0518	0.004913
Co	59	3	He	153.079	7.9368	225471.87	0.0518	0.004913
Co	59	3	He	148.67	7.7083	224077.83	0.0518	0.004913
Ni	60	3	He	294.938	2.204	121388.13	0.0075	0.006695
Ni	60	3	He	296.296	2.2141	120723.10	0.0075	0.006695
Ni	60	3	He	289.377	2.1626	122688.42	0.0075	0.006695
Cu	63	3	He	120.936	2.6139	143965.70	0.0216	0.003198
Cu	63	3	He	121.338	2.6226	142996.59	0.0216	0.003198
Cu	63	3	He	117.086	2.5308	143580.84	0.0216	0.003198
Zn	66	3	He	133.525	0.3541	19504.11	0.0026	0.002954
Zn	66	3	He	136.074	0.3608	19674.14	0.0026	0.002954
Zn	66	3	He	133.485	0.354	20084.65	0.0026	0.002954
As	75	3	He	93.967	0.184	10131.63	0.002	0.0004943
As	75	3	He	95.88	0.1877	10233.70	0.002	0.0004943
As	75	3	He	91.939	0.18	10211.70	0.002	0.0004943
Sr	88	3	He	70.979	0.5765	31345.74	0.0081	0.0006852
Sr	88	3	He	70.036	0.5689	31255.15	0.0081	0.0006852
Sr	88	3	He	72.756	0.591	31566.30	0.0081	0.0006852
Mo	98	3	He	58.84	1.205	65514.04	0.0205	0.0005587
Mo	98	3	He	57.593	1.1795	64799.69	0.0205	0.0005587
Mo	98	3	He	59.43	1.2171	65010.24	0.0205	0.0005587
Ag	107	3	He	36.416	1.568	85250.24	0.043	0.0004367
Ag	107	3	He	36.381	1.5665	86064.80	0.043	0.0004367
Ag	107	3	He	38.072	1.6393	87563.48	0.043	0.0004367
Cd	111	3	He	162.703	0.8133	44215.64	0.005	1.253E-05
Cd	111	3	He	162.566	0.8126	44642.91	0.005	1.253E-05
Cd	111	3	He	165.126	0.8254	44087.25	0.005	1.253E-05
Sn	120	3	He	0.585	0.0219	1190.09	0.0146	0.01334
Sn	120	3	He	0.893	0.0264	1450.13	0.0146	0.01334
Sn	120	3	He	0.676	0.0232	1240.10	0.0146	0.01334
Sb	121	3	He	65.766	0.9372	50954.81	0.0142	0.001484
Sb	121	3	He	66.389	0.9461	51977.87	0.0142	0.001484
Sb	121	3	He	66.875	0.953	50904.79	0.0142	0.001484
Ba	137	3	He	377.024	1.7373	94455.15	0.0046	0.000374
Ba	137	3	He	365.978	1.6864	92652.52	0.0046	0.000374
Ba	137	3	He	379.043	1.7466	93295.75	0.0046	0.000374
Tl	205	3	He	44.601	1.259	244148.75	0.0282	0.00021
Tl	205	3	He	45.632	1.2881	244848.86	0.0282	0.00021
Tl	205	3	He	45.799	1.2928	246994.55	0.0282	0.00021
Pb	208	3	He	237.904	8.86	913573.58	0.0372	0.0009772
Pb	208	3	He	241.702	9.0014	902724.60	0.0372	0.0009772
Pb	208	3	He	240.167	8.9442	903333.66	0.0372	0.0009772
U	238	3	He	0.009	0.0005	90.00	0.0417	8.729E-05
U	238	3	He	0.008	0.0004	80.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1754601.22		
Sc	45	1	No Gas			1743632.32		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1772542.63		
Ge	72	1	No Gas			897263.42		
Ge	72	1	No Gas			896911.16		
Ge	72	1	No Gas			890167.41		
Sc	45	2	H2			128362.64		
Sc	45	2	H2			130430.23		
Sc	45	2	H2			131287.51		
Ge	72	2	H2			110182.64		
Ge	72	2	H2			112449.40		
Ge	72	2	H2			107503.21		
In	115	2	H2			269042.34		
In	115	2	H2			273763.77		
In	115	2	H2			268807.16		
Sc	45	3	He			27867.62		
Sc	45	3	He			28408.36		
Sc	45	3	He			29069.59		
Ge	72	3	He			55076.67		
Ge	72	3	He			54524.60		
Ge	72	3	He			56732.96		
In	115	3	He			54376.59		
In	115	3	He			54950.20		
In	115	3	He			53423.68		
Tb	159	3	He			248251.46		
Tb	159	3	He			247474.12		
Tb	159	3	He			248677.79		
Bi	209	3	He			193929.80		
Bi	209	3	He			190092.36		
Bi	209	3	He			191055.37		

Quantitation Report

Data File Name	127SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:31:19 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

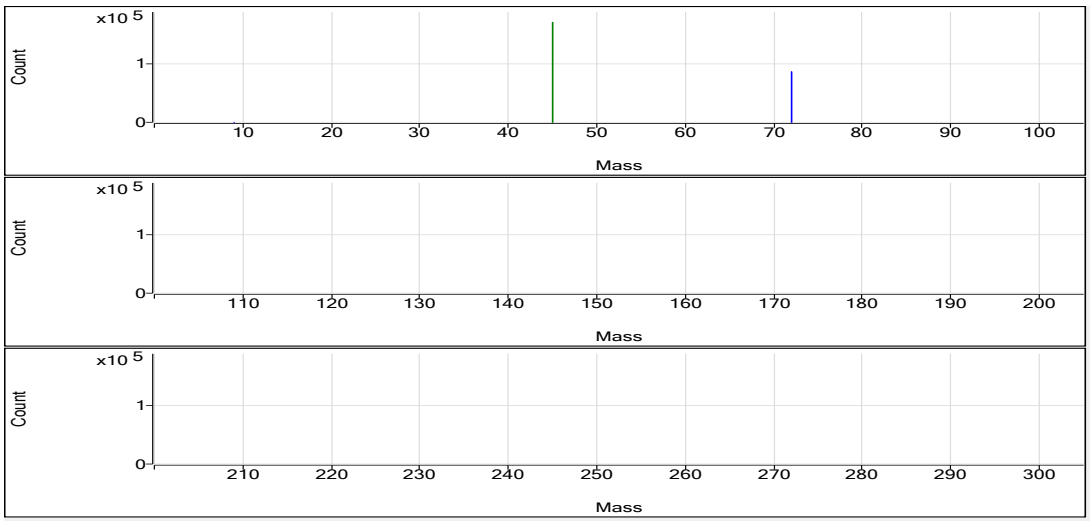
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.238	ppb	18.6	184.00	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.287	ppb	17.8	13.78	0.0001	Pulse	1.5000	3
Na	23	45	He	19.770	ppb	10.9	9106.38	0.3148	Pulse	0.1000	3
Mg	24	45	He	0.812	ppb	184.8	176.67	0.0061	Pulse	0.1000	3
Al	27	45	He	1.560	ppb	80.1	63.33	0.0022	Pulse	0.1000	3
K	39	45	He	-1.562	ppb	N/A	10447.48	0.3612	Pulse	0.1000	3
Ca	44	45	He	23.223	ppb	107.7	113.34	0.0039	Pulse	0.1000	3
Ti	47	45	He	0.246	ppb	307.4	10.00	0.0003	Pulse	0.1000	3
V	51	45	He	0.255	ppb	27.6	483.34	0.0167	Pulse	0.5000	3
Cr	52	45	He	0.236	ppb	78.7	2143.57	0.0741	Pulse	0.1000	3
Mn	55	45	He	0.421	ppb	40.3	260.01	0.0090	Pulse	0.1000	3
Fe	57	45	He	1.235	ppb	256.5	136.68	0.0047	Pulse	0.1000	3
Co	59	45	He	0.090	ppb	60.8	276.68	0.0096	Pulse	0.1000	3
Ni	60	72	He	0.233	ppb	38.2	456.69	0.0084	Pulse	0.1000	3
Cu	63	72	He	0.120	ppb	38.7	313.34	0.0058	Pulse	0.1000	3
Zn	66	72	He	0.515	ppb	21.7	233.35	0.0043	Pulse	0.1000	3
As	75	72	He	0.377	ppb	26.2	66.67	0.0012	Pulse	0.5000	3
Sr	88	115	He	0.053	ppb	73.9	60.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.225	ppb	18.9	276.68	0.0052	Pulse	0.1000	3
Ag	107	115	He	0.032	ppb	28.7	96.67	0.0018	Pulse	0.1000	3
Cd	111	115	He	0.112	ppb	13.4	30.67	0.0006	Pulse	0.5000	3
Sn	120	115	He	0.354	ppb	3.8	993.41	0.0185	Pulse	0.1000	3
Sb	121	115	He	0.808	ppb	21.7	696.71	0.0130	Pulse	0.1000	3
Ba	137	115	He	0.067	ppb	91.2	36.67	0.0007	Pulse	0.1000	3
Tl	205	209	He	0.401	ppb	11.7	2196.94	0.0115	Pulse	0.1000	3
Pb	208	209	He	0.136	ppb	18.9	1153.39	0.0060	Pulse	0.1000	3
U	238	209	He	0.000	ppb	N/A	13.33	0.0001	Pulse	0.1000	3

ISTD Table:

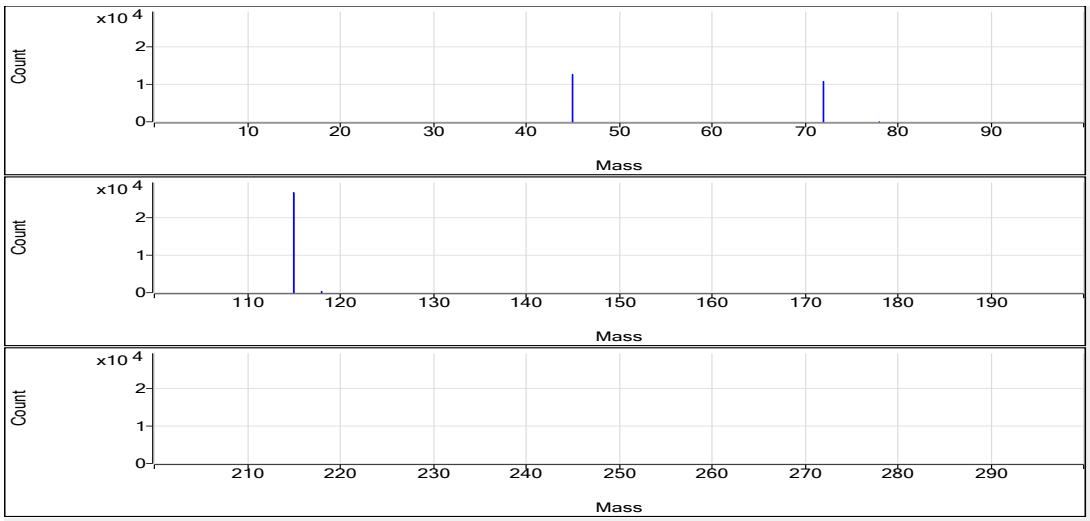
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1722748.57	1.5	97.8	Analog	0.1000	3
No Gas	Ge	72	870418.06	2.0	97.5	Pulse	0.1000	3
H2	Sc	45	127461.16	0.5	100.1	Pulse	0.1000	3
H2	Ge	72	108554.22	0.4	101.2	Pulse	0.1000	3
H2	In	115	268774.05	1.3	100.9	Pulse	0.1000	3
He	Sc	45	28926.30	0.7	101.5	Pulse	0.1000	3
He	Ge	72	54176.56	0.9	97.9	Pulse	0.1000	3
He	In	115	53640.68	0.6	99.9	Pulse	0.1000	3
He	Tb	159	246869.30	1.1	100.4	Pulse	0.1000	3
He	Bi	209	190404.62	1.4	99.8	Pulse	0.1000	3

No Gas

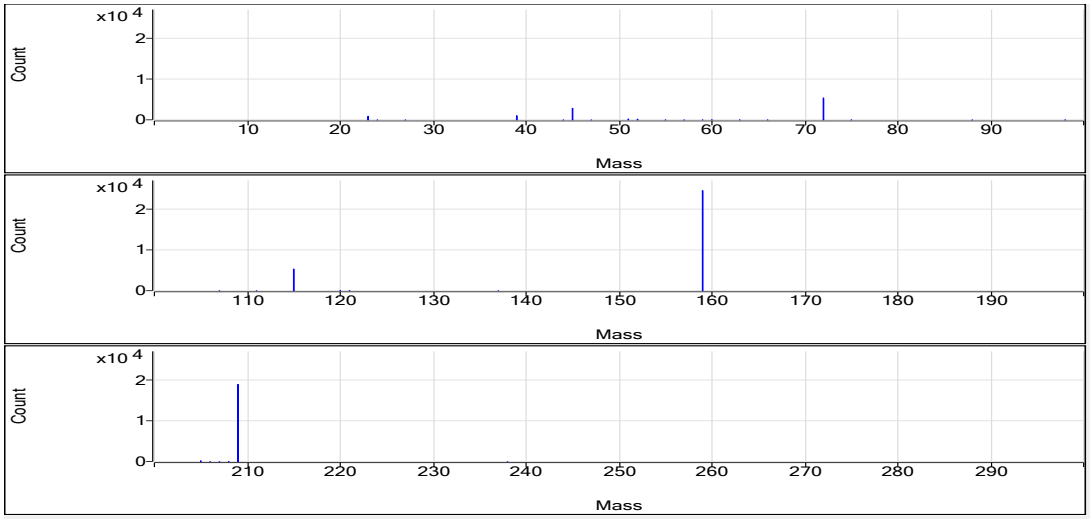


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.232	0.0001	182.00	0.0004	1.287E-05
Be	9	1	No Gas	0.198	0.0001	154.00	0.0004	1.287E-05
Be	9	1	No Gas	0.286	0.0001	216.00	0.0004	1.287E-05
Se	78	2	H2	0.324	0.0001	15.33	0.0004	1.451E-05
Se	78	2	H2	0.229	0.0001	11.33	0.0004	1.451E-05
Se	78	2	H2	0.31	0.0001	14.67	0.0004	1.451E-05
Na	23	3	He	21.824	0.32	9223.10	0.0025	0.2648
Na	23	3	He	19.946	0.3153	9083.04	0.0025	0.2648
Na	23	3	He	17.54	0.3092	9013.00	0.0025	0.2648
Mg	24	3	He	1.709	0.0073	210.01	0.0013	0.005032
Mg	24	3	He	-0.92	0.0038	110.00	0.0013	0.005032
Mg	24	3	He	1.646	0.0072	210.01	0.0013	0.005032
Al	27	3	He	1.306	0.0021	60.00	0.0004	0.001519
Al	27	3	He	2.918	0.0028	80.00	0.0004	0.001519
Al	27	3	He	0.456	0.0017	50.00	0.0004	0.001519
K	39	3	He	19.67	0.3818	11004.67	0.001	0.3627
K	39	3	He	-10.946	0.3521	10143.84	0.001	0.3627
K	39	3	He	-13.408	0.3497	10193.94	0.001	0.3627
Ca	44	3	He	3.524	0.0028	80.00	0.0001	0.002571
Ca	44	3	He	51.349	0.0056	160.01	0.0001	0.002571
Ca	44	3	He	14.794	0.0034	100.00	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	1.004	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.24	0.0003	10.00	0.0005	0.0002328
V	51	3	He	0.249	0.0166	478.01	0.0201	0.0116
V	51	3	He	0.329	0.0182	524.01	0.0201	0.0116
V	51	3	He	0.188	0.0154	448.01	0.0201	0.0116
Cr	52	3	He	0.135	0.0715	2060.24	0.0257	0.06801
Cr	52	3	He	0.123	0.0712	2050.21	0.0257	0.06801
Cr	52	3	He	0.451	0.0796	2320.27	0.0257	0.06801
Mn	55	3	He	0.241	0.0069	200.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.578	0.0108	310.01	0.0113	0.004215
Mn	55	3	He	0.446	0.0093	270.01	0.0113	0.004215
Fe	57	3	He	-0.551	0.0038	110.01	0.0005	0.004099
Fe	57	3	He	4.891	0.0066	190.01	0.0005	0.004099
Fe	57	3	He	-0.636	0.0038	110.01	0.0005	0.004099
Co	59	3	He	0.153	0.0128	370.02	0.0518	0.004913
Co	59	3	He	0.059	0.008	230.01	0.0518	0.004913
Co	59	3	He	0.057	0.0079	230.01	0.0518	0.004913
Ni	60	3	He	0.272	0.0087	470.02	0.0075	0.006695
Ni	60	3	He	0.131	0.0077	420.02	0.0075	0.006695
Ni	60	3	He	0.297	0.0089	480.02	0.0075	0.006695
Cu	63	3	He	0.153	0.0065	350.01	0.0216	0.003198
Cu	63	3	He	0.14	0.0062	340.01	0.0216	0.003198
Cu	63	3	He	0.067	0.0046	250.01	0.0216	0.003198
Zn	66	3	He	0.641	0.0046	250.02	0.0026	0.002954
Zn	66	3	He	0.475	0.0042	230.01	0.0026	0.002954
Zn	66	3	He	0.429	0.0041	220.01	0.0026	0.002954
As	75	3	He	0.488	0.0014	78.00	0.002	0.0004943
As	75	3	He	0.346	0.0012	64.00	0.002	0.0004943
As	75	3	He	0.298	0.0011	58.00	0.002	0.0004943
Sr	88	3	He	0.075	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.008	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.077	0.0013	70.00	0.0081	0.0006852
Mo	98	3	He	0.181	0.0043	230.01	0.0205	0.0005587
Mo	98	3	He	0.265	0.006	320.02	0.0205	0.0005587
Mo	98	3	He	0.229	0.0052	280.01	0.0205	0.0005587
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.025	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.042	0.0022	120.00	0.043	0.0004367
Cd	111	3	He	0.123	0.0006	34.00	0.005	1.253E-05
Cd	111	3	He	0.095	0.0005	26.00	0.005	1.253E-05
Cd	111	3	He	0.117	0.0006	32.00	0.005	1.253E-05
Sn	120	3	He	0.341	0.0183	990.07	0.0146	0.01334
Sn	120	3	He	0.368	0.0187	1000.08	0.0146	0.01334
Sn	120	3	He	0.354	0.0185	990.07	0.0146	0.01334
Sb	121	3	He	0.91	0.0144	780.05	0.0142	0.001484
Sb	121	3	He	0.908	0.0144	770.04	0.0142	0.001484
Sb	121	3	He	0.606	0.0101	540.04	0.0142	0.001484
Ba	137	3	He	0.12	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0	0.0004	20.00	0.0046	0.000374
Ba	137	3	He	0.081	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.447	0.0128	2480.32	0.0282	0.00021
Tl	205	3	He	0.403	0.0116	2180.30	0.0282	0.00021
Tl	205	3	He	0.353	0.0102	1930.20	0.0282	0.00021
Pb	208	3	He	0.165	0.0071	760.05	0.0372	0.0009772
Pb	208	3	He	0.126	0.0057	550.03	0.0372	0.0009772
Pb	208	3	He	0.117	0.0053	530.03	0.0372	0.0009772
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
U	238	3	He	-0.002	0	0.00	0.0417	8.729E-05
U	238	3	He	-0.001	0.0001	10.00	0.0417	8.729E-05
Sc	45	1	No Gas			1748604.97		
Sc	45	1	No Gas			1697278.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1722362.01		
Ge	72	1	No Gas			889383.42		
Ge	72	1	No Gas			854411.24		
Ge	72	1	No Gas			867459.52		
Sc	45	2	H2			127193.22		
Sc	45	2	H2			127040.71		
Sc	45	2	H2			128149.55		
Ge	72	2	H2			108591.33		
Ge	72	2	H2			108923.68		
Ge	72	2	H2			108147.64		
In	115	2	H2			264872.11		
In	115	2	H2			270217.55		
In	115	2	H2			271232.48		
Sc	45	3	He			28819.65		
Sc	45	3	He			28809.46		
Sc	45	3	He			29149.78		
Ge	72	3	He			53892.10		
Ge	72	3	He			54735.16		
Ge	72	3	He			53902.42		
In	115	3	He			54035.09		
In	115	3	He			53443.83		
In	115	3	He			53463.97		
Tb	159	3	He			244564.41		
Tb	159	3	He			250003.84		
Tb	159	3	He			246039.64		
Bi	209	3	He			193318.24		
Bi	209	3	He			188409.29		
Bi	209	3	He			189486.34		

Quantitation Report

Data File Name	128_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:33:21 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

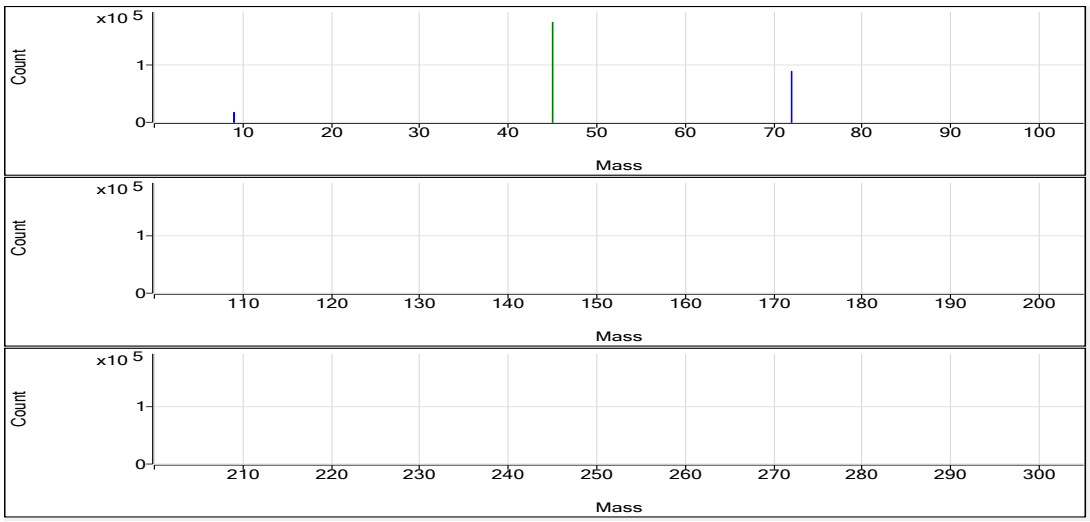
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	50.673	ppb	7.1	35041.70	0.0200	Pulse	0.5000	3
Se	78	72	H2	52.137	ppb	1.6	2261.07	0.0204	Pulse	1.5000	3
Na	23	45	He	5148.168	ppb	0.6	381423.89	13.2830	Pulse	0.1000	3
Mg	24	45	He	5113.193	ppb	0.4	193933.91	6.7537	Pulse	0.1000	3
Al	27	45	He	5201.450	ppb	1.3	64454.66	2.2447	Pulse	0.1000	3
K	39	45	He	5241.322	ppb	1.0	156644.88	5.4550	Pulse	0.1000	3
Ca	44	45	He	5258.665	ppb	1.9	8846.29	0.3081	Pulse	0.1000	3
Ti	47	45	He	5211.063	ppb	0.9	68772.71	2.3949	Pulse	0.1000	3
V	51	45	He	520.510	ppb	0.9	300132.10	10.4521	Pulse	0.5000	3
Cr	52	45	He	521.704	ppb	1.2	386979.67	13.4764	Pulse	0.1000	3
Mn	55	45	He	523.626	ppb	0.3	170472.99	5.9366	Pulse	0.1000	3
Fe	57	45	He	5297.019	ppb	2.0	77759.69	2.7080	Pulse	0.1000	3
Co	59	45	He	511.078	ppb	0.5	760578.76	26.4867	Pulse	0.1000	3
Ni	60	72	He	520.697	ppb	0.5	215995.73	3.8859	Pulse	0.1000	3
Cu	63	72	He	516.741	ppb	0.9	620212.23	11.1584	Pulse	0.1000	3
Zn	66	72	He	520.804	ppb	2.5	76290.04	1.3727	Pulse	0.1000	3
As	75	72	He	519.276	ppb	1.2	56378.41	1.0143	Pulse	0.5000	3
Sr	88	115	He	50.266	ppb	1.4	22304.94	0.4085	Pulse	0.1000	3
Mo	98	115	He	50.844	ppb	1.3	56855.64	1.0413	Pulse	0.1000	3
Ag	107	115	He	51.675	ppb	0.0	121485.28	2.2249	Pulse	0.1000	3
Cd	111	115	He	51.155	ppb	1.4	13961.02	0.2557	Pulse	0.5000	3
Sn	120	115	He	50.962	ppb	0.5	41399.39	0.7582	Pulse	0.1000	3
Sb	121	115	He	51.037	ppb	1.3	39731.23	0.7276	Pulse	0.1000	3
Ba	137	115	He	505.352	ppb	1.0	127136.38	2.3285	Pulse	0.1000	3
Tl	205	209	He	51.211	ppb	1.7	277869.65	1.4455	Pulse	0.1000	3
Pb	208	209	He	51.208	ppb	0.2	366752.66	1.9079	Pulse	0.1000	3
U	238	209	He	51.218	ppb	0.3	410754.16	2.1368	Pulse	0.1000	3

ISTD Table:

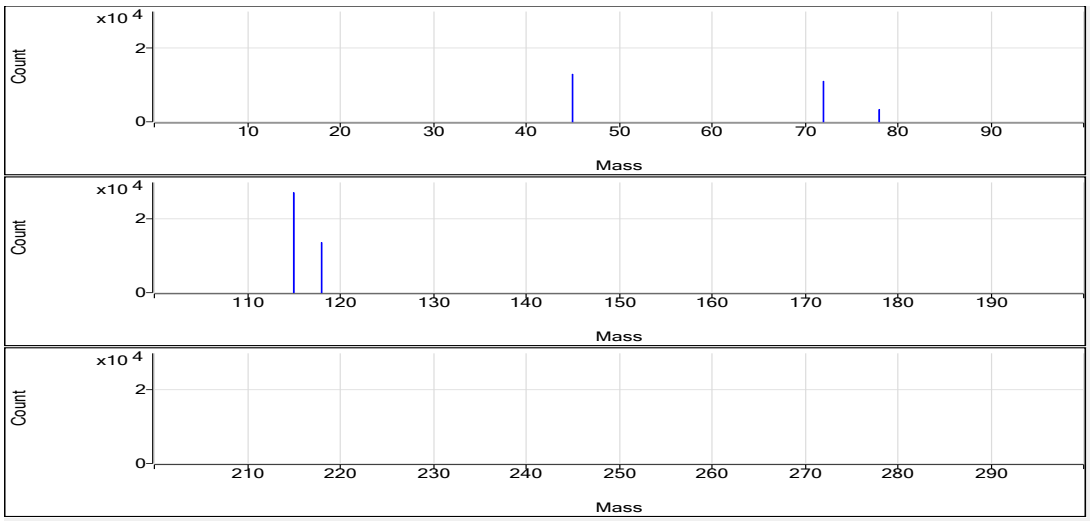
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1754451.59	0.0	99.6	Analog	0.1000	3
No Gas	Ge	72	895041.89	0.6	100.3	Pulse	0.1000	3
H2	Sc	45	130070.93	0.4	102.2	Pulse	0.1000	3
H2	Ge	72	110801.11	0.3	103.3	Pulse	0.1000	3
H2	In	115	272740.61	0.5	102.4	Pulse	0.1000	3
He	Sc	45	28715.69	0.4	100.7	Pulse	0.1000	3
He	Ge	72	55585.76	1.0	100.5	Pulse	0.1000	3
He	In	115	54603.07	1.0	101.7	Pulse	0.1000	3
He	Tb	159	247531.06	0.9	100.7	Pulse	0.1000	3
He	Bi	209	192231.80	0.9	100.7	Pulse	0.1000	3

