APPENDIX C
LABORATORY ANALYTICAL RESULTS – YEAR 2018
(CD-ROM)

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Data Validation Summary
Fourth Quarter 2018
Semiannual Compliance Groundwater Monitoring Event for HWMU 16 and
Corrective Action Semiannual Groundwater Monitoring Event for HWMU 5

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

Draper Aden Associates performed data validation of the analytical results for the Fourth Quarter 2018 semiannual groundwater monitoring event at Hazardous Waste Management Units (HWMUs) 5 and 16 located at the Radford Army Ammunition Plant (RFAAP) in Radford, Virginia. Groundwater monitoring activities were conducted in accordance with the *Final Hazardous Waste Management Post-Closure Care Permit* (Permit) for HWMUs 5 and 16 (original effective date October 4, 2002, reissued August 16, 2014, Class 1 Permit Modification dated September 12, 2014 and Class 1 Permit Modification dated December 1, 2016). The Fourth Quarter 2018 event served as the semiannual Corrective Action (CA) groundwater monitoring event for HWMU-5 and semiannual compliance monitoring for HWMU-16 conducted in accordance with the Permit. The following information summarizes the findings of the Fourth Quarter 2018 semiannual activities at each Unit.

Sample Collection/Analytical Services

Draper Aden Associates, of Blacksburg, Virginia, collected groundwater samples during October 9 through October 16, 2018.

Samples were submitted for laboratory analysis via courier to Shealy Environmental Services (Shealy), of West Columbia, South Carolina; or Eurofins Lancaster Laboratories Environmental, (ELLE), of Lancaster, Pennsylvania. A summary table of the required analyses and identification of the analyzing laboratory is provided below. Each 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., each laboratory submitted results to Draper Aden Associates 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 was received on November 28, 2018.

Verification Events

No verification events were required.

Summary of Monitoring Event Data by Analytical Method

Certificates of analysis were received from each laboratory in the following sample delivery groups (SDGs):

Summary of Required Analytical Methods and SDGs

Analytical Method	Hazardous Waste Management Unit (HWMU)	
	HWMU 5 / Laboratory	**HWMU 16 / Laboratory**
8260C Volatiles	RAF23 / ELLE	RAF20 / ELLE
8270D Semivolatiles	NA	RAF20 / ELLE
6020A Inorganics, total	RAF24 / ELLE	TJ13026 / SHEALY (6020B)
7470A Mercury, total	NA	TJ13026 / SHEALY

NA - Denotes analysis not applicable/analysis not required.

Each final certificate of analysis was complete in its presentation and the data were of acceptable quality. Chains of custody and permit required target analyte lists are provided in each 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*, January 2017, where applicable.
- *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Superfund Methods Data Review*, January 2017, where applicable.

Draper Aden Associates, of Blacksburg, Virginia, performed data validation as detailed in the attached data validation reports. For each HWMU, data validation reports and a summary table of data validation results are provided as an attachment.

Reporting of Results

HWMU-5 - For this event, 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 for Unit-5. Results reported between the detection limit and quantitation limit should be considered estimated concentrations. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for antimony, lead, and zinc, where applicable.

HWMU 16 - For this event, point of compliance well and plume well results for HWMU 16 were reported to at or above the permit QL, except where noted.

All wells were analyzed for the constituents listed in the semiannual compliance monitoring lists (Attachment 3 Appendix E rev 12-1-2016 Class 1 Permit Modification) consisting of 12 inorganics, 20 volatile organics and three semivolatile organics. Note December 2016 Class 1 Permit Modification included a revision to the permit specified QL for lead, and zinc. Additionally, tetrahydrofuran (volatile organic) was added to the semiannual compliance monitoring list, Attachment 3 Appendix E, and the groundwater protection standards list, Appendix G to Attachment 3. Other modifications were made with the December 2016 Class Permit Modification, but not applicable to this semiannual event.

Additionally, a footnote presented in Appendix G of Permit Attachment 3 indicates that verification is required for constituents detected at concentrations less than the QL if their associated GPSs are equal to the QL and are greater than the applicable risk-based concentrations (i.e., ACL or RSL). In these instances, verification must be conducted using an alternate low-level analytical method in order to confirm or refute the observed initial detections if the QL achievable by that method is less than, or equal to, the ACL or RSL for the subject constituent. If a concentration greater than the low-level analytical method QL is observed, then the GPS for that constituent will be updated, if warranted. During Fourth Quarter 2018, no constituents with GPSs equal to their respective QLs and greater than the applicable risk-based concentrations were detected. This applied to 2,4-dinitrotoluene and 2,6-dinitrotoluene.

Summary of Data Validation Results

The data validation results are summarized below and on the attached reports and table. Each final 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 below.

SW-846 Method 8260C/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, except where 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. No target analytes were detected in the sample/field duplicate sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 5

- Sample/Blind Field Sample Duplicate results - 5WC21/5WDUP - Trichloroethene was reported above the QL in both the sample and blind field duplicate (2.5/2.6 μg/l). The relative percent difference (RPD) criteria were met.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – 1,1-dichloroethane (2.7/2.7 µg/l) and diethyl ether (16/16 µg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- Samples 16C1 and 16MW9 had concentrations that exceeded the calibration range for diethyl ether. The samples were diluted; however, the dilution analysis was performed outside the required holding time criteria. The diluted results confirmed the initial results. The initial (undiluted) results were reported and qualified as ("J") to note the results were estimated due to the QC deficiency.
- Chloroethane, dichlorofluoromethane, and dimethyl ether did not meet the calibration verification (CV) standard percent difference/drift requirement of ±20%. Results detected at or above the QL for these analytes were qualified as estimated ("J"). Results not detected at or above the QL for these analytes are qualified "UJ" to note that the QLs are estimated due to the QC deficiency.
- Dichlorofluoromethane recovered low in the LCS/LCSD. This analyte was not detected at or above the QL in any project sample and results for dichlorofluoromethane were qualified "UJ" to note that the QL is estimated. The remaining LCS/LCSD criteria were met.
- The permit required QL is 12.5 µg/l for both diethyl ether and dimethyl ether. The laboratory reported the QL as 13 µg/l for diethyl ether and dimethyl ether due to the laboratory rounding policy. Draper Aden Associates revised the QL to 12.5 µg/l and no revision was requested.

SW-846 Method 8270D/3510C- Semivolatile Organic Analytes (HWMU16 only)

Instrument calibration, blank, surrogate, MS/MSD, LCS, internal standards, sample/blind field sample duplicate results, and target analyte identification and quantitation criteria were met, except as noted below. The MS/MSD samples were analyzed on project samples as noted on the chain of custody. A blind field duplicate was collected and analyzed for the required target analytes. No target analytes were detected in the sample/field duplicate sample unless noted below. No deviations from specific QA/QC criteria were identified during the data review process.

HWMU 16

- A footnote presented in Appendix G to Attachment 3, Groundwater Corrective Action Annual Monitoring List, of Permit Module V – *Groundwater Compliance Monitoring for Unit 16* indicates that verification is required for constituents detected at concentrations less than the Limit of Quantitation (LOQ)/QL if their associated groundwater protection standard (GPS) is based on the LOQ/QL. This footnote applies to 2,4-dinitrotoluene and 2,6-dinitrotoluene detected below the LOQ/QL only in compliance wells.
- The surrogate recovered low for sample 16WC1A. 16WC1A was re-extracted outside the holding time criteria with acceptable surrogate recoveries. The surrogate recoveries from the original 16WC1A MS/MSD and field duplicate (16WC1A) analyses were within acceptance criteria. The MS/MSD recovered within acceptance criteria. The original low 16WC1A surrogate recoveries were attributed to laboratory error and no data qualification was required.

During Fourth Quarter 2018, results for 2,4-dinitrotoluene and 2,6-dinitrotoluene were evaluated to the MDL (review of instrument quantitation report). These two constituents were not detected at or above the MDL or QL and no additional evaluation was required.

SW-846 Method 6020A/3020A or 6020B/3005A

Calibration, blank, interference check sample, MS/MSD/DUP, LCS, internal standards, serial dilution, sample/field sample duplicate results, and target analyte quantitation were met, except where noted below or no data qualification was required. MS/MSD analyses were performed on project samples as noted on the chain of custody. No target analytes were detected in the sample/field duplicate sample unless noted below. Deviations from specific QA/QC criteria that were identified during the data review process are summarized below.

HWMU 5

- Sample/Blind Field Sample Duplicate results – 5WC21/5WDUP – Cobalt was reported above the QL in both the sample and blind field duplicate (38.7/38.7 µg/l.) The RPD criteria were met.
- Sample 5WC23 was reanalyzed for total cobalt in dilution (1:5) due to matrix interference as indicated by low internal standard relative intensities in the original sample. The diluted sample internal standard relative intensities were within acceptance criteria and no data qualification was required. However, for 5W23, the total cobalt result was qualified as "UA" to denote that total cobalt was not detected at or above the adjusted QL (25 ug/l) or adjusted DL (5 ug/l). The permit GPS for total cobalt is 7 ug/l and the adjusted DL (5 ug/l) is below the GPS.

HWMU 16

- Sample/Blind Field Sample Duplicate results – 16WC1A/16WDUP – Barium (280/290 µg/l), and cobalt (8.3/8.7 µg/l) were reported above the QL in both the sample and blind field duplicate. The RPD criteria were met.
- Beryllium recovered low in the MS/MSD and analytical spike (45%/44%/44%.) Beryllium was not detected at or above the QL in any project sample and results for beryllium were validated and qualified "UJ" to note that the QL is estimated due to the QC deficiency. The remaining MS/MSD criteria were met.
- The laboratory inadvertently reported the collection date for sample 16-2 as 10/11/18 rather than 10/10/18 as stated on the COC and no action was required.

SW-846 Method 7470A– Mercury-total - (HWMU 16 only)

Calibration, blank, MS/MSD, LCS, sample/field sample duplicate results were within control limits. MS/MSD analyses were performed on project samples as noted on the chain of custody. Mercury was not detected in the sample/blind field duplicate sample. No deviations from specific QA/QC criteria were identified during the data review process.

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 8260C (GC/MS) VOLATILE ORGANICS

A. QC DELIVERABLES PACKAGE:

- ☑ VELAP accredited (matrix, method and analyte)

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ 14-day sample holding time, pH <2
- ☑ Samples received at ≤ 6ºC, zero headspace
- ☑ 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

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ 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 following the instrument performance check analysis 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 (77-114%), 4-bromofluorobenzene (78-110%)
  - toluene-d_8 (77-110%), 1,2-dichloroethane-d_4 (74-113%)

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%.

DATA EVALUATION FOR SW-846 METHOD 8260C (GC/MS) VOLATILE ORGANICS (Con't.)

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 QL (HWMU5)
- ☑ Results reported within instrument calibration range
- ☑ Sample/blind field duplicate RPD <20, where applicable

A. QC DELIVERABLES PACKAGE:

- ☑ VELAP accredited (matrix, method, target analytes)
- ☑ Electronic data file reviewed

B. TECHNICAL HOLDING TIME AND PRESERVATION REVIEW CRITERIA:

- ☑ Holding time: 7-day sample collection to extraction / 40-day extraction to analysis
- ☑ Samples received at ≤6°C
- ☑ Extraction Method 3510C used

C. GC/MS INSTRUMENT PERFORMANCE CHECK REVIEW CRITERIA:

- ☑ Instrument performance check solution analyzed at the beginning of each 12-hour period of standard and/or sample analysis

D. INITIAL GC/MS CALIBRATION REVIEW CRITERIA:

- ☑ Target analytes included in the ICAL
- ☑ ICAL consisted of a minimum of 5 calibration standards (or more, as needed)
- ☑ Lowest concentration calibration standard at or below the associated MCL, regulatory compliance, action limit, or permit QL
- ☑ No calibration standards were dropped to meet calibration criteria
- ☑ 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 following the instrument performance check analysis and prior to the method blank and sample analysis
- ☑ Analytes have % Difference/Drift within ± 20.0%

F. BLANK REVIEW CRITERIA:

- ☑ Method/extraction blank analyzed on each GC/MS system used for sample analysis

G. SURROGATE REVIEW CRITERIA:

- ☑ The following surrogates (or others, as allowed) were used and within the specified range
  - phenol - d_6 (10-94%), - 2-fluorophenol (21-100%), - 2,4,6-tribromophenol (10-123%), nitrobenzene – d_5 (43-108%), - 2-fluorobiphenyl (43-116%), - terphenyl - d_{14} (33-141%)
- ☑ Two base/neutral or acid surrogates out of specification or any one base/neutral or acid extractable surrogate have a recovery of less than 10%, if so corrective action needed

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

- ☑ MS/MSD and LCS analyzed with target analytes
- ☑ MS/MSD and LCS recovered at or above 45%, RPD <40

I. INTERNAL STANDARDS REVIEW CRITERIA:

- ☑ The following internal standards were used (or others as allowed)
  - -1,4-Dichlorobenzene-d_4, Naphthalene-d_8, Acenapththene-d_{10}, Phenanthrene-d_{10}, Pyrene-d_{10}, Perylene-d_{12}
- ☑ 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 permit QL
- Relative intensities of the ions between the standard and sample spectra were within ±30%.

K. TARGET ANALYTE QUANTITATION REVIEW CRITERIA:

- ☑ Results were 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) except 2,4-DNT and 2,6-DNT reviewed and validated to at or above DL.
- ☑ Results reported at or above permit DL and QL (HWMU5)

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

A. QC DELIVERABLES PACKAGE:

- ☑ Sample results included for sample locations
- ☑ Target analyte QLs reported at permit required QL
- ☑ Sample digestion method: 3005A (for Unit 16) and 3020A (for Unit 5)
- ☑ 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 batch or every 12 hours (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 6020A/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)
- ☑ Results reported at or above permit DL and QL (HWMU5)

A. QC DELIVERABLES PACKAGE:

- ☑ Mercury QL reported at permit required QL
- ☑ Electronic data file reviewed
- ☑ VELAP accredited (matrix, method, target analytes)

B. TECHNICAL HOLDING TIME / PRESERVATION REVIEW CRITERIA:

- ☑ 28 day holding time, Adjust pH <2 w/ HNO_3

C. INSTRUMENT CALIBRATION CRITERIA:

- ☑ 1 calibration blank and at least 5 standards
- ☑ ICAL standards within 30% of true value
- ☑ Instrument calibrated for every analytical sequence, r>0.995
- ☑ ICAL standard analyzed at the permit QL
- ☑ QL standard (LLQC) analyzed at or less than the permit required QL (70-130%R)
- ☑ QL standard analyzed at beginning of run, following ICV/ICB

D. INITIAL / CONTINUING CALIBRATION VERIFICATION CRITERIA:

- ☑ 10 sample frequency for CCV; recovery within 85-115%

E. BLANK CRITERIA:

- N/A Trip Blank (check only if analyzed)
- N/A Equipment Blank (check only if analyzed)
- ☑ Method/other laboratory blanks (check only if analyzed), Interference free

F. 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.

H. MATRIX SPIKE (MS) CRITERIA:

- ☑ 75-125% recovery
- ☑ MS spiked prior to digestion, One MS per analytical batch of 20 samples

H. FIELD SAMPLE DUPLICATE CRITERIA:

- ☑ Target analyte: mercury, Difference <10RPD

I. LABORATORY CONTROL SAMPLE (LCS) CRITERIA:

- ☑ Recovery within 80-120% range. Independent source from calibration standards.

J. SAMPLE RESULTS CRITERIA:

- ☑ Results reported within instrument calibration range

K. REPORTING:

- ☑ Detected analytes reported to at or above the permit QL. When applicable, results requiring validation are presented on the attached data validation report.

LIMITATIONS:

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Comprehensive Data Validation Report
Radford Army Ammunition Plant (RFAAP), Radford, Virginia
Facility: HWMU-5 Groundwater Monitoring Event:Fourth Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 6020A											
Laboratory: ELLE, Lancaster, PA											
Cobalt	5W8B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	9.3		9.3		5	1	5	1	ug/l	No action taken.
	5WC21	38.7		38.7		5	1	5	1	ug/l	No action taken.
	5WC22	4.9	J	4.9	J	5	1	5	1	ug/l	Result < QL.
	5WC23	5	U	U	A	5	1	5	1	ug/l	Analyte not detected at or above the adjusted DL or adjusted QL. Analyzed in dilution (1:5). Actual QL 25 ug/l / Actual DL 5 ug/l.
	5WDUP	38.7		38.7		5	1	5	1	ug/l	No action taken. Blind field dupllicate 5WC21.
	5W12A	1	U	U		5	1	5	1	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
1,1-Dichloroethene	5W8B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.4	U	U		1	0.4	1	0.44	ug/l	Analyte not detected at or above the DL or QL.
cis-1,2-Dichloroethene	5W8B	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.05	U	U		1	0.05	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
trans-1,2-Dichloroethene	5W8B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes
Method: 8260C											
Laboratory: ELLE, Lancaster, PA											
trans-1,2-Dichloroethene	Trip Blank 1	0.8	U	U		1	0.8	1	0.8	ug/l	Analyte not detected at or above the DL or QL.
Trichloroethene	5W8B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.2	J	0.2	J	1	0.2	1	0.177	ug/l	Result < QL.
	5WC21	2.5		2.5		1	0.2	1	0.177	ug/l	No action taken.
	5WC22	2.9		2.9		1	0.2	1	0.177	ug/l	No action taken.
	5WC23	3.8		3.8		1	0.2	1	0.177	ug/l	No action taken.
	5WDUP	2.6		2.6		1	0.2	1	0.177	ug/l	No action taken. Blind field dupllicate 5WC21.
	5W12A	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.2	U	U		1	0.2	1	0.177	ug/l	Analyte not detected at or above the DL or QL.
Vinyl chloride	5W8B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W5B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5W7B	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC21	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC22	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WC23	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	5WDUP	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL. Blind field dupllicate 5WC21.
	5W12A	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.
	Trip Blank 1	0.1	U	U		1	0.1	1	0.1	ug/l	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Lab Result	Q	Validated Result	Q	Lab QL	Lab DL	Permit QL	Permit DL	Units	Validation Notes

Definitions:

QL Denotes quantitation limit**.**
DL Denotes detection limit
Q Denotes data qualifier.
U Denotes analyte not detected at or above Detection Limit (DL) or Quantitation Limit (QL).
UA Denotes analyte not detected at or above adjusted sample DL or QL.
J Denotes analyte reported at or above the DL and associated result is estimated. When used with "U" (i.e., "UJ"), denotes analyte not detected at or above DL and QL and DL and QL are estimated. When used with "UA" (i.e., "**UAJ**"), denotes analyte not detected at or above adjusted DL and QL and adjusted DL and QL are estimated.
R Denotes result rejected.
Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the DL or QL.

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: Fourth Quarter 2018

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020A							
Laboratory: ELLE, Lancaster, PA							
Cobalt	5WC21	38.7		38.7		5	No action taken.
	5WDUP	38.7		38.7		5	No action taken. Blind field dupllicate 5WC21.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Trichloroethene	5WC21	2.5		2.5		1	No action taken.
	5WDUP	2.6		2.6		1	No action taken. Blind field dupllicate 5WC21.

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.

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater and Water Samples
Collected on 10/16/18

SDG# RAF23

GROUP	SAMPLE NUMBERS
1999460	9856052-9856062

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M Kauffman

Dana M. Kauffman
Manager

Date: 11/12/2018

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF23
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9856052	5W8B	10/16/2018 09:05	10/17/2018 09:40
9856053	5W5B	10/16/2018 11:15	10/17/2018 09:40
9856054	5W7B	10/16/2018 10:30	10/17/2018 09:40
9856055	5W7B Matrix Spike	10/16/2018 10:30	10/17/2018 09:40
9856056	5W7B Matrix Spike Dup	10/16/2018 10:30	10/17/2018 09:40
9856057	5WC21	10/16/2018 14:10	10/17/2018 09:40
9856058	5WDUP	10/16/2018 14:15	10/17/2018 09:40
9856059	5WC22	10/16/2018 12:30	10/17/2018 09:40
9856060	5WC23	10/16/2018 13:25	10/17/2018 09:40
9856061	5W12A	10/16/2018 09:50	10/17/2018 09:40
9856062	Trip Blank 1	10/16/2018 00:00	10/17/2018 09:40

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Sample pH Log

SDG: RAF23

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9856052	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:42PM	1973
9856053	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:37PM	1973
9856054	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:37PM	1973
9856055	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:37PM	1973
9856056	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856057	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856058	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856059	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856060	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856061	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973
9856062	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/25/2018 2:31:38PM	1973

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: October 26, 2018 14:23

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1999460
SDG: RAF23
State of Sample Origin: VA

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	10/16/2018 09:05	9856052
5W5B Grab Groundwater	10/16/2018 11:15	9856053
5W7B Grab Groundwater	10/16/2018 10:30	9856054
5W7B Matrix Spike Grab Groundwater	10/16/2018 10:30	9856055
5W7B Matrix Spike Dup Grab Groundwater	10/16/2018 10:30	9856056
5WC21 Grab Groundwater	10/16/2018 14:10	9856057
5WDUP Grab Groundwater	10/16/2018 14:15	9856058
5WC22 Grab Groundwater	10/16/2018 12:30	9856059
5WC23 Grab Groundwater	10/16/2018 13:25	9856060
5W12A Grab Groundwater	10/16/2018 09:50	9856061
Trip Blank 1 Water	10/16/2018	9856062

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU-5
ELLE Group #: 1999460

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

No additional comments are necessary.

Sample Description: **5W8B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 09:05
SDG#: RAF23-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856052
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 02:58	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 02:58	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W5B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 11:15
SDG#: RAF23-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856053
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 03:19	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 03:19	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF23-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856054
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	0.2 J	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 03:40	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 03:40	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF23-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856055
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	5.7	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.3	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.4	0.8	1.0	1
11996	Trichloroethene	79-01-6	5.4	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	3.9	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 04:02	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 04:02	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF23-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856056
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	5.9	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	5.5	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	5.6	0.8	1.0	1
11996	Trichloroethene	79-01-6	5.7	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	3.9	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 04:23	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 04:23	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC21 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 14:10
SDG#: RAF23-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856057
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	2.5	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 05:06	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 05:06	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WDUP Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 14:15
SDG#: RAF23-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856058
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	2.6	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 05:27	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 05:27	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC22 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 12:30
SDG#: RAF23-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856059
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	2.9	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 01:32	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 01:32	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5WC23 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 13:25
SDG#: RAF23-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856060
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	3.8	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 01:53	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 01:53	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **5W12A Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 09:50
SDG#: RAF23-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856061
ELLE Group #: 1999460
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 02:14	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 02:14	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Sample Description: **Trip Blank 1 Water**
2018 - 2nd Semiannual Groundwater Corrective
RAAP - Radford, VA - HWMU-5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018
SDG#: RAF23-09TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856062
ELLE Group #: 1999460
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	**ug/l**	
11996	1,1-Dichloroethene	75-35-4	N.D.	0.4	1.0	1
11996	cis-1,2-Dichloroethene	156-59-2	N.D.	0.05	1.0	1
11996	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	1.0	1
11996	Trichloroethene	79-01-6	N.D.	0.2	1.0	1
11996	Vinyl Chloride	75-01-4	N.D.	0.1	1.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	RAAP Unit 5 "J" list	SW-846 8260C 25mL purge	1	H182973AA	10/25/2018 02:36	Joel G Chachapoya	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182973AA	10/25/2018 02:36	Joel G Chachapoya	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1999460
Reported: 10/26/2018 14:23

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 was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL**	LOQ
	ug/l	ug/l	ug/l
Batch number: H182973AA	Sample number(s): 9856052-9856062		
1,1-Dichloroethene	N.D.	0.4	1.0
cis-1,2-Dichloroethene	N.D.	0.05	1.0
trans-1,2-Dichloroethene	N.D.	0.8	1.0
Trichloroethene	N.D.	0.2	1.0
Vinyl Chloride	N.D.	0.1	1.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H182973AA	Sample number(s): 9856052-9856062								
1,1-Dichloroethene	5.00	4.77	5.00	4.72	95	94	80-131	1	30
cis-1,2-Dichloroethene	5.00	4.72	5.00	4.78	94	96	80-120	1	30
trans-1,2-Dichloroethene	5.00	4.72	5.00	4.71	94	94	80-120	0	30
Trichloroethene	5.00	4.58	5.00	4.66	92	93	80-120	2	30
Vinyl Chloride	5.00	3.72	5.00	3.64	74	73	60-125	2	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H182973AA	Sample number(s): 9856052-9856062 UNSPK: 9856054									
1,1-Dichloroethene	N.D.	5.00	5.65	5.00	5.94	113	119	80-131	5	30
cis-1,2-Dichloroethene	N.D.	5.00	5.33	5.00	5.53	107	111	80-120	4	30
trans-1,2-Dichloroethene	N.D.	5.00	5.36	5.00	5.64	107	113	80-120	5	30
Trichloroethene	0.184	5.00	5.41	5.00	5.66	104	110	80-120	5	30
Vinyl Chloride	N.D.	5.00	3.92	5.00	3.87	78	77	60-125	1	30

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1999460
Reported: 10/26/2018 14:23

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: RAAP Unit 5 "J" list
Batch number: H182973AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9856052	99	105	102	96
9856053	98	101	102	95
9856054	99	103	102	97
9856055	98	101	103	97
9856056	97	103	103	97
9856057	99	104	102	96
9856058	99	103	103	95
9856059	98	104	101	96
9856060	97	103	102	96
9856061	99	103	102	96
9856062	98	105	103	98
Blank	97	100	103	96
LCS	99	101	103	95
LCSD	98	102	98	98
MS	98	101	103	97
MSD	97	103	103	97
Limits:	80-120	80-120	80-120	80-120

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

11200/999460/9856052-62

CHAIN OF CUSTODY RECORD

JUR 9/21/18

Laboratory: ELLE, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RFAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier	**Location:**	HWMU5
Address	0	**Address:**	2206 South Main Street		2018- 2nd Semiannual Groundwater Corrective
	0		Blacksburg, Virginia 24060	**Event:**	Action Monitoring Event
Phone:	0	**Phone:**	(540) 552-0444	**DAA JN:**	B03204-18A
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? *YES*
MPS:
Carrier: 12.754.02X.Y0-5662-8684
Tracking Number:

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

Invoice
Copy to Consultant: *YES*
Bill: *CLIENT* *OTHER* _____
Preserved and shipped on Ice: *YES*

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	1-500ml P						
Sample ID	**Date: 2018**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260C/5030C 25 ml purge Appendix J Analyte List**	**Cobalt only-Total 6020A /3020A (appendix J)**						
5W8B	10/16	0905	GW	4	X	X						
5W5B	10/16	1015	GW	4	X	X						
5W7B	10/16	1030	GW	12/10	X	X						USE FOR QC
5WC21	10/16	1410	GW	4	X	X						
5WDUP	10/16	1415	GW	4	X	X						
5WC22	10/16	1230	GW	4	X	X						
5WC23	10/16	1325	GW	4	X	X						
5W12A	10/16	0950	GW	4	X	X						
Trip Blank 1	10/16	—	T	2	X							
Trip Blank 2			T	2	X							

GENERAL NOTES:

1. 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.

Cobalt - report QL = 5 µg/L
DL = 1 µg/L

JUR 9/21/18

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 10/16/18	#1 Relinquished by (Signature):	10/16/18	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KY-Tran Vo	Date: 10/16/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/17/18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 0940	

awmd 9-25-18

1/2 10/24/18

1999460

ANALYTICAL METHOD: 8260C/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	0.177
2.	1,1-Dichloroethene	75-35-4	1	0.44
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	0.1

Note: *Report current lab MDL if higher.

25 ml purge volume

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Sample Administration Receipt Documentation Log

Doc Log ID: 230265

Group Number(s): 1999460

Client: Draper Aden Assoc.

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/17/2018 9:40
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 10:23 on 10/17/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

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.

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

Tests 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.

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

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF23

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9856052	5W8B	X		1	
9856053	5W5B	X		1	
9856054	5W7B	X		1	Unspiked
9856055	5W7B Matrix Spike	X		1	Matrix Spike
9856056	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9856057	5WC21	X		1	
9856058	5WDUP	X		1	Field Duplicate Sample
9856059	5WC22	X		1	
9856060	5WC23	X		1	
9856061	5W12A	X		1	
9856062	Trip Blank 1	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF23

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF23

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
RAAP Unit 5 "J" list	H182973AA	VBLKH62	10/24/2018 22:49
		LCSH62	10/24/2018 21:02
		LCDH62	10/24/2018 21:23
		9856052	10/25/2018 02:58
		9856053	10/25/2018 03:19
		9856054 UNSPK	10/25/2018 03:40
		9856055 MS	10/25/2018 04:02
		9856056 MSD	10/25/2018 04:23
		9856057	10/25/2018 05:06
		9856058	10/25/2018 05:27
		9856059	10/25/2018 01:32
		9856060	10/25/2018 01:53
		9856061	10/25/2018 02:14
		9856062	10/25/2018 02:36

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAF23
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H182973AA / VBLKH62 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Vinyl Chloride	10/24/18	N.D.	ug/l	0.1	1.0
1,1-Dichloroethene	10/24/18	N.D.	ug/l	0.4	1.0
trans-1,2-Dichloroethene	10/24/18	N.D.	ug/l	0.8	1.0
cis-1,2-Dichloroethene	10/24/18	N.D.	ug/l	0.05	1.0
Trichloroethene	10/24/18	N.D.	ug/l	0.2	1.0

Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF23
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H182973AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH62	100	80 - 120	96	80 - 120	97	80 - 120	103	80 - 120
LCSH62	101	80 - 120	95	80 - 120	99	80 - 120	103	80 - 120
LCDH62	102	80 - 120	98	80 - 120	98	80 - 120	98	80 - 120
9856052	105	80 - 120	96	80 - 120	99	80 - 120	102	80 - 120
9856053	101	80 - 120	95	80 - 120	98	80 - 120	102	80 - 120
9856054 UNSPK	103	80 - 120	97	80 - 120	99	80 - 120	102	80 - 120
9856055 MS	101	80 - 120	97	80 - 120	98	80 - 120	103	80 - 120
9856056 MSD	103	80 - 120	97	80 - 120	97	80 - 120	103	80 - 120
9856057	104	80 - 120	96	80 - 120	99	80 - 120	102	80 - 120
9856058	103	80 - 120	95	80 - 120	99	80 - 120	103	80 - 120
9856059	104	80 - 120	96	80 - 120	98	80 - 120	101	80 - 120
9856060	103	80 - 120	96	80 - 120	97	80 - 120	102	80 - 120
9856061	103	80 - 120	96	80 - 120	99	80 - 120	102	80 - 120
9856062	105	80 - 120	98	80 - 120	98	80 - 120	103	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9856054 MS: 9856055 MSD: 9856056 **Analyte**	Batch: **H182973AA** (Sample number(s): 9856052-9856062)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	5.00	N.D.	3.92	3.87	78	77	60-125	1	30
1,1-Dichloroethene	5.00	N.D.	5.65	5.94	113	119	80-131	5	30
trans-1,2-Dichloroethene	5.00	N.D.	5.36	5.64	107	113	80-120	5	30
cis-1,2-Dichloroethene	5.00	N.D.	5.33	5.53	107	111	80-120	4	30
Trichloroethene	5.00	0.184 J	5.41	5.66	104	110	80-120	5	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF23
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH62 LCSD: LCDH62 **Analyte**	Batch: **H182973AA** (Sample number(s): 9856052-9856062)							
	Spike Added ug/l	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Vinyl Chloride	5.00	3.72	3.64	74	73	60-125	2	30
1,1-Dichloroethene	5.00	4.77	4.72	95	94	80-131	1	30
trans-1,2-Dichloroethene	5.00	4.72	4.71	94	94	80-120	0	30
cis-1,2-Dichloroethene	5.00	4.72	4.78	94	96	80-120	1	30
Trichloroethene	5.00	4.58	4.66	92	93	80-120	2	30

LOQ/MDL Summary
GC/MS Volatiles

SDG: RAF23

Fraction: Volatiles by GC/MS

11996: RAAP Unit 5 "J" list Analyte Name	Default MDL	Default LOQ	Units
Vinyl Chloride	0.1	1.0	ug/l
1,1-Dichloroethene	0.4	1.0	ug/l
trans-1,2-Dichloroethene	0.8	1.0	ug/l
cis-1,2-Dichloroethene	0.05	1.0	ug/l
Trichloroethene	0.2	1.0	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hs24t05.d BFB Injection Date: 09/24/18

Instrument ID: HP19094 BFB Injection Time: 17:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.30
75	30.0 - 60.0% of mass 95	48.01
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.23
173	Less than 2.0% of mass 174	0.88 (0.99)1
174	Greater than 50.0% of mass 95	88.37
175	5.0 - 9.0% of mass 174	6.59 (7.45)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.23 (97.58)1
177	5.0 - 9.0% of mass 176	6.27 (7.28)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hs24i01.d	09/24/18	18:29
02	VSTD10	hs24i02.d	09/24/18	18:50
03	VSTD5	hs24i03.d	09/24/18	19:11
04	VSTD2	hs24i04.d	09/24/18	19:33
05	VSTD1	hs24i05.d	09/24/18	19:54
06	VSTD.5	hs24i06.d	09/24/18	20:16
07	VSTD.2	hs24i07.d	09/24/18	20:37
08	MDL0.1 - MDL0.1	hs24m01.d	09/24/18	20:59
09	ICVHLG	hs24v01.d	09/24/18	21:20

FORM V VOA

^

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hc24t05.d BFB Injection Date: 10/24/18

Instrument ID: HP19094 BFB Injection Time: 19:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.70
75	30.0 - 60.0% of mass 95	45.98
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	1.20 (1.37)1
174	Greater than 50.0% of mass 95	87.01
175	5.0 - 9.0% of mass 174	6.27 (7.20)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.14 (95.55)1
177	5.0 - 9.0% of mass 176	5.77 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hc24c01.d	10/24/18	20:19
02	VSTD10	hc24c02.d	10/24/18	20:41
03	LCSH60	hc24s41.d	10/24/18	21:02
04	LCSH62	hc24l41.d	10/24/18	21:02
05	LCDH60	hc24s42.d	10/24/18	21:23
06	LCDH62	hc24l42.d	10/24/18	21:23
07	LCSH61	hc24s43.d	10/24/18	21:45
08	LCDH61	hc24s44.d	10/24/18	22:06
09	MDL61 - MDL61	hc24m01.d	10/24/18	22:28
10	VBLKH60	hc24b05.d	10/24/18	22:49
11	VBLKH62	hc24b10.d	10/24/18	22:49
12	9851488	hc24s45.d	10/24/18	23:24
13	9851492	hc24s46.d	10/24/18	23:45
14	9851494	hc24s47.d	10/25/18	00:06
15	9851497	hc24s48.d	10/25/18	00:27
16	9856059	hc24s73.d	10/25/18	01:32
17	9856060	hc24s74.d	10/25/18	01:53
18	9856061	hc24s75.d	10/25/18	02:14
19	9856062	hc24s76.d	10/25/18	02:36
20	9856052	hc24s77.d	10/25/18	02:58
21	9856053	hc24s78.d	10/25/18	03:19
22	9856054	hc24s79.d	10/25/18	03:40

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hc24t05.d BFB Injection Date: 10/24/18

Instrument ID: HP19094 BFB Injection Time: 19:36

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.70
75	30.0 - 60.0% of mass 95	45.98
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.72
173	Less than 2.0% of mass 174	1.20 (1.37)1
174	Greater than 50.0% of mass 95	87.01
175	5.0 - 9.0% of mass 174	6.27 (7.20)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.14 (95.55)1
177	5.0 - 9.0% of mass 176	5.77 (6.94)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9856055MS	hc24s80.d	10/25/18	04:02
24	9856056MSD	hc24s81.d	10/25/18	04:23
25	9856057	hc24s82.d	10/25/18	05:06
26	9856058	hc24s83.d	10/25/18	05:27

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3380	0.3844	0.3955	0.3840	0.4097	0.4153	0.4089	0.3908	7	AVG #
Chloromethane	#0.3666	0.3812	0.3853	0.3730	0.3900	0.3939	0.3892	0.3827	3	AVG #
Vinyl Chloride	#0.3437	0.3452	0.3656	0.3476	0.3655	0.3717	0.3695	0.3584	3	AVG #
1,3-Butadiene	0.4071	0.3994	0.4295	0.4025	0.4024	0.4033	0.3977	0.4060	3	AVG
Bromomethane	#0.2658	0.2790	0.2802	0.2752	0.2802	0.2863	0.2838	0.2786	2	AVG #
Chloroethane	#0.2153	0.2148	0.2244	0.2134	0.2173	0.2205	0.2162	0.2174	2	AVG #
Dichlorofluoromethane	0.4863	0.4967	0.5291	0.5160	0.5340	0.5250	0.5325	0.5171	4	AVG
Trichlorofluoromethane	#0.4040	0.4488	0.4614	0.4428	0.4717	0.4709	0.4699	0.4528	5	AVG #
Ethyl ether	0.1522	0.1489	0.1504	0.1542	0.1545	0.1583	0.1563	0.1535	2	AVG
Freon 123a	0.2447	0.2821	0.2934	0.2879	0.3015	0.3019	0.2965	0.2869	7	AVG
Acrolein	2.1198	2.0592	2.1962	2.0635	2.3423	2.4323	2.3181	2.2188	7	AVG
1,1-Dichloroethene	#0.1600	0.1855	0.2038	0.1994	0.2077	0.2075	0.2086	0.1961	9	AVG #
Freon 113	#0.1774	0.2175	0.2391	0.2337	0.2475	0.2531	0.2494	0.2311	11	AVG #
Acetone	#3.2559	2.8395	2.9519	2.8356	2.9753	3.0172	2.9856	2.9801	5	AVG #
Methyl Iodide	0.3727	0.3995	0.4135	0.4033	0.4227	0.4255	0.4237	0.4087	5	AVG
Carbon Disulfide	#0.5967	0.6051	0.6303	0.6060	0.6379	0.6471	0.6440	0.6239	3	AVG #
Allyl Chloride	0.3543	0.3501	0.3714	0.3743	0.3829	0.3890	0.3870	0.3727	4	AVG
Methyl Acetate	#	8.0473	8.9174	8.2822	8.4178	8.3747	8.1582	8.3663	4	AVG #
Methylene Chloride	#0.2543	0.2082	0.2246	0.2127	0.2144	0.2186	0.2156	0.2212	7	AVG #
t-Butyl Alcohol	0.8075	0.8290	0.8990	0.8853	0.8581	0.9014	0.7939	0.8535	5	AVG
Acrylonitrile	3.6046	3.6151	3.8689	3.5796	4.0954	4.1849	3.9920	3.8486	7	AVG
trans-1,2-Dichloroethene	#0.2055	0.2092	0.2290	0.2160	0.2279	0.2325	0.2290	0.2213	5	AVG #
Methyl Tertiary Butyl Ether	#0.3525	0.3879	0.4149	0.4082	0.4218	0.4292	0.4083	0.4032	6	AVG #
n-Hexane	0.2565	0.3255	0.3632	0.3491	0.3833	0.3933	0.3923	0.3519	14	AVG
1,1-Dichloroethane	#0.3762	0.4022	0.4348	0.4176	0.4398	0.4430	0.4357	0.4213	6	AVG #
di-Isopropyl Ether	0.7011	0.7115	0.7555	0.7496	0.7609	0.7819	0.7771	0.7482	4	AVG
2-Chloro-1,3-Butadiene	0.3109	0.3474	0.3840	0.3818	0.4066	0.4138	0.4095	0.3791	10	AVG
Ethyl t-butyl ether	0.5277	0.5761	0.6125	0.6028	0.6146	0.6262	0.5944	0.5935	6	AVG
cis-1,2-Dichloroethene	#0.2191	0.2336	0.2512	0.2409	0.2547	0.2573	0.2548	0.2445	6	AVG #
2,2-Dichloropropane	0.2529	0.2750	0.3029	0.3083	0.3200	0.3278	0.3195	0.3009	9	AVG
2-Butanone	#4.7407	4.4717	4.8604	4.4839	5.2815	5.3633	4.9464	4.8783	7	AVG #
Propionitrile	1.1750	1.3038	1.3751	1.2700	1.4479	1.4295	1.2676	1.3241	7	AVG
Methacrylonitrile	4.3615	4.3517	4.7414	4.3969	5.1979	5.2827	5.0894	4.7745	9	AVG
Bromochloromethane	0.1024	0.0949	0.1024	0.1048	0.1062	0.1068	0.1056	0.1033	4	AVG
Tetrahydrofuran	1.2361	1.1778	1.2836	1.2200	1.3946	1.4399	1.3263	1.2969	7	AVG
Chloroform	#0.3416	0.3782	0.4144	0.3892	0.4020	0.4101	0.4064	0.3917	6	AVG #
1,1,1-Trichloroethane	#0.2842	0.3160	0.3433	0.3371	0.3555	0.3569	0.3525	0.3351	8	AVG #
Cyclohexane	#0.3470	0.4028	0.4493	0.4389	0.4704	0.4796	0.4739	0.4374	11	AVG #
Cyclohexane(2)	#0.2914	0.3151	0.3783	0.3668	0.3893	0.3943	0.3892	0.3606	11	AVG #
Cyclohexane(3)	#0.1022	0.1183	0.1318	0.1288	0.1387	0.1419	0.1407	0.1289	11	AVG #
1,1-Dichloropropene	0.2759	0.2910	0.3278	0.3191	0.3346	0.3387	0.3371	0.3177	8	AVG
Carbon Tetrachloride	#0.2319	0.2693	0.2968	0.2885	0.3032	0.3144	0.3103	0.2878	10	AVG #
Isobutyl Alcohol	0.2897	0.3375	0.3434	0.3190	0.3348	0.3491	0.3379	0.3302	6	AVG
Benzene	#0.8848	0.9069	0.9593	0.9138	0.9669	0.9701	0.9685	0.9386	4	AVG #
1,2-Dichloroethane	#0.2384	0.2152	0.2154	0.2064	0.2100	0.2143	0.2124	0.2160	5	AVG #
t-Amyl methyl ether	0.4510	0.4674	0.5059	0.4955	0.5077	0.5220	0.4947	0.4920	5	AVG
n-Heptane	0.2678	0.3330	0.3732	0.3588	0.3968	0.4037	0.4063	0.3628	14	AVG
n-Butanol	0.2534	0.2553	0.2725	0.2718	0.2920	0.3060	0.3017	0.2790	8	AVG
Trichloroethene	#0.2151	0.2224	0.2471	0.2423	0.2494	0.2532	0.2529	0.2403	6	AVG #
Methylcyclohexane	#0.4063	0.4157	0.4453	0.4529	0.4752	0.4906	0.4911	0.4539	8	AVG #
1,2-Dichloropropane	#0.2175	0.2096	0.2288	0.2255	0.2362	0.2385	0.2379	0.2277	5	AVG #
Methyl Methacrylate	7.4866	7.5623	8.6561	8.1346	9.7939	10.147	10.081	8.8375	13	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.0859	0.0918	0.0963	0.0957	0.0964	0.0974	0.0982	0.0945	5	AVG
1,4-Dioxane		0.0512	0.0674	0.0735	0.0717	0.0692	0.0699	0.0672	12	AVG
Bromodichloromethane	#0.2375	0.2374	0.2531	0.2486	0.2658	0.2725	0.2772	0.2560	6	AVG #
2-Nitropropane	2.1943	2.1326	2.3103	2.2662	2.7615	2.9069	2.9516	2.5034	14	AVG
cis-1,3-Dichloropropene	#0.2646	0.2677	0.2918	0.2956	0.3133	0.3253	0.3282	0.2981	9	AVG #
4-Methyl-2-Pentanone	#10.423	10.703	12.049	11.150	13.294	13.683	13.638	12.134	12	AVG #
Toluene	#0.6968	0.7194	0.7473	0.7411	0.7565	0.7709	0.7625	0.7421	4	AVG #
trans-1,3-Dichloropropene	#0.2330	0.2716	0.2792	0.2845	0.2990	0.3169	0.3174	0.2859	10	AVG #
Ethyl Methacrylate	0.2095	0.2309	0.2354	0.2500	0.2537	0.2684	0.2669	0.2450	9	AVG
1,1,2-Trichloroethane	#0.1691	0.1575	0.1727	0.1725	0.1711	0.1785	0.1739	0.1708	4	AVG #
Tetrachloroethene	#0.2956	0.3305	0.3401	0.3373	0.3460	0.3515	0.3460	0.3353	6	AVG #
1,3-Dichloropropane	0.2838	0.2841	0.3046	0.3097	0.3104	0.3149	0.3111	0.3026	4	AVG
2-Hexanone	#7.3199	7.3166	8.1580	7.5786	9.0091	9.2952	9.1412	8.2598	11	AVG #
Dibromochloromethane	#0.1948	0.1857	0.1947	0.2070	0.2115	0.2179	0.2208	0.2046	6	AVG #
1,2-Dibromoethane	#0.1471	0.1541	0.1589	0.1562	0.1643	0.1719	0.1680	0.1601	5	AVG #
1-Chlorohexane	0.4437	0.4223	0.4433	0.4259	0.4476	0.4585	0.4569	0.4426	3	AVG
Chlorobenzene	#0.7275	0.7494	0.8164	0.7808	0.8015	0.8151	0.8204	0.7873	5	AVG #
1,1,1,2-Tetrachloroethane	0.2148	0.2441	0.2605	0.2596	0.2721	0.2837	0.2840	0.2598	9	AVG
Ethylbenzene	#1.2688	1.3813	1.4741	1.4462	1.4984	1.5393	1.5444	1.4504	7	AVG #
m+p-Xylene	#0.4752	0.5146	0.5391	0.5376	0.5603	0.5690	0.5701	0.5380	6	AVG #
o-Xylene	#0.4328	0.4897	0.5241	0.5154	0.5368	0.5477	0.5536	0.5143	8	AVG #
Styrene	#0.6878	0.7466	0.8289	0.8287	0.8757	0.8924	0.9000	0.8229	10	AVG #
Bromoform	#0.0962	0.1042	0.1113	0.1109	0.1171	0.1227	0.1250	0.1125	9	AVG #
Isopropylbenzene	#1.1958	1.3049	1.4259	1.4006	1.4806	1.4990	1.5215	1.4040	8	AVG #
1,1,2,2-Tetrachloroethane	#0.3905	0.3709	0.3819	0.3843	0.4123	0.4144	0.4225	0.3967	5	AVG #
Bromobenzene	0.5278	0.5708	0.6063	0.6016	0.6293	0.6307	0.6550	0.6030	7	AVG
trans-1,4-Dichloro-2-butene	3.2707	3.2389	3.7050	3.4423	4.2002	4.3536	4.3928	3.8005	13	AVG
1,2,3-Trichloropropane	0.0983	0.1022	0.1028	0.1034	0.1042	0.1033	0.1036	0.1025	2	AVG
n-Propylbenzene	2.8181	3.0518	3.2914	3.2490	3.4590	3.4886	3.5948	3.2790	8	AVG
2-Chlorotoluene	0.5518	0.6185	0.6460	0.6324	0.6632	0.6645	0.6753	0.6360	7	AVG
1,3,5-Trimethylbenzene	1.8494	2.0479	2.2234	2.2089	2.3773	2.3691	2.4731	2.2213	10	AVG
4-Chlorotoluene	0.5465	0.6043	0.6553	0.6366	0.6706	0.6636	0.6842	0.6373	7	AVG
tert-Butylbenzene	0.3899	0.4598	0.4952	0.4960	0.5055	0.5106	0.5245	0.4831	9	AVG
Pentachloroethane	0.3255	0.3274	0.3543	0.3751	0.4049	0.4175	0.4346	0.3770	12	AVG
1,2,4-Trimethylbenzene	1.8578	2.1050	2.2557	2.2683	2.4136	2.4170	2.5493	2.2667	10	AVG
sec-Butylbenzene	2.3074	2.5867	2.9178	2.8538	3.0767	3.1336	3.2726	2.8784	12	AVG
1,3-Dichlorobenzene	#1.0200	1.1416	1.2276	1.1973	1.2481	1.2485	1.3039	1.1981	8	AVG #
p-Isopropyltoluene	1.8768	2.1348	2.3564	2.3843	2.5700	2.6128	2.7544	2.3842	13	AVG
1,4-Dichlorobenzene	#1.0899	1.0941	1.1950	1.1603	1.2155	1.2175	1.2607	1.1761	6	AVG #
1,2,3-Trimethylbenzene	1.0207	0.9774	1.0183	1.0334	1.0455	1.0757	1.1084	1.0399	4	AVG
Benzyl Chloride		0.1092	0.1229	0.1383	0.1502	0.1669	0.1729	0.1434	17	AVG
n-Butylbenzene	0.9426	1.0785	1.2030	1.1681	1.2616	1.2878	1.3425	1.1834	12	AVG
1,2-Dichlorobenzene	#0.9680	1.0221	1.0665	1.0569	1.0918	1.0822	1.1123	1.0571	5	AVG #
1,2-Dibromo-3-chloropropane	#1.6120	1.6792	2.1671	1.8688	2.3036	2.3298	2.4378	2.0569	16	AVG #
1,3,5-Trichlorobenzene	0.7724	0.8416	0.8987	0.8625	0.9221	0.9492	0.9929	0.8913	8	AVG
1,2,4-Trichlorobenzene	#0.6328	0.6854	0.7128	0.7113	0.7490	0.7750	0.8160	0.7260	8	AVG #
Hexachlorobutadiene	0.2548	0.2553	0.2675	0.2668	0.2841	0.2891	0.3032	0.2744	7	AVG
Naphthalene	0.9415	1.0203	1.1133	1.1358	1.2217	1.2836	1.3262	1.1489	12	AVG
1,2,3-Trichlorobenzene	0.5182	0.5589	0.5959	0.5792	0.6174	0.6490	0.6602	0.5970	8	AVG
Dibromofluoromethane	0.2512	0.2521	0.2524	0.2530	0.2528	0.2517	0.2511	0.2520	0	AVG
Dibromofluoromethane(2)	0.2598	0.2573	0.2615	0.2599	0.2578	0.2618	0.2579	0.2594	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4	0.0442	0.0434	0.0434	0.0451	0.0436	0.0447	0.0432	0.0439	2	AVG
1,2-Dichloroethane-d4(2)	0.2145	0.2128	0.2150	0.2127	0.2086	0.2137	0.2105	0.2125	1	AVG
1,2-Dichloroethane-d4(3)	0.0282	0.0281	0.0289	0.0277	0.0280	0.0285	0.0276	0.0281	2	AVG
Toluene-d8	1.3052	1.2869	1.2788	1.3015	1.2877	1.2898	1.2594	1.2870	1	AVG
Toluene-d8(2)	0.8344	0.8306	0.8301	0.8441	0.8303	0.8321	0.8133	0.8307	1	AVG
4-Bromofluorobenzene	0.4770	0.4703	0.4684	0.4767	0.4646	0.4676	0.4556	0.4686	2	AVG
4-Bromofluorobenzene(2)	0.4124	0.4112	0.4059	0.4114	0.4017	0.4081	0.3976	0.4069	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i01.d	VSTD025
/chem2/HP19094.i/18sep24i.b/hs24i02.d	VSTD010
/chem2/HP19094.i/18sep24i.b/hs24i03.d	VSTD005
/chem2/HP19094.i/18sep24i.b/hs24i04.d	VSTD002
/chem2/HP19094.i/18sep24i.b/hs24i05.d	VSTD001
/chem2/HP19094.i/18sep24i.b/hs24i06.d	VSTD0.5
/chem2/HP19094.i/18sep24i.b/hs24i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	123769	126410	127180	147863	137024	140183	136477	134129	6	Yes
Fluorobenzene	2609636	2675616	2745022	2771401	2758903	2743076	2763999	2723950	2	Yes
Chlorobenzene-d5	2080614	2091043	2142668	2139668	2171615	2144655	2139400	2129952	2	Yes
1,4-Dichlorobenzene-d4	1041754	1077251	1089195	1109693	1123390	1119082	1132249	1098945	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. RT
t-Butyl Alcohol-d10	4.470	4.483	4.482	4.476	4.470	4.477	4.482	4.477
Fluorobenzene	7.970	7.970	7.963	7.964	7.963	7.964	7.970	7.966
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.383	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.249	13.249	13.249	13.249	13.249	13.249	13.250

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/25/2018 at 07:39.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3172	4.06	5	-19	#
# Chloromethane	0.3827	0.3497	4.57	5	-9	#
# Vinyl Chloride	0.3584	0.3392	4.73	5	-5	#
1,3-Butadiene	0.4060	0.3387	4.17	5	-17	
# Bromomethane	0.2786	0.2311	4.15	5	-17	#
# Chloroethane	0.2174	0.1959	4.51	5	-10	#
Dichlorofluoromethane	0.5171	0.4978	4.81	5	-4	
# Trichlorofluoromethane	0.4528	0.4031	4.45	5	-11	#
Ethyl ether	0.1535	0.1414	4.61	5	-8	
Freon 123a	0.2869	0.2963	5.16	5	3	
Acrolein	2.2188	1.8796	31.77	37.5	-15	
# 1,1-Dichloroethene	0.1961	0.2212	5.64	5	13	#
# Freon 113	0.2311	0.2437	5.27	5	5	#
# Acetone	2.9801	2.5719	32.36	37.5	-14	#
Methyl Iodide	0.4087	0.3967	4.85	5	-3	
# Carbon Disulfide	0.6239	0.5961	4.78	5	-4	#
Allyl Chloride	0.3727	0.3366	4.52	5	-10	
# Methyl Acetate	8.3663	7.1758	4.29	5	-14	#
# Methylene Chloride	0.2212	0.2191	4.95	5	-1	#
t-Butyl Alcohol	0.8535	0.8243	48.29	50	-3	
Acrylonitrile	3.8486	3.5584	23.11	25	-8	
# trans-1,2-Dichloroethene	0.2213	0.2368	5.35	5	7	#
# Methyl Tertiary Butyl Ether	0.4032	0.3967	4.92	5	-2	#
n-Hexane	0.3519	0.3623	5.15	5	3	
# 1,1-Dichloroethane	0.4213	0.4392	5.21	5	4	#
di-Isopropyl Ether	0.7482	0.7508	5.02	5	0	
2-Chloro-1,3-Butadiene	0.3791	0.3807	5.02	5	0	
Ethyl t-butyl ether	0.5935	0.5760	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2445	0.2605	5.33	5	7	#
2,2-Dichloropropane	0.3009	0.3204	5.32	5	6	
# 2-Butanone	4.8783	4.5905	35.29	37.5	-6	#
Propionitrile	1.3241	1.3362	37.84	37.5	1	
Methacrylonitrile	4.7745	4.5420	35.67	37.5	-5	
Bromochloromethane	0.1033	0.0938	4.54	5	-9	
Tetrahydrofuran	1.2969	1.2254	23.62	25	-6	
# Chloroform	0.3917	0.4191	5.35	5	7	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3351	0.3556	5.31	5	6	#
# Cyclohexane	0.4374	0.4418	5.05	5	1	#
1,1-Dichloropropene	0.3177	0.3305	5.20	5	4	
# Carbon Tetrachloride	0.2878	0.3045	5.29	5	6	#
Isobutyl Alcohol	0.3302	0.3194	120.92	125	-3	
# Benzene	0.9386	0.9606	5.12	5	2	#
# 1,2-Dichloroethane	0.2160	0.2161	5.00	5	0	#
t-Amyl methyl ether	0.4920	0.4796	4.87	5	-3	
n-Heptane	0.3628	0.3736	5.15	5	3	
n-Butanol	0.2790	0.2586	231.70	250	-7	
# Trichloroethene	0.2403	0.2508	5.22	5	4	#
# Methylcyclohexane	0.4539	0.4251	4.68	5	-6	#
# 1,2-Dichloropropane	0.2277	0.2359	5.18	5	4	#
Methyl Methacrylate	8.8375	8.4056	4.76	5	-5	
Dibromomethane	0.0945	0.0974	5.15	5	3	
1,4-Dioxane	0.0672	0.0678	126.10	125	1	
# Bromodichloromethane	0.2560	0.2699	5.27	5	5	#
2-Nitropropane	2.5034	2.0564	4.11	5	-18	
# cis-1,3-Dichloropropene	0.2981	0.3034	5.09	5	2	#
# 4-Methyl-2-Pentanone	12.134	11.2665	23.21	25	-7	#
# Toluene	0.7421	0.7621	5.14	5	3	#
# trans-1,3-Dichloropropene	0.2859	0.2900	5.07	5	1	#
Ethyl Methacrylate	0.2450	0.2371	4.84	5	-3	
# 1,1,2-Trichloroethane	0.1708	0.1782	5.22	5	4	#
# Tetrachloroethene	0.3353	0.3454	5.15	5	3	#
1,3-Dichloropropane	0.3026	0.3017	4.98	5	0	
# 2-Hexanone	8.2598	7.5207	22.76	25	-9	#
# Dibromochloromethane	0.2046	0.2117	5.17	5	3	#
# 1,2-Dibromoethane	0.1601	0.1646	5.14	5	3	#
1-Chlorohexane	0.4426	0.4372	4.94	5	-1	
# Chlorobenzene	0.7873	0.7981	5.07	5	1	#
1,1,1,2-Tetrachloroethane	0.2598	0.2675	5.15	5	3	
# Ethylbenzene	1.4504	1.4813	5.11	5	2	#
# m+p-Xylene	0.5380	0.5552	10.32	10	3	#
# o-Xylene	0.5143	0.5235	5.09	5	2	#
# Styrene	0.8229	0.8625	5.24	5	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Bromoform	0.1125	0.1136	5.05	5	1	#
# Isopropylbenzene	1.4040	1.4667	5.22	5	4	#
# 1,1,2,2-Tetrachloroethane	0.3967	0.3962	4.99	5	0	#
Bromobenzene	0.6030	0.6209	5.15	5	3	
trans-1,4-Dichloro-2-butene	3.8005	3.6717	24.15	25	-3	
1,2,3-Trichloropropane	0.1025	0.1010	4.92	5	-2	
n-Propylbenzene	3.2790	3.4213	5.22	5	4	
2-Chlorotoluene	0.6360	0.6495	5.11	5	2	
1,3,5-Trimethylbenzene	2.2213	2.2866	5.15	5	3	
4-Chlorotoluene	0.6373	0.6518	5.11	5	2	
tert-Butylbenzene	0.4831	0.4924	5.10	5	2	
Pentachloroethane	0.3770	0.3672	4.87	5	-3	
1,2,4-Trimethylbenzene	2.2667	2.3009	5.08	5	2	
sec-Butylbenzene	2.8784	3.0190	5.24	5	5	
# 1,3-Dichlorobenzene	1.1981	1.2031	5.02	5	0	#
p-Isopropyltoluene	2.3842	2.5039	5.25	5	5	
# 1,4-Dichlorobenzene	1.1761	1.1959	5.08	5	2	#
1,2,3-Trimethylbenzene	1.0399	0.9939	4.78	5	-4	
Benzyl Chloride	0.1434	0.1356	4.73	5	-5	
n-Butylbenzene	1.1834	1.2376	5.23	5	5	
# 1,2-Dichlorobenzene	1.0571	1.0599	5.01	5	0	#
# 1,2-Dibromo-3-chloropropane	2.0569	2.1820	5.30	5	6	#
1,3,5-Trichlorobenzene	0.8913	0.9013	5.06	5	1	
# 1,2,4-Trichlorobenzene	0.7260	0.7345	5.06	5	1	#
Hexachlorobutadiene	0.2744	0.2834	5.16	5	3	
Naphthalene	1.1489	1.1935	5.19	5	4	
1,2,3-Trichlorobenzene	0.5970	0.6118	5.12	5	2	
			Average %Drift		5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

^

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i07.d
/chem2/HP19094.i/18sep24i.b/hs24i06.d
/chem2/HP19094.i/18sep24i.b/hs24i05.d
/chem2/HP19094.i/18sep24i.b/hs24i04.d
/chem2/HP19094.i/18sep24i.b/hs24i03.d
/chem2/HP19094.i/18sep24i.b/hs24i02.d
/chem2/HP19094.i/18sep24i.b/hs24i01.d

File /chem2/HP19094.i/18sep24i.b/hs24i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/18oct24b.b/hc24c01.d

RT Summary

Internal Standard Name	File ID: hc24c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.489	4.483	Yes
Fluorobenzene	7.970	7.970	Yes
Chlorobenzene-d5	11.384	11.384	Yes
1,4-Dichlorobenzene-d4	13.249	13.249	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hc24c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	114344	126410	63205	252820	Yes
Fluorobenzene	2692216	2675616	1337808	5351232	Yes
Chlorobenzene-d5	2007743	2091043	1045522	4182086	Yes
1,4-Dichlorobenzene-d4	1042995	1077251	538626	2154502	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/24/18 Time: 20:19

Lab File ID: hc24c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3294	8.43	10	-16	#
# Chloromethane	0.3827	0.3062	8.00	10	-20	#
# Vinyl Chloride	0.3584	0.2922	8.15	10	-18	#
1,3-Butadiene	0.4060	0.3534	8.70	10	-13	
# Bromomethane	0.2786	0.2389	8.58	10	-14	#
# Chloroethane	0.2174	0.1782	8.20	10	-18	#
Dichlorofluoromethane	0.5171	0.4273	8.26	10	-17	
# Trichlorofluoromethane	0.4528	0.3969	8.77	10	-12	#
Ethyl ether	0.1535	0.1294	8.43	10	-16	
Freon 123a	0.2869	0.2445	8.52	10	-15	
Acrolein	2.2188	1.8880	425.46	500	-15	
# 1,1-Dichloroethene	0.1961	0.1714	8.74	10	-13	#
# Freon 113	0.2311	0.1911	8.27	10	-17	#
# Acetone	2.9801	2.5705	86.26	100	-14	#
Methyl Iodide	0.4087	0.3631	8.88	10	-11	
# Carbon Disulfide	0.6239	0.5017	8.04	10	-20	#
Allyl Chloride	0.3727	0.2958	7.94	10	-21	<-
# Methyl Acetate	8.3663	7.5444	9.02	10	-10	#
# Methylene Chloride	0.2212	0.1841	8.32	10	-17	#
t-Butyl Alcohol	0.8535	0.7186	168.40	200	-16	
Acrylonitrile	3.8486	3.6707	47.69	50	-5	
# trans-1,2-Dichloroethene	0.2213	0.1968	8.89	10	-11	#
# Methyl Tertiary Butyl Ether	0.4032	0.3729	9.25	10	-8	#
n-Hexane	0.3519	0.2776	7.89	10	-21	<-
# 1,1-Dichloroethane	0.4213	0.3723	8.84	10	-12	#
di-Isopropyl Ether	0.7482	0.6394	8.54	10	-15	
2-Chloro-1,3-Butadiene	0.3791	0.3329	8.78	10	-12	
Ethyl t-butyl ether	0.5935	0.5250	8.85	10	-12	
# cis-1,2-Dichloroethene	0.2445	0.2184	8.93	10	-11	#
2,2-Dichloropropane	0.3009	0.2814	9.35	10	-6	
# 2-Butanone	4.8783	4.6304	94.92	100	-5	#
Propionitrile	1.3241	1.3120	198.17	200	-1	
Methacrylonitrile	4.7745	4.6752	97.92	100	-2	
Bromochloromethane	0.1033	0.0919	8.89	10	-11	
Tetrahydrofuran	1.2969	1.2541	96.70	100	-3	
# Chloroform	0.3917	0.3500	8.94	10	-11	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/24/18 Time: 20:19

Lab File ID: hc24c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3351	0.3043	9.08	10	-9	#
# Cyclohexane	0.4374	0.3511	8.03	10	-20	#
# Cyclohexane(2)	0.3606	0.3078	8.53	10	-15	#
# Cyclohexane(3)	0.1289	0.1057	8.20	10	-18	#
1,1-Dichloropropene	0.3177	0.2839	8.94	10	-11	
# Carbon Tetrachloride	0.2878	0.2717	9.44	10	-6	#
Isobutyl Alcohol	0.3302	0.2952	446.99	500	-11	
# Benzene	0.9386	0.8160	8.69	10	-13	#
# 1,2-Dichloroethane	0.2160	0.1821	8.43	10	-16	#
t-Amyl methyl ether	0.4920	0.4359	8.86	10	-11	
n-Heptane	0.3628	0.2824	7.78	10	-22	<-
n-Butanol	0.2790	0.2627	941.61	1000	-6	
# Trichloroethene	0.2403	0.2175	9.05	10	-10	#
# Methylcyclohexane	0.4539	0.3695	8.14	10	-19	#
# 1,2-Dichloropropane	0.2277	0.2005	8.80	10	-12	#
Methyl Methacrylate	8.8375	8.9952	10.18	10	2	
Dibromomethane	0.0945	0.0861	9.11	10	-9	
1,4-Dioxane	0.0672	0.0617	459.11	500	-8	
# Bromodichloromethane	0.2560	0.2326	9.08	10	-9	#
2-Nitropropane	2.5034	2.5218	100.74	100	1	
# cis-1,3-Dichloropropene	0.2981	0.2708	9.08	10	-9	#
# 4-Methyl-2-Pentanone	12.1340	11.5853	95.47	100	-5	#
# Toluene	0.7421	0.6823	9.19	10	-8	#
# trans-1,3-Dichloropropene	0.2859	0.2773	9.70	10	-3	#
Ethyl Methacrylate	0.2450	0.2324	9.49	10	-5	
# 1,1,2-Trichloroethane	0.1708	0.1603	9.39	10	-6	#
# Tetrachloroethene	0.3353	0.3328	9.93	10	-1	#
1,3-Dichloropropane	0.3026	0.2840	9.38	10	-6	
# 2-Hexanone	8.2598	7.9345	96.06	100	-4	#
# Dibromochloromethane	0.2046	0.2053	10.03	10	0	#
# 1,2-Dibromoethane	0.1601	0.1581	9.88	10	-1	#
1-Chlorohexane	0.4426	1.3655	30.85	10	209	
# Chlorobenzene	0.7873	0.7583	9.63	10	-4	#
1,1,1,2-Tetrachloroethane	0.2598	0.2651	10.20	10	2	
# Ethylbenzene	1.4504	1.3645	9.41	10	-6	#
# m+p-Xylene	0.5380	0.5236	19.47	20	-3	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/24/18 Time: 20:19

Lab File ID: hc24c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

	COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	o-Xylene	0.5143	0.4999	9.72	10	-3	#
#	Styrene	0.8229	0.8107	9.85	10	-1	#
#	Bromoform	0.1125	0.1128	10.03	10	0	#
#	Isopropylbenzene	1.4040	1.3595	9.68	10	-3	#
#	1,1,2,2-Tetrachloroethane	0.3967	0.3631	9.15	10	-8	#
	Bromobenzene	0.6030	0.5939	9.85	10	-2	
	trans-1,4-Dichloro-2-butene	3.8005	2.5680	67.57	100	-32	<-
	1,2,3-Trichloropropane	0.1025	0.0963	9.39	10	-6	
	n-Propylbenzene	3.2790	3.0829	9.40	10	-6	
	2-Chlorotoluene	0.6360	0.6146	9.66	10	-3	
	1,3,5-Trimethylbenzene	2.2213	2.1294	9.59	10	-4	
	4-Chlorotoluene	0.6373	0.6187	9.71	10	-3	
	tert-Butylbenzene	0.4831	0.5077	10.51	10	5	
	Pentachloroethane	0.3770	0.3702	9.82	10	-2	
	1,2,4-Trimethylbenzene	2.2667	2.1703	9.57	10	-4	
	sec-Butylbenzene	2.8784	2.7938	9.71	10	-3	
#	1,3-Dichlorobenzene	1.1981	1.1639	9.71	10	-3	#
	p-Isopropyltoluene	2.3842	2.3813	9.99	10	0	
#	1,4-Dichlorobenzene	1.1761	1.1432	9.72	10	-3	#
	1,2,3-Trimethylbenzene	1.0399	0.9429	9.07	10	-9	
	Benzyl Chloride	0.1434	0.1484	10.35	10	3	
	n-Butylbenzene	1.1834	1.1251	9.51	10	-5	
#	1,2-Dichlorobenzene	1.0571	0.9989	9.45	10	-6	#
#	1,2-Dibromo-3-chloropropane	2.0569	2.2252	10.82	10	8	#
	1,3,5-Trichlorobenzene	0.8913	0.8496	9.53	10	-5	
#	1,2,4-Trichlorobenzene	0.7260	0.6594	9.08	10	-9	#
	Hexachlorobutadiene	0.2744	0.2613	9.52	10	-5	
	Naphthalene	1.1489	1.0003	8.71	10	-13	
	1,2,3-Trichlorobenzene	0.5970	0.5144	8.62	10	-14	
	Dibromofluoromethane	0.2520	0.2479	9.84	10	-2	
	Dibromofluoromethane(2)	0.2594	0.2549	9.83	10	-2	
	1,2-Dichloroethane-d4	0.0439	0.0452	10.29	10	3	
	1,2-Dichloroethane-d4(2)	0.2125	0.2095	9.86	10	-1	
	1,2-Dichloroethane-d4(3)	0.0281	0.0279	9.92	10	-1	
	Toluene-d8	1.2870	1.3179	10.24	10	2	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/24/18 Time: 20:19

Lab File ID: hc24c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Toluene-d8(2)	0.8307	0.8475	10.20	10	2
4-Bromofluorobenzene	0.4686	0.4514	9.63	10	-4
4-Bromofluorobenzene(2)	0.4069	0.4119	10.12	10	1

Average %Drift 10

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hc24c01.d Date Analyzed: 10/24/18

Instrument ID: HP19094 Time Analyzed: 20:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	114344	4.489	2692216	7.970	2007743	11.384	1042995	13.249
UPPER LIMIT	228688	4.989	5384432	8.470	4015486	11.884	2085990	13.749
LOWER LIMIT	57172	3.989	1346108	7.470	1003872	10.884	521498	12.749
LAB SAMPLE ID								
01 LCSH60	105206	4.501	2544365	7.970	1962923	11.384	976586	13.249
02 LCSH62	105206	4.501	2544365	7.970	1962923	11.384	976586	13.249
03 LCDH60	115052	4.482	2569695	7.964	1985996	11.384	1000280	13.249
04 LCDH62	115052	4.482	2569695	7.964	1985996	11.384	1000280	13.249
05 LCSH61	111639	4.495	2602273	7.970	1891937	11.384	1001622	13.249
06 LCDH61	109960	4.477	2732989	7.964	1890238	11.384	1052463	13.249
07 MDL61 - MDL	112019	4.495	2585647	7.970	1895953	11.384	997361	13.249
08 VBLKH60	101135	4.488	2577599	7.970	1886298	11.384	998630	13.249
09 VBLKH62	101135	4.488	2577599	7.970	1886298	11.384	998630	13.249
10 9851488	86911	4.501	2652897	7.976	1969504	11.384	1027315	13.249
11 9851492	108264	4.483	2532137	7.964	1859381	11.384	979733	13.249
12 9851494	109741	4.470	2499969	7.964	1828287	11.384	965537	13.249
13 9851497	101892	4.482	2523562	7.970	1872817	11.384	979987	13.249
14 9856059	84137	4.482	2500182	7.964	1861513	11.384	973346	13.249
15 9856060	94240	4.483	2534338	7.964	1862965	11.384	987878	13.249
16 9856061	88795	4.483	2520028	7.964	1865691	11.378	984311	13.249
17 9856062	104946	4.482	2515376	7.964	1849768	11.384	983954	13.249
18 9856052	111705	4.495	2505883	7.970	1856162	11.384	975796	13.249
19 9856053	107678	4.495	2479117	7.970	1828685	11.384	956698	13.249
20 9856054	103594	4.476	2470987	7.964	1825924	11.378	962861	13.249
21 9856055MS	113639	4.476	2493142	7.964	1828945	11.384	969661	13.249
22 9856056MSD	104333	4.477	2505818	7.964	1855342	11.384	979413	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hc24c01.d Date Analyzed: 10/24/18

Instrument ID: HP19094 Time Analyzed: 20:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	114344	4.489	2692216	7.970	2007743	11.384	1042995	13.249
UPPER LIMIT	228688	4.989	5384432	8.470	4015486	11.884	2085990	13.749
LOWER LIMIT	57172	3.989	1346108	7.470	1003872	10.884	521498	12.749
LAB SAMPLE ID								
23 9856057	111153	4.476	2469814	7.970	1832497	11.384	967166	13.249
24 9856058	98050	4.476	2479007	7.964	1840036	11.378	960829	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

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Sample Data

Volatiles by GC/MS

5HM08 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9856052

Data file: /chem2/HP19094.i/18oct24b.b/hc24s77.d Injection date and time: **25-OCT-2018 02:58**
Data file Sample Info. Line: 5HM08;9856052;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495	(-0.006)	477	65	111705	(-2)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2505883	(-7)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1856162	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	975796	(-6)	10.00	

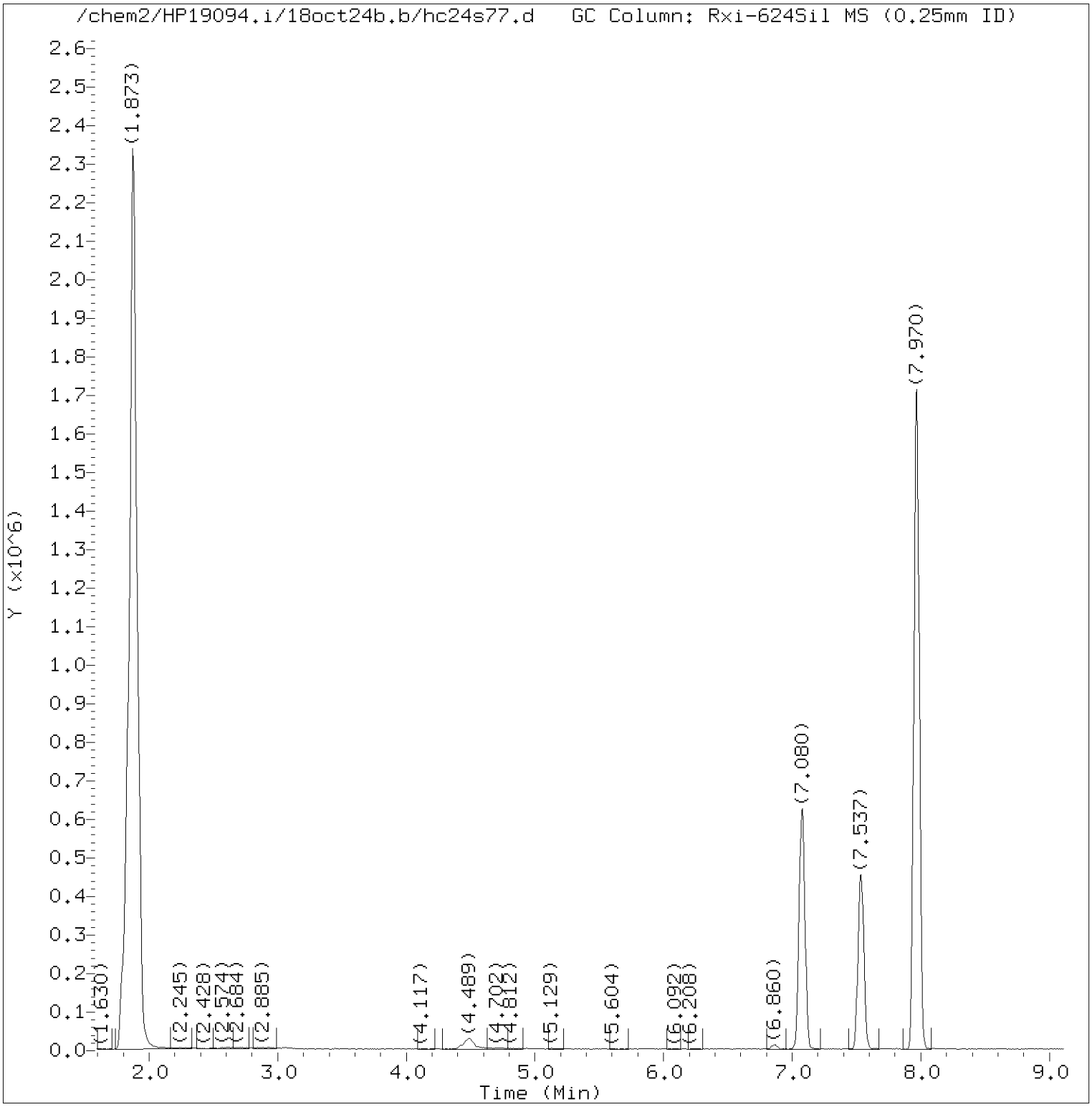
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	626379	9.918	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	115976	10.533	105%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2439159	10.210	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	834476	9.594	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

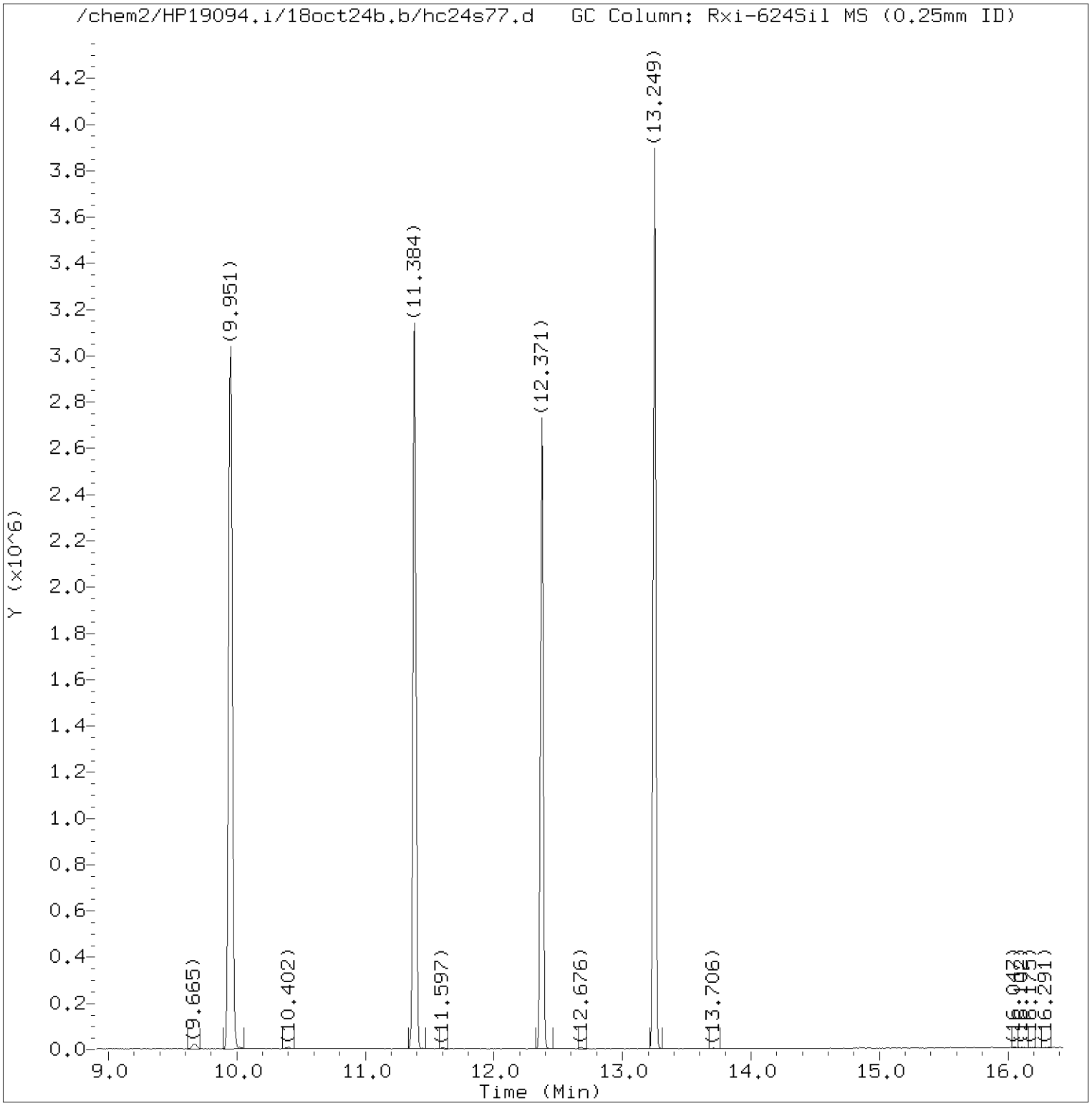
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s77.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:58 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HM08 Lab Sample ID: 9856052

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s77.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:58 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HM08 Lab Sample ID: 9856052

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s77.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:58 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HM08 Lab Sample ID: 9856052

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.495	65	111705	50.000
50)$Dibromofluoromethane	(2)	7.074	113	626379	9.918
57)$1,2-Dichloroethane-d4	(2)	7.531	102	115976	10.533
63)*Fluorobenzene	(2)	7.970	96	2505883	10.000
82)$Toluene-d8	(3)	9.951	98	2439159	10.210
97)*Chlorobenzene-d5	(3)	11.384	117	1856162	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	834476	9.594
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	975796	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct24b.b/hc24s78.d Injection date and time: **25-OCT-2018 03:19**
Data file Sample Info. Line: 5HM05;9856053;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 03:37 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495	(-0.006)	477	65	107678	(-6)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2479117	(-8)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1828685	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	956698	(-8)	10.00	

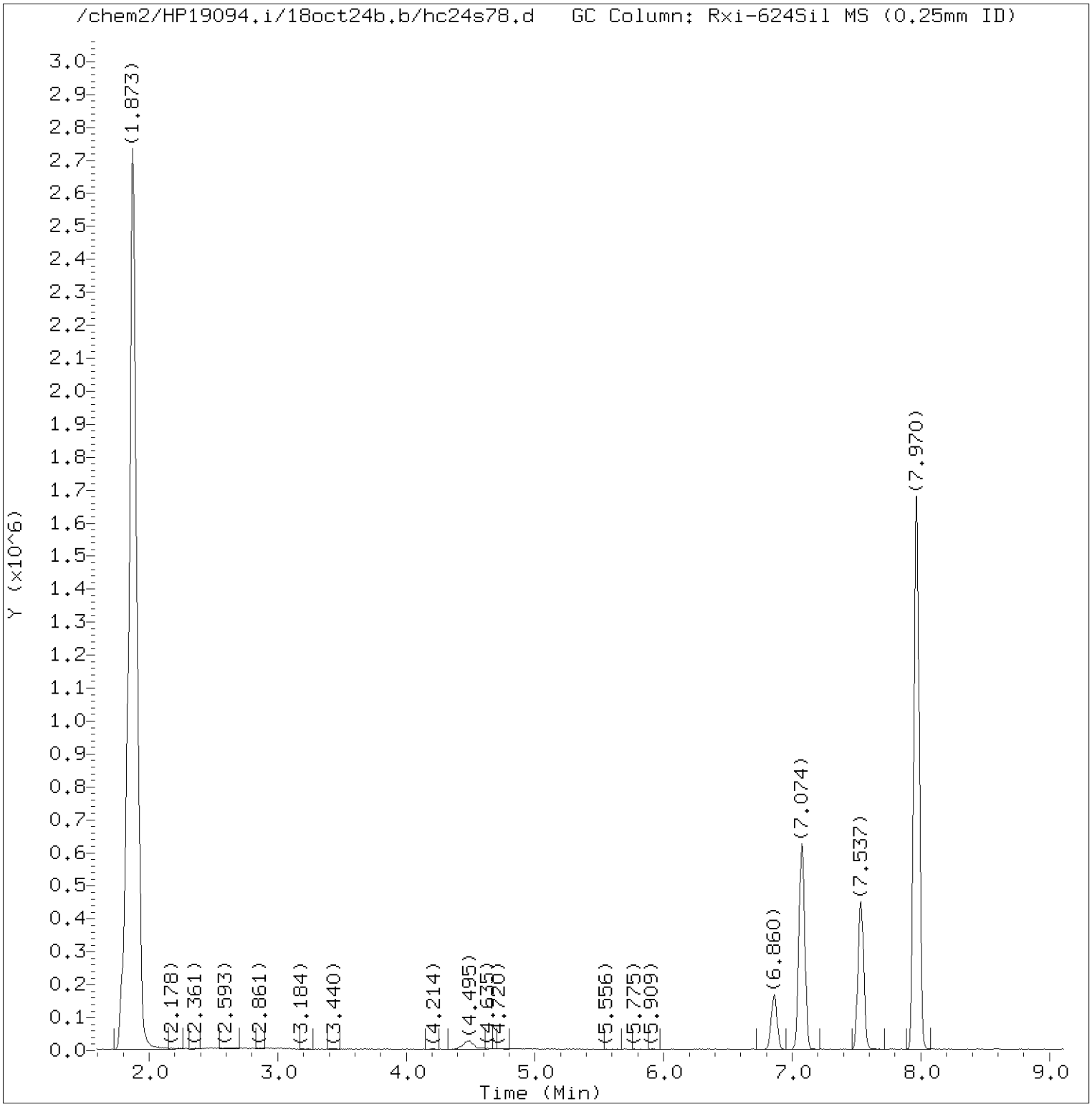
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	611527	9.787	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	109716	10.072	101%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2405613	10.221	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	814973	9.511	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

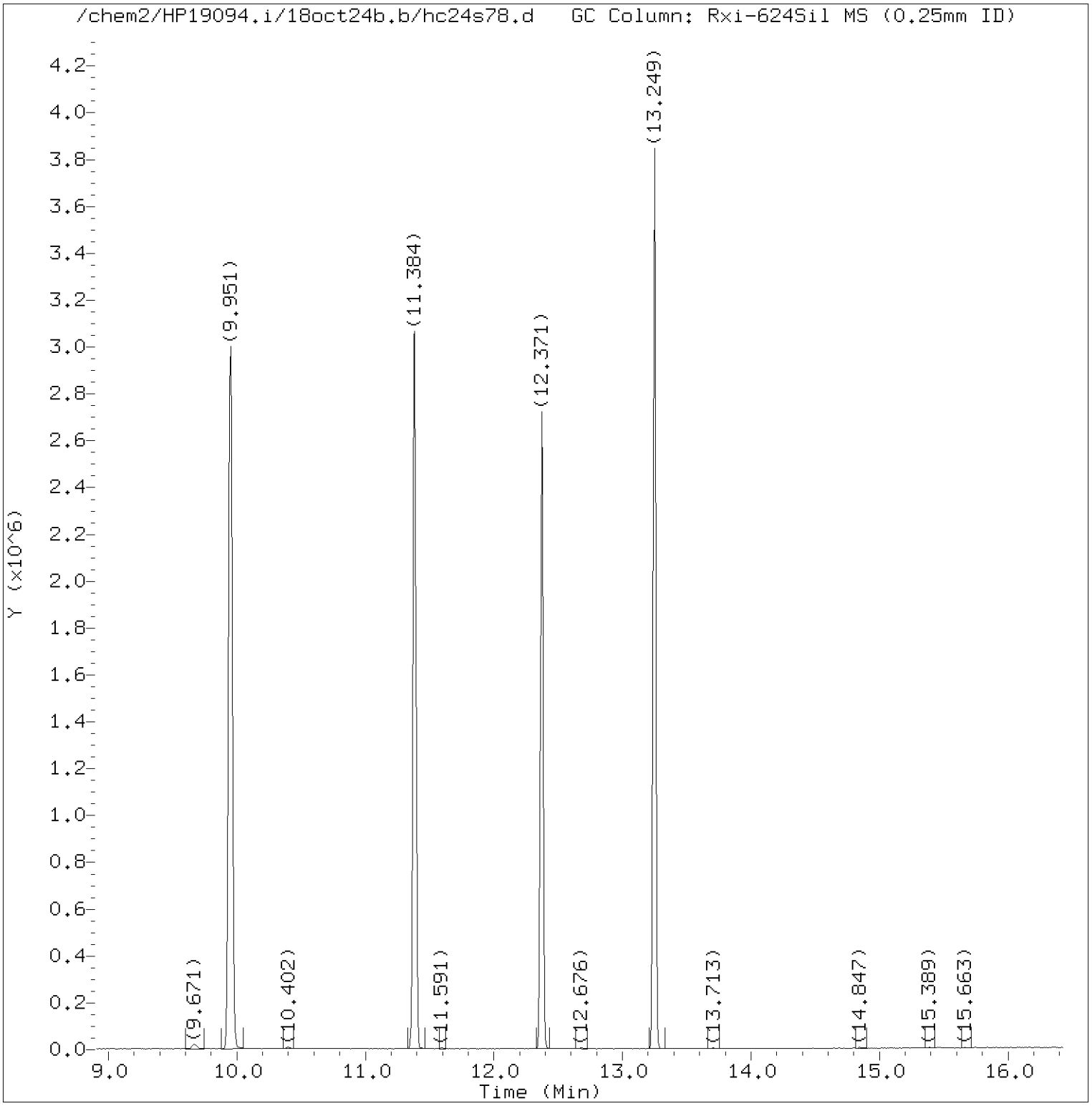
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s78.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:37 Automation

Sample Name: 5HM05 Lab Sample ID: 9856053

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s78.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:37 Automation

Sample Name: 5HM05 Lab Sample ID: 9856053

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s78.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:37 Automation

Sample Name: 5HM05 Lab Sample ID: 9856053

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.495	65	107678	50.000
50)$Dibromofluoromethane	(2)	7.074	113	611527	9.787
57)$1,2-Dichloroethane-d4	(2)	7.537	102	109716	10.072
63)*Fluorobenzene	(2)	7.970	96	2479117	10.000
82)$Toluene-d8	(3)	9.951	98	2405613	10.221
97)*Chlorobenzene-d5	(3)	11.384	117	1828685	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	814973	9.511
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	956698	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct24b.b/hc24s79.d Injection date and time: **25-OCT-2018 03:40**
Data file Sample Info. Line: 5HM07;9856054;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 03:58 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.012)	474	65	103594	(-9)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2470987	(-8)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1825924	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	962861	(-8)	10.00	

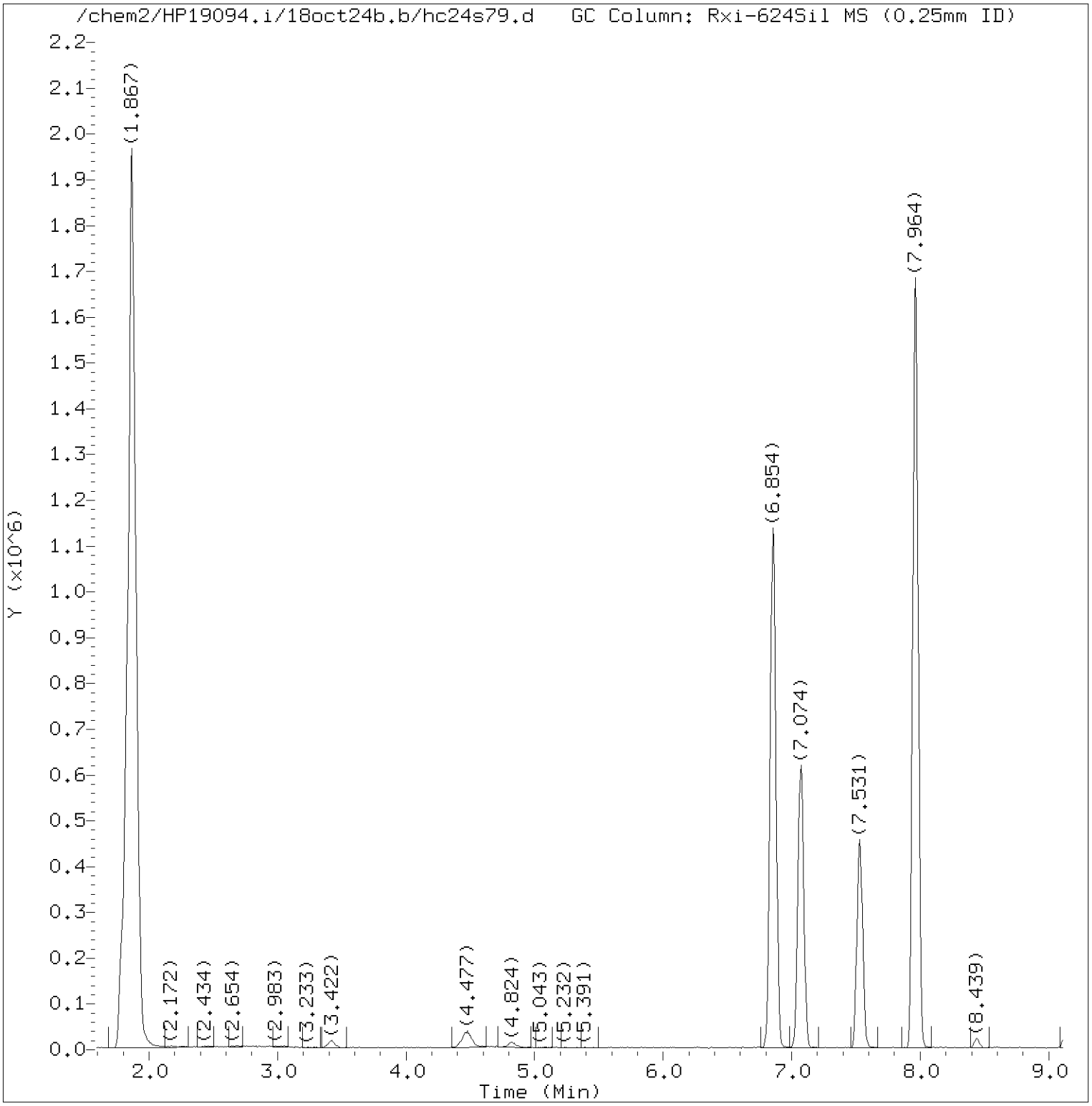
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	617703	9.918	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	112090	10.324	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2406430	10.240	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	830923	9.711	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	10941	0.184	0.18		J	0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

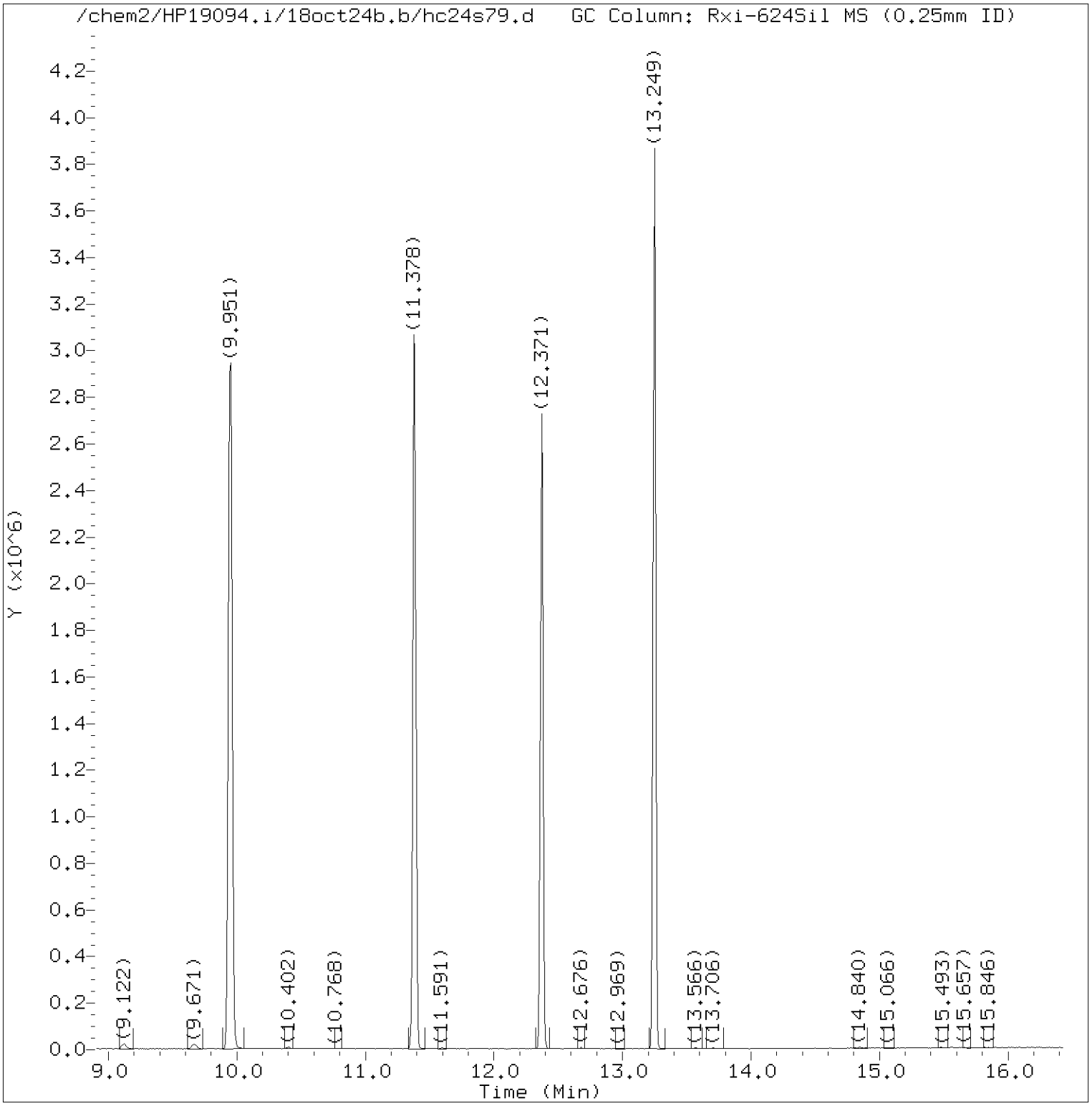
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s79.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:40 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:58 Automation

Sample Name: 5HM07 Lab Sample ID: 9856054

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s79.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:40 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:58 Automation

Sample Name: 5HM07 Lab Sample ID: 9856054

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s79.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:40 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:58 Automation

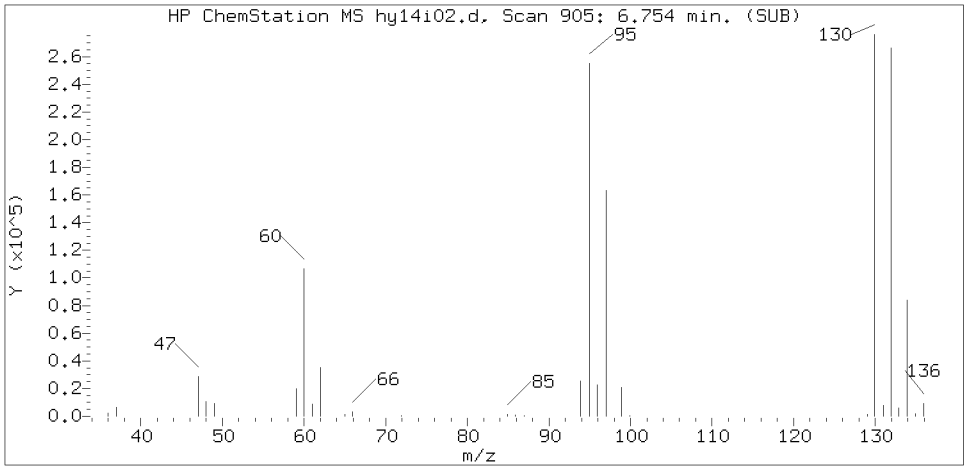
Sample Name: 5HM07 Lab Sample ID: 9856054

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.477	65	103594	50.000
50)$Dibromofluoromethane	(2)	7.074	113	617703	9.918
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112090	10.324
63)*Fluorobenzene	(2)	7.964	96	2470987	10.000
67) Trichloroethene	(2)	8.439	95	10941	0.184
82)$Toluene-d8	(3)	9.951	98	2406430	10.240
97)*Chlorobenzene-d5	(3)	11.378	117	1825924	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	830923	9.711
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	962861	10.000

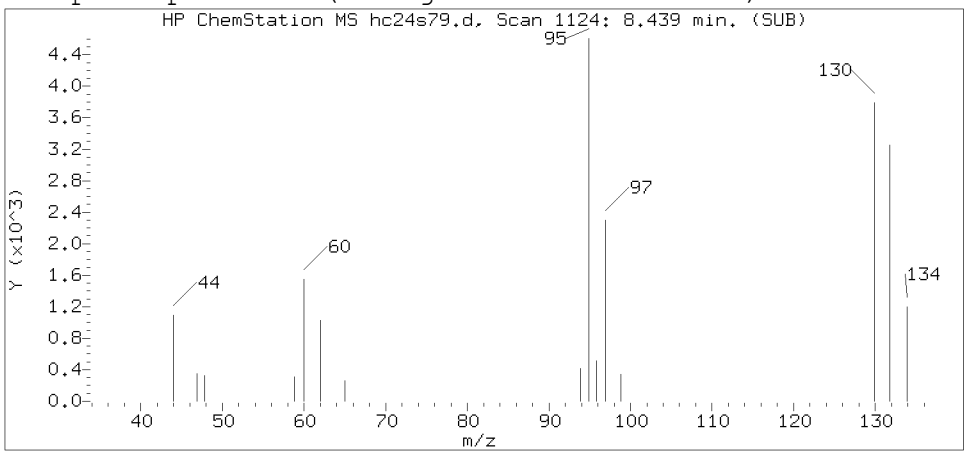
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

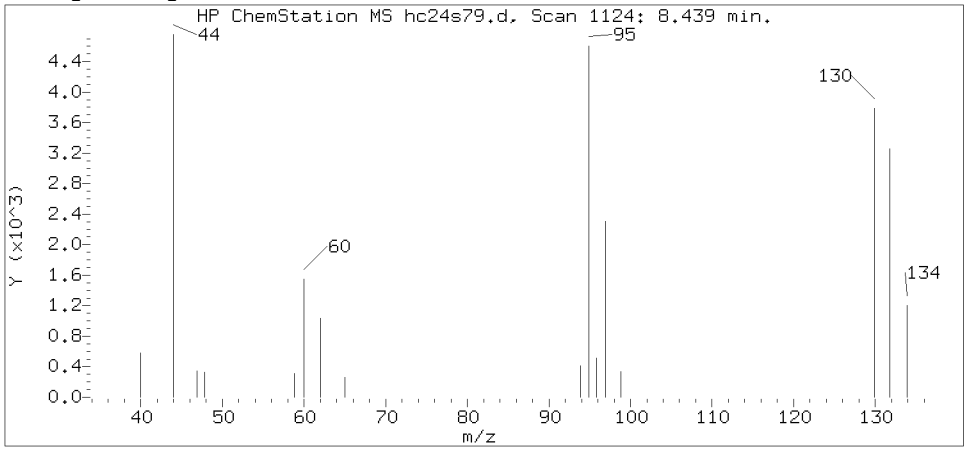
Reference Standard Spectrum for Trichloroethene

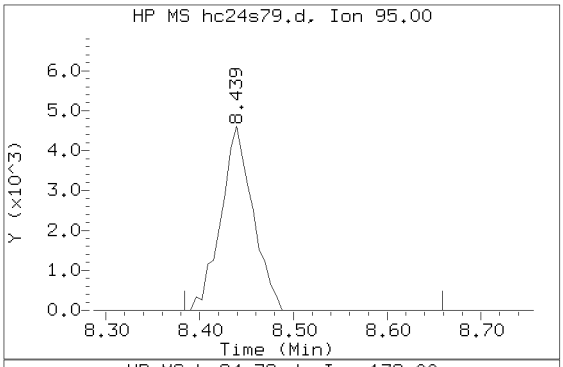


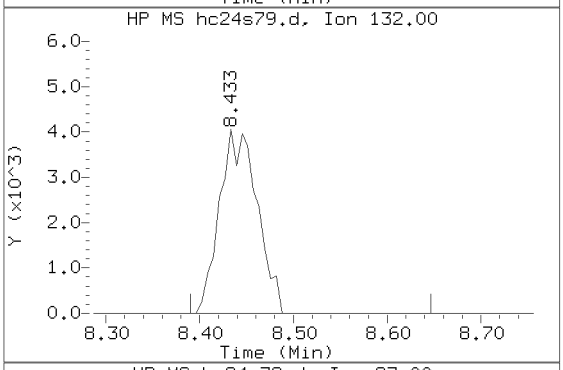
Sample Spectrum (Background Subtracted)

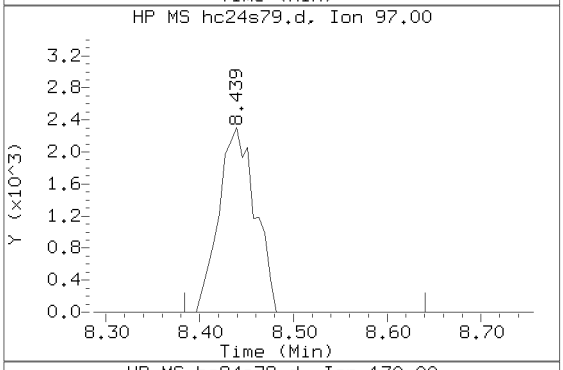


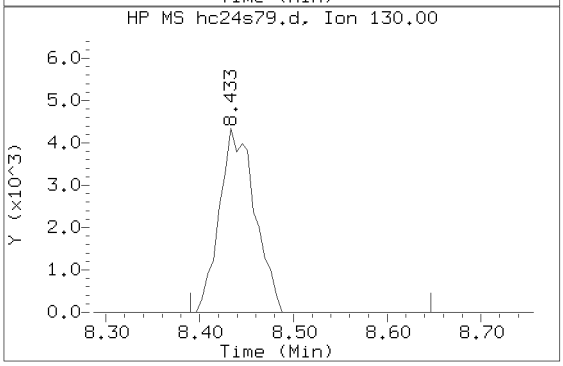
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct24b.b/hc24s79.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 03:40 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 03:58 Automation

Sample Name: 5HM07 Lab Sample ID: 9856054

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1124
Retention Time (minutes)	: 8.439
Relative Retention Time	:-0.00005
Quant Ion	: 95.00
Area (flag)	: 10941
On-Column Amount (ng)	: 0.1842

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

5HM21 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9856057

Data file: /chem2/HP19094.i/18oct24b.b/hc24s82.d Injection date and time: **25-OCT-2018 05:06**
Data file Sample Info. Line: 5HM21;9856057;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 05:24 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.476	(0.012)	474	65	111153	(-3)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2469814	(-8)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1832497	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	967166	(-7)	10.00	

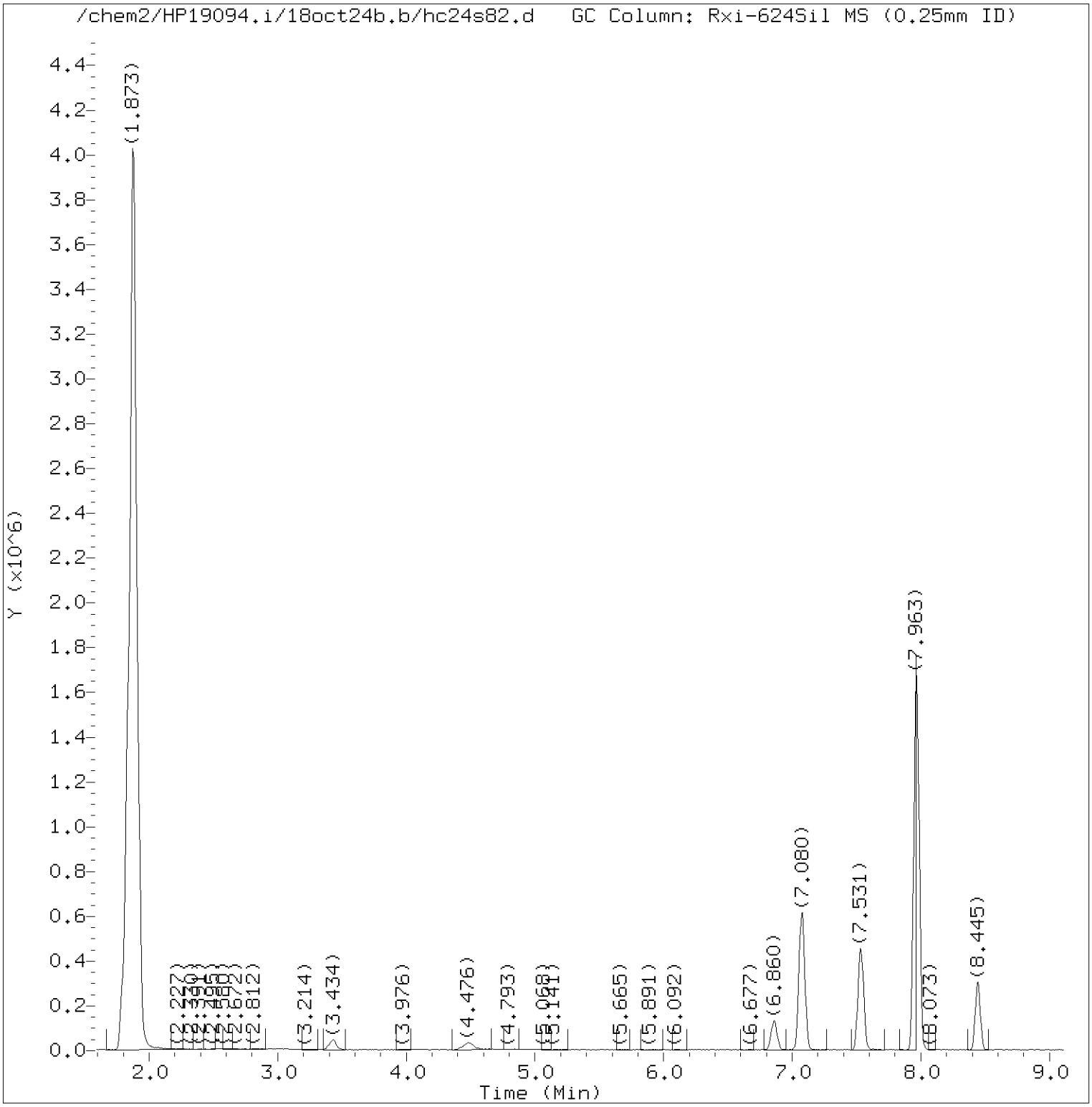
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.000)	113	618229	9.932	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	113299	10.440	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2401927	10.184	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	827801	9.640	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)	8.439	(0.000)	95	148888	2.508	2.51			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

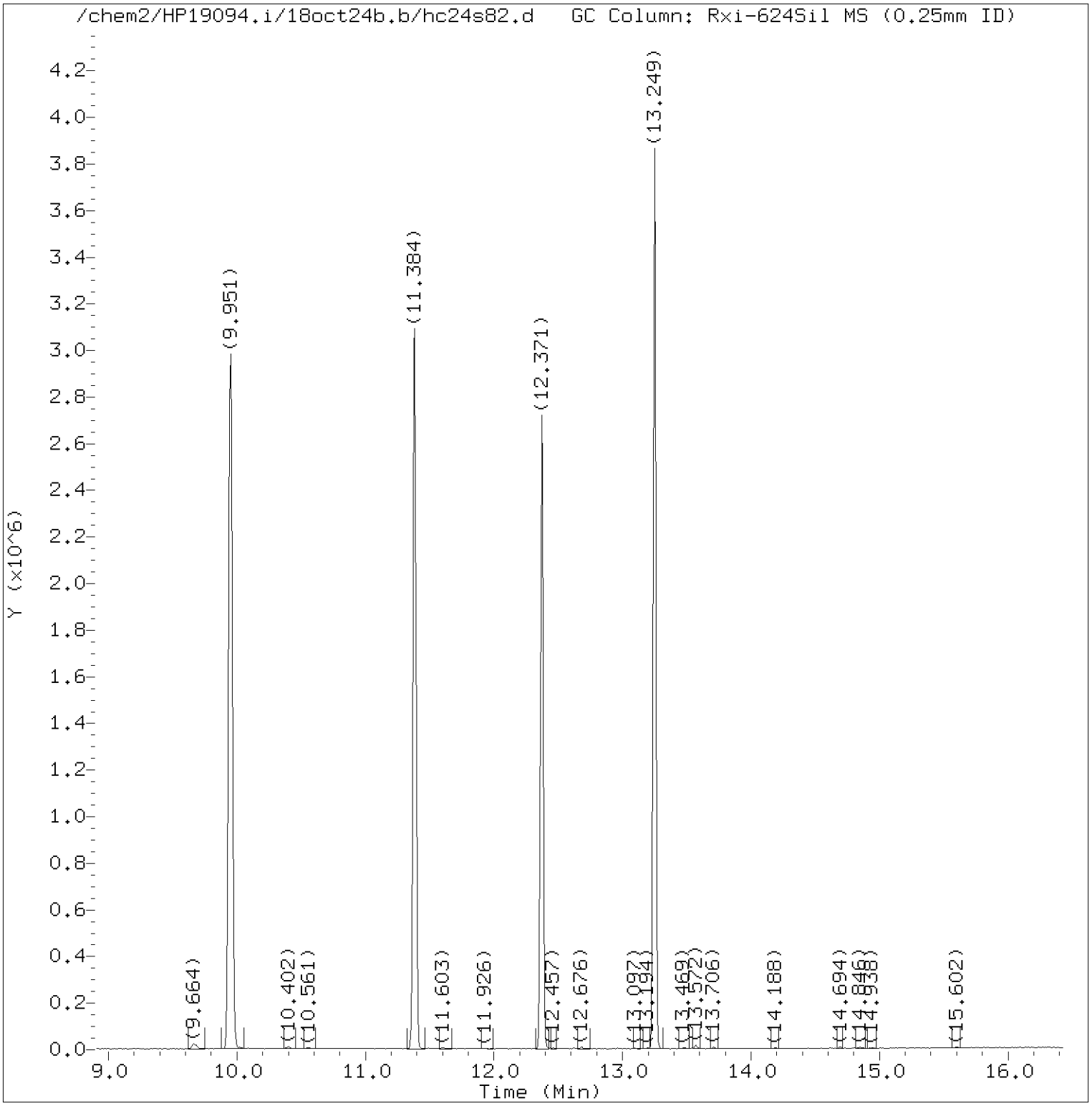
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s82.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:06 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:24 Automation

Sample Name: 5HM21 Lab Sample ID: 9856057

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s82.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:06 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:24 Automation

Sample Name: 5HM21 Lab Sample ID: 9856057

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s82.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:06 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:24 Automation

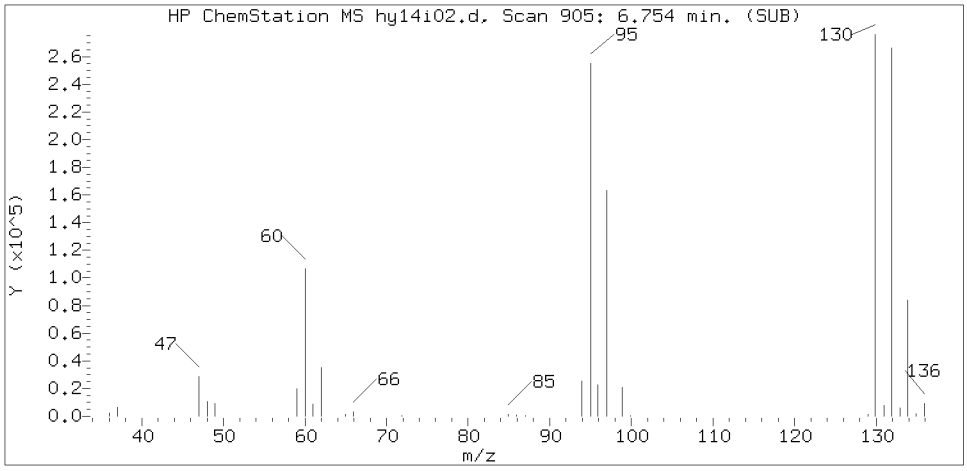
Sample Name: 5HM21 Lab Sample ID: 9856057

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.476	65	111153	50.000
50)$Dibromofluoromethane	(2)	7.073	113	618229	9.932
57)$1,2-Dichloroethane-d4	(2)	7.531	102	113299	10.440
63)*Fluorobenzene	(2)	7.970	96	2469814	10.000
67) Trichloroethene	(2)	8.439	95	148888	2.508
82)$Toluene-d8	(3)	9.951	98	2401927	10.184
97)*Chlorobenzene-d5	(3)	11.384	117	1832497	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	827801	9.640
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	967166	10.000

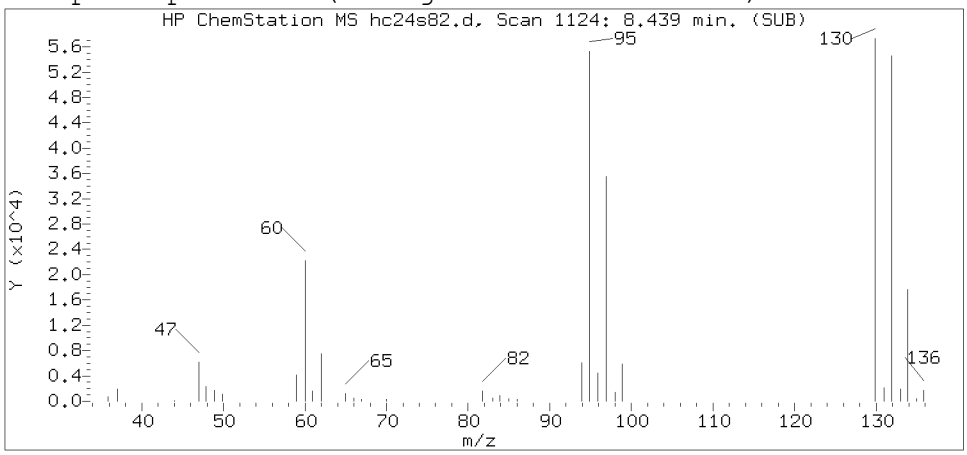
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

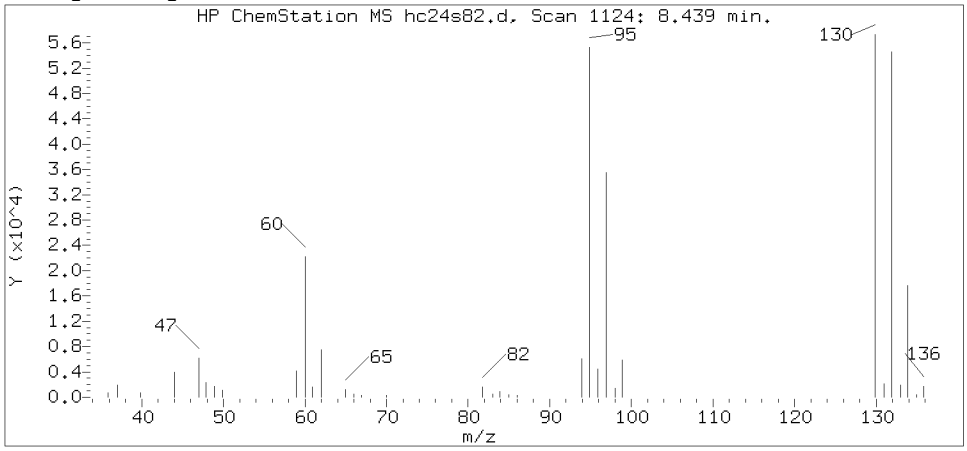
Reference Standard Spectrum for Trichloroethene

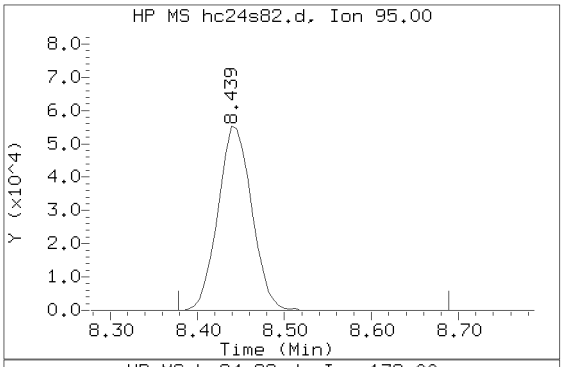


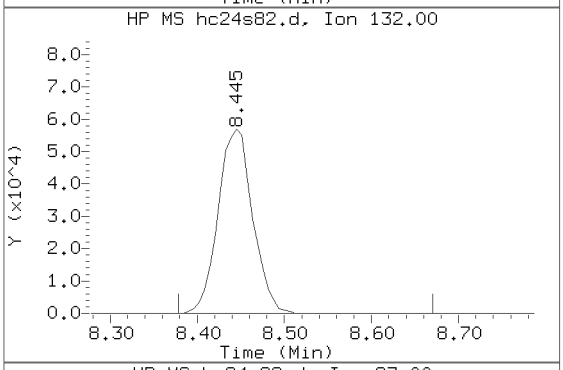
Sample Spectrum (Background Subtracted)

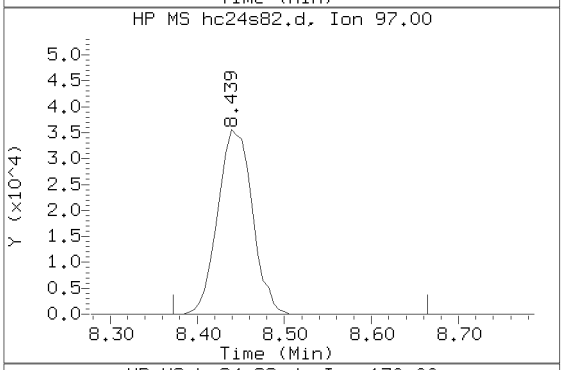


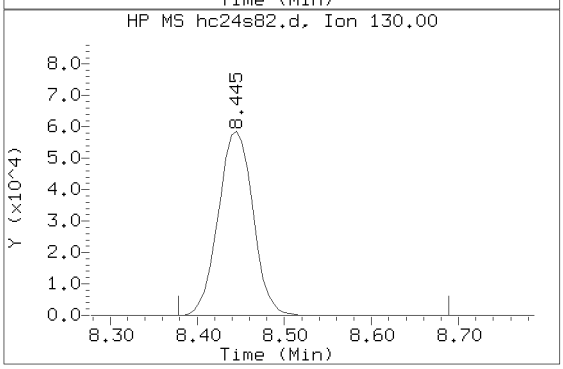
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct24b.b/hc24s82.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:06 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:24 Automation

Sample Name: 5HM21 Lab Sample ID: 9856057

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1124
Retention Time (minutes)	: 8.439
Relative Retention Time	: 0.00076
Quant Ion	: 95.00
Area (flag)	: 148888
On-Column Amount (ng)	: 2.5084

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

5HMFD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9856058

Data file: /chem2/HP19094.i/18oct24b.b/hc24s83.d Injection date and time: **25-OCT-2018 05:27**
Data file Sample Info. Line: 5HMFD;9856058;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 05:45 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.012)	474	65	98050	(-14)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2479007	(-8)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1840036	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	960829	(-8)	10.00	

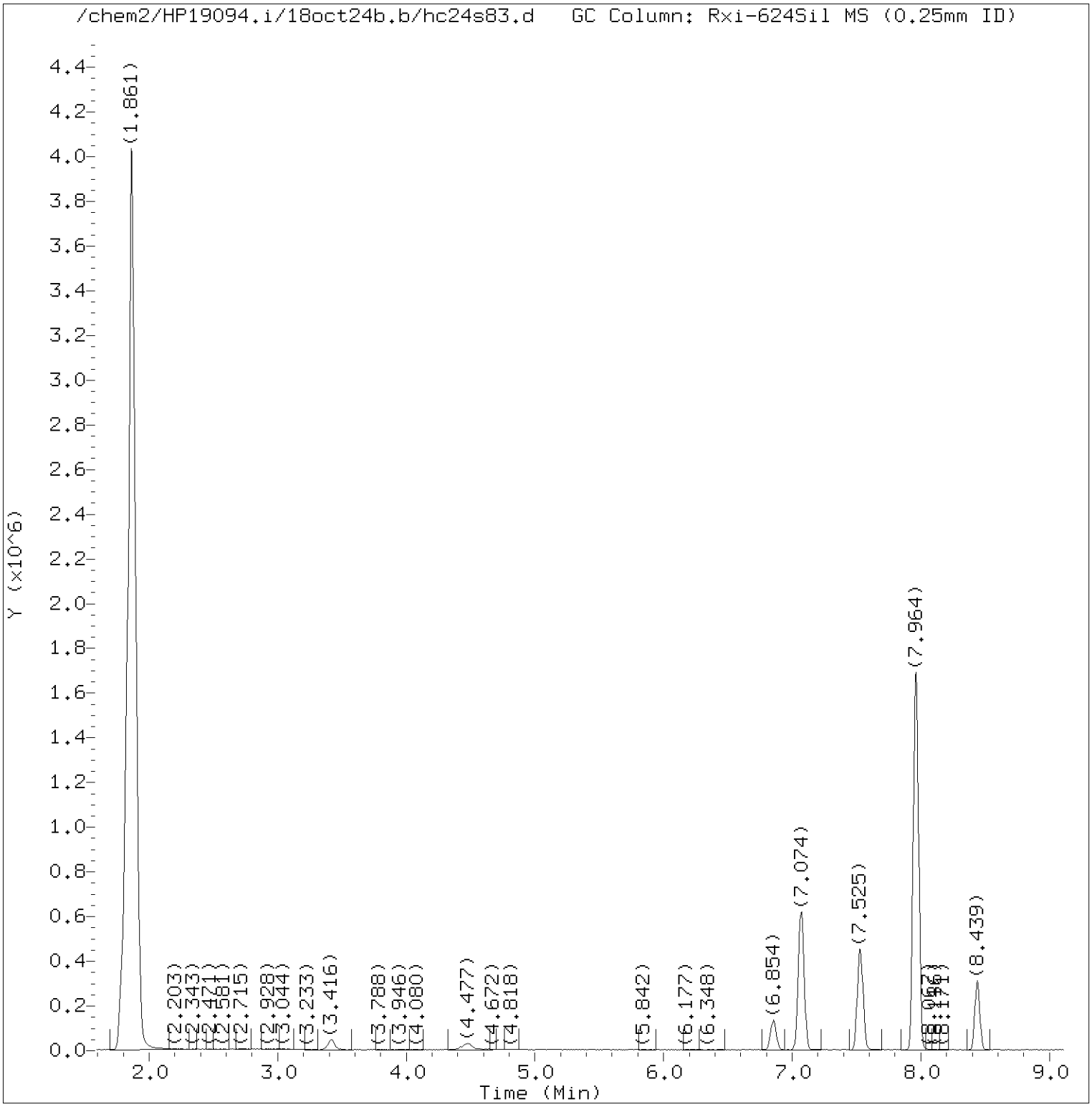
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	616946	9.874	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.001)	102	111967	10.279	103%		80 - 120
82) Toluene-d8	(3)	9.945	(0.000)	98	2427734	10.251	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	818833	9.497	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	152780	2.564	2.56			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

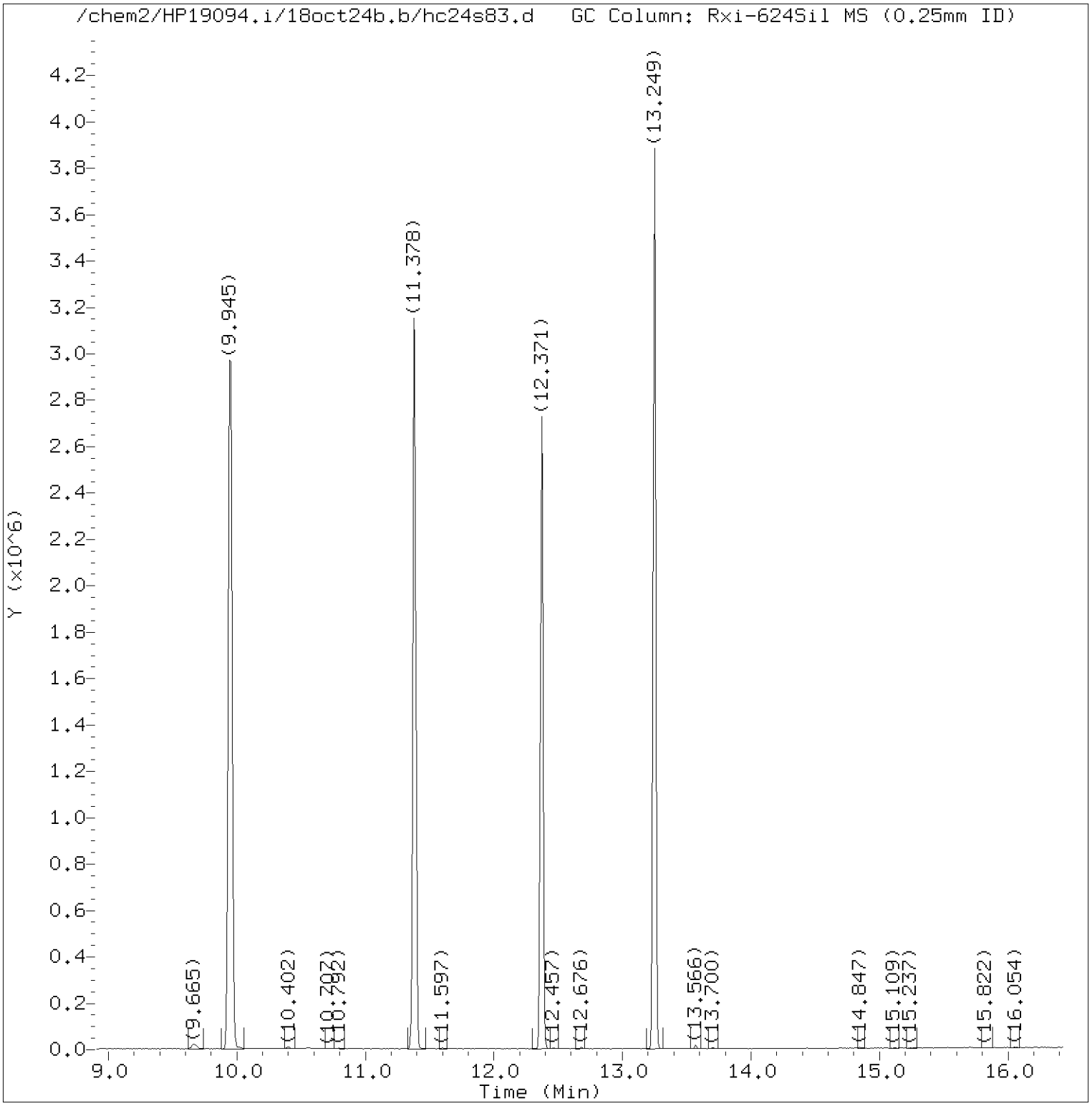
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s83.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:27 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:45 Automation

Sample Name: 5HMFD Lab Sample ID: 9856058

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s83.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:27 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:45 Automation

Sample Name: 5HMFD Lab Sample ID: 9856058

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s83.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:27 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:45 Automation

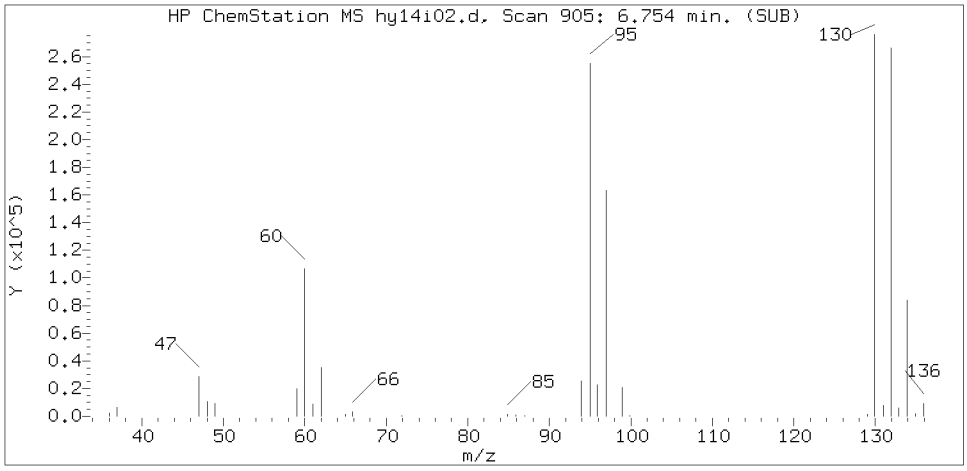
Sample Name: 5HMFD Lab Sample ID: 9856058

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.477	65	98050	50.000
50)$Dibromofluoromethane	(2)	7.074	113	616946	9.874
57)$1,2-Dichloroethane-d4	(2)	7.525	102	111967	10.279
63)*Fluorobenzene	(2)	7.964	96	2479007	10.000
67) Trichloroethene	(2)	8.439	95	152780	2.564
82)$Toluene-d8	(3)	9.945	98	2427734	10.251
97)*Chlorobenzene-d5	(3)	11.378	117	1840036	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	818833	9.497
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	960829	10.000

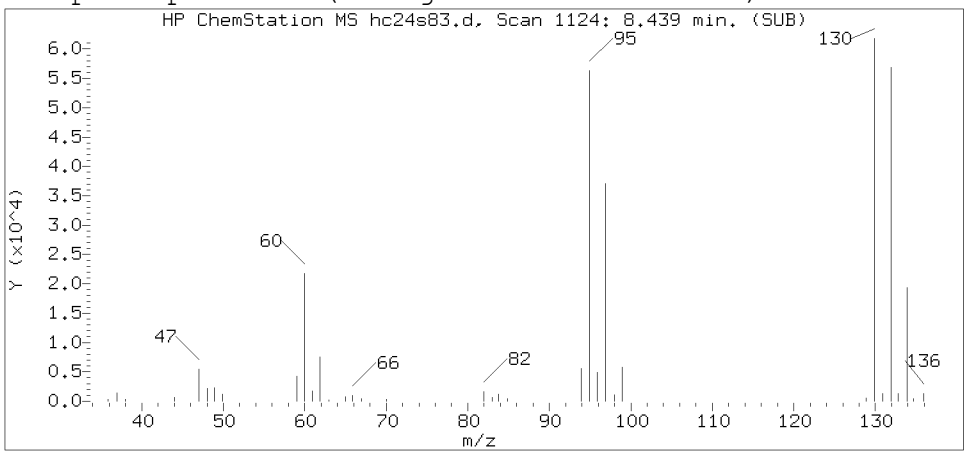
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

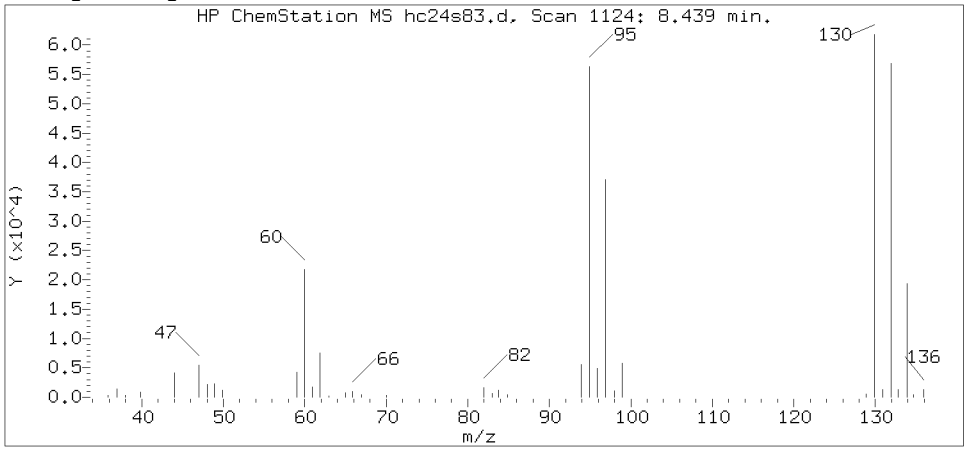
Reference Standard Spectrum for Trichloroethene

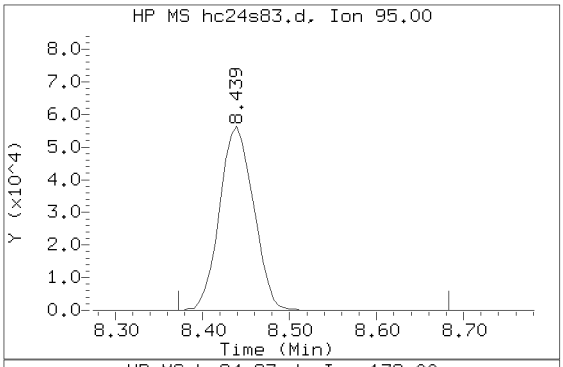


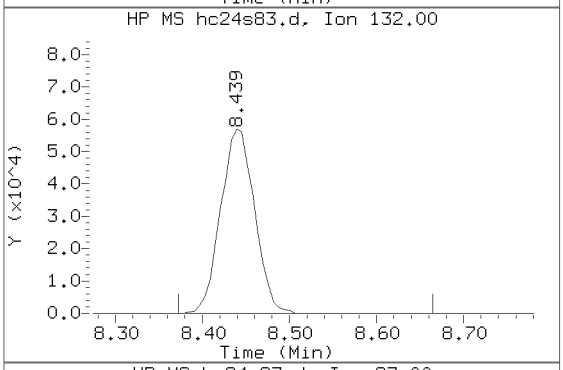
Sample Spectrum (Background Subtracted)

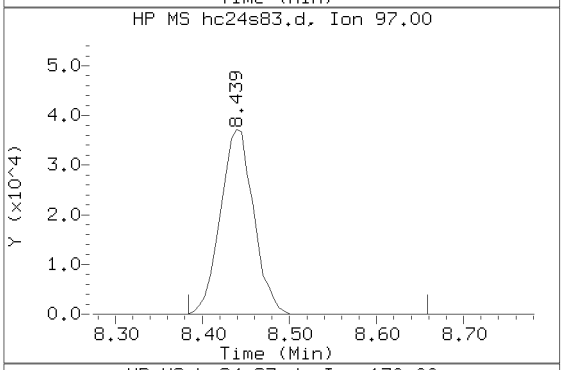


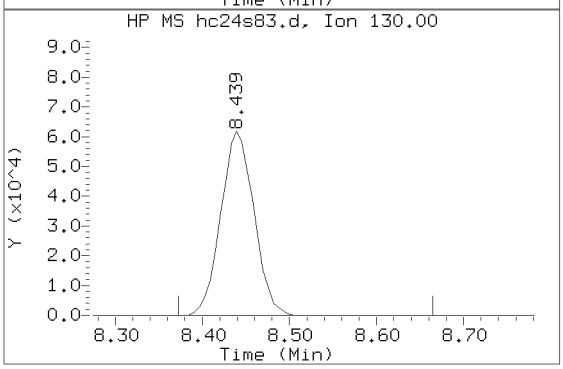
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct24b.b/hc24s83.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 05:27 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 05:45 Automation

Sample Name: 5HMFD Lab Sample ID: 9856058

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1124
Retention Time (minutes): 8.439
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 152780
On-Column Amount (ng) : 2.5644

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

5HM22 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9856059

Data file: /chem2/HP19094.i/18oct24b.b/hc24s73.d Injection date and time: **25-OCT-2018 01:32**
Data file Sample Info. Line: 5HM22;9856059;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 01:49 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482	(0.006)	475	65	84137	(-26)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2500182	(-7)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1861513	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	973346	(-7)	10.00	

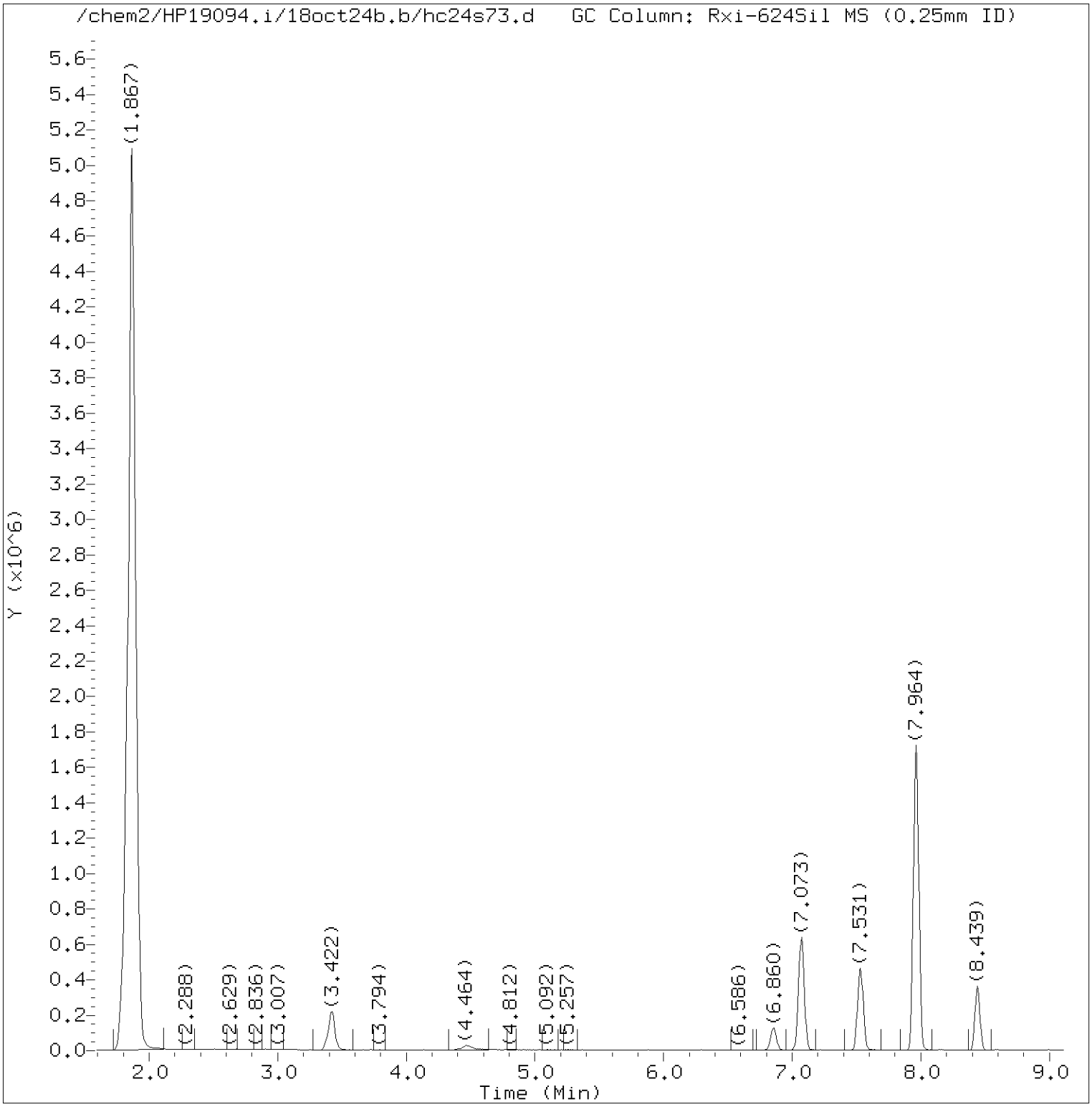
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(-0.001)	113	617835	9.805	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	114197	10.395	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2420946	10.105	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	837967	9.606	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	175041	2.913	2.91			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:01. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

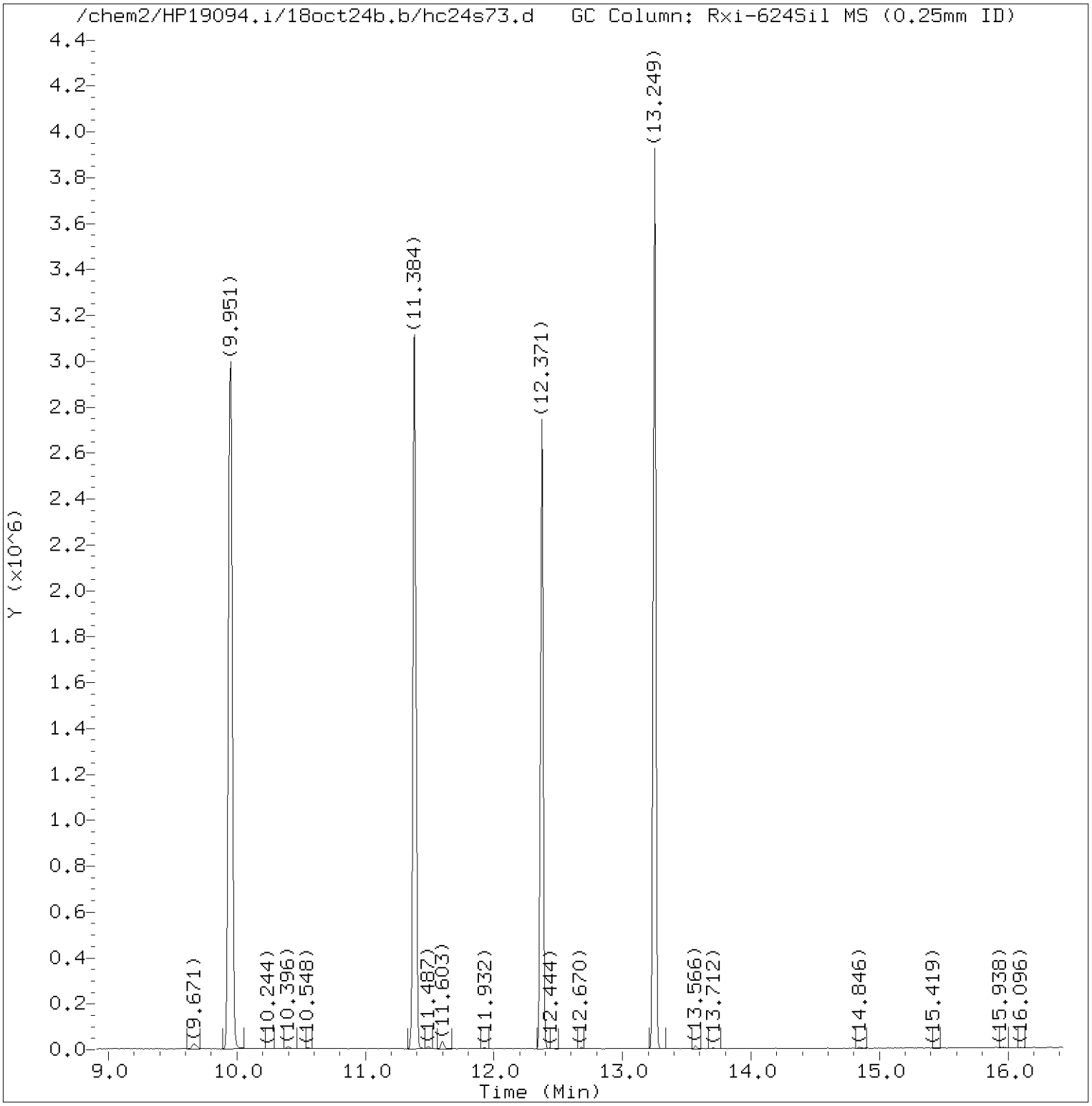
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s73.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:32 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 01:49 Automation

Sample Name: 5HM22 Lab Sample ID: 9856059

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s73.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:32 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 01:49 Automation

Sample Name: 5HM22 Lab Sample ID: 9856059

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s73.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:32 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 01:49 Automation

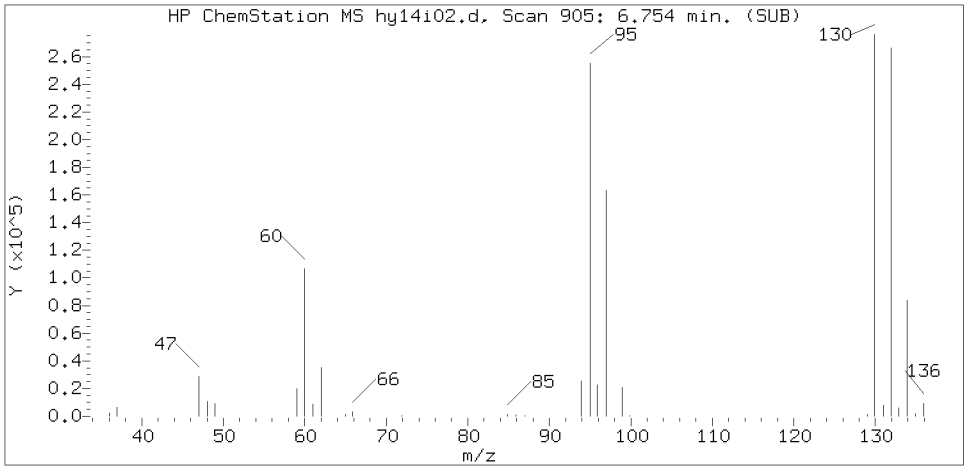
Sample Name: 5HM22 Lab Sample ID: 9856059

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.482	65	84137	50.000
50)$Dibromofluoromethane	(2)	7.073	113	617835	9.805
57)$1,2-Dichloroethane-d4	(2)	7.531	102	114197	10.395
63)*Fluorobenzene	(2)	7.964	96	2500182	10.000
67) Trichloroethene	(2)	8.439	95	175041	2.913
82)$Toluene-d8	(3)	9.951	98	2420946	10.105
97)*Chlorobenzene-d5	(3)	11.384	117	1861513	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	837967	9.606
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	973346	10.000

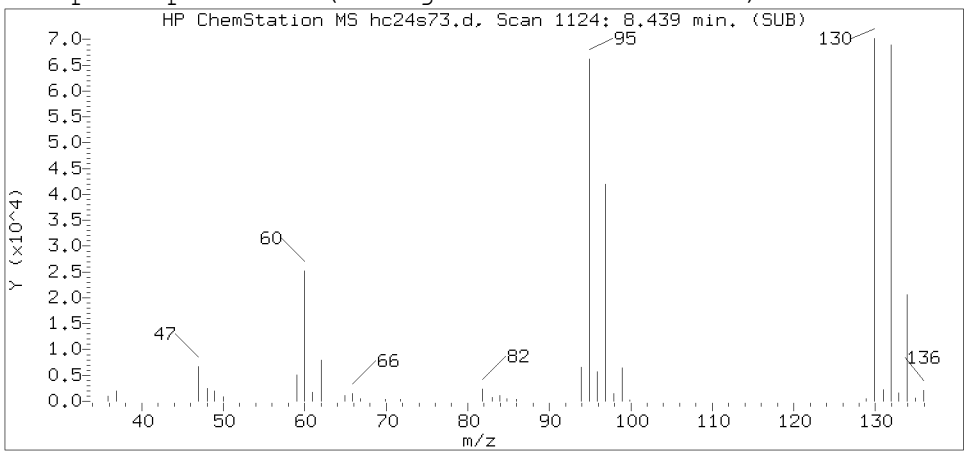
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

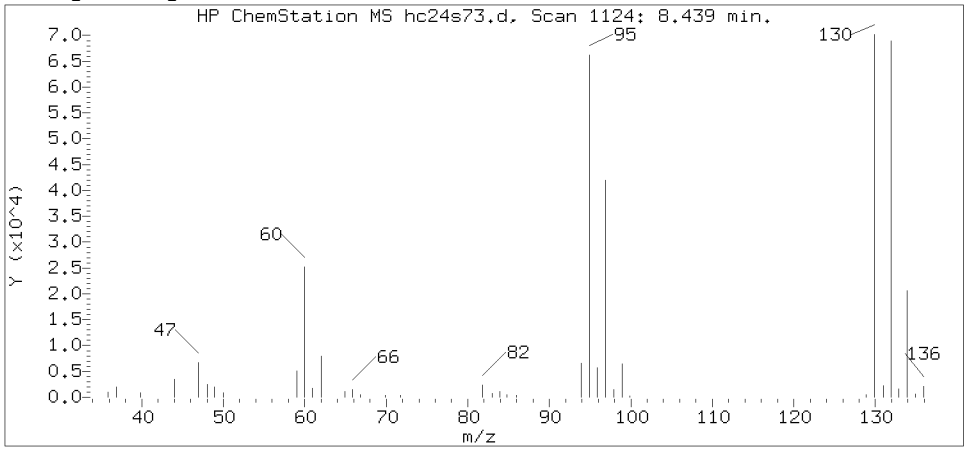
Reference Standard Spectrum for Trichloroethene

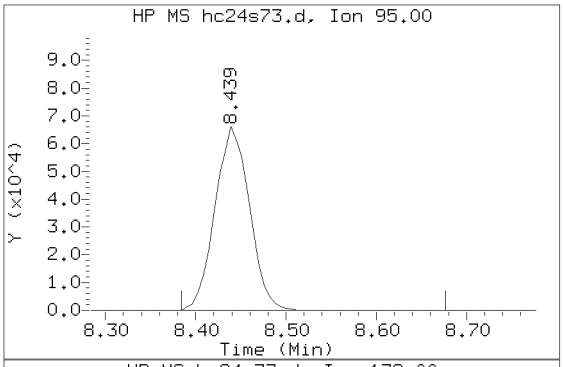


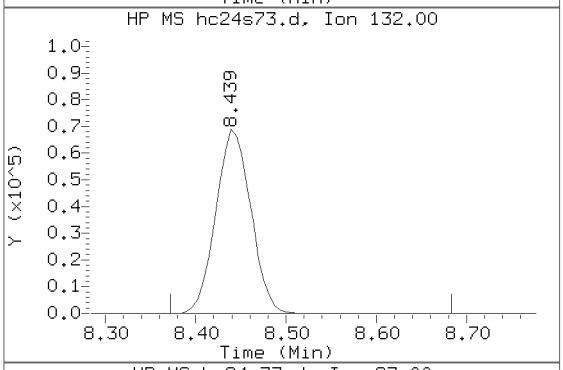
Sample Spectrum (Background Subtracted)

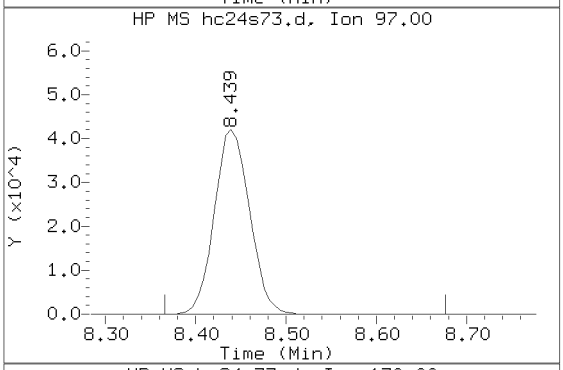


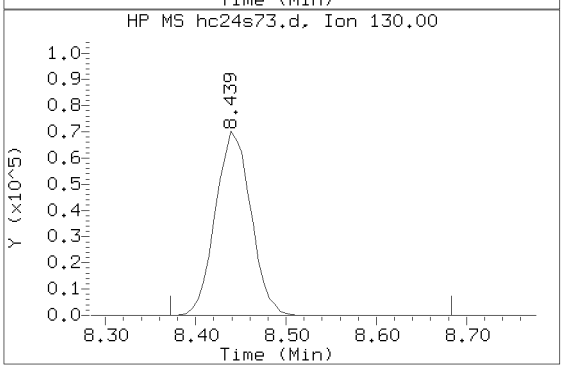
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct24b.b/hc24s73.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:32 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 01:49 Automation

Sample Name: 5HM22 Lab Sample ID: 9856059

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1124
Retention Time (minutes): 8.439
Relative Retention Time :-0.00005
Quant Ion : 95.00
Area (flag) : 175041
On-Column Amount (ng) : 2.9131

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

5HM23 Lancaster Laboratories 9856060
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct24b.b/hc24s74.d Injection date and time: **25-OCT-2018 01:53**
Data file Sample Info. Line: 5HM23;9856060;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 02:11 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(0.006)	475	65	94240	(-18)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2534338	(-6)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1862965	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	987878	(-5)	10.00	

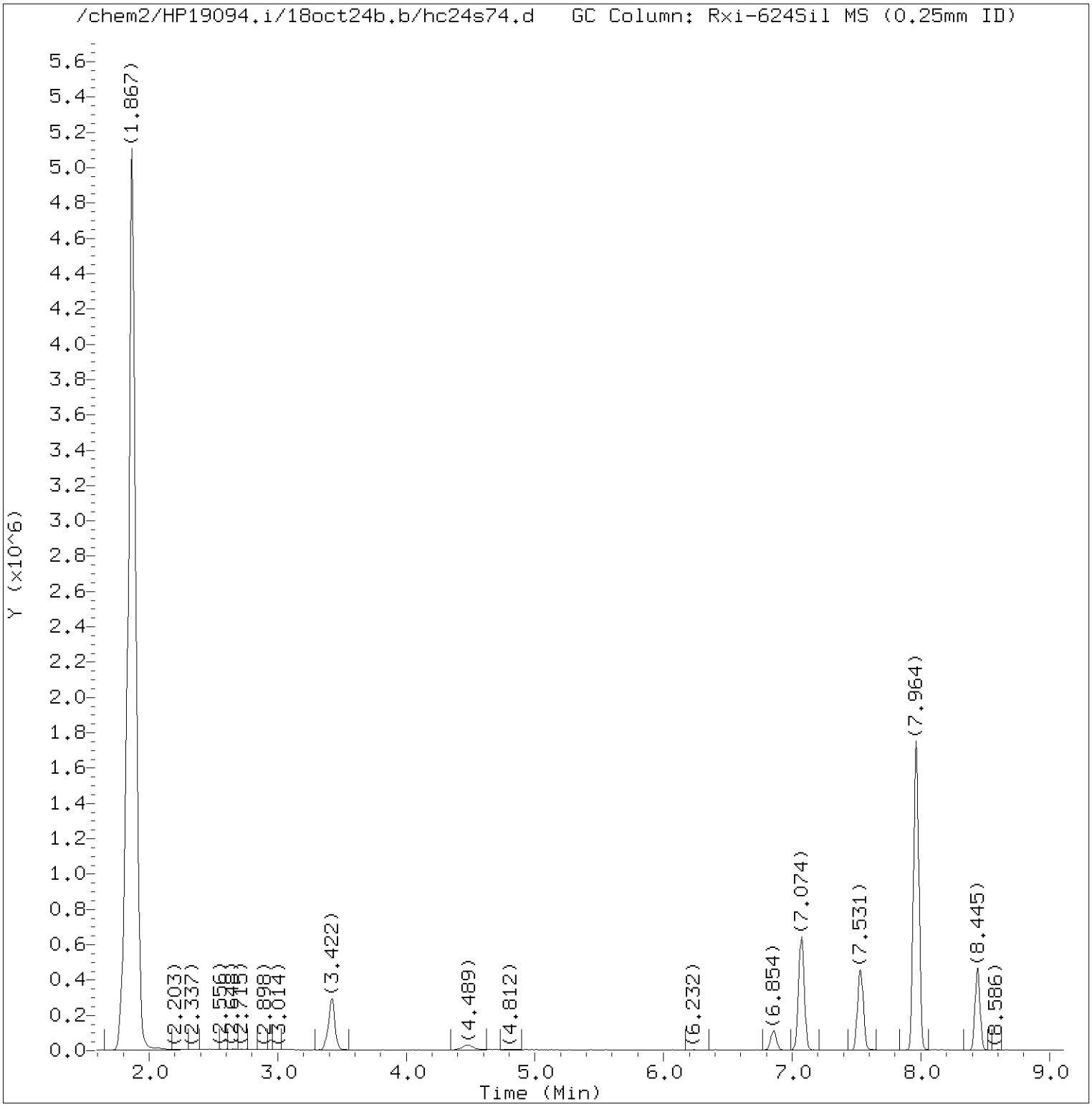
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	619730	9.702	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.001)	102	114723	10.302	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2446093	10.202	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	841360	9.638	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)	8.445	(-0.000)	95	228505	3.752	3.75			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:01. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

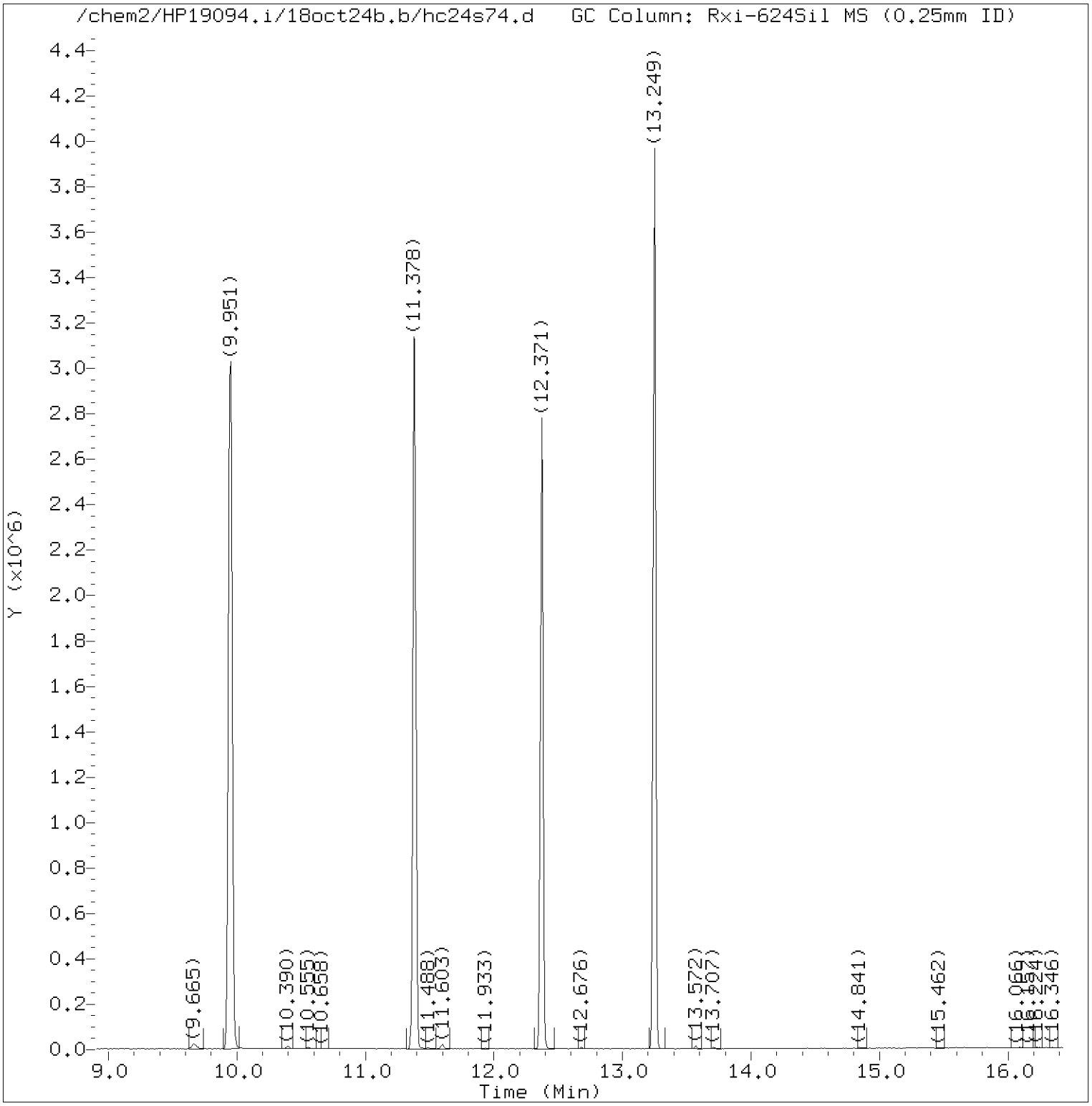
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s74.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:53 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:11 Automation

Sample Name: 5HM23 Lab Sample ID: 9856060

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s74.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:53 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:11 Automation

Sample Name: 5HM23 Lab Sample ID: 9856060

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s74.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:53 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:11 Automation

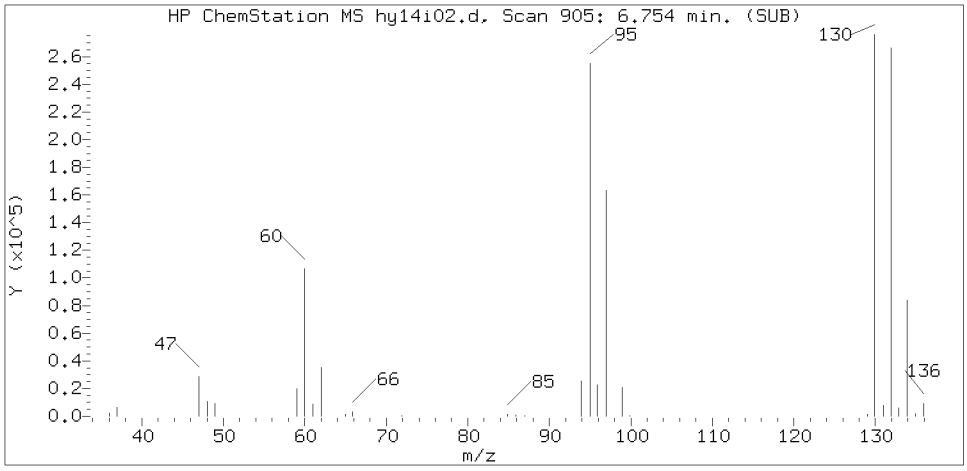
Sample Name: 5HM23 Lab Sample ID: 9856060

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.483	65	94240	50.000
50)$Dibromofluoromethane	(2)	7.074	113	619730	9.702
57)$1,2-Dichloroethane-d4	(2)	7.525	102	114723	10.302
63)*Fluorobenzene	(2)	7.964	96	2534338	10.000
67) Trichloroethene	(2)	8.445	95	228505	3.752
82)$Toluene-d8	(3)	9.951	98	2446093	10.202
97)*Chlorobenzene-d5	(3)	11.384	117	1862965	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	841360	9.638
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	987878	10.000

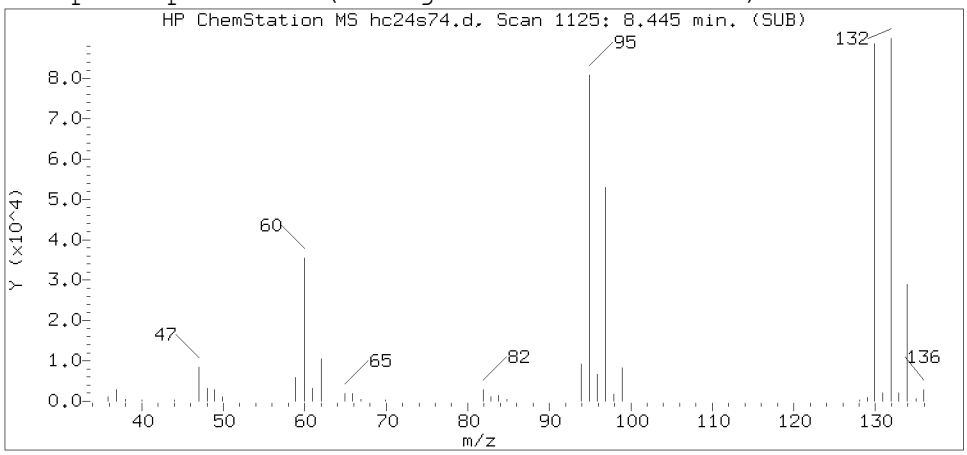
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

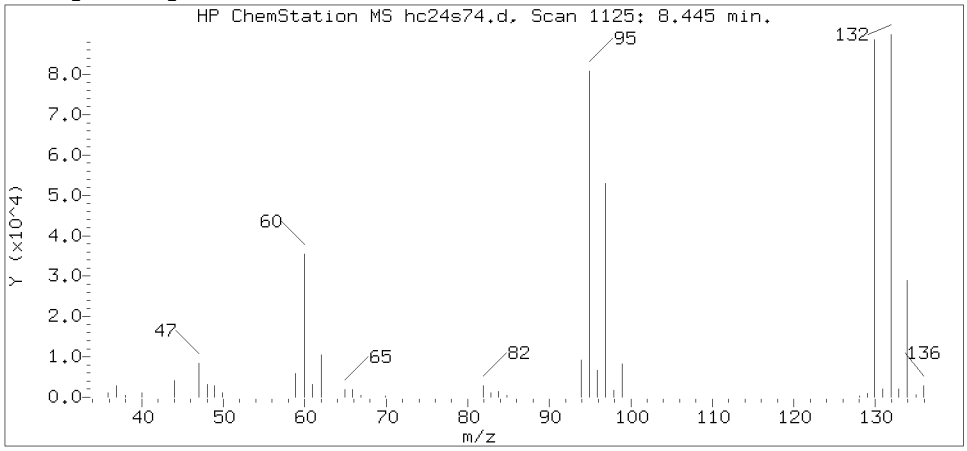
Reference Standard Spectrum for Trichloroethene

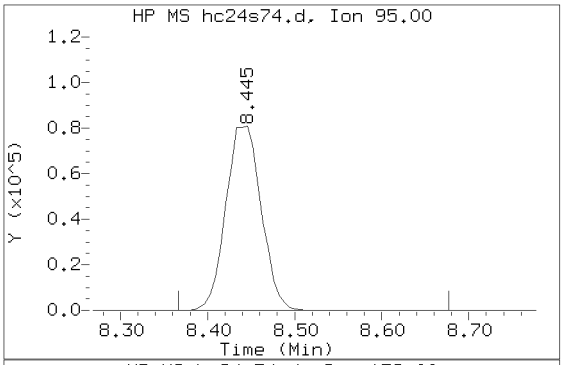


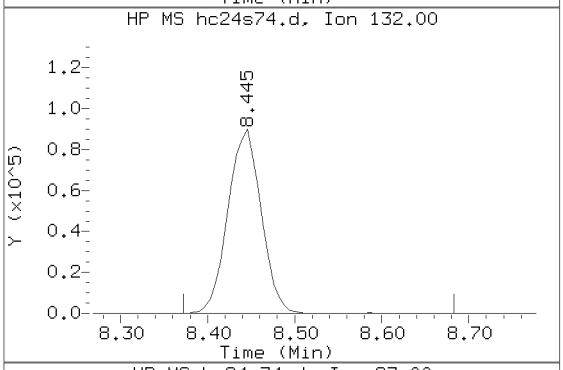
Sample Spectrum (Background Subtracted)

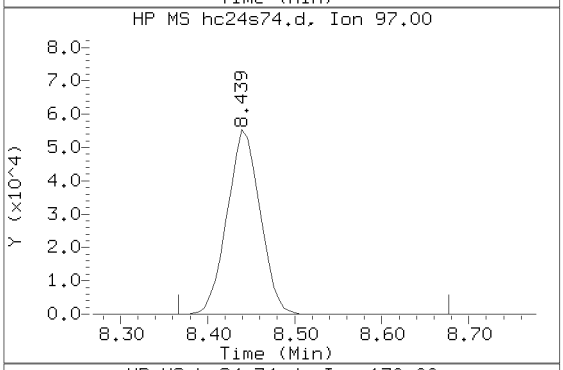


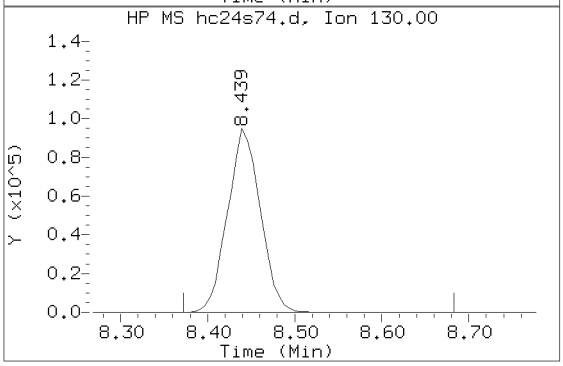
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct24b.b/hc24s74.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 01:53 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:11 Automation

Sample Name: 5HM23 Lab Sample ID: 9856060

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1125
Retention Time (minutes): 8.445
Relative Retention Time :-0.00081
Quant Ion : 95.00
Area (flag) : 228505
On-Column Amount (ng) : 3.7517

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:01.
Target 3.5 esignature user ID: kas02648

5HM12 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9856061

Data file: /chem2/HP19094.i/18oct24b.b/hc24s75.d Injection date and time: **25-OCT-2018 02:14**
Data file Sample Info. Line: 5HM12;9856061;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 02:32 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(0.006)	475	65	88795	(-22)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2520028	(-6)	10.00	
97) Chlorobenzene-d5	11.378	(0.006)	1606	117	1865691	(-7)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	984311	(-6)	10.00	

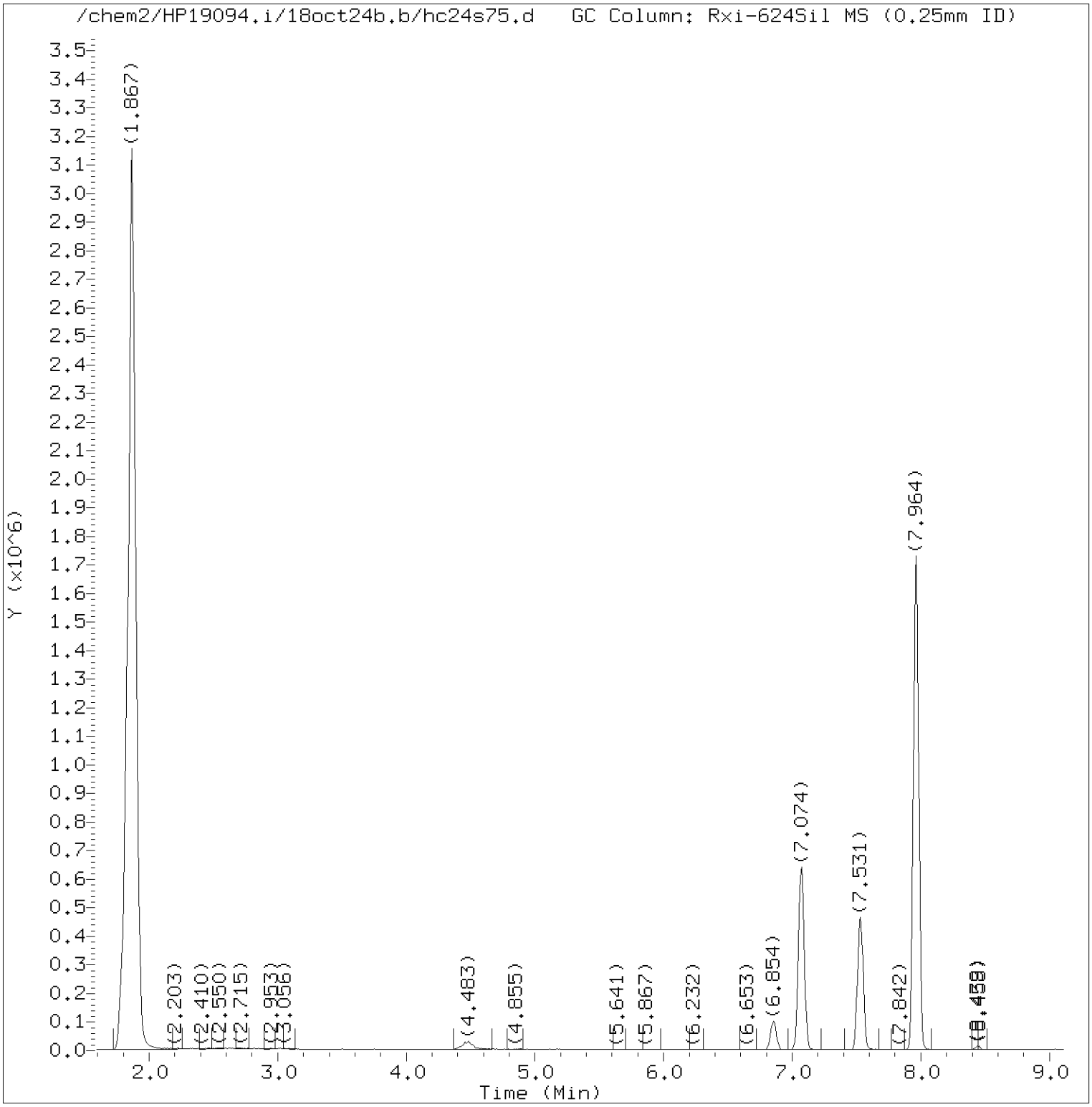
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	627927	9.886	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	114584	10.348	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2438848	10.157	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(-0.001)	95	840741	9.617	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

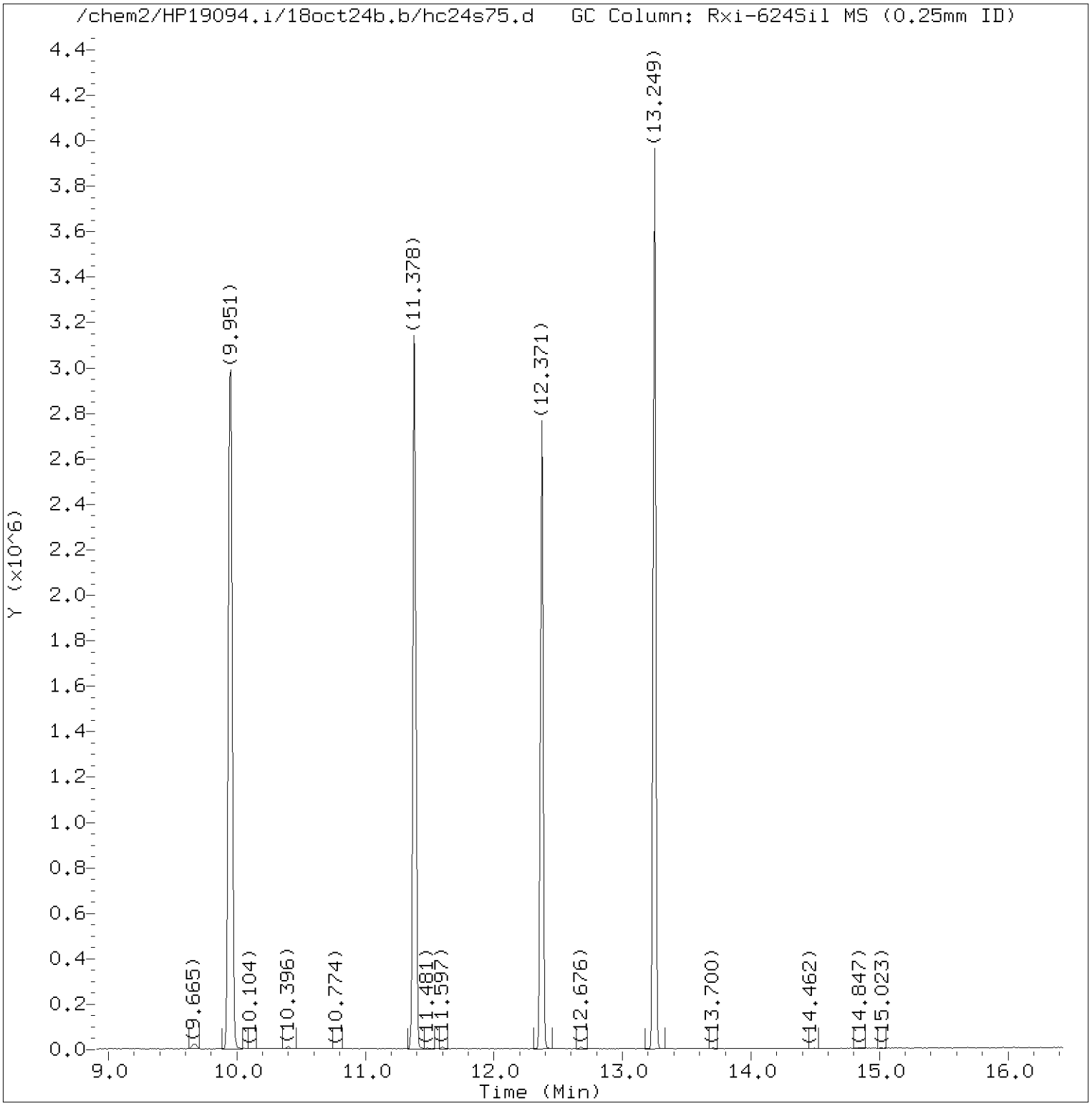
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s75.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:32 Automation

Sample Name: 5HM12 Lab Sample ID: 9856061

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s75.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:32 Automation

Sample Name: 5HM12 Lab Sample ID: 9856061

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s75.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:14 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 02:32 Automation

Sample Name: 5HM12 Lab Sample ID: 9856061

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.483	65	88795	50.000
50)$Dibromofluoromethane	(2)	7.074	113	627927	9.886
57)$1,2-Dichloroethane-d4	(2)	7.531	102	114584	10.348
63)*Fluorobenzene	(2)	7.964	96	2520028	10.000
82)$Toluene-d8	(3)	9.951	98	2438848	10.157
97)*Chlorobenzene-d5	(3)	11.378	117	1865691	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	840741	9.617
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	984311	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

5HMTB

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9856062

Data file: /chem2/HP19094.i/18oct24b.b/hc24s76.d Injection date and time: **25-OCT-2018 02:36**
Data file Sample Info. Line: 5HMTB;9856062;1;0;;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482	(0.006)	475	65	104946	(-8)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2515376	(-7)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1849768	(-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	983954	(-6)	10.00	

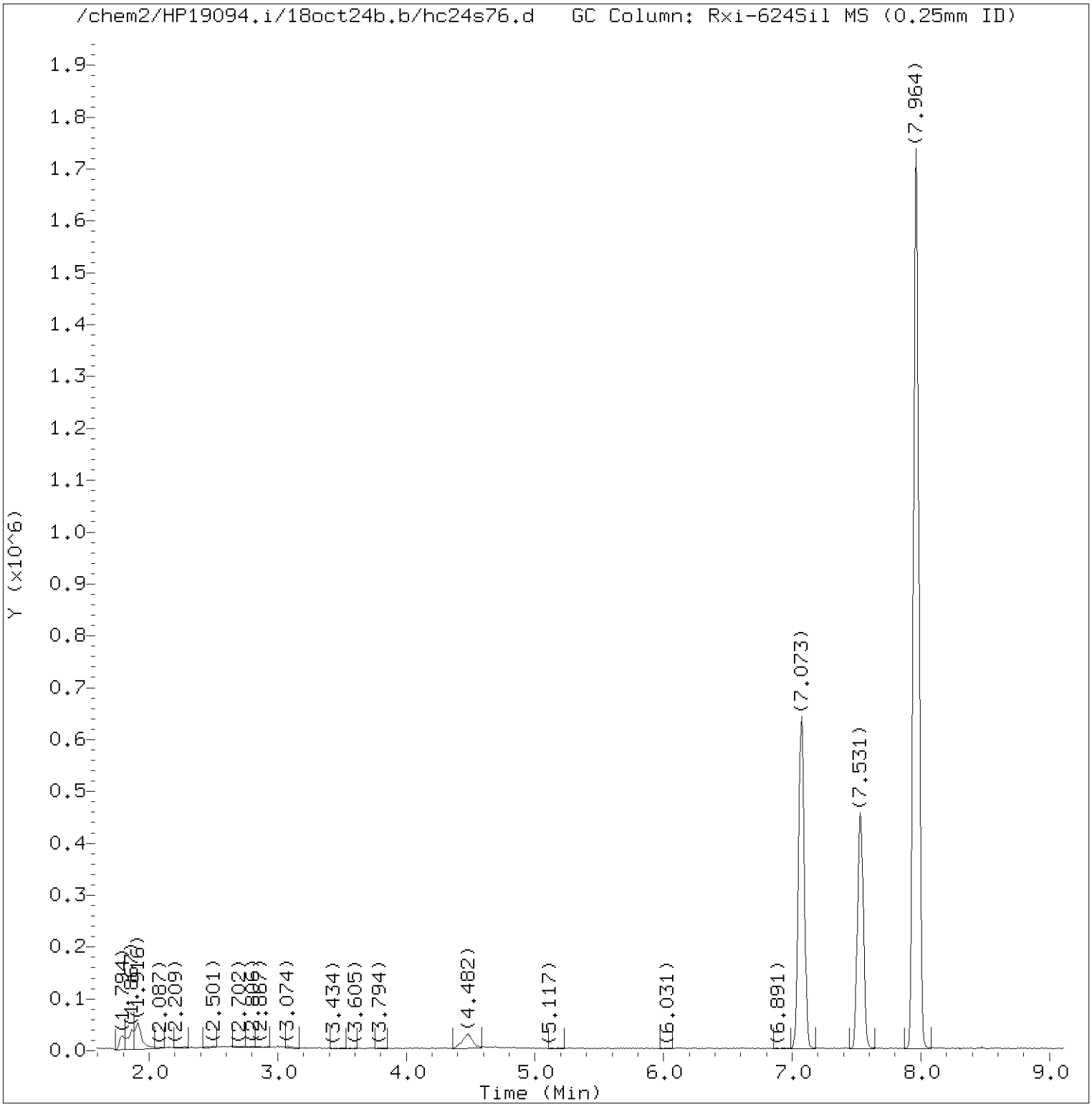
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.067	(0.000)	113	623633	9.837	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	116035	10.499	105%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2454411	10.310	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	848183	9.785	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

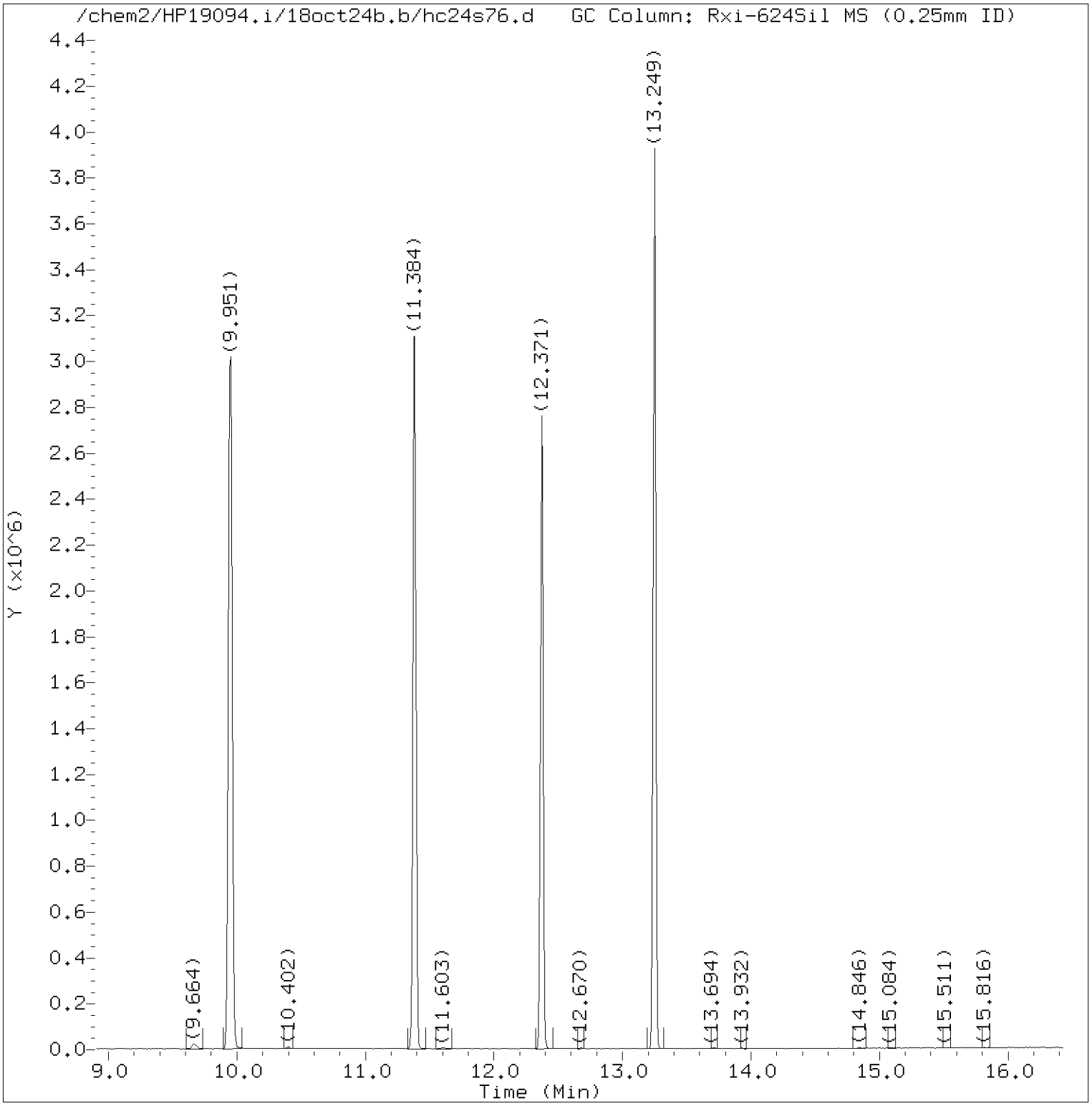
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s76.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:36 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HMTB Lab Sample ID: 9856062