No Gas

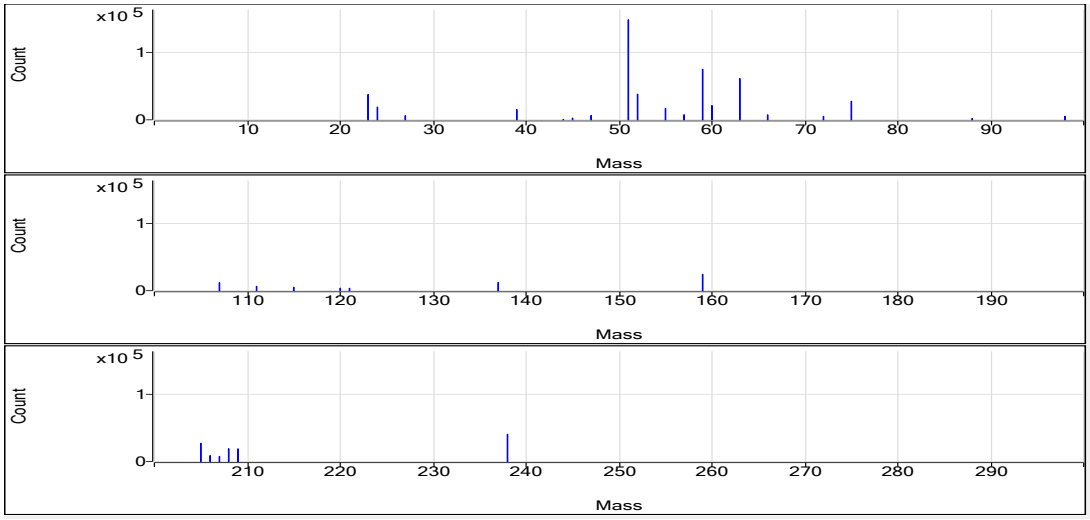


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	46.774	0.0184	32348.92	0.0004	1.287E-05
Be	9	1	No Gas	51.383	0.0203	35534.05	0.0004	1.287E-05
Be	9	1	No Gas	53.862	0.0212	37242.13	0.0004	1.287E-05
Se	78	2	H2	52.062	0.0204	2250.85	0.0004	1.451E-05
Se	78	2	H2	52.983	0.0207	2296.86	0.0004	1.451E-05
Se	78	2	H2	51.365	0.0201	2235.51	0.0004	1.451E-05
Na	23	3	He	5161.151	13.3158	381881.24	0.0025	0.2648
Na	23	3	He	5170.754	13.3401	381779.92	0.0025	0.2648
Na	23	3	He	5112.598	13.193	380610.50	0.0025	0.2648
Mg	24	3	He	5119.347	6.7618	193919.63	0.0013	0.005032
Mg	24	3	He	5129.803	6.7756	193910.23	0.0013	0.005032
Mg	24	3	He	5090.429	6.7236	193971.87	0.0013	0.005032
Al	27	3	He	5179.301	2.2351	64099.89	0.0004	0.001519
Al	27	3	He	5279.63	2.2784	65204.49	0.0004	0.001519
Al	27	3	He	5145.418	2.2205	64059.59	0.0004	0.001519
K	39	3	He	5294.537	5.5067	157925.37	0.001	0.3627
K	39	3	He	5190.754	5.4059	154710.36	0.001	0.3627
K	39	3	He	5238.676	5.4524	157298.91	0.001	0.3627
Ca	44	3	He	5161.584	0.3024	8672.85	0.0001	0.002571
Ca	44	3	He	5256.725	0.3079	8812.94	0.0001	0.002571
Ca	44	3	He	5357.686	0.3138	9053.08	0.0001	0.002571
Ti	47	3	He	5257.461	2.4163	69295.16	0.0005	0.0002328
Ti	47	3	He	5159.947	2.3714	67868.21	0.0005	0.0002328
Ti	47	3	He	5215.782	2.3971	69154.75	0.0005	0.0002328
V	51	3	He	524.403	10.5302	301992.13	0.0201	0.0116
V	51	3	He	521.672	10.4754	299794.31	0.0201	0.0116
V	51	3	He	515.454	10.3507	298609.88	0.0201	0.0116
Cr	52	3	He	515.909	13.3274	382214.53	0.0257	0.06801
Cr	52	3	He	527.895	13.6355	390233.16	0.0257	0.06801
Cr	52	3	He	521.309	13.4662	388491.32	0.0257	0.06801
Mn	55	3	He	522.721	5.9264	169960.86	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	525.559	5.9585	170526.72	0.0113	0.004215
Mn	55	3	He	522.597	5.925	170931.40	0.0113	0.004215
Fe	57	3	He	5419.144	2.7703	79448.73	0.0005	0.004099
Fe	57	3	He	5237.798	2.6777	76633.86	0.0005	0.004099
Fe	57	3	He	5234.114	2.6758	77196.48	0.0005	0.004099
Co	59	3	He	509.164	26.3876	756762.88	0.0518	0.004913
Co	59	3	He	514.016	26.639	762379.75	0.0518	0.004913
Co	59	3	He	510.054	26.4337	762593.66	0.0518	0.004913
Ni	60	3	He	518.156	3.867	215738.34	0.0075	0.006695
Ni	60	3	He	523.126	3.904	214586.40	0.0075	0.006695
Ni	60	3	He	520.81	3.8867	217662.46	0.0075	0.006695
Cu	63	3	He	515.688	11.1357	621261.67	0.0216	0.003198
Cu	63	3	He	522.038	11.2728	619618.31	0.0216	0.003198
Cu	63	3	He	512.497	11.0668	619756.71	0.0216	0.003198
Zn	66	3	He	522.677	1.3776	76856.29	0.0026	0.002954
Zn	66	3	He	532.549	1.4036	77148.06	0.0026	0.002954
Zn	66	3	He	507.186	1.3369	74865.78	0.0026	0.002954
As	75	3	He	513.523	1.0031	55962.73	0.002	0.0004943
As	75	3	He	526.073	1.0276	56482.82	0.002	0.0004943
As	75	3	He	518.233	1.0123	56689.69	0.002	0.0004943
Sr	88	3	He	51.053	0.4149	22668.64	0.0081	0.0006852
Sr	88	3	He	49.746	0.4043	22288.17	0.0081	0.0006852
Sr	88	3	He	49.999	0.4063	21958.01	0.0081	0.0006852
Mo	98	3	He	50.367	1.0316	56363.43	0.0205	0.0005587
Mo	98	3	He	50.541	1.0351	57066.94	0.0205	0.0005587
Mo	98	3	He	51.625	1.0573	57136.56	0.0205	0.0005587
Ag	107	3	He	51.663	2.2244	121536.42	0.043	0.0004367
Ag	107	3	He	51.677	2.225	122664.31	0.043	0.0004367
Ag	107	3	He	51.685	2.2253	120255.10	0.043	0.0004367
Cd	111	3	He	51.088	0.2554	13953.05	0.005	1.253E-05
Cd	111	3	He	50.487	0.2524	13912.95	0.005	1.253E-05
Cd	111	3	He	51.891	0.2594	14017.06	0.005	1.253E-05
Sn	120	3	He	51.069	0.7598	41513.22	0.0146	0.01334
Sn	120	3	He	50.667	0.7539	41563.08	0.0146	0.01334
Sn	120	3	He	51.15	0.761	41121.87	0.0146	0.01334
Sb	121	3	He	50.288	0.717	39176.30	0.0142	0.001484
Sb	121	3	He	51.335	0.7319	40349.79	0.0142	0.001484
Sb	121	3	He	51.486	0.734	39667.61	0.0142	0.001484
Ba	137	3	He	504.715	2.3256	127067.71	0.0046	0.000374
Ba	137	3	He	500.719	2.3072	127196.38	0.0046	0.000374
Ba	137	3	He	510.623	2.3528	127145.06	0.0046	0.000374
Tl	205	3	He	51.186	1.4448	280602.05	0.0282	0.00021
Tl	205	3	He	52.1	1.4706	280610.50	0.0282	0.00021
Tl	205	3	He	50.349	1.4212	272396.40	0.0282	0.00021
Pb	208	3	He	51.267	1.91	197034.96	0.0372	0.0009772
Pb	208	3	He	51.261	1.9098	194269.82	0.0372	0.0009772
Pb	208	3	He	51.097	1.9037	194443.77	0.0372	0.0009772
U	238	3	He	51.208	2.1363	414904.72	0.0417	8.729E-05
U	238	3	He	51.384	2.1437	409043.94	0.0417	8.729E-05
U	238	3	He	51.064	2.1303	408313.82	0.0417	8.729E-05
Sc	45	1	No Gas			1754536.38		
Sc	45	1	No Gas			1754536.38		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1754282.01		
Ge	72	1	No Gas			890272.41		
Ge	72	1	No Gas			900987.17		
Ge	72	1	No Gas			893866.08		
Sc	45	2	H2			130663.68		
Sc	45	2	H2			130016.41		
Sc	45	2	H2			129532.69		
Ge	72	2	H2			110455.95		
Ge	72	2	H2			110756.63		
Ge	72	2	H2			111190.76		
In	115	2	H2			273243.45		
In	115	2	H2			273904.49		
In	115	2	H2			271073.88		
Sc	45	3	He			28678.77		
Sc	45	3	He			28618.97		
Sc	45	3	He			28849.34		
Ge	72	3	He			55790.04		
Ge	72	3	He			54965.88		
Ge	72	3	He			56001.37		
In	115	3	He			54929.51		
In	115	3	He			55421.61		
In	115	3	He			54327.47		
Tb	159	3	He			249174.20		
Tb	159	3	He			248339.27		
Tb	159	3	He			245079.70		
Bi	209	3	He			194213.55		
Bi	209	3	He			190813.90		
Bi	209	3	He			191667.95		

Quantitation Report

Data File Name	129_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:35:21 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

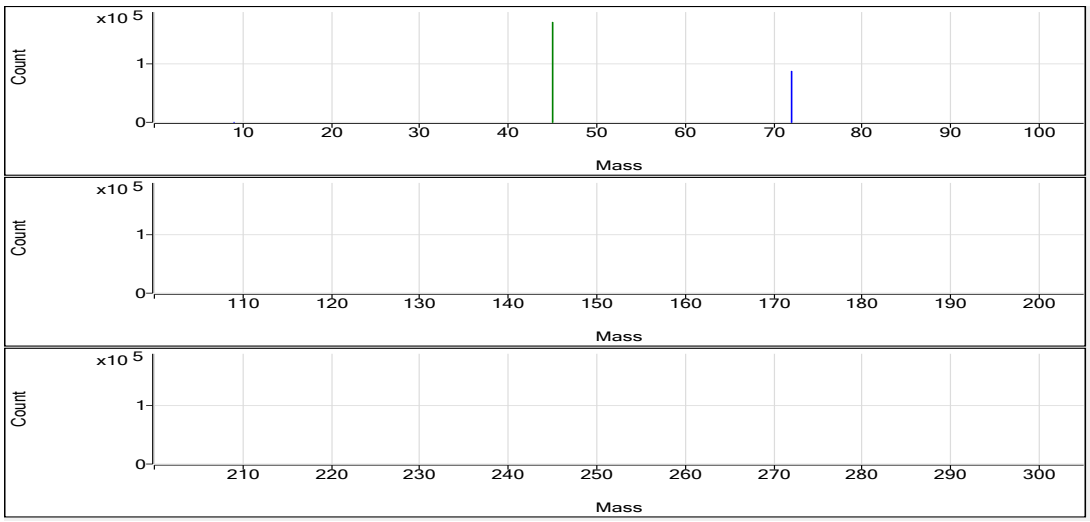
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.283	ppb	26.2	214.67	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.102	ppb	32.9	5.78	0.0001	Pulse	1.5000	3
Na	23	45	He	25.396	ppb	23.8	9226.51	0.3291	Pulse	0.1000	3
Mg	24	45	He	1.950	ppb	44.5	213.34	0.0076	Pulse	0.1000	3
Al	27	45	He	0.042	ppb	4809.6	43.33	0.0015	Pulse	0.1000	3
K	39	45	He	23.107	ppb	120.2	10804.30	0.3852	Pulse	0.1000	3
Ca	44	45	He	13.013	ppb	136.0	93.33	0.0033	Pulse	0.1000	3
Ti	47	45	He	3.119	ppb	52.1	46.67	0.0017	Pulse	0.1000	3
V	51	45	He	0.275	ppb	19.6	480.01	0.0171	Pulse	0.5000	3
Cr	52	45	He	0.217	ppb	99.0	2063.58	0.0736	Pulse	0.1000	3
Mn	55	45	He	0.330	ppb	19.2	223.34	0.0080	Pulse	0.1000	3
Fe	57	45	He	1.744	ppb	77.5	140.01	0.0050	Pulse	0.1000	3
Co	59	45	He	0.171	ppb	5.2	386.69	0.0138	Pulse	0.1000	3
Ni	60	72	He	0.178	ppb	21.4	433.35	0.0080	Pulse	0.1000	3
Cu	63	72	He	0.212	ppb	14.8	420.02	0.0078	Pulse	0.1000	3
Zn	66	72	He	0.454	ppb	138.3	223.35	0.0041	Pulse	0.1000	3
As	75	72	He	0.652	ppb	24.3	95.33	0.0018	Pulse	0.5000	3
Sr	88	115	He	0.053	ppb	86.8	60.00	0.0011	Pulse	0.1000	3
Mo	98	115	He	0.106	ppb	47.2	146.67	0.0027	Pulse	0.1000	3
Ag	107	115	He	0.019	ppb	74.5	66.67	0.0012	Pulse	0.1000	3
Cd	111	115	He	0.040	ppb	28.7	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.377	ppb	29.1	1016.74	0.0189	Pulse	0.1000	3
Sb	121	115	He	0.352	ppb	0.1	350.02	0.0065	Pulse	0.1000	3
Ba	137	115	He	0.120	ppb	33.5	50.00	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.143	ppb	18.0	806.73	0.0042	Pulse	0.1000	3
Pb	208	209	He	0.068	ppb	33.5	666.71	0.0035	Pulse	0.1000	3
U	238	209	He	0.026	ppb	47.6	223.34	0.0012	Pulse	0.1000	3

ISTD Table:

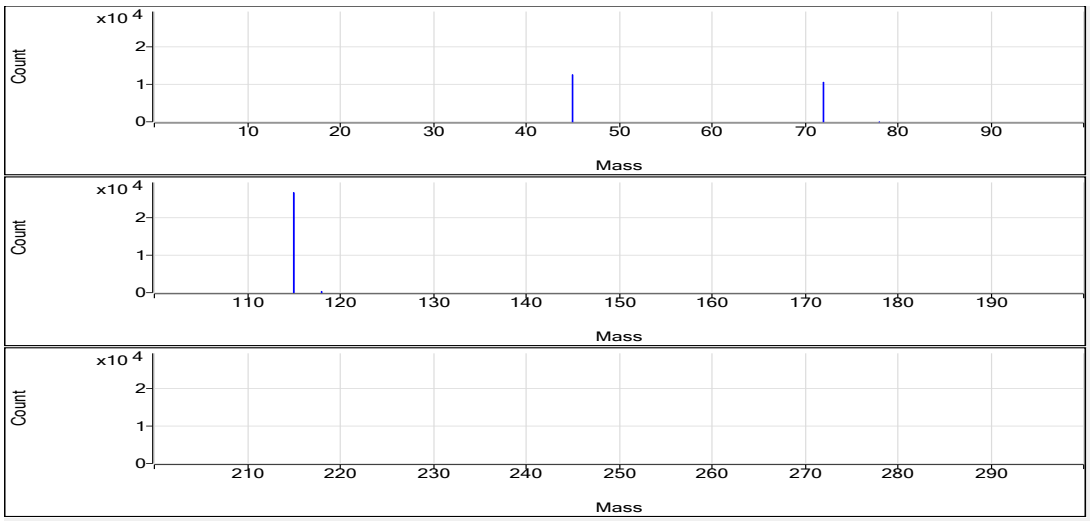
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1727458.88	0.4	98.1	Analog	0.1000	3
No Gas	Ge	72	883316.68	0.3	99.0	Pulse	0.1000	3
H2	Sc	45	126230.77	0.6	99.1	Pulse	0.1000	3
H2	Ge	72	106439.18	0.1	99.3	Pulse	0.1000	3
H2	In	115	268166.27	1.0	100.7	Pulse	0.1000	3
He	Sc	45	28051.06	1.4	98.4	Pulse	0.1000	3
He	Ge	72	53992.60	1.9	97.6	Pulse	0.1000	3
He	In	115	53931.83	0.0	100.5	Pulse	0.1000	3
He	Tb	159	245662.39	0.6	100.0	Pulse	0.1000	3
He	Bi	209	189948.48	1.9	99.5	Pulse	0.1000	3

No Gas

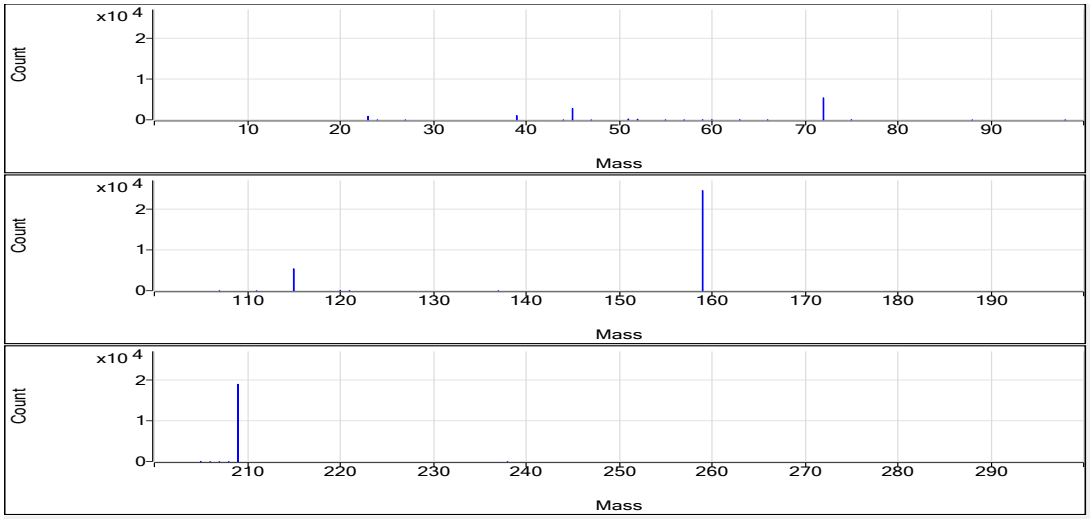


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.346	0.0001	258.00	0.0004	1.287E-05
Be	9	1	No Gas	0.202	0.0001	160.00	0.0004	1.287E-05
Be	9	1	No Gas	0.301	0.0001	226.00	0.0004	1.287E-05
Se	78	2	H2	0.075	0	4.67	0.0004	1.451E-05
Se	78	2	H2	0.139	0.0001	7.33	0.0004	1.451E-05
Se	78	2	H2	0.091	0.0001	5.33	0.0004	1.451E-05
Na	23	3	He	25.307	0.3288	9213.19	0.0025	0.2648
Na	23	3	He	19.398	0.3139	8932.96	0.0025	0.2648
Na	23	3	He	31.483	0.3445	9533.39	0.0025	0.2648
Mg	24	3	He	2.948	0.0089	250.01	0.0013	0.005032
Mg	24	3	He	1.512	0.007	200.01	0.0013	0.005032
Mg	24	3	He	1.389	0.0069	190.01	0.0013	0.005032
Al	27	3	He	-0.211	0.0014	40.00	0.0004	0.001519
Al	27	3	He	2.182	0.0025	70.00	0.0004	0.001519
Al	27	3	He	-1.846	0.0007	20.00	0.0004	0.001519
K	39	3	He	55.179	0.4163	11665.02	0.001	0.3627
K	39	3	He	6.912	0.3695	10514.08	0.001	0.3627
K	39	3	He	7.23	0.3698	10233.81	0.001	0.3627
Ca	44	3	He	-7.396	0.0021	60.00	0.0001	0.002571
Ca	44	3	He	22.277	0.0039	110.00	0.0001	0.002571
Ca	44	3	He	24.157	0.004	110.00	0.0001	0.002571
Ti	47	3	He	4.93	0.0025	70.00	0.0005	0.0002328
Ti	47	3	He	1.787	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	2.638	0.0014	40.00	0.0005	0.0002328
V	51	3	He	0.329	0.0182	510.01	0.0201	0.0116
V	51	3	He	0.273	0.0171	486.01	0.0201	0.0116
V	51	3	He	0.222	0.016	444.01	0.0201	0.0116
Cr	52	3	He	0.02	0.0685	1920.21	0.0257	0.06801
Cr	52	3	He	0.184	0.0727	2070.24	0.0257	0.06801
Cr	52	3	He	0.447	0.0795	2200.30	0.0257	0.06801
Mn	55	3	He	0.29	0.0075	210.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.403	0.0088	250.01	0.0113	0.004215
Mn	55	3	He	0.298	0.0076	210.01	0.0113	0.004215
Fe	57	3	He	3.159	0.0057	160.01	0.0005	0.004099
Fe	57	3	He	1.609	0.0049	140.01	0.0005	0.004099
Fe	57	3	He	0.465	0.0043	120.01	0.0005	0.004099
Co	59	3	He	0.181	0.0143	400.02	0.0518	0.004913
Co	59	3	He	0.163	0.0134	380.02	0.0518	0.004913
Co	59	3	He	0.17	0.0137	380.02	0.0518	0.004913
Ni	60	3	He	0.222	0.0083	460.02	0.0075	0.006695
Ni	60	3	He	0.151	0.0078	420.02	0.0075	0.006695
Ni	60	3	He	0.162	0.0079	420.02	0.0075	0.006695
Cu	63	3	He	0.196	0.0074	410.02	0.0216	0.003198
Cu	63	3	He	0.248	0.0086	460.02	0.0216	0.003198
Cu	63	3	He	0.192	0.0073	390.02	0.0216	0.003198
Zn	66	3	He	-0.088	0.0027	150.01	0.0026	0.002954
Zn	66	3	He	1.142	0.006	320.02	0.0026	0.002954
Zn	66	3	He	0.308	0.0038	200.01	0.0026	0.002954
As	75	3	He	0.658	0.0018	98.00	0.002	0.0004943
As	75	3	He	0.49	0.0015	78.00	0.002	0.0004943
As	75	3	He	0.807	0.0021	110.00	0.002	0.0004943
Sr	88	3	He	0.053	0.0011	60.00	0.0081	0.0006852
Sr	88	3	He	0.007	0.0007	40.00	0.0081	0.0006852
Sr	88	3	He	0.098	0.0015	80.00	0.0081	0.0006852
Mo	98	3	He	0.109	0.0028	150.01	0.0205	0.0005587
Mo	98	3	He	0.154	0.0037	200.01	0.0205	0.0005587
Mo	98	3	He	0.054	0.0017	90.00	0.0205	0.0005587
Ag	107	3	He	0.024	0.0015	80.00	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.003	0.0006	30.00	0.043	0.0004367
Cd	111	3	He	0.027	0.0001	8.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Cd	111	3	He	0.049	0.0003	14.00	0.005	1.253E-05
Sn	120	3	He	0.356	0.0185	1000.08	0.0146	0.01334
Sn	120	3	He	0.279	0.0174	940.06	0.0146	0.01334
Sn	120	3	He	0.496	0.0206	1110.09	0.0146	0.01334
Sb	121	3	He	0.352	0.0065	350.02	0.0142	0.001484
Sb	121	3	He	0.352	0.0065	350.02	0.0142	0.001484
Sb	121	3	He	0.352	0.0065	350.02	0.0142	0.001484
Ba	137	3	He	0.12	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	0.16	0.0011	60.00	0.0046	0.000374
Ba	137	3	He	0.08	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.165	0.0049	940.07	0.0282	0.00021
Tl	205	3	He	0.114	0.0034	640.04	0.0282	0.00021
Tl	205	3	He	0.149	0.0044	840.07	0.0282	0.00021
Pb	208	3	He	0.082	0.004	400.02	0.0372	0.0009772
Pb	208	3	He	0.042	0.0025	260.01	0.0372	0.0009772
Pb	208	3	He	0.08	0.0039	360.02	0.0372	0.0009772
U	238	3	He	0.028	0.0012	240.01	0.0417	8.729E-05
U	238	3	He	0.038	0.0017	310.02	0.0417	8.729E-05
U	238	3	He	0.013	0.0006	120.00	0.0417	8.729E-05
Sc	45	1	No Gas			1728607.47		
Sc	45	1	No Gas			1733906.85		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1719862.32		
Ge	72	1	No Gas			880304.28		
Ge	72	1	No Gas			885729.13		
Ge	72	1	No Gas			883916.63		
Sc	45	2	H2			126315.96		
Sc	45	2	H2			126990.21		
Sc	45	2	H2			125386.13		
Ge	72	2	H2			106566.15		
Ge	72	2	H2			106315.73		
Ge	72	2	H2			106435.66		
In	115	2	H2			265692.91		
In	115	2	H2			271157.26		
In	115	2	H2			267648.63		
Sc	45	3	He			28017.65		
Sc	45	3	He			28458.66		
Sc	45	3	He			27676.87		
Ge	72	3	He			55116.20		
Ge	72	3	He			53731.55		
Ge	72	3	He			53130.04		
In	115	3	He			53925.95		
In	115	3	He			53965.80		
In	115	3	He			53925.09		
Tb	159	3	He			246176.97		
Tb	159	3	He			246779.29		
Tb	159	3	He			244030.91		
Bi	209	3	He			193553.06		
Bi	209	3	He			186177.46		
Bi	209	3	He			190114.92		

Quantitation Report

Data File Name	130SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:37:22 PM
Sample Name	410-134023-B-6-A
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

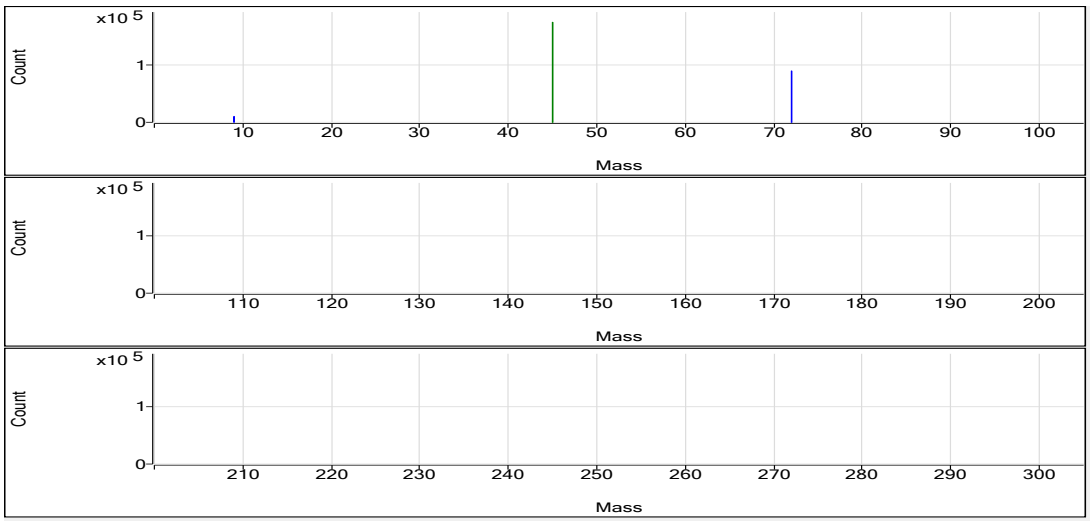
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	30.121	ppb	6.7	20751.79	0.0119	Pulse	0.5000	3
Se	78	72	H2	40.508	ppb	2.9	1771.45	0.0159	Pulse	1.5000	3
Na	23	45	He	15.449	ppb	39.2	9089.78	0.3039	Pulse	0.1000	3
Mg	24	45	He	1.507	ppb	18.5	210.01	0.0070	Pulse	0.1000	3
Al	27	45	He	316.429	ppb	4.5	4127.38	0.1380	Pulse	0.1000	3
K	39	45	He	-12.850	ppb	N/A	10480.77	0.3503	Pulse	0.1000	3
Ca	44	45	He	191.586	ppb	12.4	410.02	0.0137	Pulse	0.1000	3
Ti	47	45	He	0.463	ppb	90.4	13.33	0.0004	Pulse	0.1000	3
V	51	45	He	291.939	ppb	0.2	175521.35	5.8674	Pulse	0.5000	3
Cr	52	45	He	168.790	ppb	0.4	131808.96	4.4061	Pulse	0.1000	3
Mn	55	45	He	168.188	ppb	2.2	57133.67	1.9097	Pulse	0.1000	3
Fe	57	45	He	280.538	ppb	6.0	4407.48	0.1473	Pulse	0.1000	3
Co	59	45	He	145.012	ppb	0.6	224924.84	7.5188	Pulse	0.1000	3
Ni	60	72	He	290.696	ppb	1.5	122073.84	2.1724	Pulse	0.1000	3
Cu	63	72	He	118.654	ppb	1.6	144112.79	2.5647	Pulse	0.1000	3
Zn	66	72	He	130.308	ppb	1.8	19427.10	0.3457	Pulse	0.1000	3
As	75	72	He	91.954	ppb	2.3	10114.95	0.1800	Pulse	0.5000	3
Sr	88	115	He	70.674	ppb	1.3	31602.71	0.5741	Pulse	0.1000	3
Mo	98	115	He	57.206	ppb	1.0	64485.33	1.1715	Pulse	0.1000	3
Ag	107	115	He	166.733	ppb	1.1	395095.70	7.1777	Pulse	0.1000	3
Cd	111	115	He	162.040	ppb	0.8	44584.83	0.8099	Pulse	0.5000	3
Sn	120	115	He	0.123	ppb	123.9	833.40	0.0151	Pulse	0.1000	3
Sb	121	115	He	62.305	ppb	1.8	48873.66	0.8880	Pulse	0.1000	3
Ba	137	115	He	370.628	ppb	1.0	94015.25	1.7079	Pulse	0.1000	3
Tl	205	209	He	43.107	ppb	1.0	238440.90	1.2168	Pulse	0.1000	3
Pb	208	209	He	235.264	ppb	0.8	1716934.83	8.7617	Pulse	0.1000	3
U	238	209	He	0.006	ppb	1.6	70.00	0.0004	Pulse	0.1000	3

ISTD Table:

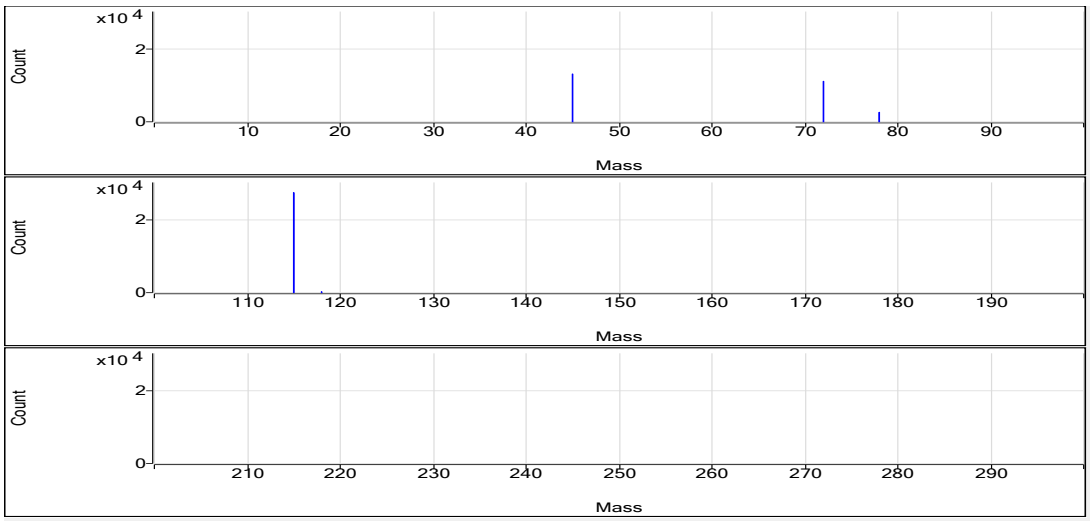
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1747595.39	0.6	99.2	Analog	0.1000	3
No Gas	Ge	72	897687.77	0.8	100.6	Pulse	0.1000	3
H2	Sc	45	131732.03	2.0	103.5	Pulse	0.1000	3
H2	Ge	72	111714.16	0.5	104.2	Pulse	0.1000	3
H2	In	115	275246.13	0.6	103.4	Pulse	0.1000	3
He	Sc	45	29914.87	0.7	104.9	Pulse	0.1000	3
He	Ge	72	56197.85	1.3	101.6	Pulse	0.1000	3
He	In	115	55047.39	1.3	102.6	Pulse	0.1000	3
He	Tb	159	249629.60	0.3	101.6	Pulse	0.1000	3
He	Bi	209	195971.18	1.2	102.7	Pulse	0.1000	3

No Gas

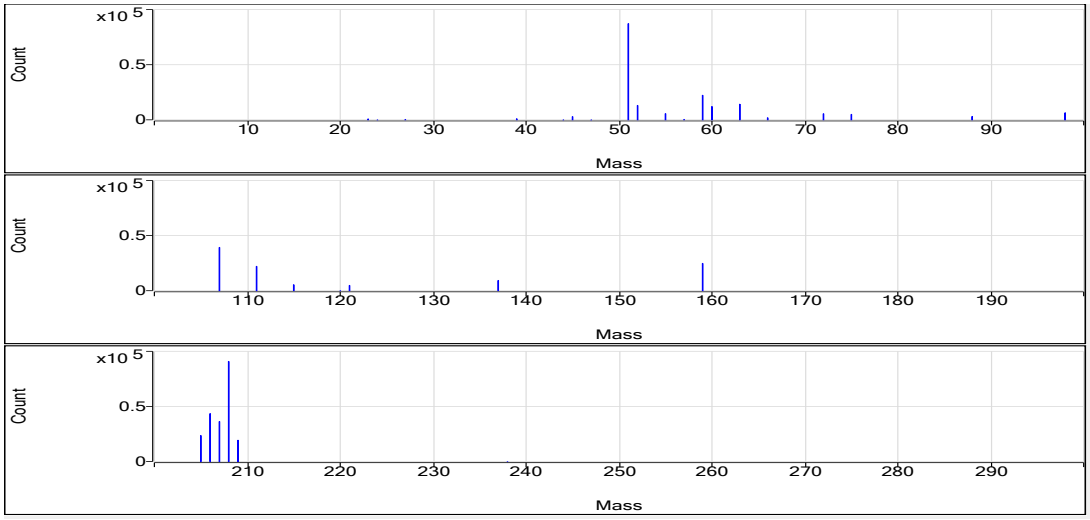


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	27.851	0.011	19310.49	0.0004	1.287E-05
Be	9	1	No Gas	30.746	0.0121	21160.96	0.0004	1.287E-05
Be	9	1	No Gas	31.765	0.0125	21783.91	0.0004	1.287E-05
Se	78	2	H2	41.132	0.0161	1795.45	0.0004	1.451E-05
Se	78	2	H2	39.153	0.0153	1722.77	0.0004	1.451E-05
Se	78	2	H2	41.24	0.0161	1796.12	0.0004	1.451E-05
Na	23	3	He	8.454	0.2862	8612.80	0.0025	0.2648
Na	23	3	He	18.983	0.3128	9373.28	0.0025	0.2648
Na	23	3	He	18.91	0.3127	9283.26	0.0025	0.2648
Mg	24	3	He	1.475	0.007	210.01	0.0013	0.005032
Mg	24	3	He	1.245	0.0067	200.01	0.0013	0.005032
Mg	24	3	He	1.802	0.0074	220.01	0.0013	0.005032
Al	27	3	He	323.265	0.1409	4240.74	0.0004	0.001519
Al	27	3	He	299.914	0.1309	3920.67	0.0004	0.001519
Al	27	3	He	326.109	0.1422	4220.73	0.0004	0.001519
K	39	3	He	14.347	0.3767	11334.81	0.001	0.3627
K	39	3	He	-18.349	0.3449	10333.97	0.001	0.3627
K	39	3	He	-34.547	0.3292	9773.54	0.001	0.3627
Ca	44	3	He	201.737	0.0143	430.02	0.0001	0.002571
Ca	44	3	He	208.552	0.0147	440.02	0.0001	0.002571
Ca	44	3	He	164.47	0.0121	360.02	0.0001	0.002571
Ti	47	3	He	0.216	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	0.946	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	0.226	0.0003	10.00	0.0005	0.0002328
V	51	3	He	292.299	5.8746	176776.28	0.0201	0.0116
V	51	3	He	291.328	5.8551	175427.36	0.0201	0.0116
V	51	3	He	292.192	5.8724	174360.41	0.0201	0.0116
Cr	52	3	He	169.579	4.4264	133197.28	0.0257	0.06801
Cr	52	3	He	168.102	4.3884	131483.76	0.0257	0.06801
Cr	52	3	He	168.689	4.4035	130745.85	0.0257	0.06801
Mn	55	3	He	172.278	1.956	58860.61	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	167.35	1.9002	56932.83	0.0113	0.004215
Mn	55	3	He	164.936	1.8729	55607.58	0.0113	0.004215
Fe	57	3	He	288.245	0.1512	4550.87	0.0005	0.004099
Fe	57	3	He	292.148	0.1532	4590.86	0.0005	0.004099
Fe	57	3	He	261.22	0.1374	4080.72	0.0005	0.004099
Co	59	3	He	145.767	7.5579	227431.21	0.0518	0.004913
Co	59	3	He	144.157	7.4745	223946.85	0.0518	0.004913
Co	59	3	He	145.111	7.524	223396.46	0.0518	0.004913
Ni	60	3	He	295.653	2.2093	122991.16	0.0075	0.006695
Ni	60	3	He	288.263	2.1543	122931.17	0.0075	0.006695
Ni	60	3	He	288.172	2.1536	120299.18	0.0075	0.006695
Cu	63	3	He	120.865	2.6124	145429.47	0.0216	0.003198
Cu	63	3	He	117.202	2.5333	144561.89	0.0216	0.003198
Cu	63	3	He	117.895	2.5483	142347.02	0.0216	0.003198
Zn	66	3	He	127.646	0.3387	18853.12	0.0026	0.002954
Zn	66	3	He	131.236	0.3481	19864.33	0.0026	0.002954
Zn	66	3	He	132.044	0.3502	19563.84	0.0026	0.002954
As	75	3	He	93.332	0.1827	10171.65	0.002	0.0004943
As	75	3	He	89.518	0.1753	10001.54	0.002	0.0004943
As	75	3	He	93.013	0.1821	10171.65	0.002	0.0004943
Sr	88	3	He	71.172	0.5781	32297.45	0.0081	0.0006852
Sr	88	3	He	71.242	0.5787	31626.33	0.0081	0.0006852
Sr	88	3	He	69.608	0.5654	30884.35	0.0081	0.0006852
Mo	98	3	He	56.566	1.1584	64719.03	0.0205	0.0005587
Mo	98	3	He	57.734	1.1824	64619.19	0.0205	0.0005587
Mo	98	3	He	57.318	1.1738	64117.76	0.0205	0.0005587
Ag	107	3	He	165.644	7.1309	398382.18	0.043	0.0004367
Ag	107	3	He	165.766	7.1361	390010.23	0.043	0.0004367
Ag	107	3	He	168.789	7.2662	396894.68	0.043	0.0004367
Cd	111	3	He	161.628	0.8079	45134.50	0.005	1.253E-05
Cd	111	3	He	163.413	0.8168	44641.13	0.005	1.253E-05
Cd	111	3	He	161.081	0.8052	43978.87	0.005	1.253E-05
Sn	120	3	He	0.177	0.0159	890.08	0.0146	0.01334
Sn	120	3	He	-0.049	0.0126	690.04	0.0146	0.01334
Sn	120	3	He	0.24	0.0168	920.07	0.0146	0.01334
Sb	121	3	He	61.081	0.8706	48636.12	0.0142	0.001484
Sb	121	3	He	63.292	0.902	49298.60	0.0142	0.001484
Sb	121	3	He	62.541	0.8913	48686.27	0.0142	0.001484
Ba	137	3	He	371.912	1.7138	95743.54	0.0046	0.000374
Ba	137	3	He	366.501	1.6888	92300.19	0.0046	0.000374
Ba	137	3	He	373.473	1.721	94002.03	0.0046	0.000374
Tl	205	3	He	42.651	1.2039	238712.34	0.0282	0.00021
Tl	205	3	He	43.512	1.2282	237789.61	0.0282	0.00021
Tl	205	3	He	43.16	1.2183	238820.74	0.0282	0.00021
Pb	208	3	He	233.916	8.7115	918951.39	0.0372	0.0009772
Pb	208	3	He	237.353	8.8394	908775.85	0.0372	0.0009772
Pb	208	3	He	234.524	8.7341	912075.69	0.0372	0.0009772
U	238	3	He	0.006	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.006	0.0004	70.00	0.0417	8.729E-05
Sc	45	1	No Gas			1758133.26		
Sc	45	1	No Gas			1745430.13		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1739222.79		
Ge	72	1	No Gas			893450.38		
Ge	72	1	No Gas			906475.92		
Ge	72	1	No Gas			893137.02		
Sc	45	2	H2			134739.46		
Sc	45	2	H2			130278.09		
Sc	45	2	H2			130178.53		
Ge	72	2	H2			111501.76		
Ge	72	2	H2			112389.11		
Ge	72	2	H2			111251.61		
In	115	2	H2			277208.04		
In	115	2	H2			274570.37		
In	115	2	H2			273959.98		
Sc	45	3	He			30091.73		
Sc	45	3	He			29961.50		
Sc	45	3	He			29691.37		
Ge	72	3	He			55669.30		
Ge	72	3	He			57064.25		
Ge	72	3	He			55859.99		
In	115	3	He			55873.51		
In	115	3	He			54657.88		
In	115	3	He			54628.28		
Tb	159	3	He			249291.68		
Tb	159	3	He			249060.31		
Tb	159	3	He			250536.81		
Bi	209	3	He			198279.29		
Bi	209	3	He			193603.98		
Bi	209	3	He			196030.27		

Quantitation Report

Data File Name	131SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:39:20 PM
Sample Name	410-134023-B-6-A @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

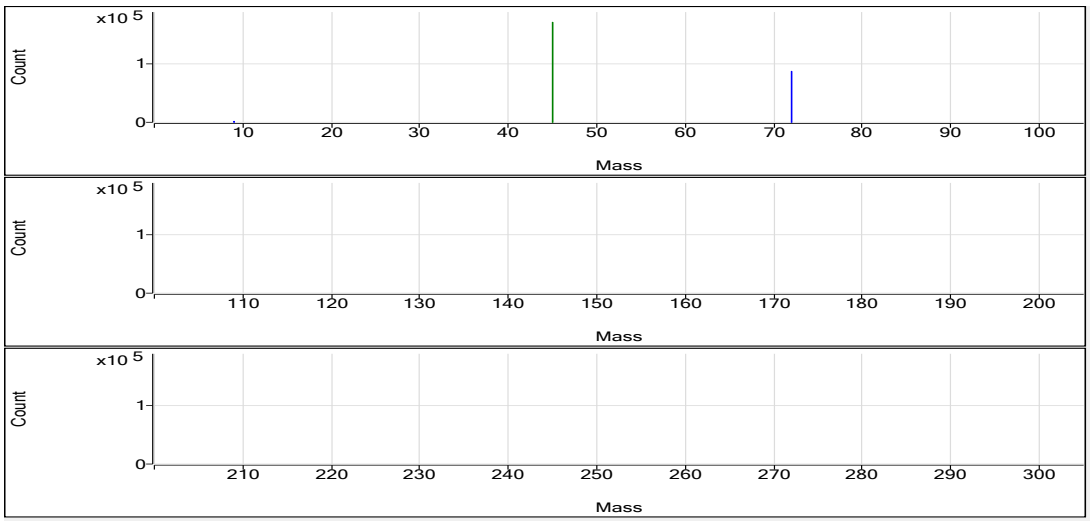
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	5.544	ppb	4.6	3743.16	0.0022	Pulse	0.5000	3
Se	78	72	H2	8.032	ppb	5.7	342.00	0.0032	Pulse	1.5000	3
Na	23	45	He	19.765	ppb	12.6	9036.42	0.3148	Pulse	0.1000	3
Mg	24	45	He	1.921	ppb	81.6	216.68	0.0076	Pulse	0.1000	3
Al	27	45	He	60.594	ppb	7.5	793.38	0.0276	Pulse	0.1000	3
K	39	45	He	-3.668	ppb	N/A	10317.34	0.3592	Pulse	0.1000	3
Ca	44	45	He	51.455	ppb	70.7	160.01	0.0056	Pulse	0.1000	3
Ti	47	45	He	0.497	ppb	175.0	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	56.881	ppb	1.7	33068.86	1.1525	Pulse	0.5000	3
Cr	52	45	He	33.606	ppb	3.3	26742.18	0.9317	Pulse	0.1000	3
Mn	55	45	He	34.270	ppb	3.9	11261.43	0.3925	Pulse	0.1000	3
Fe	57	45	He	58.910	ppb	8.7	980.07	0.0342	Pulse	0.1000	3
Co	59	45	He	29.050	ppb	1.7	43332.68	1.5101	Pulse	0.1000	3
Ni	60	72	He	55.403	ppb	4.4	23302.81	0.4194	Pulse	0.1000	3
Cu	63	72	He	22.497	ppb	4.7	27156.29	0.4888	Pulse	0.1000	3
Zn	66	72	He	24.677	ppb	1.8	3773.97	0.0679	Pulse	0.1000	3
As	75	72	He	17.913	ppb	3.5	1970.82	0.0355	Pulse	0.5000	3
Sr	88	115	He	13.721	ppb	2.2	6038.17	0.1120	Pulse	0.1000	3
Mo	98	115	He	11.265	ppb	3.6	12459.35	0.2312	Pulse	0.1000	3
Ag	107	115	He	32.159	ppb	1.1	74646.77	1.3848	Pulse	0.1000	3
Cd	111	115	He	31.136	ppb	2.0	8389.90	0.1556	Pulse	0.5000	3
Sn	120	115	He	0.432	ppb	58.5	1060.08	0.0197	Pulse	0.1000	3
Sb	121	115	He	12.987	ppb	1.9	10040.63	0.1863	Pulse	0.1000	3
Ba	137	115	He	73.748	ppb	2.8	18332.88	0.3401	Pulse	0.1000	3
Tl	205	209	He	8.660	ppb	1.6	47008.36	0.2446	Pulse	0.1000	3
Pb	208	209	He	45.303	ppb	0.6	324382.59	1.6880	Pulse	0.1000	3
U	238	209	He	0.007	ppb	61.6	73.33	0.0004	Pulse	0.1000	3

ISTD Table:

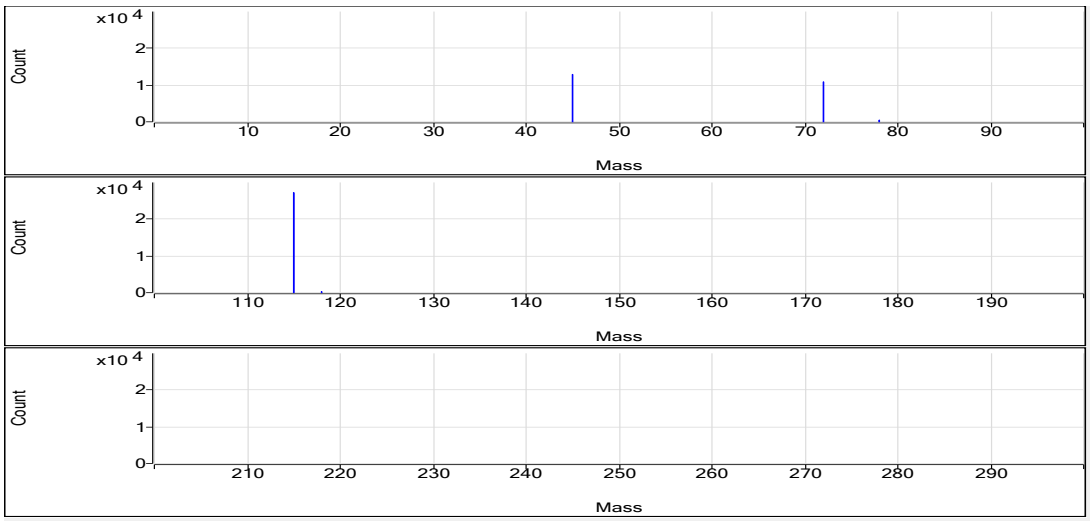
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1704393.83	1.4	96.8	Analog	0.1000	3
No Gas	Ge	72	869523.61	1.4	97.4	Pulse	0.1000	3
H2	Sc	45	128645.17	0.5	101.0	Pulse	0.1000	3
H2	Ge	72	108425.62	1.4	101.1	Pulse	0.1000	3
H2	In	115	271371.30	1.0	101.9	Pulse	0.1000	3
He	Sc	45	28699.03	2.1	100.7	Pulse	0.1000	3
He	Ge	72	55612.35	3.5	100.5	Pulse	0.1000	3
He	In	115	53911.47	1.6	100.4	Pulse	0.1000	3
He	Tb	159	246261.88	1.2	100.2	Pulse	0.1000	3
He	Bi	209	192177.11	0.4	100.7	Pulse	0.1000	3

No Gas

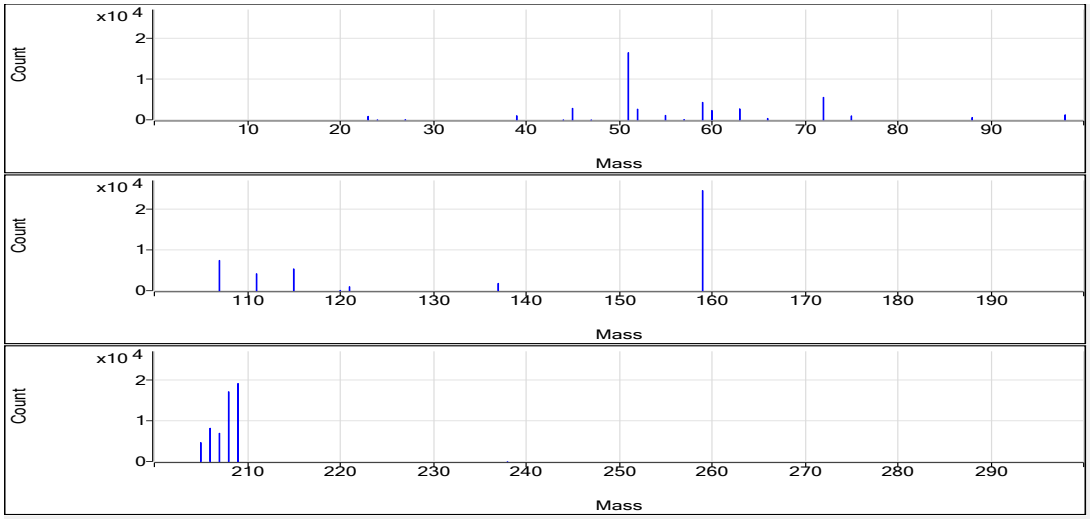


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	5.263	0.0021	3594.46	0.0004	1.287E-05
Be	9	1	No Gas	5.613	0.0022	3728.49	0.0004	1.287E-05
Be	9	1	No Gas	5.756	0.0023	3906.53	0.0004	1.287E-05
Se	78	2	H2	8.522	0.0033	357.34	0.0004	1.451E-05
Se	78	2	H2	7.962	0.0031	340.67	0.0004	1.451E-05
Se	78	2	H2	7.611	0.003	328.00	0.0004	1.451E-05
Na	23	3	He	20.891	0.3177	9333.22	0.0025	0.2648
Na	23	3	He	16.919	0.3076	8692.93	0.0025	0.2648
Na	23	3	He	21.485	0.3192	9083.12	0.0025	0.2648
Mg	24	3	He	0.572	0.0058	170.01	0.0013	0.005032
Mg	24	3	He	1.55	0.0071	200.01	0.0013	0.005032
Mg	24	3	He	3.643	0.0098	280.02	0.0013	0.005032
Al	27	3	He	58.833	0.0269	790.05	0.0004	0.001519
Al	27	3	He	57.206	0.0262	740.05	0.0004	0.001519
Al	27	3	He	65.742	0.0299	850.05	0.0004	0.001519
K	39	3	He	26.538	0.3885	11414.84	0.001	0.3627
K	39	3	He	-10.436	0.3526	9963.76	0.001	0.3627
K	39	3	He	-27.107	0.3364	9573.43	0.001	0.3627
Ca	44	3	He	78.787	0.0071	210.01	0.0001	0.002571
Ca	44	3	He	65.398	0.0064	180.01	0.0001	0.002571
Ca	44	3	He	10.18	0.0032	90.00	0.0001	0.002571
Ti	47	3	He	0.975	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	1.023	0.0007	20.00	0.0005	0.0002328
V	51	3	He	55.86	1.132	33259.94	0.0201	0.0116
V	51	3	He	57.779	1.1705	33077.56	0.0201	0.0116
V	51	3	He	57.003	1.155	32869.08	0.0201	0.0116
Cr	52	3	He	34.153	0.9458	27787.40	0.0257	0.06801
Cr	52	3	He	34.345	0.9507	26865.75	0.0257	0.06801
Cr	52	3	He	32.318	0.8986	25573.39	0.0257	0.06801
Mn	55	3	He	33.951	0.3889	11424.90	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	35.72	0.4089	11555.04	0.0113	0.004215
Mn	55	3	He	33.138	0.3797	10804.36	0.0113	0.004215
Fe	57	3	He	56.654	0.033	970.07	0.0005	0.004099
Fe	57	3	He	64.769	0.0372	1050.08	0.0005	0.004099
Fe	57	3	He	55.307	0.0323	920.06	0.0005	0.004099
Co	59	3	He	28.727	1.4934	43877.43	0.0518	0.004913
Co	59	3	He	29.605	1.5389	43486.89	0.0518	0.004913
Co	59	3	He	28.817	1.4981	42633.72	0.0518	0.004913
Ni	60	3	He	52.644	0.3989	23059.09	0.0075	0.006695
Ni	60	3	He	57.163	0.4326	23359.62	0.0075	0.006695
Ni	60	3	He	56.4	0.4269	23489.72	0.0075	0.006695
Cu	63	3	He	21.356	0.4642	26835.71	0.0216	0.003198
Cu	63	3	He	23.43	0.509	27486.95	0.0216	0.003198
Cu	63	3	He	22.704	0.4933	27146.22	0.0216	0.003198
Zn	66	3	He	24.928	0.0685	3960.70	0.0026	0.002954
Zn	66	3	He	24.932	0.0685	3700.59	0.0026	0.002954
Zn	66	3	He	24.171	0.0665	3660.61	0.0026	0.002954
As	75	3	He	17.221	0.0341	1972.15	0.002	0.0004943
As	75	3	He	18.471	0.0366	1974.15	0.002	0.0004943
As	75	3	He	18.048	0.0357	1966.15	0.002	0.0004943
Sr	88	3	He	14.037	0.1146	6211.60	0.0081	0.0006852
Sr	88	3	He	13.448	0.1098	5991.51	0.0081	0.0006852
Sr	88	3	He	13.677	0.1117	5911.39	0.0081	0.0006852
Mo	98	3	He	11.575	0.2375	12876.58	0.0205	0.0005587
Mo	98	3	He	10.81	0.2218	12105.62	0.0205	0.0005587
Mo	98	3	He	11.41	0.2341	12395.86	0.0205	0.0005587
Ag	107	3	He	32.242	1.3884	75273.50	0.043	0.0004367
Ag	107	3	He	31.759	1.3676	74630.11	0.043	0.0004367
Ag	107	3	He	32.475	1.3984	74036.70	0.043	0.0004367
Cd	111	3	He	31.579	0.1579	8558.65	0.005	1.253E-05
Cd	111	3	He	30.428	0.1521	8300.52	0.005	1.253E-05
Cd	111	3	He	31.401	0.157	8310.52	0.005	1.253E-05
Sn	120	3	He	0.715	0.0238	1290.10	0.0146	0.01334
Sn	120	3	He	0.228	0.0167	910.06	0.0146	0.01334
Sn	120	3	He	0.354	0.0185	980.07	0.0146	0.01334
Sb	121	3	He	12.747	0.1829	9913.86	0.0142	0.001484
Sb	121	3	He	12.986	0.1863	10164.02	0.0142	0.001484
Sb	121	3	He	13.229	0.1897	10044.01	0.0142	0.001484
Ba	137	3	He	74.638	0.3442	18663.44	0.0046	0.000374
Ba	137	3	He	71.405	0.3293	17972.42	0.0046	0.000374
Ba	137	3	He	75.202	0.3468	18362.79	0.0046	0.000374
Tl	205	3	He	8.713	0.2461	47165.56	0.0282	0.00021
Tl	205	3	He	8.763	0.2475	47476.62	0.0282	0.00021
Tl	205	3	He	8.504	0.2402	46382.90	0.0282	0.00021
Pb	208	3	He	45.269	1.6867	169950.68	0.0372	0.0009772
Pb	208	3	He	45.61	1.6994	172059.12	0.0372	0.0009772
Pb	208	3	He	45.03	1.6778	173738.06	0.0372	0.0009772
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.007	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.012	0.0006	110.00	0.0417	8.729E-05
Sc	45	1	No Gas			1723172.01		
Sc	45	1	No Gas			1676614.98		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1713394.51		
Ge	72	1	No Gas			882935.30		
Ge	72	1	No Gas			858546.32		
Ge	72	1	No Gas			867089.21		
Sc	45	2	H2			128444.68		
Sc	45	2	H2			128151.40		
Sc	45	2	H2			129339.43		
Ge	72	2	H2			106746.37		
Ge	72	2	H2			108882.43		
Ge	72	2	H2			109648.07		
In	115	2	H2			269688.82		
In	115	2	H2			269775.23		
In	115	2	H2			274649.86		
Sc	45	3	He			29380.35		
Sc	45	3	He			28258.26		
Sc	45	3	He			28458.49		
Ge	72	3	He			57807.27		
Ge	72	3	He			54002.86		
Ge	72	3	He			55026.93		
In	115	3	He			54226.80		
In	115	3	He			54578.05		
In	115	3	He			52951.81		
Tb	159	3	He			249043.08		
Tb	159	3	He			246361.13		
Tb	159	3	He			243381.44		
Bi	209	3	He			191633.04		
Bi	209	3	He			191811.27		
Bi	209	3	He			193087.01		

Quantitation Report

Data File Name	132SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:41:19 PM
Sample Name	410-134023-A-6-B
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