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s76.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:36 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HMTB Lab Sample ID: 9856062

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s76.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 02:36 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:31 kel01973

Sample Name: 5HMTB Lab Sample ID: 9856062

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.482	65	104946	50.000
50)$Dibromofluoromethane	(2)	7.067	113	623633	9.837
57)$1,2-Dichloroethane-d4	(2)	7.531	102	116035	10.499
63)*Fluorobenzene	(2)	7.964	96	2515376	10.000
82)$Toluene-d8	(3)	9.951	98	2454411	10.310
97)*Chlorobenzene-d5	(3)	11.384	117	1849768	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	848183	9.785
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	983954	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18SEP24I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	HS24T05.D	BFB AUG07-18	09/24/2018	17:53		
JKH09052	HS24X01.D	blk	09/24/2018	18:07		
JKH09052	HS24i01.D	VSTD025	09/24/2018	18:29		
JKH09052	HS24i02.D	VSTD010	09/24/2018	18:50		
JKH09052	HS24i03.D	VSTD005	09/24/2018	19:11		
JKH09052	HS24i04.D	VSTD002	09/24/2018	19:33		
JKH09052	HS24i05.D	VSTD001	09/24/2018	19:54		
JKH09052	HS24i06.D	VSTD0.5	09/24/2018	20:16		
JKH09052	HS24i07.D	VSTD0.2	09/24/2018	20:37		
JKH09052	HS24M01.D	MDL0.1	09/24/2018	20:59		
JKH09052	HS24V01.D	ICVHLG	09/24/2018	21:20		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - d:\data\18oct24B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JGC14951	HC24T05.D	50NGBFB	10/24/2018	19:36	H182972AA	
JGC14951	HC24X01.D	VBLKH60	10/24/2018	19:58	H182972AA	
JGC14951	HC24C01.D	VSTD010	10/24/2018	20:19	H182972AA	
JGC14951	HC24C02.D	VSTD010	10/24/2018	20:41	H182972AA	
JGC14951	HC24S41.D	LCSH60	10/24/2018	21:02	H182972AA	
JGC14951	HC24S42.D	LCDH60	10/24/2018	21:23	H182972AA	
JGC14951	HC24S43.D	LCSH61	10/24/2018	21:45	H182972AA	
JGC14951	HC24S44.D	LCDH61	10/24/2018	22:06	H182972AA	
JGC14951	HC24M01.D	MDL61	10/24/2018	22:28	H182972AA	
JGC14951	HC24B05.D	VBLKH60	10/24/2018	22:49	H182972AA	
JGC14951	HC24S45.D	9851488	10/24/2018	23:24	H182972AA	
JGC14951	HC24S46.D	9851492	10/24/2018	23:45	H182972AA	
JGC14951	HC24S47.D	9851494	10/25/2018	00:06	H182972AA	
JGC14951	HC24S48.D	9851497RE	10/25/2018	00:27	H182972AA	100
JGC14951	HC24S49.D	9851493	10/25/2018	00:49	H182972AA	2
JGC14951	HC24S50.D	9851493DL	10/25/2018	01:10	H182972AA	20
JGC14951	HC24S73.D	9856059	10/25/2018	01:32	H182973AA	
JGC14951	HC24S74.D	9856060	10/25/2018	01:53	H182973AA	
JGC14951	HC24S75.D	9856061	10/25/2018	02:14	H182973AA	
JGC14951	HC24S76.D	9856062	10/25/2018	02:36	H182973AA	
JGC14951	HC24S77.D	9856052	10/25/2018	02:58	H182973AA	
JGC14951	HC24S78.D	9856053	10/25/2018	03:19	H182973AA	
JGC14951	HC24S79.D	9856054	10/25/2018	03:40	H182973AA	
JGC14951	HC24S80.D	9856055MS	10/25/2018	04:02	H182973AA	
JGC14951	HC24S81.D	9856056MSD	10/25/2018	04:23	H182973AA	
JGC14951	HC24X02.D	VBLKH60	10/25/2018	04:44	H182972AA	
JGC14951	HC24S82.D	9856057	10/25/2018	05:06	H182973AA	
JGC14951	HC24S83.D	9856058	10/25/2018	05:27	H182973AA	

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

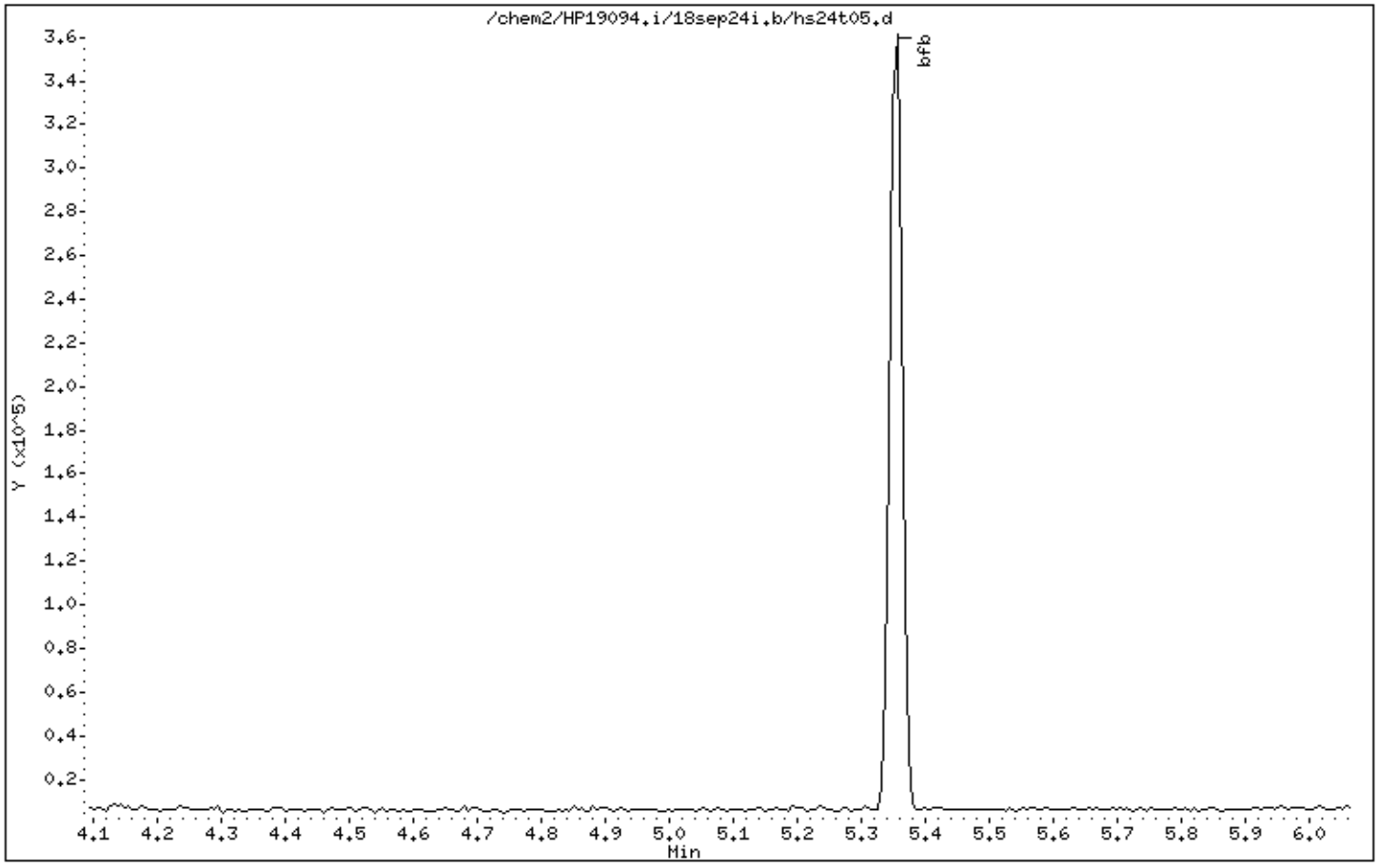
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

Instrument: HP19094.i

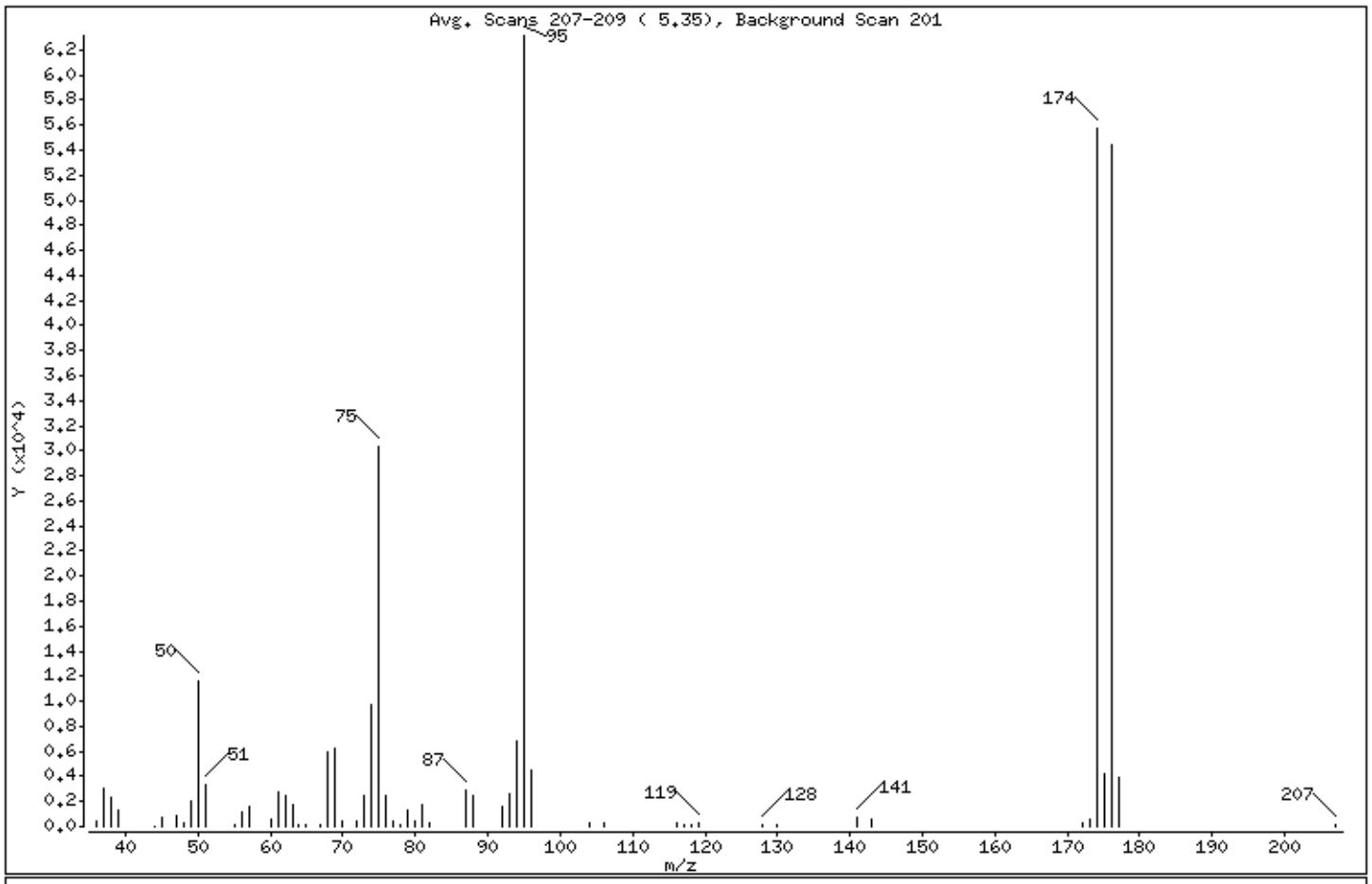
Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.30
75	30.00 - 60.00% of mass 95	48.01
96	5.00 - 9.00% of mass 95	7.23
173	Less than 2.00% of mass 174	0.88 (0.99)
174	50.00 - 100.00% of mass 95	88.37
175	5.00 - 9.00% of mass 174	6.59 (7.45)
176	95.00 - 101.00% of mass 174	86.23 (97.58)
177	5.00 - 9.00% of mass 176	6.27 (7.28)

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

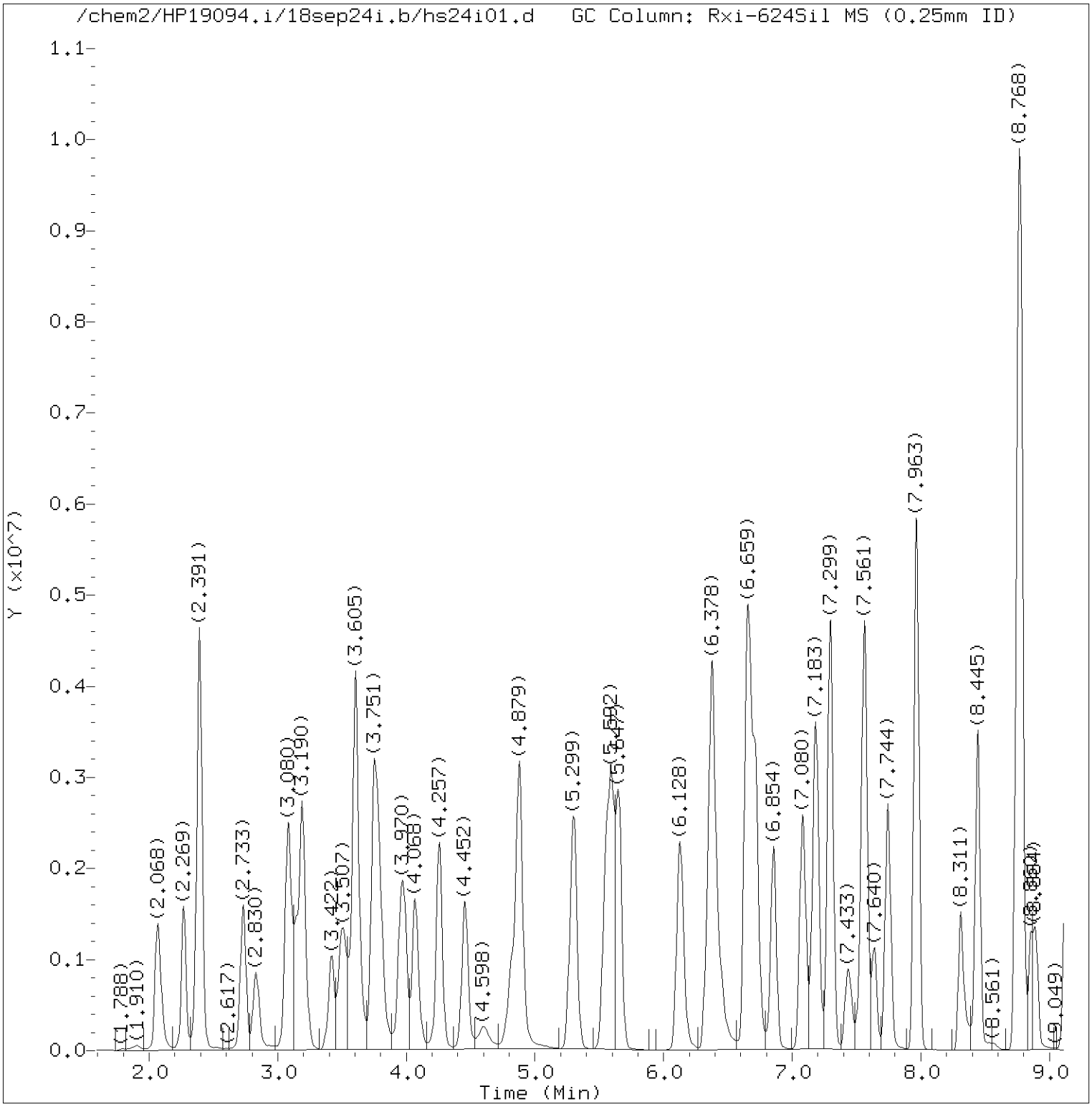
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hs24t05.d
Spectrum: Avg. Scans 207-209 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	380	61.00	2761	78.00	85	117.00	165
37.00	3109	62.00	2478	79.00	1339	118.00	125
38.00	2327	63.00	1778	80.00	478	119.00	271
39.00	1285	64.00	95	81.00	1678	128.00	207
44.00	4	65.00	114	82.00	305	130.00	104
45.00	778	67.00	89	87.00	2896	141.00	746
47.00	856	68.00	6016	88.00	2501	143.00	552
48.00	257	69.00	6278	92.00	1547	172.00	224
49.00	2059	70.00	428	93.00	2614	173.00	555
50.00	11554	72.00	423	94.00	6758	174.00	55792
51.00	3390	73.00	2434	95.00	63136	175.00	4158
55.00	180	74.00	9779	96.00	4567	176.00	54440
56.00	1094	75.00	30304	104.00	228	177.00	3961
57.00	1606	76.00	2509	106.00	307	207.00	187
60.00	530	77.00	454	116.00	237		

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

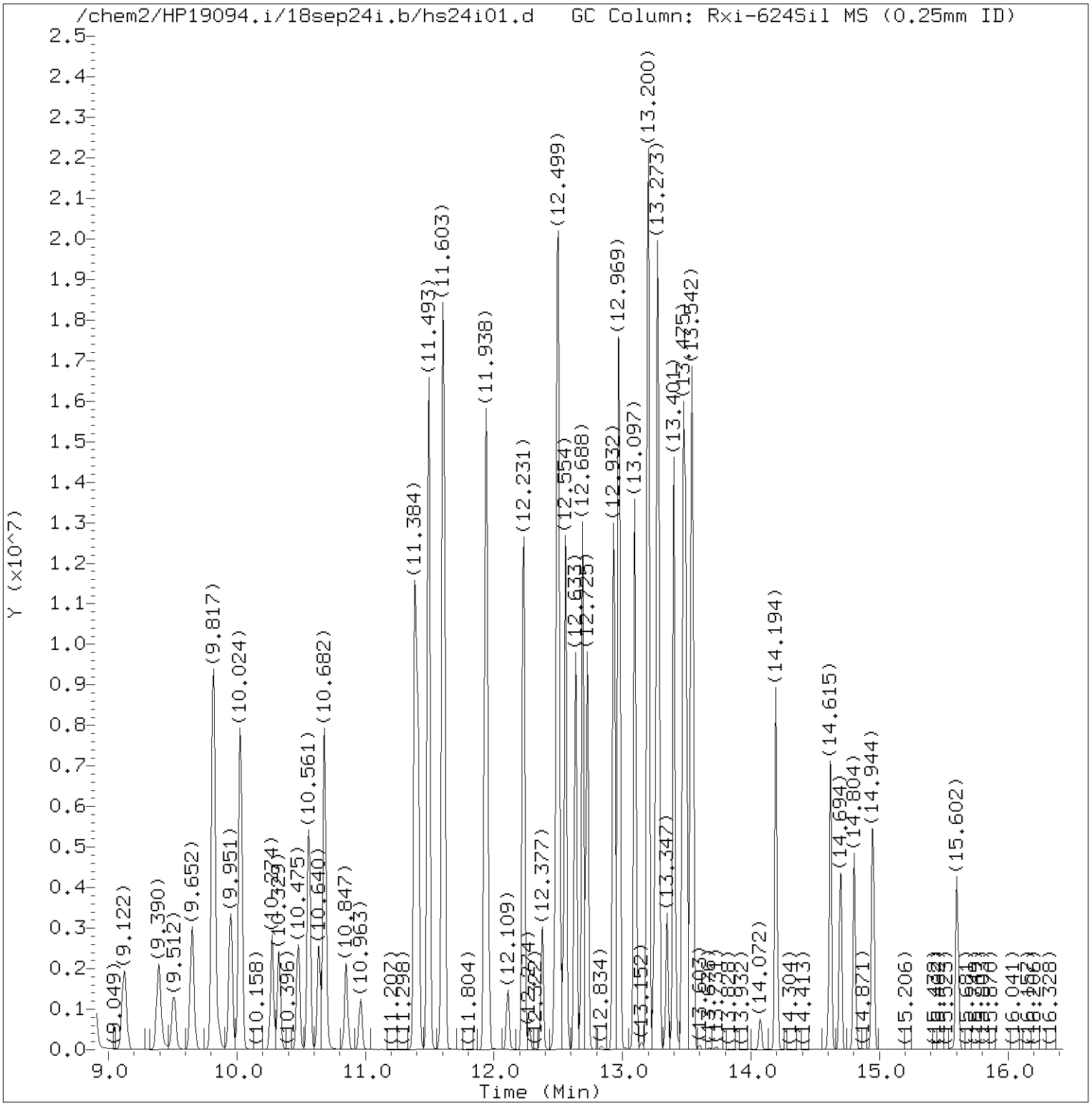
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	2667477	26.155
2) Chloromethane	(2)	2.269	50	2539335	25.424
5) Vinyl Chloride	(2)	2.391	62	2410925	25.776
6) 1,3-Butadiene	(2)	2.391	39	2594646	24.489
7) Bromomethane	(2)	2.733	94	1851509	25.463
8) Chloroethane	(2)	2.830	64	1410558	24.864
9) Dichlorofluoromethane	(2)	3.080	67	3474207	25.746
10) Trichlorofluoromethane	(2)	3.141	101	3065694	25.945
11) Ethyl ether	(2)	3.416	59	1019569	25.448
12) Freon 123a	(2)	3.501	67	1934522	25.841
13) Acrolein	(1)	3.605	56	7172863	1305.987
15) 1,1-Dichloroethene	(2)	3.745	96	1360935	26.597
16) Freon 113	(2)	3.775	101	1627334	26.985
14) Acetone	(1)	3.787	43	1847599M	250.454
17) Methyl Iodide	(2)	3.958	142	2764121	25.916
18) Carbon Disulfide	(2)	4.068	76	4201344	25.805
21) Methyl Acetate	(1)	4.233	43	504865	24.378
22) Allyl Chloride	(2)	4.257	41	2524824	25.958
23) Methylene Chloride	(2)	4.458	84	1406291	24.362
26)*t-Butyl Alcohol-d10	(1)	4.470	65	123769M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	982548	465.083
29) Acrylonitrile	(1)	4.812	53	1235214M	129.656
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	2663697	25.312
31) trans-1,2-Dichloroethene	(2)	4.879	96	1493749	25.866
32) n-Hexane	(2)	5.299	57	2559536	27.873
33) 1,1-Dichloroethane	(2)	5.543	63	2842374M	25.851
34) di-Isopropyl Ether	(2)	5.592	45	5070137	25.966
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2671346	27.000
40) 1,2-Dichloroethene (Total)	(2)		96	3155804	51.914
37) Ethyl t-butyl ether	(2)	6.128	59	3878205	25.041
38) 2-Butanone	(1)	6.348	43	3061047	253.491
39) cis-1,2-Dichloroethene	(2)	6.372	96	1662055	26.048
41) 2,2-Dichloropropane	(2)	6.391	77	2084281	26.541
42) Propionitrile	(1)	6.446	54	1568878	478.649
45) Methacrylonitrile	(1)	6.653	67	3149545	266.488
47) Bromochloromethane	(2)	6.714	128	688648	25.549
48) Tetrahydrofuran	(1)	6.720	71	820759	255.663
49) Chloroform	(2)	6.854	83	2651699	25.940

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	655219	9.962
50)$Dibromofluoromethane	(2)	7.073	111	673113	9.943
51) 1,1,1-Trichloroethane	(2)	7.086	97	2299905	26.303
52) Cyclohexane	(2)	7.183	56	3091541	27.084
52) Cyclohexane	(2)	7.183	84	2539041	26.980
52) Cyclohexane	(2)	7.183	69	918069	27.291
54) Carbon Tetrachloride	(2)	7.293	117	2024542	26.959
55) 1,1-Dichloropropene	(2)	7.299	75	2199442	26.527
56) Isobutyl Alcohol	(1)	7.433	41	1045544	1279.099
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112838	9.841
57)$1,2-Dichloroethane-d4	(2)	7.537	65	549372	9.906
57)$1,2-Dichloroethane-d4	(2)	7.537	104	71973	9.801
58) Benzene	(2)	7.561	78	6318666	25.796
59) 1,2-Dichloroethane	(2)	7.640	62	1386008M	24.587
60) t-Amyl methyl ether	(2)	7.744	73	3227765	25.138
62) n-Heptane	(2)	7.963	43	2650704	27.997
63)*Fluorobenzene	(2)	7.970	96	2609636	10.000
65) n-Butanol	(1)	8.311	56	1867070	2703.605
67) Trichloroethene	(2)	8.445	95	1649864	26.306
69) Methylcyclohexane	(2)	8.750	83	3203740	27.048
70) 1,2-Dichloropropane	(2)	8.787	63	1552299	26.120
71) Methyl Methacrylate	(1)	8.854	69	623886	28.519
72) 1,4-Dioxane	(1)	8.872	88	216251M	1300.575
73) Dibromomethane	(2)	8.890	93	640944	25.985
74) Bromodichloromethane	(2)	9.122	83	1808486	27.068
76) 2-Nitropropane	(1)	9.390	41	1826609	294.768
80) cis-1,3-Dichloropropene	(2)	9.652	75	2141489	27.530
81) 4-Methyl-2-Pentanone	(1)	9.817	43	8439729	280.977
82)$Toluene-d8	(3)	9.951	98	2620387	9.785
82)$Toluene-d8	(3)	9.951	100	1692208	9.791
83) Toluene	(3)	10.024	92	3966390	25.689
85) 1,3-Dichloropropene (total)	(3)		75	3792374	55.280
84) trans-1,3-Dichloropropene	(3)	10.274	75	1650885	27.750
86) Ethyl Methacrylate	(3)	10.329	69	1388174	27.235
88) 1,1,2-Trichloroethane	(3)	10.475	97	904681	25.463
89) Tetrachloroethene	(3)	10.561	166	1799885	25.801
90) 1,3-Dichloropropane	(3)	10.640	76	1618164	25.698
91) 2-Hexanone	(1)	10.682	43	5656981	276.677

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	1148646	26.975
95) 1,2-Dibromoethane	(3)	10.963	107	873629	26.234
96) 1-Chlorohexane	(3)	11.384	91	2376499	25.807
97)*Chlorobenzene-d5	(3)	11.384	117	2080614	10.000
98) Chlorobenzene	(3)	11.408	112	4267356	26.051
100) Ethylbenzene	(3)	11.493	91	8033395	26.621
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1477189	27.325
101) m+p-Xylene	(3)	11.603	106	5930803	52.987
105) Xylene (Total)	(3)		106	8810207	79.883
104) o-Xylene	(3)	11.932	106	2879404	26.908
106) Styrene	(3)	11.944	104	4681599	27.345
107) Bromoform	(3)	12.109	173	650012	27.775
108) Isopropylbenzene	(3)	12.231	105	7914371	27.092
111)$4-Bromofluorobenzene	(3)	12.377	95	947875	9.722
111)$4-Bromofluorobenzene	(3)	12.377	174	827331	9.773
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	1100327M	26.627
114) Bromobenzene	(4)	12.493	156	1705745	27.152
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2718489	288.965
116) 1,2,3-Trichloropropane	(4)	12.524	110	269907	25.264
117) n-Propylbenzene	(4)	12.554	91	9362269	27.408
119) 2-Chlorotoluene	(4)	12.633	126	1758732	26.546
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	6440866	27.834
122) 4-Chlorotoluene	(4)	12.725	126	1781873	26.840
125) tert-Butylbenzene	(4)	12.932	134	1366112	27.146
126) Pentachloroethane	(4)	12.969	167	1131984	28.820
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	6639441	28.118
128) sec-Butylbenzene	(4)	13.097	105	8523009	28.424
131) 1,3-Dichlorobenzene	(4)	13.194	146	3395836	27.206
132) p-Isopropyltoluene	(4)	13.200	119	7173555	28.882
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1041754	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	3283435	26.798
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	2886733	26.647
136) Benzyl Chloride	(4)	13.347	126	450358	30.147
138) n-Butylbenzene	(4)	13.493	92	3496269	28.360
139) 1,2-Dichlorobenzene	(4)	13.529	146	2896879	26.305
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	150859	29.629
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	2585997	27.849
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	2125128	28.097

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	789734	27.625
147) Naphthalene	(4)	14.804	128	3453963	28.858
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	1719365	27.647

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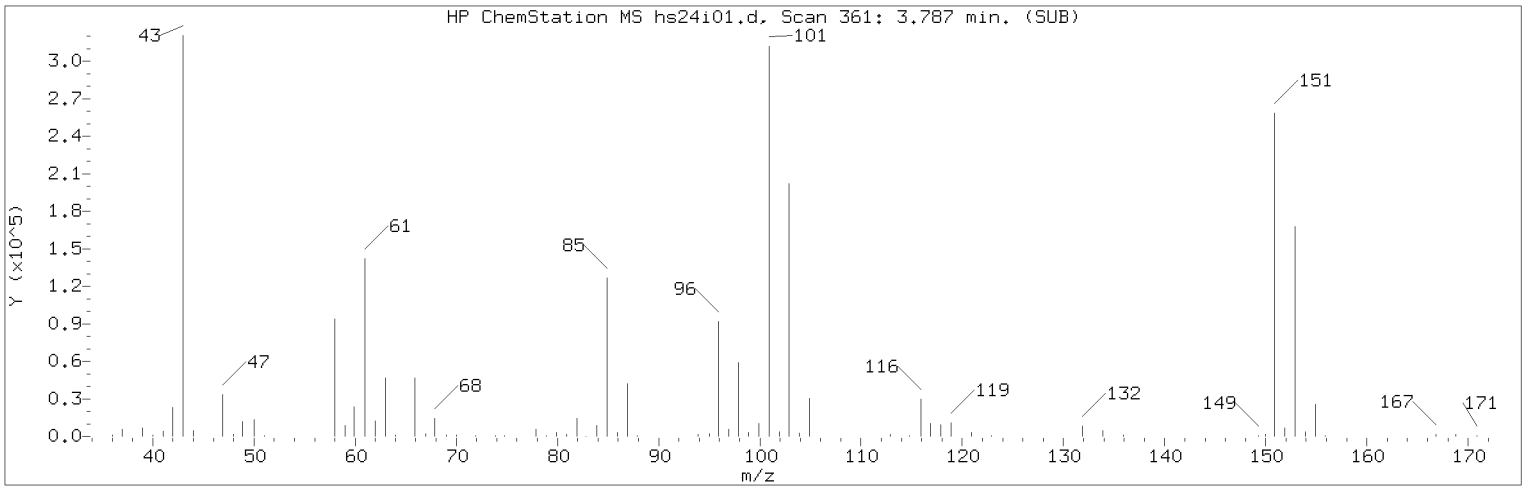
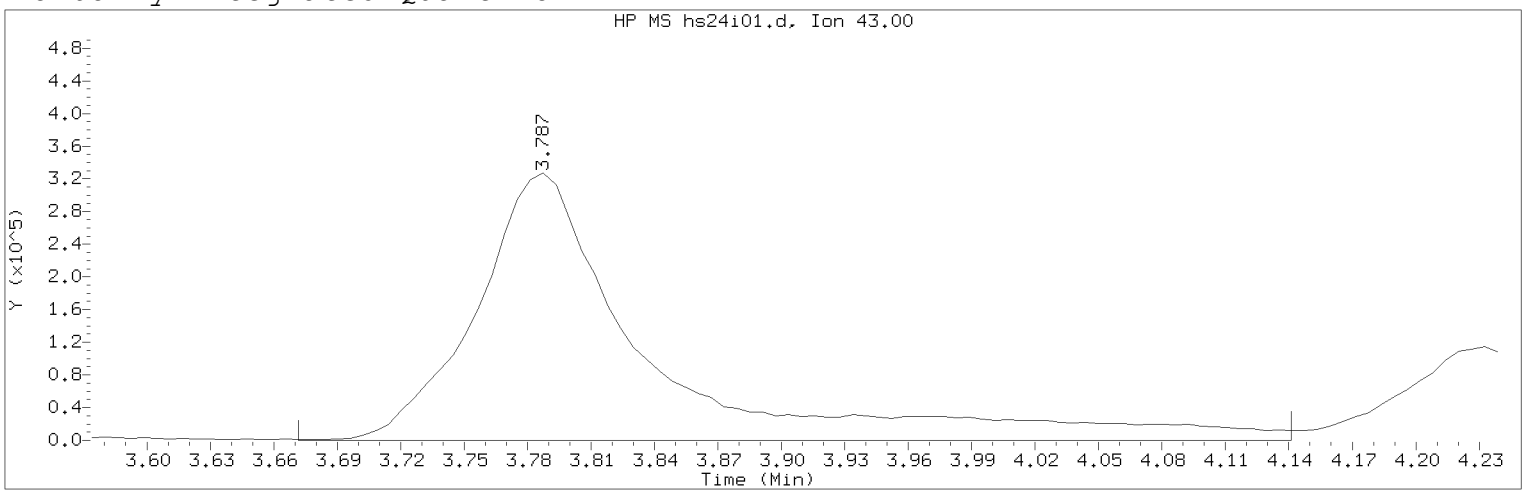
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

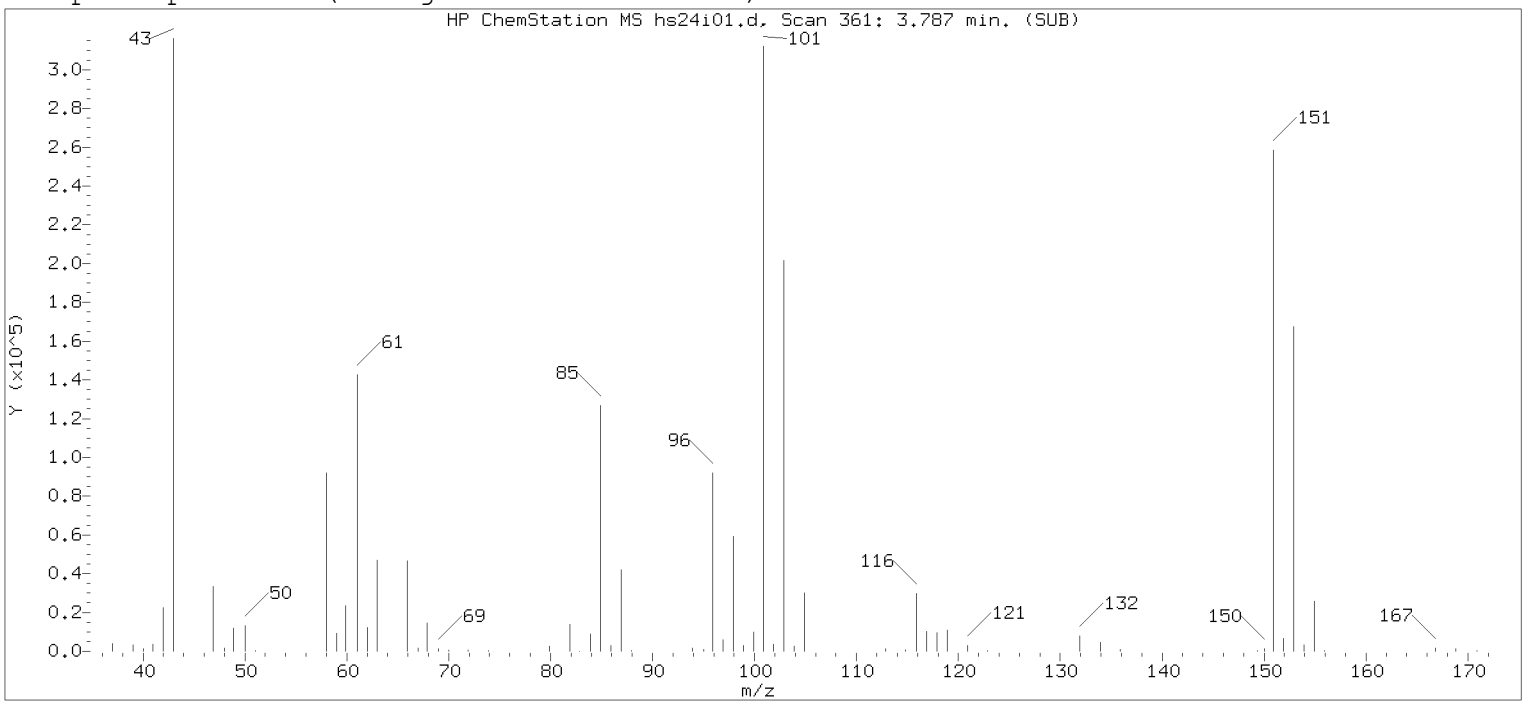
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 1847599M
On-Column Amount (ng) : 250.4543
Integration start scan : 341 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

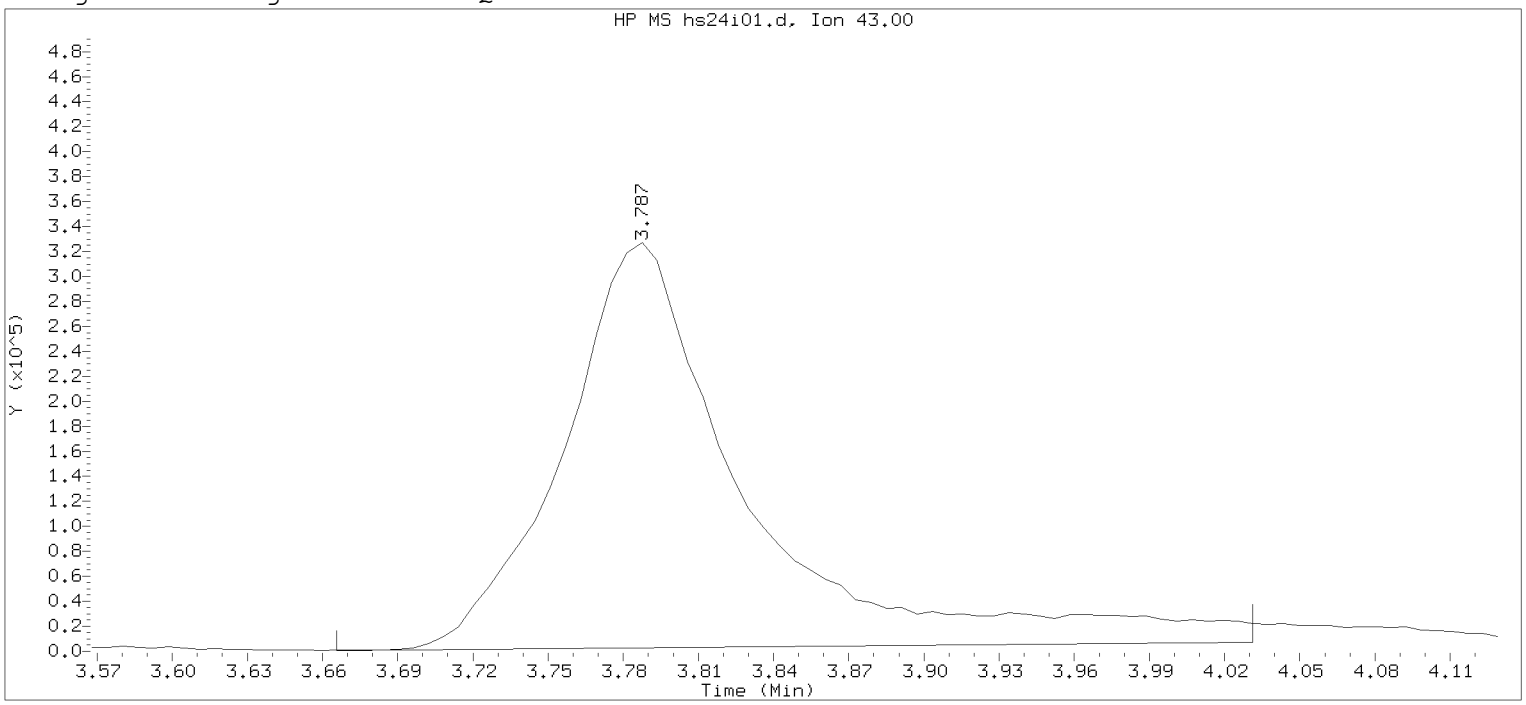
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

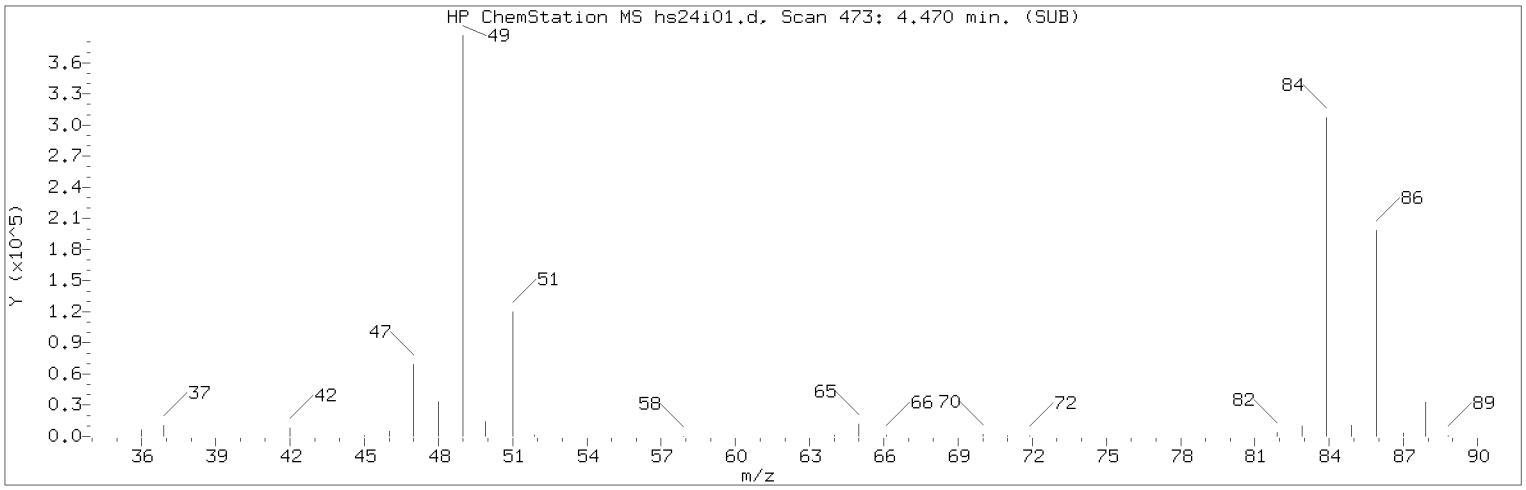
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

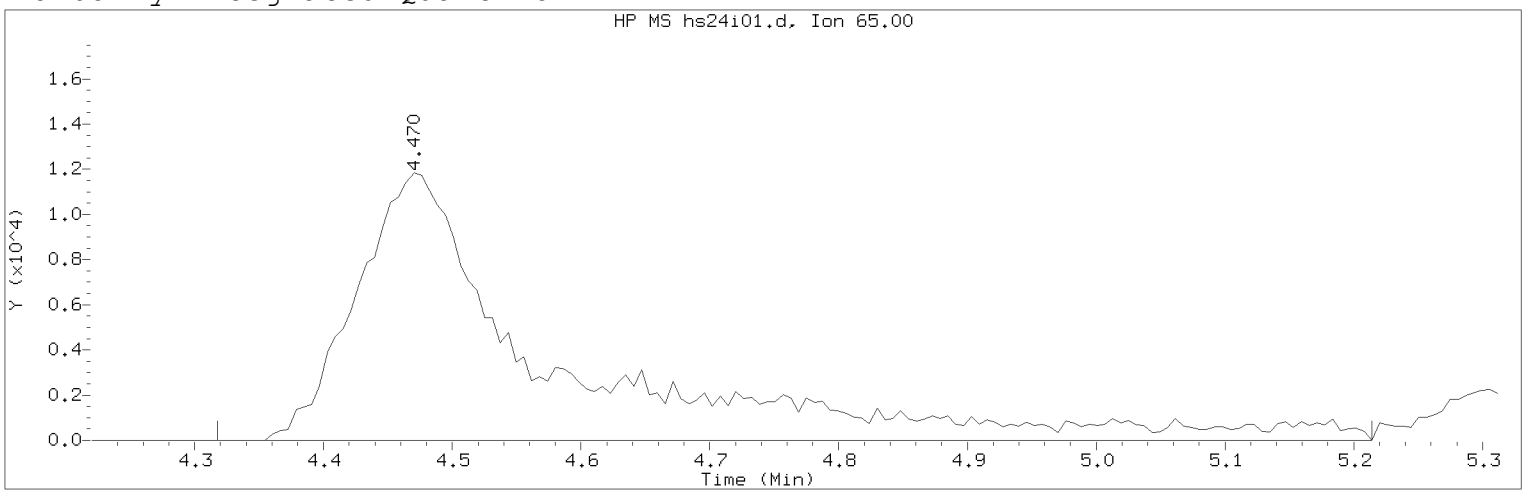
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area : 1639725
On-column Amount (ng) : 243.3952
Integration start scan : 340 Integration stop scan: 400
Y at integration start : 625 Y at integration end: 7448

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

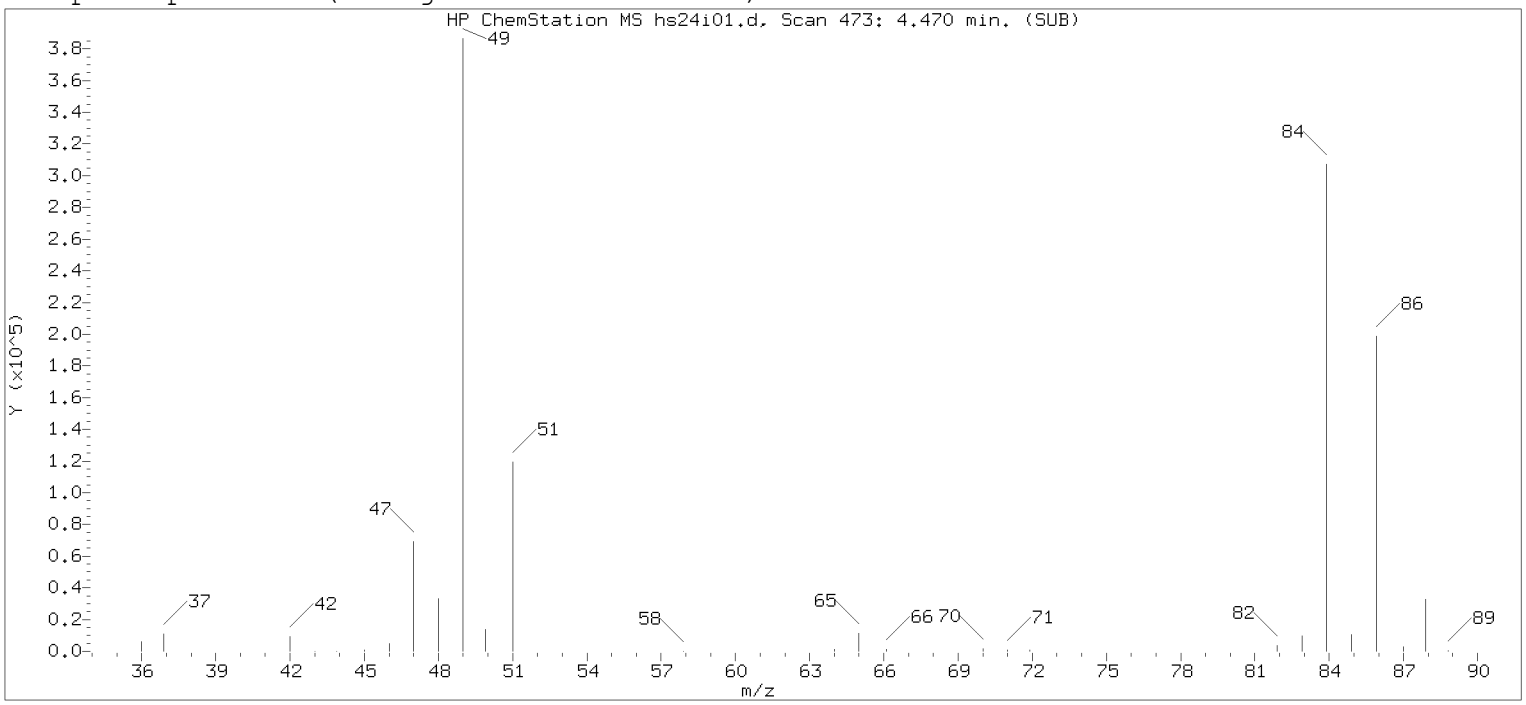
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 123769M
On-Column Amount (ng) : 50.0000
Integration start scan : 447 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

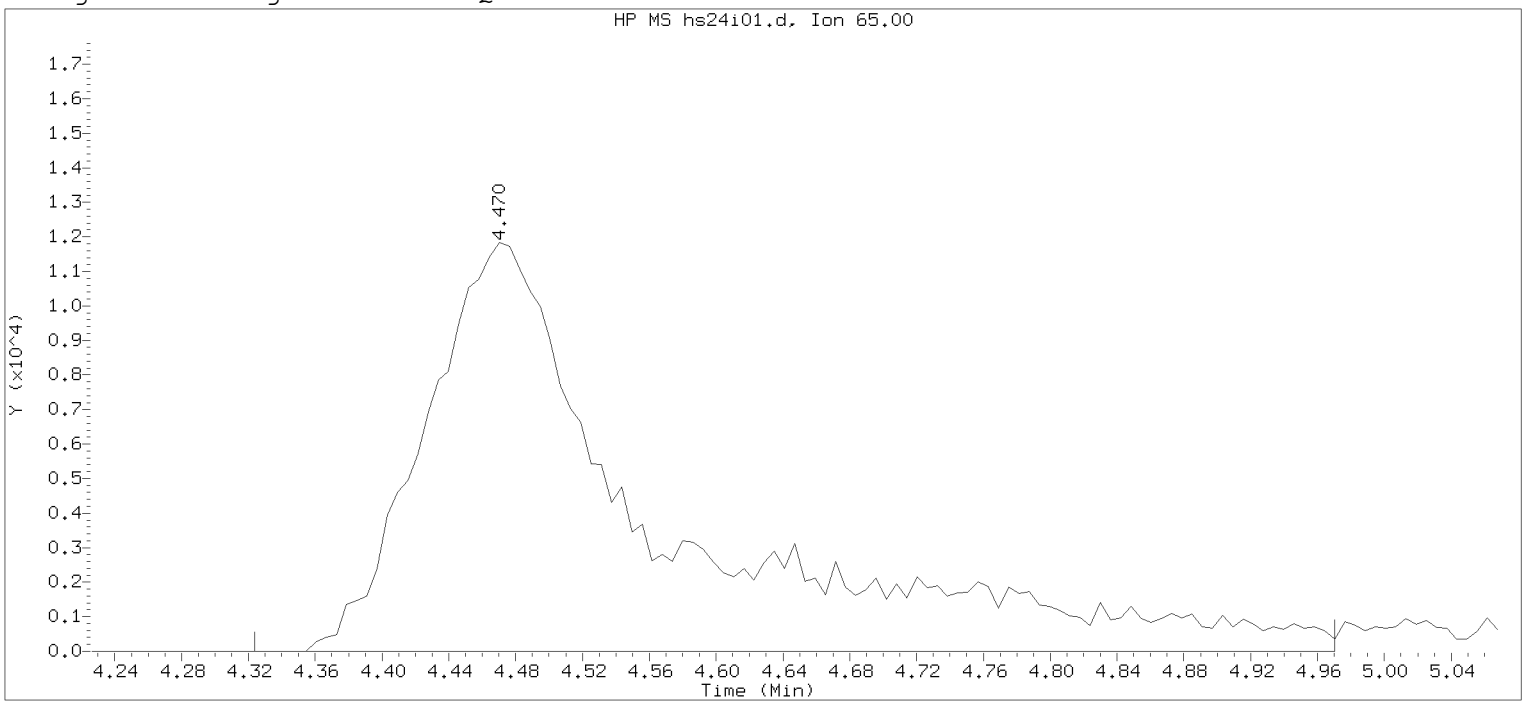
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 473		
Retention Time (minutes)	: 4.470		
Quant Ion	: 65.00		
Area	: 114590		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 448	Integration stop scan:	554
Y at integration start	: 0	Y at integration end:	0

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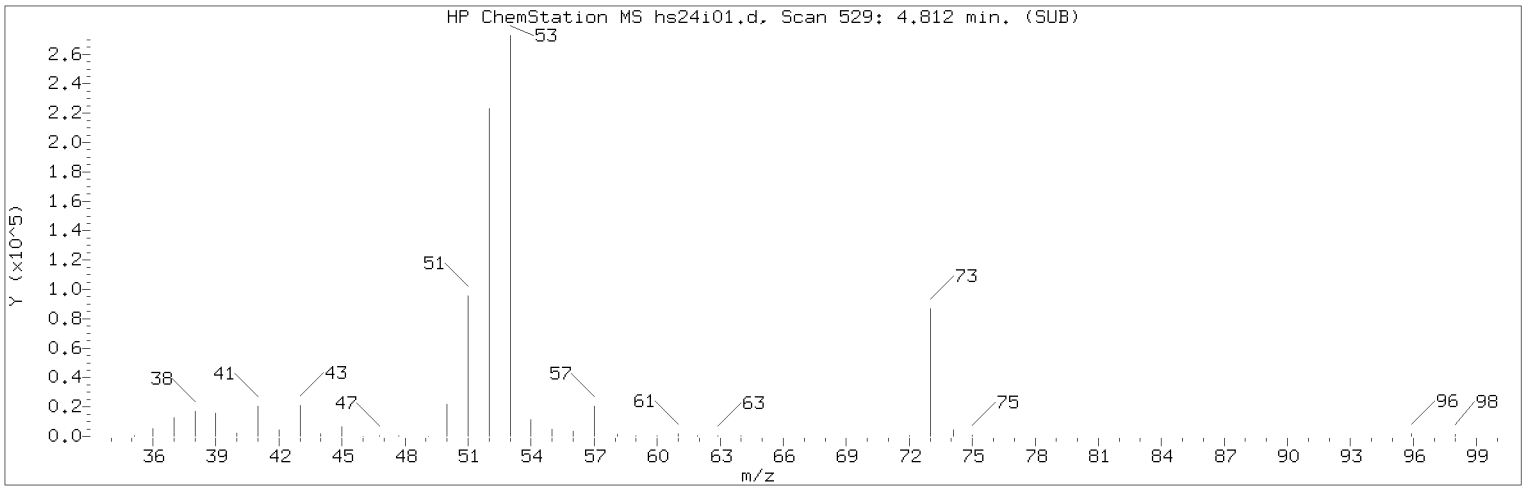
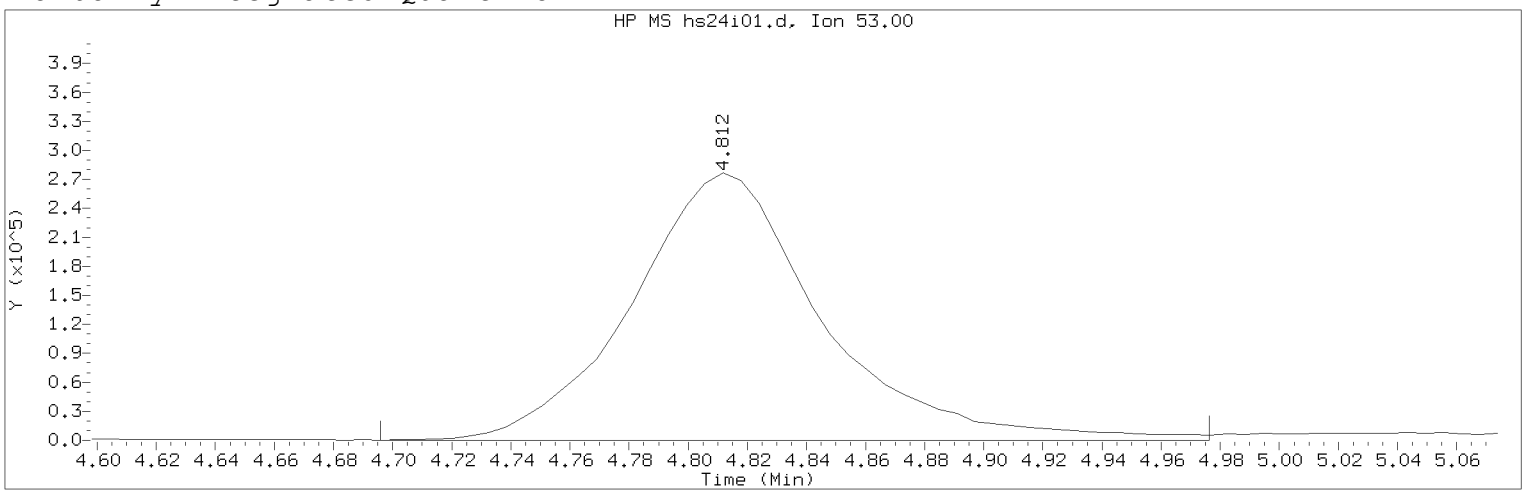
Target 3.5 esignature user AF23jkh0114

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

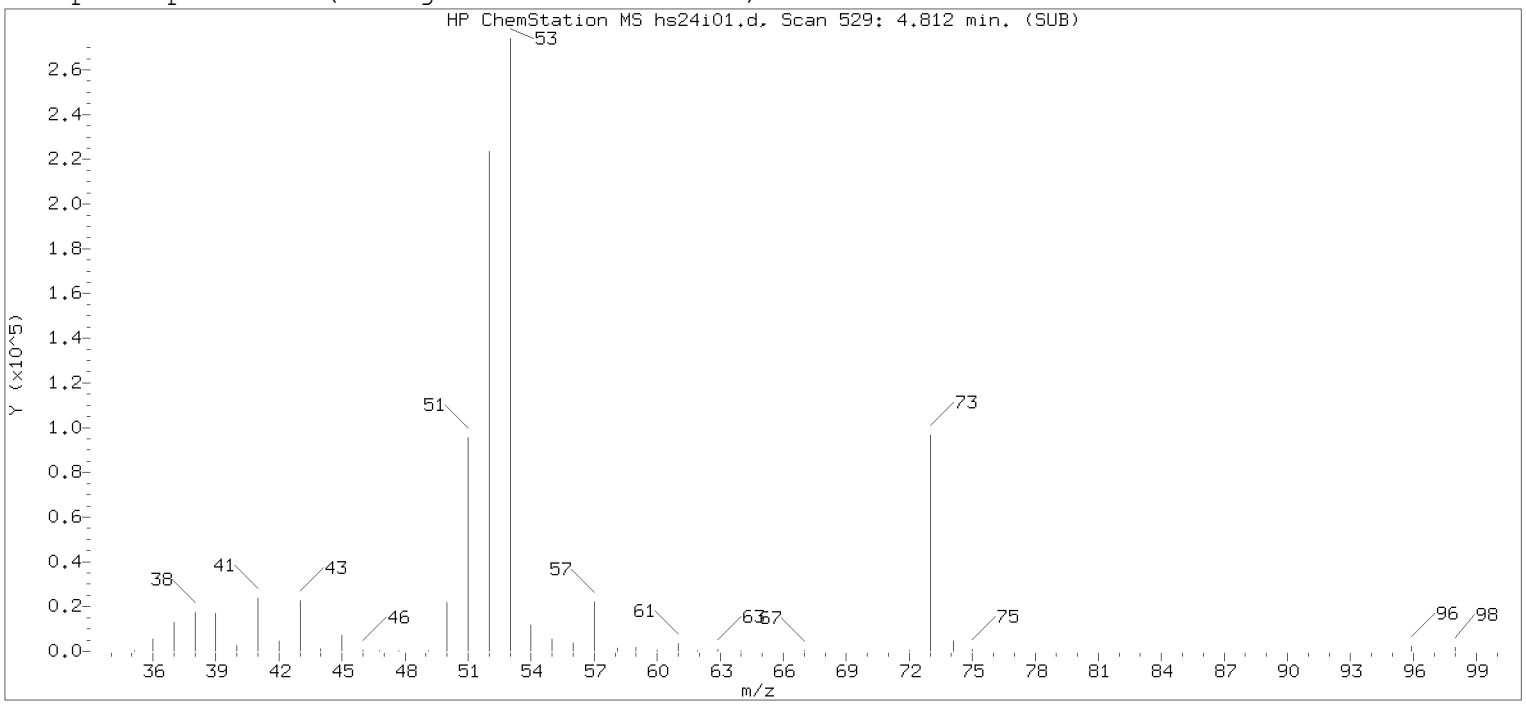
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area (flag) : 1235214M
On-Column Amount (ng) : 129.6558
Integration start scan : 509 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

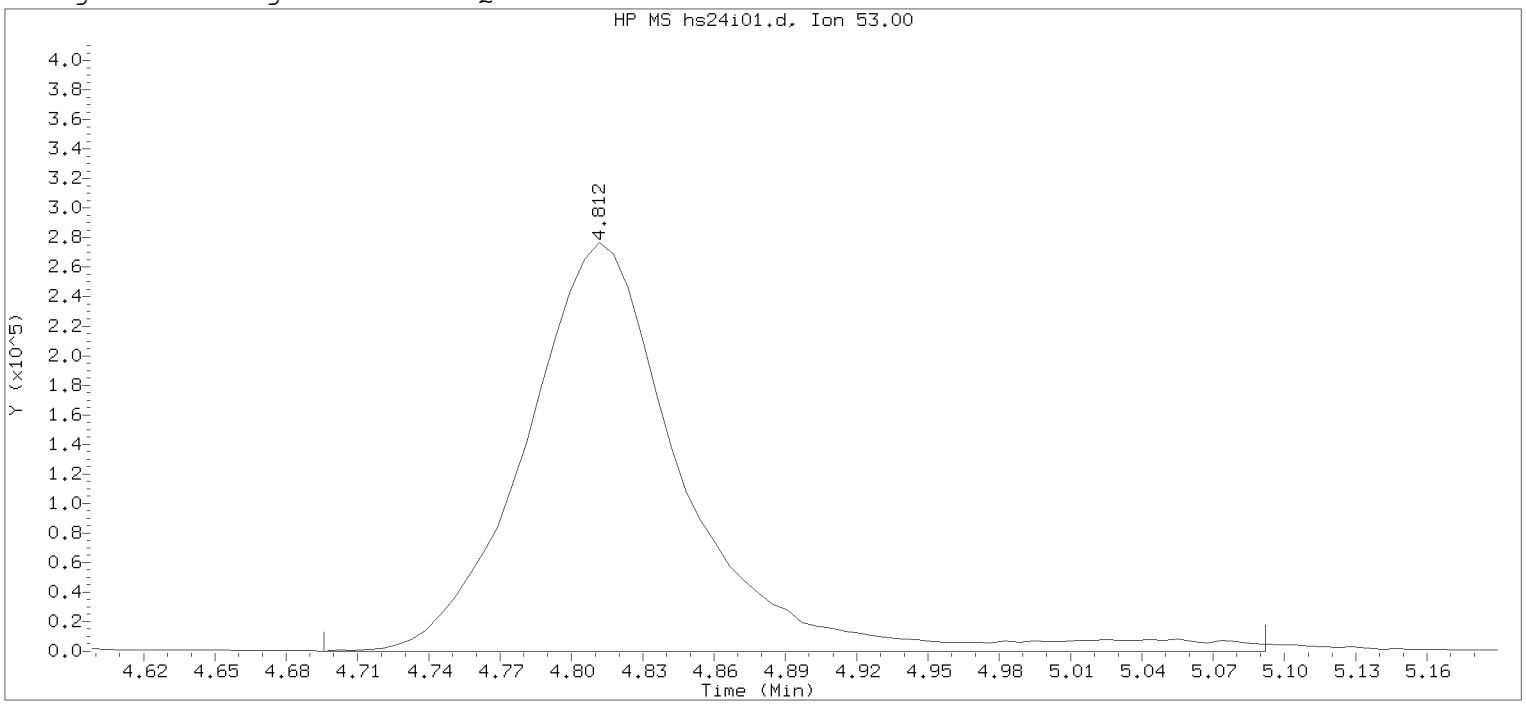
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area : 1282020
On-column Amount (ng) : 129.1888
Integration start scan : 509 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

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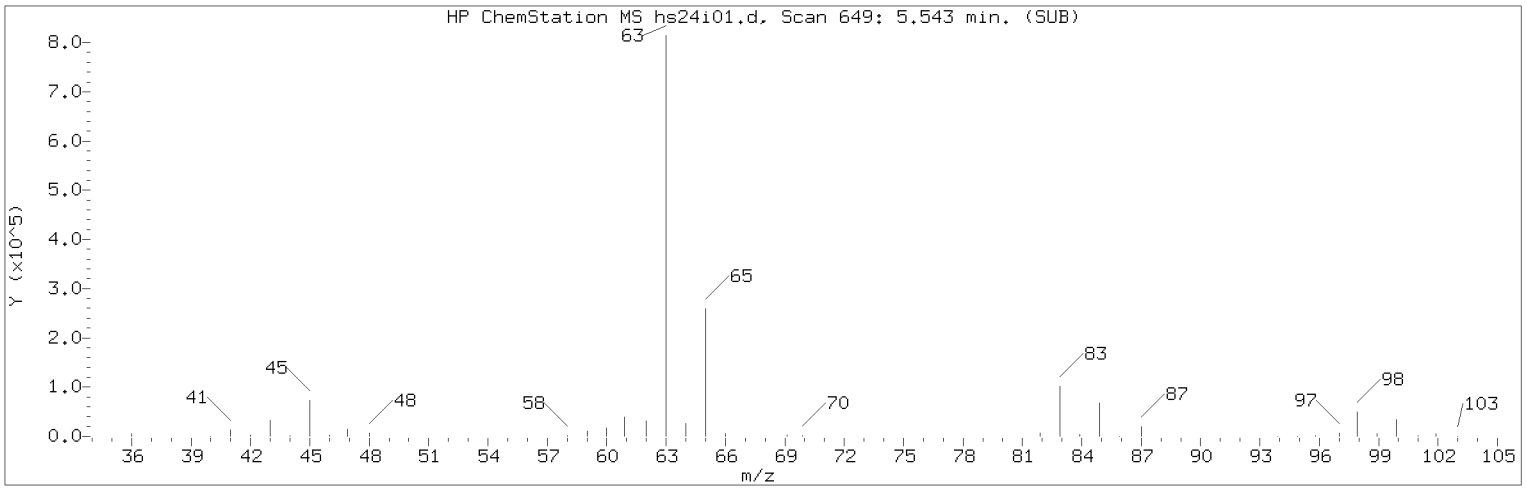
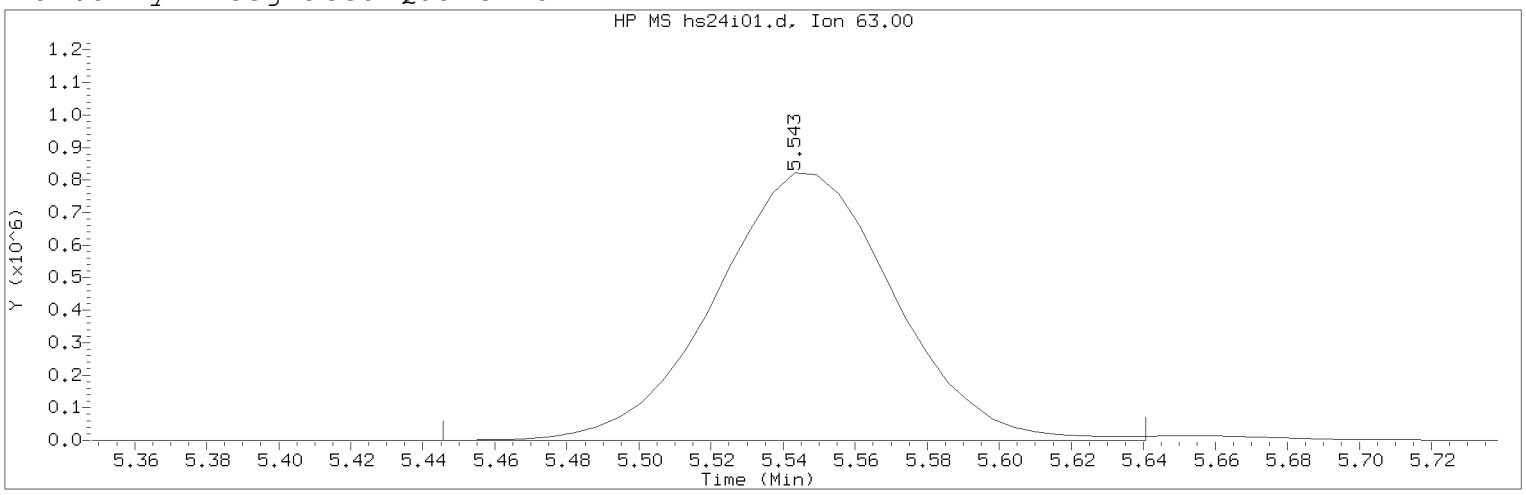
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

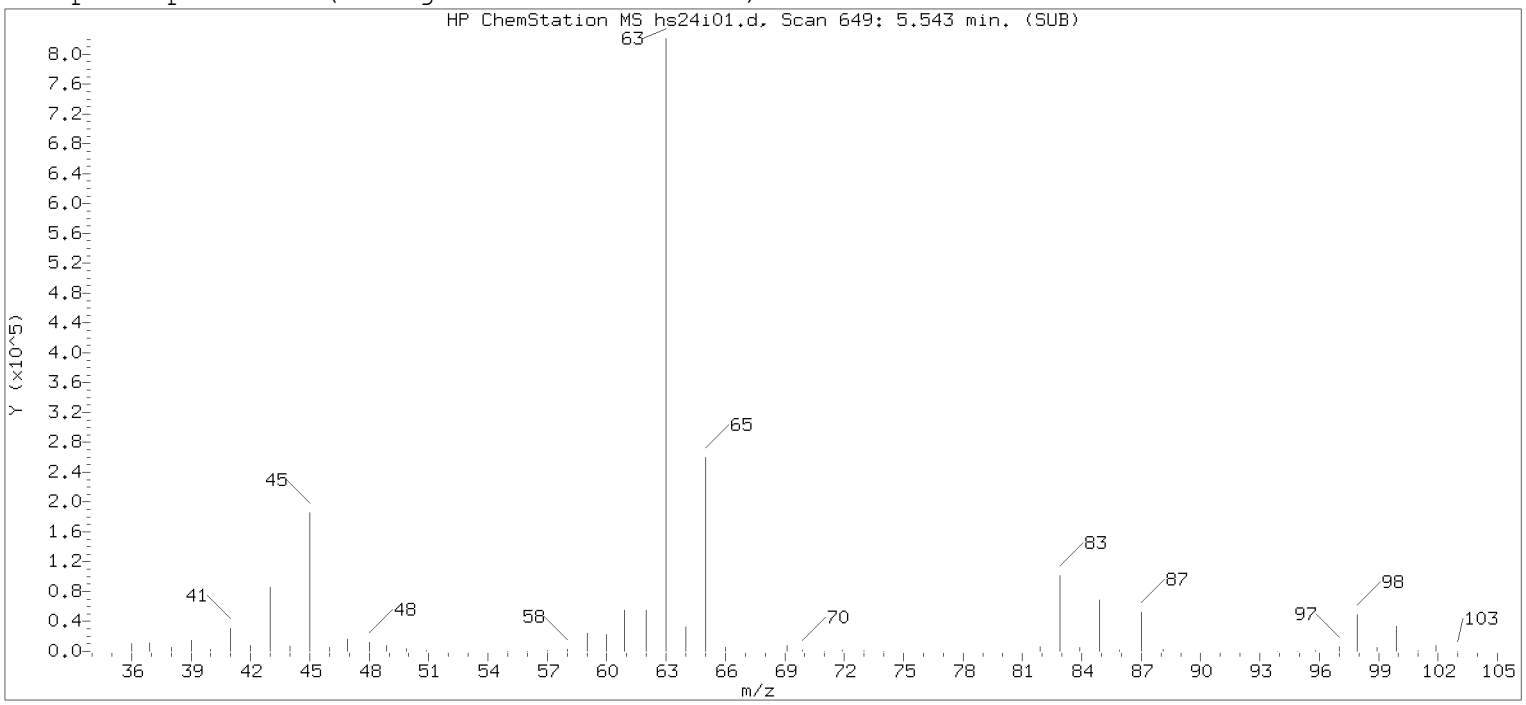
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area (flag) : 2842374M
On-Column Amount (ng) : 25.8511
Integration start scan : 632 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

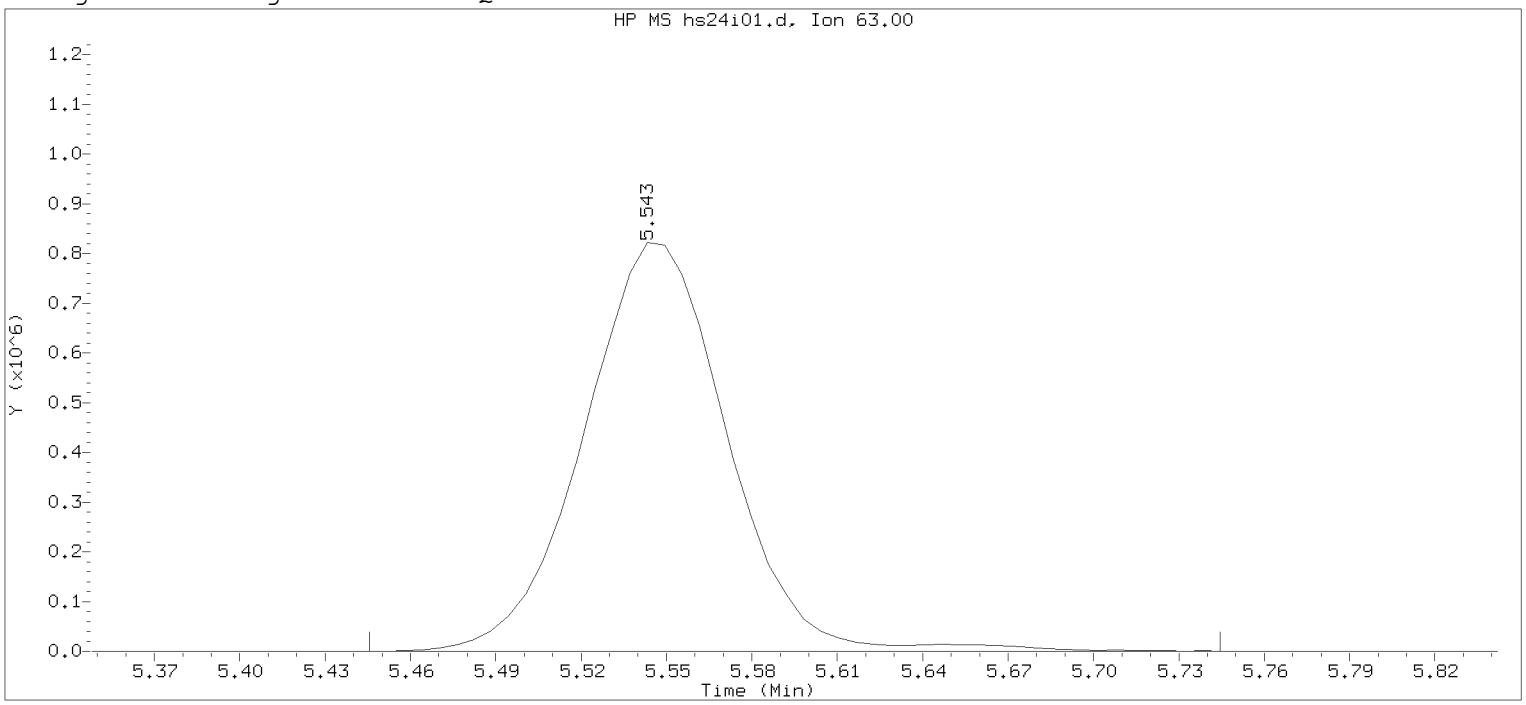
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

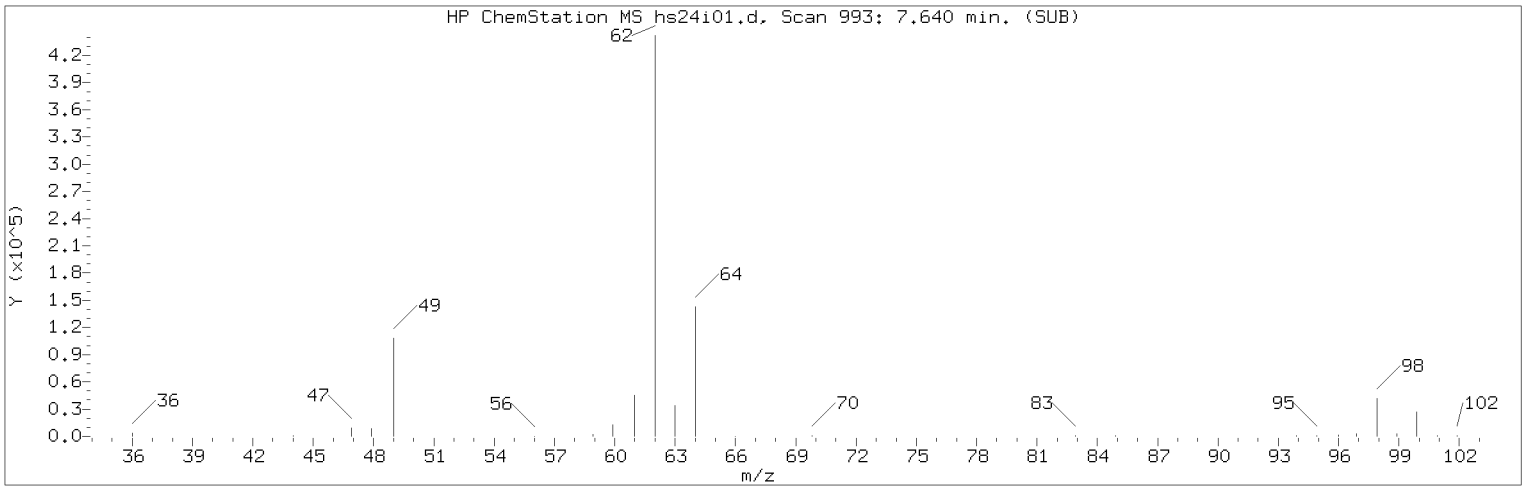
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

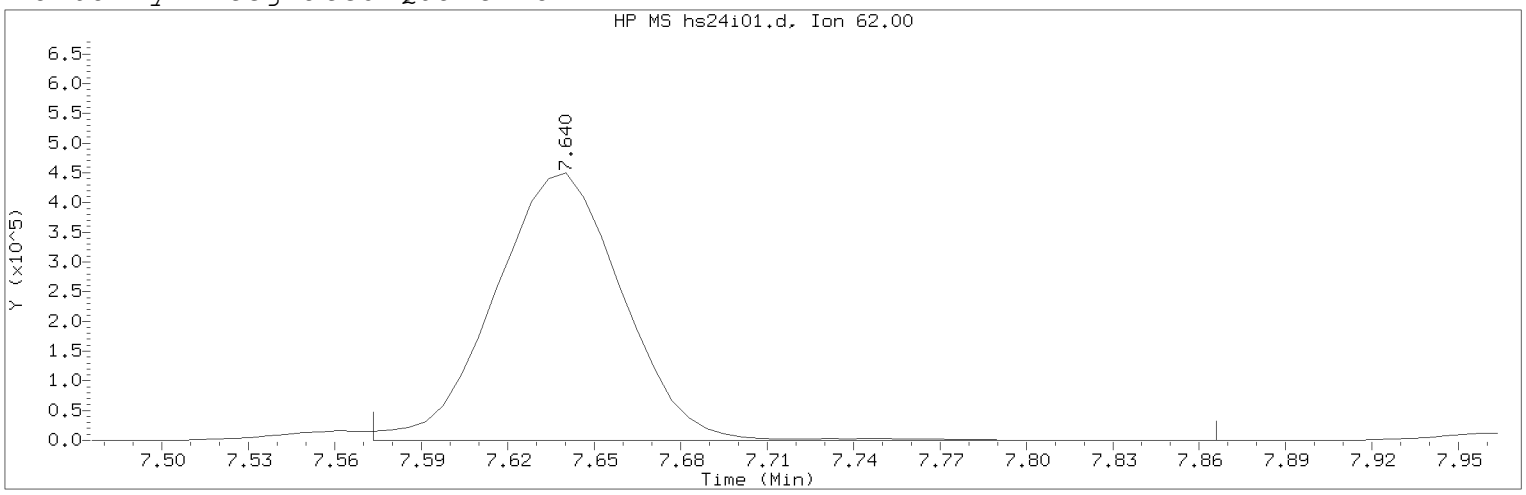
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area : 2874978
On-column Amount (ng) : 24.9330
Integration start scan : 632 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

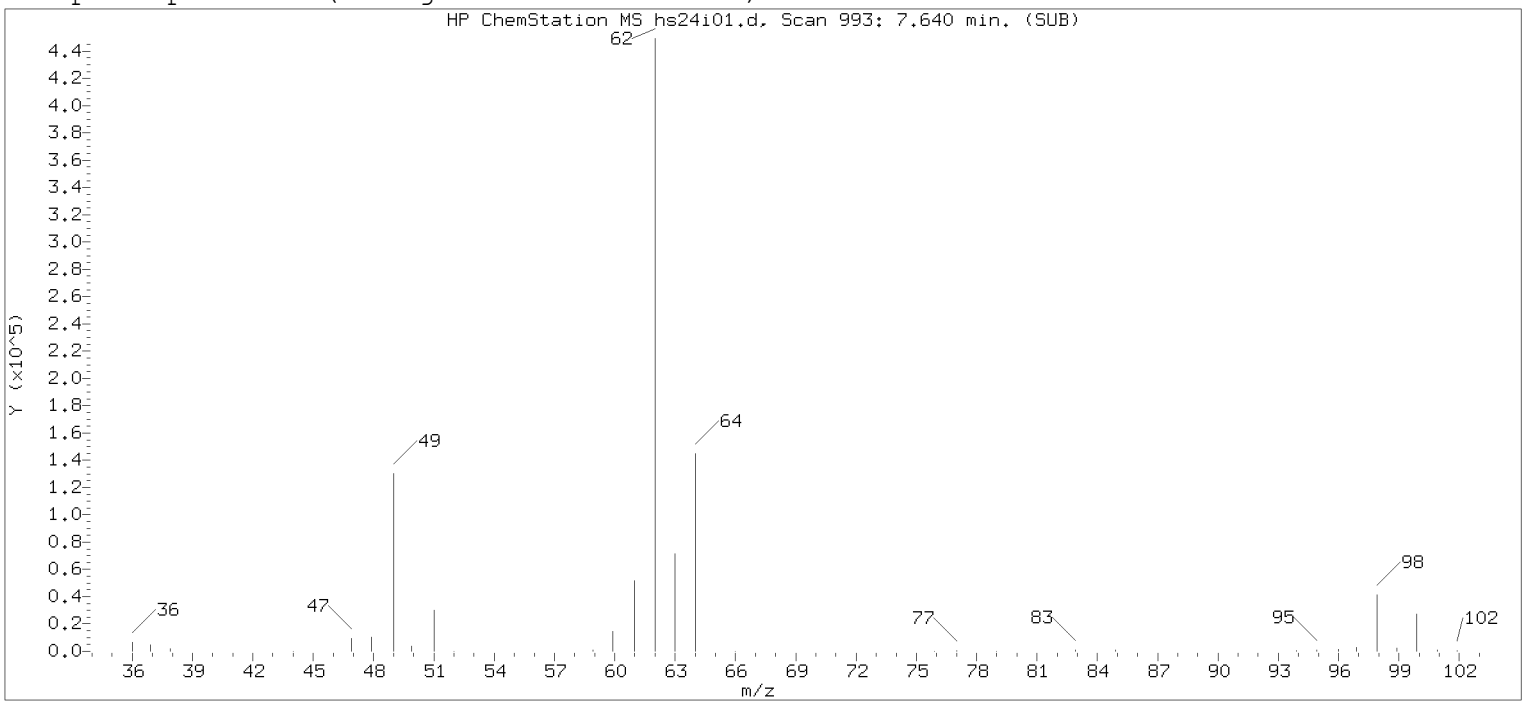
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area (flag) : 1386008M
On-Column Amount (ng) : 24.5870
Integration start scan : 981 Integration stop scan: 1029
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

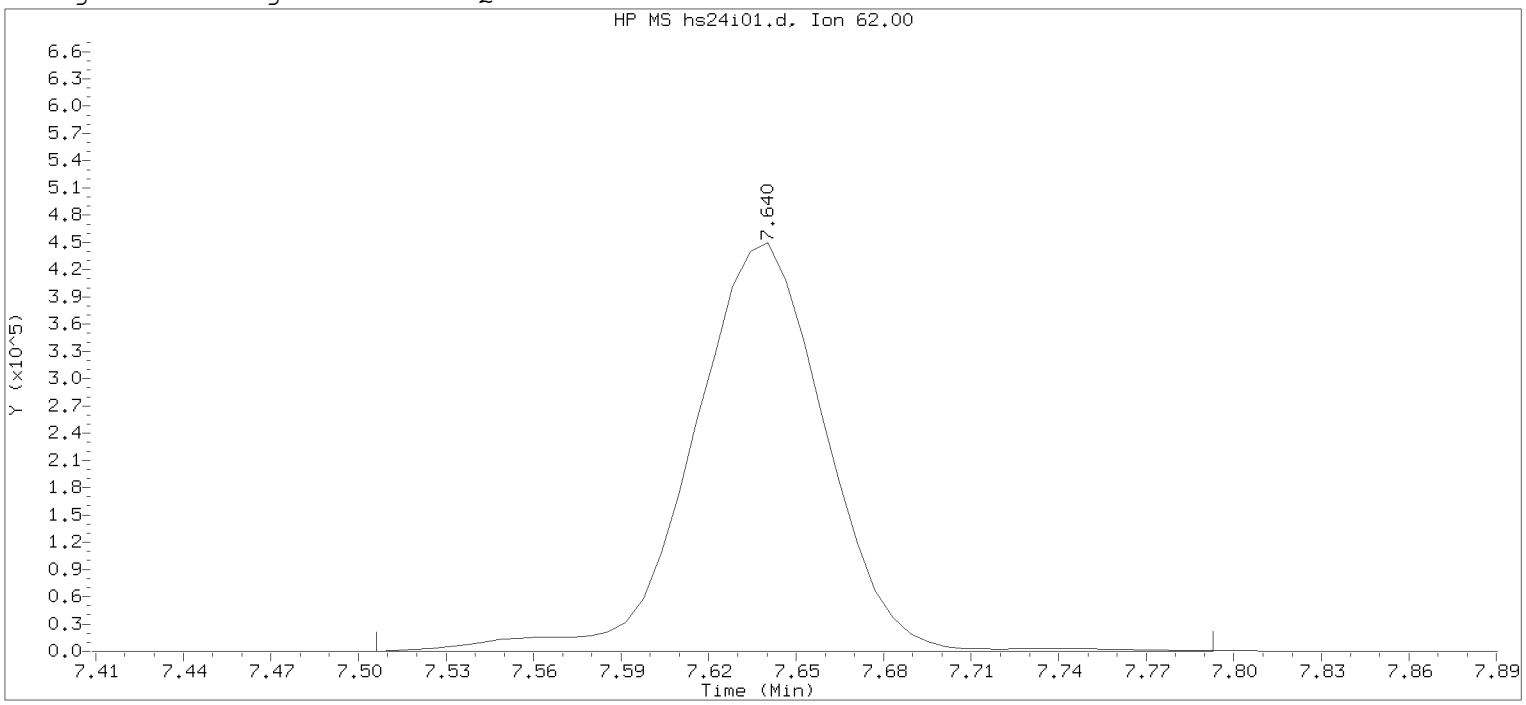
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

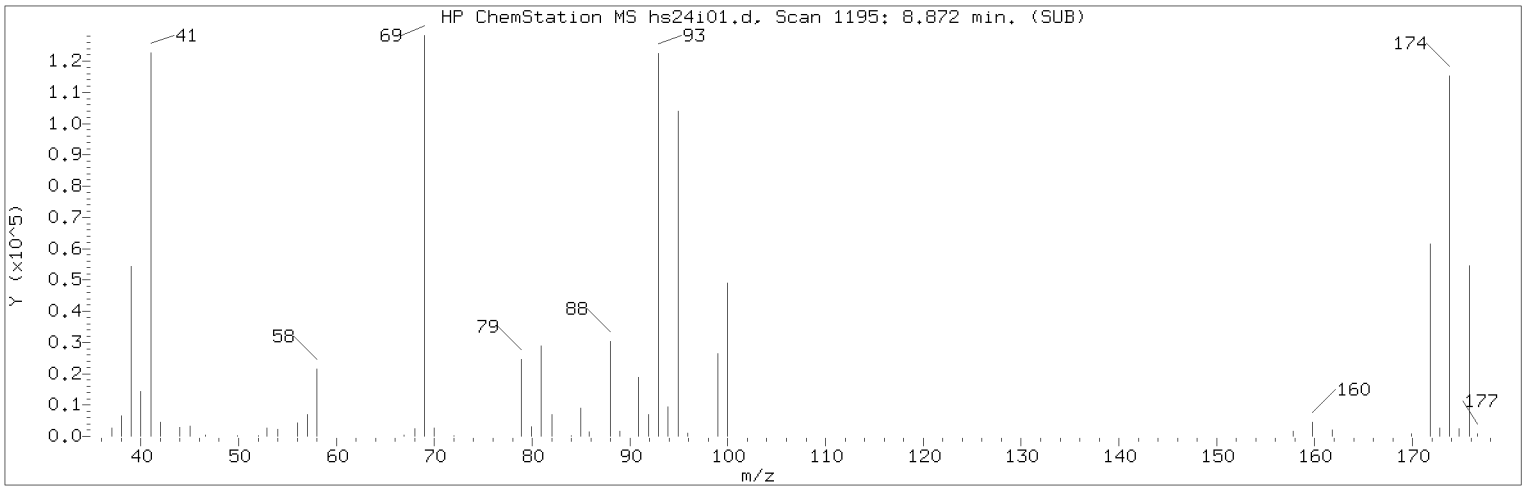
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

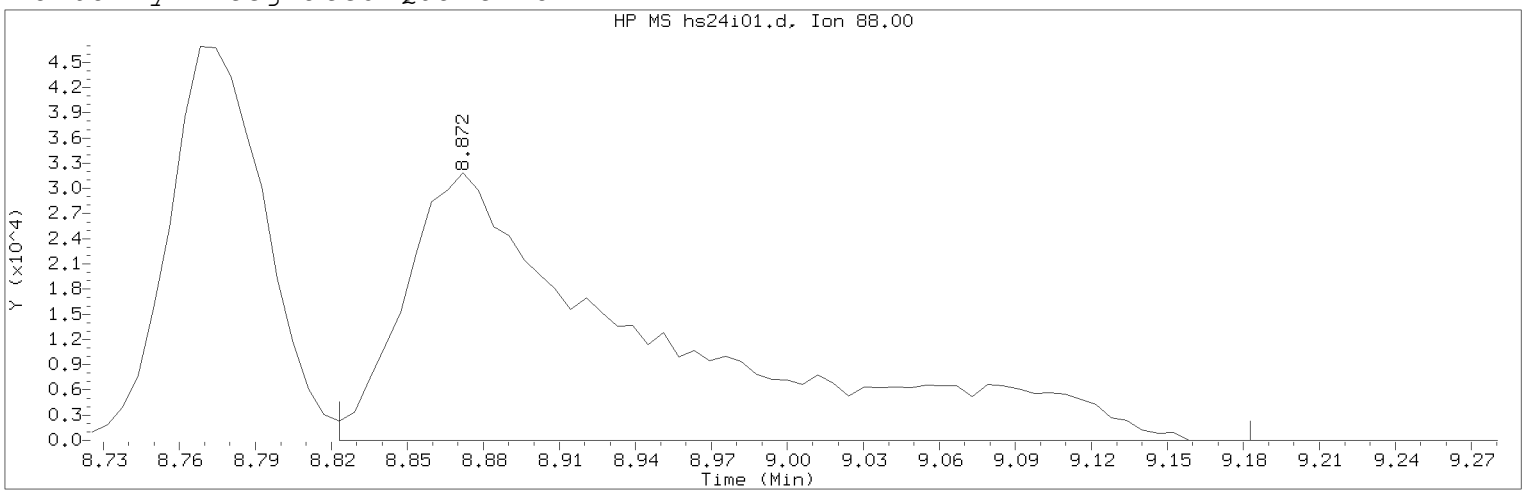
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area : 1414553
On-column Amount (ng) : 25.1444
Integration start scan : 970 Integration stop scan: 1017
Y at integration start : 0 Y at integration end: 260

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

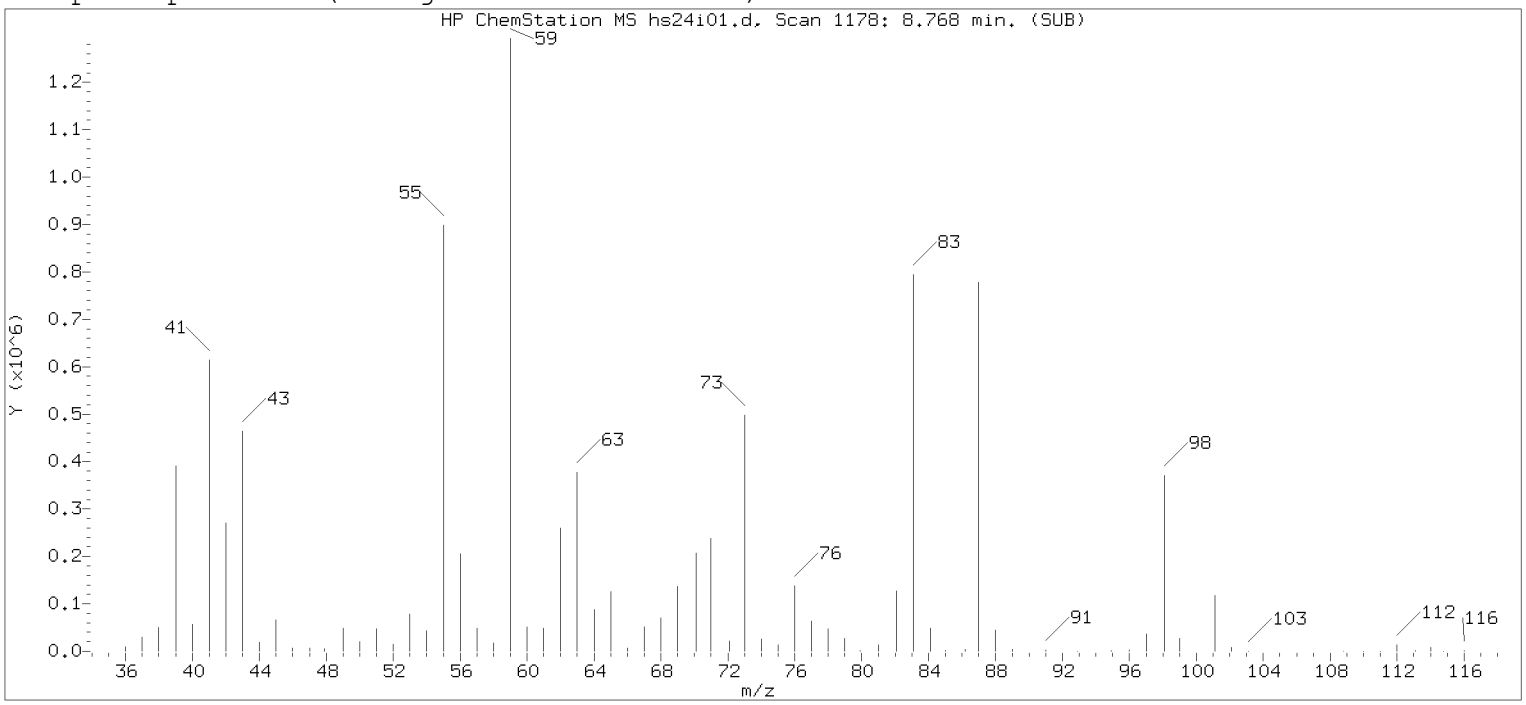
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 216251M
On-Column Amount (ng) : 1300.5754
Integration start scan : 1186 Integration stop scan: 1245
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

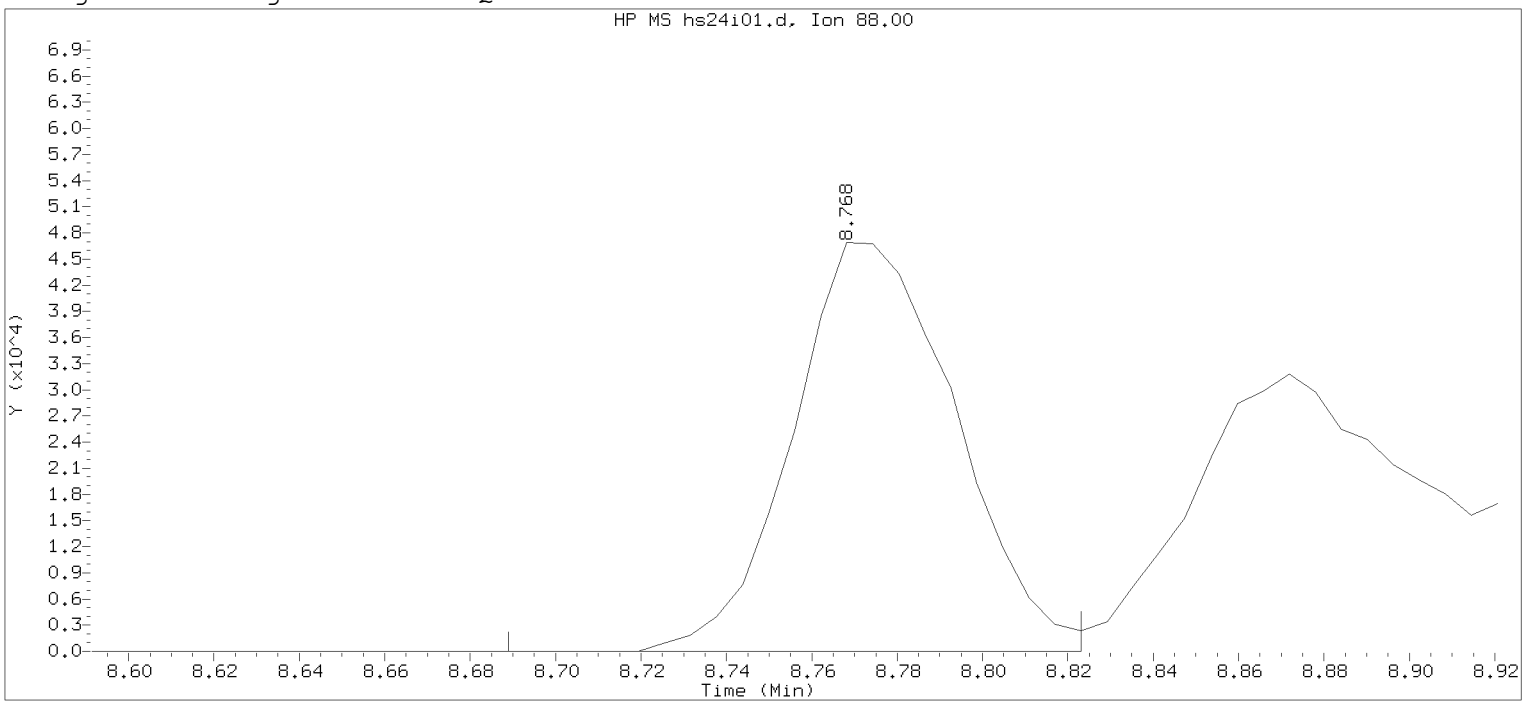
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

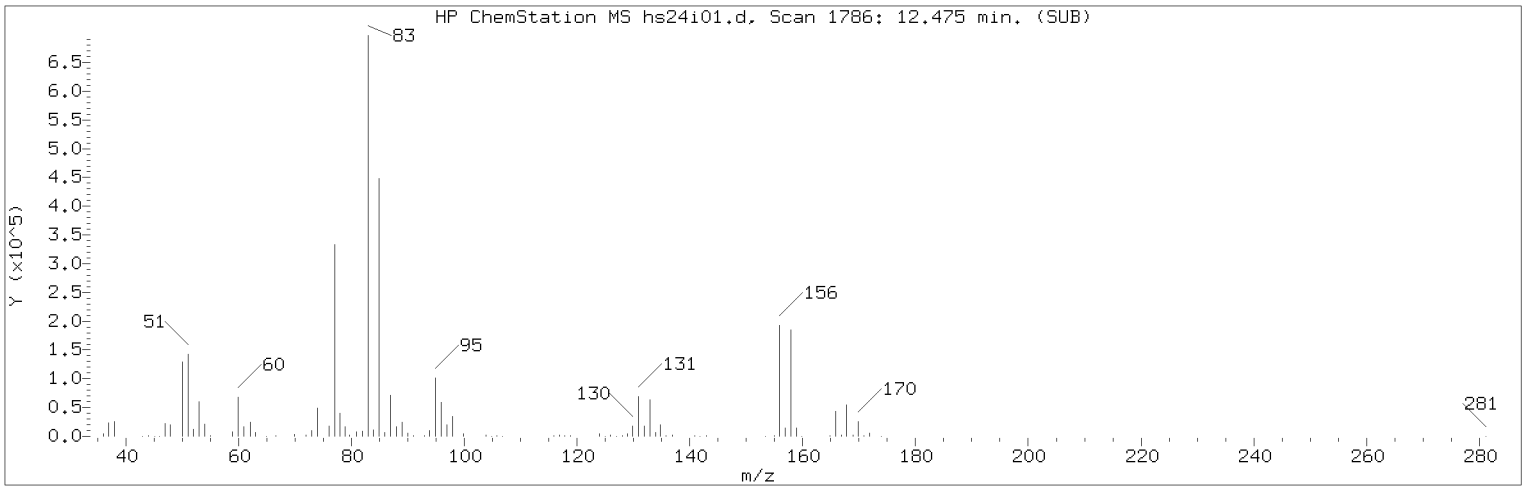
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

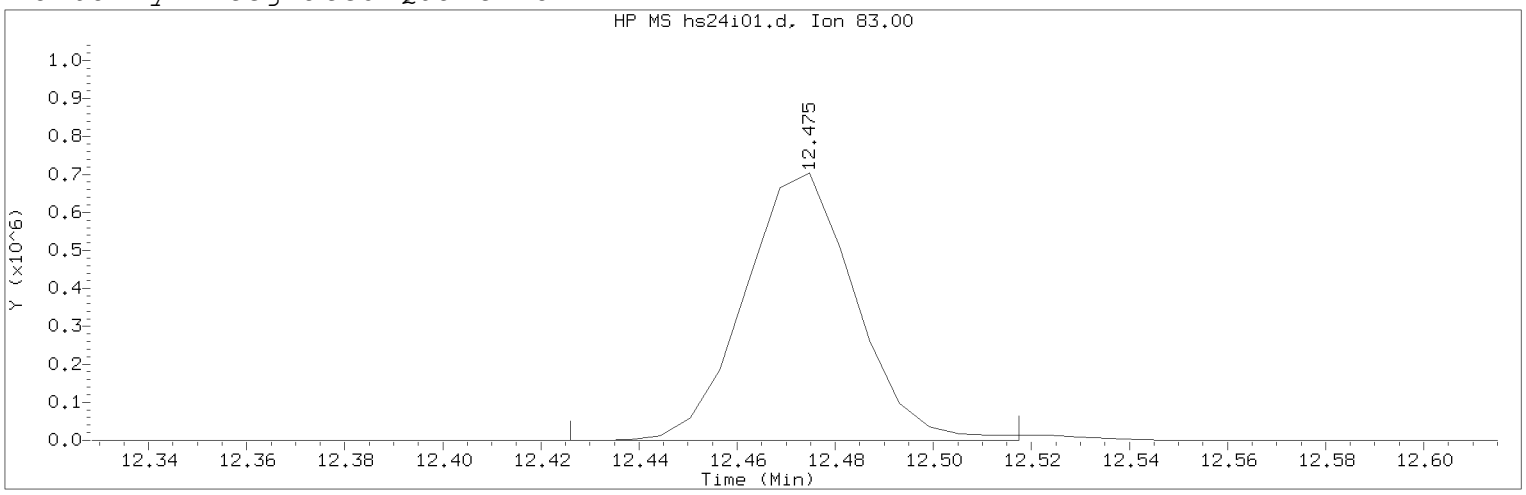
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 124030		
On-column Amount (ng)	: 962.4201		
Integration start scan	: 1164	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

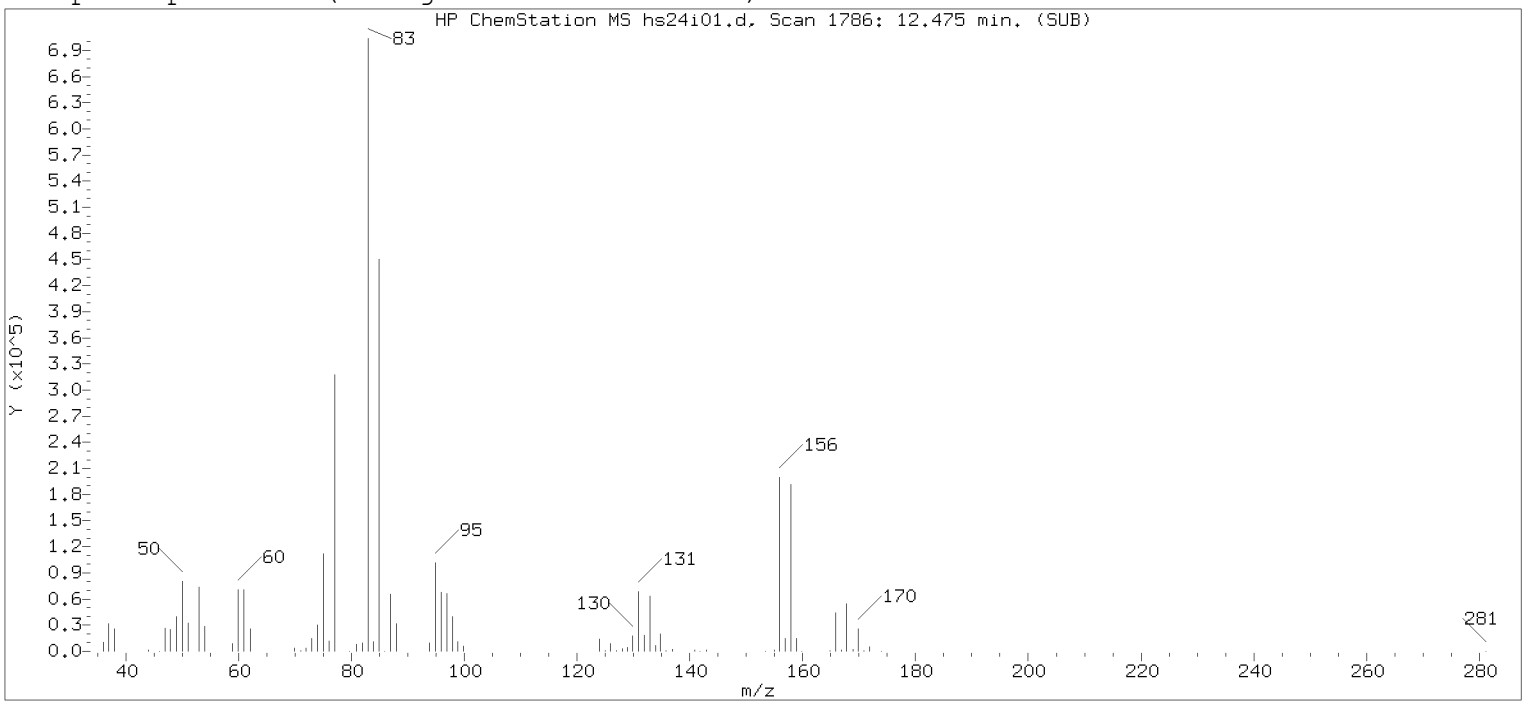
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 1100327M
On-Column Amount (ng) : 26.6273
Integration start scan : 1777 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

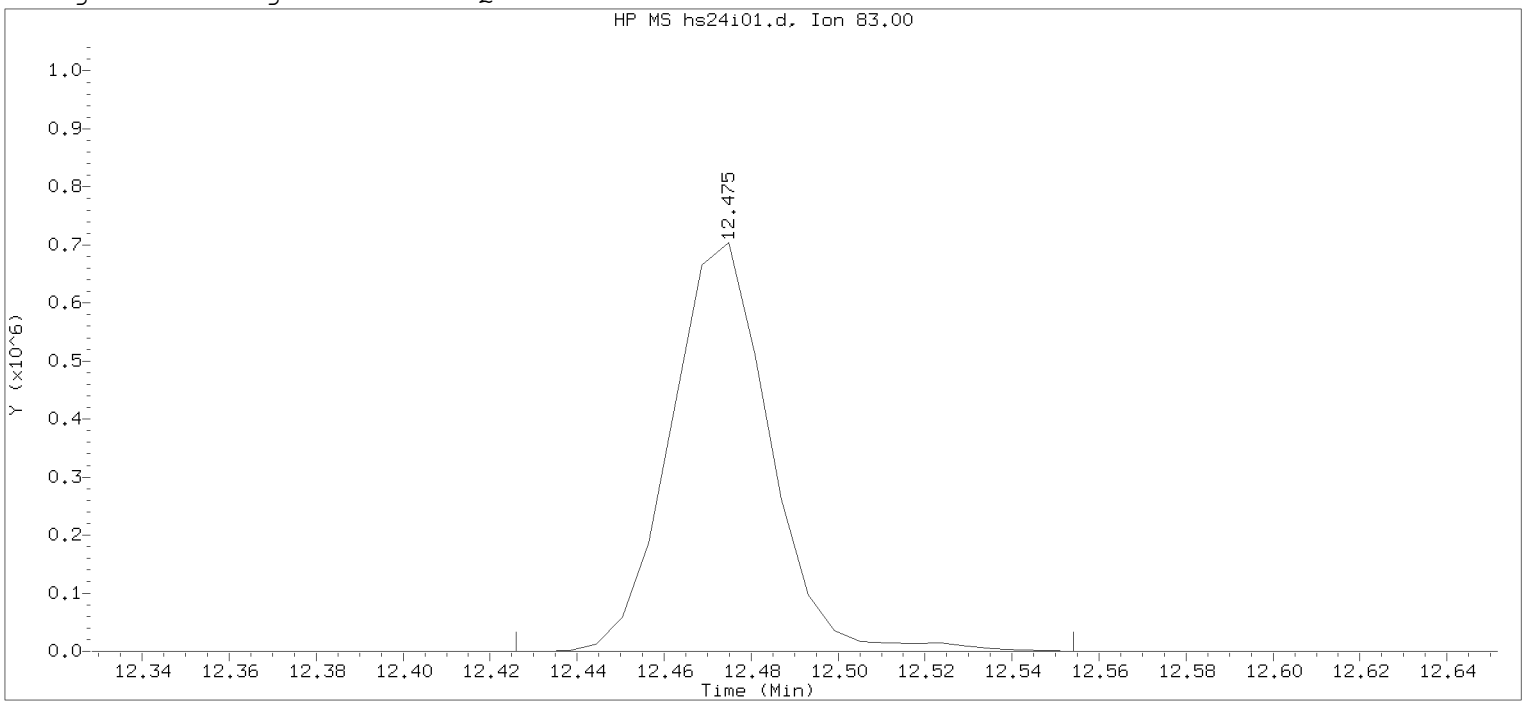
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



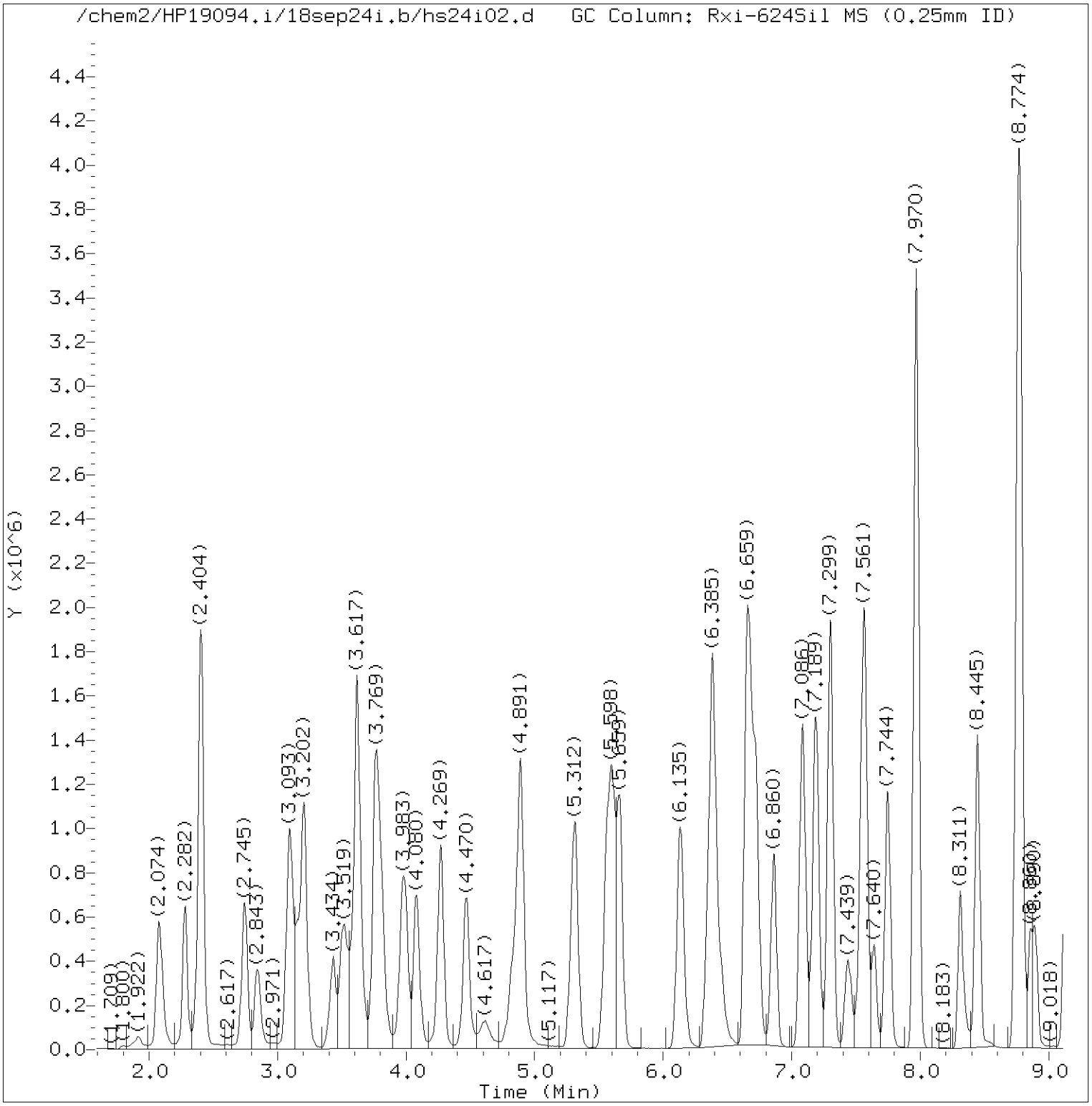
Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 1111309
On-column Amount (ng) : 25.3663
Integration start scan : 1777 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

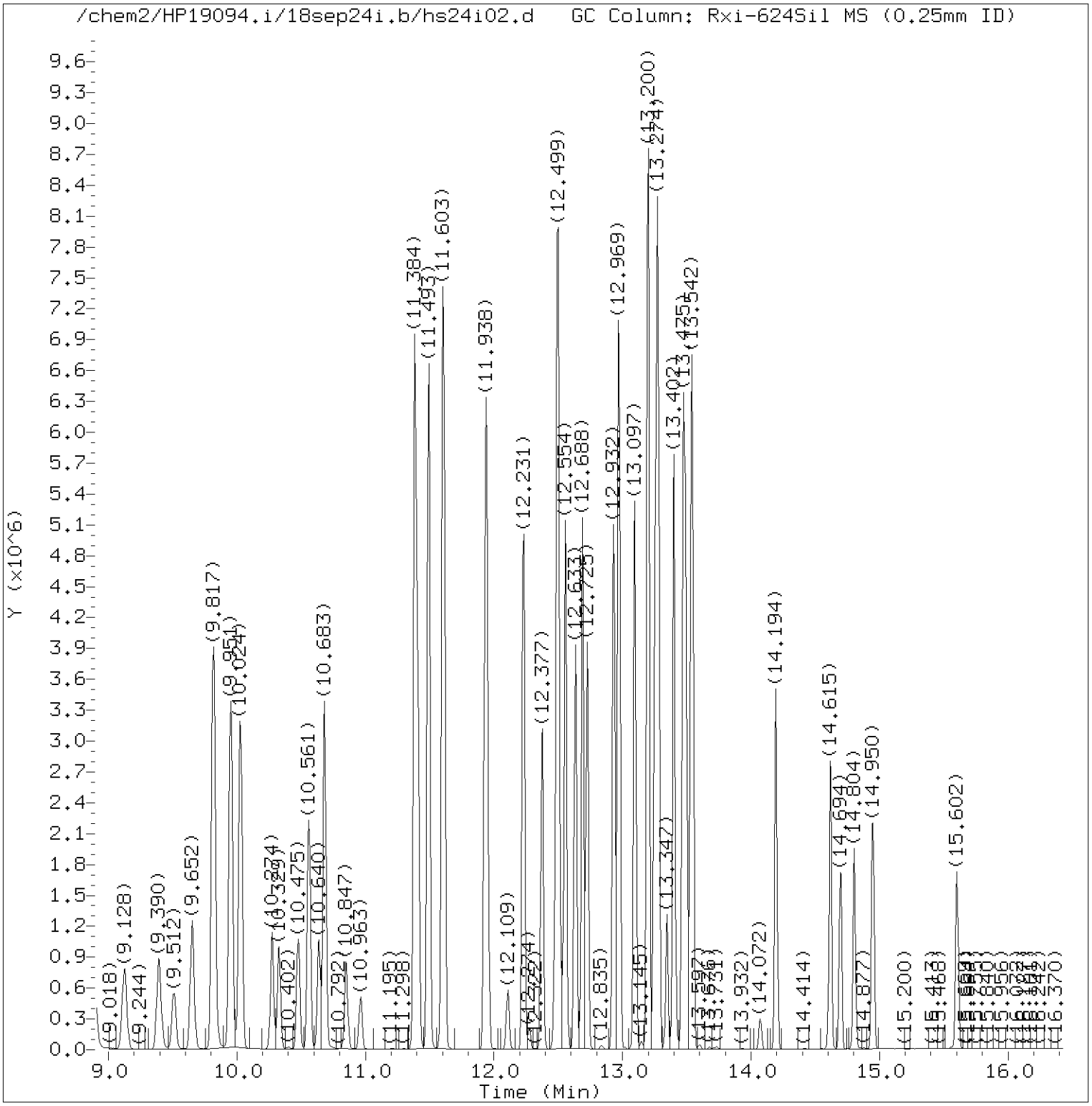
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	1111195	10.627
2) Chloromethane	(2)	2.282	50	1053821	10.291
5) Vinyl Chloride	(2)	2.404	62	994450	10.370
6) 1,3-Butadiene	(2)	2.404	39	1079138	9.934
7) Bromomethane	(2)	2.739	94	765899	10.273
8) Chloroethane	(2)	2.843	64	589896	10.142
9) Dichlorofluoromethane	(2)	3.093	67	1404728	10.153
10) Trichlorofluoromethane	(2)	3.154	101	1259997	10.400
11) Ethyl ether	(2)	3.434	59	423587	10.312
12) Freon 123a	(2)	3.513	67	807807	10.524
13) Acrolein	(1)	3.617	56	3074728	548.130
15) 1,1-Dichloroethene	(2)	3.757	96	555090	10.581
16) Freon 113	(2)	3.794	101	677125	10.951
14) Acetone	(1)	3.806	43	762811	101.244
17) Methyl Iodide	(2)	3.970	142	1138408	10.410
18) Carbon Disulfide	(2)	4.080	76	1731295	10.372
21) Methyl Acetate	(1)	4.251	43	211729	10.010
22) Allyl Chloride	(2)	4.269	41	1040687	10.436
23) Methylene Chloride	(2)	4.464	84	584981	9.884
26)*t-Butyl Alcohol-d10	(1)	4.483	65	126410	50.000
28) t-Butyl Alcohol	(1)	4.617	59	455794M	211.240
29) Acrylonitrile	(1)	4.824	53	529018	54.369
30) Methyl Tertiary Butyl Ether	(2)	4.873	73	1148303	10.643
31) trans-1,2-Dichloroethene	(2)	4.891	96	621983	10.505
32) n-Hexane	(2)	5.318	57	1052293	11.177
33) 1,1-Dichloroethane	(2)	5.556	63	1185400	10.515
34) di-Isopropyl Ether	(2)	5.604	45	2092042	10.450
35) 2-Chloro-1,3-Butadiene	(2)	5.665	53	1107150	10.914
40) 1,2-Dichloroethene (Total)	(2)		96	1310379	21.027
37) Ethyl t-butyl ether	(2)	6.135	59	1675402	10.551
38) 2-Butanone	(1)	6.342	43	1355942	109.942
39) cis-1,2-Dichloroethene	(2)	6.385	96	688396	10.523
41) 2,2-Dichloropropane	(2)	6.397	77	877144	10.894
42) Propionitrile	(1)	6.446	54	722828	215.920
45) Methacrylonitrile	(1)	6.659	67	1335578	110.644
47) Bromochloromethane	(2)	6.720	128	285662	10.337
48) Tetrahydrofuran	(1)	6.720	71	364027	111.024
49) Chloroform	(2)	6.866	83	1097143	10.468

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.080	113	673469	9.987
50)$Dibromofluoromethane	(2)	7.074	111	700447	10.091
51) 1,1,1-Trichloroethane	(2)	7.092	97	954892M	10.651
52) Cyclohexane	(2)	7.189	56	1283297	10.965
52) Cyclohexane	(2)	7.189	84	1055029	10.934
52) Cyclohexane	(2)	7.189	69	379671	11.008
54) Carbon Tetrachloride	(2)	7.299	117	841170	10.925
55) 1,1-Dichloropropene	(2)	7.305	75	906209	10.660
56) Isobutyl Alcohol	(1)	7.439	41	441325	528.629
57)$1,2-Dichloroethane-d4	(2)	7.531	102	119504	10.165
57)$1,2-Dichloroethane-d4	(2)	7.537	65	571691	10.054
57)$1,2-Dichloroethane-d4	(2)	7.537	104	76384	10.145
58) Benzene	(2)	7.567	78	2595708	10.336
59) 1,2-Dichloroethane	(2)	7.647	62	573462M	9.922
60) t-Amyl methyl ether	(2)	7.744	73	1396741	10.610
62) n-Heptane	(2)	7.970	43	1080061	11.126
63)*Fluorobenzene	(2)	7.970	96	2675616	10.000
65) n-Butanol	(1)	8.311	56	773741	1097.005
67) Trichloroethene	(2)	8.445	95	677458	10.535
69) Methylcyclohexane	(2)	8.756	83	1312618	10.809
70) 1,2-Dichloropropane	(2)	8.787	63	638119	10.473
71) Methyl Methacrylate	(1)	8.854	69	256545	11.482
72) 1,4-Dioxane	(1)	8.878	88	87437M	514.877
73) Dibromomethane	(2)	8.896	93	260508	10.301
74) Bromodichloromethane	(2)	9.122	83	729114	10.644
76) 2-Nitropropane	(1)	9.390	41	734933	116.122
80) cis-1,3-Dichloropropene	(2)	9.652	75	870258	10.912
81) 4-Methyl-2-Pentanone	(1)	9.817	43	3459344	112.763
82)$Toluene-d8	(3)	9.951	98	2697002	10.021
82)$Toluene-d8	(3)	9.951	100	1740056	10.017
83) Toluene	(3)	10.024	92	1612018	10.388
85) 1,3-Dichloropropene (total)	(3)		75	1532900	21.995
84) trans-1,3-Dichloropropene	(3)	10.274	75	662642	11.083
86) Ethyl Methacrylate	(3)	10.329	69	561170	10.955
88) 1,1,2-Trichloroethane	(3)	10.475	97	373327	10.455
89) Tetrachloroethene	(3)	10.561	166	735072	10.485
90) 1,3-Dichloropropane	(3)	10.640	76	658558	10.406
91) 2-Hexanone	(1)	10.683	43	2350012	112.535

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	455725	10.649
95) 1,2-Dibromoethane	(3)	10.963	107	359375	10.738
96) 1-Chlorohexane	(3)	11.384	91	958778	10.360
97)*Chlorobenzene-d5	(3)	11.384	117	2091043	10.000
98) Chlorobenzene	(3)	11.408	112	1704436	10.353
100) Ethylbenzene	(3)	11.493	91	3218789	10.613
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	593286	10.920
101) m+p-Xylene	(3)	11.603	106	2379515	21.153
105) Xylene (Total)	(3)		106	3524795	31.800
104) o-Xylene	(3)	11.932	106	1145280	10.649
106) Styrene	(3)	11.951	104	1866075	10.845
107) Bromoform	(3)	12.109	173	256472	10.904
108) Isopropylbenzene	(3)	12.231	105	3134574	10.677
111)$4-Bromofluorobenzene	(3)	12.377	95	977708	9.978
111)$4-Bromofluorobenzene	(3)	12.377	174	853274	10.029
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	446396M	10.447
114) Bromobenzene	(4)	12.493	156	679412	10.458
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1100680	114.554
116) 1,2,3-Trichloropropane	(4)	12.524	110	111265M	10.072
117) n-Propylbenzene	(4)	12.554	91	3758147	10.639
119) 2-Chlorotoluene	(4)	12.633	126	715824	10.449
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2552095	10.665
122) 4-Chlorotoluene	(4)	12.725	126	714849	10.413
125) tert-Butylbenzene	(4)	12.932	134	550044	10.570
126) Pentachloroethane	(4)	12.969	167	449742	11.073
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	2603683	10.663
128) sec-Butylbenzene	(4)	13.097	105	3375632	10.887
131) 1,3-Dichlorobenzene	(4)	13.194	146	1344989	10.421
132) p-Isopropyltoluene	(4)	13.200	119	2814592	10.959
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1077251	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	1311510	10.351
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	1158798	10.344
136) Benzyl Chloride	(4)	13.347	126	179783	11.638
138) n-Butylbenzene	(4)	13.493	92	1387276	10.882
139) 1,2-Dichlorobenzene	(4)	13.530	146	1165776	10.237
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	58902	11.327
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	1022554	10.649
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	834904	10.675

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

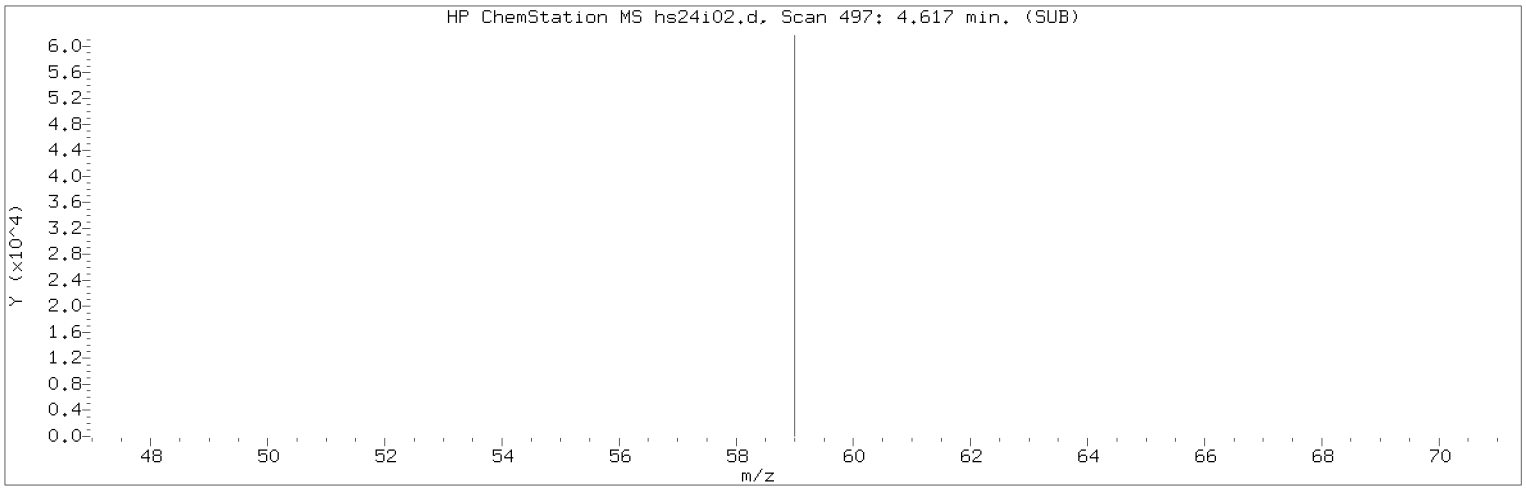
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

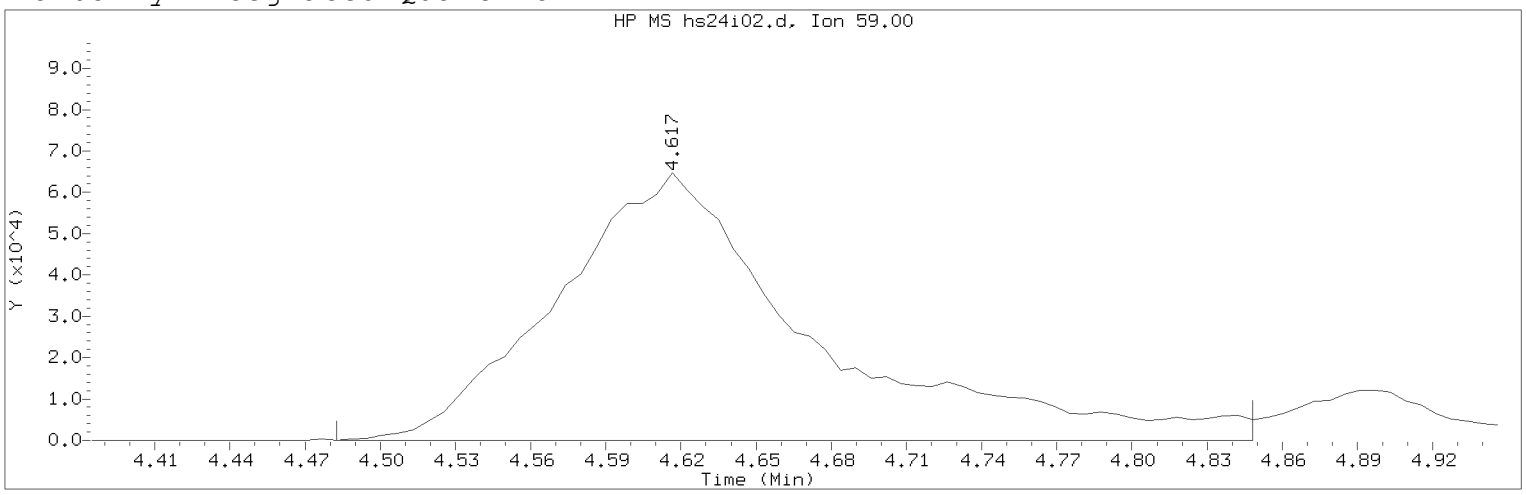
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	311460	10.536
147) Naphthalene	(4)	14.804	128	1382804	11.173
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	699158	10.872

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

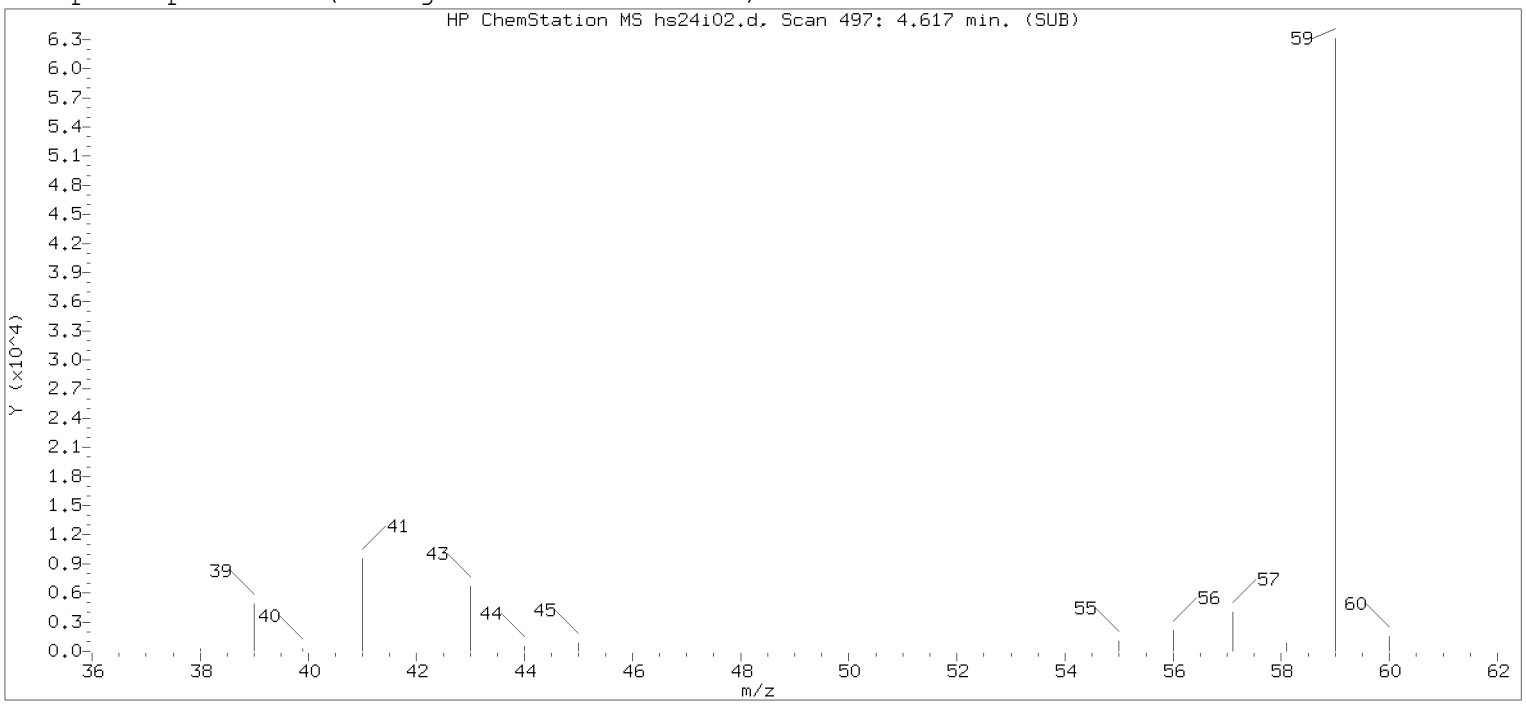
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 455794M
On-Column Amount (ng) : 211.2399
Integration start scan : 474 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

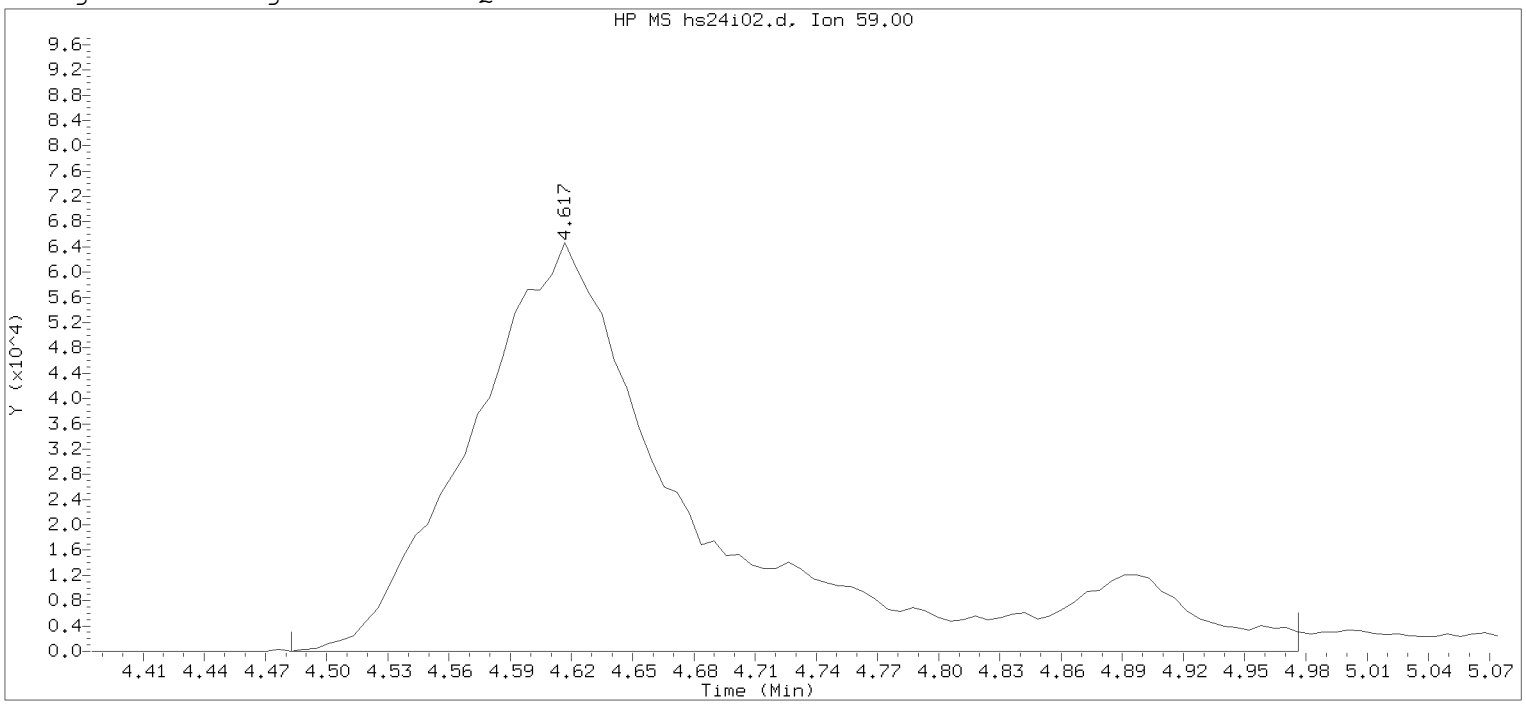
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

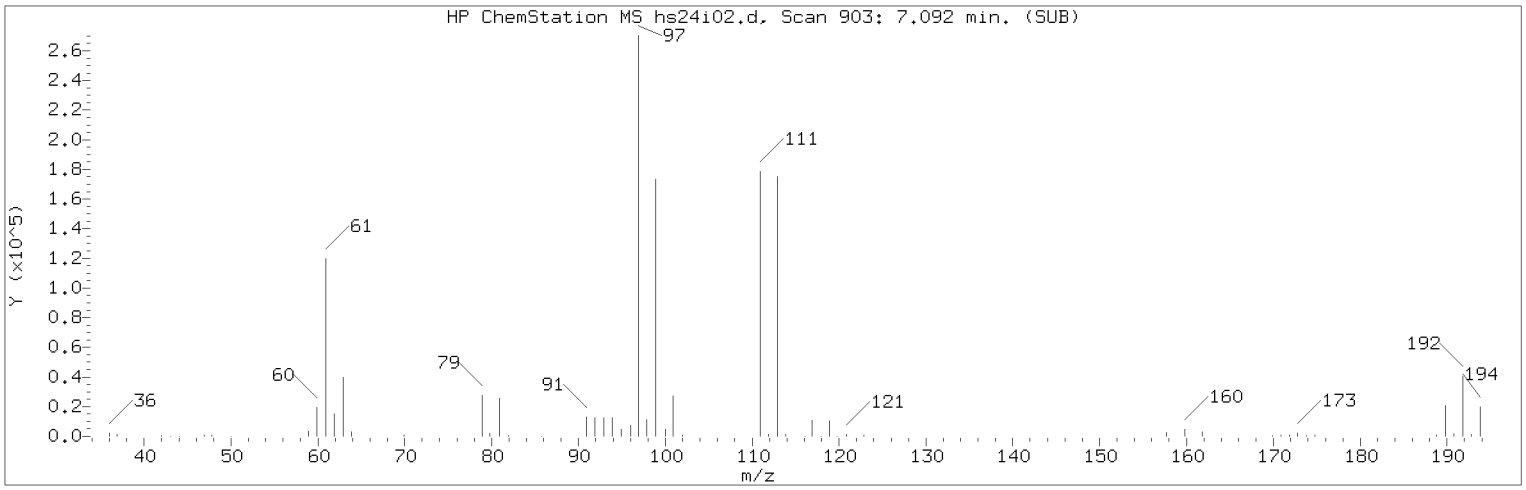
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

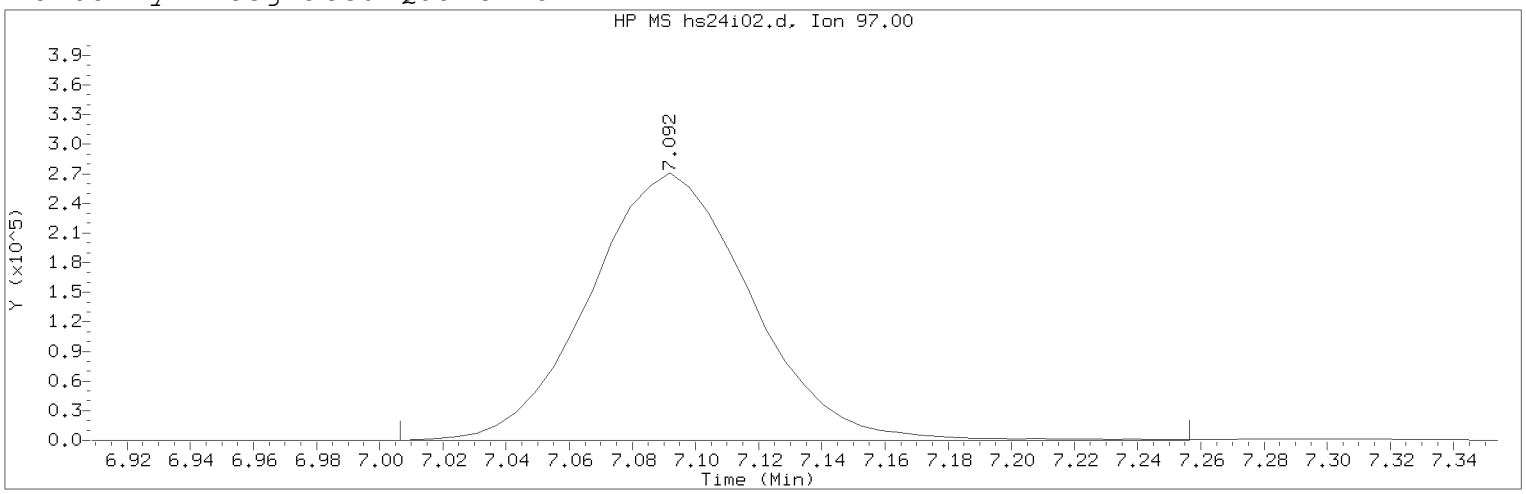
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 497		
Retention Time (minutes)	: 4.617		
Quant Ion	: 59.00		
Area	: 508509		
On-column Amount (ng)	: 200.0000		
Integration start scan	: 474	Integration stop scan:	555
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

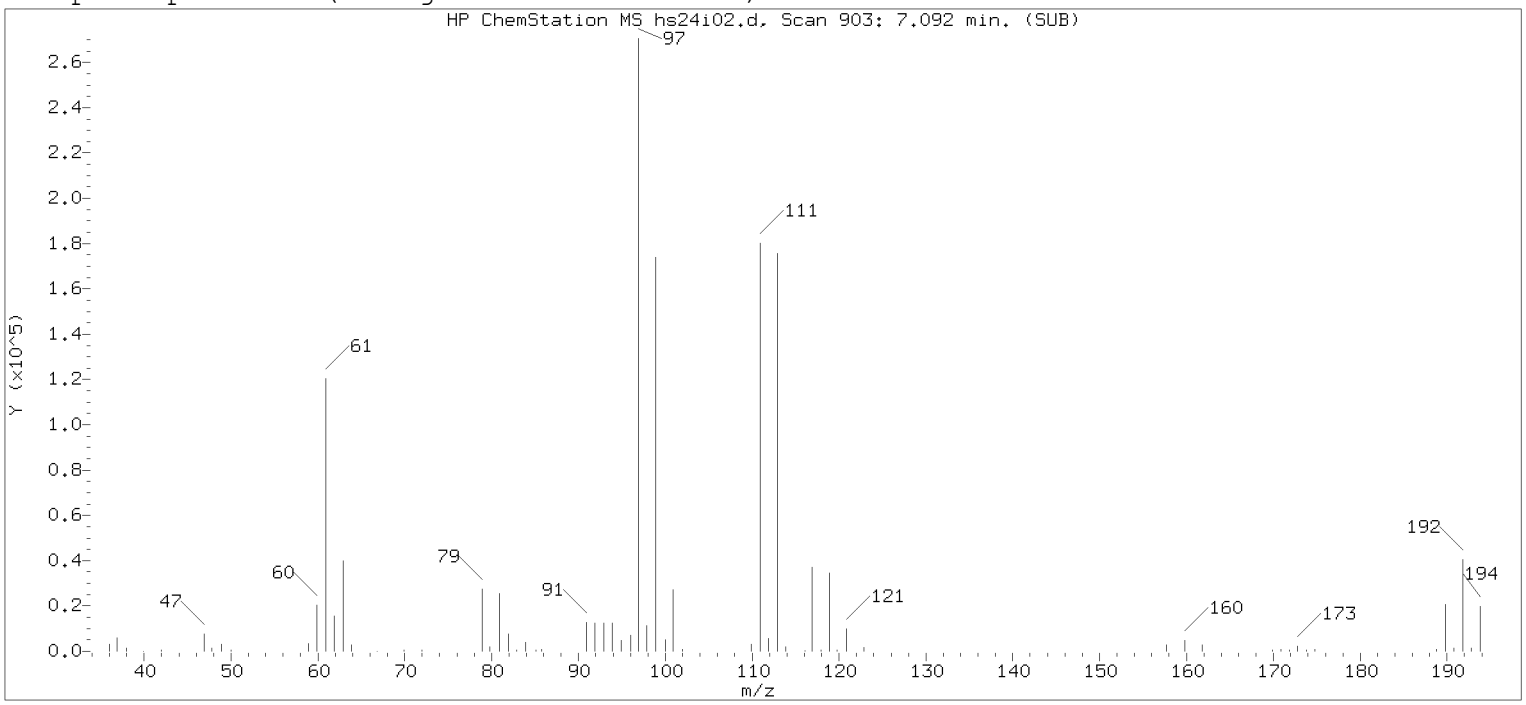
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area (flag) : 954892M
On-Column Amount (ng) : 10.6514
Integration start scan : 888 Integration stop scan: 929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

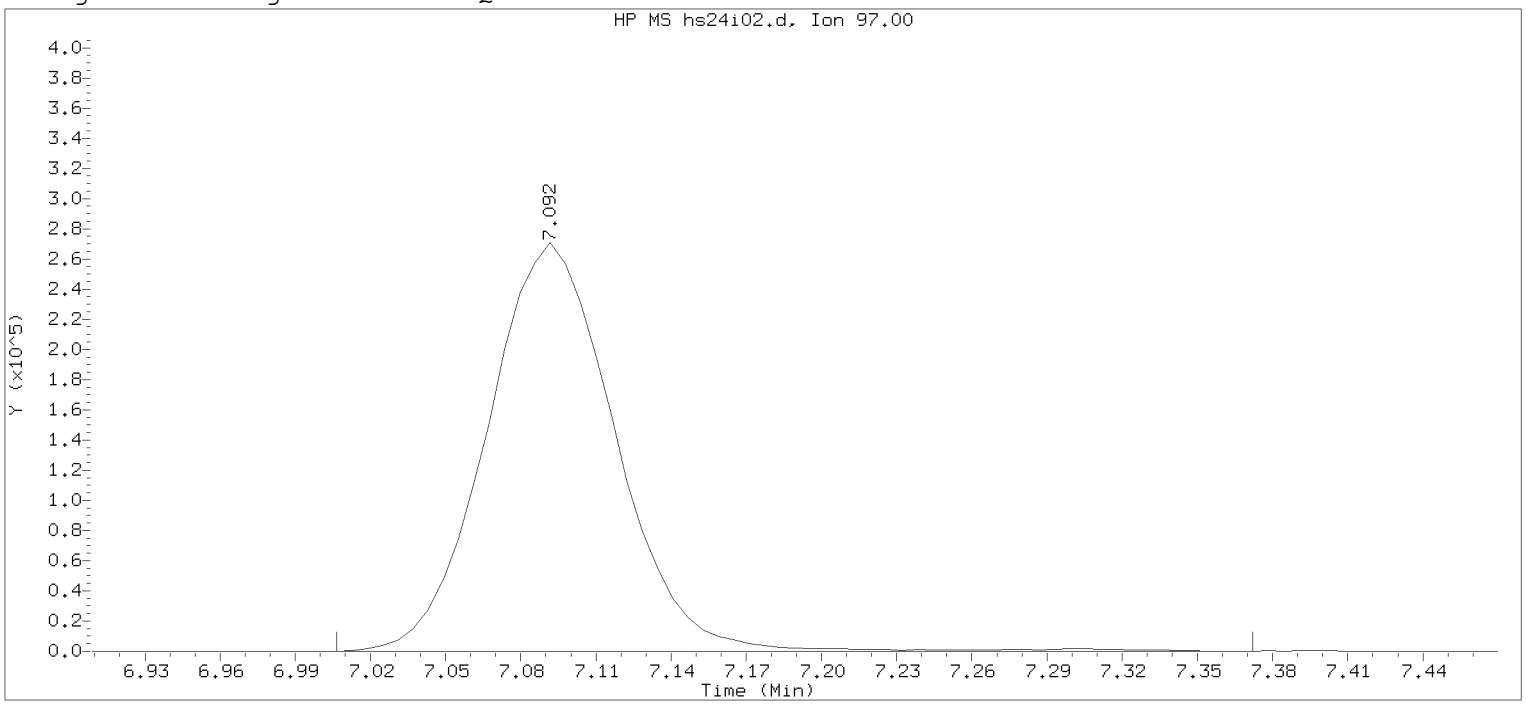
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

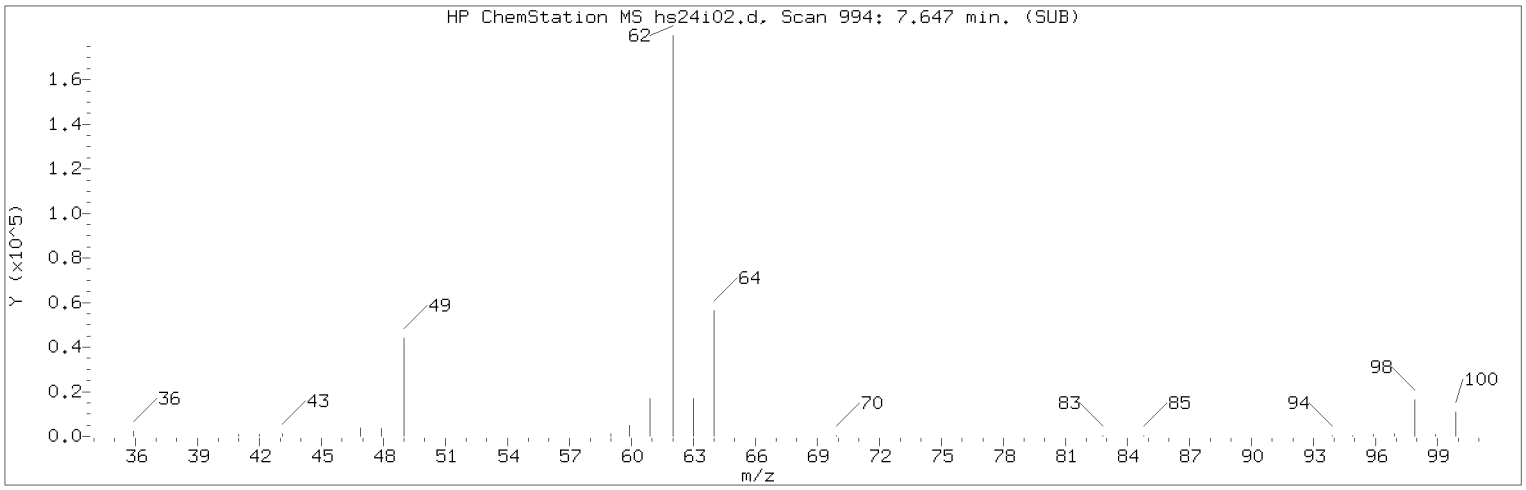
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

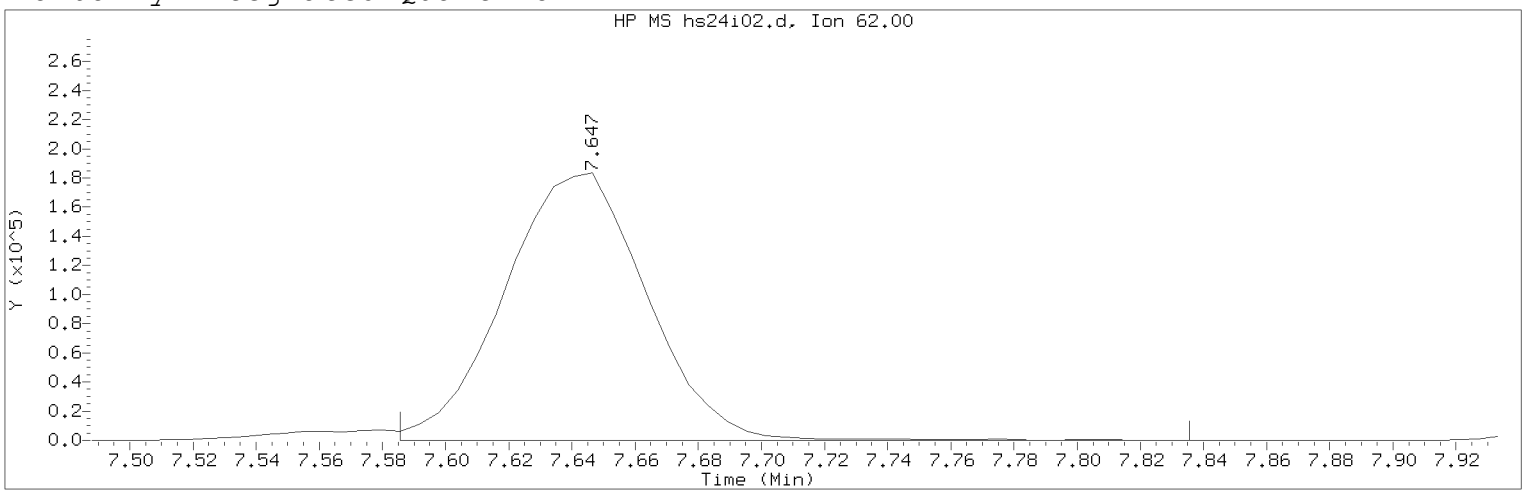
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area : 960539
On-column Amount (ng) : 10.0000
Integration start scan : 888 Integration stop scan: 948
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

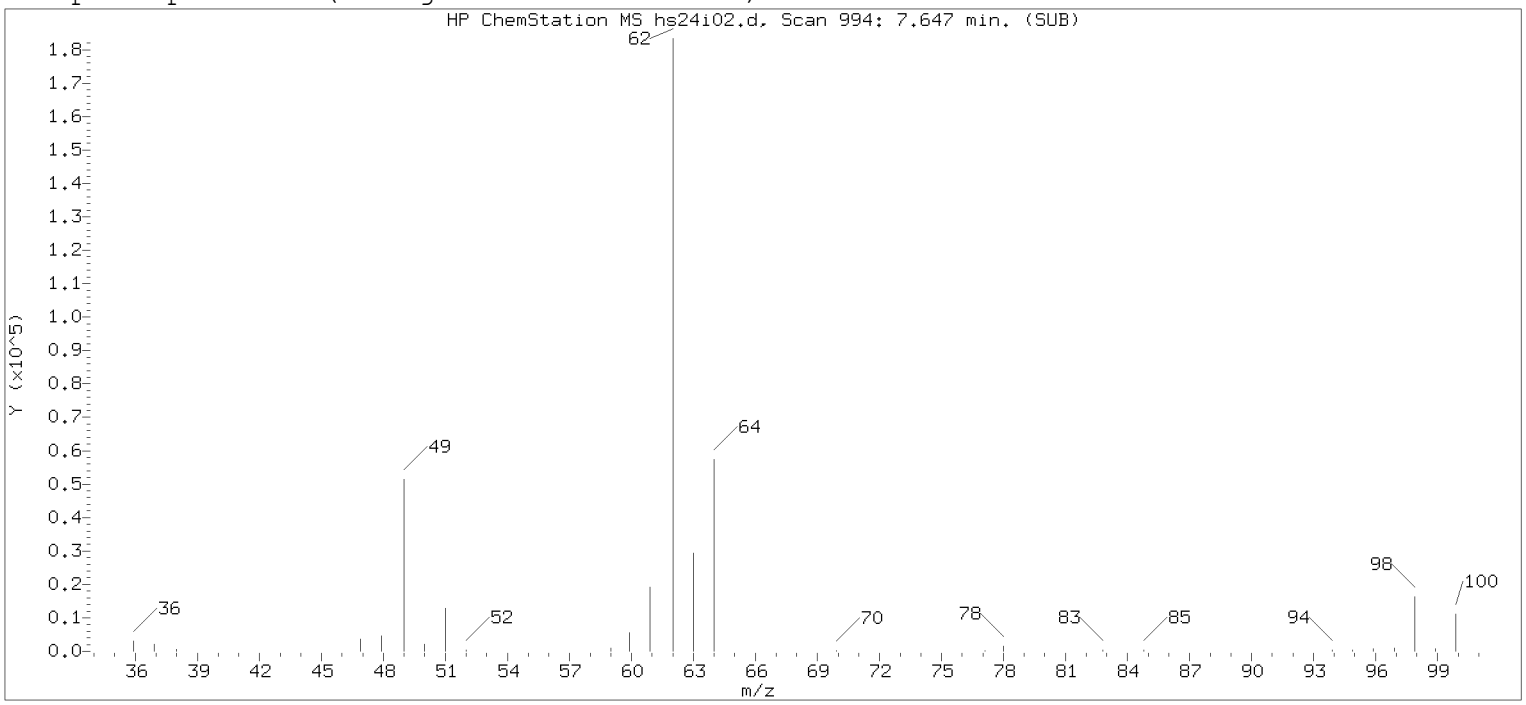
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area (flag) : 573462M
On-Column Amount (ng) : 9.9220
Integration start scan : 983 Integration stop scan: 1024
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

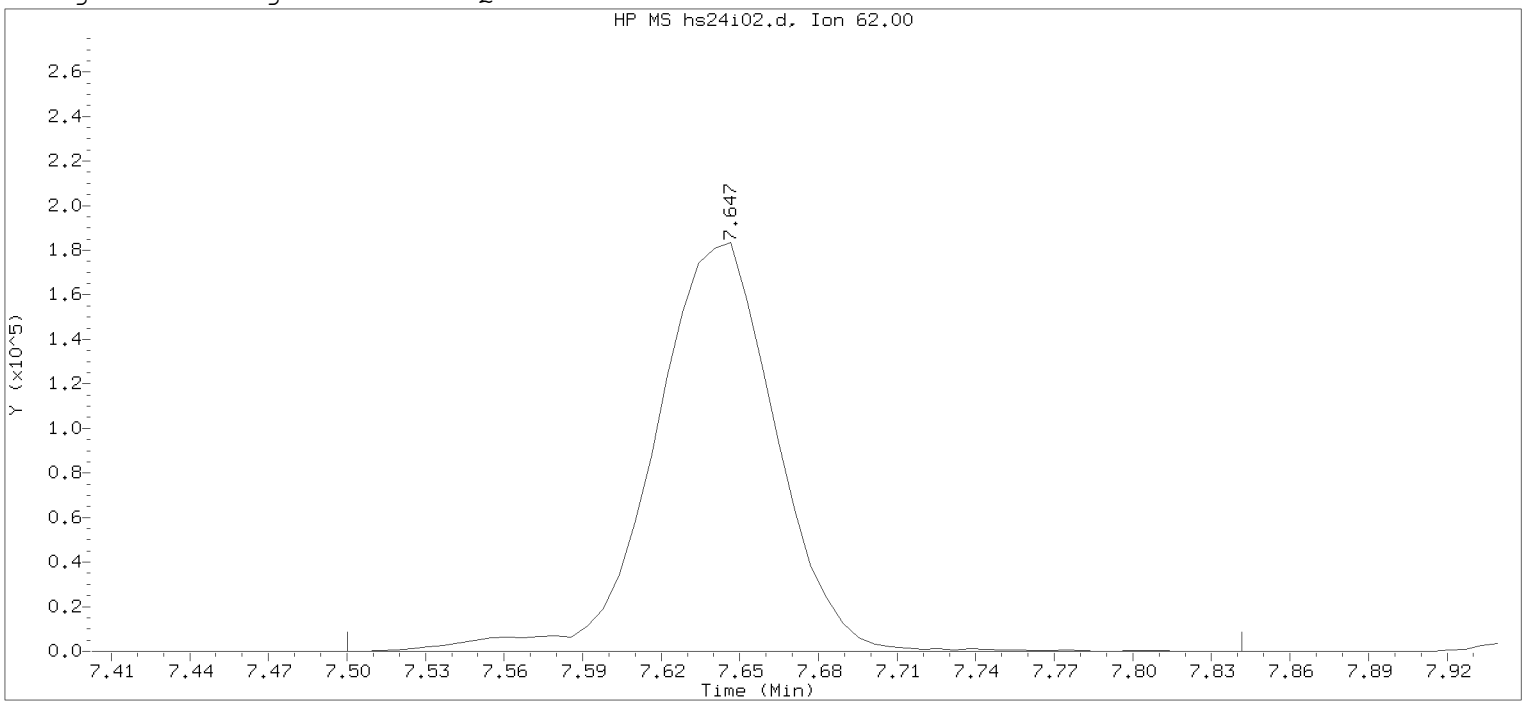
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

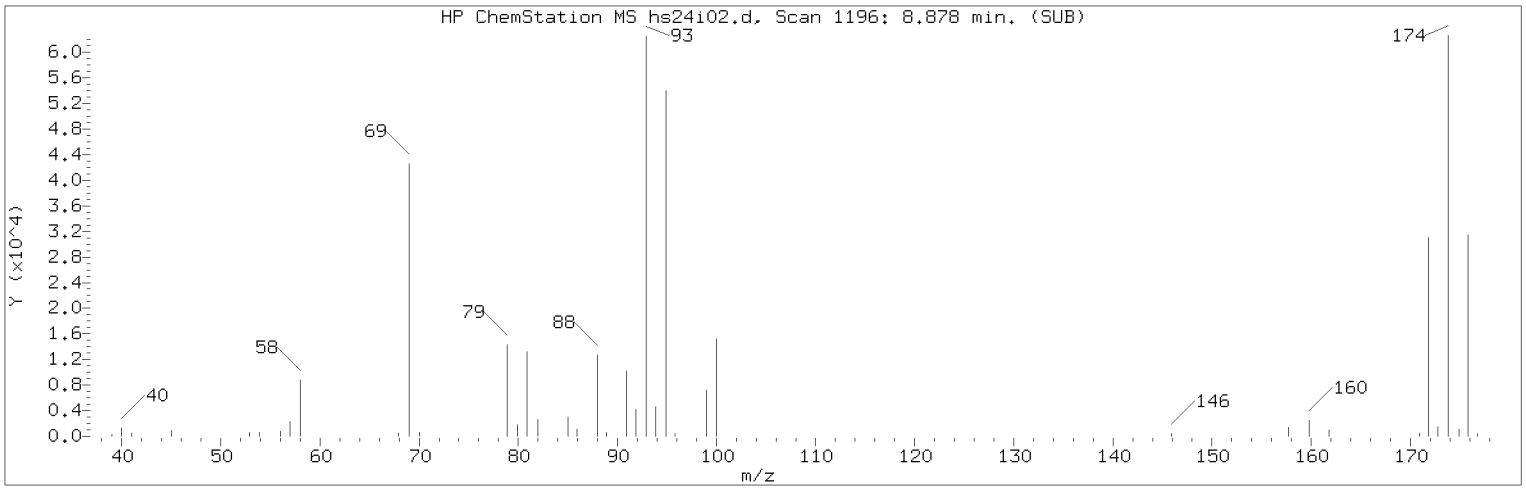
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

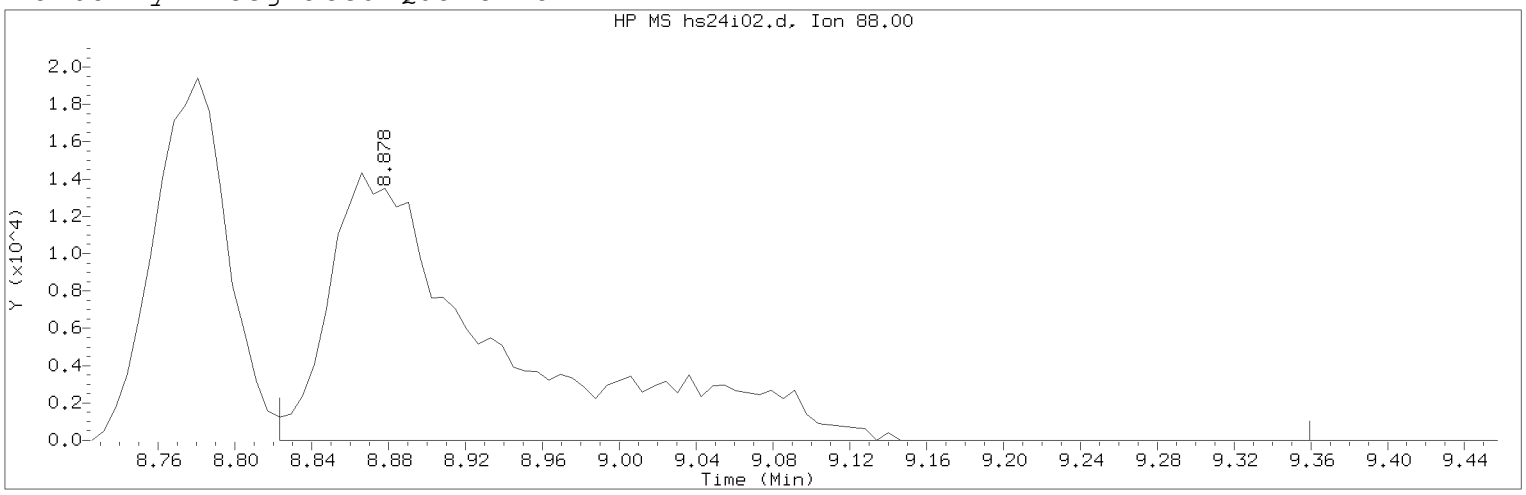
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area : 590569
On-column Amount (ng) : 10.0000
Integration start scan : 969 Integration stop scan: 1025
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

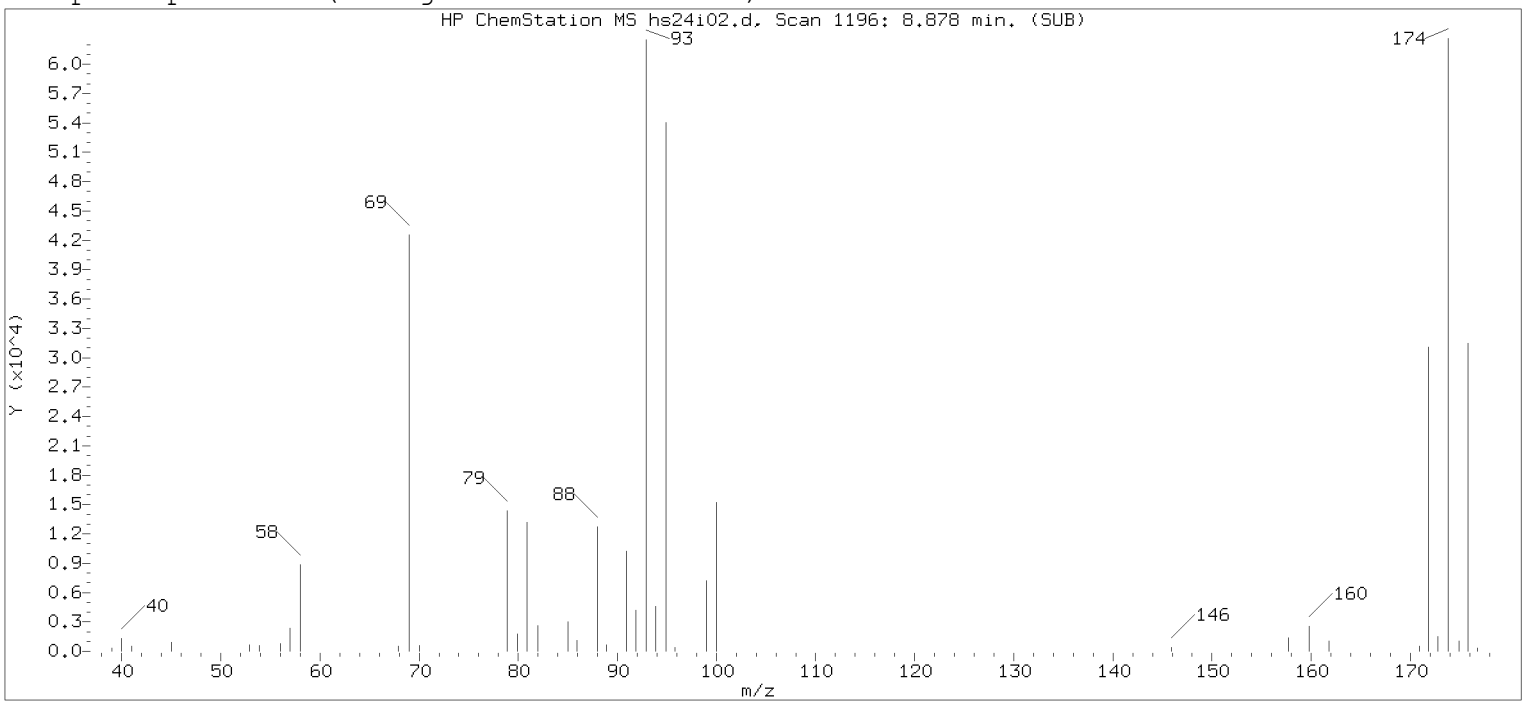
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 87437M
On-Column Amount (ng) : 514.8766
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

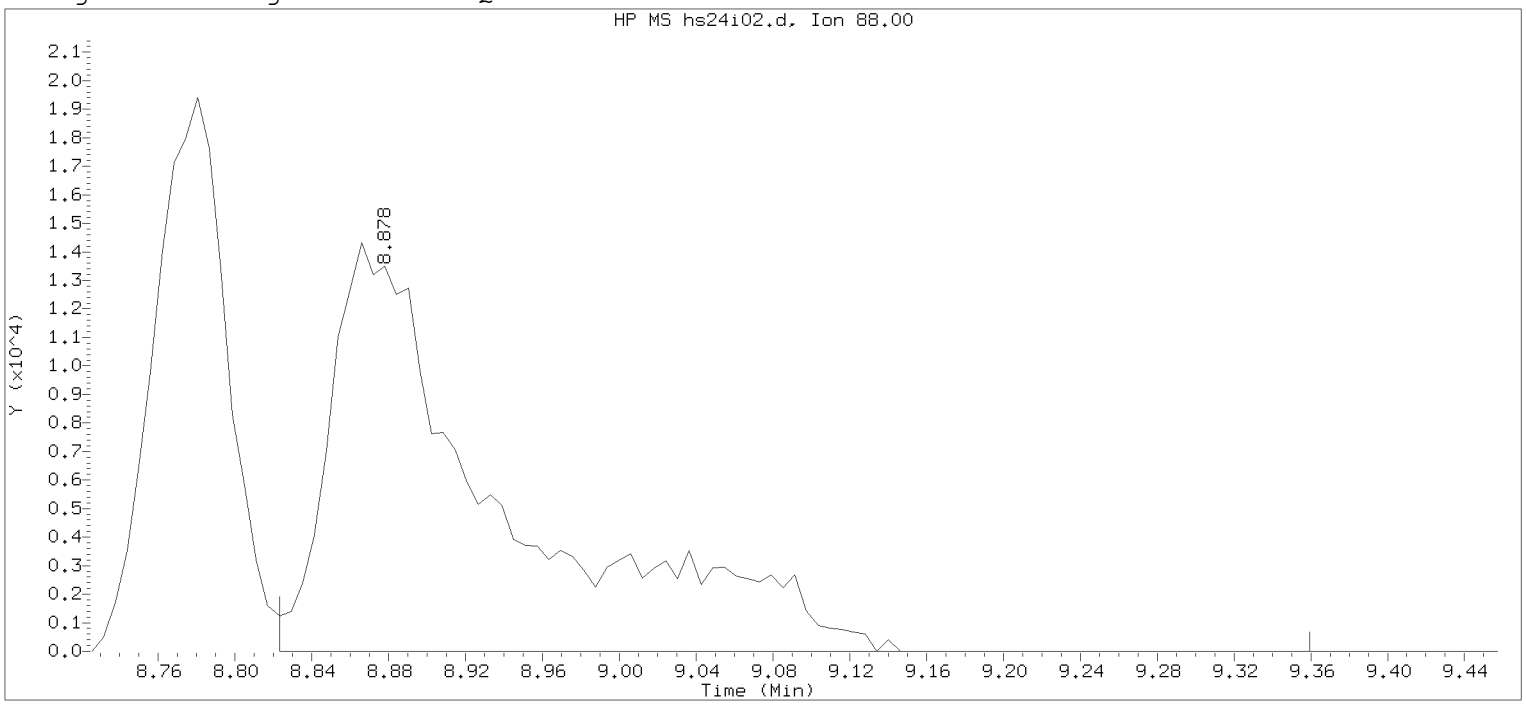
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

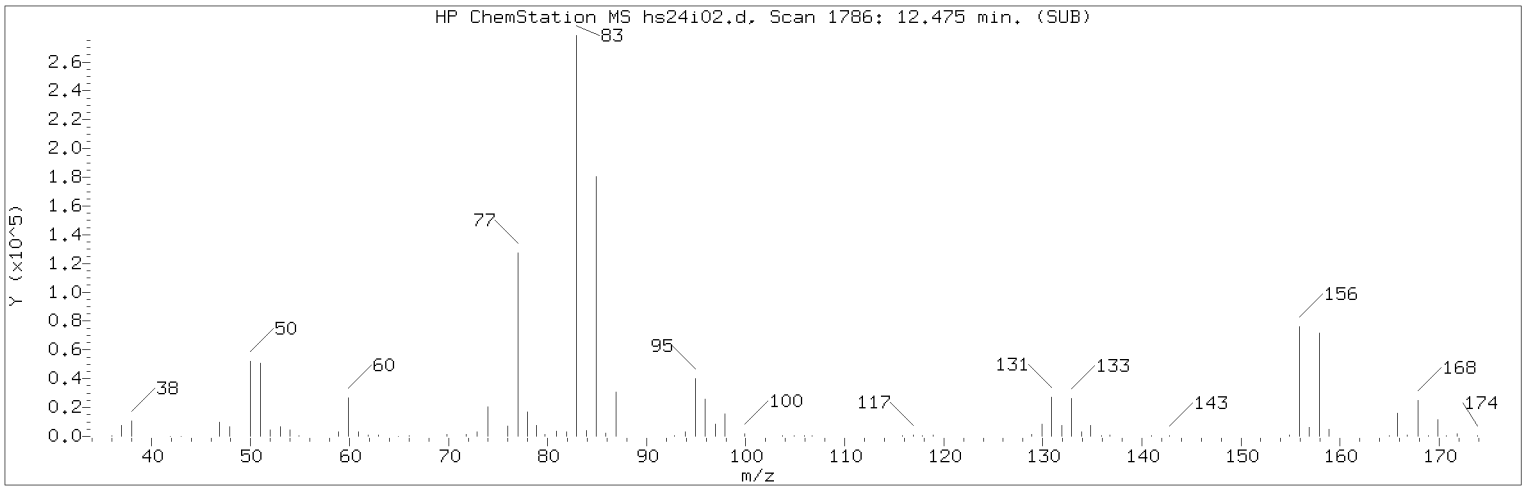
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

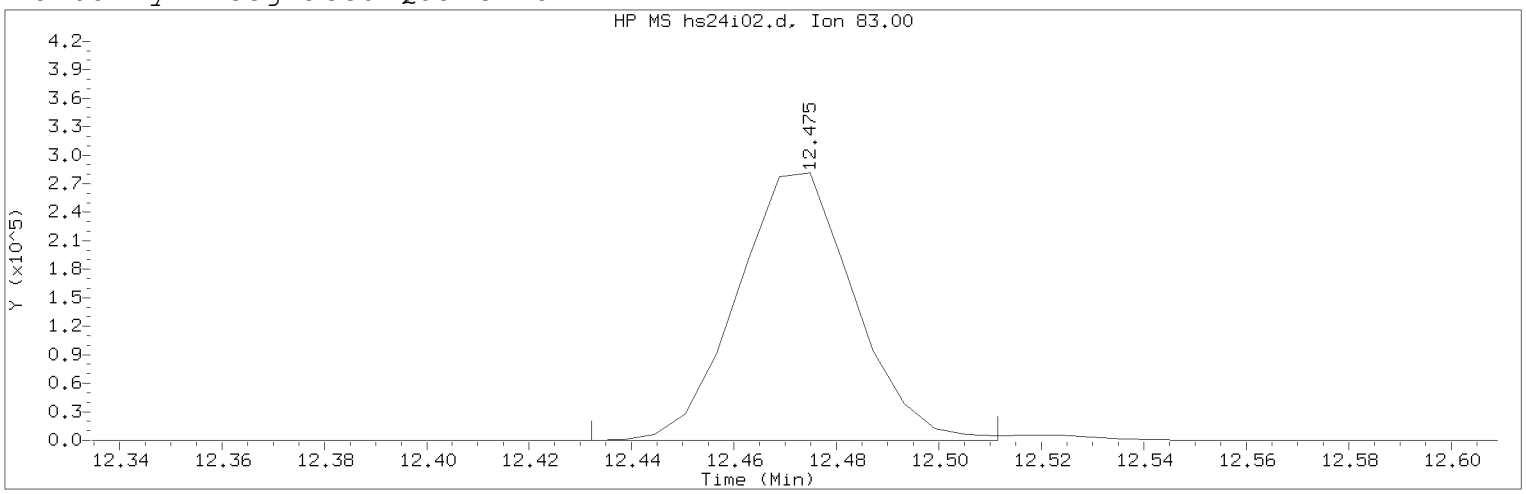
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1196		
Retention Time (minutes)	: 8.878		
Quant Ion	: 88.00		
Area	: 87437		
On-column Amount (ng)	: 500.0000		
Integration start scan	: 1186	Integration stop scan:	1274
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

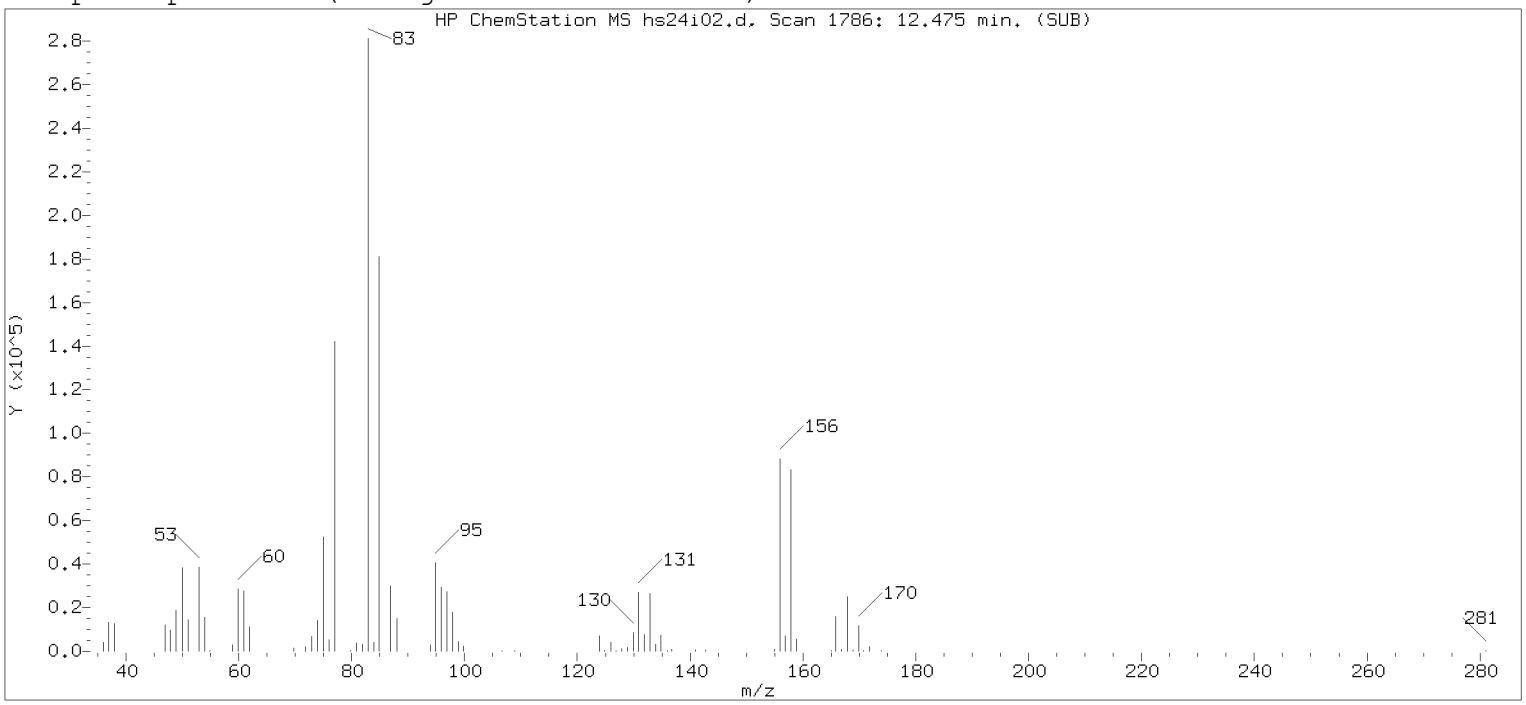
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 446396M
On-Column Amount (ng) : 10.4466
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

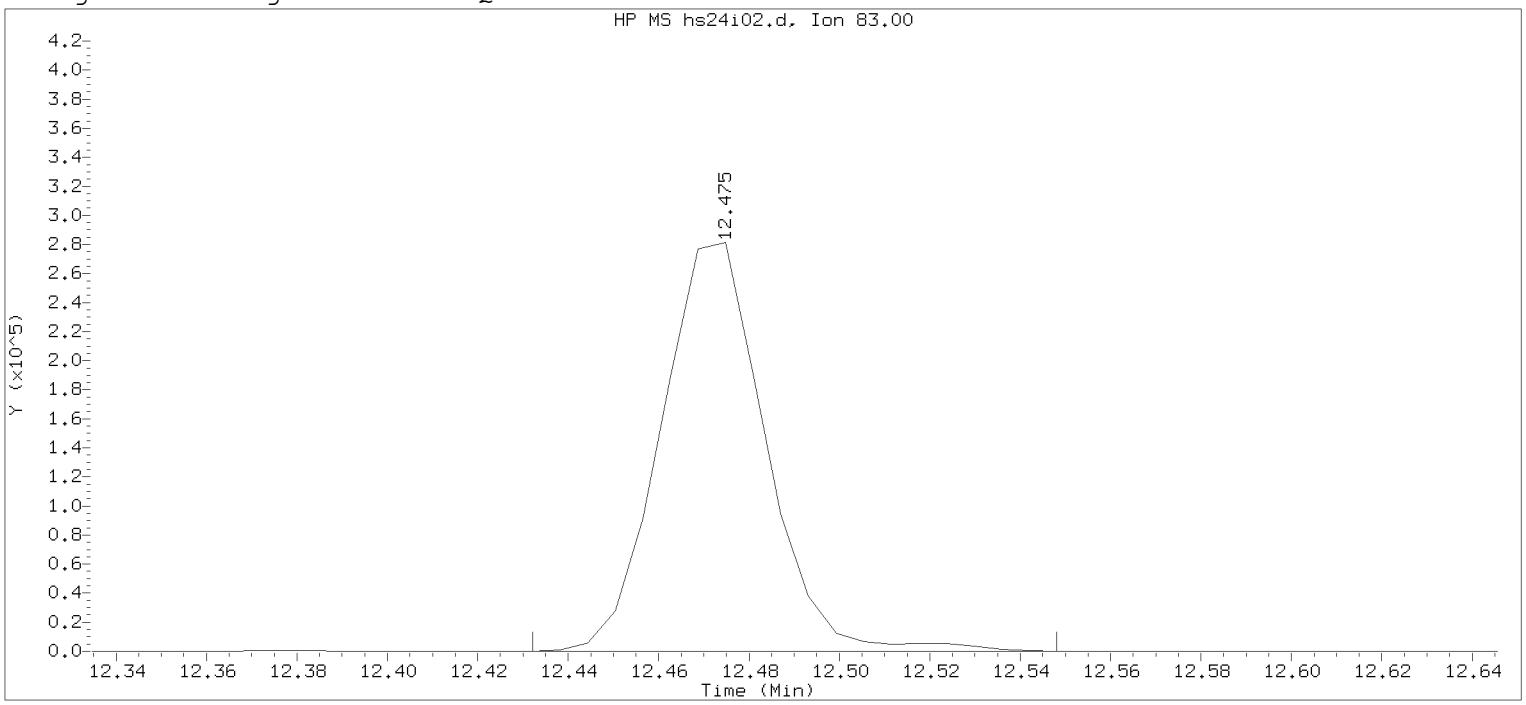
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