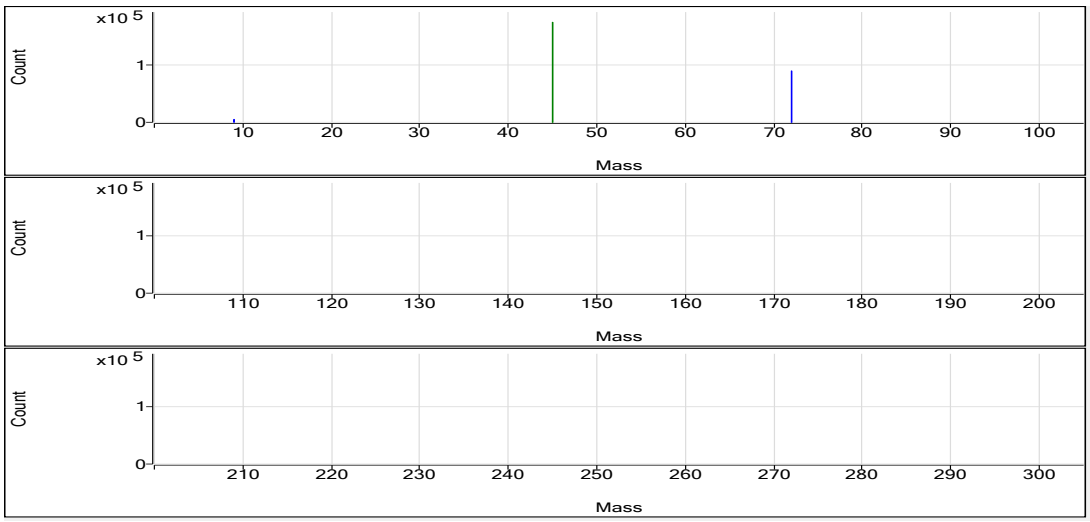
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	15.143	ppb	3.4	10360.97	0.0060	Pulse	0.5000	3
Se	78	72	H2	20.363	ppb	3.3	886.25	0.0080	Pulse	1.5000	3
Na	23	45	He	20.295	ppb	20.8	9229.90	0.3162	Pulse	0.1000	3
Mg	24	45	He	0.512	ppb	73.6	166.68	0.0057	Pulse	0.1000	3
Al	27	45	He	165.405	ppb	1.2	2126.90	0.0728	Pulse	0.1000	3
K	39	45	He	-4.151	ppb	N/A	10477.49	0.3587	Pulse	0.1000	3
Ca	44	45	He	130.703	ppb	10.0	296.68	0.0102	Pulse	0.1000	3
Ti	47	45	He	0.482	ppb	233.8	13.33	0.0005	Pulse	0.1000	3
V	51	45	He	145.979	ppb	0.8	85825.26	2.9397	Pulse	0.5000	3
Cr	52	45	He	85.595	ppb	2.0	66218.63	2.2679	Pulse	0.1000	3
Mn	55	45	He	86.371	ppb	1.0	28692.59	0.9828	Pulse	0.1000	3
Fe	57	45	He	136.053	ppb	6.4	2146.89	0.0735	Pulse	0.1000	3
Co	59	45	He	73.581	ppb	0.7	111459.75	3.8176	Pulse	0.1000	3
Ni	60	72	He	142.750	ppb	1.7	60008.68	1.0702	Pulse	0.1000	3
Cu	63	72	He	59.325	ppb	2.6	71990.50	1.2839	Pulse	0.1000	3
Zn	66	72	He	67.277	ppb	8.5	10083.90	0.1799	Pulse	0.1000	3
As	75	72	He	45.522	ppb	3.2	5010.91	0.0894	Pulse	0.5000	3
Sr	88	115	He	34.760	ppb	2.4	15465.61	0.2827	Pulse	0.1000	3
Mo	98	115	He	28.158	ppb	0.7	31562.81	0.5769	Pulse	0.1000	3
Ag	107	115	He	138.994	ppb	1.2	327346.87	5.9837	Pulse	0.1000	3
Cd	111	115	He	80.633	ppb	2.0	22048.05	0.4030	Pulse	0.5000	3
Sn	120	115	He	0.154	ppb	38.4	853.40	0.0156	Pulse	0.1000	3
Sb	121	115	He	30.344	ppb	2.5	23704.25	0.4332	Pulse	0.1000	3
Ba	137	115	He	180.601	ppb	1.7	45536.62	0.8324	Pulse	0.1000	3
Tl	205	209	He	20.840	ppb	1.0	115444.44	0.5884	Pulse	0.1000	3
Pb	208	209	He	115.231	ppb	0.3	842156.83	4.2919	Pulse	0.1000	3
U	238	209	He	0.004	ppb	56.8	53.33	0.0003	Pulse	0.1000	3

ISTD Table:

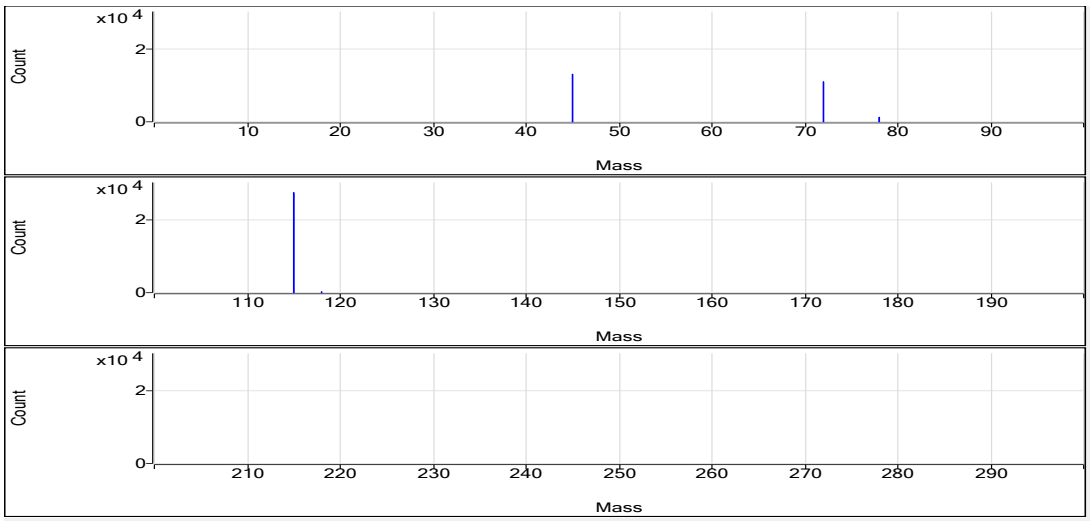
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1733305.49	0.4	98.4	Analog	0.1000	3
No Gas	Ge	72	890846.45	0.7	99.8	Pulse	0.1000	3
H2	Sc	45	132229.96	0.3	103.9	Pulse	0.1000	3
H2	Ge	72	111079.58	0.4	103.6	Pulse	0.1000	3
H2	In	115	277143.65	0.6	104.1	Pulse	0.1000	3
He	Sc	45	29196.40	0.8	102.4	Pulse	0.1000	3
He	Ge	72	56077.58	0.9	101.4	Pulse	0.1000	3
He	In	115	54709.53	1.0	101.9	Pulse	0.1000	3
He	Tb	159	249102.76	0.5	101.4	Pulse	0.1000	3
He	Bi	209	196222.11	0.8	102.8	Pulse	0.1000	3

No Gas

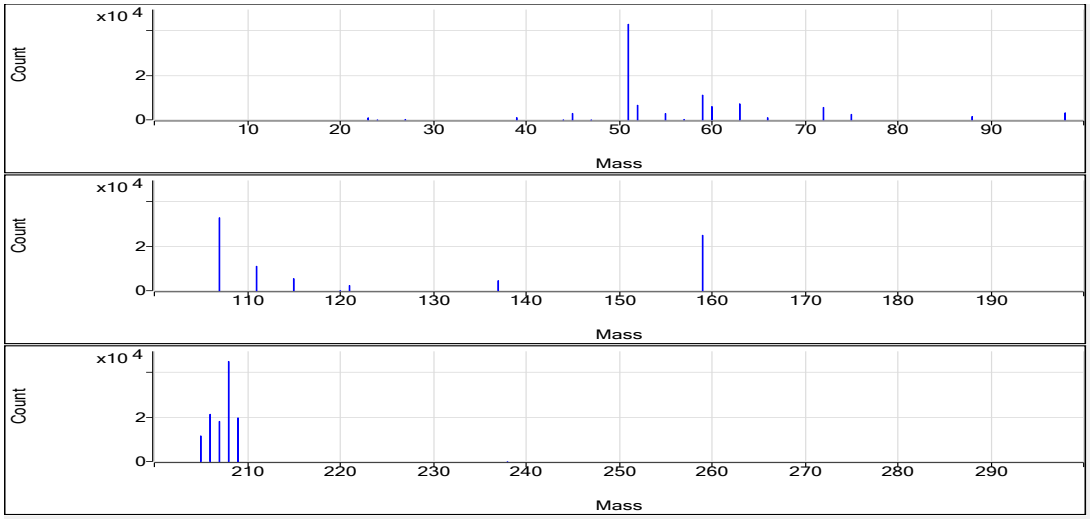


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	14.618	0.0058	10037.40	0.0004	1.287E-05
Be	9	1	No Gas	15.16	0.006	10325.61	0.0004	1.287E-05
Be	9	1	No Gas	15.651	0.0062	10719.89	0.0004	1.287E-05
Se	78	2	H2	20.364	0.008	886.03	0.0004	1.451E-05
Se	78	2	H2	21.037	0.0082	912.03	0.0004	1.451E-05
Se	78	2	H2	19.689	0.0077	860.69	0.0004	1.451E-05
Na	23	3	He	18.67	0.3121	9193.14	0.0025	0.2648
Na	23	3	He	25.09	0.3283	9523.47	0.0025	0.2648
Na	23	3	He	17.126	0.3081	8973.08	0.0025	0.2648
Mg	24	3	He	0.817	0.0061	180.01	0.0013	0.005032
Mg	24	3	He	0.628	0.0059	170.01	0.0013	0.005032
Mg	24	3	He	0.091	0.0052	150.01	0.0013	0.005032
Al	27	3	He	164.152	0.0723	2130.24	0.0004	0.001519
Al	27	3	He	164.357	0.0724	2100.23	0.0004	0.001519
Al	27	3	He	167.706	0.0738	2150.23	0.0004	0.001519
K	39	3	He	32.449	0.3943	11615.04	0.001	0.3627
K	39	3	He	-21.611	0.3417	9913.70	0.001	0.3627
K	39	3	He	-23.291	0.3401	9903.74	0.001	0.3627
Ca	44	3	He	125.199	0.0098	290.01	0.0001	0.002571
Ca	44	3	He	145.64	0.011	320.02	0.0001	0.002571
Ca	44	3	He	121.271	0.0096	280.01	0.0001	0.002571
Ti	47	3	He	1.709	0.001	30.00	0.0005	0.0002328
Ti	47	3	He	0.243	0.0003	10.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	144.908	2.9182	85970.08	0.0201	0.0116
V	51	3	He	145.874	2.9376	85217.55	0.0201	0.0116
V	51	3	He	147.155	2.9633	86288.16	0.0201	0.0116
Cr	52	3	He	86.526	2.2918	67517.89	0.0257	0.06801
Cr	52	3	He	83.613	2.2169	64312.69	0.0257	0.06801
Cr	52	3	He	86.645	2.2949	66825.30	0.0257	0.06801
Mn	55	3	He	85.913	0.9776	28799.27	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	85.882	0.9772	28348.47	0.0113	0.004215
Mn	55	3	He	87.319	0.9935	28930.03	0.0113	0.004215
Fe	57	3	He	132.296	0.0716	2110.21	0.0005	0.004099
Fe	57	3	He	145.959	0.0786	2280.25	0.0005	0.004099
Fe	57	3	He	129.903	0.0704	2050.22	0.0005	0.004099
Co	59	3	He	73.562	3.8166	112436.39	0.0518	0.004913
Co	59	3	He	73.084	3.7918	109998.56	0.0518	0.004913
Co	59	3	He	74.097	3.8443	111944.31	0.0518	0.004913
Ni	60	3	He	140.8	1.0557	59774.32	0.0075	0.006695
Ni	60	3	He	145.473	1.0905	60738.38	0.0075	0.006695
Ni	60	3	He	141.978	1.0644	59513.33	0.0075	0.006695
Cu	63	3	He	58.484	1.2657	71669.32	0.0216	0.003198
Cu	63	3	He	61.127	1.3228	73678.84	0.0216	0.003198
Cu	63	3	He	58.364	1.2631	70623.33	0.0216	0.003198
Zn	66	3	He	61.081	0.1636	9263.26	0.0026	0.002954
Zn	66	3	He	68.465	0.183	10193.96	0.0026	0.002954
Zn	66	3	He	72.286	0.1931	10794.49	0.0026	0.002954
As	75	3	He	43.952	0.0863	4886.87	0.002	0.0004943
As	75	3	He	45.807	0.0899	5008.90	0.002	0.0004943
As	75	3	He	46.806	0.0919	5136.95	0.002	0.0004943
Sr	88	3	He	33.873	0.2755	15178.61	0.0081	0.0006852
Sr	88	3	He	34.839	0.2833	15328.86	0.0081	0.0006852
Sr	88	3	He	35.568	0.2892	15889.35	0.0081	0.0006852
Mo	98	3	He	27.918	0.572	31516.17	0.0205	0.0005587
Mo	98	3	He	28.296	0.5798	31365.68	0.0205	0.0005587
Mo	98	3	He	28.259	0.579	31806.58	0.0205	0.0005587
Ag	107	3	He	137.134	5.9036	325255.37	0.043	0.0004367
Ag	107	3	He	140.101	6.0313	326301.64	0.043	0.0004367
Ag	107	3	He	139.747	6.0161	330483.59	0.043	0.0004367
Cd	111	3	He	80.612	0.4029	22199.62	0.005	1.253E-05
Cd	111	3	He	82.284	0.4113	22251.73	0.005	1.253E-05
Cd	111	3	He	79.002	0.3949	21692.81	0.005	1.253E-05
Sn	120	3	He	0.18	0.016	880.07	0.0146	0.01334
Sn	120	3	He	0.086	0.0146	790.06	0.0146	0.01334
Sn	120	3	He	0.196	0.0162	890.06	0.0146	0.01334
Sb	121	3	He	31.229	0.4458	24562.32	0.0142	0.001484
Sb	121	3	He	29.931	0.4273	23120.03	0.0142	0.001484
Sb	121	3	He	29.873	0.4265	23430.40	0.0142	0.001484
Ba	137	3	He	181.103	0.8347	45987.98	0.0046	0.000374
Ba	137	3	He	183.464	0.8456	45747.32	0.0046	0.000374
Ba	137	3	He	177.235	0.8169	44874.57	0.0046	0.000374
Tl	205	3	He	20.61	0.5819	115171.17	0.0282	0.00021
Tl	205	3	He	20.946	0.5914	115636.16	0.0282	0.00021
Tl	205	3	He	20.963	0.5918	115525.98	0.0282	0.00021
Pb	208	3	He	114.966	4.282	453838.86	0.0372	0.0009772
Pb	208	3	He	115.623	4.3065	447113.12	0.0372	0.0009772
Pb	208	3	He	115.102	4.2871	446459.02	0.0372	0.0009772
U	238	3	He	0.006	0.0004	70.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1739302.94		
Sc	45	1	No Gas			1725428.88		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1735184.66		
Ge	72	1	No Gas			897334.13		
Ge	72	1	No Gas			890533.35		
Ge	72	1	No Gas			884671.86		
Sc	45	2	H2			131903.62		
Sc	45	2	H2			132176.47		
Sc	45	2	H2			132609.79		
Ge	72	2	H2			111038.86		
Ge	72	2	H2			110646.68		
Ge	72	2	H2			111553.21		
In	115	2	H2			275942.36		
In	115	2	H2			279019.61		
In	115	2	H2			276468.98		
Sc	45	3	He			29460.20		
Sc	45	3	He			29009.56		
Sc	45	3	He			29119.43		
Ge	72	3	He			56622.80		
Ge	72	3	He			55699.29		
Ge	72	3	He			55910.64		
In	115	3	He			55100.49		
In	115	3	He			54106.58		
In	115	3	He			54939.45		
Tb	159	3	He			250143.39		
Tb	159	3	He			247860.35		
Tb	159	3	He			249304.55		
Bi	209	3	He			197929.27		
Bi	209	3	He			195540.88		
Bi	209	3	He			195196.17		

Quantitation Report

Data File Name	133SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:43:20 PM
Sample Name	410-134023-A-6-B @5
Sample Type	Sample
Comment	G7
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

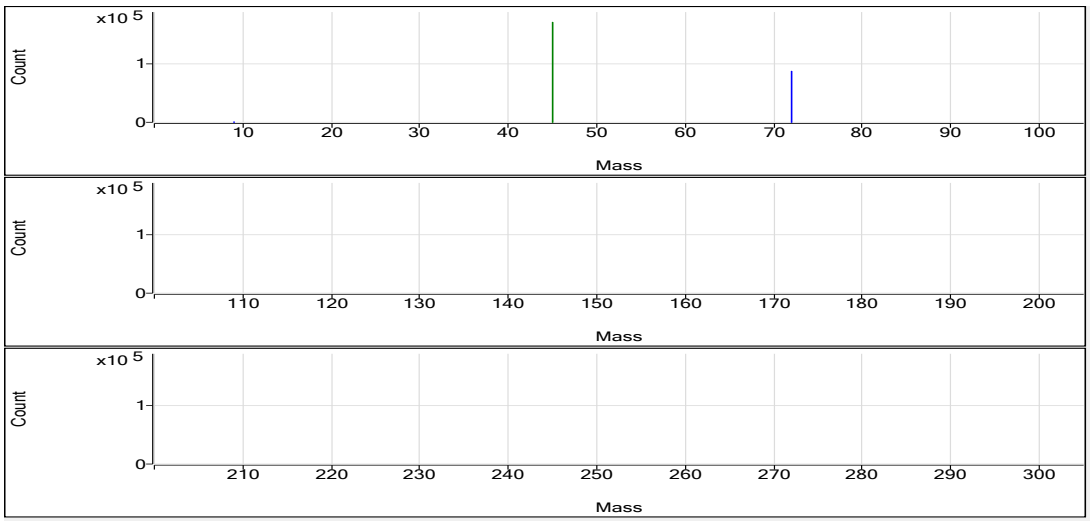
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	2.740	ppb	8.0	1869.46	0.0011	Pulse	0.5000	3
Se	78	72	H2	4.036	ppb	2.9	173.11	0.0016	Pulse	1.5000	3
Na	23	45	He	25.529	ppb	39.0	9206.48	0.3294	Pulse	0.1000	3
Mg	24	45	He	0.876	ppb	171.7	173.34	0.0062	Pulse	0.1000	3
Al	27	45	He	35.968	ppb	2.1	476.69	0.0170	Pulse	0.1000	3
K	39	45	He	-1.213	ppb	N/A	10120.54	0.3616	Pulse	0.1000	3
Ca	44	45	He	80.505	ppb	27.0	203.34	0.0072	Pulse	0.1000	3
Ti	47	45	He	-0.507	ppb	N/A	0.00	0.0000	Pulse	0.1000	3
V	51	45	He	27.314	ppb	3.1	15647.79	0.5595	Pulse	0.5000	3
Cr	52	45	He	16.268	ppb	3.3	13596.84	0.4861	Pulse	0.1000	3
Mn	55	45	He	16.843	ppb	0.7	5457.89	0.1950	Pulse	0.1000	3
Fe	57	45	He	22.948	ppb	14.9	443.36	0.0158	Pulse	0.1000	3
Co	59	45	He	14.027	ppb	1.8	20471.79	0.7317	Pulse	0.1000	3
Ni	60	72	He	25.999	ppb	2.0	10877.74	0.2004	Pulse	0.1000	3
Cu	63	72	He	10.770	ppb	4.9	12792.79	0.2357	Pulse	0.1000	3
Zn	66	72	He	12.537	ppb	6.2	1950.21	0.0359	Pulse	0.1000	3
As	75	72	He	8.763	ppb	6.5	955.37	0.0176	Pulse	0.5000	3
Sr	88	115	He	6.531	ppb	1.5	2813.72	0.0537	Pulse	0.1000	3
Mo	98	115	He	5.520	ppb	2.8	5951.44	0.1135	Pulse	0.1000	3
Ag	107	115	He	25.845	ppb	1.8	58339.36	1.1130	Pulse	0.1000	3
Cd	111	115	He	15.103	ppb	2.7	3957.25	0.0755	Pulse	0.5000	3
Sn	120	115	He	0.327	ppb	50.5	950.07	0.0181	Pulse	0.1000	3
Sb	121	115	He	6.083	ppb	7.5	4614.25	0.0880	Pulse	0.1000	3
Ba	137	115	He	33.460	ppb	4.8	8099.35	0.1545	Pulse	0.1000	3
Tl	205	209	He	4.200	ppb	2.7	22827.31	0.1188	Pulse	0.1000	3
Pb	208	209	He	21.456	ppb	0.6	153791.60	0.8000	Pulse	0.1000	3
U	238	209	He	0.004	ppb	52.4	50.00	0.0003	Pulse	0.1000	3

ISTD Table:

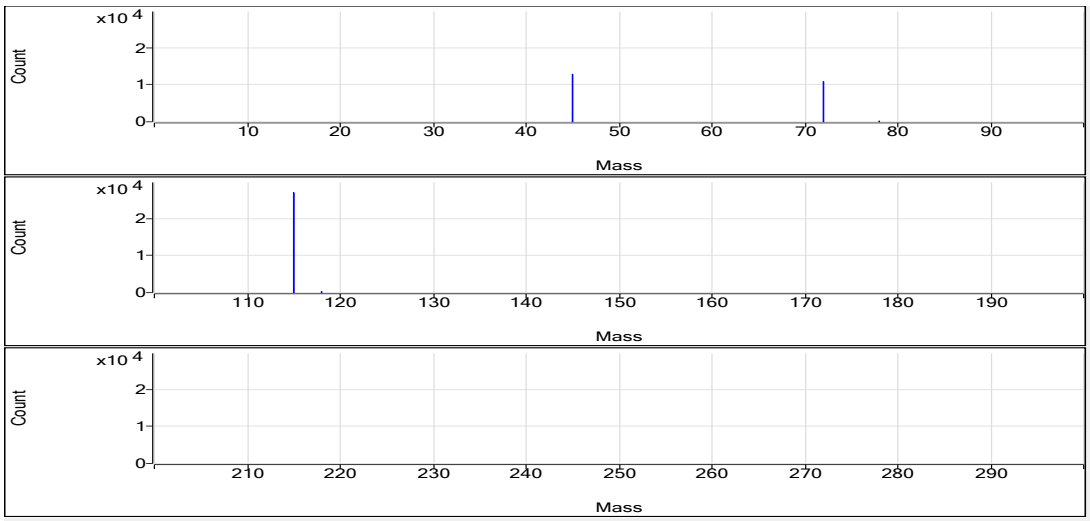
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1712126.80	0.7	97.2	Analog	0.1000	3
No Gas	Ge	72	875967.30	0.6	98.2	Pulse	0.1000	3
H2	Sc	45	128400.02	0.7	100.8	Pulse	0.1000	3
H2	Ge	72	108630.39	1.4	101.3	Pulse	0.1000	3
H2	In	115	269566.09	1.0	101.2	Pulse	0.1000	3
He	Sc	45	27984.28	2.7	98.2	Pulse	0.1000	3
He	Ge	72	54280.52	0.4	98.1	Pulse	0.1000	3
He	In	115	52429.58	1.8	97.7	Pulse	0.1000	3
He	Tb	159	243759.56	1.2	99.2	Pulse	0.1000	3
He	Bi	209	192257.86	1.2	100.7	Pulse	0.1000	3

No Gas

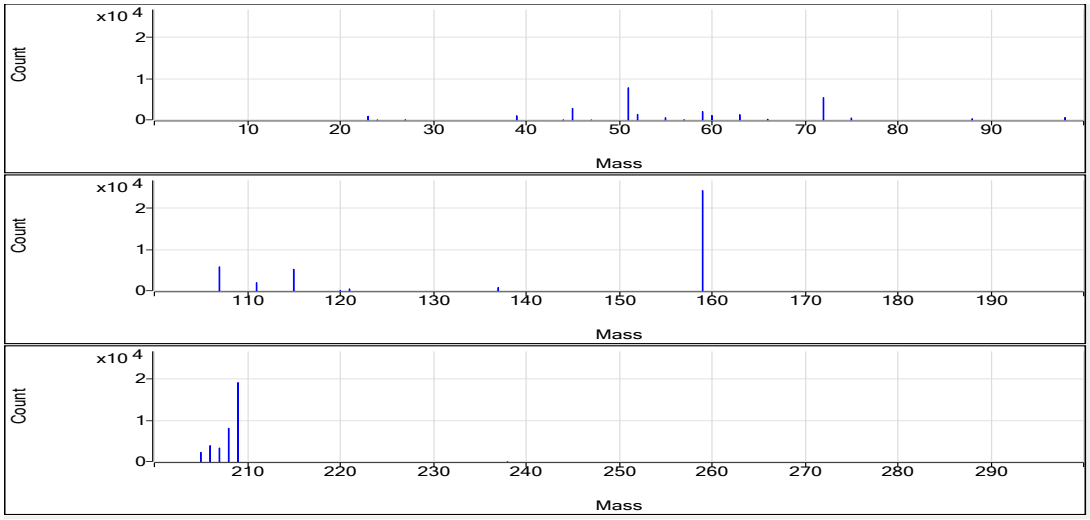


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	2.491	0.001	1716.11	0.0004	1.287E-05
Be	9	1	No Gas	2.835	0.0011	1928.14	0.0004	1.287E-05
Be	9	1	No Gas	2.896	0.0012	1964.14	0.0004	1.287E-05
Se	78	2	H2	4.157	0.0016	180.67	0.0004	1.451E-05
Se	78	2	H2	3.926	0.0016	166.00	0.0004	1.451E-05
Se	78	2	H2	4.025	0.0016	172.67	0.0004	1.451E-05
Na	23	3	He	14.097	0.3005	8632.74	0.0025	0.2648
Na	23	3	He	30.111	0.341	9543.40	0.0025	0.2648
Na	23	3	He	32.38	0.3467	9443.30	0.0025	0.2648
Mg	24	3	He	1.99	0.0077	220.01	0.0013	0.005032
Mg	24	3	He	-0.835	0.0039	110.00	0.0013	0.005032
Mg	24	3	He	1.473	0.007	190.01	0.0013	0.005032
Al	27	3	He	36.838	0.0174	500.03	0.0004	0.001519
Al	27	3	He	35.421	0.0168	470.03	0.0004	0.001519
Al	27	3	He	35.644	0.0169	460.02	0.0004	0.001519
K	39	3	He	8.355	0.3709	10654.25	0.001	0.3627
K	39	3	He	-9.507	0.3535	9893.69	0.001	0.3627
K	39	3	He	-2.486	0.3603	9813.68	0.001	0.3627
Ca	44	3	He	105.545	0.0087	250.01	0.0001	0.002571
Ca	44	3	He	66.457	0.0064	180.01	0.0001	0.002571
Ca	44	3	He	69.513	0.0066	180.01	0.0001	0.002571
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
V	51	3	He	26.553	0.5442	15634.44	0.0201	0.0116
V	51	3	He	27.168	0.5565	15576.38	0.0201	0.0116
V	51	3	He	28.22	0.5776	15732.54	0.0201	0.0116
Cr	52	3	He	15.674	0.4708	13526.73	0.0257	0.06801
Cr	52	3	He	16.423	0.4901	13716.95	0.0257	0.06801
Cr	52	3	He	16.707	0.4974	13546.83	0.0257	0.06801
Mn	55	3	He	16.745	0.1939	5571.24	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	16.977	0.1966	5501.24	0.0113	0.004215
Mn	55	3	He	16.808	0.1946	5301.19	0.0113	0.004215
Fe	57	3	He	26.068	0.0174	500.03	0.0005	0.004099
Fe	57	3	He	23.471	0.0161	450.03	0.0005	0.004099
Fe	57	3	He	19.305	0.014	380.02	0.0005	0.004099
Co	59	3	He	13.74	0.7169	20595.33	0.0518	0.004913
Co	59	3	He	14.176	0.7394	20695.33	0.0518	0.004913
Co	59	3	He	14.165	0.7389	20124.72	0.0518	0.004913
Ni	60	3	He	25.951	0.2	10824.32	0.0075	0.006695
Ni	60	3	He	25.5	0.1967	10664.23	0.0075	0.006695
Ni	60	3	He	26.547	0.2045	11144.68	0.0075	0.006695
Cu	63	3	He	11.346	0.2481	13426.71	0.0216	0.003198
Cu	63	3	He	10.655	0.2332	12646.00	0.0216	0.003198
Cu	63	3	He	10.31	0.2258	12305.66	0.0216	0.003198
Zn	66	3	He	12.65	0.0362	1960.21	0.0026	0.002954
Zn	66	3	He	11.71	0.0338	1830.19	0.0026	0.002954
Zn	66	3	He	13.249	0.0378	2060.22	0.0026	0.002954
As	75	3	He	9.402	0.0189	1020.04	0.002	0.0004943
As	75	3	He	8.588	0.0173	936.04	0.002	0.0004943
As	75	3	He	8.299	0.0167	910.04	0.002	0.0004943
Sr	88	3	He	6.444	0.053	2820.39	0.0081	0.0006852
Sr	88	3	He	6.511	0.0535	2750.35	0.0081	0.0006852
Sr	88	3	He	6.636	0.0545	2870.41	0.0081	0.0006852
Mo	98	3	He	5.497	0.1131	6021.43	0.0205	0.0005587
Mo	98	3	He	5.686	0.117	6011.50	0.0205	0.0005587
Mo	98	3	He	5.375	0.1106	5821.40	0.0205	0.0005587
Ag	107	3	He	25.51	1.0985	58493.50	0.043	0.0004367
Ag	107	3	He	26.386	1.1363	58403.26	0.043	0.0004367
Ag	107	3	He	25.638	1.1041	58121.31	0.043	0.0004367
Cd	111	3	He	14.676	0.0734	3906.58	0.005	1.253E-05
Cd	111	3	He	15.491	0.0774	3980.59	0.005	1.253E-05
Cd	111	3	He	15.141	0.0757	3984.59	0.005	1.253E-05
Sn	120	3	He	0.231	0.0167	890.06	0.0146	0.01334
Sn	120	3	He	0.232	0.0167	860.05	0.0146	0.01334
Sn	120	3	He	0.517	0.0209	1100.09	0.0146	0.01334
Sb	121	3	He	6.246	0.0904	4811.00	0.0142	0.001484
Sb	121	3	He	6.433	0.093	4780.97	0.0142	0.001484
Sb	121	3	He	5.571	0.0807	4250.79	0.0142	0.001484
Ba	137	3	He	31.726	0.1465	7802.53	0.0046	0.000374
Ba	137	3	He	33.798	0.1561	8022.61	0.0046	0.000374
Ba	137	3	He	34.855	0.161	8472.90	0.0046	0.000374
Tl	205	3	He	4.111	0.1162	22580.02	0.0282	0.00021
Tl	205	3	He	4.328	0.1224	23211.41	0.0282	0.00021
Tl	205	3	He	4.162	0.1177	22690.49	0.0282	0.00021
Pb	208	3	He	21.305	0.7943	81291.78	0.0372	0.0009772
Pb	208	3	He	21.56	0.8038	80517.55	0.0372	0.0009772
Pb	208	3	He	21.505	0.8018	82559.49	0.0372	0.0009772
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
U	238	3	He	0.002	0.0002	30.00	0.0417	8.729E-05
Sc	45	1	No Gas			1726664.66		
Sc	45	1	No Gas			1707183.41		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1702532.32		
Ge	72	1	No Gas			878222.17		
Ge	72	1	No Gas			879486.63		
Ge	72	1	No Gas			870193.11		
Sc	45	2	H2			127797.80		
Sc	45	2	H2			128000.19		
Sc	45	2	H2			129402.08		
Ge	72	2	H2			110122.70		
Ge	72	2	H2			107088.47		
Ge	72	2	H2			108679.99		
In	115	2	H2			269988.43		
In	115	2	H2			266780.23		
In	115	2	H2			271929.61		
Sc	45	3	He			28728.99		
Sc	45	3	He			27987.86		
Sc	45	3	He			27236.00		
Ge	72	3	He			54112.95		
Ge	72	3	He			54224.03		
Ge	72	3	He			54504.59		
In	115	3	He			53252.56		
In	115	3	He			51405.65		
In	115	3	He			52650.47		
Tb	159	3	He			246768.20		
Tb	159	3	He			240926.73		
Tb	159	3	He			243583.75		
Bi	209	3	He			194264.45		
Bi	209	3	He			189696.40		
Bi	209	3	He			192812.73		