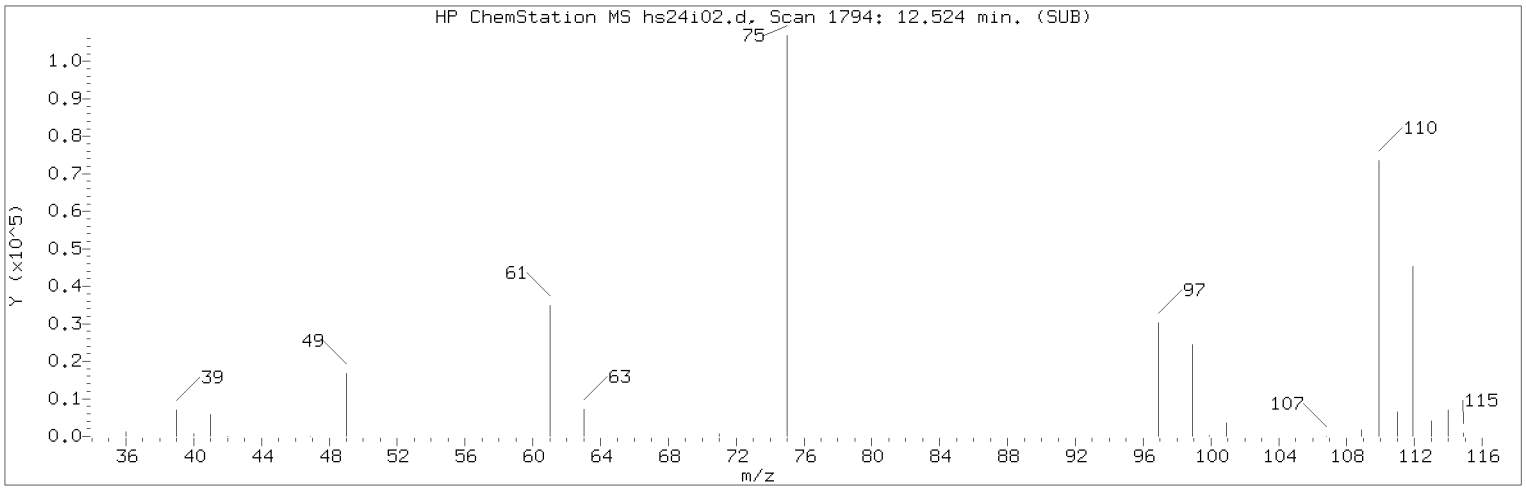
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

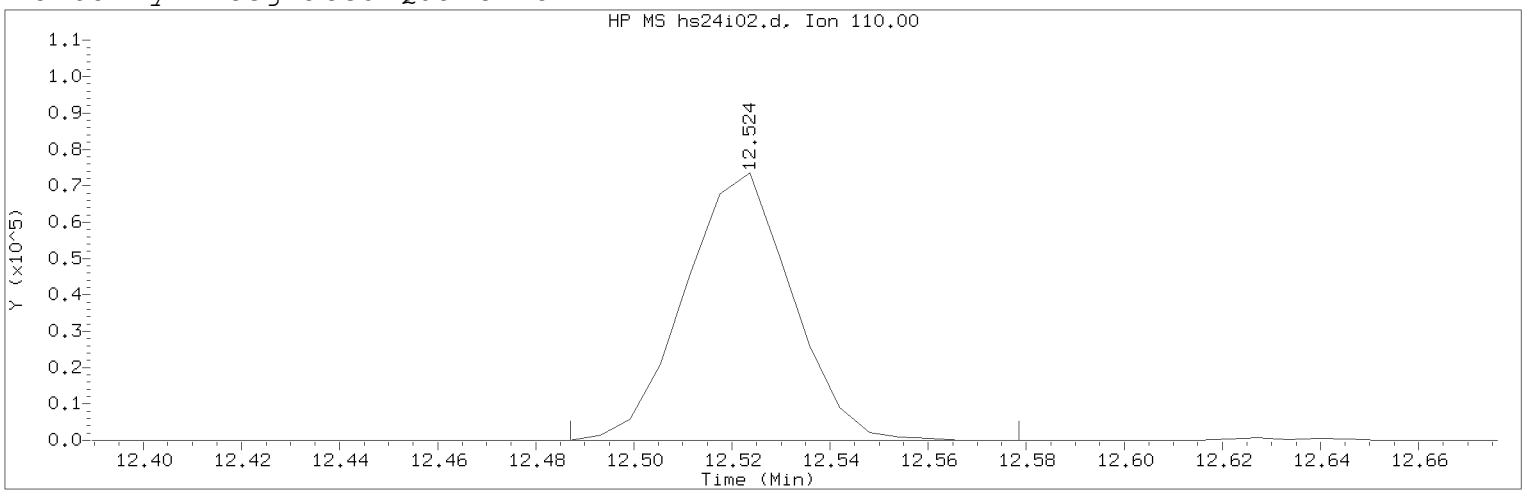
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 452299
On-column Amount (ng) : 10.0000
Integration start scan : 1778 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

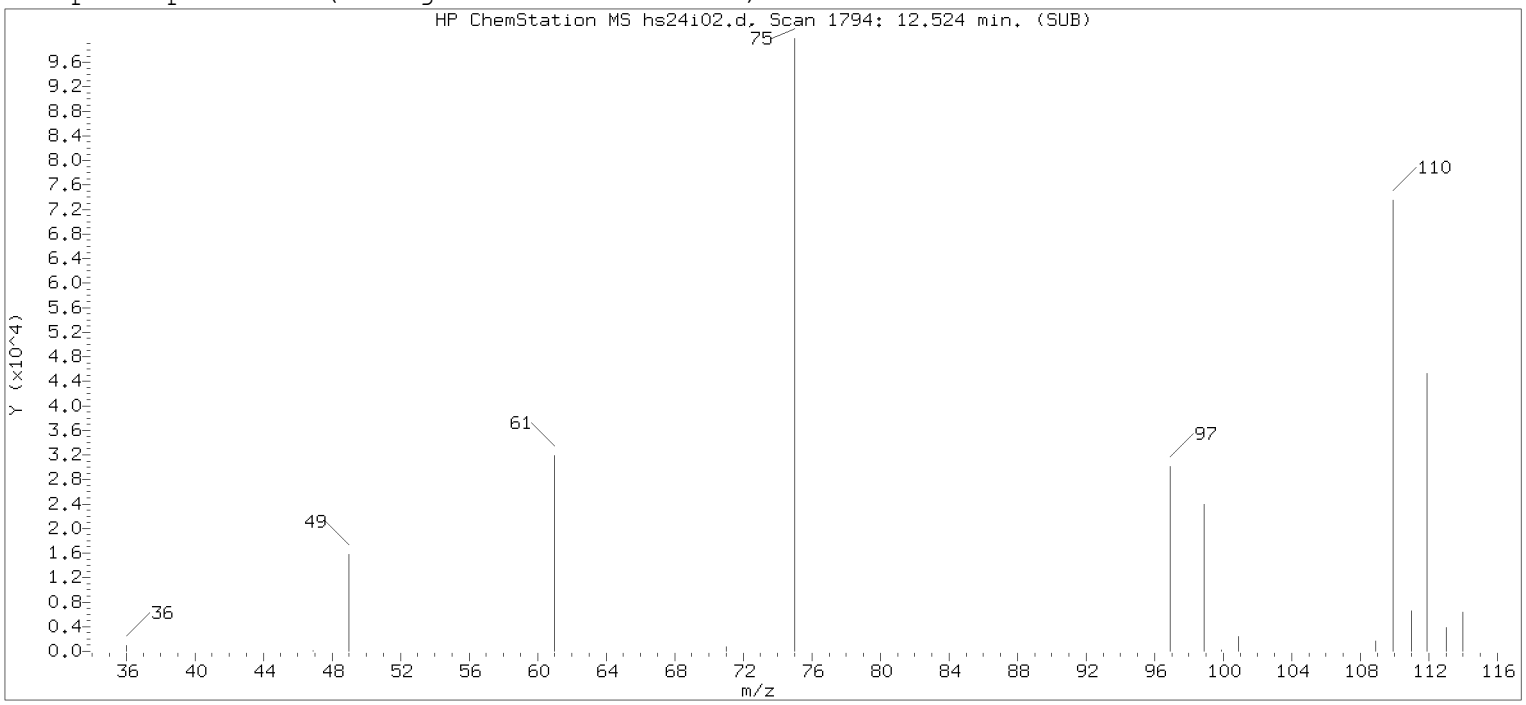
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 111265M
On-Column Amount (ng) : 10.0716
Integration start scan : 1787 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

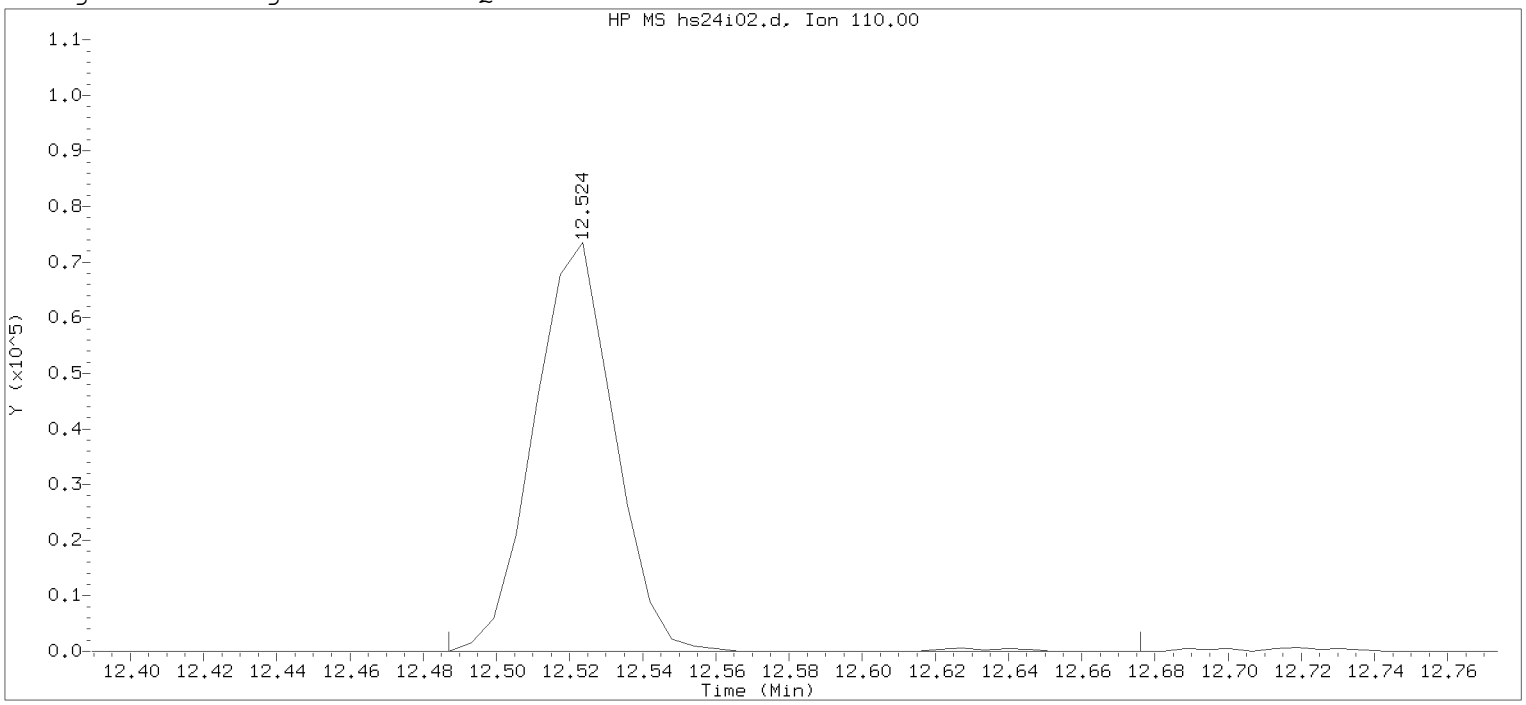
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



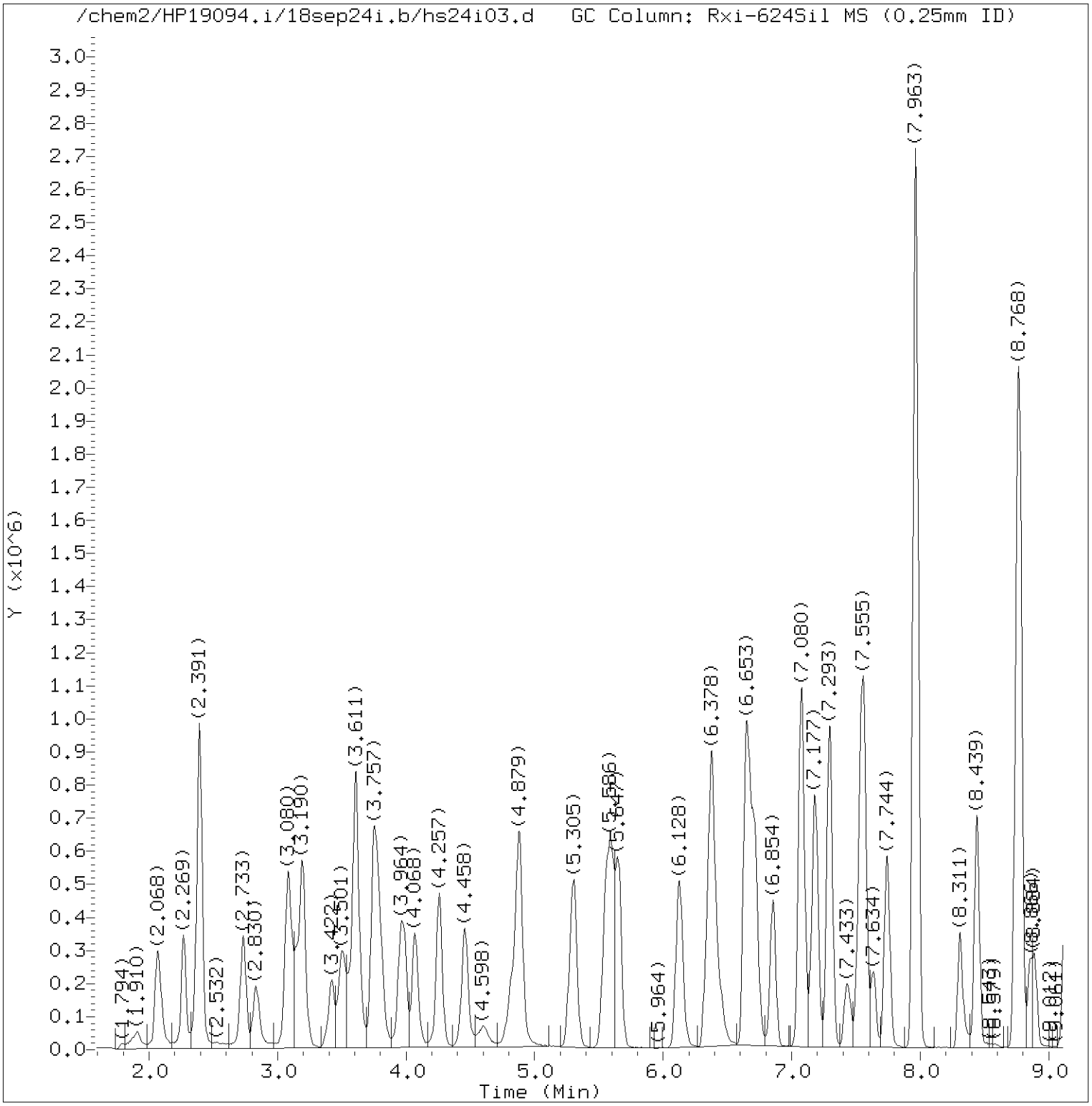
Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 112033
On-column Amount (ng) : 10.0000
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

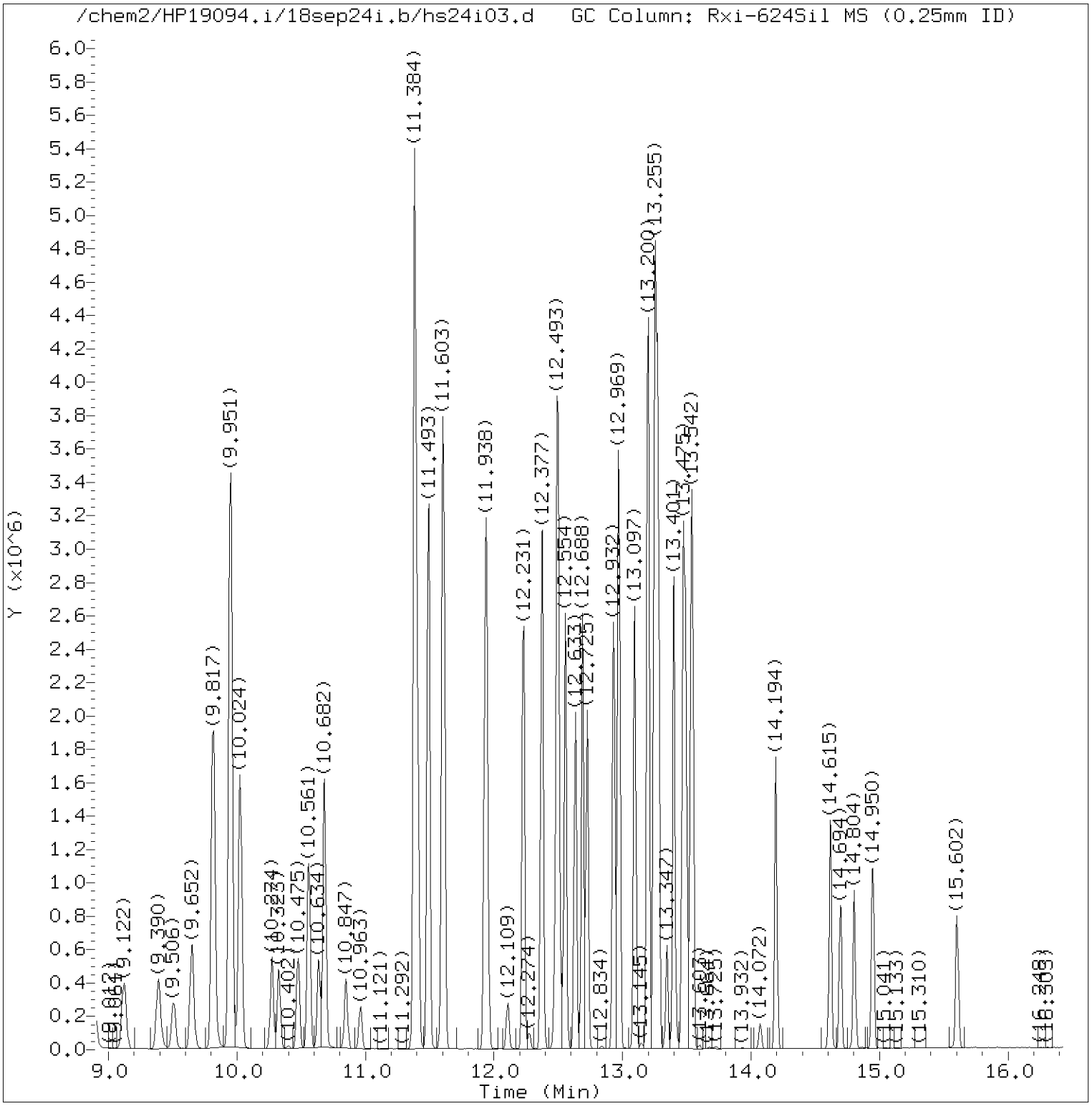
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	562282	5.241
2) Chloromethane	(2)	2.269	50	535240	5.095
5) Vinyl Chloride	(2)	2.391	62	501670	5.099
6) 1,3-Butadiene	(2)	2.391	39	552344M	4.956
7) Bromomethane	(2)	2.733	94	384528	5.027
8) Chloroethane	(2)	2.830	64	298270	4.998
9) Dichlorofluoromethane	(2)	3.080	67	732855	5.163
10) Trichlorofluoromethane	(2)	3.141	101	647481	5.209
11) Ethyl ether	(2)	3.422	59	212003	5.030
12) Freon 123a	(2)	3.507	67	413759	5.254
13) Acrolein	(1)	3.611	56	1489451	263.916
15) 1,1-Dichloroethene	(2)	3.745	96	285012	5.295
16) Freon 113	(2)	3.775	101	339708	5.355
14) Acetone	(1)	3.787	43	378399M	49.919
17) Methyl Iodide	(2)	3.958	142	580104	5.171
18) Carbon Disulfide	(2)	4.068	76	875498	5.112
21) Methyl Acetate	(1)	4.239	43	107057	5.031
22) Allyl Chloride	(2)	4.257	41	525571	5.137
23) Methylene Chloride	(2)	4.452	84	294254	4.846
26)*t-Butyl Alcohol-d10	(1)	4.482	65	127180M	50.000
28) t-Butyl Alcohol	(1)	4.598	59	218266	100.544
29) Acrylonitrile	(1)	4.812	53	260426	26.603
30) Methyl Tertiary Butyl Ether	(2)	4.860	73	578958	5.230
31) trans-1,2-Dichloroethene	(2)	4.885	96	312820	5.150
32) n-Hexane	(2)	5.305	57	526068	5.446
33) 1,1-Dichloroethane	(2)	5.543	63	603578	5.219
34) di-Isopropyl Ether	(2)	5.592	45	1044288	5.084
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	558039	5.362
40) 1,2-Dichloroethene (Total)	(2)		96	662378	10.358
37) Ethyl t-butyl ether	(2)	6.128	59	843514	5.178
38) 2-Butanone	(1)	6.342	43	671705	54.133
39) cis-1,2-Dichloroethene	(2)	6.372	96	349558	5.208
41) 2,2-Dichloropropane	(2)	6.391	77	439160	5.316
42) Propionitrile	(1)	6.445	54	368280	109.345
45) Methacrylonitrile	(1)	6.653	67	661065	54.434
47) Bromochloromethane	(2)	6.708	128	145716	5.139
48) Tetrahydrofuran	(1)	6.714	71	177366	53.767
49) Chloroform	(2)	6.854	83	551731	5.131

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	693943	10.030
50)$Dibromofluoromethane	(2)	7.067	111	707652	9.937
51) 1,1,1-Trichloroethane	(2)	7.086	97	487870	5.304
52) Cyclohexane	(2)	7.183	56	645692	5.378
52) Cyclohexane	(2)	7.183	84	534268	5.397
52) Cyclohexane	(2)	7.177	69	190372	5.380
54) Carbon Tetrachloride	(2)	7.293	117	416126	5.268
55) 1,1-Dichloropropene	(2)	7.299	75	459178	5.265
56) Isobutyl Alcohol	(1)	7.427	41	212923	253.500
57)$1,2-Dichloroethane-d4	(2)	7.537	102	119553M	9.912
57)$1,2-Dichloroethane-d4	(2)	7.531	65	572526	9.814
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76935	9.960
58) Benzene	(2)	7.561	78	1327137	5.151
59) 1,2-Dichloroethane	(2)	7.634	62	288210	4.861
60) t-Amyl methyl ether	(2)	7.744	73	696807	5.159
62) n-Heptane	(2)	7.963	43	544674	5.469
63)*Fluorobenzene	(2)	7.963	96	2745022	10.000
65) n-Butanol	(1)	8.305	56	371428M	523.420
67) Trichloroethene	(2)	8.445	95	342245	5.188
69) Methylcyclohexane	(2)	8.750	83	652245	5.235
70) 1,2-Dichloropropane	(2)	8.780	63	324215	5.186
71) Methyl Methacrylate	(1)	8.854	69	124559	5.541
72) 1,4-Dioxane	(1)	8.872	88	45616M	266.986
73) Dibromomethane	(2)	8.890	93	132300	5.099
74) Bromodichloromethane	(2)	9.122	83	364823	5.191
76) 2-Nitropropane	(1)	9.390	41	351207	55.156
80) cis-1,3-Dichloropropene	(2)	9.646	75	430070	5.256
81) 4-Methyl-2-Pentanone	(1)	9.817	43	1690753	54.779
82)$Toluene-d8	(3)	9.951	98	2759111	10.005
82)$Toluene-d8	(3)	9.951	100	1778973	9.995
83) Toluene	(3)	10.024	92	810475	5.097
85) 1,3-Dichloropropene (total)	(3)		75	750377	10.484
84) trans-1,3-Dichloropropene	(3)	10.274	75	320307	5.228
86) Ethyl Methacrylate	(3)	10.323	69	271825	5.179
88) 1,1,2-Trichloroethane	(3)	10.475	97	183350	5.011
89) Tetrachloroethene	(3)	10.561	166	370654	5.159
90) 1,3-Dichloropropane	(3)	10.640	76	332490	5.127
91) 2-Hexanone	(1)	10.682	43	1145783	54.536

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	226639	5.168
95) 1,2-Dibromoethane	(3)	10.963	107	175991	5.132
96) 1-Chlorohexane	(3)	11.384	91	479490	5.056
97)*Chlorobenzene-d5	(3)	11.384	117	2142668	10.000
98) Chlorobenzene	(3)	11.408	112	858660	5.090
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291506	5.236
100) Ethylbenzene	(3)	11.493	91	1605334	5.166
101) m+p-Xylene	(3)	11.603	106	1200436	10.414
105) Xylene (Total)	(3)		106	1775566	15.633
104) o-Xylene	(3)	11.932	106	575130	5.219
106) Styrene	(3)	11.944	104	938150	5.321
107) Bromoform	(3)	12.109	173	125482	5.207
108) Isopropylbenzene	(3)	12.231	105	1586197	5.273
111)$4-Bromofluorobenzene	(3)	12.371	95	995484	9.915
111)$4-Bromofluorobenzene	(3)	12.377	174	860774	9.873
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	224515M	5.196
114) Bromobenzene	(4)	12.493	156	342709	5.218
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	534181	55.258
116) 1,2,3-Trichloropropane	(4)	12.524	110	56735M	5.079
117) n-Propylbenzene	(4)	12.554	91	1883753	5.275
119) 2-Chlorotoluene	(4)	12.633	126	361184	5.214
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1294691	5.351
122) 4-Chlorotoluene	(4)	12.725	126	365201	5.261
125) tert-Butylbenzene	(4)	12.932	134	275287	5.232
126) Pentachloroethane	(4)	12.969	167	220484	5.369
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1314436	5.324
128) sec-Butylbenzene	(4)	13.097	105	1675573	5.345
131) 1,3-Dichlorobenzene	(4)	13.194	146	679711	5.208
132) p-Isopropyltoluene	(4)	13.200	119	1399618	5.390
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1089195	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	661942	5.167
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	569393	5.027
136) Benzyl Chloride	(4)	13.347	126	81818	5.238
138) n-Butylbenzene	(4)	13.493	92	687040	5.330
139) 1,2-Dichlorobenzene	(4)	13.529	146	594602	5.164
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	29297	5.600
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	502164	5.172
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	407904	5.158

M = Compound was manually integrated.
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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	154730	5.177
147) Naphthalene	(4)	14.804	128	665320	5.317
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	336232	5.171

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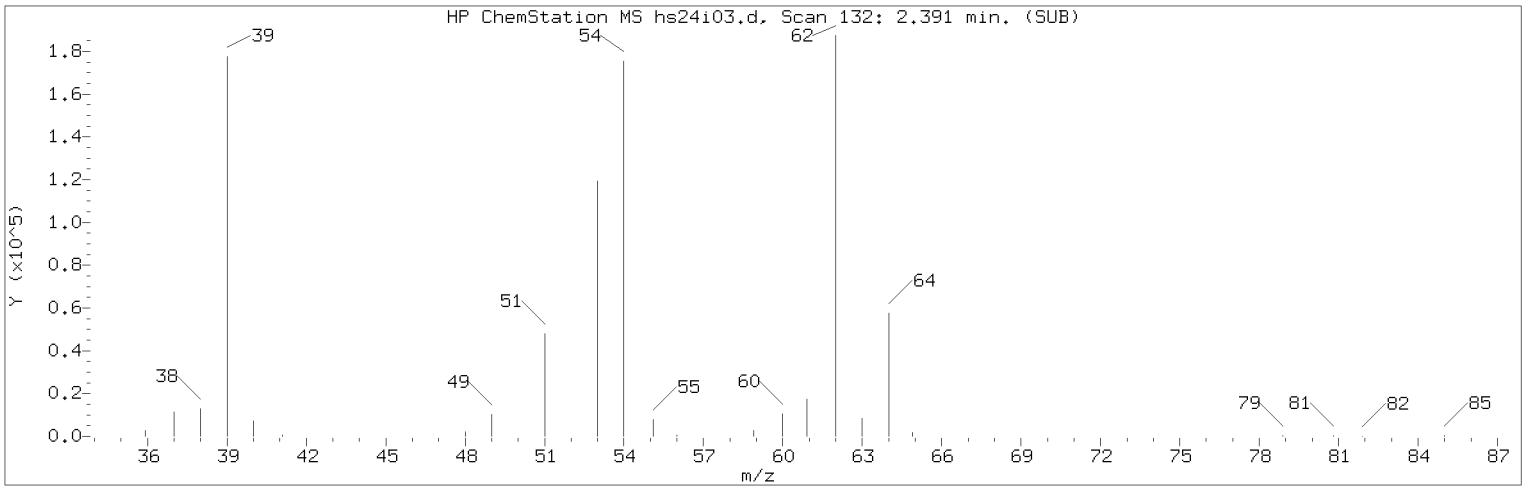
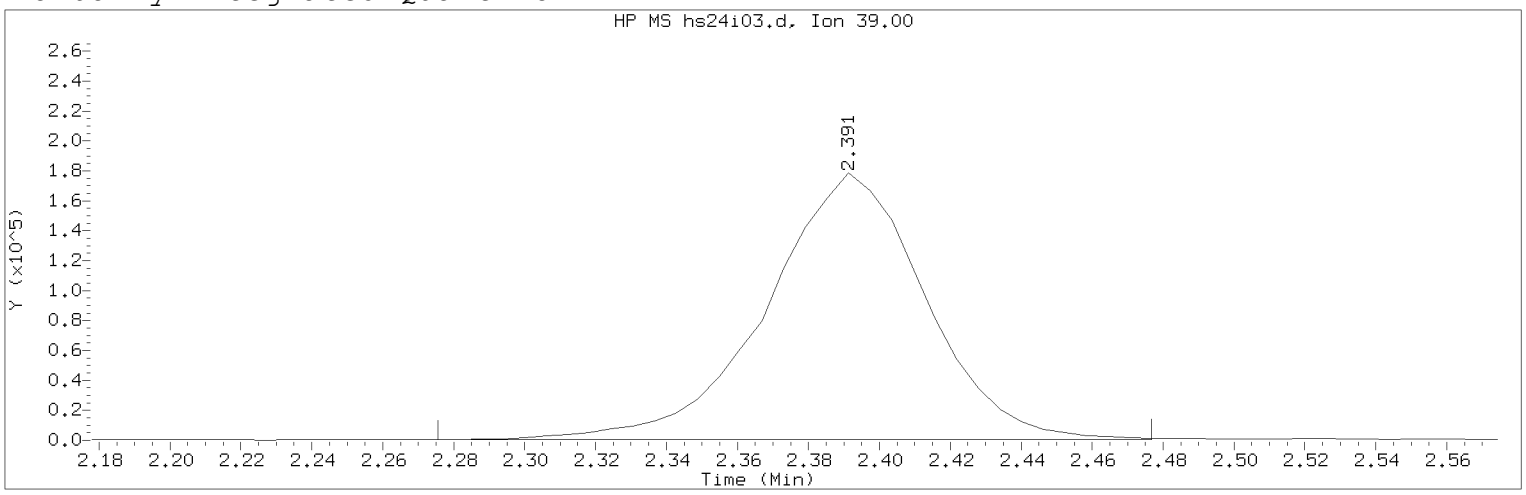
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

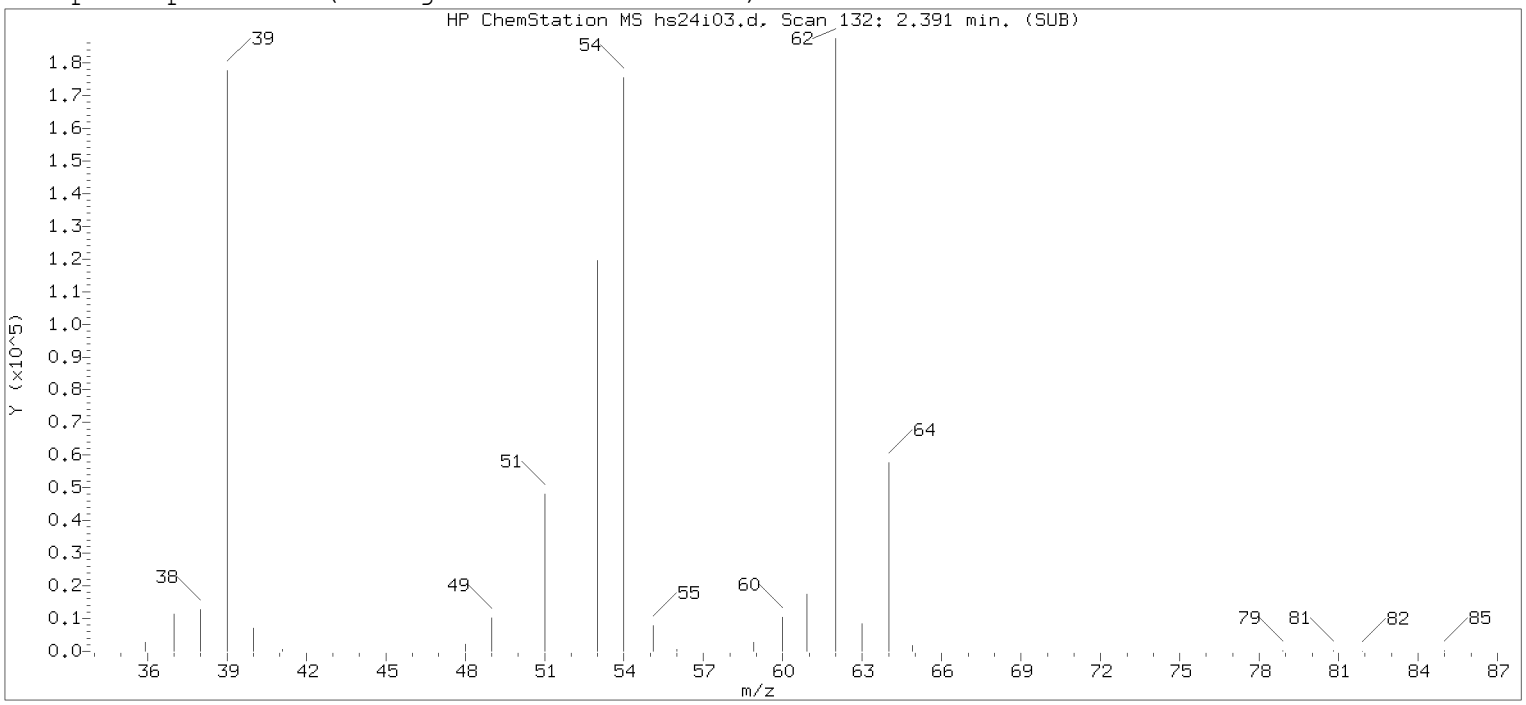
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 552344M
On-Column Amount (ng) : 4.9561
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 458 Y at integration end: 458

Reason for manual integration: improper integration

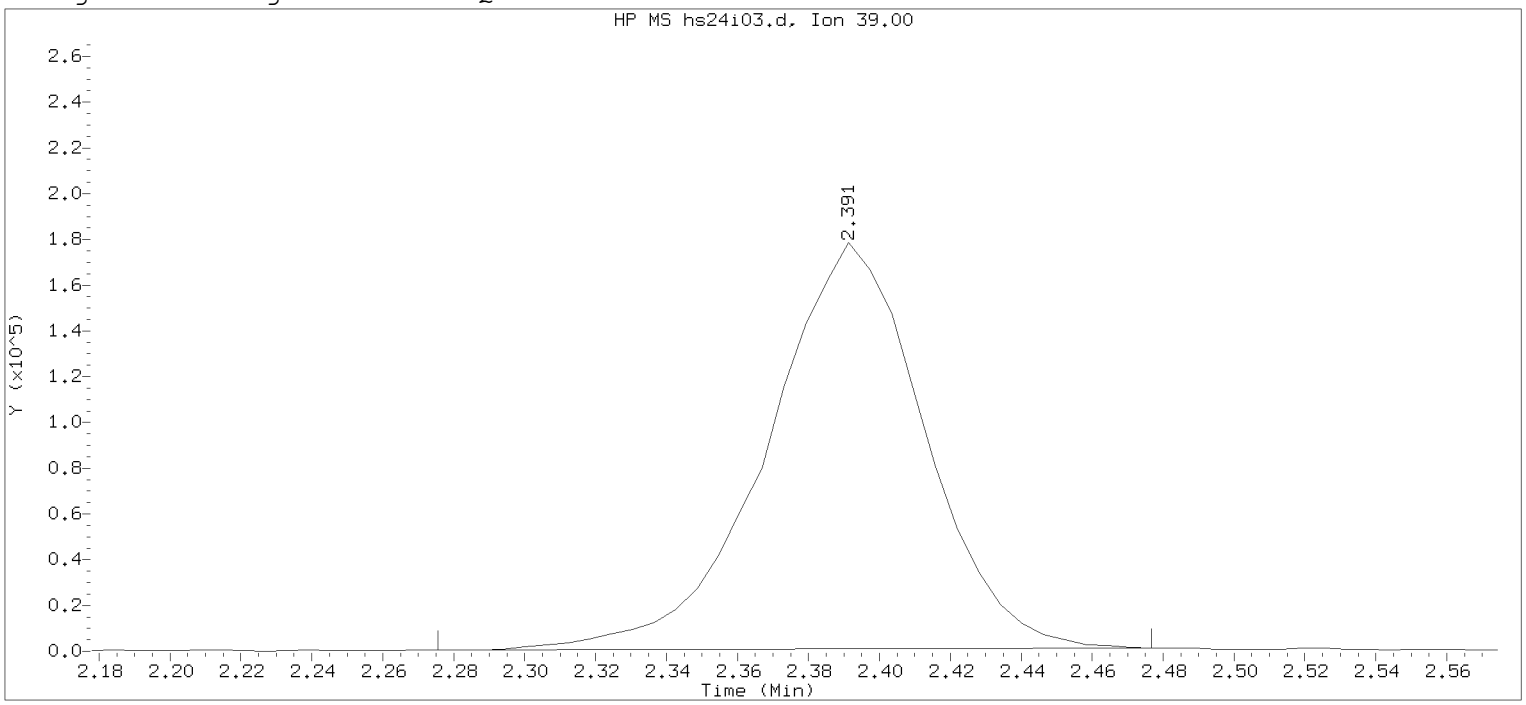
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

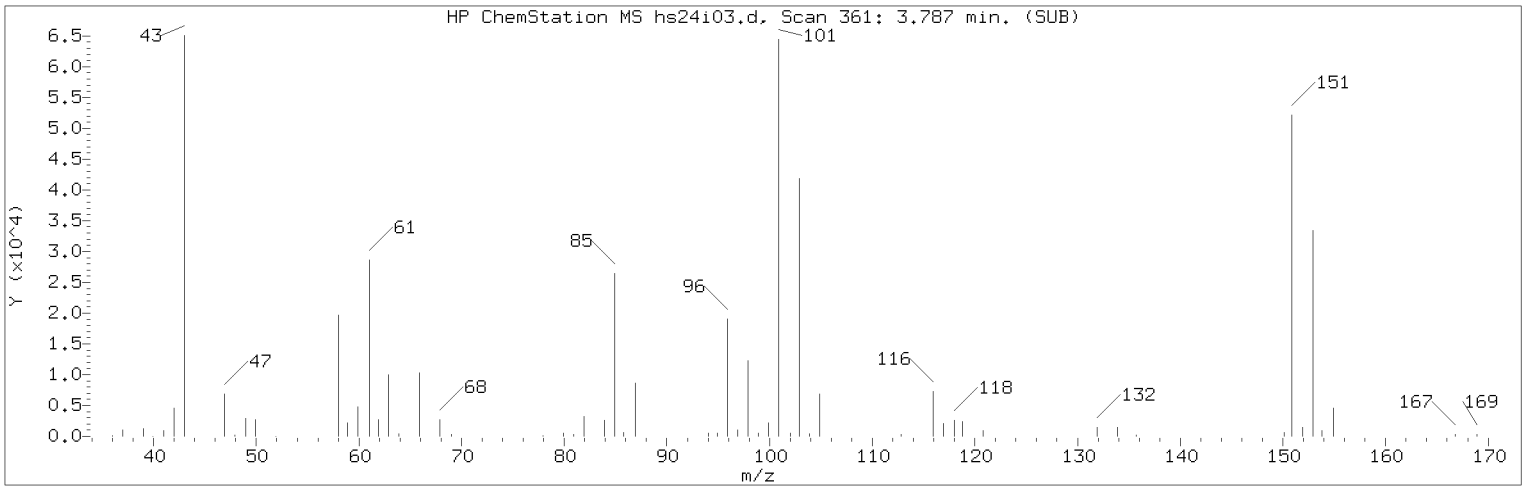
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

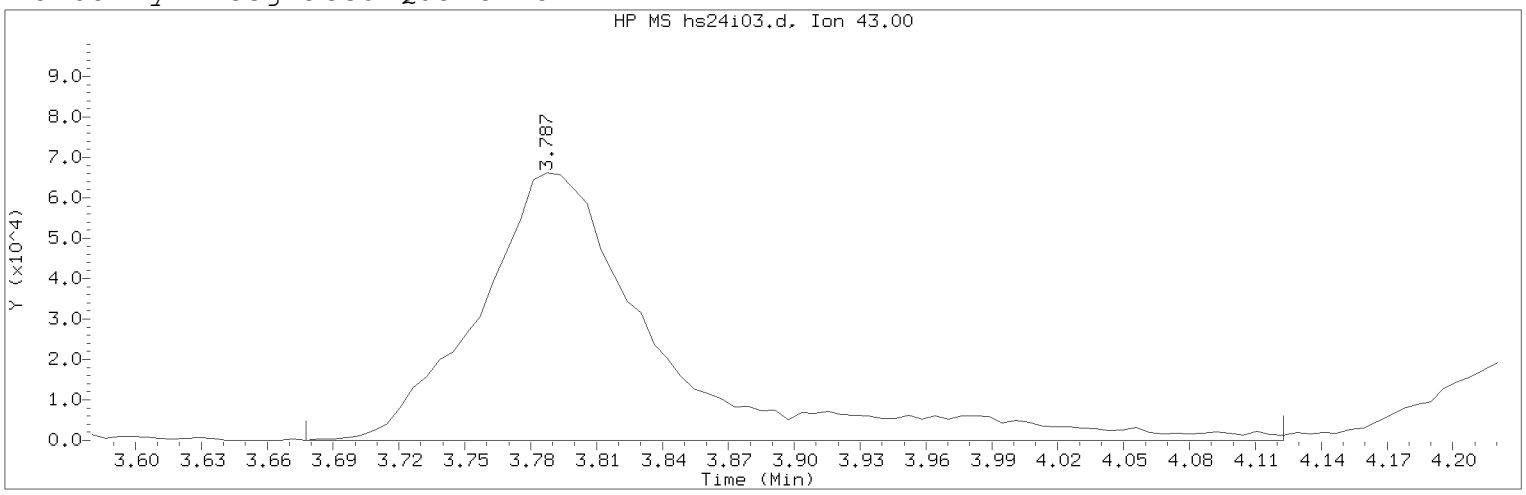
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 547218
On-column Amount (ng) : 4.9849
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 437 Y at integration end: 1303

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

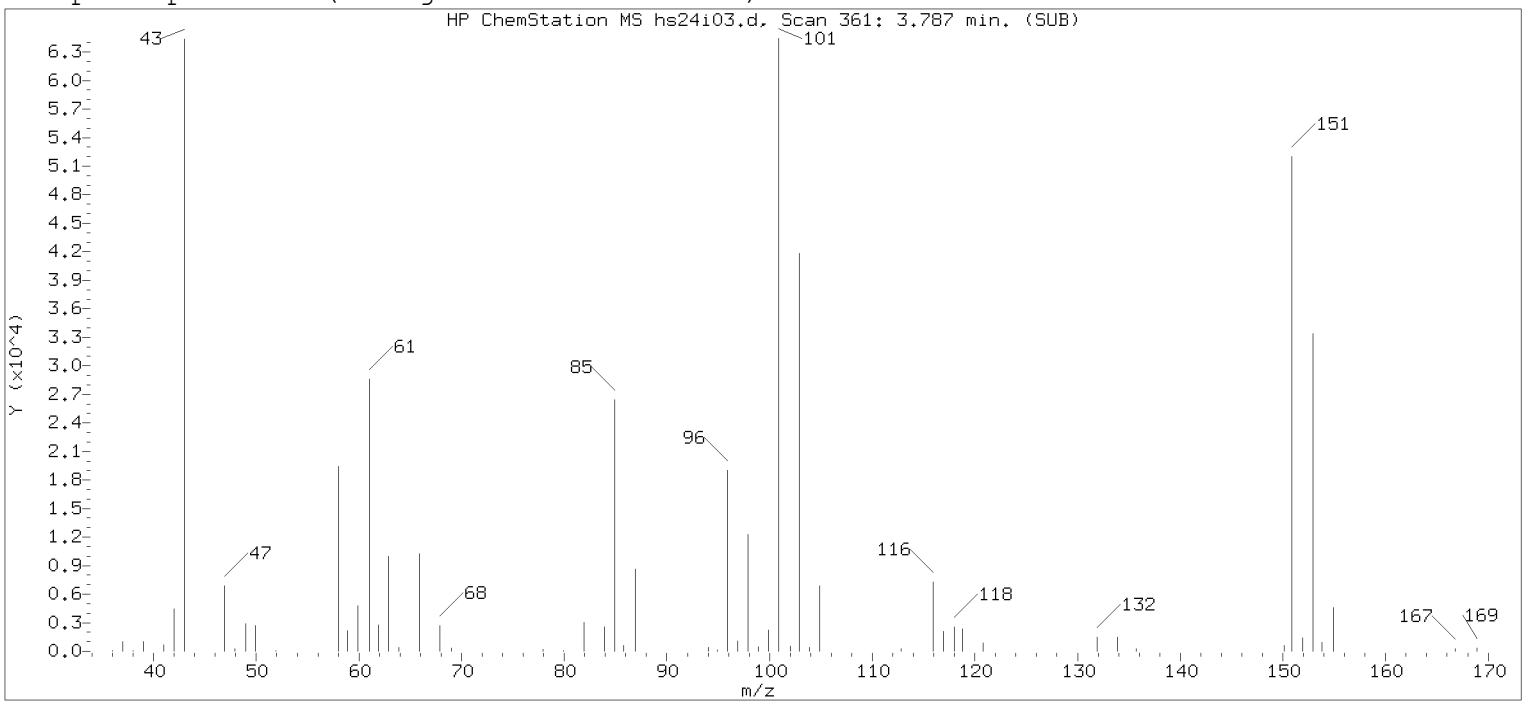
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 378399M
On-Column Amount (ng) : 49.9188
Integration start scan : 342 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

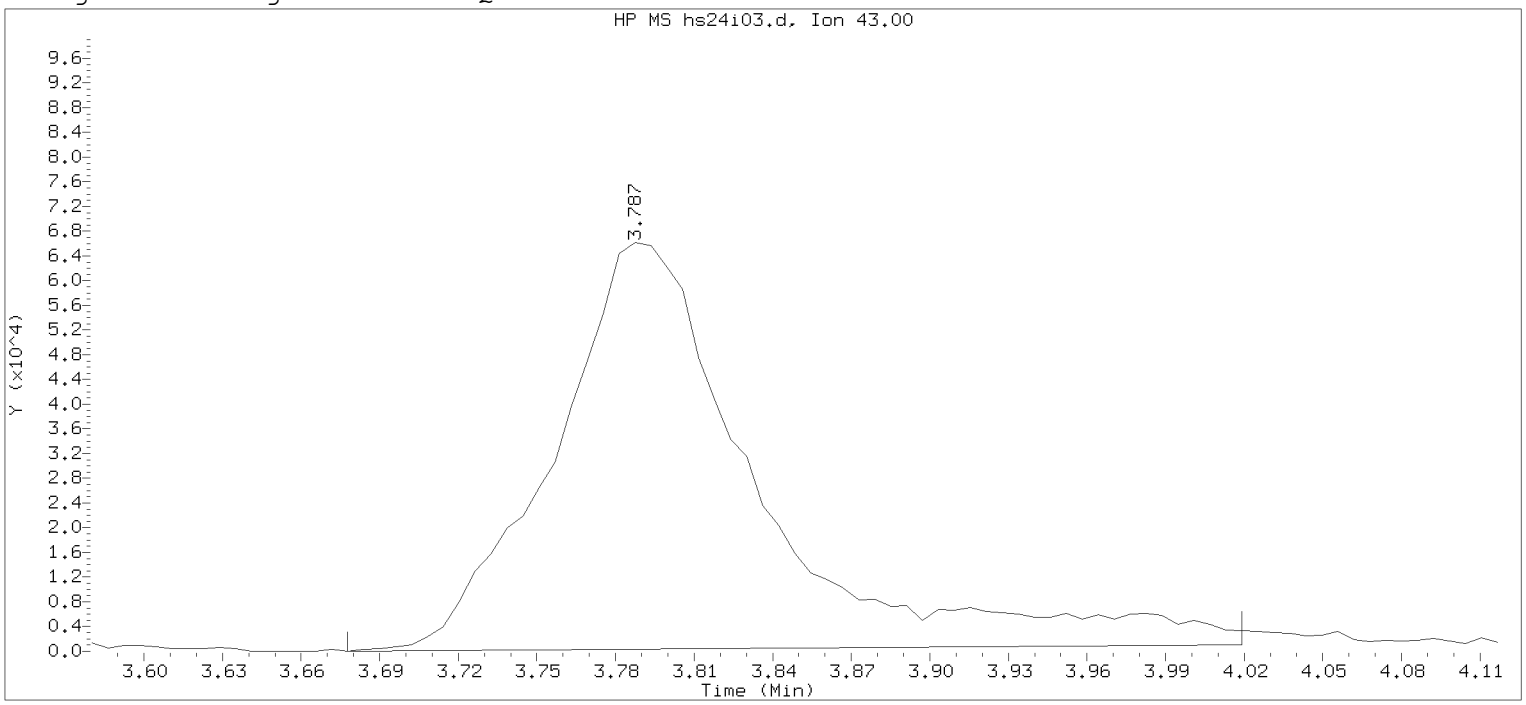
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 353758		
On-column Amount (ng)	: 50.2605		
Integration start scan	: 342	Integration stop scan:	398
Y at integration start	: 0	Y at integration end:	1061

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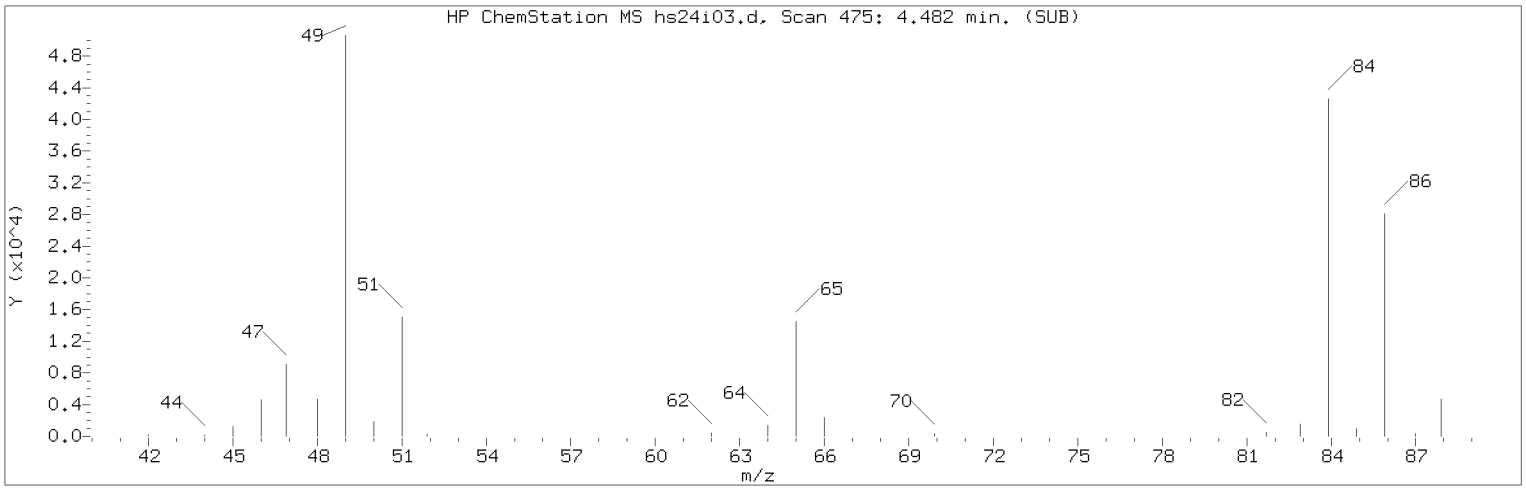
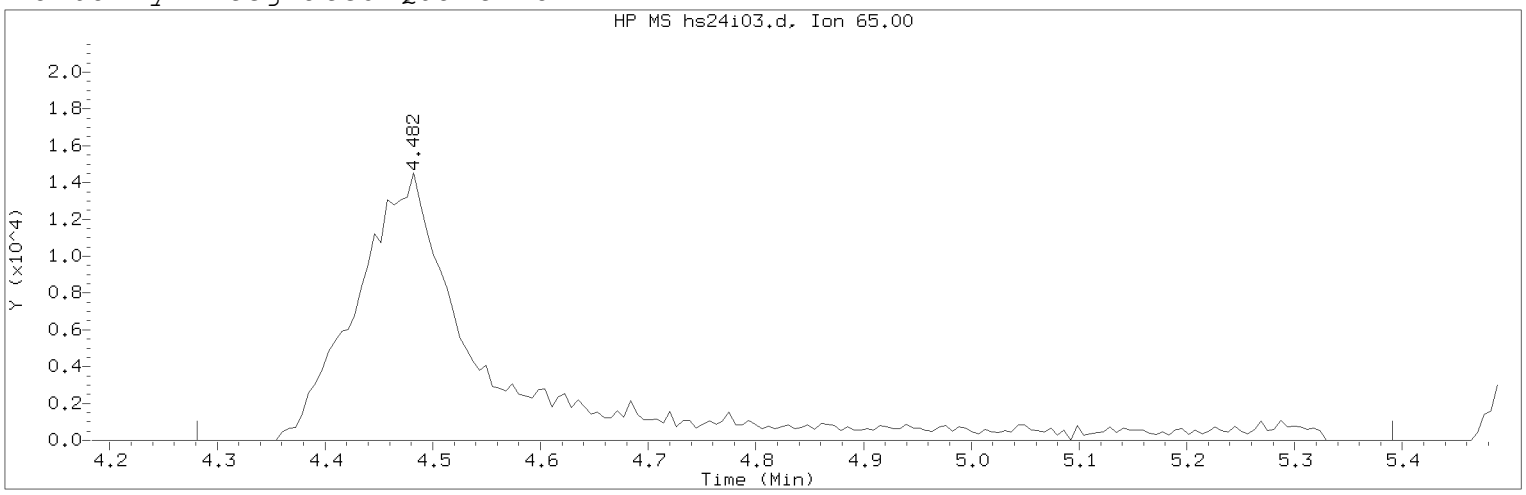
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

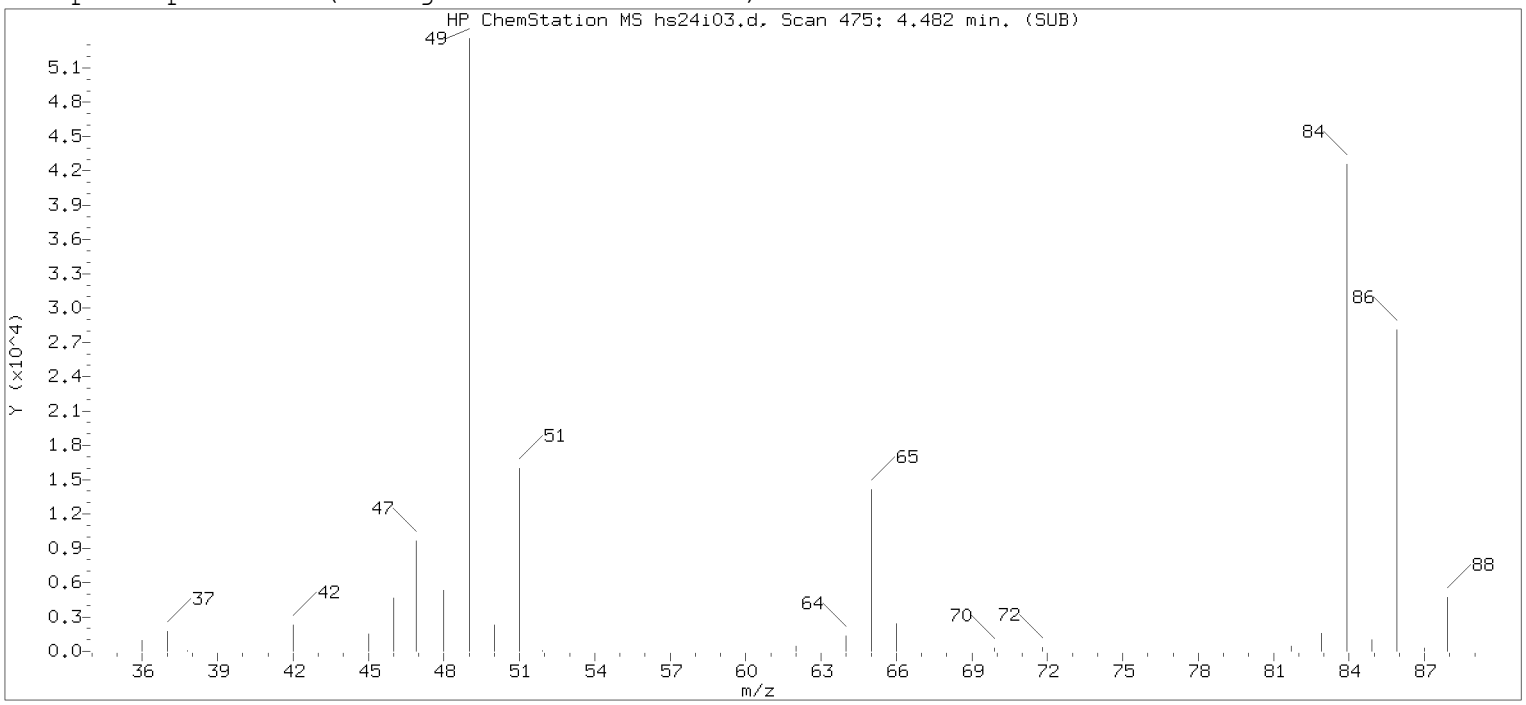
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area (flag) : 127180M
On-Column Amount (ng) : 50.0000
Integration start scan : 441 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

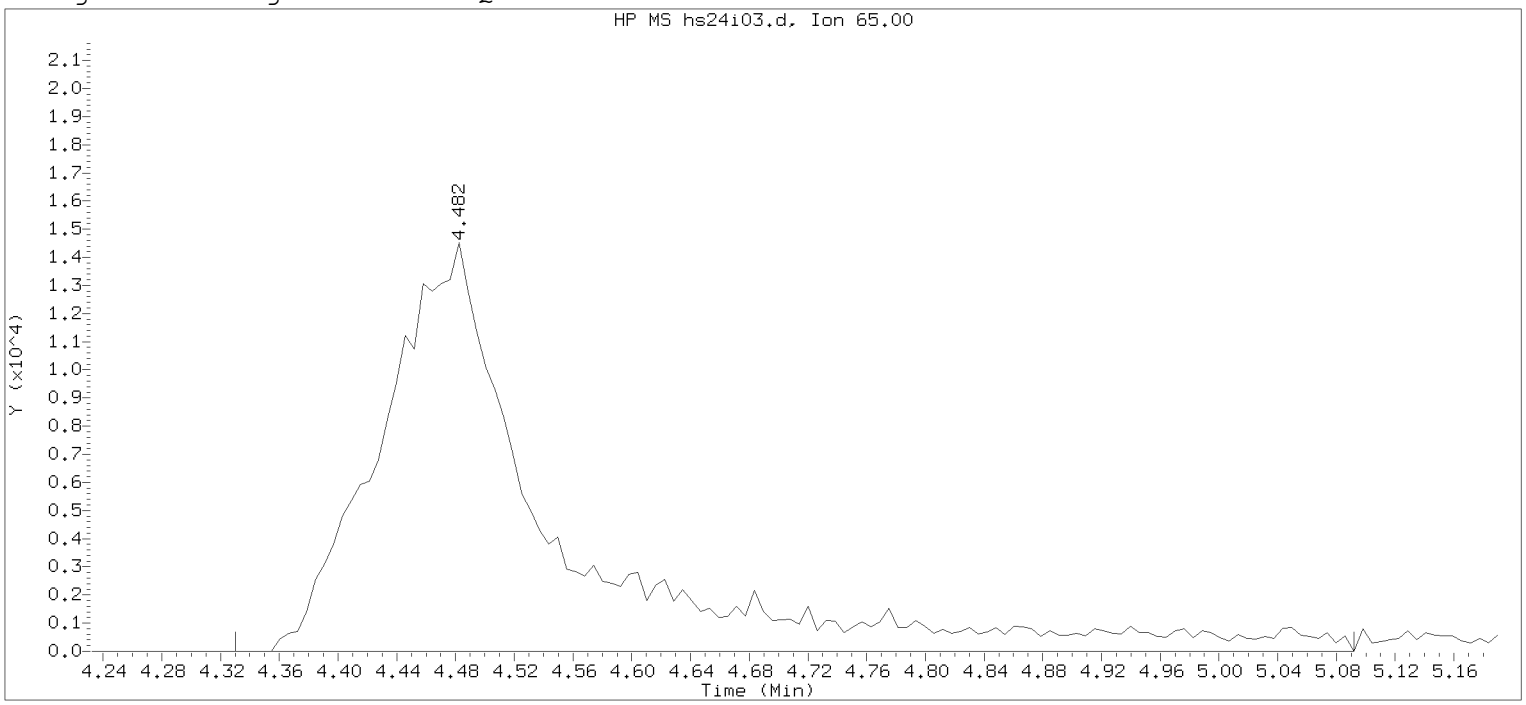
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

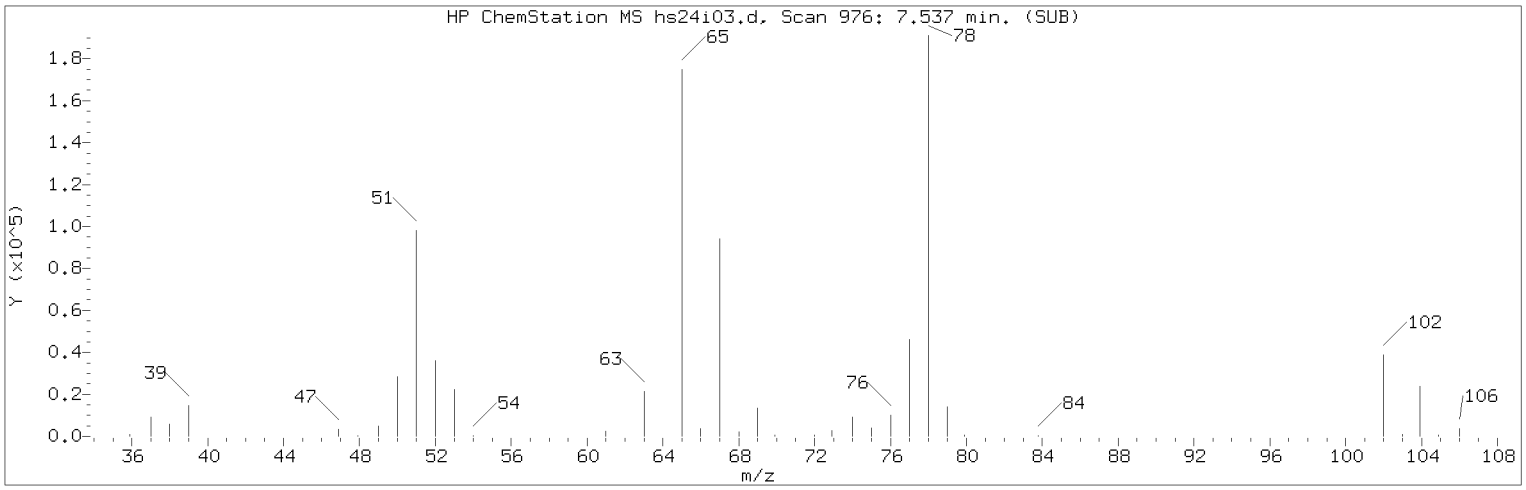
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

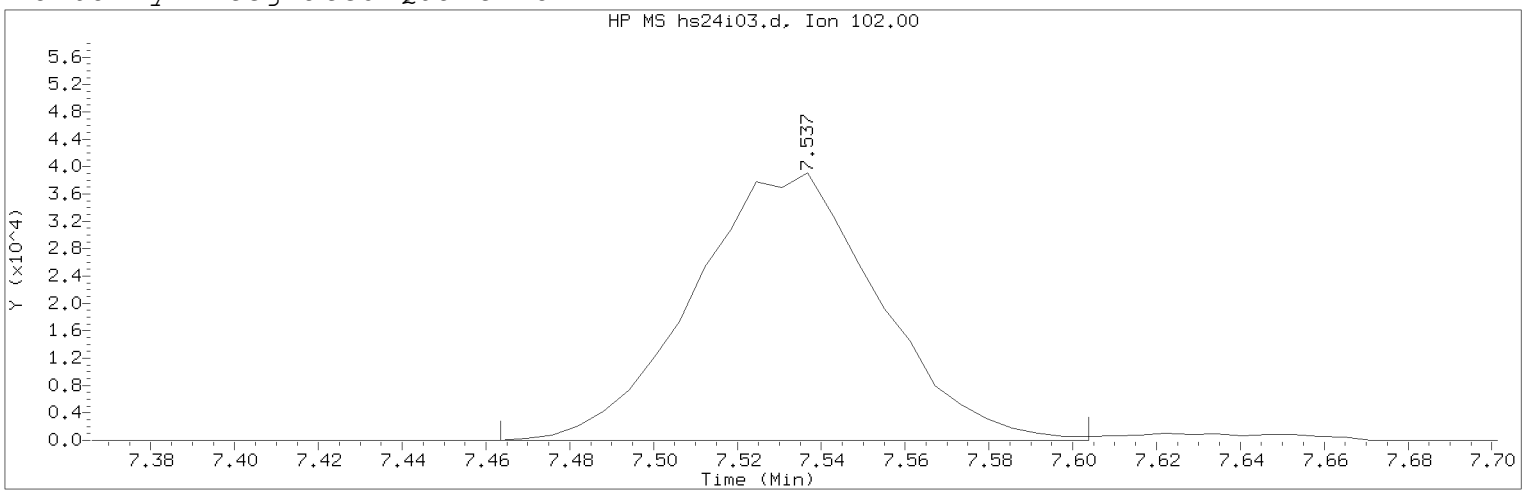
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area : 119408
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

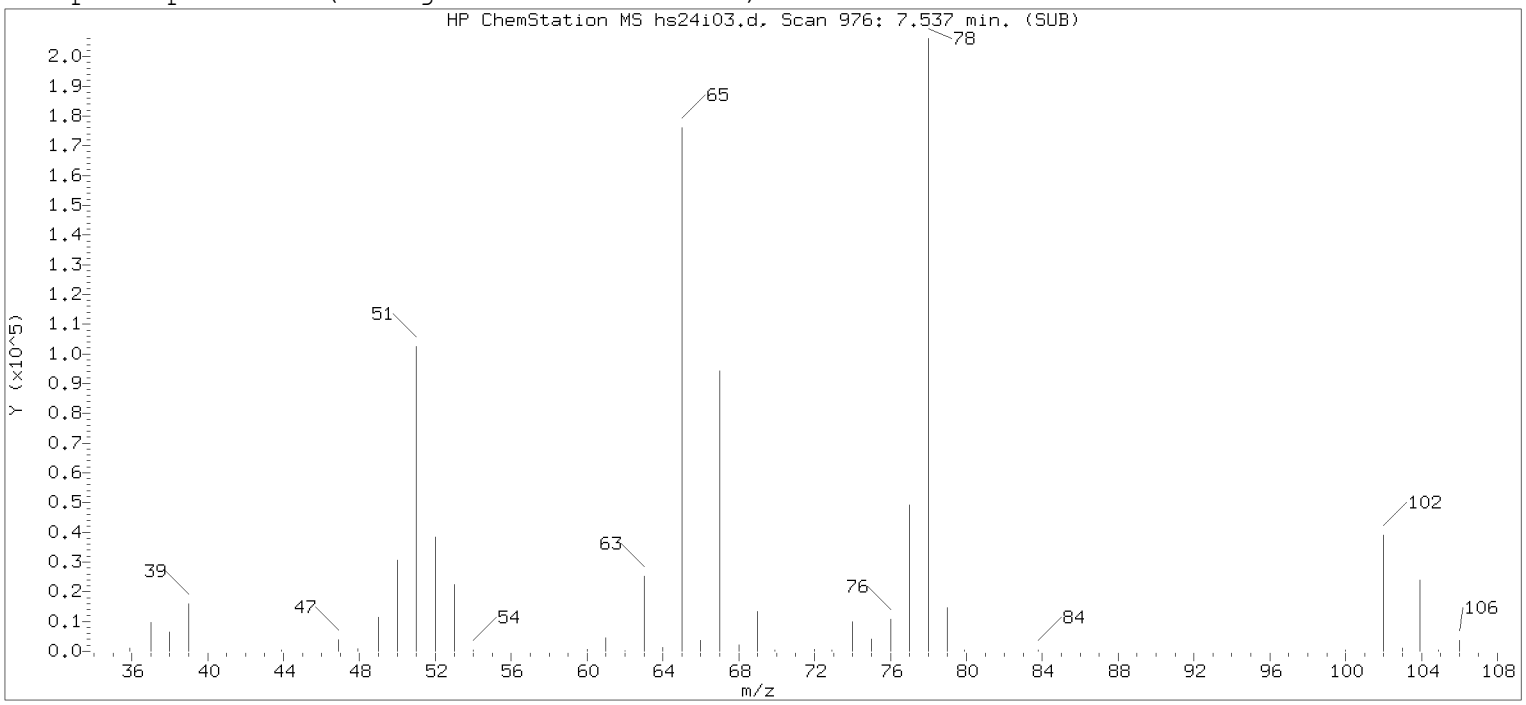
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 119553M
On-Column Amount (ng) : 9.9122
Integration start scan : 963 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

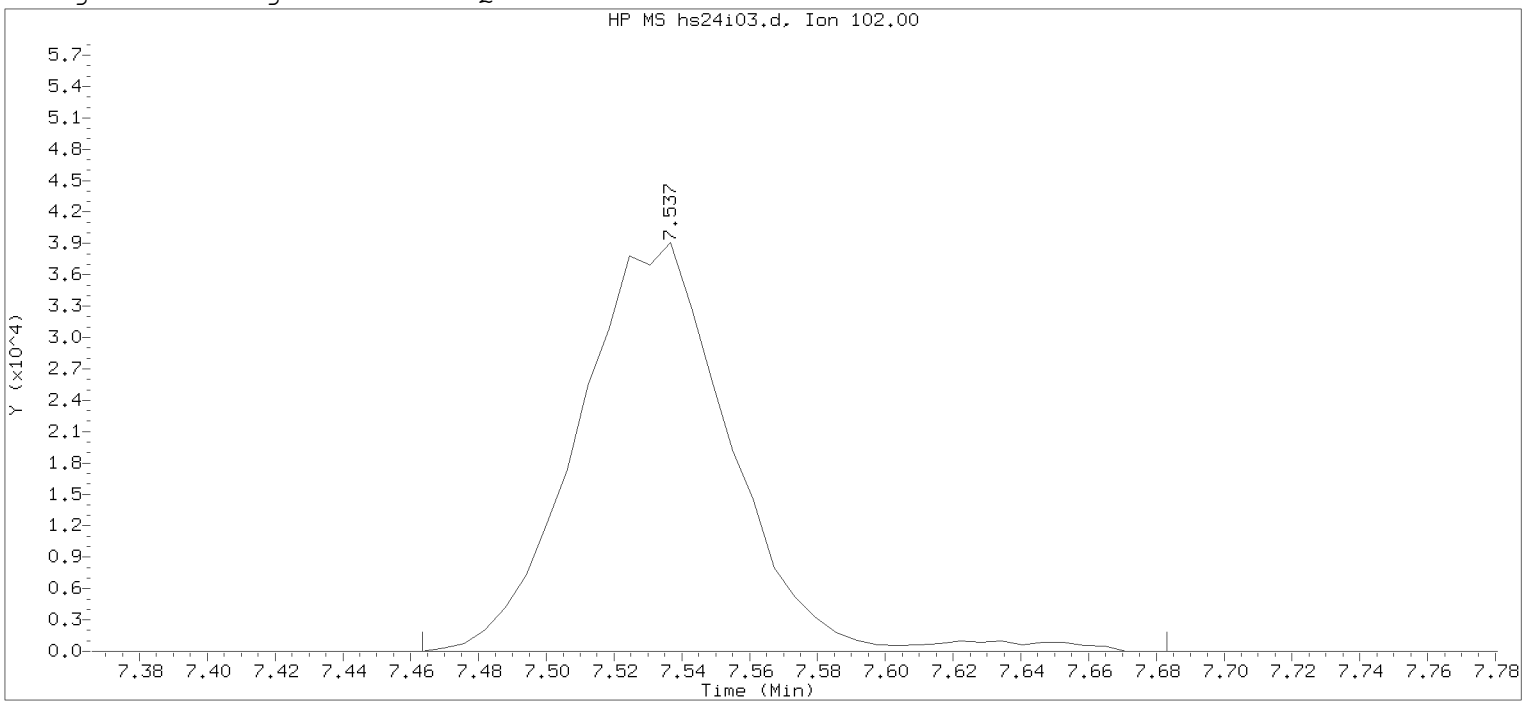
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

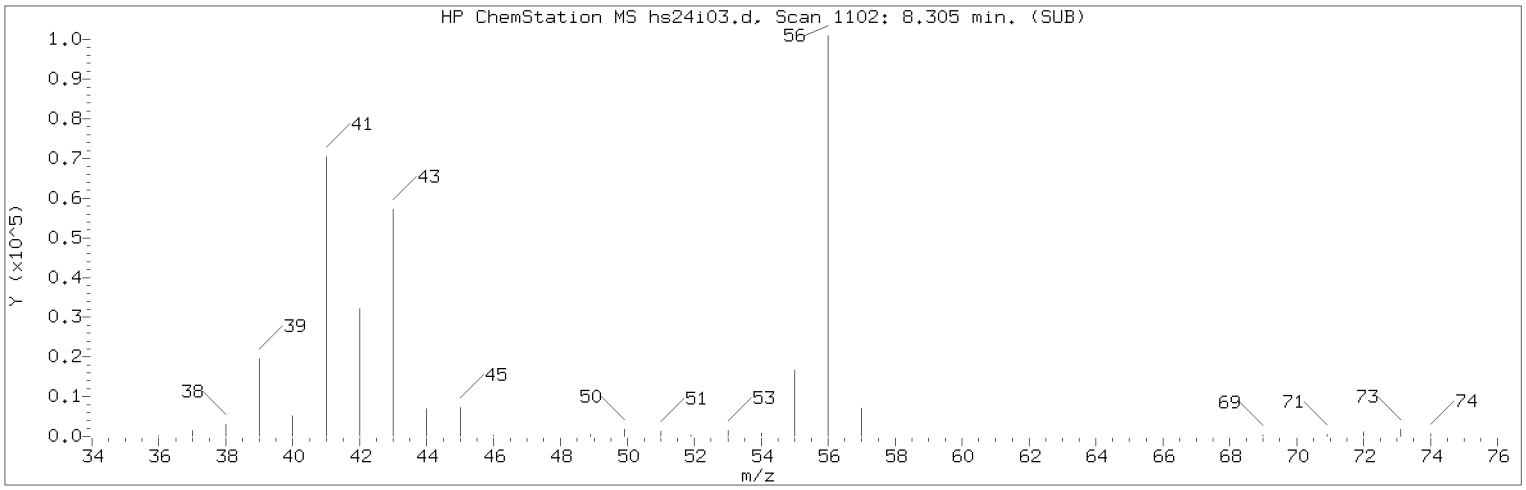
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

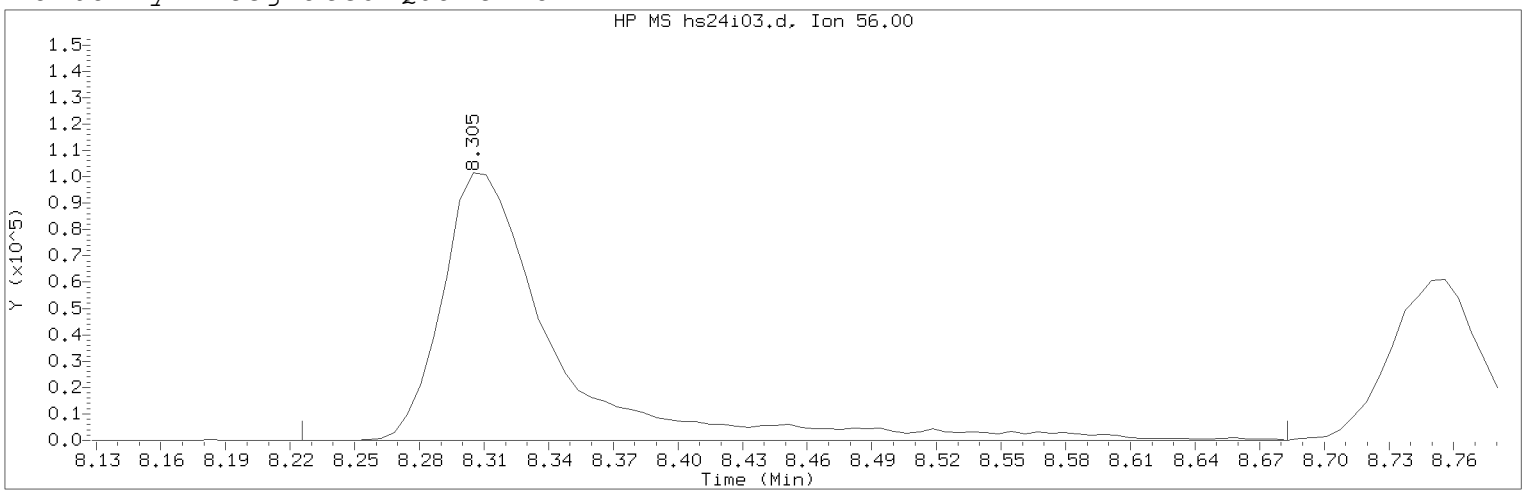
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 122323
On-column Amount (ng) : 10.0921
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

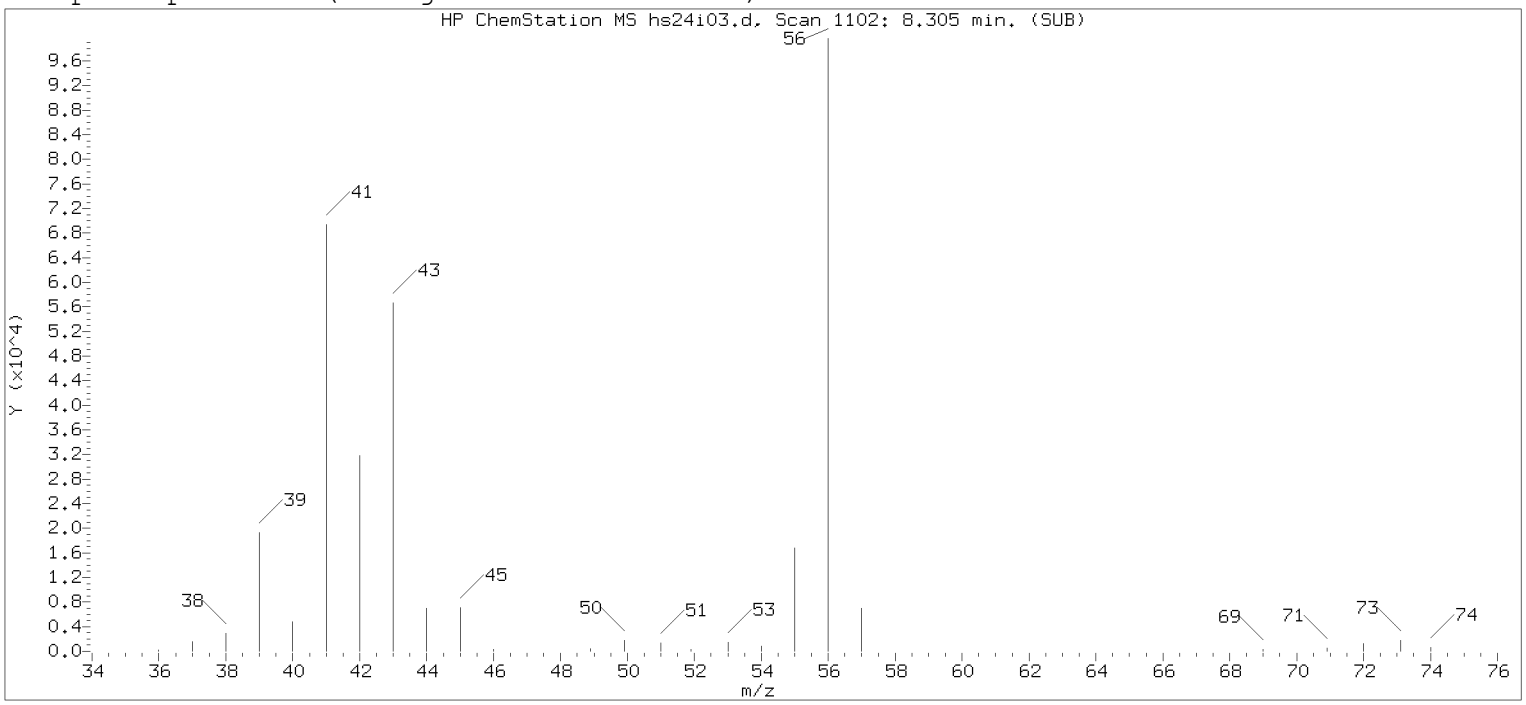
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 371428M
On-Column Amount (ng) : 523.4201
Integration start scan : 1088 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

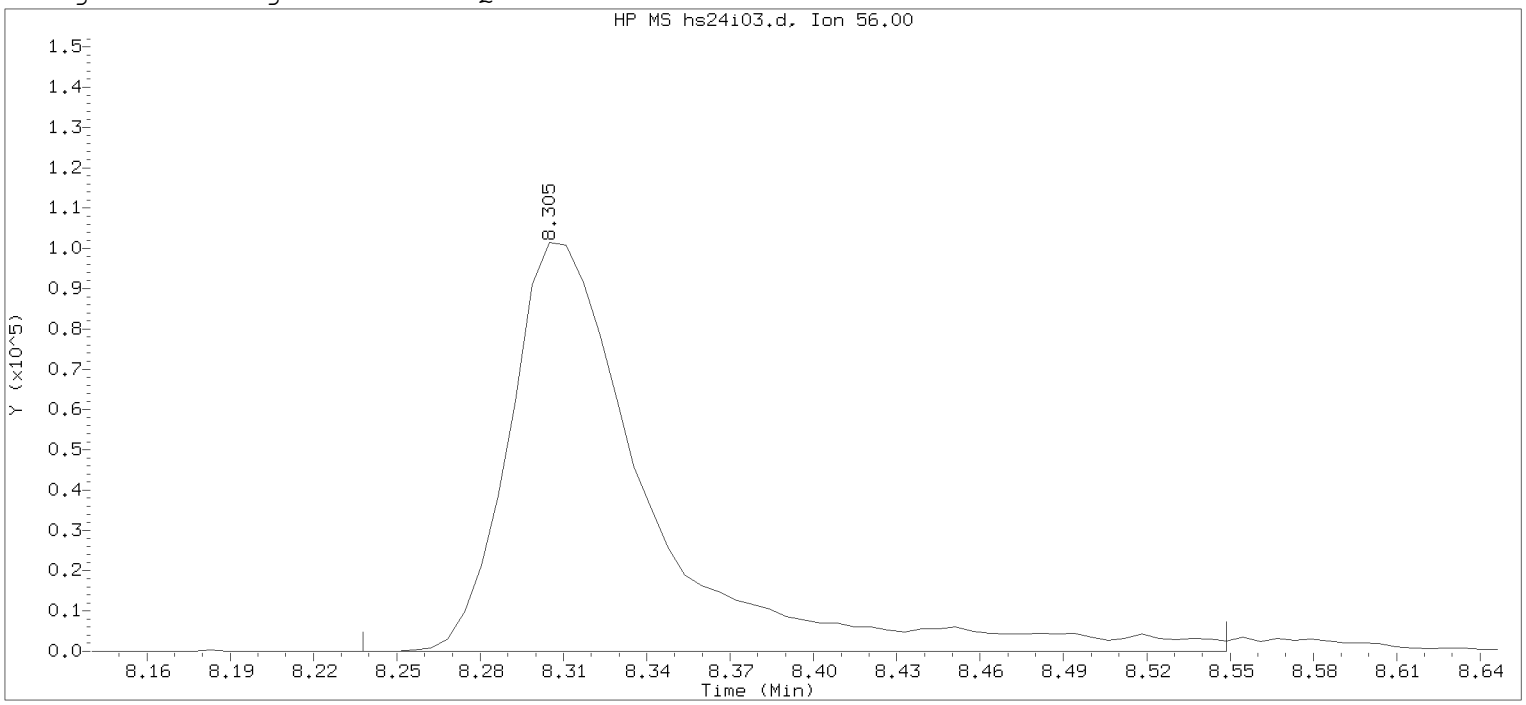
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

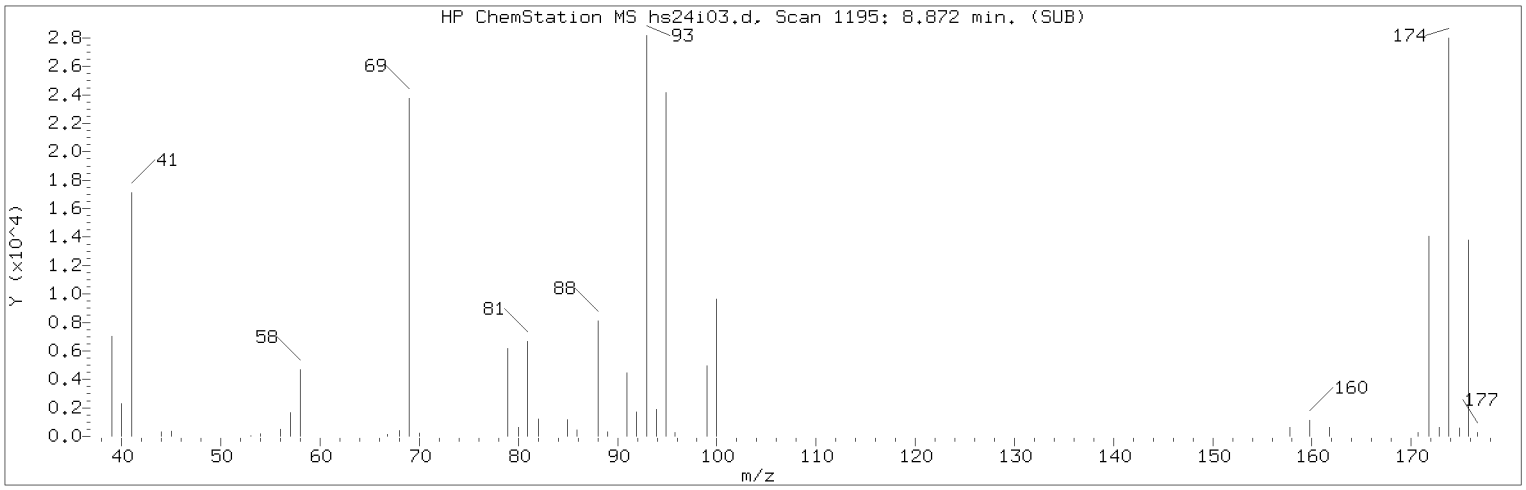
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

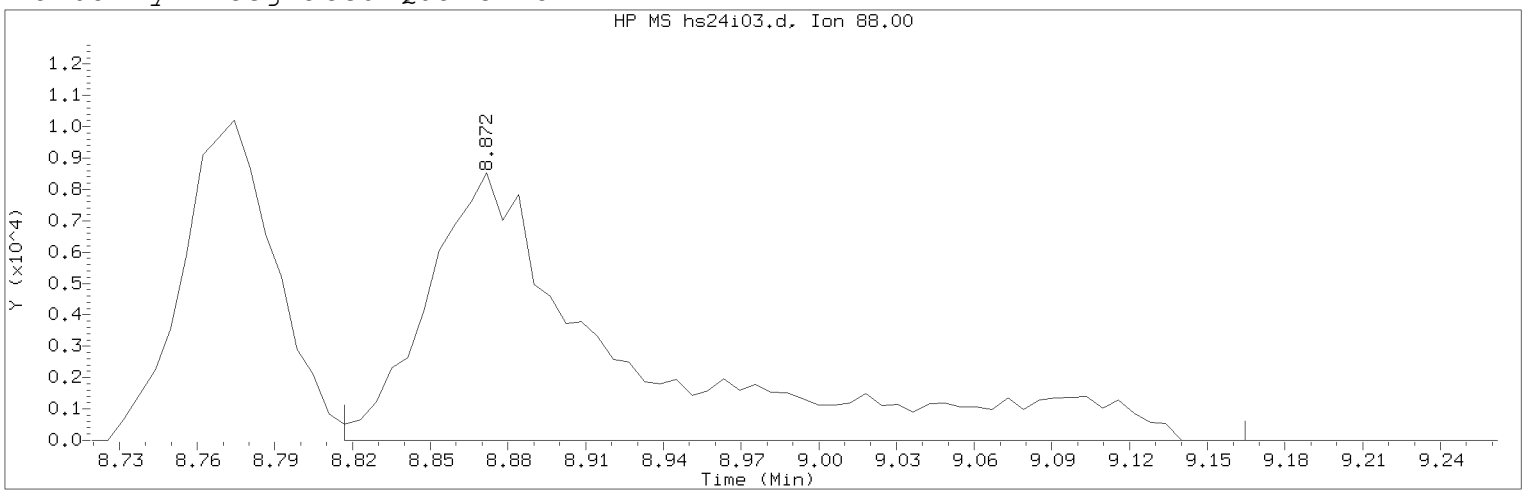
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 359413		
On-column Amount (ng)	: 483.9616		
Integration start scan	: 1090	Integration stop scan:	1141
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

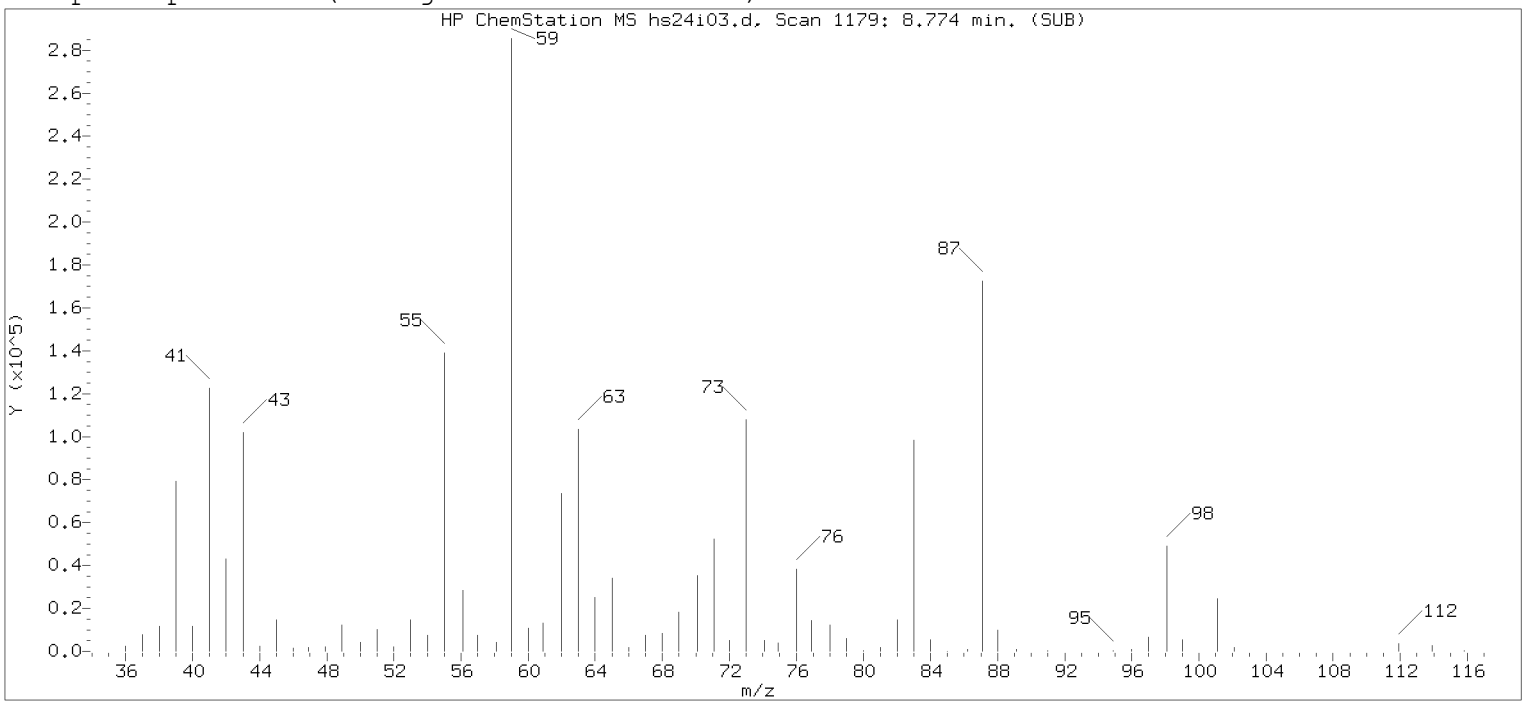
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 45616M
On-Column Amount (ng) : 266.9855
Integration start scan : 1185 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

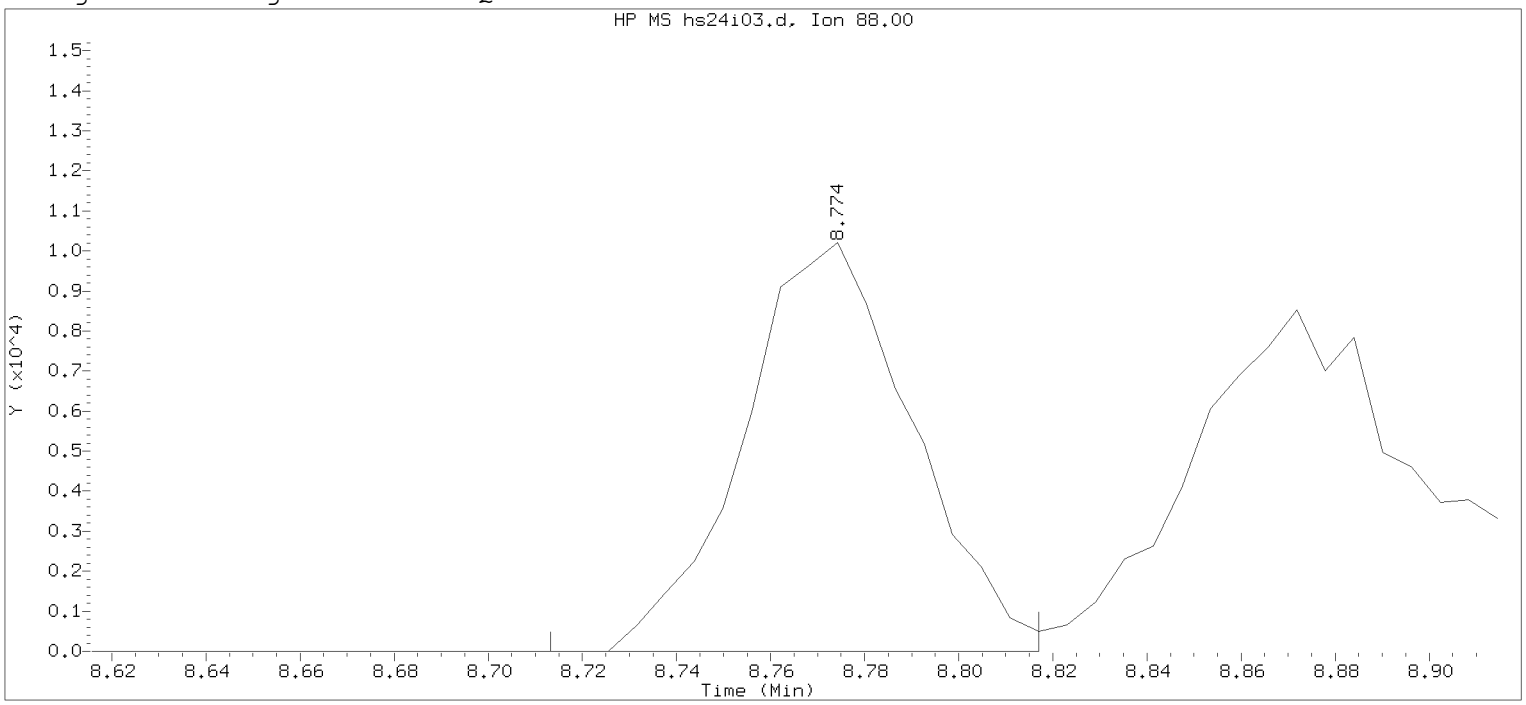
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

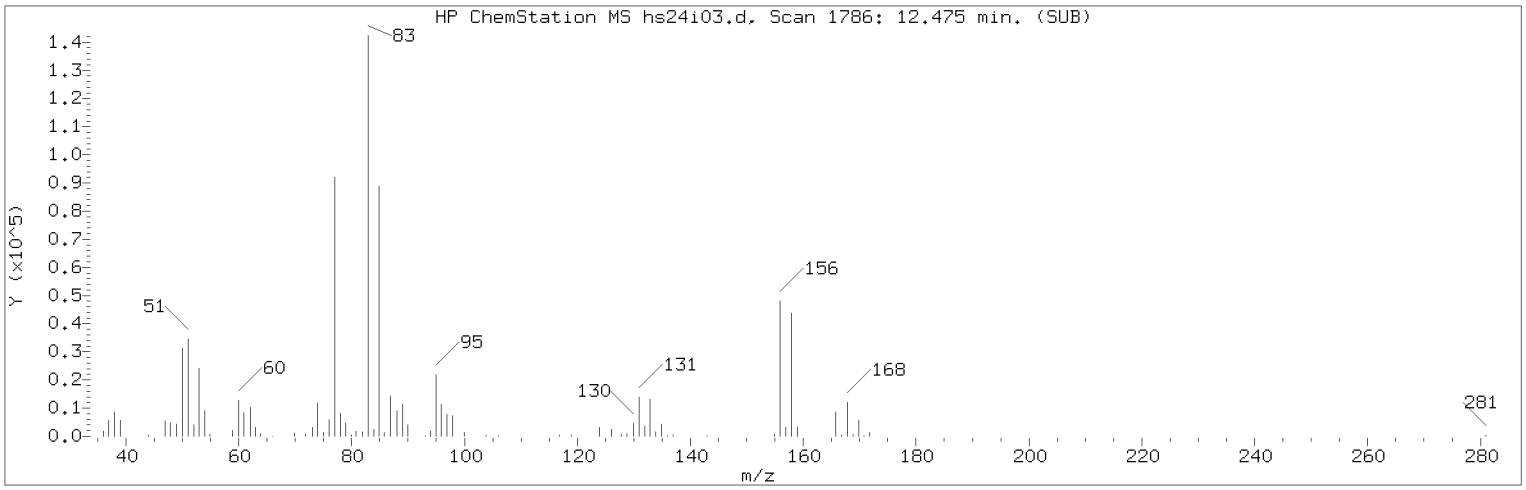
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

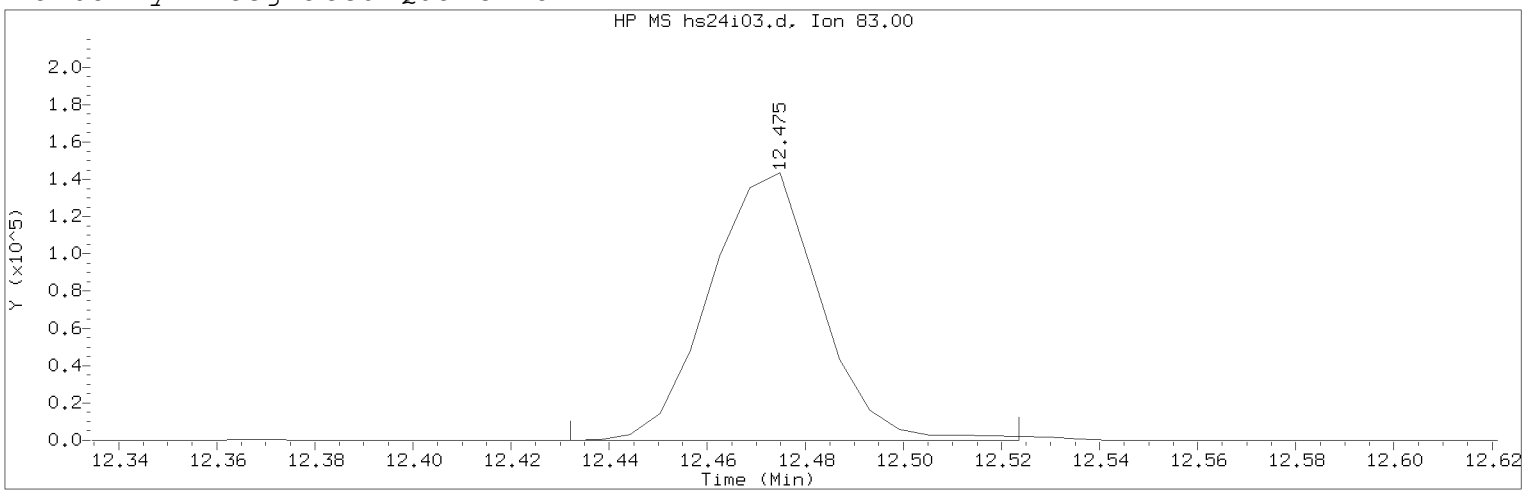
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 25388		
On-column Amount (ng)	: 205.7756		
Integration start scan	: 1168	Integration stop scan:	1185
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

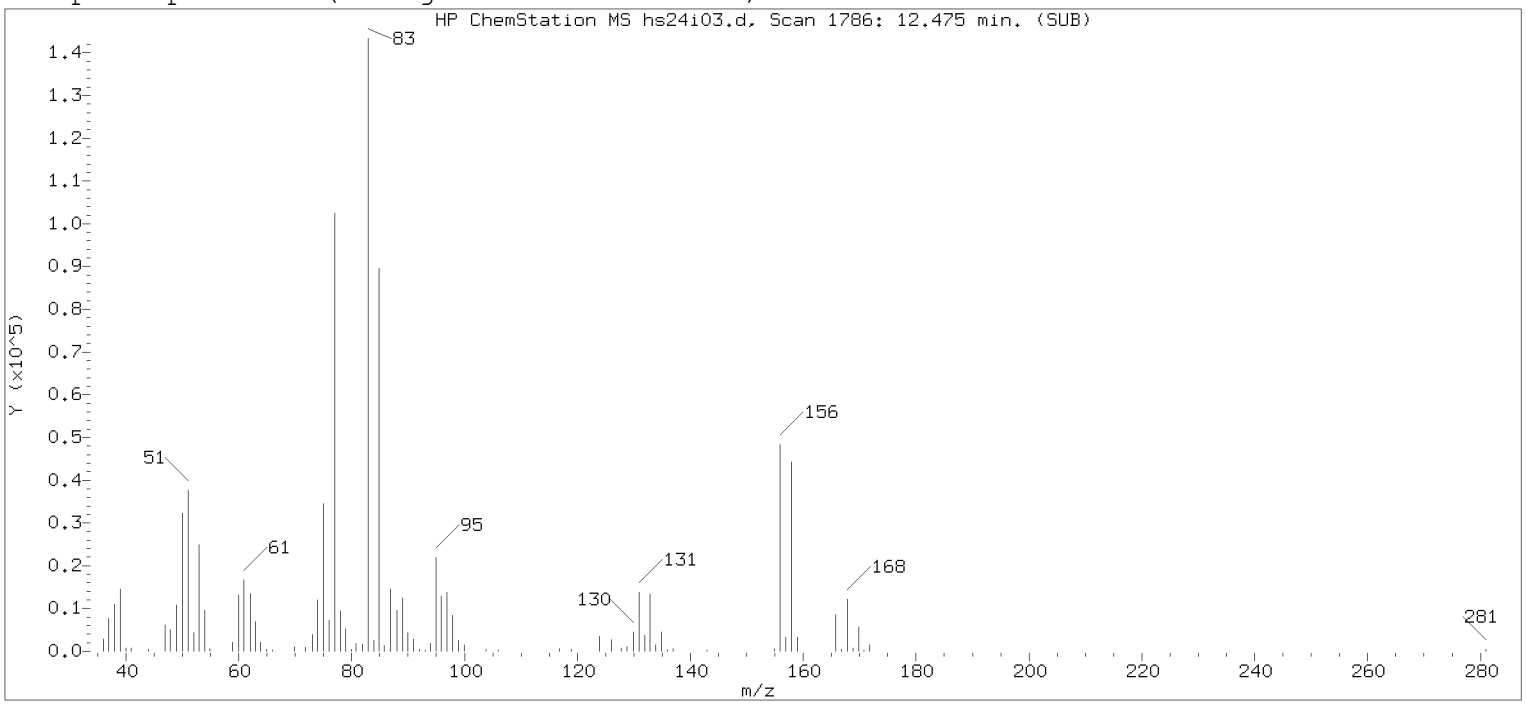
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 224515M
On-Column Amount (ng) : 5.1965
Integration start scan : 1778 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

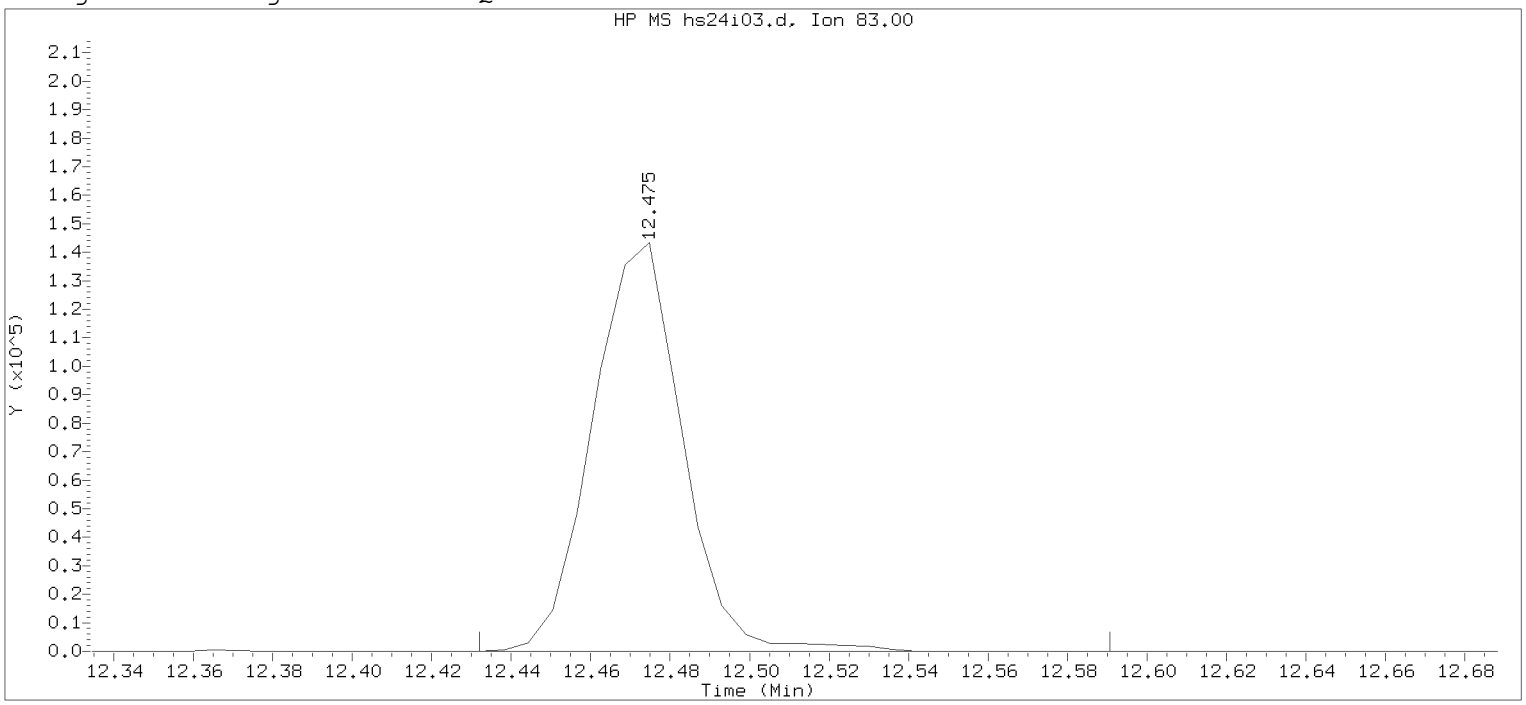
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

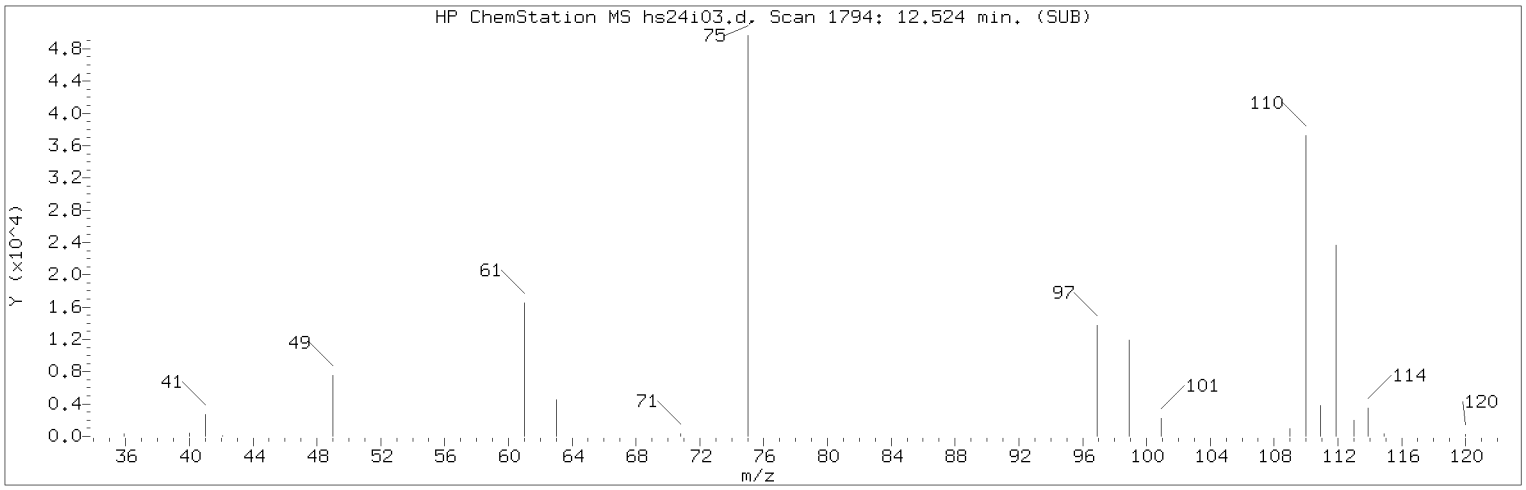
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

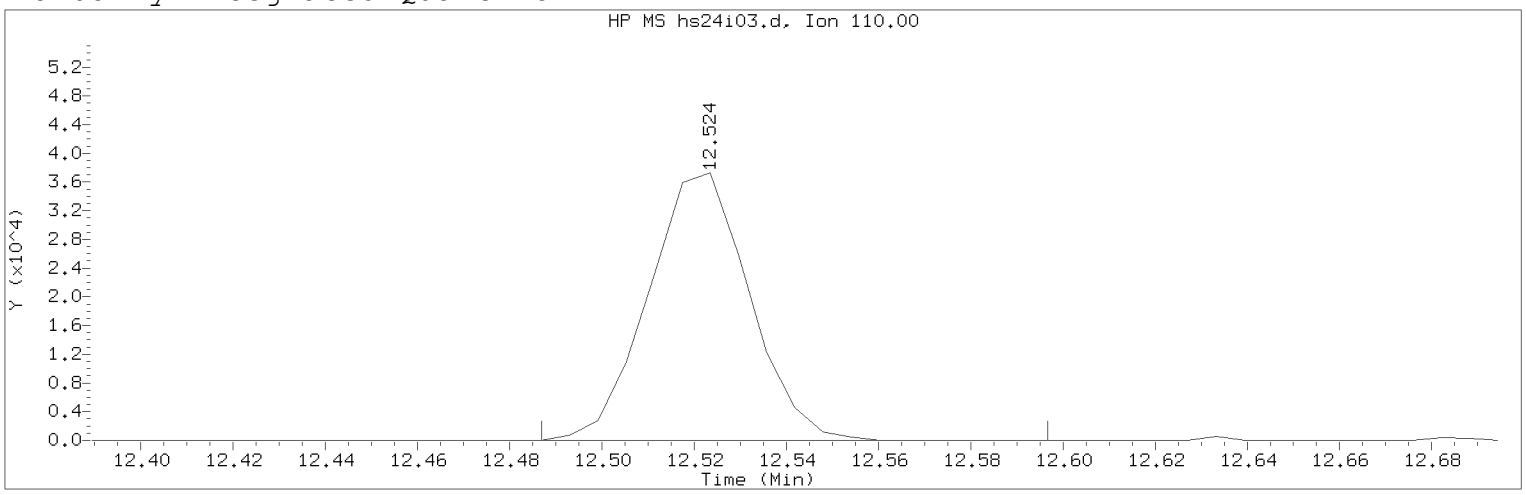
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 225435
On-column Amount (ng) : 4.9474
Integration start scan : 1778 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

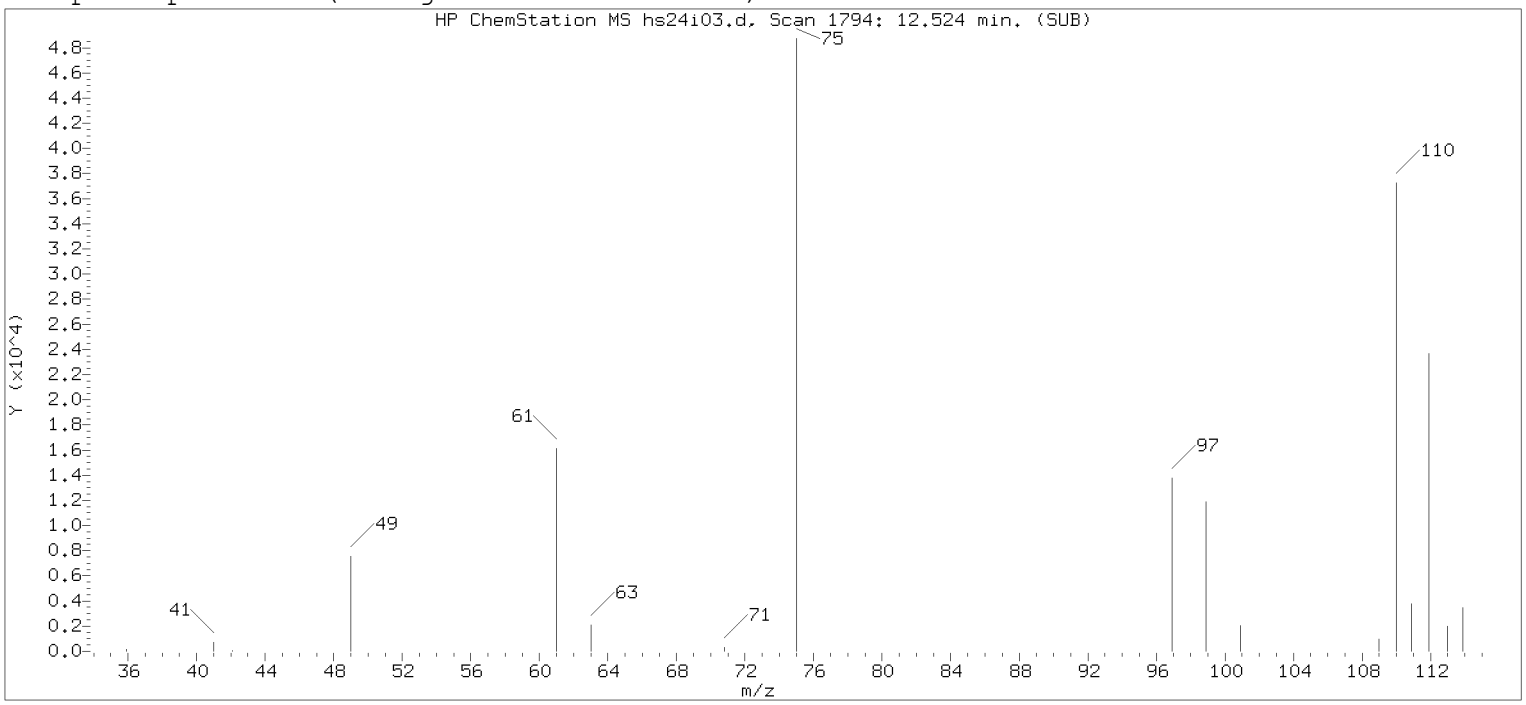
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 56735M
On-Column Amount (ng) : 5.0793
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

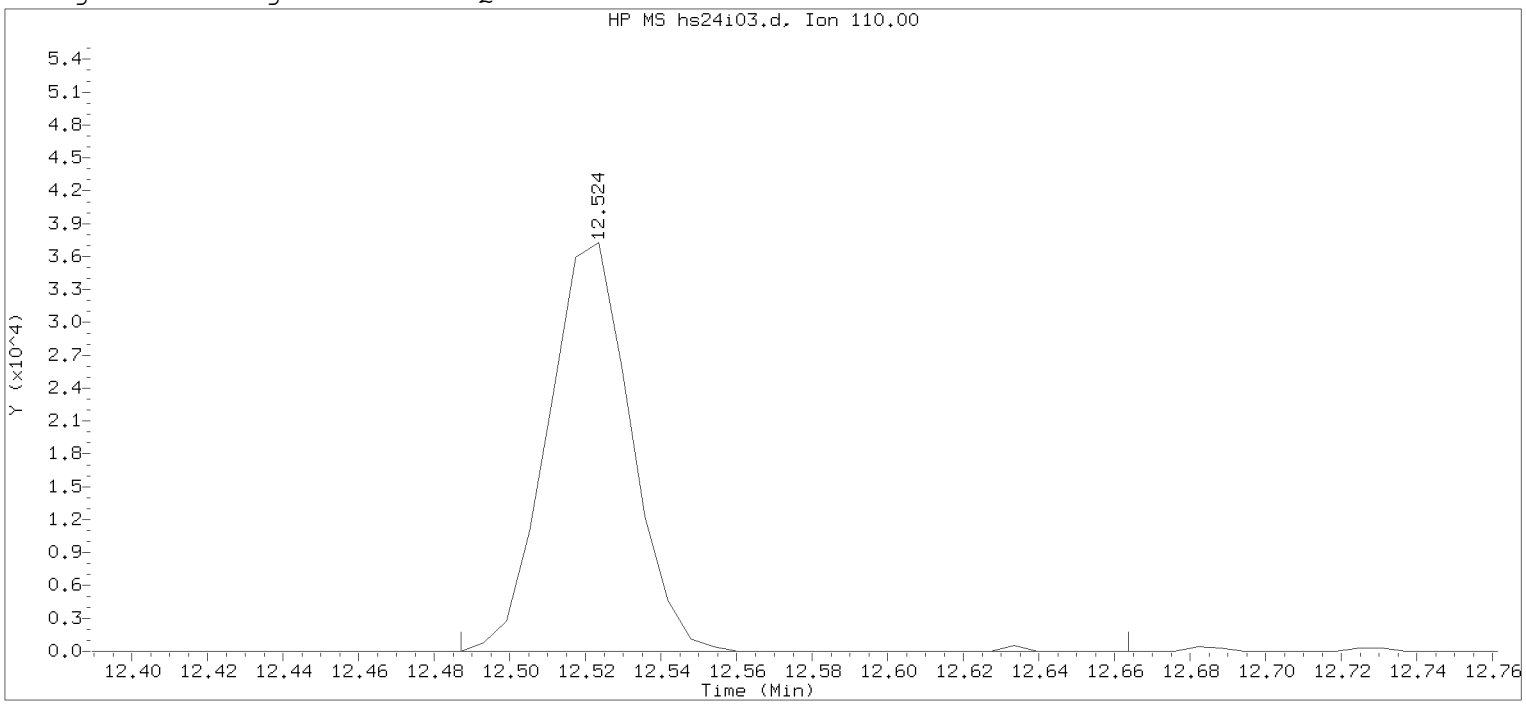
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



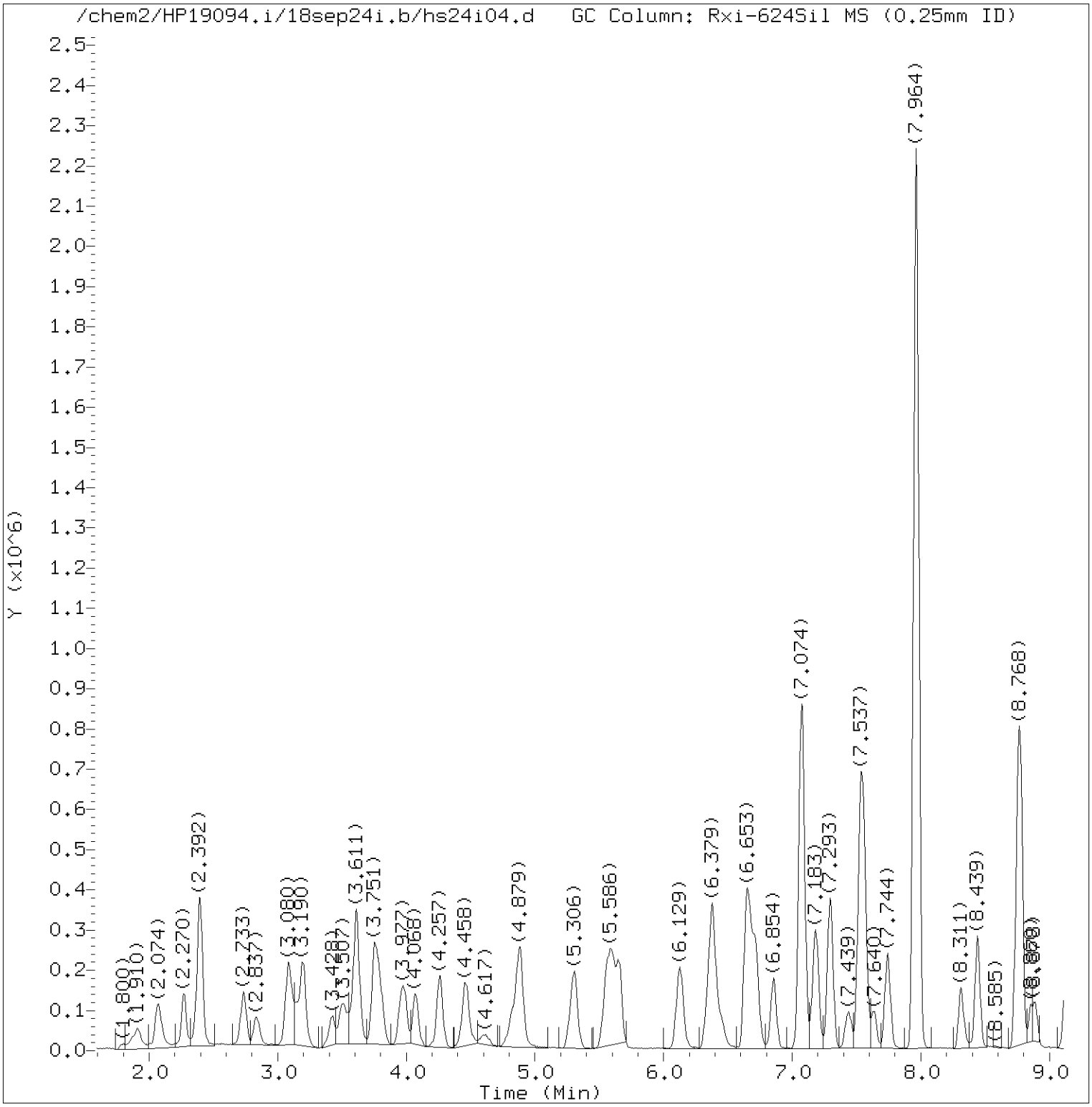
Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 56920
On-column Amount (ng) : 5.0340
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

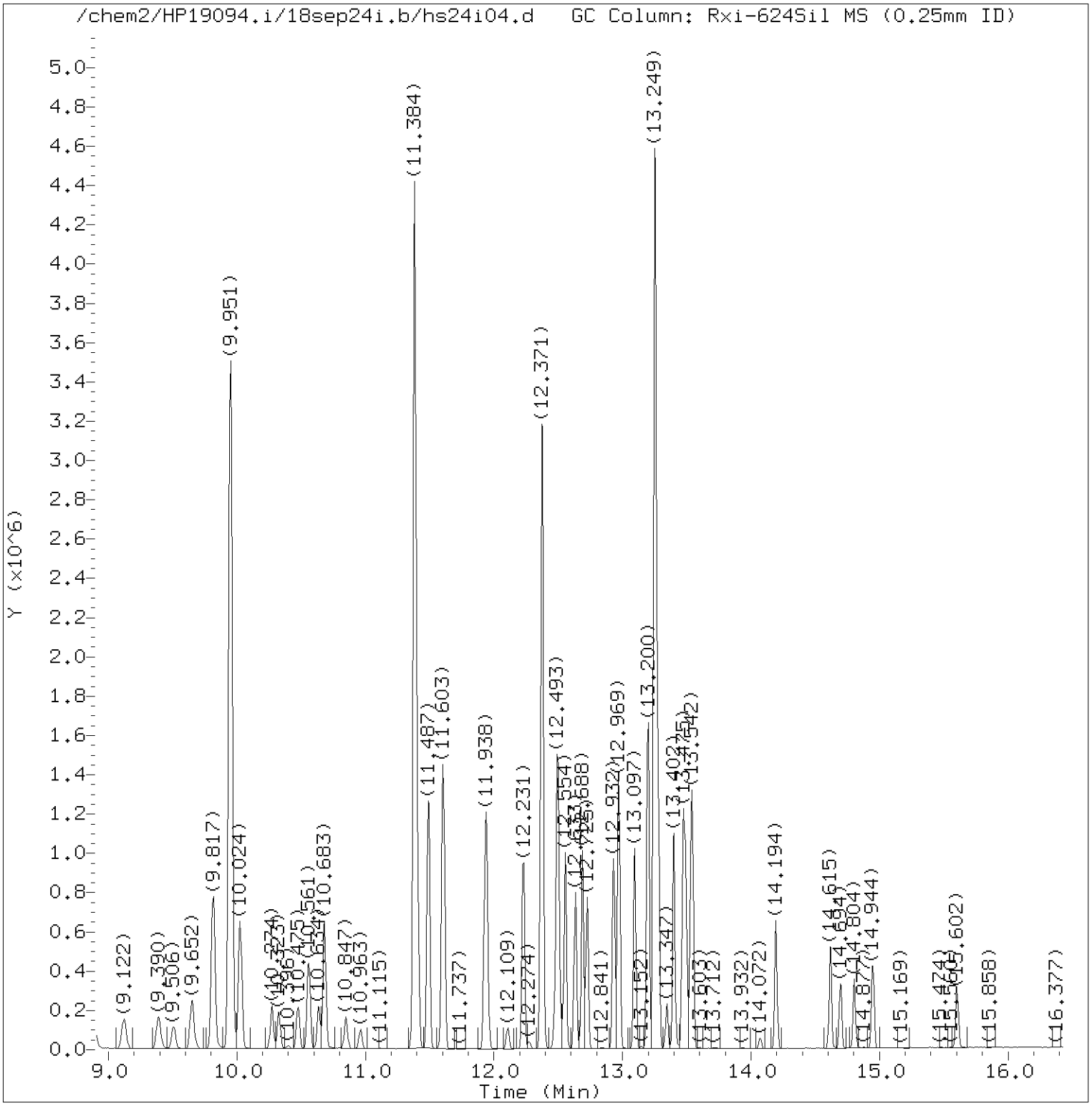
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	212842	1.965
2) Chloromethane	(2)	2.270	50	206767	1.949
5) Vinyl Chloride	(2)	2.392	62	192690	1.940
6) 1,3-Butadiene	(2)	2.392	39	223122M	1.983
7) Bromomethane	(2)	2.733	94	152532	1.975
8) Chloroethane	(2)	2.830	64	118265	1.963
9) Dichlorofluoromethane	(2)	3.080	67	286031	1.996
10) Trichlorofluoromethane	(2)	3.141	101	245427M	1.956
11) Ethyl ether	(2)	3.416	59	85465M	2.009
12) Freon 123a	(2)	3.507	67	159597	2.007
13) Acrolein	(1)	3.611	56	610220	93.000
15) 1,1-Dichloroethene	(2)	3.751	96	110543	2.034
16) Freon 113	(2)	3.781	101	129533	2.023
14) Acetone	(1)	3.800	43	167715M	19.030
17) Methyl Iodide	(2)	3.958	142	223559	1.974
18) Carbon Disulfide	(2)	4.074	76	335903	1.943
21) Methyl Acetate	(1)	4.233	43	48985	1.980
22) Allyl Chloride	(2)	4.257	41	207468	2.009
23) Methylene Chloride	(2)	4.452	84	117905	1.923
26)*t-Butyl Alcohol-d10	(1)	4.476	65	147863M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	104728M	41.495
29) Acrylonitrile	(1)	4.812	53	105857	9.301
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	226282	2.025
31) trans-1,2-Dichloroethene	(2)	4.885	96	119713	1.952
32) n-Hexane	(2)	5.306	57	193515	1.984
33) 1,1-Dichloroethane	(2)	5.543	63	231472	1.982
34) di-Isopropyl Ether	(2)	5.592	45	415509	2.004
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	211615	2.014
40) 1,2-Dichloroethene (Total)	(2)		96	253223	3.922
37) Ethyl t-butyl ether	(2)	6.129	59	334132M	2.032
38) 2-Butanone	(1)	6.348	43	265202	18.383
39) cis-1,2-Dichloroethene	(2)	6.379	96	133510	1.970
41) 2,2-Dichloropropane	(2)	6.385	77	170897	2.049
42) Propionitrile	(1)	6.446	54	150231	38.365
45) Methacrylonitrile	(1)	6.647	67	260058	18.418
47) Bromochloromethane	(2)	6.708	128	58062	2.028
48) Tetrahydrofuran	(1)	6.720	71	72155	18.814
49) Chloroform	(2)	6.854	83	215747	1.987

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.074	113	701118	10.038
50)$Dibromofluoromethane	(2)	7.074	111	720366	10.019
51) 1,1,1-Trichloroethane	(2)	7.086	97	186862	2.012
52) Cyclohexane	(2)	7.189	56	243250	2.007
52) Cyclohexane	(2)	7.183	84	203326	2.034
52) Cyclohexane	(2)	7.183	69	71385	1.998
54) Carbon Tetrachloride	(2)	7.293	117	159920	2.005
55) 1,1-Dichloropropene	(2)	7.293	75	176849	2.008
56) Isobutyl Alcohol	(1)	7.439	41	94332	96.599
57)$1,2-Dichloroethane-d4	(2)	7.537	102	125039M	10.268
57)$1,2-Dichloroethane-d4	(2)	7.531	65	589363	10.006
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76732	9.839
58) Benzene	(2)	7.561	78	506487	1.947
59) 1,2-Dichloroethane	(2)	7.634	62	114381	1.911
60) t-Amyl methyl ether	(2)	7.744	73	274629	2.014
62) n-Heptane	(2)	7.964	43	198879M	1.978
63)*Fluorobenzene	(2)	7.964	96	2771401	10.000
65) n-Butanol	(1)	8.311	56	160778M	194.877
67) Trichloroethene	(2)	8.439	95	134309	2.016
69) Methylcyclohexane	(2)	8.750	83	251052	1.996
70) 1,2-Dichloropropane	(2)	8.787	63	125013	1.981
71) Methyl Methacrylate	(1)	8.854	69	48112	1.841
72) 1,4-Dioxane	(1)	8.866	88	21749M	109.489
73) Dibromomethane	(2)	8.890	93	53023	2.024
74) Bromodichloromethane	(2)	9.122	83	137803	1.942
76) 2-Nitropropane	(1)	9.390	41	134032	18.105
80) cis-1,3-Dichloropropene	(2)	9.652	75	163843	1.983
81) 4-Methyl-2-Pentanone	(1)	9.817	43	659459	18.377
82)$Toluene-d8	(3)	9.951	98	2784763	10.112
82)$Toluene-d8	(3)	9.951	100	1806074	10.161
83) Toluene	(3)	10.024	92	317158	1.997
85) 1,3-Dichloropropene (total)	(3)		75	285594	3.973
84) trans-1,3-Dichloropropene	(3)	10.274	75	121751	1.990
86) Ethyl Methacrylate	(3)	10.323	69	106995	2.041
88) 1,1,2-Trichloroethane	(3)	10.475	97	73815	2.020
89) Tetrachloroethene	(3)	10.561	166	144328	2.012
90) 1,3-Dichloropropane	(3)	10.634	76	132513	2.046
91) 2-Hexanone	(1)	10.683	43	448236	18.350

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	88599	2.023
95) 1,2-Dibromoethane	(3)	10.963	107	66850	1.952
96) 1-Chlorohexane	(3)	11.384	91	182251	1.924
97)*Chlorobenzene-d5	(3)	11.384	117	2139668	10.000
98) Chlorobenzene	(3)	11.408	112	334112	1.983
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	111074	1.998
100) Ethylbenzene	(3)	11.493	91	618859	1.994
101) m+p-Xylene	(3)	11.603	106	460102	3.997
105) Xylene (Total)	(3)		106	680646	6.001
104) o-Xylene	(3)	11.932	106	220544	2.004
106) Styrene	(3)	11.945	104	354610	2.014
107) Bromoform	(3)	12.109	173	47440	1.971
108) Isopropylbenzene	(3)	12.231	105	599350	1.995
111)$4-Bromofluorobenzene	(3)	12.371	95	1020043	10.174
111)$4-Bromofluorobenzene	(3)	12.377	174	880214	10.110
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	85286M	1.938
114) Bromobenzene	(4)	12.493	156	133526	1.995
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	203595	18.115
116) 1,2,3-Trichloropropane	(4)	12.518	110	22957M	2.017
117) n-Propylbenzene	(4)	12.554	91	721086	1.982
119) 2-Chlorotoluene	(4)	12.633	126	140344	1.989
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	490251	1.989
122) 4-Chlorotoluene	(4)	12.725	126	141279	1.998
125) tert-Butylbenzene	(4)	12.932	134	110083M	2.054
126) Pentachloroethane	(4)	12.969	167	83251	1.990
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	503413	2.001
128) sec-Butylbenzene	(4)	13.097	105	633366	1.983
131) 1,3-Dichlorobenzene	(4)	13.194	146	265730	1.999
132) p-Isopropyltoluene	(4)	13.200	119	529167	2.000
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1109693	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	257515	1.973
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	229342	1.987
136) Benzyl Chloride	(4)	13.347	126	30686M	1.928
138) n-Butylbenzene	(4)	13.493	92	259241	1.974
139) 1,2-Dichlorobenzene	(4)	13.530	146	234578	2.000
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	11053	1.817
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	191417	1.935
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	157858	1.959

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	59215	1.945
147) Naphthalene	(4)	14.804	128	252080	1.977
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	128555	1.941

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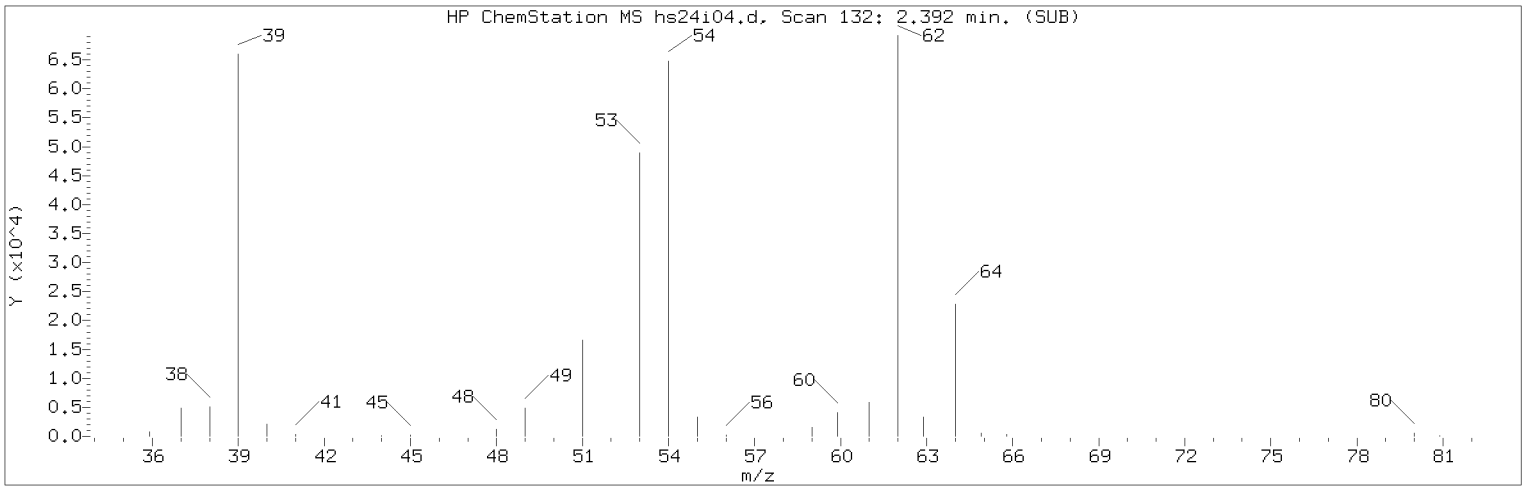
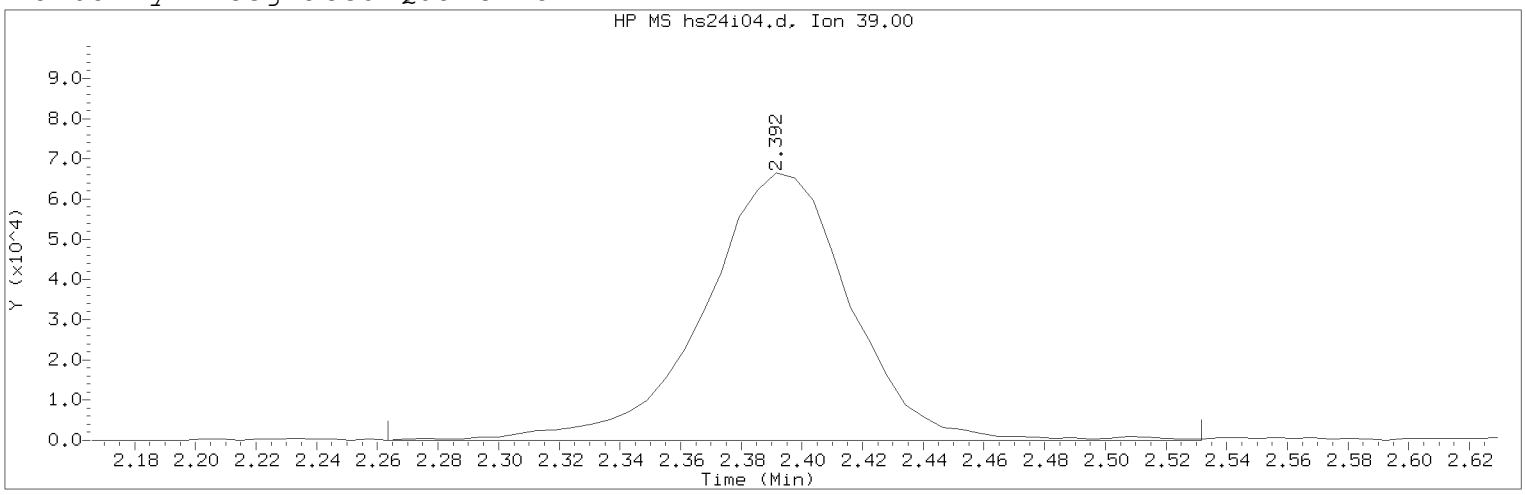
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

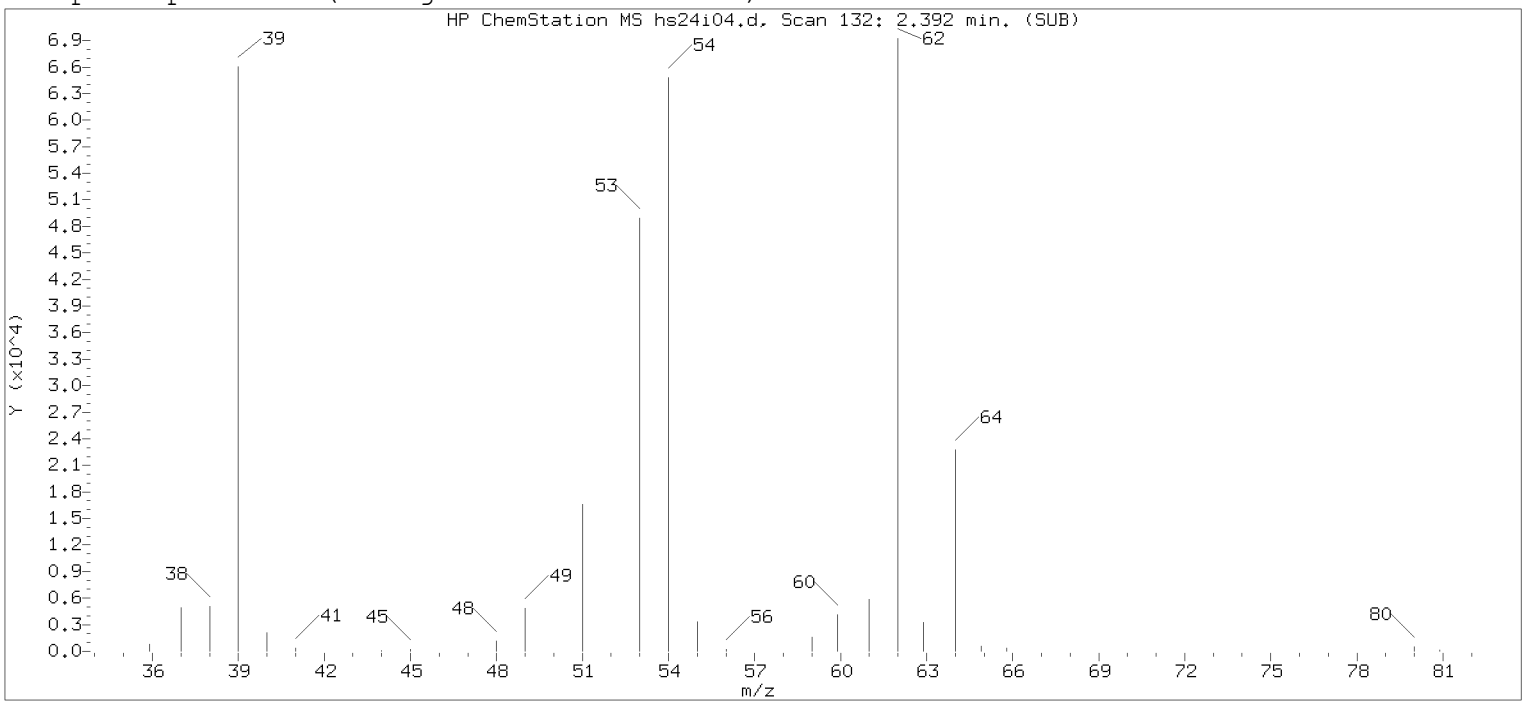
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 223122M
On-Column Amount (ng) : 1.9830
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

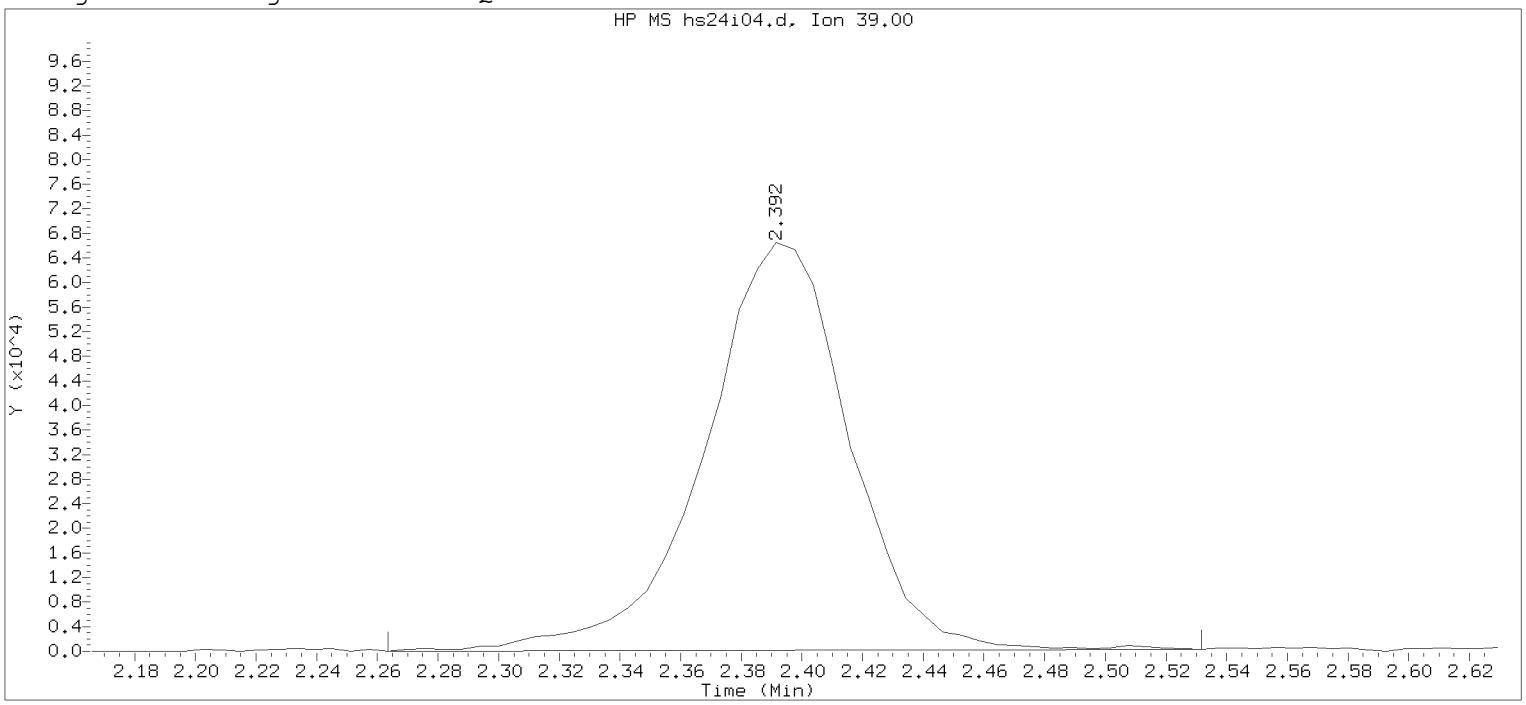
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 132		
Retention Time (minutes)	: 2.392		
Quant Ion	: 39.00		
Area	: 220168		
On-column Amount (ng)	: 1.9899		
Integration start scan	: 110	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	359

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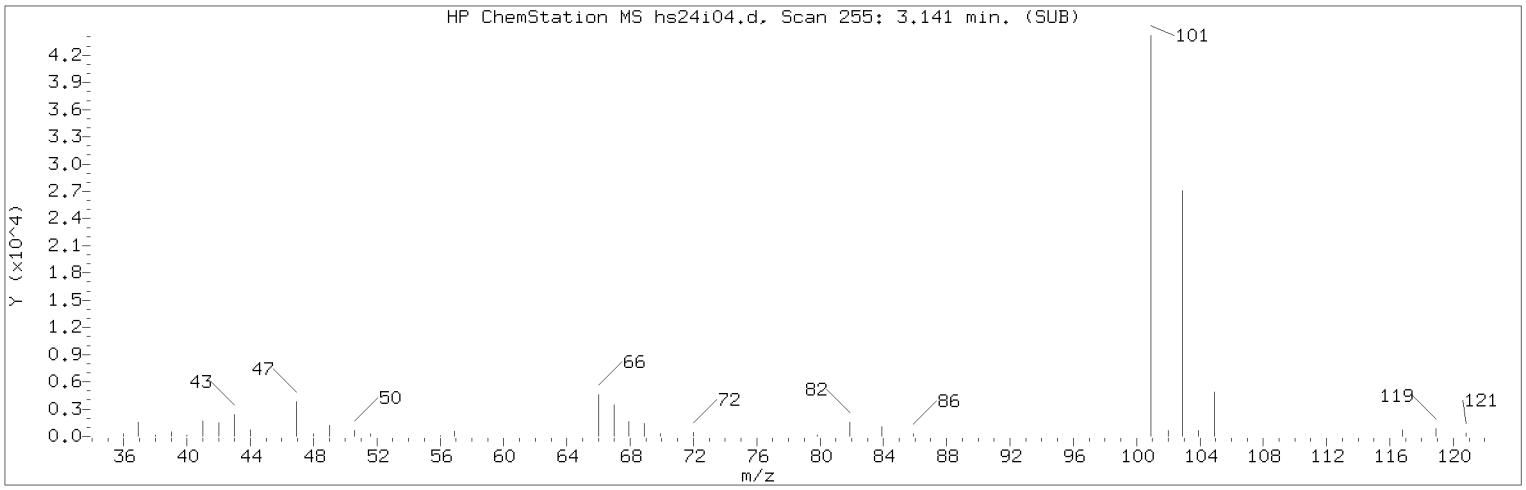
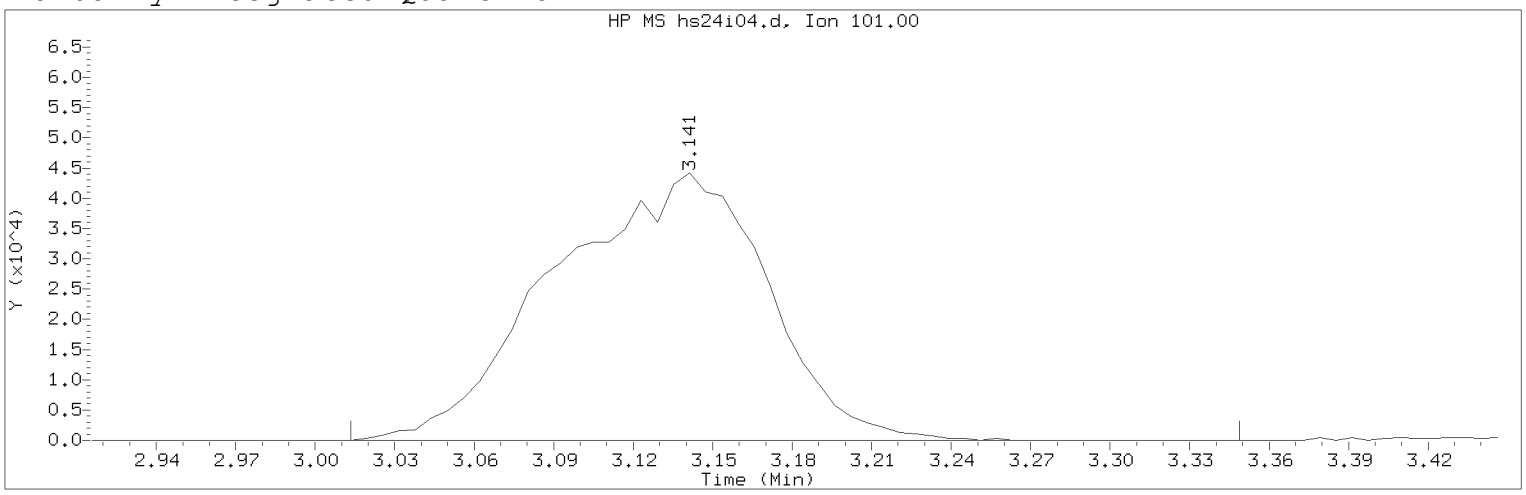
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

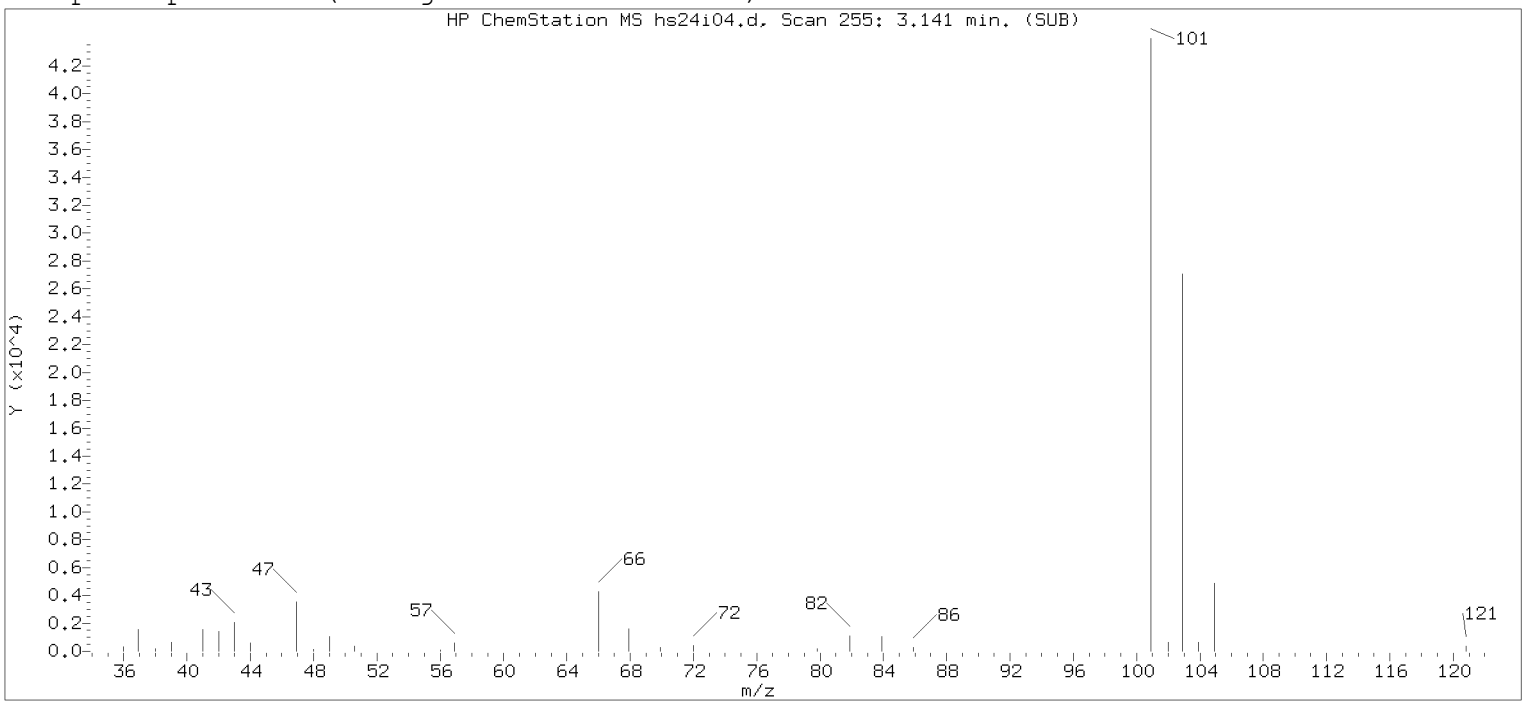
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area (flag) : 245427M
On-Column Amount (ng) : 1.9558
Integration start scan : 233 Integration stop scan: 288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

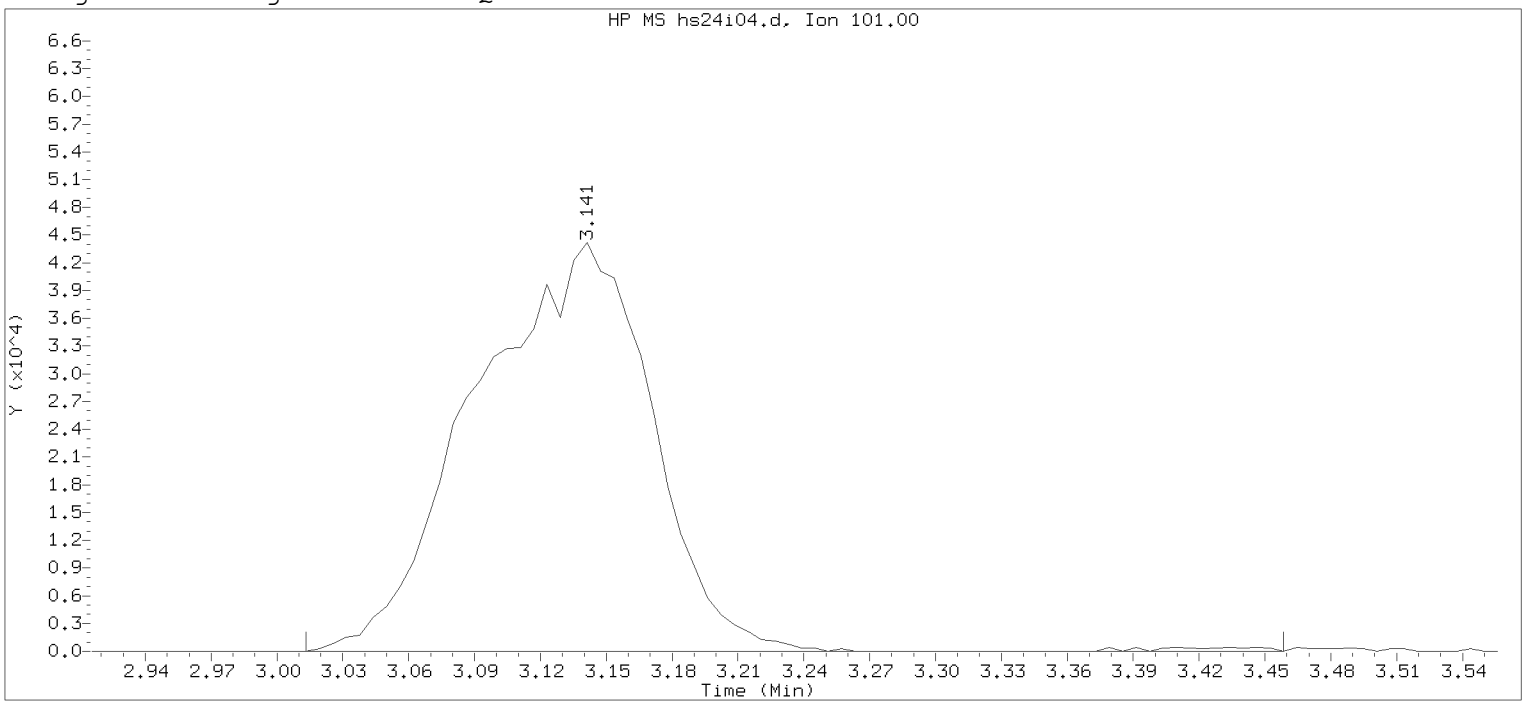
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area : 246940
On-column Amount (ng) : 1.9182
Integration start scan : 233 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

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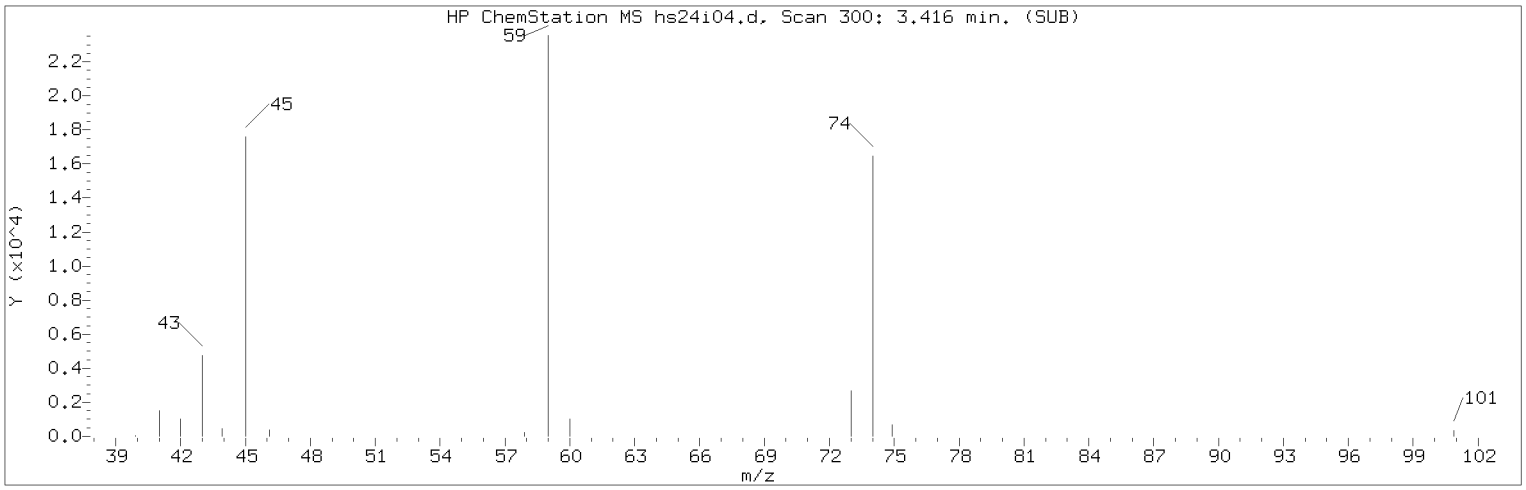
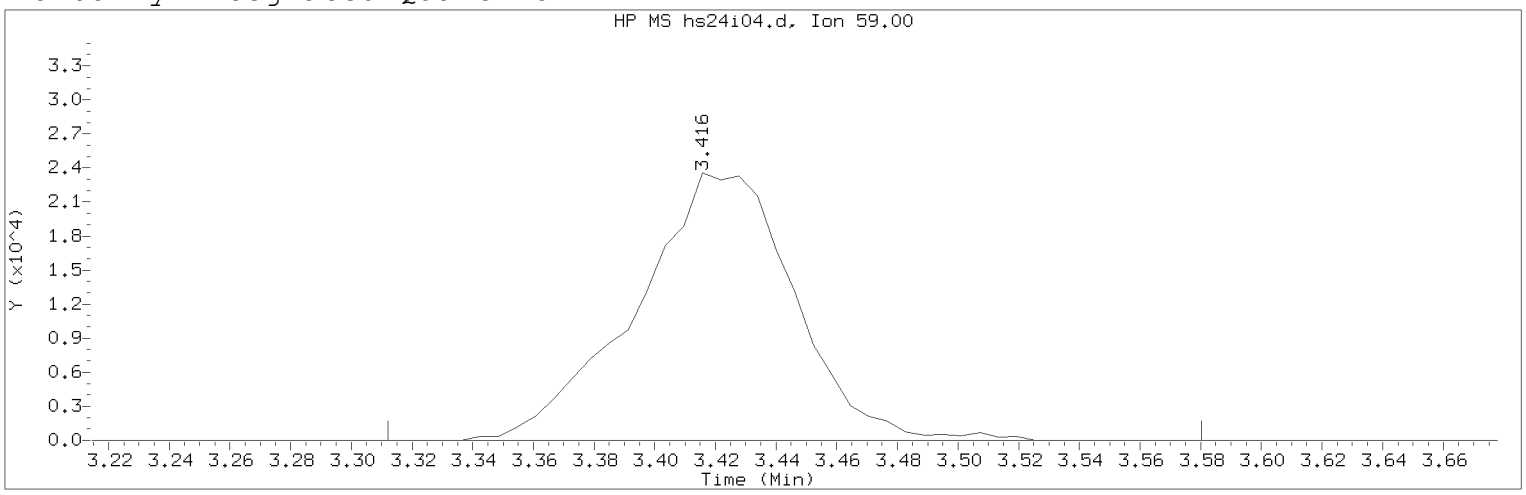
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

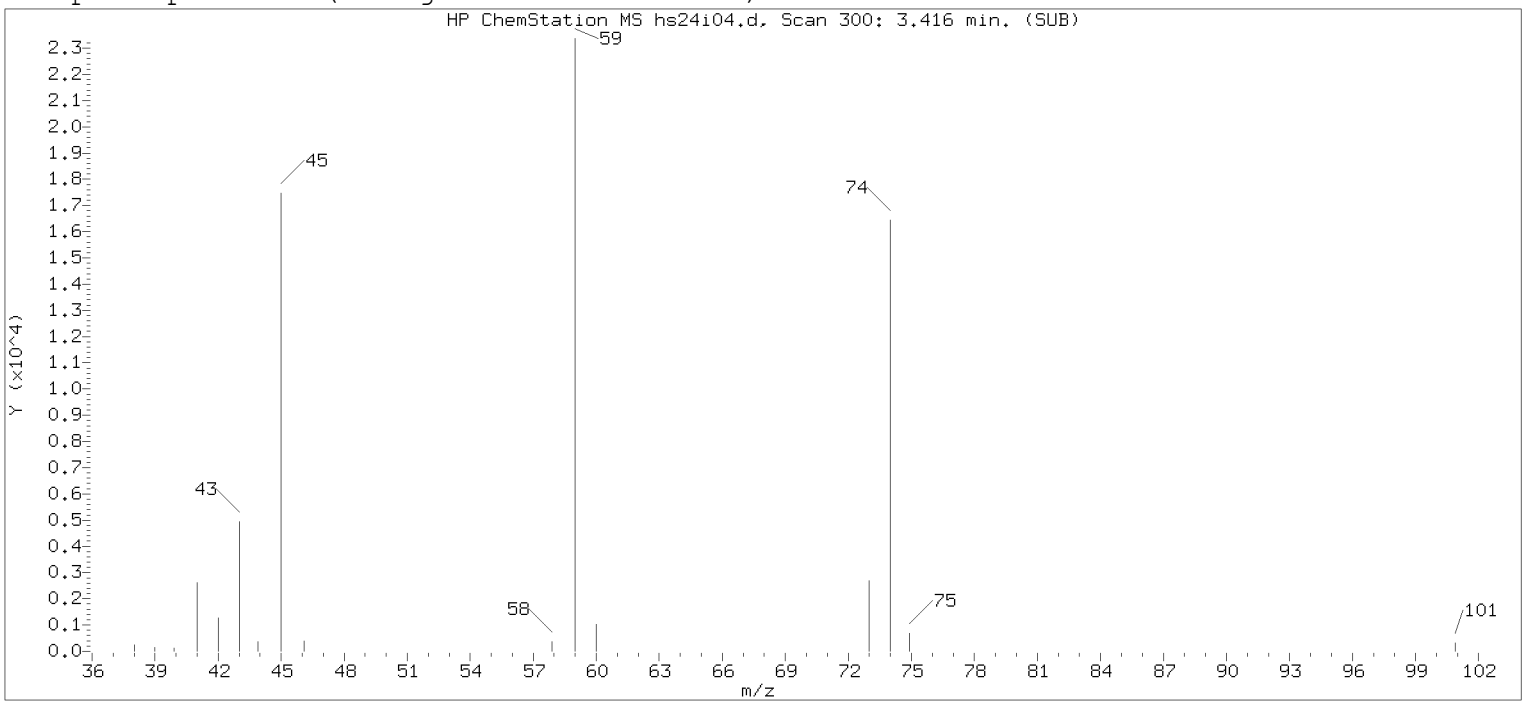
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area (flag) : 85465M
On-Column Amount (ng) : 2.0086
Integration start scan : 282 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

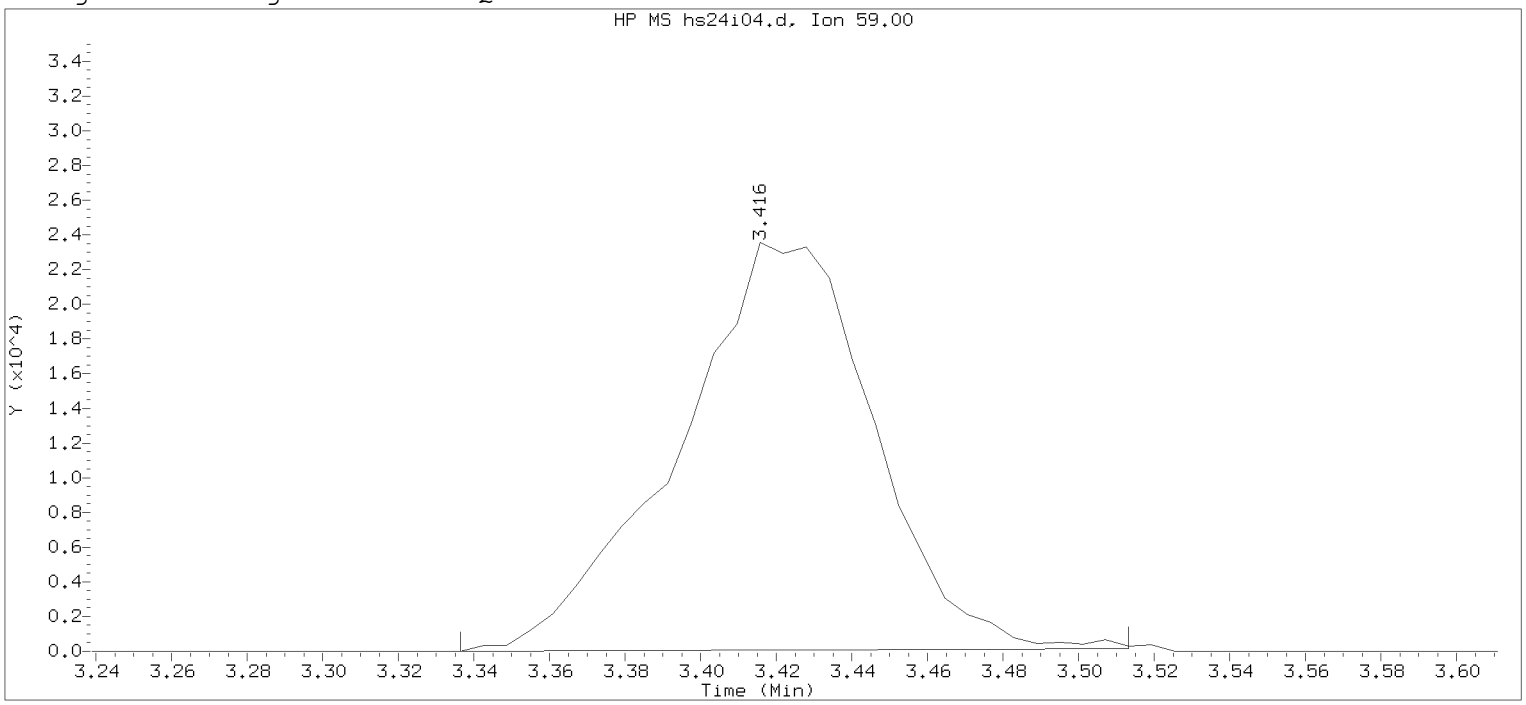
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area : 84538
On-column Amount (ng) : 1.9630
Integration start scan : 286 Integration stop scan: 315
Y at integration start : 0 Y at integration end: 140

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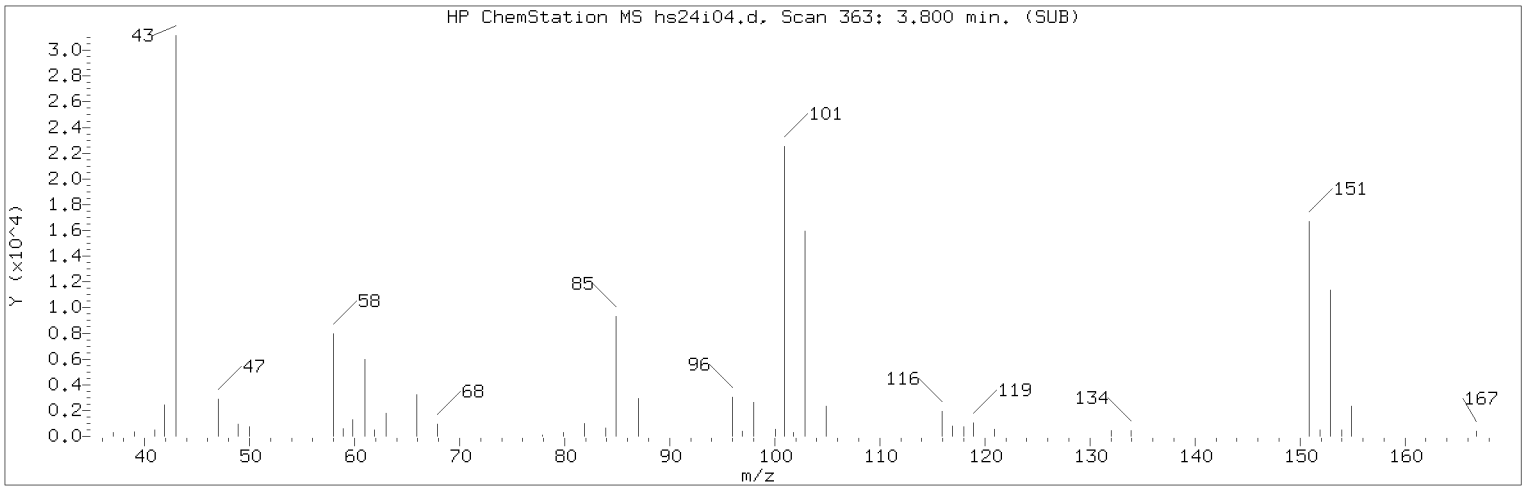
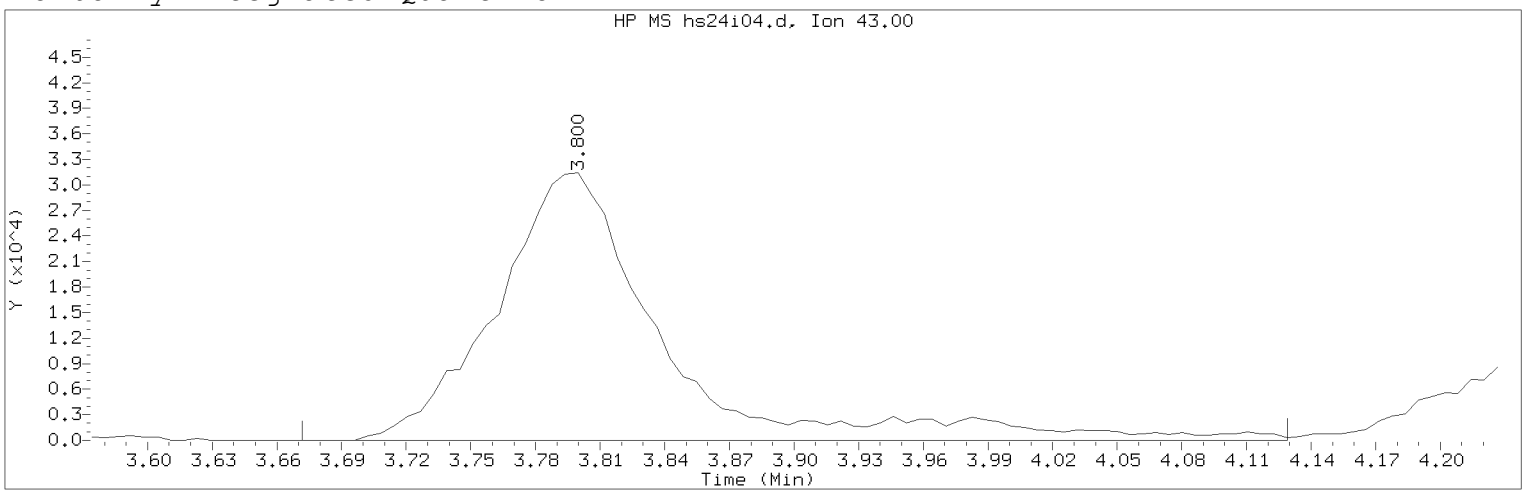
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

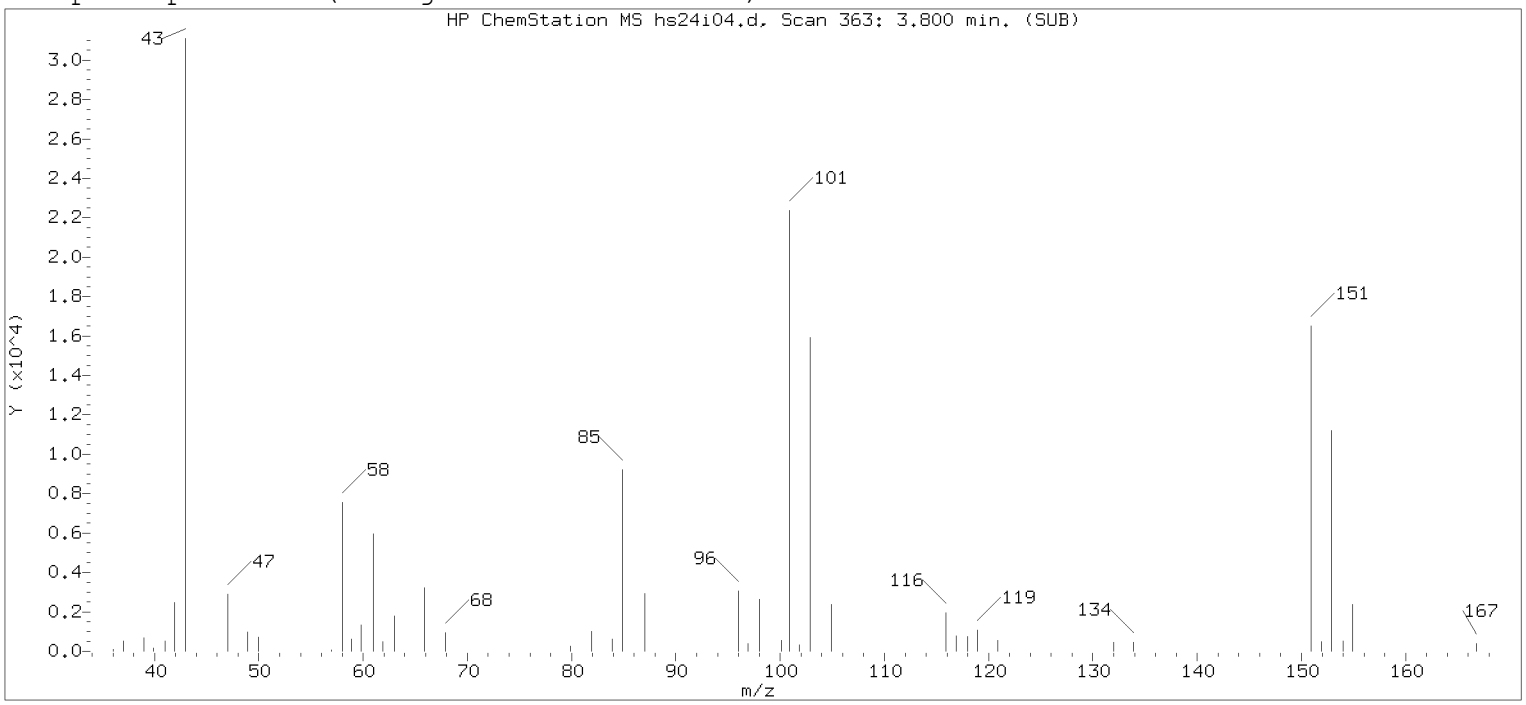
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 167715M
On-Column Amount (ng) : 19.0303
Integration start scan : 341 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

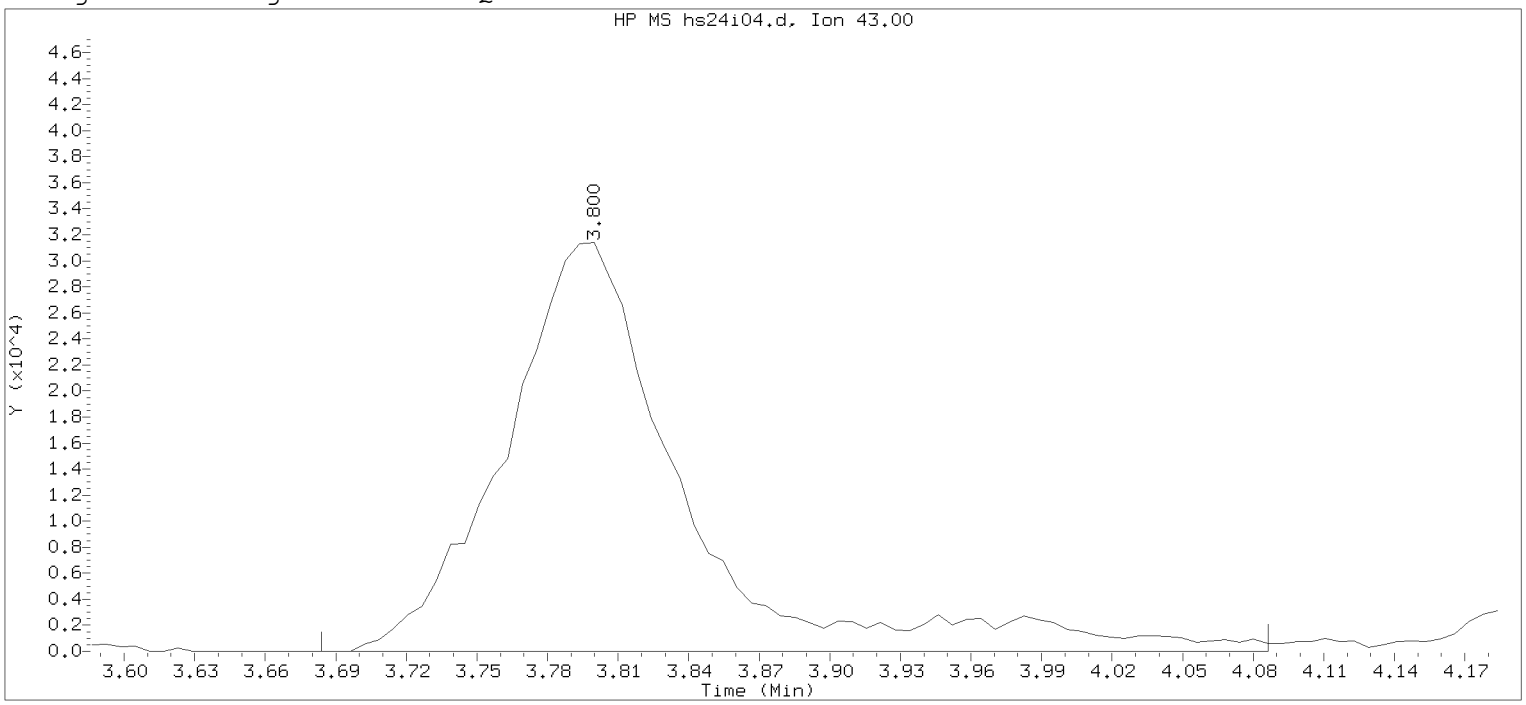
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

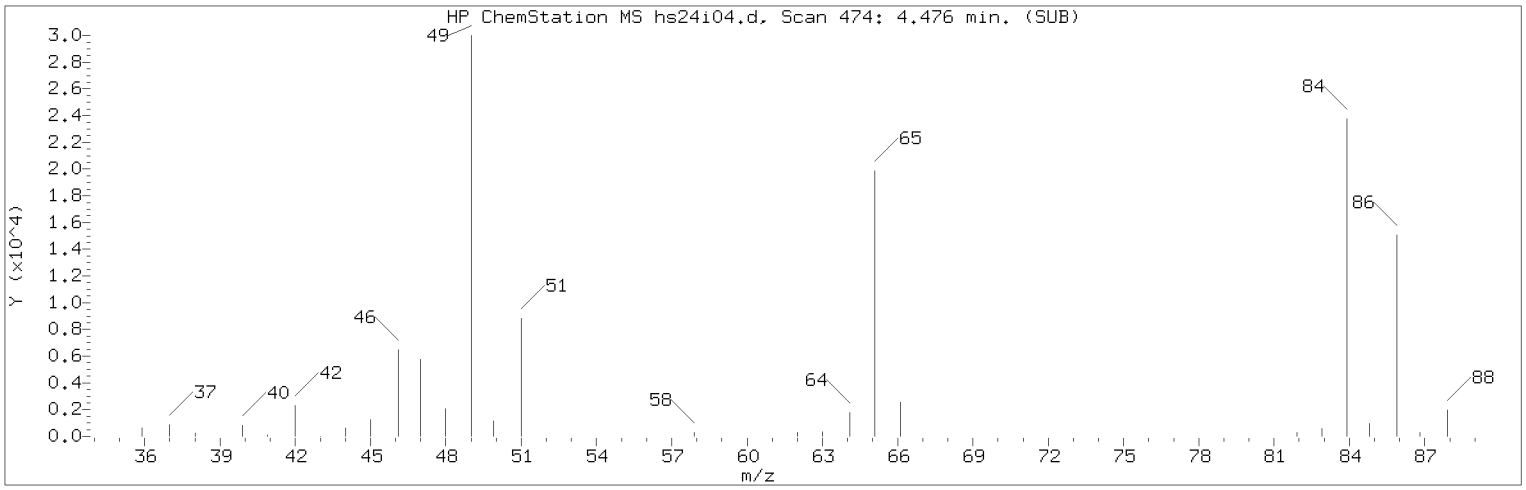
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

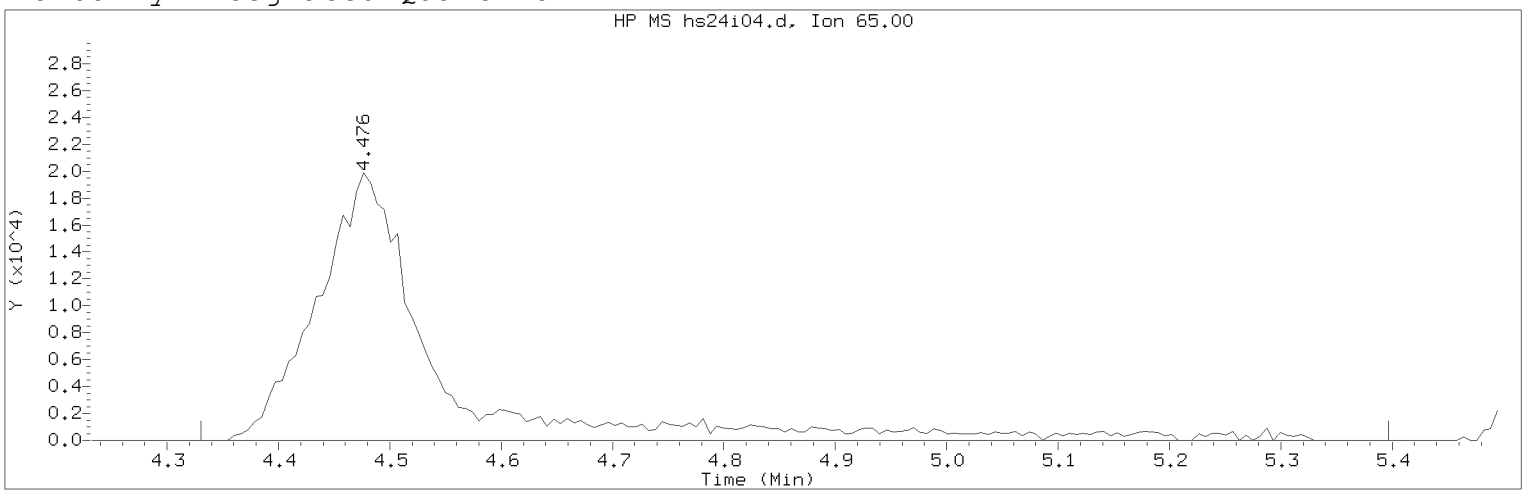
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 363		
Retention Time (minutes)	: 3.800		
Quant Ion	: 43.00		
Area	: 165832		
On-column Amount (ng)	: 19.2516		
Integration start scan	: 343	Integration stop scan:	409
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

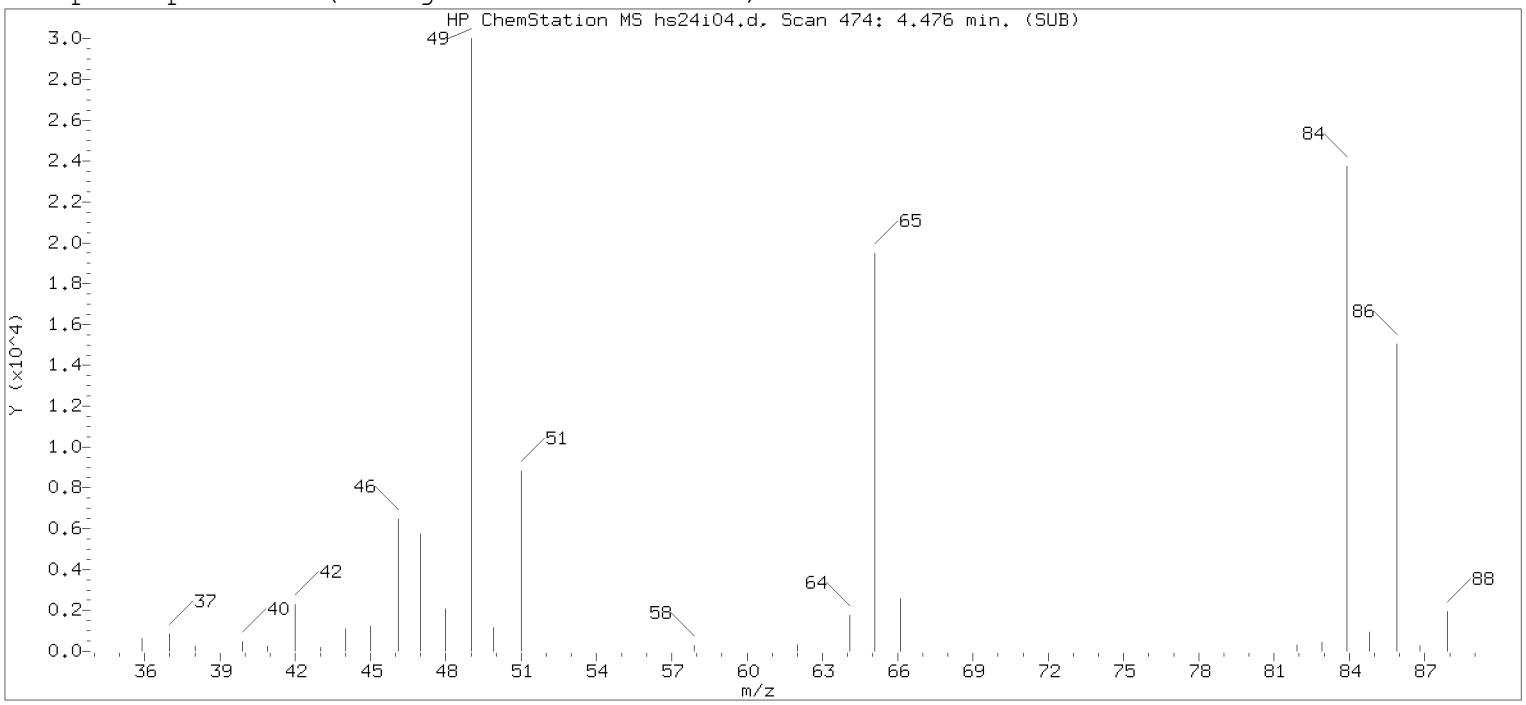
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 147863M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

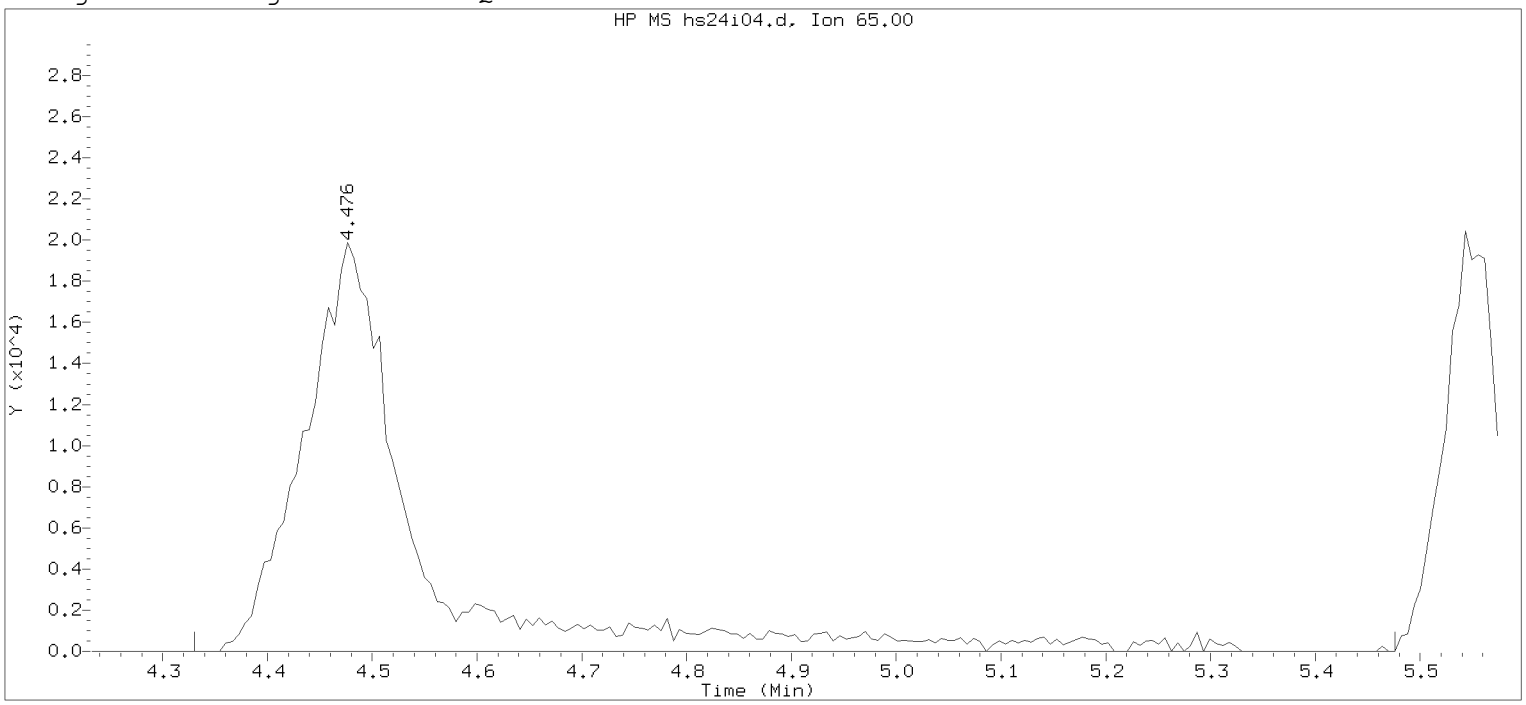
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

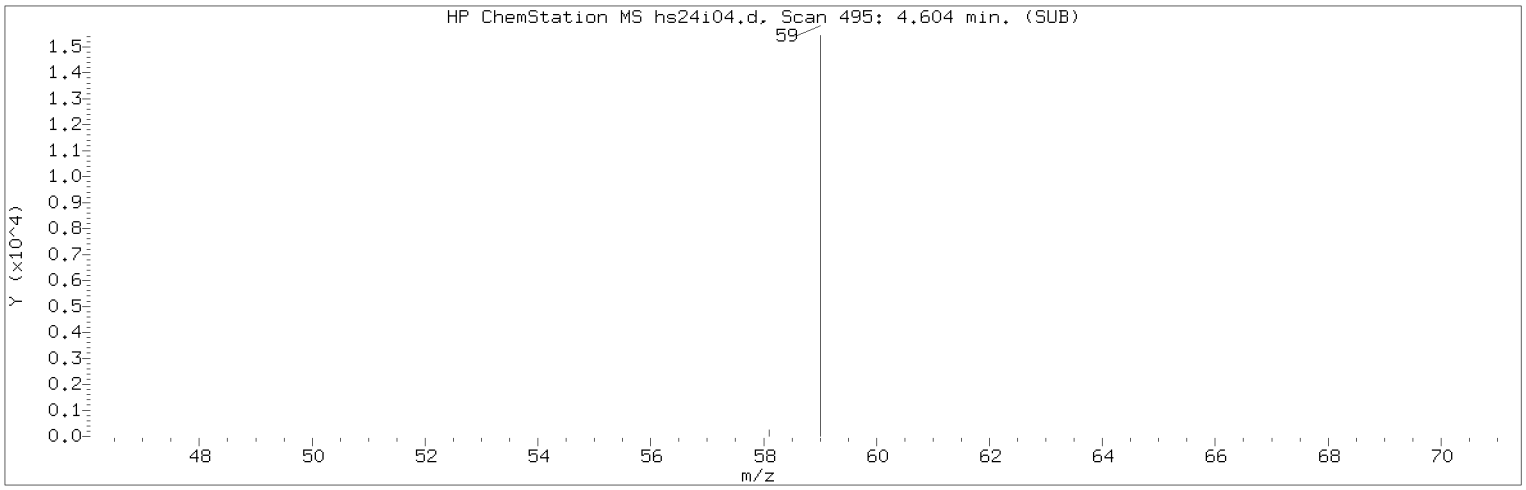
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

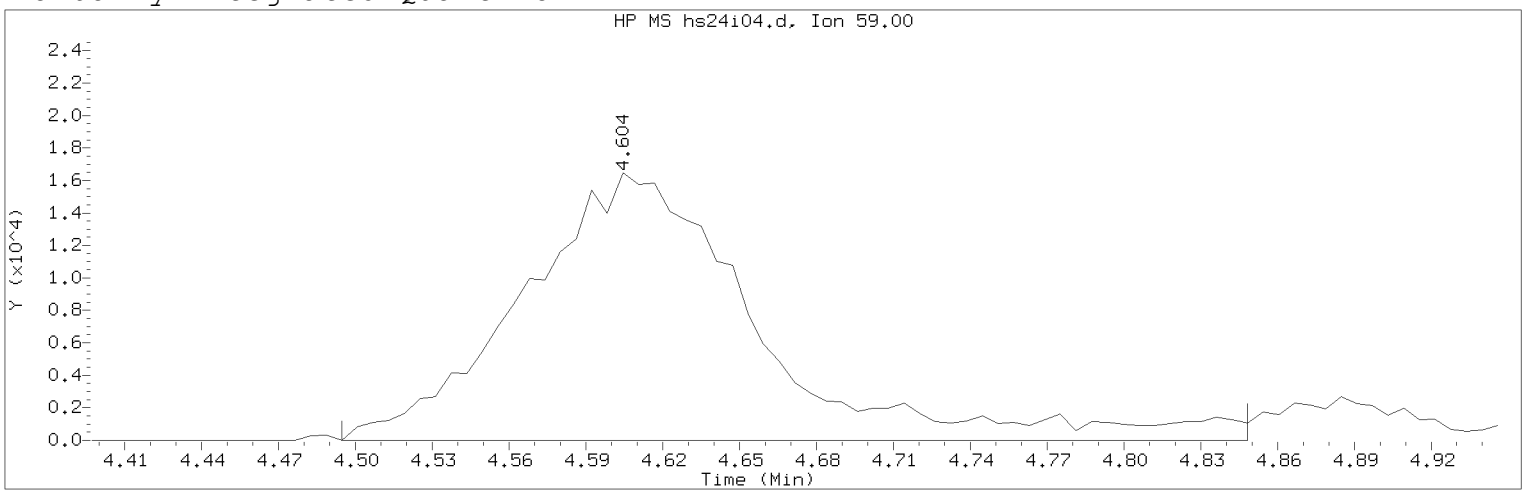
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 474		
Retention Time (minutes)	: 4.476		
Quant Ion	: 65.00		
Area	: 147958		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	637
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

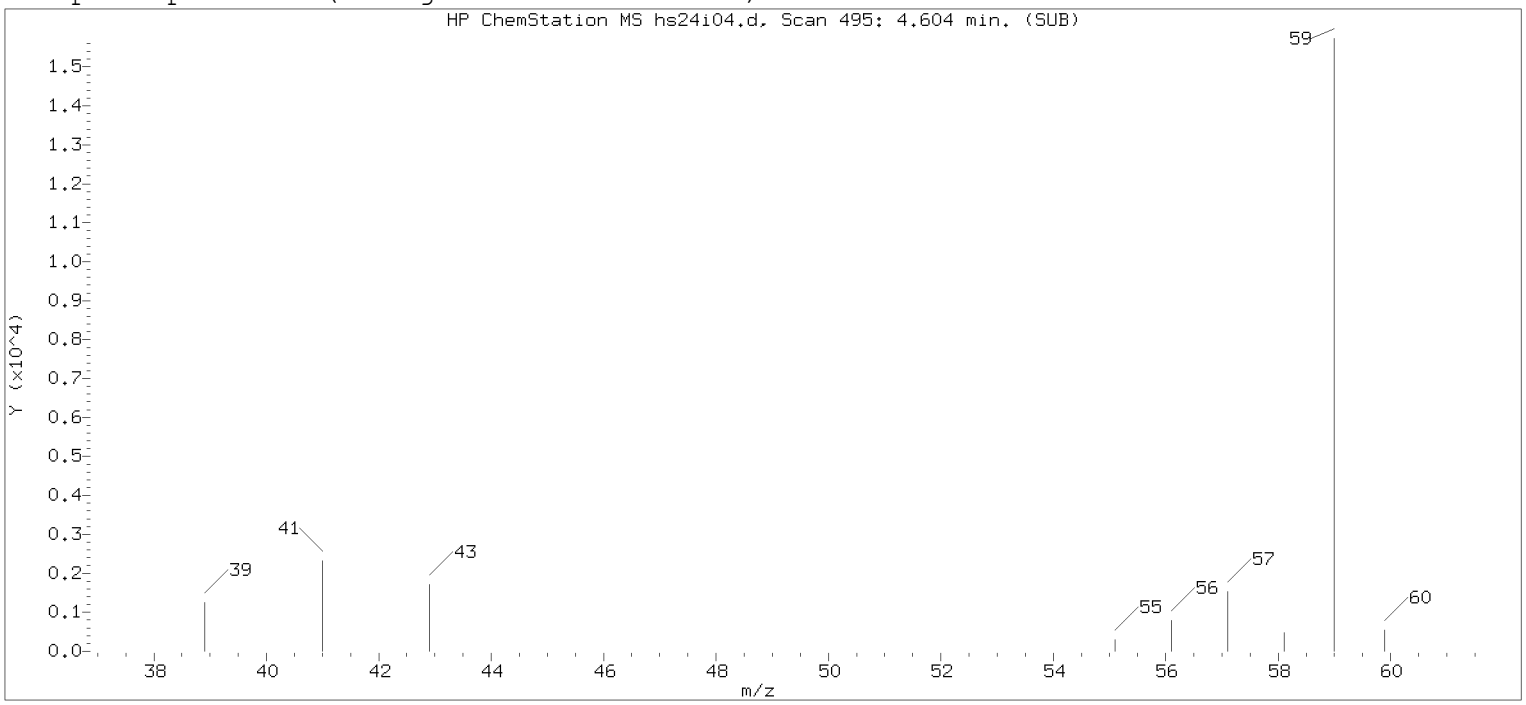
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 104728M
On-Column Amount (ng) : 41.4946
Integration start scan : 476 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

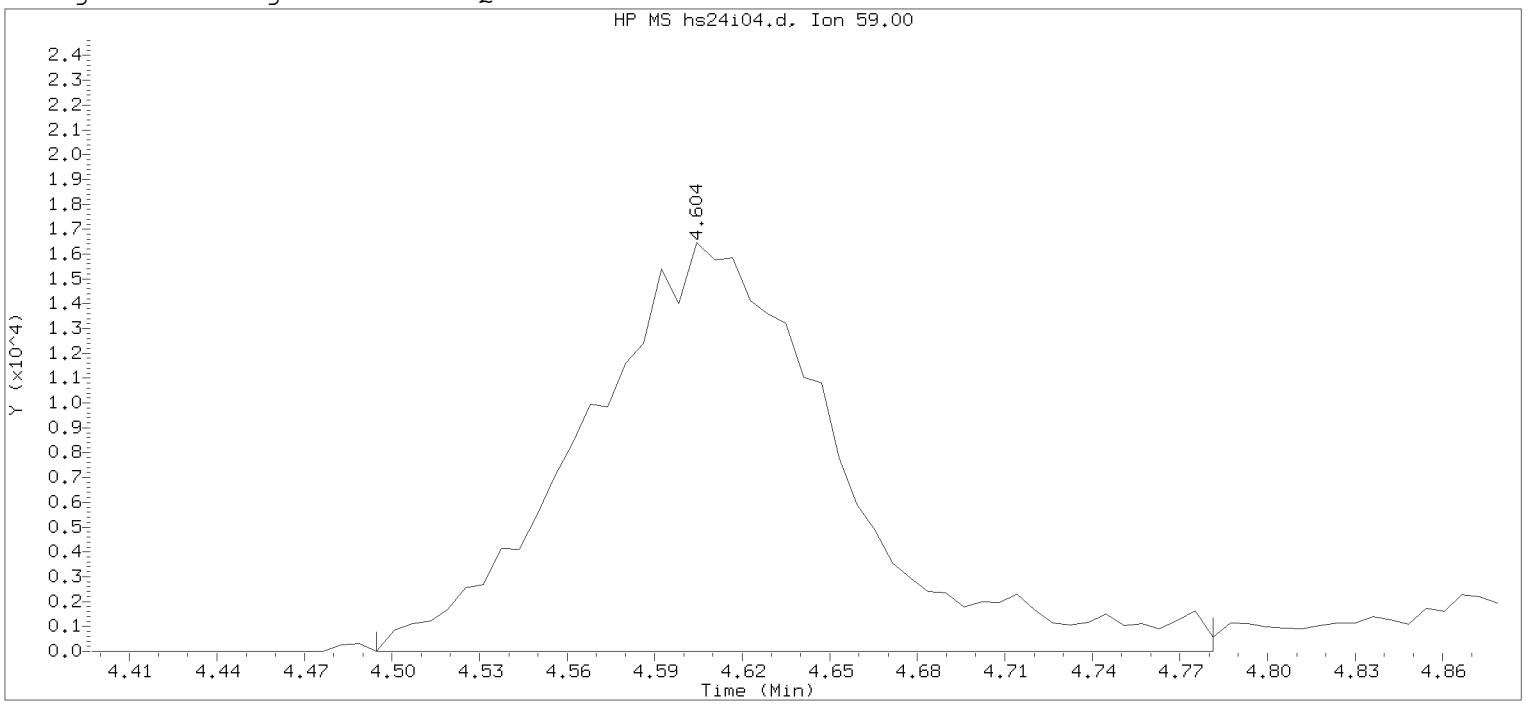
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

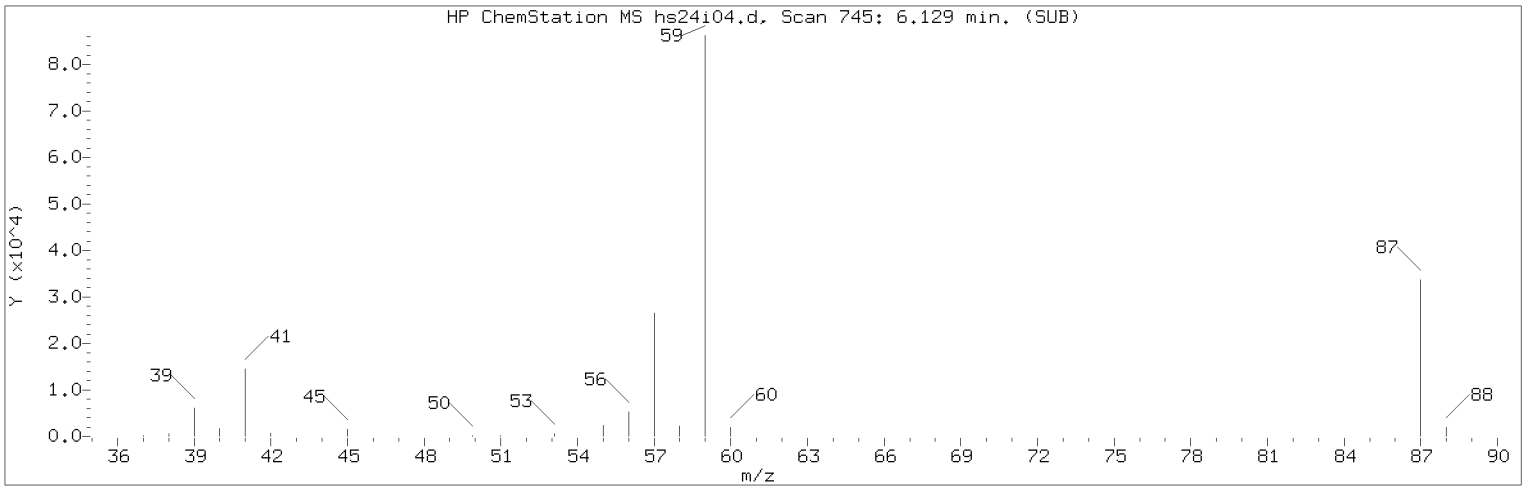
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

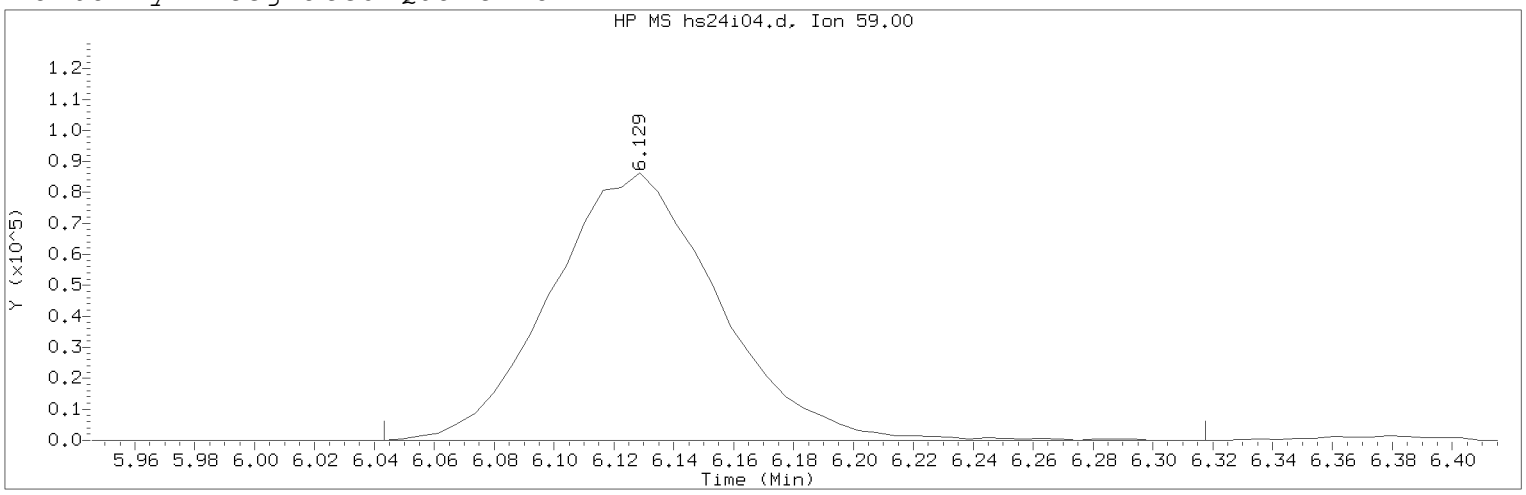
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 495		
Retention Time (minutes)	: 4.604		
Quant Ion	: 59.00		
Area	: 100186		
On-column Amount (ng)	: 38.4816		
Integration start scan	: 476	Integration stop scan:	523
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

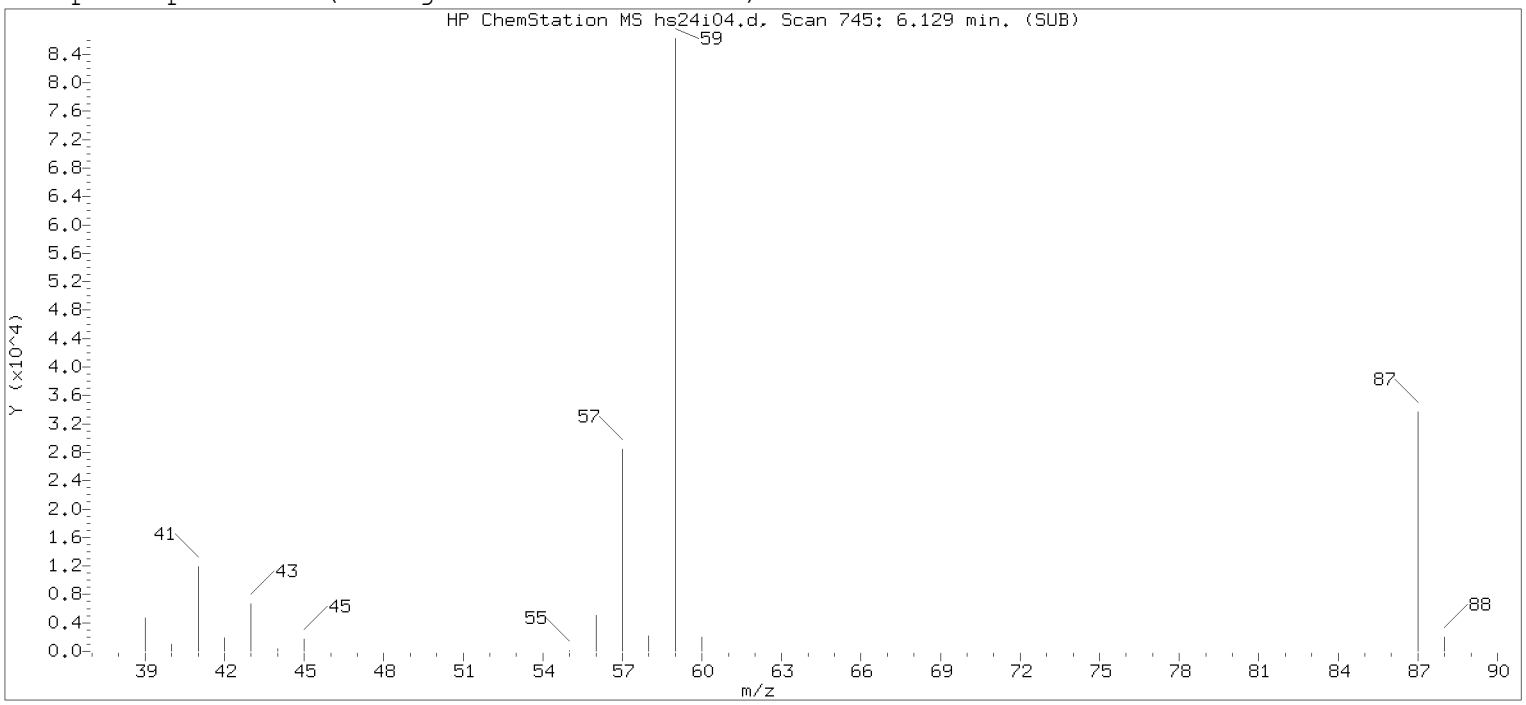
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area (flag) : 334132M
On-Column Amount (ng) : 2.0315
Integration start scan : 730 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

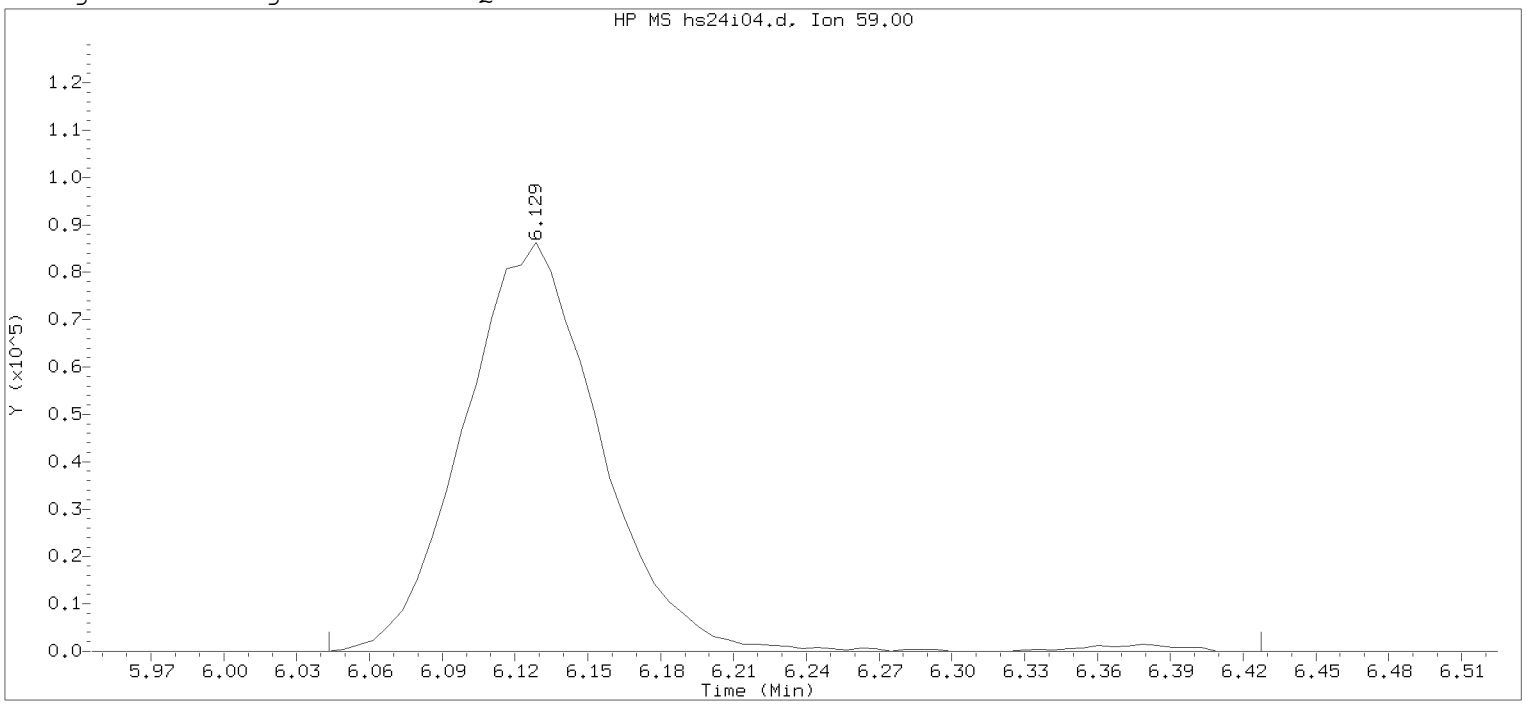
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

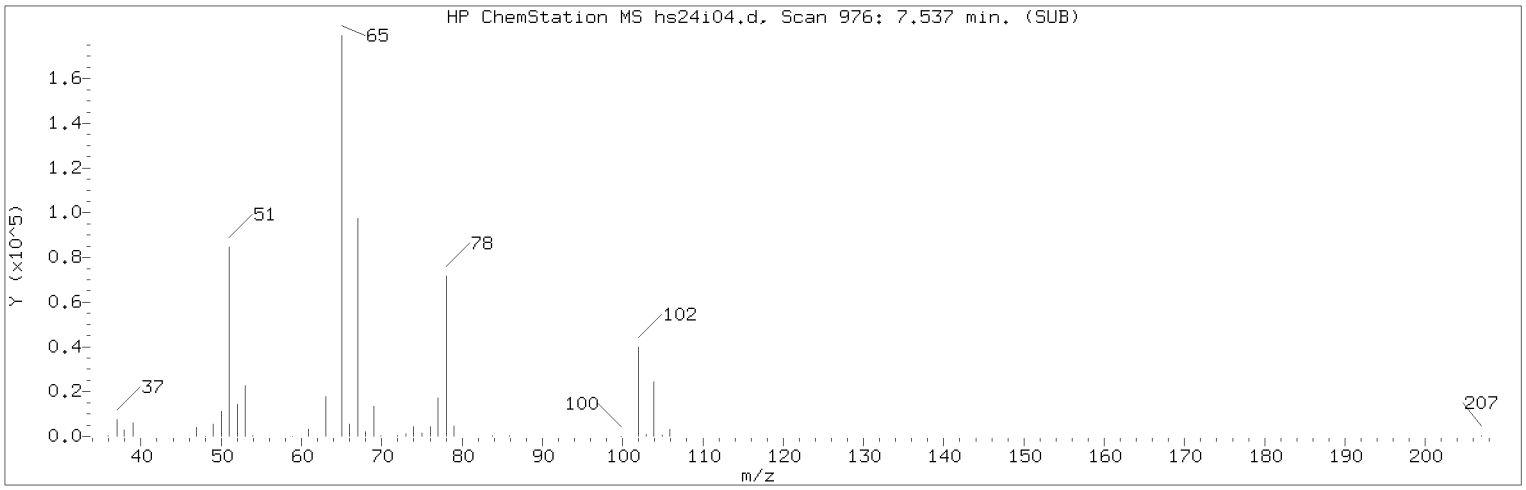
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

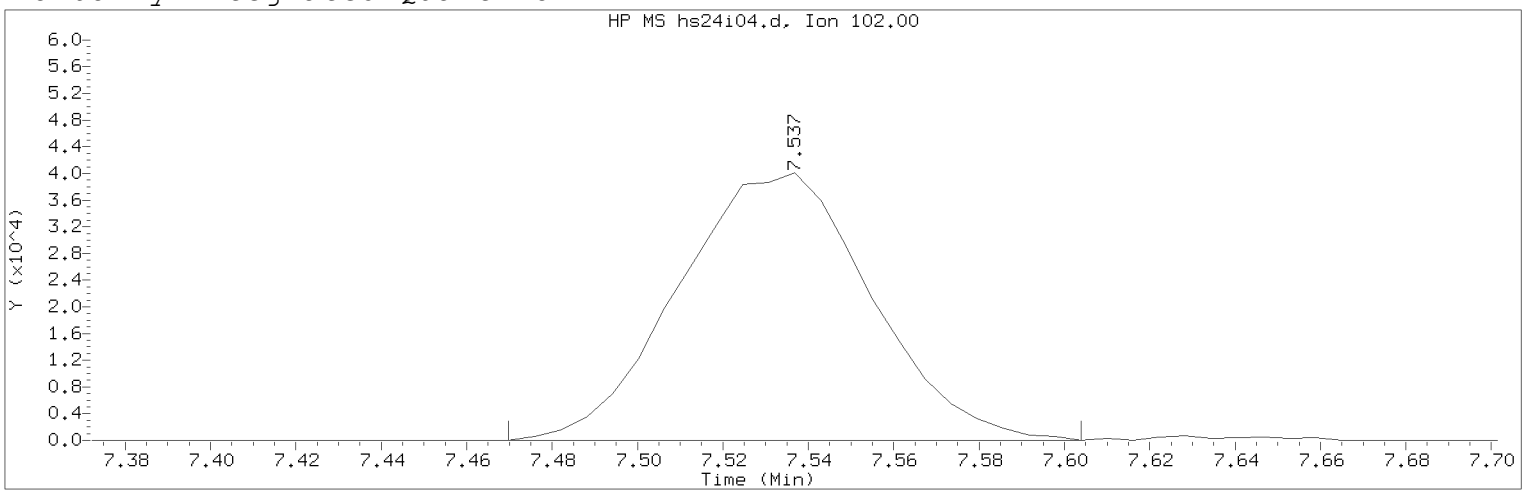
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area : 338010
On-column Amount (ng) : 1.9953
Integration start scan : 730 Integration stop scan: 793
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

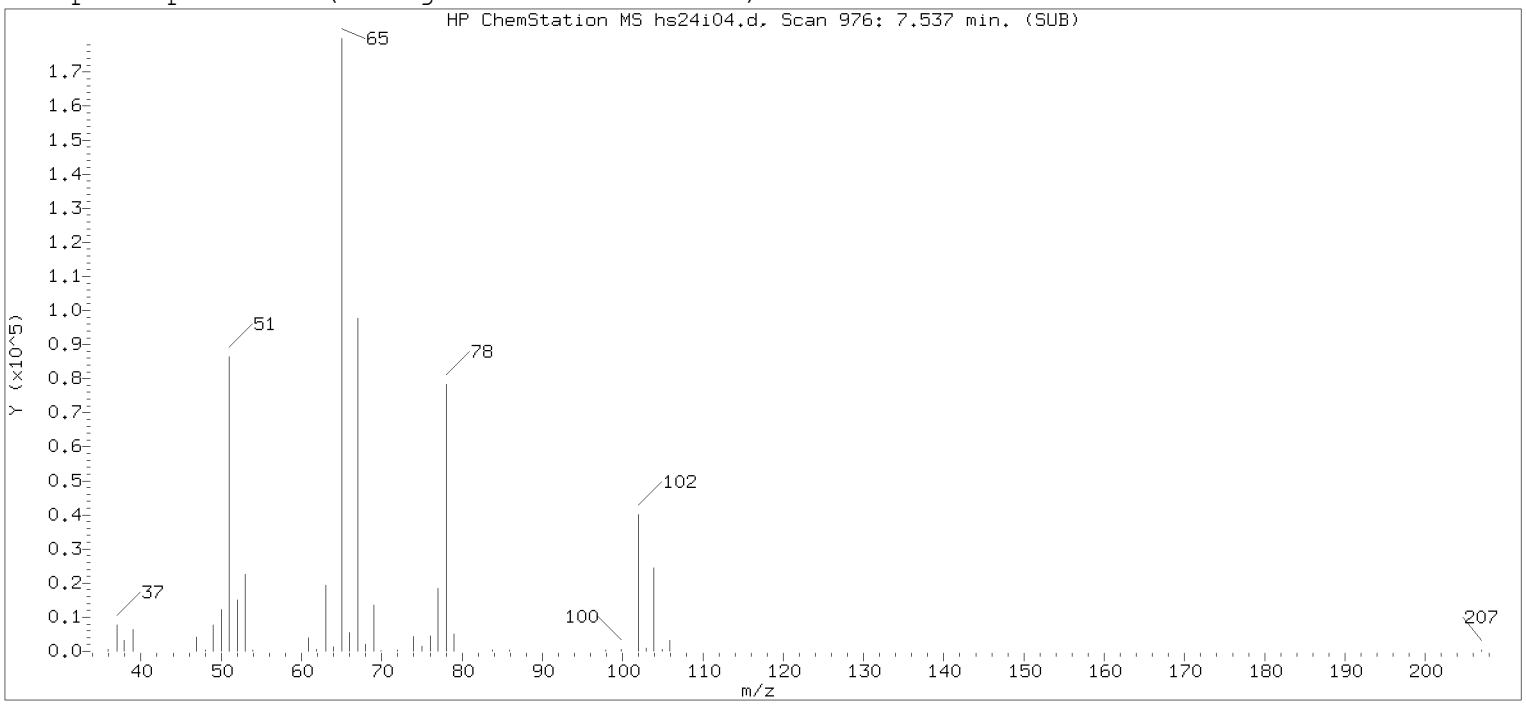
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 125039M
On-Column Amount (ng) : 10.2684
Integration start scan : 964 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

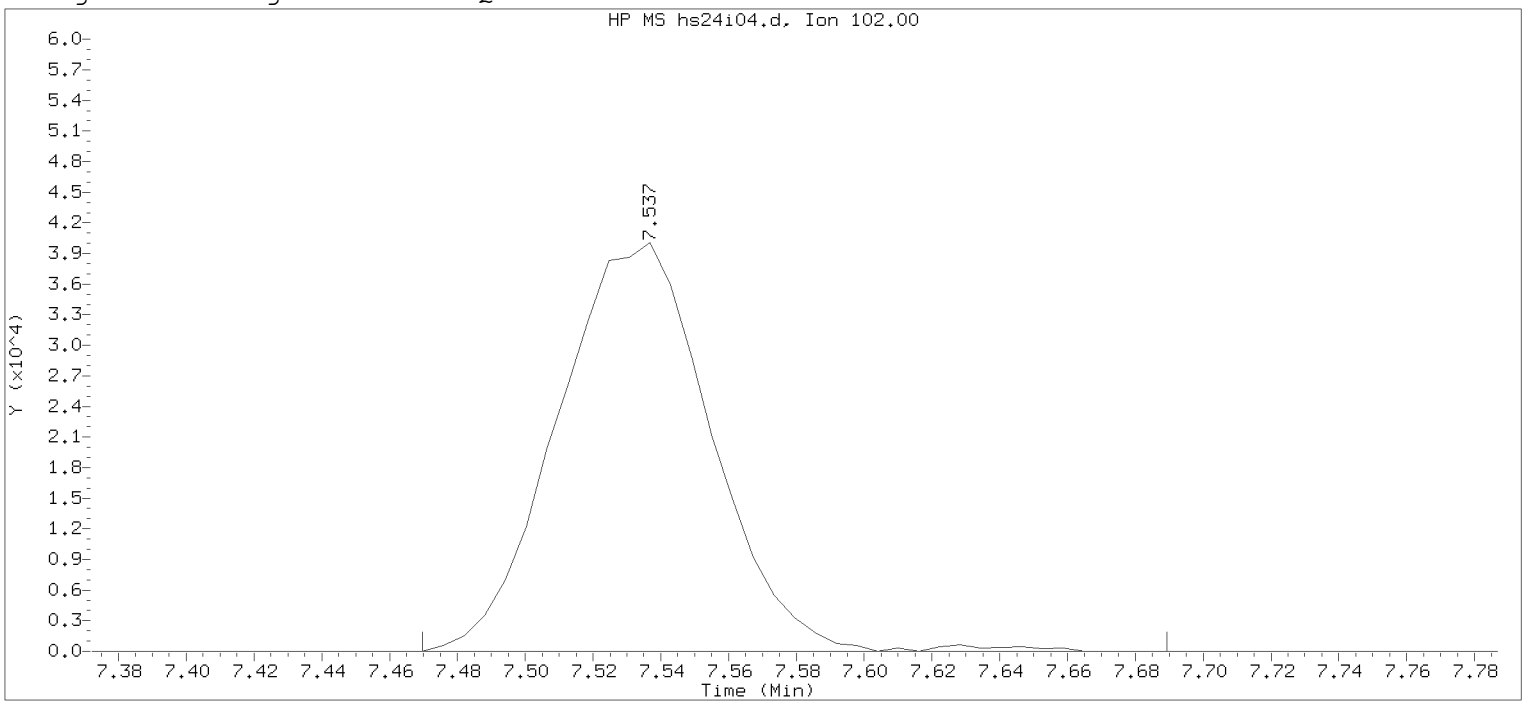
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

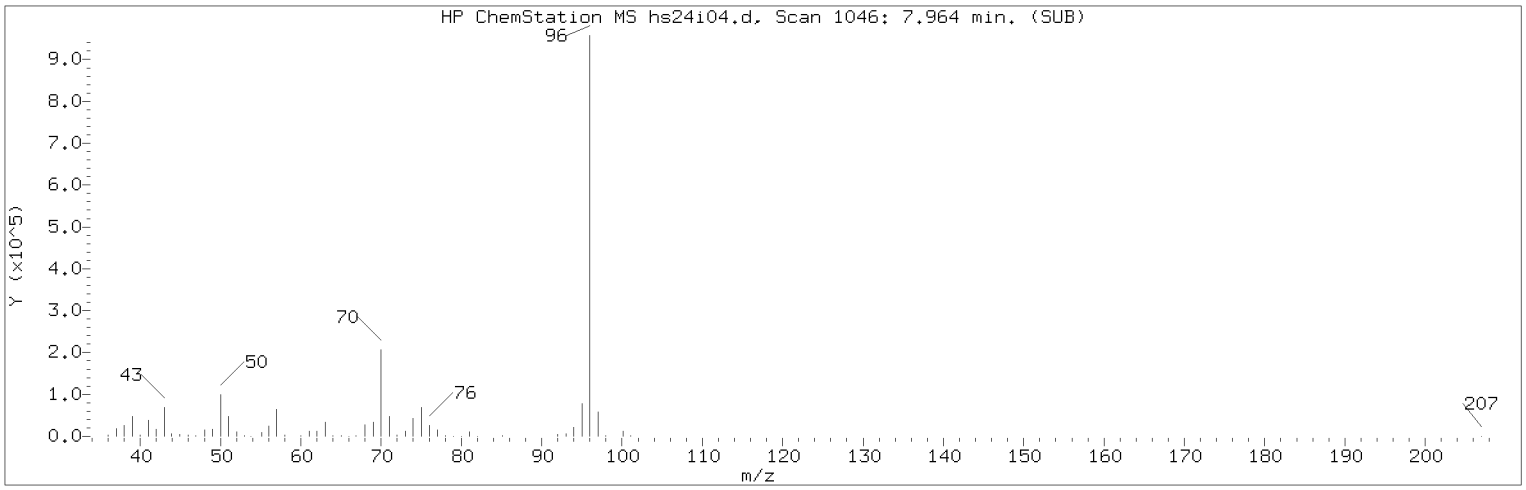
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

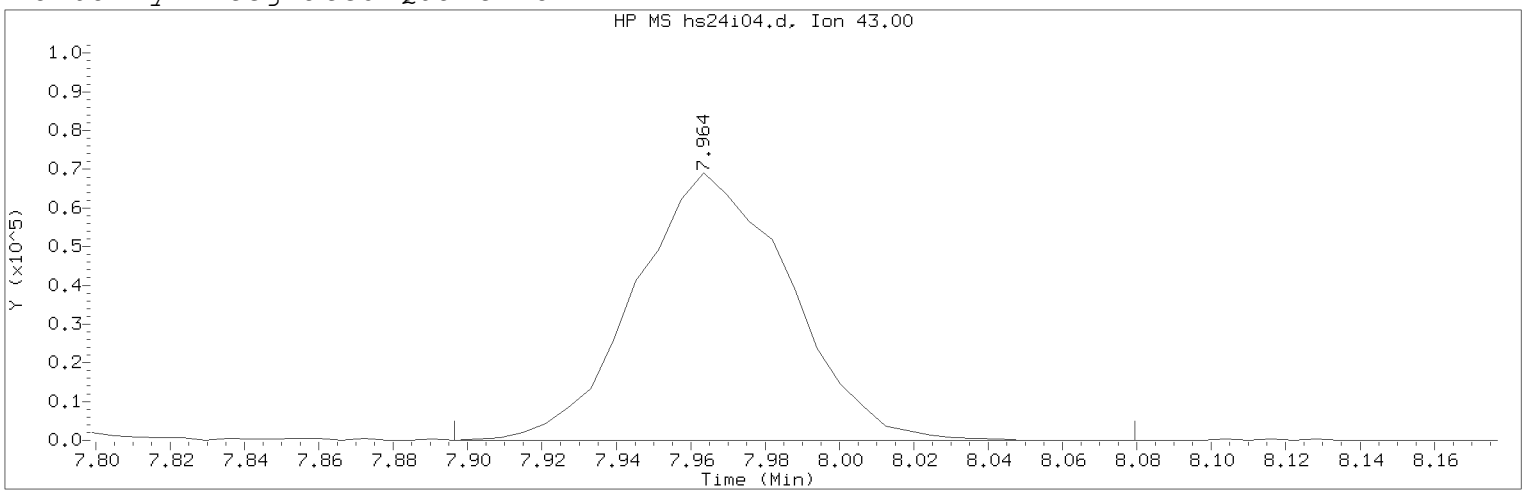
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 126184
On-column Amount (ng) : 10.2319
Integration start scan : 964 Integration stop scan: 1000
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

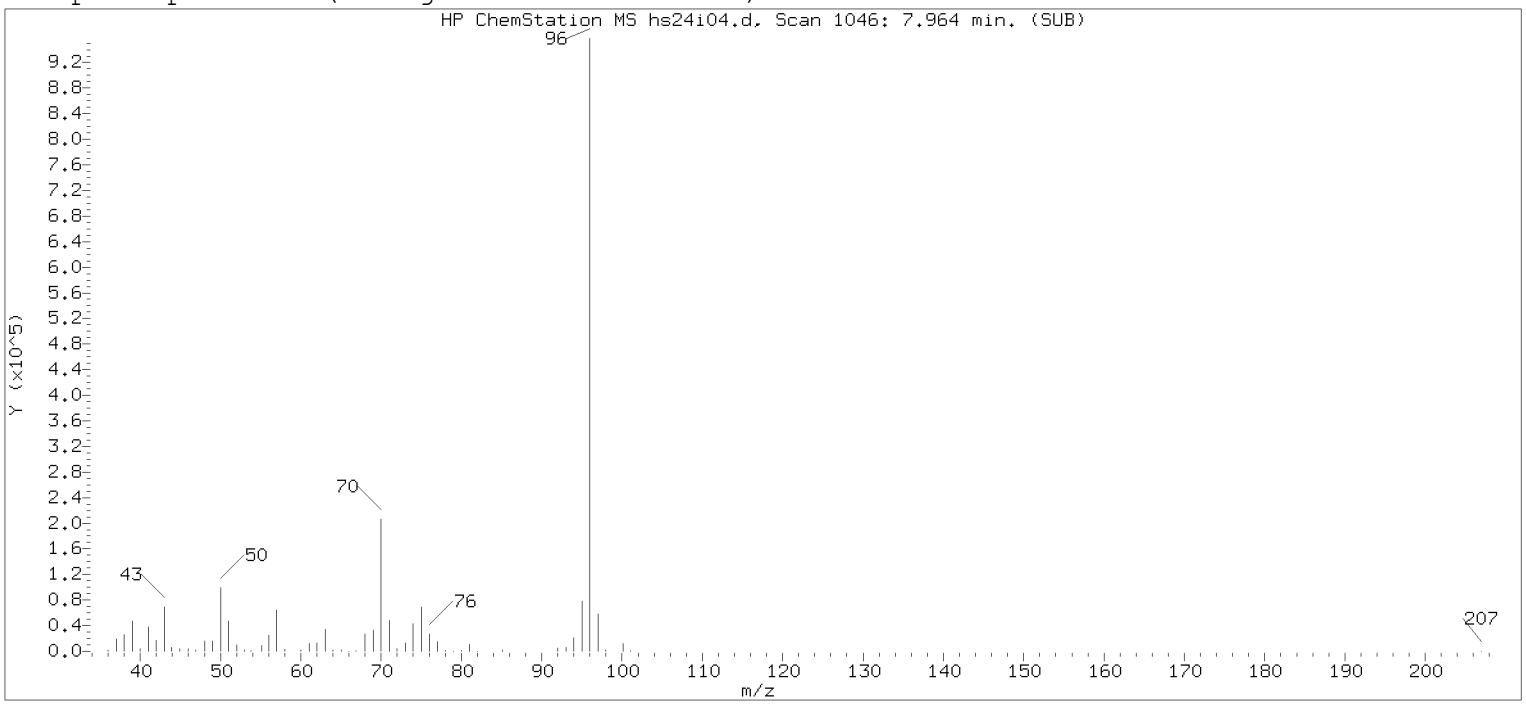
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 198879M
On-Column Amount (ng) : 1.9780
Integration start scan : 1034 Integration stop scan: 1064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

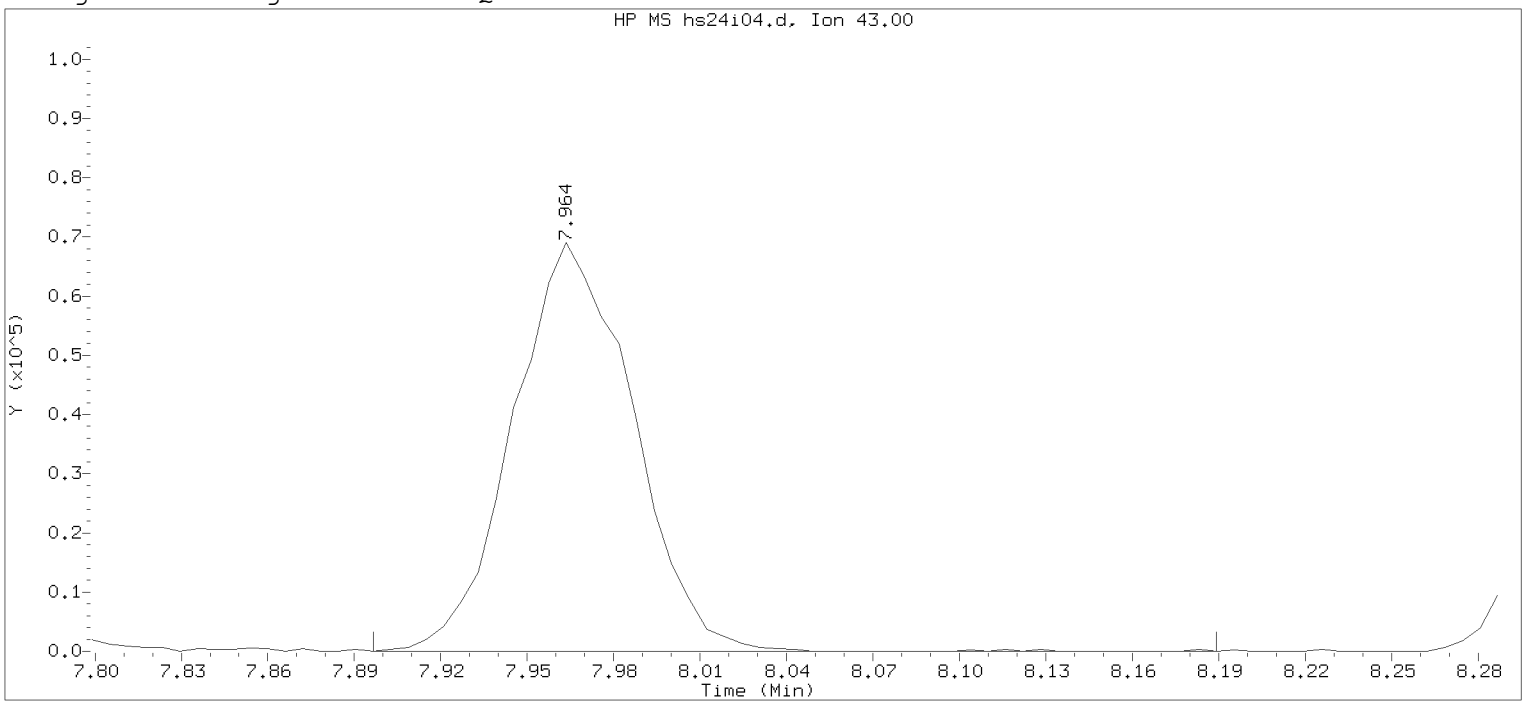
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

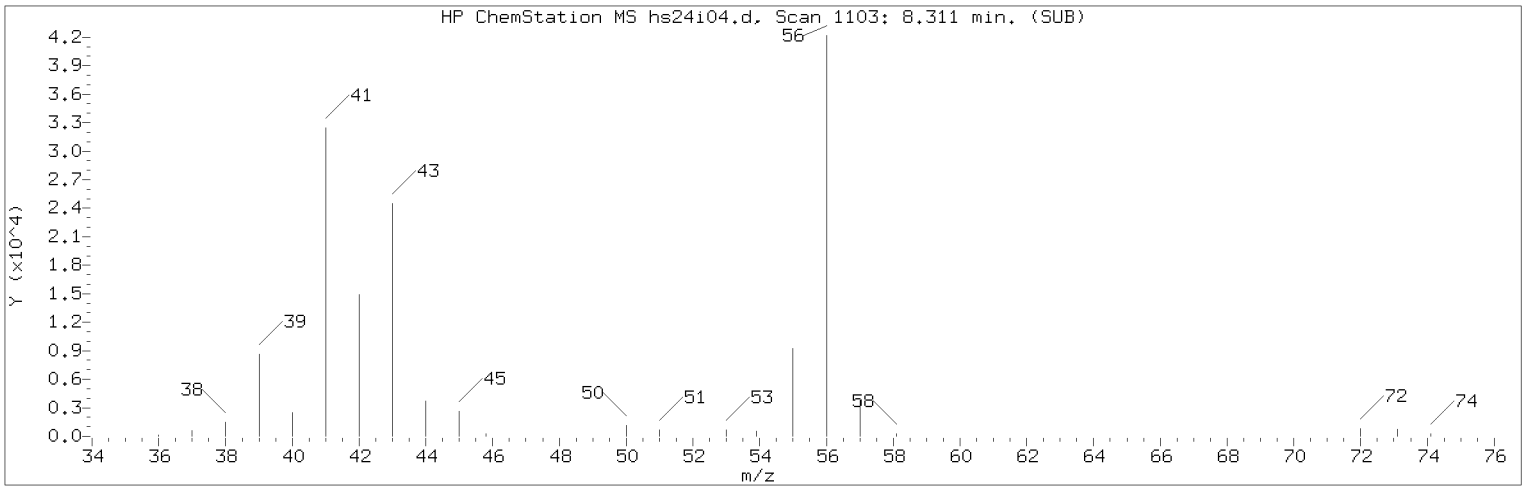
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

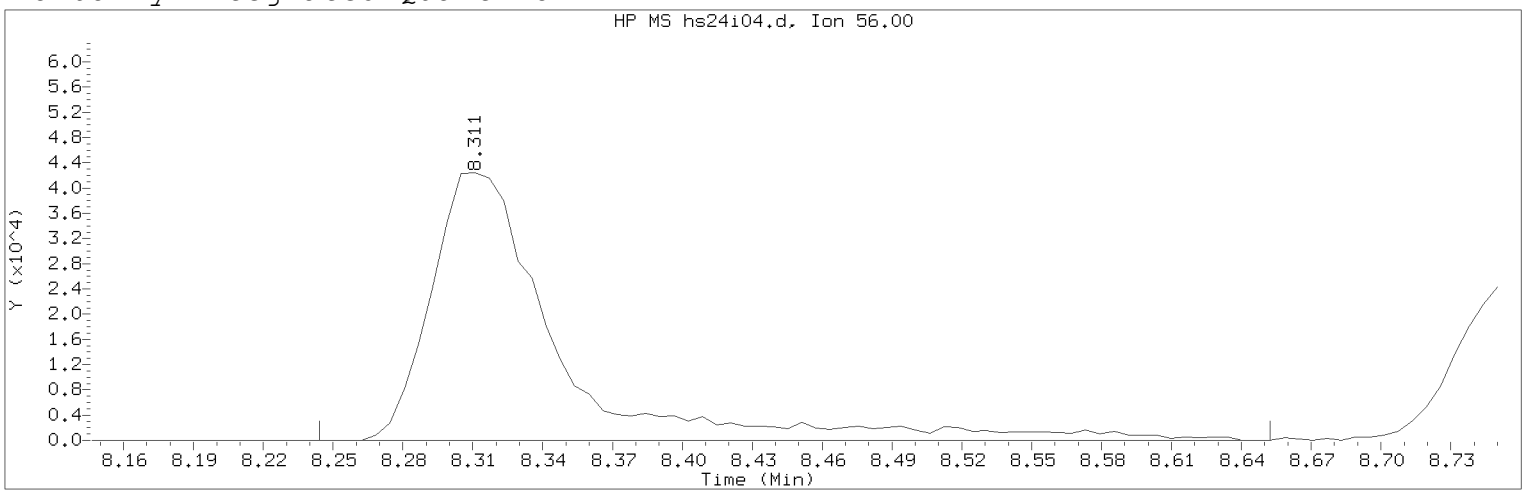
Compound Number	: 62		
Compound Name	: n-Heptane		
Scan Number	: 1046		
Retention Time (minutes)	: 7.964		
Quant Ion	: 43.00		
Area	: 199330		
On-column Amount (ng)	: 1.8366		
Integration start scan	: 1034	Integration stop scan:	1082
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

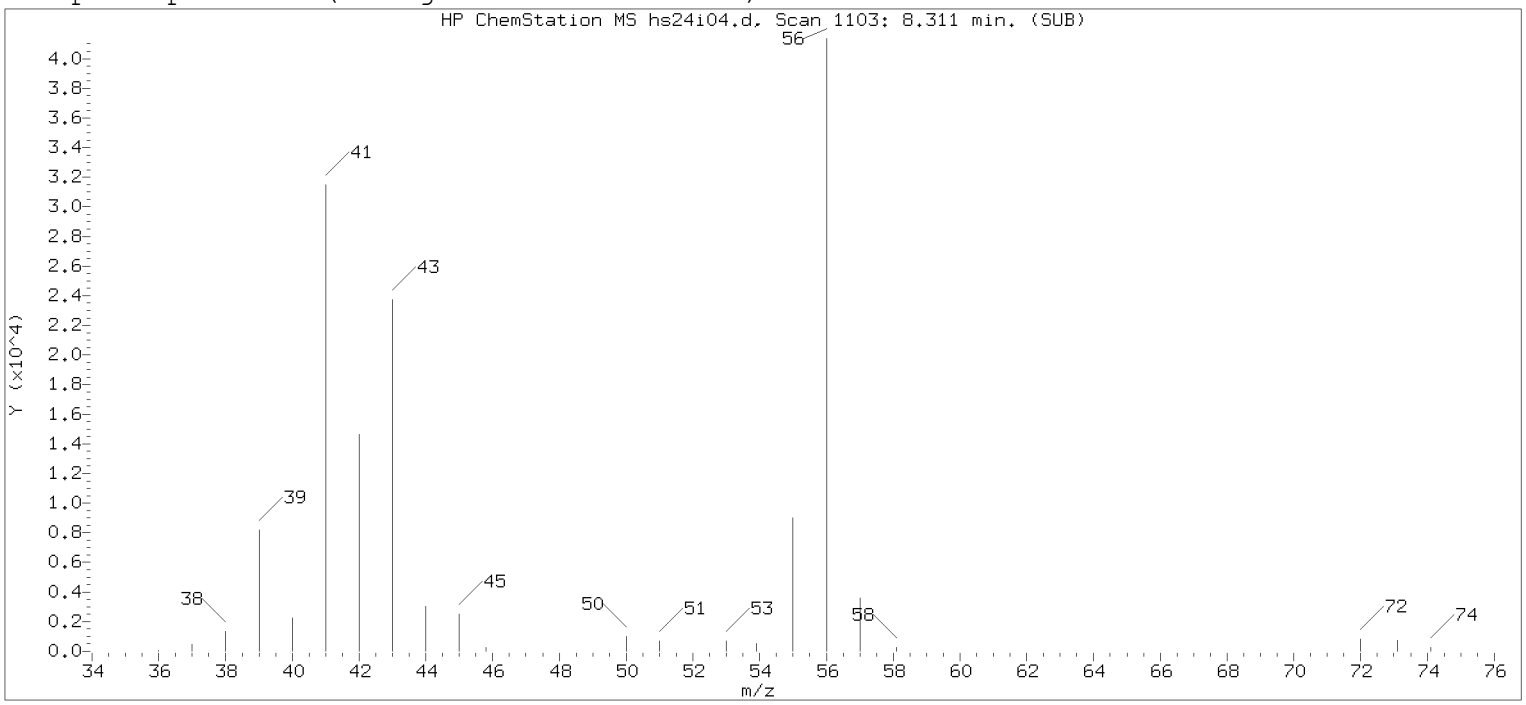
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area (flag) : 160778M
On-Column Amount (ng) : 194.8775
Integration start scan : 1091 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

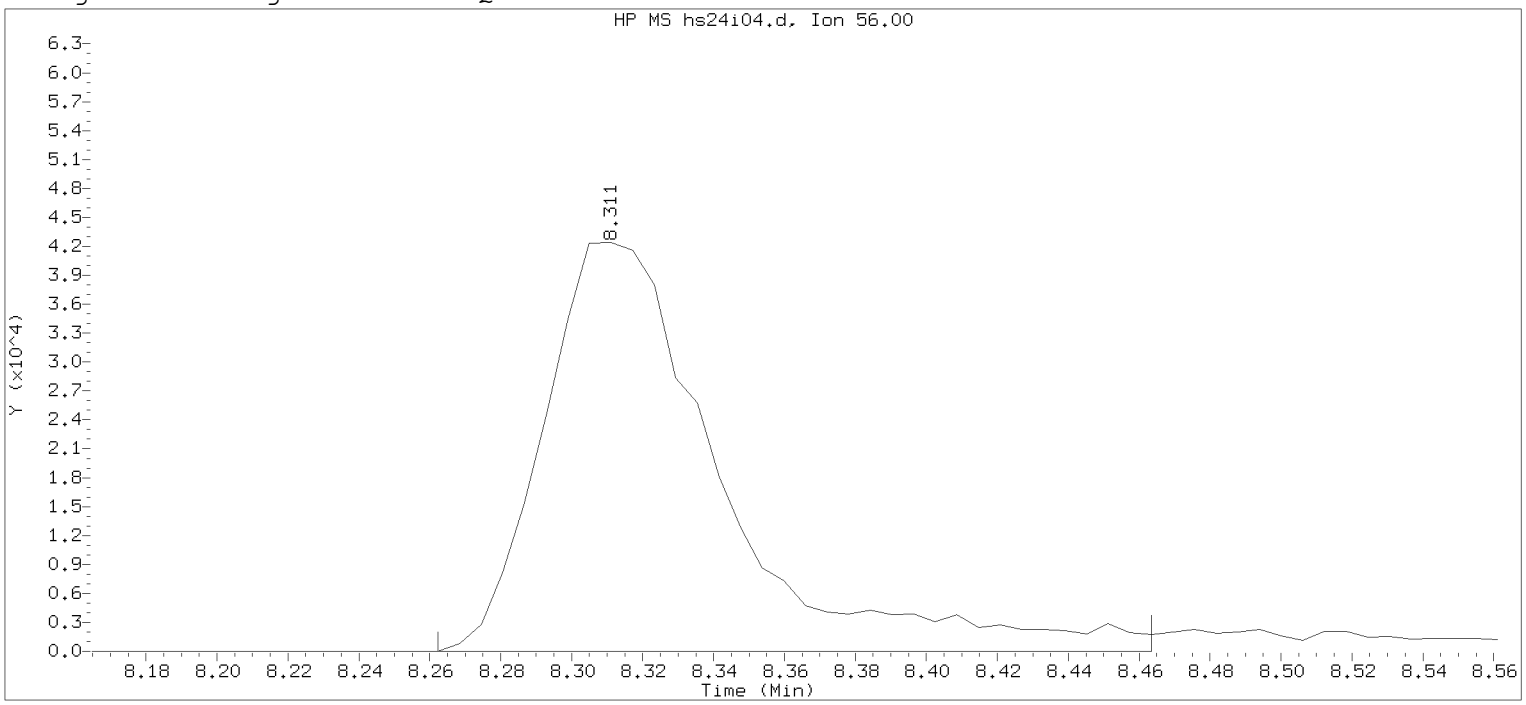
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

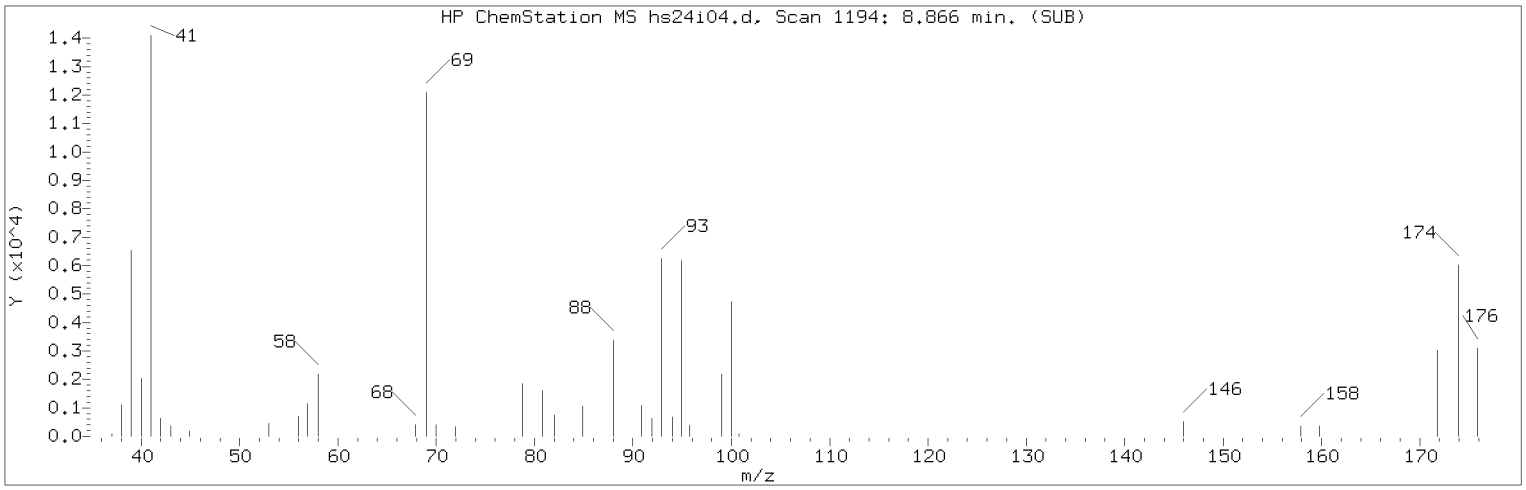
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

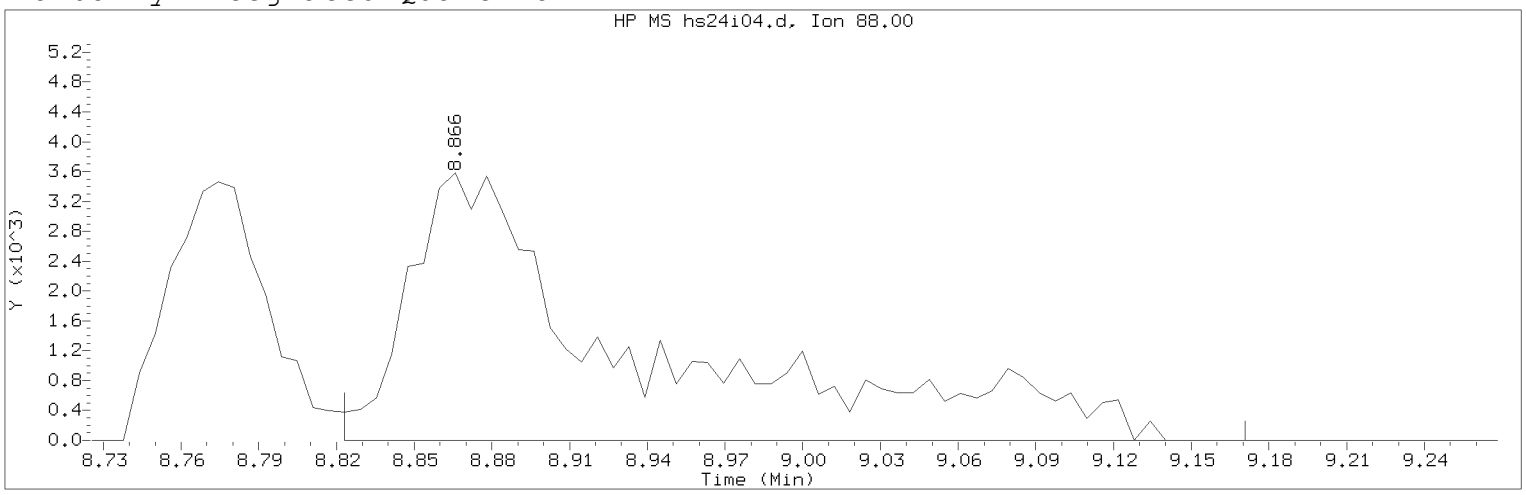
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 56.00		
Area	: 147095		
On-column Amount (ng)	: 168.2954		
Integration start scan	: 1094	Integration stop scan:	1127
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

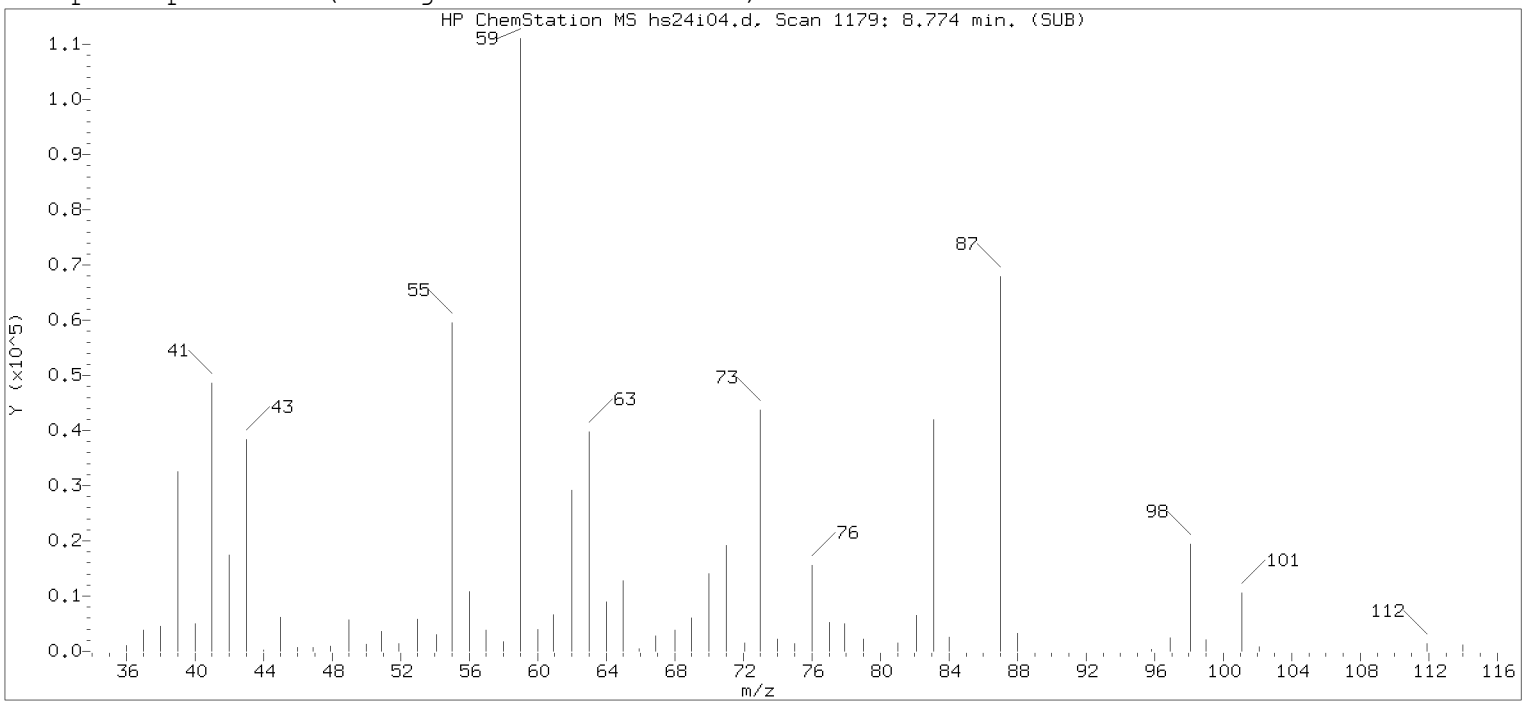
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 21749M
On-Column Amount (ng) : 109.4886
Integration start scan : 1186 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

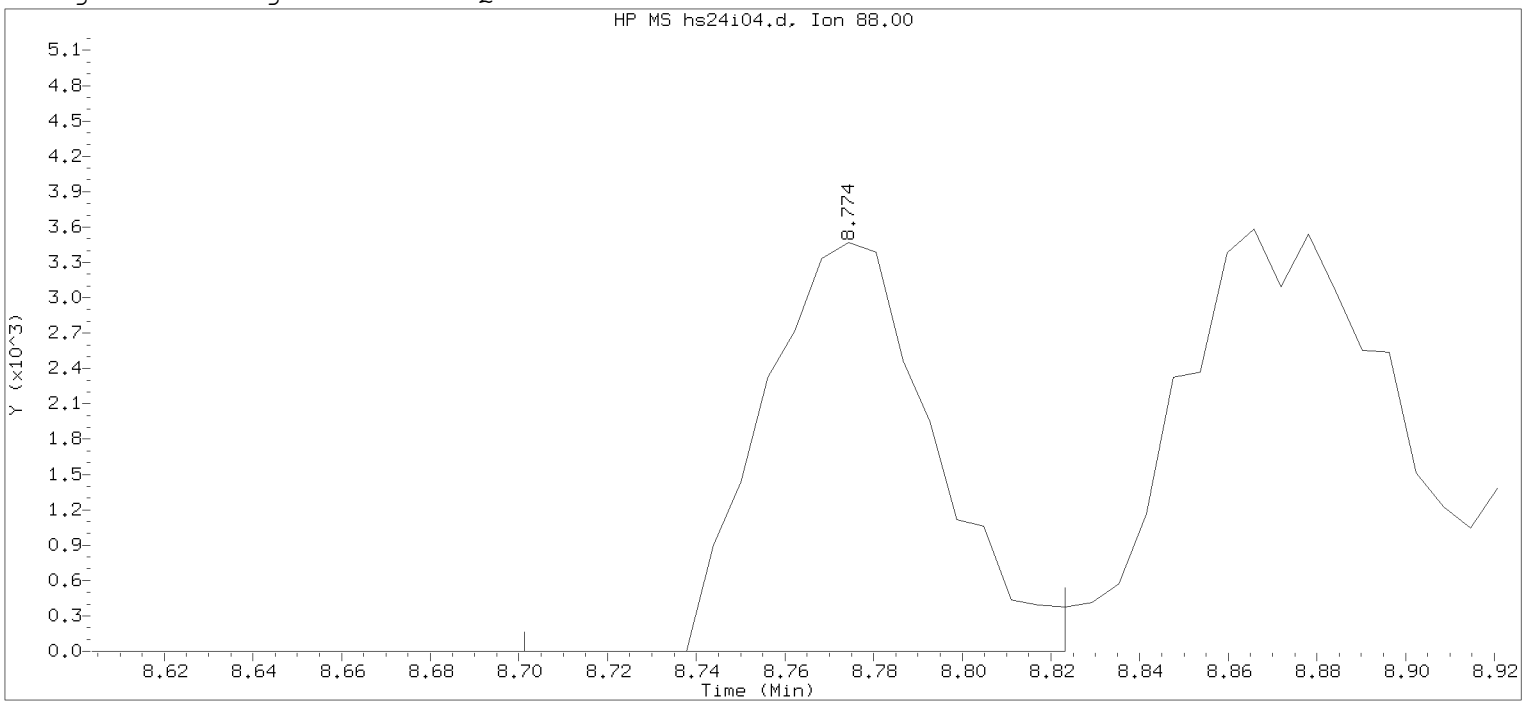
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

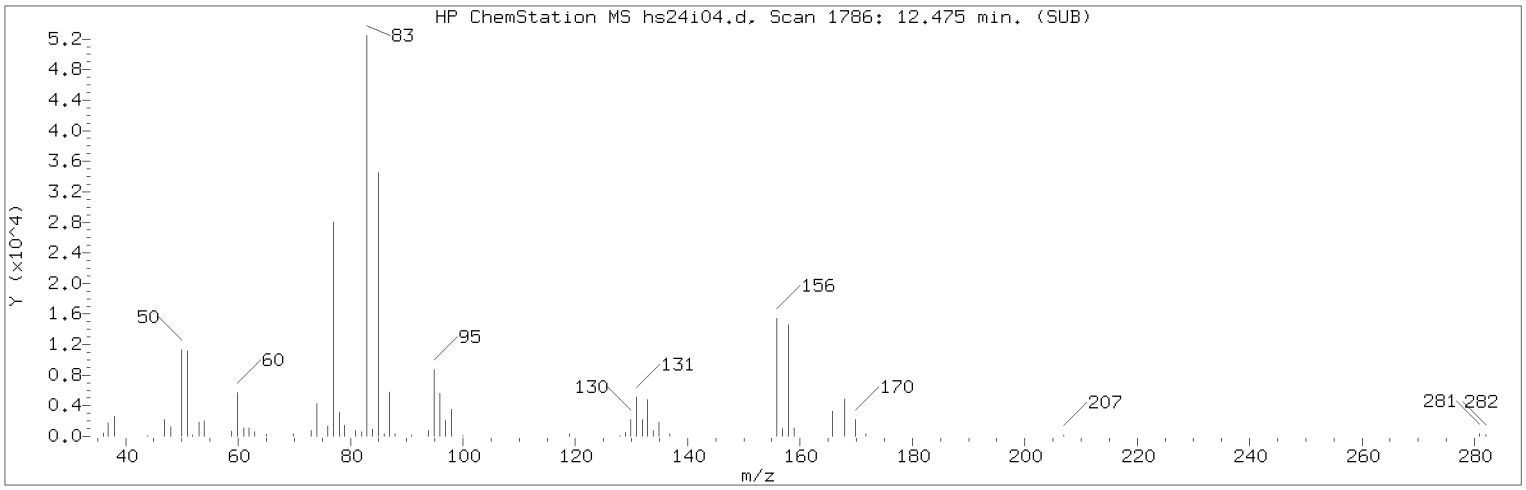
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

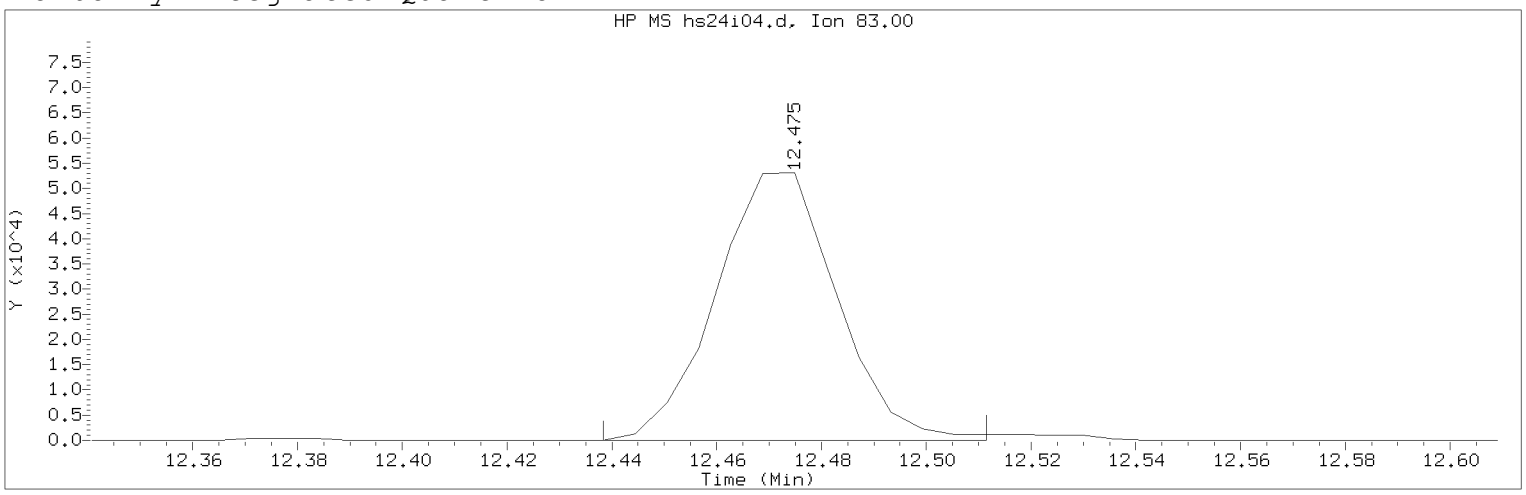
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 9210
On-column Amount (ng) : 66.8956
Integration start scan : 1166 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

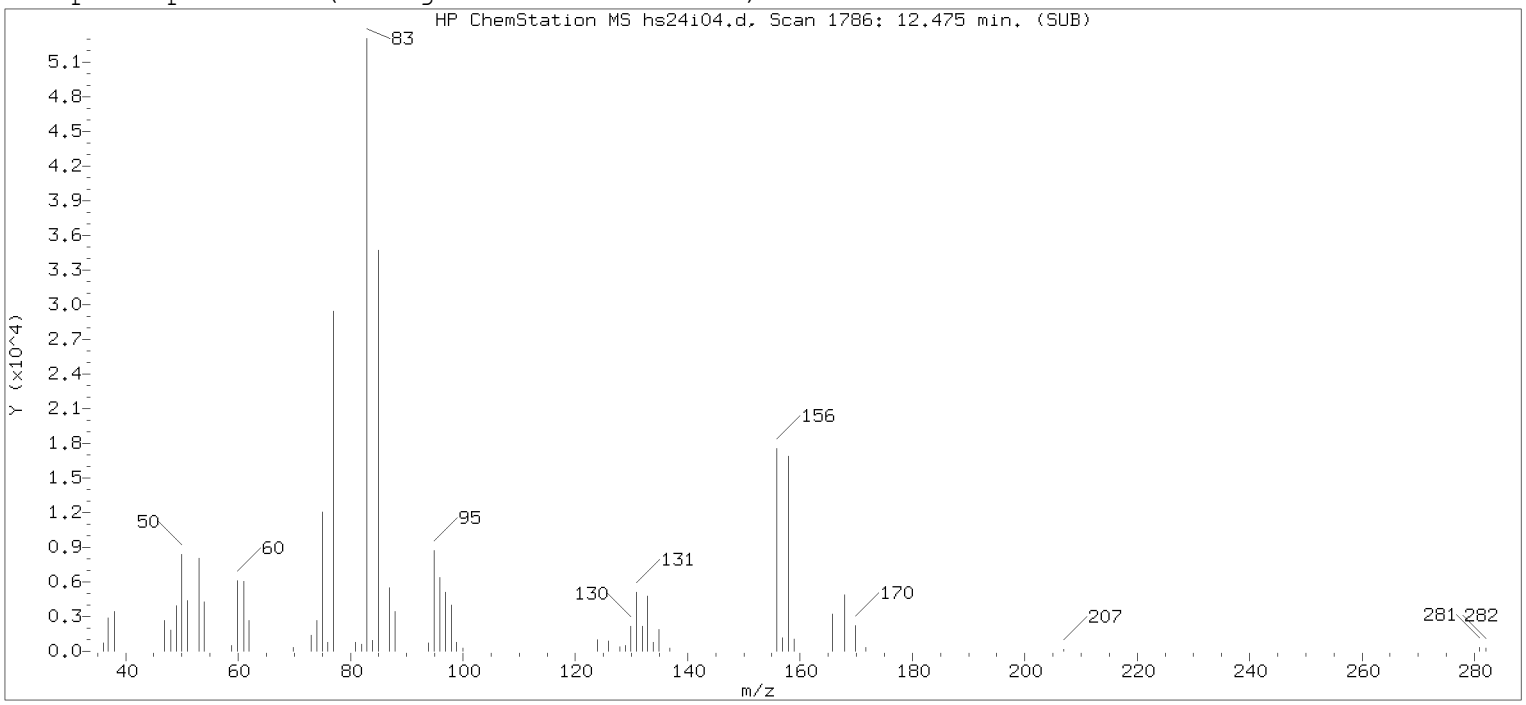
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 85286M
On-Column Amount (ng) : 1.9375
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

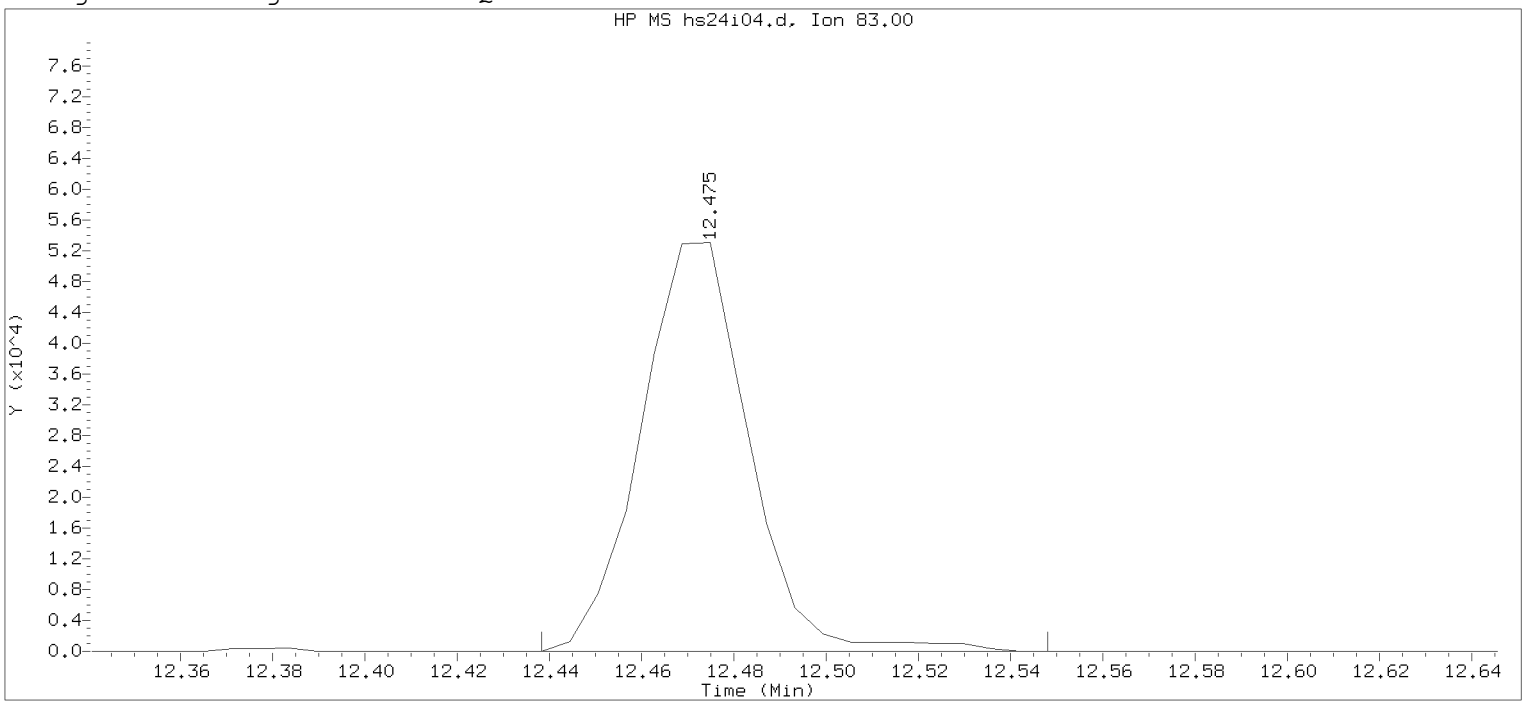
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

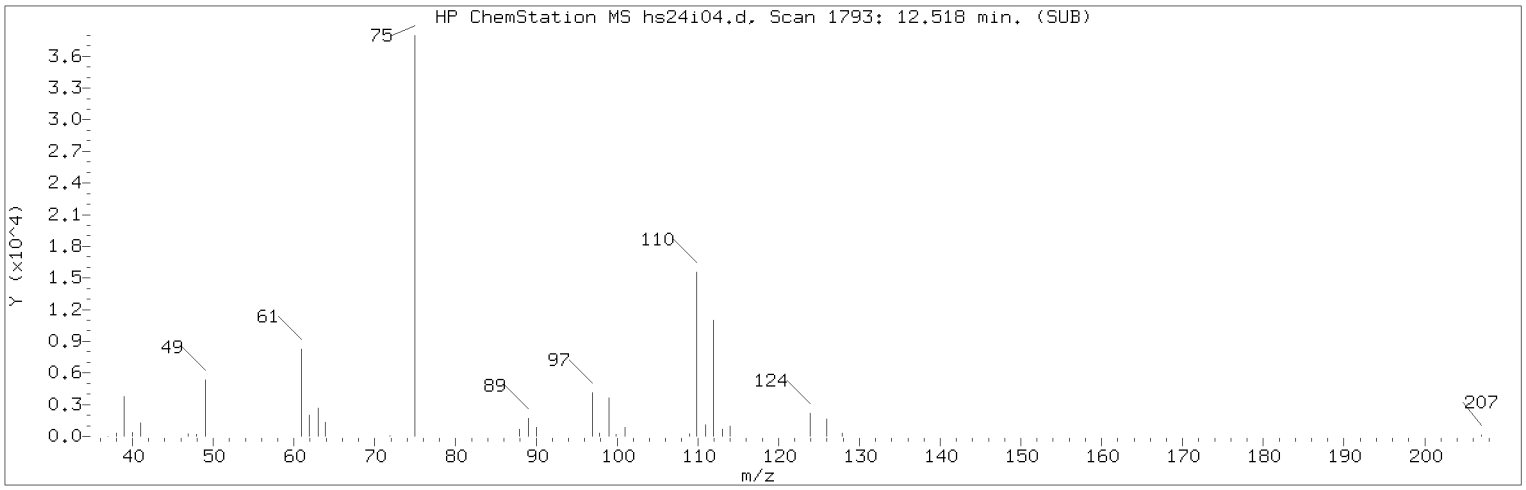
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

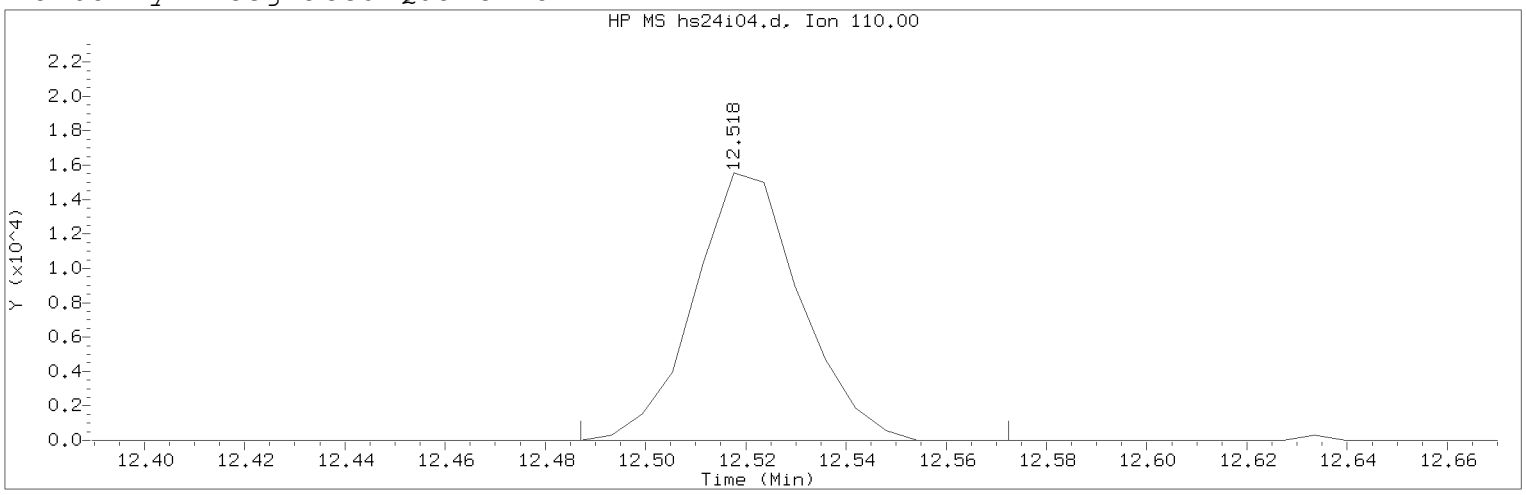
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 86557
On-column Amount (ng) : 1.8966
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

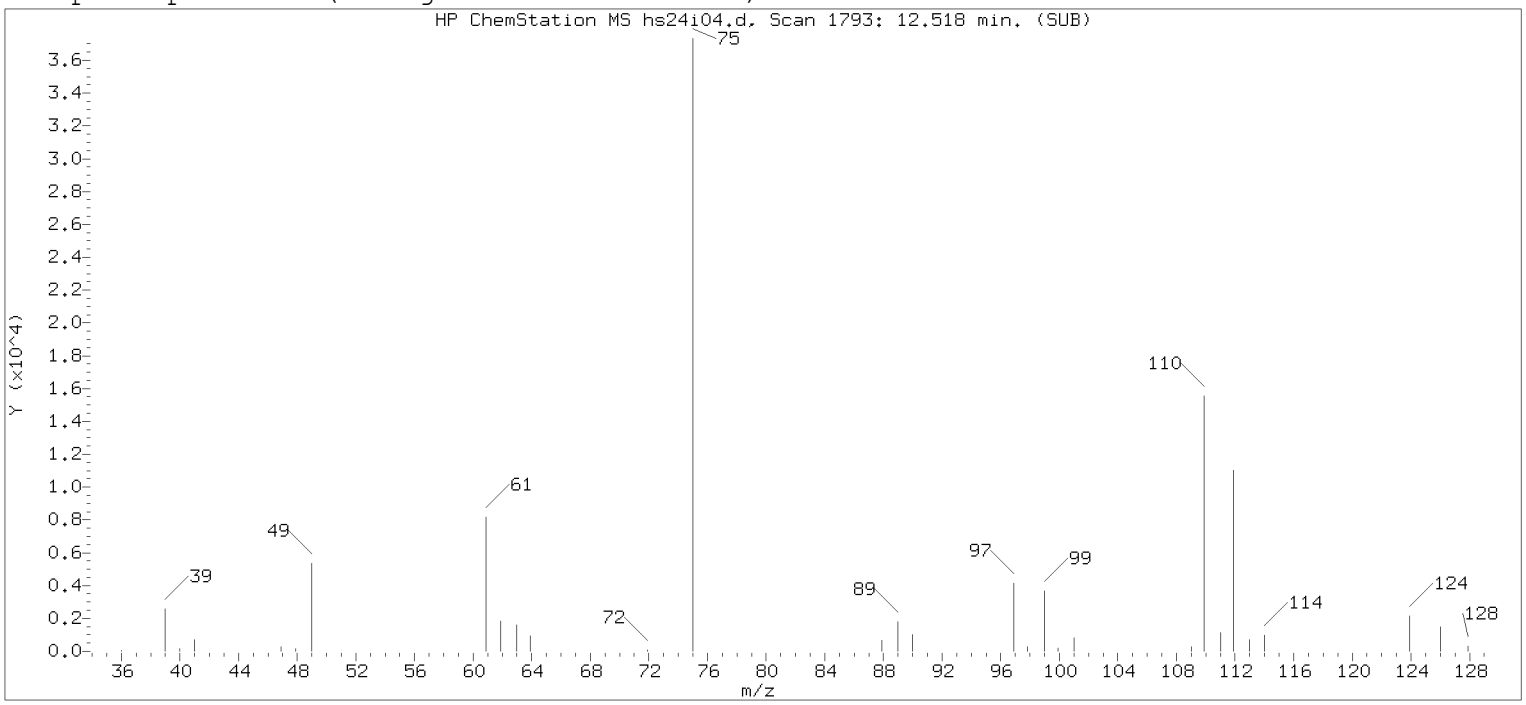
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 22957M
On-Column Amount (ng) : 2.0173
Integration start scan : 1787 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

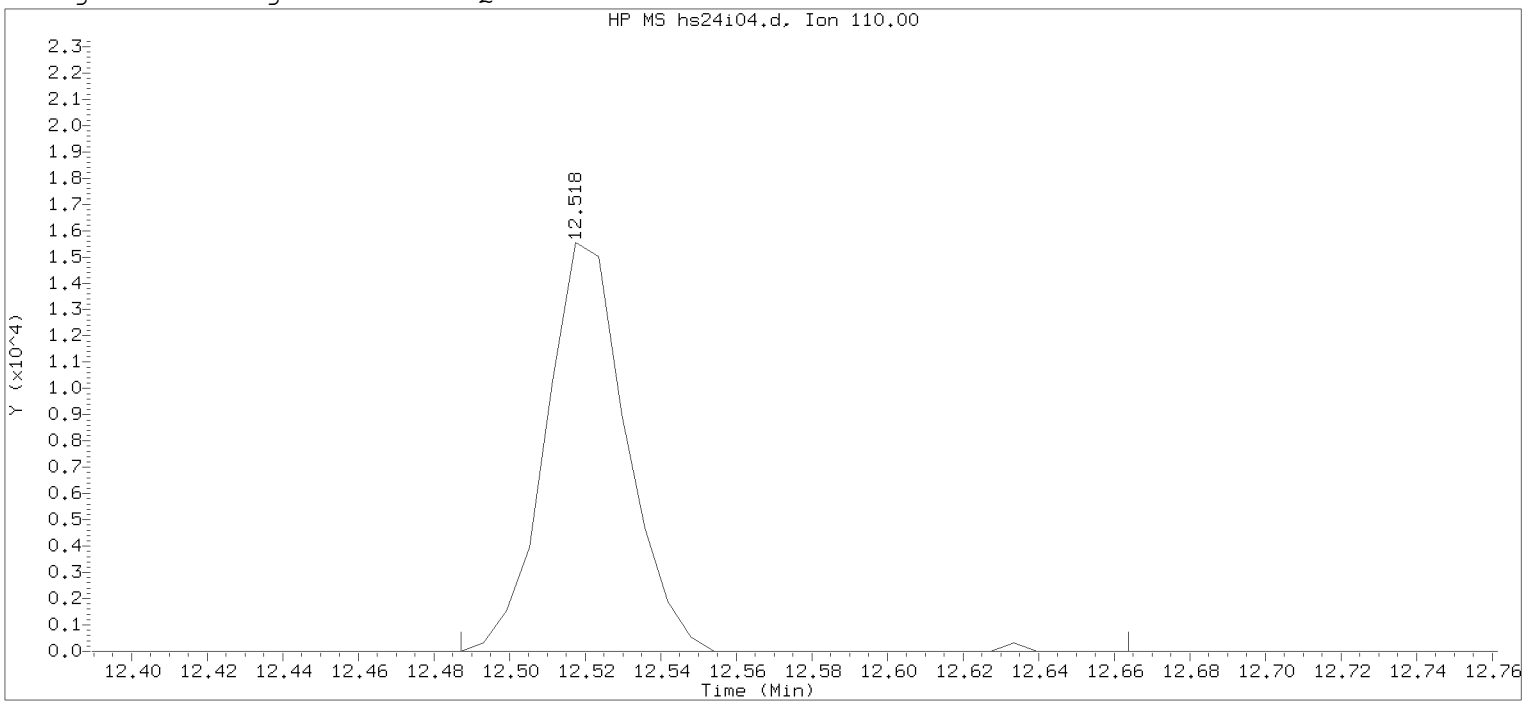
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

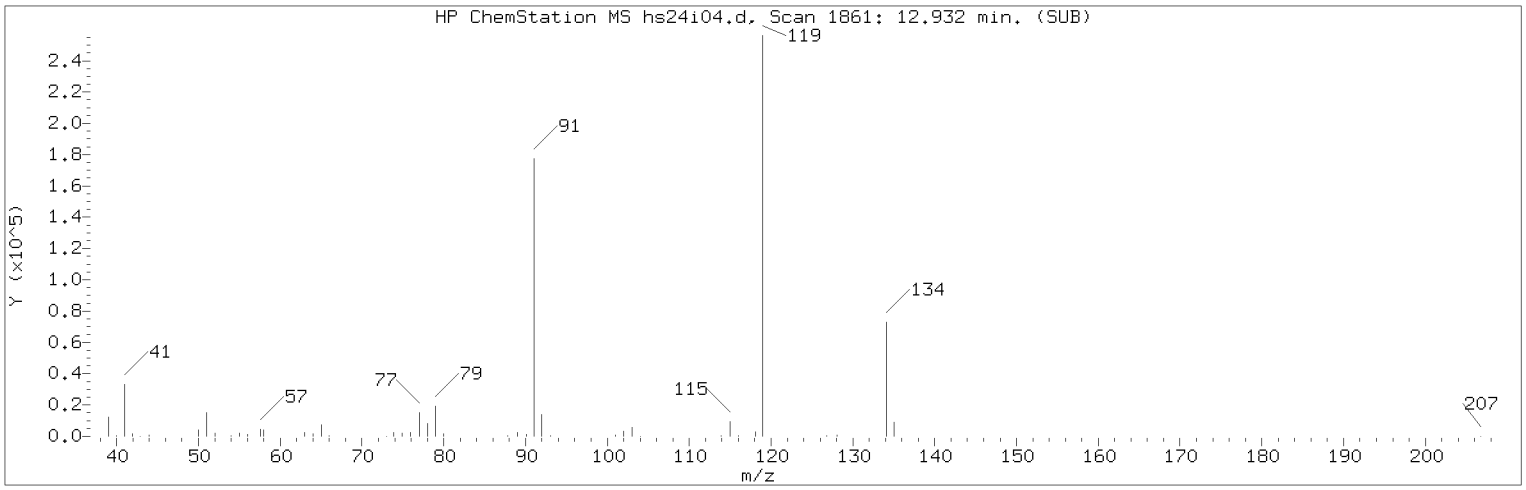
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

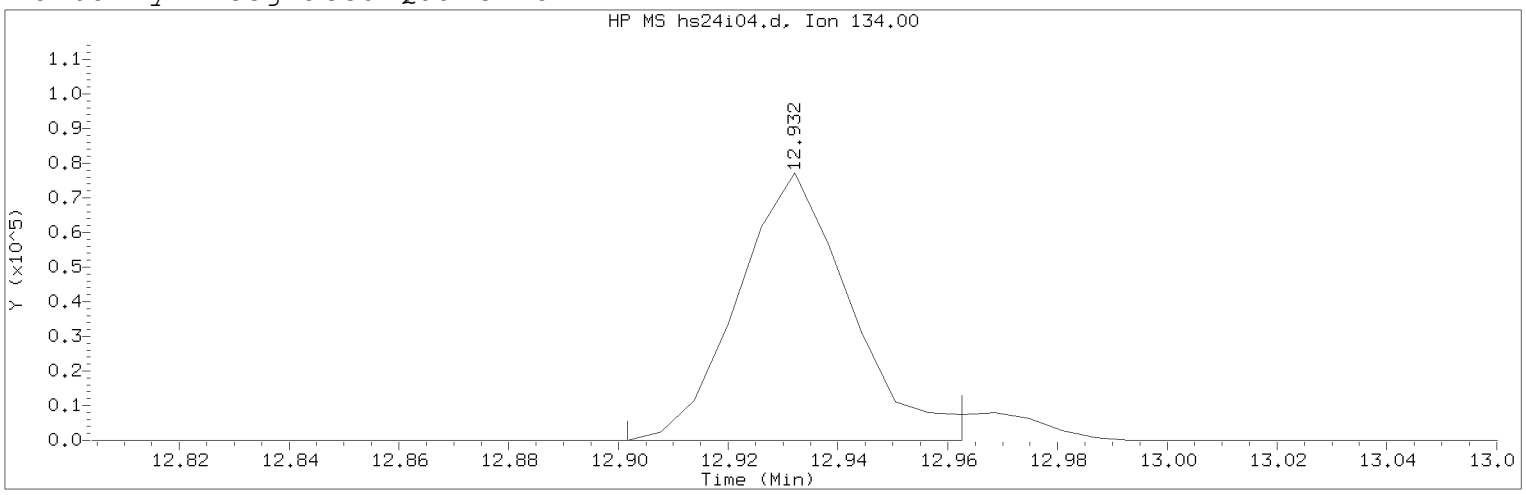
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 23069
On-column Amount (ng) : 2.0019
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

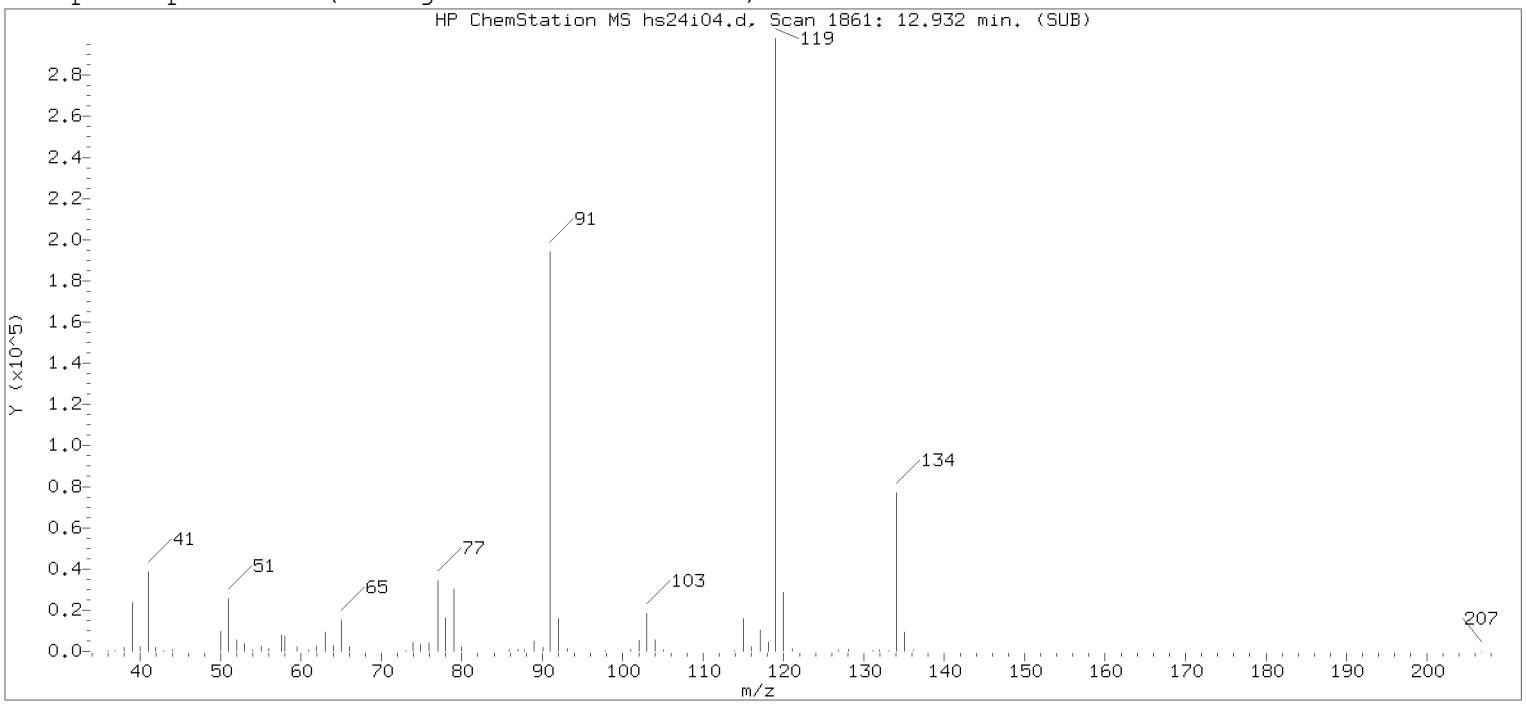
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 110083M
On-Column Amount (ng) : 2.0535
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

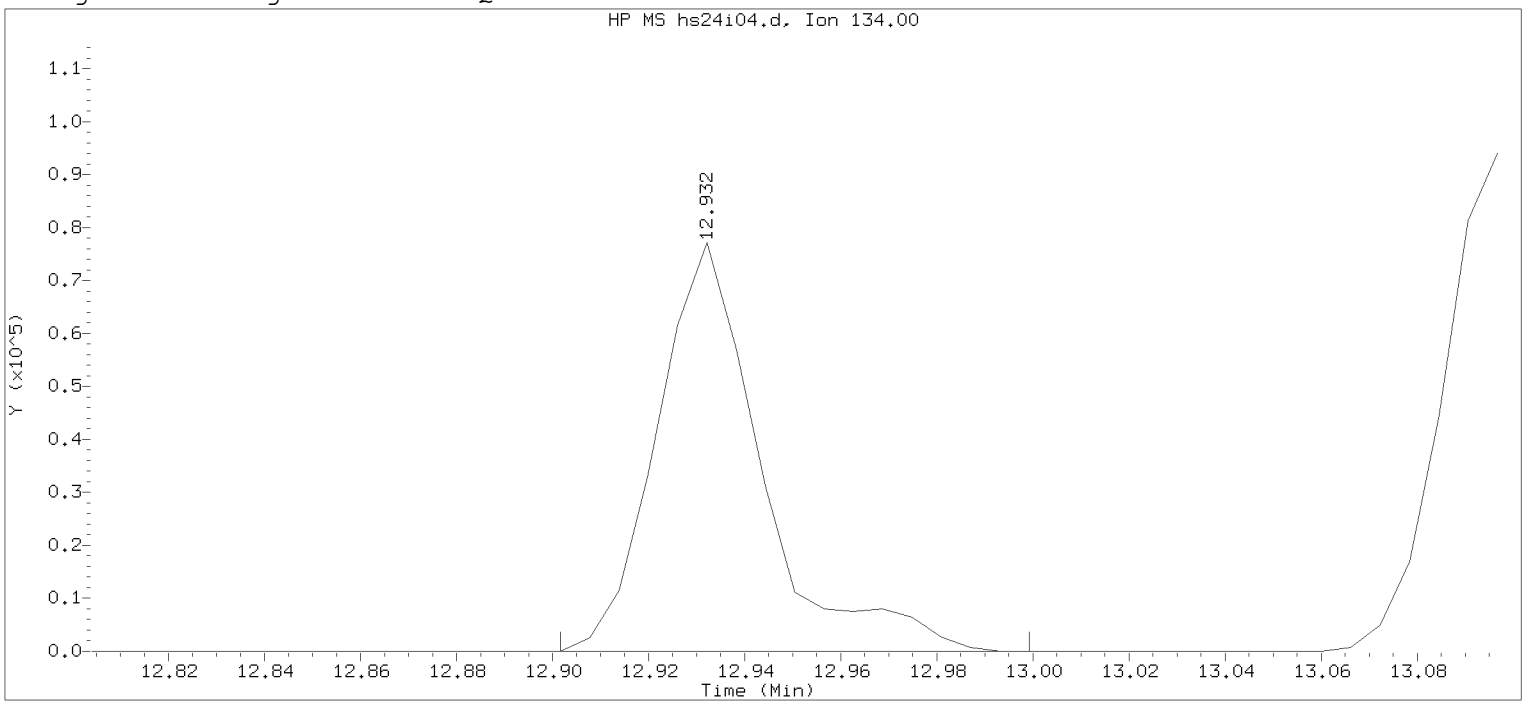
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

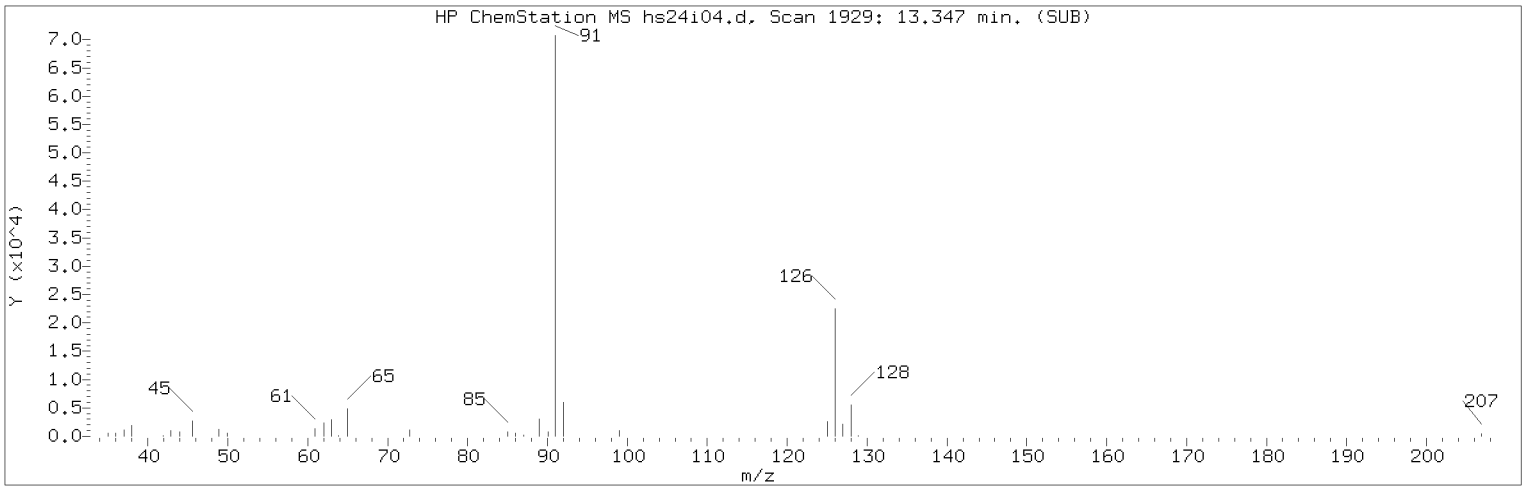
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

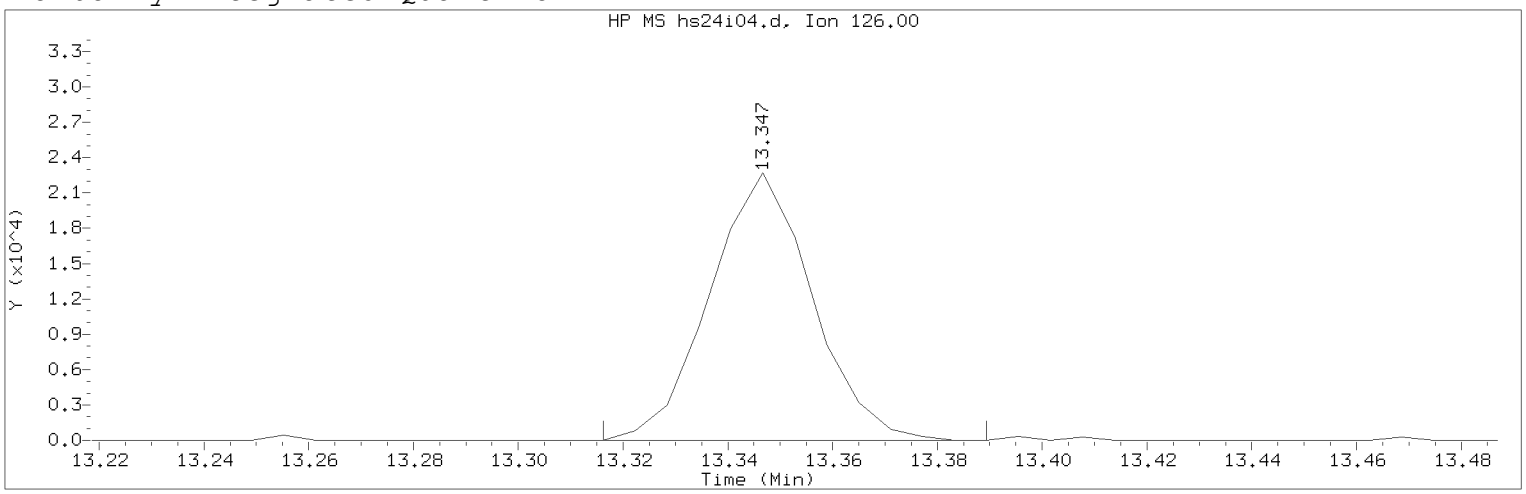
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 116606
On-column Amount (ng) : 2.0344
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

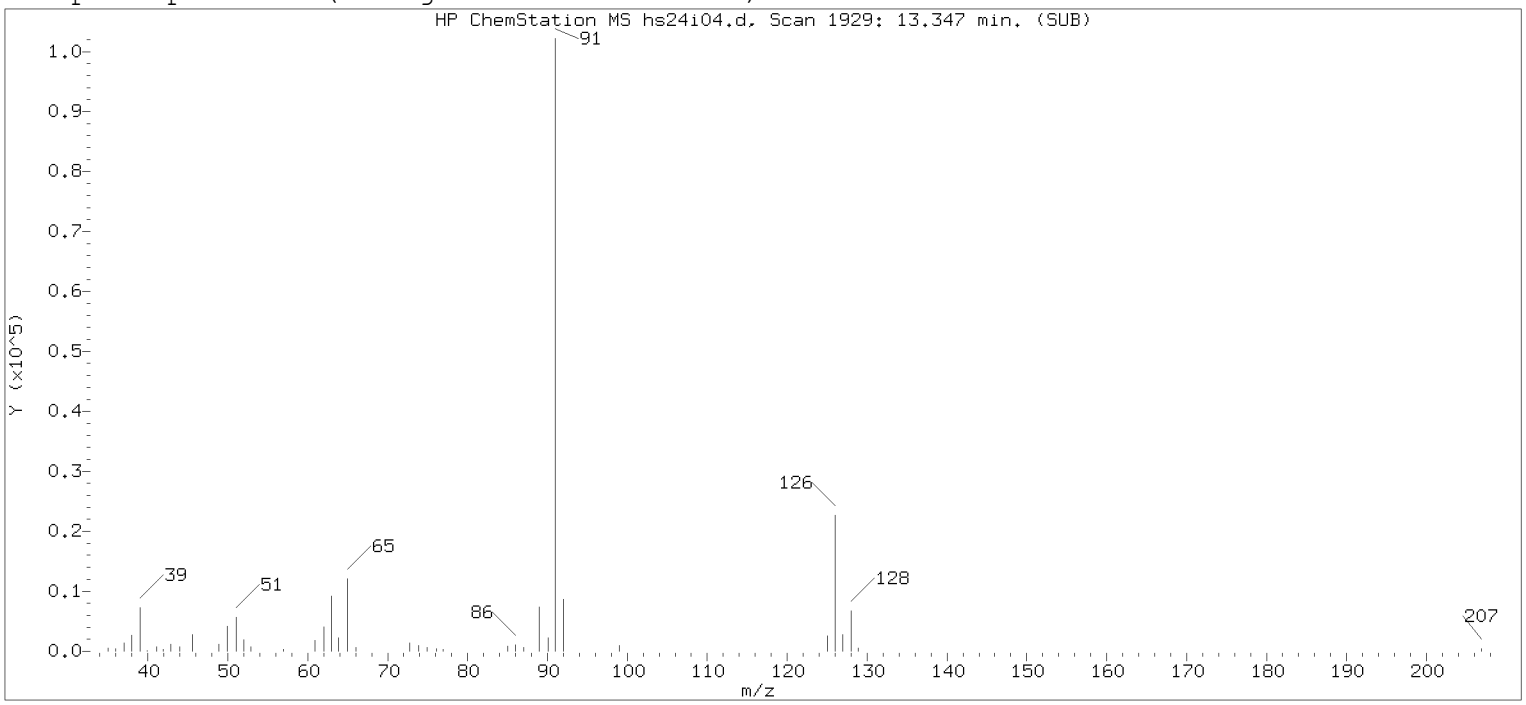
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 30686M
On-Column Amount (ng) : 1.9284
Integration start scan : 1923 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

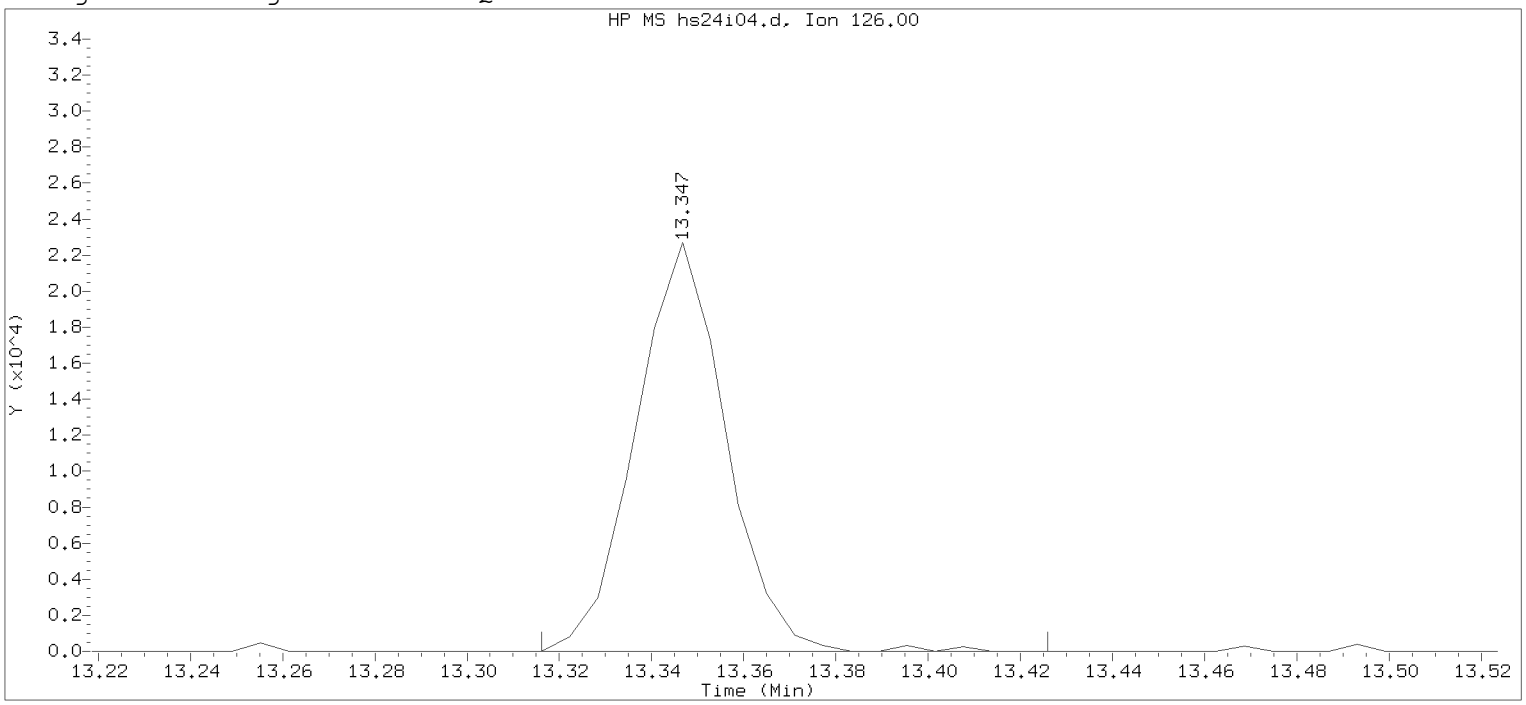
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



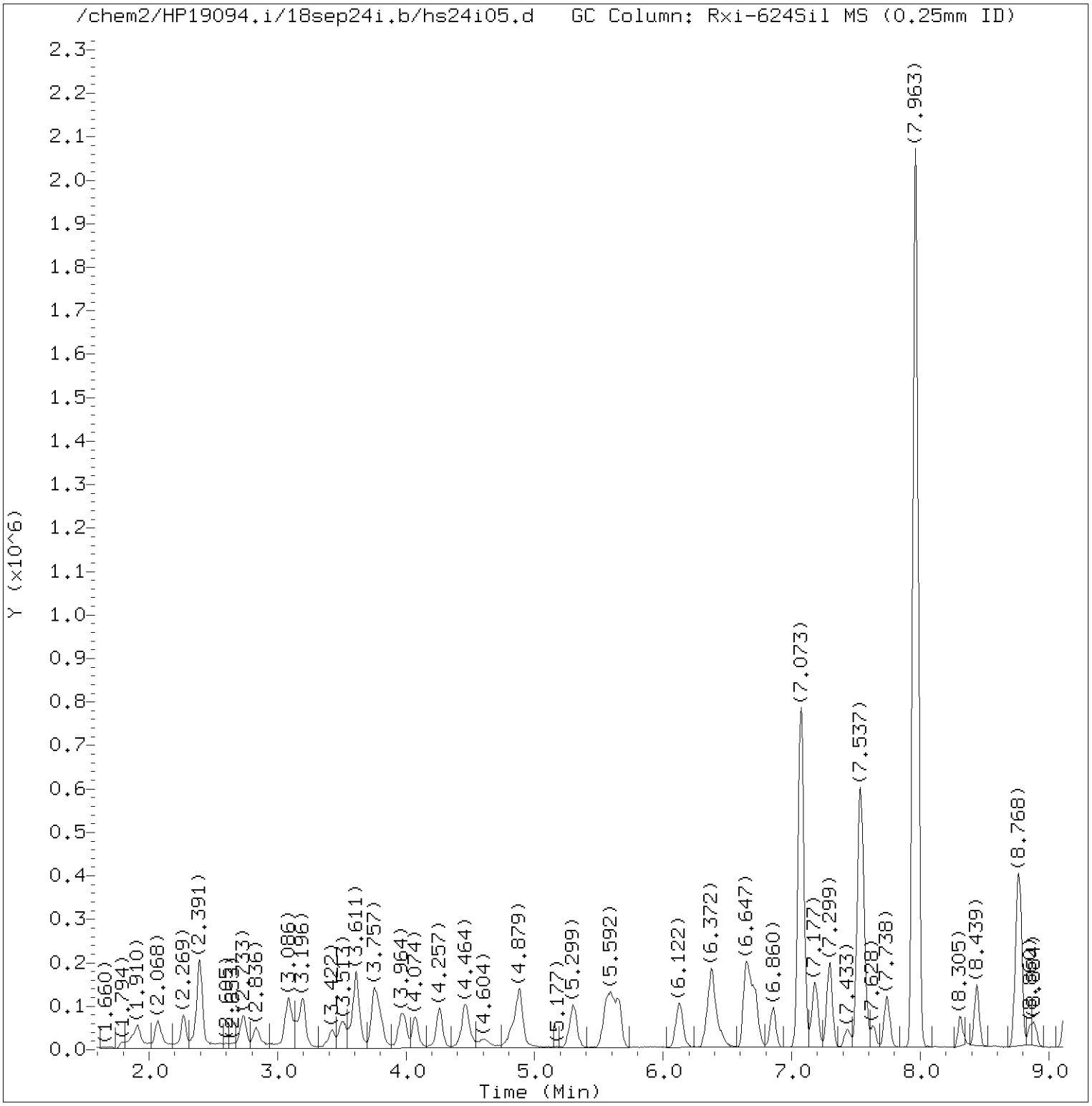
Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 30896
On-column Amount (ng) : 1.7699
Integration start scan : 1923 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: JKH09052



Total Ion Chromatogram (TIC)

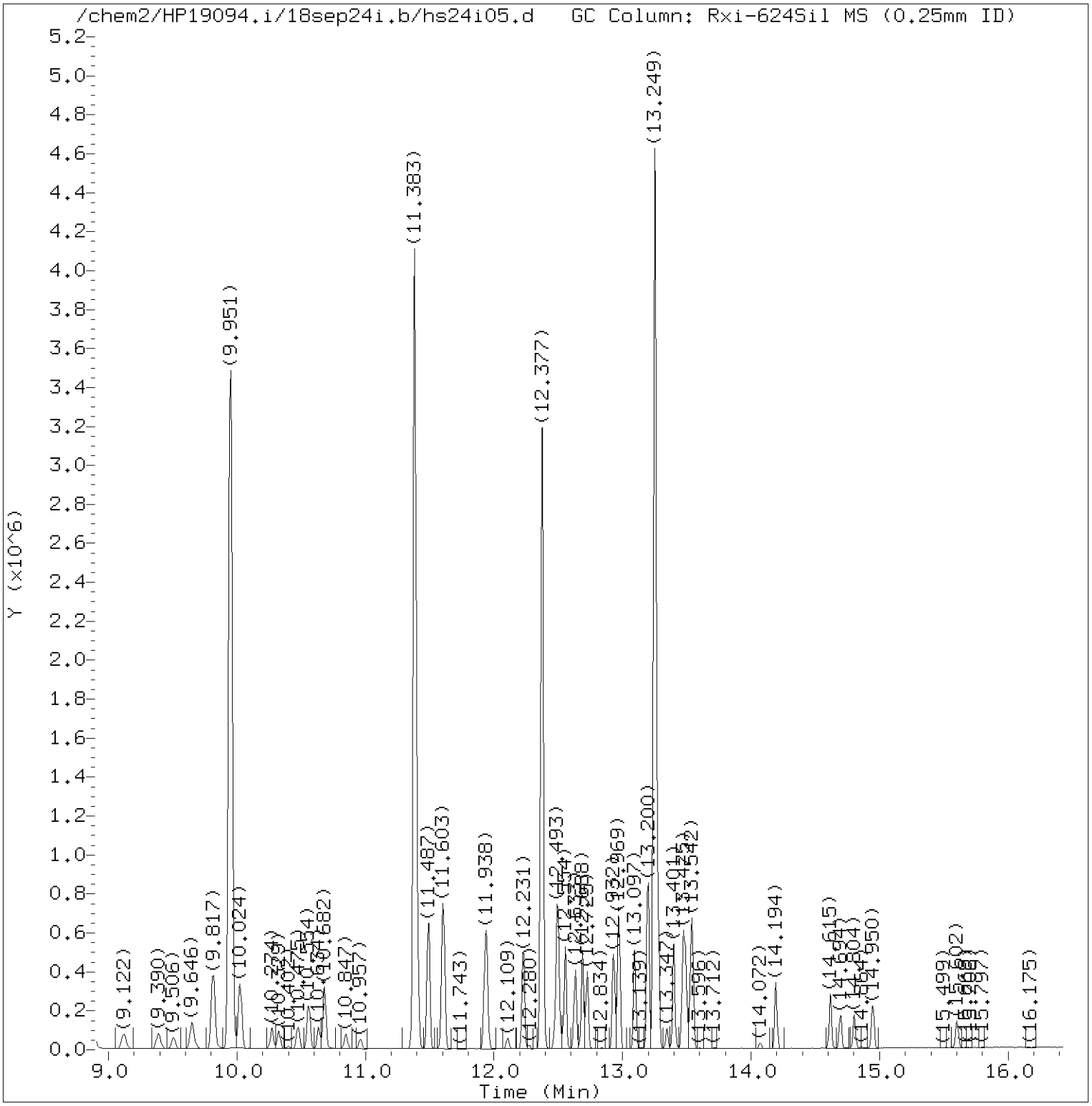
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	109107	1.012
2) Chloromethane	(2)	2.269	50	106297	1.007
6) 1,3-Butadiene	(2)	2.385	39	118482M	1.058
5) Vinyl Chloride	(2)	2.397	62	100865	1.020
7) Bromomethane	(2)	2.739	94	77295	1.005
8) Chloroethane	(2)	2.836	64	61896	1.032
9) Dichlorofluoromethane	(2)	3.080	67	145968	1.023
10) Trichlorofluoromethane	(2)	3.141	101	127294	1.019
11) Ethyl ether	(2)	3.428	59	41485	0.979
12) Freon 123a	(2)	3.513	67	80944	1.023
13) Acrolein	(1)	3.611	56	300932	49.491
15) 1,1-Dichloroethene	(2)	3.751	96	56220	1.039
16) Freon 113	(2)	3.775	101	65967	1.035
14) Acetone	(1)	3.787	43	80897M	9.905
17) Methyl Iodide	(2)	3.952	142	114085	1.012
18) Carbon Disulfide	(2)	4.074	76	173907	1.010
21) Methyl Acetate	(1)	4.232	43	24438	1.066
22) Allyl Chloride	(2)	4.257	41	102466	0.996
23) Methylene Chloride	(2)	4.452	84	61955	1.015
26)*t-Butyl Alcohol-d10	(1)	4.470	65	137024M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	49275M	21.068
29) Acrylonitrile	(1)	4.824	53	53013	5.026
30) Methyl Tertiary Butyl Ether	(2)	4.854	73	114458	1.029
31) trans-1,2-Dichloroethene	(2)	4.891	96	63184	1.035
32) n-Hexane	(2)	5.299	57	100196	1.032
33) 1,1-Dichloroethane	(2)	5.555	63	119955	1.032
34) di-Isopropyl Ether	(2)	5.592	45	208438	1.010
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	105930	1.013
40) 1,2-Dichloroethene (Total)	(2)		96	132499	2.062
37) Ethyl t-butyl ether	(2)	6.128	59	168973M	1.032
38) 2-Butanone	(1)	6.336	43	133197	9.963
39) cis-1,2-Dichloroethene	(2)	6.372	96	69315	1.028
41) 2,2-Dichloropropane	(2)	6.391	77	83581	1.007
42) Propionitrile	(1)	6.445	54	75366	20.769
45) Methacrylonitrile	(1)	6.647	67	129937	9.931
47) Bromochloromethane	(2)	6.701	128	28262	0.992
48) Tetrahydrofuran	(1)	6.720	71	35178	9.898
49) Chloroform	(2)	6.860	83	114336	1.058

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	696307	10.014
50)$Dibromofluoromethane	(2)	7.073	111	721346	10.079
51) 1,1,1-Trichloroethane	(2)	7.086	97	94711	1.025
52) Cyclohexane	(2)	7.177	56	123949	1.027
52) Cyclohexane	(2)	7.183	84	104356	1.049
52) Cyclohexane	(2)	7.183	69	36367	1.023
55) 1,1-Dichloropropene	(2)	7.293	75	90431	1.032
54) Carbon Tetrachloride	(2)	7.299	117	81897	1.032
56) Isobutyl Alcohol	(1)	7.427	41	47053	51.995
57)$1,2-Dichloroethane-d4	(2)	7.524	102	119829	9.885
57)$1,2-Dichloroethane-d4	(2)	7.531	65	593178	10.117
57)$1,2-Dichloroethane-d4	(2)	7.531	104	79680	10.263
58) Benzene	(2)	7.561	78	264658	1.022
59) 1,2-Dichloroethane	(2)	7.628	62	59426M	0.997
60) t-Amyl methyl ether	(2)	7.738	73	139571	1.028
62) n-Heptane	(2)	7.963	43	102958	1.029
63)*Fluorobenzene	(2)	7.963	96	2758903	10.000
65) n-Butanol	(1)	8.305	56	74668M	97.664
67) Trichloroethene	(2)	8.445	95	68161	1.028
69) Methylcyclohexane	(2)	8.750	83	122857	0.981
70) 1,2-Dichloropropane	(2)	8.780	63	63132	1.005
71) Methyl Methacrylate	(1)	8.847	69	23722	0.979
72) 1,4-Dioxane	(1)	8.878	88	9241M	50.201
73) Dibromomethane	(2)	8.884	93	26560	1.019
74) Bromodichloromethane	(2)	9.122	83	69831	0.989
76) 2-Nitropropane	(1)	9.390	41	63314	9.229
80) cis-1,3-Dichloropropene	(2)	9.646	75	80509	0.979
81) 4-Methyl-2-Pentanone	(1)	9.811	43	330202	9.930
82)$Toluene-d8	(3)	9.951	98	2776980	9.936
82)$Toluene-d8	(3)	9.951	100	1802725	9.993
83) Toluene	(3)	10.024	92	162279	1.007
85) 1,3-Dichloropropene (total)	(3)		75	141132	1.955
84) trans-1,3-Dichloropropene	(3)	10.274	75	60623	0.976
86) Ethyl Methacrylate	(3)	10.329	69	51127	0.961
88) 1,1,2-Trichloroethane	(3)	10.475	97	37494	1.011
89) Tetrachloroethene	(3)	10.560	166	73862	1.014
90) 1,3-Dichloropropane	(3)	10.634	76	66150	1.007
91) 2-Hexanone	(1)	10.682	43	223568	9.877

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	42278	0.951
95) 1,2-Dibromoethane	(3)	10.963	107	34504	0.993
96) 1-Chlorohexane	(3)	11.383	91	96260	1.002
97)*Chlorobenzene-d5	(3)	11.383	117	2171615	10.000
98) Chlorobenzene	(3)	11.408	112	177295	1.037
100) Ethylbenzene	(3)	11.493	91	320107	1.016
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	56567	1.003
101) m+p-Xylene	(3)	11.603	106	234132	2.004
105) Xylene (Total)	(3)		106	347952	3.023
104) o-Xylene	(3)	11.932	106	113820	1.019
106) Styrene	(3)	11.944	104	180005	1.007
107) Bromoform	(3)	12.109	173	24175	0.990
108) Isopropylbenzene	(3)	12.231	105	309640	1.016
111)$4-Bromofluorobenzene	(3)	12.371	95	1017139	9.995
111)$4-Bromofluorobenzene	(3)	12.377	174	881427	9.975
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	42904M	0.963
114) Bromobenzene	(4)	12.493	156	68106	1.005
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	101534	9.749
116) 1,2,3-Trichloropropane	(4)	12.524	110	11546	1.002
117) n-Propylbenzene	(4)	12.554	91	369750	1.004
119) 2-Chlorotoluene	(4)	12.633	126	72571	1.016
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	249772	1.001
122) 4-Chlorotoluene	(4)	12.725	126	73614	1.028
125) tert-Butylbenzene	(4)	12.932	134	55631M	1.025
126) Pentachloroethane	(4)	12.969	167	39799	0.940
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	253402	0.995
128) sec-Butylbenzene	(4)	13.097	105	327784	1.014
131) 1,3-Dichlorobenzene	(4)	13.194	146	137902	1.025
132) p-Isopropyltoluene	(4)	13.200	119	264718	0.988
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1123390	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	134240	1.016
135) 1,2,3-Trimethylbenzene	(4)	13.279	120	114395M	0.979
136) Benzyl Chloride	(4)	13.347	126	13809	0.857
138) n-Butylbenzene	(4)	13.493	92	135142	1.017
139) 1,2-Dichlorobenzene	(4)	13.529	146	119809	1.009
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	5939	1.054
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	100961	1.008
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	80077	0.982

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	30050	0.975
147) Naphthalene	(4)	14.804	128	125068	0.969
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	66944	0.998

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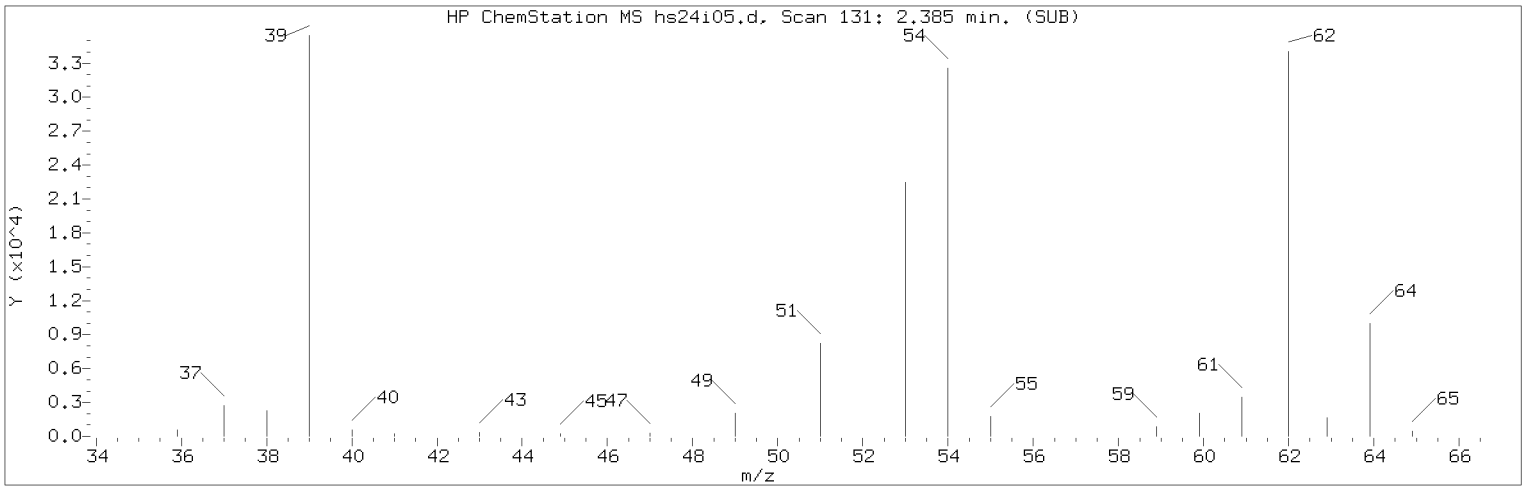
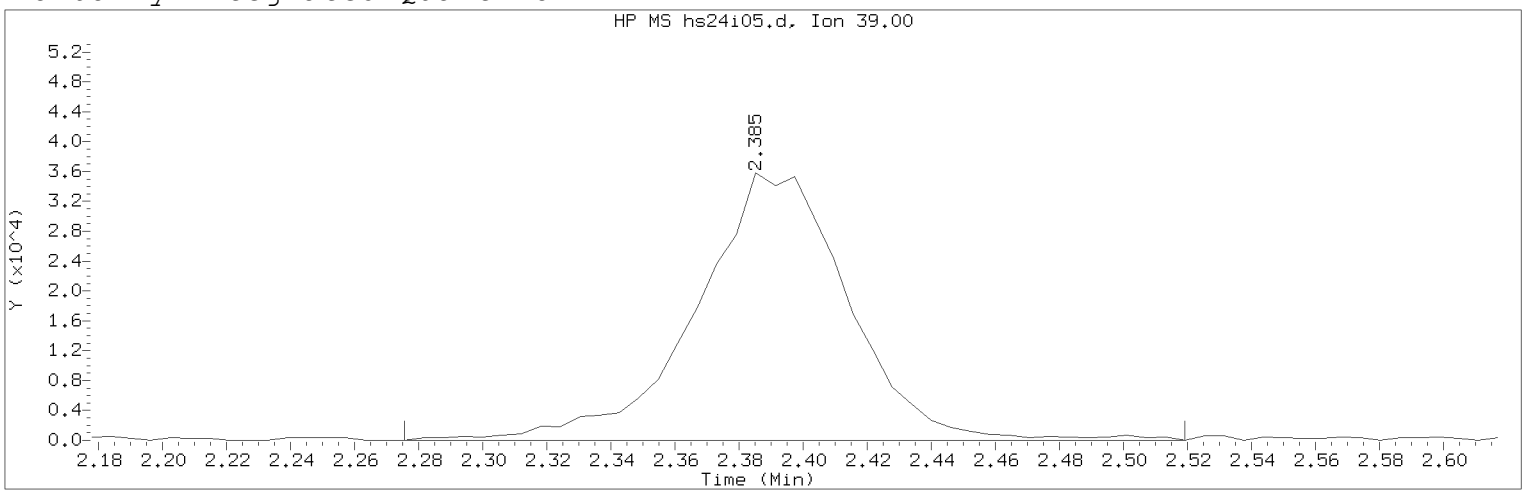
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

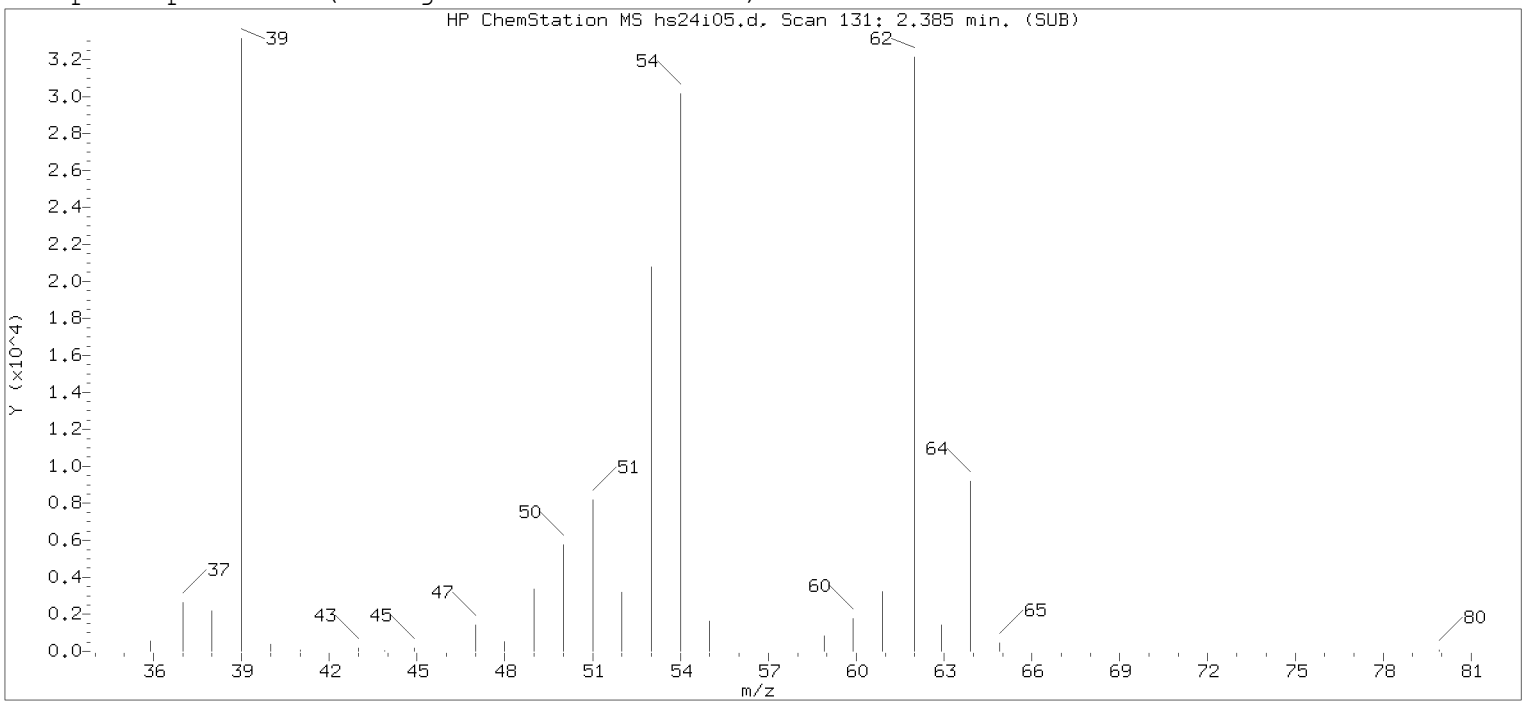
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area (flag) : 118482M
On-Column Amount (ng) : 1.0578
Integration start scan : 112 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

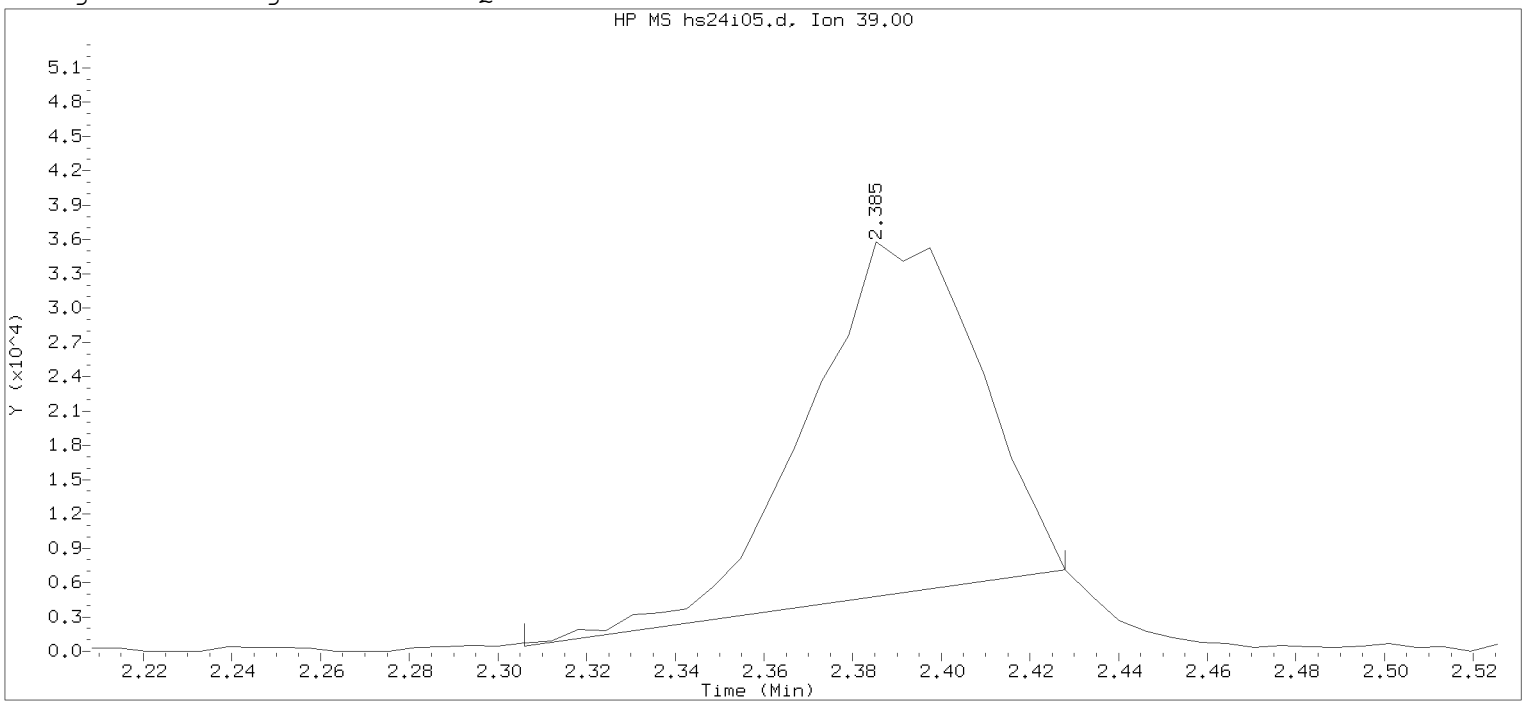
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

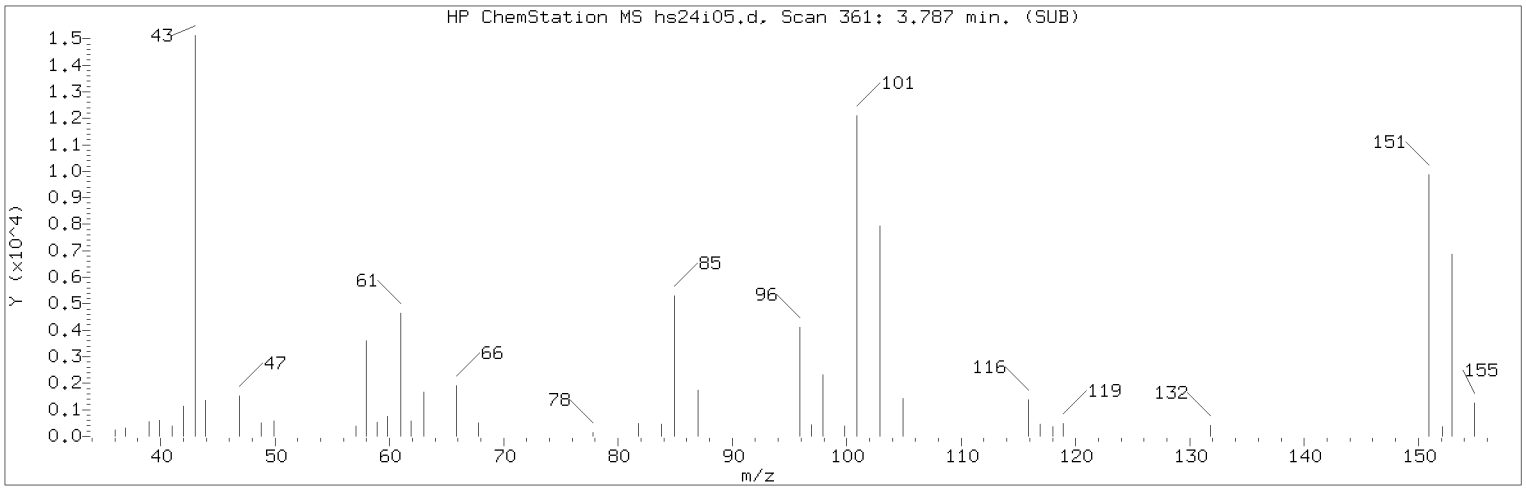
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

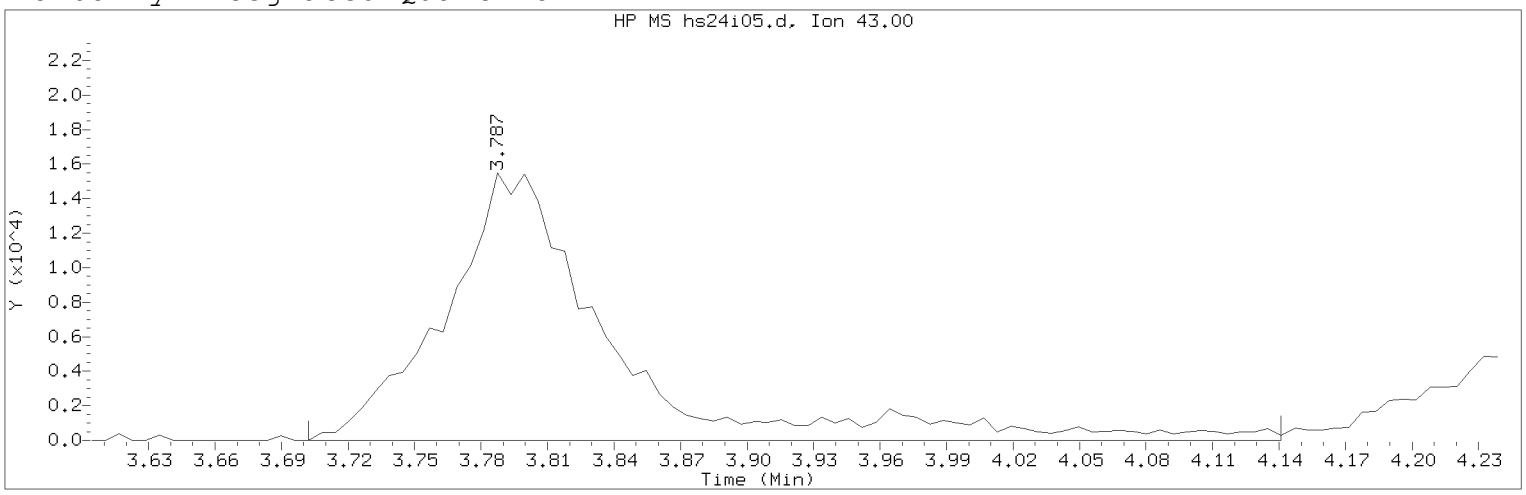
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area : 83022
On-column Amount (ng) : 0.7928
Integration start scan : 117 Integration stop scan: 137
Y at integration start : 469 Y at integration end: 7133

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

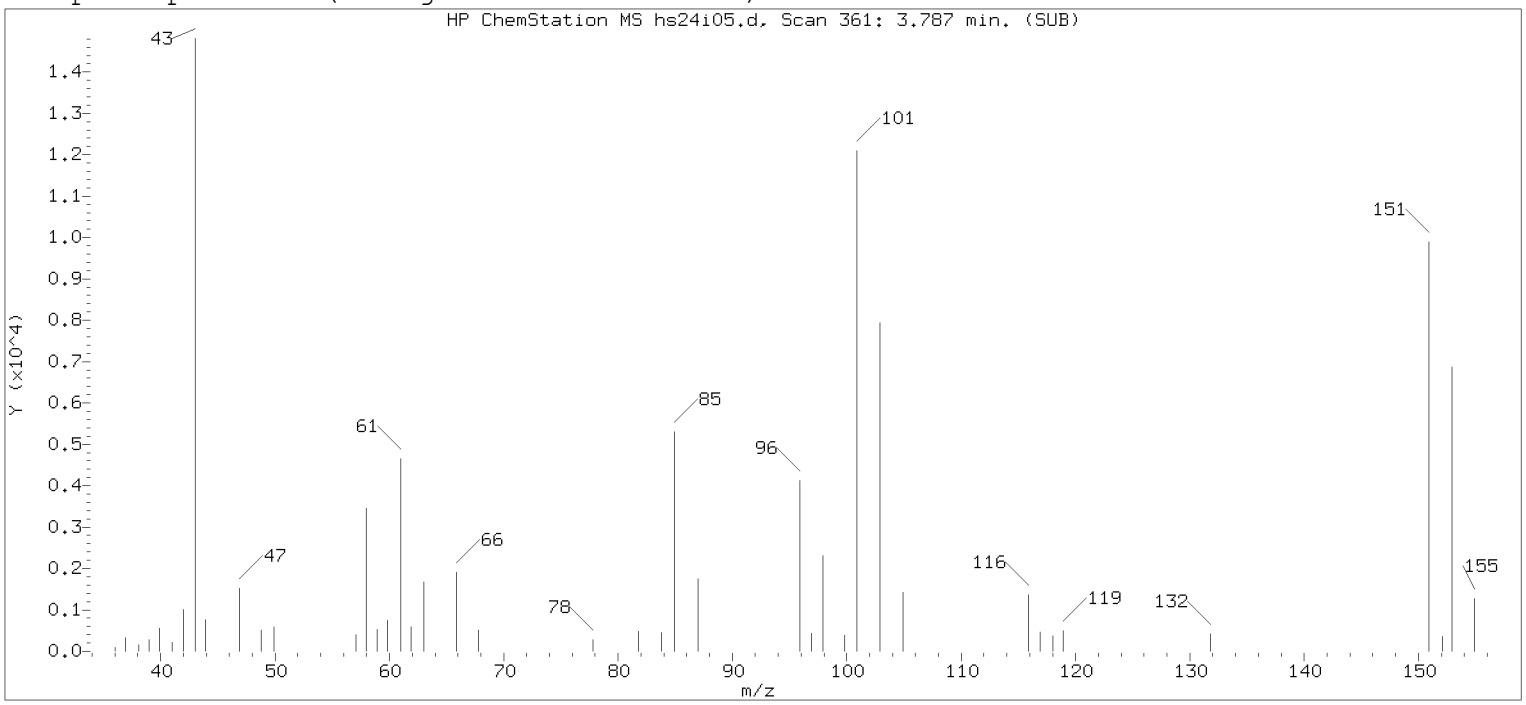
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 80897M
On-Column Amount (ng) : 9.9053
Integration start scan : 346 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

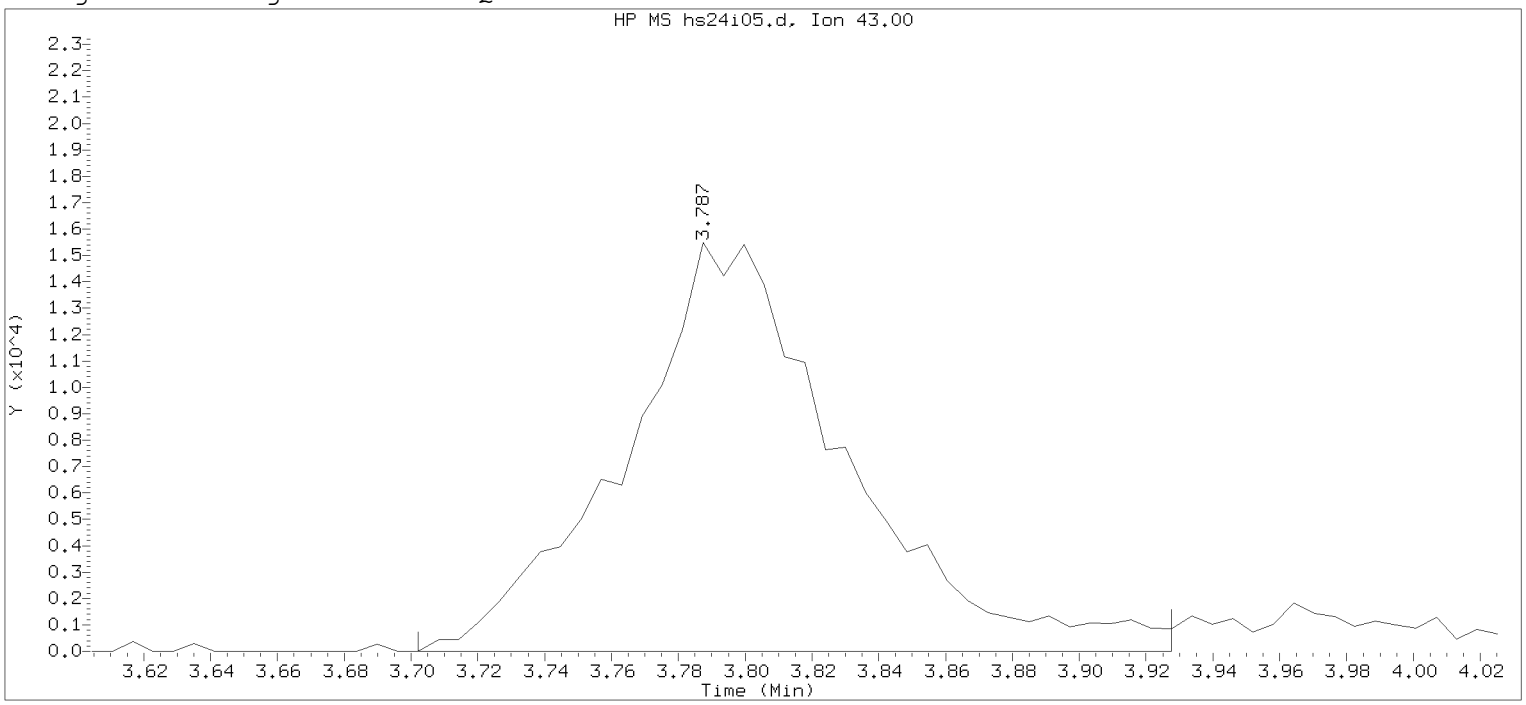
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 70990		
On-column Amount (ng)	: 9.1768		
Integration start scan	: 346	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

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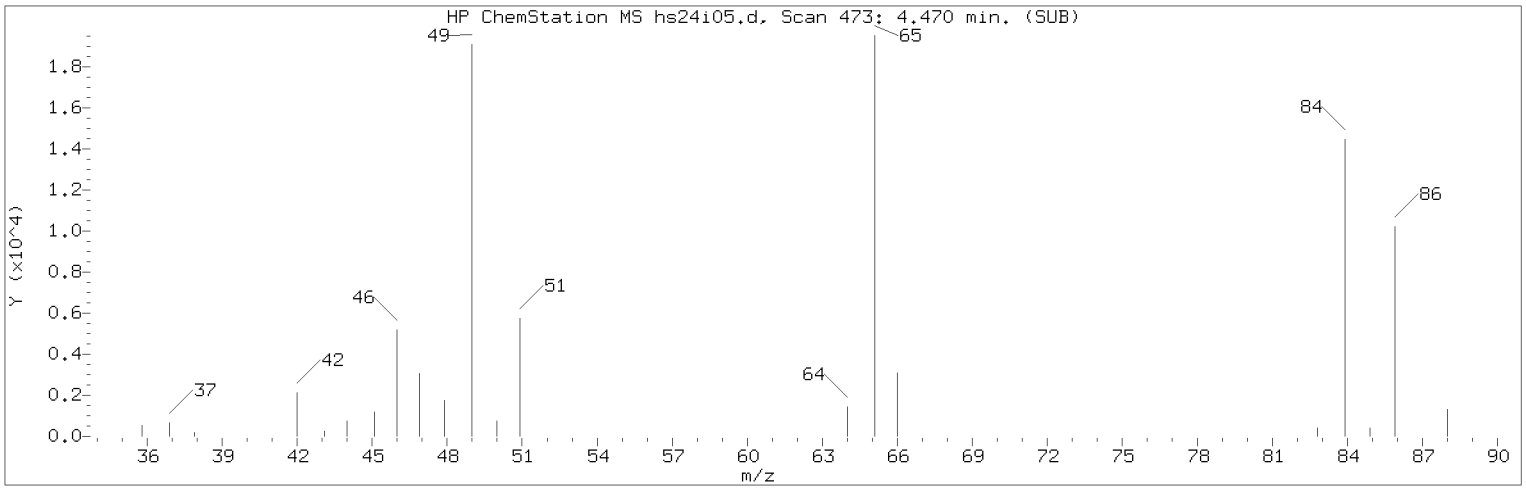
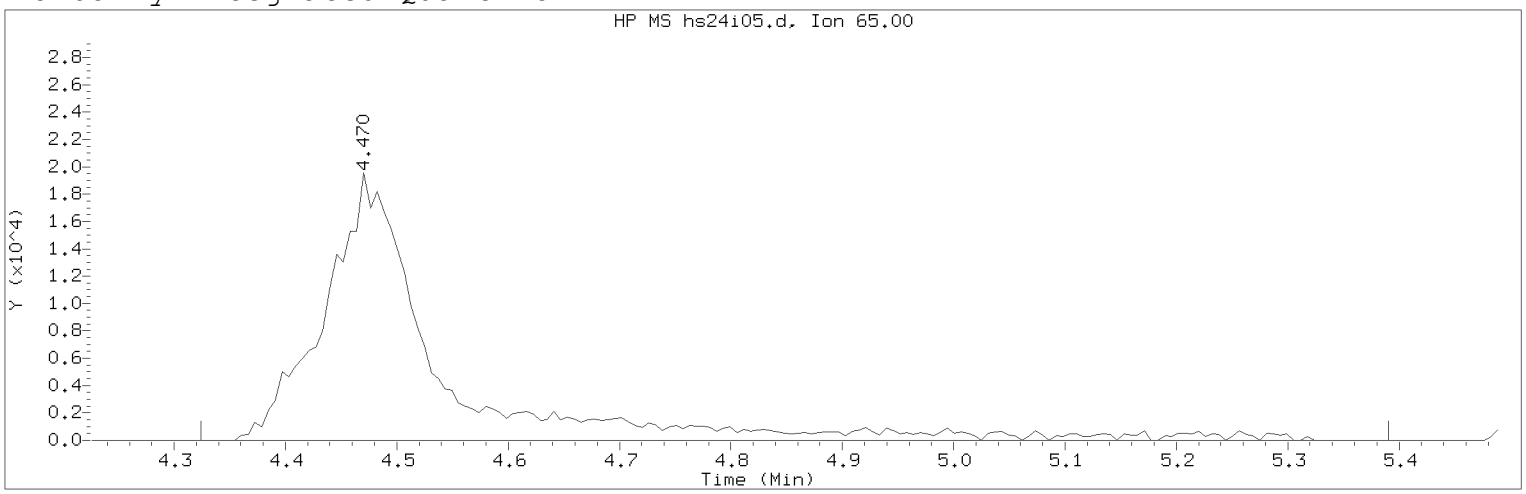
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

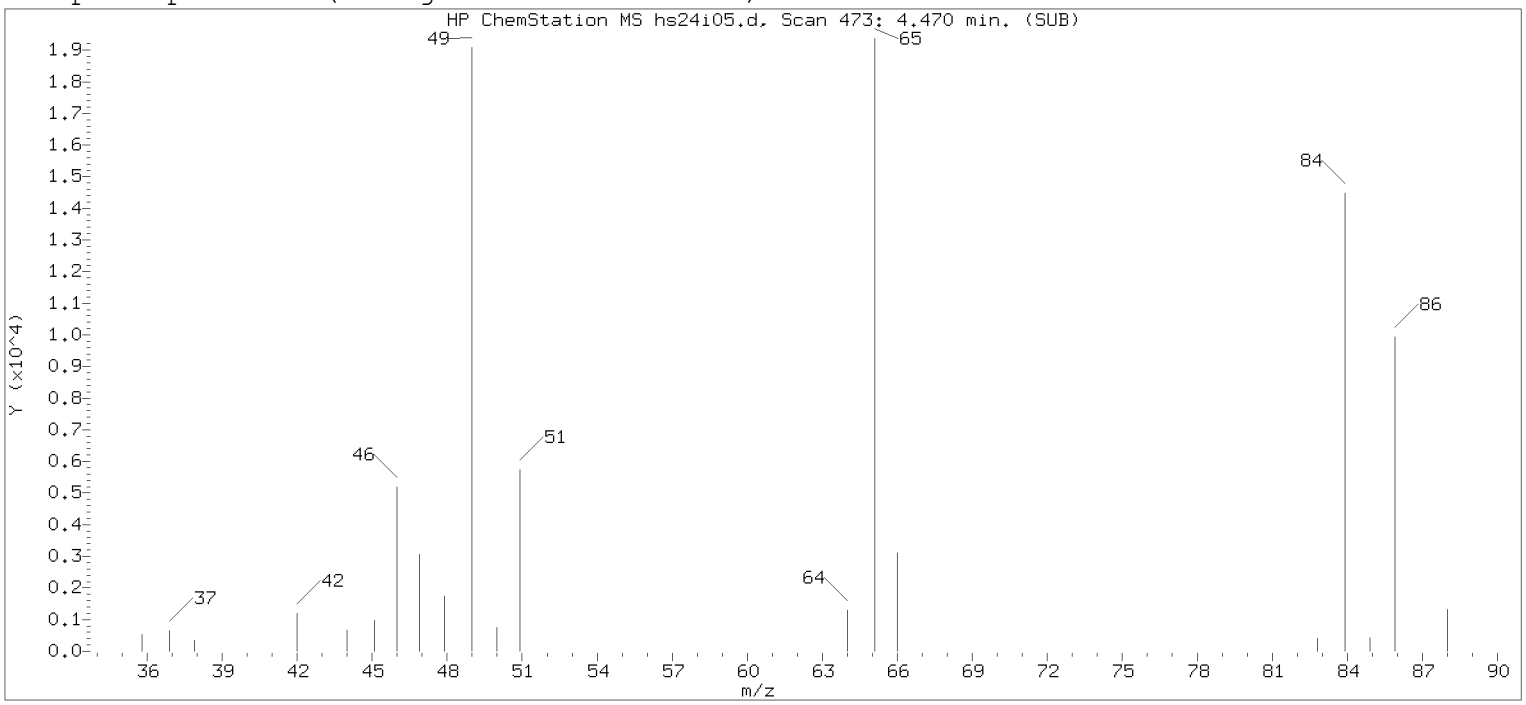
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 137024M
On-Column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

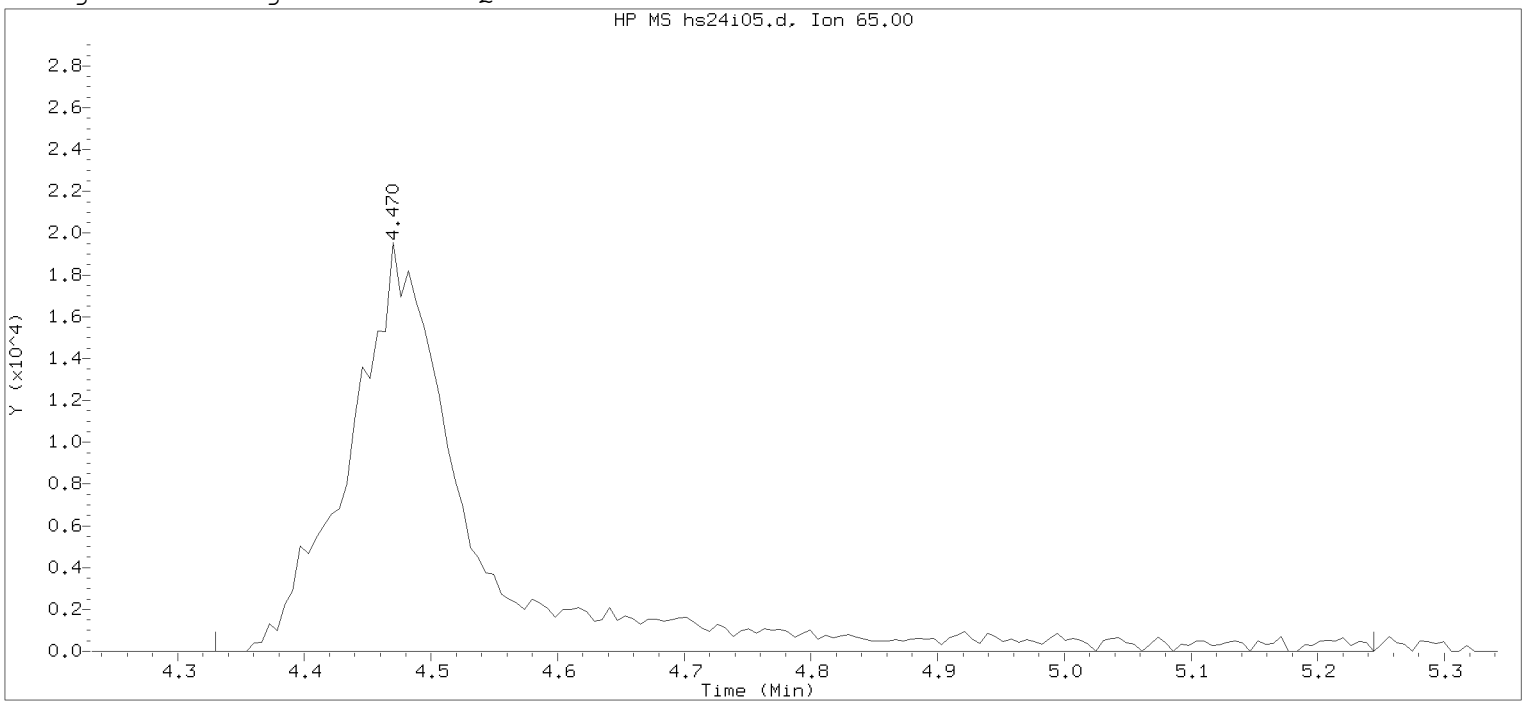
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 135610
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

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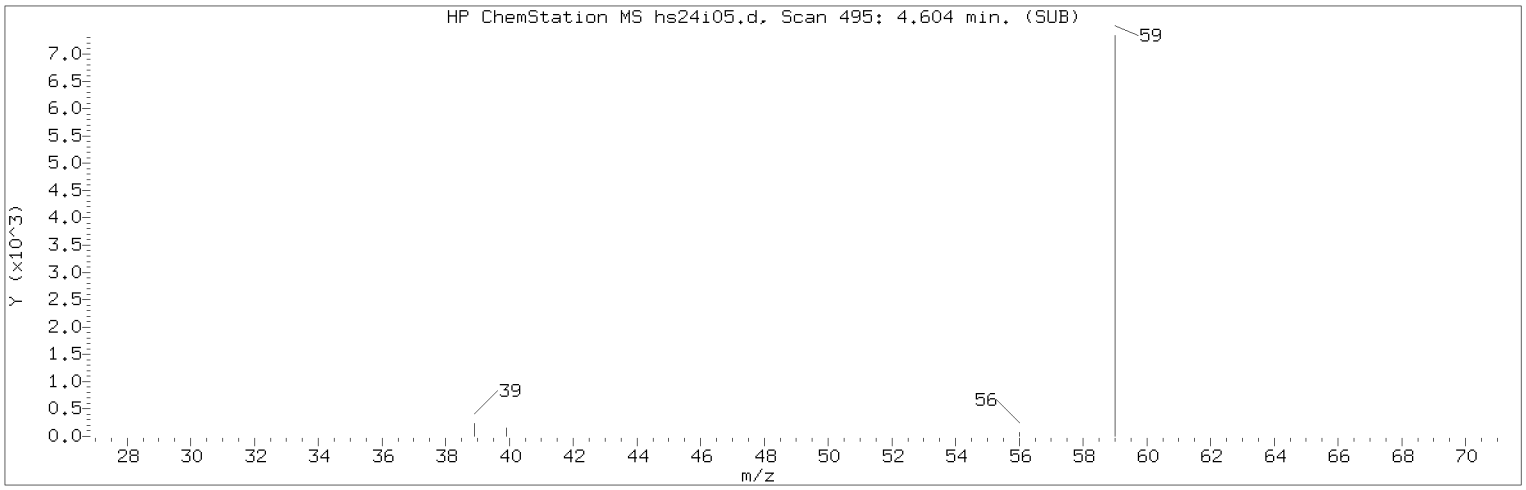
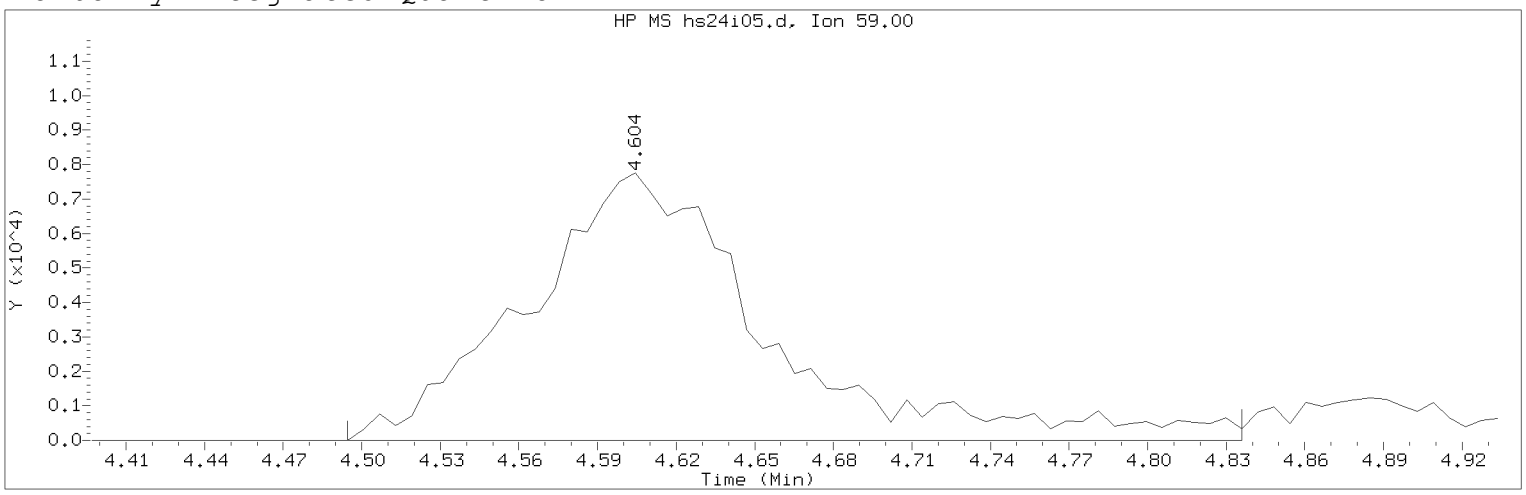
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

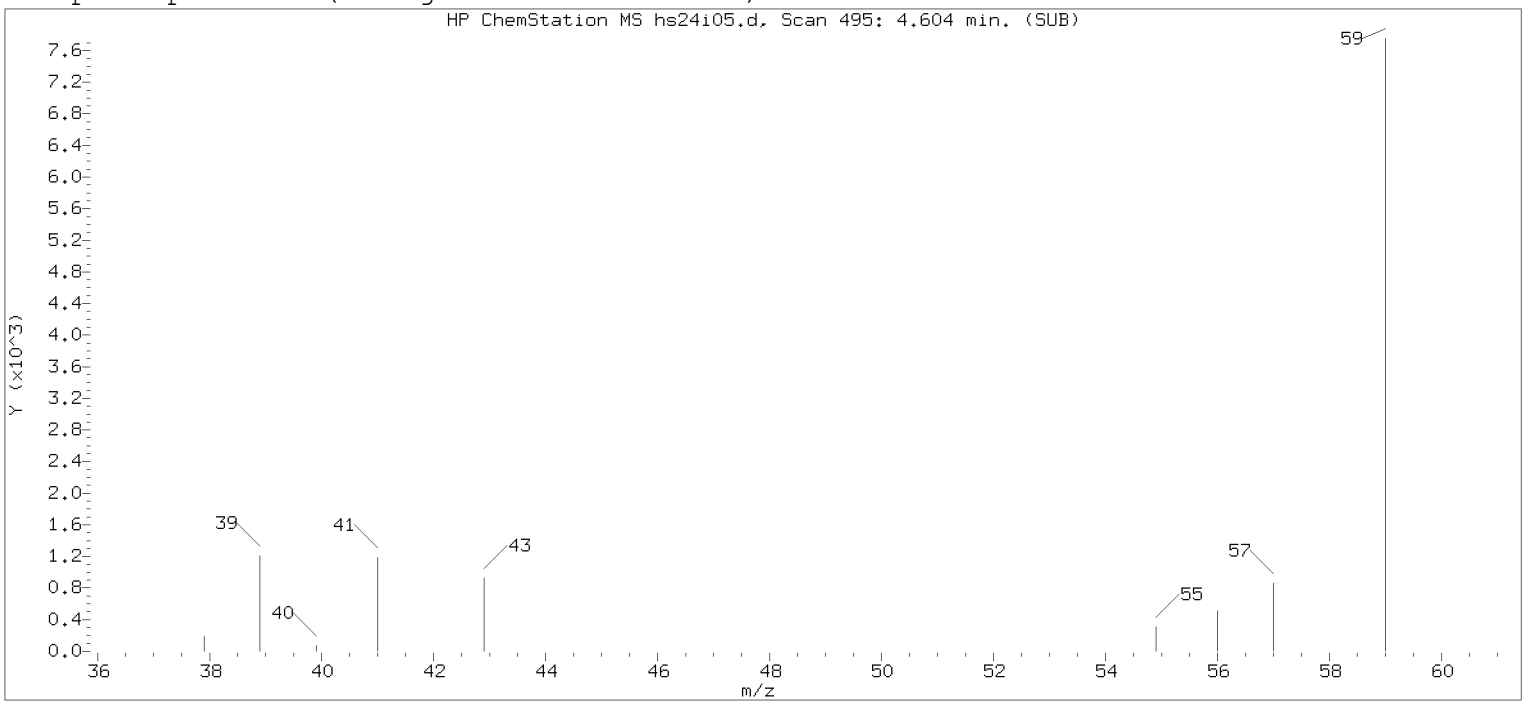
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 49275M
On-Column Amount (ng) : 21.0678
Integration start scan : 476 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

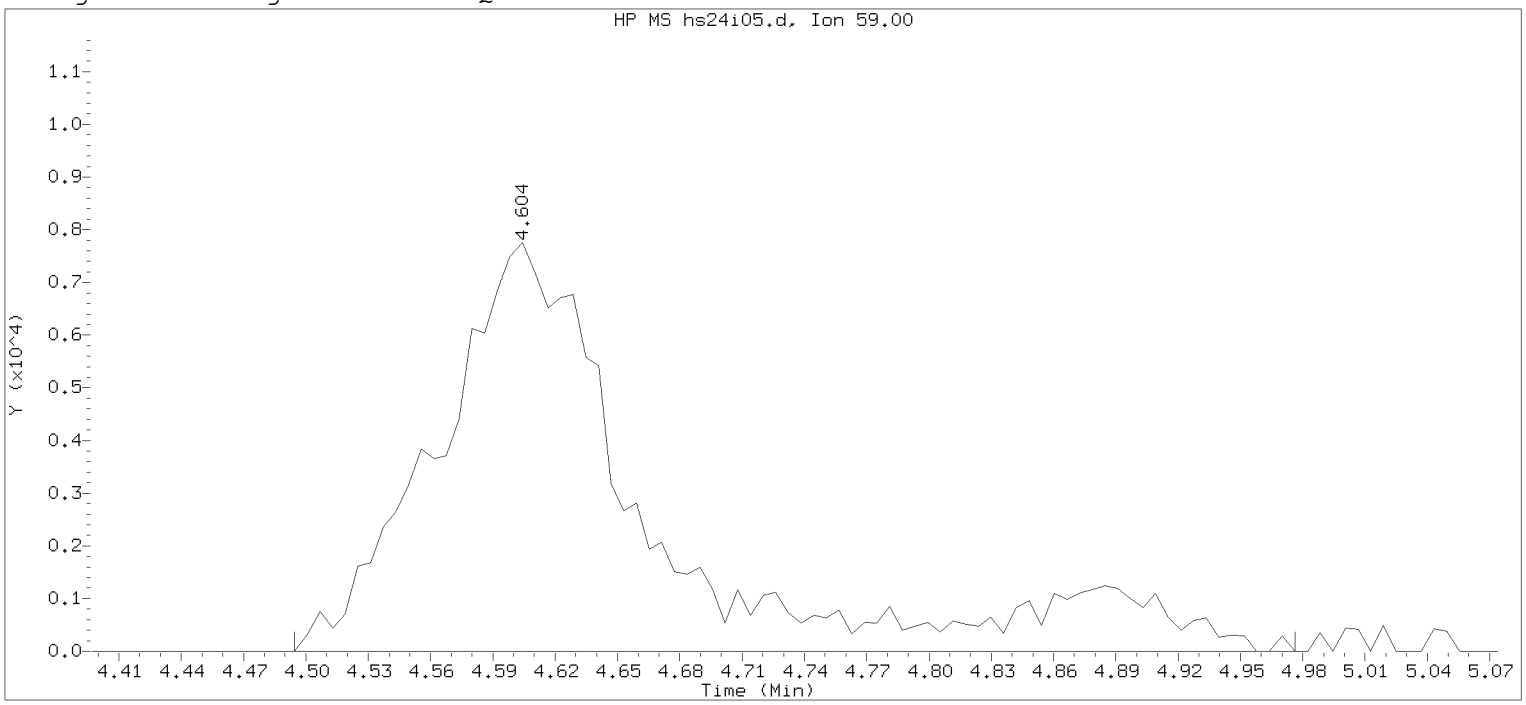
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