Quantitation Report

Data File Name	134SMPL.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:45:18 PM
Sample Name	RINSE
Sample Type	Sample
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

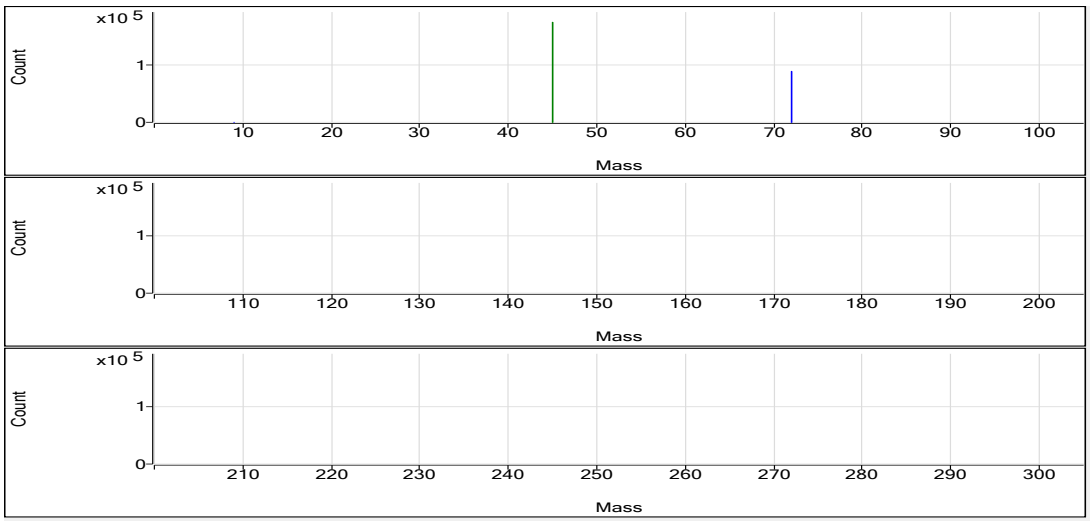
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.069	ppb	9.8	69.33	0.0000	Pulse	0.5000	3
Se	78	72	H2	0.043	ppb	112.4	3.33	0.0000	Pulse	1.5000	3
Na	23	45	He	22.444	ppb	0.8	8996.38	0.3216	Pulse	0.1000	3
Mg	24	45	He	0.162	ppb	641.8	146.67	0.0052	Pulse	0.1000	3
Al	27	45	He	1.457	ppb	59.3	60.00	0.0021	Pulse	0.1000	3
K	39	45	He	5.868	ppb	681.0	10300.60	0.3684	Pulse	0.1000	3
Ca	44	45	He	-7.293	ppb	N/A	60.00	0.0021	Pulse	0.1000	3
Ti	47	45	He	0.272	ppb	288.0	10.00	0.0004	Pulse	0.1000	3
V	51	45	He	0.176	ppb	18.0	423.34	0.0151	Pulse	0.5000	3
Cr	52	45	He	0.266	ppb	82.1	2093.56	0.0749	Pulse	0.1000	3
Mn	55	45	He	0.038	ppb	10.5	130.01	0.0046	Pulse	0.1000	3
Fe	57	45	He	3.658	ppb	125.2	166.67	0.0060	Pulse	0.1000	3
Co	59	45	He	0.066	ppb	34.7	233.34	0.0083	Pulse	0.1000	3
Ni	60	72	He	0.249	ppb	61.6	466.69	0.0085	Pulse	0.1000	3
Cu	63	72	He	0.075	ppb	25.9	263.34	0.0048	Pulse	0.1000	3
Zn	66	72	He	0.038	ppb	612.7	166.67	0.0031	Pulse	0.1000	3
As	75	72	He	0.171	ppb	22.0	45.33	0.0008	Pulse	0.5000	3
Sr	88	115	He	0.015	ppb	375.1	43.33	0.0008	Pulse	0.1000	3
Mo	98	115	He	0.049	ppb	61.2	83.33	0.0016	Pulse	0.1000	3
Ag	107	115	He	0.012	ppb	35.0	50.00	0.0009	Pulse	0.1000	3
Cd	111	115	He	0.040	ppb	61.0	11.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.176	ppb	29.7	850.05	0.0159	Pulse	0.1000	3
Sb	121	115	He	0.242	ppb	28.7	263.35	0.0049	Pulse	0.1000	3
Ba	137	115	He	0.054	ppb	155.0	33.33	0.0006	Pulse	0.1000	3
Tl	205	209	He	0.155	ppb	6.7	863.40	0.0046	Pulse	0.1000	3
Pb	208	209	He	0.069	ppb	23.0	666.70	0.0035	Pulse	0.1000	3
U	238	209	He	0.003	ppb	83.8	40.00	0.0002	Pulse	0.1000	3

ISTD Table:

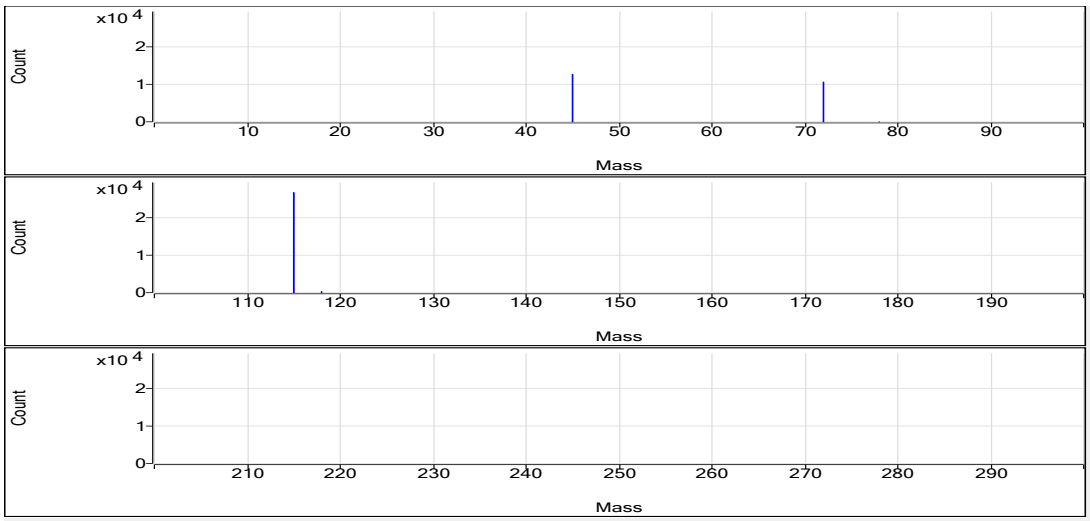
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1733186.38	1.3	98.4	Analog	0.1000	3
No Gas	Ge	72	883272.62	0.9	99.0	Pulse	0.1000	3
H2	Sc	45	127384.15	1.4	100.0	Pulse	0.1000	3
H2	Ge	72	107116.49	1.2	99.9	Pulse	0.1000	3
H2	In	115	268856.64	0.6	101.0	Pulse	0.1000	3
He	Sc	45	27974.23	1.0	98.1	Pulse	0.1000	3
He	Ge	72	54641.93	1.4	98.8	Pulse	0.1000	3
He	In	115	53410.68	1.5	99.5	Pulse	0.1000	3
He	Tb	159	245650.62	1.2	100.0	Pulse	0.1000	3
He	Bi	209	188453.56	1.7	98.7	Pulse	0.1000	3

No Gas

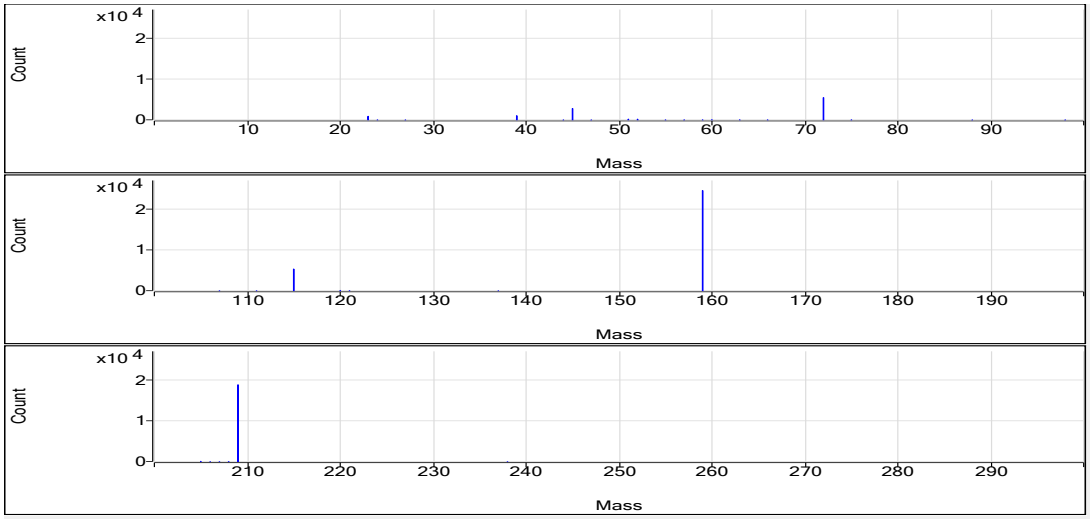


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.077	0	74.00	0.0004	1.287E-05
Be	9	1	No Gas	0.065	0	66.00	0.0004	1.287E-05
Be	9	1	No Gas	0.065	0	68.00	0.0004	1.287E-05
Se	78	2	H2	0.09	0	5.33	0.0004	1.451E-05
Se	78	2	H2	-0.006	0	1.33	0.0004	1.451E-05
Se	78	2	H2	0.043	0	3.33	0.0004	1.451E-05
Na	23	3	He	22.3	0.3212	8923.03	0.0025	0.2648
Na	23	3	He	22.647	0.3221	8973.06	0.0025	0.2648
Na	23	3	He	22.384	0.3214	9093.04	0.0025	0.2648
Mg	24	3	He	-0.539	0.0043	120.00	0.0013	0.005032
Mg	24	3	He	1.355	0.0068	190.01	0.0013	0.005032
Mg	24	3	He	-0.33	0.0046	130.01	0.0013	0.005032
Al	27	3	He	1.488	0.0022	60.00	0.0004	0.001519
Al	27	3	He	2.306	0.0025	70.00	0.0004	0.001519
Al	27	3	He	0.577	0.0018	50.00	0.0004	0.001519
K	39	3	He	48.869	0.4102	11394.78	0.001	0.3627
K	39	3	He	-1.148	0.3616	10073.72	0.001	0.3627
K	39	3	He	-30.118	0.3335	9433.31	0.001	0.3627
Ca	44	3	He	5.317	0.0029	80.00	0.0001	0.002571
Ca	44	3	He	-13.363	0.0018	50.00	0.0001	0.002571
Ca	44	3	He	-13.834	0.0018	50.00	0.0001	0.002571
Ti	47	3	He	1.06	0.0007	20.00	0.0005	0.0002328
Ti	47	3	He	-0.507	0	0.00	0.0005	0.0002328
Ti	47	3	He	0.263	0.0004	10.00	0.0005	0.0002328
V	51	3	He	0.208	0.0158	438.01	0.0201	0.0116
V	51	3	He	0.177	0.0151	422.01	0.0201	0.0116
V	51	3	He	0.144	0.0145	410.01	0.0201	0.0116
Cr	52	3	He	0.506	0.081	2250.26	0.0257	0.06801
Cr	52	3	He	0.078	0.07	1950.20	0.0257	0.06801
Cr	52	3	He	0.215	0.0735	2080.21	0.0257	0.06801
Mn	55	3	He	0.041	0.0047	130.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.04	0.0047	130.01	0.0113	0.004215
Mn	55	3	He	0.034	0.0046	130.00	0.0113	0.004215
Fe	57	3	He	8.898	0.0086	240.01	0.0005	0.004099
Fe	57	3	He	0.41	0.0043	120.00	0.0005	0.004099
Fe	57	3	He	1.667	0.0049	140.01	0.0005	0.004099
Co	59	3	He	0.058	0.0079	220.01	0.0518	0.004913
Co	59	3	He	0.092	0.0097	270.01	0.0518	0.004913
Co	59	3	He	0.048	0.0074	210.01	0.0518	0.004913
Ni	60	3	He	0.073	0.0072	400.02	0.0075	0.006695
Ni	60	3	He	0.325	0.0091	500.03	0.0075	0.006695
Ni	60	3	He	0.35	0.0093	500.02	0.0075	0.006695
Cu	63	3	He	0.078	0.0049	270.01	0.0216	0.003198
Cu	63	3	He	0.054	0.0044	240.01	0.0216	0.003198
Cu	63	3	He	0.093	0.0052	280.01	0.0216	0.003198
Zn	66	3	He	0.115	0.0033	180.01	0.0026	0.002954
Zn	66	3	He	-0.222	0.0024	130.00	0.0026	0.002954
Zn	66	3	He	0.22	0.0035	190.01	0.0026	0.002954
As	75	3	He	0.192	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.195	0.0009	48.00	0.002	0.0004943
As	75	3	He	0.128	0.0007	40.00	0.002	0.0004943
Sr	88	3	He	-0.038	0.0004	20.00	0.0081	0.0006852
Sr	88	3	He	0.074	0.0013	70.00	0.0081	0.0006852
Sr	88	3	He	0.009	0.0008	40.00	0.0081	0.0006852
Mo	98	3	He	0.028	0.0011	60.00	0.0205	0.0005587
Mo	98	3	He	0.036	0.0013	70.00	0.0205	0.0005587
Mo	98	3	He	0.083	0.0023	120.00	0.0205	0.0005587
Ag	107	3	He	0.012	0.0009	50.00	0.043	0.0004367
Ag	107	3	He	0.015	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.007	0.0008	40.00	0.043	0.0004367
Cd	111	3	He	0.058	0.0003	16.00	0.005	1.253E-05
Cd	111	3	He	0.012	0.0001	4.00	0.005	1.253E-05
Cd	111	3	He	0.05	0.0003	14.00	0.005	1.253E-05
Sn	120	3	He	0.225	0.0166	880.05	0.0146	0.01334
Sn	120	3	He	0.182	0.016	870.05	0.0146	0.01334
Sn	120	3	He	0.121	0.0151	800.05	0.0146	0.01334
Sb	121	3	He	0.321	0.006	320.02	0.0142	0.001484
Sb	121	3	He	0.219	0.0046	250.01	0.0142	0.001484
Sb	121	3	He	0.188	0.0042	220.01	0.0142	0.001484
Ba	137	3	He	0.083	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.118	0.0009	50.00	0.0046	0.000374
Ba	137	3	He	-0.04	0.0002	10.00	0.0046	0.000374
Tl	205	3	He	0.152	0.0045	860.06	0.0282	0.00021
Tl	205	3	He	0.146	0.0043	800.06	0.0282	0.00021
Tl	205	3	He	0.166	0.0049	930.07	0.0282	0.00021
Pb	208	3	He	0.072	0.0037	470.02	0.0372	0.0009772
Pb	208	3	He	0.083	0.0041	390.02	0.0372	0.0009772
Pb	208	3	He	0.052	0.0029	330.02	0.0372	0.0009772
U	238	3	He	0.003	0.0002	40.00	0.0417	8.729E-05
U	238	3	He	0.001	0.0001	20.00	0.0417	8.729E-05
U	238	3	He	0.005	0.0003	60.00	0.0417	8.729E-05
Sc	45	1	No Gas			1717243.10		
Sc	45	1	No Gas			1722395.13		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1759920.91		
Ge	72	1	No Gas			880448.27		
Ge	72	1	No Gas			876790.77		
Ge	72	1	No Gas			892578.81		
Sc	45	2	H2			126375.42		
Sc	45	2	H2			129401.17		
Sc	45	2	H2			126375.86		
Ge	72	2	H2			107291.34		
Ge	72	2	H2			108348.93		
Ge	72	2	H2			105709.19		
In	115	2	H2			269666.19		
In	115	2	H2			269877.57		
In	115	2	H2			267026.15		
Sc	45	3	He			27777.55		
Sc	45	3	He			27857.16		
Sc	45	3	He			28287.99		
Ge	72	3	He			55287.59		
Ge	72	3	He			54866.05		
Ge	72	3	He			53772.15		
In	115	3	He			52931.52		
In	115	3	He			54366.98		
In	115	3	He			52951.40		
Tb	159	3	He			247961.81		
Tb	159	3	He			242453.79		
Tb	159	3	He			246536.25		
Bi	209	3	He			190733.16		
Bi	209	3	He			184869.47		
Bi	209	3	He			189758.04		

Quantitation Report

Data File Name	135_CCV.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:47:18 PM
Sample Name	CCV 4621649
Sample Type	CCV
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

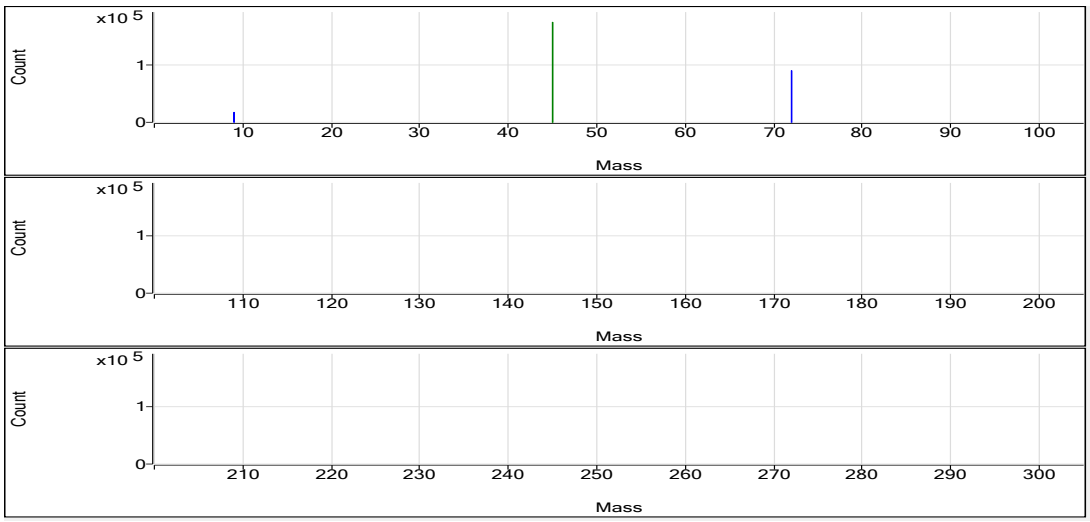
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	51.118	ppb	7.4	34970.17	0.0201	Pulse	0.5000	3
Se	78	72	H2	51.709	ppb	1.7	2245.29	0.0202	Pulse	1.5000	3
Na	23	45	He	5209.165	ppb	3.4	379025.41	13.4372	Pulse	0.1000	3
Mg	24	45	He	5148.766	ppb	4.2	191787.91	6.8006	Pulse	0.1000	3
Al	27	45	He	5116.219	ppb	2.9	62285.49	2.2079	Pulse	0.1000	3
K	39	45	He	5168.783	ppb	4.1	151869.61	5.3845	Pulse	0.1000	3
Ca	44	45	He	5200.492	ppb	5.9	8589.54	0.3047	Pulse	0.1000	3
Ti	47	45	He	5212.187	ppb	5.5	67540.60	2.3954	Pulse	0.1000	3
V	51	45	He	519.011	ppb	3.0	293998.66	10.4220	Pulse	0.5000	3
Cr	52	45	He	518.653	ppb	2.8	377971.28	13.3980	Pulse	0.1000	3
Mn	55	45	He	517.435	ppb	3.4	165475.17	5.8665	Pulse	0.1000	3
Fe	57	45	He	5220.941	ppb	5.2	75266.53	2.6691	Pulse	0.1000	3
Co	59	45	He	515.959	ppb	3.6	754203.64	26.7397	Pulse	0.1000	3
Ni	60	72	He	505.376	ppb	0.4	213402.95	3.7718	Pulse	0.1000	3
Cu	63	72	He	500.459	ppb	0.6	611446.25	10.8069	Pulse	0.1000	3
Zn	66	72	He	503.044	ppb	1.6	75025.72	1.3260	Pulse	0.1000	3
As	75	72	He	499.552	ppb	0.7	55209.83	0.9758	Pulse	0.5000	3
Sr	88	115	He	52.420	ppb	1.0	22688.83	0.4260	Pulse	0.1000	3
Mo	98	115	He	51.621	ppb	0.3	56313.38	1.0572	Pulse	0.1000	3
Ag	107	115	He	51.826	ppb	1.6	118846.62	2.2314	Pulse	0.1000	3
Cd	111	115	He	50.916	ppb	0.1	13556.60	0.2545	Pulse	0.5000	3
Sn	120	115	He	50.723	ppb	1.4	40199.11	0.7547	Pulse	0.1000	3
Sb	121	115	He	51.869	ppb	0.3	39390.13	0.7395	Pulse	0.1000	3
Ba	137	115	He	509.660	ppb	0.4	125088.02	2.3484	Pulse	0.1000	3
Tl	205	209	He	50.657	ppb	1.7	274233.85	1.4299	Pulse	0.1000	3
Pb	208	209	He	50.979	ppb	1.0	364292.17	1.8993	Pulse	0.1000	3
U	238	209	He	50.237	ppb	0.9	401977.34	2.0959	Pulse	0.1000	3

ISTD Table:

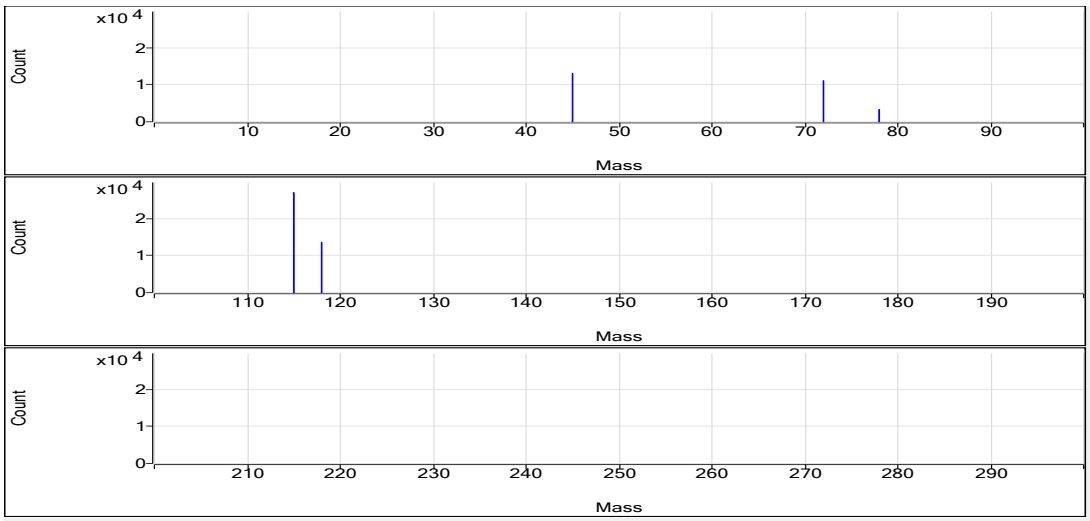
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1736080.23	0.6	98.6	Analog	0.1000	3
No Gas	Ge	72	896882.49	0.1	100.5	Pulse	0.1000	3
H2	Sc	45	130544.98	2.1	102.5	Pulse	0.1000	3
H2	Ge	72	110934.69	1.4	103.5	Pulse	0.1000	3
H2	In	115	269843.40	1.5	101.3	Pulse	0.1000	3
He	Sc	45	28228.19	3.4	99.0	Pulse	0.1000	3
He	Ge	72	56579.33	0.5	102.3	Pulse	0.1000	3
He	In	115	53265.78	0.8	99.2	Pulse	0.1000	3
He	Tb	159	246218.15	0.6	100.2	Pulse	0.1000	3
He	Bi	209	191814.51	1.5	100.5	Pulse	0.1000	3