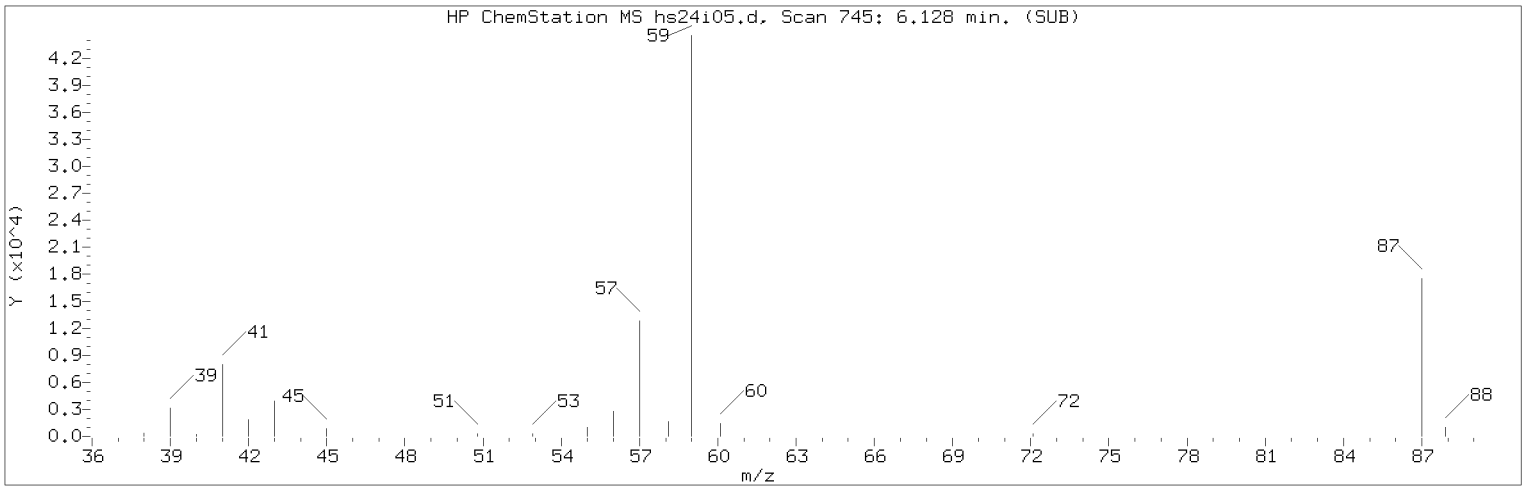
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

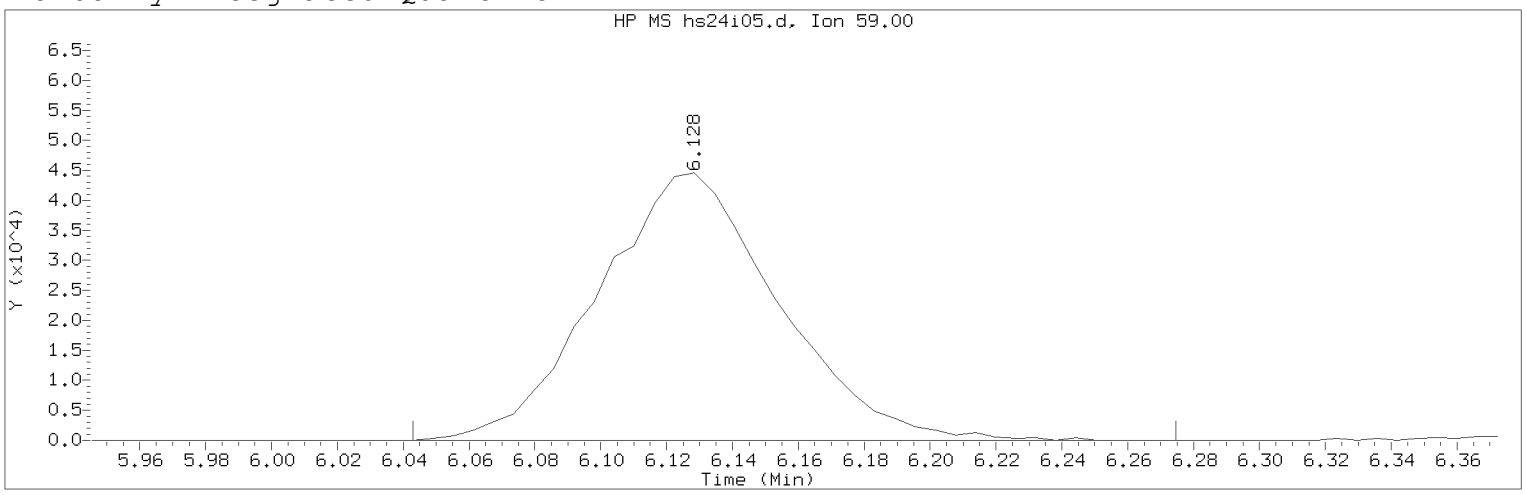
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 495		
Retention Time (minutes)	: 4.604		
Quant Ion	: 59.00		
Area	: 54917		
On-column Amount (ng)	: 22.3410		
Integration start scan	: 476	Integration stop scan:	555
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

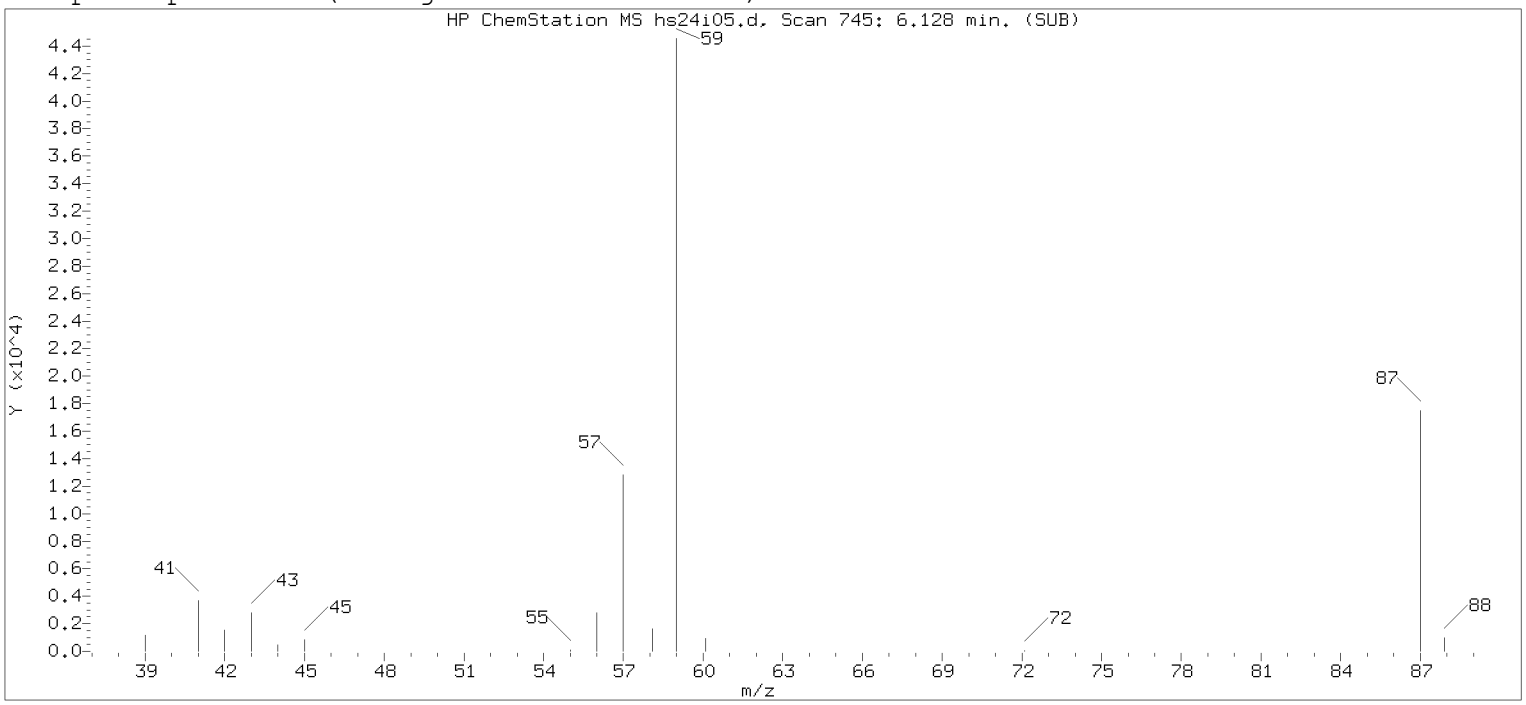
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area (flag) : 168973M
On-Column Amount (ng) : 1.0320
Integration start scan : 730 Integration stop scan: 768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

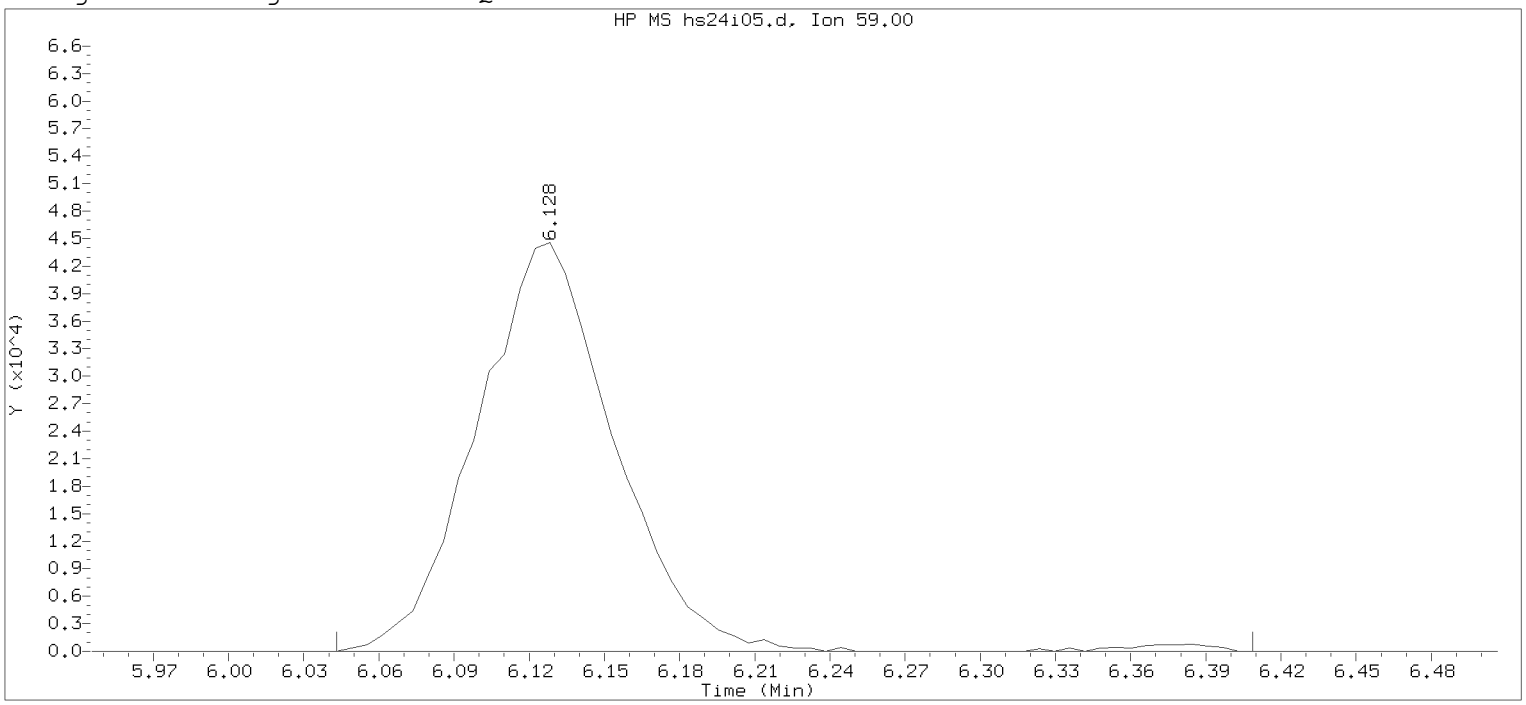
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

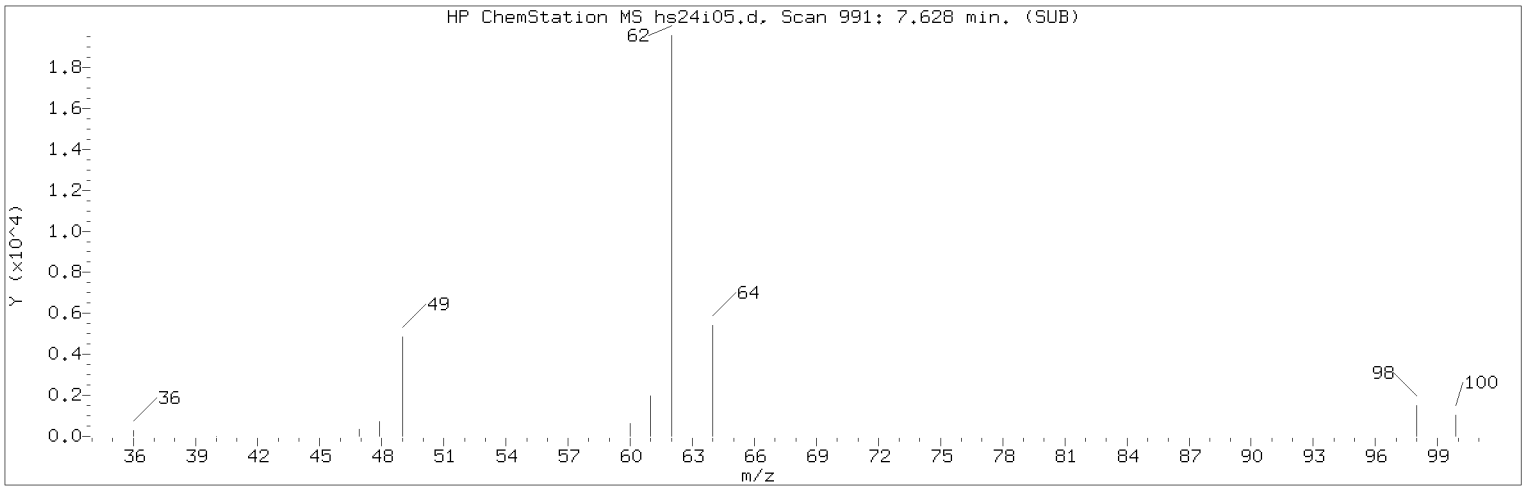
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

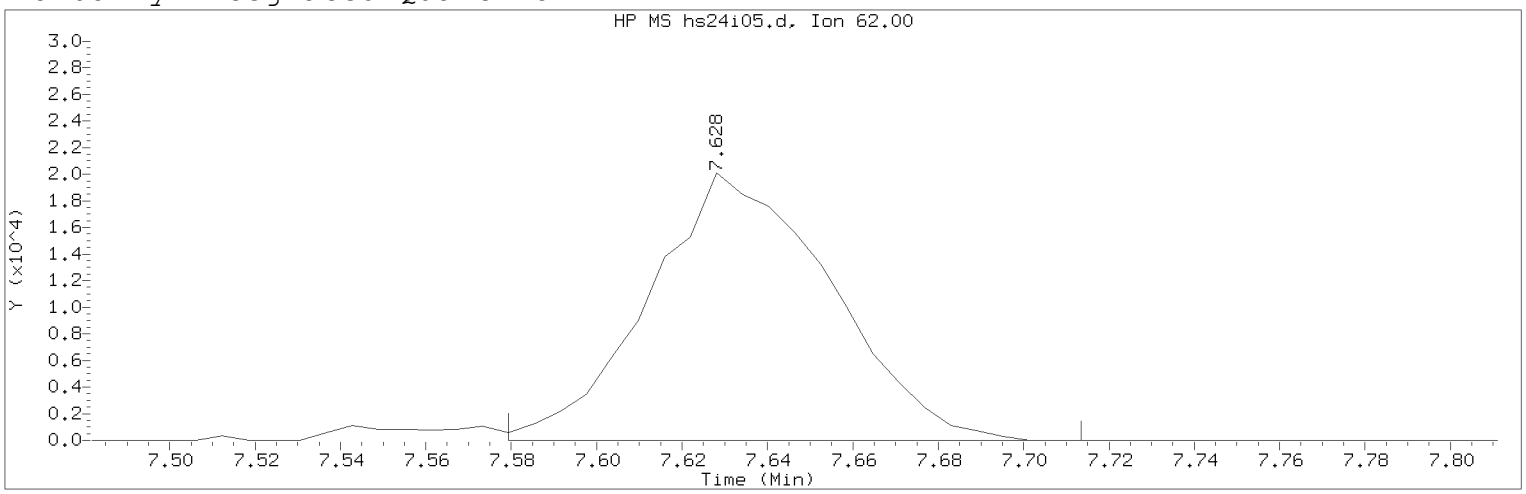
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area : 170974
On-column Amount (ng) : 1.0111
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

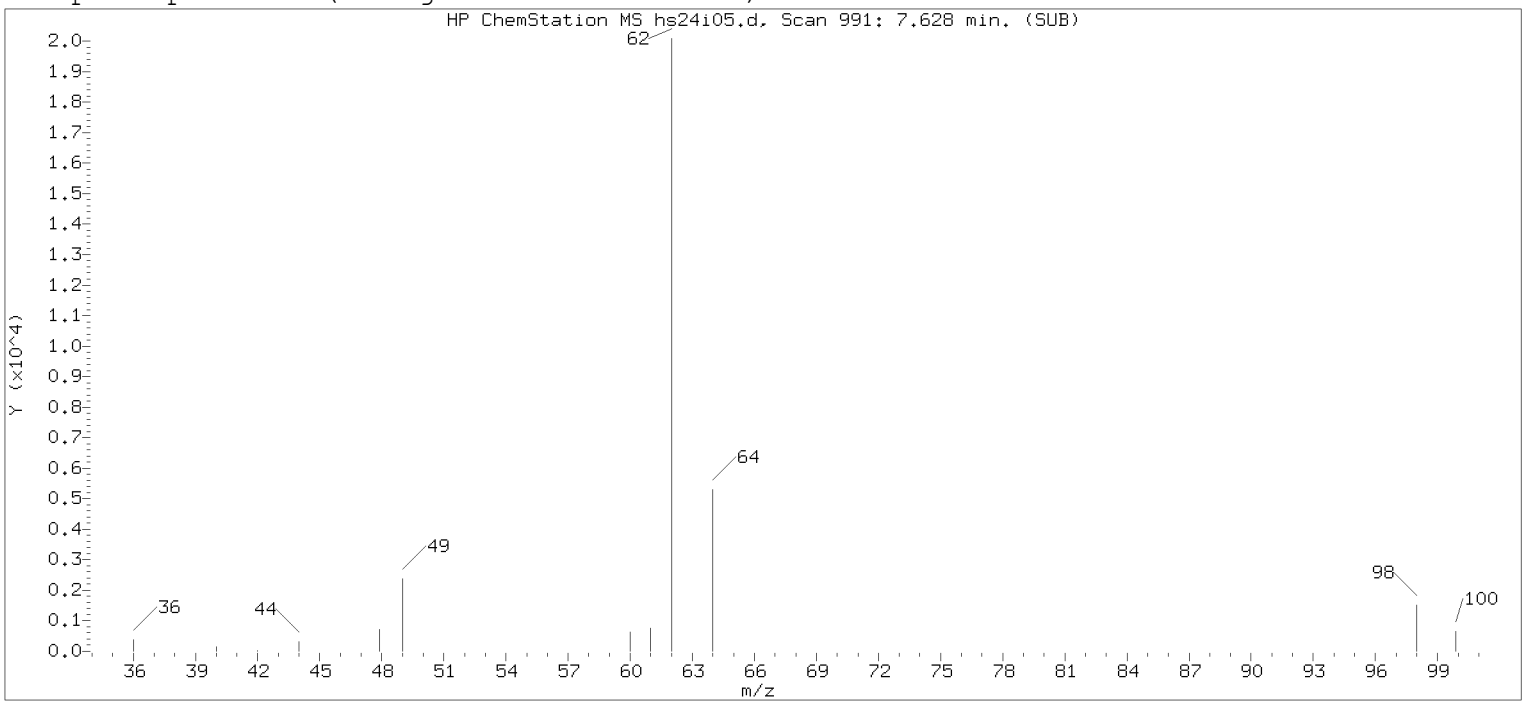
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 59426M
On-Column Amount (ng) : 0.9971
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

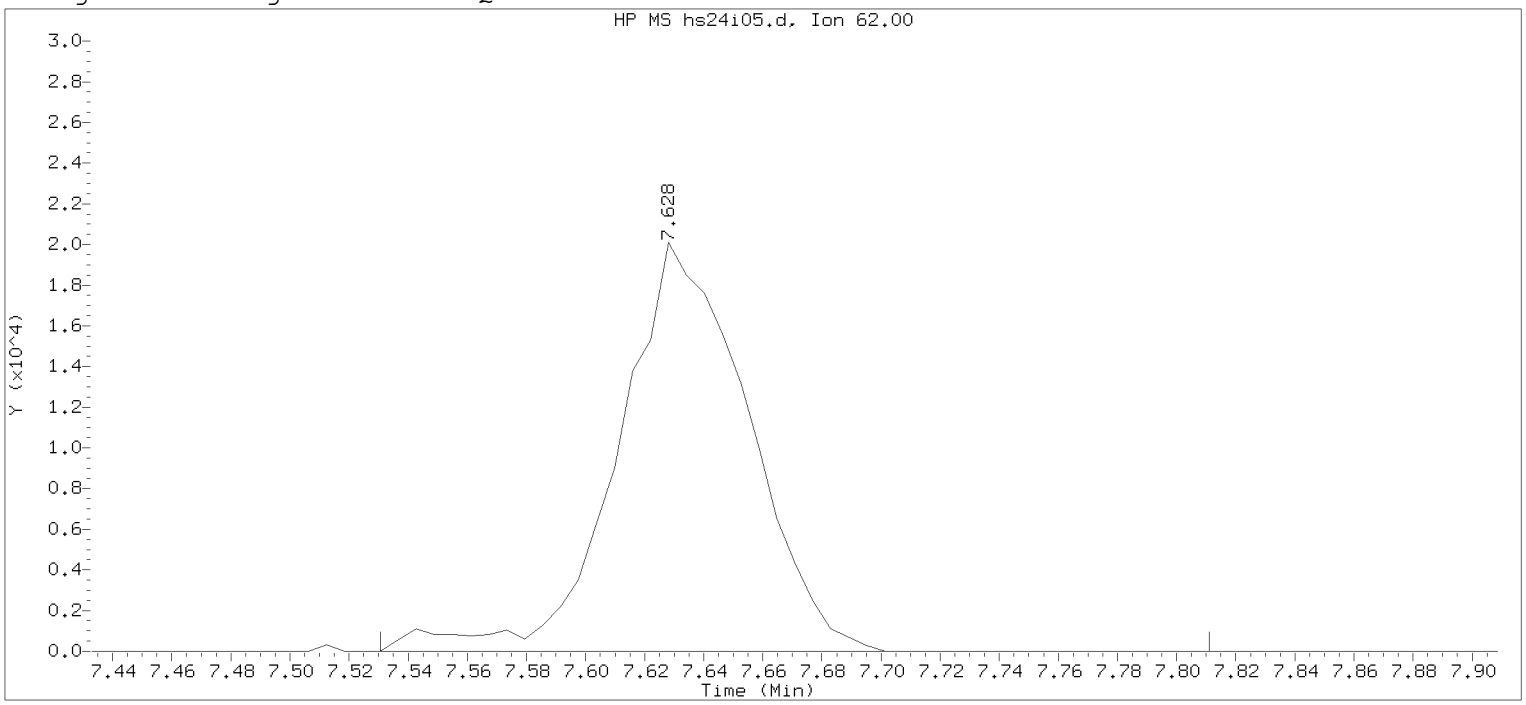
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

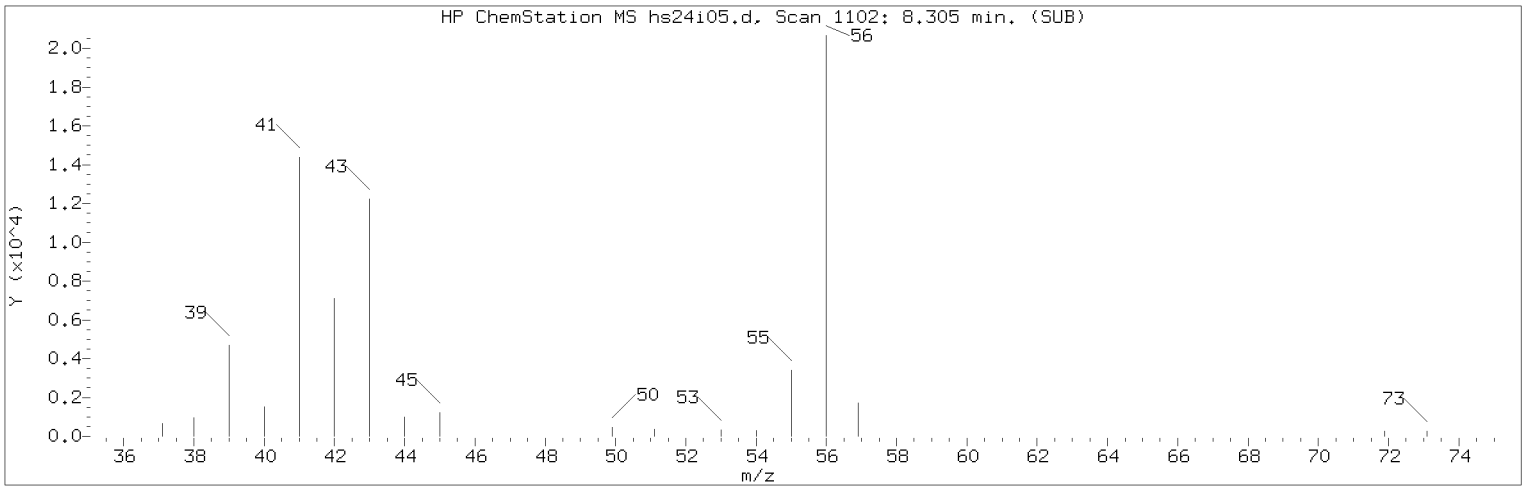
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

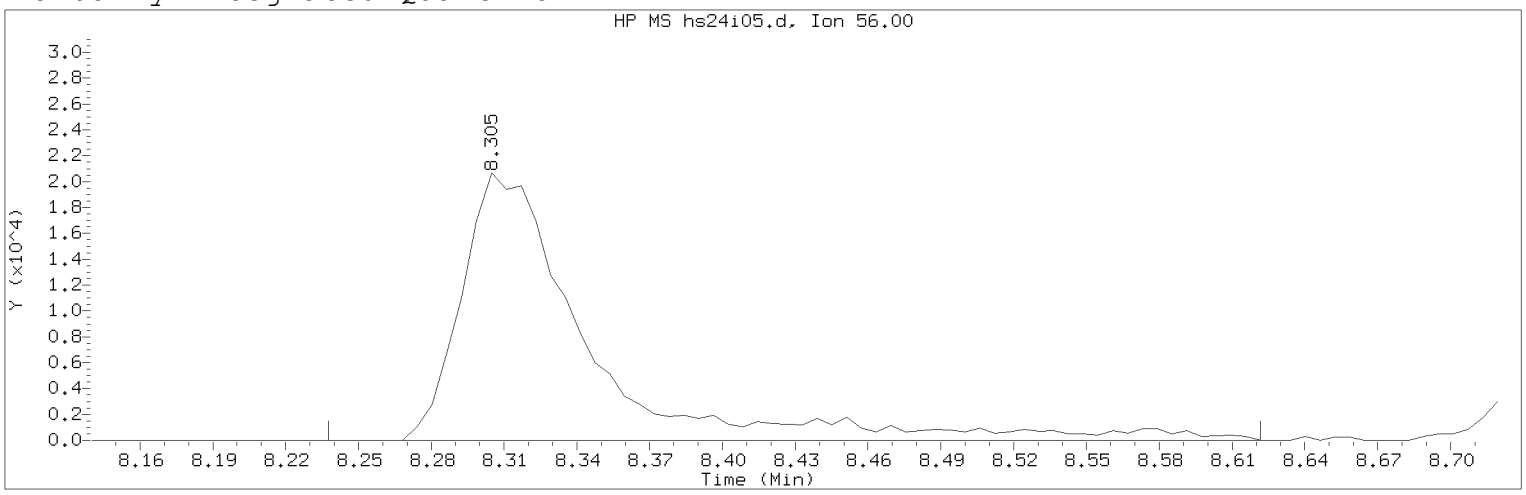
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 61591
On-column Amount (ng) : 1.0425
Integration start scan : 974 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

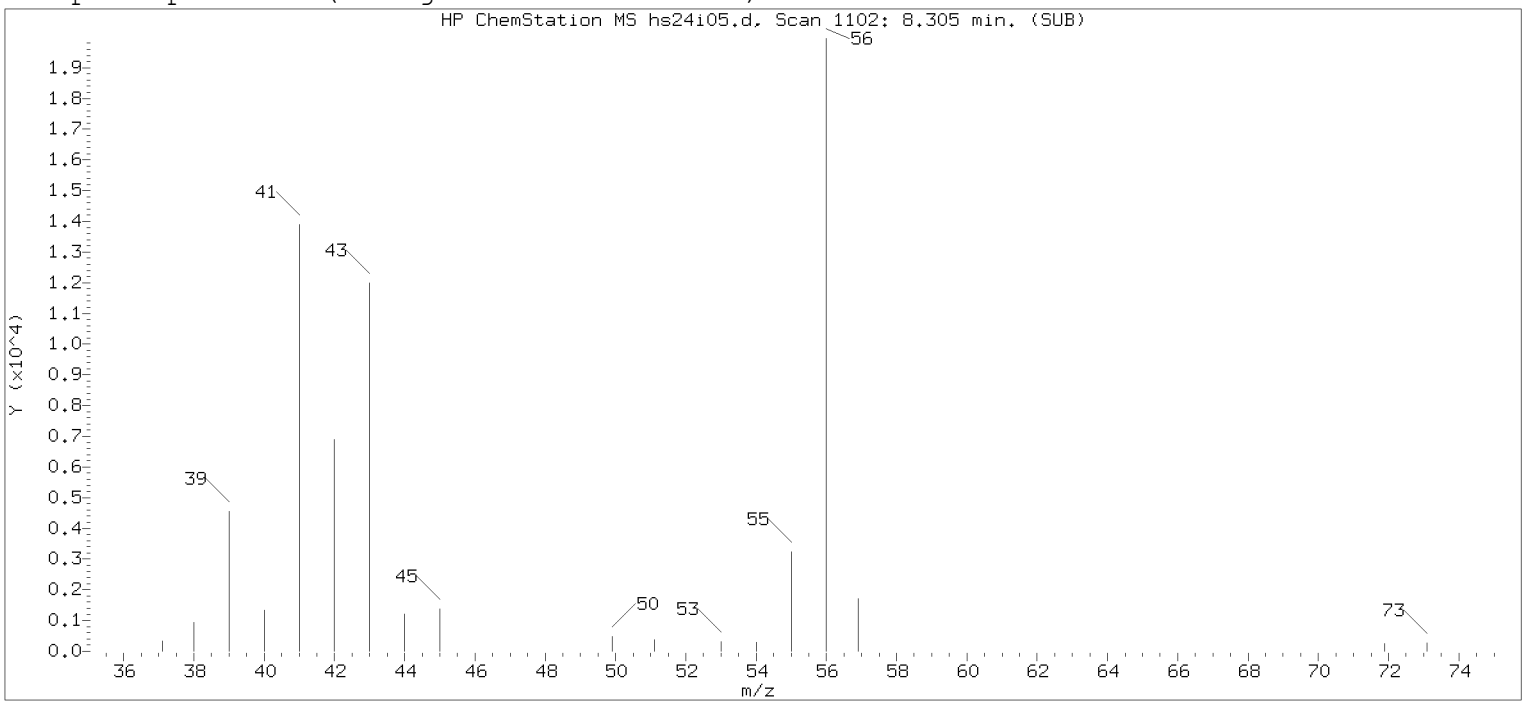
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 74668M
On-Column Amount (ng) : 97.6635
Integration start scan : 1090 Integration stop scan: 1153
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

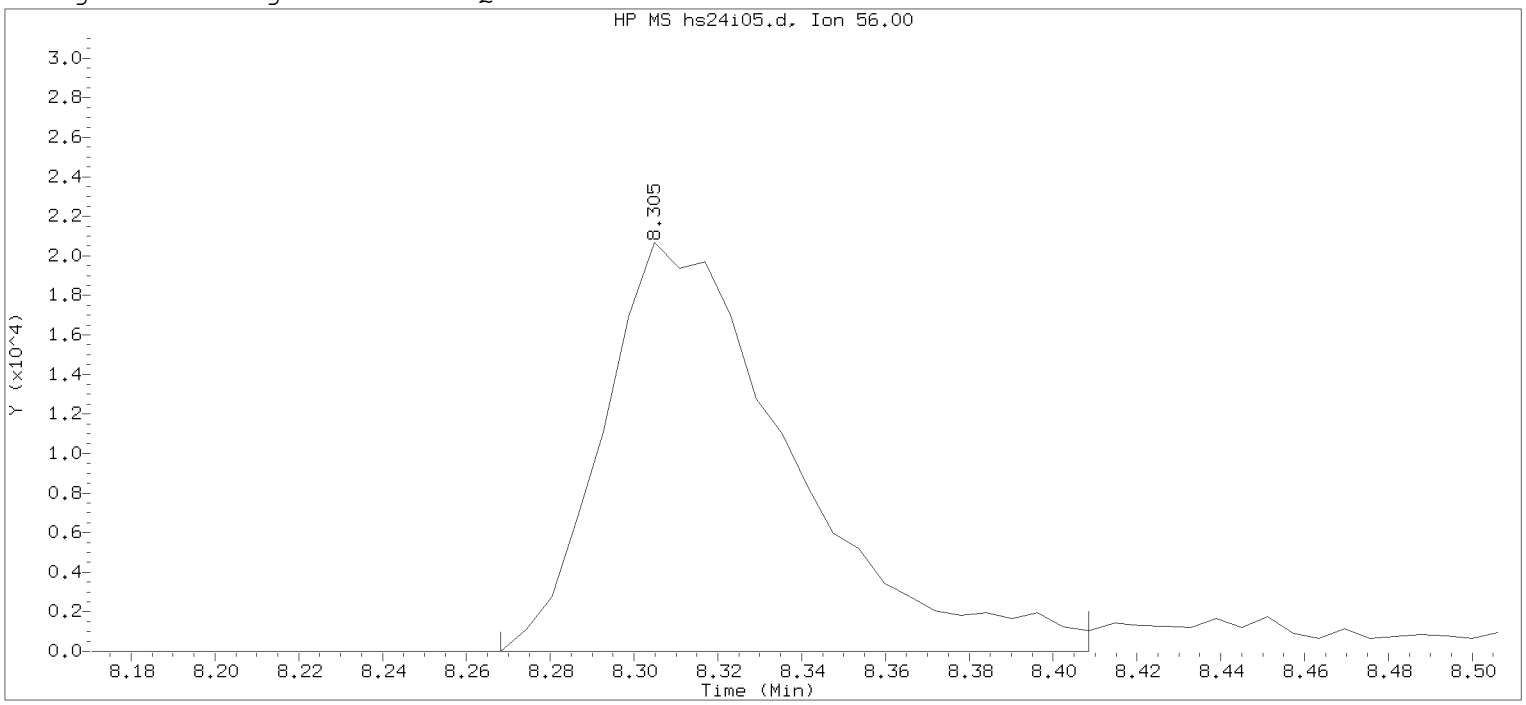
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

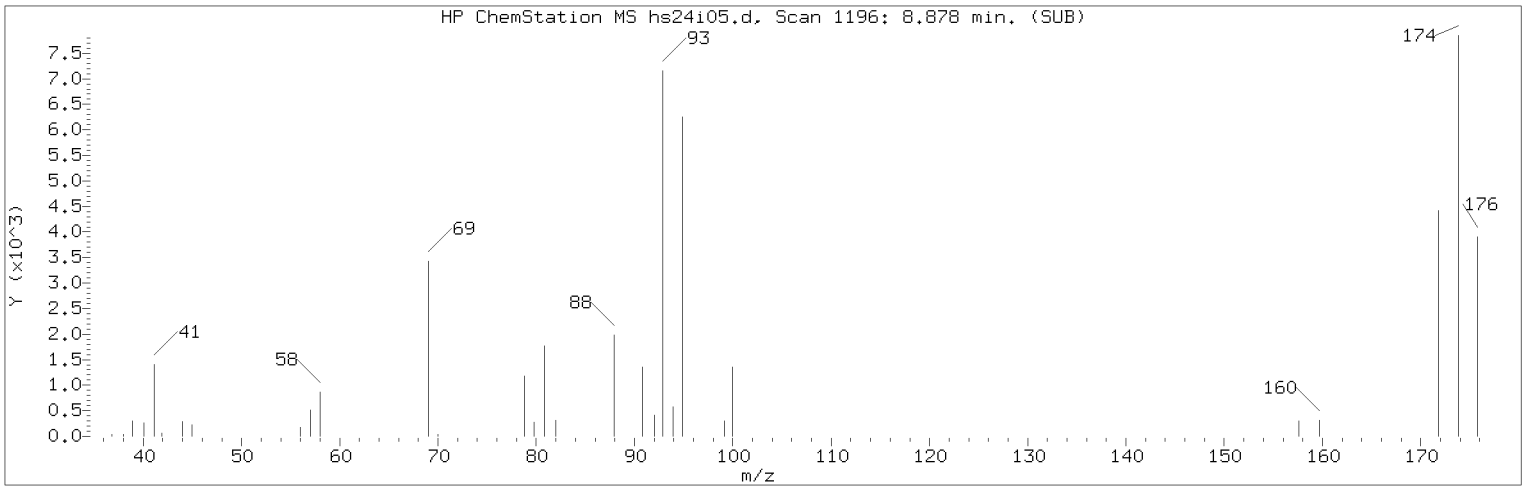
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

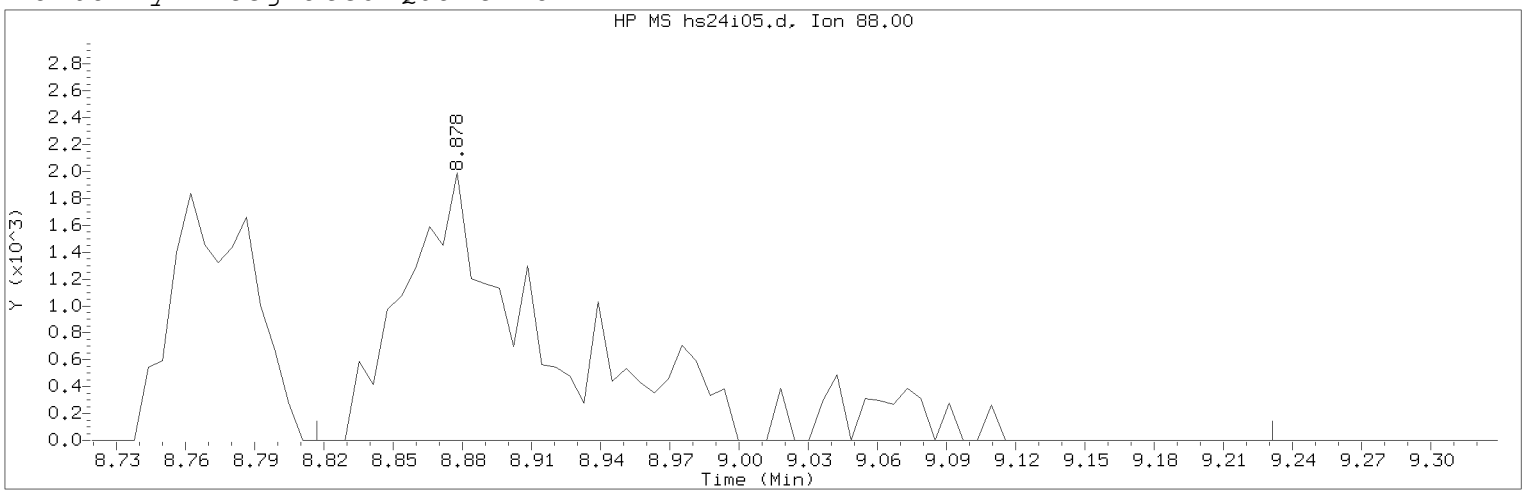
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 64395		
On-column Amount (ng)	: 83.6678		
Integration start scan	: 1095	Integration stop scan:	1118
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

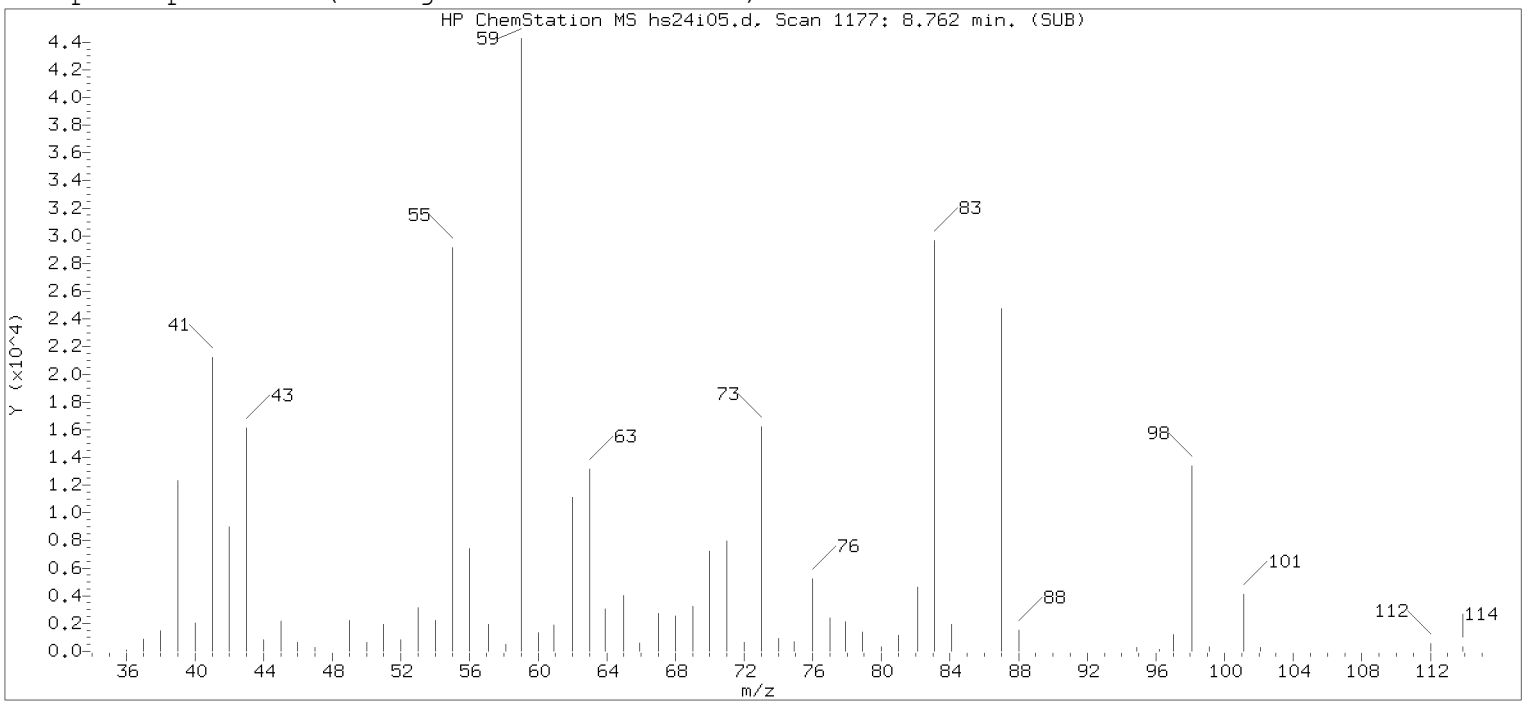
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 9241M
On-Column Amount (ng) : 50.2009
Integration start scan : 1185 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

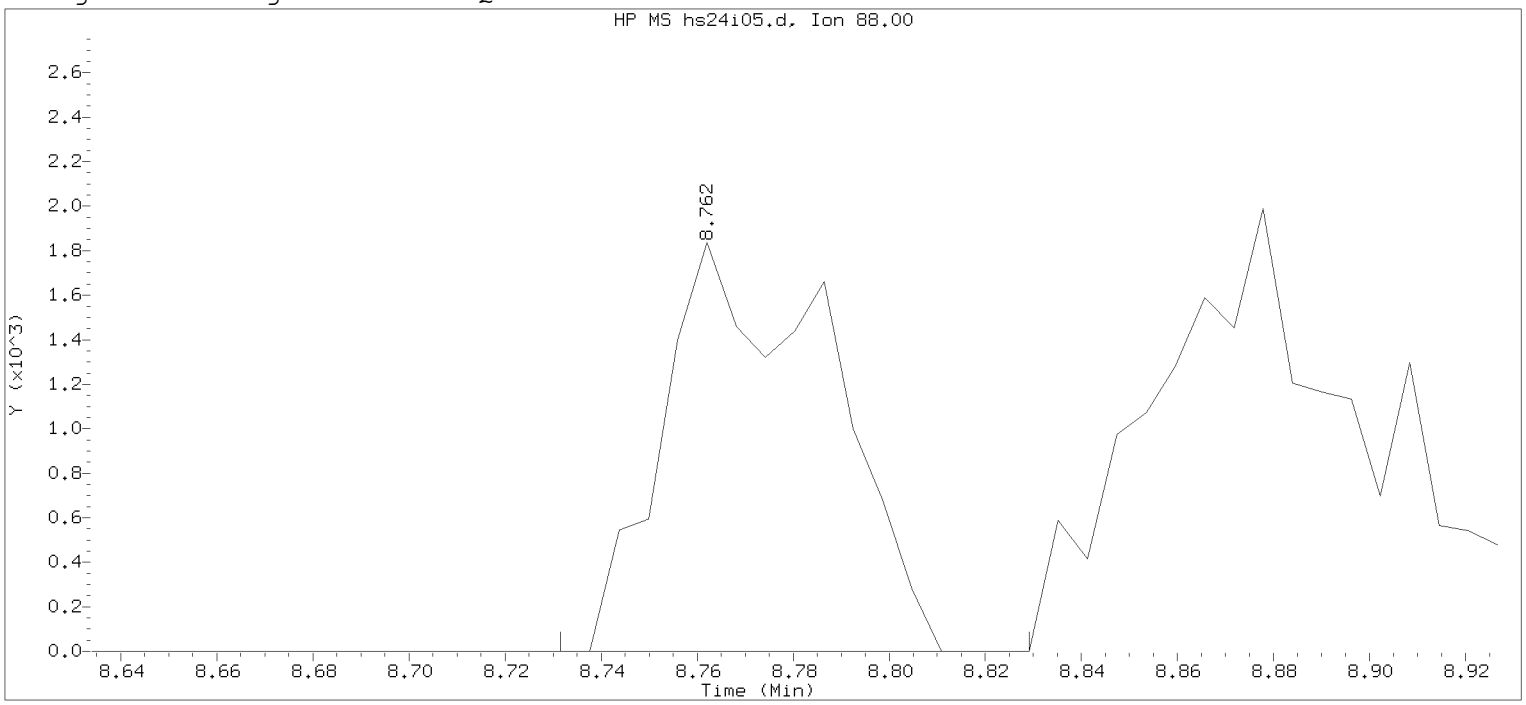
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

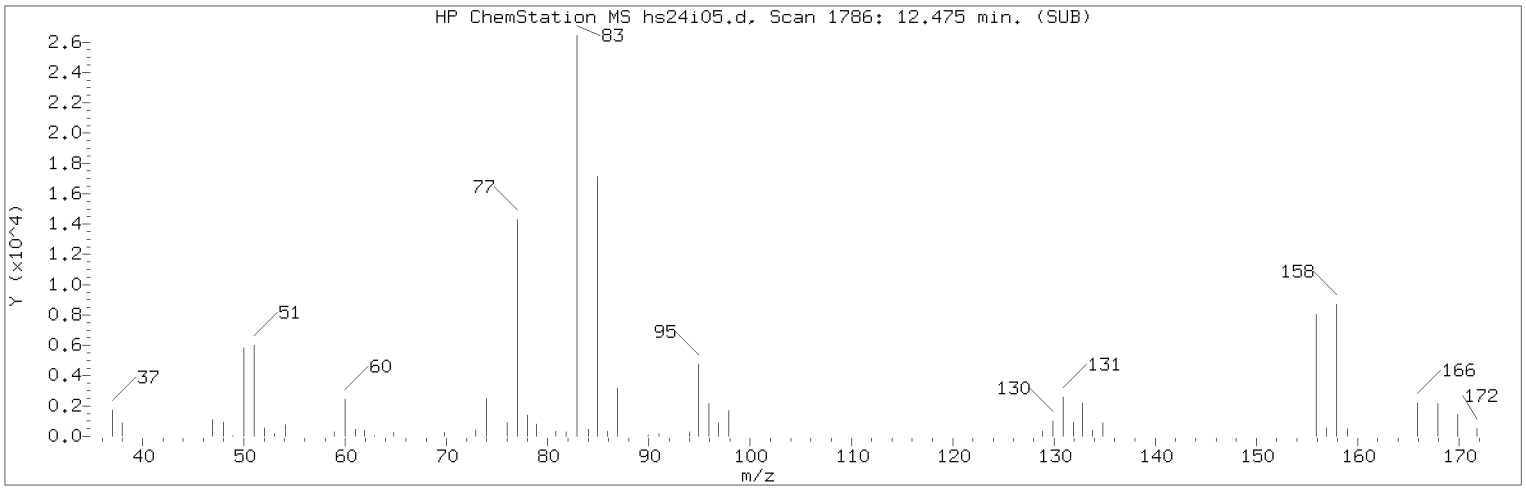
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

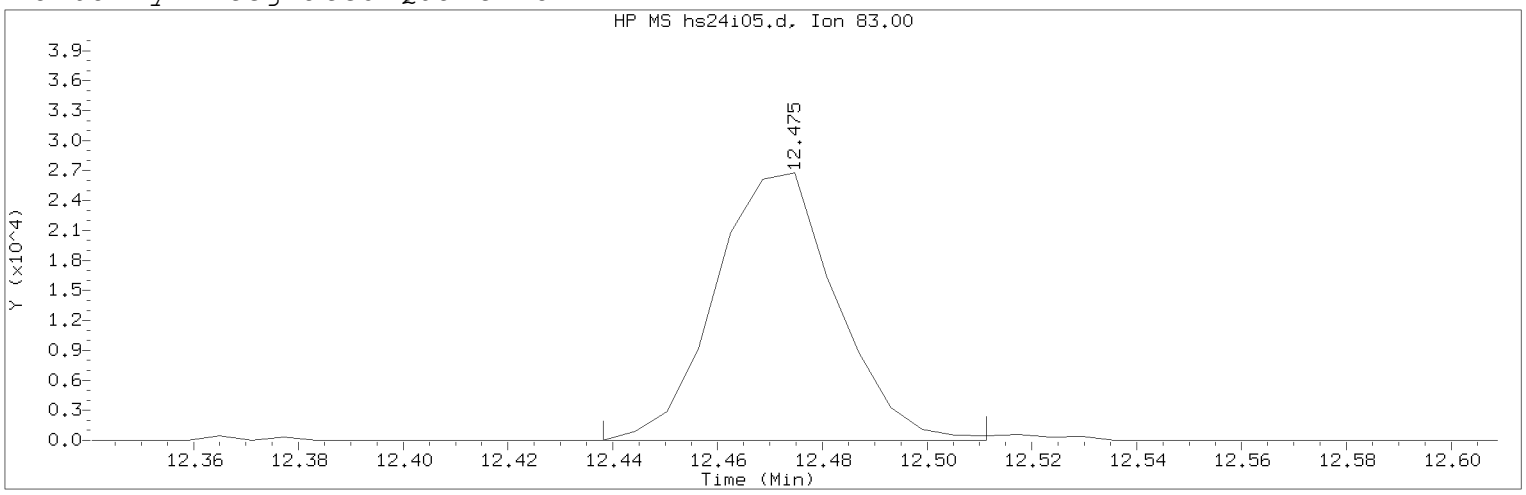
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.762		
Quant Ion	: 88.00		
Area	: 4467		
On-column Amount (ng)	: 37.5984		
Integration start scan	: 1171	Integration stop scan:	1187
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

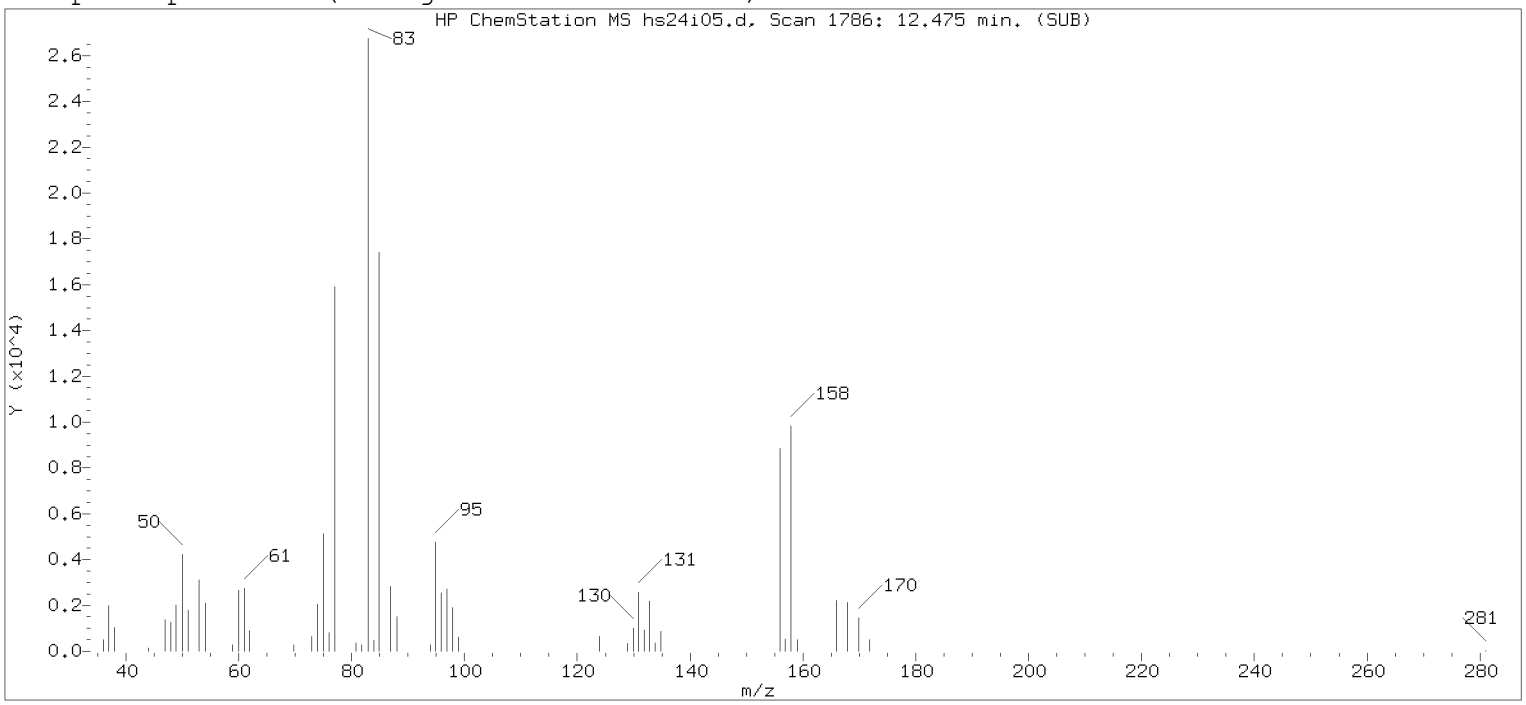
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 42904M
On-Column Amount (ng) : 0.9628
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

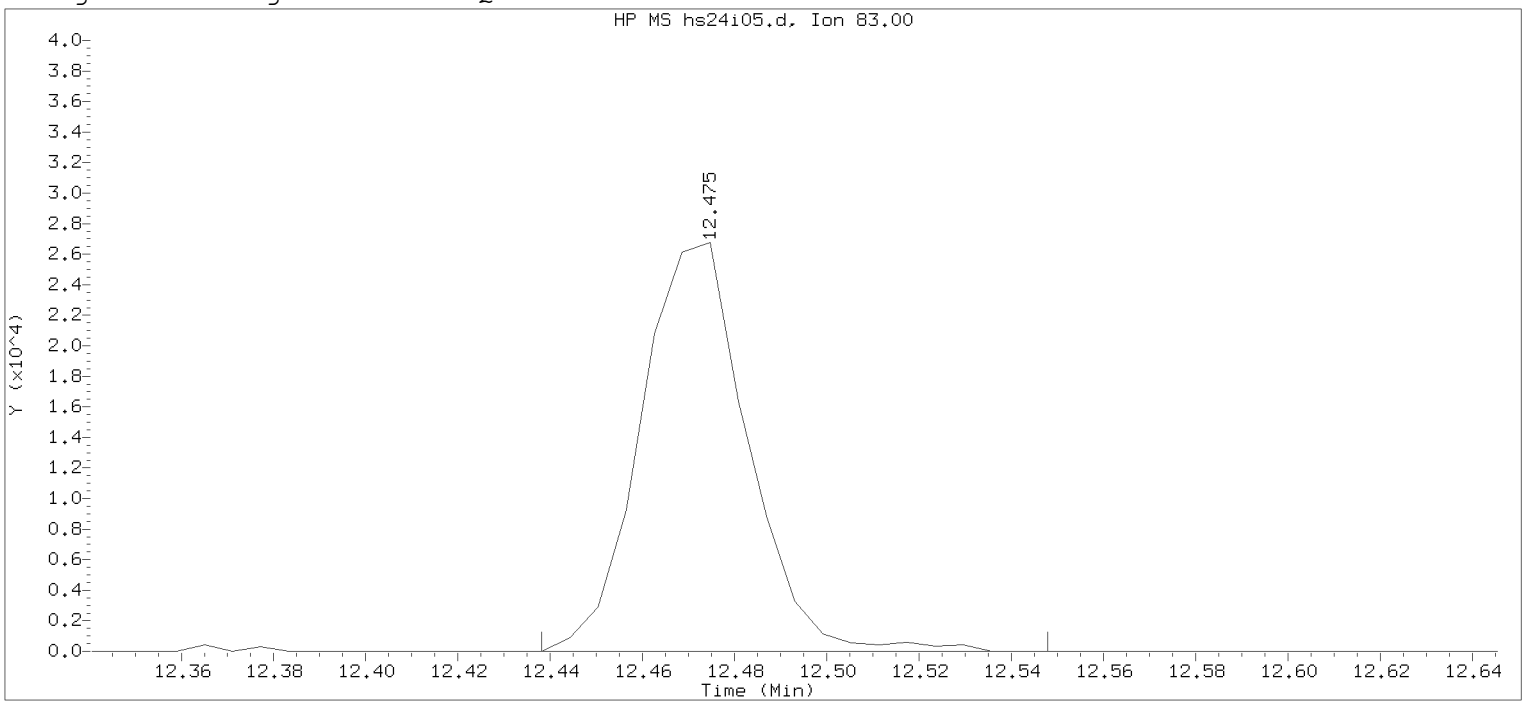
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

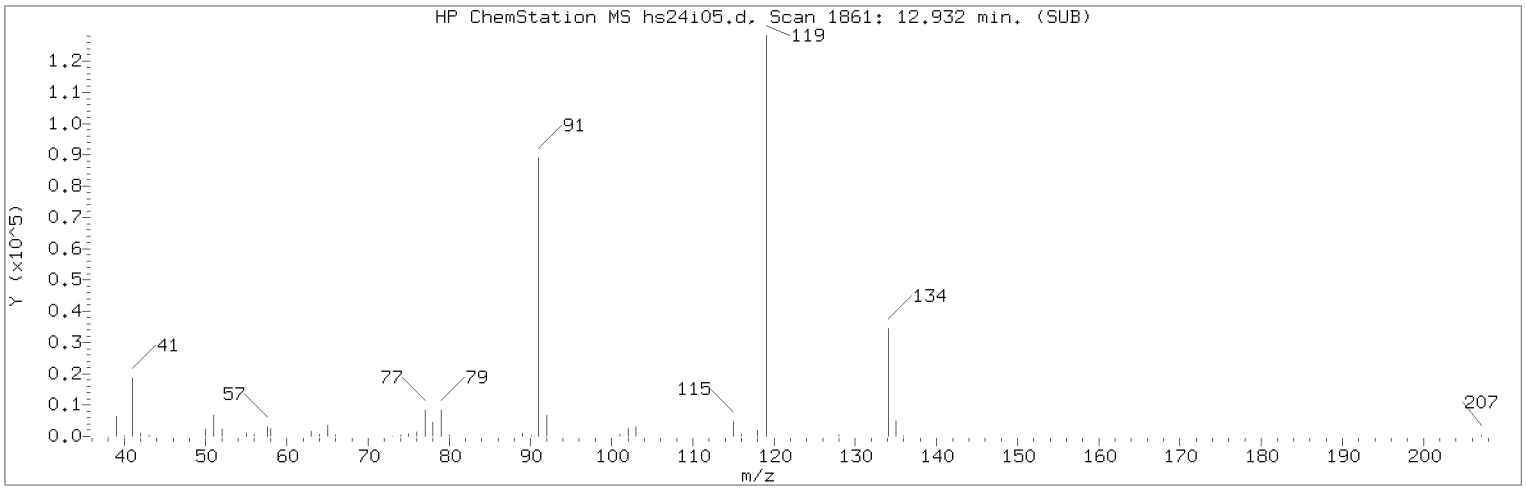
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

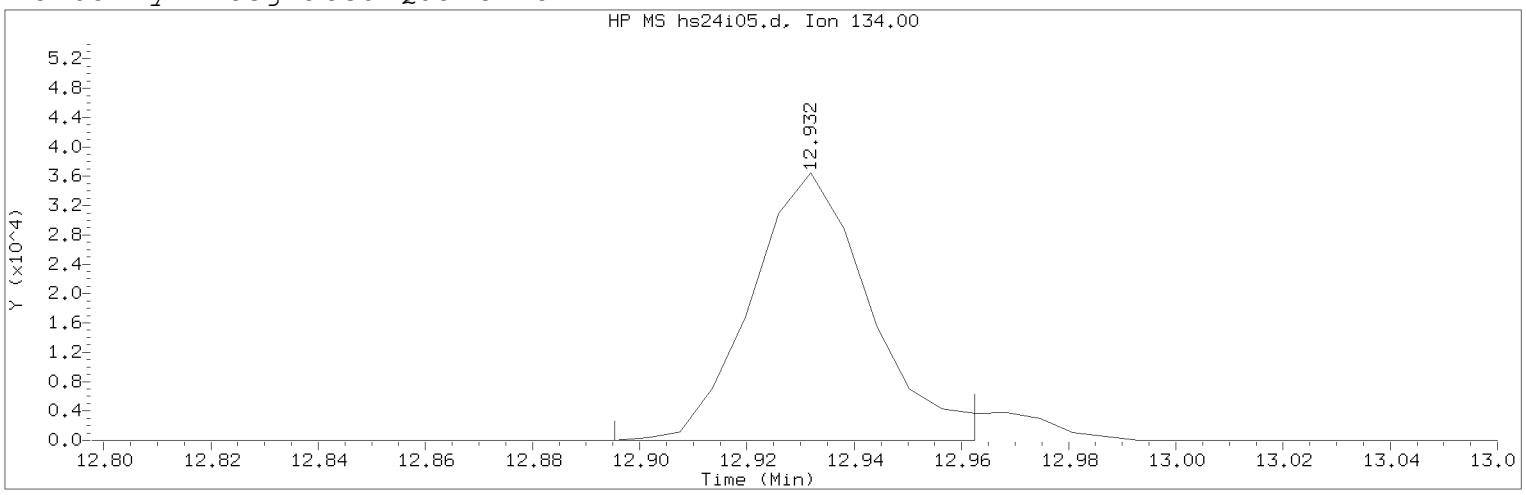
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 43396
On-column Amount (ng) : 0.9508
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

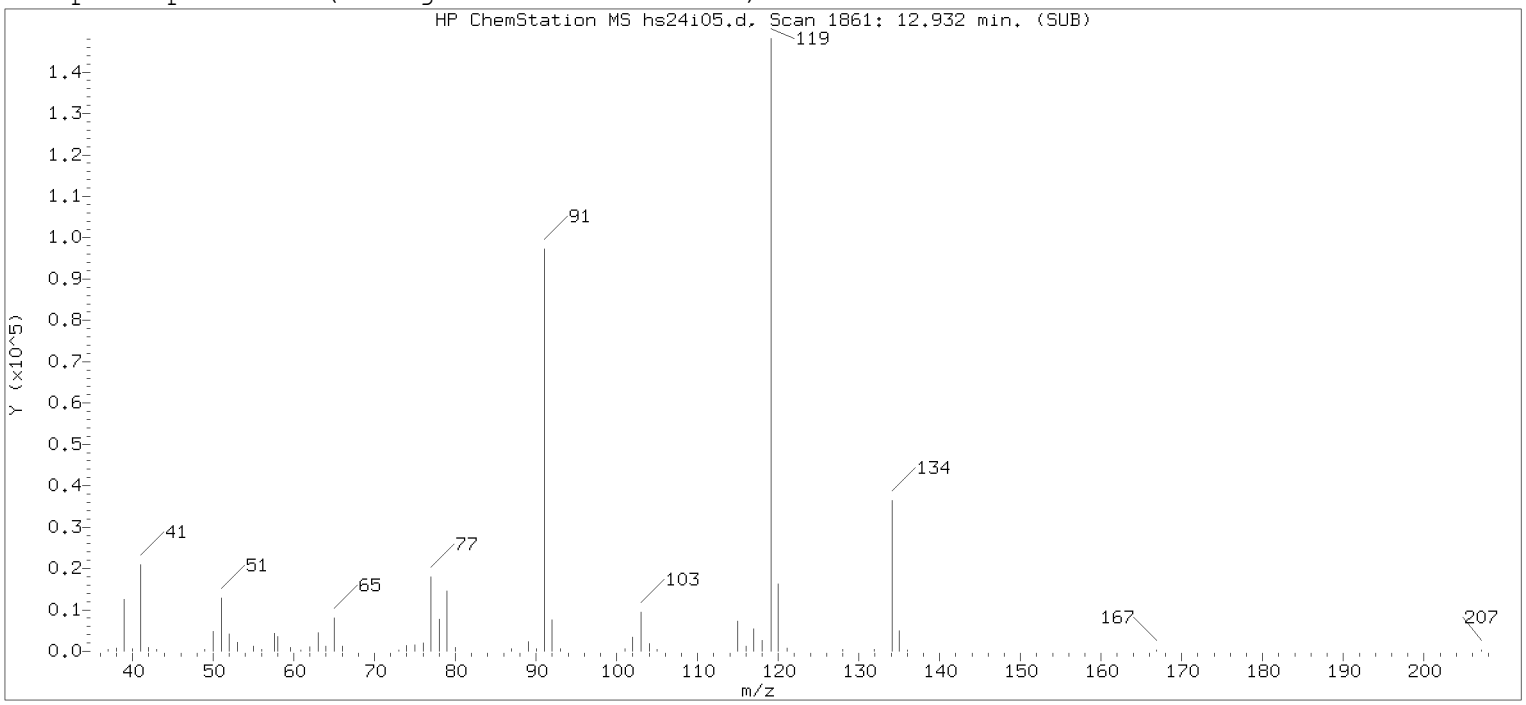
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 55631M
On-Column Amount (ng) : 1.0251
Integration start scan : 1854 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

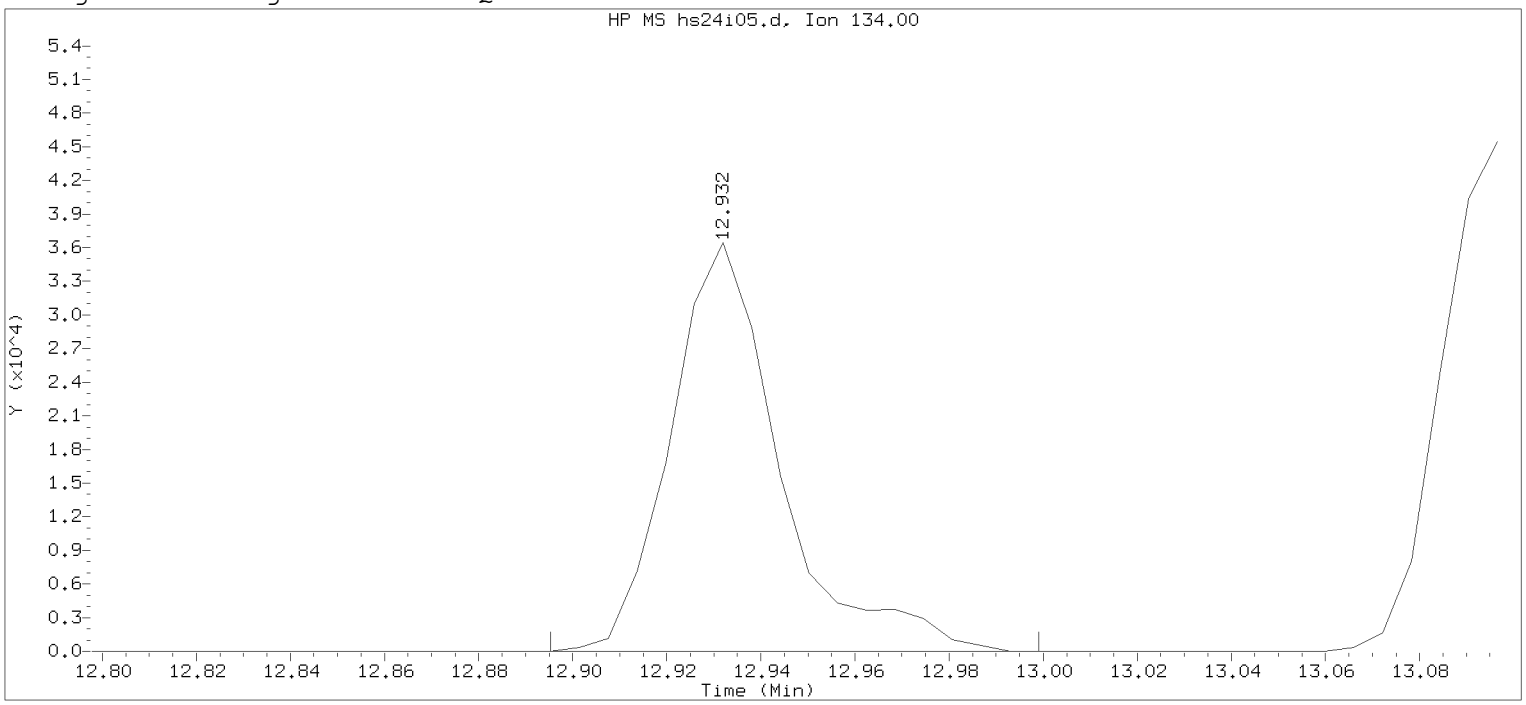
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

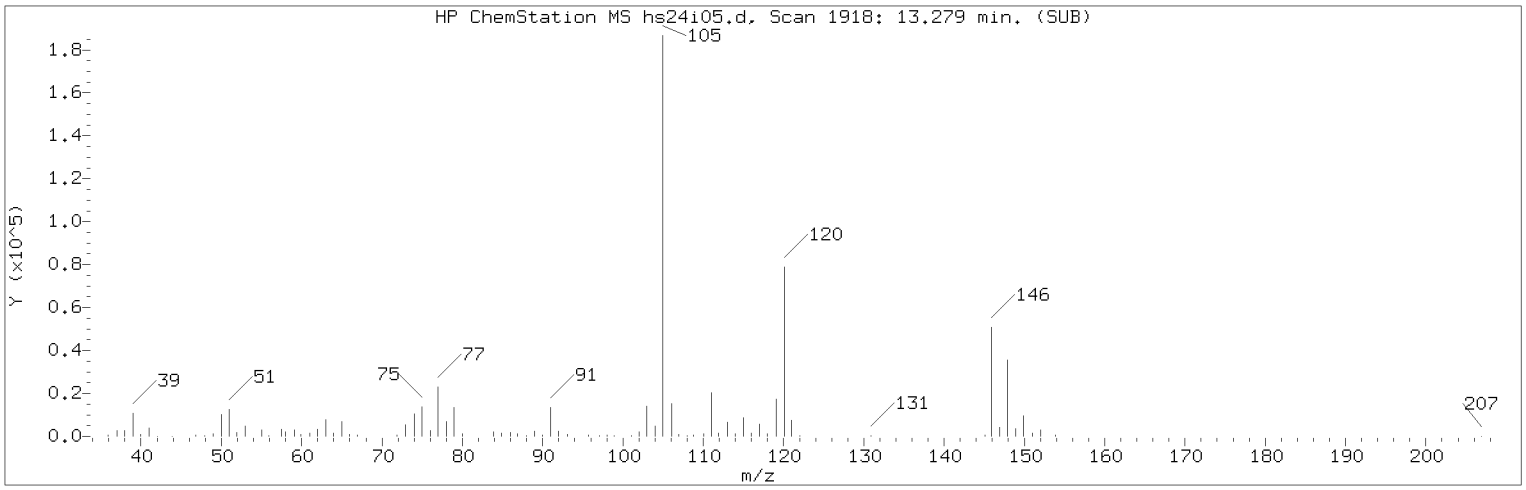
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

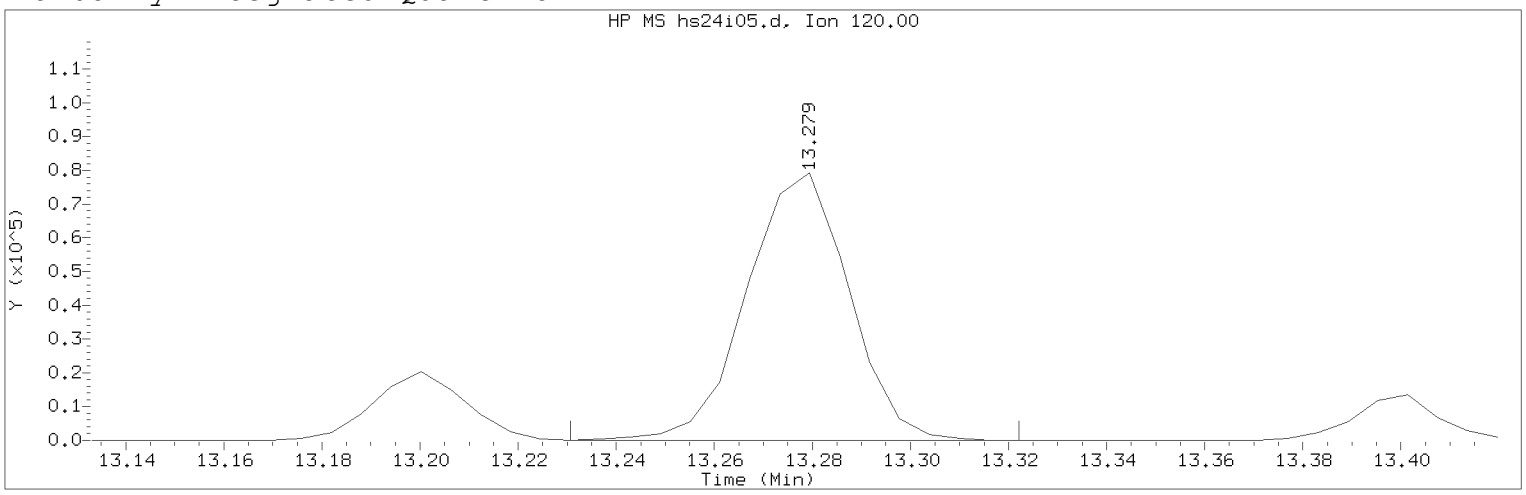
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 58647
On-column Amount (ng) : 1.0086
Integration start scan : 1854 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

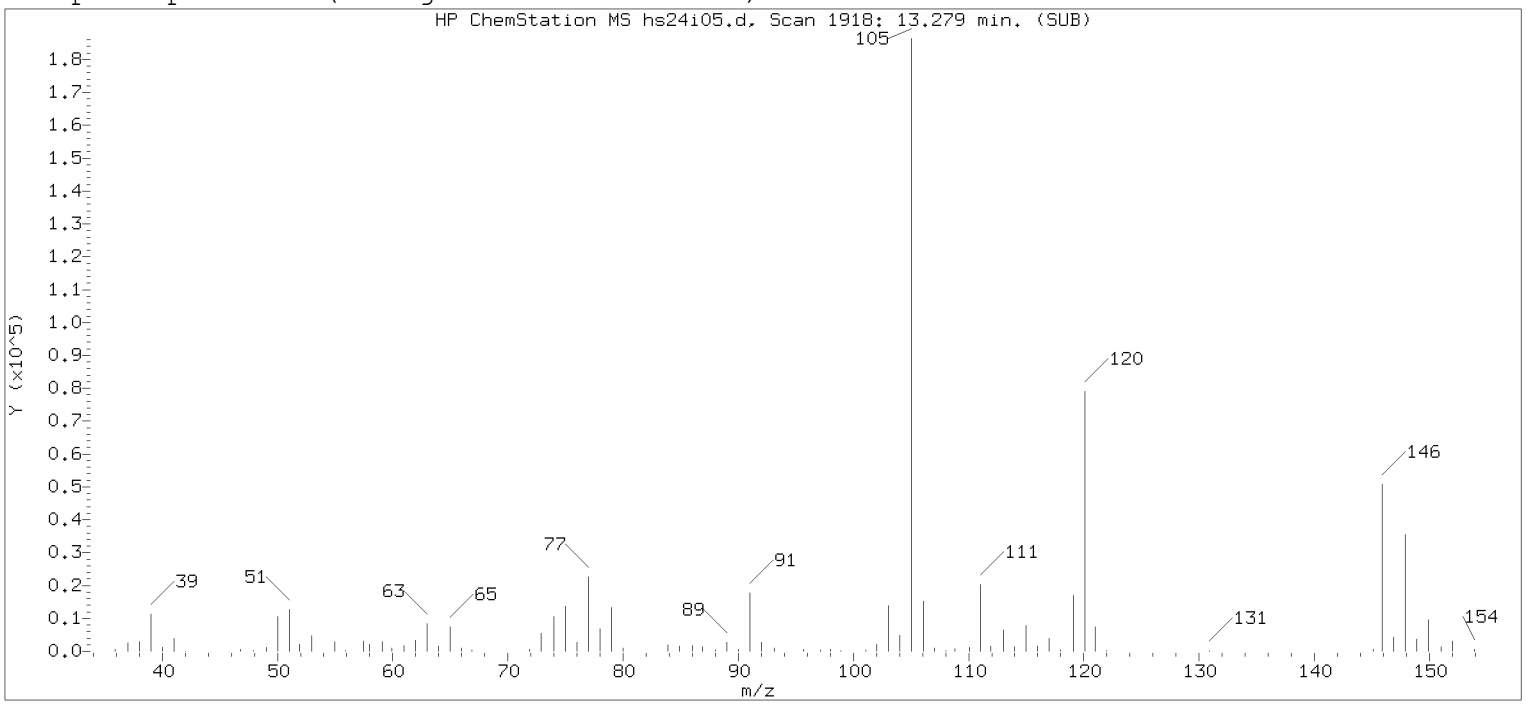
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area (flag) : 114395M
On-Column Amount (ng) : 0.9792
Integration start scan : 1909 Integration stop scan: 1924
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

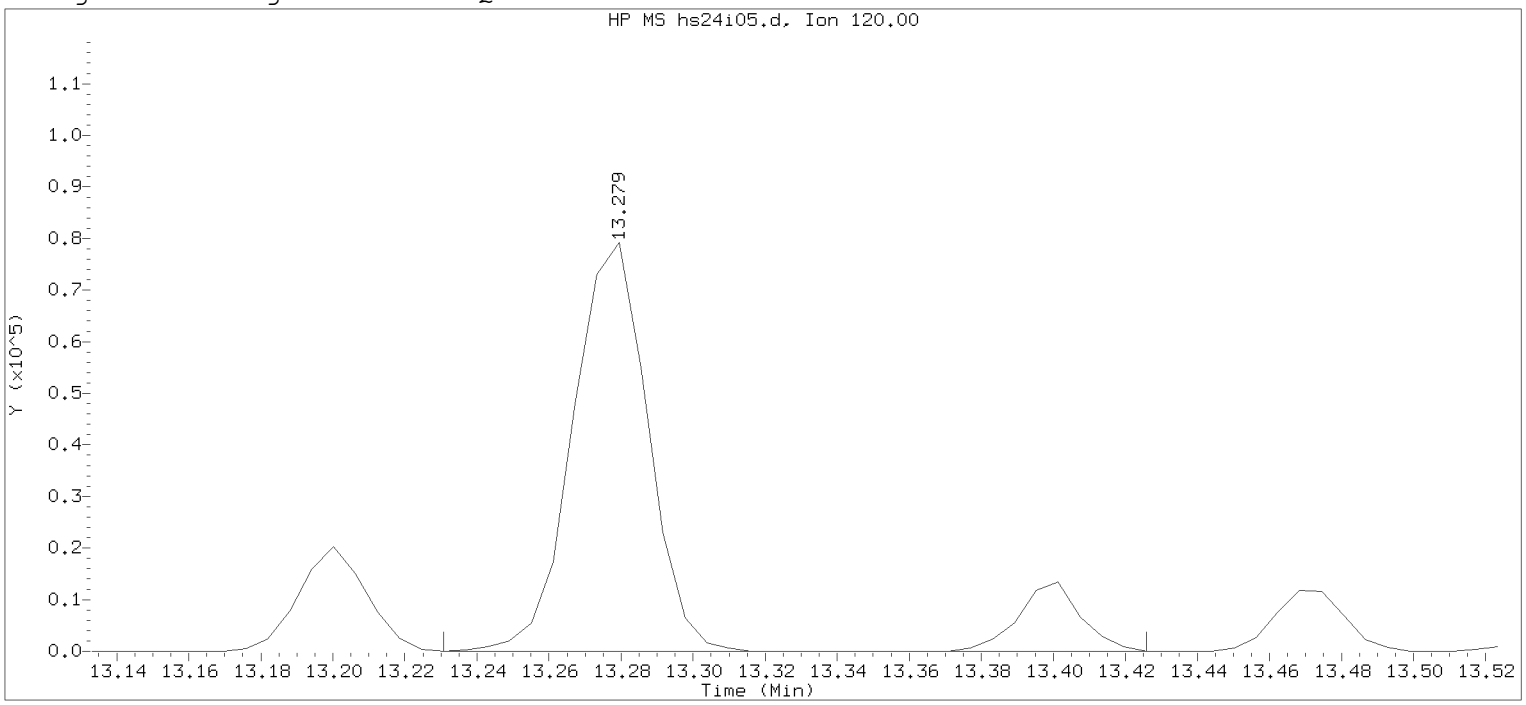
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



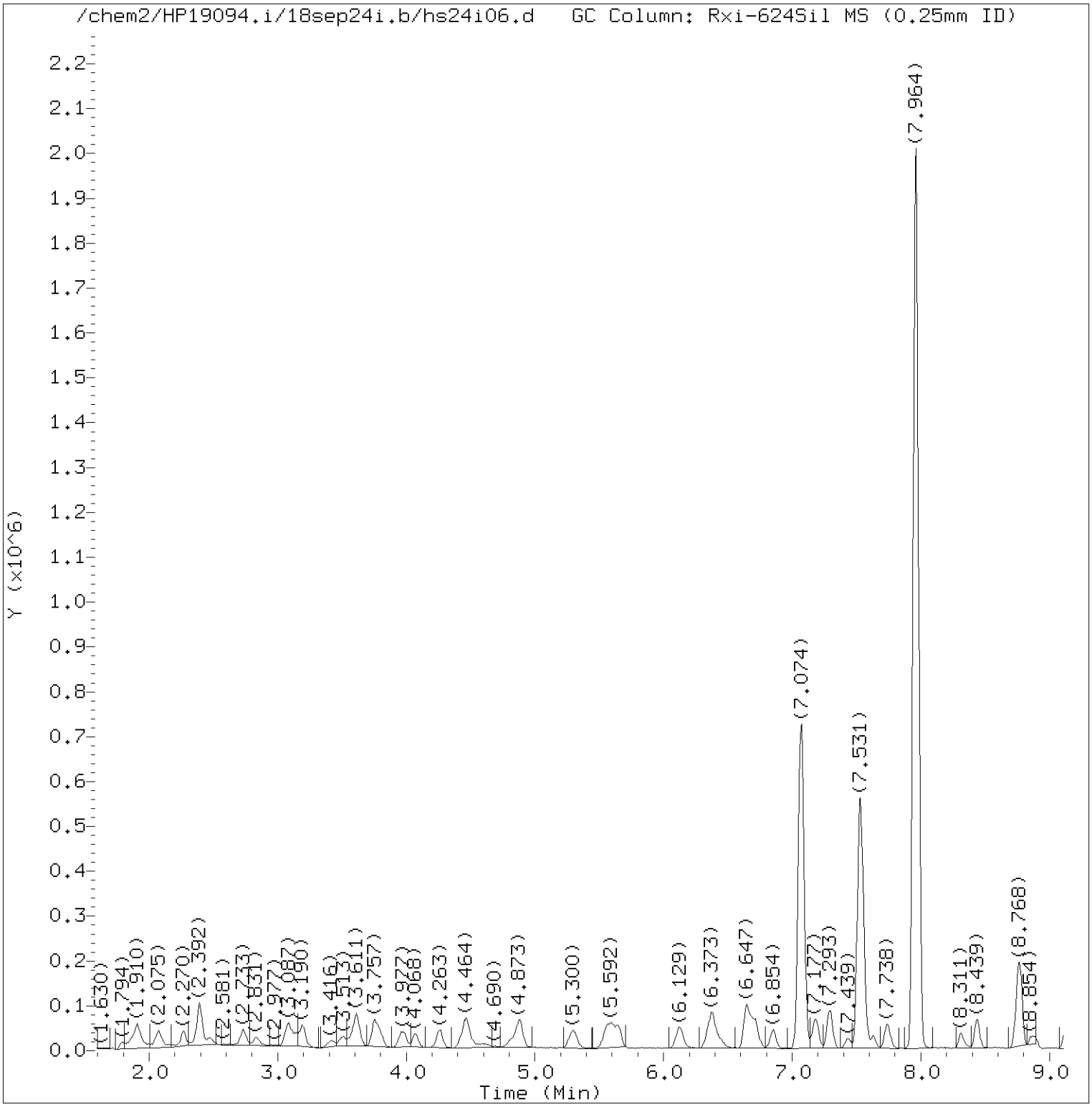
Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area : 130549
On-column Amount (ng) : 1.0710
Integration start scan : 1909 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: JKH09052



Total Ion Chromatogram (TIC)

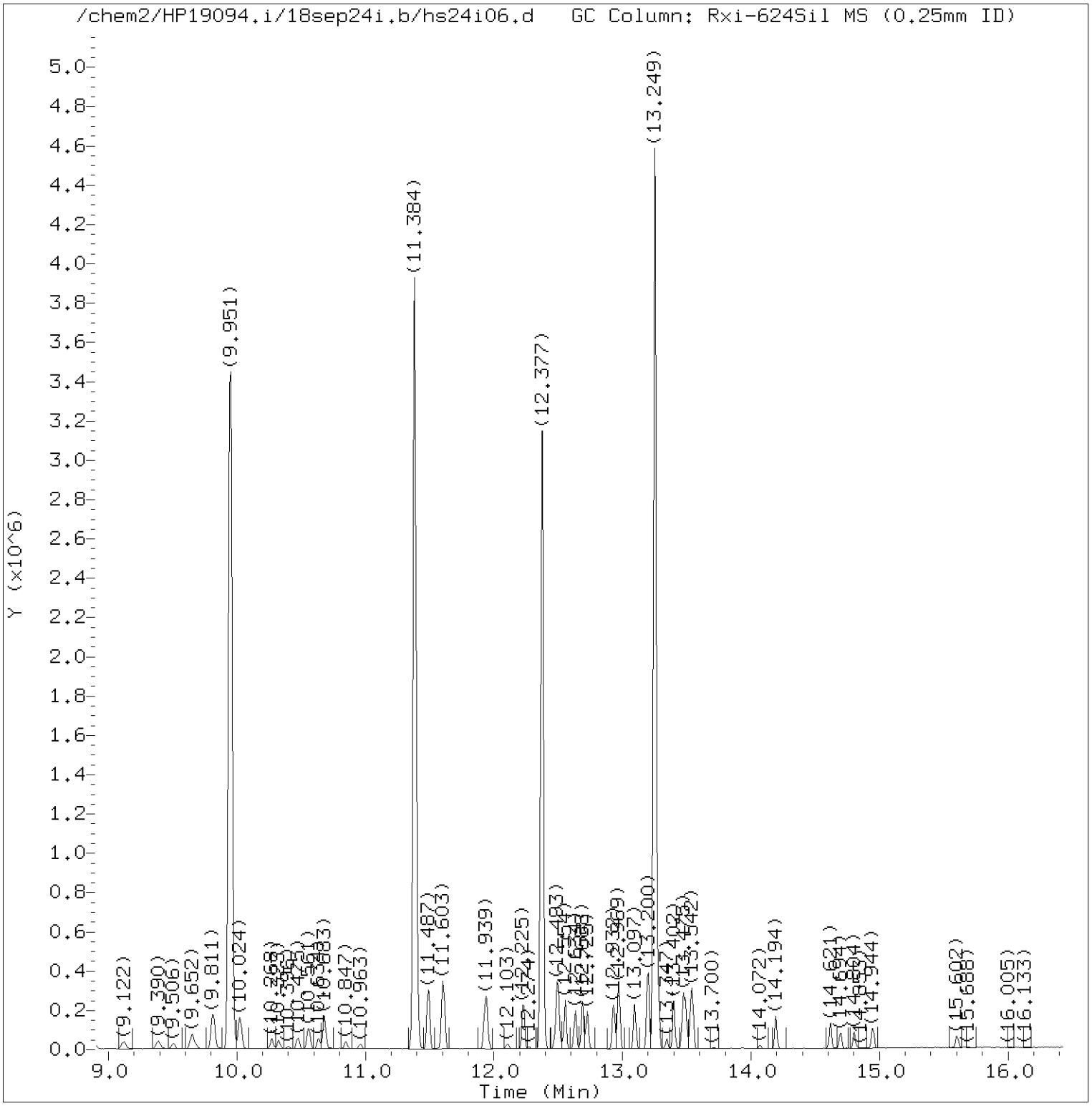
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	52718	0.492
2) Chloromethane	(2)	2.270	50	52280	0.498
6) 1,3-Butadiene	(2)	2.386	39	54776M	0.492
5) Vinyl Chloride	(2)	2.398	62	47346	0.482
7) Bromomethane	(2)	2.733	94	38272	0.501
8) Chloroethane	(2)	2.831	64	29455	0.494
9) Dichlorofluoromethane	(2)	3.080	67	68125	0.480
10) Trichlorofluoromethane	(2)	3.141	101	61550	0.496
11) Ethyl ether	(2)	3.422	59	20421	0.485
12) Freon 123a	(2)	3.501	67	38697	0.492
13) Acrolein	(1)	3.611	56	144331	23.202
15) 1,1-Dichloroethene	(2)	3.751	96	25447	0.473
16) Freon 113	(2)	3.794	101	29825	0.471
14) Acetone	(1)	3.800	43	39805M	4.764
17) Methyl Iodide	(2)	3.958	142	54798	0.489
18) Carbon Disulfide	(2)	4.068	76	82997	0.485
21) Methyl Acetate	(1)	4.214	43	11281	0.481
22) Allyl Chloride	(2)	4.257	41	48017	0.470
23) Methylene Chloride	(2)	4.452	84	28557	0.471
26)*t-Butyl Alcohol-d10	(1)	4.477	65	140183M	50.000
28) t-Butyl Alcohol	(1)	4.605	59	23242	9.713
29) Acrylonitrile	(1)	4.800	53	25339	2.348
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	53197	0.481
31) trans-1,2-Dichloroethene	(2)	4.891	96	28696	0.473
32) n-Hexane	(2)	5.300	57	44645	0.463
33) 1,1-Dichloroethane	(2)	5.556	63	55167	0.477
34) di-Isopropyl Ether	(2)	5.592	45	97579	0.475
35) 2-Chloro-1,3-Butadiene	(2)	5.647	53	47649	0.458
40) 1,2-Dichloroethene (Total)	(2)		96	60740	0.951
37) Ethyl t-butyl ether	(2)	6.117	59	79009M	0.485
38) 2-Butanone	(1)	6.336	43	62685	4.583
39) cis-1,2-Dichloroethene	(2)	6.366	96	32044	0.478
41) 2,2-Dichloropropane	(2)	6.391	77	37720	0.457
42) Propionitrile	(1)	6.446	54	36555	9.847
45) Methacrylonitrile	(1)	6.647	67	61003	4.557
47) Bromochloromethane	(2)	6.702	128	13020	0.460
48) Tetrahydrofuran	(1)	6.714	71	16511	4.541
49) Chloroform	(2)	6.854	83	51878	0.483

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	691568	10.003
50)$Dibromofluoromethane	(2)	7.068	111	705727	9.917
51) 1,1,1-Trichloroethane	(2)	7.086	97	43339	0.472
52) Cyclohexane	(2)	7.183	56	55245	0.460
52) Cyclohexane	(2)	7.177	84	43224	0.437
52) Cyclohexane	(2)	7.177	69	16219	0.459
54) Carbon Tetrachloride	(2)	7.293	117	36936	0.468
55) 1,1-Dichloropropene	(2)	7.299	75	39906	0.458
56) Isobutyl Alcohol	(1)	7.433	41	23659	25.555
57)$1,2-Dichloroethane-d4	(2)	7.531	102	118986	9.872
57)$1,2-Dichloroethane-d4	(2)	7.525	65	583630	10.011
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76978	9.972
58) Benzene	(2)	7.555	78	124386	0.483
59) 1,2-Dichloroethane	(2)	7.628	62	29519M	0.498
60) t-Amyl methyl ether	(2)	7.738	73	64107	0.475
63)*Fluorobenzene	(2)	7.964	96	2743076	10.000
62) n-Heptane	(2)	7.976	43	45673	0.459
65) n-Butanol	(1)	8.305	56	35795M	45.764
67) Trichloroethene	(2)	8.439	95	30507	0.463
69) Methylcyclohexane	(2)	8.756	83	57016	0.458
70) 1,2-Dichloropropane	(2)	8.781	63	28744	0.460
71) Methyl Methacrylate	(1)	8.854	69	10601	0.428
72) 1,4-Dioxane	(1)	8.866	88	3592M	19.073
73) Dibromomethane	(2)	8.890	93	12594	0.486
74) Bromodichloromethane	(2)	9.122	83	32561	0.464
76) 2-Nitropropane	(1)	9.390	41	29896	4.260
80) cis-1,3-Dichloropropene	(2)	9.652	75	36712	0.449
81) 4-Methyl-2-Pentanone	(1)	9.811	43	150042	4.410
82)$Toluene-d8	(3)	9.951	98	2759998	9.999
82)$Toluene-d8	(3)	9.951	100	1781368	9.999
83) Toluene	(3)	10.024	92	77148	0.485
85) 1,3-Dichloropropene (total)	(3)		75	65838	0.924
84) trans-1,3-Dichloropropene	(3)	10.274	75	29126	0.475
86) Ethyl Methacrylate	(3)	10.323	69	24760	0.471
88) 1,1,2-Trichloroethane	(3)	10.475	97	16887	0.461
89) Tetrachloroethene	(3)	10.555	166	35437	0.493
90) 1,3-Dichloropropane	(3)	10.634	76	30460	0.469
91) 2-Hexanone	(1)	10.683	43	102566	4.429

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	19914	0.454
95) 1,2-Dibromoethane	(3)	10.963	107	16520	0.481
96) 1-Chlorohexane	(3)	11.384	91	45289	0.477
97)*Chlorobenzene-d5	(3)	11.384	117	2144655	10.000
98) Chlorobenzene	(3)	11.408	112	80357	0.476
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	26174	0.470
100) Ethylbenzene	(3)	11.493	91	148120	0.476
101) m+p-Xylene	(3)	11.603	106	110361	0.957
105) Xylene (Total)	(3)		106	162876	1.433
104) o-Xylene	(3)	11.932	106	52515	0.476
106) Styrene	(3)	11.945	104	80057M	0.454
107) Bromoform	(3)	12.103	173	11176	0.463
108) Isopropylbenzene	(3)	12.231	105	139927	0.465
111)$4-Bromofluorobenzene	(3)	12.371	95	1008561	10.036
111)$4-Bromofluorobenzene	(3)	12.377	174	881794	10.105
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	20751	0.467
114) Bromobenzene	(4)	12.493	156	31936	0.473
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	45404	4.261
116) 1,2,3-Trichloropropane	(4)	12.524	110	5721	0.499
117) n-Propylbenzene	(4)	12.554	91	170760	0.465
119) 2-Chlorotoluene	(4)	12.634	126	34609	0.486
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	114586	0.461
122) 4-Chlorotoluene	(4)	12.725	126	33813	0.474
125) tert-Butylbenzene	(4)	12.932	134	25726M	0.476
126) Pentachloroethane	(4)	12.969	167	18317	0.434
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	117785	0.464
128) sec-Butylbenzene	(4)	13.097	105	144734	0.449
131) 1,3-Dichlorobenzene	(4)	13.194	146	63877	0.476
132) p-Isopropyltoluene	(4)	13.200	119	119452	0.448
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1119082	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	61222	0.465
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	54691	0.470
136) Benzyl Chloride	(4)	13.347	126	6108	0.381
138) n-Butylbenzene	(4)	13.493	92	60346	0.456
139) 1,2-Dichlorobenzene	(4)	13.530	146	57190	0.483
143) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	2354	0.408
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	47093	0.472
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	38351	0.472

M = Compound was manually integrated.
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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	14287	0.465
147) Naphthalene	(4)	14.804	128	57089	0.444
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	31271	0.468

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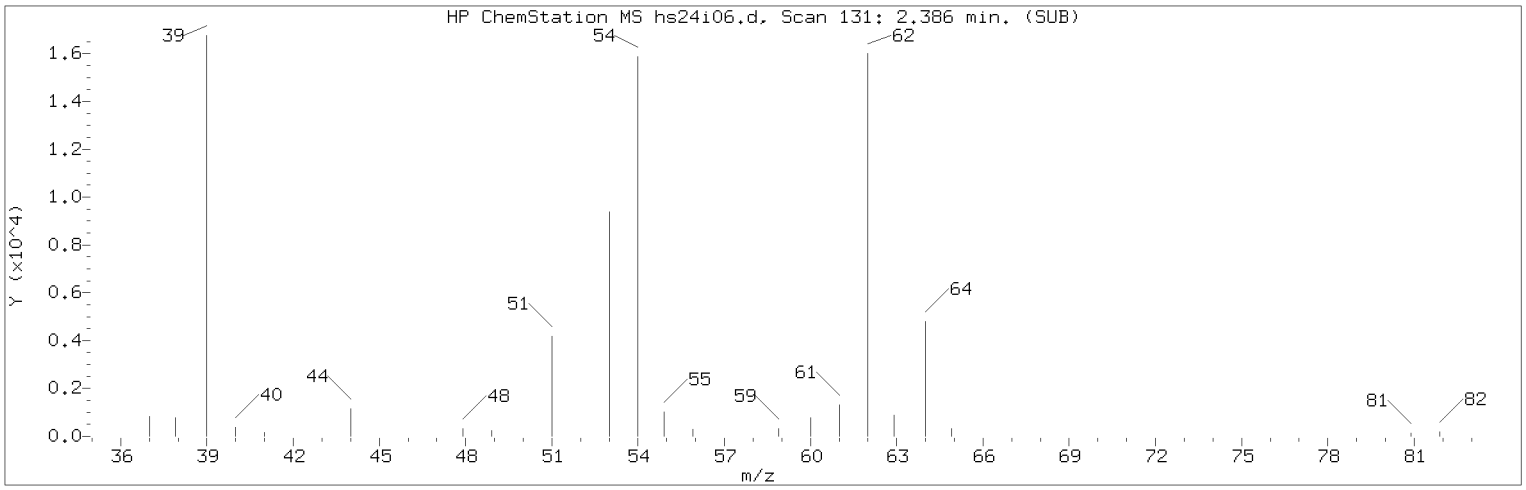
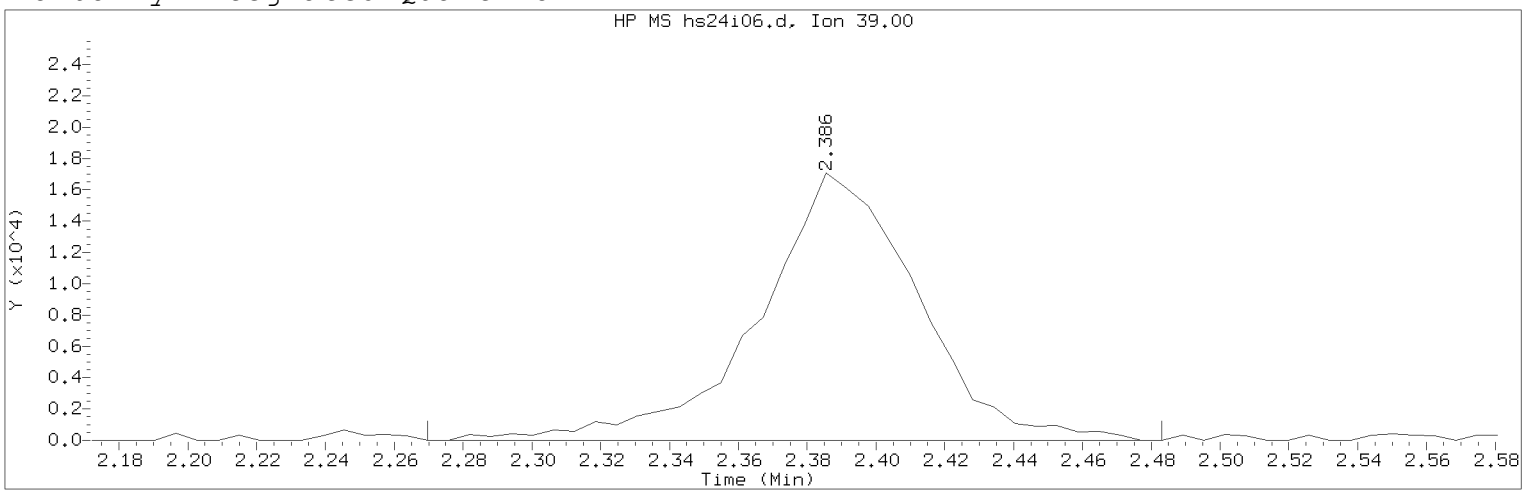
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

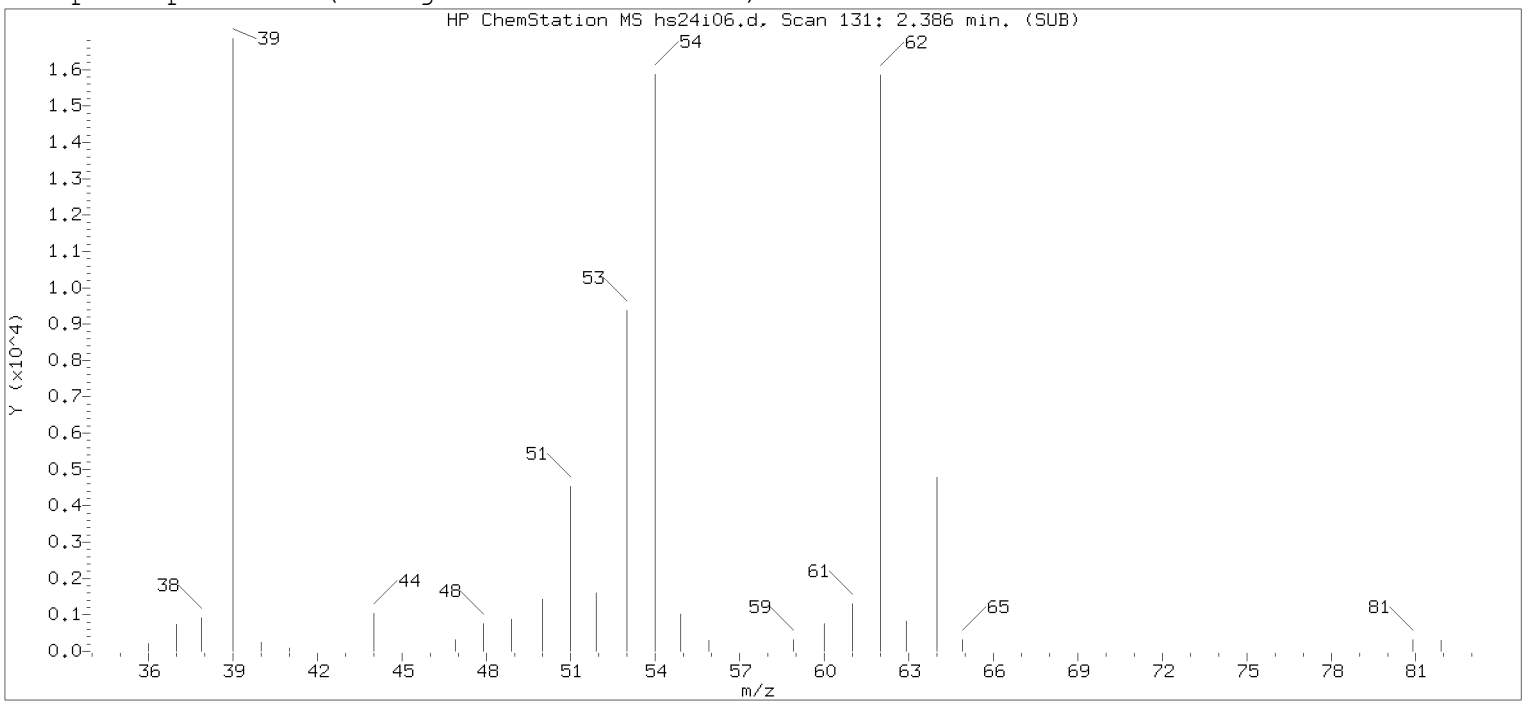
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area (flag) : 54776M
On-Column Amount (ng) : 0.4918
Integration start scan : 111 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

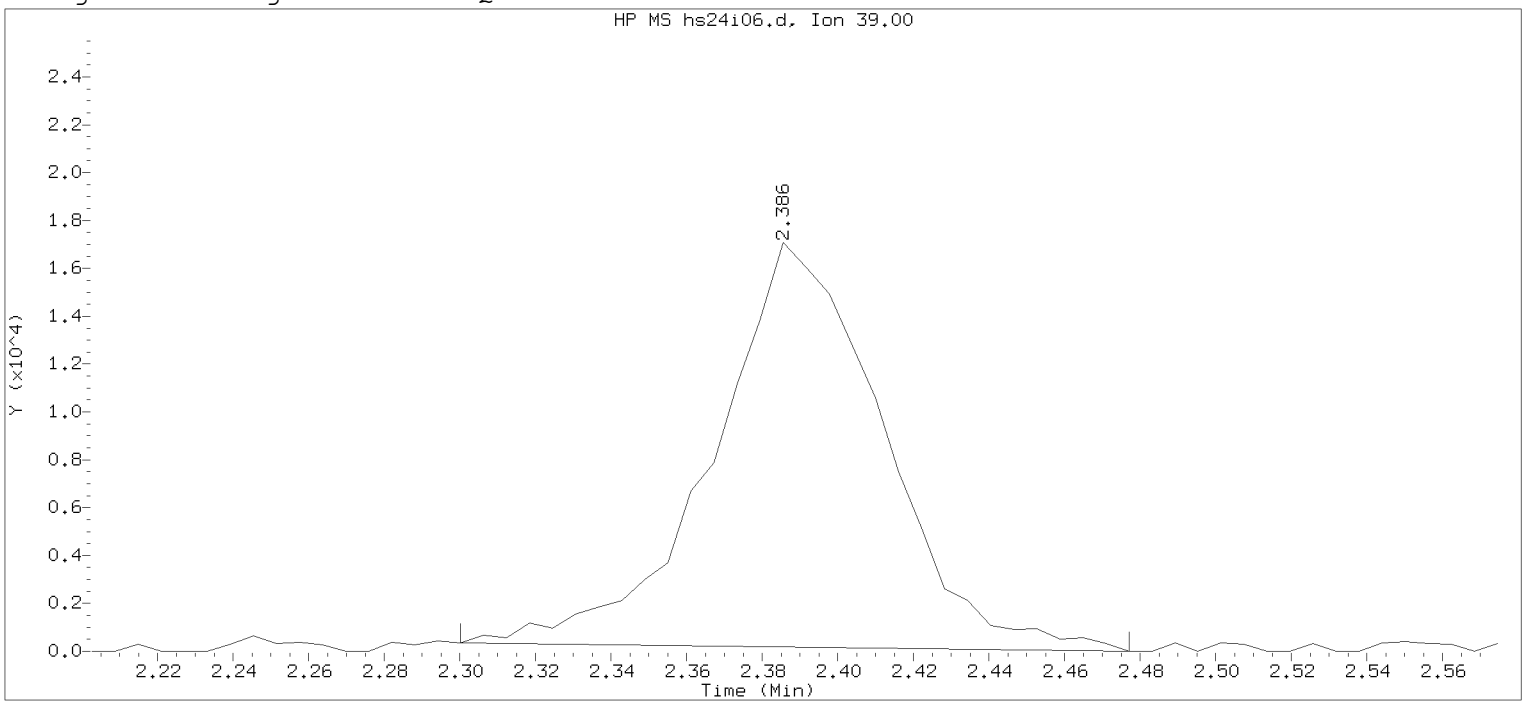
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

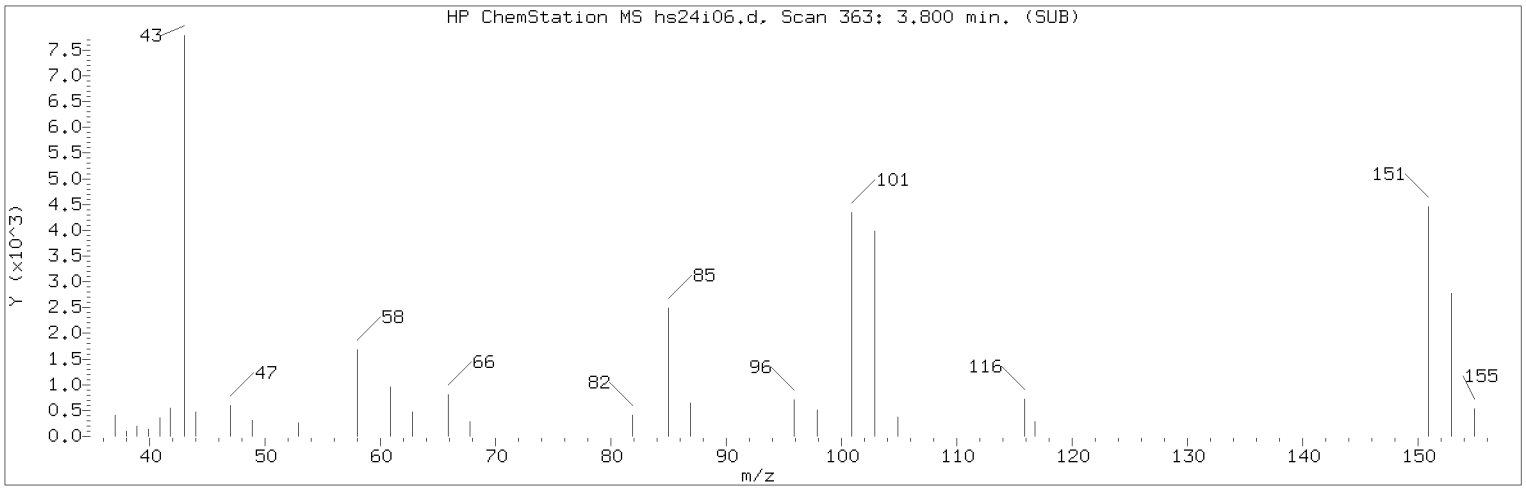
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

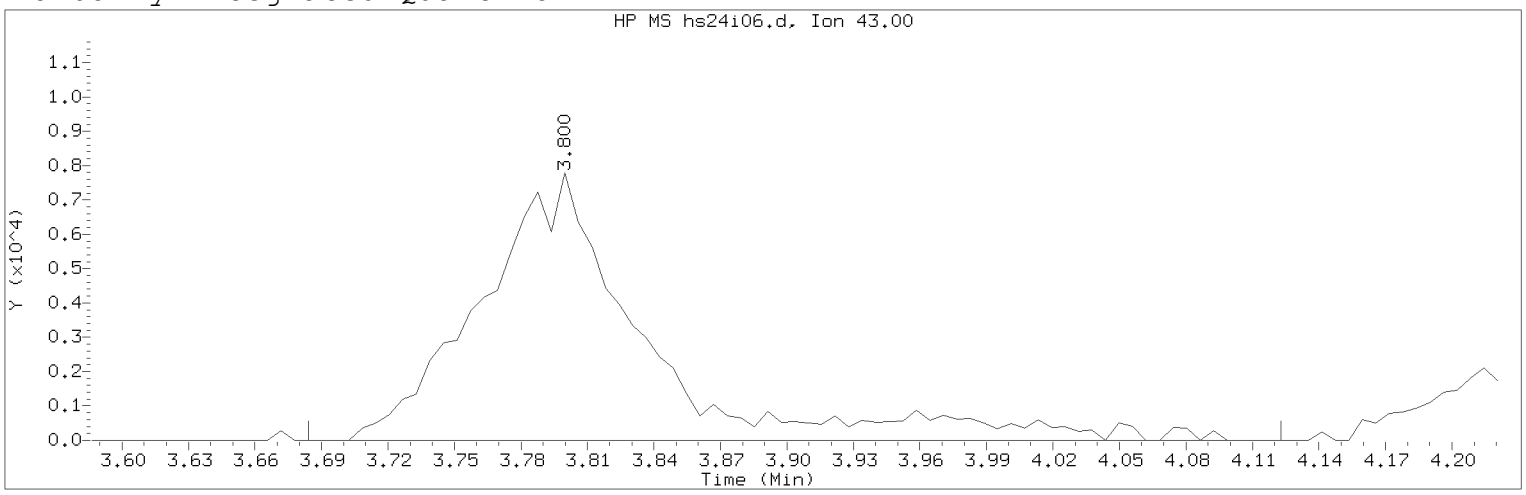
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area : 52477
On-column Amount (ng) : 0.5033
Integration start scan : 116 Integration stop scan: 145
Y at integration start : 348 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

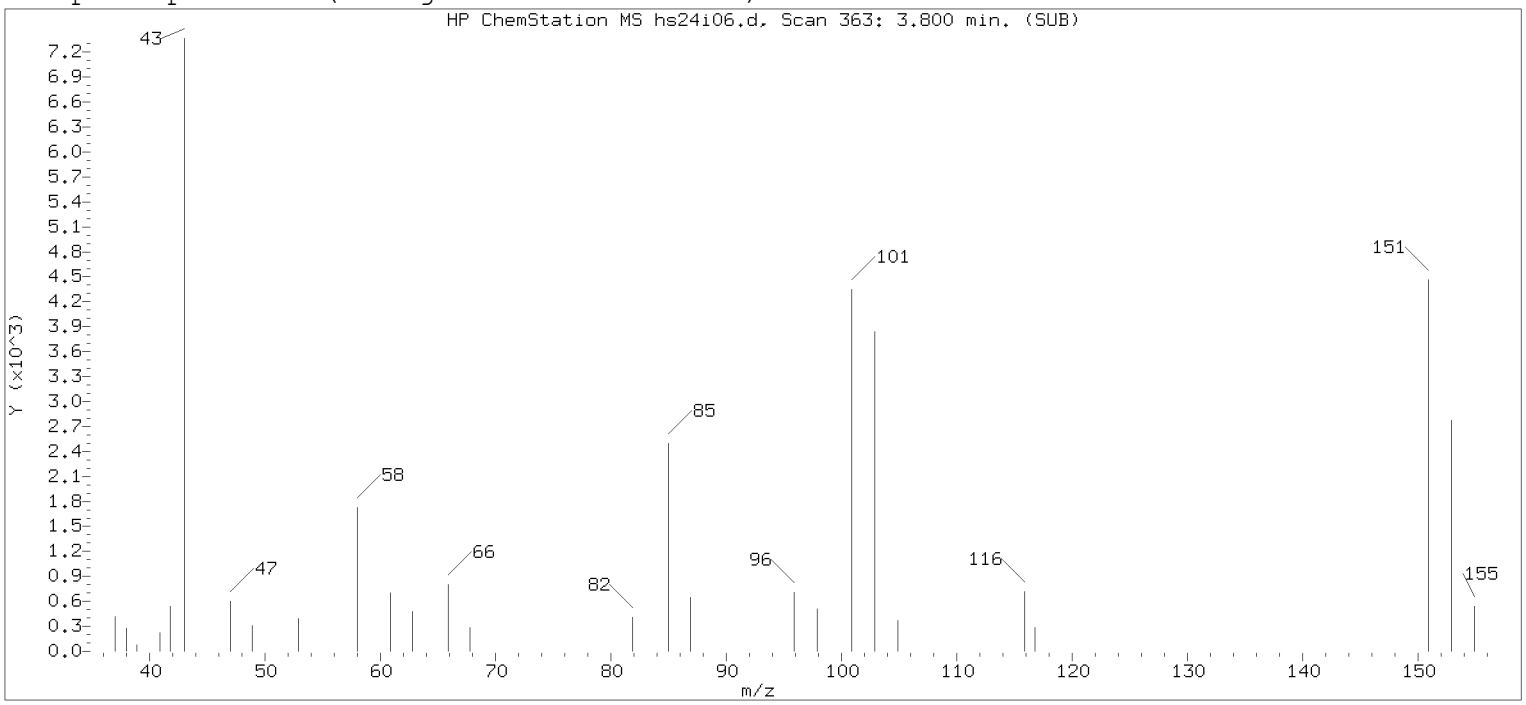
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 39805M
On-Column Amount (ng) : 4.7640
Integration start scan : 343 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

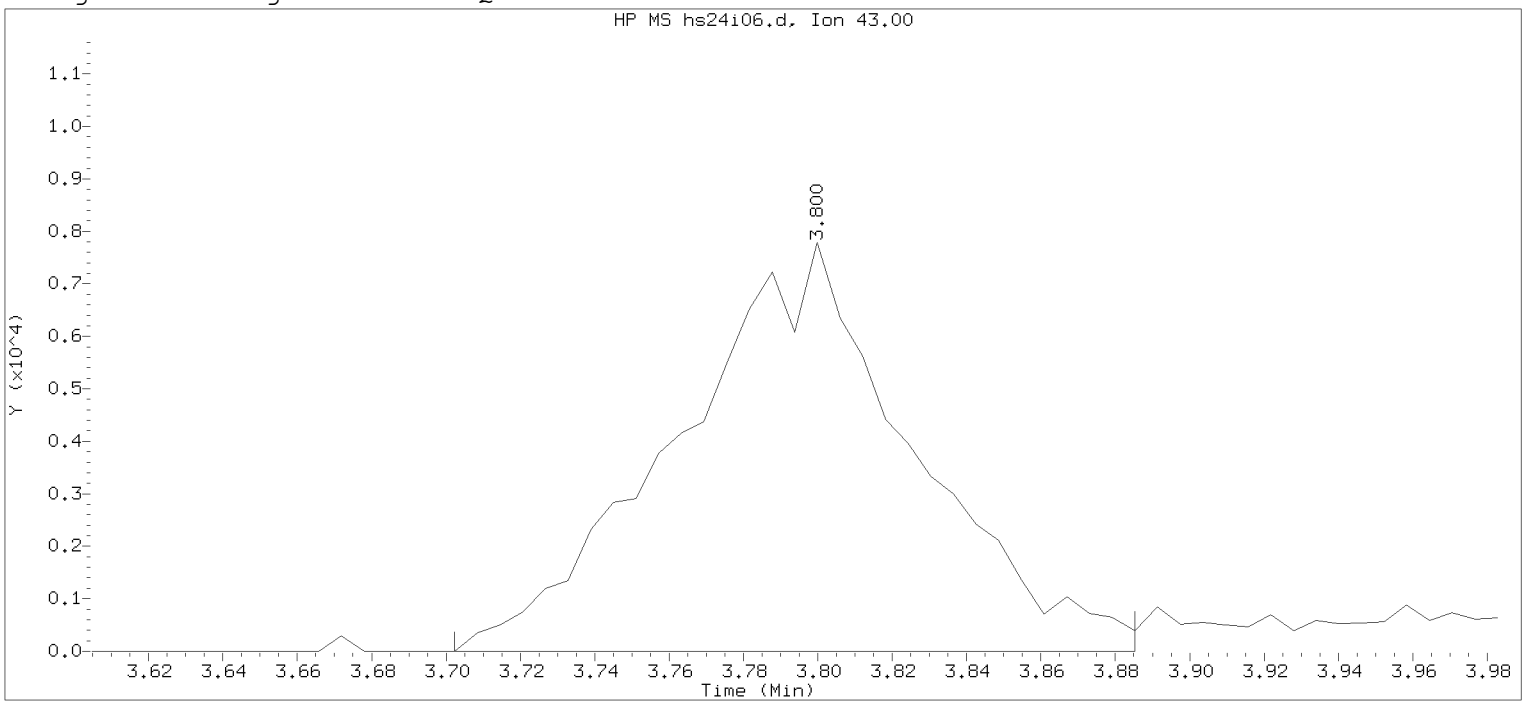
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

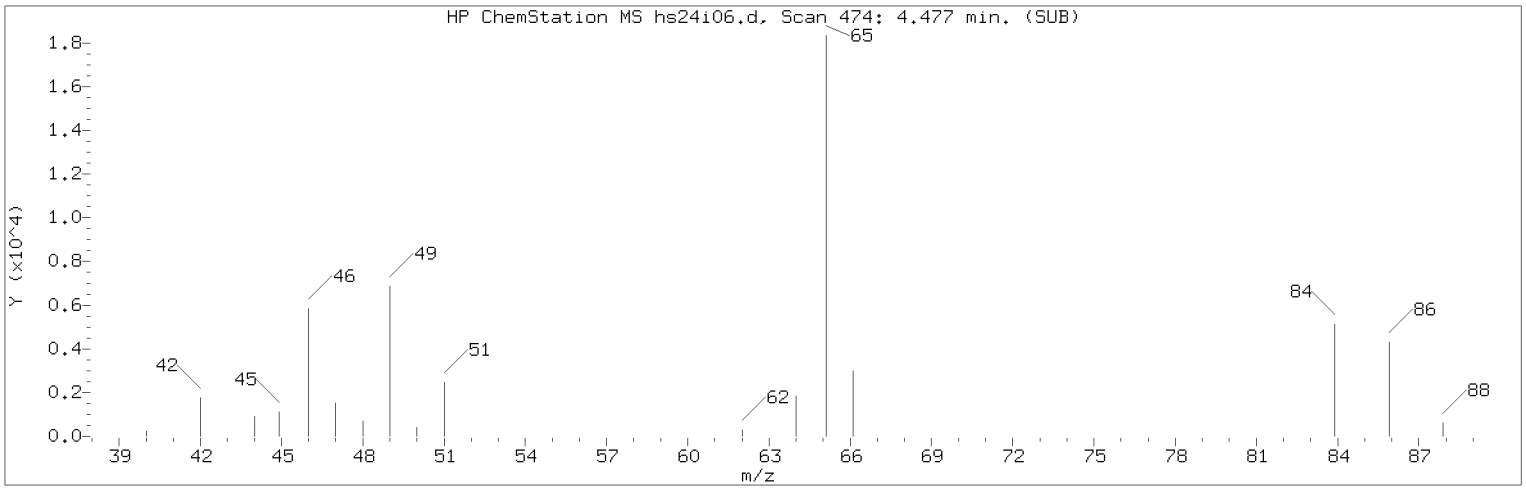
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

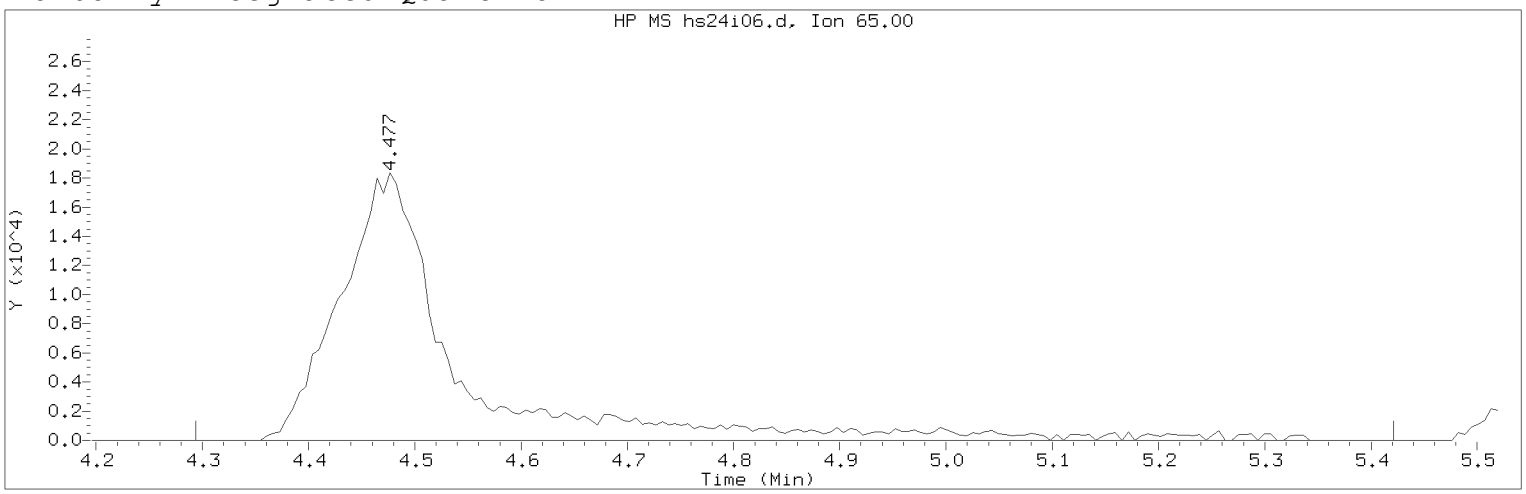
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area : 34206
On-column Amount (ng) : 4.4016
Integration start scan : 346 Integration stop scan: 376
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

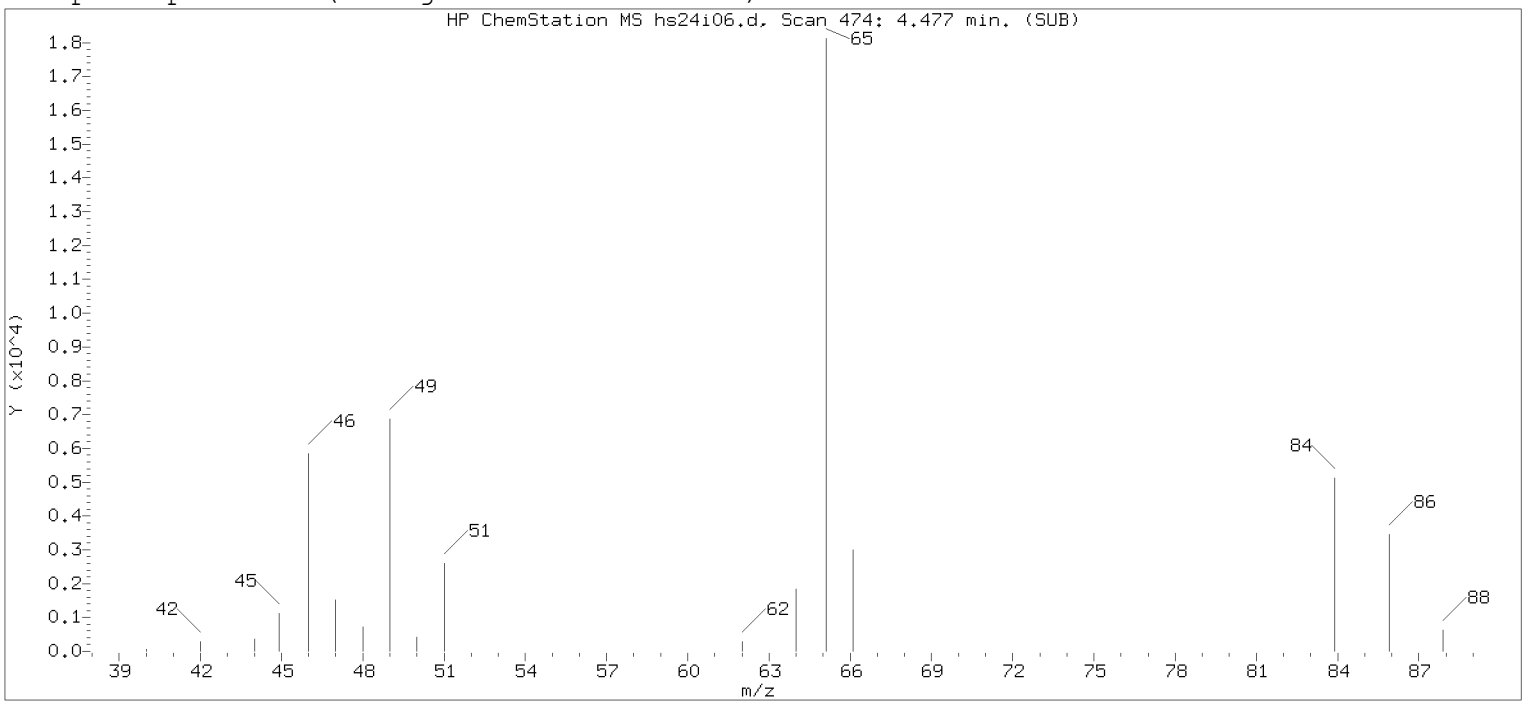
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 140183M
On-Column Amount (ng) : 50.0000
Integration start scan : 443 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

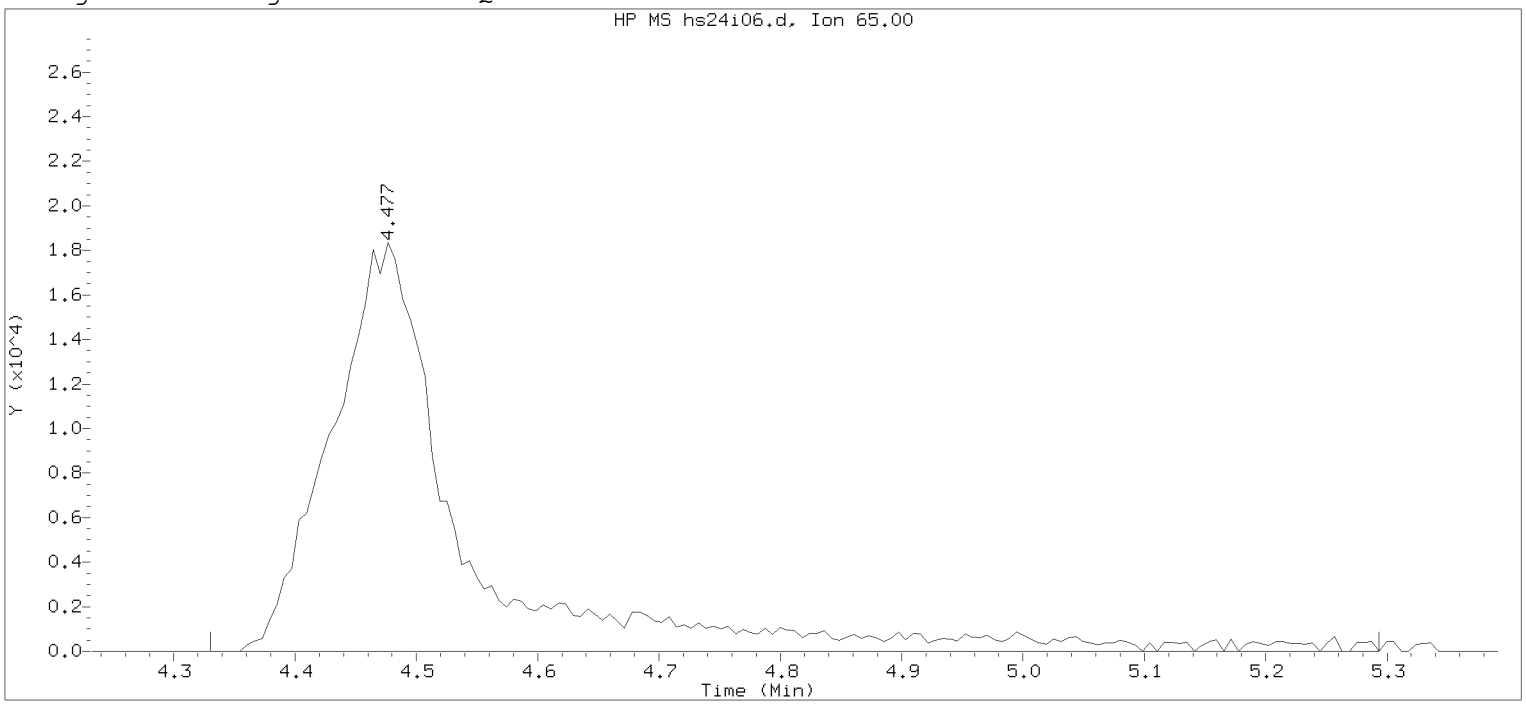
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

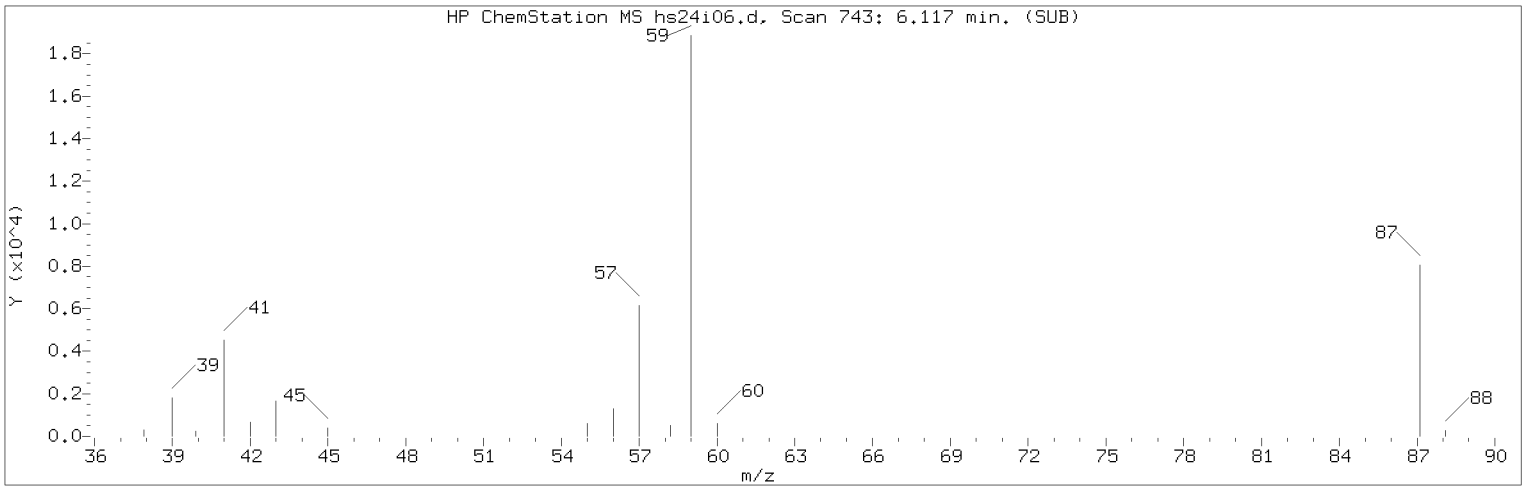
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

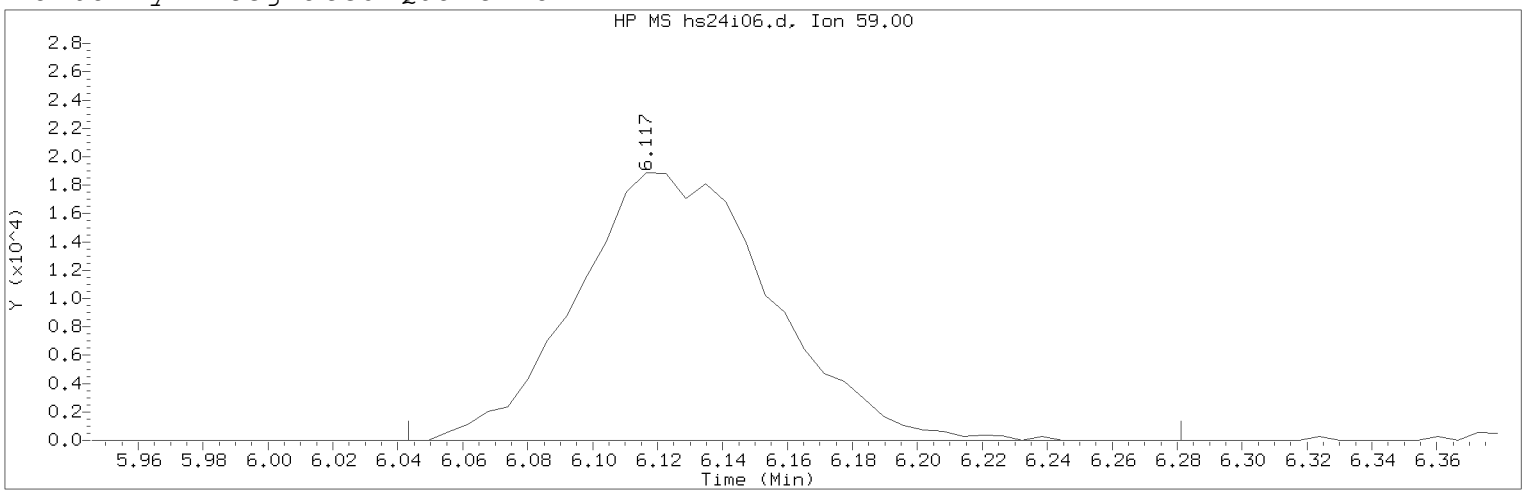
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area : 139492
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 607
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

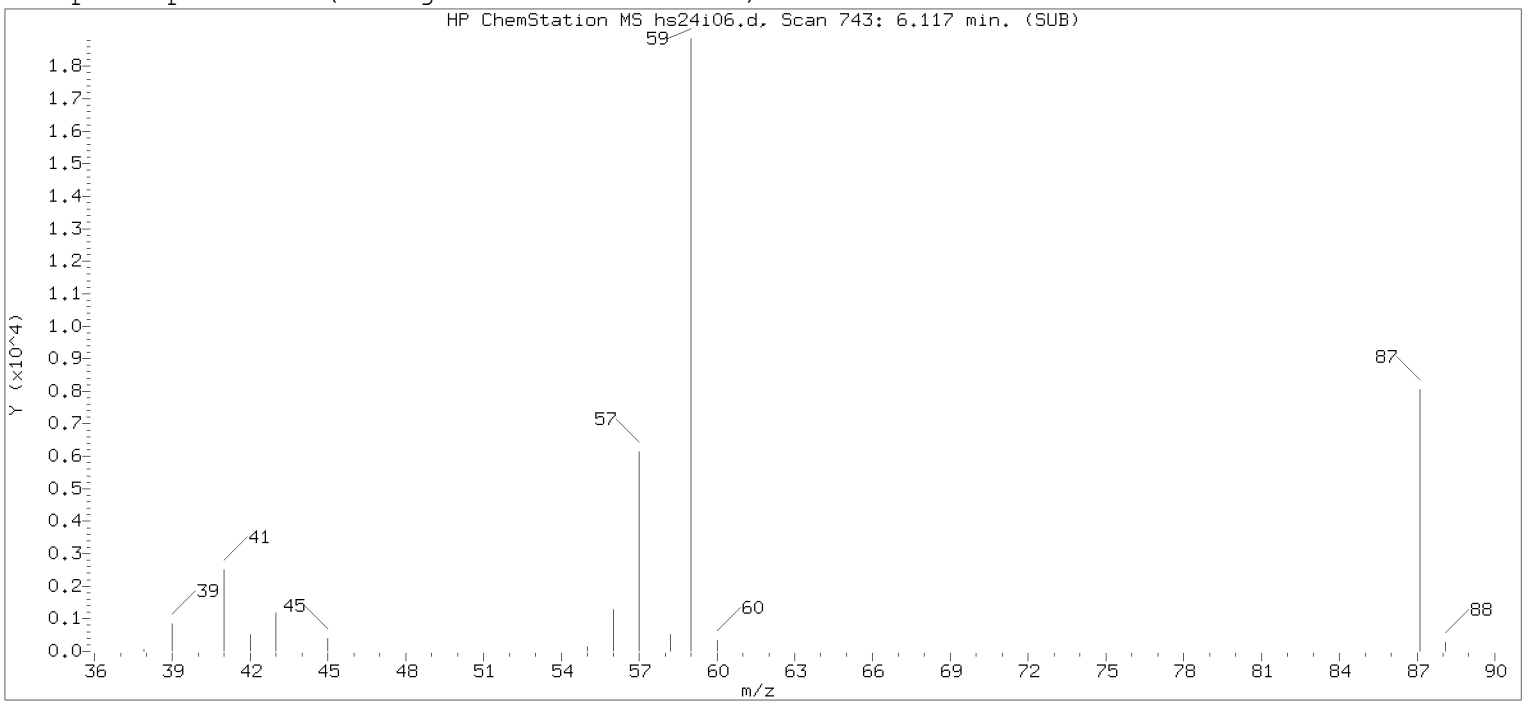
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area (flag) : 79009M
On-Column Amount (ng) : 0.4853
Integration start scan : 730 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

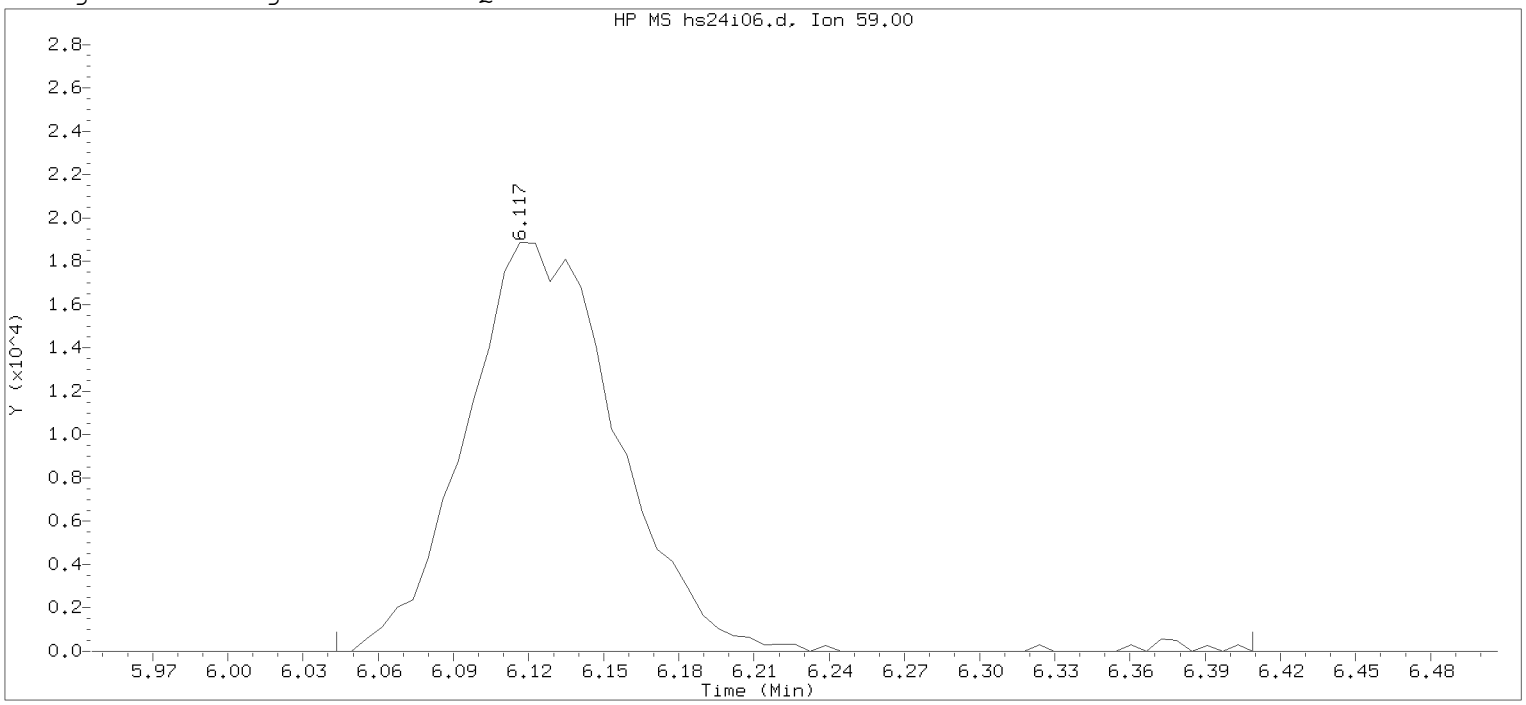
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

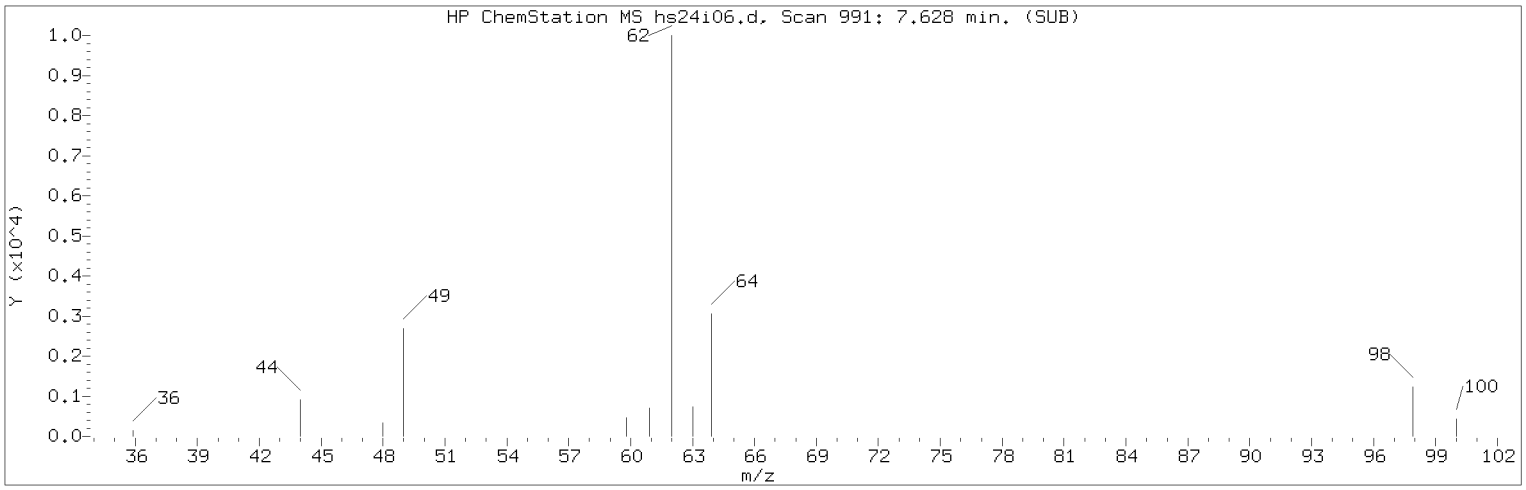
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

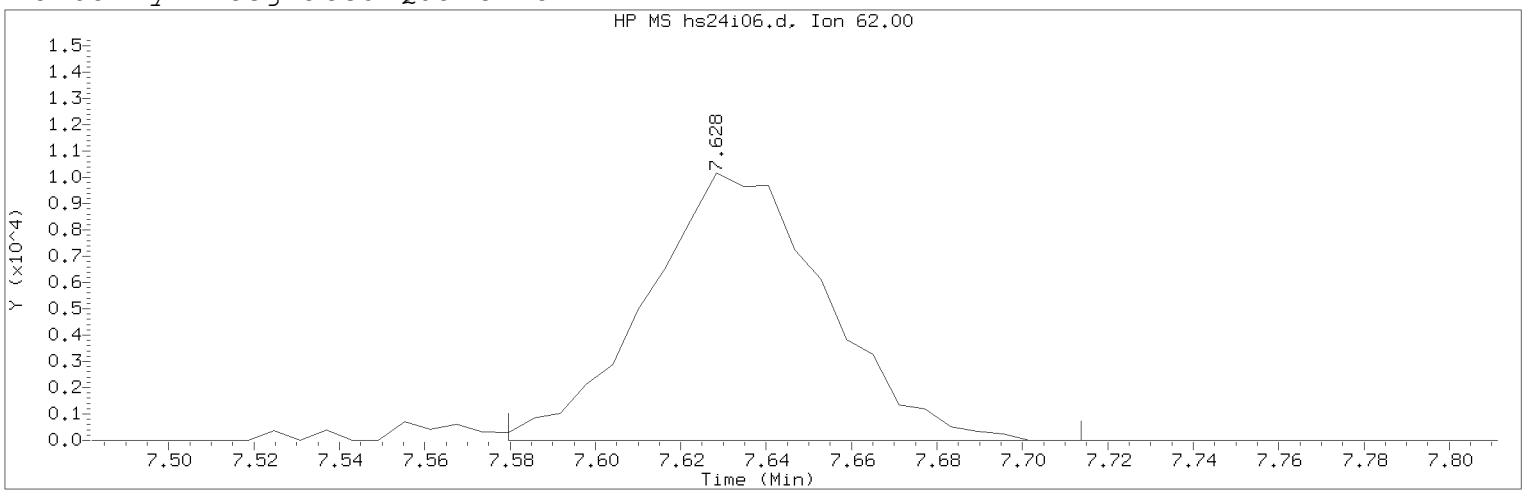
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area : 79805
On-column Amount (ng) : 0.4787
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

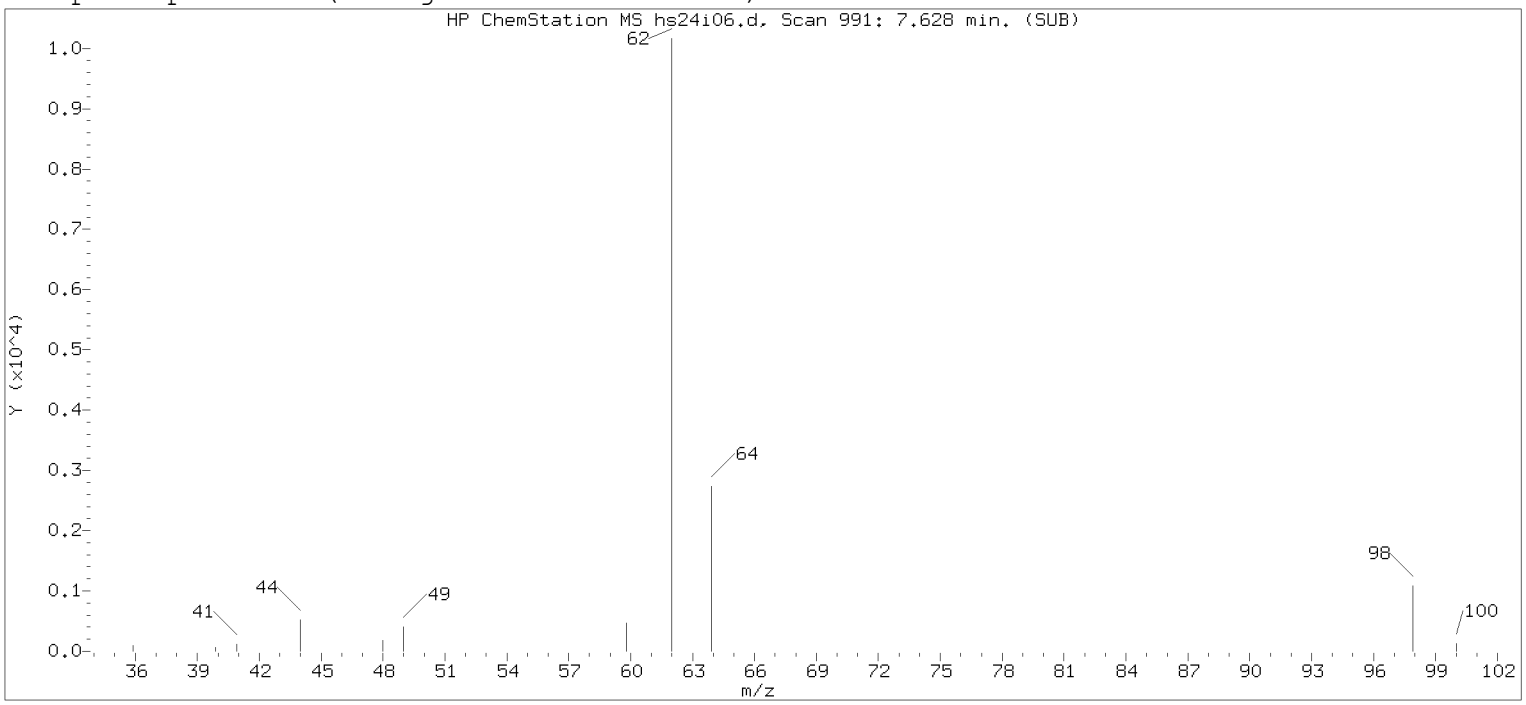
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 29519M
On-Column Amount (ng) : 0.4982
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

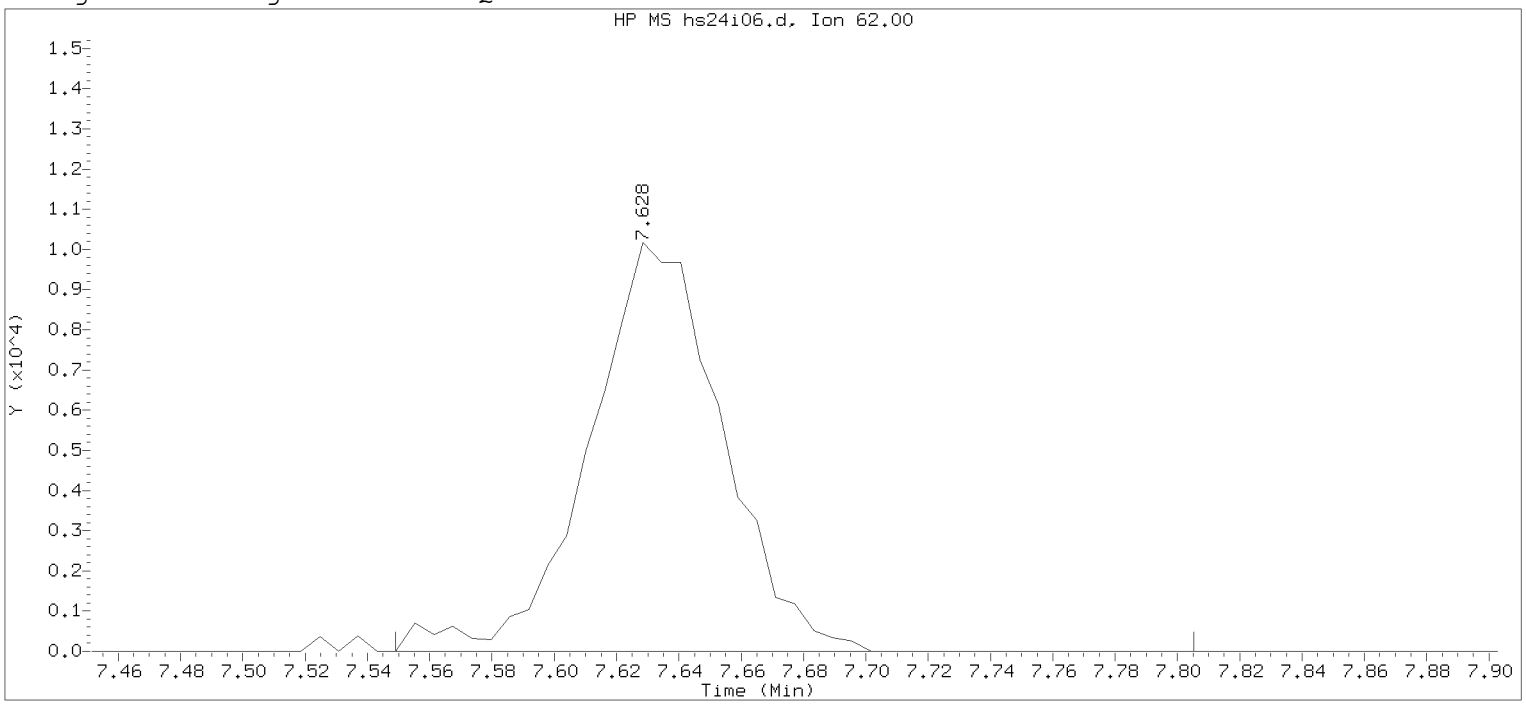
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

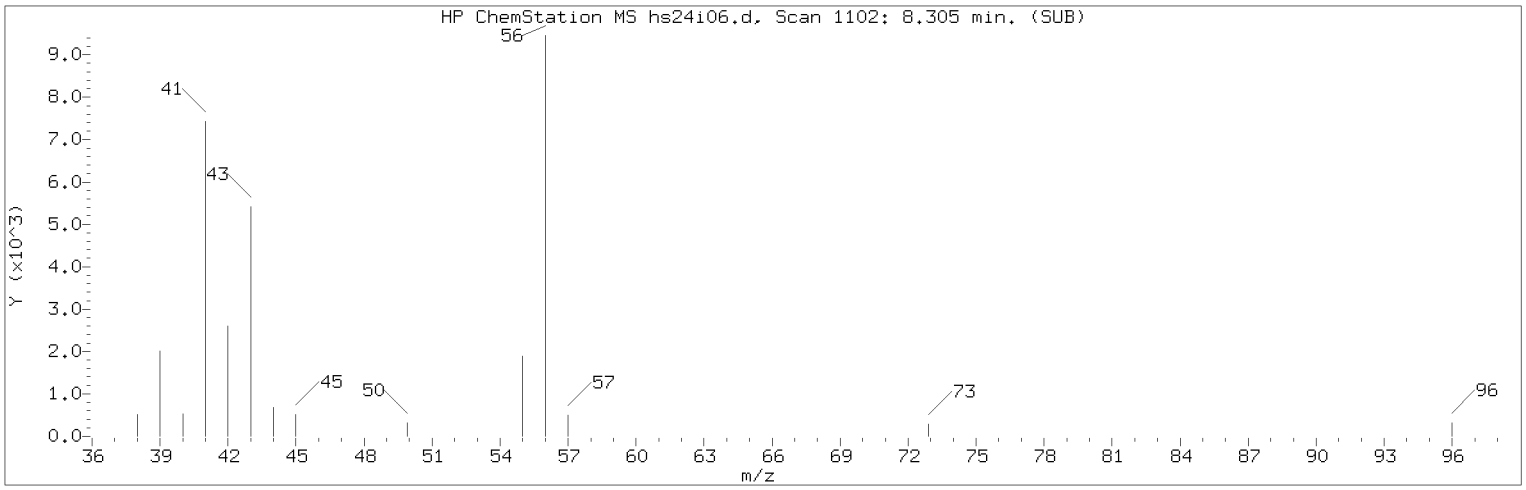
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

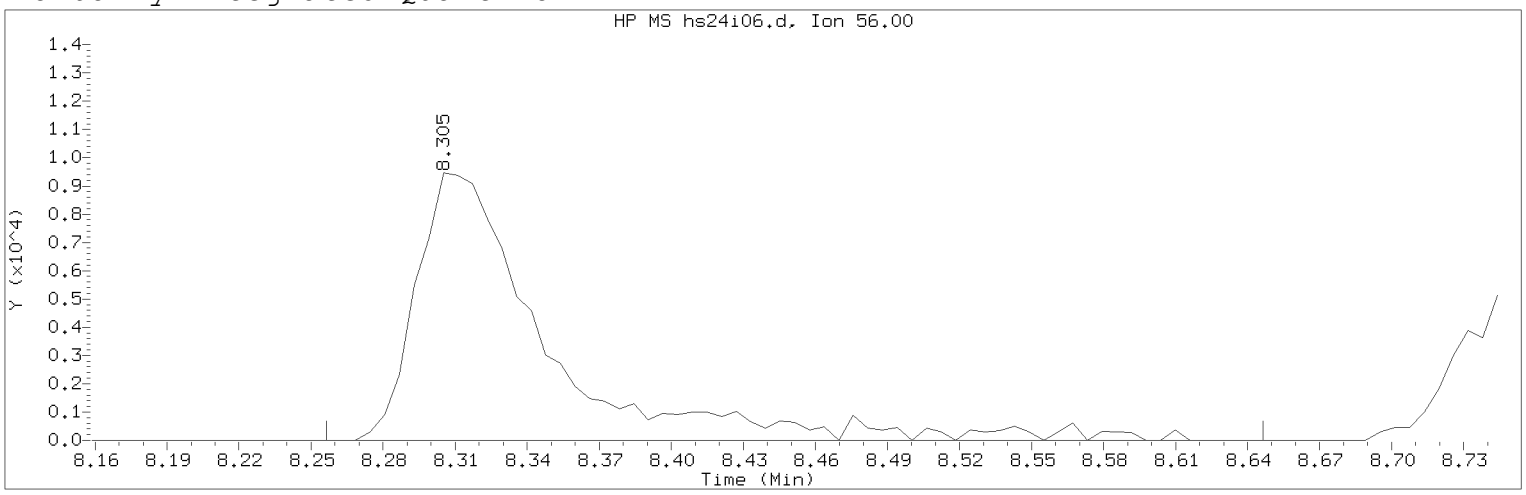
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 30276
On-column Amount (ng) : 0.5128
Integration start scan : 977 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

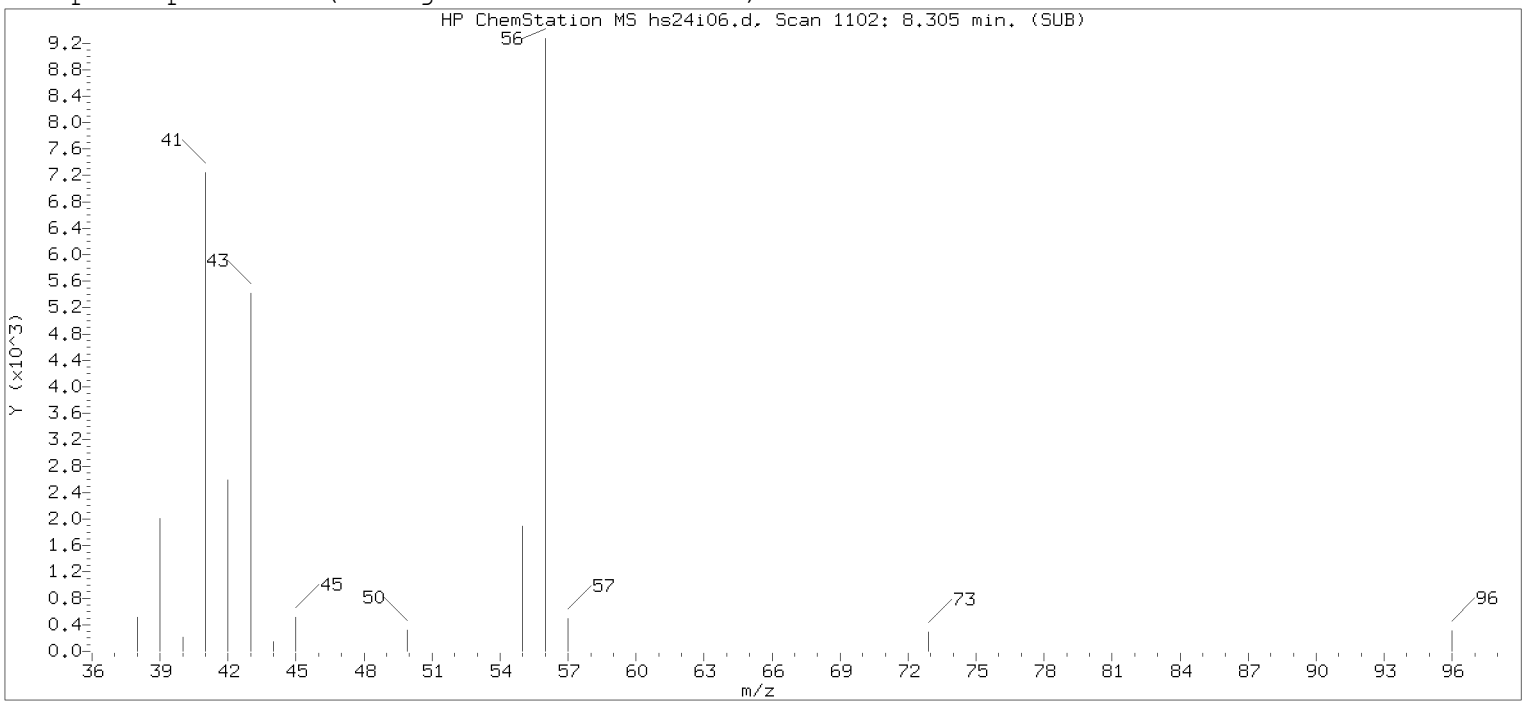
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 35795M
On-Column Amount (ng) : 45.7637
Integration start scan : 1093 Integration stop scan: 1157
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

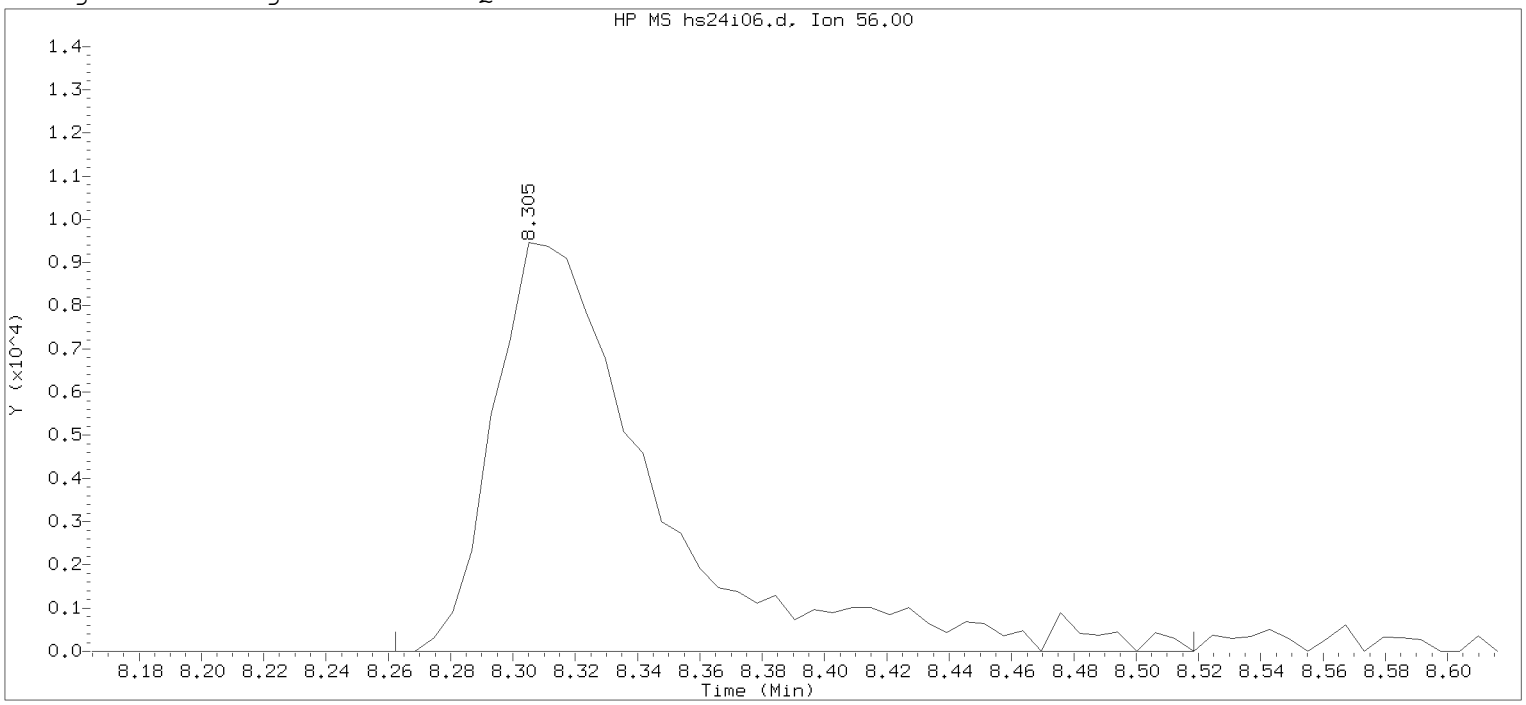
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

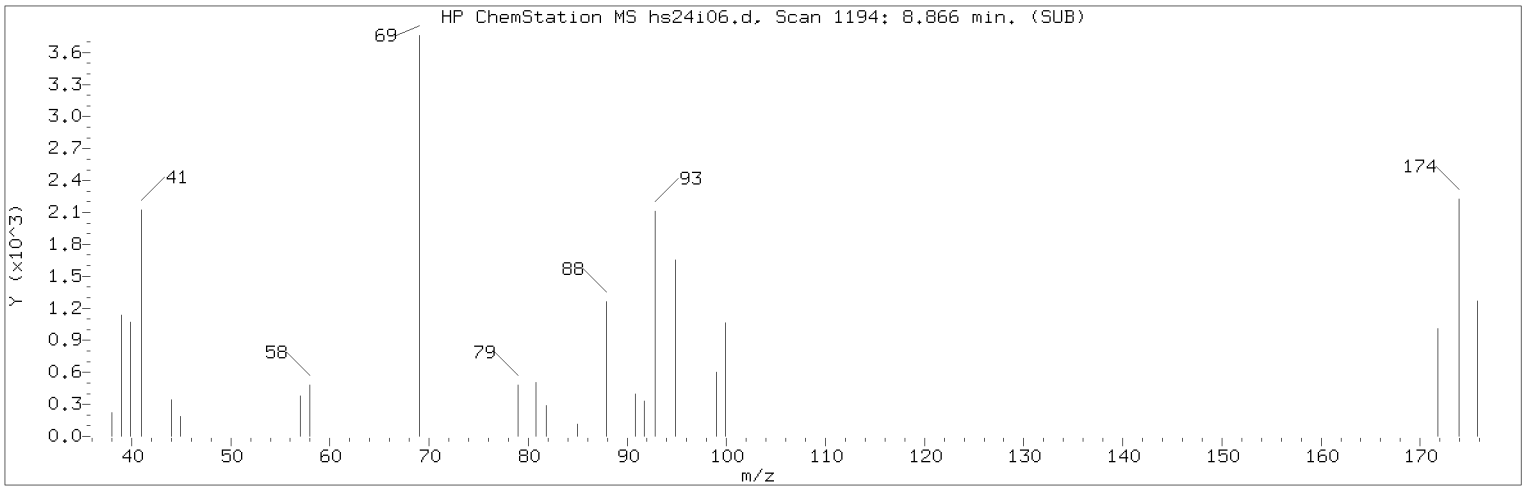
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

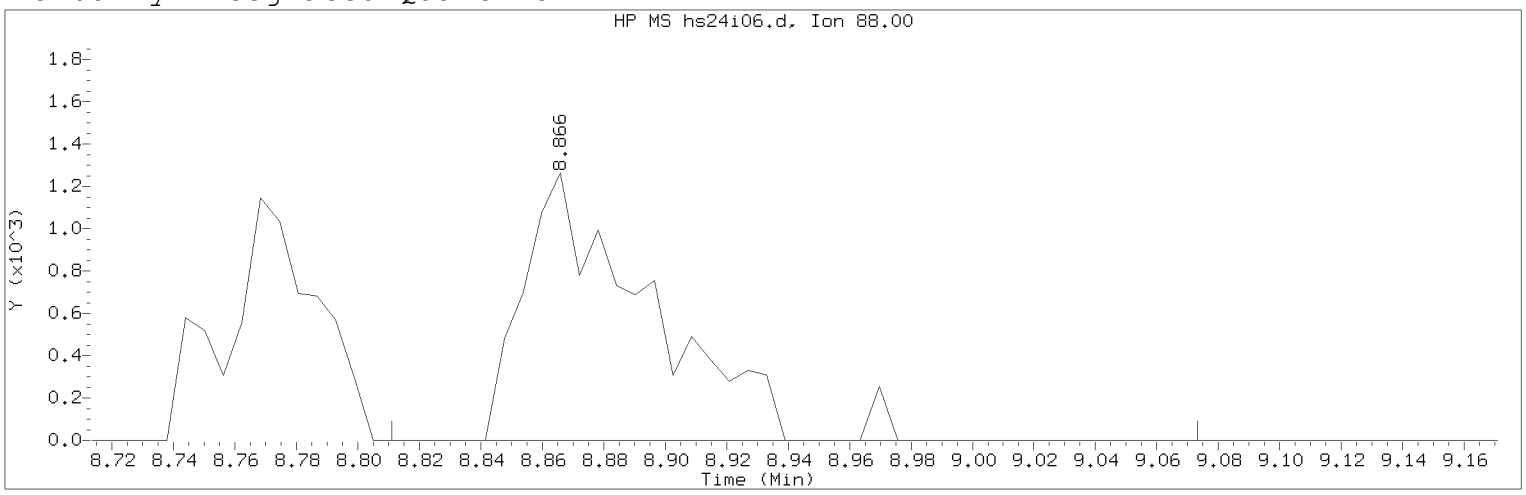
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 34344		
On-column Amount (ng)	: 44.3600		
Integration start scan	: 1094	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

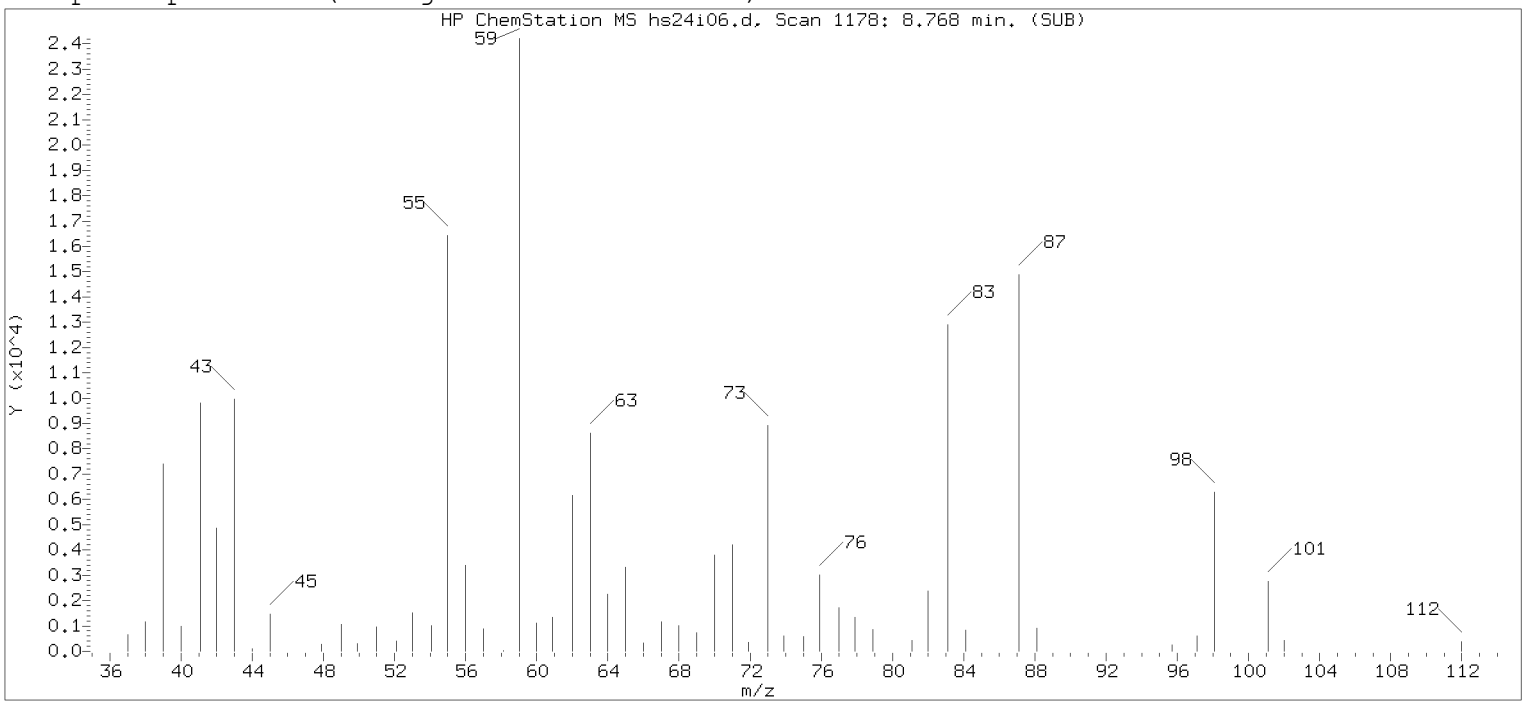
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 3592M
On-Column Amount (ng) : 19.0735
Integration start scan : 1184 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

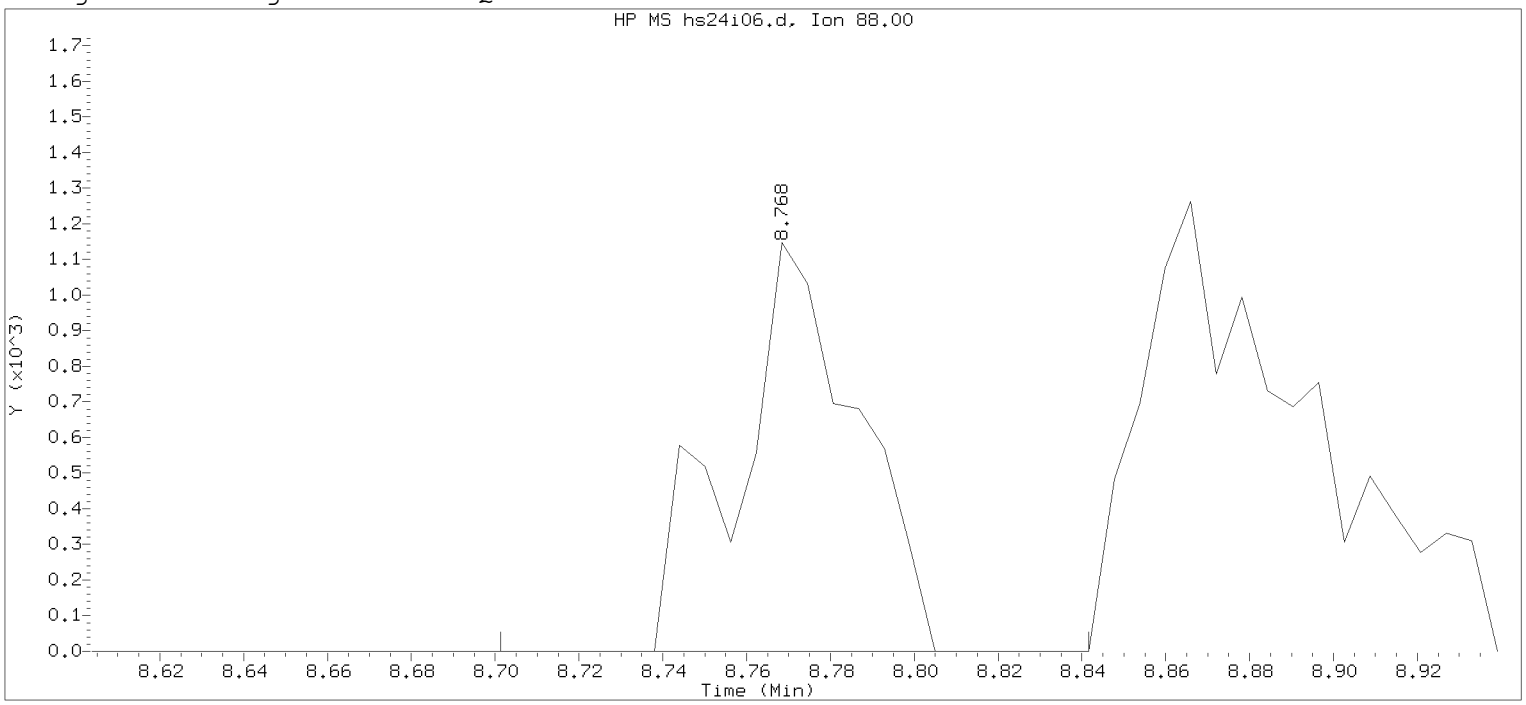
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

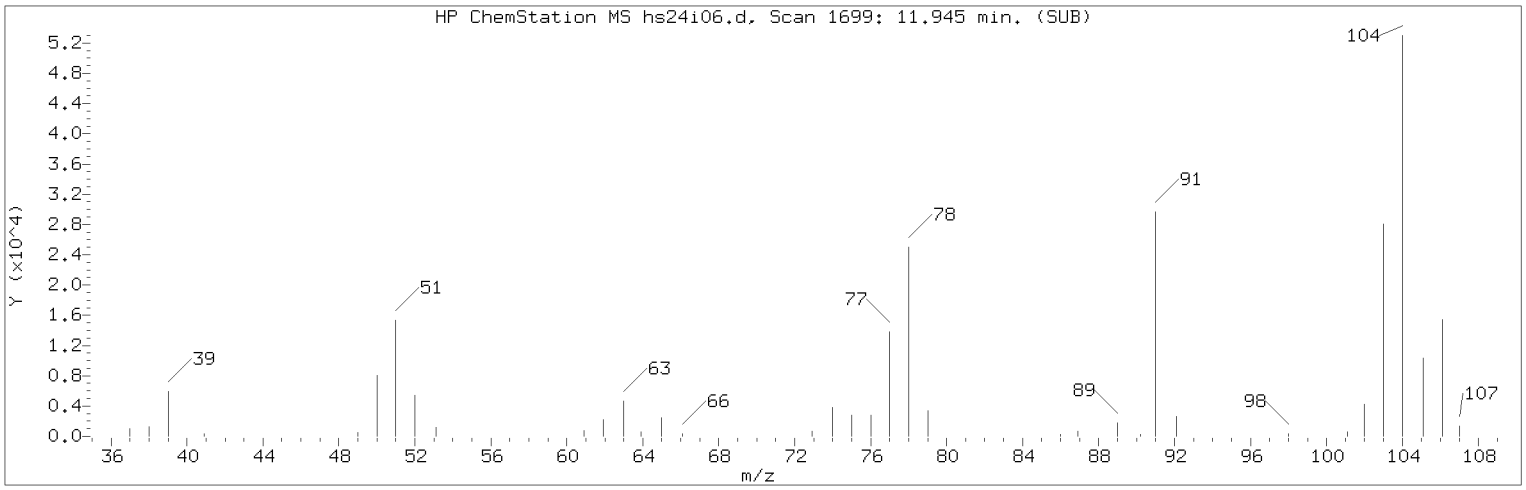
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

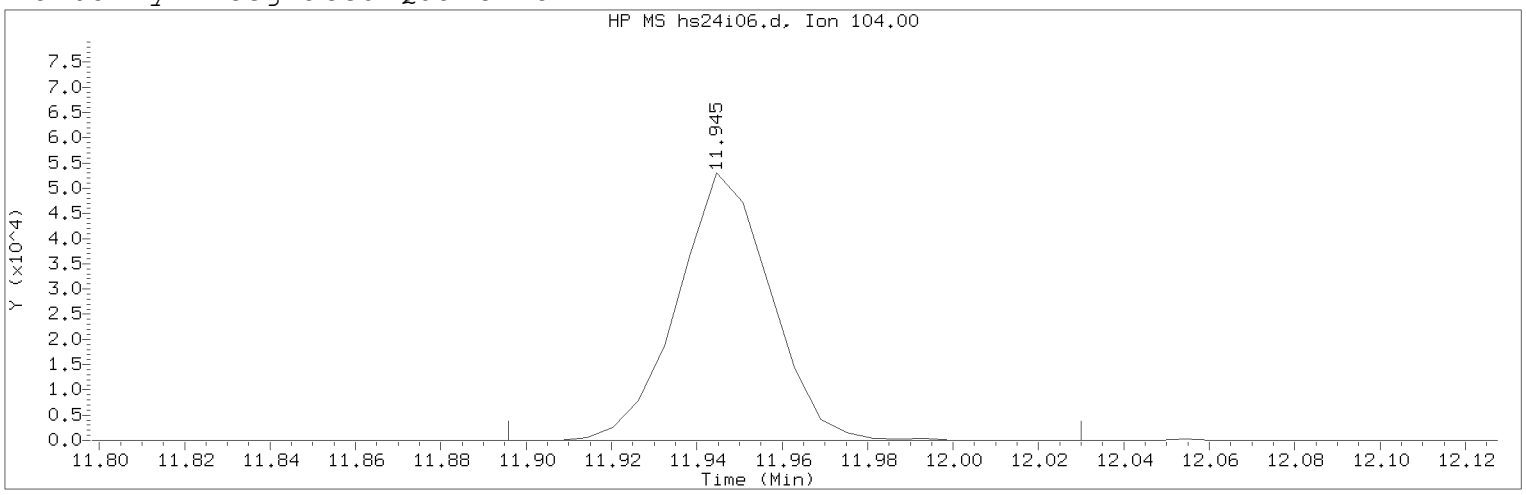
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 2332		
On-column Amount (ng)	: 19.8680		
Integration start scan	: 1166	Integration stop scan:	1189
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