No Gas

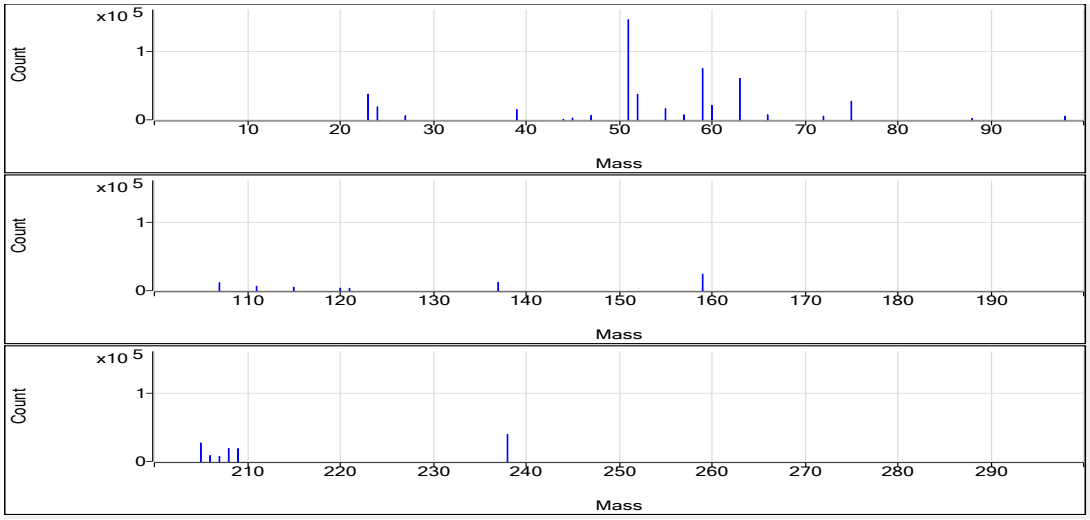


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	47.089	0.0186	32453.14	0.0004	1.287E-05
Be	9	1	No Gas	51.676	0.0204	35187.20	0.0004	1.287E-05
Be	9	1	No Gas	54.589	0.0215	37270.16	0.0004	1.287E-05
Se	78	2	H2	52.647	0.0206	2302.86	0.0004	1.451E-05
Se	78	2	H2	50.943	0.0199	2232.18	0.0004	1.451E-05
Se	78	2	H2	51.536	0.0202	2200.84	0.0004	1.451E-05
Na	23	3	He	5391.802	13.8991	379115.85	0.0025	0.2648
Na	23	3	He	5037.09	13.0021	379272.92	0.0025	0.2648
Na	23	3	He	5198.603	13.4105	378687.46	0.0025	0.2648
Mg	24	3	He	5362.755	7.083	193199.68	0.0013	0.005032
Mg	24	3	He	4928.039	6.5093	189876.66	0.0013	0.005032
Mg	24	3	He	5155.504	6.8095	192287.40	0.0013	0.005032
Al	27	3	He	5272.479	2.2753	62061.42	0.0004	0.001519
Al	27	3	He	4983.429	2.1506	62734.11	0.0004	0.001519
Al	27	3	He	5092.75	2.1978	62060.93	0.0004	0.001519
K	39	3	He	5402.997	5.6121	153076.96	0.001	0.3627
K	39	3	He	4994.036	5.2147	152114.73	0.001	0.3627
K	39	3	He	5109.317	5.3267	150417.15	0.001	0.3627
Ca	44	3	He	5454.511	0.3194	8712.89	0.0001	0.002571
Ca	44	3	He	4861.387	0.285	8312.75	0.0001	0.002571
Ca	44	3	He	5285.578	0.3096	8742.98	0.0001	0.002571
Ti	47	3	He	5434.008	2.4974	68119.54	0.0005	0.0002328
Ti	47	3	He	4890.858	2.2478	65568.12	0.0005	0.0002328
Ti	47	3	He	5311.694	2.4412	68934.13	0.0005	0.0002328
V	51	3	He	535	10.7427	293022.00	0.0201	0.0116
V	51	3	He	504.146	10.1238	295313.91	0.0201	0.0116
V	51	3	He	517.886	10.3994	293660.06	0.0201	0.0116
Cr	52	3	He	531.194	13.7203	374239.21	0.0257	0.06801
Cr	52	3	He	502.948	12.9943	379046.09	0.0257	0.06801
Cr	52	3	He	521.817	13.4793	380628.55	0.0257	0.06801
Mn	55	3	He	535.077	6.0664	165468.22	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	500.104	5.6701	165398.32	0.0113	0.004215
Mn	55	3	He	517.125	5.863	165558.96	0.0113	0.004215
Fe	57	3	He	5535.685	2.8298	77186.26	0.0005	0.004099
Fe	57	3	He	5053.613	2.5837	75367.20	0.0005	0.004099
Fe	57	3	He	5073.526	2.5939	73246.14	0.0005	0.004099
Co	59	3	He	533.702	27.659	754437.96	0.0518	0.004913
Co	59	3	He	496.461	25.7294	750528.66	0.0518	0.004913
Co	59	3	He	517.714	26.8306	757644.29	0.0518	0.004913
Ni	60	3	He	502.973	3.7539	212819.16	0.0075	0.006695
Ni	60	3	He	507.093	3.7845	214822.01	0.0075	0.006695
Ni	60	3	He	506.062	3.7769	212567.67	0.0075	0.006695
Cu	63	3	He	503.119	10.8644	615938.78	0.0216	0.003198
Cu	63	3	He	497.344	10.7397	609617.65	0.0216	0.003198
Cu	63	3	He	500.913	10.8167	608782.33	0.0216	0.003198
Zn	66	3	He	507.177	1.3368	75789.68	0.0026	0.002954
Zn	66	3	He	508.169	1.3394	76030.78	0.0026	0.002954
Zn	66	3	He	493.785	1.3016	73256.71	0.0026	0.002954
As	75	3	He	497.808	0.9724	55129.47	0.002	0.0004943
As	75	3	He	497.053	0.9709	55113.48	0.002	0.0004943
As	75	3	He	503.793	0.9841	55386.54	0.002	0.0004943
Sr	88	3	He	51.927	0.422	22678.60	0.0081	0.0006852
Sr	88	3	He	52.321	0.4252	22558.71	0.0081	0.0006852
Sr	88	3	He	53.012	0.4308	22829.17	0.0081	0.0006852
Mo	98	3	He	51.444	1.0536	56624.67	0.0205	0.0005587
Mo	98	3	He	51.657	1.058	56133.04	0.0205	0.0005587
Mo	98	3	He	51.764	1.0601	56182.43	0.0205	0.0005587
Ag	107	3	He	50.897	2.1914	117774.49	0.043	0.0004367
Ag	107	3	He	52.085	2.2425	118983.73	0.043	0.0004367
Ag	107	3	He	52.497	2.2602	119781.64	0.043	0.0004367
Cd	111	3	He	50.895	0.2544	13672.72	0.005	1.253E-05
Cd	111	3	He	50.874	0.2543	13492.55	0.005	1.253E-05
Cd	111	3	He	50.979	0.2548	13504.54	0.005	1.253E-05
Sn	120	3	He	50.313	0.7487	40239.59	0.0146	0.01334
Sn	120	3	He	51.557	0.7669	40690.10	0.0146	0.01334
Sn	120	3	He	50.299	0.7485	39667.64	0.0146	0.01334
Sb	121	3	He	52.019	0.7416	39858.06	0.0142	0.001484
Sb	121	3	He	51.711	0.7372	39116.44	0.0142	0.001484
Sb	121	3	He	51.878	0.7396	39195.89	0.0142	0.001484
Ba	137	3	He	509.932	2.3496	126279.01	0.0046	0.000374
Ba	137	3	He	507.403	2.338	124048.25	0.0046	0.000374
Ba	137	3	He	511.645	2.3575	124936.81	0.0046	0.000374
Tl	205	3	He	49.87	1.4077	274715.84	0.0282	0.00021
Tl	205	3	He	51.561	1.4554	276914.21	0.0282	0.00021
Tl	205	3	He	50.538	1.4265	271071.50	0.0282	0.00021
Pb	208	3	He	50.522	1.8823	197742.63	0.0372	0.0009772
Pb	208	3	He	51.534	1.92	195539.86	0.0372	0.0009772
Pb	208	3	He	50.882	1.8957	191147.48	0.0372	0.0009772
U	238	3	He	49.695	2.0732	404600.23	0.0417	8.729E-05
U	238	3	He	50.547	2.1088	401224.80	0.0417	8.729E-05
U	238	3	He	50.471	2.1056	400106.99	0.0417	8.729E-05
Sc	45	1	No Gas			1748432.01		
Sc	45	1	No Gas			1727573.72		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1732234.97		
Ge	72	1	No Gas			895775.77		
Ge	72	1	No Gas			897607.88		
Ge	72	1	No Gas			897263.81		
Sc	45	2	H2			127837.29		
Sc	45	2	H2			133417.51		
Sc	45	2	H2			130380.15		
Ge	72	2	H2			111753.74		
Ge	72	2	H2			111946.08		
Ge	72	2	H2			109104.24		
In	115	2	H2			270982.48		
In	115	2	H2			273324.84		
In	115	2	H2			265222.87		
Sc	45	3	He			27276.36		
Sc	45	3	He			29170.12		
Sc	45	3	He			28238.09		
Ge	72	3	He			56693.49		
Ge	72	3	He			56763.01		
Ge	72	3	He			56281.48		
In	115	3	He			54025.97		
In	115	3	He			53342.81		
In	115	3	He			53272.75		
Tb	159	3	He			246910.64		
Tb	159	3	He			247277.03		
Tb	159	3	He			244466.77		
Bi	209	3	He			195156.03		
Bi	209	3	He			190266.23		
Bi	209	3	He			190021.27		

Quantitation Report

Data File Name	136_CCB.d
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\23H07C00.b
Acq Time	8/7/2023 7:49:16 PM
Sample Name	CCB 4613416
Sample Type	CCB
Comment	---
Prep Dilution	1.0000
Auto Dilution	1.0000
Total Dilution	1.0000
Operator Name	us19_usr_ins23851
Acq Mode	Spectrum
Cal Title	---
Cal Type	External Calibration
Last Calib	8/7/2023 3:25:03 PM
Bkg File	---
Bkg Mode	Count Subtraction except for ISTD
FQ BlankFile	---
VIS Fit	Point to Point

FullQuant Table

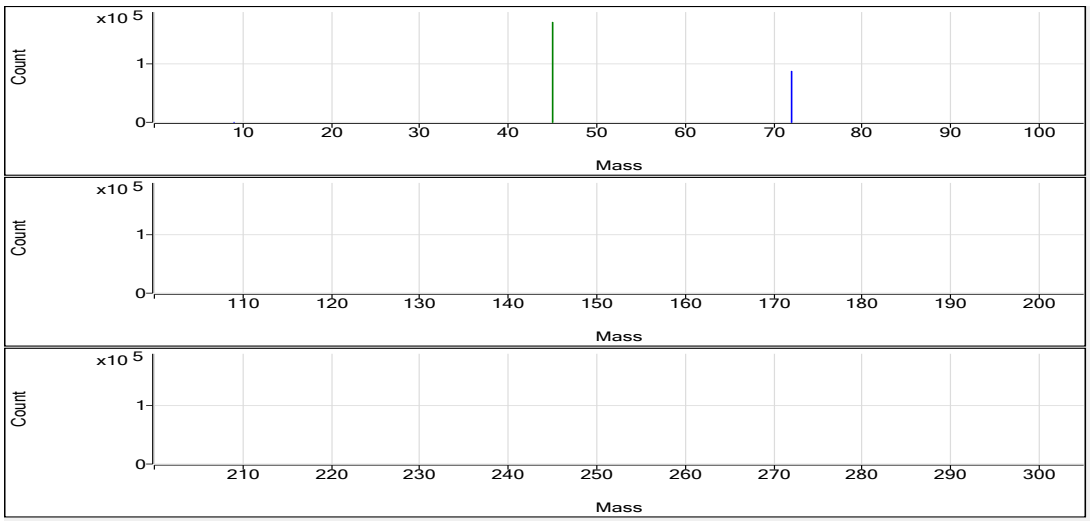
Element	Mass	ISTD	Tune Mode	Conc.	Units	RSD(%)	CPS	Ratio	Det.	Time(sec)	Rep
Be	9	45	No Gas	0.245	ppb	7.4	189.33	0.0001	Pulse	0.5000	3
Se	78	72	H2	0.122	ppb	25.2	6.67	0.0001	Pulse	1.5000	3
Na	23	45	He	20.630	ppb	30.3	8876.33	0.3170	Pulse	0.1000	3
Mg	24	45	He	0.968	ppb	40.9	176.68	0.0063	Pulse	0.1000	3
Al	27	45	He	5.318	ppb	36.5	106.67	0.0038	Pulse	0.1000	3
K	39	45	He	11.739	ppb	277.3	10477.42	0.3741	Pulse	0.1000	3
Ca	44	45	He	-9.394	ppb	N/A	56.67	0.0020	Pulse	0.1000	3
Ti	47	45	He	4.161	ppb	56.2	60.00	0.0021	Pulse	0.1000	3
V	51	45	He	0.270	ppb	44.0	476.68	0.0170	Pulse	0.5000	3
Cr	52	45	He	0.161	ppb	84.0	2020.21	0.0721	Pulse	0.1000	3
Mn	55	45	He	0.332	ppb	38.7	223.34	0.0080	Pulse	0.1000	3
Fe	57	45	He	1.054	ppb	474.7	130.00	0.0046	Pulse	0.1000	3
Co	59	45	He	0.195	ppb	47.1	420.02	0.0150	Pulse	0.1000	3
Ni	60	72	He	0.302	ppb	62.9	486.69	0.0089	Pulse	0.1000	3
Cu	63	72	He	0.182	ppb	32.7	386.68	0.0071	Pulse	0.1000	3
Zn	66	72	He	0.487	ppb	51.4	230.01	0.0042	Pulse	0.1000	3
As	75	72	He	0.469	ppb	14.3	76.67	0.0014	Pulse	0.5000	3
Sr	88	115	He	0.092	ppb	114.2	76.67	0.0014	Pulse	0.1000	3
Mo	98	115	He	0.070	ppb	38.1	106.67	0.0020	Pulse	0.1000	3
Ag	107	115	He	0.025	ppb	28.8	80.00	0.0015	Pulse	0.1000	3
Cd	111	115	He	0.032	ppb	34.0	9.33	0.0002	Pulse	0.5000	3
Sn	120	115	He	0.162	ppb	93.7	836.73	0.0157	Pulse	0.1000	3
Sb	121	115	He	0.234	ppb	19.2	256.68	0.0048	Pulse	0.1000	3
Ba	137	115	He	0.122	ppb	56.7	50.00	0.0009	Pulse	0.1000	3
Tl	205	209	He	0.149	ppb	8.2	833.39	0.0044	Pulse	0.1000	3
Pb	208	209	He	0.052	ppb	20.4	553.36	0.0029	Pulse	0.1000	3
U	238	209	He	0.024	ppb	18.1	206.68	0.0011	Pulse	0.1000	3

ISTD Table:

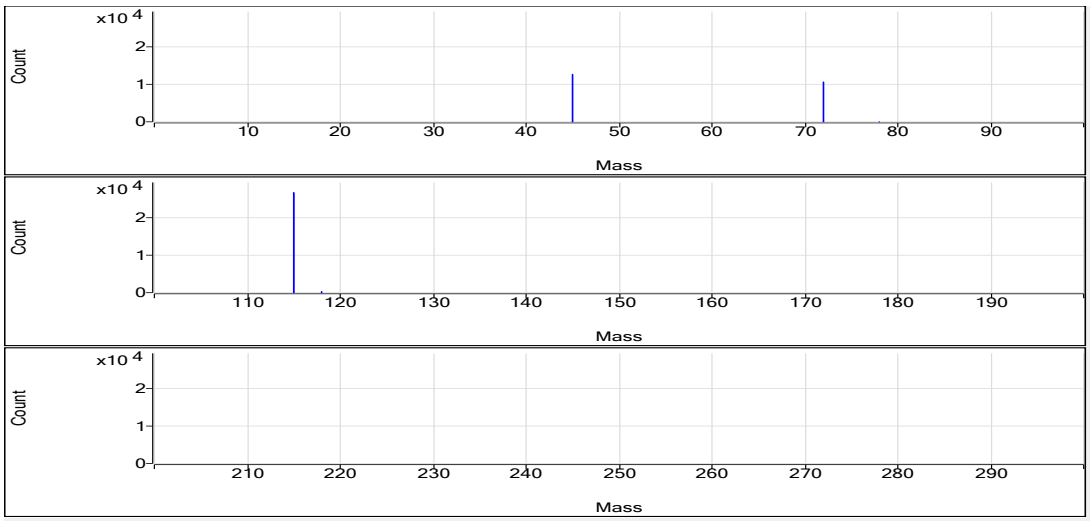
Quantitation Report

Tune Mode	Element	Mass	CPS	RSD(%)	ISTD Recovery %	Det.	Time(seq)	Rep
No Gas	Sc	45	1729432.63	0.9	98.2	Analog	0.1000	3
No Gas	Ge	72	884157.96	0.7	99.1	Pulse	0.1000	3
H2	Sc	45	127293.07	3.1	100.0	Pulse	0.1000	3
H2	Ge	72	106928.25	0.9	99.7	Pulse	0.1000	3
H2	In	115	268127.98	1.6	100.7	Pulse	0.1000	3
He	Sc	45	27997.64	0.4	98.2	Pulse	0.1000	3
He	Ge	72	54320.75	1.8	98.2	Pulse	0.1000	3
He	In	115	53341.06	1.5	99.4	Pulse	0.1000	3
He	Tb	159	244322.60	0.5	99.4	Pulse	0.1000	3
He	Bi	209	189268.86	0.6	99.2	Pulse	0.1000	3

No Gas

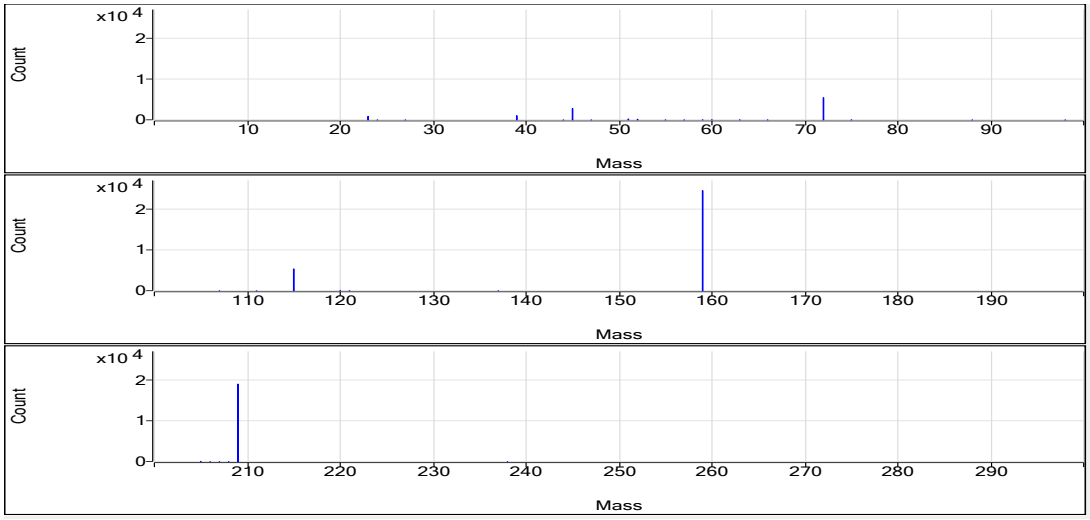


H2



Quantitation Report

He



Replicate:

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Be	9	1	No Gas	0.232	0.0001	182.00	0.0004	1.287E-05
Be	9	1	No Gas	0.237	0.0001	182.00	0.0004	1.287E-05
Be	9	1	No Gas	0.266	0.0001	204.00	0.0004	1.287E-05
Se	78	2	H2	0.123	0.0001	6.67	0.0004	1.451E-05
Se	78	2	H2	0.091	0.0001	5.33	0.0004	1.451E-05
Se	78	2	H2	0.152	0.0001	8.00	0.0004	1.451E-05
Na	23	3	He	27.095	0.3334	9373.34	0.0025	0.2648
Na	23	3	He	14.602	0.3018	8442.67	0.0025	0.2648
Na	23	3	He	20.194	0.3159	8812.97	0.0025	0.2648
Mg	24	3	He	1.307	0.0068	190.01	0.0013	0.005032
Mg	24	3	He	1.062	0.0064	180.01	0.0013	0.005032
Mg	24	3	He	0.533	0.0057	160.01	0.0013	0.005032
Al	27	3	He	3.076	0.0028	80.00	0.0004	0.001519
Al	27	3	He	6.425	0.0043	120.01	0.0004	0.001519
Al	27	3	He	6.453	0.0043	120.00	0.0004	0.001519
K	39	3	He	46.324	0.4077	11464.90	0.001	0.3627
K	39	3	He	7.191	0.3697	10343.94	0.001	0.3627
K	39	3	He	-18.298	0.345	9623.42	0.001	0.3627
Ca	44	3	He	-19.772	0.0014	40.00	0.0001	0.002571
Ca	44	3	He	-7.343	0.0021	60.00	0.0001	0.002571
Ca	44	3	He	-1.066	0.0025	70.00	0.0001	0.002571
Ti	47	3	He	1.815	0.0011	30.00	0.0005	0.0002328
Ti	47	3	He	6.494	0.0032	90.01	0.0005	0.0002328
Ti	47	3	He	4.174	0.0022	60.00	0.0005	0.0002328
V	51	3	He	0.408	0.0198	556.01	0.0201	0.0116
V	51	3	He	0.199	0.0156	436.01	0.0201	0.0116
V	51	3	He	0.205	0.0157	438.01	0.0201	0.0116
Cr	52	3	He	0.302	0.0758	2130.23	0.0257	0.06801
Cr	52	3	He	0.149	0.0719	2010.22	0.0257	0.06801
Cr	52	3	He	0.032	0.0688	1920.19	0.0257	0.06801
Mn	55	3	He	0.476	0.0096	270.01	0.0113	0.004215

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Mn	55	3	He	0.291	0.0075	210.01	0.0113	0.004215
Mn	55	3	He	0.229	0.0068	190.01	0.0113	0.004215
Fe	57	3	He	6.603	0.0075	210.01	0.0005	0.004099
Fe	57	3	He	-0.327	0.0039	110.00	0.0005	0.004099
Fe	57	3	He	-3.114	0.0025	70.00	0.0005	0.004099
Co	59	3	He	0.296	0.0203	570.03	0.0518	0.004913
Co	59	3	He	0.119	0.0111	310.01	0.0518	0.004913
Co	59	3	He	0.168	0.0136	380.02	0.0518	0.004913
Ni	60	3	He	0.489	0.0103	570.03	0.0075	0.006695
Ni	60	3	He	0.307	0.009	490.03	0.0075	0.006695
Ni	60	3	He	0.109	0.0075	400.02	0.0075	0.006695
Cu	63	3	He	0.23	0.0082	450.02	0.0216	0.003198
Cu	63	3	He	0.115	0.0057	310.01	0.0216	0.003198
Cu	63	3	He	0.2	0.0075	400.02	0.0216	0.003198
Zn	66	3	He	0.669	0.0047	260.01	0.0026	0.002954
Zn	66	3	He	0.202	0.0035	190.01	0.0026	0.002954
Zn	66	3	He	0.59	0.0045	240.01	0.0026	0.002954
As	75	3	He	0.545	0.0016	86.00	0.002	0.0004943
As	75	3	He	0.442	0.0014	74.00	0.002	0.0004943
As	75	3	He	0.42	0.0013	70.00	0.002	0.0004943
Sr	88	3	He	0.214	0.0024	130.00	0.0081	0.0006852
Sr	88	3	He	0.033	0.001	50.00	0.0081	0.0006852
Sr	88	3	He	0.03	0.0009	50.00	0.0081	0.0006852
Mo	98	3	He	0.064	0.0019	100.00	0.0205	0.0005587
Mo	98	3	He	0.047	0.0015	80.00	0.0205	0.0005587
Mo	98	3	He	0.1	0.0026	140.01	0.0205	0.0005587
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Ag	107	3	He	0.016	0.0011	60.00	0.043	0.0004367
Ag	107	3	He	0.029	0.0017	90.00	0.043	0.0004367
Cd	111	3	He	0.035	0.0002	10.00	0.005	1.253E-05
Cd	111	3	He	0.02	0.0001	6.00	0.005	1.253E-05
Cd	111	3	He	0.042	0.0002	12.00	0.005	1.253E-05
Sn	120	3	He	0.183	0.016	860.06	0.0146	0.01334
Sn	120	3	He	0.301	0.0177	930.07	0.0146	0.01334
Sn	120	3	He	0.001	0.0134	720.05	0.0146	0.01334
Sb	121	3	He	0.262	0.0052	280.01	0.0142	0.001484
Sb	121	3	He	0.258	0.0052	270.02	0.0142	0.001484
Sb	121	3	He	0.182	0.0041	220.01	0.0142	0.001484
Ba	137	3	He	0.202	0.0013	70.00	0.0046	0.000374
Ba	137	3	He	0.084	0.0008	40.00	0.0046	0.000374
Ba	137	3	He	0.08	0.0007	40.00	0.0046	0.000374
Tl	205	3	He	0.139	0.0041	780.05	0.0282	0.00021
Tl	205	3	He	0.145	0.0043	820.06	0.0282	0.00021
Tl	205	3	He	0.162	0.0048	900.07	0.0282	0.00021
Pb	208	3	He	0.057	0.0031	370.02	0.0372	0.0009772
Pb	208	3	He	0.04	0.0025	330.02	0.0372	0.0009772
Pb	208	3	He	0.059	0.0032	290.02	0.0372	0.0009772
U	238	3	He	0.028	0.0013	240.01	0.0417	8.729E-05
U	238	3	He	0.024	0.0011	210.01	0.0417	8.729E-05
U	238	3	He	0.02	0.0009	170.01	0.0417	8.729E-05
Sc	45	1	No Gas			1742557.94		
Sc	45	1	No Gas			1711769.51		

Quantitation Report

Name	Mass	Tune Step	Tune Mode	Calc Conc.	Ratio	CPS	a	b (blank)
Sc	45	1	No Gas			1733970.44		
Ge	72	1	No Gas			889342.88		
Ge	72	1	No Gas			877244.91		
Ge	72	1	No Gas			885886.08		
Sc	45	2	H2			127171.40		
Sc	45	2	H2			123430.07		
Sc	45	2	H2			131277.73		
Ge	72	2	H2			106242.50		
Ge	72	2	H2			106575.00		
Ge	72	2	H2			107967.24		
In	115	2	H2			268551.68		
In	115	2	H2			263590.66		
In	115	2	H2			272241.60		
Sc	45	3	He			28118.01		
Sc	45	3	He			27977.56		
Sc	45	3	He			27897.35		
Ge	72	3	He			55157.08		
Ge	72	3	He			54534.76		
Ge	72	3	He			53270.40		
In	115	3	He			53684.85		
In	115	3	He			52420.56		
In	115	3	He			53935.35		
Tb	159	3	He			243445.95		
Tb	159	3	He			245569.31		
Tb	159	3	He			243952.54		
Bi	209	3	He			189375.58		
Bi	209	3	He			190377.01		
Bi	209	3	He			188054.00		

US EPA Tune Check Report

Operator Name	us19_usr_ins23851
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA_ICPMS.b
Acq. Date-Time	8/7/2023 6:25:21 AM
Report Comment	E08 Tune Report
Instrument Name	G8403A SG19504696

[No Gas]

Sensitivity

Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
9	10.00	3260	32601.27			0.637	5.000
24	10.00	14203	142028.02			0.514	5.000
25	10.00	1991	19908.49			0.720	5.000
26	10.00	2253	22528.40			0.956	5.000
59	10.00	27584	275841.21			0.451	5.000
115	10.00	40190	401896.97			0.759	5.000
206	10.00	7838	78382.69			0.547	5.000
207	10.00	7015	70149.32			1.044	5.000
208	10.00	16278	162782.24			0.802	5.000

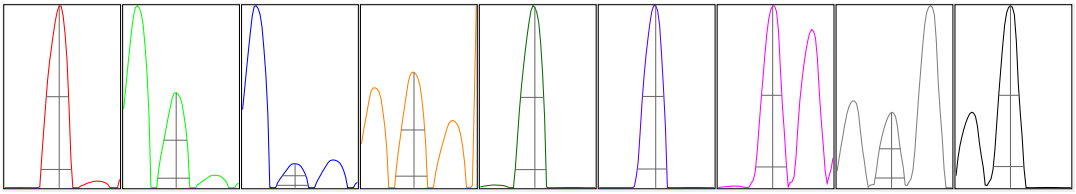
Mass	RSD% (Flag)
9	
24	
25	
26	
59	
115	
206	
207	
208	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
9	3237	3262	3258	3251	3293
24	14089	14241	14212	14188	14284
25	1967	2005	1994	1995	1993
26	2217	2253	2254	2272	2268
59	27394	27666	27553	27589	27719
115	39699	40460	40365	40098	40327
206	7779	7885	7823	7831	7874
207	6913	7056	7046	6967	7093
208	16045	16332	16324	16343	16347

Integration Time [sec] 0.1

Resolution/Axis

US EPA Tune Check Report



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
9	6084.11	8.95	8.90 - 9.10	
24	25841.41	23.90	23.90 - 24.10	
25	3402.60	24.90	24.90 - 25.10	
26	3936.34	25.90	25.90 - 26.10	
59	50199.75	58.95	58.90 - 59.10	
115	76272.23	115.00	114.90 - 115.10	
206	14758.24	205.95	205.90 - 206.10	
207	12830.74	206.95	206.90 - 207.10	
208	30940.72	207.95	207.90 - 208.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
9	0.57	0.789	0.900	
24	0.59	0.812	0.900	
25	0.60	0.813	0.900	
26	0.60	0.810	0.900	
59	0.60	0.793	0.900	
115	0.55	0.759	0.900	
206	0.52	0.795	0.900	
207	0.54	0.752	0.900	
208	0.52	0.788	0.900	

Integration Time [sec]	0.1
Acquisition Time [sec]	235
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	1.05 L/min	Makeup Gas	0.00 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.40 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	2 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	12.4 V	Deflect	15.0 V
Extract 2	-250.0 V	Cell Entrance	-24 V	Plate Bias	-35 V
Omega Bias	-100 V	Cell Exit	-56 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V

US EPA Tune Check Report

He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	140 V		

QP Parameters

Mass Gain	129	Axis Gain	1.0004	QP Bias	-3.0 V
Mass Offset	123	Axis Offset	-0.05		

Hardware Settings

Torch

Torch H	-0.2 mm	Torch V	0.1 mm		

EM

Discriminator	3.4 mV	Analog HV	2179 V	Pulse HV	1636 V

Shipping and Receiving Documents

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories (ELLE), LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300 NC 7-19-23

Client:	TRC Engineers, Inc	**Consultant:**	TRC Engineers Inc (Formerly DAA)	**Sample Site:**	RFAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier	**Location:**	HWMU5
Address	0	**Address:**	2200 South Main Street Suite A Blacksburg, Virginia 24060	**Event:**	3Q 2023 Annual GW Corrective Action Monitoring Event
	0	**Phone:**	(540) 552-0444	**JN:**	547076 task 000001
Phone:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				
Fax:	0				

Project Specific (PS) or Batch (B) QC: PS
Sample Collection for Project Complete? YES
WPS- 12754-02X-40-7393-8414
Carrier:

410-136176-01 Chain of Custody

Box 1: Matrix
SW Surface Water; GW Groundwater; L Leachate; S Soil; T Trip Blank; E Equipment Blank; P Product; O Other

Box 2: Preservative
A HCL; B HNO_3; C H_2SO_4; D $Na_2S_2O_3$; E NaOH; F ZnAc; G Other (Specify); H None

Box 3: Filtered/Unfiltered
F Filtered; U Unfiltered

Box 4: Sample Type
G Grab; C Composite

Box 5: Sample Container Type
P Plastic; AG Amber Glass; V VOA; CG Clear Glass

Box 4 - Sample Type					G	G						
Box 3 - Filtered/Unfiltered					U	U						
Required pH of Sample					<2	<2						
Box 2 - Preservative					A	B						
Box 5 - Sample Container Type					3-40ml V	1-250ml P						
Sample ID	**Date: 2023**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260D/5030C 25 ml purge Appendix J Analyte List**	**Cobalt only-Total 6020B /3020A (appendix J)**						
5W8B	7/25	0830	GW	4	X	X						
5W5B	7/25	1050	GW	4	X	X						
5W7B	7/25	1005	GW	10	X	X						
5WC21	7/25	1325	GW	4	X	X						
5WDUP	7/25	1330	GW	4	X	X						
5WC22	7/25	1140	GW	4	X	X						
5WC23	7/25	1235	GW	4	X	X						
5W12A	7/25	0920	GW	4	X	X						
Trip Blank 1	7/25	—	T	2	X							
Trip Blank 2	—	—	T	2	X							

GENERAL NOTES:
1. Full Deliverable. See attached analyte list.
2. Report Results to MDL with "J" Flags.
3. 1 trip blank per day of sampling. Delete Trip blank 2 if not required.
4. ERIS DELIVERABLE ALSO REQUIRED.
5. VELAP Accreditation required. Full deliverable with EDD.

Cobalt QL = 5 µg/L
DL = 1 µg/L

VELAP ✓ # 12487 ex 6/24

ONLY (1) 250mL TM Container USE FOR QC 3x Volume Needed. NC 7-19-23

ONLY ONE SET OF T.B. NEEDED
DELETE IF NO SAMPLES COLELCTED ON SECOND DAY NC 7/25/23

Clients Special Instructions: level 4 - full deliverable with edd.