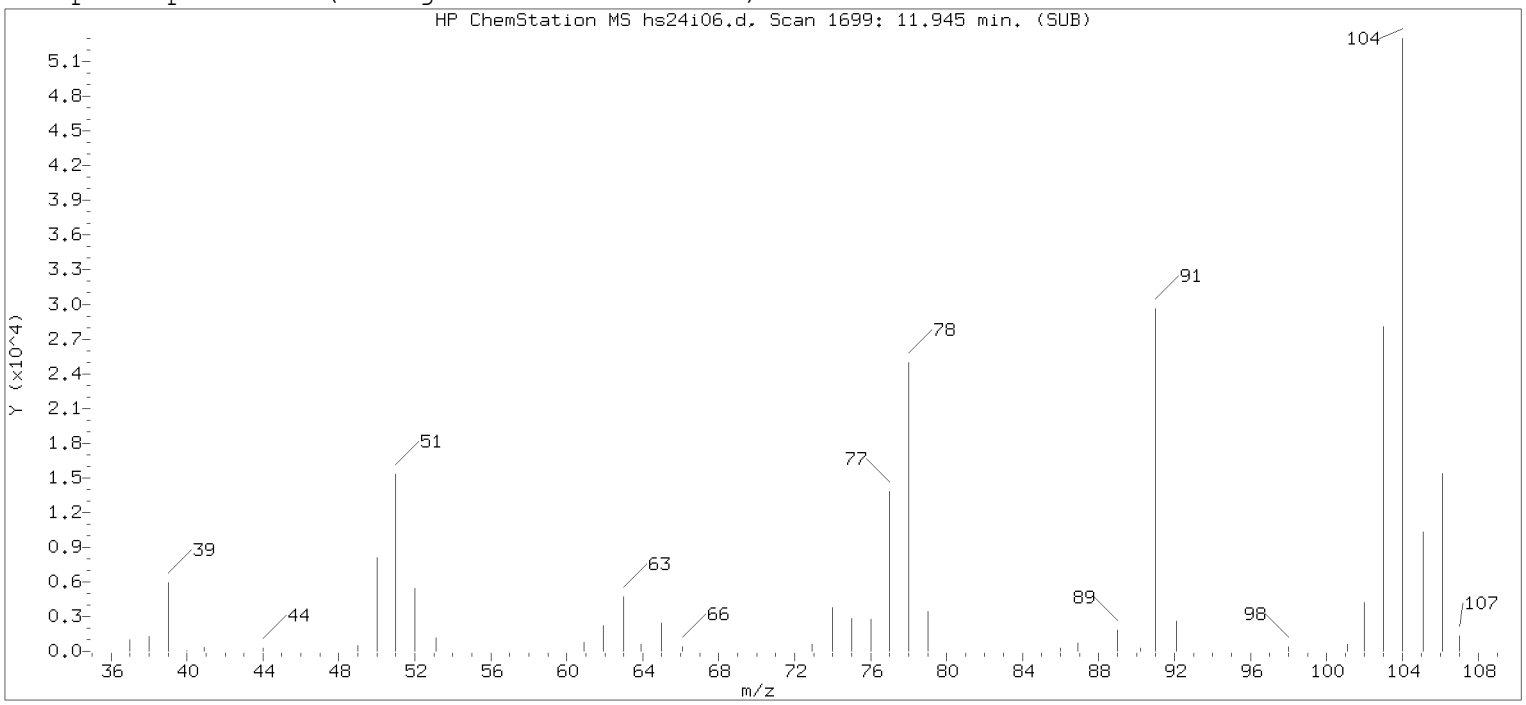
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area (flag) : 80057M
On-Column Amount (ng) : 0.4536
Integration start scan : 1690 Integration stop scan: 1712
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

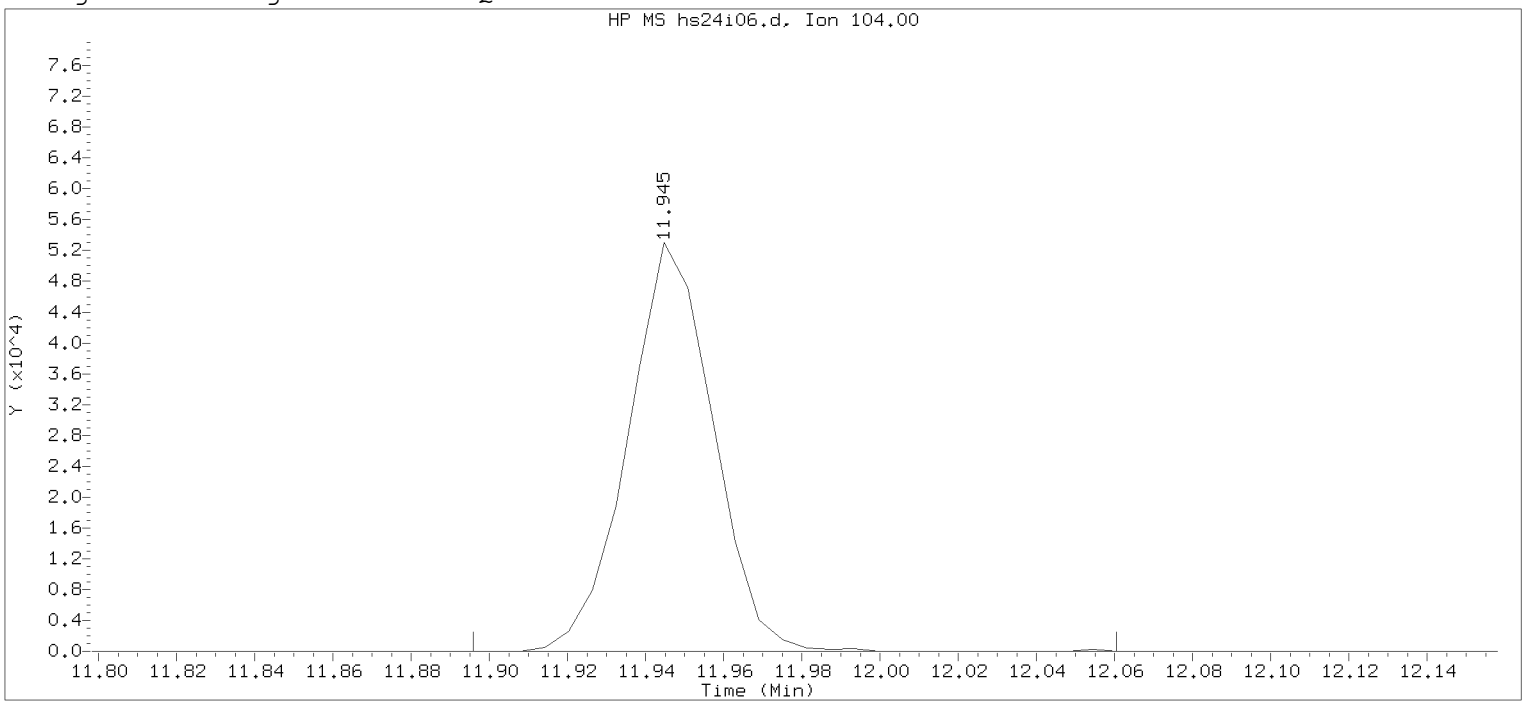
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

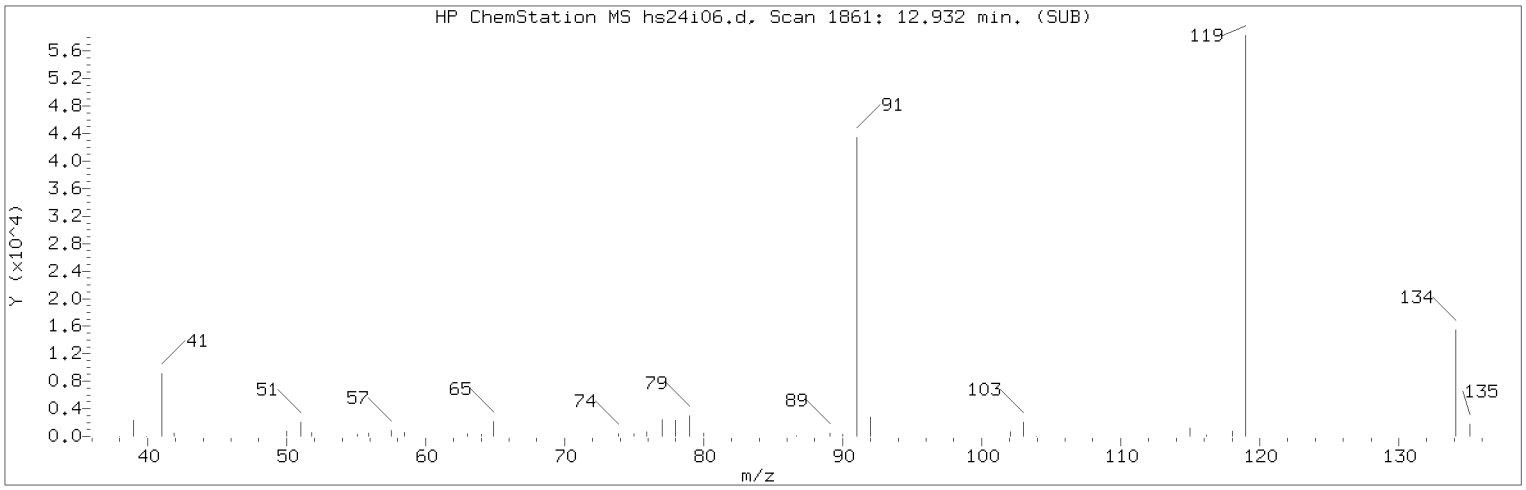
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

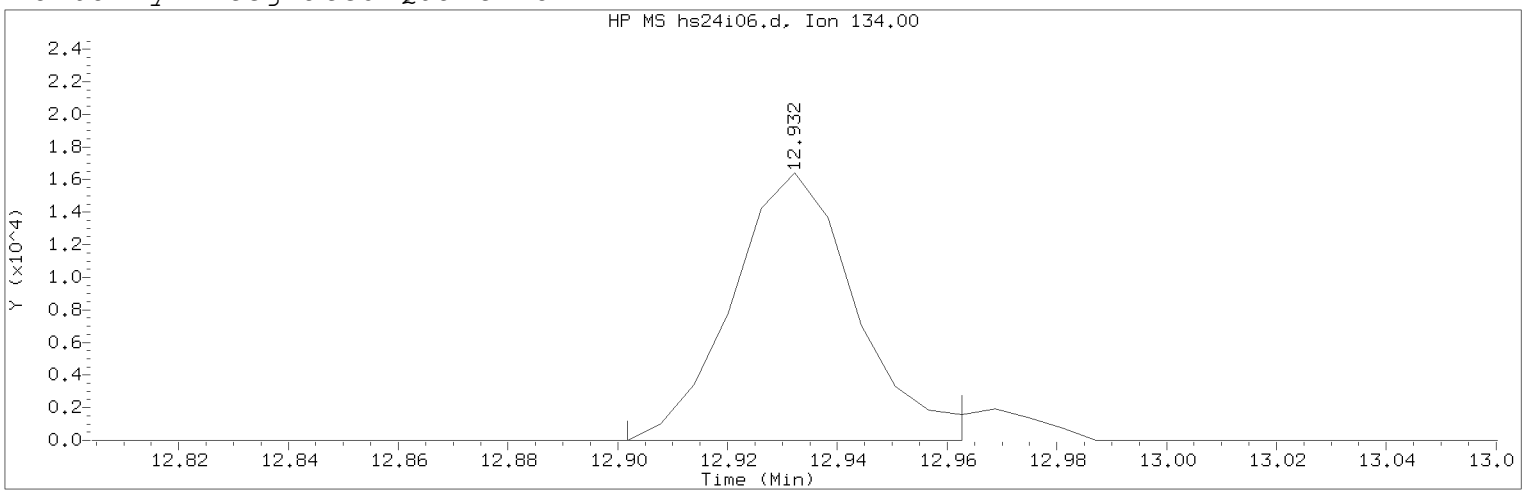
Compound Number	: 106		
Compound Name	: Styrene		
Scan Number	: 1699		
Retention Time (minutes)	: 11.945		
Quant Ion	: 104.00		
Area	: 80151		
On-column Amount (ng)	: 0.4420		
Integration start scan	: 1690	Integration stop scan:	1717
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

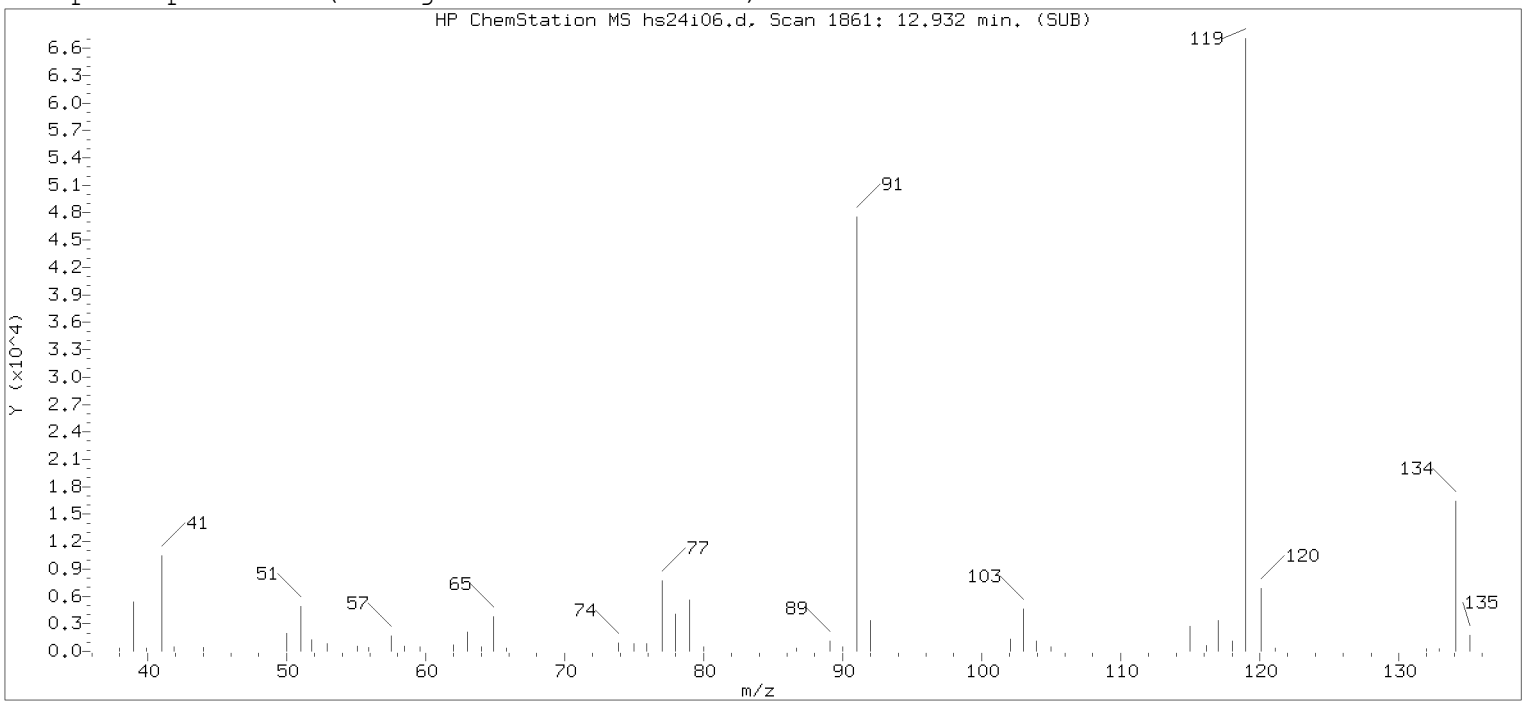
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 25726M
On-Column Amount (ng) : 0.4759
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

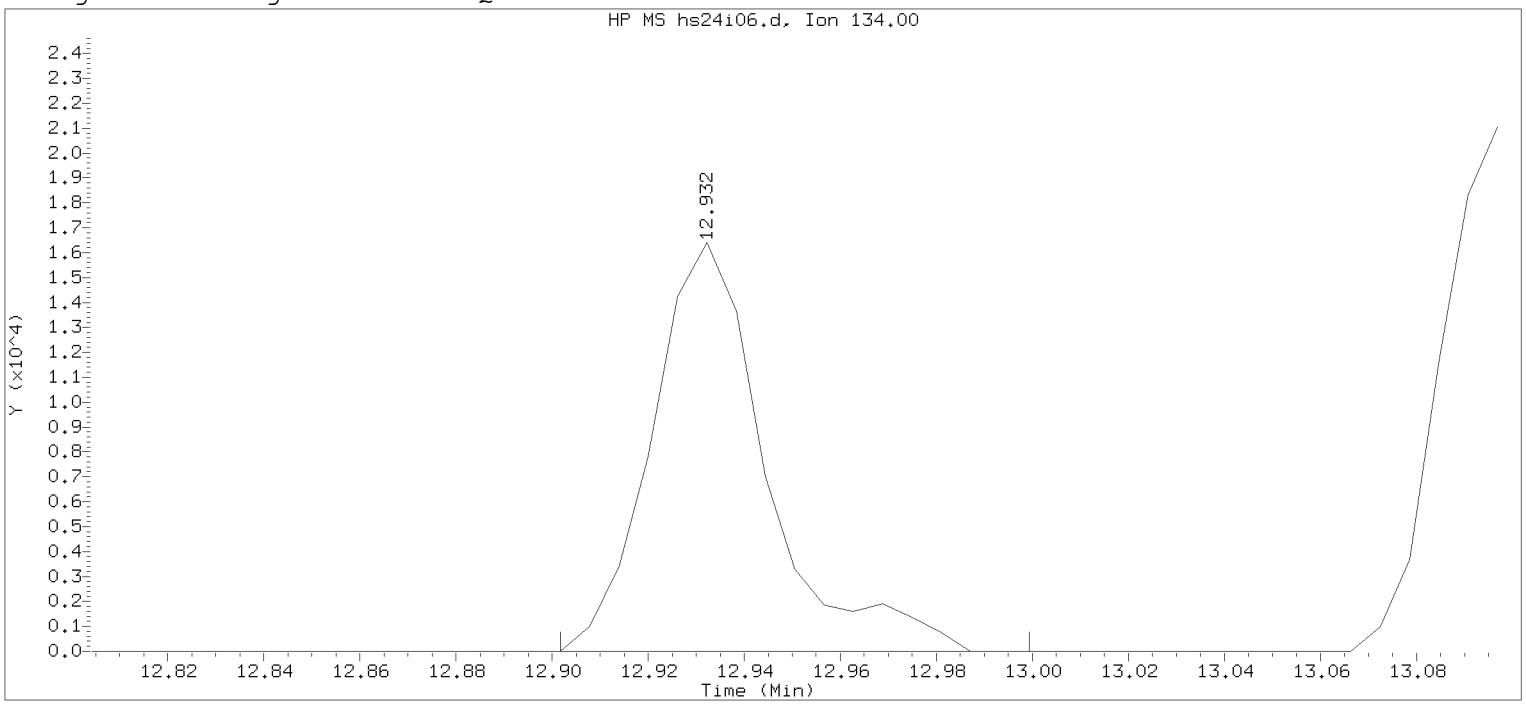
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



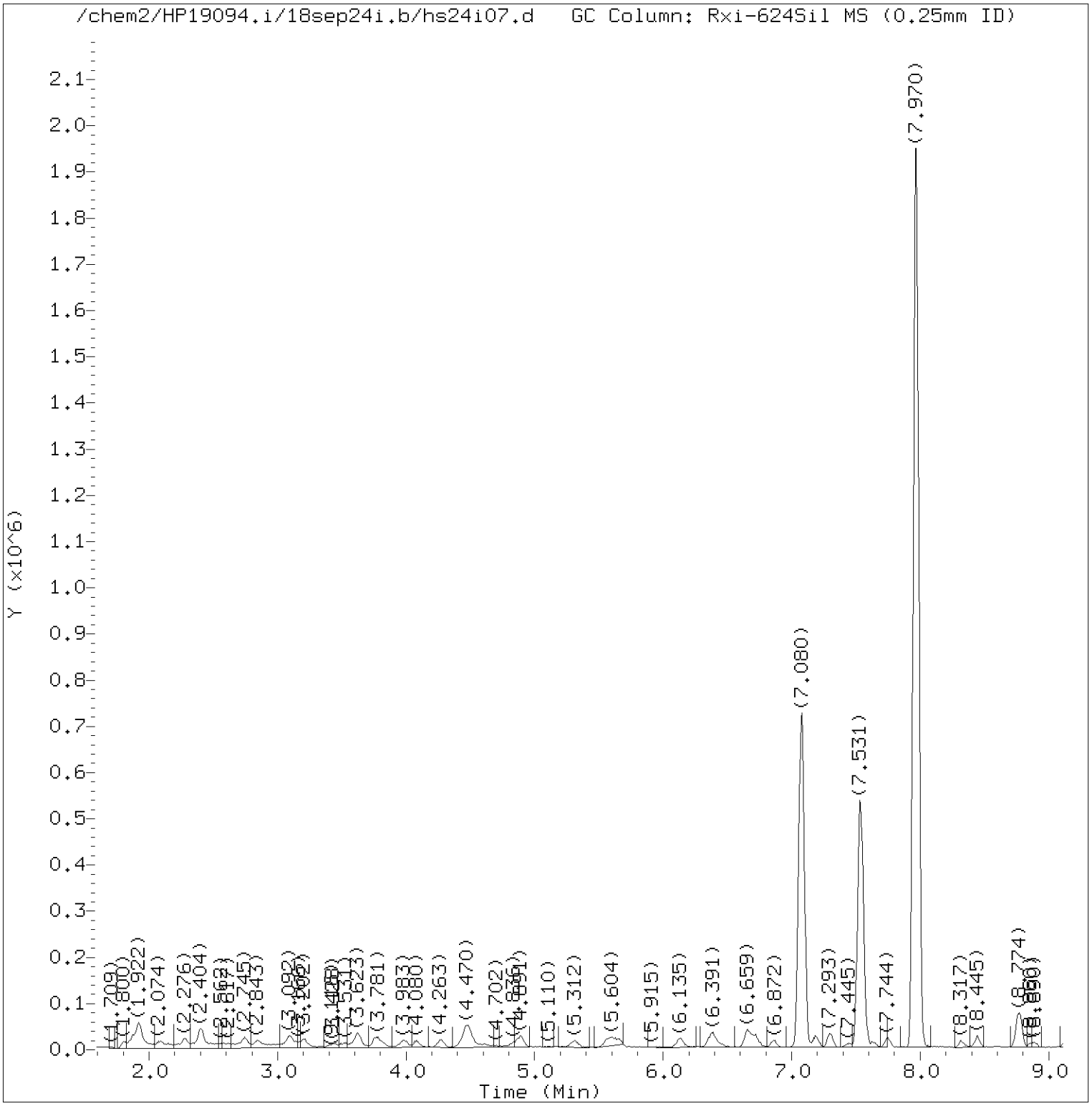
Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 27202
On-column Amount (ng) : 0.4744
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

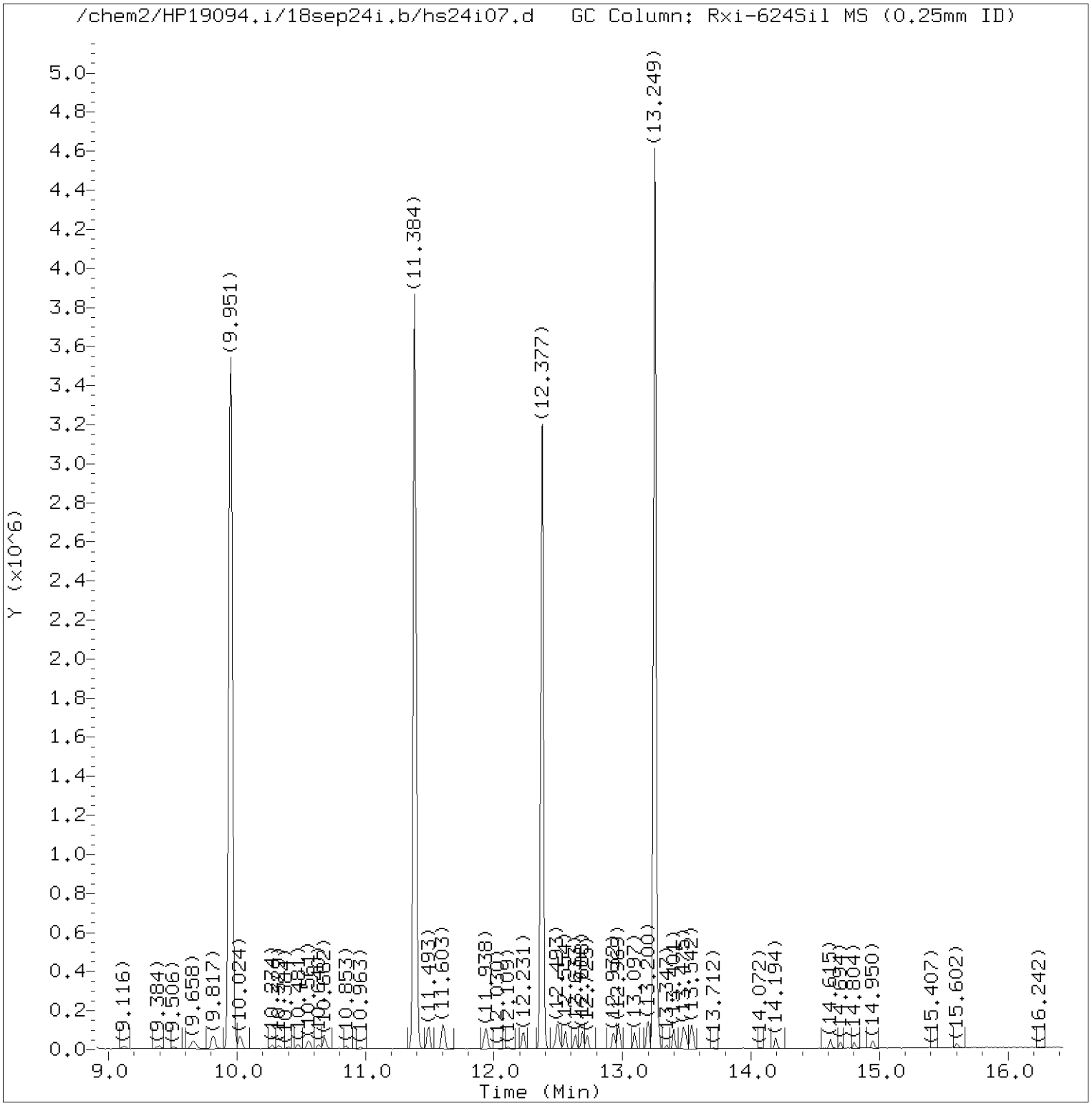
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	18684	0.173
2) Chloromethane	(2)	2.276	50	20265	0.192
6) 1,3-Butadiene	(2)	2.391	39	22506M	0.201
5) Vinyl Chloride	(2)	2.404	62	19000	0.192
7) Bromomethane	(2)	2.745	94	14696	0.191
8) Chloroethane	(2)	2.855	64	11899	0.198
9) Dichlorofluoromethane	(2)	3.092	67	26880	0.188
10) Trichlorofluoromethane	(2)	3.166	101	22332	0.178
11) Ethyl ether	(2)	3.434	59	8413	0.198
12) Freon 123a	(2)	3.513	67	13528	0.171
13) Acrolein	(1)	3.629	56	57860	9.554
15) 1,1-Dichloroethene	(2)	3.769	96	8847	0.163
16) Freon 113	(2)	3.787	101	9804	0.153
14) Acetone	(1)	3.806	43	17774M	2.185
17) Methyl Iodide	(2)	3.970	142	20605	0.182
18) Carbon Disulfide	(2)	4.080	76	32988	0.191
21) Methyl Acetate	(1)	4.251	43	3885	0.170
22) Allyl Chloride	(2)	4.269	41	19586	0.190
23) Methylene Chloride	(2)	4.464	84	14058	0.230
26)*t-Butyl Alcohol-d10	(1)	4.482	65	136477	50.000
28) t-Butyl Alcohol	(1)	4.604	59	8816	3.784
29) Acrylonitrile	(1)	4.836	53	9839	0.937
30) Methyl Tertiary Butyl Ether	(2)	4.885	73	19485	0.175
31) trans-1,2-Dichloroethene	(2)	4.891	96	11360	0.186
32) n-Hexane	(2)	5.305	57	14177	0.146
33) 1,1-Dichloroethane	(2)	5.549	63	20797	0.179
34) di-Isopropyl Ether	(2)	5.604	45	38755	0.187
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	17187	0.164
40) 1,2-Dichloroethene (Total)	(2)		96	23470	0.365
37) Ethyl t-butyl ether	(2)	6.122	59	29171	0.178
38) 2-Butanone	(1)	6.354	43	25880	1.944
41) 2,2-Dichloropropane	(2)	6.385	77	13983	0.168
39) cis-1,2-Dichloroethene	(2)	6.391	96	12110	0.179
42) Propionitrile	(1)	6.452	54	12829	3.550
45) Methacrylonitrile	(1)	6.659	67	23810	1.827
47) Bromochloromethane	(2)	6.702	128	5661	0.198
48) Tetrahydrofuran	(1)	6.726	71	6748	1.906
49) Chloroform	(2)	6.860	83	18885	0.174

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	694305	9.967
50)$Dibromofluoromethane	(2)	7.080	111	718039	10.014
51) 1,1,1-Trichloroethane	(2)	7.080	97	15708	0.170
52) Cyclohexane	(2)	7.183	56	19182	0.159
52) Cyclohexane	(2)	7.183	84	16106	0.162
52) Cyclohexane	(2)	7.201	69	5648	0.159
55) 1,1-Dichloropropene	(2)	7.299	75	15252	0.174
54) Carbon Tetrachloride	(2)	7.305	117	12817	0.161
56) Isobutyl Alcohol	(1)	7.439	41	7908	8.774
57)$1,2-Dichloroethane-d4	(2)	7.537	102	122128	10.056
57)$1,2-Dichloroethane-d4	(2)	7.531	65	592808	10.092
57)$1,2-Dichloroethane-d4	(2)	7.531	104	77943	10.021
58) Benzene	(2)	7.573	78	48910	0.189
59) 1,2-Dichloroethane	(2)	7.640	62	13176	0.221
60) t-Amyl methyl ether	(2)	7.750	73	24932	0.183
62) n-Heptane	(2)	7.963	43	14806	0.148
63)*Fluorobenzene	(2)	7.970	96	2763999	10.000
65) n-Butanol	(1)	8.317	56	13835M	18.168
67) Trichloroethene	(2)	8.451	95	11889	0.179
69) Methylcyclohexane	(2)	8.750	83	22461	0.179
70) 1,2-Dichloropropane	(2)	8.787	63	12025	0.191
71) Methyl Methacrylate	(1)	8.847	69	4087	0.169
72) 1,4-Dioxane	(1)	8.872	88	1041M	5.678
73) Dibromomethane	(2)	8.884	93	4747	0.182
74) Bromodichloromethane	(2)	9.128	83	13129	0.186
76) 2-Nitropropane	(1)	9.396	41	11979	1.753
80) cis-1,3-Dichloropropene	(2)	9.652	75	14627	0.178
81) 4-Methyl-2-Pentanone	(1)	9.811	43	56901M	1.718
82)$Toluene-d8	(3)	9.951	98	2792286	10.141
82)$Toluene-d8	(3)	9.951	100	1785080	10.044
83) Toluene	(3)	10.024	92	29814	0.188
85) 1,3-Dichloropropene (total)	(3)		75	24597	0.341
84) trans-1,3-Dichloropropene	(3)	10.274	75	9970	0.163
86) Ethyl Methacrylate	(3)	10.329	69	8963	0.171
91) 2-Hexanone	(1)	10.335	43	39960	1.772
88) 1,1,2-Trichloroethane	(3)	10.487	97	7236M	0.198
89) Tetrachloroethene	(3)	10.561	166	12649	0.176
90) 1,3-Dichloropropane	(3)	10.640	76	12143	0.188

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$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	8337	0.190
95) 1,2-Dibromoethane	(3)	10.963	107	6295	0.184
96) 1-Chlorohexane	(3)	11.384	91	18987	0.201
97)*Chlorobenzene-d5	(3)	11.384	117	2139400	10.000
98) Chlorobenzene	(3)	11.408	112	31130	0.185
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	9192	0.165
100) Ethylbenzene	(3)	11.493	91	54290	0.175
101) m+p-Xylene	(3)	11.603	106	40662	0.353
105) Xylene (Total)	(3)		106	59182	0.522
104) o-Xylene	(3)	11.932	106	18520	0.168
106) Styrene	(3)	11.944	104	29429	0.167
107) Bromoform	(3)	12.109	173	4117	0.171
108) Isopropylbenzene	(3)	12.231	105	51166	0.170
111)$4-Bromofluorobenzene	(3)	12.377	95	1020584	10.180
111)$4-Bromofluorobenzene	(3)	12.377	174	882233	10.135
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	8843	0.197
114) Bromobenzene	(4)	12.493	156	11951	0.175
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	17855M	1.721
116) 1,2,3-Trichloropropane	(4)	12.524	110	2226	0.192
117) n-Propylbenzene	(4)	12.554	91	63816	0.172
119) 2-Chlorotoluene	(4)	12.633	126	12496	0.174
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	41880	0.167
122) 4-Chlorotoluene	(4)	12.725	126	12375	0.172
125) tert-Butylbenzene	(4)	12.932	134	8830M	0.161
126) Pentachloroethane	(4)	12.963	167	7371	0.173
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	42070	0.164
128) sec-Butylbenzene	(4)	13.097	105	52250M	0.160
131) 1,3-Dichlorobenzene	(4)	13.200	146	23099	0.170
132) p-Isopropyltoluene	(4)	13.200	119	42501	0.157
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1132249	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	24681	0.185
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	23113	0.196
136) Benzyl Chloride	(4)	13.341	126	2121	0.131
138) n-Butylbenzene	(4)	13.493	92	21345	0.159
139) 1,2-Dichlorobenzene	(4)	13.529	146	21920	0.183
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	880	0.157
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	17490	0.173
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	14330	0.174

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	5770	0.186
147) Naphthalene	(4)	14.804	128	21320	0.164
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	11734	0.174

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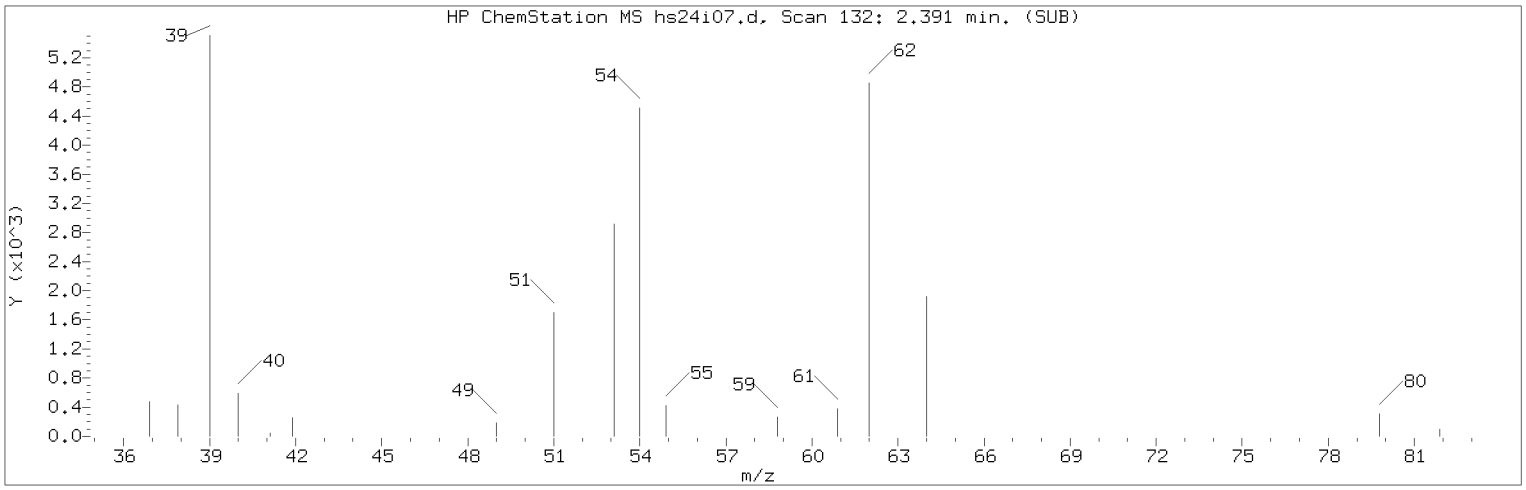
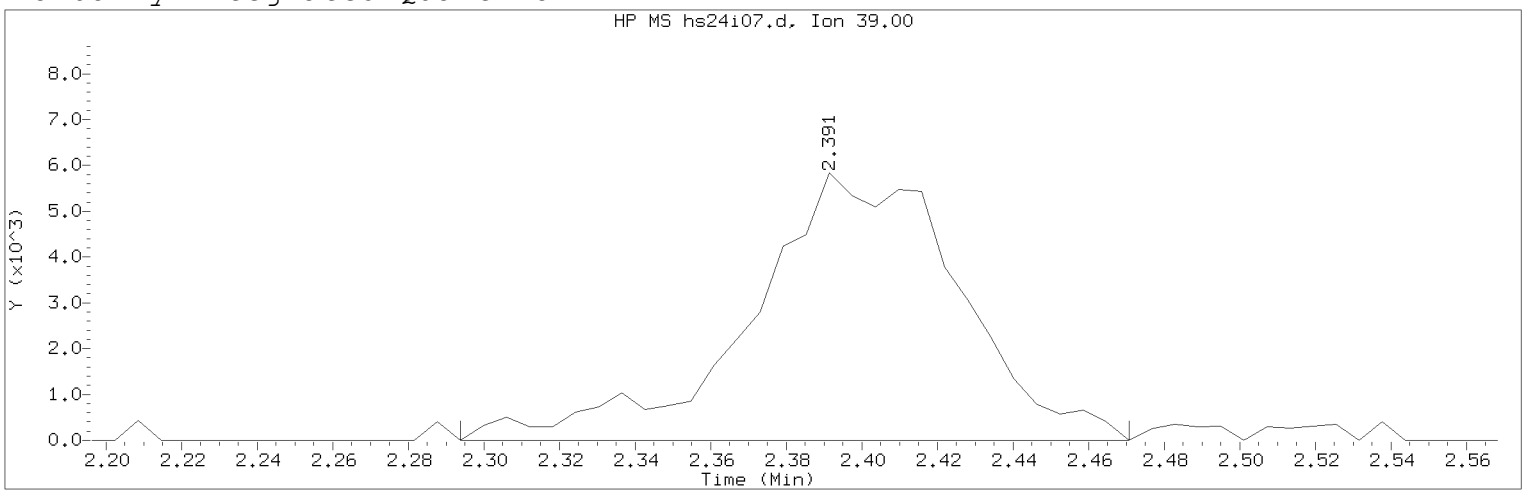
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

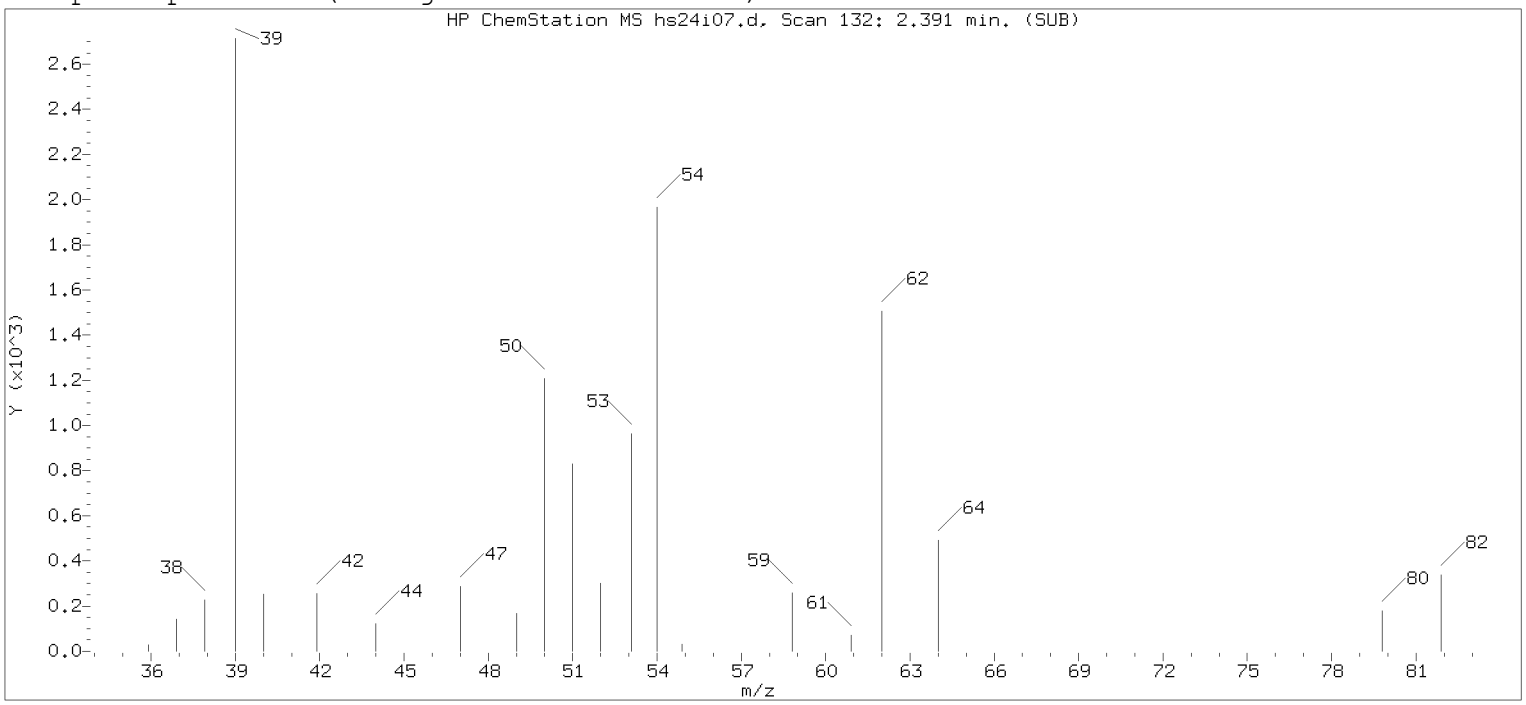
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 22506M
On-Column Amount (ng) : 0.2006
Integration start scan : 115 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

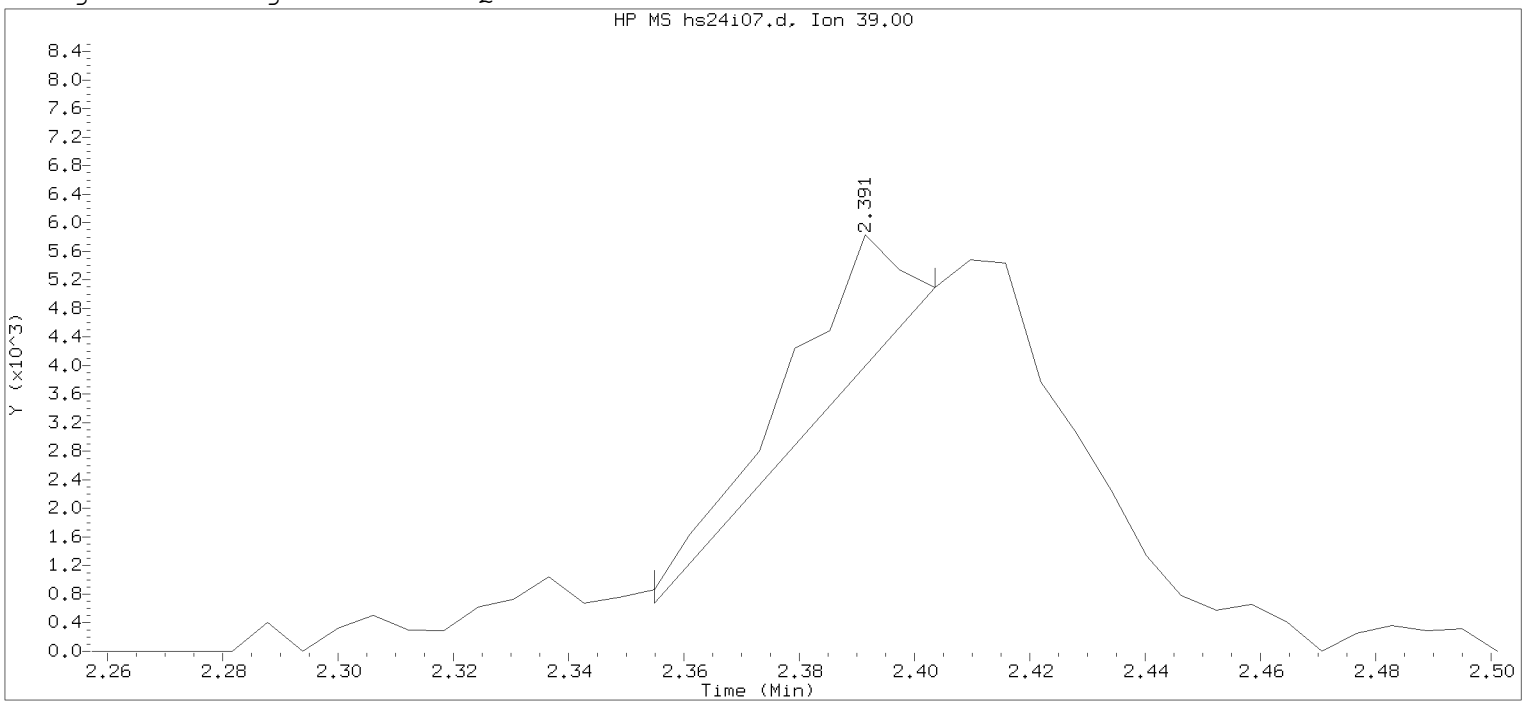
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 132		
Retention Time (minutes)	: 2.391		
Quant Ion	: 39.00		
Area	: 2354		
On-column Amount (ng)	: 0.0257		
Integration start scan	: 125	Integration stop scan:	133
Y at integration start	: 678	Y at integration end:	5096

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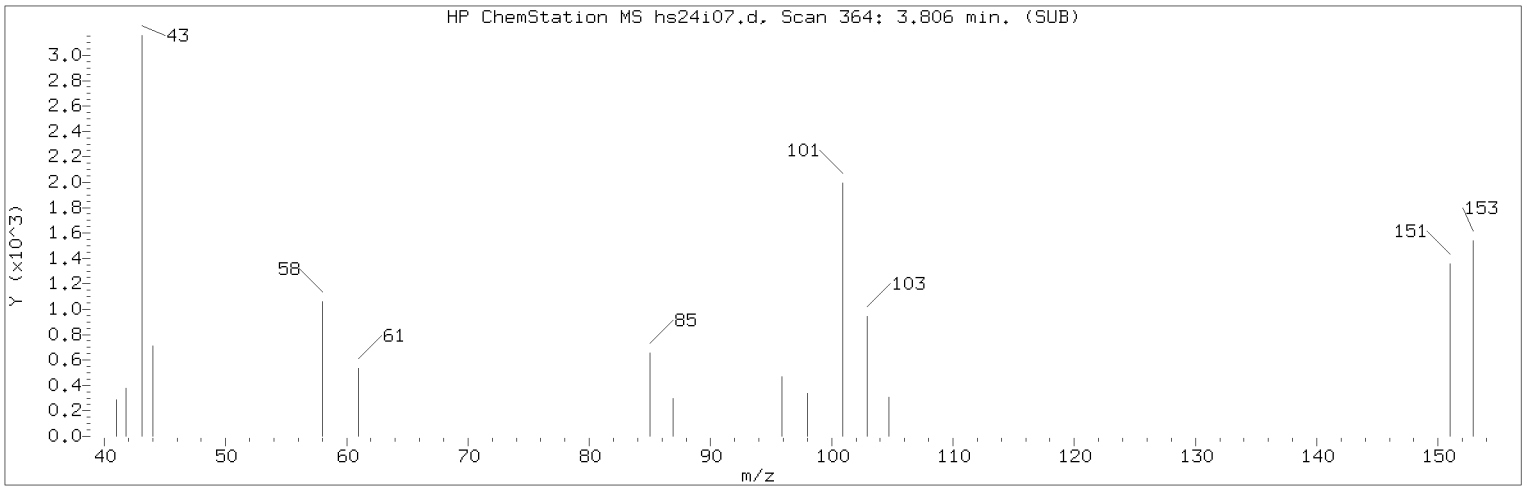
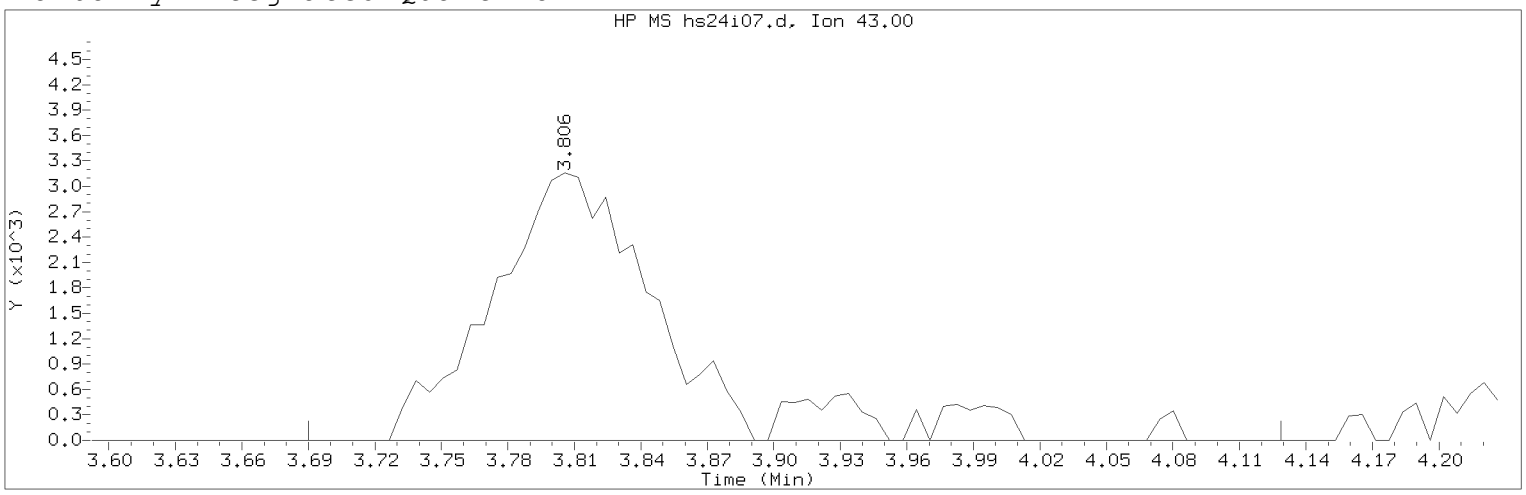
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

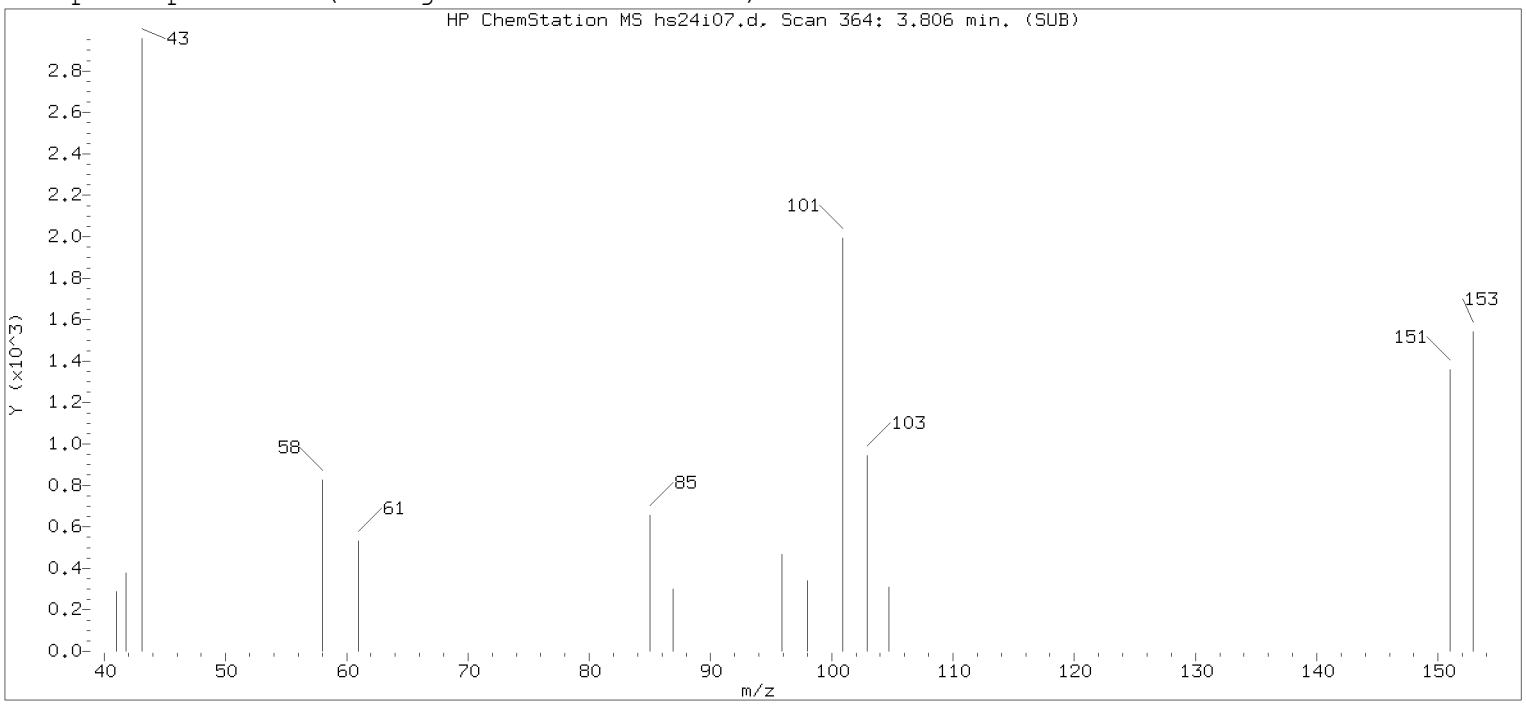
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 17774M
On-Column Amount (ng) : 2.1850
Integration start scan : 344 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

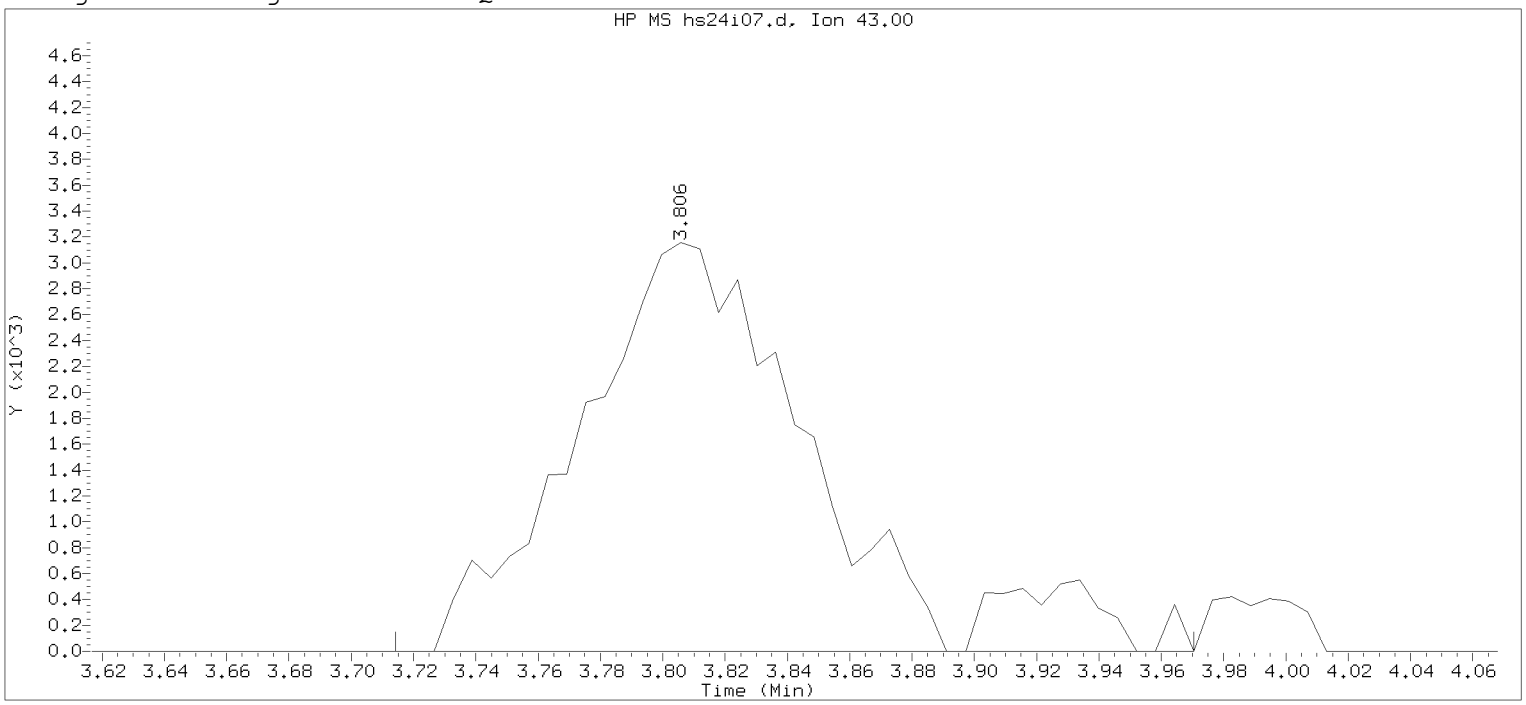
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area : 16725
On-column Amount (ng) : 2.1688
Integration start scan : 348 Integration stop scan: 390
Y at integration start : 0 Y at integration end: 0

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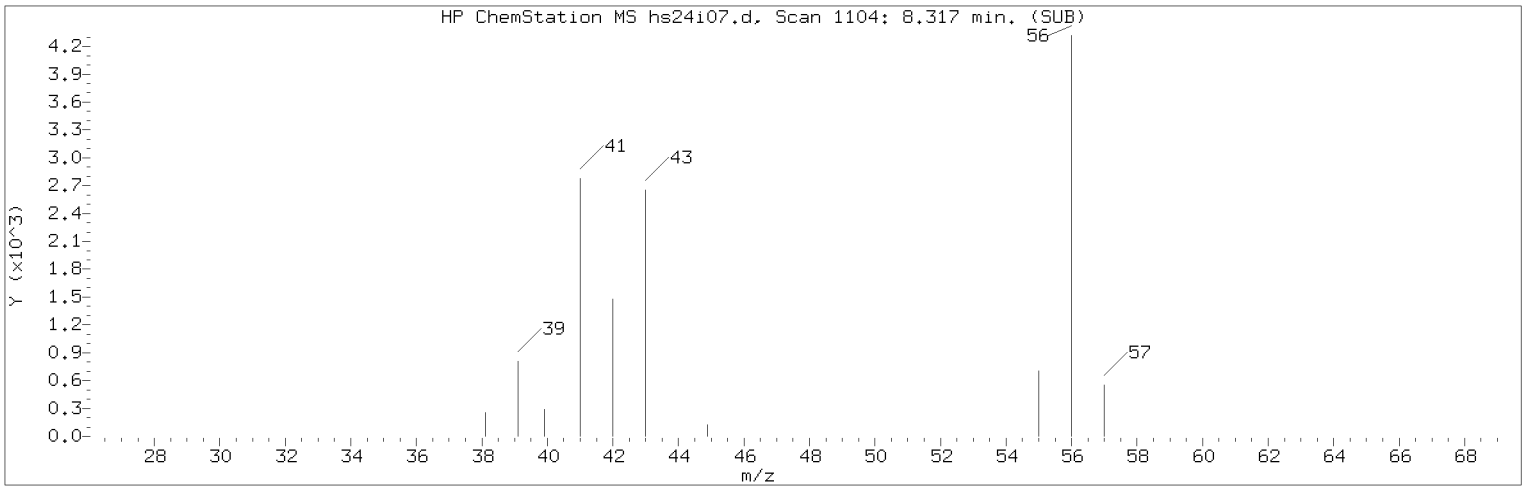
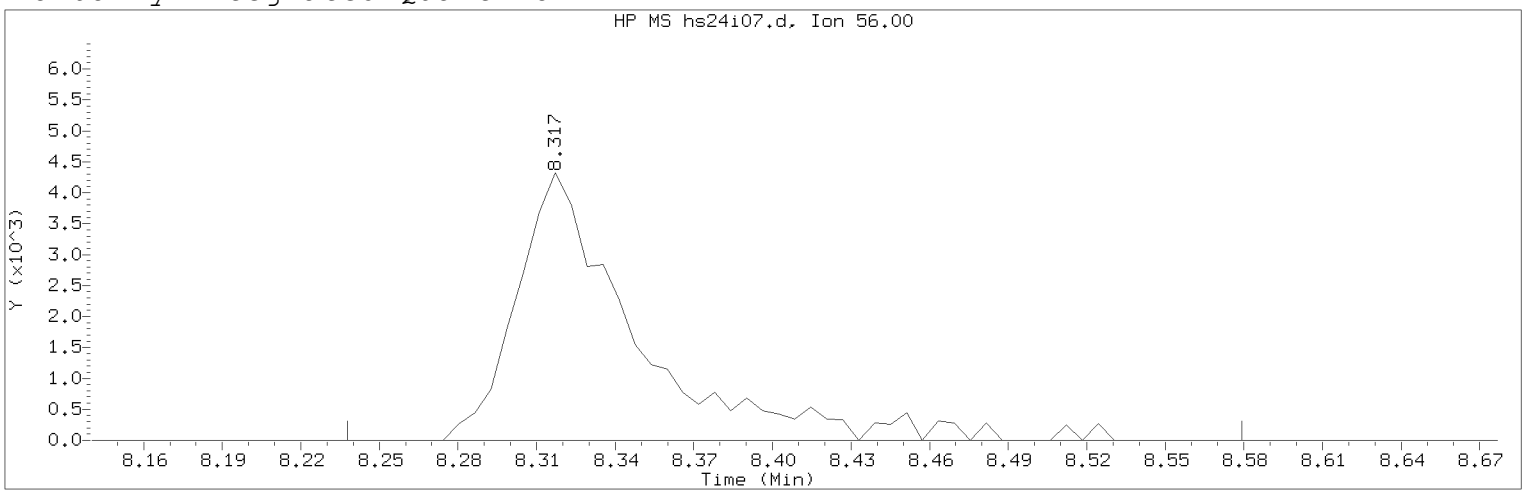
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

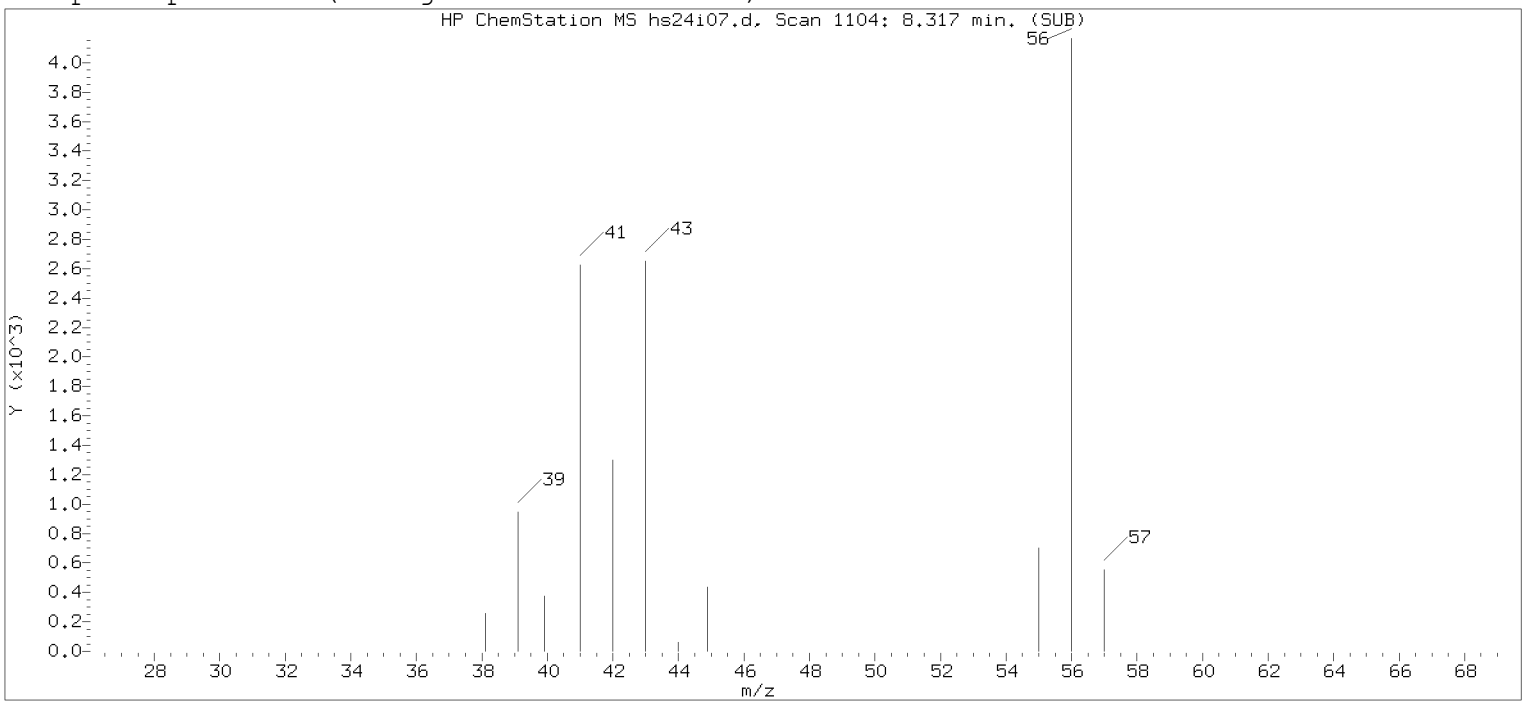
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1104
Retention Time (minutes): 8.317
Quant Ion : 56.00
Area (flag) : 13835M
On-Column Amount (ng) : 18.1683
Integration start scan : 1090 Integration stop scan: 1146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

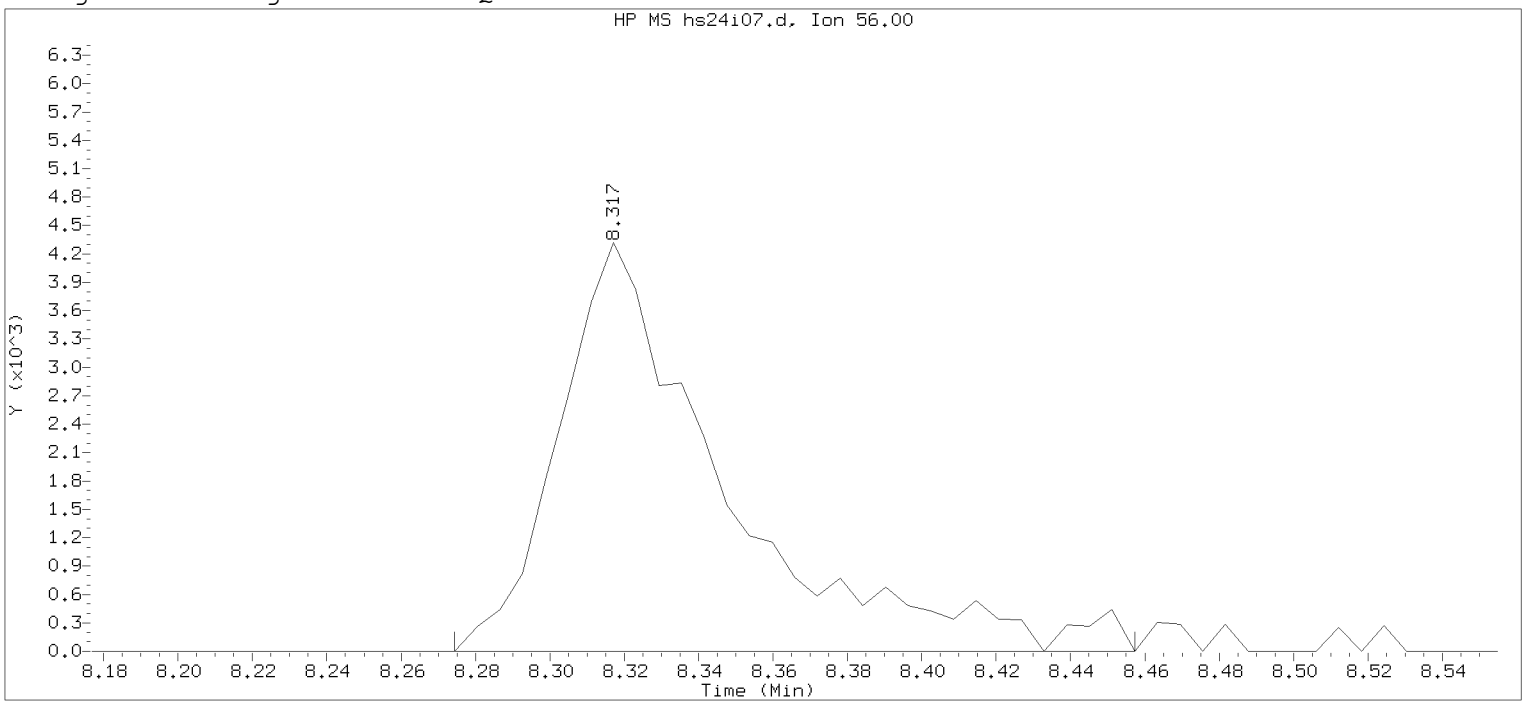
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

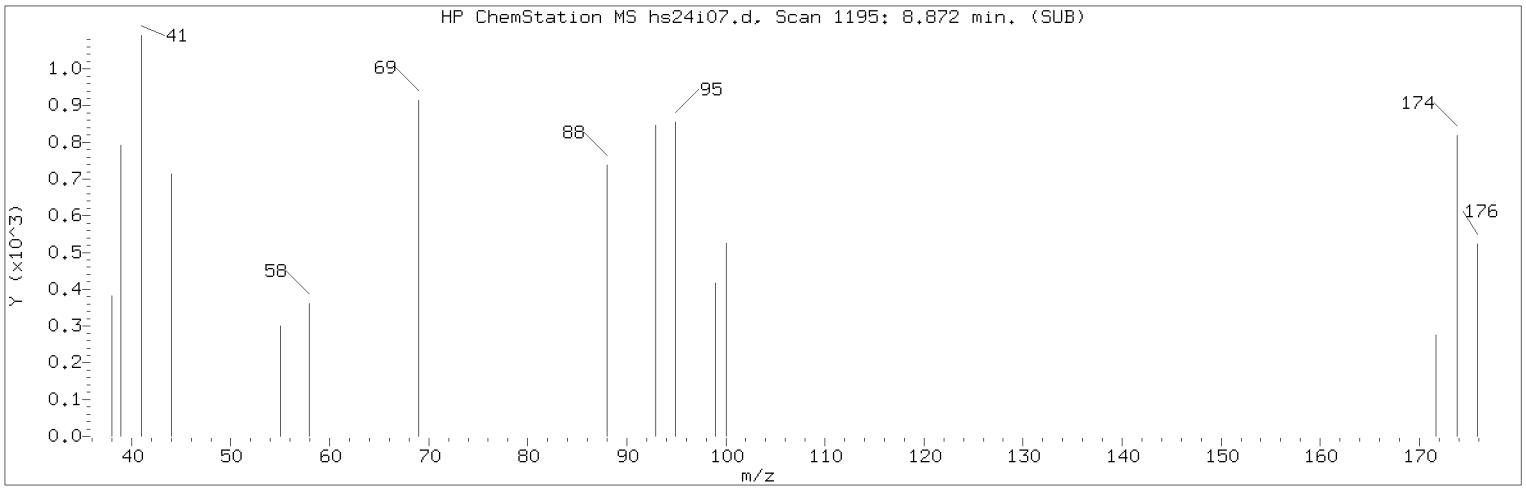
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

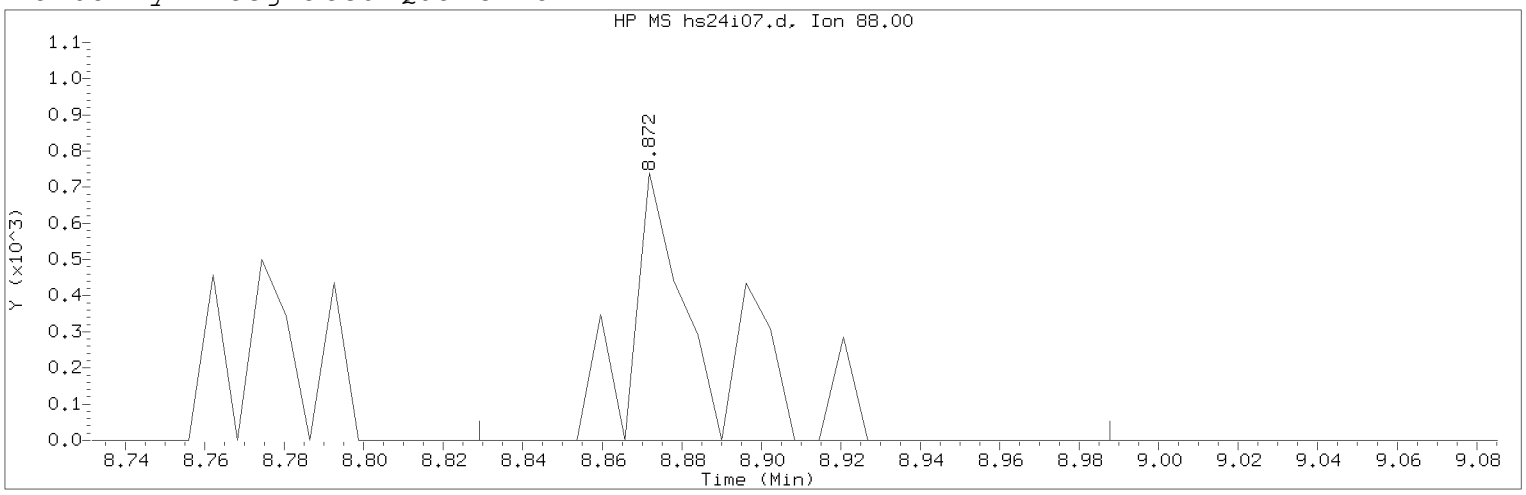
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1104		
Retention Time (minutes)	: 8.317		
Quant Ion	: 56.00		
Area	: 13324		
On-column Amount (ng)	: 17.8982		
Integration start scan	: 1096	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user AF23 jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

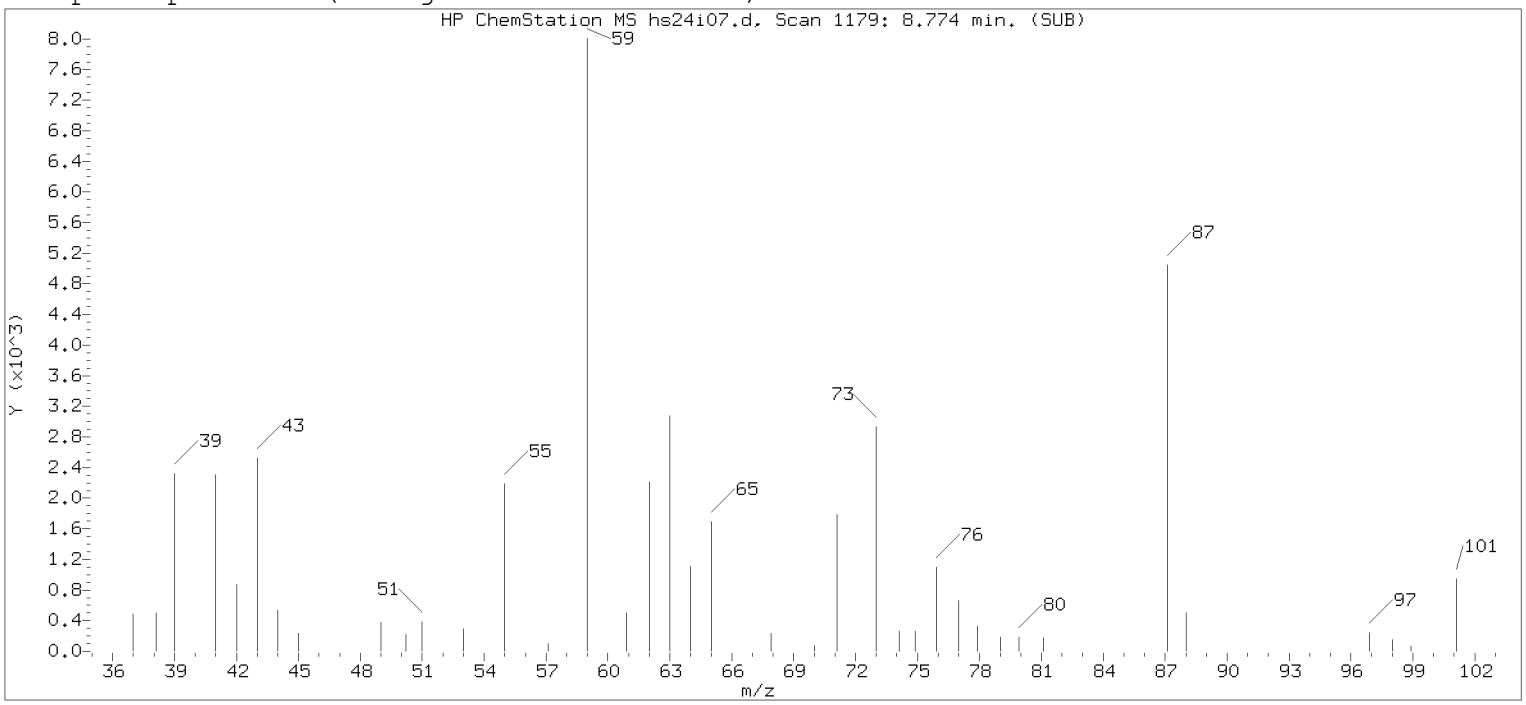
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 1041M
On-Column Amount (ng) : 5.6778
Integration start scan : 1187 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

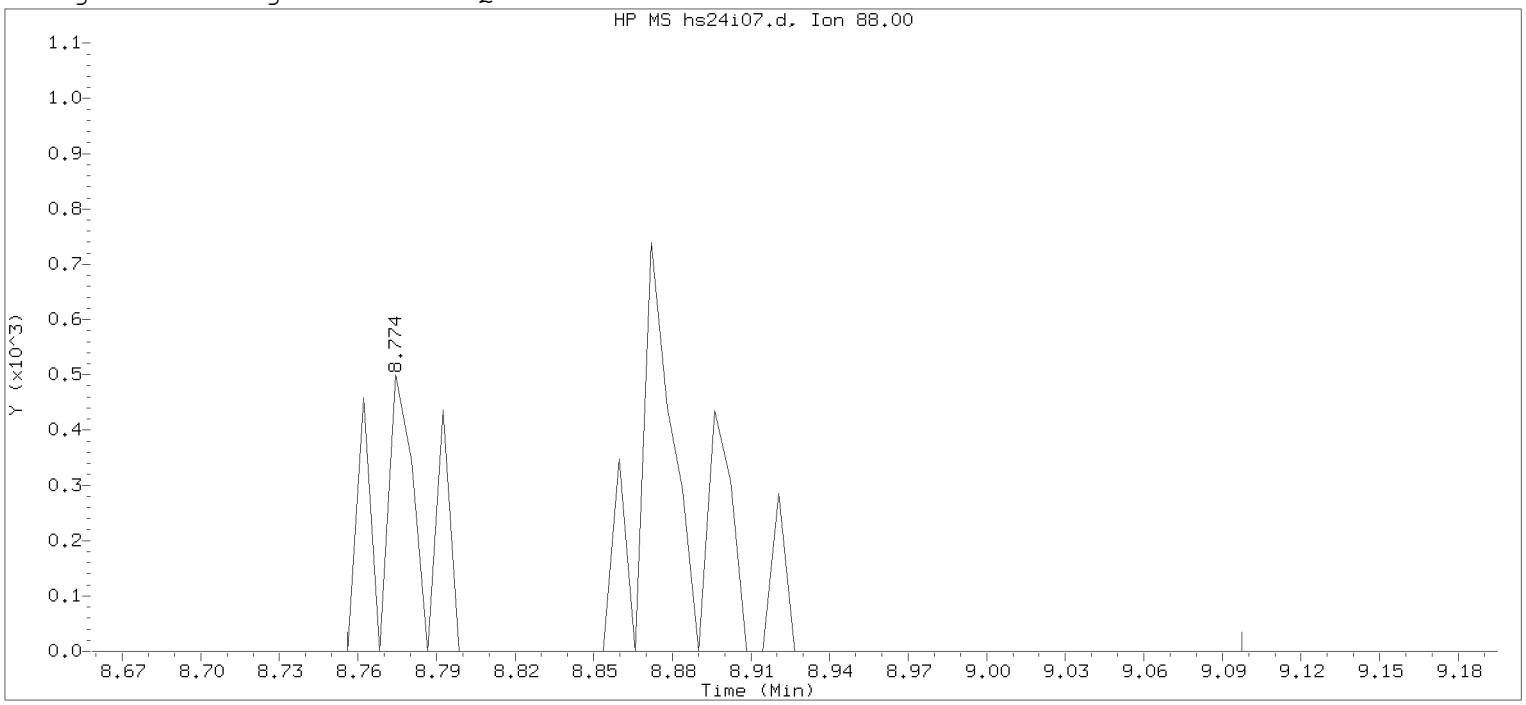
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

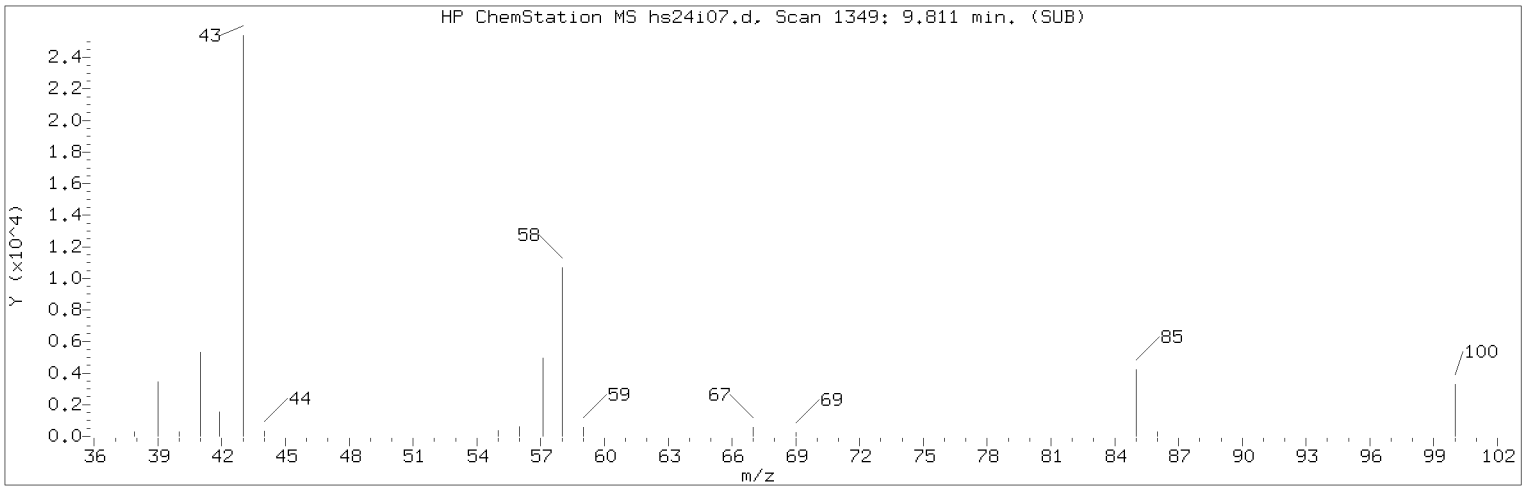
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

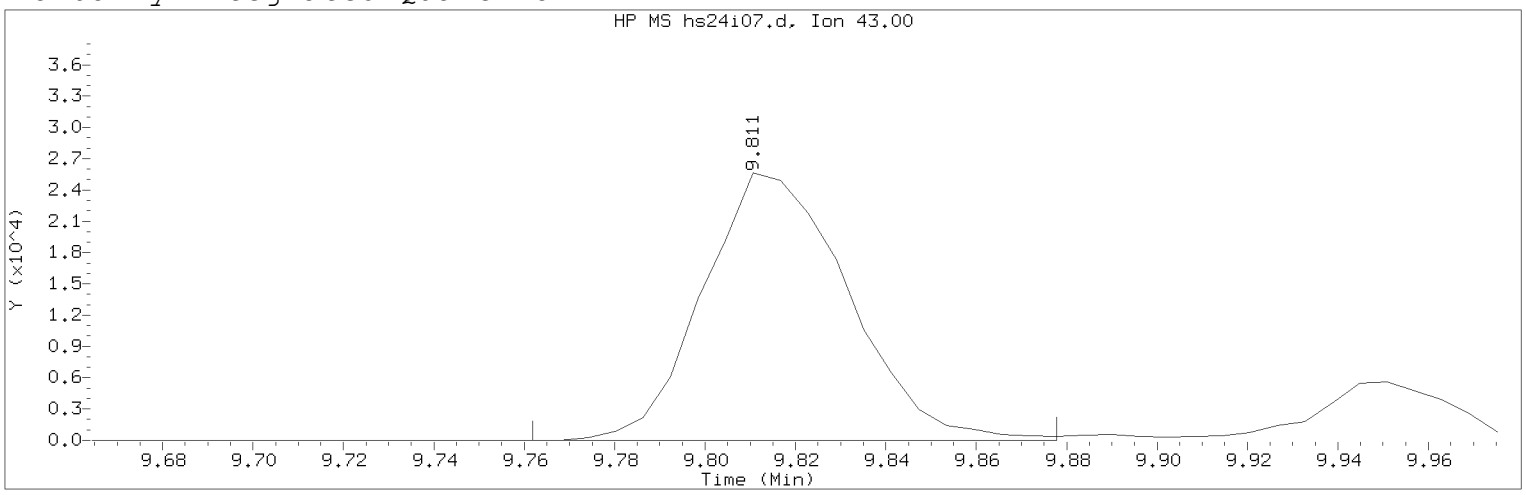
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 1677		
On-column Amount (ng)	: 13.7029		
Integration start scan	: 1175	Integration stop scan:	1231
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

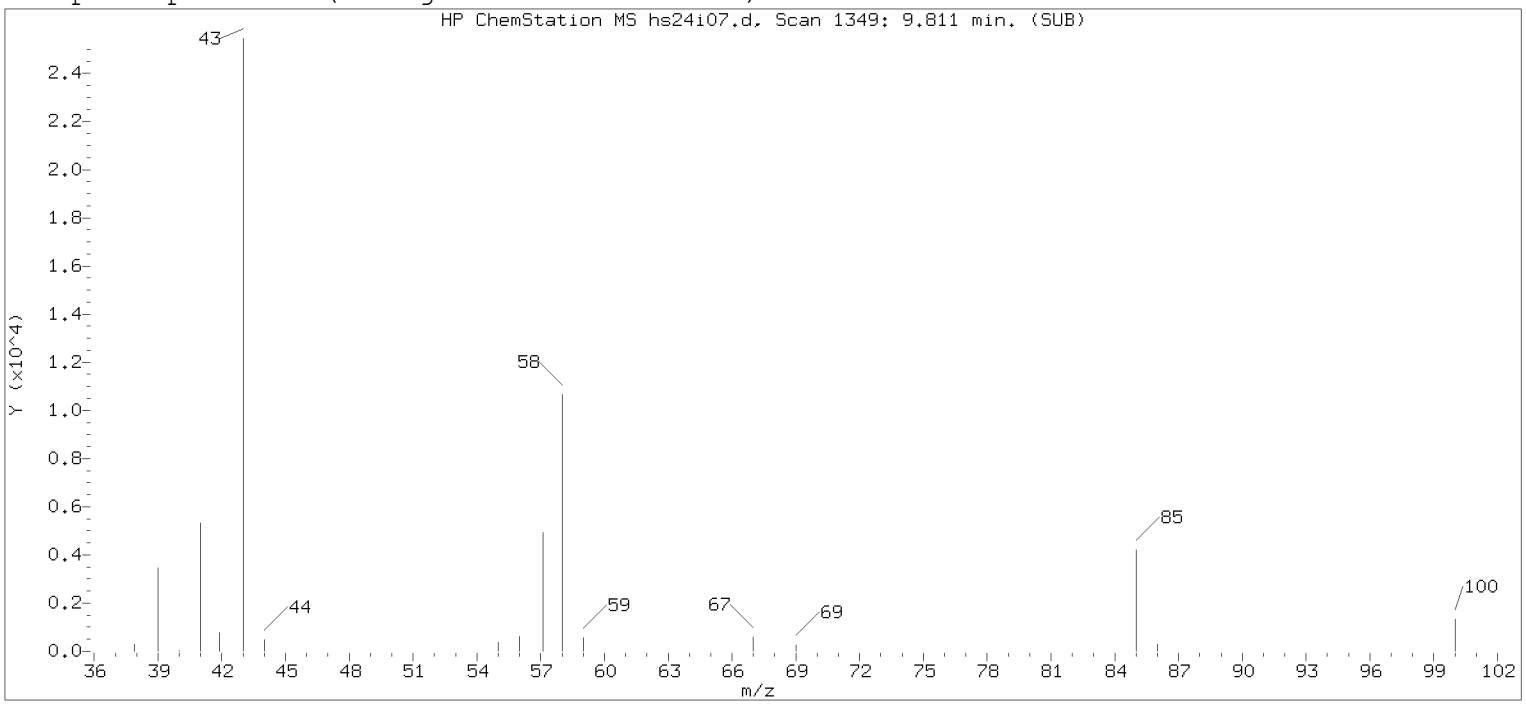
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 56901M
On-Column Amount (ng) : 1.7180
Integration start scan : 1340 Integration stop scan: 1359
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

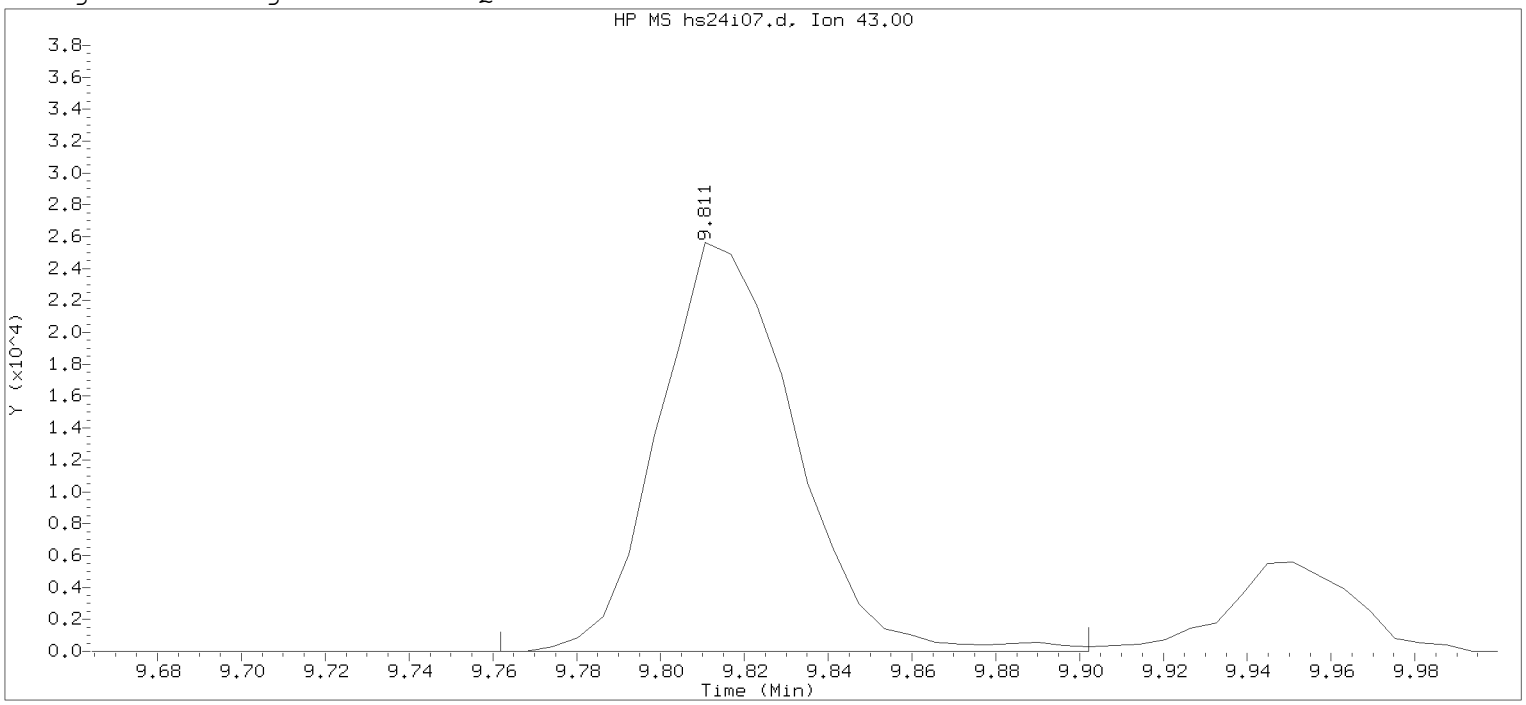
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

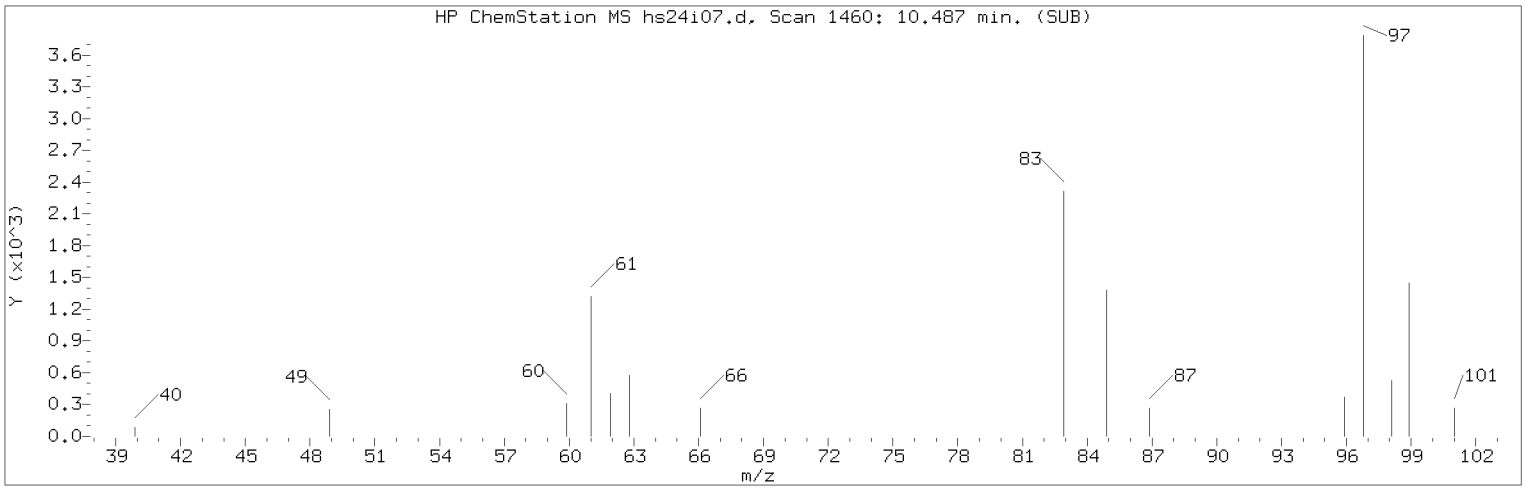
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

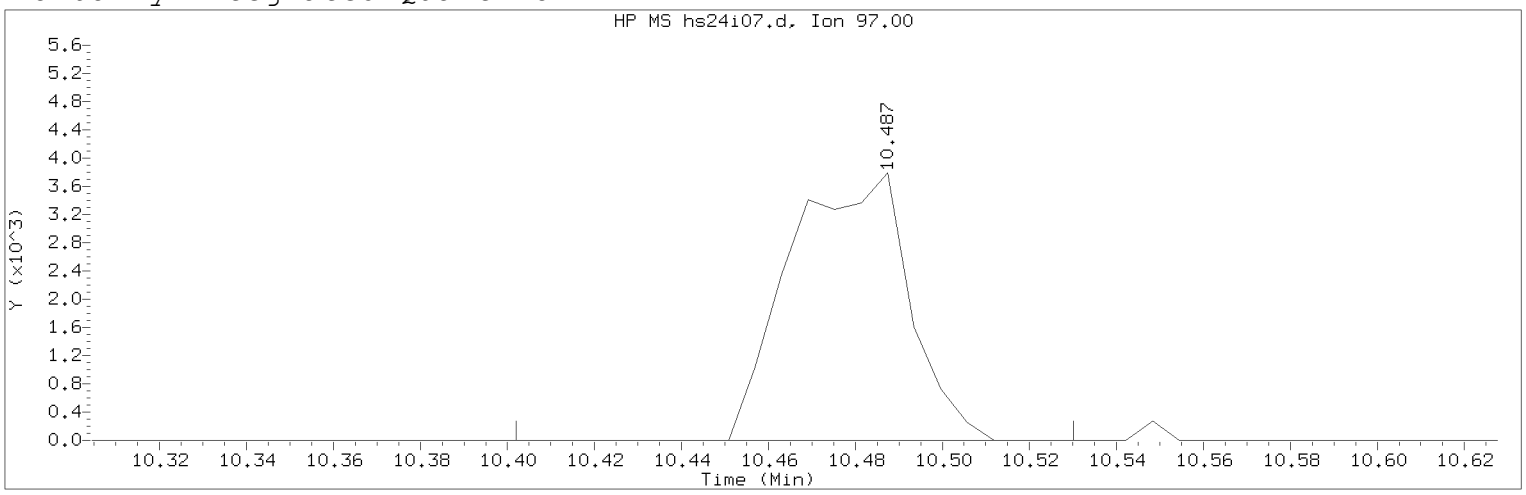
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 57465
On-column Amount (ng) : 1.6906
Integration start scan : 1340 Integration stop scan: 1363
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

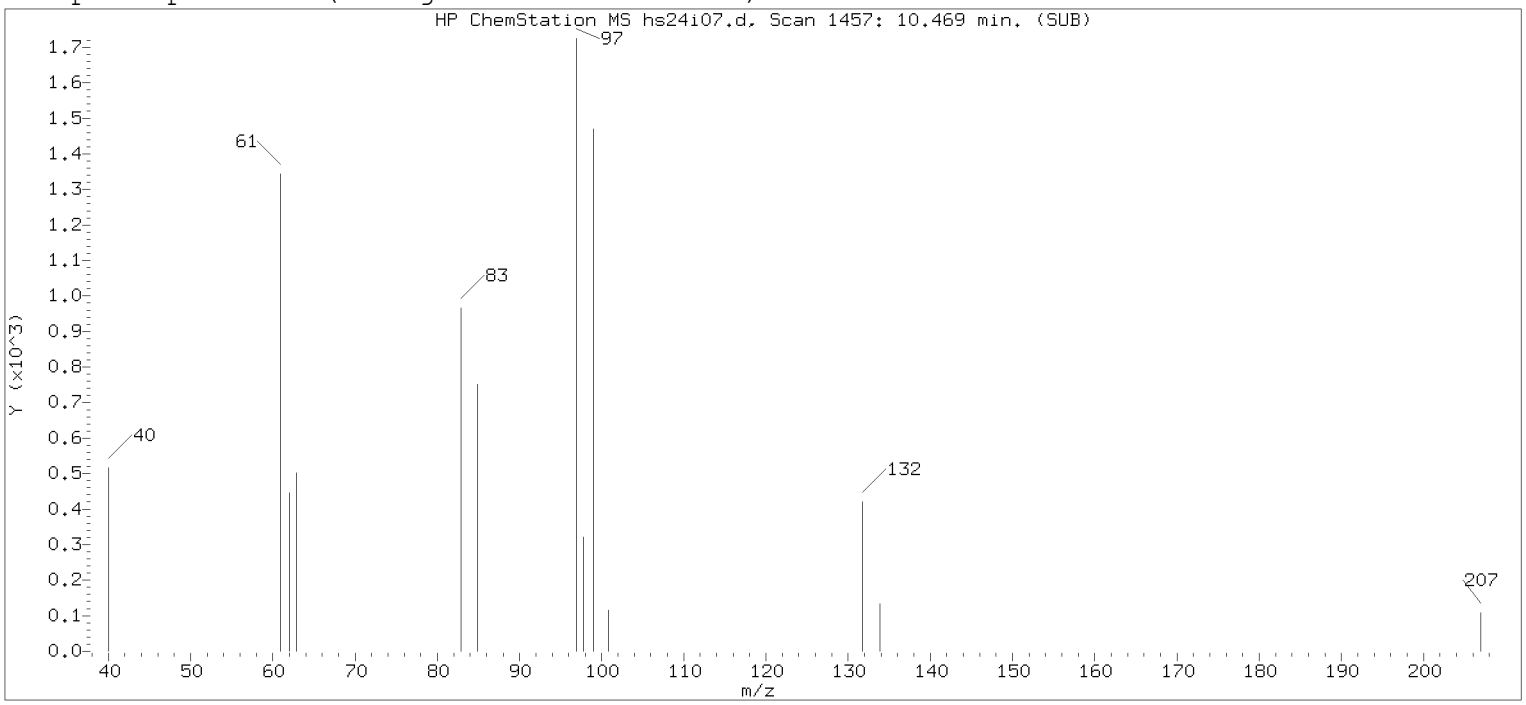
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1460
Retention Time (minutes): 10.487
Quant Ion : 97.00
Area (flag) : 7236M
On-Column Amount (ng) : 0.1981
Integration start scan : 1445 Integration stop scan: 1466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

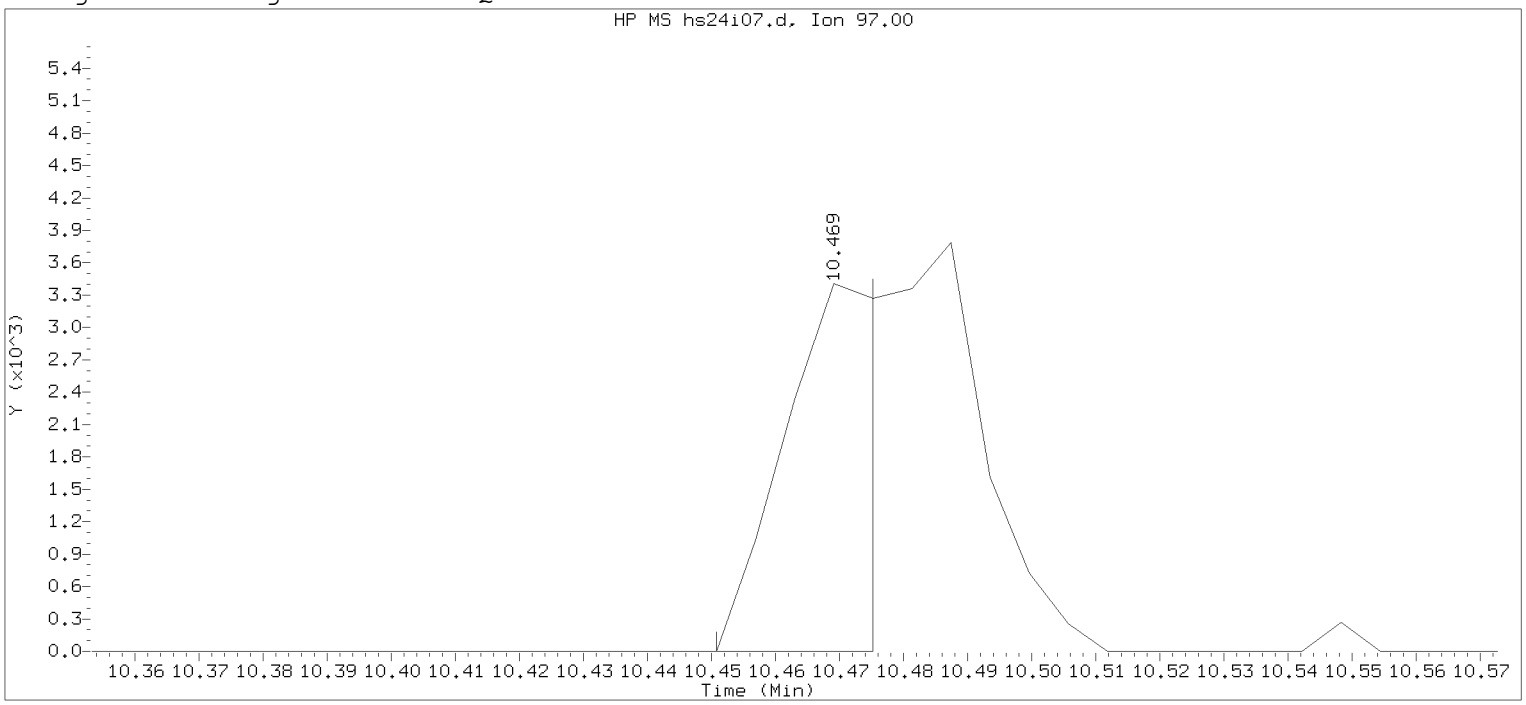
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

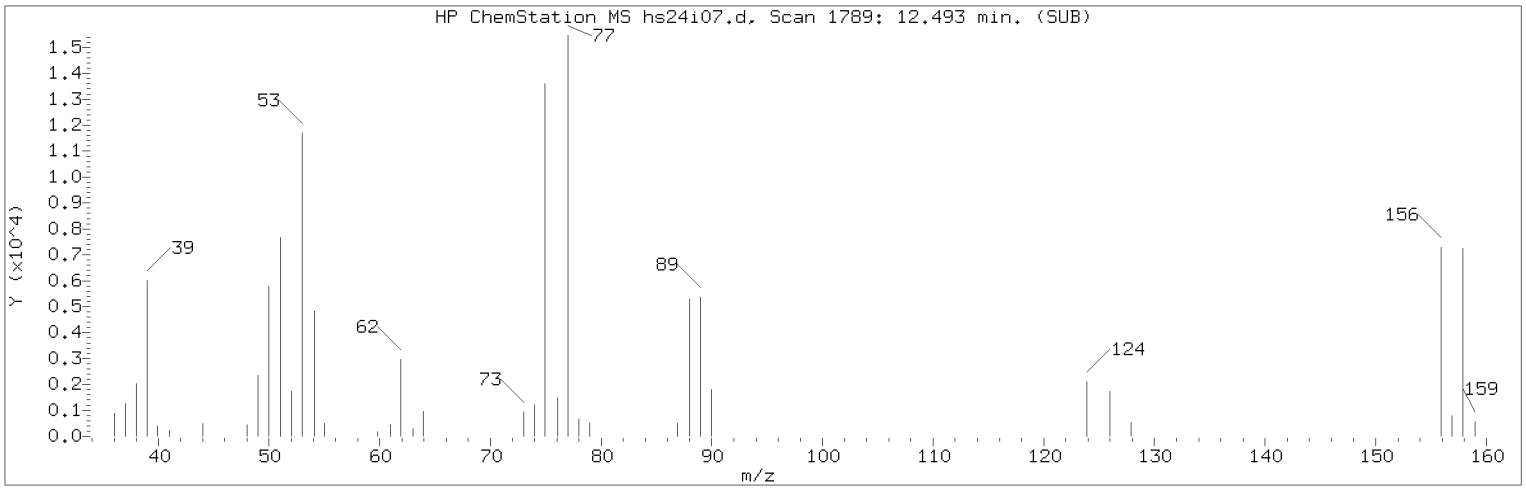
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

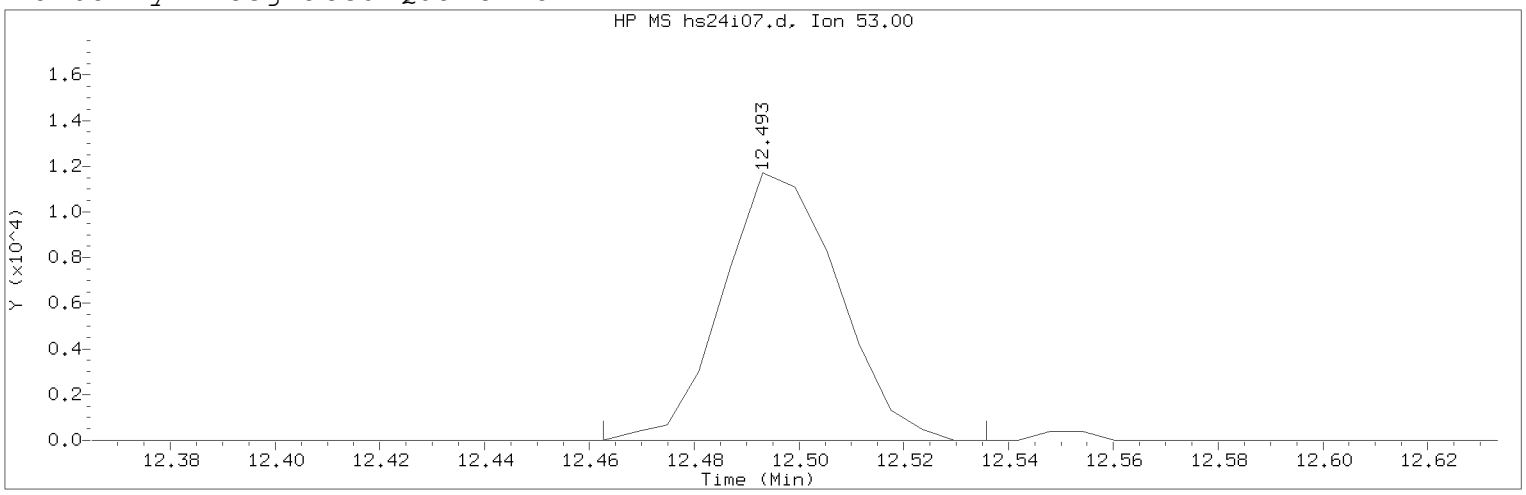
Compound Number	: 88		
Compound Name	: 1,1,2-Trichloroethane		
Scan Number	: 1457		
Retention Time (minutes)	: 10.469		
Quant Ion	: 97.00		
Area	: 3077		
On-column Amount (ng)	: 0.0917		
Integration start scan	: 1453	Integration stop scan:	1457
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

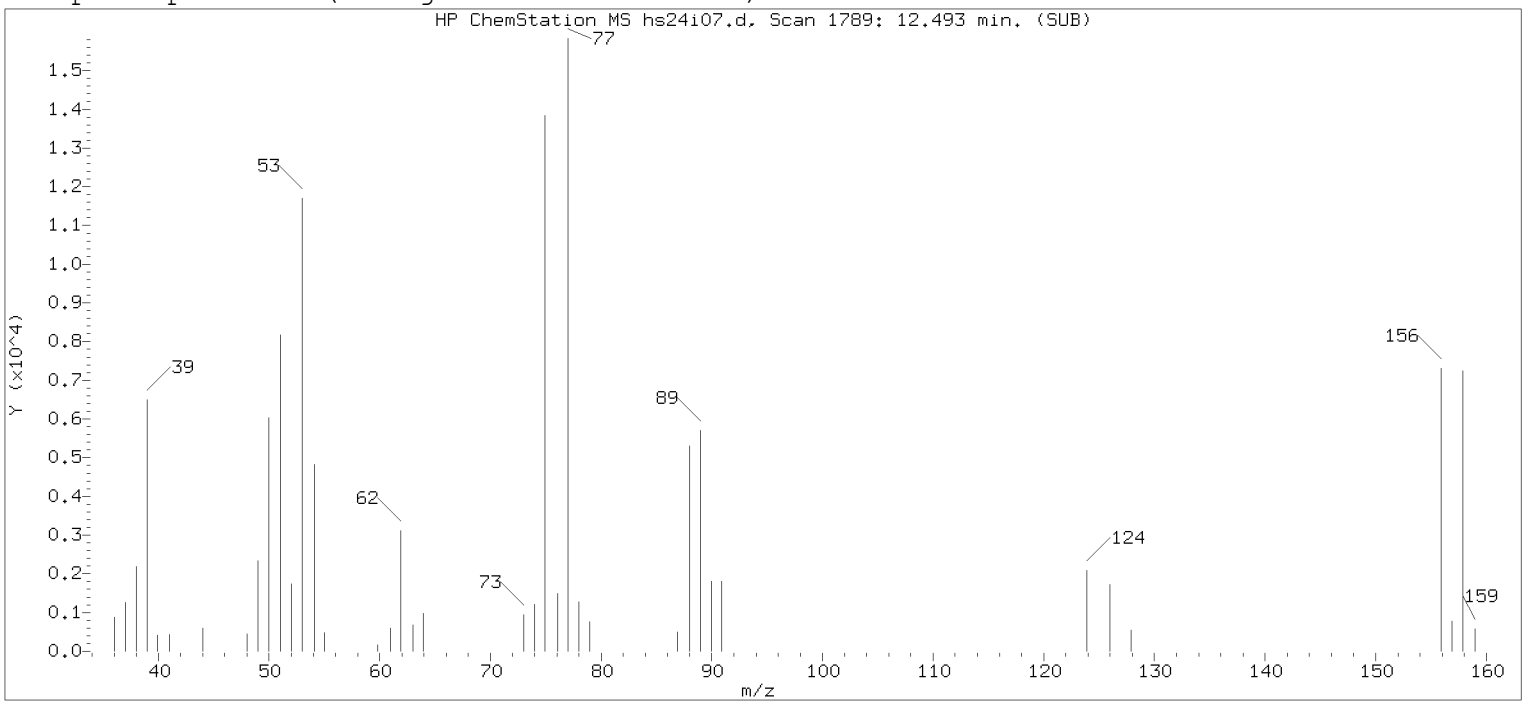
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 17855M
On-Column Amount (ng) : 1.7212
Integration start scan : 1783 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

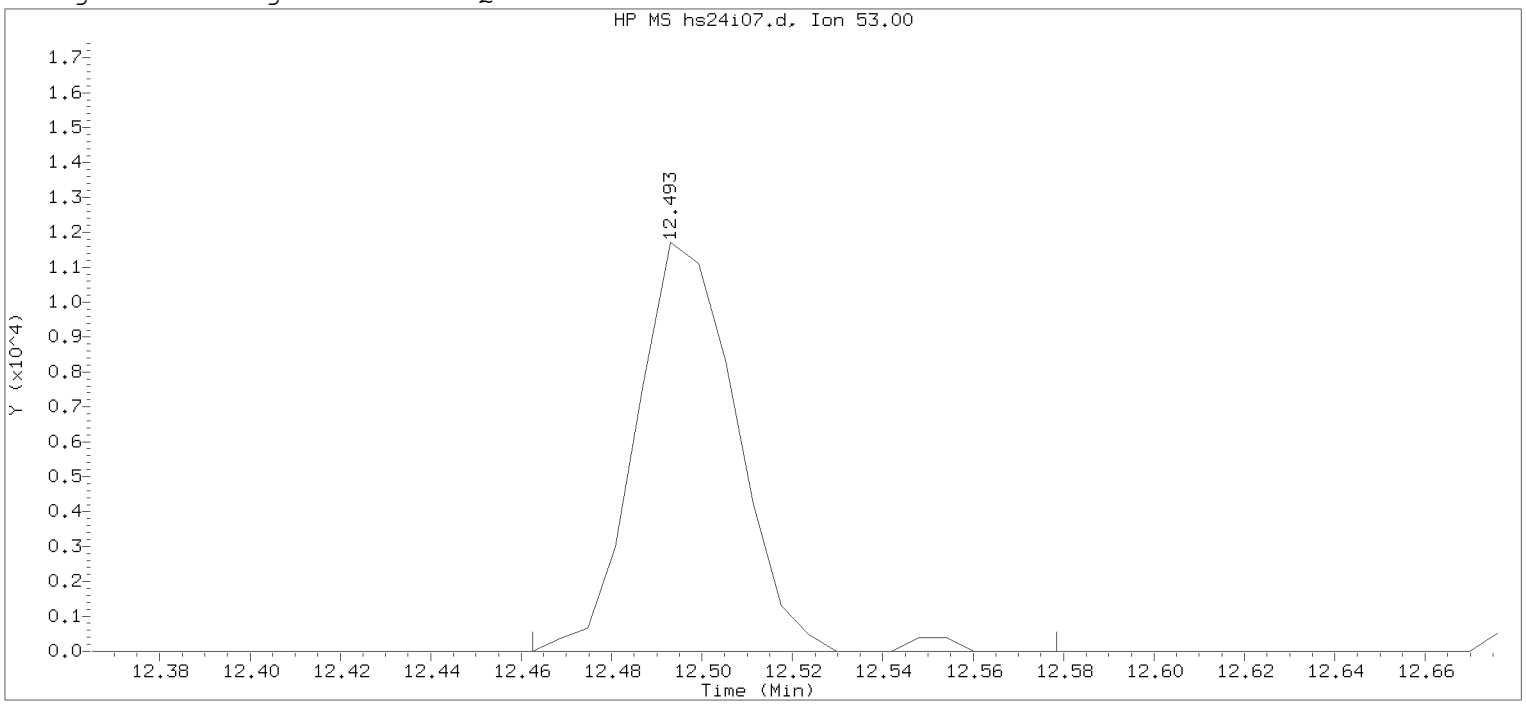
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

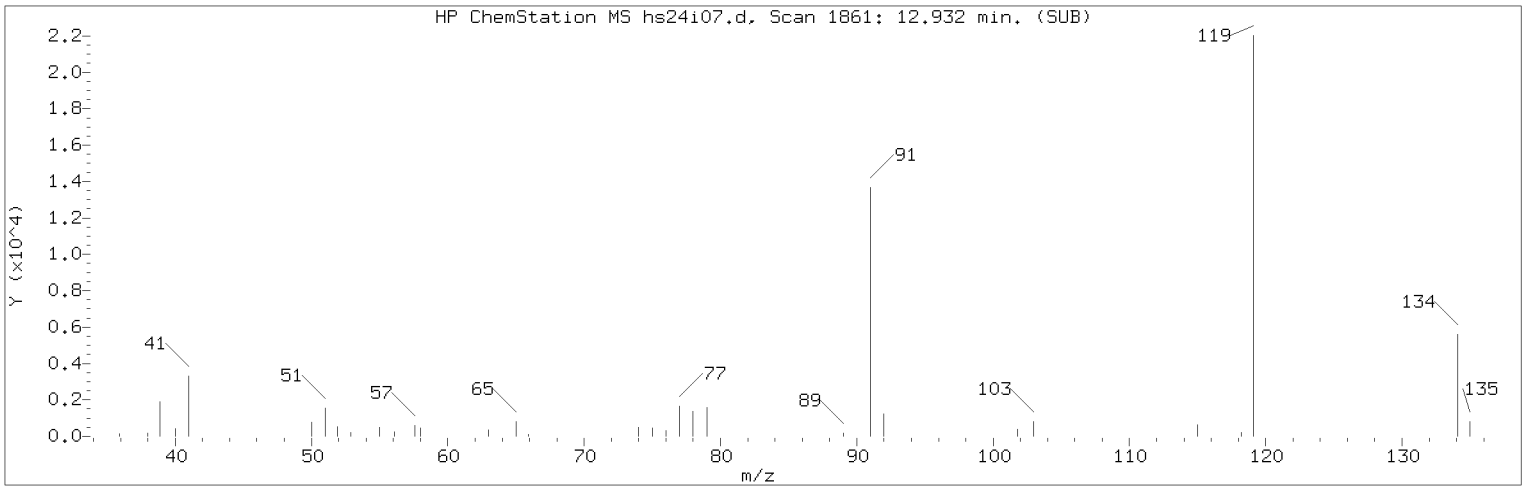
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

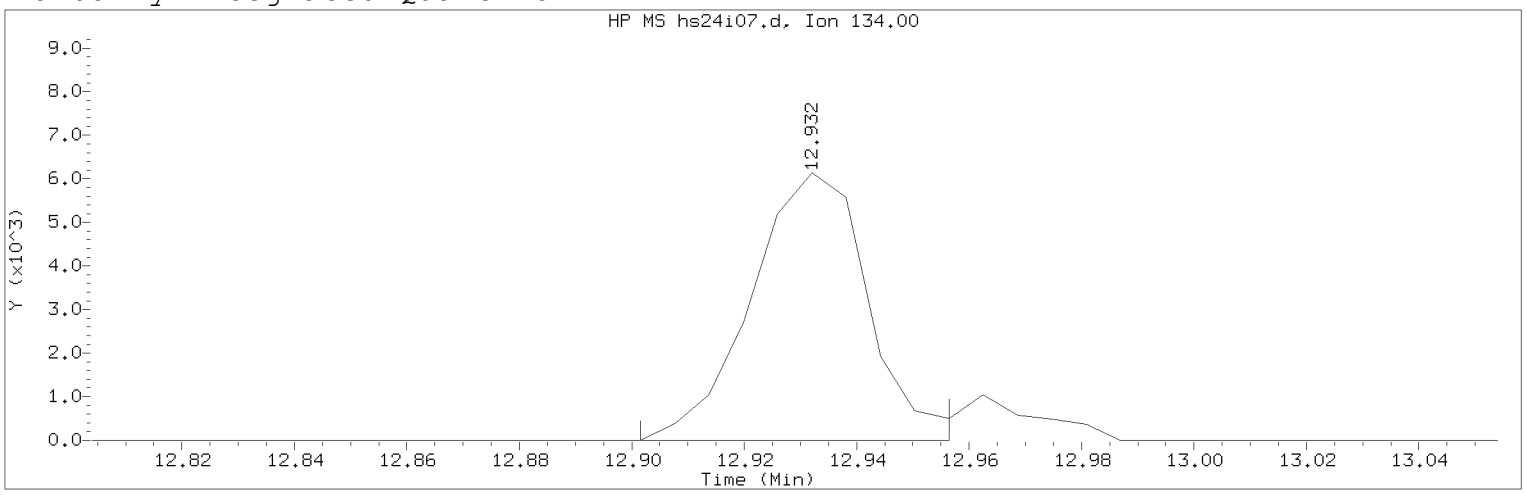
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 18137
On-column Amount (ng) : 1.7018
Integration start scan : 1783 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

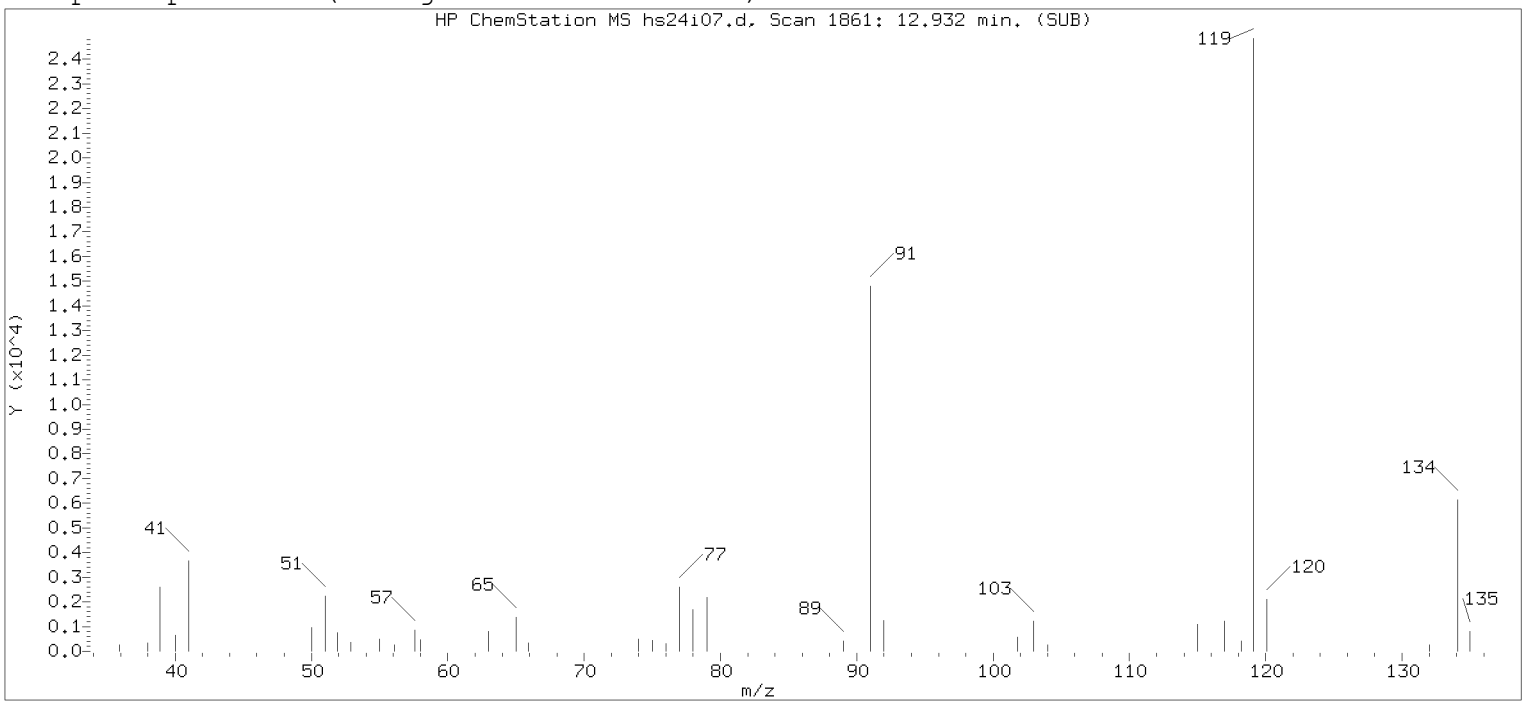
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 8830M
On-Column Amount (ng) : 0.1614
Integration start scan : 1855 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

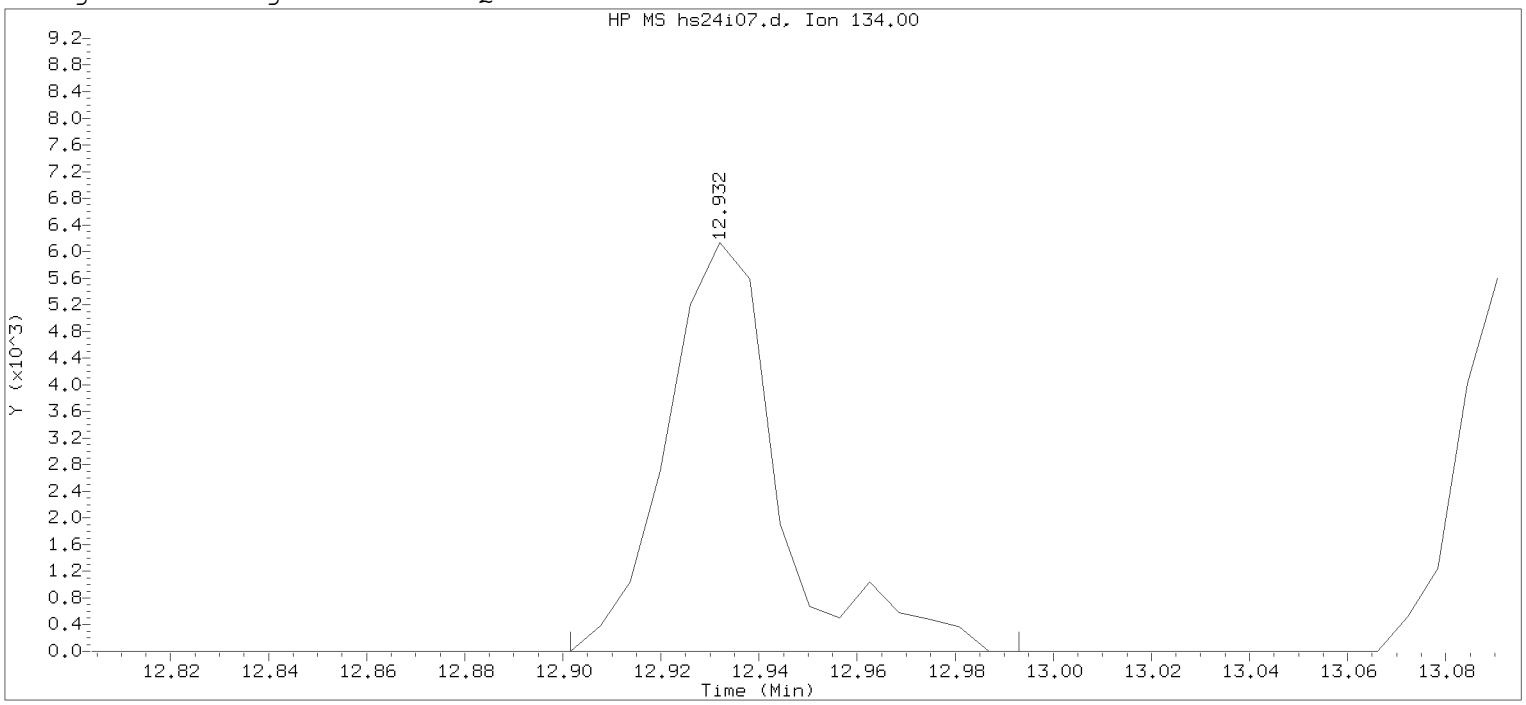
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

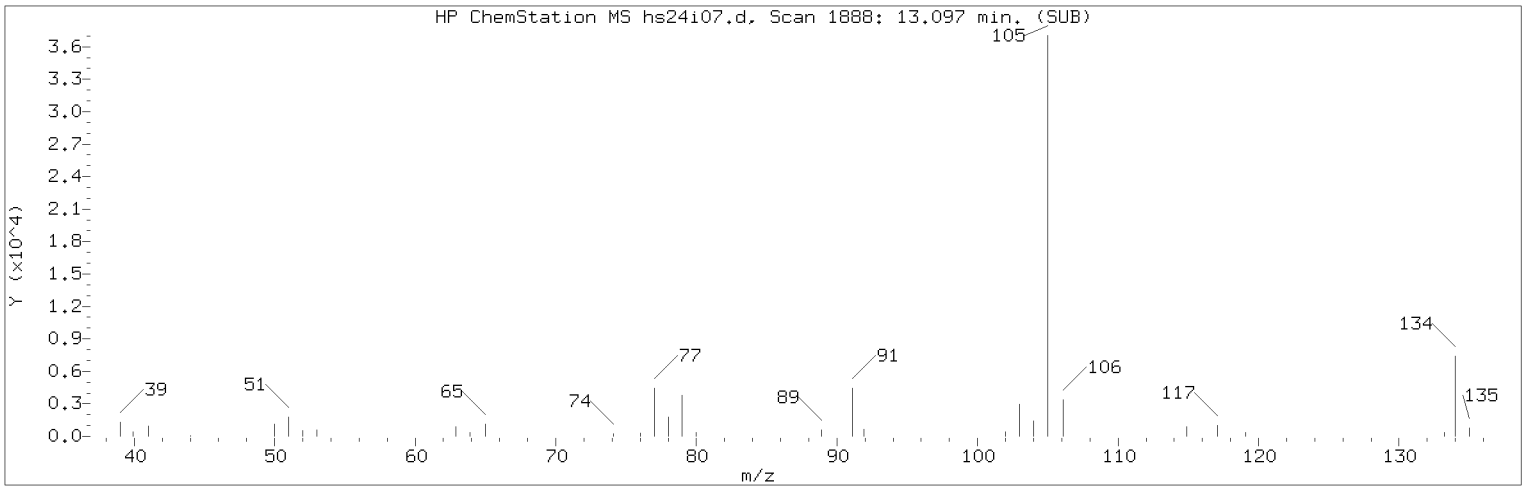
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

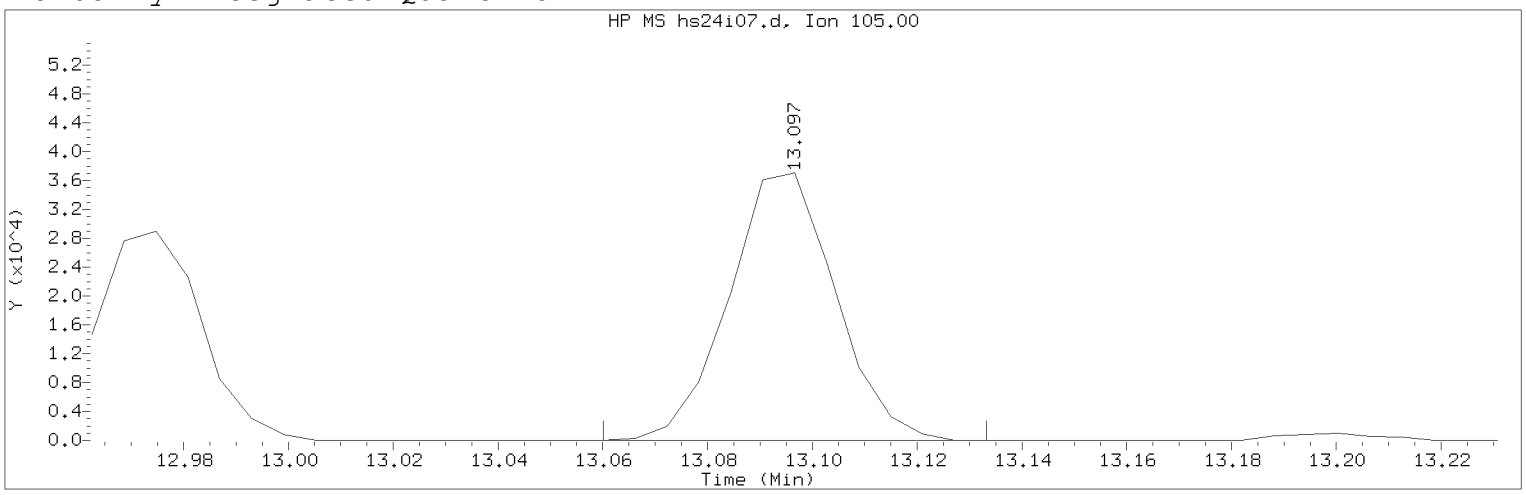
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 9731
On-column Amount (ng) : 0.1717
Integration start scan : 1855 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

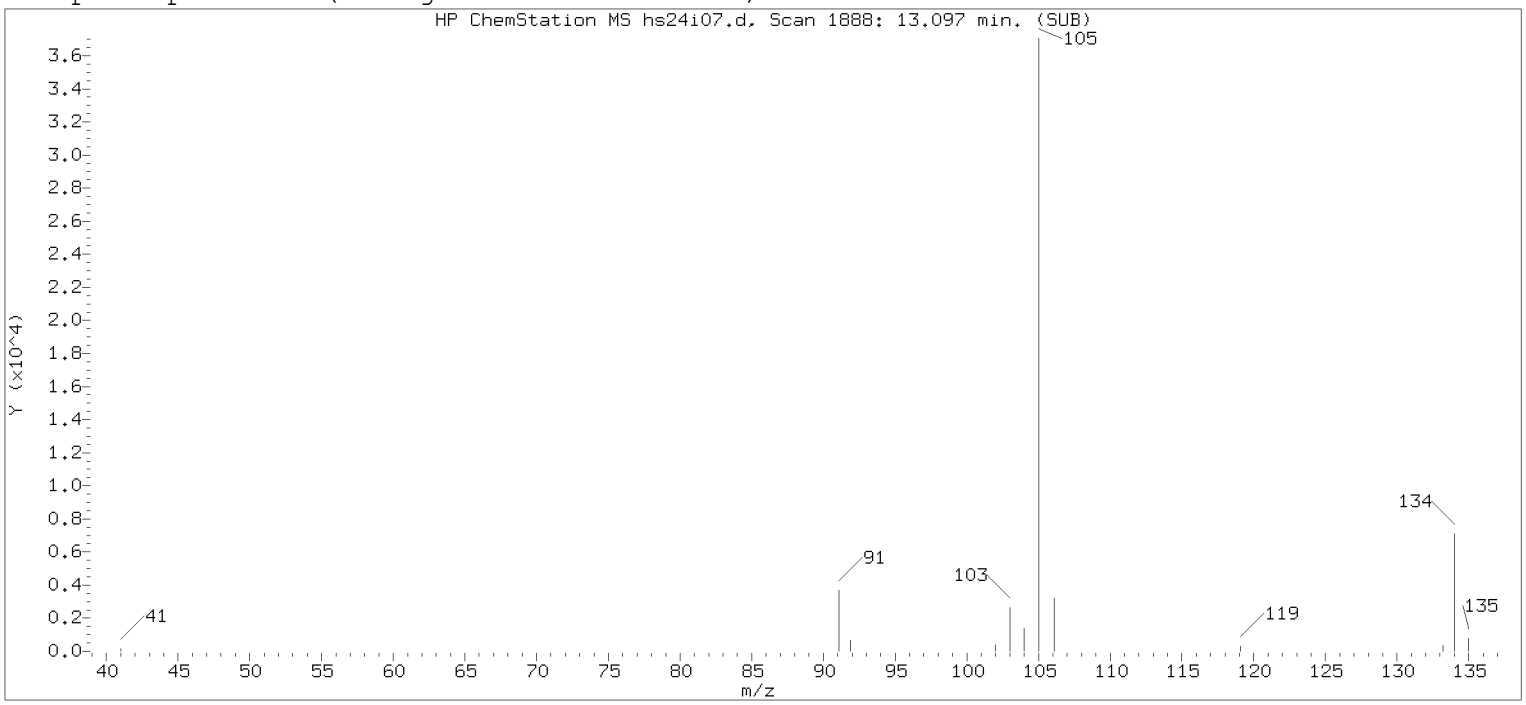
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 52250M
On-Column Amount (ng) : 0.1603
Integration start scan : 1881 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

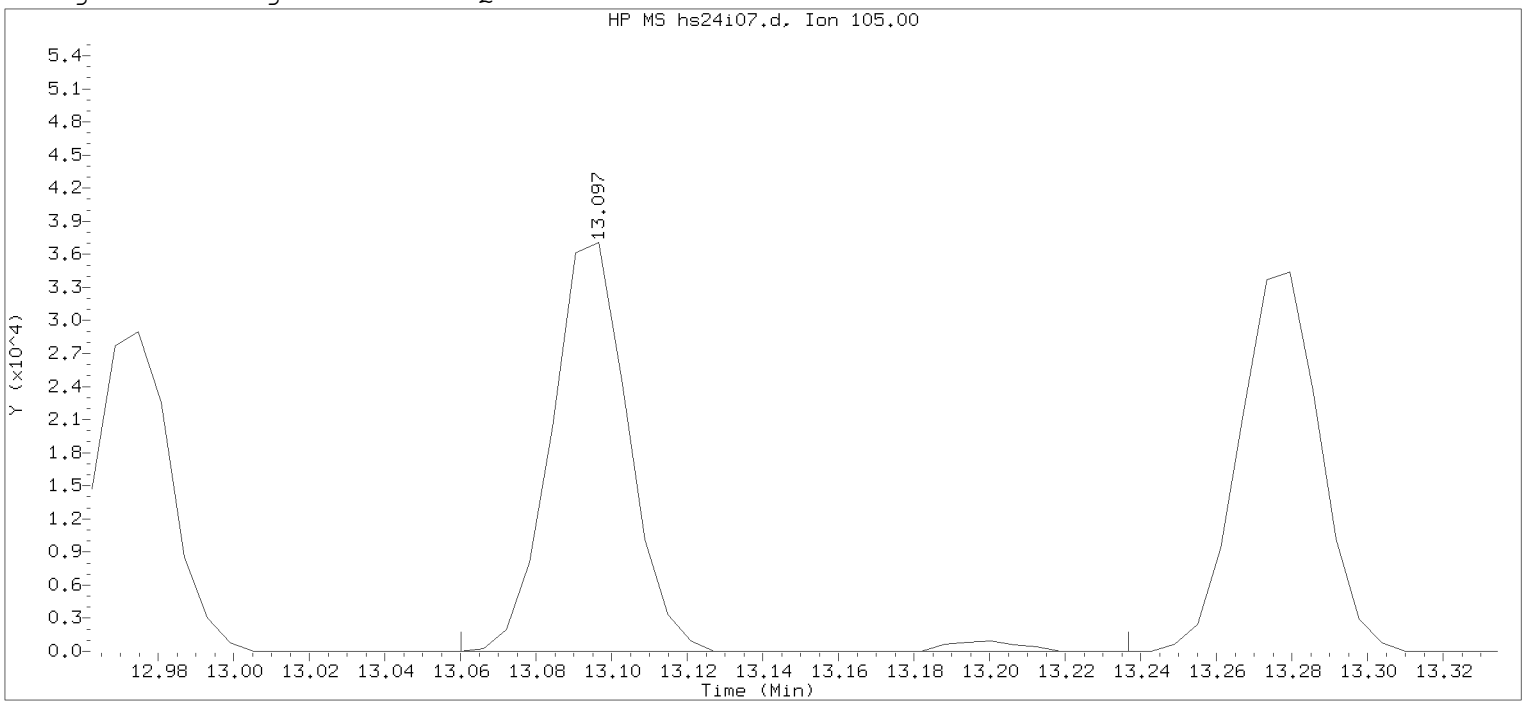
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



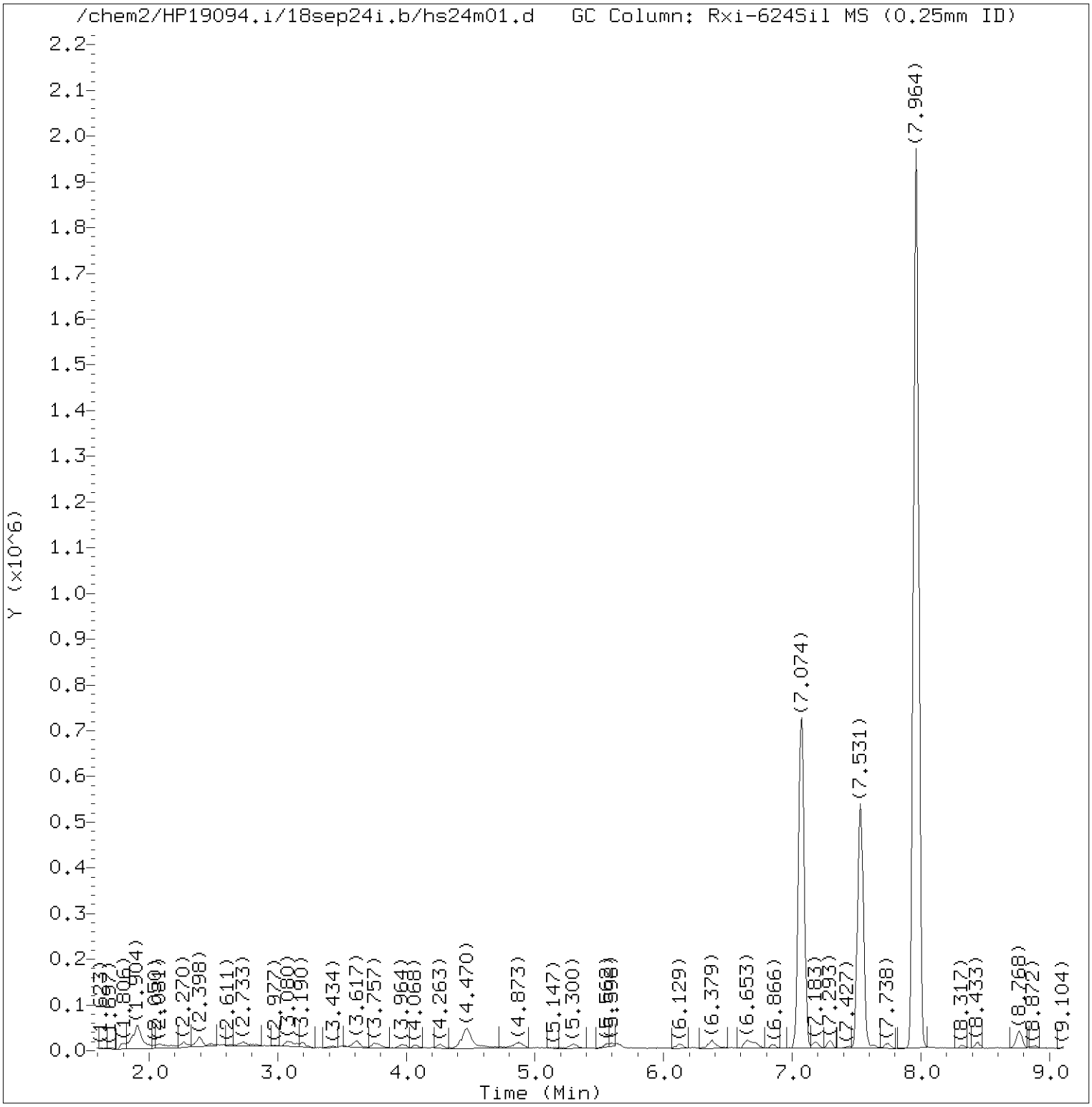
Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area : 53494
On-column Amount (ng) : 0.1637
Integration start scan : 1881 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user: JKH09052



Total Ion Chromatogram (TIC)

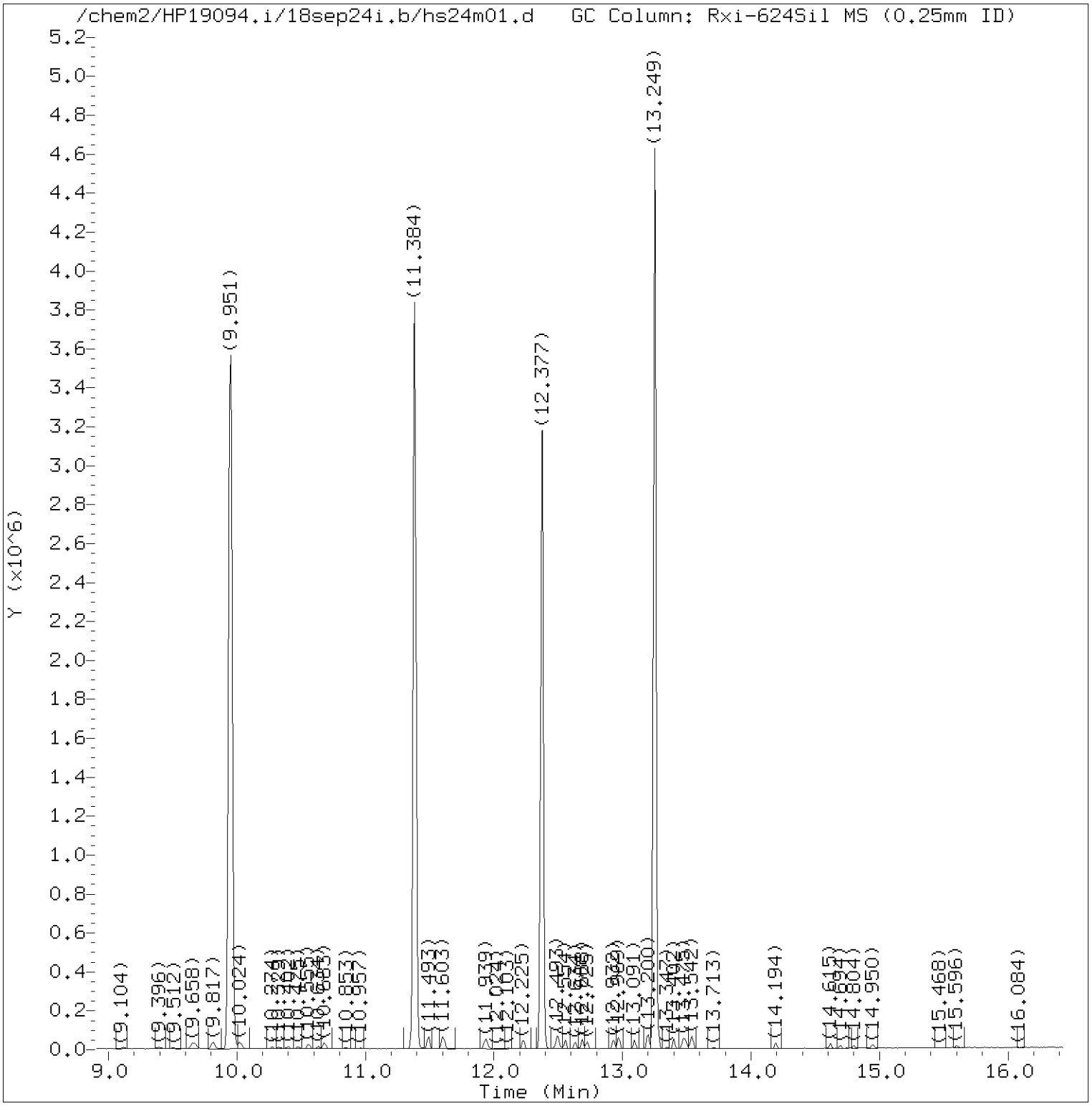
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	9887	0.091
2) Chloromethane	(2)	2.264	50	11027	0.104
5) Vinyl Chloride	(2)	2.392	62	9705	0.097
6) 1,3-Butadiene	(2)	2.392	39	12302M	0.109
7) Bromomethane	(2)	2.727	94	7190	0.093
8) Chloroethane	(2)	2.837	64	6058	0.100
9) Dichlorofluoromethane	(2)	3.080	67	14390	0.100
10) Trichlorofluoromethane	(2)	3.129	101	12048	0.096
11) Ethyl ether	(2)	3.422	59	3966	0.093
12) Freon 123a	(2)	3.513	67	7745	0.097
13) Acrolein	(1)	3.611	56	30281	4.838
15) 1,1-Dichloroethene	(2)	3.745	96	4892	0.090
16) Freon 113	(2)	3.769	101	5407	0.084
14) Acetone	(1)	3.775	43	9288	1.105
17) Methyl Iodide	(2)	3.964	142	10653	0.094
18) Carbon Disulfide	(2)	4.068	76	16735M	0.096
21) Methyl Acetate	(1)	4.227	43	2044	0.087
22) Allyl Chloride	(2)	4.263	41	9829	0.095
23) Methylene Chloride	(2)	4.452	84	6908	0.112
26)*t-Butyl Alcohol-d10	(1)	4.470	65	141036	50.000
28) t-Butyl Alcohol	(1)	4.605	59	4176	1.735
29) Acrylonitrile	(1)	4.824	53	4124	0.380
30) Methyl Tertiary Butyl Ether	(2)	4.855	73	10117	0.090
31) trans-1,2-Dichloroethene	(2)	4.879	96	5521	0.090
32) n-Hexane	(2)	5.293	57	8152	0.083
33) 1,1-Dichloroethane	(2)	5.556	63	11186	0.095
34) di-Isopropyl Ether	(2)	5.598	45	19224	0.092
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	9694	0.092
40) 1,2-Dichloroethene (Total)	(2)		96	11674	0.180
37) Ethyl t-butyl ether	(2)	6.123	59	14814	0.090
38) 2-Butanone	(1)	6.342	43	12103	0.880
41) 2,2-Dichloropropane	(2)	6.379	77	6559	0.078
39) cis-1,2-Dichloroethene	(2)	6.379	96	6153	0.090
42) Propionitrile	(1)	6.434	54	6324	1.693
45) Methacrylonitrile	(1)	6.659	67	10750	0.798
47) Bromochloromethane	(2)	6.708	128	2451	0.085
48) Tetrahydrofuran	(1)	6.714	71	2784	0.761
49) Chloroform	(2)	6.866	83	10073	0.092

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	702027	10.009
51) 1,1,1-Trichloroethane	(2)	7.092	97	7736	0.083
52) Cyclohexane	(2)	7.177	56	9614	0.079
54) Carbon Tetrachloride	(2)	7.293	117	6960	0.087
55) 1,1-Dichloropropene	(2)	7.299	75	8159	0.092
56) Isobutyl Alcohol	(1)	7.452	41	3763	4.040
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123366	10.089
58) Benzene	(2)	7.555	78	24986	0.096
59) 1,2-Dichloroethane	(2)	7.628	62	8132	0.135
60) t-Amyl methyl ether	(2)	7.750	73	12517	0.091
63)*Fluorobenzene	(2)	7.964	96	2783023	10.000
62) n-Heptane	(2)	7.976	43	9564	0.095
65) n-Butanol	(1)	8.323	56	6085	7.733
67) Trichloroethene	(2)	8.439	95	6307	0.094
69) Methylcyclohexane	(2)	8.756	83	11396	0.090
70) 1,2-Dichloropropane	(2)	8.775	63	5902	0.093
71) Methyl Methacrylate	(1)	8.848	69	1661M	0.067
72) 1,4-Dioxane	(1)	8.872	88	538	2.839
73) Dibromomethane	(2)	8.890	93	2312	0.088
74) Bromodichloromethane	(2)	9.128	83	6593	0.093
76) 2-Nitropropane	(1)	9.396	41	5792	0.820
80) cis-1,3-Dichloropropene	(2)	9.652	75	7111	0.086
81) 4-Methyl-2-Pentanone	(1)	9.817	43	27891	0.815
82)$Toluene-d8	(3)	9.951	98	2808841	10.086
83) Toluene	(3)	10.024	92	14540	0.091
85) 1,3-Dichloropropene (total)	(3)		75	11931	0.164
84) trans-1,3-Dichloropropene	(3)	10.268	75	4820	0.078
86) Ethyl Methacrylate	(3)	10.323	69	4465	0.084
91) 2-Hexanone	(1)	10.329	43	19024A	0.817
88) 1,1,2-Trichloroethane	(3)	10.482	97	4082	0.110
89) Tetrachloroethene	(3)	10.555	166	7159	0.099
90) 1,3-Dichloropropane	(3)	10.640	76	6776	0.103
93) Dibromochloromethane	(3)	10.841	129	3771	0.085
95) 1,2-Dibromoethane	(3)	10.957	107	2957	0.085
96) 1-Chlorohexane	(3)	11.384	91	11869M	0.124
97)*Chlorobenzene-d5	(3)	11.384	117	2163745	10.000
98) Chlorobenzene	(3)	11.408	112	17130	0.101
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	5306	0.094

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

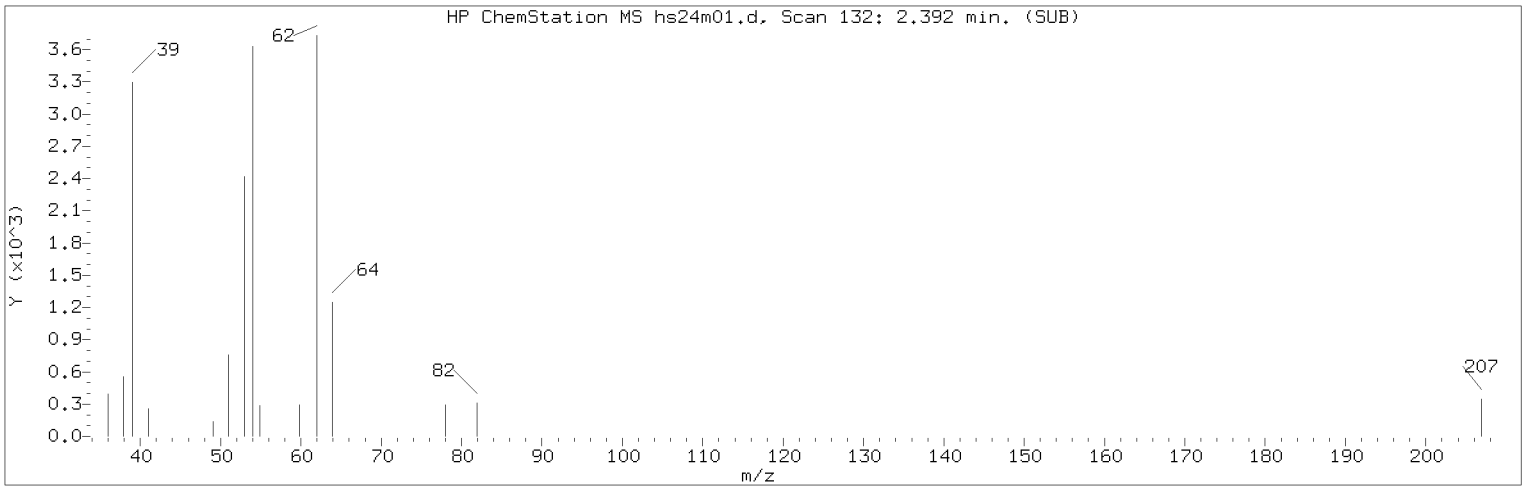
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	27666	0.088
101) m+p-Xylene	(3)	11.603	106	19688	0.169
105) Xylene (Total)	(3)		106	29552	0.258
104) o-Xylene	(3)	11.926	106	9864	0.089
106) Styrene	(3)	11.945	104	14567	0.082
107) Bromoform	(3)	12.103	173	1566	0.064
108) Isopropylbenzene	(3)	12.231	105	26026	0.086
111)$4-Bromofluorobenzene	(3)	12.371	95	1017301	10.033
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	3878	0.086
114) Bromobenzene	(4)	12.487	156	6201	0.091
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	8928	0.833
116) 1,2,3-Trichloropropane	(4)	12.524	110	1112	0.095
117) n-Propylbenzene	(4)	12.554	91	32379	0.087
119) 2-Chlorotoluene	(4)	12.634	126	6163	0.085
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	20930	0.083
122) 4-Chlorotoluene	(4)	12.725	126	6027	0.083
125) tert-Butylbenzene	(4)	12.932	134	4681M	0.085
126) Pentachloroethane	(4)	12.963	167	3547	0.083
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	22024	0.086
128) sec-Butylbenzene	(4)	13.091	105	27687M	0.085
131) 1,3-Dichlorobenzene	(4)	13.200	146	12534	0.092
132) p-Isopropyltoluene	(4)	13.200	119	22266	0.082
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1136004	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	13175	0.099
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	11819M	0.100
136) Benzyl Chloride	(4)	13.341	126	866	0.053
138) n-Butylbenzene	(4)	13.493	92	11478	0.085
139) 1,2-Dichlorobenzene	(4)	13.530	146	10954	0.091
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	310M	0.053
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	9149	0.090
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	7379	0.089
146) Hexachlorobutadiene	(4)	14.694	225	2902	0.093
147) Naphthalene	(4)	14.804	128	10099	0.077
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	6064	0.089

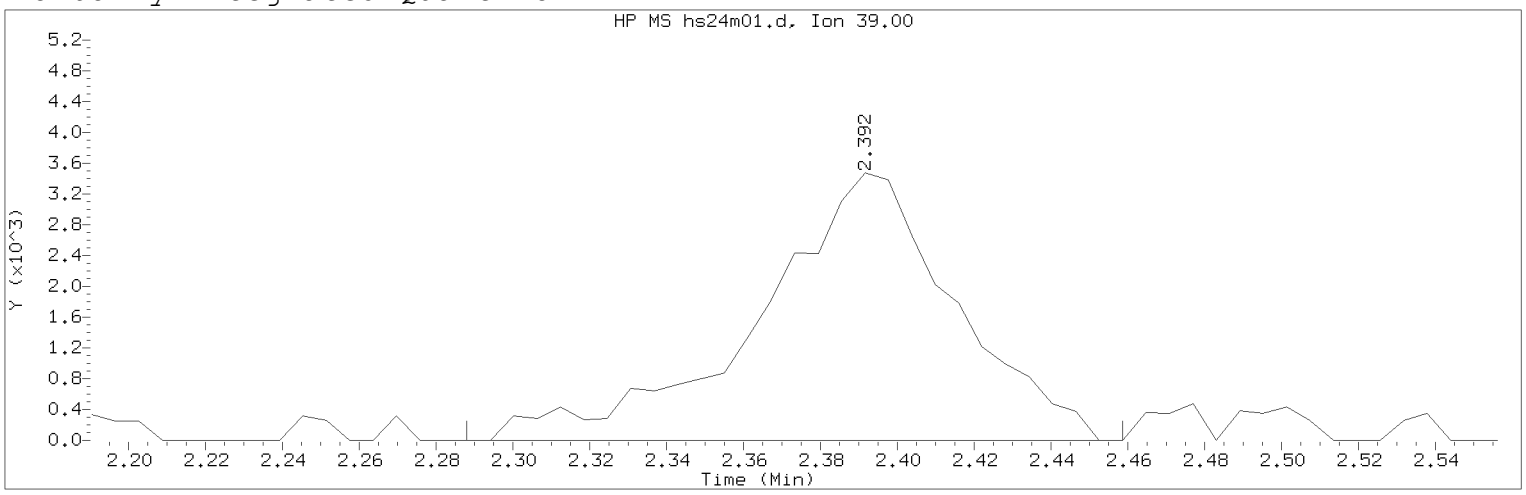
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

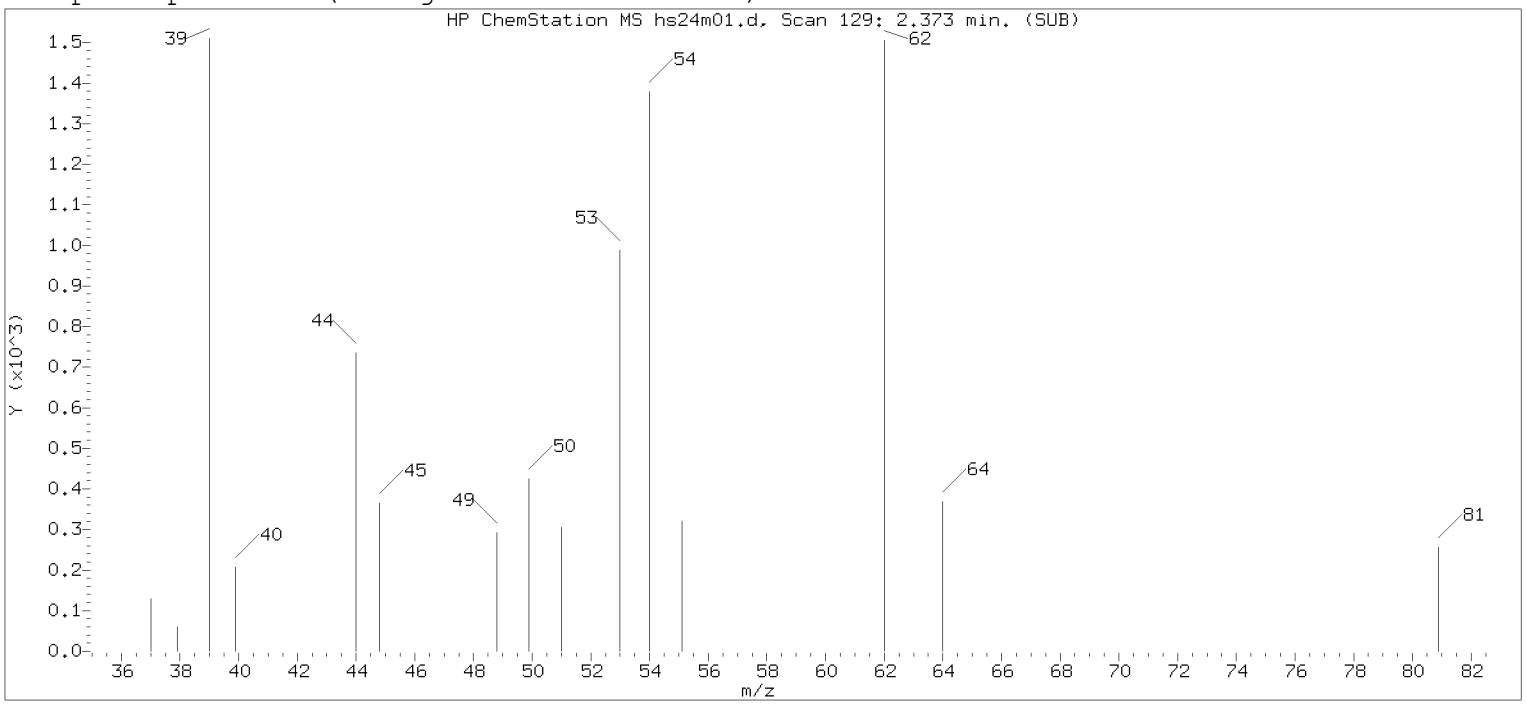
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 12302M
On-Column Amount (ng) : 0.1089
Integration start scan : 114 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

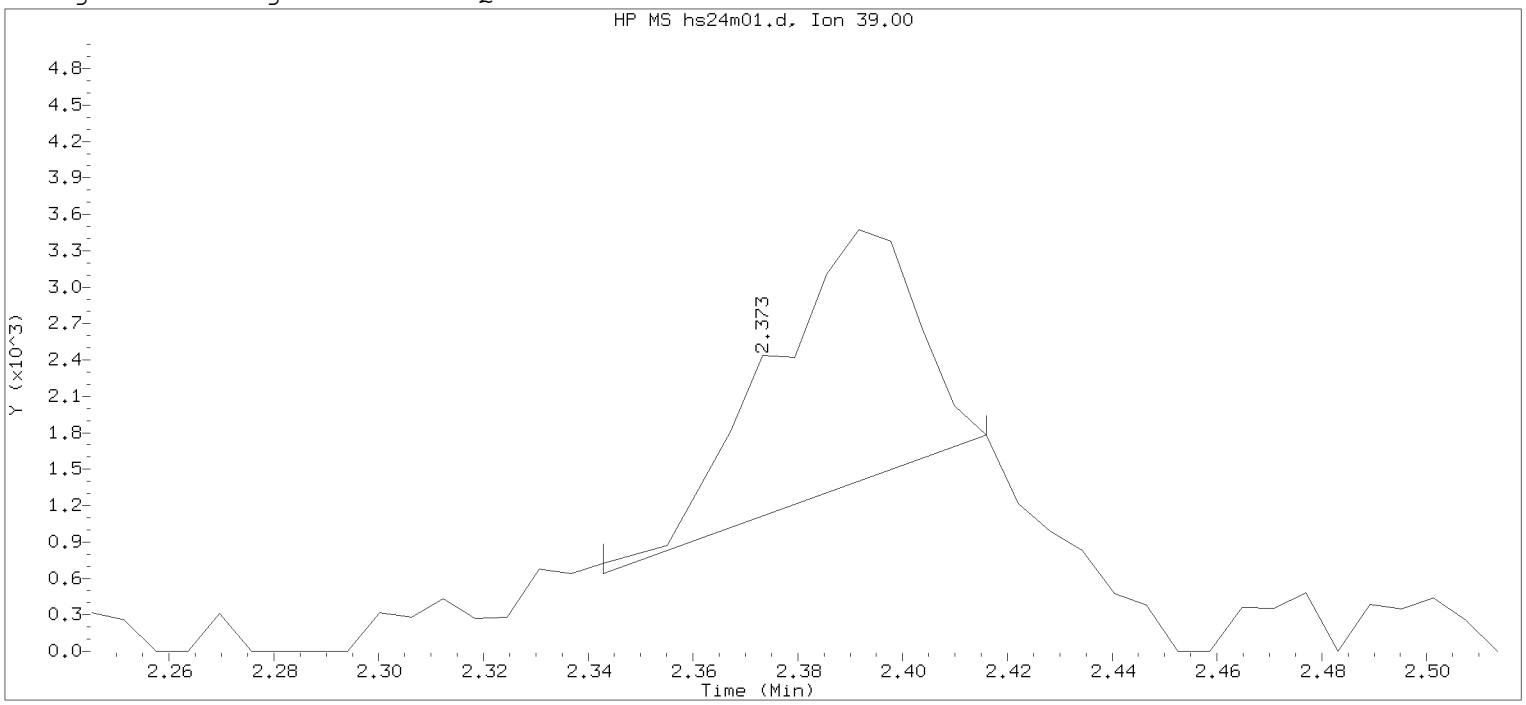
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

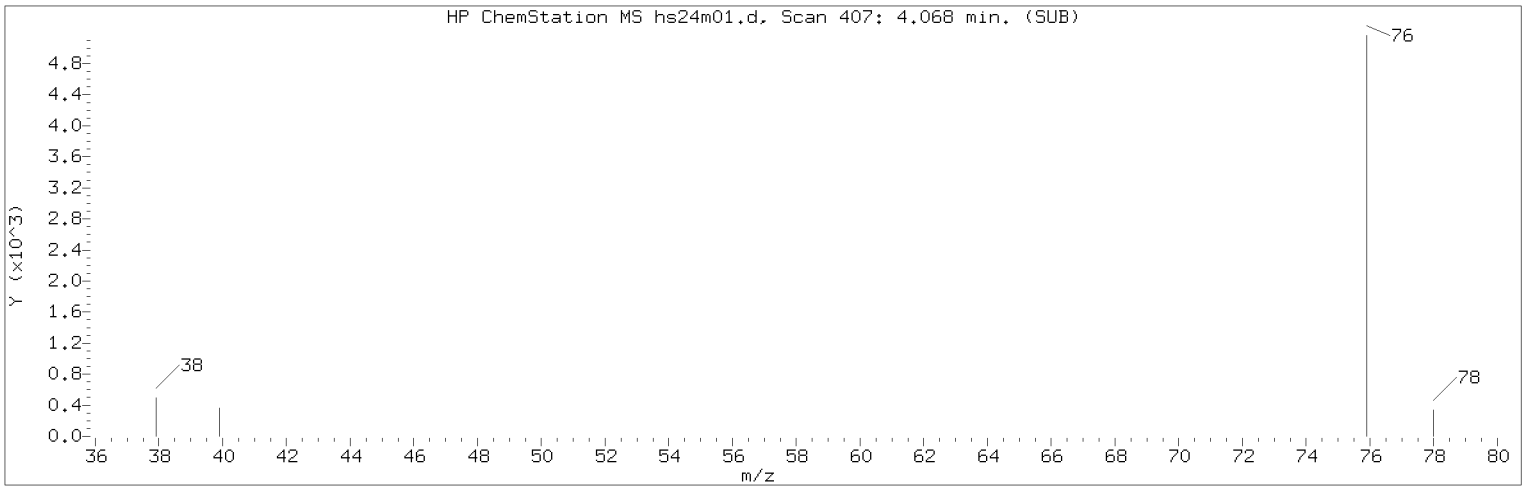
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

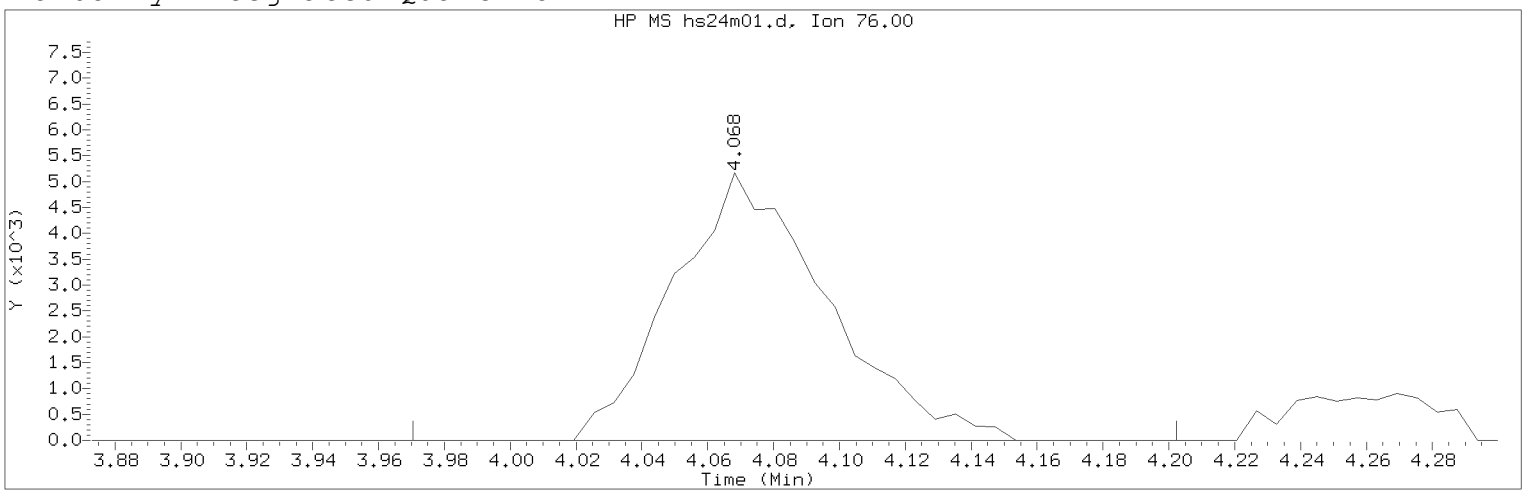
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.373
Quant Ion : 39.00
Area : 4048
On-column Amount (ng) : 0.0438
Integration start scan : 123 Integration stop scan: 135
Y at integration start : 640 Y at integration end: 1780

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

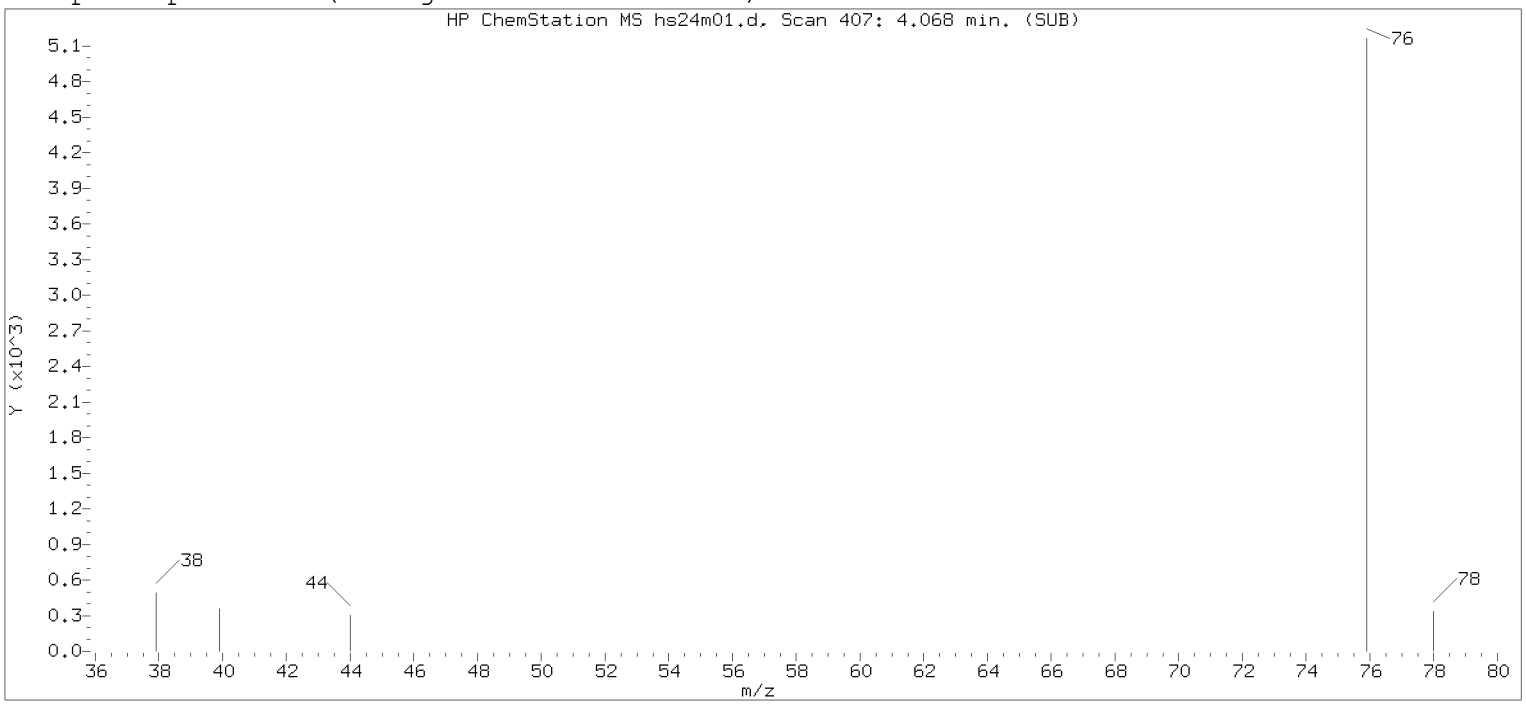
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area (flag) : 16735M
On-Column Amount (ng) : 0.0964
Integration start scan : 390 Integration stop scan: 428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

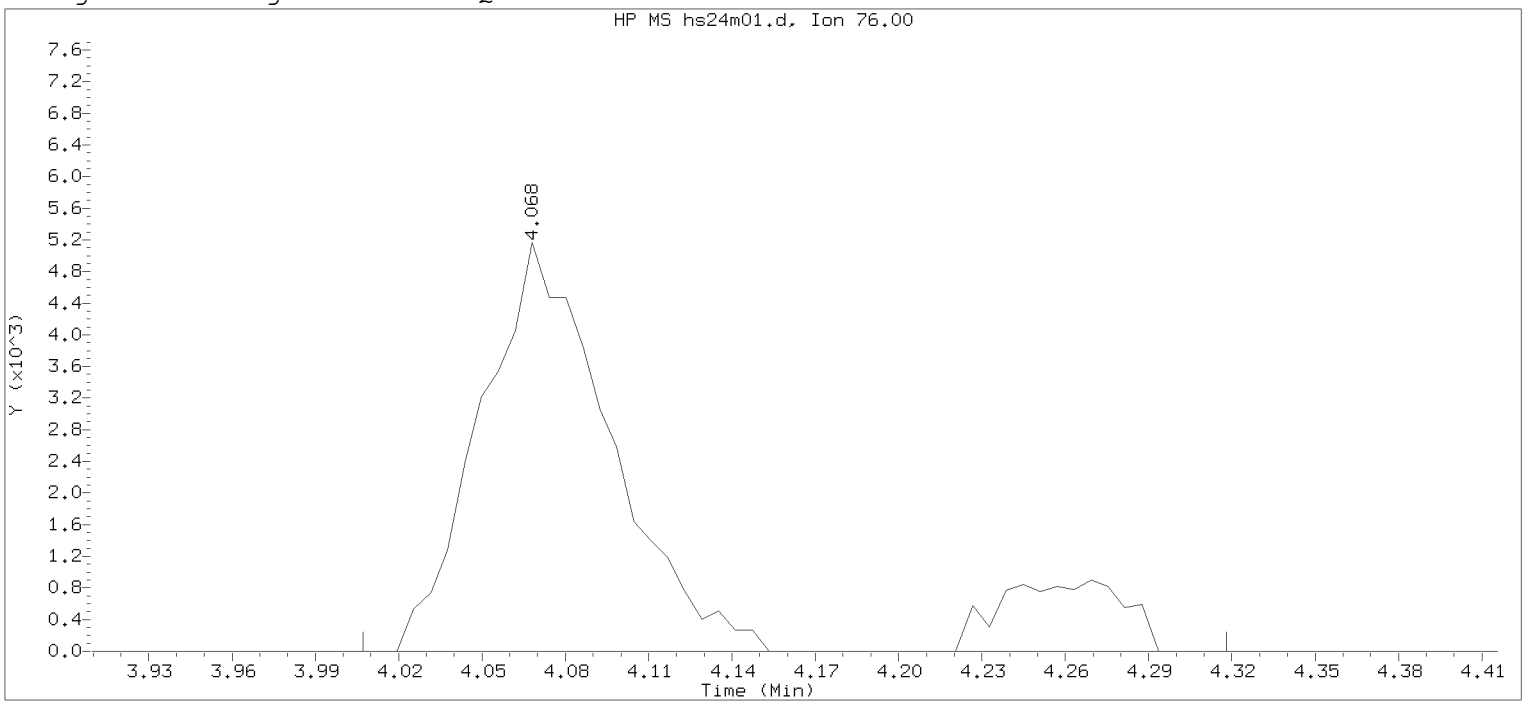
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

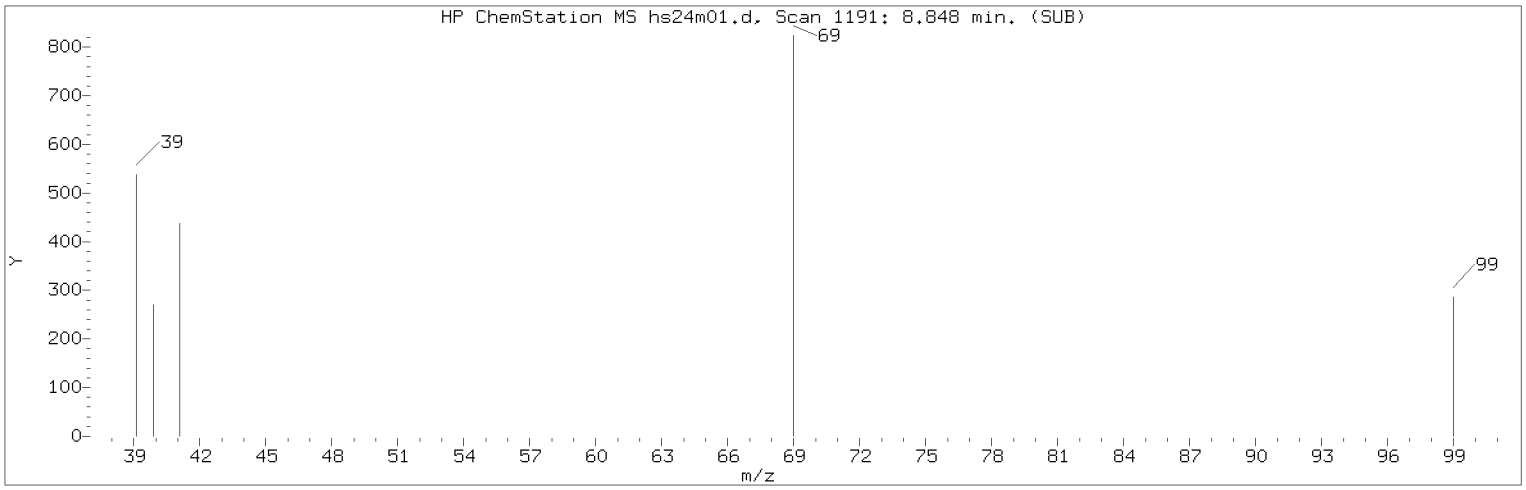
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

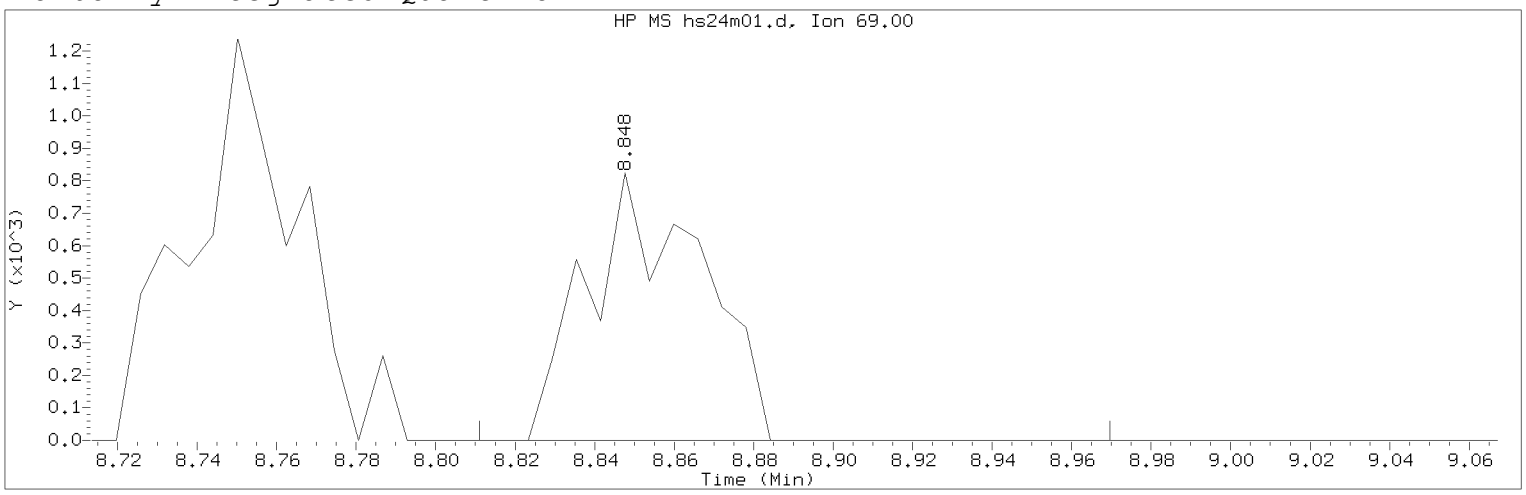
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area : 19554
On-column Amount (ng) : 0.1126
Integration start scan : 396 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

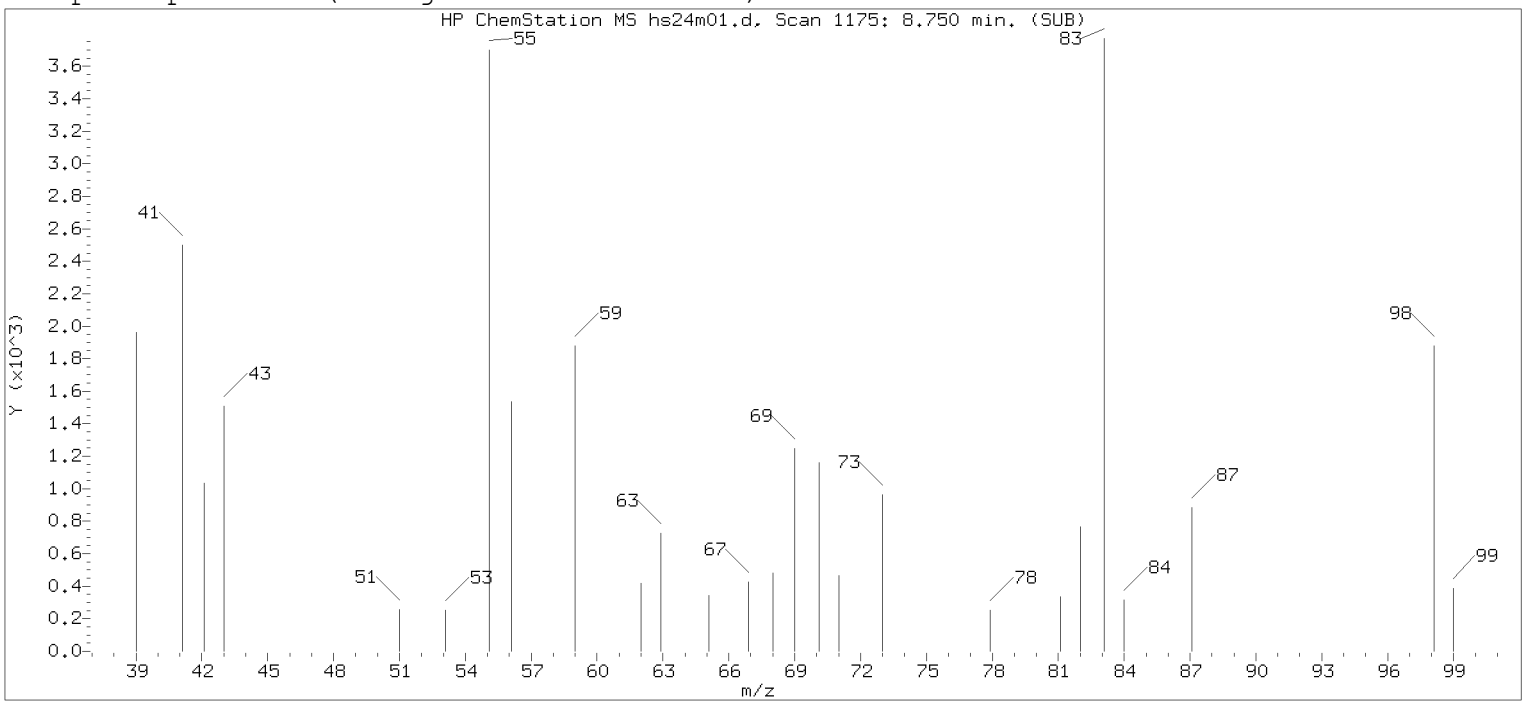
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1191
Retention Time (minutes): 8.848
Quant Ion : 69.00
Area (flag) : 1661M
On-Column Amount (ng) : 0.0666
Integration start scan : 1184 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