LOW: 1.9 LOC: 1.7

Received by lab in Good Condition X Yes ___ No Custody Seal Intact X Yes ___ No Temperature upon arrival Received on Ice X Yes ___ No
Describe problems, if any

Sampler Name (Print): Ken Coddington	Date: 7/25/23	#1 Relinquished by (Signature): Ken Coddington	Date: 7/25/23	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:	
Sampler Signature: Ken Coddington	Time: 0700	Company Name: DAA/TRC	Time: 1700	Company Name:	Time:		
Sampler Name (Print): Alexa Prater	Date: 7/25/23	#1 Received by (Signature):	Date:	#2 Received by (Signature): Jen Mulany	Date: 7-26-23	30 DYS ORG/6 MTHS INORG	
Sampler Signature: Alexa Prater	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 0930	ACH	

NC 7-25-23 NC 1472 7-18-23 08/08/2023

ANALYTICAL METHOD: 8260D/5030C
TYPE METHOD: GCMS
CLASS: VOLATILE

Appendix – J Target Analyte List

No.	ANALYTE	CAS RN	Required QL (µg/l)	Required MDL
1.	Trichloroethene	79-01-6	1	0.3
2.	1,1-Dichloroethene	75-35-4	1	0.2
3.	Cis-1,2-Dichloroethene	156-59-2	1	0.1
4.	Trans-1,2-Dichloroethene	156-60-5	1	0.8
5.	Vinyl Chloride	75-01-4	1	0.2

JCF 9-13-2021 – revised to reflect 2021 Class 1 Permit Mod
JCF 6-30-2022 – correct list

25 ml purge volume

page 2 of 2 JCF 6-29-2023

Login Sample Receipt Checklist

Client: TRC, Engineers, Inc.

Job Number: 410-136176-1

Login Number: 136176

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McBeth, Jessica

Question	Answer	Comment
The cooler's custody seal is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable (</=6C, not frozen).	True	
Cooler Temperature is recorded.	True	
WV: Container Temperature is acceptable (</=6C, not frozen).	N/A	
WV: Container Temperature is recorded.	N/A	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses.	True	
Is the Field Sampler's name present on COC?	True	
Sample custody seals are intact.	True	
VOA sample vials do not have headspace >6mm in diameter (none, if from WV)?	True	

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environment Testing, LLC

2425 New Holland Pike
Lancaster, PA 17601

Owner: EUROFINS LANCASTER LABORATORIES ENVIRONMENT TESTING, LLC
Responsible Official: PAUL A. WISE

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2016 TNI Standard approved by The NELAC Institute
is hereby approved as an

Accredited Environmental Laboratory

As more fully described in the attached Scope of Accreditation

Effective Date: **July 15, 2023**
Expiration Date: **June 14, 2024**
Certificate # 12574

Marilyn Bibbs Freeman, Ph.D., M(ASCP)
DCLS Deputy Director

Continued accreditation status depends on successful ongoing participation in the program.
Certificate to be conspicuously displayed at the laboratory.
Not valid unless accompanied by a valid Virginia Environmental Laboratory Accreditation Program (VELAP) Scope of Accreditation.
Customers are urged to verify the laboratory's current accreditation status.

Certificate Not Transferable

Surrender Upon Revocation

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

AIR

METHOD	ANALYTE	PRIMARY
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLORO-1,1,2,2-TETRAFLUOR OETHANE (FREON-114)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ
EPA TO-15 2nd Ed.	BENZYL CHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLORODIBROMOMETHANE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-15 2nd Ed.	DICHLORODIFLUOROMETHANE (FREON-12)	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ
EPA TO-15 2nd Ed.	N-HEPTANE	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ

METHOD	ANALYTE	PRIMARY
EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-15 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	N-HEXANE	LA DEQ
EPA TO-15 2nd Ed.	PROPYLENE (PROPENE)	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

AIR

METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-15 2nd Ed.	VINYL BROMIDE (BROMOETHENE)	LA DEQ
EPA TO-15 2nd Ed.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	DICHLOROFLUOROMETHANE (FREON 21)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	N-OCTANE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	N-PROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	SEC-BUTYLBENZENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	LA DEQ
EPA TO-15 2nd Ed.	TETRAHYDROFURAN (THF)	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	VINYL ACETATE	LA DEQ
EPA TO-15 2nd Ed.	VINYL CHLORIDE (CHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	1,1,1,2-TETRACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ETHANOL	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	ISOOCTANE (2,2,4-TRIMETHYLPENTANE)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	N-BUTYLBENZENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	N-PENTANE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-AMYL METHYL ETHER (TAME)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYLBENZENE	LA DEQ

DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BARIUM	PA
EPA 180.1 REV 2	TURBIDITY	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.8 REV 5.4	ALUMINUM	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

DRINKING WATER

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SODIUM	PA
EPA 200.8 REV 5.4	ZINC	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRITE AS N	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES (TTHMS)	PA
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA
EPA 531.1 REV 3.1	OXAMYL	PA
SM 2130 B-2011	TURBIDITY	PA
SM 2510 B-2011	CONDUCTIVITY	PA
SM 4500-F⁻ C-2011	FLUORIDE	PA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	PA
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	PA

METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	IRON	PA
EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA
EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 335.4 REV 1.0	CYANIDE	PA
EPA 353.2 REV 2	NITRATE-NITRITE AS N	PA
EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLOROFORM	PA
EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 524.2 REV 4.1	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA
SM 2120 B-2011	COLOR	PA
SM 2320 B-2011	ALKALINITY AS CACO3	PA
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-H+ B-2011	PH	PA
SM 4500-SIO2 C-2011	SILICA AS SIO2	PA
SM 5540 C-2011	SURFACTANTS - MBAS	PA

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	PA

METHOD	ANALYTE	PRIMARY
EPA 1010 B	FLASHPOINT	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 1613 B	TOTAL HEPTACHLORODIBENZOFURAN (HPCDF, TOTAL)	PA
EPA 1613 B	TOTAL HEXACHLORODIBENZOFURAN (HXCDF, TOTAL)	PA
EPA 1613 B	TOTAL PENTACHLORODIBENZOFURAN (PECDF, TOTAL)	PA
EPA 1613 B	TOTAL TETRACHLORODIBENZOFURAN (TCDF, TOTAL)	PA
EPA 1664 B	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA

METHOD	ANALYTE	PRIMARY
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE (SPLP)	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1613 B	TOTAL HEPTACHLORODIBENZO-P-DIOXIN (HPCDD, TOTAL)	PA
EPA 1613 B	TOTAL HEXACHLORODIBENZO-P-DIOXIN (HXCDD, TOTAL)	PA
EPA 1613 B	TOTAL PENTACHLORODIBENZO-P-DIOXIN (PECDD, TOTAL)	PA
EPA 1613 B	TOTAL TETRACHLORODIBENZO-P-DIOXIN (TCDD, TOTAL)	PA
EPA 1664 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 1666 A	ETHYL ACETATE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA
EPA 1666 A	METHYL FORMATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA
EPA 1666 A	N-HEPTANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 1666 A	XYLENE (TOTAL)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA
EPA 1671 A	DIETHYLAMINE	PA
EPA 1671 A	ETHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA
EPA 180.1 REV 2	TURBIDITY	PA
EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	LEAD	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA
EPA 200.8 REV 5.4	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA
EPA 200.8 REV 5.4	ZINC	PA
EPA 200.8 REV 5.4 - EXTENDED	IRON	PA
EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TIN	PA
EPA 218.6 REV 3.3	CHROMIUM VI	PA
EPA 300.0 REV 2.1	BROMIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA

METHOD	ANALYTE	PRIMARY
EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	METHANOL	PA
EPA 1671 A	TRIETHYLAMINE	PA
EPA 200.7 REV 4.4	ALUMINUM	PA
EPA 200.7 REV 4.4	ARSENIC	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA
EPA 200.7 REV 4.4	CADMIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA
EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	LEAD	PA
EPA 200.7 REV 4.4	MANGANESE	PA
EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SELENIUM	PA
EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.7 REV 4.4	TIN	PA
EPA 200.7 REV 4.4	VANADIUM	PA
EPA 200.8 REV 5.4	ALUMINUM	PA
EPA 200.8 REV 5.4	ARSENIC	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA
EPA 200.8 REV 5.4	COPPER	PA
EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SILVER	PA
EPA 200.8 REV 5.4	VANADIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA
EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA
EPA 3020 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 335.4 REV 1.0	CYANIDE	PA
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA
EPA 353.2 REV 2	NITRATE-NITRITE AS N	PA
EPA 3620 C	PREP: FLORISIL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA
EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	PA
EPA 5030 C	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 D	ANTIMONY	PA
EPA 6010 D	BARIUM	PA
EPA 6010 D	BORON	PA
EPA 6010 D	CALCIUM	PA
EPA 6010 D	COBALT	PA
EPA 6010 D	IRON	PA
EPA 6010 D	LITHIUM	PA
EPA 6010 D	MANGANESE	PA
EPA 6010 D	NICKEL	PA
EPA 6010 D	SELENIUM	PA
EPA 6010 D	SODIUM	PA
EPA 6010 D	THALLIUM	PA
EPA 6010 D	TITANIUM	PA
EPA 6010 D	ZINC	PA
EPA 6010 D - EXTENDED	THORIUM	PA
EPA 6020 B	ALUMINUM	PA
EPA 6020 B	ARSENIC	PA
EPA 6020 B	BERYLLIUM	PA
EPA 6020 B	CALCIUM	PA
EPA 6020 B	COBALT	PA
EPA 6020 B	IRON	PA
EPA 6020 B	MAGNESIUM	PA
EPA 6020 B	MOLYBDENUM	PA
EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL METALS	PA
EPA 3060 A	PREP: HEXAVALENT CHROMIUM	PA
EPA 350.1 REV 2	AMMONIA AS N	PA
EPA 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE AS N	PA
EPA 353.2 REV 2	NITRITE AS N	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA
EPA 6010 D	ALUMINUM	PA
EPA 6010 D	ARSENIC	PA
EPA 6010 D	BERYLLIUM	PA
EPA 6010 D	CADMIUM	PA
EPA 6010 D	CHROMIUM	PA
EPA 6010 D	COPPER	PA
EPA 6010 D	LEAD	PA
EPA 6010 D	MAGNESIUM	PA
EPA 6010 D	MOLYBDENUM	PA
EPA 6010 D	POTASSIUM	PA
EPA 6010 D	SILVER	PA
EPA 6010 D	STRONTIUM	PA
EPA 6010 D	TIN	PA
EPA 6010 D	VANADIUM	PA
EPA 6010 D - EXTENDED	SULFUR	PA
EPA 6010 D - EXTENDED	ZIRCONIUM	PA
EPA 6020 B	ANTIMONY	PA
EPA 6020 B	BARIUM	PA
EPA 6020 B	CADMIUM	PA
EPA 6020 B	CHROMIUM	PA
EPA 6020 B	COPPER	PA
EPA 6020 B	LEAD	PA
EPA 6020 B	MANGANESE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6020 B	NICKEL	PA
EPA 6020 B	SELENIUM	PA
EPA 6020 B	SODIUM	PA
EPA 6020 B	TIN	PA
EPA 6020 B	ZINC	PA
EPA 6020 B - EXTENDED	TITANIUM	PA
EPA 608.3	4,4'-DDD	PA
EPA 608.3	4,4'-DDT	PA
EPA 608.3	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	AROCLOR-1016 (PCB-1016)	PA
EPA 608.3	AROCLOR-1232 (PCB-1232)	PA
EPA 608.3	AROCLOR-1248 (PCB-1248)	PA
EPA 608.3	AROCLOR-1260 (PCB-1260)	PA
EPA 608.3	CHLORDANE, TOTAL	PA
EPA 608.3	DIELDRIN	PA
EPA 608.3	ENDOSULFAN II	PA
EPA 608.3	ENDRIN	PA
EPA 608.3	ENDRIN KETONE	PA
EPA 608.3	GAMMA-CHLORDANE (TRANS-CHLORDANE)	PA
EPA 608.3	HEPTACHLOR EPOXIDE	PA
EPA 608.3	MIREX	PA
EPA 624.1	1,1,1,2-TETRACHLOROETHANE	PA
EPA 624.1	1,1,2,2-TETRACHLOROETHANE	PA
EPA 624.1	1,1,2-TRICHLOROETHANE	PA
EPA 624.1	1,1-DICHLOROETHYLENE	PA
EPA 624.1	1,2,3-TRICHLOROBENZENE	PA
EPA 624.1	1,2,4-TRIMETHYLBENZENE	PA
EPA 624.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 624.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 624.1	1,3,5-TRIMETHYLBENZENE	PA
EPA 624.1	1,3-DICHLOROPROPANE	PA
EPA 6020 B	POTASSIUM	PA
EPA 6020 B	SILVER	PA
EPA 6020 B	THALLIUM	PA
EPA 6020 B	VANADIUM	PA
EPA 6020 B - EXTENDED	STRONTIUM	PA
EPA 6020 B - EXTENDED	URANIUM (MASS)	PA
EPA 608.3	4,4'-DDE	PA
EPA 608.3	ALDRIN	PA
EPA 608.3	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 608.3	AROCLOR-1221 (PCB-1221)	PA
EPA 608.3	AROCLOR-1242 (PCB-1242)	PA
EPA 608.3	AROCLOR-1254 (PCB-1254)	PA
EPA 608.3	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	DELTA-BHC	PA
EPA 608.3	ENDOSULFAN I	PA
EPA 608.3	ENDOSULFAN SULFATE	PA
EPA 608.3	ENDRIN ALDEHYDE	PA
EPA 608.3	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608.3	HEPTACHLOR	PA
EPA 608.3	METHOXYCHLOR	PA
EPA 608.3	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 624.1	1,1,1-TRICHLOROETHANE	PA
EPA 624.1	1,1,2-TRICHLORO-1,2,2-TRIFLUOROETHANE (FREON 113)	PA
EPA 624.1	1,1-DICHLOROETHANE	PA
EPA 624.1	1,1-DICHLOROPROPENE	PA
EPA 624.1	1,2,3-TRICHLOROPROPANE	PA
EPA 624.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 624.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 624.1	1,2-DICHLOROPROPANE	PA
EPA 624.1	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 624.1	2,2-DICHLOROPROPANE	PA
EPA 624.1	2-CHLOROETHYL VINYL ETHER	PA
EPA 624.1	2-HEXANONE	PA
EPA 624.1	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 624.1	ACETONE	PA
EPA 624.1	ACROLEIN (PROPENAL)	PA
EPA 624.1	BENZENE	PA
EPA 624.1	BROMOBENZENE	PA
EPA 624.1	BROMODICHLOROMETHANE	PA
EPA 624.1	CARBON DISULFIDE	PA
EPA 624.1	CHLOROBENZENE	PA
EPA 624.1	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624.1	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 624.1	CIS-1,3-DICHLOROPROPENE	PA
EPA 624.1	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 624.1	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 624.1	ETHYL METHACRYLATE	PA
EPA 624.1	ETHYLBENZENE	PA
EPA 624.1	IODOMETHANE (METHYL IODIDE)	PA
EPA 624.1	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 624.1	M+P-XYLENE	PA
EPA 624.1	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624.1	METHYL METHACRYLATE	PA
EPA 624.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 624.1	N-PROPYLBENZENE	PA
EPA 624.1	O-XYLENE	PA
EPA 624.1	SEC-BUTYLBENZENE	PA
EPA 624.1	TERT-AMYL ETHYL ETHER (TAEE)	PA

METHOD	ANALYTE	PRIMARY
EPA 624.1	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 624.1	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 624.1	2-CHLOROTOLUENE	PA
EPA 624.1	4-CHLOROTOLUENE	PA
EPA 624.1	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 624.1	ACETONITRILE	PA
EPA 624.1	ACRYLONITRILE	PA
EPA 624.1	BENZYL CHLORIDE	PA
EPA 624.1	BROMOCHLOROMETHANE	PA
EPA 624.1	BROMOFORM	PA
EPA 624.1	CARBON TETRACHLORIDE	PA
EPA 624.1	CHLORODIBROMOMETHANE	PA
EPA 624.1	CHLOROFORM	PA
EPA 624.1	CIS-1,2-DICHLOROETHYLENE	PA
EPA 624.1	CYCLOHEXANE	PA
EPA 624.1	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 624.1	ETHYL ACETATE	PA
EPA 624.1	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 624.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 624.1	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 624.1	ISOPROPYLBENZENE	PA
EPA 624.1	METHACRYLONITRILE	PA
EPA 624.1	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 624.1	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 624.1	N-BUTYLBENZENE	PA
EPA 624.1	NAPHTHALENE	PA
EPA 624.1	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 624.1	STYRENE	PA
EPA 624.1	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 624.1	TERT-BUTYLBENZENE	PA
EPA 624.1	TETRAHYDROFURAN (THF)	PA
EPA 624.1	TRANS-1,2-DICHLOROETHENE	PA
EPA 624.1	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 624.1	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 624.1	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 624.1 EXTENDED	1,2,4-TRICHLOROBENZENE	PA
EPA 624.1 EXTENDED	N-HEXANE	PA
EPA 625.1	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 625.1	1,2-DIPHENYLHYDRAZINE	PA
EPA 625.1	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 625.1	2,4,5-TRICHLOROPHENOL	PA
EPA 625.1	2,4-DICHLOROPHENOL	PA
EPA 625.1	2,4-DINITROPHENOL	PA
EPA 625.1	2,6-DICHLOROPHENOL	PA
EPA 625.1	2-CHLORONAPHTHALENE	PA
EPA 625.1	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625.1	2-METHYLPHENOL (O-CRESOL)	PA
EPA 625.1	2-NITROPHENOL	PA
EPA 625.1	3,3'-DICHLOROBENZIDINE	PA
EPA 625.1	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 625.1	4-CHLOROANILINE	PA
EPA 625.1	4-NITROANILINE	PA
EPA 625.1	ACENAPHTHENE	PA
EPA 625.1	ACETOPHENONE	PA
EPA 625.1	ANILINE	PA
EPA 625.1	BENZIDINE	PA
EPA 625.1	BENZO(A)PYRENE	PA
EPA 625.1	BENZO(G,H,I)PERYLENE	PA
EPA 625.1	BENZOIC ACID	PA
EPA 625.1	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 625.1	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 624.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 624.1	TOLUENE	PA
EPA 624.1	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 624.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 624.1	VINYL ACETATE	PA
EPA 624.1	XYLENE (TOTAL)	PA
EPA 624.1 EXTENDED	ISOPROPYL ACETATE	PA
EPA 625.1	1,1'-BIPHENYL (BZ-0)	PA
EPA 625.1	1,2,4-TRICHLOROBENZENE	PA
EPA 625.1	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 625.1	2,3-DICHLOROANILINE	PA
EPA 625.1	2,4,6-TRICHLOROPHENOL	PA
EPA 625.1	2,4-DIMETHYLPHENOL	PA
EPA 625.1	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625.1	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 625.1	2-CHLOROPHENOL	PA
EPA 625.1	2-METHYLNAPHTHALENE	PA
EPA 625.1	2-NITROANILINE	PA
EPA 625.1	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 625.1	3-NITROANILINE	PA
EPA 625.1	4-CHLORO-3-METHYLPHENOL	PA
EPA 625.1	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625.1	4-NITROPHENOL	PA
EPA 625.1	ACENAPHTHYLENE	PA
EPA 625.1	ALPHA-TERPINEOL	PA
EPA 625.1	ANTHRACENE	PA
EPA 625.1	BENZO(A)ANTHRACENE	PA
EPA 625.1	BENZO(B)FLUORANTHENE	PA
EPA 625.1	BENZO(K)FLUORANTHENE	PA
EPA 625.1	BENZYL ALCOHOL	PA
EPA 625.1	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625.1	BUTYL BENZYL PHTHALATE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 625.1	CARBAZOLE	PA
EPA 625.1	DI-N-BUTYL PHTHALATE	PA
EPA 625.1	DIBENZO(A,H) ANTHRACENE	PA
EPA 625.1	DIETHYL PHTHALATE	PA
EPA 625.1	DIPHENYL ETHER (DIPHENYL OXIDE)	PA
EPA 625.1	FLUORENE	PA
EPA 625.1	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625.1	HEXACHLOROETHANE	PA
EPA 625.1	ISOPHORONE	PA
EPA 625.1	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 625.1	N-NITROSODIETHYLAMINE	PA
EPA 625.1	N-NITROSODIPHENYLAMINE	PA
EPA 625.1	N-OCTADECANE	PA
EPA 625.1	NITROBENZENE	PA
EPA 625.1	PENTACHLOROPHENOL	PA
EPA 625.1	PHENOL	PA
EPA 625.1	PYRIDINE	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	METHANOL	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8015 D	ETHANOL	PA
EPA 8015 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 D	N-PROPANOL (1-PROPANOL)	PA
EPA 8015 D - EXTENDED	ETHYLENE GLYCOL	PA
EPA 8015 D - EXTENDED	PROPYLENE GLYCOL	PA
EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 625.1	CHRYSENE	PA
EPA 625.1	DI-N-OCTYL PHTHALATE	PA
EPA 625.1	DIBENZOFURAN	PA
EPA 625.1	DIMETHYL PHTHALATE	PA
EPA 625.1	FLUORANTHENE	PA
EPA 625.1	HEXACHLOROBENZENE	PA
EPA 625.1	HEXACHLOROCYCLOPENTADIENE	PA
EPA 625.1	INDENO(1,2,3-CD) PYRENE	PA
EPA 625.1	N-DECANE	PA
EPA 625.1	N-NITROSODI-N-PROPYLAMINE	PA
EPA 625.1	N-NITROSODIMETHYLAMINE	PA
EPA 625.1	N-NITROSOPYRROLIDINE	PA
EPA 625.1	NAPHTHALENE	PA
EPA 625.1	PENTACHLOROBENZENE	PA
EPA 625.1	PHENANTHRENE	PA
EPA 625.1	PYRENE	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C - EXTENDED	PROPYLENE GLYCOL	PA
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 D	METHANOL	PA
EPA 8015 D - EXTENDED	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8015 D - EXTENDED	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8015 D - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	METHOXYCHLOR	PA
EPA 8081 B - EXTENDED	2,4'-DDD	PA
EPA 8081 B - EXTENDED	2,4'-DDT	PA
EPA 8081 B - EXTENDED	MIREX	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PICLORAM	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA

METHOD	ANALYTE	PRIMARY
EPA 8081 B	CHLORDANE, TOTAL	PA
EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-CHLORDANE (TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	2,4'-DDE	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8151 A	2,4-D	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	O-XYLENE	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-NITROPROPANE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	M+P-XYLENE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	1,2-DICHLORO-1,1,2-TRIFLUOROET HANE (FREON 123A)	PA
EPA 8260 C - EXTENDED	1,3-BUTADIENE	PA
EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-HEPTANE	PA
EPA 8260 C - EXTENDED	TERT-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 D	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 D	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 D	1,1,2-TRICHLOROETHANE	PA
EPA 8260 D	1,1-DICHLOROETHYLENE	PA
EPA 8260 D	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 D	1,2,3-TRIMETHYLBENZENE	PA
EPA 8260 D	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 D	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 D	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 D	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 D	1,3-DICHLOROPROPANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	TERT-AMYL METHYL ETHER (TAME)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA
EPA 8260 C - EXTENDED	1,2,3-TRIMETHYLBENZENE	PA
EPA 8260 C - EXTENDED	1,3,5-TRICHLOROBENZENE	PA
EPA 8260 C - EXTENDED	3,3-DIMETHYL-1-BUTANOL	PA
EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 C - EXTENDED	N-HEXANE	PA
EPA 8260 C - EXTENDED	TERT-BUTYL FORMATE	PA
EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 D	1,1,1-TRICHLOROETHANE	PA
EPA 8260 D	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 D	1,1-DICHLOROETHANE	PA
EPA 8260 D	1,1-DICHLOROPROPENE	PA
EPA 8260 D	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 D	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 D	1,2-DICHLOROPROPANE	PA
EPA 8260 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 D	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 D	2,2-DICHLOROPROPANE	PA
EPA 8260 D	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 D	2-HEXANONE	PA
EPA 8260 D	4-CHLOROTOLUENE	PA
EPA 8260 D	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 D	ACETONITRILE	PA
EPA 8260 D	ACRYLONITRILE	PA
EPA 8260 D	BENZENE	PA
EPA 8260 D	BROMOBENZENE	PA
EPA 8260 D	BROMODICHLOROMETHANE	PA
EPA 8260 D	CARBON DISULFIDE	PA
EPA 8260 D	CHLOROBENZENE	PA
EPA 8260 D	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 D	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 D	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 D	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 D	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 D	ETHANOL	PA
EPA 8260 D	ETHYL METHACRYLATE	PA
EPA 8260 D	ETHYLBENZENE	PA
EPA 8260 D	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 D	M+P-XYLENE	PA
EPA 8260 D	METHYL ACETATE	PA
EPA 8260 D	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 D	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 D	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 D	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 D	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 D	2-CHLOROTOLUENE	PA
EPA 8260 D	2-NITROPROPANE	PA
EPA 8260 D	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 D	ACETONE	PA
EPA 8260 D	ACROLEIN (PROPENAL)	PA
EPA 8260 D	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 D	BENZYL CHLORIDE	PA
EPA 8260 D	BROMOCHLOROMETHANE	PA
EPA 8260 D	BROMOFORM	PA
EPA 8260 D	CARBON TETRACHLORIDE	PA
EPA 8260 D	CHLORODIBROMOMETHANE	PA
EPA 8260 D	CHLOROFORM	PA
EPA 8260 D	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 D	CYCLOHEXANE	PA
EPA 8260 D	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 D	DIETHYL ETHER	PA
EPA 8260 D	ETHYL ACETATE	PA
EPA 8260 D	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 D	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 D	ISOPROPYLBENZENE	PA
EPA 8260 D	METHACRYLONITRILE	PA
EPA 8260 D	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 D	METHYL METHACRYLATE	PA
EPA 8260 D	METHYLCYCLOHEXANE	PA
EPA 8260 D	N-BUTYLBENZENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8260 D	N-PROPYLBENZENE	PA
EPA 8260 D	O-XYLENE	PA
EPA 8260 D	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 D	STYRENE	PA
EPA 8260 D	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 D	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 D	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 D	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 D	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 D	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 D - EXTENDED	1,2-DICHLORO-1,1,2-TRIFLUOROETHANE (FREON 123A)	PA
EPA 8260 D - EXTENDED	1,3-BUTADIENE	PA
EPA 8260 D - EXTENDED	N-HEPTANE	PA
EPA 8260 D - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8260 D	NAPHTHALENE	PA
EPA 8260 D	PENTACHLOROETHANE	PA
EPA 8260 D	SEC-BUTYLBENZENE	PA
EPA 8260 D	TERT-AMYL METHYL ETHER (TAME)	PA
EPA 8260 D	TERT-BUTYLBENZENE	PA
EPA 8260 D	TOLUENE	PA
EPA 8260 D	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 D	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 D	VINYL ACETATE	PA
EPA 8260 D	XYLENE (TOTAL)	PA
EPA 8260 D - EXTENDED	1,3,5-TRICHLOROBENZENE	PA
EPA 8260 D - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 D - EXTENDED	N-HEXANE	PA
EPA 8260 D SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ANILINE	PA
EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 D	DISULFOTON	PA
EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	KEPONE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	SULFOTEP (TETRAETHYL DITHIOPYROPHOSPHATE, TEDP)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	INDENE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 E	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 E	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS, DIETHYL-O-2-PYRAZINYL PHOSPHOROTHIONATE)	PA
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	PA
EPA 8270 D - EXTENDED	N,N-DIMETHYLFORMAMIDE	PA
EPA 8270 D - EXTENDED	QUINOLINE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 E	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 E	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 E	1,2-DIPHENYLHYDRAZINE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 E	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 E	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 E	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 E	1,4-NAPHTHOQUINONE	PA
EPA 8270 E	1-METHYLNAPHTHALENE	PA
EPA 8270 E	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 E	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 E	2,4-DIMETHYLPHENOL	PA
EPA 8270 E	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 E	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 E	2-CHLORONAPHTHALENE	PA
EPA 8270 E	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 E	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 E	2-NITROANILINE	PA
EPA 8270 E	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 E	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 E	3-METHYLCHOLANTHRENE	PA
EPA 8270 E	4-AMINOBIPHENYL	PA
EPA 8270 E	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 E	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 E	4-NITROPHENOL	PA
EPA 8270 E	5-NITRO-O-TOLUIDINE	PA
EPA 8270 E	ACENAPHTHENE	PA
EPA 8270 E	ACETOPHENONE	PA
EPA 8270 E	ANTHRACENE	PA
EPA 8270 E	ATRAZINE	PA
EPA 8270 E	BENZIDINE	PA
EPA 8270 E	BENZO(A)PYRENE	PA
EPA 8270 E	BENZO(G,H,I)PERYLENE	PA
EPA 8270 E	BENZOIC ACID	PA
EPA 8270 E	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 E	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 E	CAPROLACTAM	PA
EPA 8270 E	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 E	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 E	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 E	1-CHLORONAPHTHALENE	PA
EPA 8270 E	1-NAPHTHYLAMINE	PA
EPA 8270 E	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 E	2,4-DICHLOROPHENOL	PA
EPA 8270 E	2,4-DINITROPHENOL	PA
EPA 8270 E	2,6-DICHLOROPHENOL	PA
EPA 8270 E	2-ACETYLAMINOFLUORENE	PA
EPA 8270 E	2-CHLOROPHENOL	PA
EPA 8270 E	2-METHYLNAPHTHALENE	PA
EPA 8270 E	2-NAPHTHYLAMINE	PA
EPA 8270 E	2-NITROPHENOL	PA
EPA 8270 E	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 8270 E	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 E	3-NITROANILINE	PA
EPA 8270 E	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 E	4-CHLOROANILINE	PA
EPA 8270 E	4-NITROANILINE	PA
EPA 8270 E	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 E	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 E	ACENAPHTHYLENE	PA
EPA 8270 E	ANILINE	PA
EPA 8270 E	ARAMITE	PA
EPA 8270 E	BENZALDEHYDE	PA
EPA 8270 E	BENZO(A)ANTHRACENE	PA
EPA 8270 E	BENZO(B)FLUORANTHENE	PA
EPA 8270 E	BENZO(K)FLUORANTHENE	PA
EPA 8270 E	BENZYL ALCOHOL	PA
EPA 8270 E	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 E	BUTYL BENZYL PHTHALATE	PA
EPA 8270 E	CARBAZOLE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 E	CHLOROBENZILATE	PA
EPA 8270 E	DI-N-BUTYL PHTHALATE	PA
EPA 8270 E	DIALLATE	PA
EPA 8270 E	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 E	DIETHYL PHTHALATE	PA
EPA 8270 E	DIMETHYL PHTHALATE	PA
EPA 8270 E	DIPHENYLAMINE	PA
EPA 8270 E	ETHYL METHANESULFONATE	PA
EPA 8270 E	FLUORANTHENE	PA
EPA 8270 E	HEXACHLOROBENZENE	PA
EPA 8270 E	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 E	HEXACHLOROPROPENE	PA
EPA 8270 E	ISODRIN	PA
EPA 8270 E	ISOSAFROLE	PA
EPA 8270 E	METHYL METHANESULFONATE	PA
EPA 8270 E	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 E	N-NITROSODIETHYLAMINE	PA
EPA 8270 E	N-NITROSODIPHENYLAMINE	PA
EPA 8270 E	N-NITROSOMORPHOLINE	PA
EPA 8270 E	N-NITROSOPYRROLIDINE	PA
EPA 8270 E	NITROBENZENE	PA
EPA 8270 E	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 E	PENTACHLOROBENZENE	PA
EPA 8270 E	PENTACHLOROPHENOL	PA
EPA 8270 E	PHENANTHRENE	PA
EPA 8270 E	PHORATE	PA
EPA 8270 E	PYRENE	PA
EPA 8270 E	SAFROLE	PA
EPA 8270 E	THIONAZIN (ZINOPHOS, DIETHYL-O-2-PYRAZINYL PHOSPHOROTHIONATE)	PA
EPA 8270 E - EXTENDED	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 E - EXTENDED	ALPHA-TERPINEOL	PA
EPA 8270 E - EXTENDED	INDENE	PA
EPA 8270 E - EXTENDED	TRIETHYLAMINE	PA
EPA 8270 E	CHRYSENE	PA
EPA 8270 E	DI-N-OCTYL PHTHALATE	PA
EPA 8270 E	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 E	DIBENZOFURAN	PA
EPA 8270 E	DIMETHOATE	PA
EPA 8270 E	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 E	DISULFOTON	PA
EPA 8270 E	FAMPHUR	PA
EPA 8270 E	FLUORENE	PA
EPA 8270 E	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 E	HEXACHLOROETHANE	PA
EPA 8270 E	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 E	ISOPHORONE	PA
EPA 8270 E	KEPONE	PA
EPA 8270 E	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 E	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 E	N-NITROSODIMETHYLAMINE	PA
EPA 8270 E	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 E	N-NITROSOPIPERIDINE	PA
EPA 8270 E	NAPHTHALENE	PA
EPA 8270 E	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 E	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 E	PENTACHLORONITROBENZENE	PA
EPA 8270 E	PHENACETIN	PA
EPA 8270 E	PHENOL	PA
EPA 8270 E	PRONAMIDE (KERB)	PA
EPA 8270 E	PYRIDINE	PA
EPA 8270 E	SULFOTEP (TETRAETHYL DITHIOPYROPHOSPHATE, TEDP)	PA
EPA 8270 E - EXTENDED	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 E - EXTENDED	6-METHYLCHRYSENE	PA
EPA 8270 E - EXTENDED	DIBENZ(A,H) ACRIDINE	PA
EPA 8270 E - EXTENDED	QUINOLINE	PA
EPA 8270 E SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8270 E SIM	1-METHYLNAPHTHALENE	PA
EPA 8270 E SIM	ACENAPHTHENE	PA
EPA 8270 E SIM	ANTHRACENE	PA
EPA 8270 E SIM	BENZO(A)PYRENE	PA
EPA 8270 E SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 E SIM	CHRYSENE	PA
EPA 8270 E SIM	FLUORANTHENE	PA
EPA 8270 E SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 E SIM	PHENANTHRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8290 A - EXTENDED	TOTAL HEPTACHLORODIBENZOFURAN (HPCDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL HEXACHLORODIBENZOFURAN (HXCDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL PENTACHLORODIBENZOFURAN (PECDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL TETRACHLORODIBENZOFURAN (TCDF, TOTAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8270 E SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 E SIM	ACENAPHTHYLENE	PA
EPA 8270 E SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 E SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 E SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 E SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 E SIM	FLUORENE	PA
EPA 8270 E SIM	NAPHTHALENE	PA
EPA 8270 E SIM	PYRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8290 A - EXTENDED	TOTAL HEPTACHLORODIBENZO-P-DIOXIN (HPCDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL HEXACHLORODIBENZO-P-DIOXIN (HXCDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL PENTACHLORODIBENZO-P-DIOXIN (PECDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL TETRACHLORODIBENZO-P-DIOXIN (TCDD, TOTAL)	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	3-NITROTOLUENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 B	CYANIDE, TOTAL	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	CHLORIDE	PA
EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	SULFATE	PA
EPA 9066	TOTAL PHENOLICS	PA
OIA-1677-09	CYANIDE, FREE	PA
RSK-175	ETHENE (ETHYLENE)	PA
SM 2120 B-2011	COLOR	PA
SM 2310 B-2011	ACIDITY, AS CACO3	PA
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	PA
SM 2540 B-2015	RESIDUE-TOTAL (TS)	PA
SM 2540 D-2015	RESIDUE-NONFILTERABLE (TSS)	PA
SM 3500-CR B-2011	CHROMIUM VI	PA
SM 4500-F^- B-2011	FLUORIDE	PA
SM 4500-NH3 B-2011	AMMONIA AS N	PA
SM 4500-NH3 D-2011	AMMONIA AS N	PA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	PA
SM 4500-$S2^-$ D-2011	SULFIDE	PA
SM 4500-SIO2 C-2011	SILICA AS SIO2	PA
SM 5210 B-2016	BIOCHEMICAL OXYGEN DEMAND (BOD)	PA
SM 5310 C-2014	TOTAL ORGANIC CARBON (TOC)	PA

METHOD	ANALYTE	PRIMARY
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9040 C	PH	PA
EPA 9056 A	BROMIDE	PA
EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRITE (AS N)	PA
EPA 9060 A	TOTAL ORGANIC CARBON (TOC)	PA
OIA-1677-09	CYANIDE, AVAILABLE	PA
RSK-175	ETHANE	PA
RSK-175	METHANE	PA
SM 2130 B-2011	TURBIDITY	PA
SM 2320 B-2011	ALKALINITY AS CACO3	PA
SM 2510 B-2011	CONDUCTIVITY	PA
SM 2540 C-2015	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 F-2015	RESIDUE-SETTLEABLE	PA
SM 4500-CL^- C-2011	CHLORIDE	PA
SM 4500-F^- C-2011	FLUORIDE	PA
SM 4500-NH3 C-2011	AMMONIA AS N	PA
SM 4500-P B 5-2011	PREP: TOTAL PHOSPHORUS	PA
SM 4500-P F-2011	PHOSPHORUS, TOTAL	PA
SM 4500-$S2^-$ F-2011	SULFIDE	PA
SM 4500-$SO3^-$ B-2011	SULFITE-SO3	PA
SM 5210 B-2016	CARBONACEOUS BOD (CBOD)	PA
SM 5540 C-2011	SURFACTANTS - MBAS	PA

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 B	FLASHPOINT	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE (SPLP)	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA

METHOD	ANALYTE	PRIMARY
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE (TCLP)	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 1613 B	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 1613 B	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1668 A	2,2',3,3',4,4',5,5',6-NONACHLOROBIPHENYL (BZ-206)	PA
EPA 1668 A	2,2',3,3',4,4',5,6'-OCTACHLOROBIPHENYL (BZ-196)	PA
EPA 1668 A	2,2',3,3',4,4',5,6-OCTACHLOROBIPHENYL BZ-195)	PA
EPA 1668 A	2,2',3,3',4,4',6,6'-OCTACHLOROBIPHENYL (BZ-197)	PA
EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5'-HEXACHLOROBIPHENYL (BZ-130)	PA
EPA 1668 A	2,2',3,3',4,5,5',6,6'-NONACHLOROBIPHENYL (BZ-208)	PA
EPA 1668 A	2,2',3,3',4,5,5'-HEPTACHLOROBIPHENYL (BZ-172)	PA
EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	PA
EPA 1668 A	2,2',3,3',5,5',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1613 B	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 1613 B	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 1668 A	2,2',3,3',4,4',5,5'-OCTACHLOROBIPHENYL (BZ-194)	PA
EPA 1668 A	2,2',3,3',4,4',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	PA
EPA 1668 A	2,2',3,3',4,4',5-HEPTACHLOROBIPHENYL (BZ-170)	PA
EPA 1668 A	2,2',3,3',4,4',6-HEPTACHLOROBIPHENYL (BZ-171)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	PA
EPA 1668 A	2,2',3,3',4,5,5',6'-OCTACHLOROBIPHENYL (BZ-199)	PA
EPA 1668 A	2,2',3,3',4,5,5',6-OCTACHLOROBIPHENYL (BZ-198)	PA
EPA 1668 A	2,2',3,3',4,5,6'-HEPTACHLOROBIPHENYL (BZ-174)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA
EPA 1668 A	2,2',3,3',5,5',6,6'-OCTACHLOROBIPHENYL (BZ-202)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA
EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	NITRATE (AS N)	PA
EPA 300.0 REV 2.1	SULFATE	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA
EPA 3620 C	PREP: FLORISIL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA
EPA 5035 A	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA
EPA 6010 D	ANTIMONY	PA
EPA 6010 D	BARIUM	PA
EPA 6010 D	BORON	PA
EPA 6010 D	CALCIUM	PA
EPA 6010 D	COBALT	PA
EPA 6010 D	IRON	PA
EPA 6010 D	LITHIUM	PA
EPA 6010 D	MANGANESE	PA
EPA 6010 D	NICKEL	PA
EPA 6010 D	SELENIUM	PA
EPA 6010 D	SILVER	PA
EPA 6010 D	STRONTIUM	PA
EPA 6010 D	TIN	PA
EPA 6010 D	VANADIUM	PA
EPA 6010 D - EXTENDED	SULFUR	PA
EPA 6010 D - EXTENDED	ZIRCONIUM	PA
EPA 6020 B	ANTIMONY	PA
EPA 6020 B	BARIUM	PA

METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRITE (AS N)	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA
EPA 3550 C	PREP: ULTRASONIC EXTRACTION	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 D	ALUMINUM	PA
EPA 6010 D	ARSENIC	PA
EPA 6010 D	BERYLLIUM	PA
EPA 6010 D	CADMIUM	PA
EPA 6010 D	CHROMIUM	PA
EPA 6010 D	COPPER	PA
EPA 6010 D	LEAD	PA
EPA 6010 D	MAGNESIUM	PA
EPA 6010 D	MOLYBDENUM	PA
EPA 6010 D	POTASSIUM	PA
EPA 6010 D	SILICA AS SIO2	PA
EPA 6010 D	SODIUM	PA
EPA 6010 D	THALLIUM	PA
EPA 6010 D	TITANIUM	PA
EPA 6010 D	ZINC	PA
EPA 6010 D - EXTENDED	THORIUM	PA
EPA 6020 B	ALUMINUM	PA
EPA 6020 B	ARSENIC	PA
EPA 6020 B	BERYLLIUM	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 6020 B	CADMIUM	PA
EPA 6020 B	CHROMIUM	PA
EPA 6020 B	COPPER	PA
EPA 6020 B	LEAD	PA
EPA 6020 B	MANGANESE	PA
EPA 6020 B	NICKEL	PA
EPA 6020 B	SELENIUM	PA
EPA 6020 B	SODIUM	PA
EPA 6020 B	TIN	PA
EPA 6020 B	ZINC	PA
EPA 6020 B - EXTENDED	TITANIUM	PA
EPA 6850	PERCHLORATE	PA
EPA 7199	CHROMIUM VI	PA
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8015 D	ETHANOL	PA
EPA 8015 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 D - EXTENDED	ETHYLENE GLYCOL	PA
EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	DELTA-BHC	PA
EPA 8081 B	ENDOSULFAN I	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 8081 B	HEPTACHLOR	PA
EPA 8081 B	METHOXYCHLOR	PA
EPA 6020 B	CALCIUM	PA
EPA 6020 B	COBALT	PA
EPA 6020 B	IRON	PA
EPA 6020 B	MAGNESIUM	PA
EPA 6020 B	MOLYBDENUM	PA
EPA 6020 B	POTASSIUM	PA
EPA 6020 B	SILVER	PA
EPA 6020 B	THALLIUM	PA
EPA 6020 B	VANADIUM	PA
EPA 6020 B - EXTENDED	STRONTIUM	PA
EPA 6020 B - EXTENDED	URANIUM (MASS)	PA
EPA 7196 A	CHROMIUM VI	PA
EPA 7471 B	MERCURY	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8015 C	ETHANOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 C	METHANOL	PA
EPA 8015 D	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 D	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8015 D	METHANOL	PA
EPA 8015 D - EXTENDED	TRIETHYLENE GLYCOL	PA
EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	CHLORDANE, TOTAL	PA
EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-CHLORDANE (TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR EPOXIDE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	2,4'-DDE	PA
EPA 8081 B - EXTENDED	KEPONE	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8151 A	2,4-D	PA
EPA 8151 A	DALAPON	PA
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	MCPA	PA
EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 C	2-CHLOROTOLUENE	PA
EPA 8260 C	2-NITROPROPANE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 C	ACETONE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8081 B - EXTENDED	2,4'-DDD	PA
EPA 8081 B - EXTENDED	2,4'-DDT	PA
EPA 8081 B - EXTENDED	MIREX	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8151 A	2,4,5-T	PA
EPA 8151 A	2,4-DB	PA
EPA 8151 A	DICAMBA	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8151 A	MCPP	PA
EPA 8151 A	PICLORAM	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACRYLONITRILE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 C	BENZENE	PA
EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CHLOROBENZENE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	M+P-XYLENE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	TERT-AMYL METHYL ETHER (TAME)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA
EPA 8260 C	TOLUENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 C	VINYL ACETATE	PA
EPA 8260 C	XYLENE (TOTAL)	PA

METHOD	ANALYTE	PRIMARY
EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	ETHYL ACETATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	O-XYLENE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	STYRENE	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 C - EXTENDED	TERT-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 D	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 D	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 D	1,1,2-TRICHLOROETHANE	PA
EPA 8260 D	1,1-DICHLOROETHYLENE	PA
EPA 8260 D	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 D	1,2,3-TRIMETHYLBENZENE	PA
EPA 8260 D	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 D	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 D	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 D	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 D	1,3-DICHLOROPROPANE	PA
EPA 8260 D	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 D	2,2-DICHLOROPROPANE	PA
EPA 8260 D	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 D	2-HEXANONE	PA
EPA 8260 D	4-CHLOROTOLUENE	PA
EPA 8260 D	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 D	ACETONITRILE	PA
EPA 8260 D	ACRYLONITRILE	PA
EPA 8260 D	BENZENE	PA
EPA 8260 D	BROMOBENZENE	PA
EPA 8260 D	BROMODICHLOROMETHANE	PA
EPA 8260 D	CARBON DISULFIDE	PA
EPA 8260 D	CHLOROBENZENE	PA
EPA 8260 C - EXTENDED	1,2,3-TRIMETHYLBENZENE	PA
EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA
EPA 8260 C - EXTENDED	N-HEXANE	PA
EPA 8260 C - EXTENDED	TERT-BUTYL FORMATE	PA
EPA 8260 C SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 D	1,1,1-TRICHLOROETHANE	PA
EPA 8260 D	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 D	1,1-DICHLOROETHANE	PA
EPA 8260 D	1,1-DICHLOROPROPENE	PA
EPA 8260 D	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 D	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 D	1,2-DICHLOROPROPANE	PA
EPA 8260 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 D	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 D	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 D	2-CHLOROTOLUENE	PA
EPA 8260 D	2-NITROPROPANE	PA
EPA 8260 D	4-ISOPROPYLTOLUENE (P-CYMENE, P-ISOPROPYLTOLUENE)	PA
EPA 8260 D	ACETONE	PA
EPA 8260 D	ACROLEIN (PROPENAL)	PA
EPA 8260 D	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 D	BENZYL CHLORIDE	PA
EPA 8260 D	BROMOCHLOROMETHANE	PA
EPA 8260 D	BROMOFORM	PA
EPA 8260 D	CARBON TETRACHLORIDE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8260 D	CHLORODIBROMOMETHANE	PA
EPA 8260 D	CHLOROFORM	PA
EPA 8260 D	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 D	CYCLOHEXANE	PA
EPA 8260 D	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 D	ETHANOL	PA
EPA 8260 D	ETHYL METHACRYLATE	PA
EPA 8260 D	ETHYLBENZENE	PA
EPA 8260 D	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 D	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 D	M+P-XYLENE	PA
EPA 8260 D	METHYL ACETATE	PA
EPA 8260 D	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 D	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 D	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 D	N-PROPYLBENZENE	PA
EPA 8260 D	O-XYLENE	PA
EPA 8260 D	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 D	STYRENE	PA
EPA 8260 D	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 D	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 D	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 D	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 D	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 D	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 D - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 D - EXTENDED	N-HEXANE	PA
EPA 8260 D	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 D	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 D	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 D	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 8260 D	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 D	ETHYL ACETATE	PA
EPA 8260 D	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 D	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 D	ISOPROPYLBENZENE	PA
EPA 8260 D	METHACRYLONITRILE	PA
EPA 8260 D	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 D	METHYL METHACRYLATE	PA
EPA 8260 D	METHYLCYCLOHEXANE	PA
EPA 8260 D	N-BUTYLBENZENE	PA
EPA 8260 D	NAPHTHALENE	PA
EPA 8260 D	PENTACHLOROETHANE	PA
EPA 8260 D	SEC-BUTYLBENZENE	PA
EPA 8260 D	TERT-AMYL METHYL ETHER (TAME)	PA
EPA 8260 D	TERT-BUTYLBENZENE	PA
EPA 8260 D	TOLUENE	PA
EPA 8260 D	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 D	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 8260 D	VINYL ACETATE	PA
EPA 8260 D	XYLENE (TOTAL)	PA
EPA 8260 D - EXTENDED	N-BUTYL-ACETATE	PA
EPA 8260 D - EXTENDED	TETRAHYDROFURAN (THF)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-NITROANILINE	PA
EPA 8270 D	4-AMINOBIPHENYL	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA
EPA 8270 D	4,4'-METHYLENEBIS-2-CHLOROANILINE	PA
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-NITROPHENOL	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ANILINE	PA
EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DISULFOTON	PA
EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	KEPONE	PA
EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHORATE	PA
EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS, DIETHYL-O-2-PYRAZINYL PHOSPHOROTHIONATE)	PA
EPA 8270 D - EXTENDED	1,2,3,4-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIPHENYLAMINE	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA
EPA 8270 D	FLUORANTHENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA
EPA 8270 D	ISODRIN	PA
EPA 8270 D	ISOSAFROLE	PA
EPA 8270 D	METHAPYRILENE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA
EPA 8270 D	NAPHTHALENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA
EPA 8270 D	PHENACETIN	PA
EPA 8270 D	PHENOL	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA
EPA 8270 D	PYRENE	PA
EPA 8270 D	SULFOTEP (TETRAETHYL DITHIOPYROPHOSPHATE, TEDP)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 D - EXTENDED	1,2,3,5-TETRACHLOROBENZENE	PA
EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	6-METHYLCHRYSENE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 D - EXTENDED	ATRAZINE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	DIBENZ(A,H) ACRIDINE	PA
EPA 8270 D - EXTENDED	N,N-DIMETHYLFORMAMIDE	PA
EPA 8270 D - EXTENDED	QUINOLINE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM - EXTENDED	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 E	1,1'-BIPHENYL (BZ-0)	PA
EPA 8270 E	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 E	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 E	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 E	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 E	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 E	1-CHLORONAPHTHALENE	PA
EPA 8270 E	1-NAPHTHYLAMINE	PA
EPA 8270 E	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 E	2,4-DICHLOROPHENOL	PA
EPA 8270 E	2,4-DINITROPHENOL	PA
EPA 8270 E	2,6-DICHLOROPHENOL	PA
EPA 8270 E	2-ACETYLAMINOFLUORENE	PA
EPA 8270 E	2-CHLOROPHENOL	PA
EPA 8270 E	2-METHYLNAPHTHALENE	PA
EPA 8270 E	2-NAPHTHYLAMINE	PA
EPA 8270 E	2-NITROPHENOL	PA
EPA 8270 E	3+4-METHYLPHENOL (M+P CRESOL)	PA
EPA 8270 E	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 E	3-NITROANILINE	PA
EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	INDENE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D SIM	FLUORENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA
EPA 8270 D SIM	PYRENE	PA
EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 E	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 E	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 E	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 E	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 E	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 E	1,4-NAPHTHOQUINONE	PA
EPA 8270 E	1-METHYLNAPHTHALENE	PA
EPA 8270 E	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 E	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 E	2,4-DIMETHYLPHENOL	PA
EPA 8270 E	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 E	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 E	2-CHLORONAPHTHALENE	PA
EPA 8270 E	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 E	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 E	2-NITROANILINE	PA
EPA 8270 E	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 E	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 E	3-METHYLCHOLANTHRENE	PA
EPA 8270 E	4-AMINOBIPHENYL	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 E	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 E	4-CHLOROANILINE	PA
EPA 8270 E	4-NITROANILINE	PA
EPA 8270 E	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 E	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 E	ACENAPHTHYLENE	PA
EPA 8270 E	ANILINE	PA
EPA 8270 E	ATRAZINE	PA
EPA 8270 E	BENZIDINE	PA
EPA 8270 E	BENZO(A)PYRENE	PA
EPA 8270 E	BENZO(G,H,I)PERYLENE	PA
EPA 8270 E	BENZOIC ACID	PA
EPA 8270 E	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 E	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 E	CAPROLACTAM	PA
EPA 8270 E	CHLOROBENZILATE	PA
EPA 8270 E	DI-N-BUTYL PHTHALATE	PA
EPA 8270 E	DIALLATE	PA
EPA 8270 E	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 E	DIETHYL PHTHALATE	PA
EPA 8270 E	DIMETHYL PHTHALATE	PA
EPA 8270 E	DIPHENYLAMINE	PA
EPA 8270 E	FLUORANTHENE	PA
EPA 8270 E	HEXACHLOROBENZENE	PA
EPA 8270 E	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 E	HEXACHLOROPROPENE	PA
EPA 8270 E	ISODRIN	PA
EPA 8270 E	ISOSAFROLE	PA
EPA 8270 E	METHYL METHANESULFONATE	PA
EPA 8270 E	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 E	N-NITROSODIETHYLAMINE	PA
EPA 8270 E	N-NITROSODIPHENYLAMINE	PA
EPA 8270 E	N-NITROSOMORPHOLINE	PA
EPA 8270 E	N-NITROSOPYRROLIDINE	PA
EPA 8270 E	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 E	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 E	4-NITROPHENOL	PA
EPA 8270 E	5-NITRO-O-TOLUIDINE	PA
EPA 8270 E	ACENAPHTHENE	PA
EPA 8270 E	ACETOPHENONE	PA
EPA 8270 E	ANTHRACENE	PA
EPA 8270 E	BENZALDEHYDE	PA
EPA 8270 E	BENZO(A)ANTHRACENE	PA
EPA 8270 E	BENZO(B)FLUORANTHENE	PA
EPA 8270 E	BENZO(K)FLUORANTHENE	PA
EPA 8270 E	BENZYL ALCOHOL	PA
EPA 8270 E	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 E	BUTYL BENZYL PHTHALATE	PA
EPA 8270 E	CARBAZOLE	PA
EPA 8270 E	CHRYSENE	PA
EPA 8270 E	DI-N-OCTYL PHTHALATE	PA
EPA 8270 E	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 E	DIBENZOFURAN	PA
EPA 8270 E	DIMETHOATE	PA
EPA 8270 E	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 E	ETHYL METHANESULFONATE	PA
EPA 8270 E	FLUORENE	PA
EPA 8270 E	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 E	HEXACHLOROETHANE	PA
EPA 8270 E	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 E	ISOPHORONE	PA
EPA 8270 E	METHAPYRILENE	PA
EPA 8270 E	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 E	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 E	N-NITROSODIMETHYLAMINE	PA
EPA 8270 E	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 E	N-NITROSOPIPERIDINE	PA
EPA 8270 E	NAPHTHALENE	PA

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8270 E	NITROBENZENE	PA
EPA 8270 E	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 E	PENTACHLOROBENZENE	PA
EPA 8270 E	PENTACHLOROPHENOL	PA
EPA 8270 E	PHENANTHRENE	PA
EPA 8270 E	PHORATE	PA
EPA 8270 E	PYRENE	PA
EPA 8270 E	SAFROLE	PA
EPA 8270 E	THIONAZIN (ZINOPHOS, DIETHYL-O-2-PYRAZINYL PHOSPHOROTHIONATE)	PA
EPA 8270 E - EXTENDED	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 E - EXTENDED	6-METHYLCHRYSENE	PA
EPA 8270 E - EXTENDED	DIPHENYL ETHER (DIPHENYL OXIDE)	PA
EPA 8270 E - EXTENDED	QUINOLINE	PA
EPA 8270 E SIM	1-METHYLNAPHTHALENE	PA
EPA 8270 E SIM	ACENAPHTHENE	PA
EPA 8270 E SIM	ANTHRACENE	PA
EPA 8270 E SIM	BENZO(A)PYRENE	PA
EPA 8270 E SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 E SIM	CHRYSENE	PA
EPA 8270 E SIM	FLUORANTHENE	PA
EPA 8270 E SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 E SIM	PHENANTHRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZO-P-DIOXIN (1,2,3,4,6,7,8-HPCDD)	PA
EPA 8290 A	1,2,3,4,7,8,9-HEPTACHLORODIBENZOFURAN (1,2,3,4,7,8,9-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8270 E	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 E	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 E	PENTACHLORONITROBENZENE	PA
EPA 8270 E	PHENACETIN	PA
EPA 8270 E	PHENOL	PA
EPA 8270 E	PRONAMIDE (KERB)	PA
EPA 8270 E	PYRIDINE	PA
EPA 8270 E	SULFOTEP (TETRAETHYL DITHIOPYROPHOSPHATE, TEDP)	PA
EPA 8270 E	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 E - EXTENDED	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 E - EXTENDED	DIBENZ(A,H) ACRIDINE	PA
EPA 8270 E - EXTENDED	INDENE	PA
EPA 8270 E SIM	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8270 E SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 E SIM	ACENAPHTHYLENE	PA
EPA 8270 E SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 E SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 E SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 E SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 E SIM	FLUORENE	PA
EPA 8270 E SIM	NAPHTHALENE	PA
EPA 8270 E SIM	PYRENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	PA
EPA 8290 A	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 12574

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

Virginia Laboratory ID: 460182
Effective Date: July 15, 2023
Expiration Date: June 14, 2024

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8290 A - EXTENDED	TOTAL HEPTACHLORODIBENZOFURAN (HPCDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL HEXACHLORODIBENZOFURAN (HXCDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL PENTACHLORODIBENZOFURAN (PECDF, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL TETRACHLORODIBENZOFURAN (TCDF, TOTAL)	PA
EPA 8315 A	FORMALDEHYDE	PA
EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA
EPA 9012 B	CYANIDE, TOTAL	PA
EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	FLUORIDE	PA
EPA 9056 A	NITRITE AS N	PA
EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
SM 2540 G-2011	RESIDUE-TOTAL (TS)	PA
SM 4500-NH3 B-2011	AMMONIA AS N	PA

METHOD	ANALYTE	PRIMARY
EPA 8290 A - EXTENDED	TOTAL HEPTACHLORODIBENZO-P-DIOXIN (HPCDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL HEXACHLORODIBENZO-P-DIOXIN (HXCDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL PENTACHLORODIBENZO-P-DIOXIN (PECDD, TOTAL)	PA
EPA 8290 A - EXTENDED	TOTAL TETRACHLORODIBENZO-P-DIOXIN (TCDD, TOTAL)	PA
EPA 8315 A	ACETALDEHYDE	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA
EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9045 D	PH	PA
EPA 9056 A	CHLORIDE	PA
EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	SULFATE	PA
EPA 9095 B	FREE LIQUID	PA
SM 2540 G-2011	RESIDUE-VOLATILE	PA
SM 4500-NH3 C-2011	AMMONIA AS N	PA