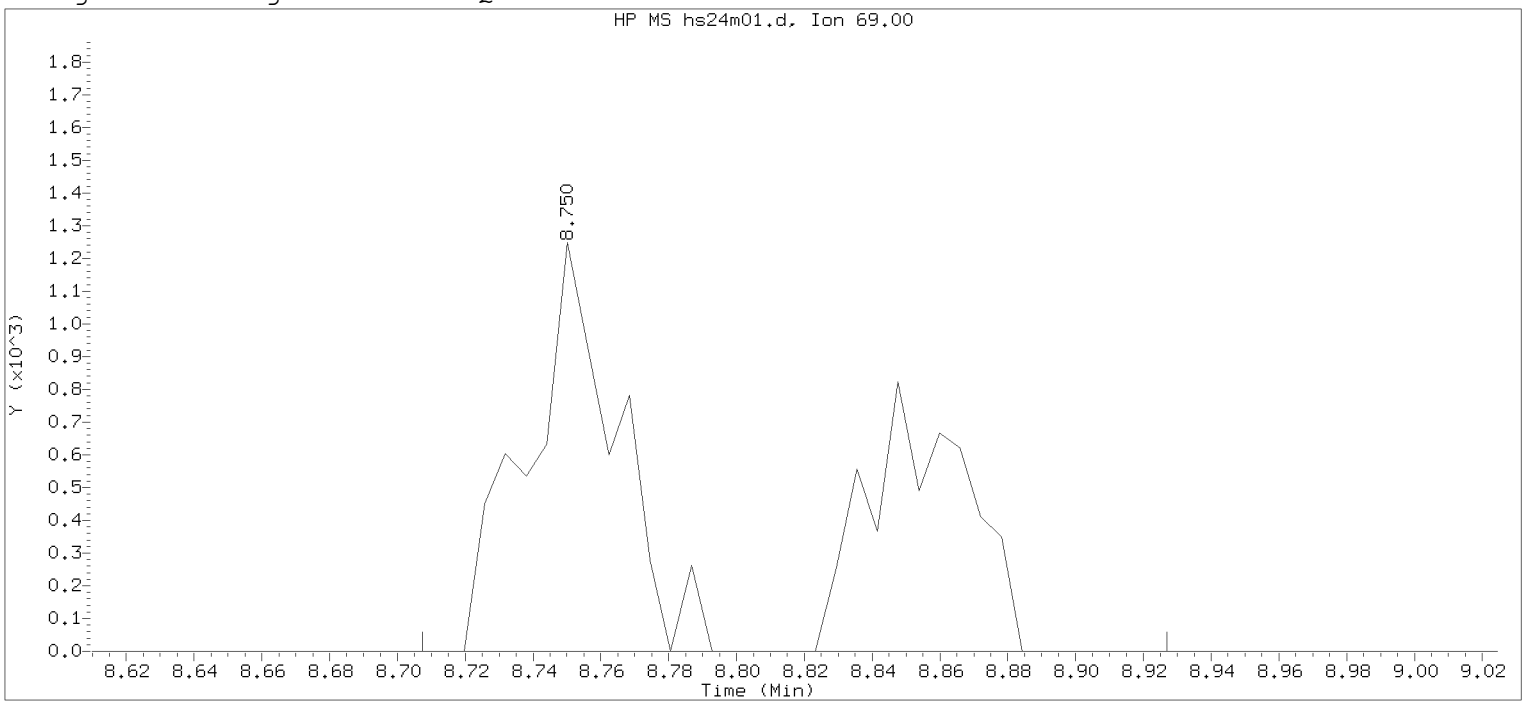
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

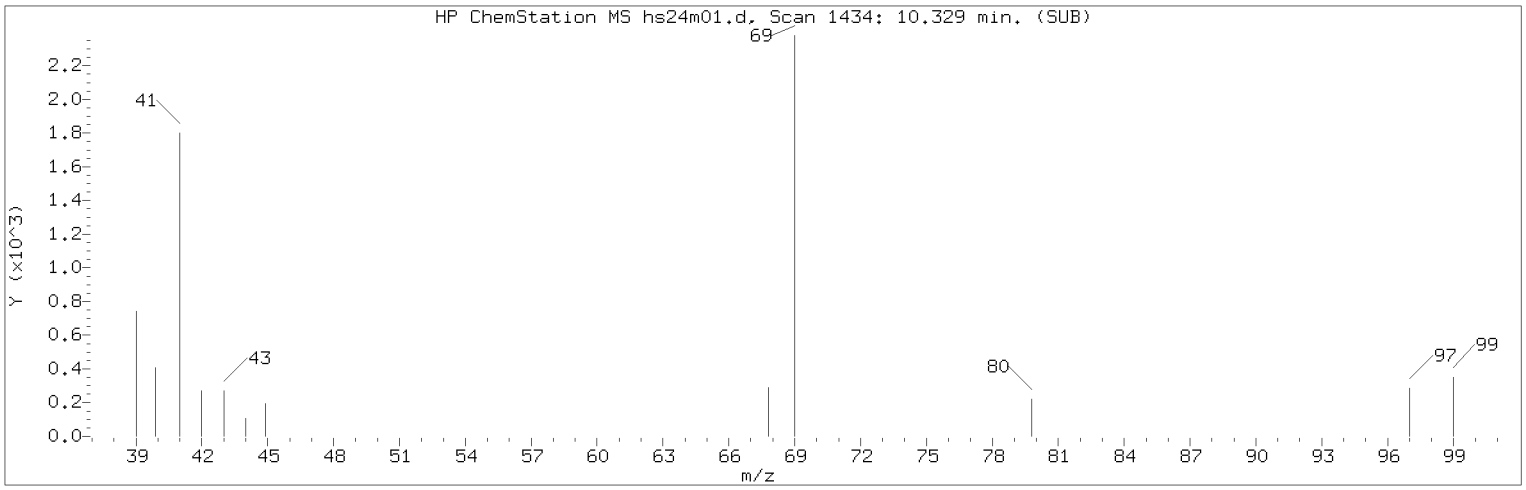
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

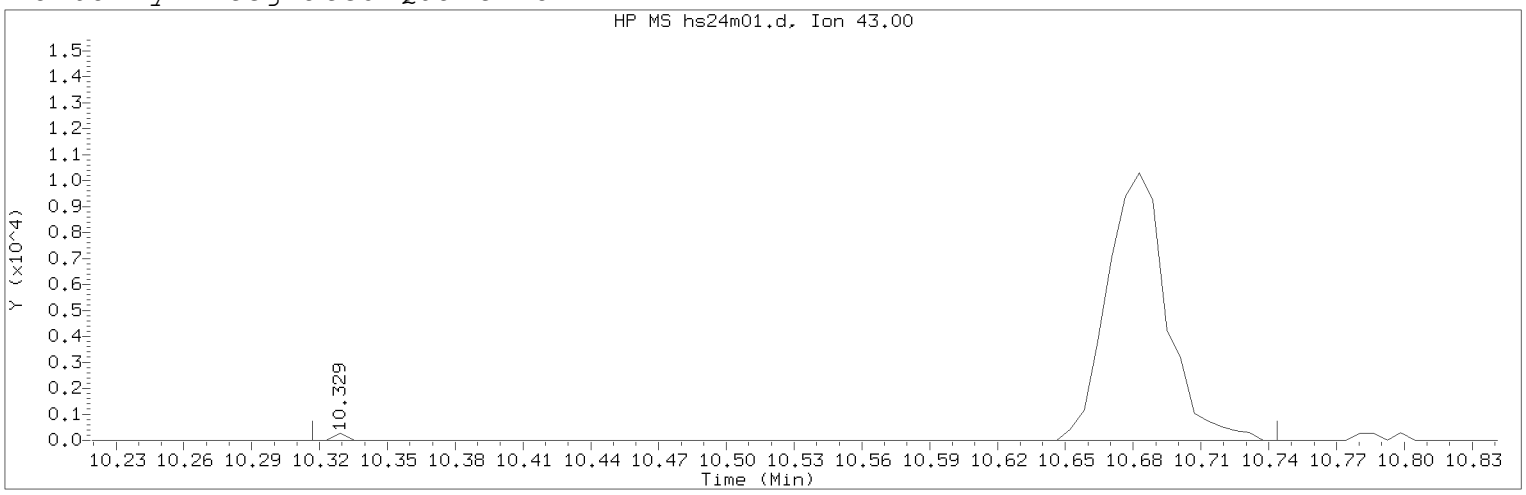
Compound Number	: 71		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1175		
Retention Time (minutes)	: 8.750		
Quant Ion	: 69.00		
Area	: 3973		
On-column Amount (ng)	: 0.1576		
Integration start scan	: 1167	Integration stop scan:	1203
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

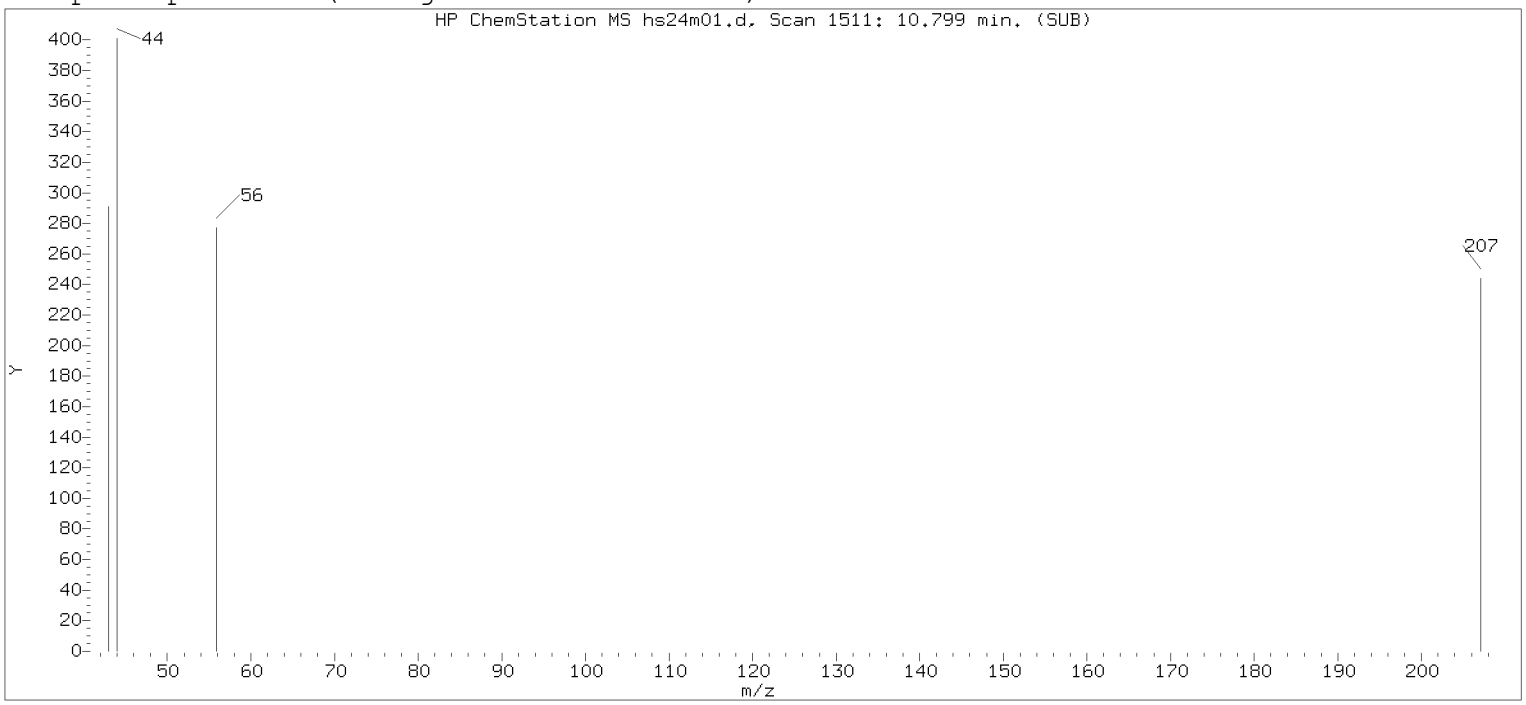
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1434
Retention Time (minutes): 10.329
Quant Ion : 43.00
Area (flag) : 19024A
On-Column Amount (ng) : 0.8165
Integration start scan : 1431 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

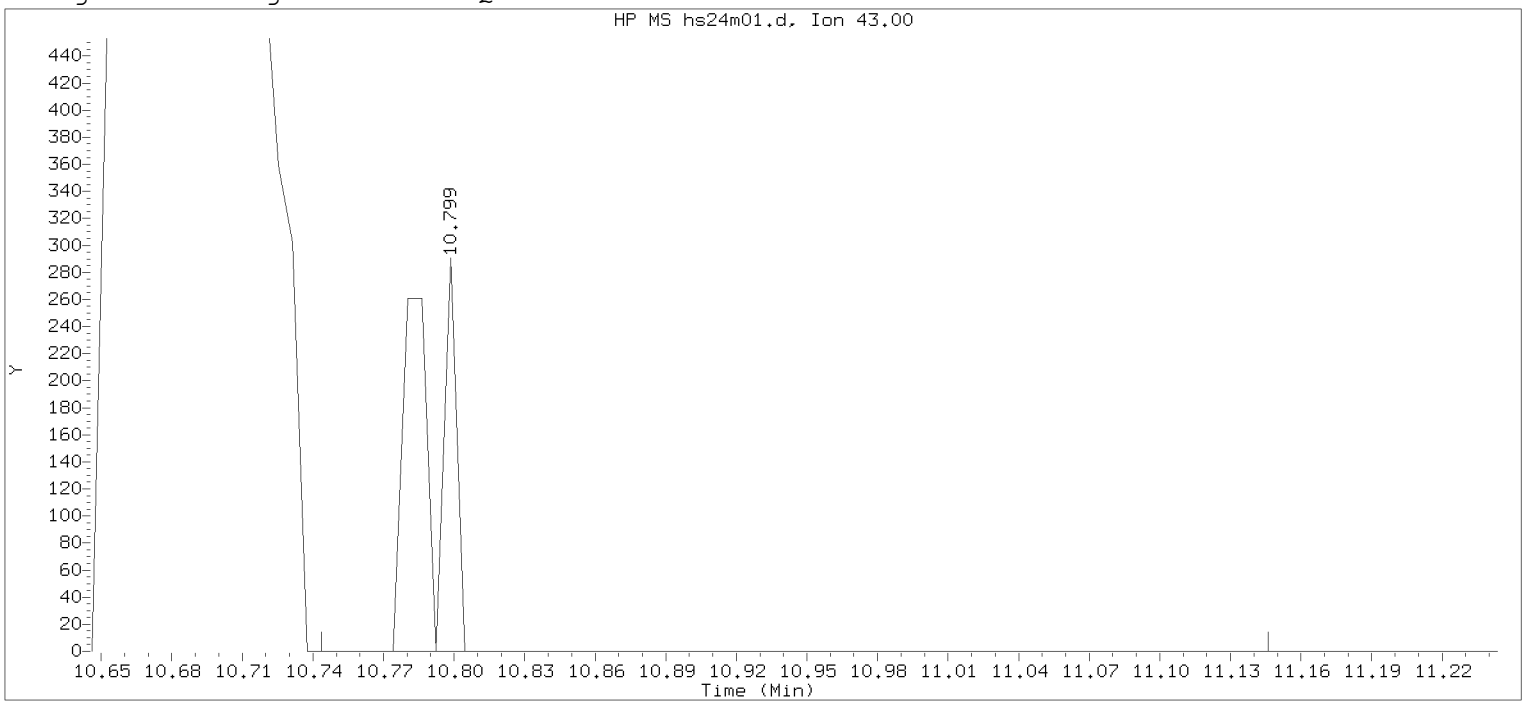
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

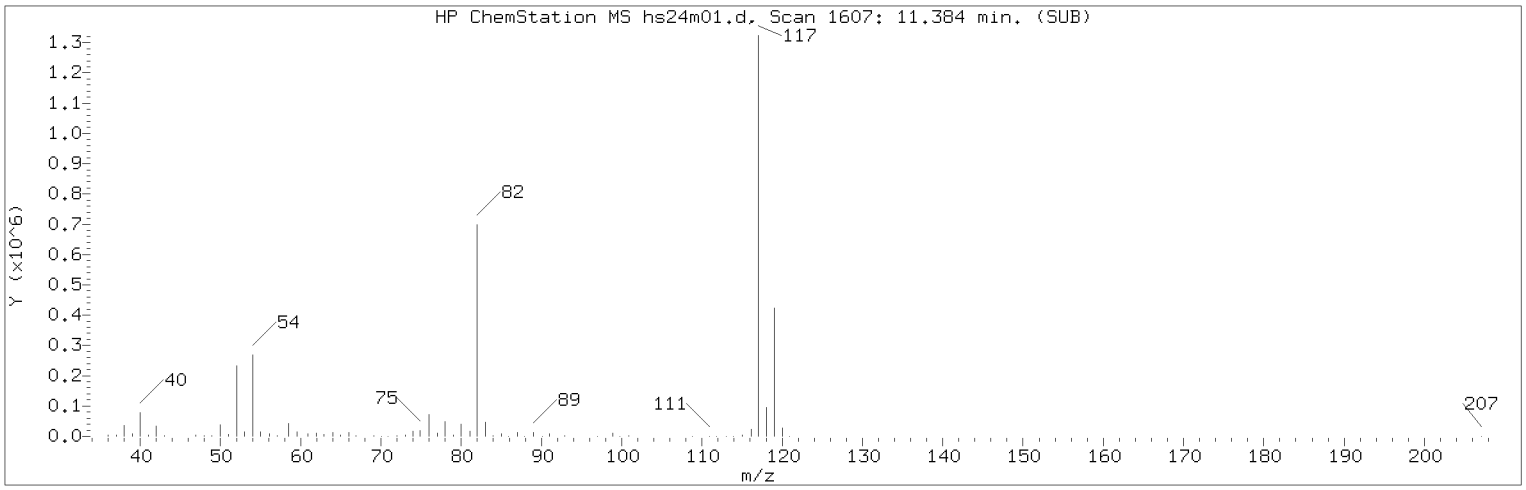
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

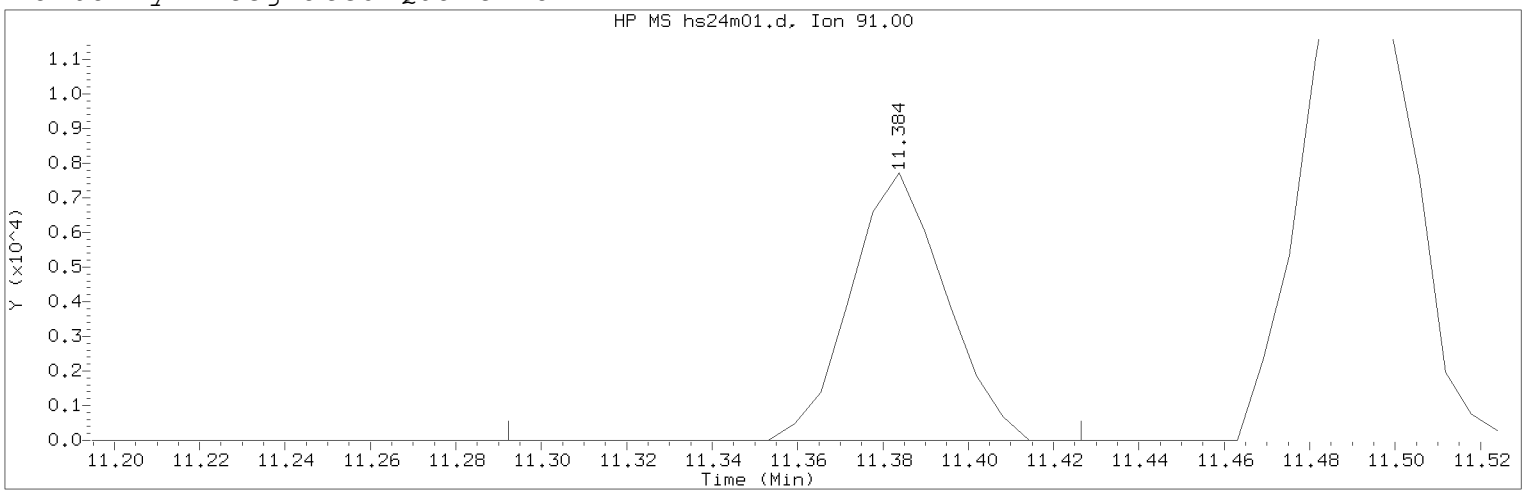
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1511
Retention Time (minutes): 10.799
Quant Ion : 43.00
Area : 297
On-column Amount (ng) : 0.0128
Integration start scan : 1501 Integration stop scan: 1567
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

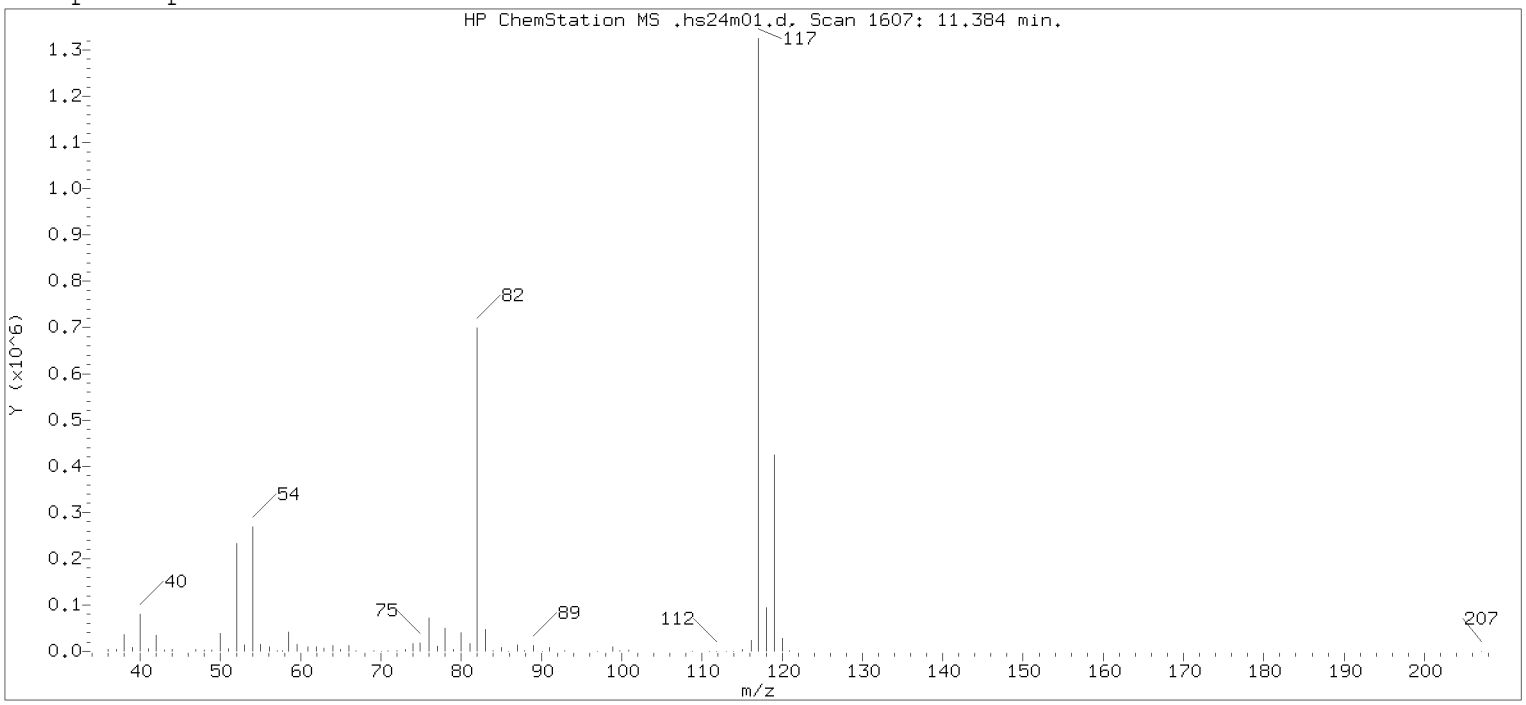
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 11869M
On-Column Amount (ng) : 0.1239
Integration start scan : 1591 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

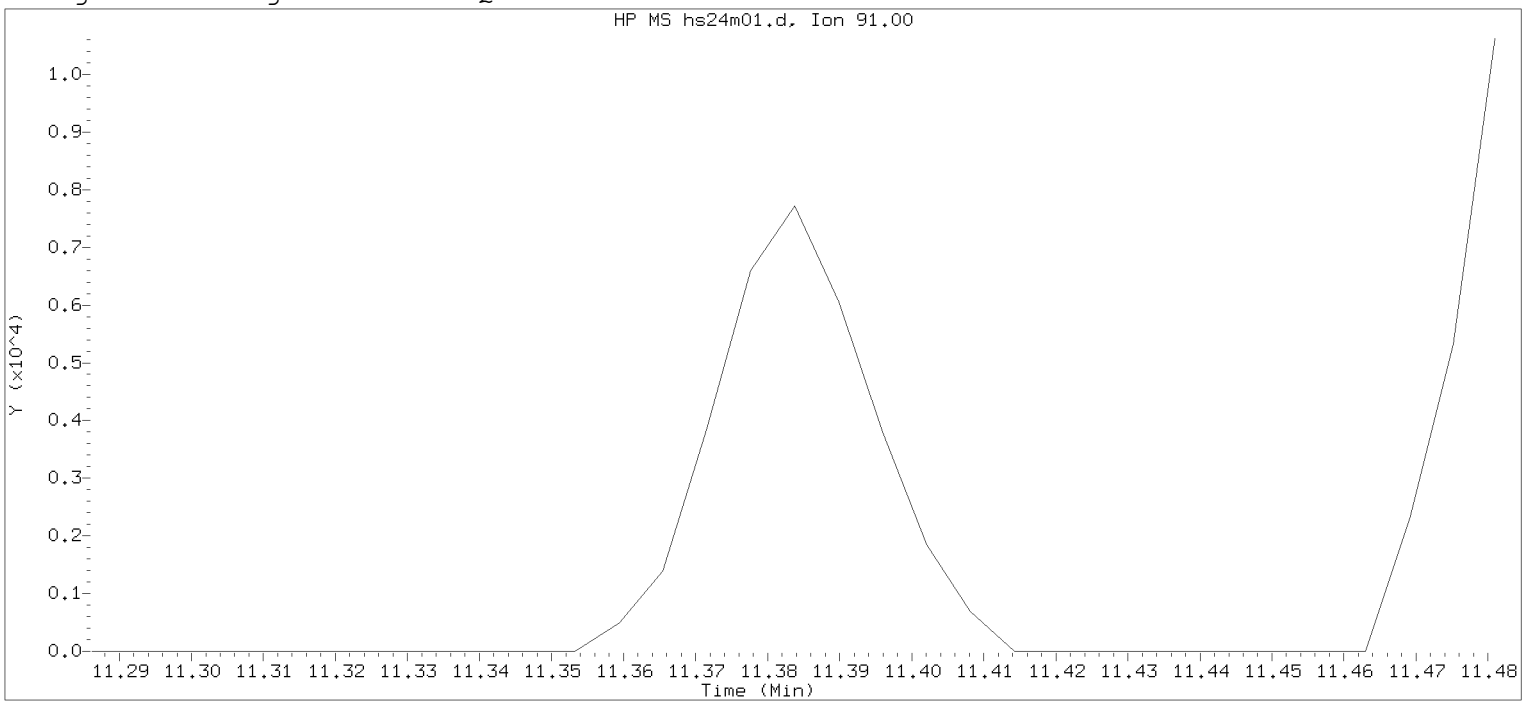
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

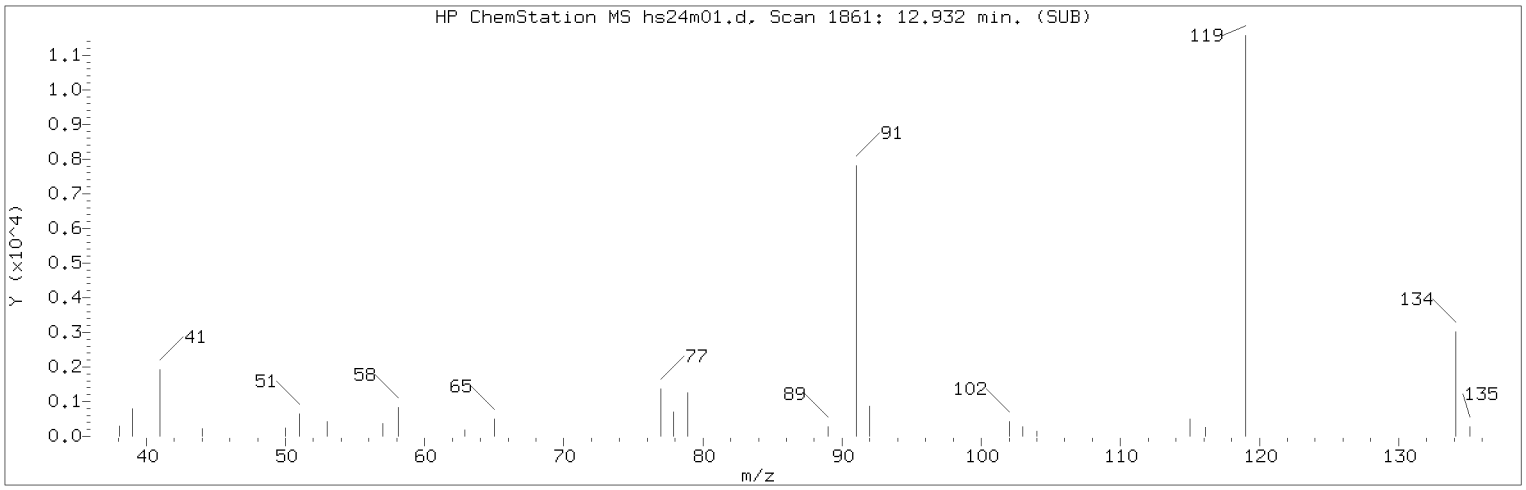
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

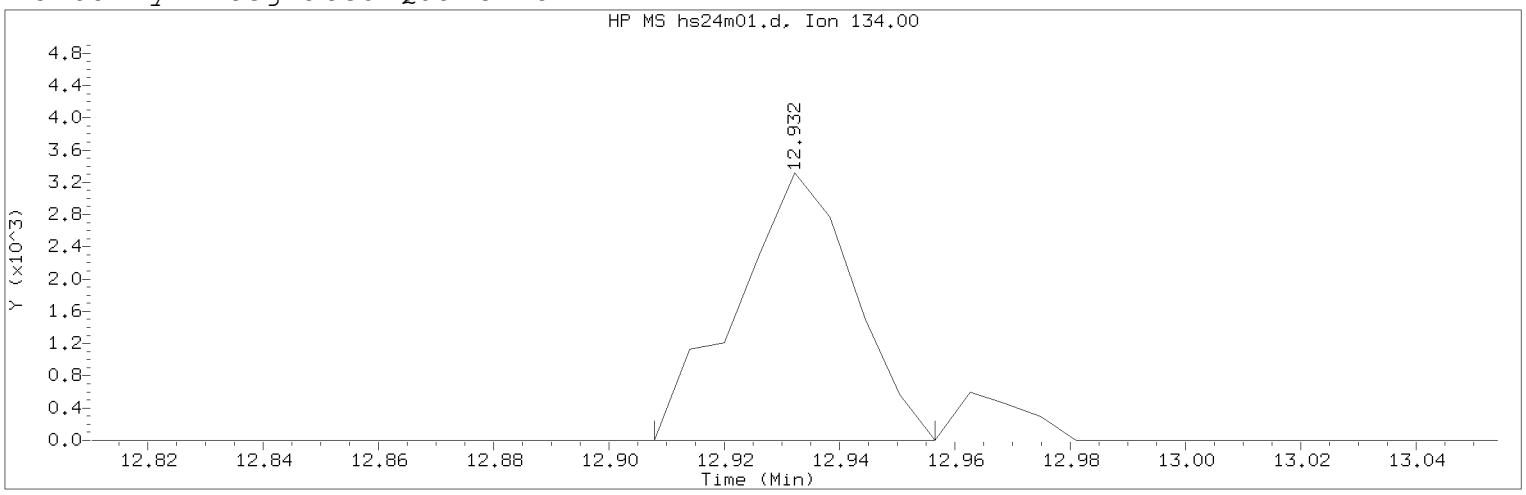
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

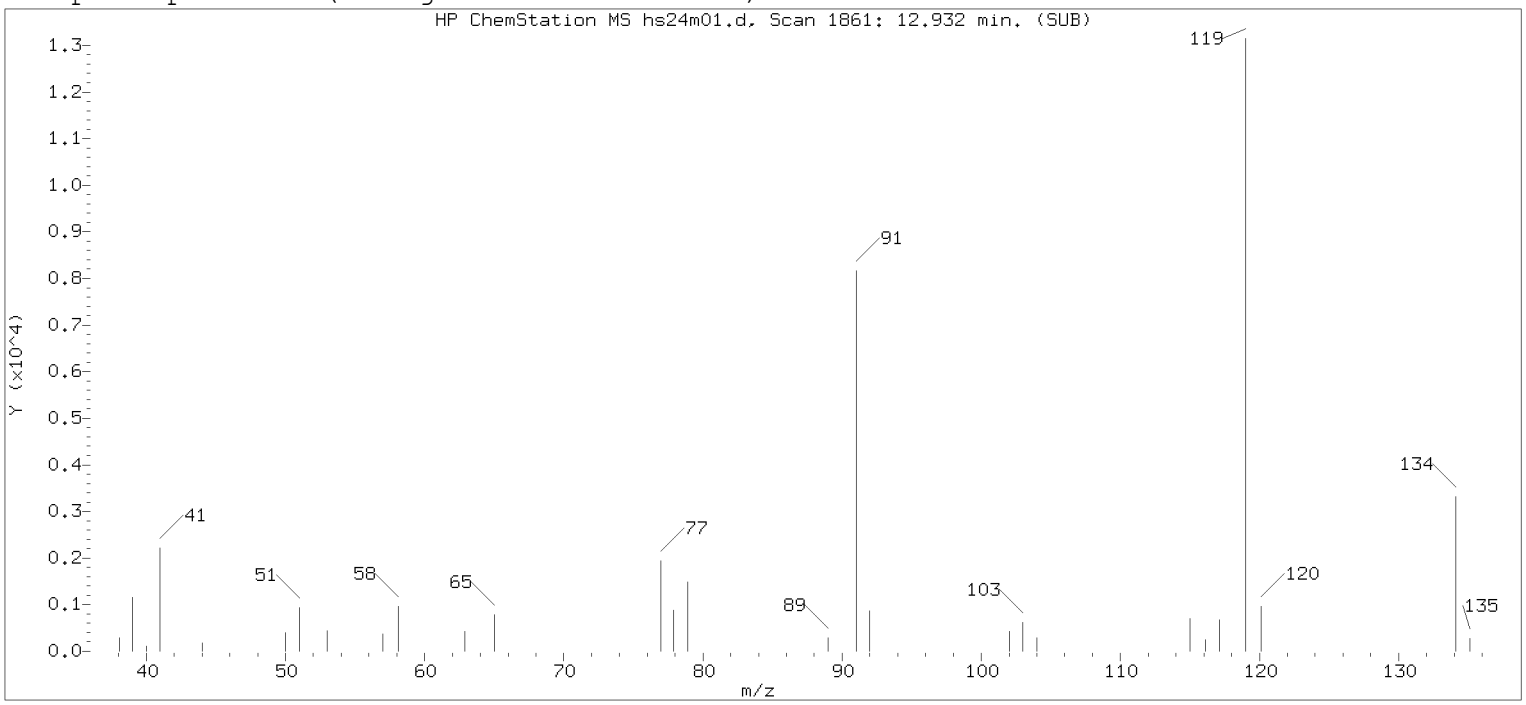
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 4681M
On-Column Amount (ng) : 0.0853
Integration start scan : 1856 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

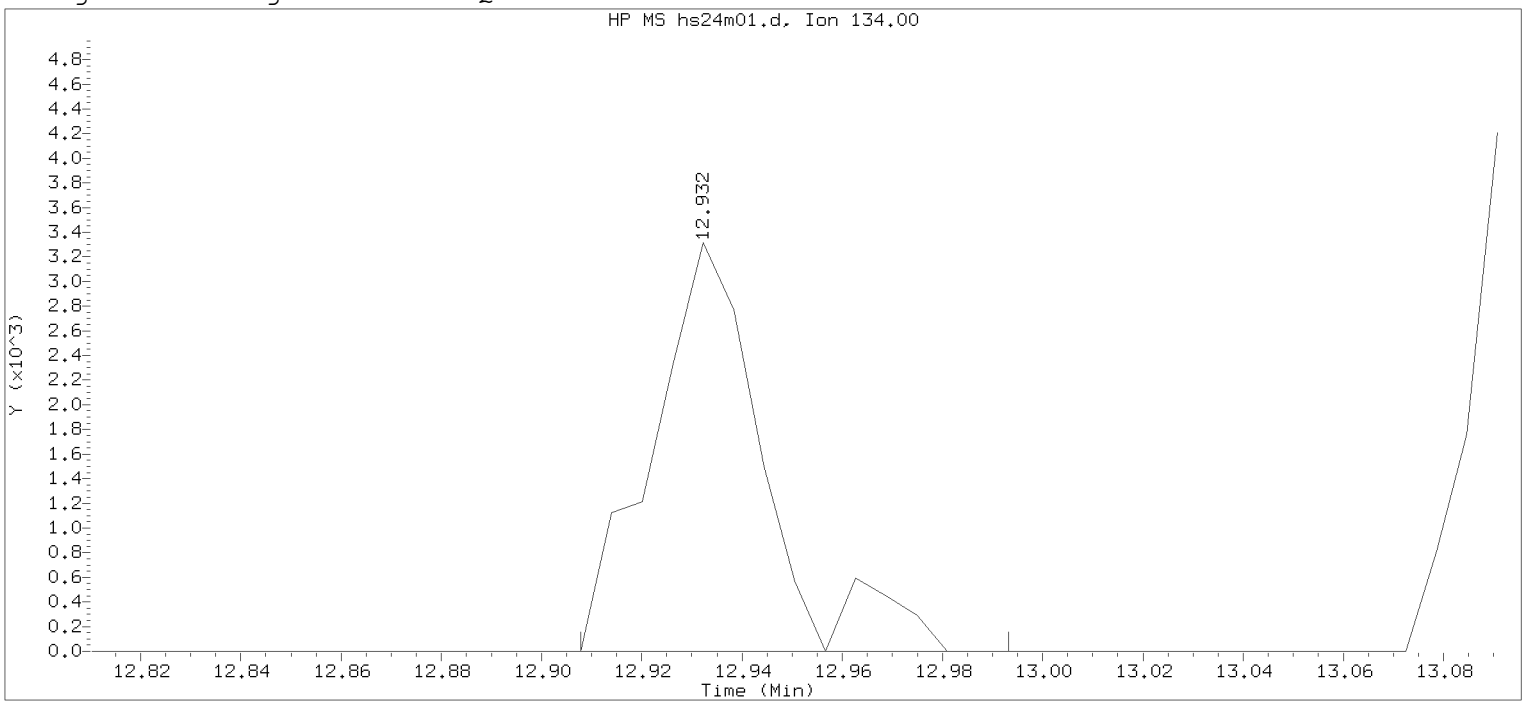
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

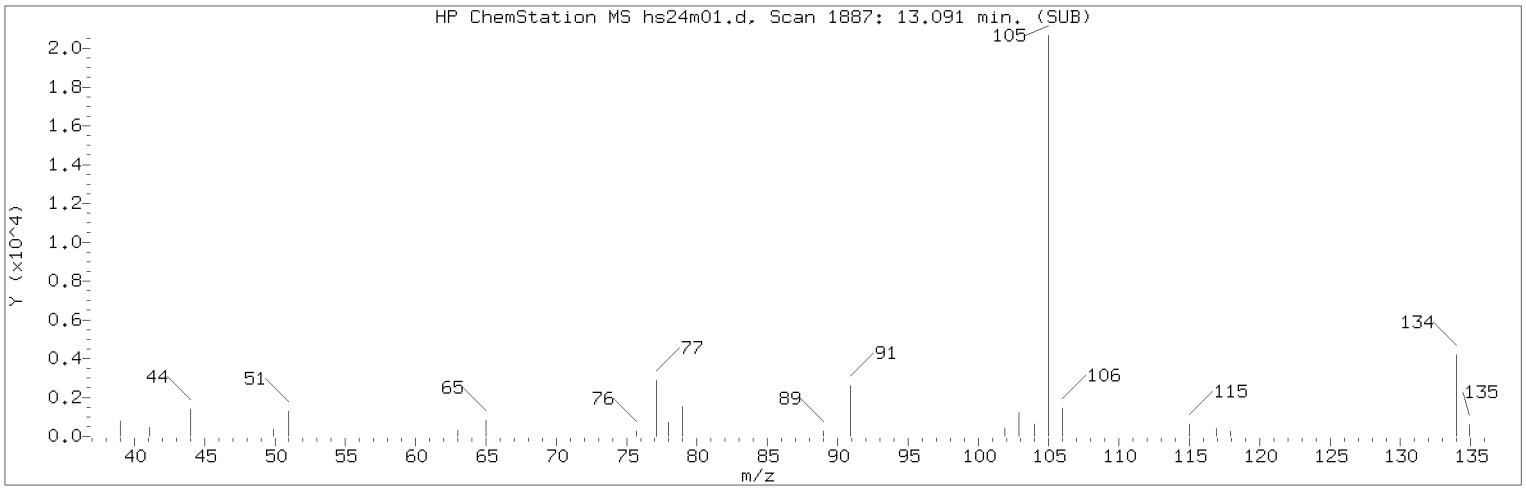
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

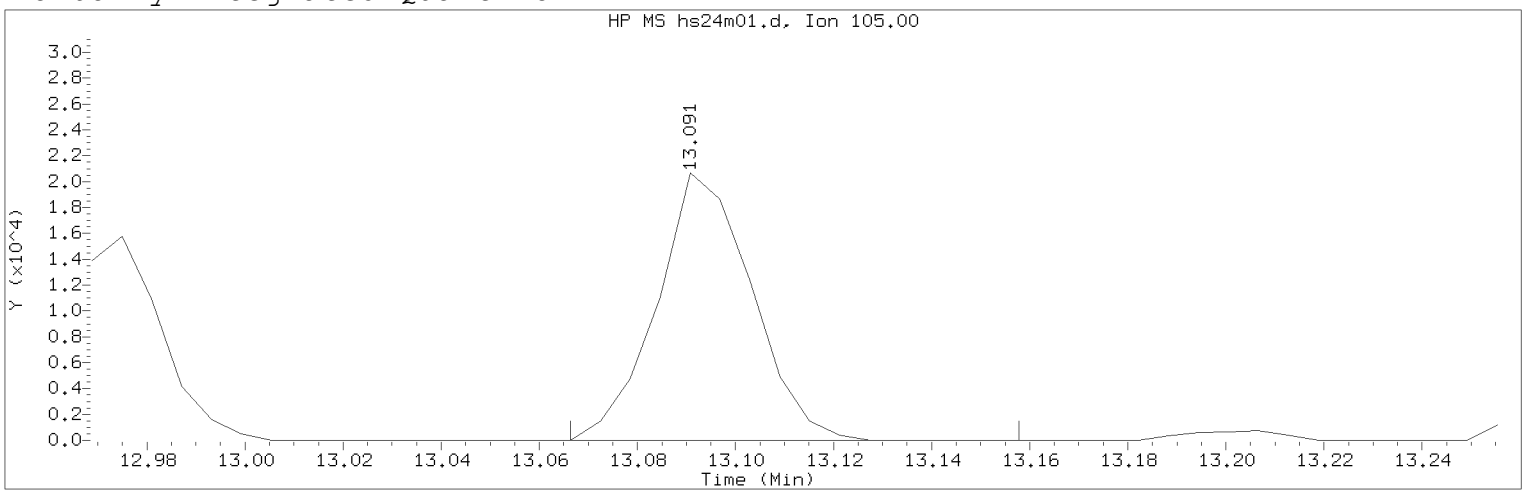
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 5170
On-column Amount (ng) : 0.0909
Integration start scan : 1856 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

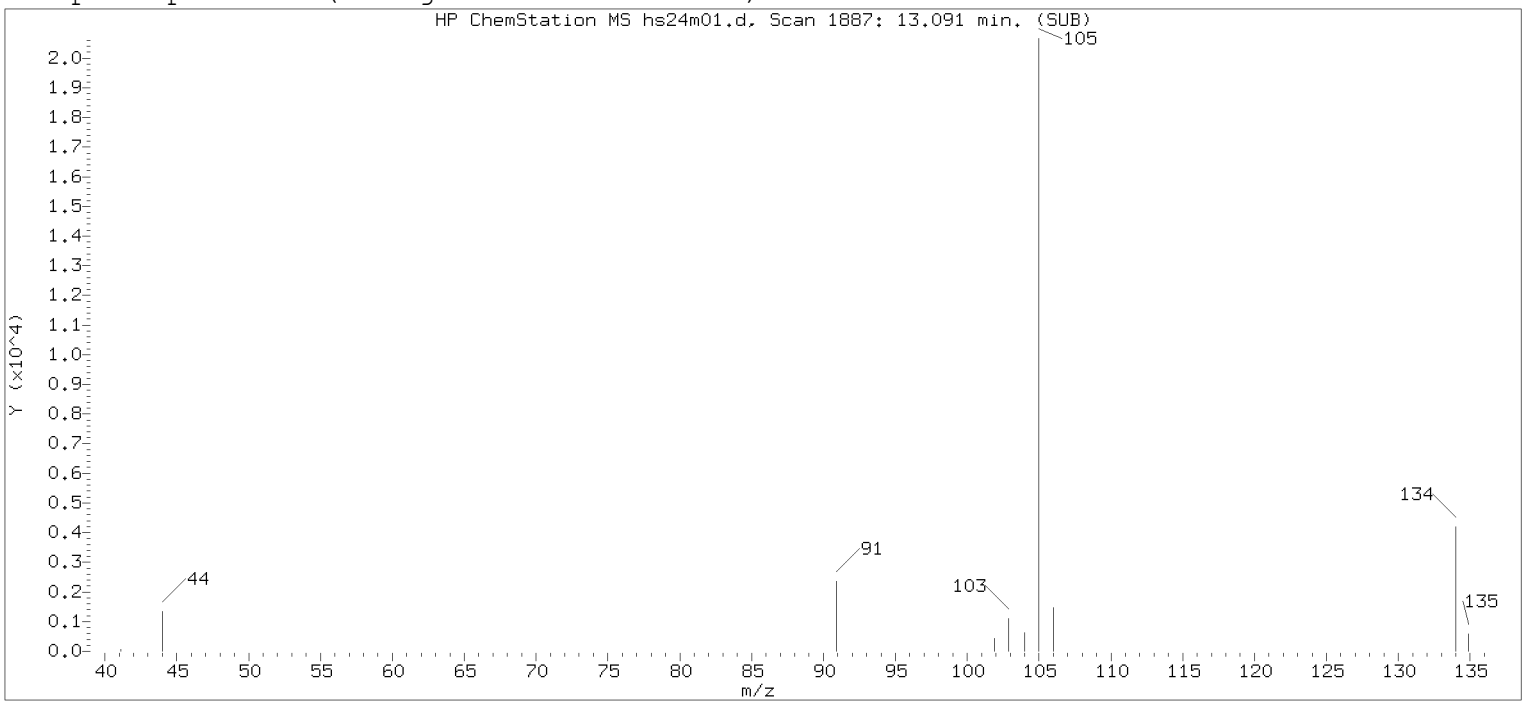
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area (flag) : 27687M
On-Column Amount (ng) : 0.0847
Integration start scan : 1882 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

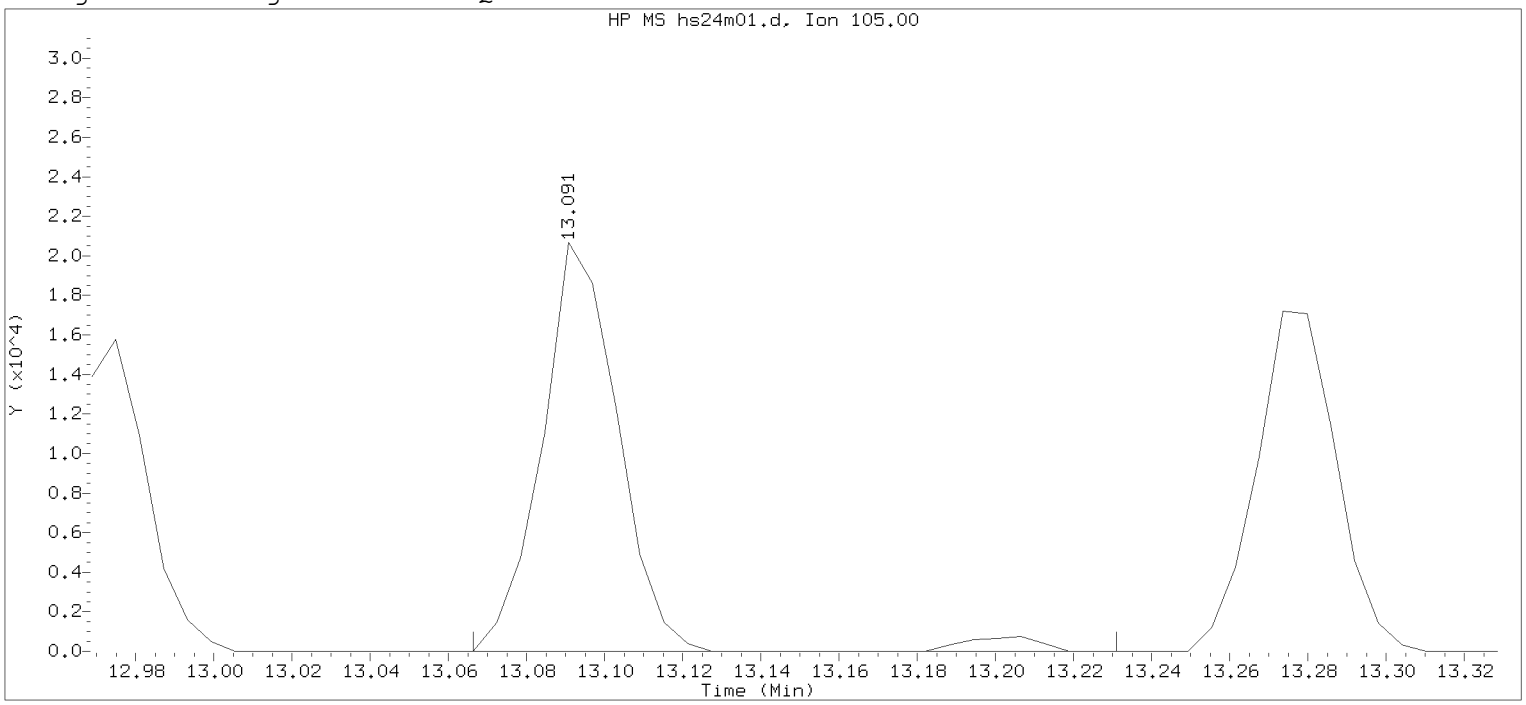
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

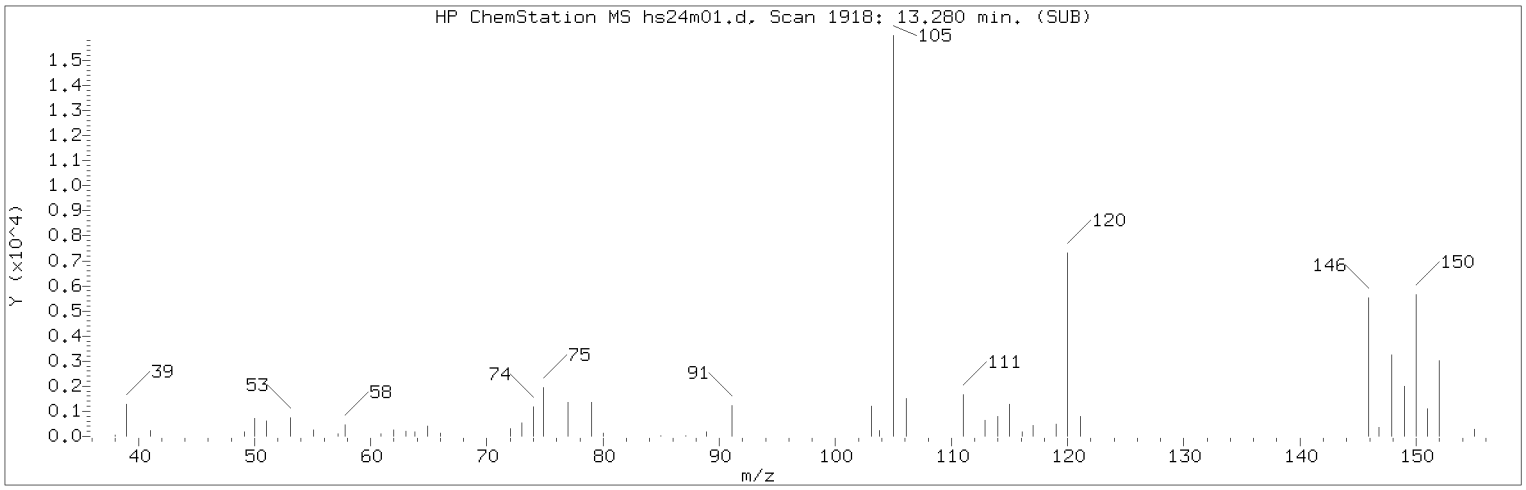
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

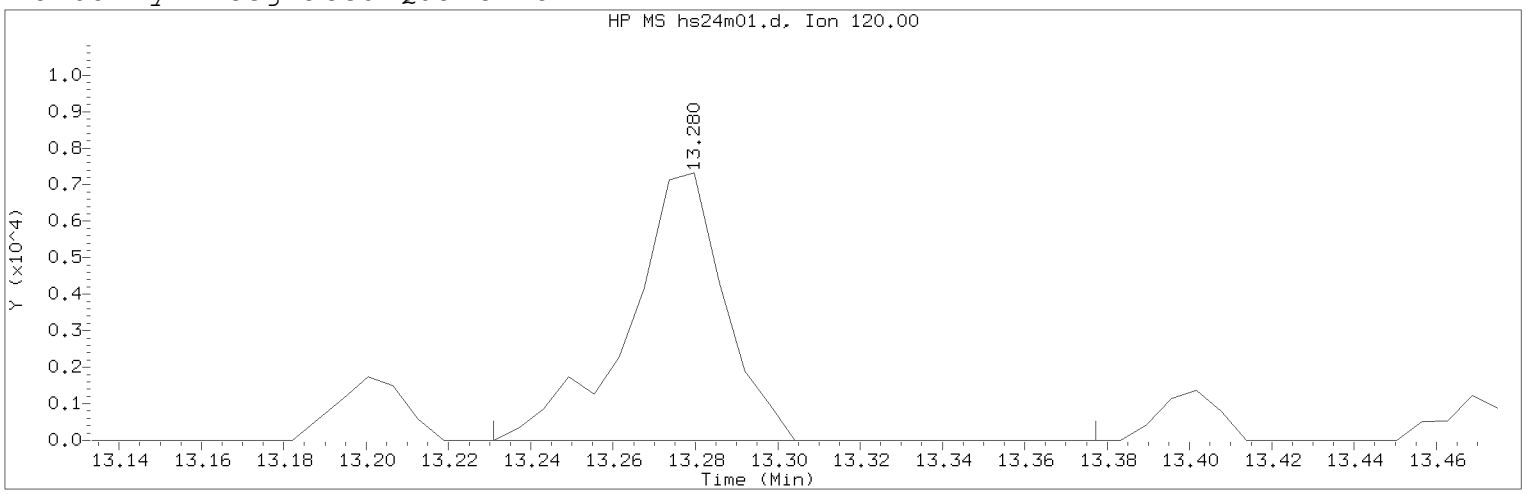
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area : 28686
On-column Amount (ng) : 0.0875
Integration start scan : 1882 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

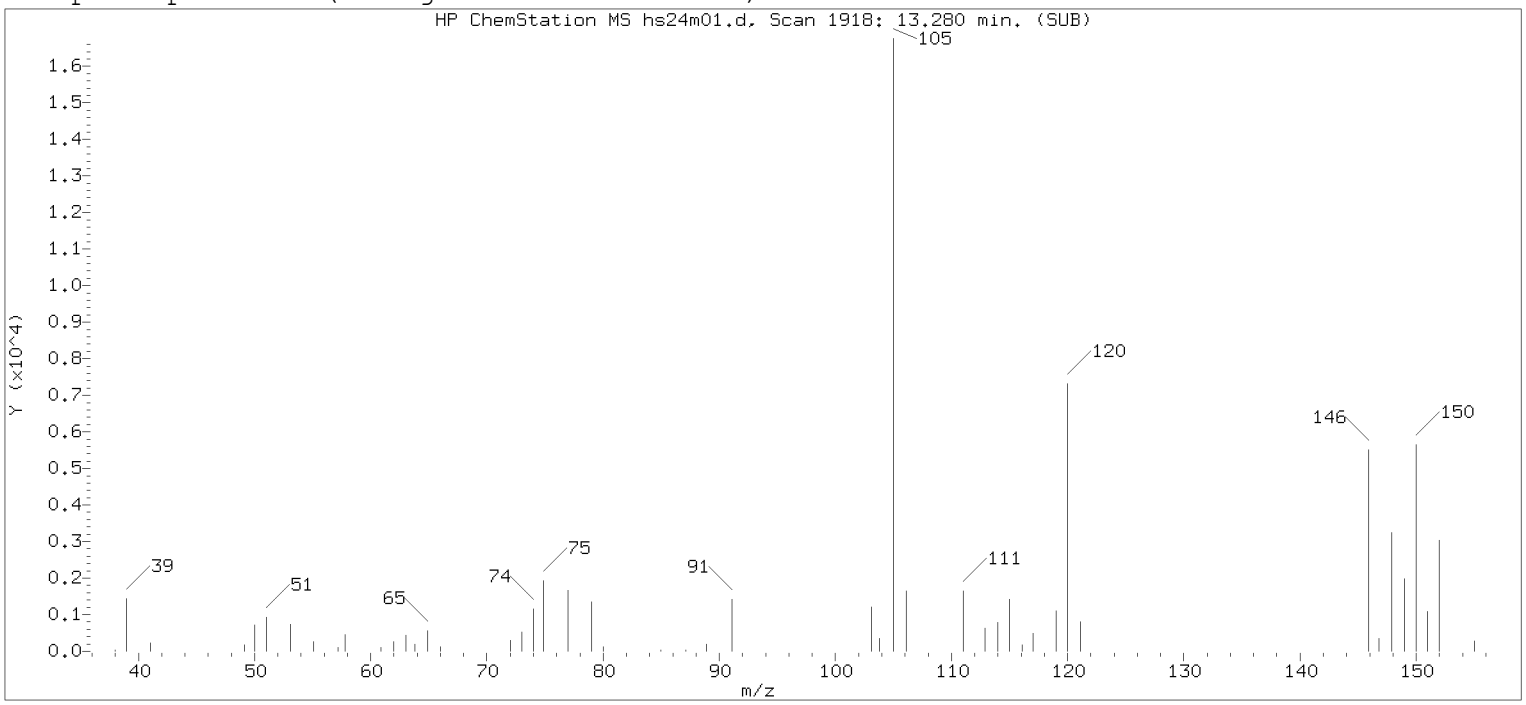
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area (flag) : 11819M
On-Column Amount (ng) : 0.1001
Integration start scan : 1909 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

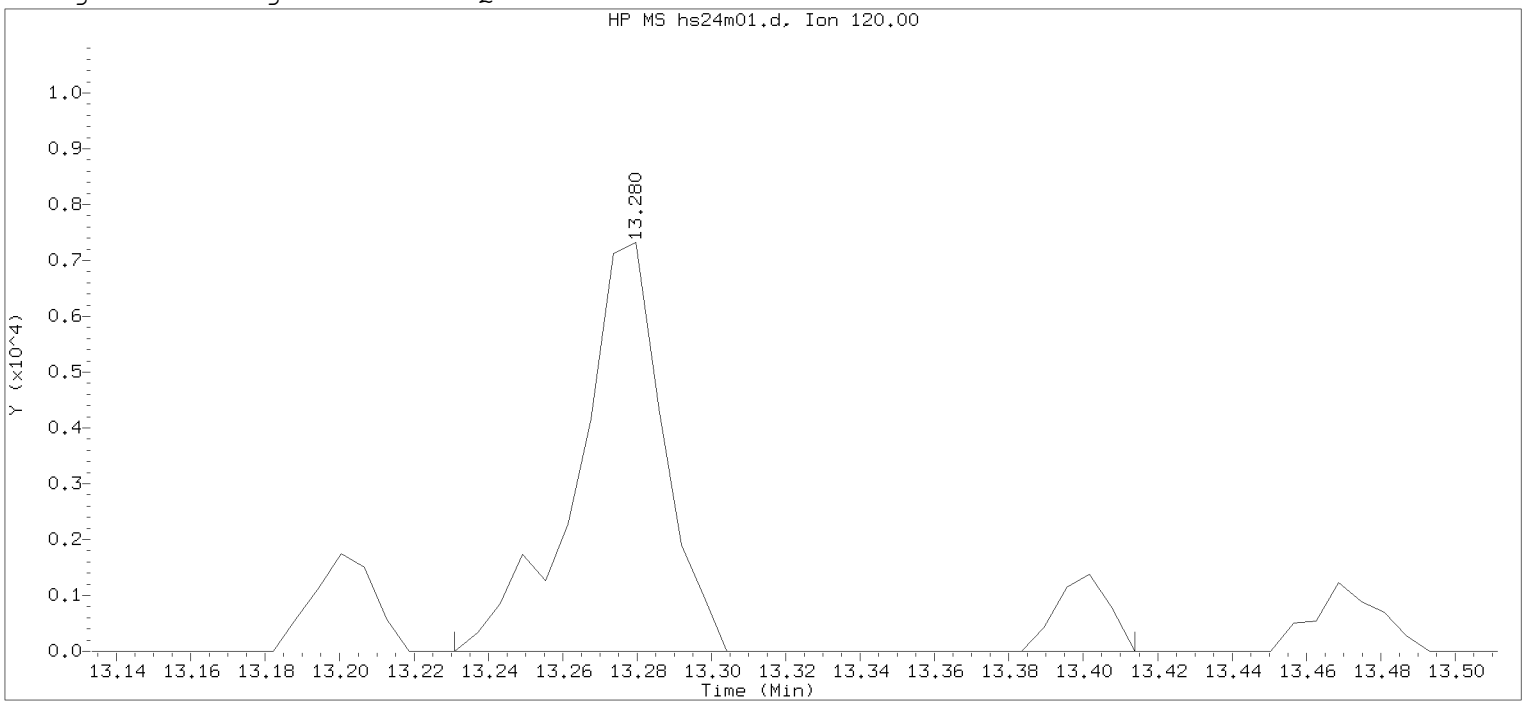
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

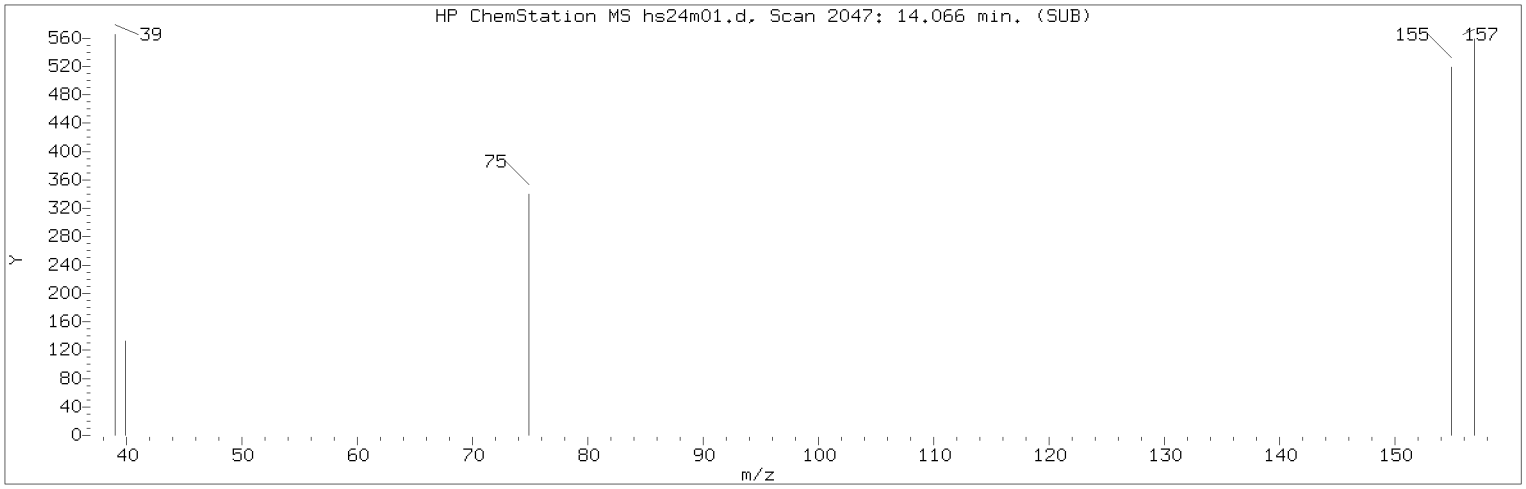
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

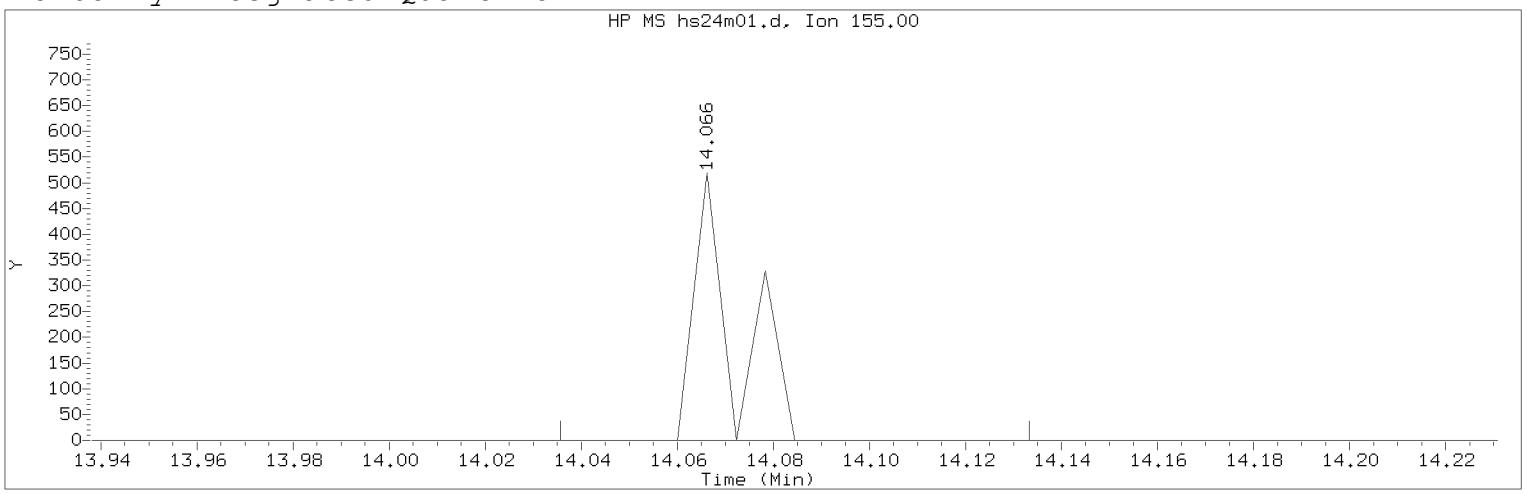
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area : 13186
On-column Amount (ng) : 0.1095
Integration start scan : 1909 Integration stop scan: 1939
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

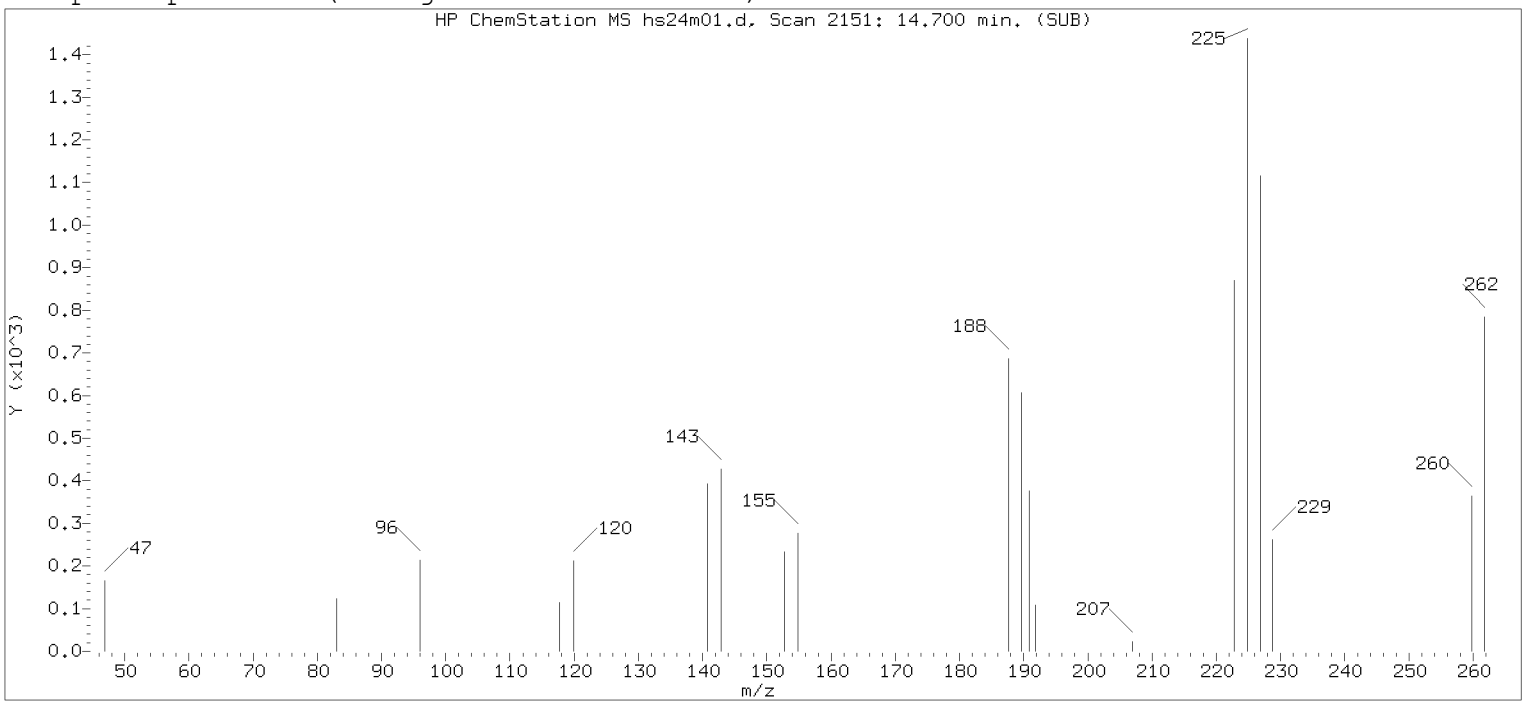
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 310M
On-Column Amount (ng) : 0.0535
Integration start scan : 2041 Integration stop scan: 2057
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

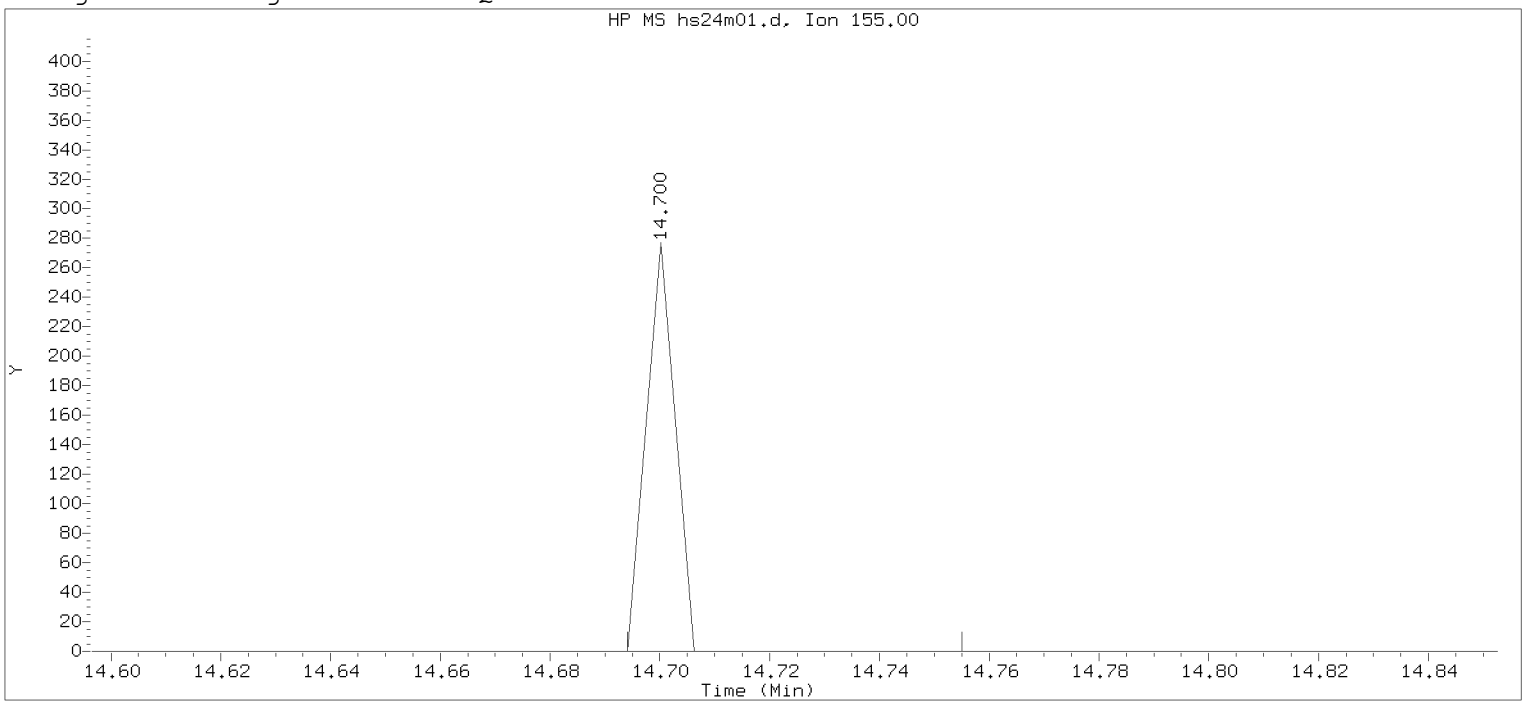
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



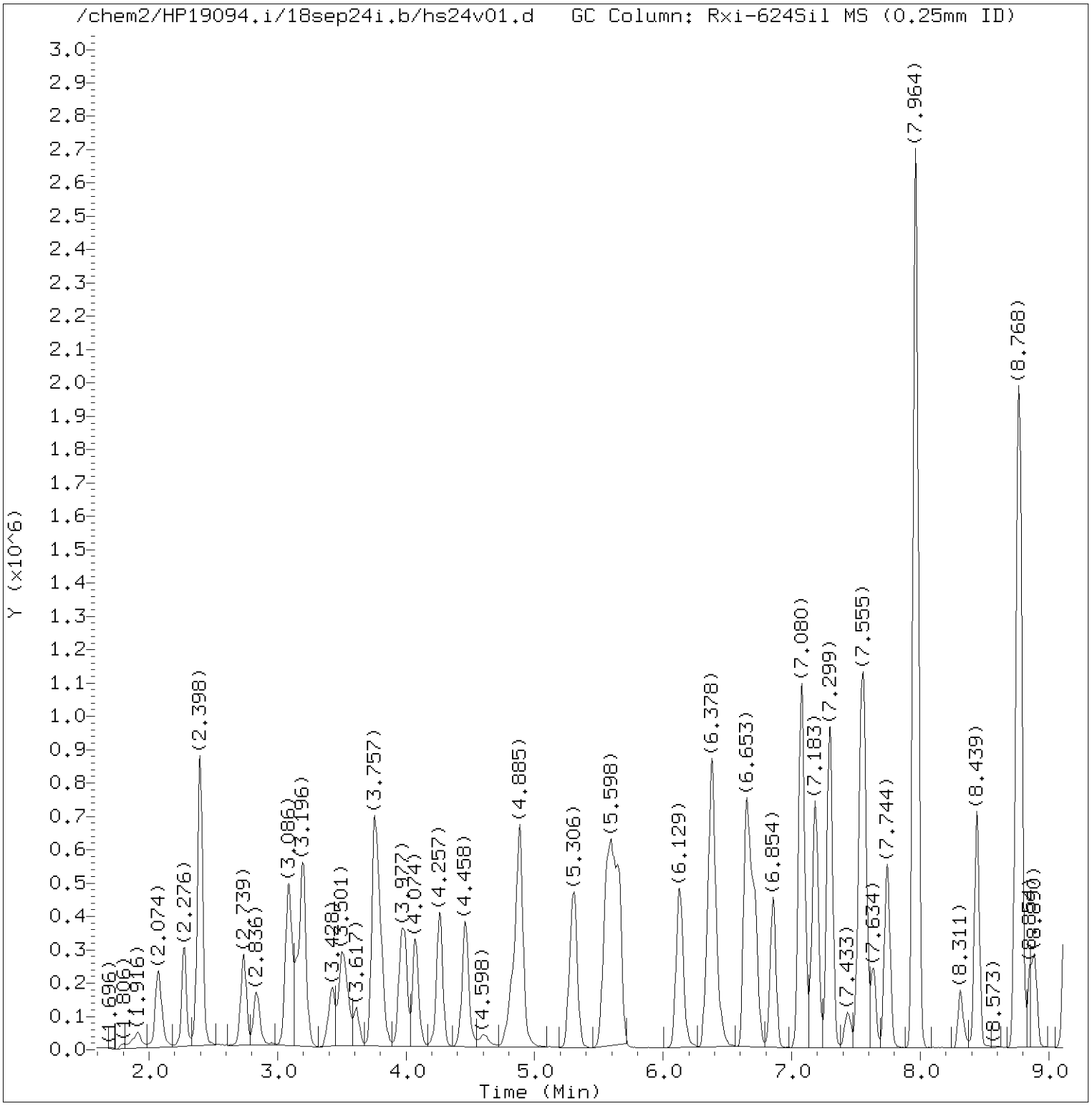
Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2151
Retention Time (minutes): 14.700
Quant Ion : 155.00
Area : 101
On-column Amount (ng) : 0.0343
Integration start scan : 2149 Integration stop scan: 2159
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user AF23 jkhowe



Total Ion Chromatogram (TIC)

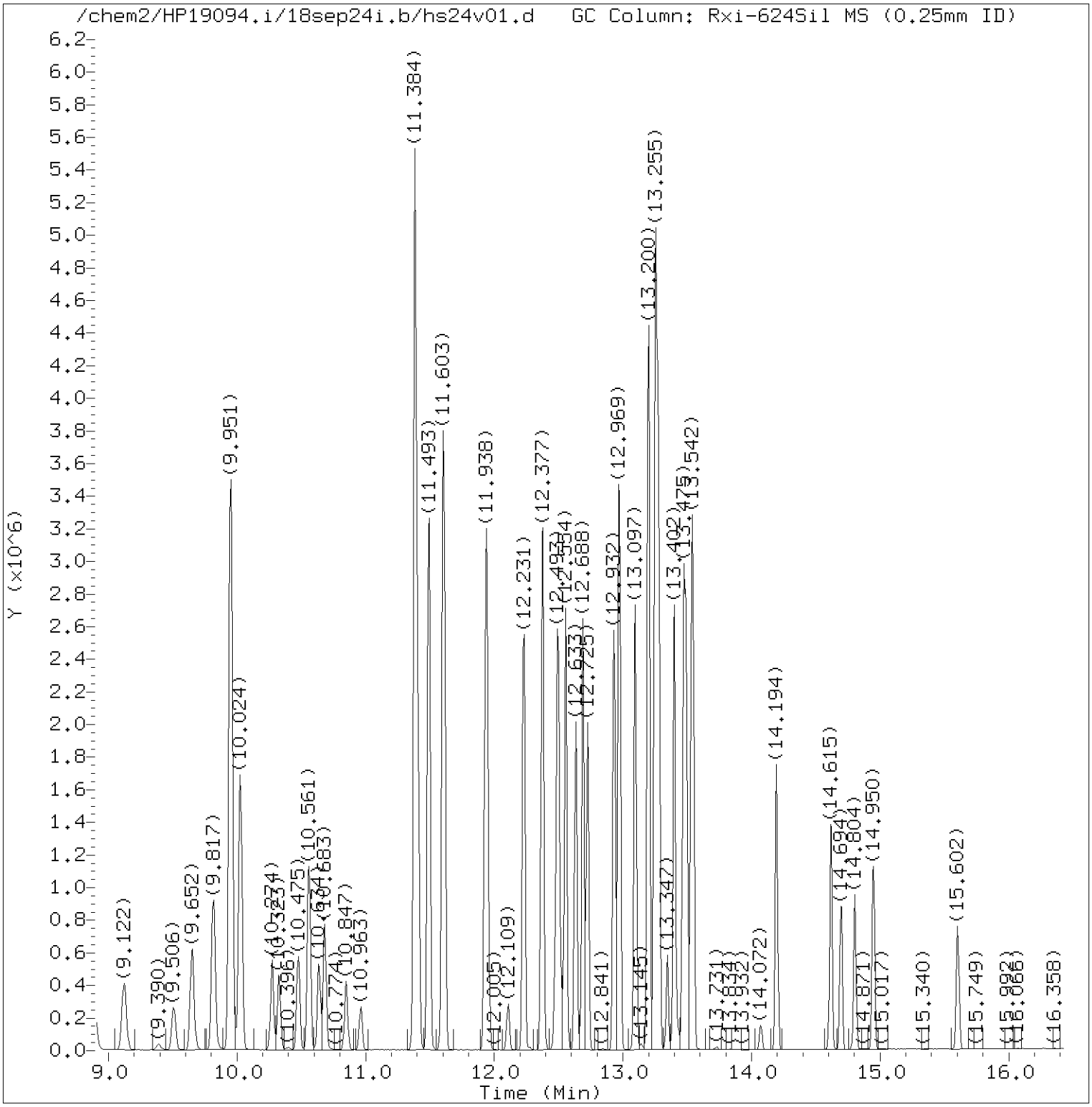
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	440976	4.058
2) Chloromethane	(2)	2.270	50	486139	4.568
6) 1,3-Butadiene	(2)	2.391	39	470828M	4.171
5) Vinyl Chloride	(2)	2.398	62	471500	4.731
7) Bromomethane	(2)	2.739	94	321337	4.148
8) Chloroethane	(2)	2.836	64	272329	4.506
9) Dichlorofluoromethane	(2)	3.080	67	691996	4.813
10) Trichlorofluoromethane	(2)	3.147	101	560449	4.452
11) Ethyl ether	(2)	3.422	59	196604	4.606
12) Freon 123a	(2)	3.513	67	411851	5.164
13) Acrolein	(1)	3.617	56	199575	31.768
15) 1,1-Dichloroethene	(2)	3.751	96	307467	5.640
16) Freon 113	(2)	3.781	101	338841	5.274
14) Acetone	(1)	3.794	43	273073M	32.363
17) Methyl Iodide	(2)	3.958	142	551496	4.853
18) Carbon Disulfide	(2)	4.068	76	828724	4.777
21) Methyl Acetate	(1)	4.239	43	101587	4.289
22) Allyl Chloride	(2)	4.263	41	468004	4.516
23) Methylene Chloride	(2)	4.458	84	304627	4.953
26)*t-Butyl Alcohol-d10	(1)	4.489	65	141569	50.000
28) t-Butyl Alcohol	(1)	4.598	59	116690	48.290
29) Acrylonitrile	(1)	4.824	53	251882	23.115
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	551498	4.919
31) trans-1,2-Dichloroethene	(2)	4.885	96	329189	5.350
32) n-Hexane	(2)	5.306	57	503625	5.148
33) 1,1-Dichloroethane	(2)	5.549	63	610622	5.212
34) di-Isopropyl Ether	(2)	5.598	45	1043824	5.017
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	529192	5.020
40) 1,2-Dichloroethene (Total)	(2)		96	691269	10.676
37) Ethyl t-butyl ether	(2)	6.129	59	800829	4.853
38) 2-Butanone	(1)	6.342	43	487401	35.288
39) cis-1,2-Dichloroethene	(2)	6.378	96	362080	5.326
41) 2,2-Dichloropropane	(2)	6.391	77	445489	5.324
42) Propionitrile	(1)	6.446	54	141875	37.842
45) Methacrylonitrile	(1)	6.653	67	482254	35.674
47) Bromochloromethane	(2)	6.708	128	130394	4.540
48) Tetrahydrofuran	(1)	6.714	71	86737	23.621
49) Chloroform	(2)	6.854	83	582593	5.349

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	703609	10.041
51) 1,1,1-Trichloroethane	(2)	7.086	97	494400	5.307
52) Cyclohexane	(2)	7.183	56	614255	5.051
55) 1,1-Dichloropropene	(2)	7.293	75	459498	5.201
54) Carbon Tetrachloride	(2)	7.299	117	423304	5.290
56) Isobutyl Alcohol	(1)	7.439	41	113054	120.918
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123305	10.093
58) Benzene	(2)	7.561	78	1335484	5.117
59) 1,2-Dichloroethane	(2)	7.634	62	300394	5.002
60) t-Amyl methyl ether	(2)	7.744	73	666761	4.874
62) n-Heptane	(2)	7.964	43	519392	5.149
63)*Fluorobenzene	(2)	7.964	96	2780415	10.000
65) n-Butanol	(1)	8.311	56	183017	231.696
67) Trichloroethene	(2)	8.439	95	348659	5.218
69) Methylcyclohexane	(2)	8.756	83	590929	4.683
70) 1,2-Dichloropropane	(2)	8.780	63	327981	5.180
71) Methyl Methacrylate	(1)	8.854	69	118997	4.756
72) 1,4-Dioxane	(1)	8.878	88	23983M	126.103
73) Dibromomethane	(2)	8.890	93	135470	5.155
74) Bromodichloromethane	(2)	9.122	83	375174	5.270
76) 2-Nitropropane	(1)	9.390	41	29112	4.107
80) cis-1,3-Dichloropropene	(2)	9.652	75	421726	5.089
81) 4-Methyl-2-Pentanone	(1)	9.817	43	797497	23.212
82)$Toluene-d8	(3)	9.951	98	2812308	10.016
83) Toluene	(3)	10.024	92	831326	5.135
85) 1,3-Dichloropropene (total)	(3)		75	738103	10.160
84) trans-1,3-Dichloropropene	(3)	10.274	75	316377	5.072
86) Ethyl Methacrylate	(3)	10.329	69	258646	4.840
88) 1,1,2-Trichloroethane	(3)	10.475	97	194331	5.216
89) Tetrachloroethene	(3)	10.561	166	376715	5.150
90) 1,3-Dichloropropane	(3)	10.634	76	329045	4.984
91) 2-Hexanone	(1)	10.683	43	532351	22.763
93) Dibromochloromethane	(3)	10.847	129	230894	5.171
95) 1,2-Dibromoethane	(3)	10.963	107	179555	5.142
96) 1-Chlorohexane	(3)	11.384	91	476940M	4.939
97)*Chlorobenzene-d5	(3)	11.384	117	2181583	10.000
98) Chlorobenzene	(3)	11.408	112	870508	5.068
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291823	5.148

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	1615822	5.107
101) m+p-Xylene	(3)	11.603	106	1211106	10.320
105) Xylene (Total)	(3)		106	1782147	15.409
104) o-Xylene	(3)	11.932	106	571041	5.089
106) Styrene	(3)	11.944	104	940841	5.241
107) Bromoform	(3)	12.109	173	123890	5.049
108) Isopropylbenzene	(3)	12.231	105	1599849	5.223
111)$4-Bromofluorobenzene	(3)	12.371	95	1014976	9.929
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	224147	4.994
114) Bromobenzene	(4)	12.493	156	351229	5.148
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	259900	24.153
116) 1,2,3-Trichloropropane	(4)	12.524	110	57126M	4.923
117) n-Propylbenzene	(4)	12.554	91	1935469	5.217
119) 2-Chlorotoluene	(4)	12.633	126	367412	5.106
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1293562	5.147
122) 4-Chlorotoluene	(4)	12.725	126	368733	5.114
125) tert-Butylbenzene	(4)	12.932	134	278567M	5.097
126) Pentachloroethane	(4)	12.969	167	207735	4.870
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1301652	5.076
128) sec-Butylbenzene	(4)	13.097	105	1707856	5.244
131) 1,3-Dichlorobenzene	(4)	13.194	146	680593	5.021
132) p-Isopropyltoluene	(4)	13.200	119	1416458	5.251
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1131416	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	676511	5.084
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	562245	4.779
136) Benzyl Chloride	(4)	13.347	126	76709M	4.728
138) n-Butylbenzene	(4)	13.493	92	700126	5.229
139) 1,2-Dichlorobenzene	(4)	13.530	146	599568	5.013
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	30890M	5.304
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	509846	5.056
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	415513	5.058
146) Hexachlorobutadiene	(4)	14.700	225	160319	5.164
147) Naphthalene	(4)	14.804	128	675168	5.194
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	346080	5.124

M = Compound was manually integrated.
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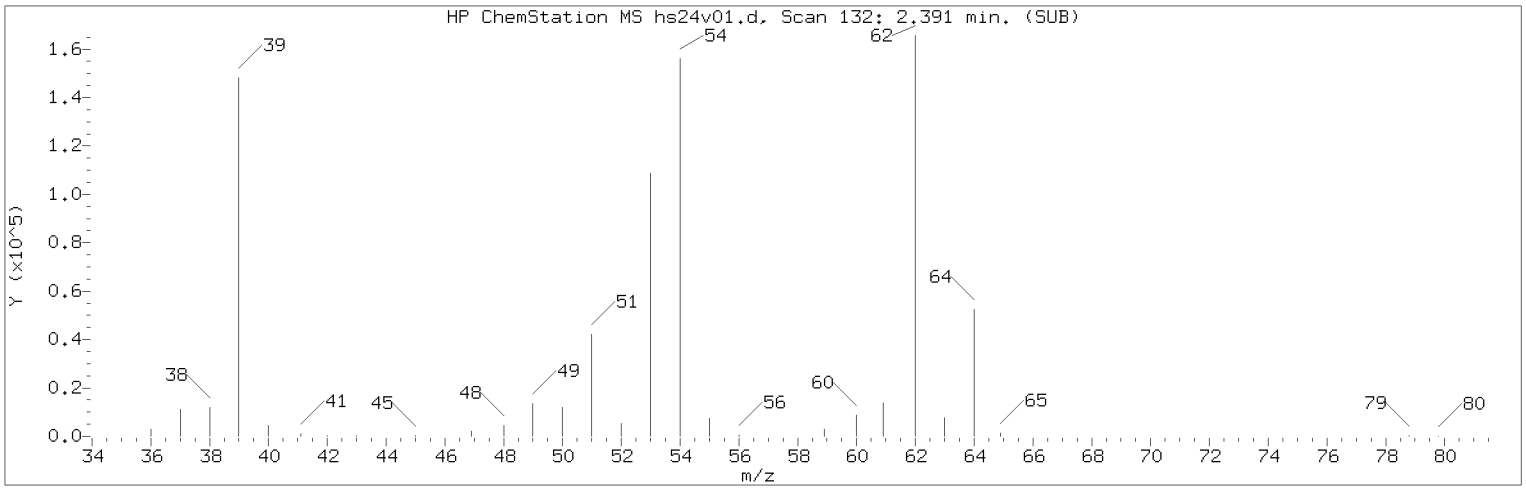
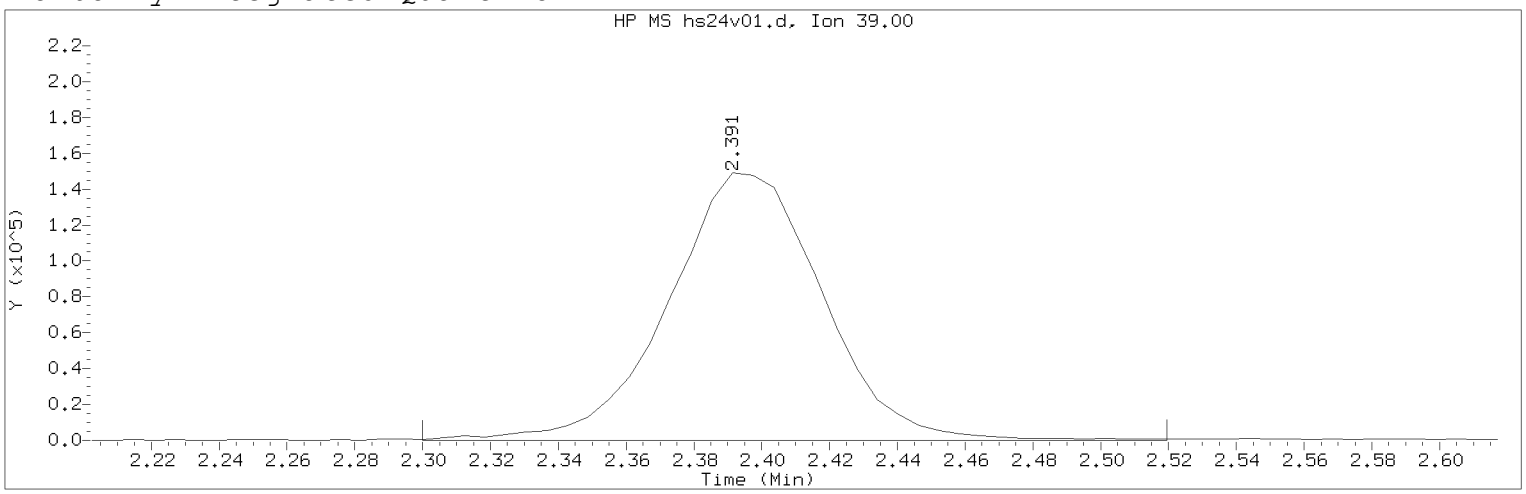
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

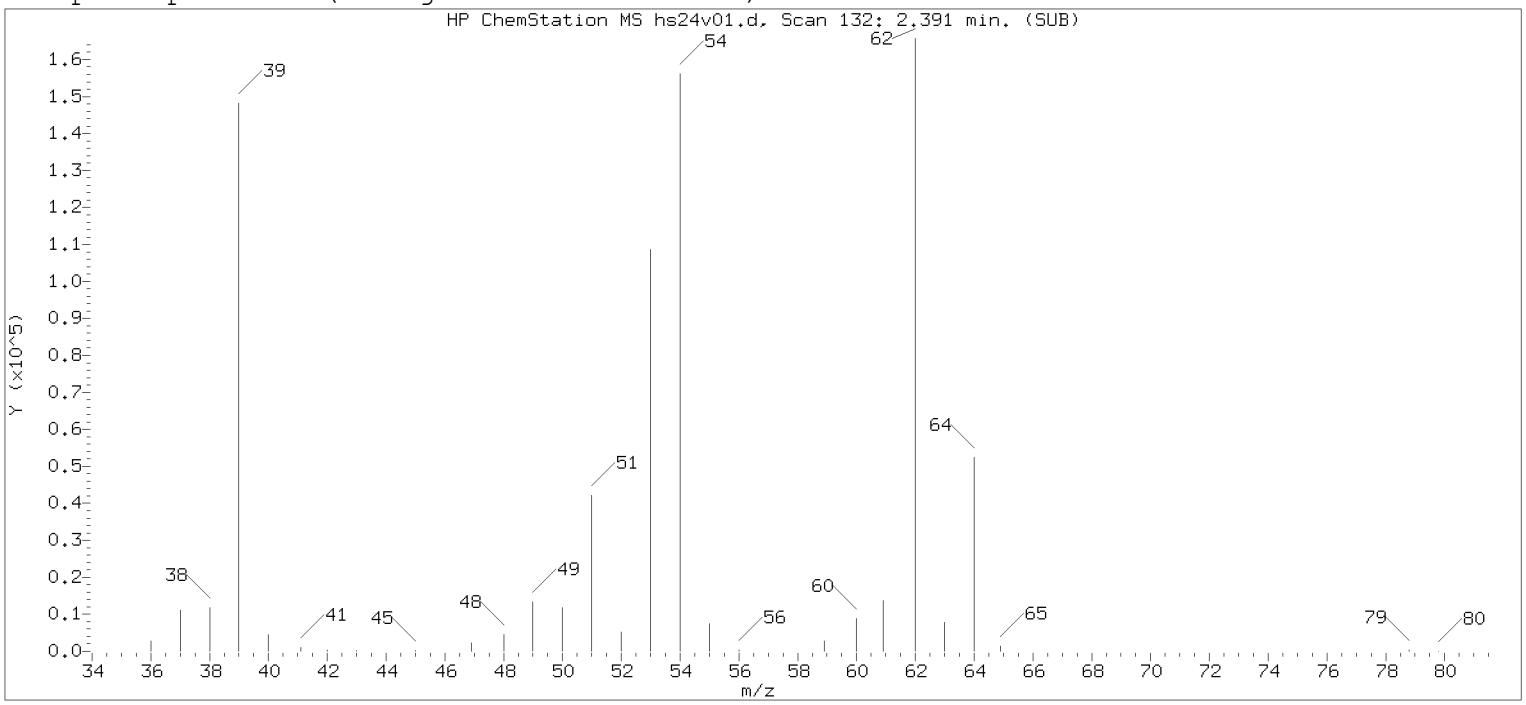
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 470828M
On-Column Amount (ng) : 4.1709
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

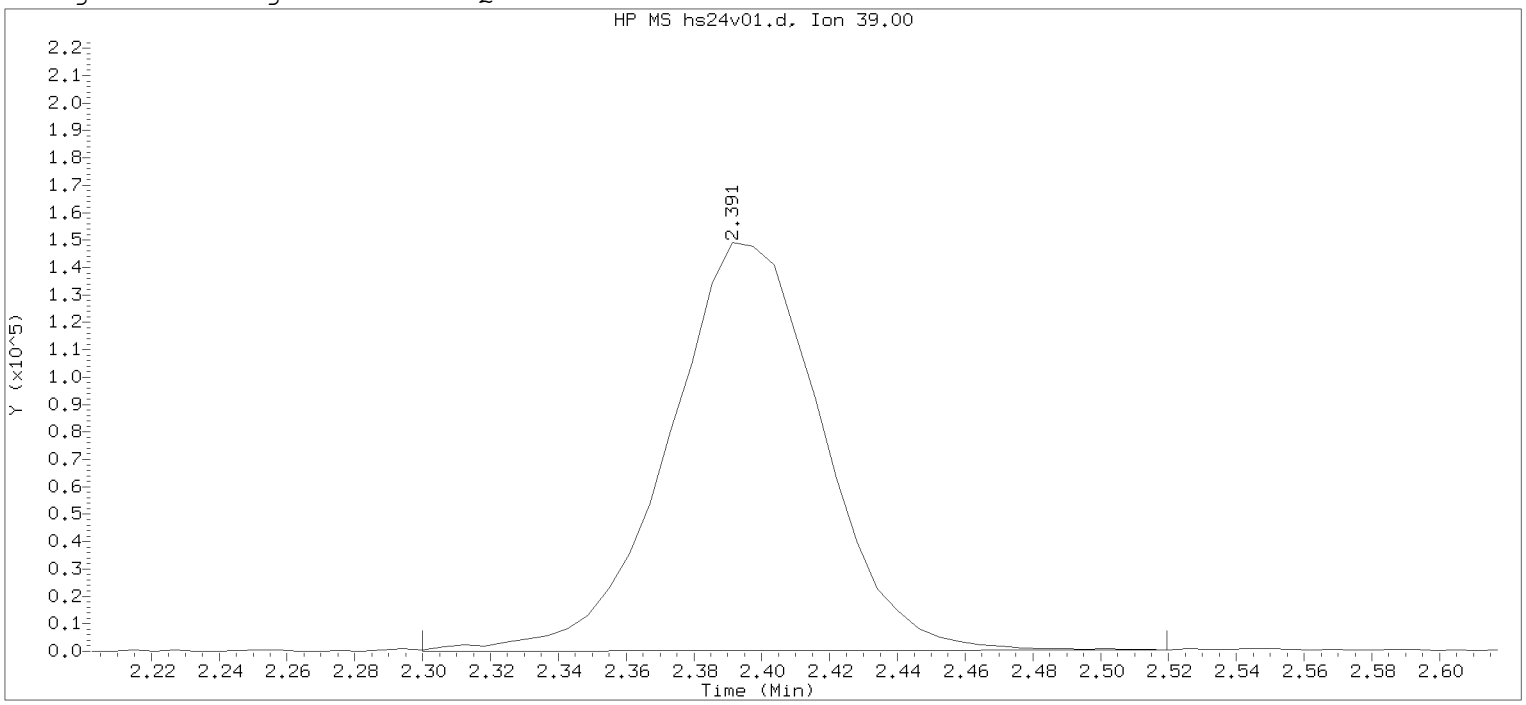
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

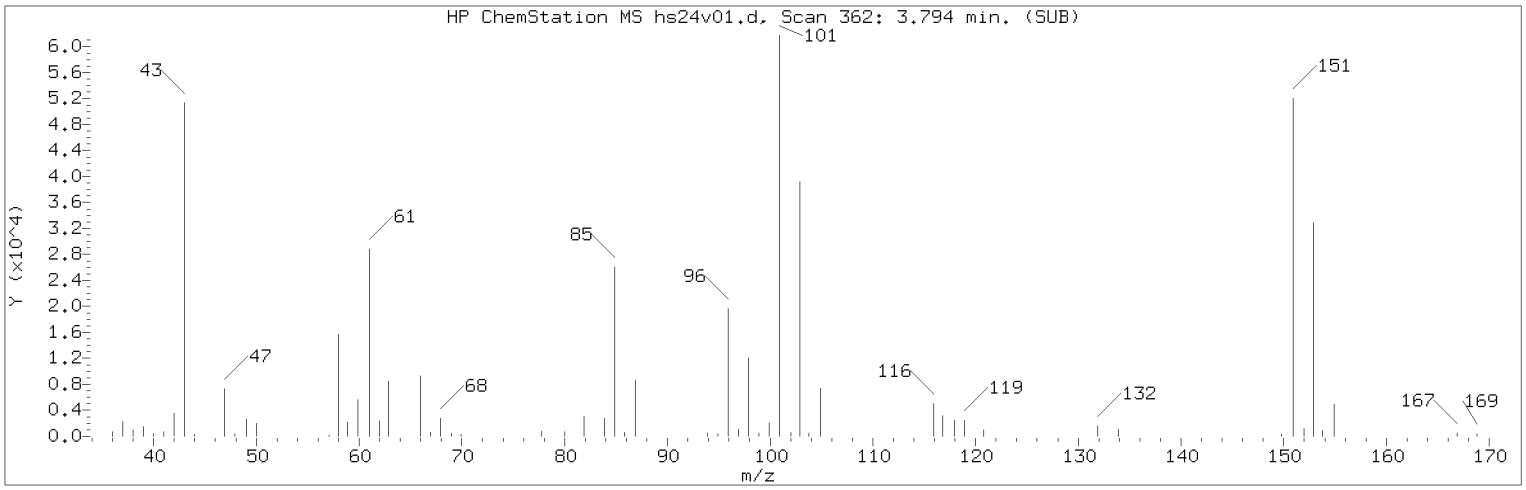
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

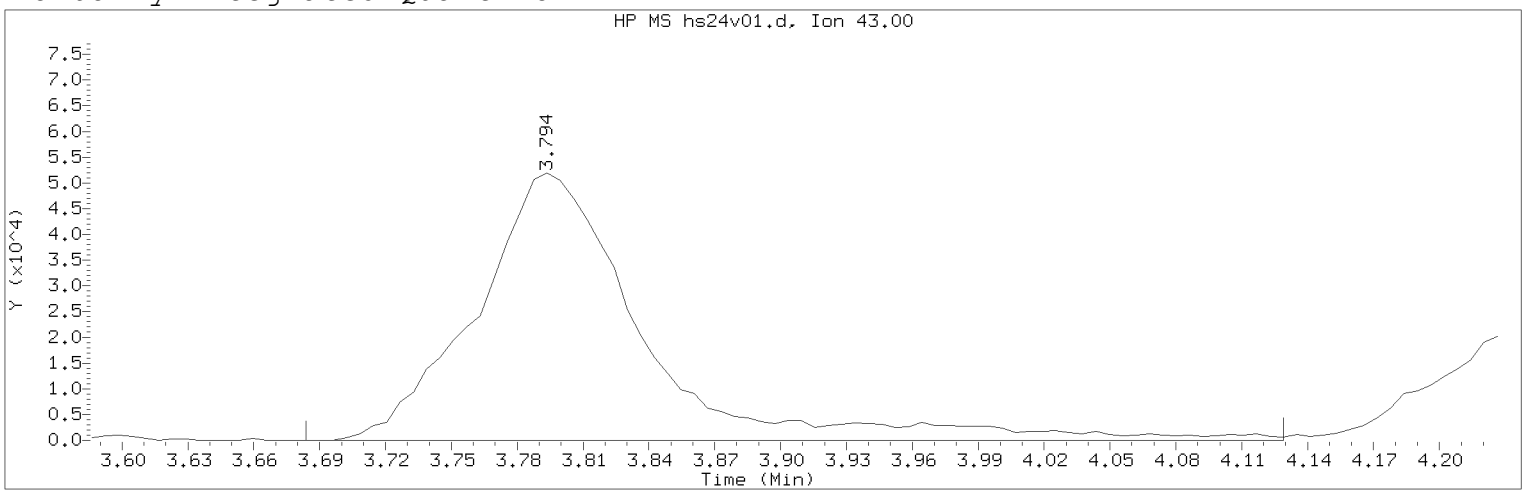
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 466594
On-column Amount (ng) : 5.0567
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 43 Y at integration end: 572

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

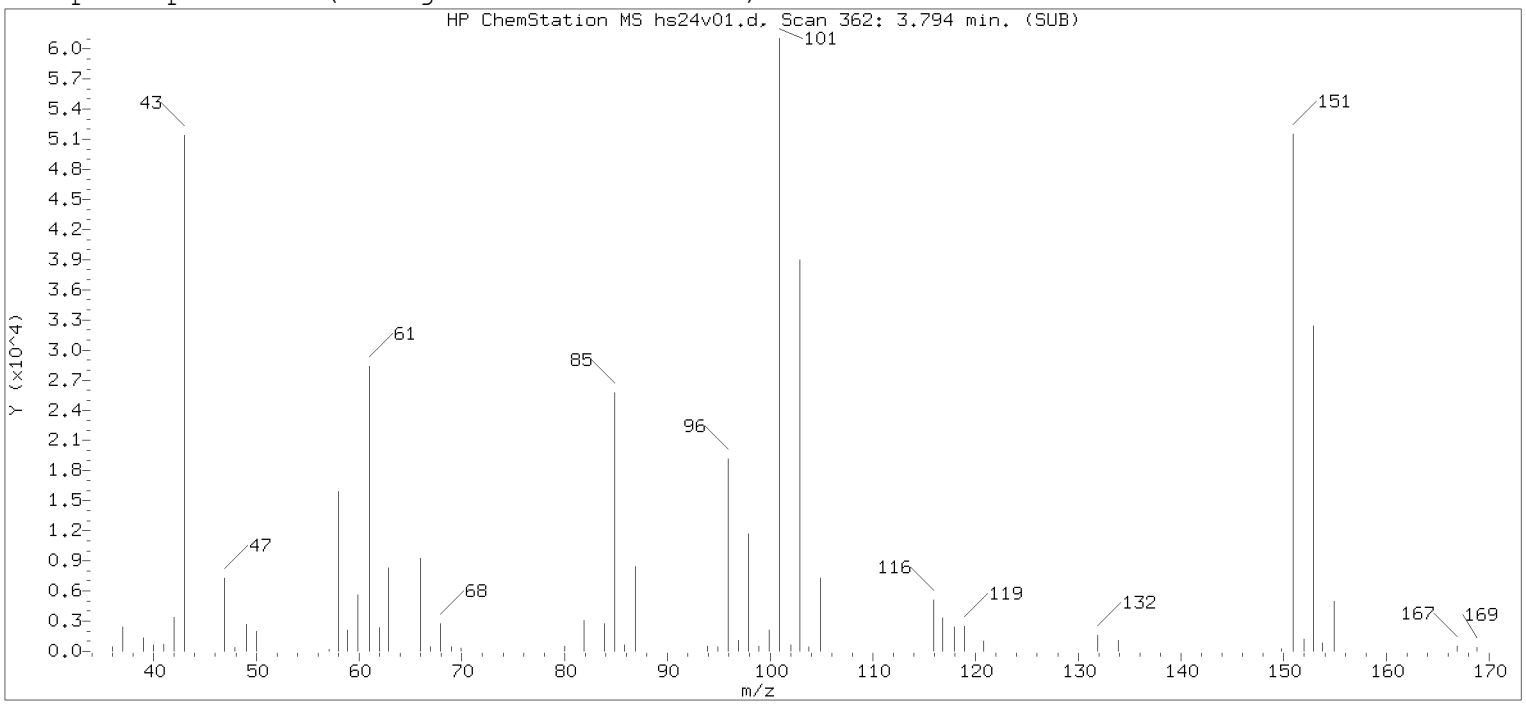
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 273073M
On-Column Amount (ng) : 32.3626
Integration start scan : 343 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

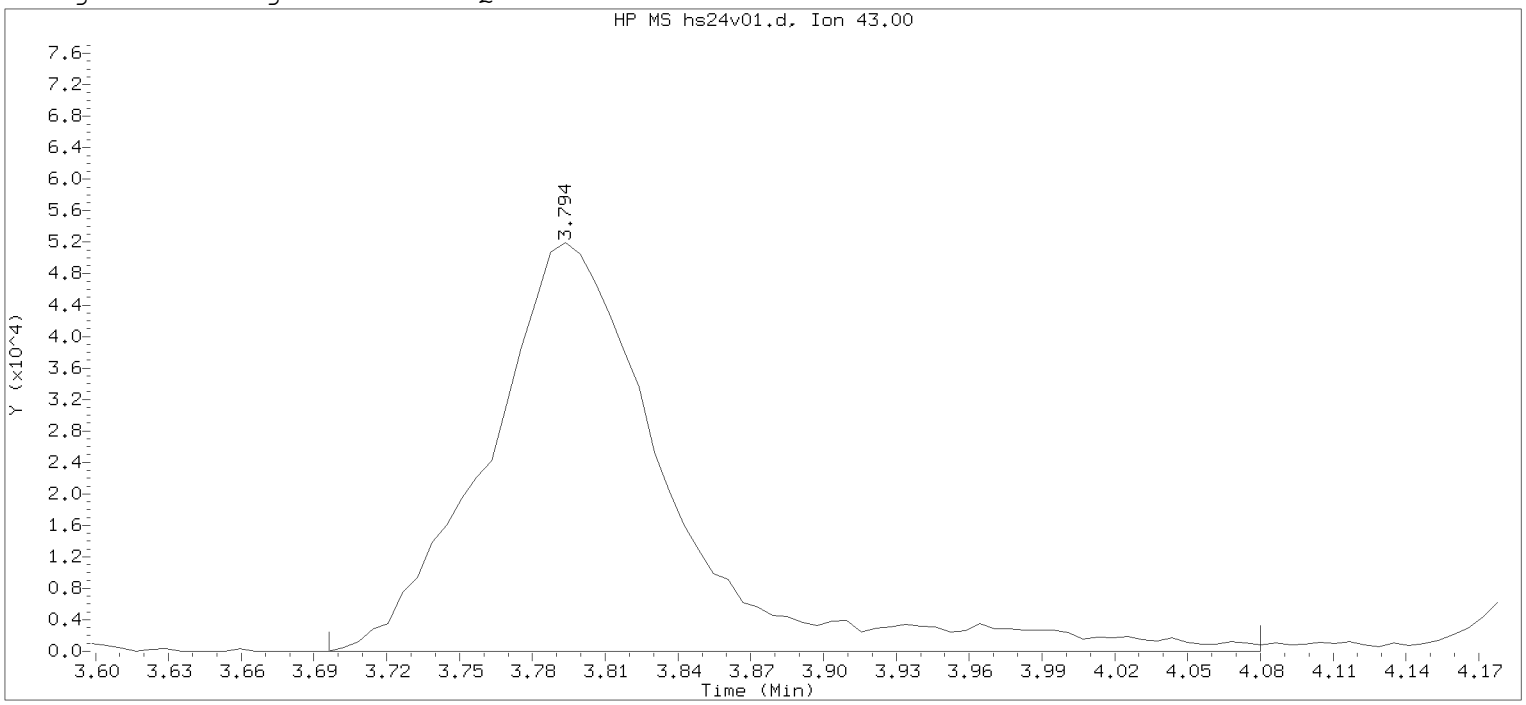
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

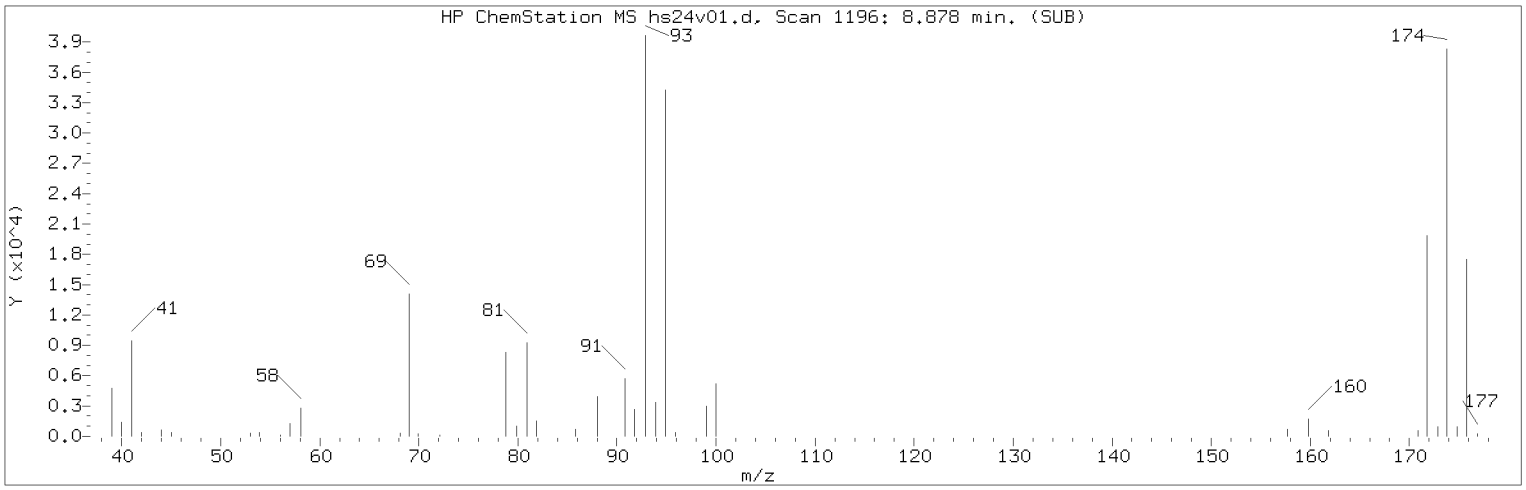
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

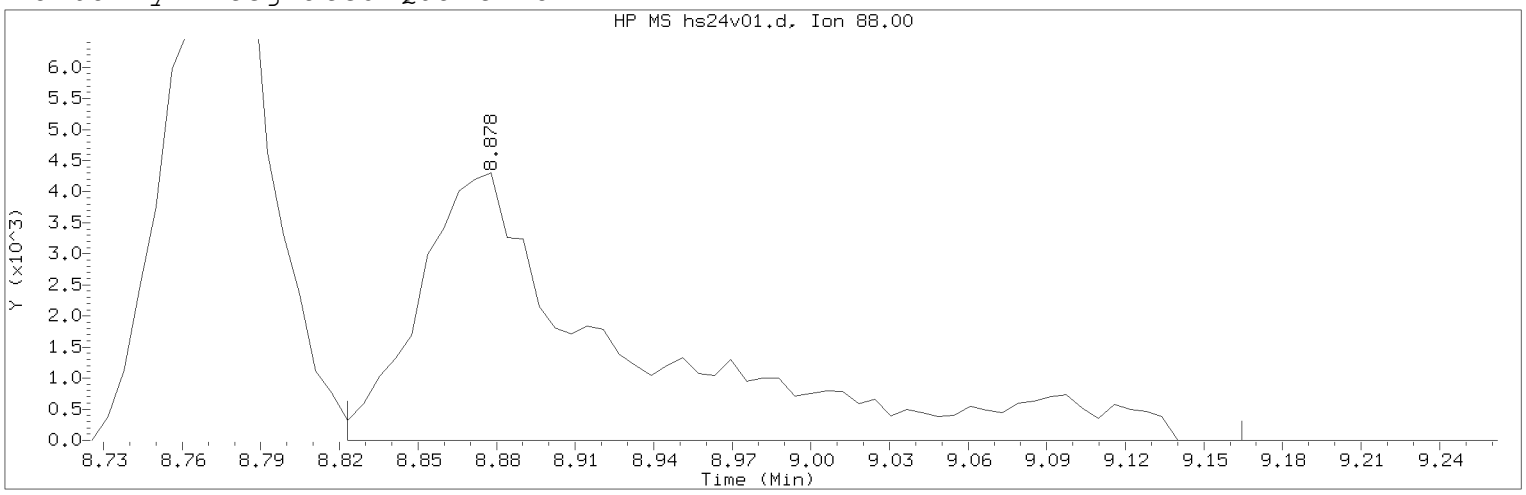
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 270202
On-column Amount (ng) : 34.6600
Integration start scan : 345 Integration stop scan: 408
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

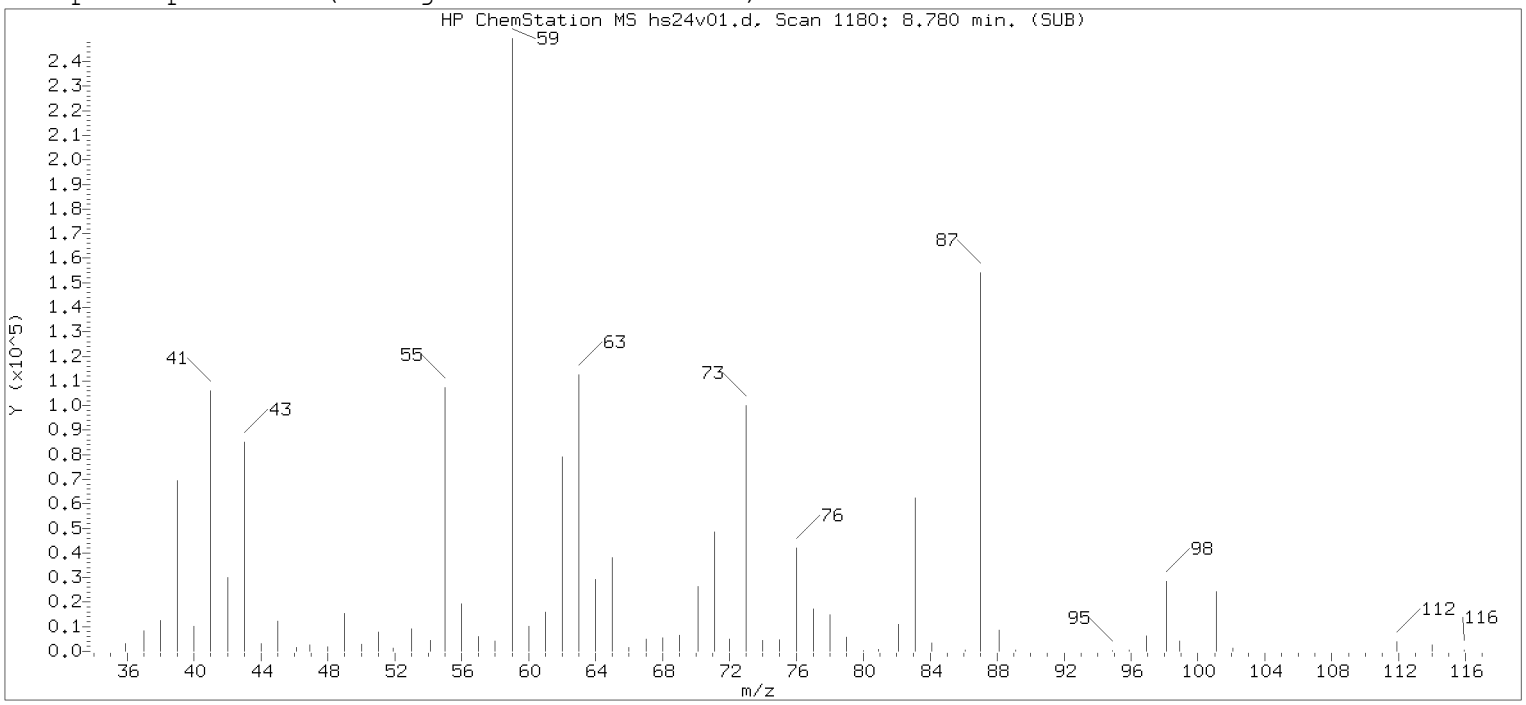
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 23983M
On-Column Amount (ng) : 126.1028
Integration start scan : 1186 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

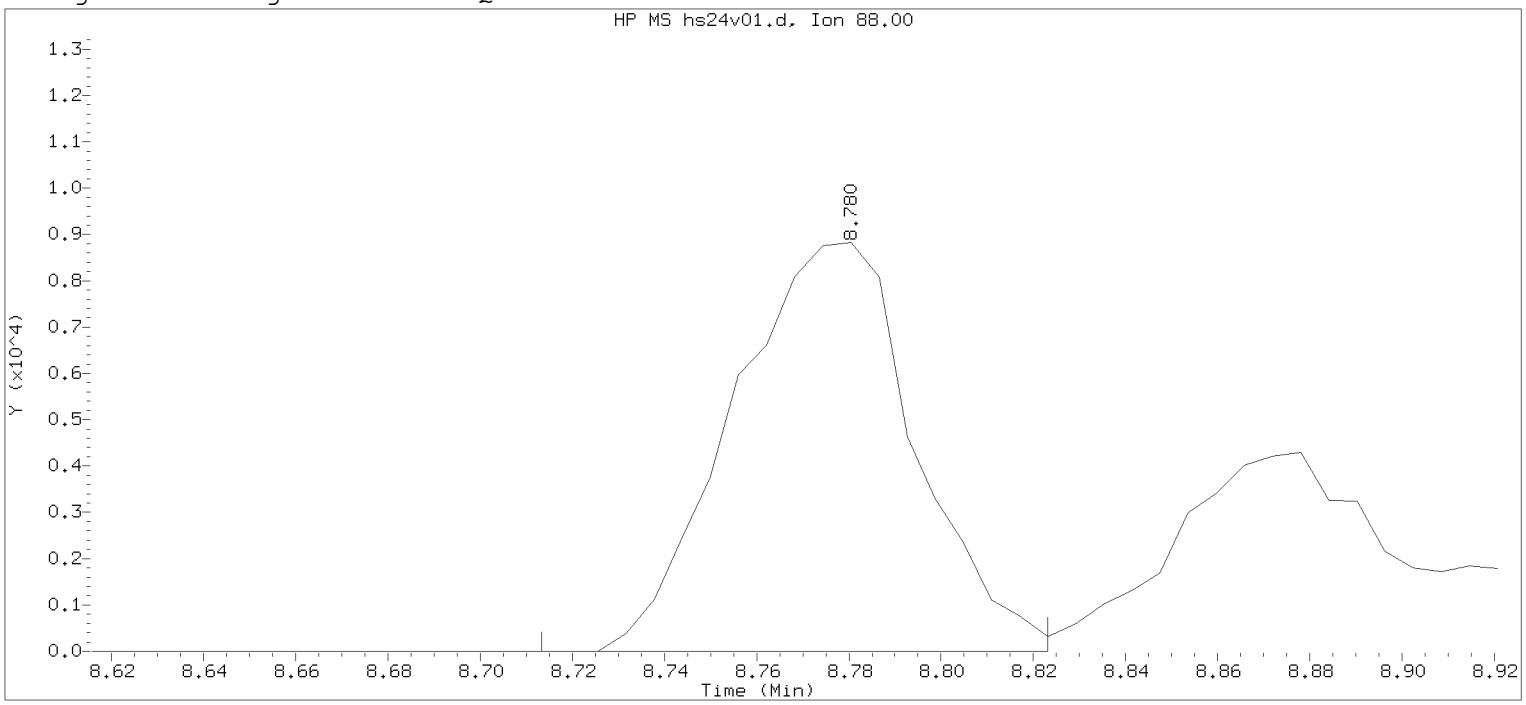
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

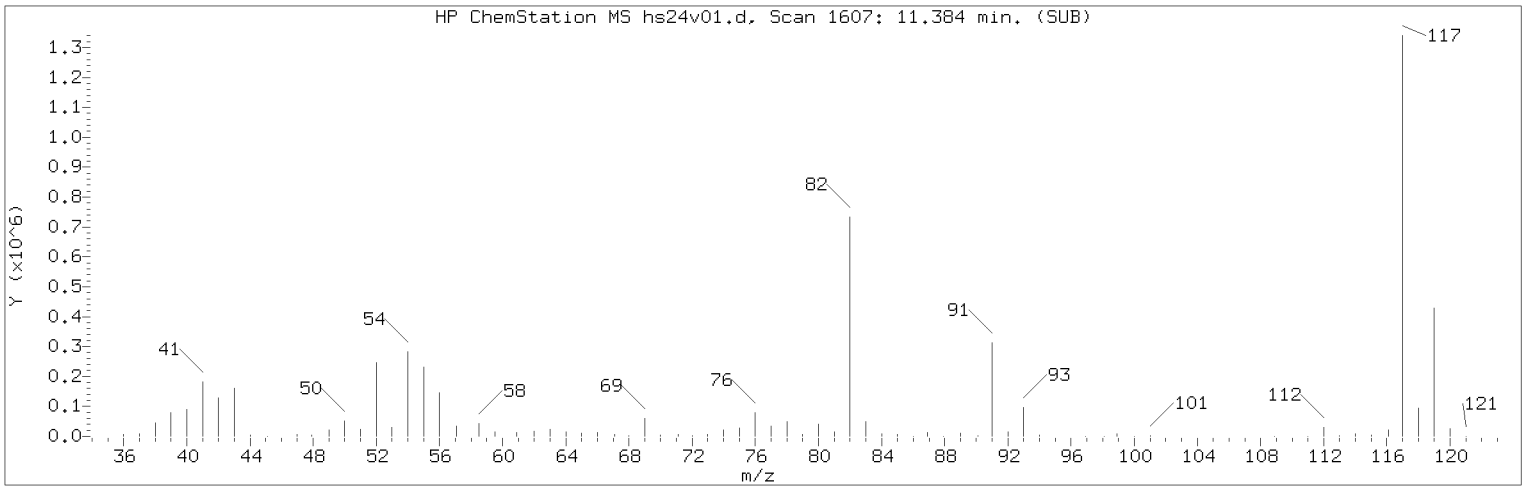
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

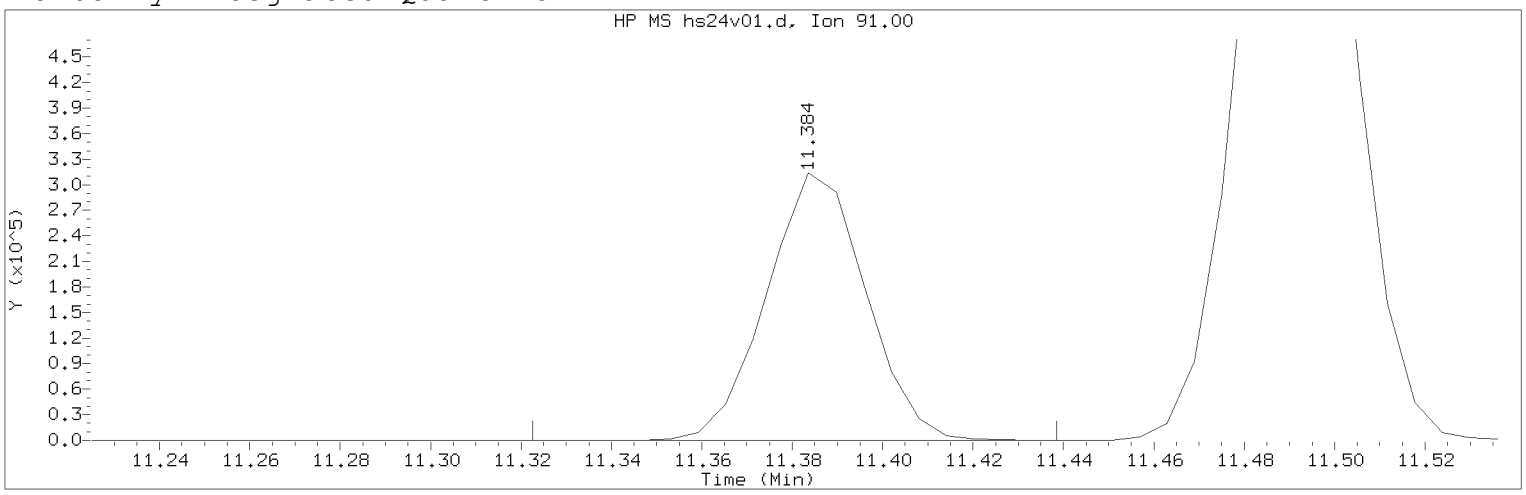
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1180		
Retention Time (minutes)	: 8.780		
Quant Ion	: 88.00		
Area	: 24295		
On-column Amount (ng)	: 144.0216		
Integration start scan	: 1168	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

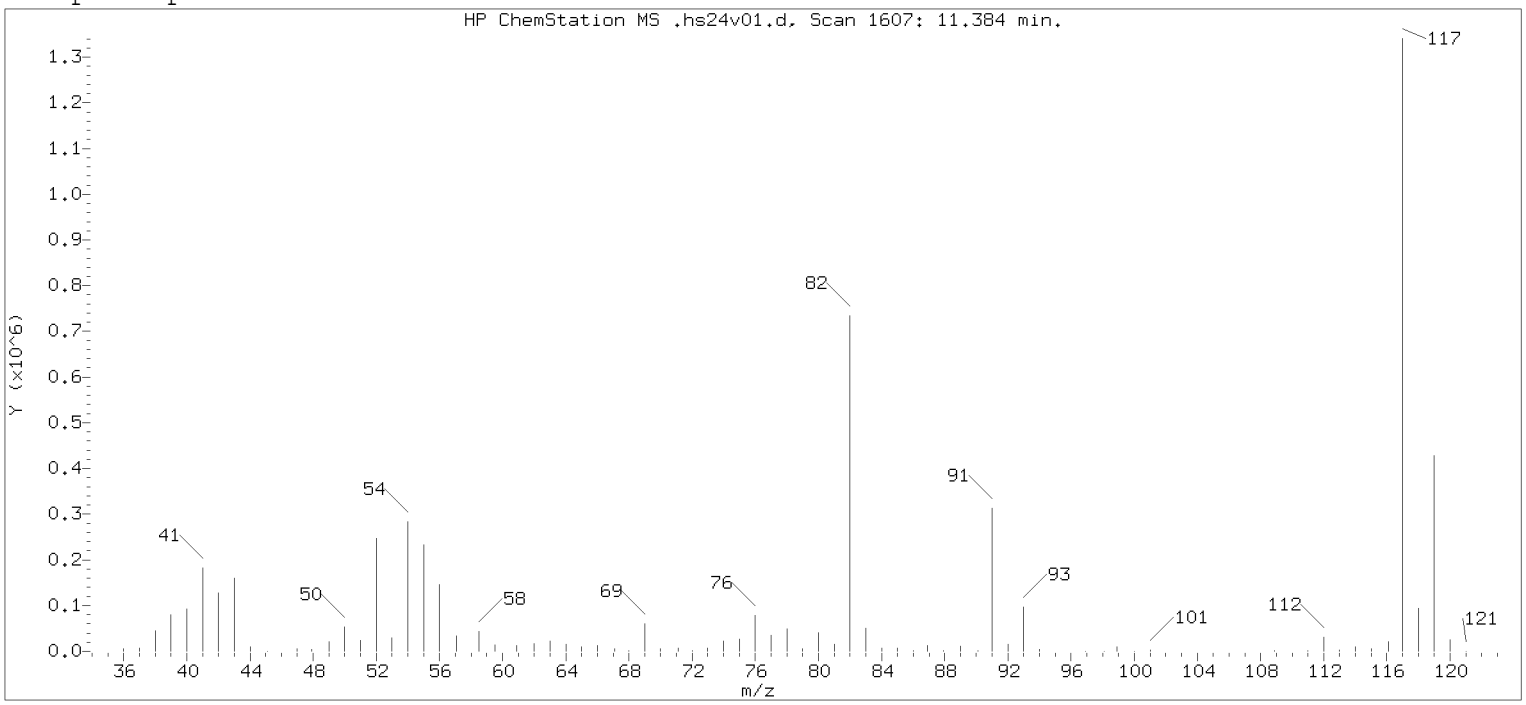
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 476940M
On-Column Amount (ng) : 4.9395
Integration start scan : 1596 Integration stop scan: 1615
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

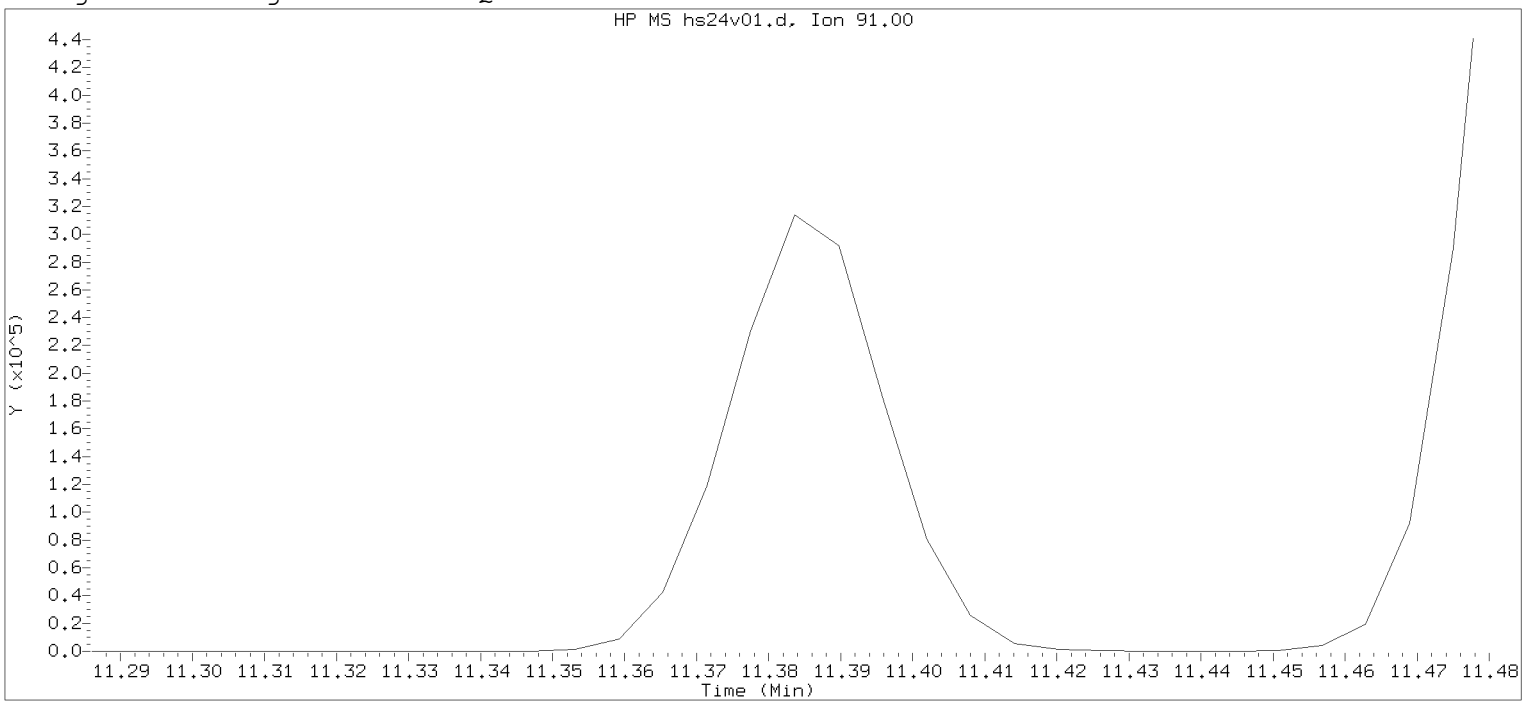
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

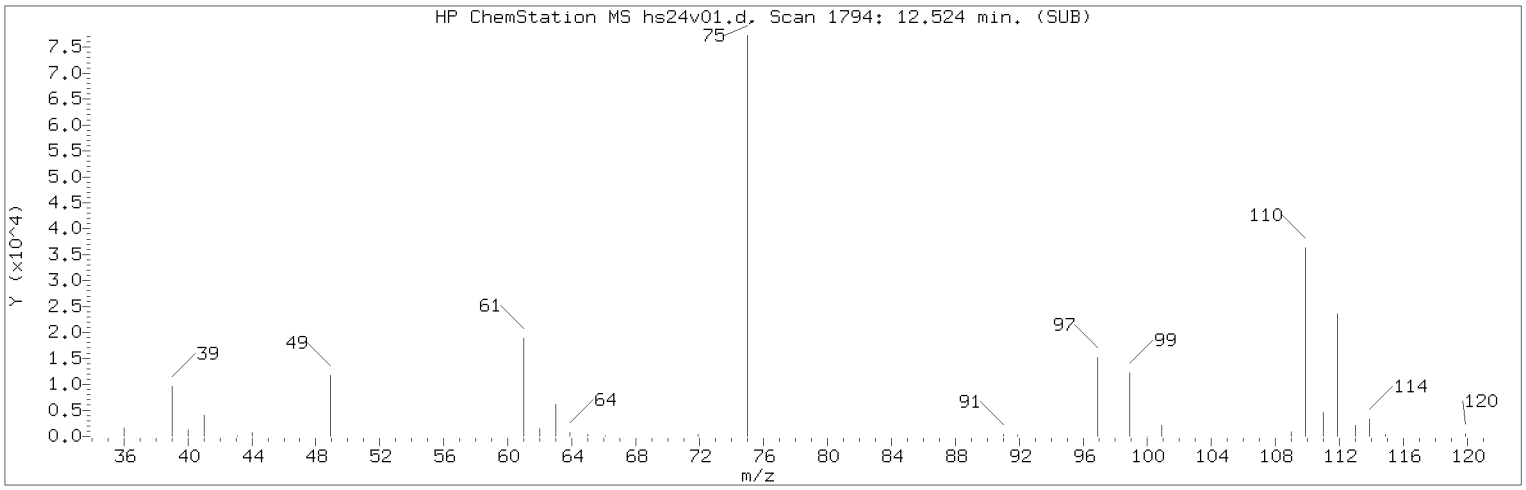
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

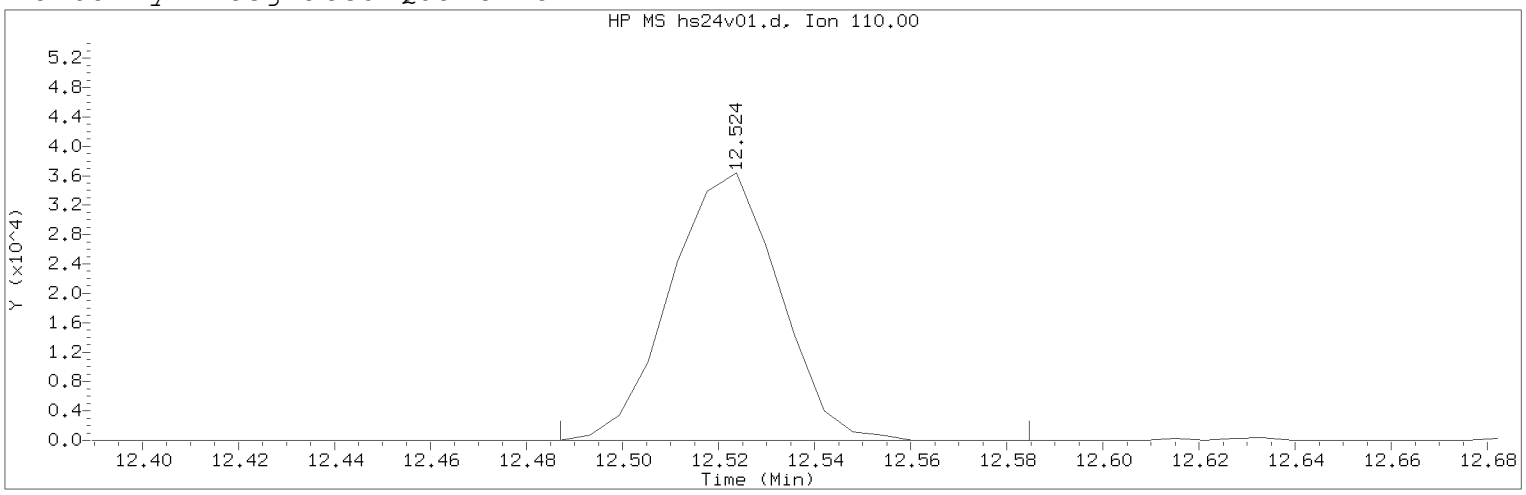
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

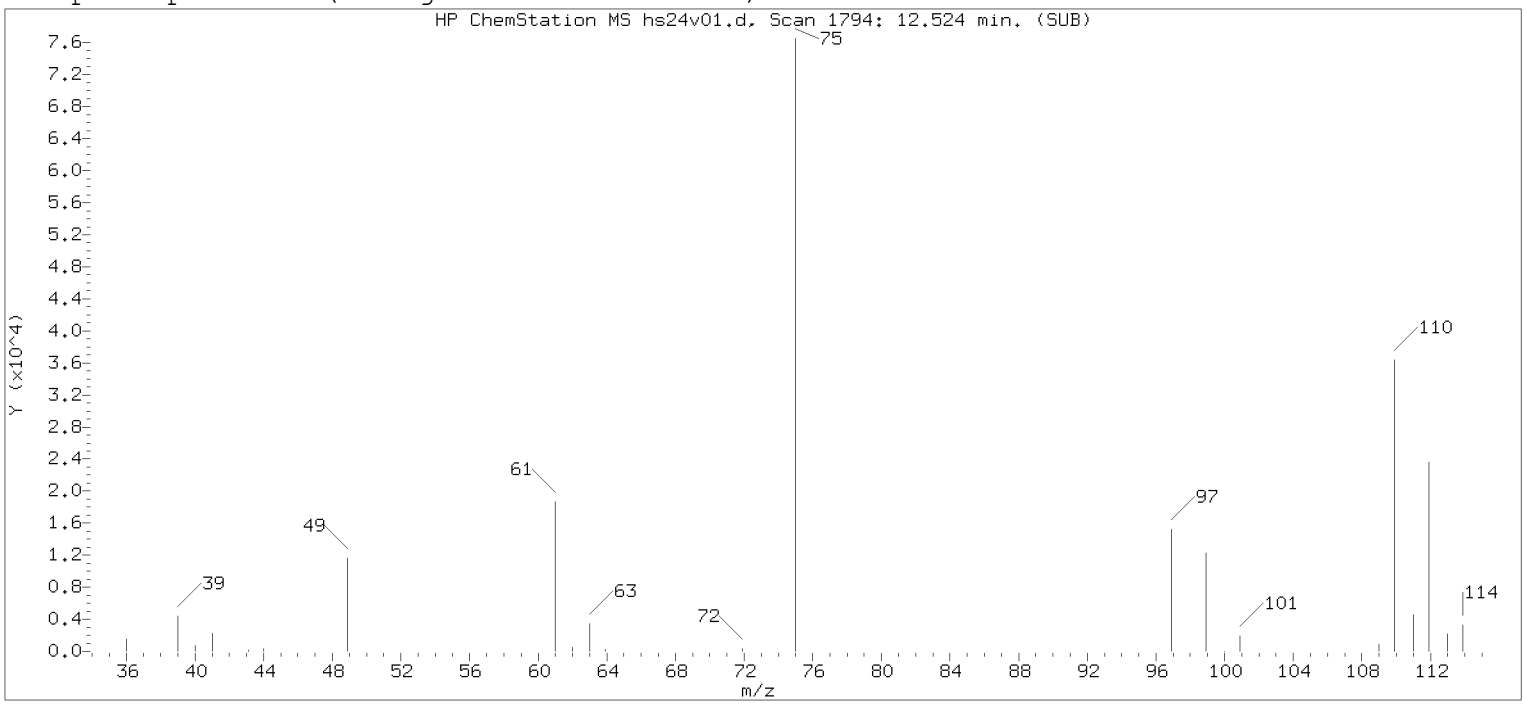
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57126M
On-Column Amount (ng) : 4.9234
Integration start scan : 1787 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

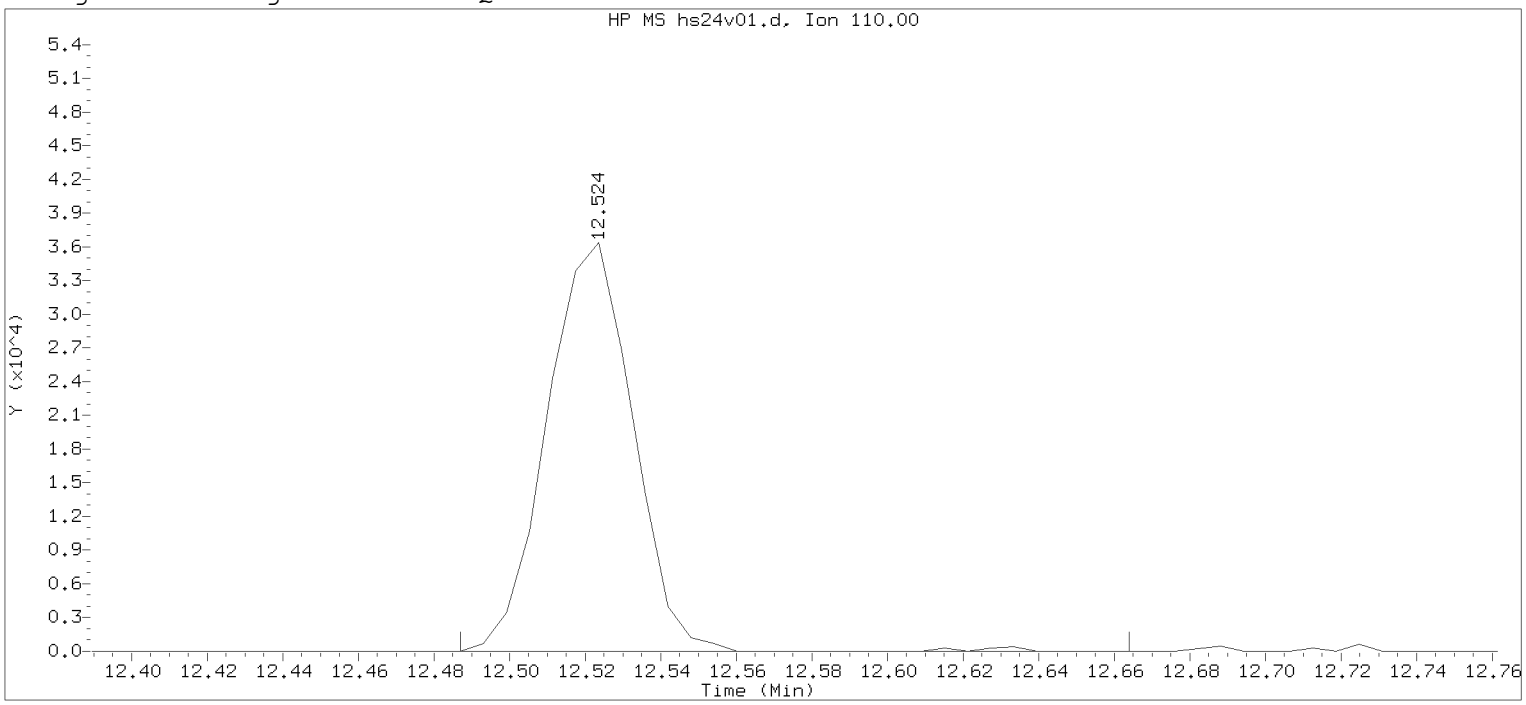
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

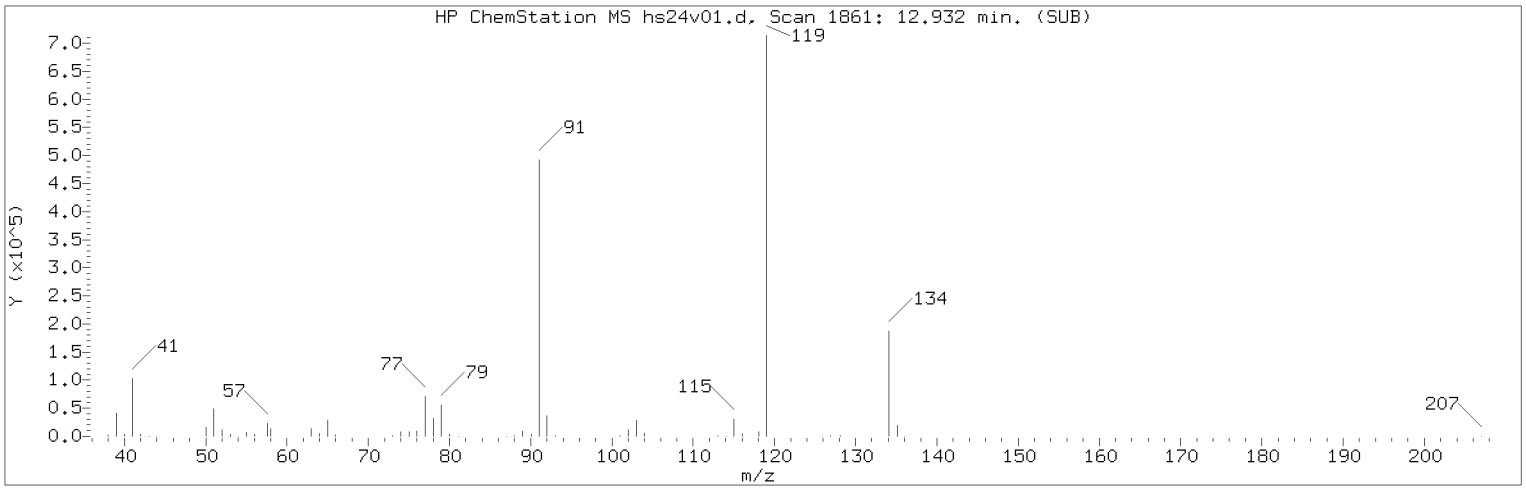
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

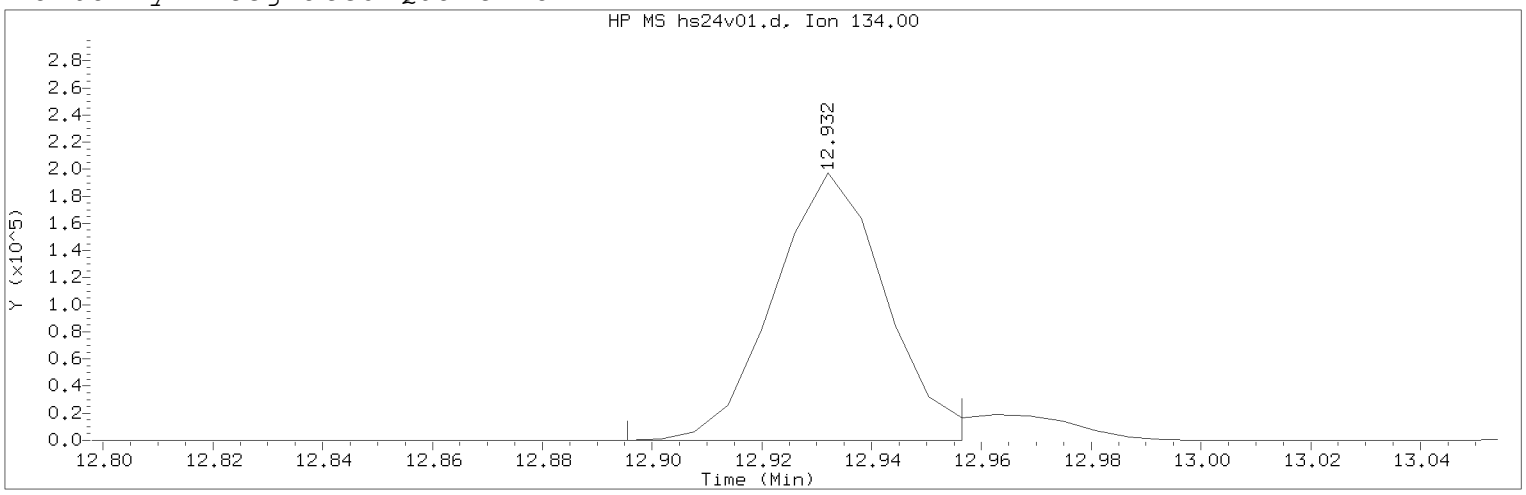
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 57467
On-column Amount (ng) : 4.9421
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

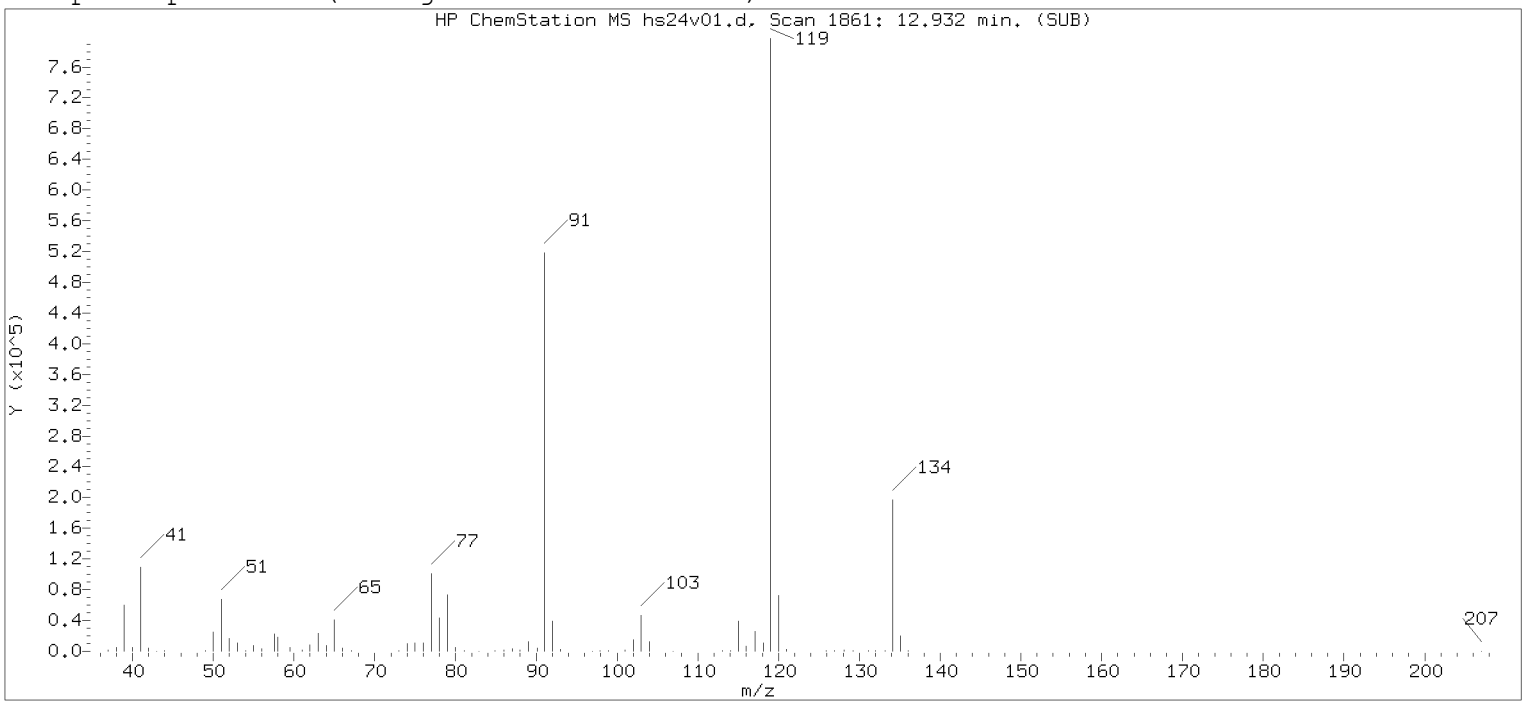
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 278567M
On-Column Amount (ng) : 5.0967
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

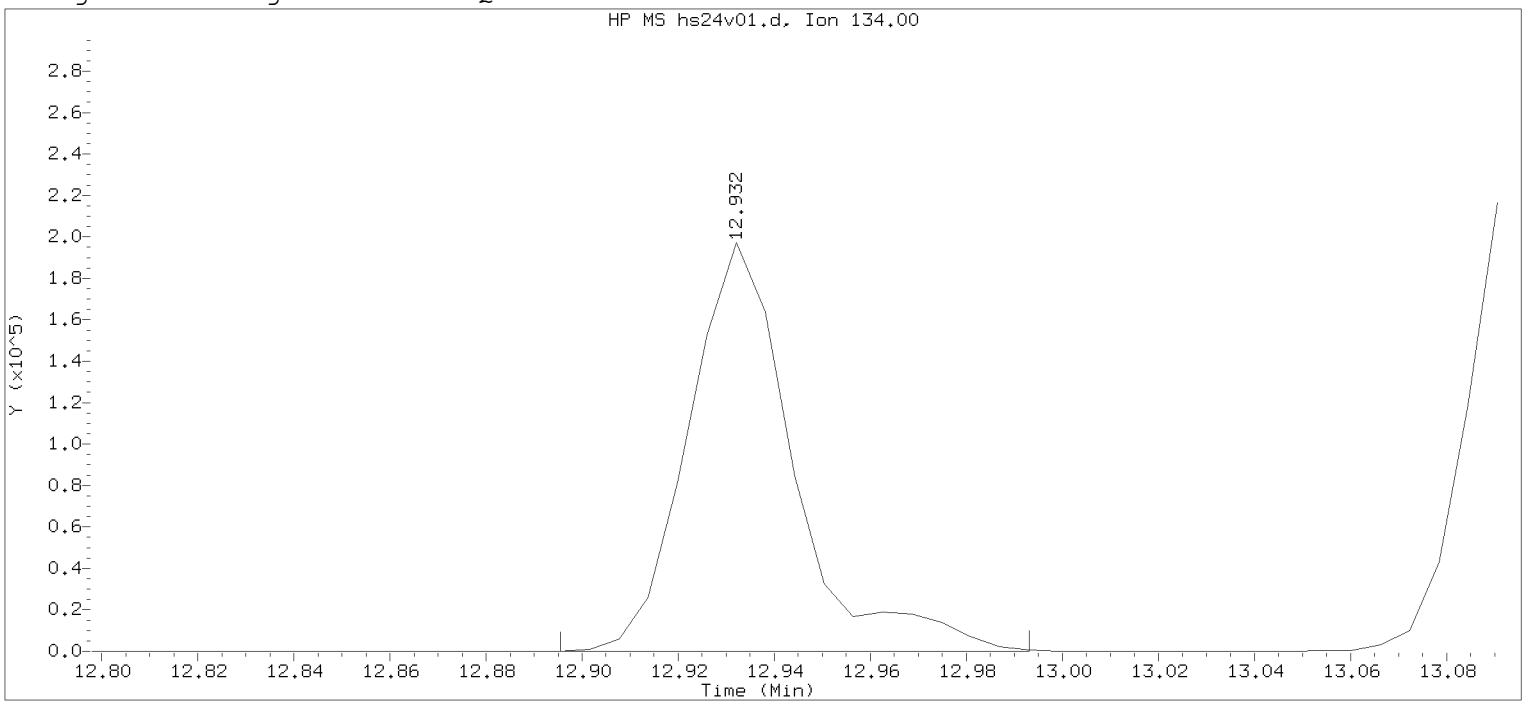
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

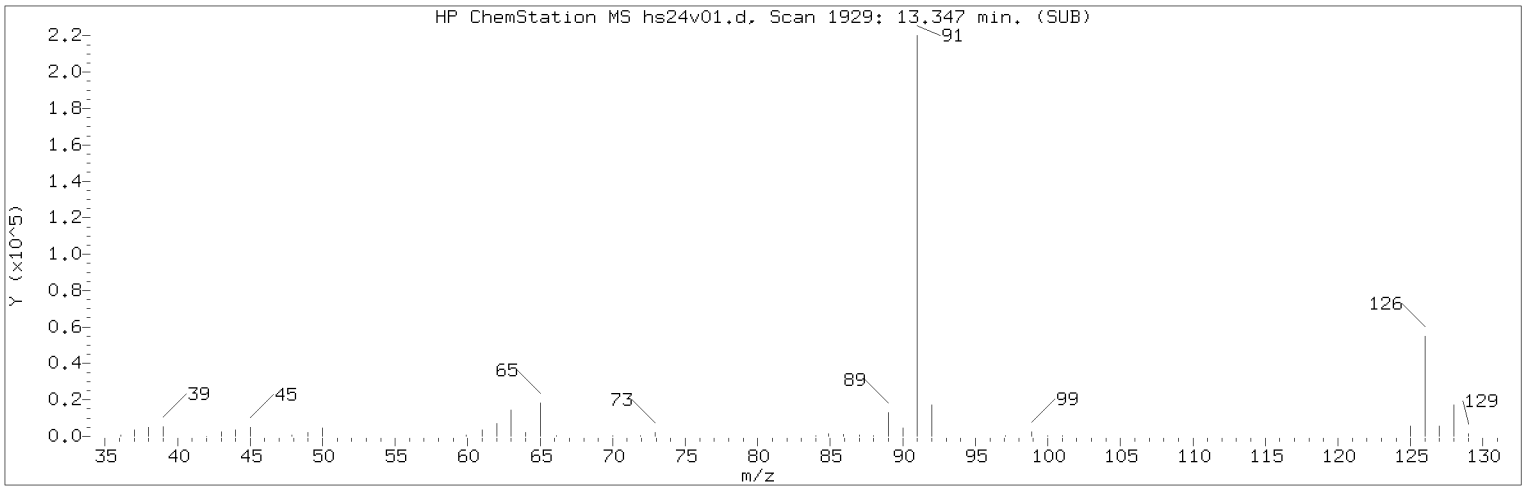
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

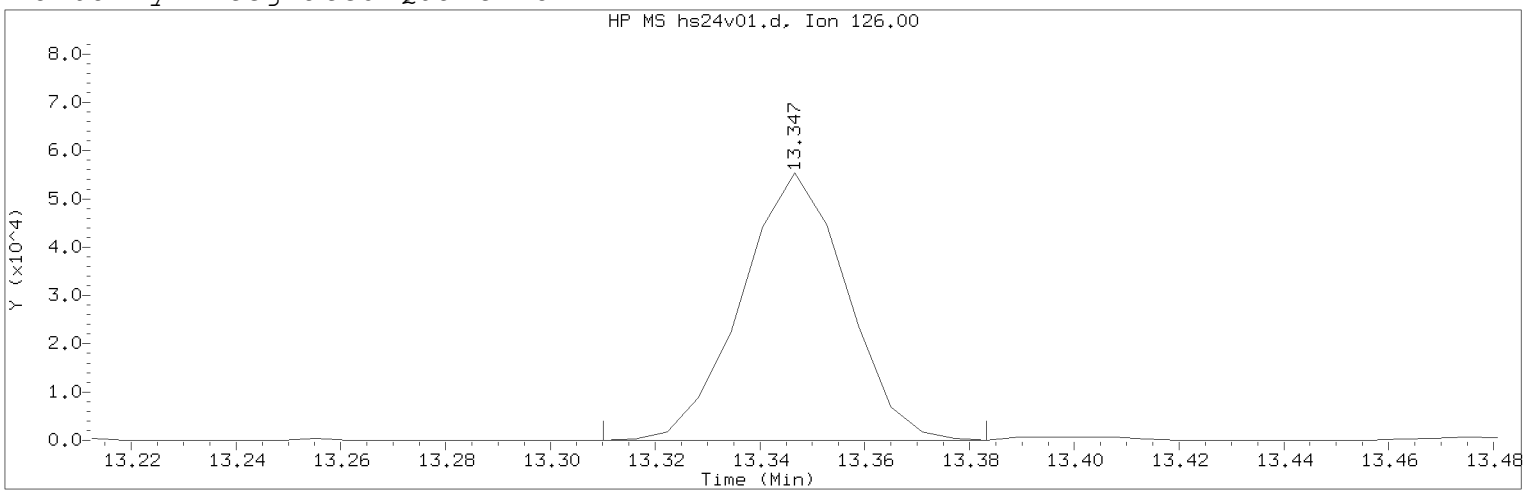
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 300676
On-column Amount (ng) : 5.3090
Integration start scan : 1854 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkhowe

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

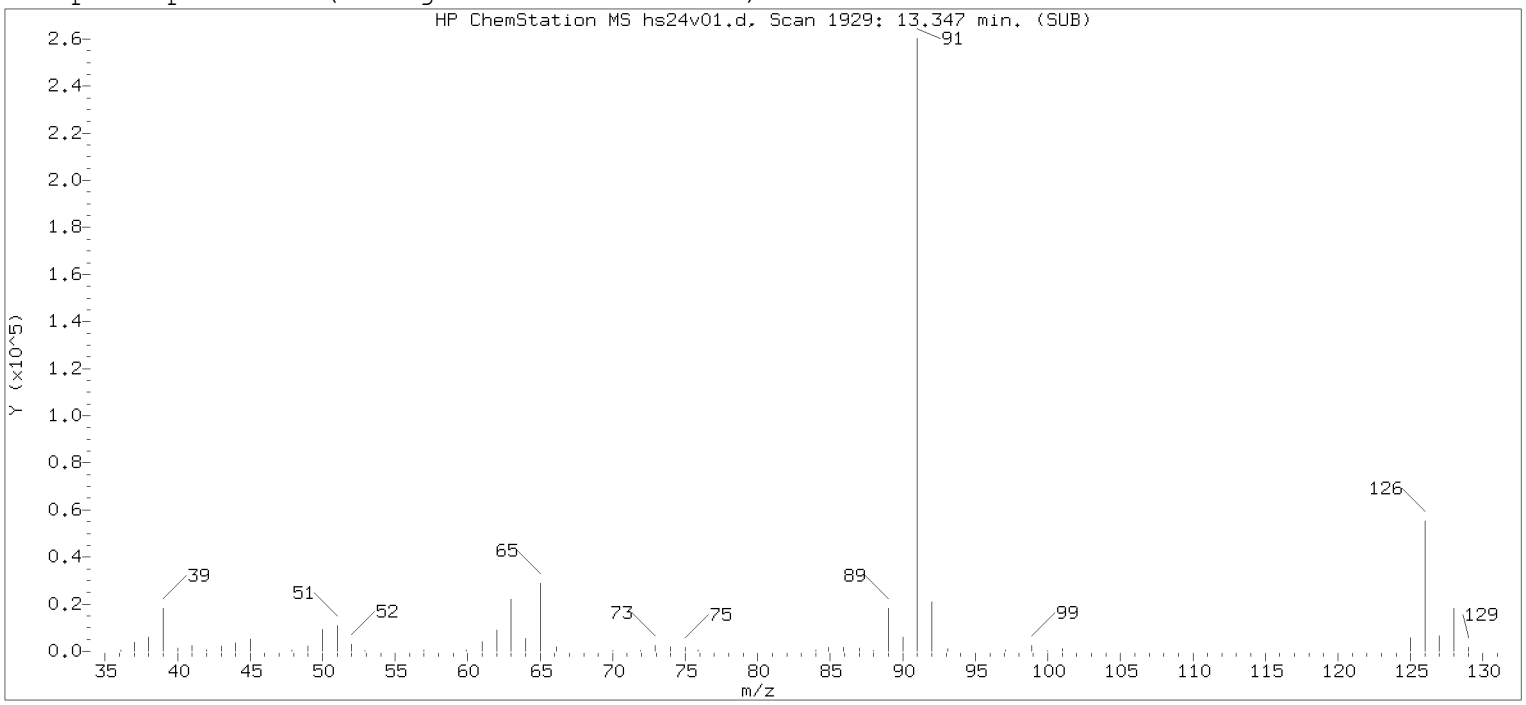
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 76709M
On-Column Amount (ng) : 4.7280
Integration start scan : 1922 Integration stop scan: 1934
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

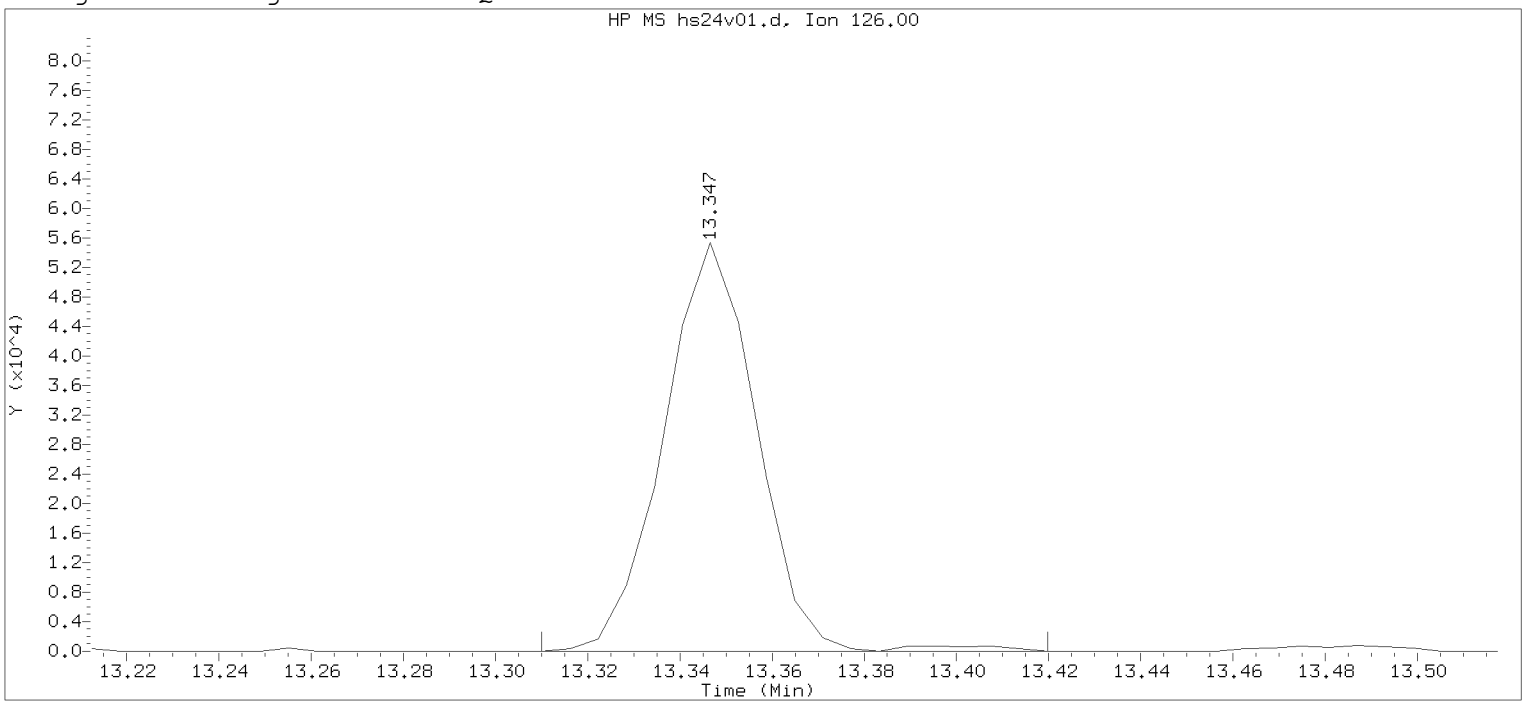
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

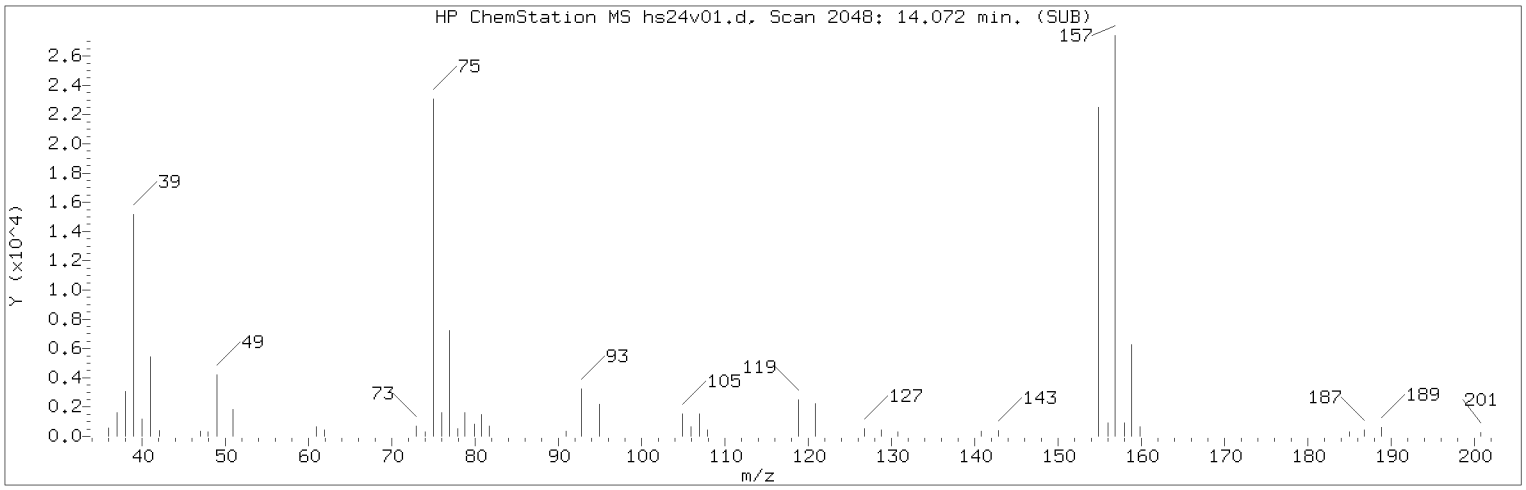
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

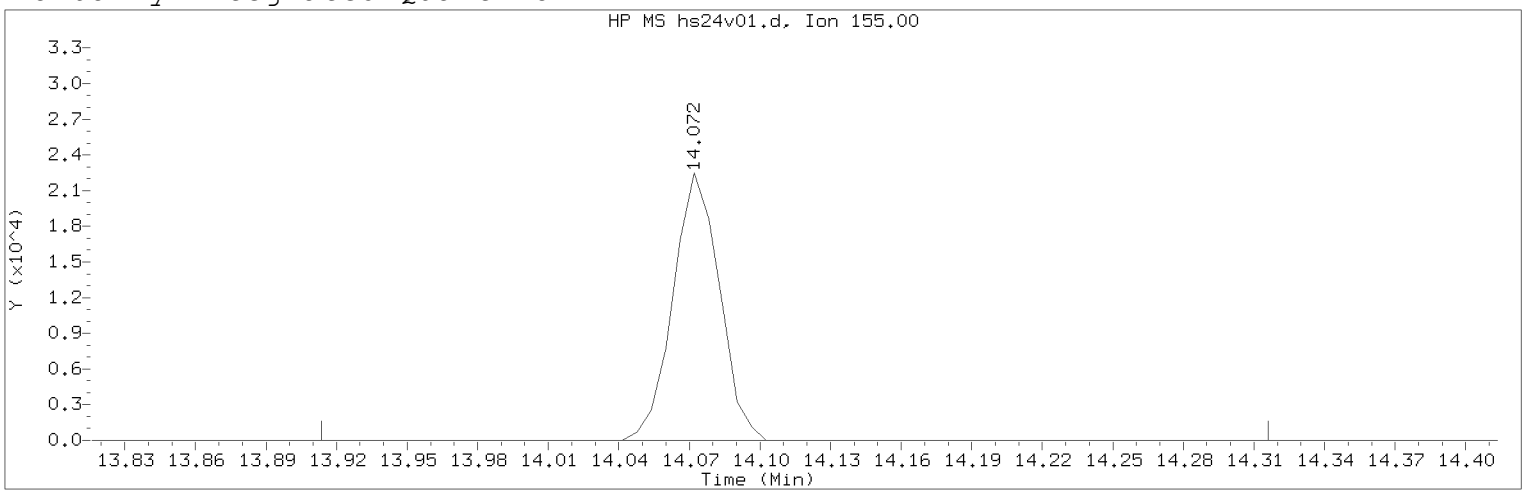
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 77799
On-column Amount (ng) : 5.0401
Integration start scan : 1922 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

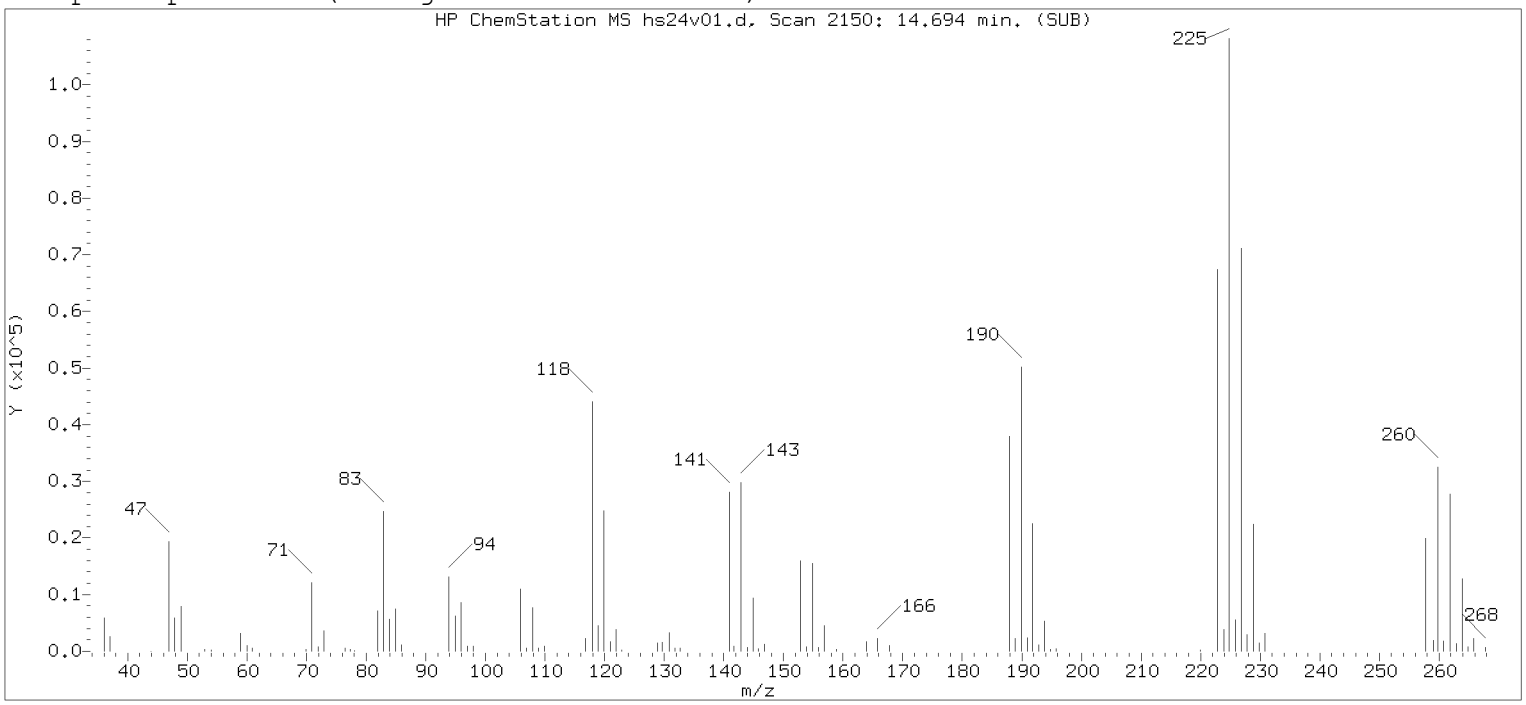
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 30890M
On-Column Amount (ng) : 5.3040
Integration start scan : 2021 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

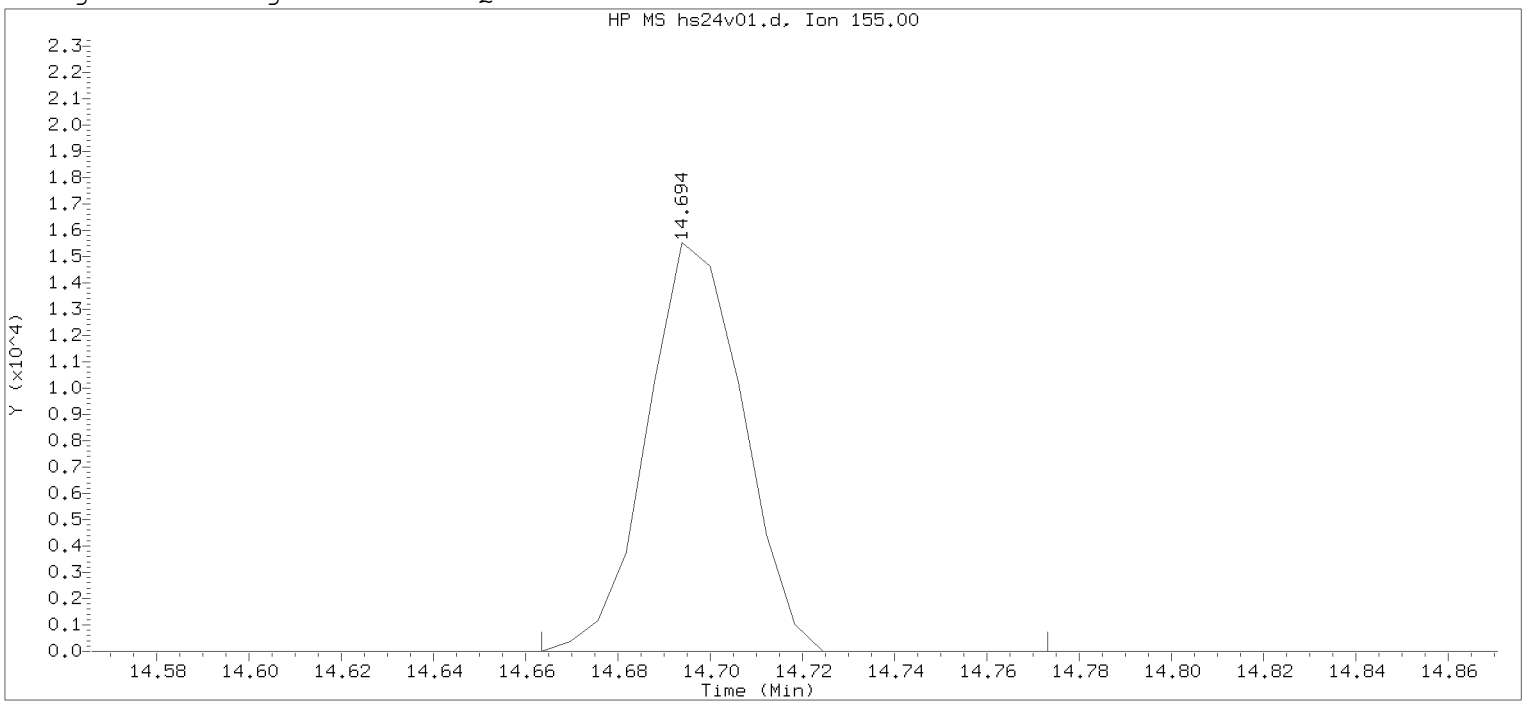
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 22433
On-column Amount (ng) : 7.5577
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkhowe

Data File: /chem2/HP19094.i/18oct24b.b/hc24t05.d

Date : 24-OCT-2018 19:36

Client ID: aug7-18

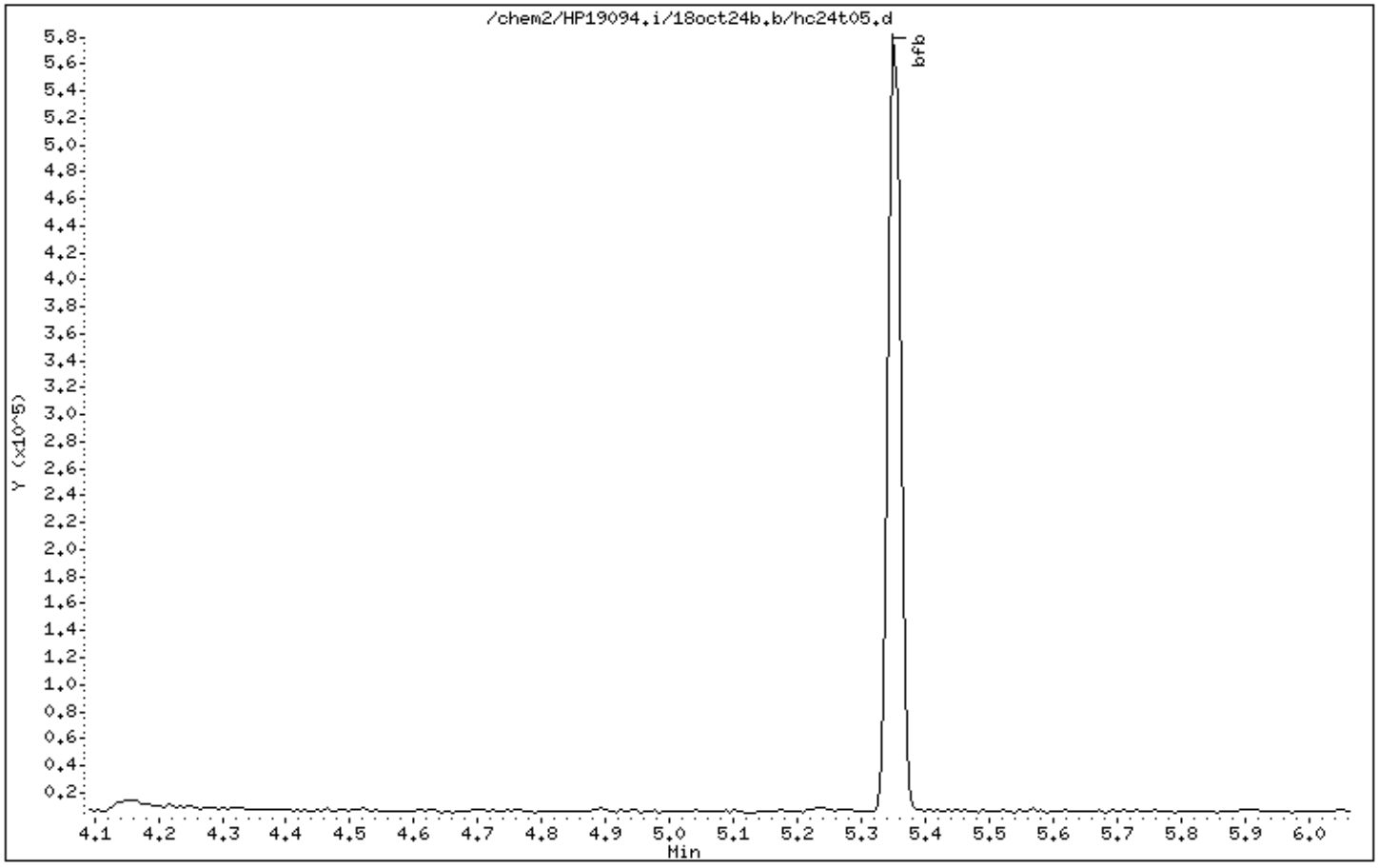
Instrument: HP19094.i

Sample Info: aug7-18;50NGBFB;1;3;;;;;;

Operator: JGC14951

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Joel G. Chachapoya on 10/24/2018 at 19:56.
Target 3.5 esignature user ID: jgc14951

Data File: /chem2/HP19094.i/18oct24b.b/hc24t05.d

Date : 24-OCT-2018 19:36

Client ID: aug7-18

Instrument: HP19094.i

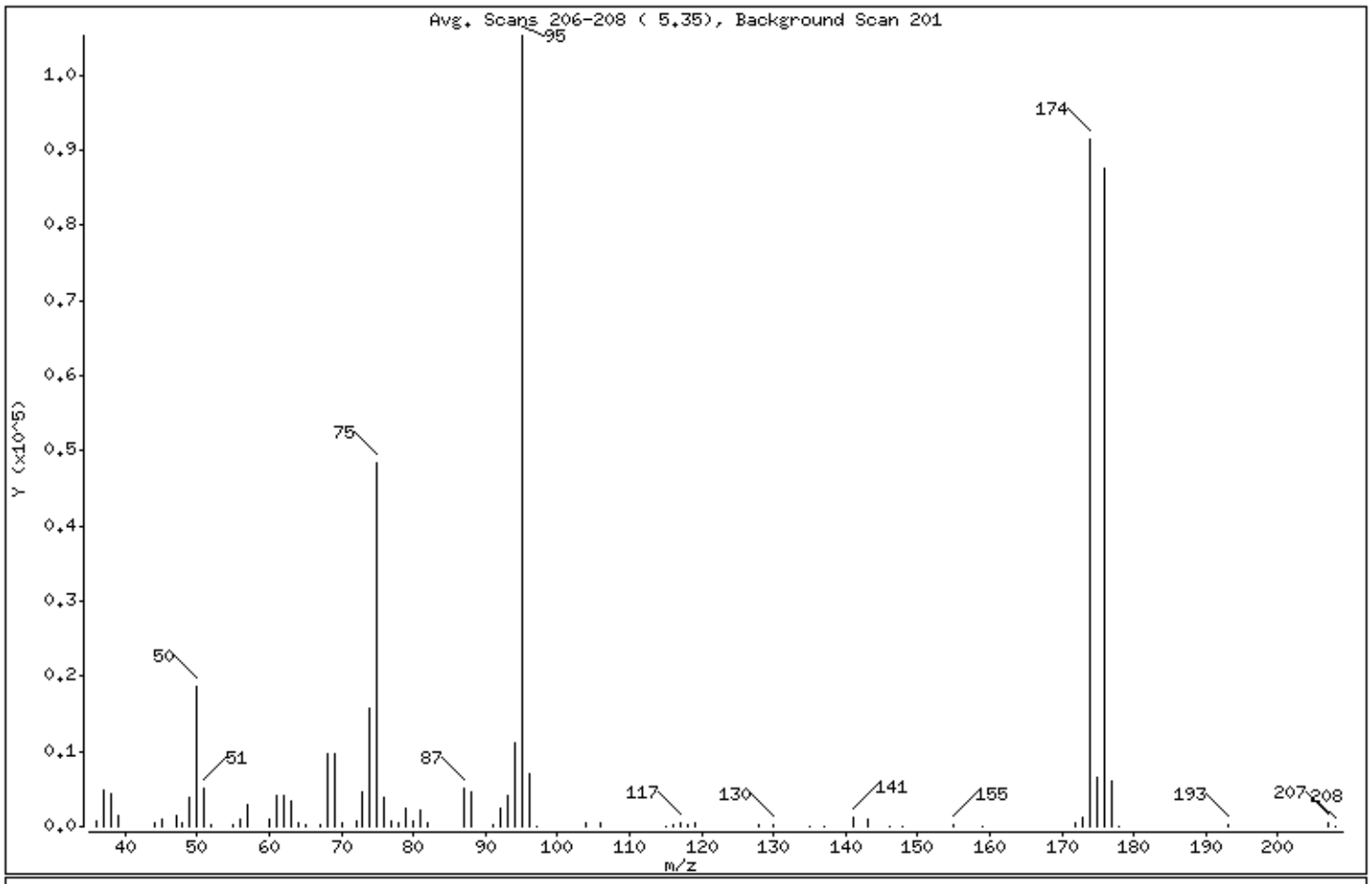
Sample Info: aug7-18;50NGBFB;1;3;;;;;;

Operator: JGC14951

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.70
75	30.00 - 60.00% of mass 95	45.98
96	5.00 - 9.00% of mass 95	6.72
173	Less than 2.00% of mass 174	1.20 (1.37)
174	50.00 - 100.00% of mass 95	87.01
175	5.00 - 9.00% of mass 174	6.27 (7.20)
176	95.00 - 101.00% of mass 174	83.14 (95.55)
177	5.00 - 9.00% of mass 176	5.77 (6.94)

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 19:56.
Target 3.5 esignature user ID: jgc14951

Date : 24-OCT-2018 19:36

Client ID: aug7-18 Instrument: HP19094.i

Sample Info: aug7-18;50NGBFB;1;3;;;;;;

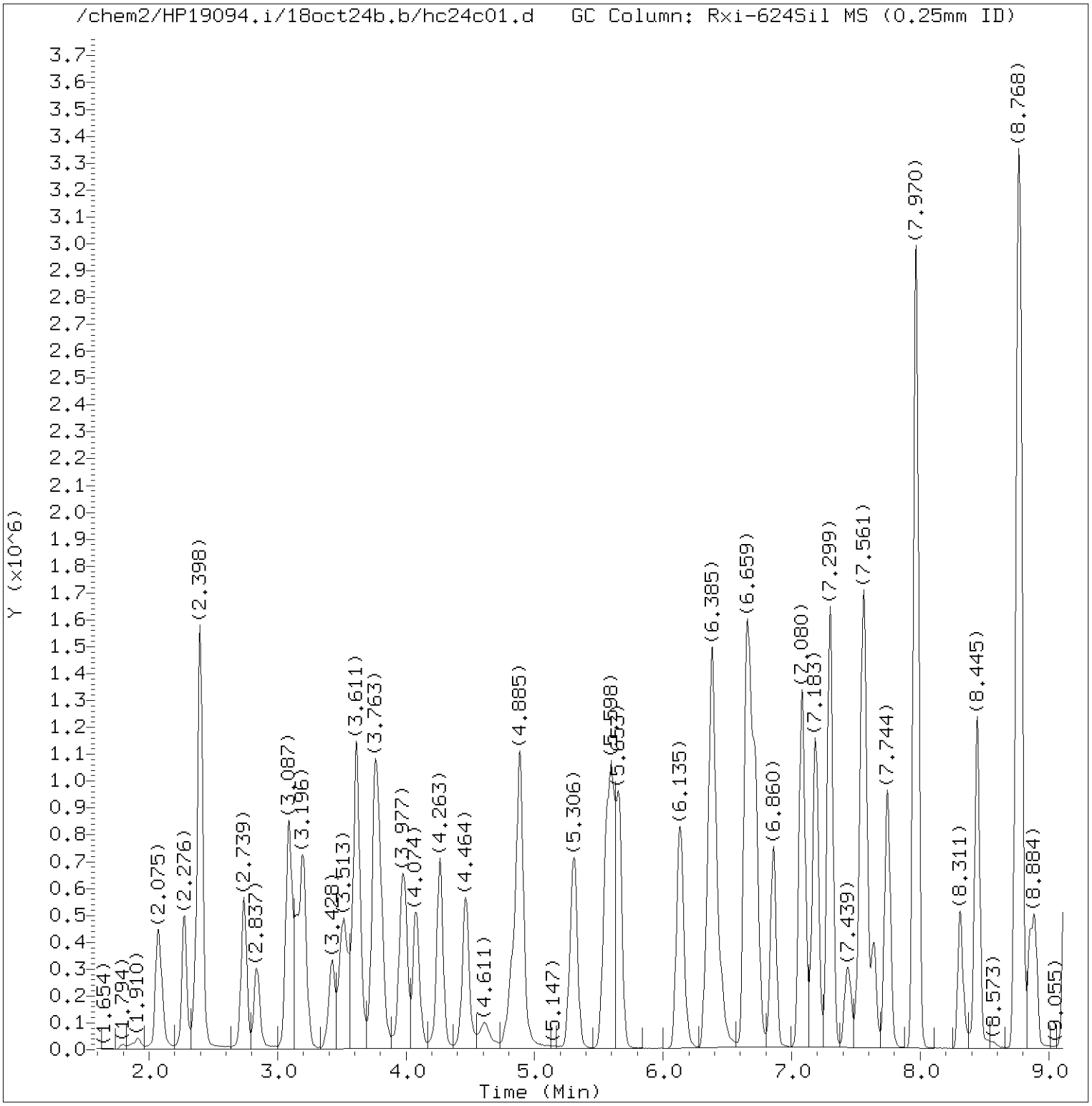
Operator: JGC14951

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hc24t05.d
Spectrum: Avg. Scans 206-208 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 72

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	695	64.00	376	91.00	358	143.00	985
37.00	4750	65.00	289	92.00	2442	146.00	88
38.00	4389	67.00	126	93.00	4130	148.00	110
39.00	1569	68.00	9590	94.00	11019	155.00	212
44.00	523	69.00	9584	95.00	105200	159.00	101
45.00	1007	70.00	572	96.00	7066	172.00	573
47.00	1337	72.00	614	97.00	116	173.00	1258
48.00	499	73.00	4567	104.00	492	174.00	91536
49.00	3764	74.00	15626	106.00	415	175.00	6595
50.00	18616	75.00	48368	115.00	83	176.00	87464
51.00	5023	76.00	3763	116.00	247	177.00	6070
52.00	129	77.00	769	117.00	553	178.00	98
55.00	289	78.00	396	118.00	330	193.00	135
56.00	1067	79.00	2530	119.00	415	207.00	385
57.00	2848	80.00	682	128.00	341	208.00	85
60.00	921	81.00	2275	130.00	347		
61.00	4093	82.00	410	135.00	84		
62.00	4168	87.00	5119	137.00	99		
63.00	3490	88.00	4504	141.00	1091		

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 19:56.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

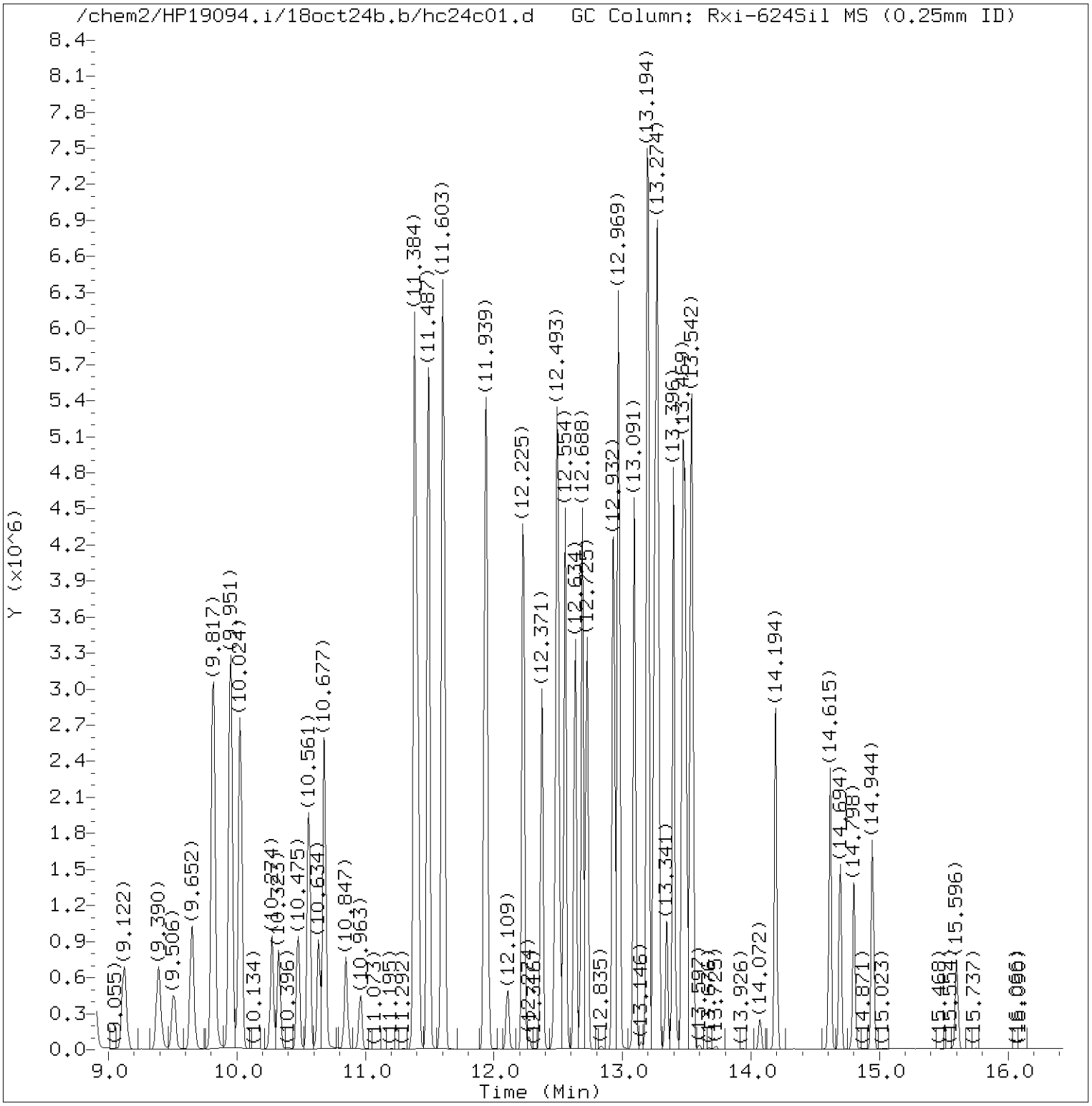
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	886920	8.430
2) Chloromethane	(2)	2.276	50	824283	8.000
5) Vinyl Chloride	(2)	2.398	62	786539	8.151
6) 1,3-Butadiene	(2)	2.398	39	951395	8.704
7) Bromomethane	(2)	2.739	94	643282	8.575
8) Chloroethane	(2)	2.837	64	479636	8.195
9) Dichlorofluoromethane	(2)	3.080	67	1150492	8.264
10) Trichlorofluoromethane	(2)	3.141	101	1068603	8.766
11) Ethyl ether	(2)	3.422	59	348240	8.425
12) Freon 123a	(2)	3.513	67	658367	8.525
13) Acrolein	(1)	3.617	56	2158815	425.461
15) 1,1-Dichloroethene	(2)	3.751	96	461353	8.740
16) Freon 113	(2)	3.782	101	514534	8.270
14) Acetone	(1)	3.794	43	587848	86.255
17) Methyl Iodide	(2)	3.964	142	977543	8.884
18) Carbon Disulfide	(2)	4.080	76	1350797	8.042
21) Methyl Acetate	(1)	4.233	43	172531	9.018
22) Allyl Chloride	(2)	4.263	41	796234	7.935
23) Methylene Chloride	(2)	4.464	84	495549	8.321
26)*t-Butyl Alcohol-d10	(1)	4.489	65	114344M	50.000
28) t-Butyl Alcohol	(1)	4.611	59	328677M	168.401
29) Acrylonitrile	(1)	4.818	53	419717	47.688
30) Methyl Tertiary Butyl Ether	(2)	4.873	73	1003922	9.247
31) trans-1,2-Dichloroethene	(2)	4.885	96	529826	8.893
32) n-Hexane	(2)	5.306	57	747489	7.890
33) 1,1-Dichloroethane	(2)	5.550	63	1002365	8.837
34) di-Isopropyl Ether	(2)	5.598	45	1721280	8.545
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	896358	8.782
40) 1,2-Dichloroethene (Total)	(2)		96	1117886	17.827
37) Ethyl t-butyl ether	(2)	6.129	59	1413436	8.847
38) 2-Butanone	(1)	6.342	43	1058914	94.919
39) cis-1,2-Dichloroethene	(2)	6.379	96	588060	8.934
41) 2,2-Dichloropropane	(2)	6.397	77	757573	9.351
42) Propionitrile	(1)	6.446	54	600071	198.166
45) Methacrylonitrile	(1)	6.659	67	1069153	97.919
47) Bromochloromethane	(2)	6.714	128	247316	8.894
48) Tetrahydrofuran	(1)	6.720	71	286808	96.704
49) Chloroform	(2)	6.860	83	942356	8.936

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.074	113	667438	9.836
50)$Dibromofluoromethane	(2)	7.074	111	686356	9.827
51) 1,1,1-Trichloroethane	(2)	7.092	97	819342	9.083
52) Cyclohexane	(2)	7.183	56	945245	8.027
52) Cyclohexane	(2)	7.183	84	828558	8.534
52) Cyclohexane	(2)	7.183	69	284450	8.196
54) Carbon Tetrachloride	(2)	7.299	117	731364	9.440
55) 1,1-Dichloropropene	(2)	7.299	75	764400	8.936
56) Isobutyl Alcohol	(1)	7.439	41	337550	446.991
57)$1,2-Dichloroethane-d4	(2)	7.537	102	121674	10.286
57)$1,2-Dichloroethane-d4	(2)	7.531	65	563993	9.857
57)$1,2-Dichloroethane-d4	(2)	7.537	104	75159	9.921
58) Benzene	(2)	7.567	78	2196816	8.694
59) 1,2-Dichloroethane	(2)	7.641	62	490218M	8.429
60) t-Amyl methyl ether	(2)	7.744	73	1173582	8.859
62) n-Heptane	(2)	7.970	43	760215	7.783
63)*Fluorobenzene	(2)	7.970	96	2692216	10.000
65) n-Butanol	(1)	8.311	56	600743	941.607
67) Trichloroethene	(2)	8.445	95	585538	9.050
69) Methylcyclohexane	(2)	8.756	83	994714	8.140
70) 1,2-Dichloropropane	(2)	8.787	63	539718	8.803
71) Methyl Methacrylate	(1)	8.854	69	205710	10.179
72) 1,4-Dioxane	(1)	8.878	88	70524	459.106
73) Dibromomethane	(2)	8.896	93	231900	9.113
74) Bromodichloromethane	(2)	9.122	83	626092	9.084
76) 2-Nitropropane	(1)	9.390	41	576697M	100.735
80) cis-1,3-Dichloropropene	(2)	9.652	75	728945	9.084
81) 4-Methyl-2-Pentanone	(1)	9.817	43	2649411M	95.475
82)$Toluene-d8	(3)	9.951	98	2645952	10.240
82)$Toluene-d8	(3)	9.951	100	1701547	10.202
83) Toluene	(3)	10.024	92	1369967	9.195
85) 1,3-Dichloropropene (total)	(3)		75	1285629	18.781
84) trans-1,3-Dichloropropene	(3)	10.274	75	556684	9.697
86) Ethyl Methacrylate	(3)	10.323	69	466608	9.487
88) 1,1,2-Trichloroethane	(3)	10.475	97	321937	9.390
89) Tetrachloroethene	(3)	10.561	166	668161	9.926
90) 1,3-Dichloropropane	(3)	10.634	76	570197	9.384
91) 2-Hexanone	(1)	10.677	43	1814532M	96.062

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	412125	10.030
95) 1,2-Dibromoethane	(3)	10.963	107	317331	9.875
97)*Chlorobenzene-d5	(3)	11.384	117	2007743	10.000
98) Chlorobenzene	(3)	11.408	112	1522380	9.631
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	532207	10.202
100) Ethylbenzene	(3)	11.493	91	2739523	9.408
96) 1-Chlorohexane	(3)	11.493	91	2741655M	30.853
101) m+p-Xylene	(3)	11.603	106	2102564	19.467
105) Xylene (Total)	(3)		106	3106328	29.188
104) o-Xylene	(3)	11.932	106	1003764	9.721
106) Styrene	(3)	11.945	104	1627720	9.852
107) Bromoform	(3)	12.109	173	226477	10.029
108) Isopropylbenzene	(3)	12.225	105	2729463	9.683
111)$4-Bromofluorobenzene	(3)	12.371	95	906245	9.633
111)$4-Bromofluorobenzene	(3)	12.371	174	826945	10.123
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	378733	9.154
114) Bromobenzene	(4)	12.493	156	619482	9.849
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	587266M	67.569
116) 1,2,3-Trichloropropane	(4)	12.518	110	100423	9.389
117) n-Propylbenzene	(4)	12.554	91	3215427	9.402
119) 2-Chlorotoluene	(4)	12.634	126	641008	9.664
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2220943	9.586
122) 4-Chlorotoluene	(4)	12.725	126	645327	9.709
125) tert-Butylbenzene	(4)	12.932	134	529561	10.510
126) Pentachloroethane	(4)	12.963	167	386152	9.820
127) 1,2,4-Trimethylbenzene	(4)	12.969	105	2263642	9.575
128) sec-Butylbenzene	(4)	13.091	105	2913867	9.706
131) 1,3-Dichlorobenzene	(4)	13.194	146	1213975	9.714
132) p-Isopropyltoluene	(4)	13.200	119	2483713	9.988
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1042995	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	1192354	9.720
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	983410	9.067
136) Benzyl Chloride	(4)	13.341	126	154758	10.347
138) n-Butylbenzene	(4)	13.487	92	1173443	9.507
139) 1,2-Dichlorobenzene	(4)	13.530	146	1041844	9.449
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	50887M	10.818
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	886126	9.532
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	687735	9.082

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Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

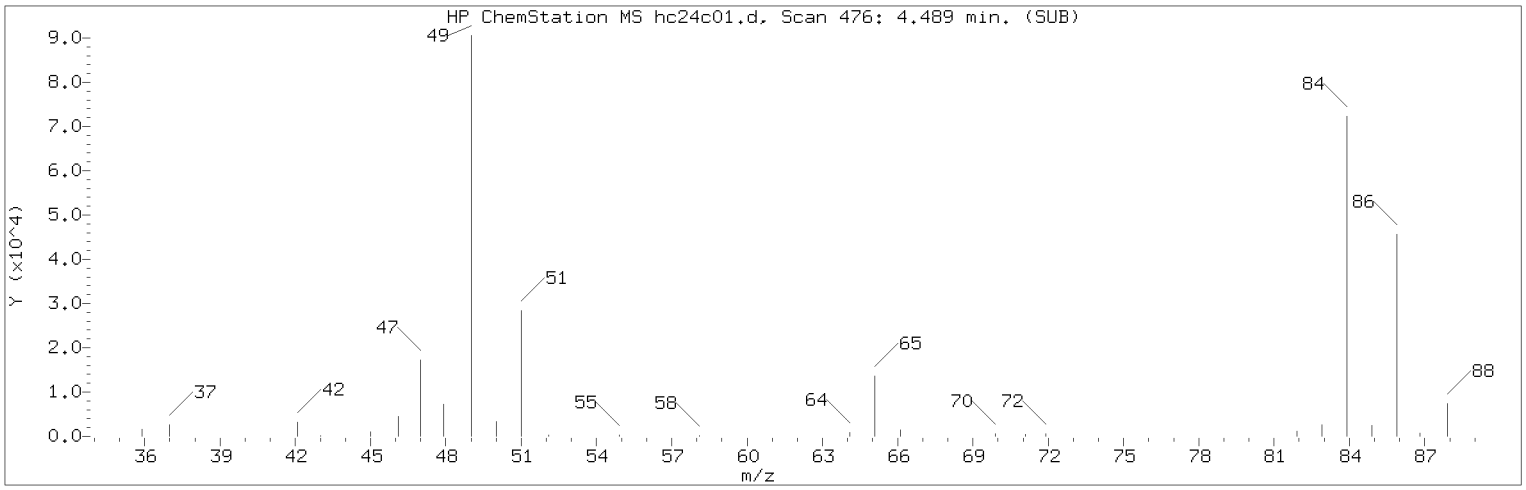
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

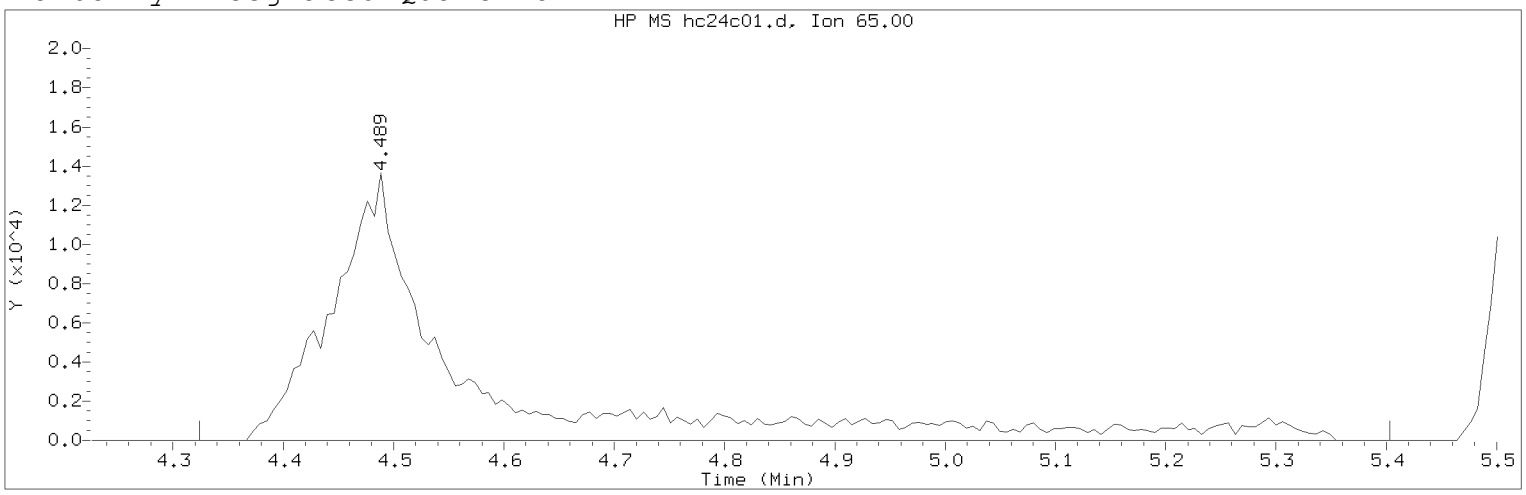
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	272518	9.521
147) Naphthalene	(4)	14.798	128	1043293	8.706
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	536513	8.617

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

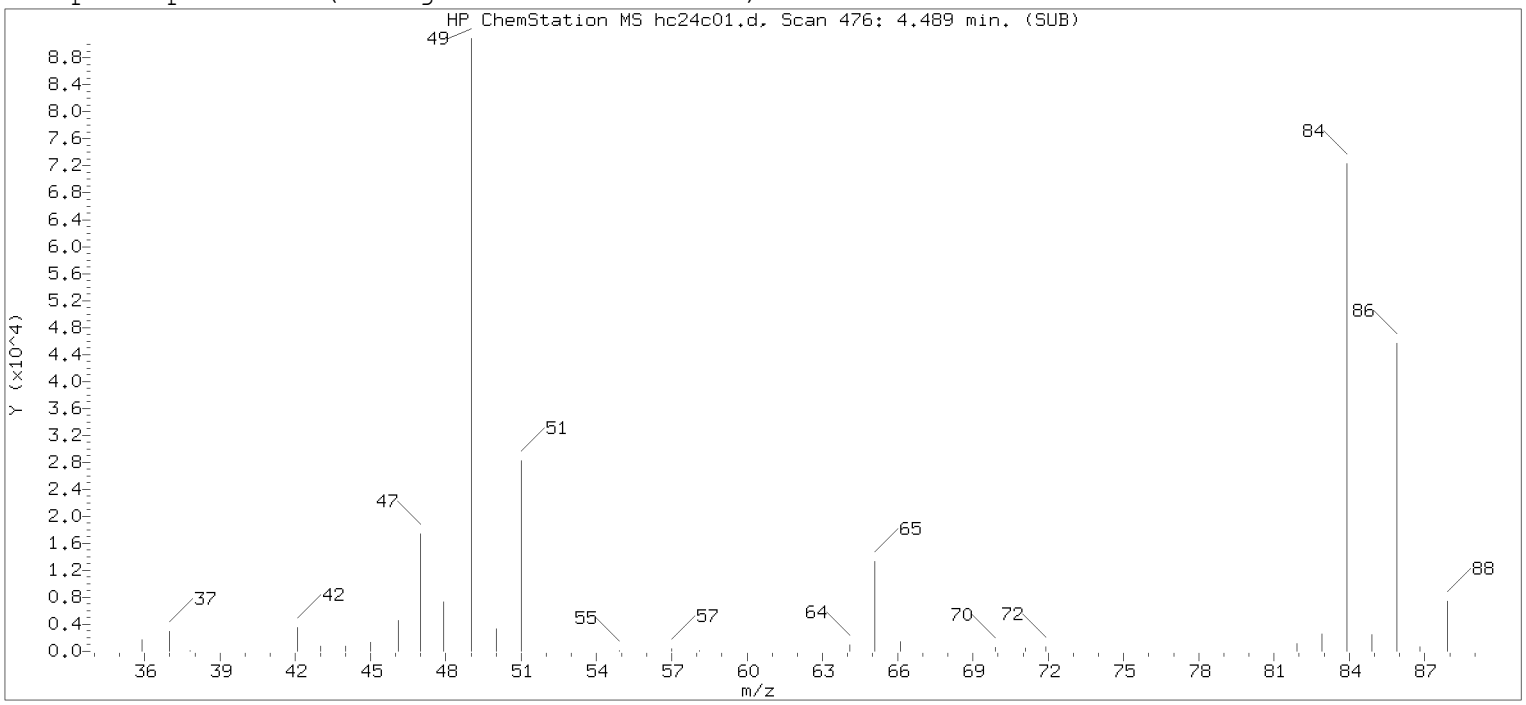
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area (flag) : 114344M
On-Column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 625
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

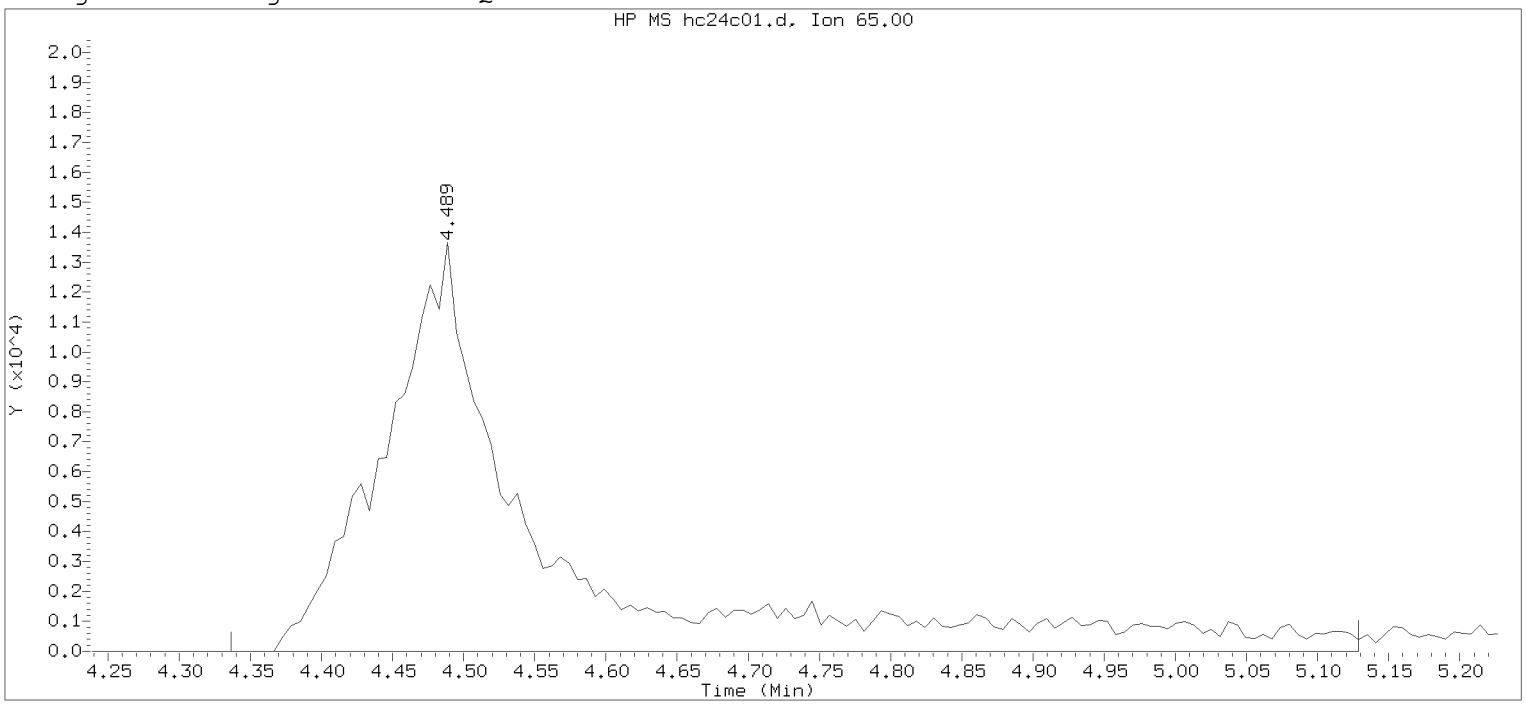
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

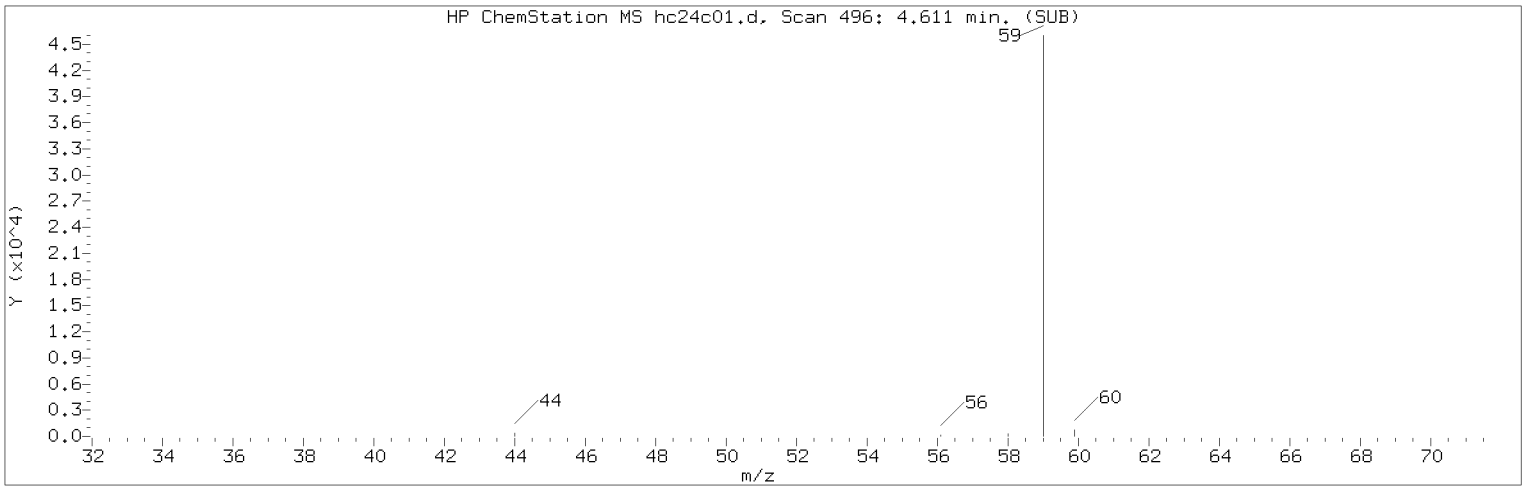
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

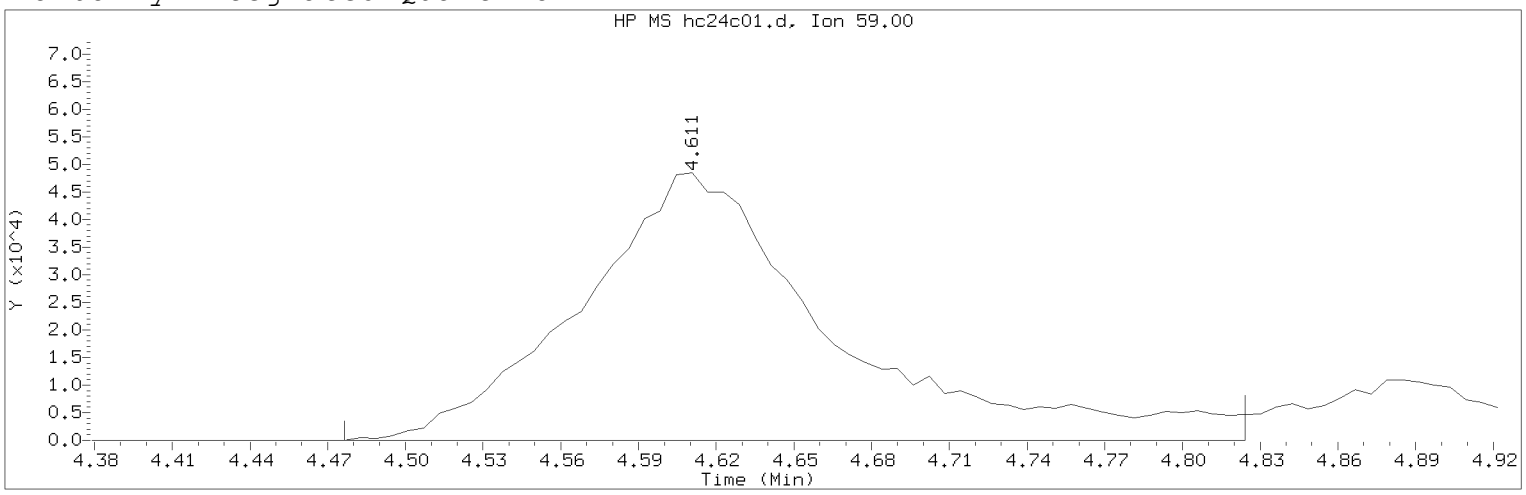
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area : 106175
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

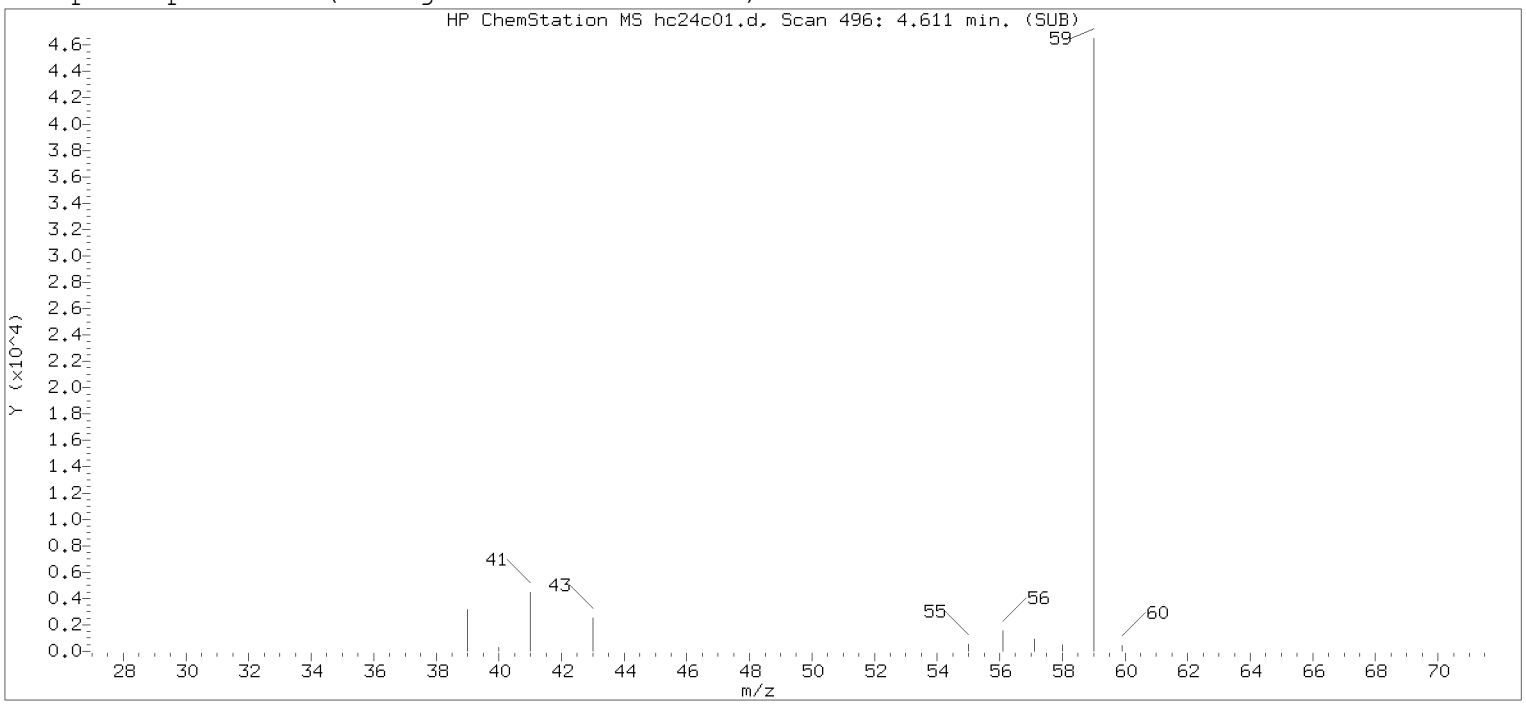
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 496
Retention Time (minutes): 4.611
Quant Ion : 59.00
Area (flag) : 328677M
On-Column Amount (ng) : 168.4010
Integration start scan : 473 Integration stop scan: 530
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

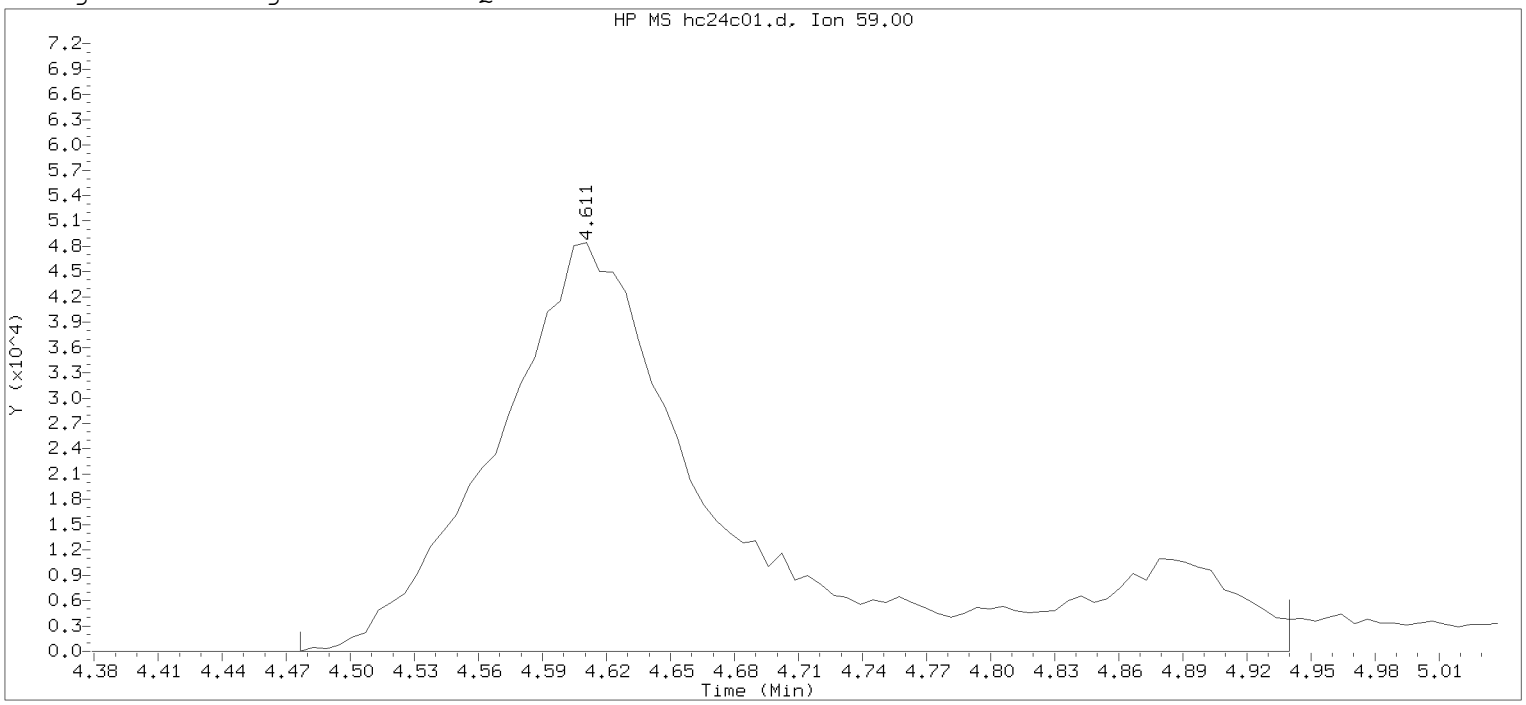
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

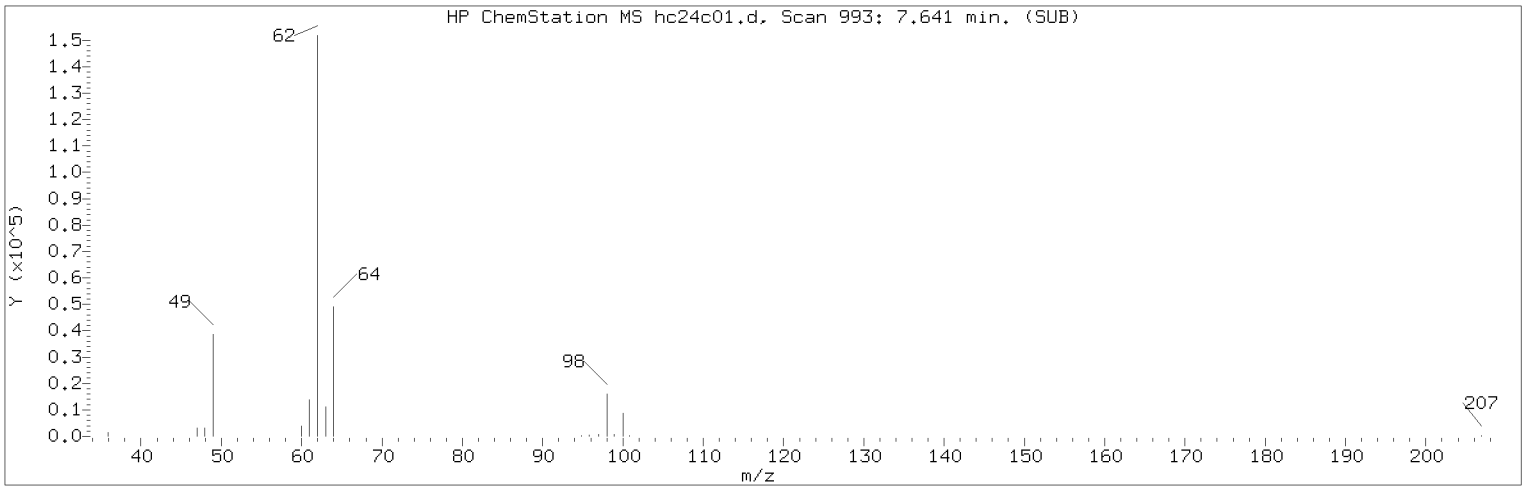
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

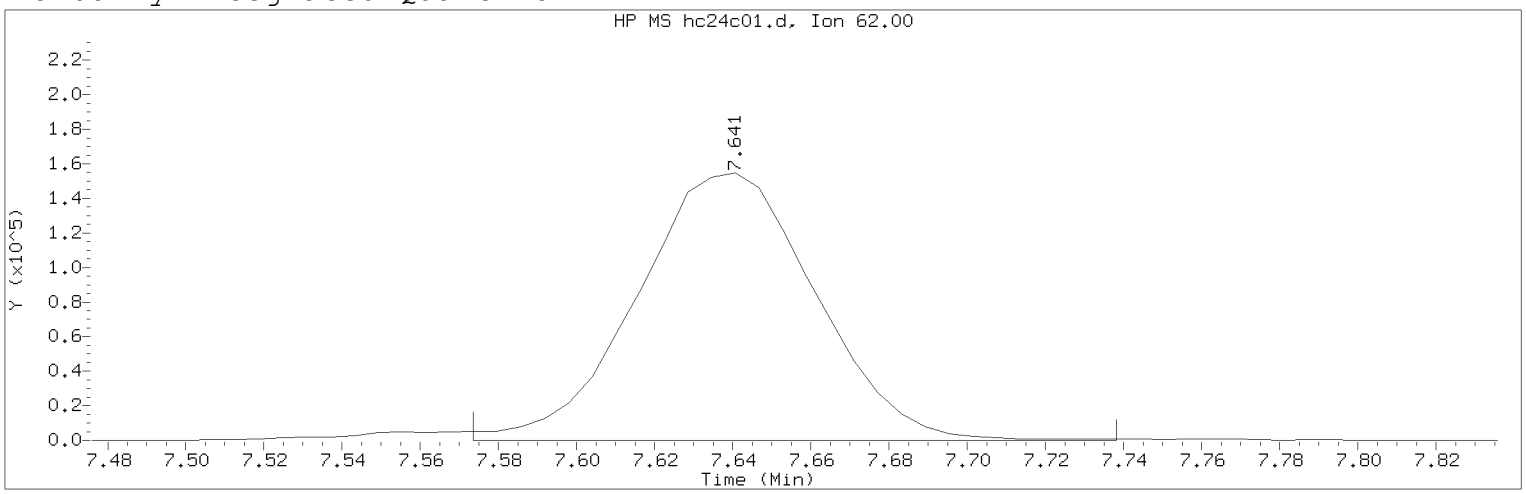
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 496
Retention Time (minutes): 4.611
Quant Ion : 59.00
Area : 378953
On-column Amount (ng) : 209.0986
Integration start scan : 473 Integration stop scan: 549
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

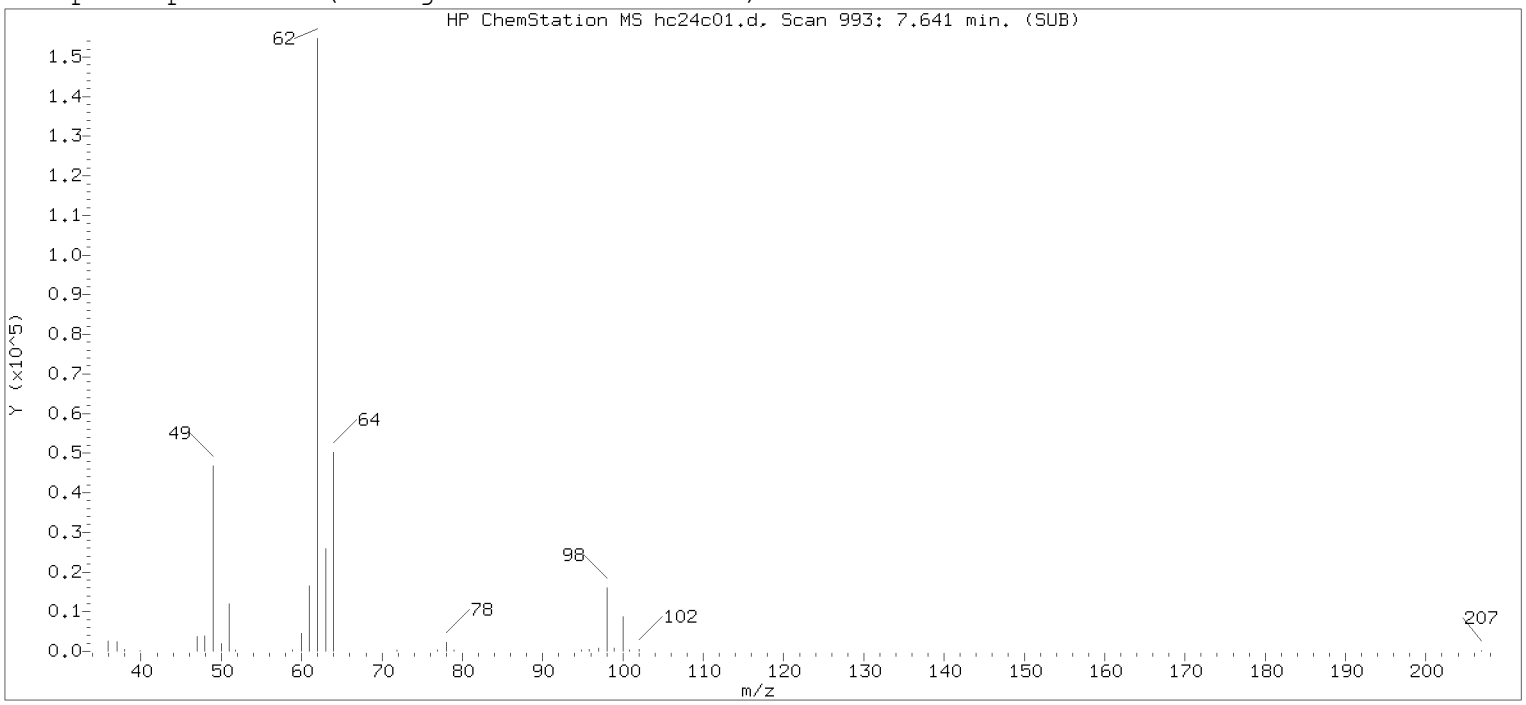
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 490218M
On-Column Amount (ng) : 8.4294
Integration start scan : 981 Integration stop scan: 1008
Y at integration start : 14 Y at integration end: 14

Reason for manual integration: improper integration

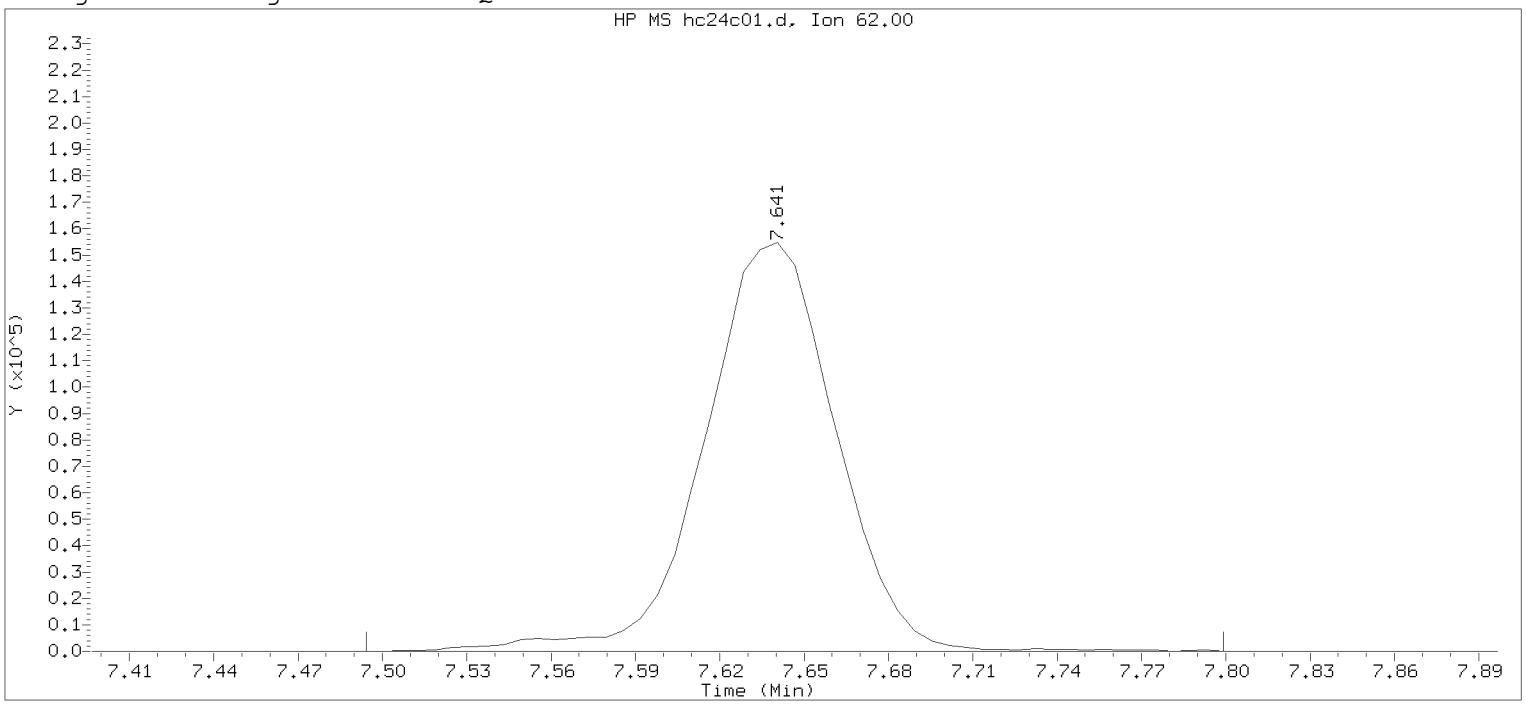
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

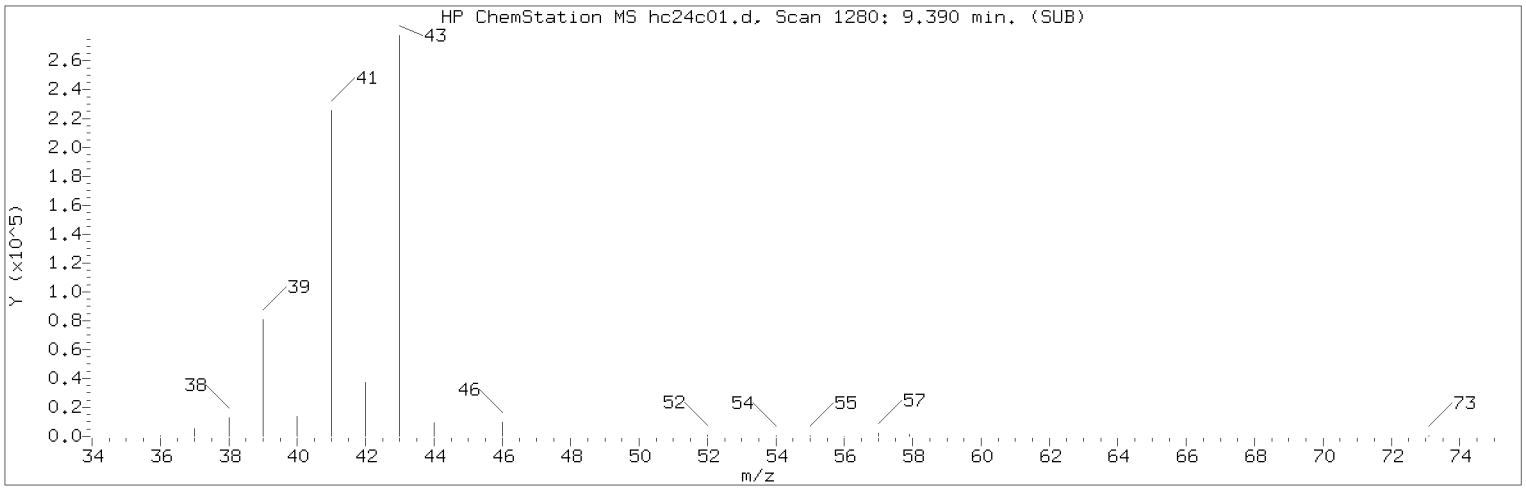
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

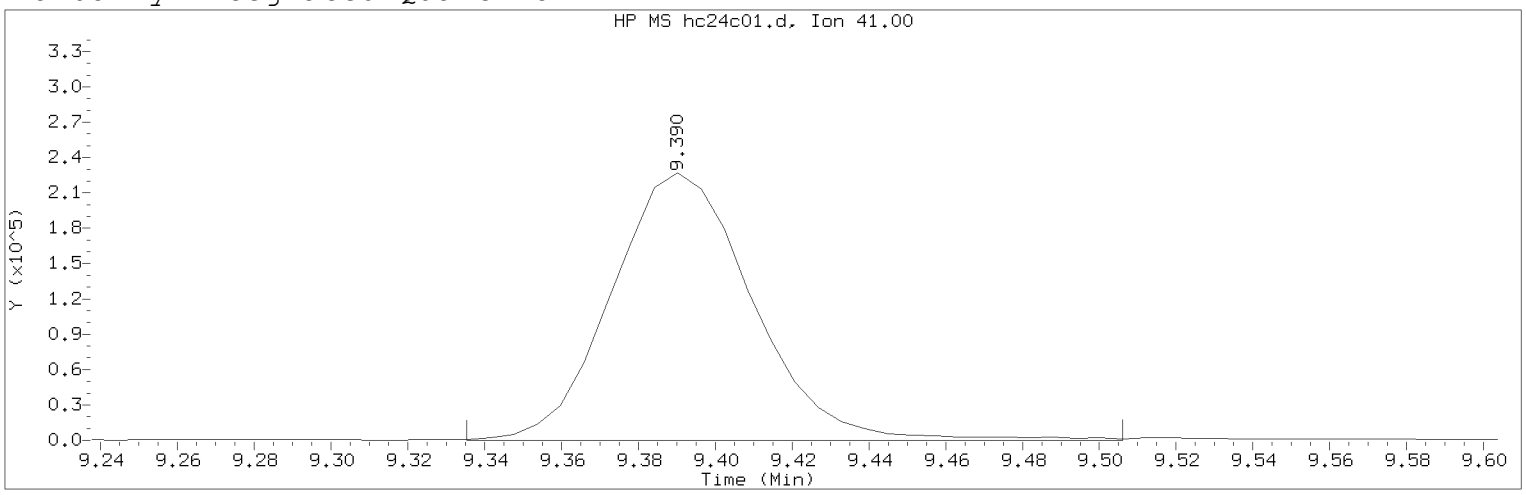
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 501955
On-column Amount (ng) : 8.6313
Integration start scan : 968 Integration stop scan: 1018
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

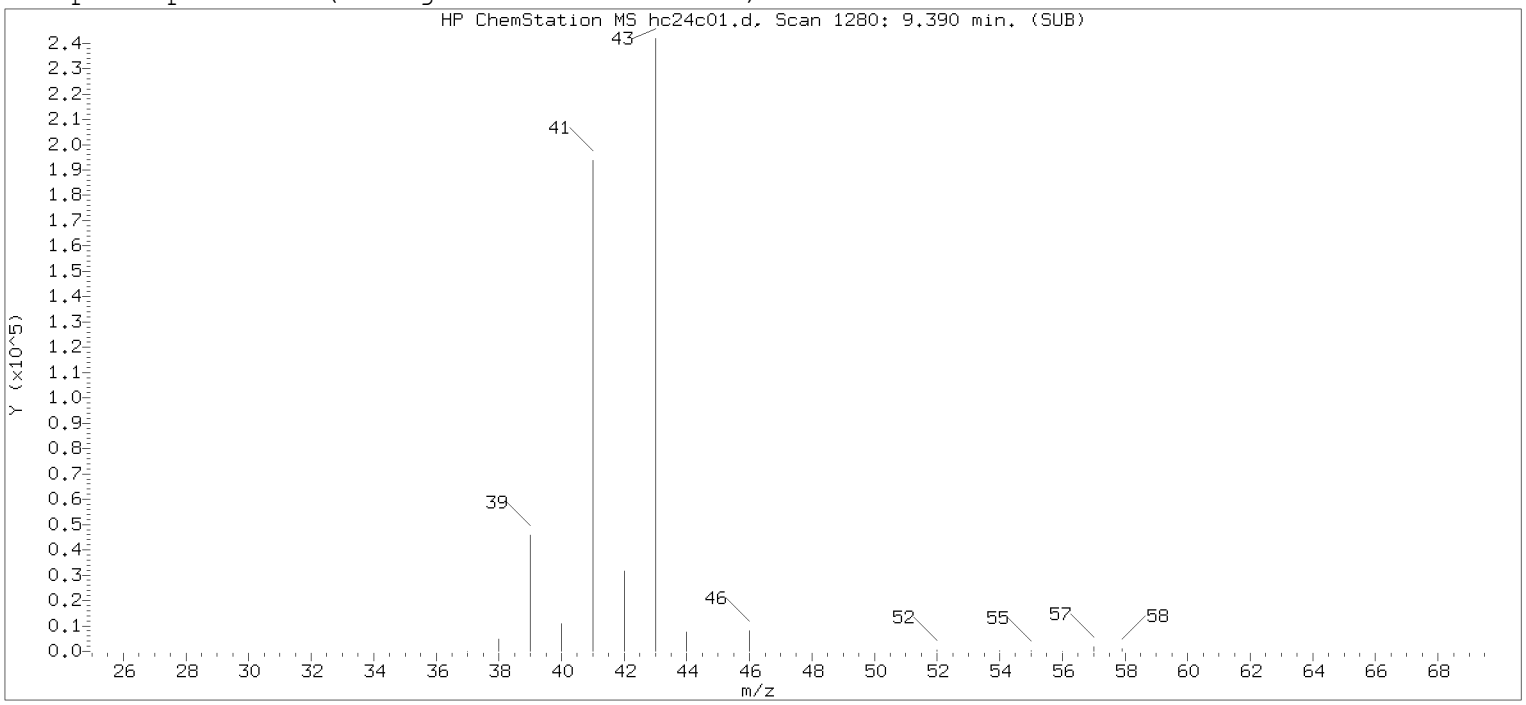
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 576697M
On-Column Amount (ng) : 100.7351
Integration start scan : 1270 Integration stop scan: 1298
Y at integration start : 161 Y at integration end: 161

Reason for manual integration: improper integration

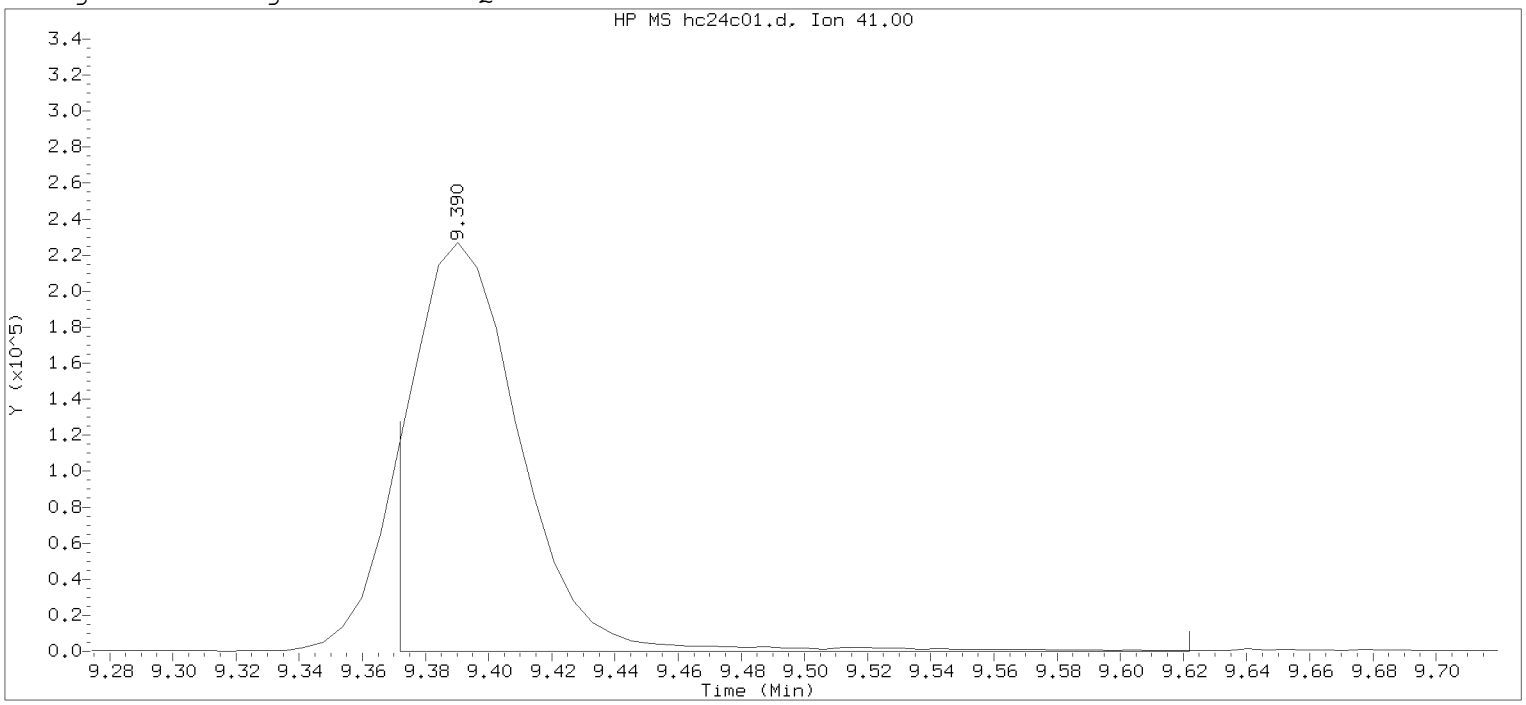
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

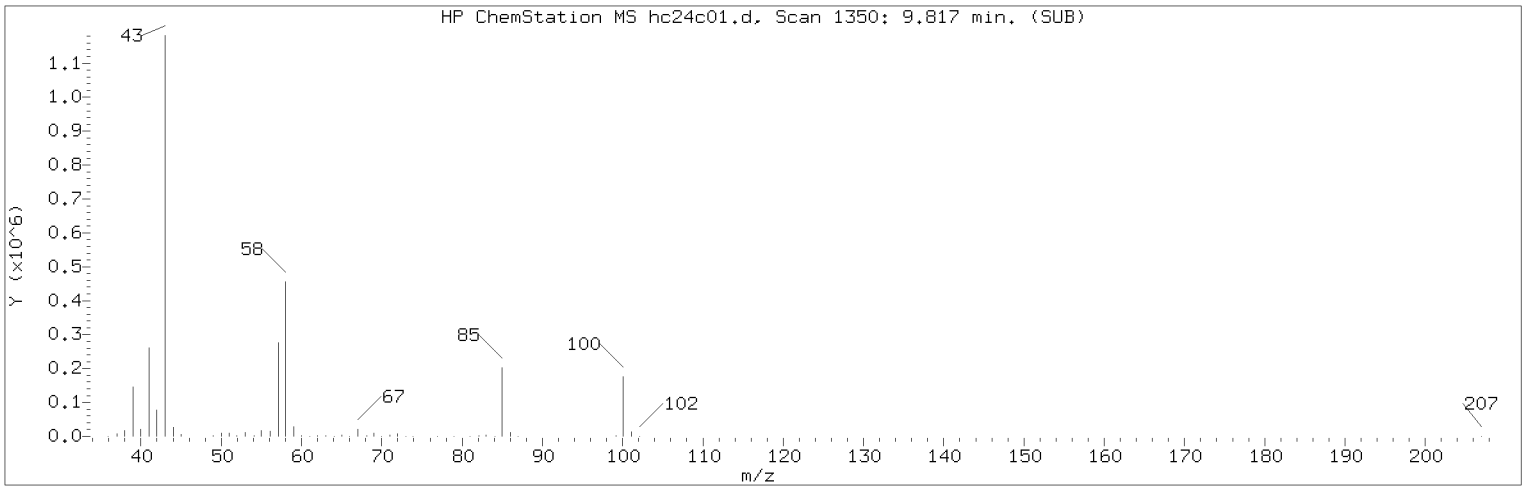
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

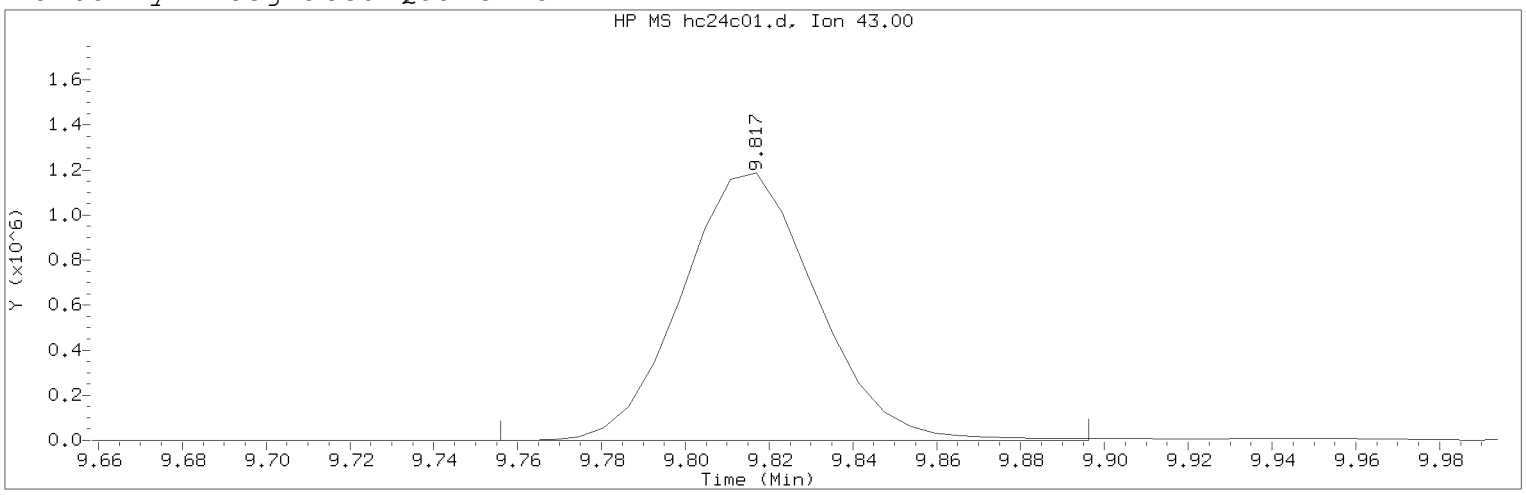
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 521707
On-column Amount (ng) : 98.1410
Integration start scan : 1276 Integration stop scan: 1317
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

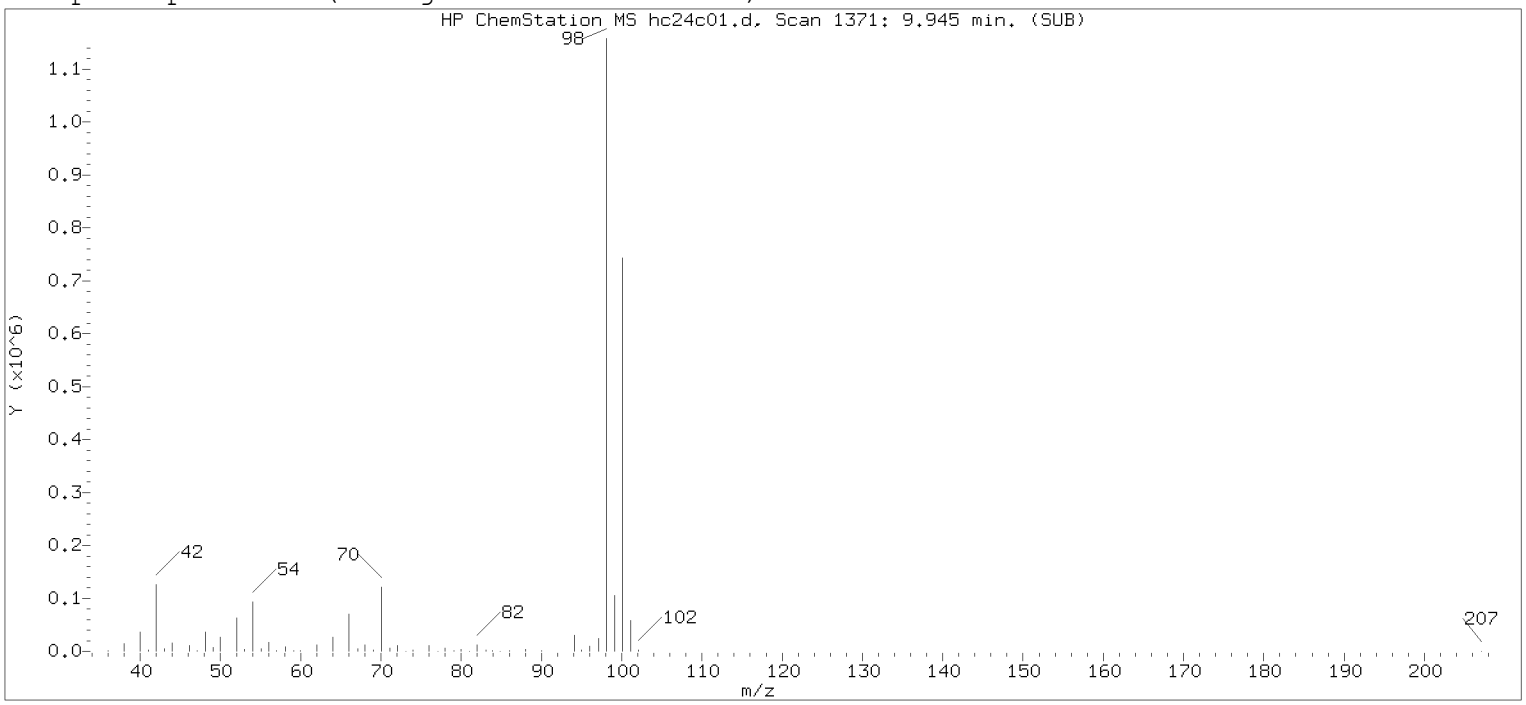
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1350
Retention Time (minutes): 9.817
Quant Ion : 43.00
Area (flag) : 2649411M
On-Column Amount (ng) : 95.4750
Integration start scan : 1339 Integration stop scan: 1362
Y at integration start : 84 Y at integration end: 84

Reason for manual integration: improper integration

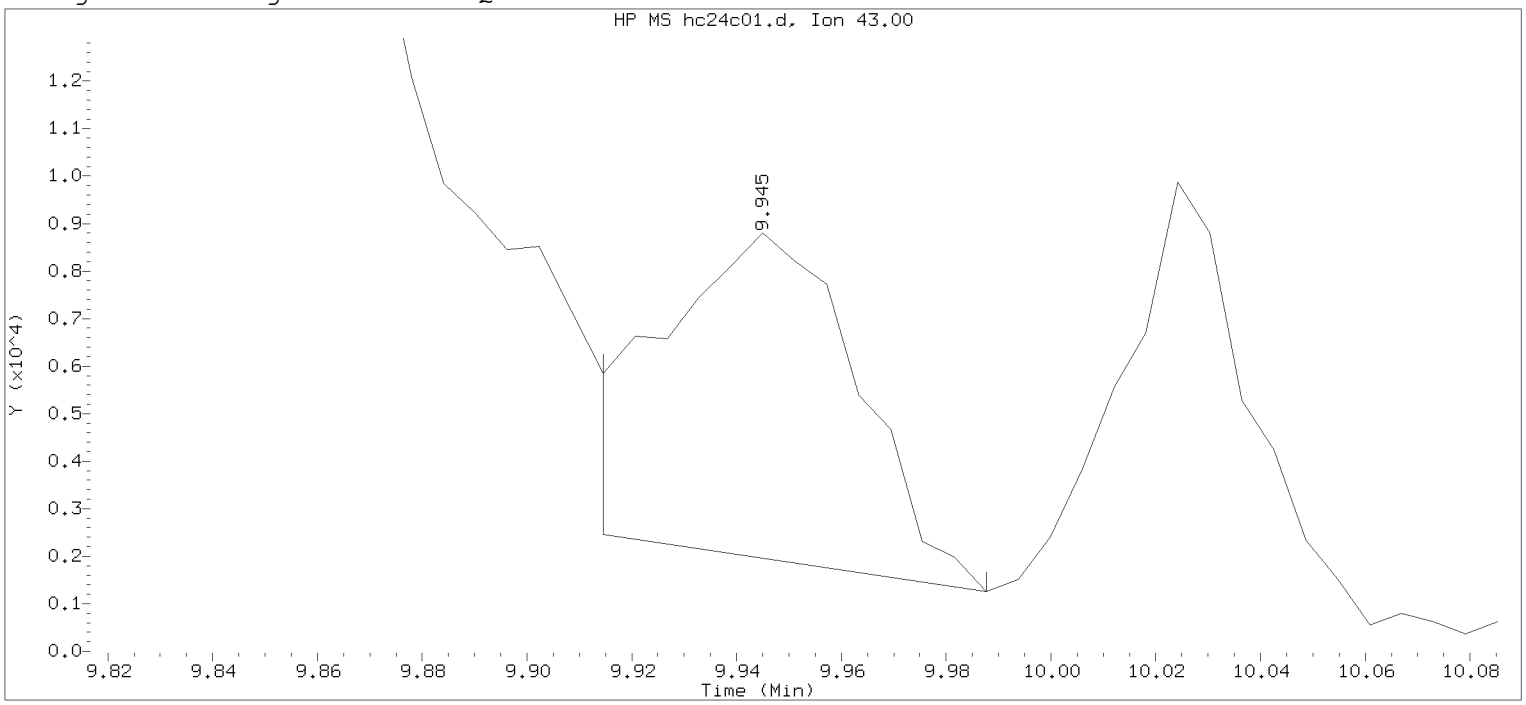
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

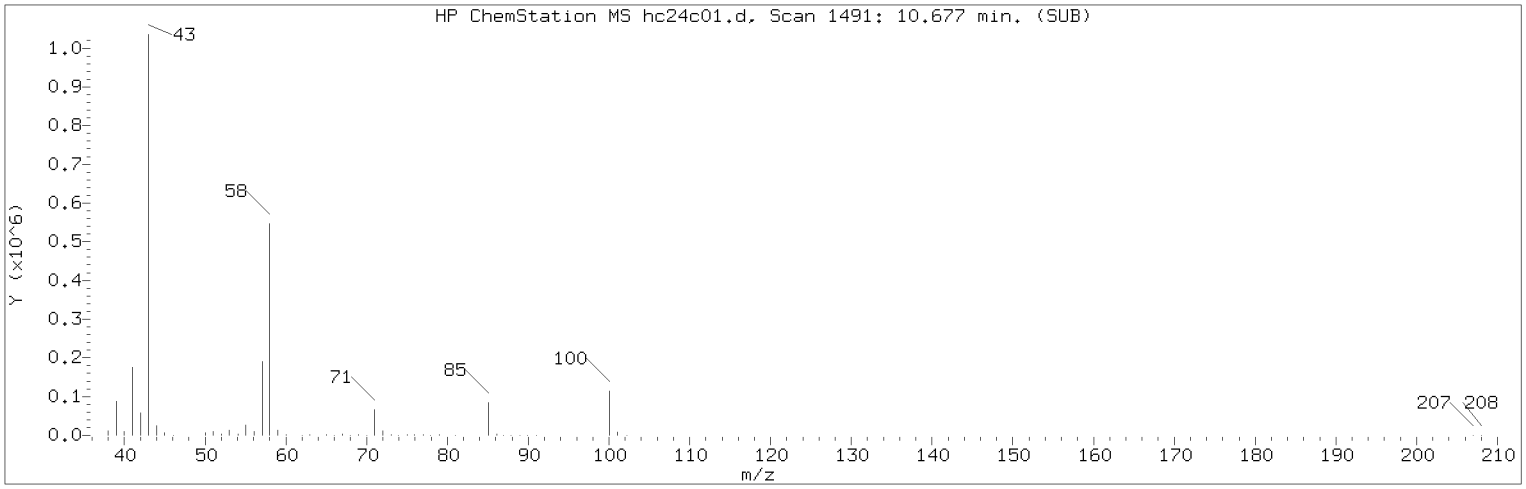
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

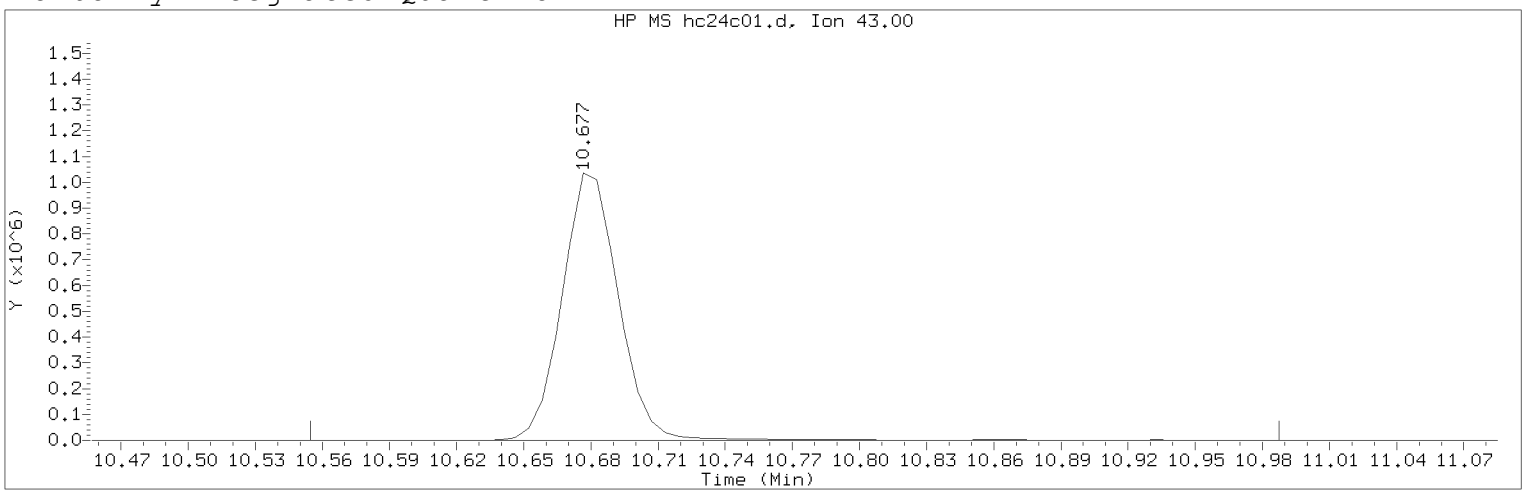
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1371
Retention Time (minutes): 9.945
Quant Ion : 43.00
Area : 17960
On-column Amount (ng) : 0.6970
Integration start scan : 1365 Integration stop scan: 1377
Y at integration start : 2456 Y at integration end: 1262

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

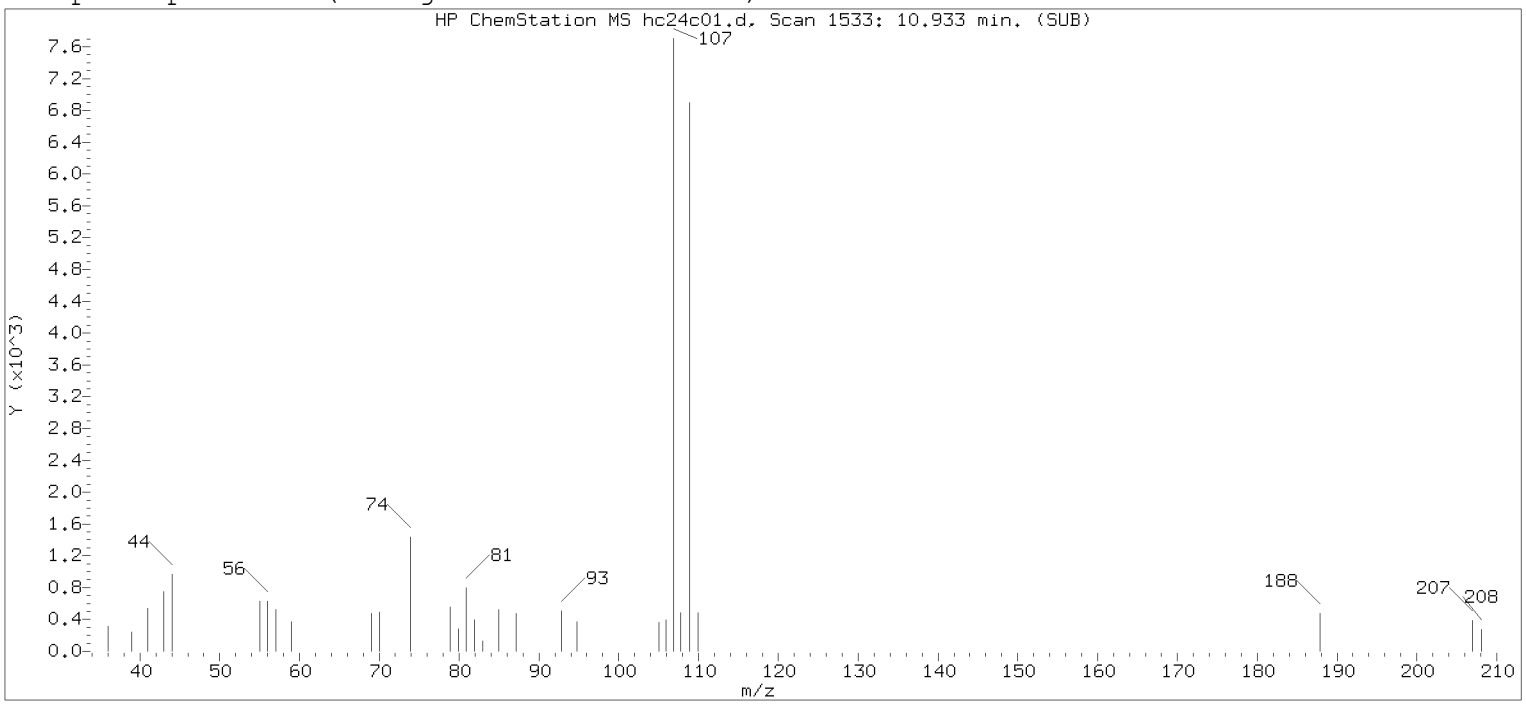
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1491
Retention Time (minutes): 10.677
Quant Ion : 43.00
Area (flag) : 1814532M
On-Column Amount (ng) : 96.0620
Integration start scan : 1470 Integration stop scan: 1541
Y at integration start : 455 Y at integration end: 302

Reason for manual integration: improper integration

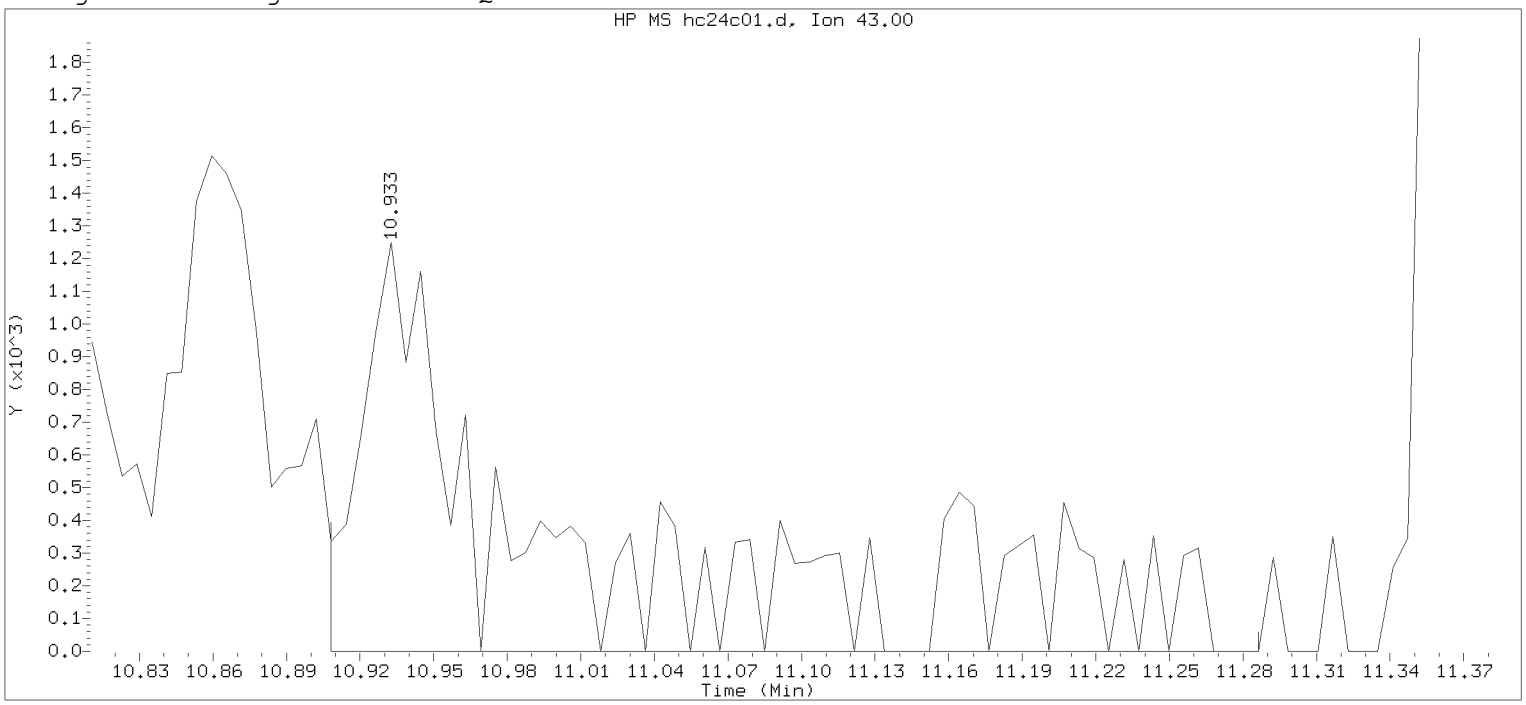
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

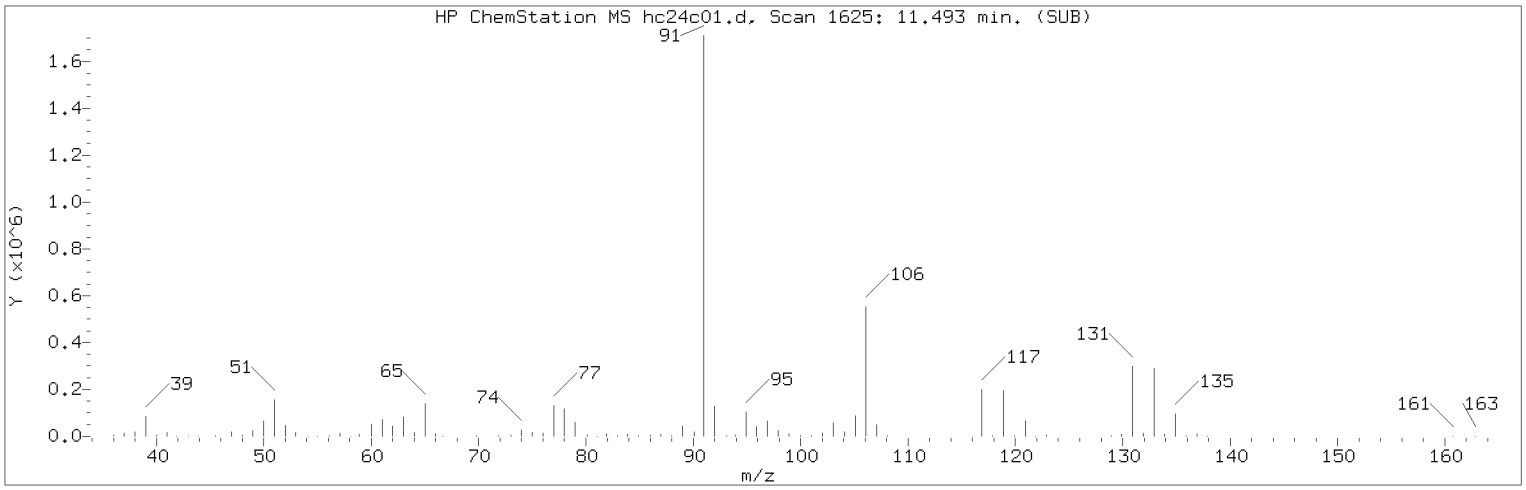
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

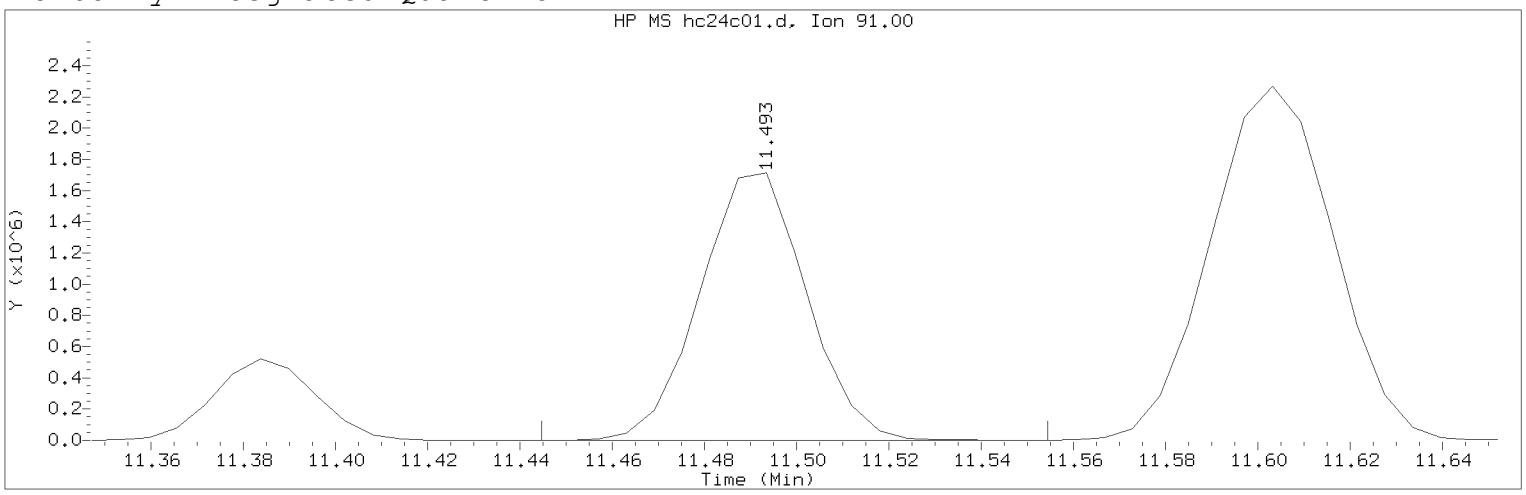
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1533
Retention Time (minutes): 10.933
Quant Ion : 43.00
Area : 6884
On-column Amount (ng) : 0.3925
Integration start scan : 1528 Integration stop scan: 1590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

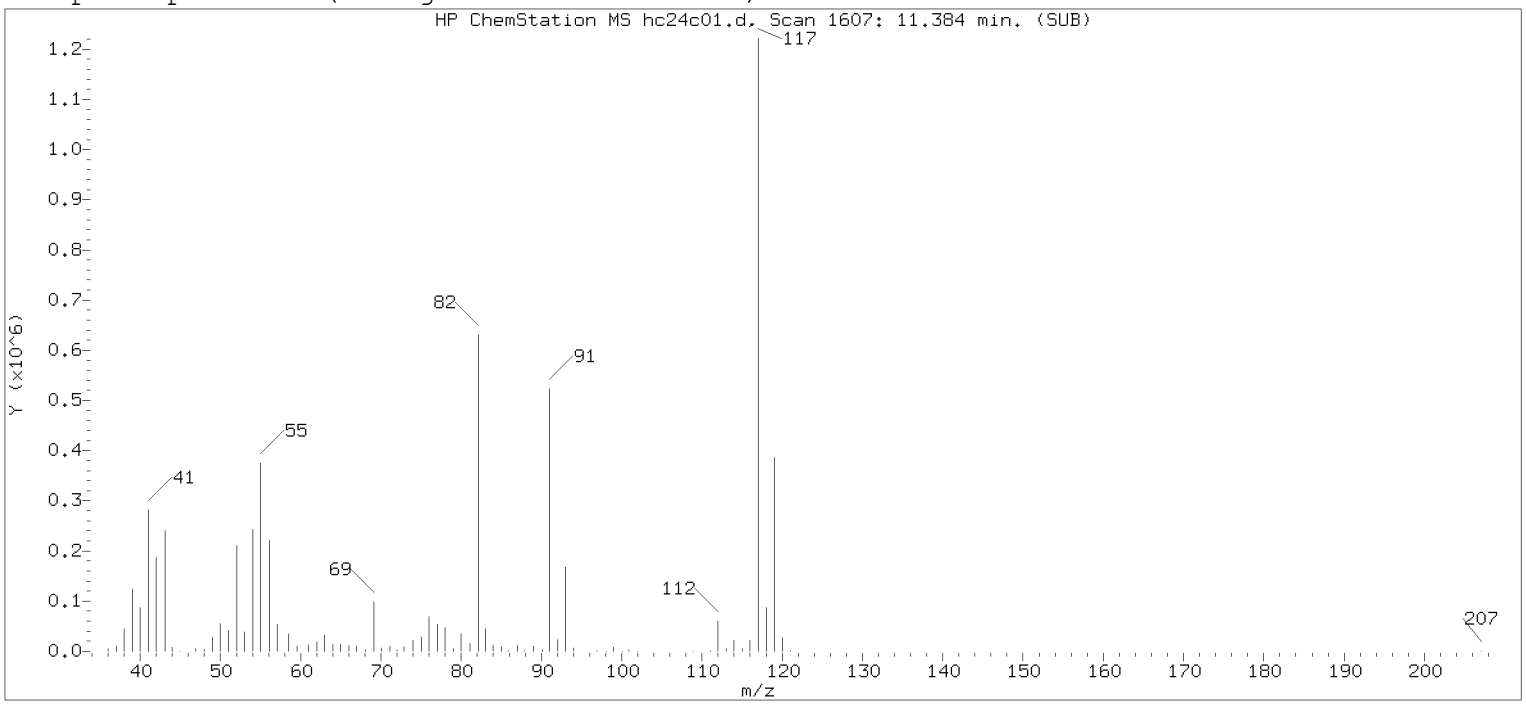
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1625
Retention Time (minutes): 11.493
Quant Ion : 91.00
Area (flag) : 2741655M
On-Column Amount (ng) : 30.8527
Integration start scan : 1616 Integration stop scan: 1634
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

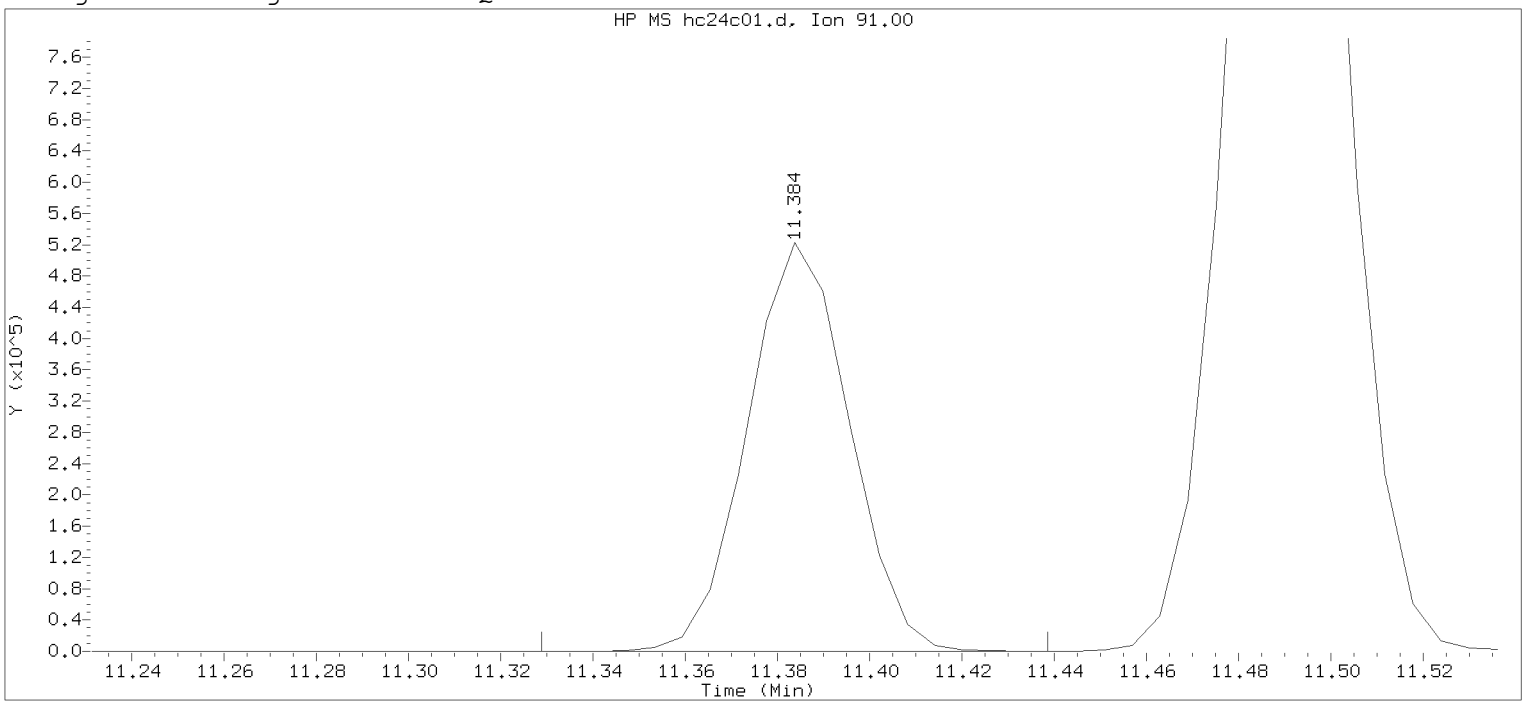
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

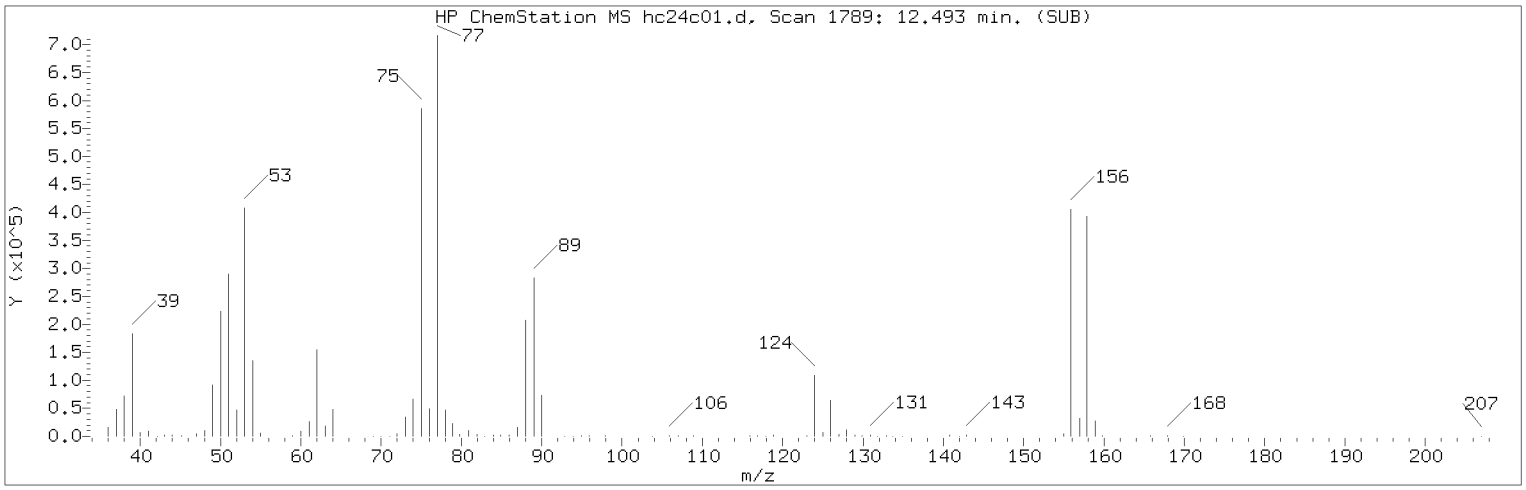
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

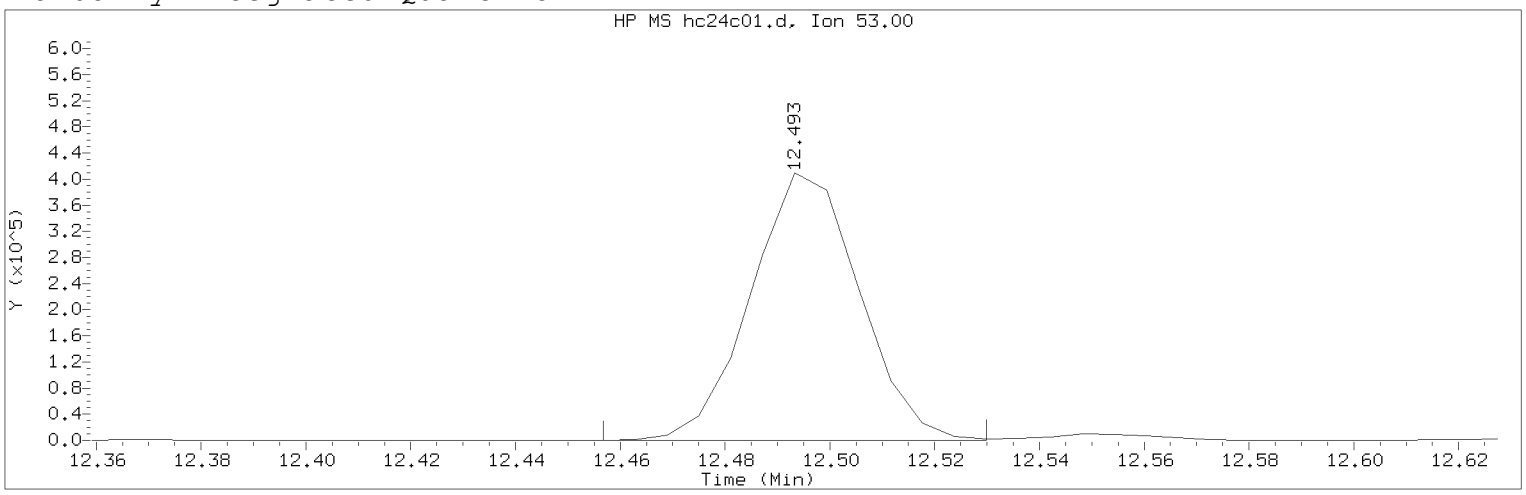
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area : 799213
On-column Amount (ng) : 8.9938
Integration start scan : 1597 Integration stop scan: 1615
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

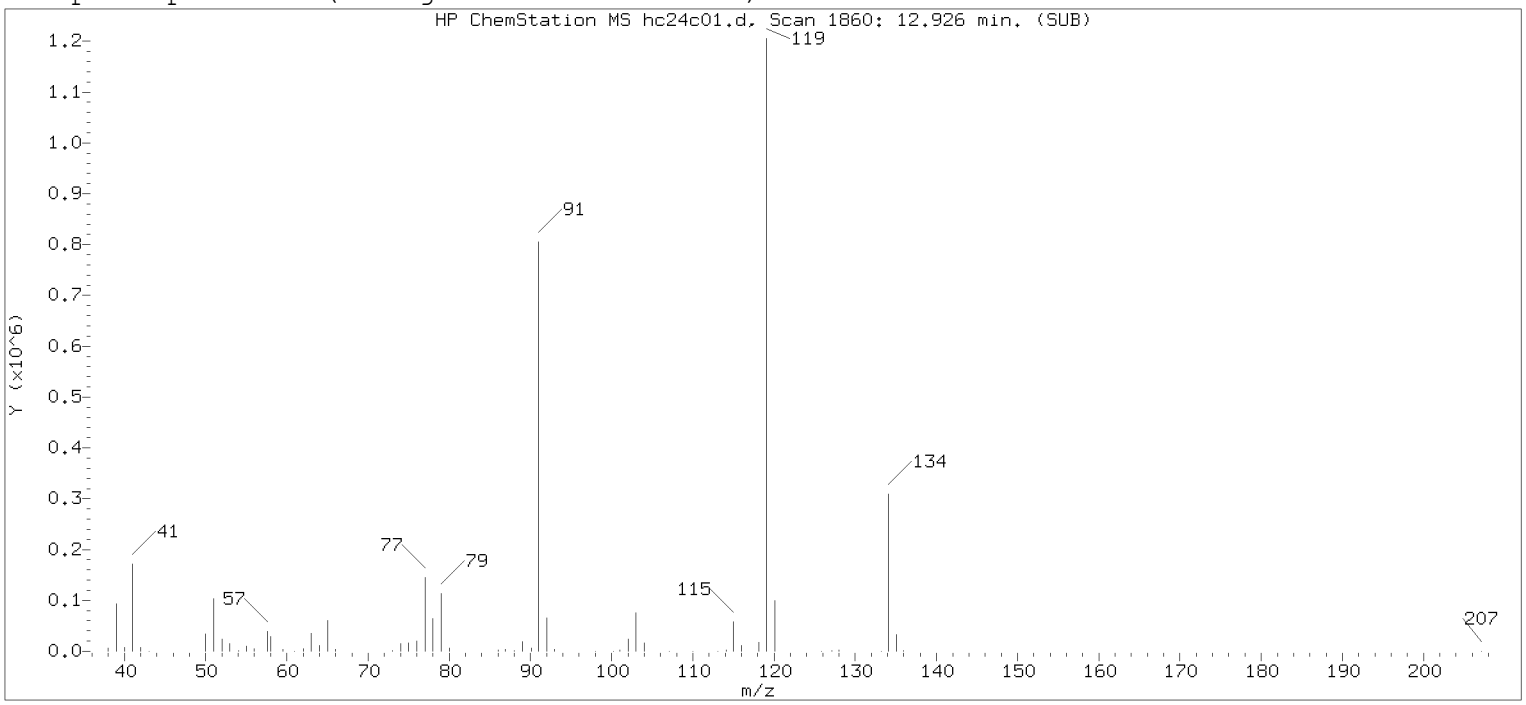
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 587266M
On-Column Amount (ng) : 67.5695
Integration start scan : 1782 Integration stop scan: 1794
Y at integration start : 27 Y at integration end: 27

Reason for manual integration: improper integration

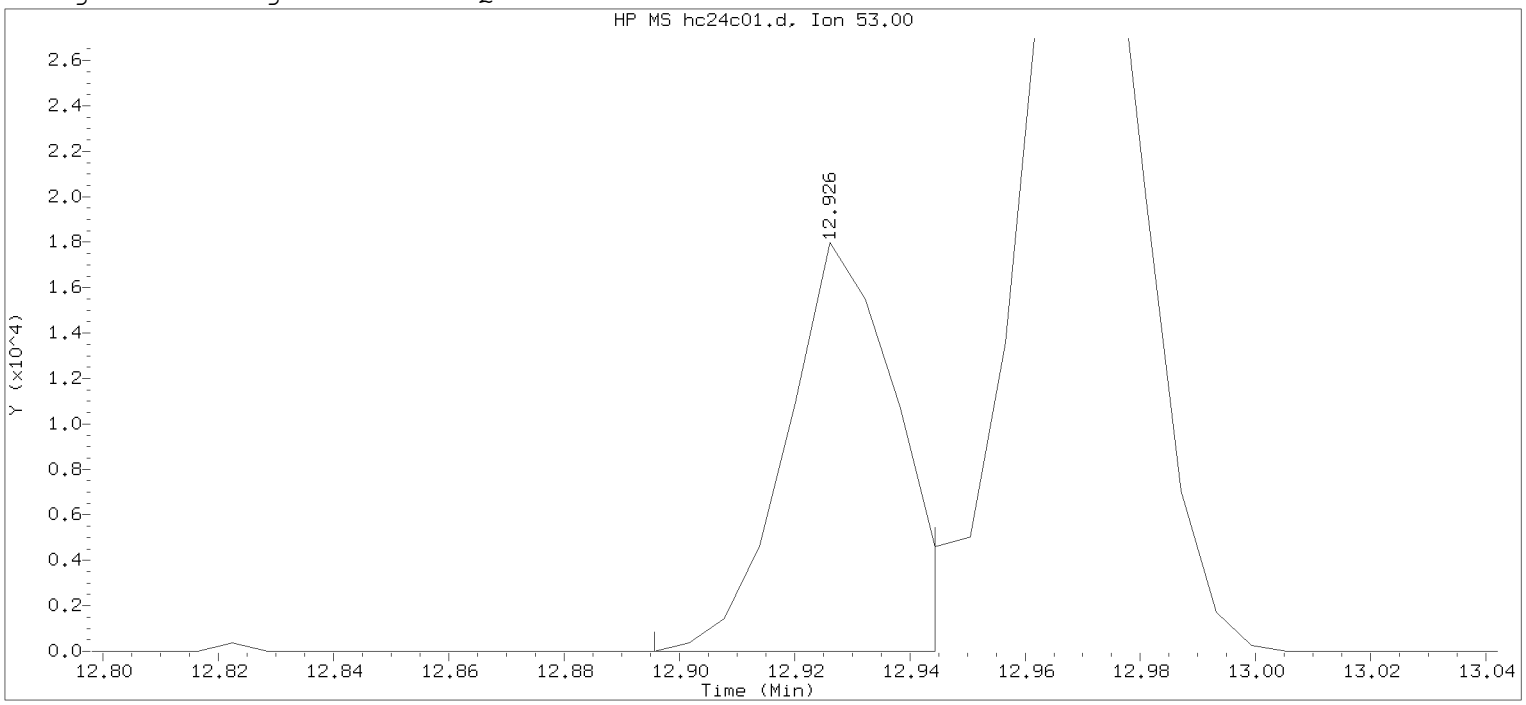
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

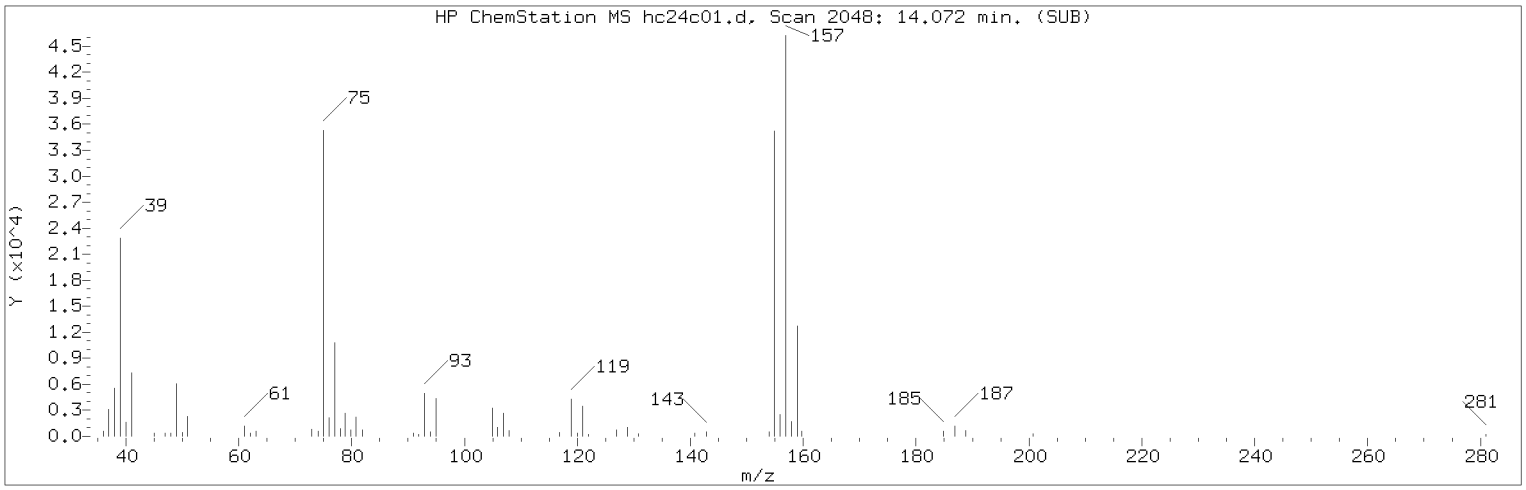
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

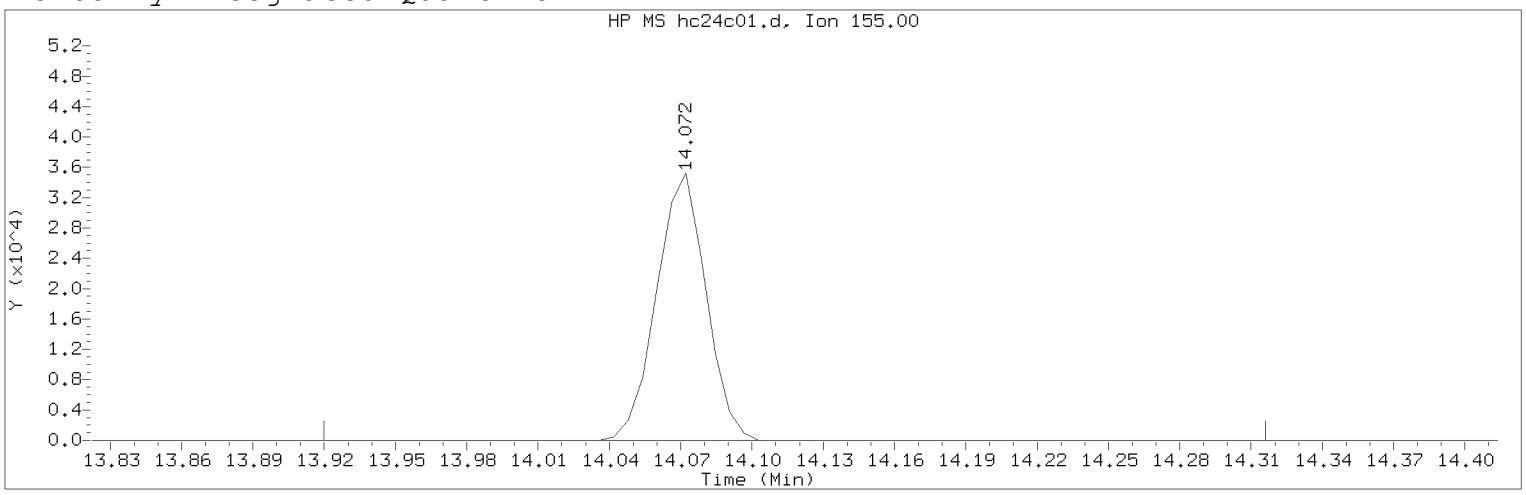
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 53.00
Area : 23324
On-column Amount (ng) : 2.8902
Integration start scan : 1854 Integration stop scan: 1862
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:47
Date, time and analyst ID of latest file update: 24-Oct-2018 20:48 jgc14951

Sample Name: VSTD010 Lab Sample ID: VSTD010

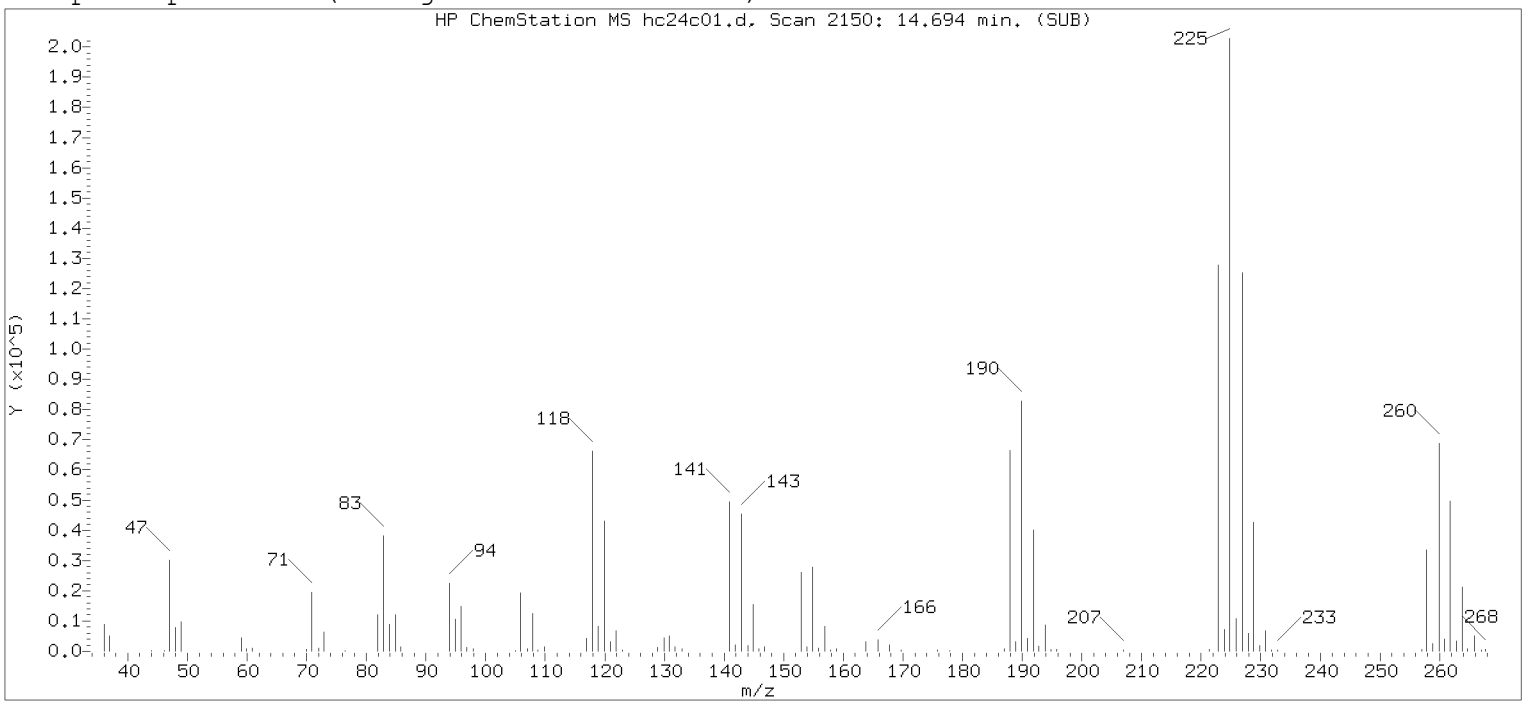
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 50887M
On-Column Amount (ng) : 10.8181
Integration start scan : 2022 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

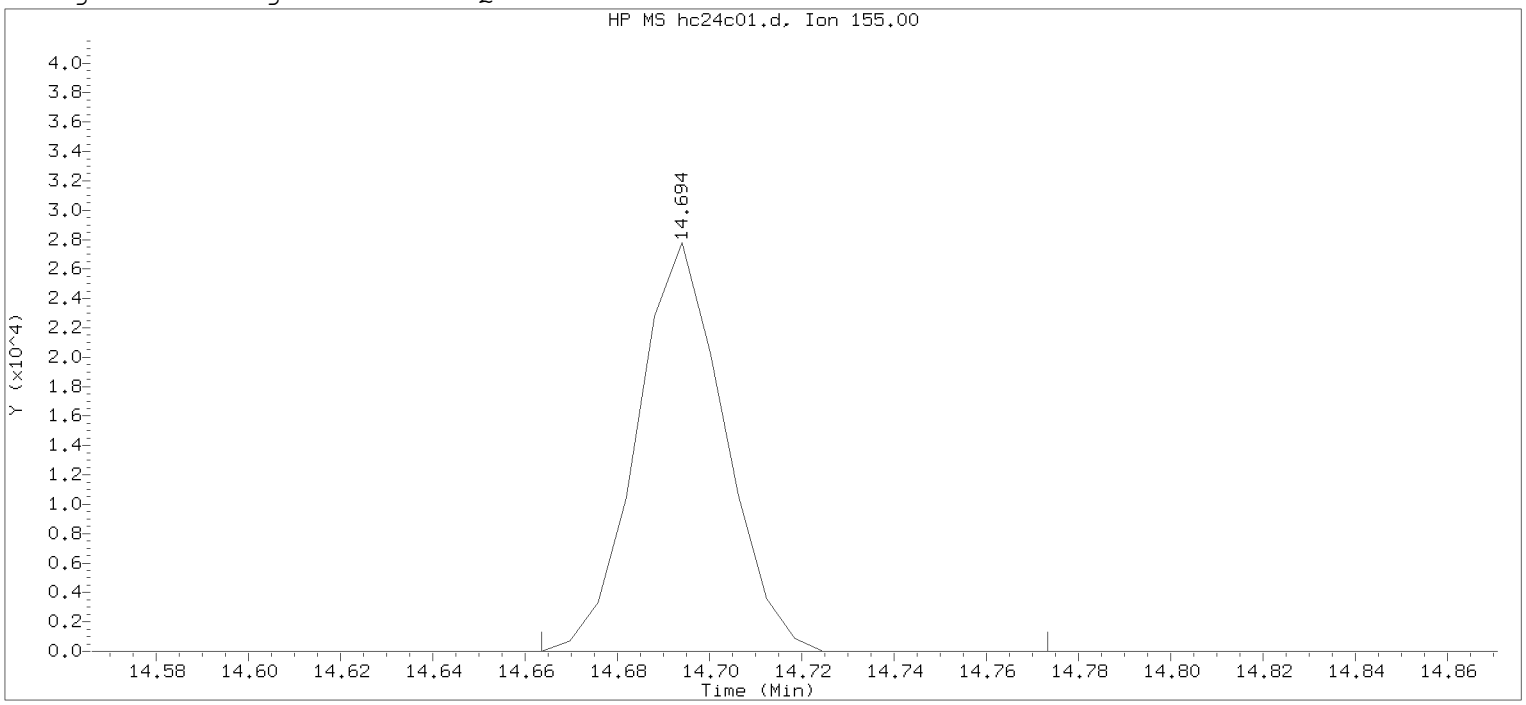
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:04.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24c01.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 20:19 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-OCT-2018 20:37
Date, time and analyst ID of latest file update: 24-Oct-2018 20:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 36751
On-column Amount (ng) : 8.4141
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 21:14.
Target 3.5 esignature user ID: JGC14951

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH62

Data file: /chem2/HP19094.i/18oct24b.b/hc24b10.d Injection date and time: **24-OCT-2018 22:49**
Data file Sample Info. Line: VBLKH62;VBLKH62;1;3;;;DRAPER2;;; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 24-Oct-2018 23:16 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(0.000)	476	65	101135	(-12)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2577599	(-4)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1886298	(-6)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	998630	(-4)	10.00	

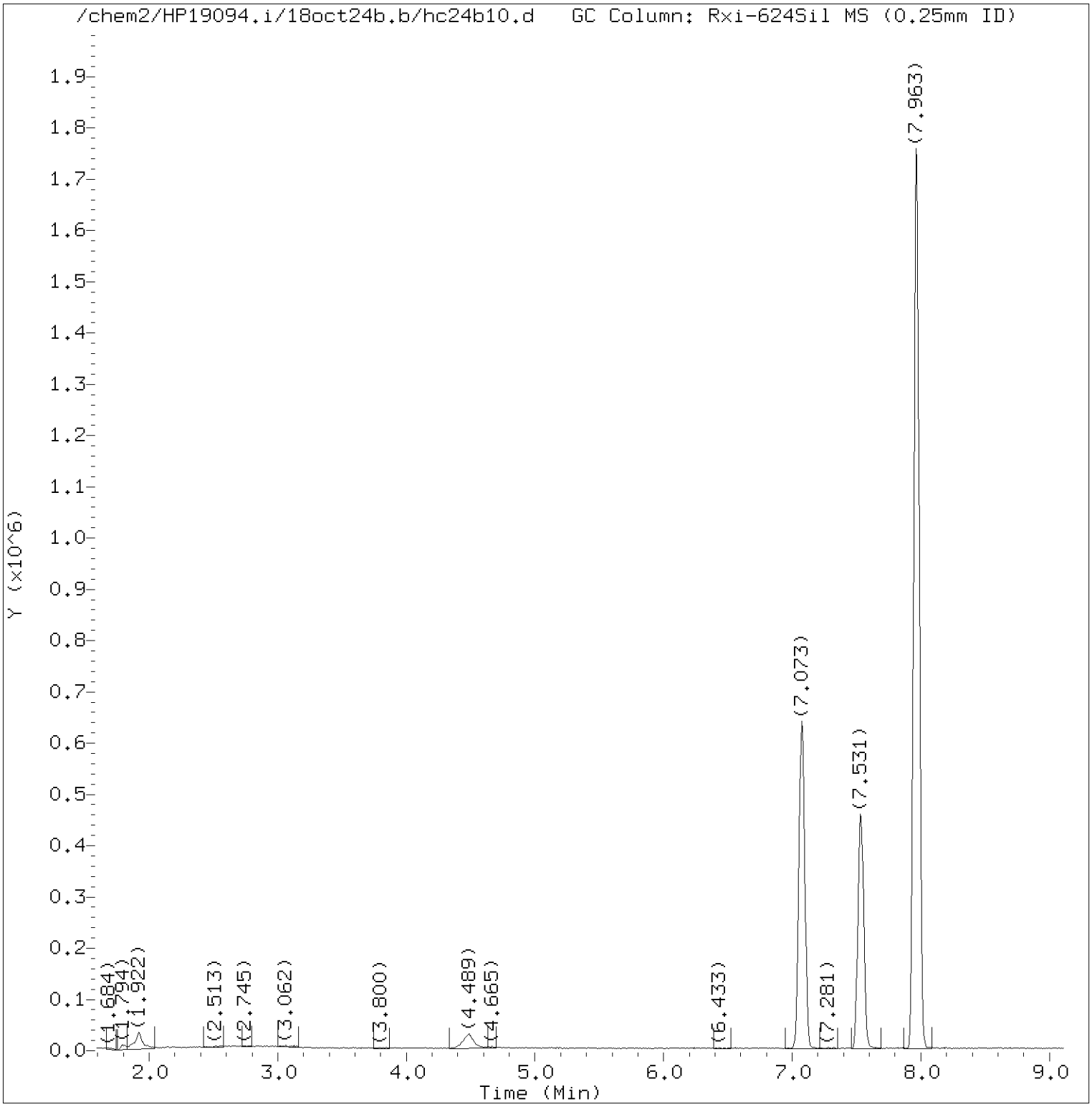
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.000)	113	630989	9.713	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	112760	9.956	100%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2492274	10.266	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	849196	9.607	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
5) Vinyl Chloride	(2)				Not Detected					0.1	1
15) 1,1-Dichloroethene	(2)				Not Detected					0.4	1
31) trans-1,2-Dichloroethene	(2)				Not Detected					0.8	1
39) cis-1,2-Dichloroethene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.2	1

Total number of targets = 5

Digitally signed by Joel G. Chachapoya on 10/24/2018 at 23:17. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

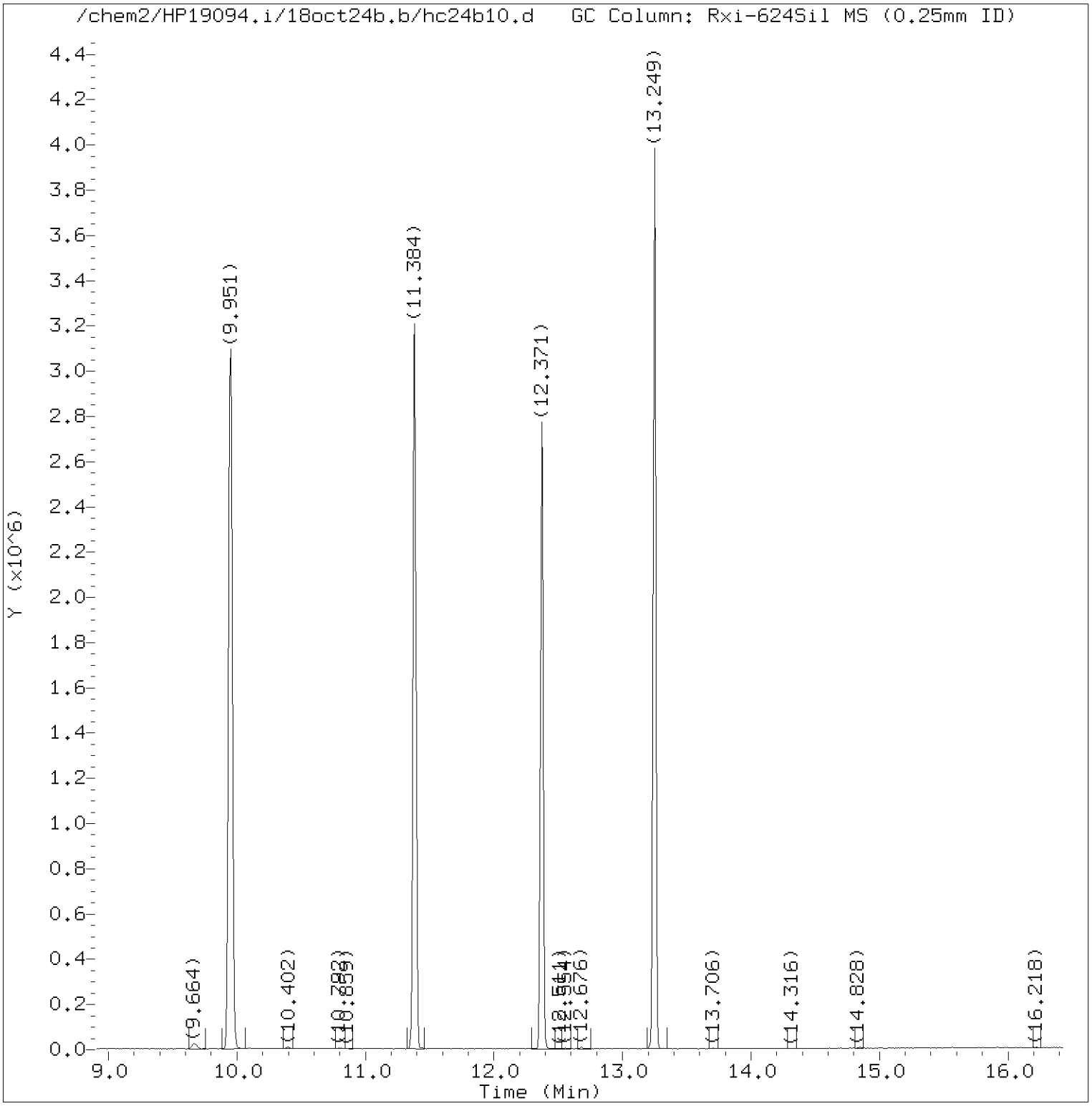
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24b10.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 22:49 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 23:16 jgc14951

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 23:17.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24b10.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 22:49 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 23:16 jgc14951

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 23:17.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24b10.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 22:49 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 23:16 jgc14951

Sample Name: VBLKH62 Lab Sample ID: VBLKH62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	101135	50.000
50)$Dibromofluoromethane	(2)	7.073	113	630989	9.713
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112760	9.956
63)*Fluorobenzene	(2)	7.970	96	2577599	10.000
82)$Toluene-d8	(3)	9.951	98	2492274	10.266
97)*Chlorobenzene-d5	(3)	11.384	117	1886298	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	849196	9.607
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	998630	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 10/24/2018 at 23:17.
Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct24b.b/hc24s80.d Injection date and time: **25-OCT-2018 04:02**
Data file Sample Info. Line: 5HM07MS;9856055MS;1;3;MS;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 25-Oct-2018 04:20 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.012)	474	65	113639	(-1)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2493142	(-7)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1828945	(-9)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	969661	(-7)	10.00	

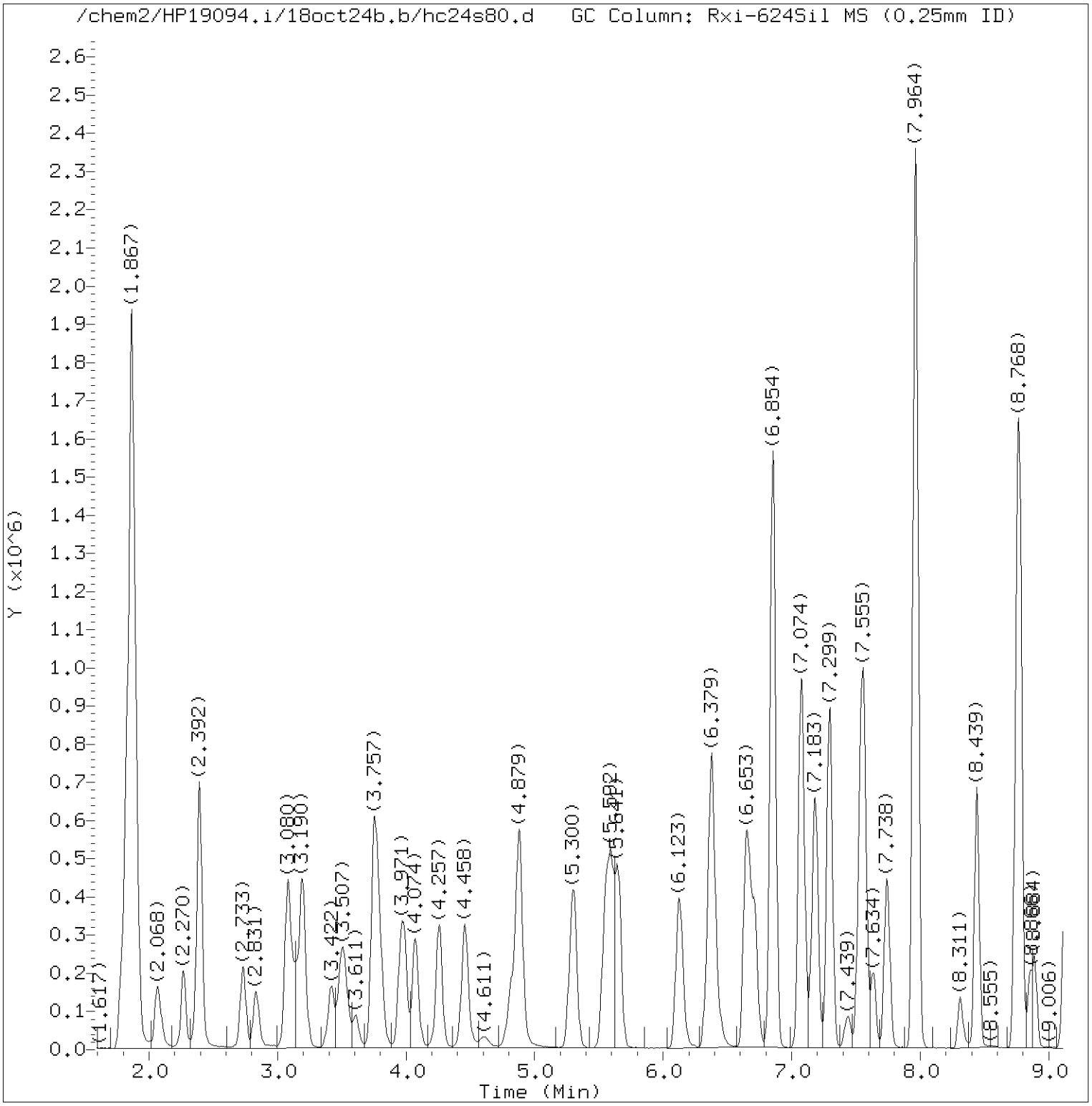
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(-0.001)	113	617108	9.821	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	111093	10.141	101%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2424709	10.301	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	827278	9.653	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.392	(0.000)	62	350257	3.920	3.92			0.1	1
15) 1,1-Dichloroethene	(2)	3.745	(0.000)	96	276289	5.652	5.65			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.879	(0.000)	96	295683	5.359	5.36			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.379	(-0.000)	96	324808	5.328	5.33			0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	323858	5.405	5.41			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

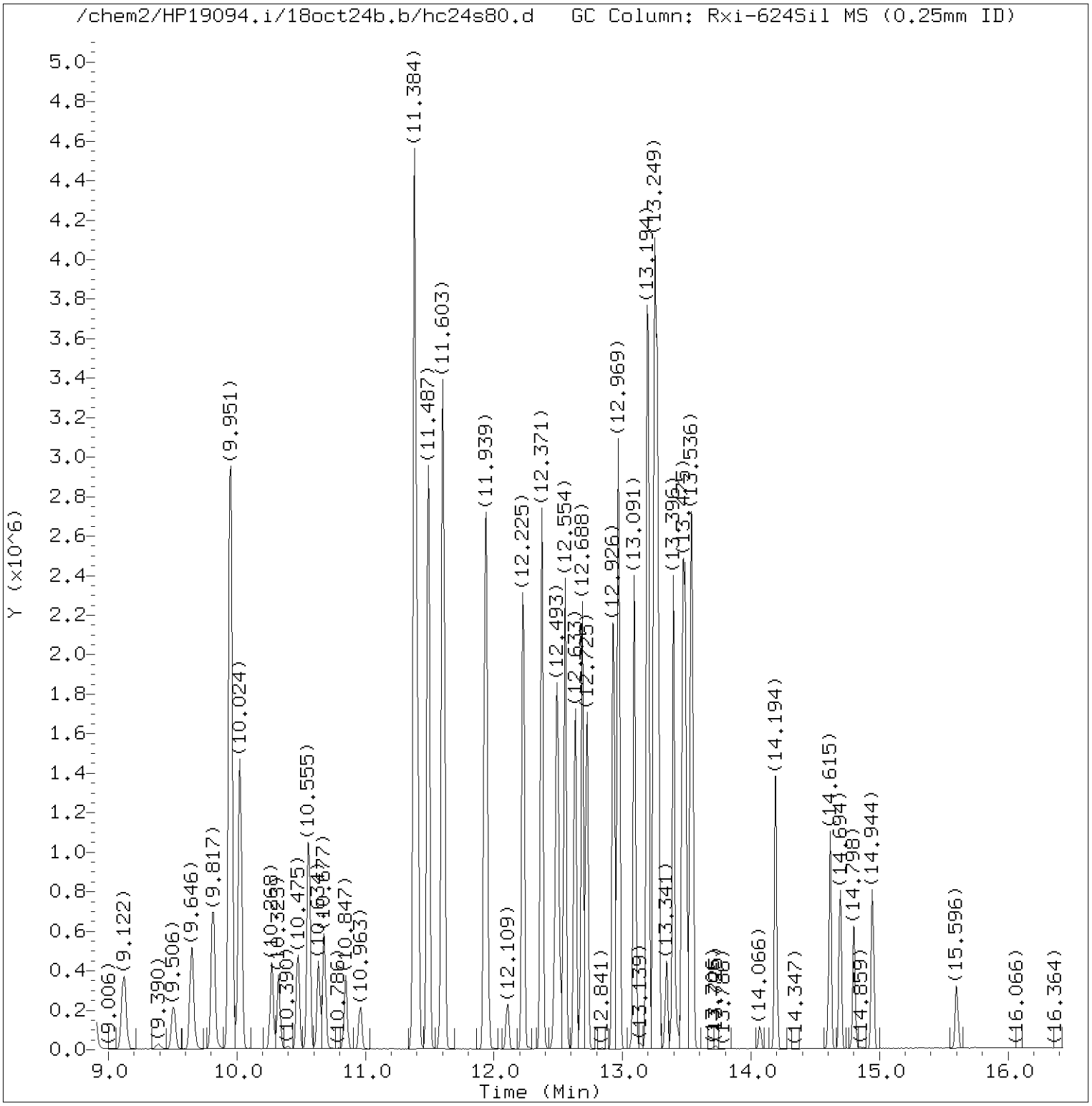
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s80.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 04:20 Automation

Sample Name: 5HM07MS Lab Sample ID: 9856055MS

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s80.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 04:20 Automation

Sample Name: 5HM07MS Lab Sample ID: 9856055MS

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s80.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 04:20 Automation

Sample Name: 5HM07MS Lab Sample ID: 9856055MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.392	62	350257	3.920
15) 1,1-Dichloroethene	(2)	3.745	96	276289	5.652
26)*t-Butyl Alcohol-d10	(1)	4.477	65	113639	50.000
31) trans-1,2-Dichloroethene	(2)	4.879	96	295683	5.359
39) cis-1,2-Dichloroethene	(2)	6.379	96	324808	5.328
50)$Dibromofluoromethane	(2)	7.074	113	617108	9.821
57)$1,2-Dichloroethane-d4	(2)	7.531	102	111093	10.141
63)*Fluorobenzene	(2)	7.964	96	2493142	10.000
67) Trichloroethene	(2)	8.439	95	323858	5.405
82)$Toluene-d8	(3)	9.951	98	2424709	10.301
97)*Chlorobenzene-d5	(3)	11.384	117	1828945	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	827278	9.653
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	969661	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Data file: /chem2/HP19094.i/18oct24b.b/hc24s81.d Injection date and time: **25-OCT-2018 04:23**
Data file Sample Info. Line: 5HM07MSD;9856056MSD;1;3;MSD;RAF23;DRAPER2;;hc24b10; Instrument ID: **HP19094.i** Batch: **H18297**
Date, time and analyst ID of latest file update: 25-Oct-2018 07:33 kel01973

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477(0.012)	474	65	104333 (-9)	50.00	
63) Fluorobenzene	7.964(0.006)	1046	96	2505818 (-7)	10.00	
97) Chlorobenzene-d5	11.384(0.000)	1607	117	1855342 (-8)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	979413 (-6)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.068(0.000)	113	613133	9.708	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531(0.000)	102	112993M	10.263	103%		80 - 120
82) Toluene-d8	(3)	9.951(0.000)	98	2449093	10.256	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371(0.000)	95	839065	9.651	97%		80 - 120

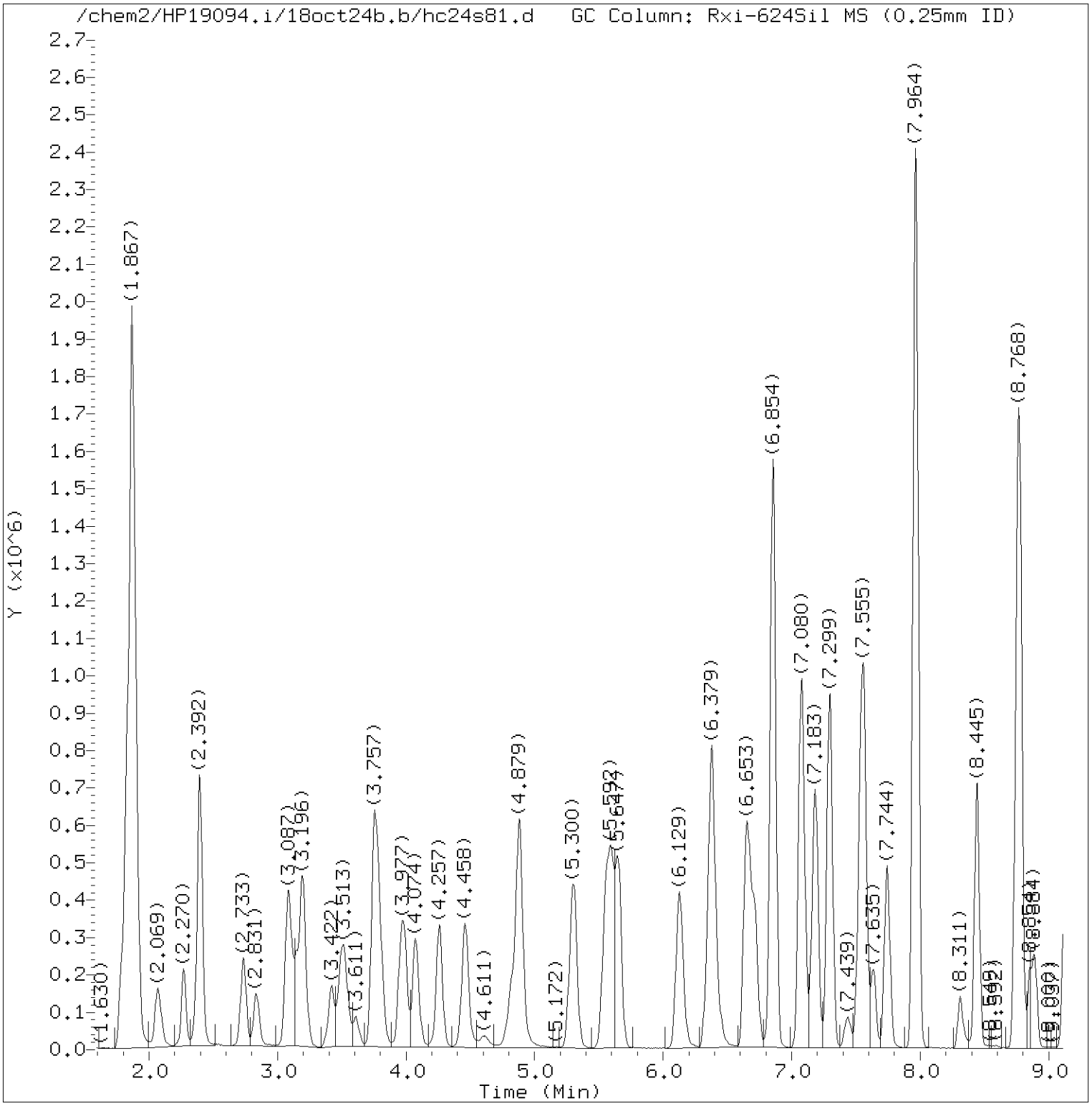
M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.398(-0.000)	62	347849	3.873	3.87			0.1	1
15) 1,1-Dichloroethene	(2)	3.751(-0.000)	96	292006	5.943	5.94			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.885(-0.000)	96	312683	5.639	5.64			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.372(0.000)	96	339119	5.535	5.53			0.05	1
67) Trichloroethene	(2)	8.445(-0.000)	95	340810	5.659	5.66			0.2	1

Total number of targets = 5

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02. Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

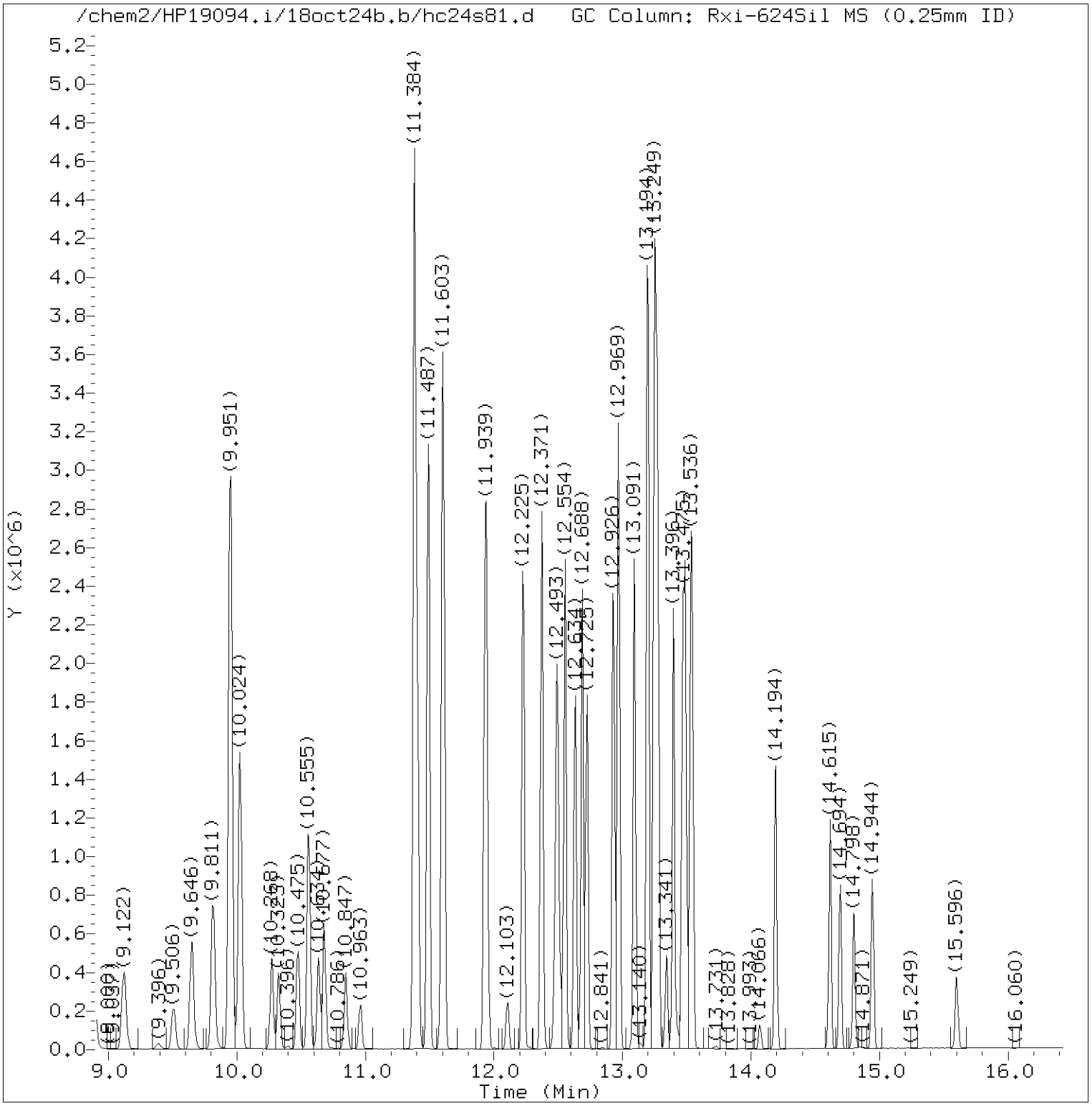
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s81.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:33 kel01973

Sample Name: 5HM07MSD Lab Sample ID: 9856056MSD

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s81.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:33 kel01973

Sample Name: 5HM07MSD Lab Sample ID: 9856056MSD

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24s81.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:33 kel01973

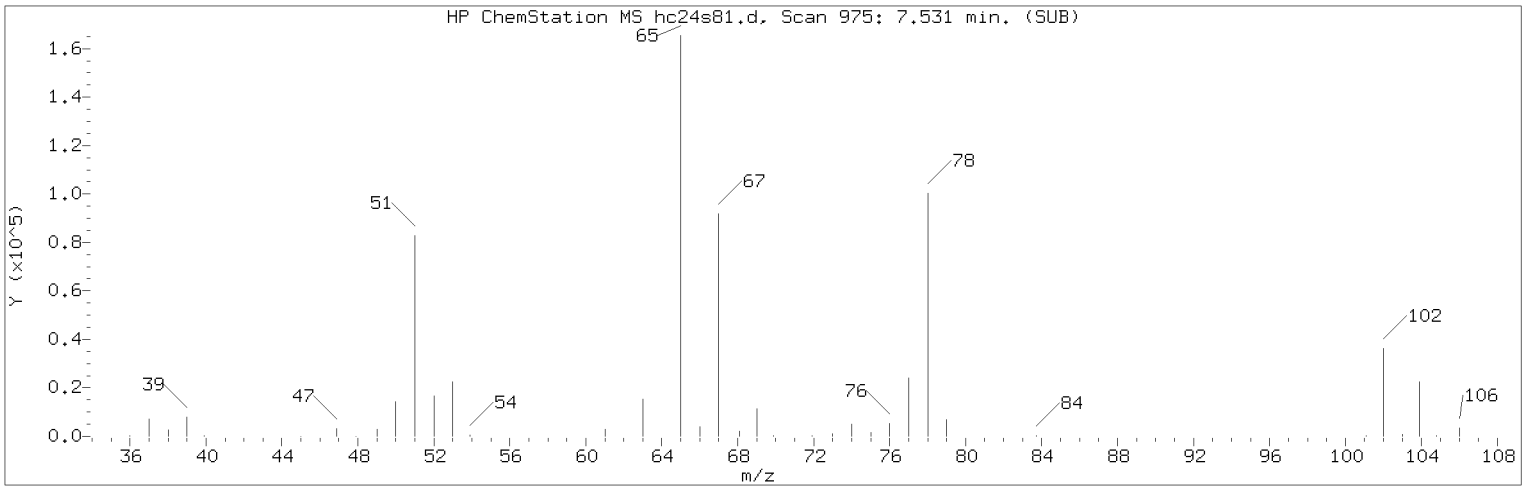
Sample Name: 5HM07MSD Lab Sample ID: 9856056MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.398	62	347849	3.873
15) 1,1-Dichloroethene	(2)	3.751	96	292006	5.943
26)*t-Butyl Alcohol-d10	(1)	4.477	65	104333	50.000
31) trans-1,2-Dichloroethene	(2)	4.885	96	312683	5.639
39) cis-1,2-Dichloroethene	(2)	6.373	96	339119	5.535
50)$Dibromofluoromethane	(2)	7.068	113	613133	9.708
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112993M	10.263
63)*Fluorobenzene	(2)	7.964	96	2505818	10.000
67) Trichloroethene	(2)	8.445	95	340810	5.659
82)$Toluene-d8	(3)	9.951	98	2449093	10.256
97)*Chlorobenzene-d5	(3)	11.384	117	1855342	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	839065	9.651
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	979413	10.000

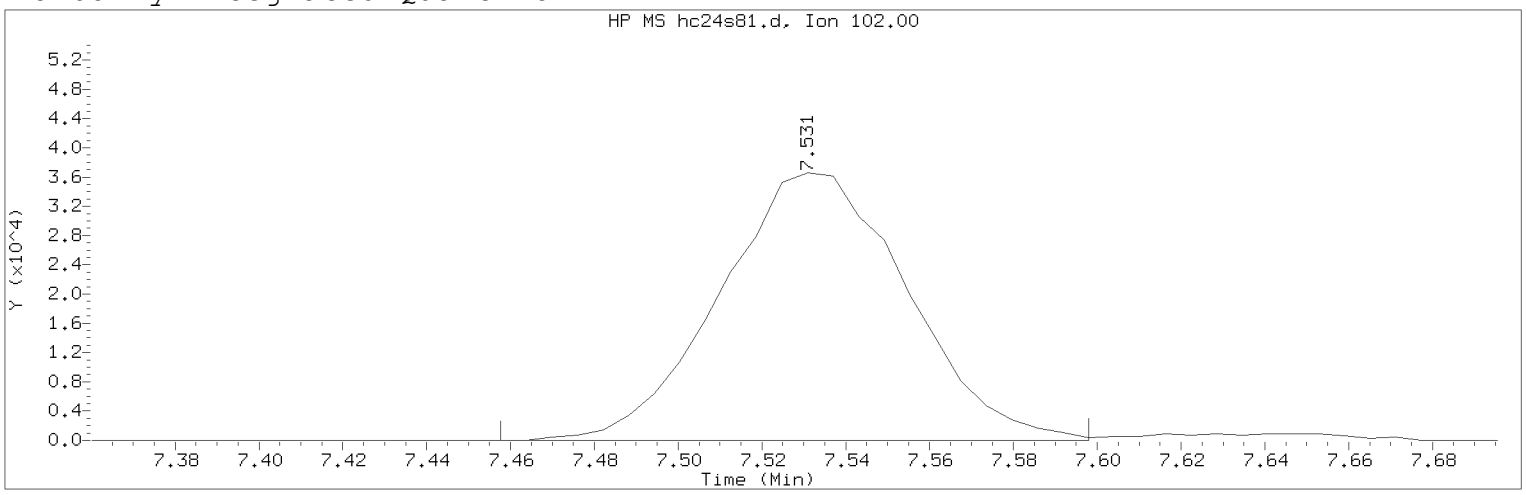
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24s81.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 07:33 kel01973

Sample Name: 5HM07MSD Lab Sample ID: 9856056MSD

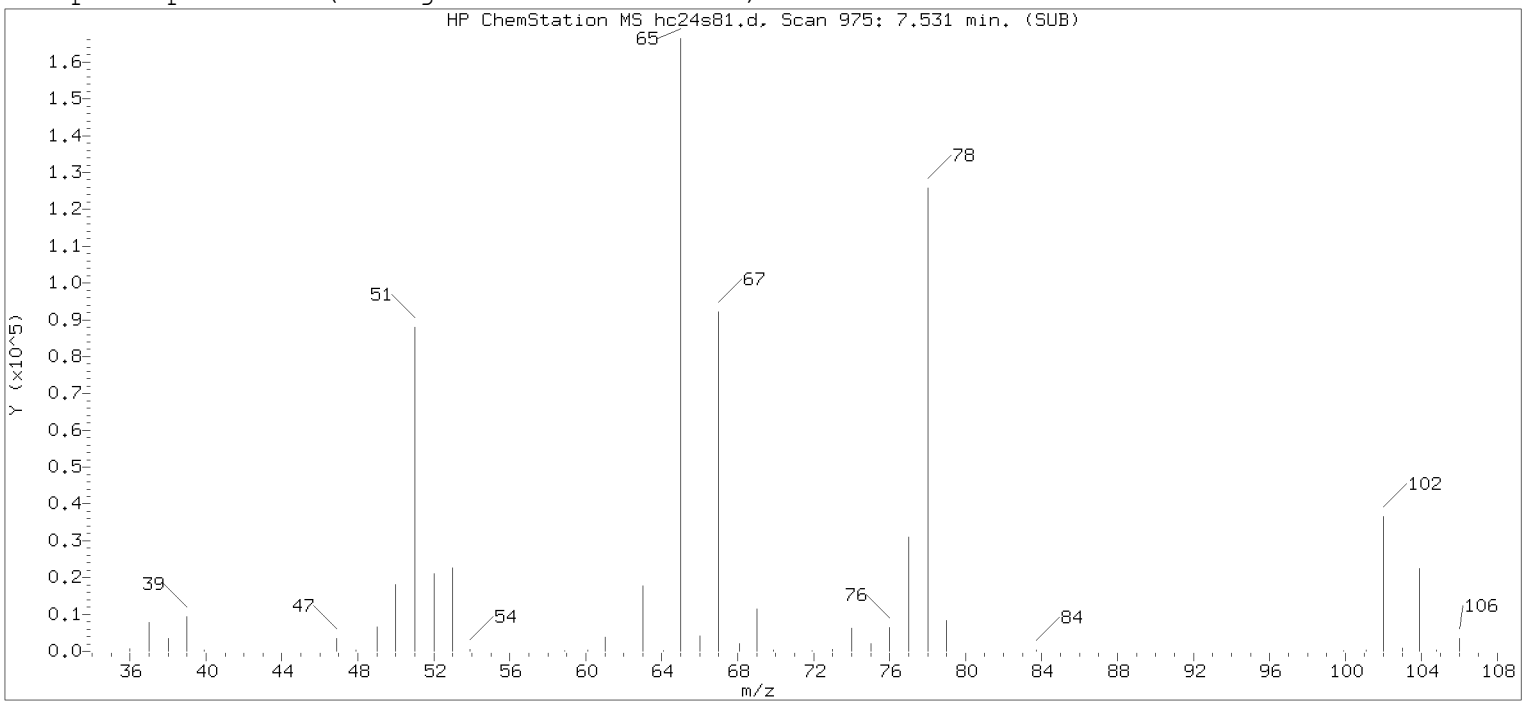
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area (flag) : 112993M
On-Column Amount (ng) : 10.2626
Integration start scan : 962 Integration stop scan: 985
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

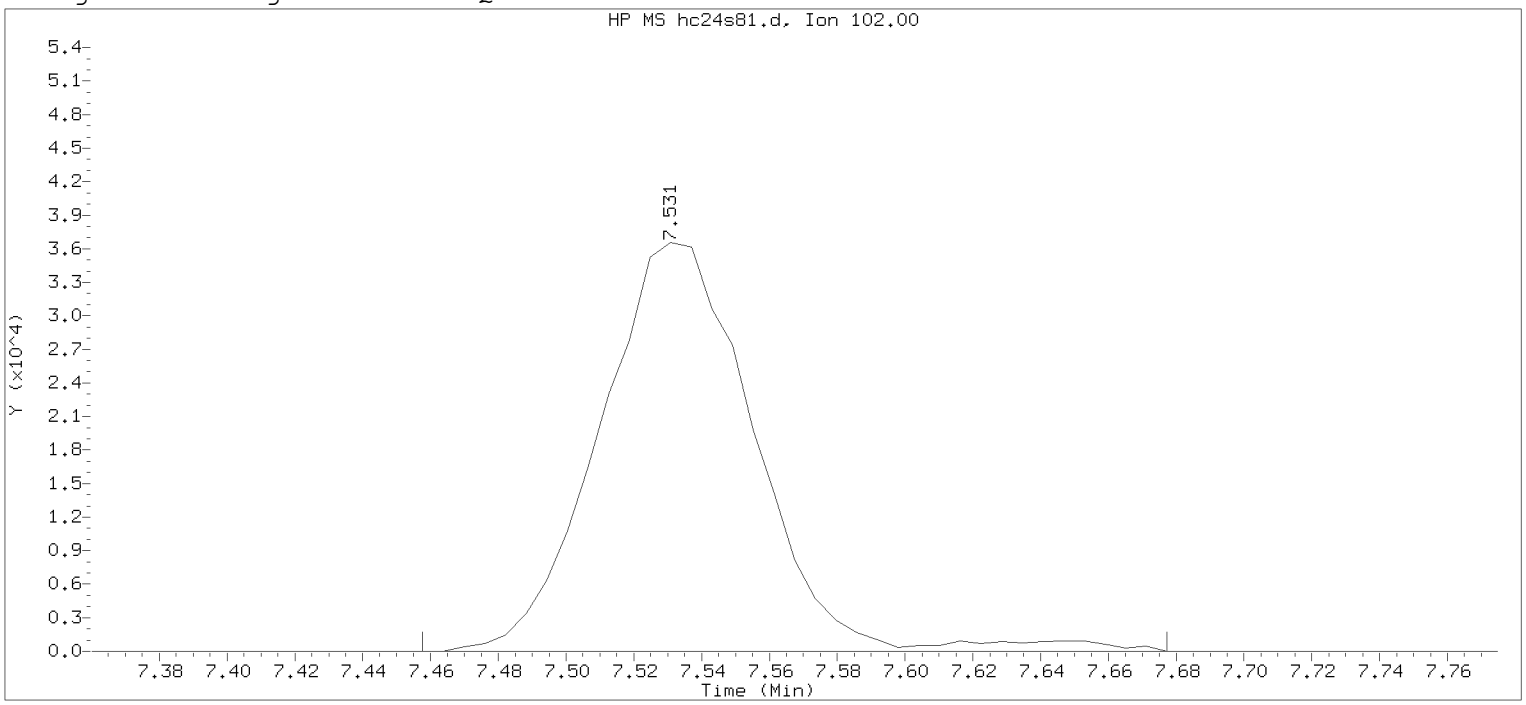
Analyst responsible for change: Digitally signed by Kevin A. Sposito
on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: kas02648

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 11:10.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24s81.d Instrument ID: HP19094.i
Injection date and time: 25-OCT-2018 04:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 25-Oct-2018 04:41 Automation

Sample Name: 5HM07MSD Lab Sample ID: 9856056MSD

Compound Number	: 57		
Compound Name	: 1,2-Dichloroethane-d4		
Scan Number	: 975		
Retention Time (minutes)	: 7.531		
Quant Ion	: 102.00		
Area	: 116022		
On-column Amount (ng)	: 10.5377		
Integration start scan	: 962	Integration stop scan:	998
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Kevin A. Sposito on 10/26/2018 at 09:02.
Target 3.5 esignature user ID: KASposito

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct24b.b/hc24141.d Injection date and time: **24-OCT-2018 21:02**
Data file Sample Info. Line: LCSH62;LCSH62;1;3;LCS;;DAA3178;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.501(-0.012)	478	65	105206M (-8)	50.00	
63) Fluorobenzene	7.970(0.000)	1047	96	2544365 (-5)	10.00	
97) Chlorobenzene-d5	11.384(0.000)	1607	117	1962923 (-2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	976586 (-6)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074(0.000)	113	633561	9.880	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537(0.000)	102	113178M	10.124	101%		80 - 120
82) Toluene-d8	(3)	9.951(0.000)	98	2599401	10.289	103%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371(0.000)	95	873628	9.498	95%		80 - 120

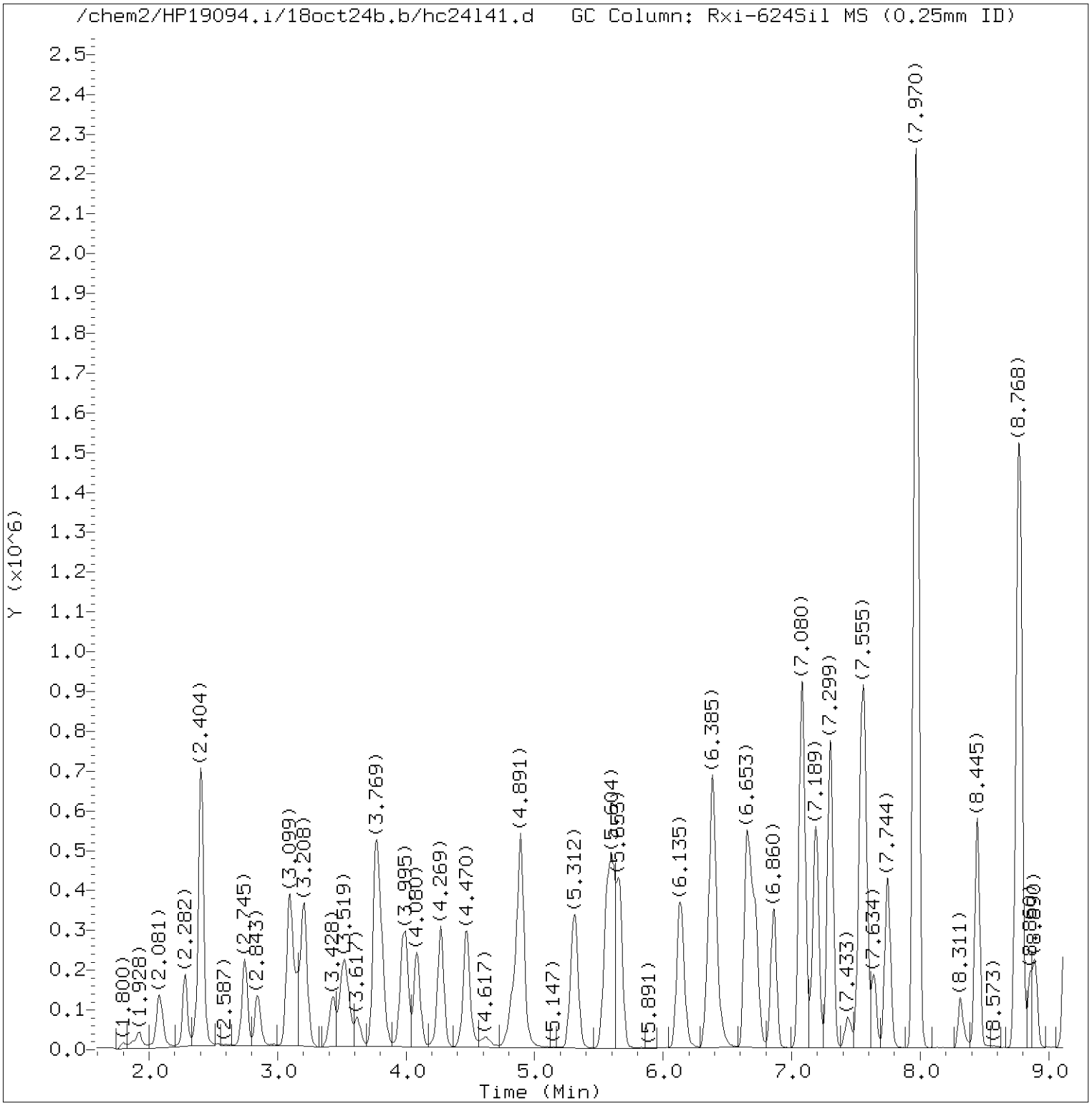
M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.404(-0.000)	62	338984	3.717	3.72			0.1	1
15) 1,1-Dichloroethene	(2)	3.763(-0.001)	96	238149	4.774	4.77			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.891(-0.000)	96	265630	4.718	4.72			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.378(0.000)	96	293793	4.723	4.72			0.05	1
67) Trichloroethene	(2)	8.445(-0.000)	95	280360	4.585	4.58			0.2	1

Total number of targets = 5

Digitally signed by Joel G. Chachapoya on 10/26/2018 at 17:47. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/29/2018 at 09:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

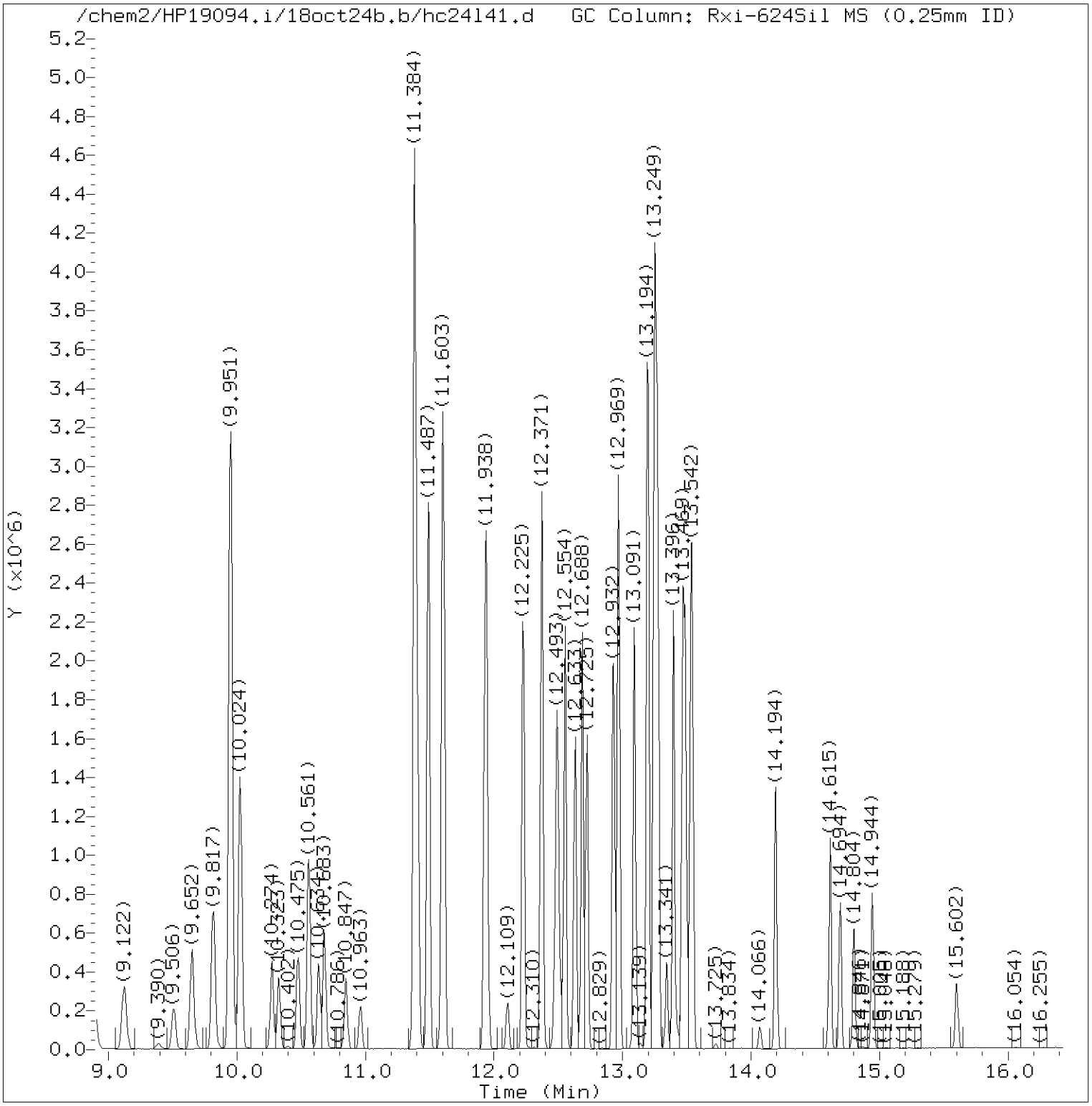
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l41.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

Sample Name: LCSH62 Lab Sample ID: LCSH62

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l41.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

Sample Name: LCSH62 Lab Sample ID: LCSH62

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l41.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

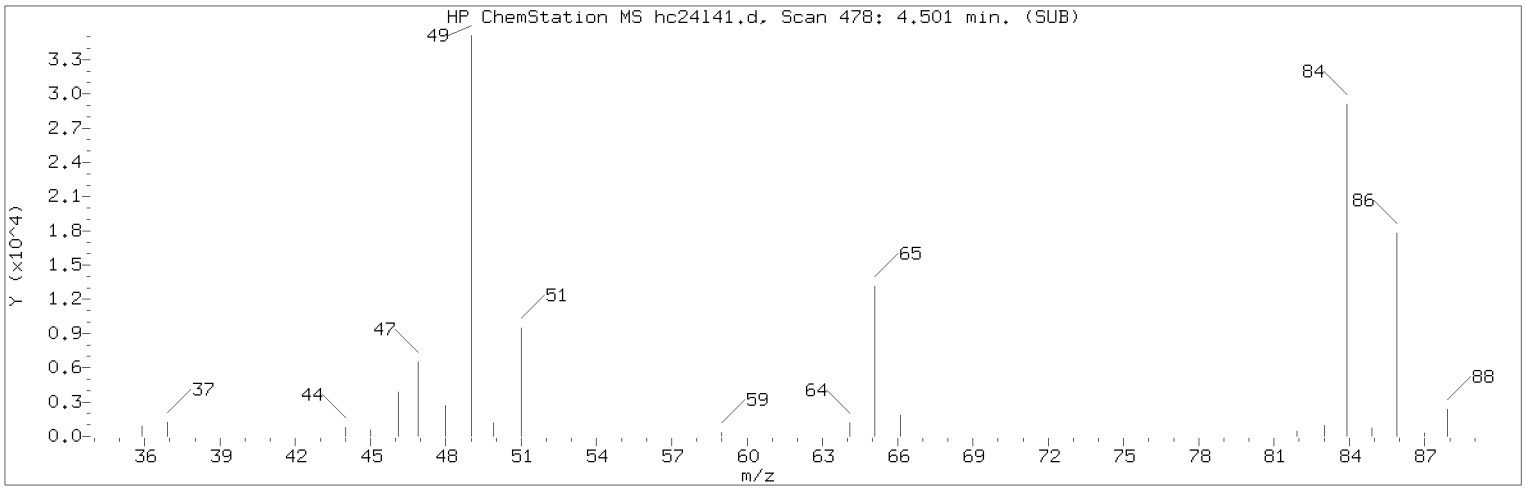
Sample Name: LCSH62 Lab Sample ID: LCSH62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.404	62	338984	3.717
15) 1,1-Dichloroethene	(2)	3.763	96	238149	4.774
26)*t-Butyl Alcohol-d10	(1)	4.501	65	105206M	50.000
31) trans-1,2-Dichloroethene	(2)	4.891	96	265630	4.718
39) cis-1,2-Dichloroethene	(2)	6.379	96	293793	4.723
50)$Dibromofluoromethane	(2)	7.074	113	633561	9.880
57)$1,2-Dichloroethane-d4	(2)	7.537	102	113178M	10.124
63)*Fluorobenzene	(2)	7.970	96	2544365	10.000
67) Trichloroethene	(2)	8.445	95	280360	4.585
82)$Toluene-d8	(3)	9.951	98	2599401	10.289
97)*Chlorobenzene-d5	(3)	11.384	117	1962923	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	873628	9.498
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	976586	10.000

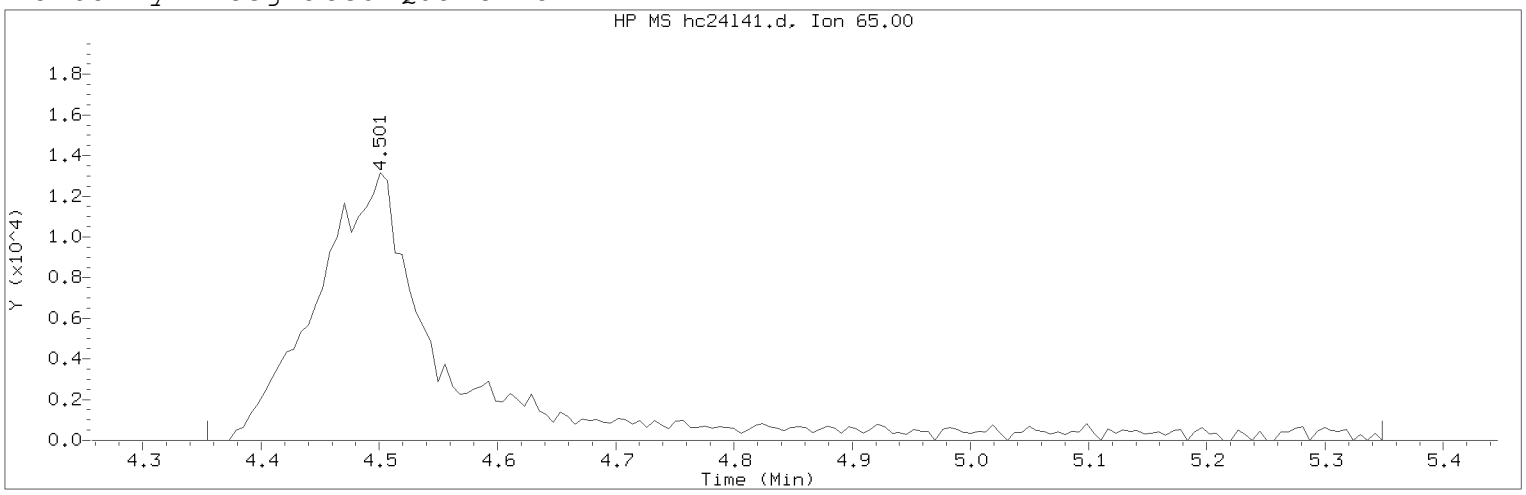
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24l41.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

Sample Name: LCSH62 Lab Sample ID: LCSH62

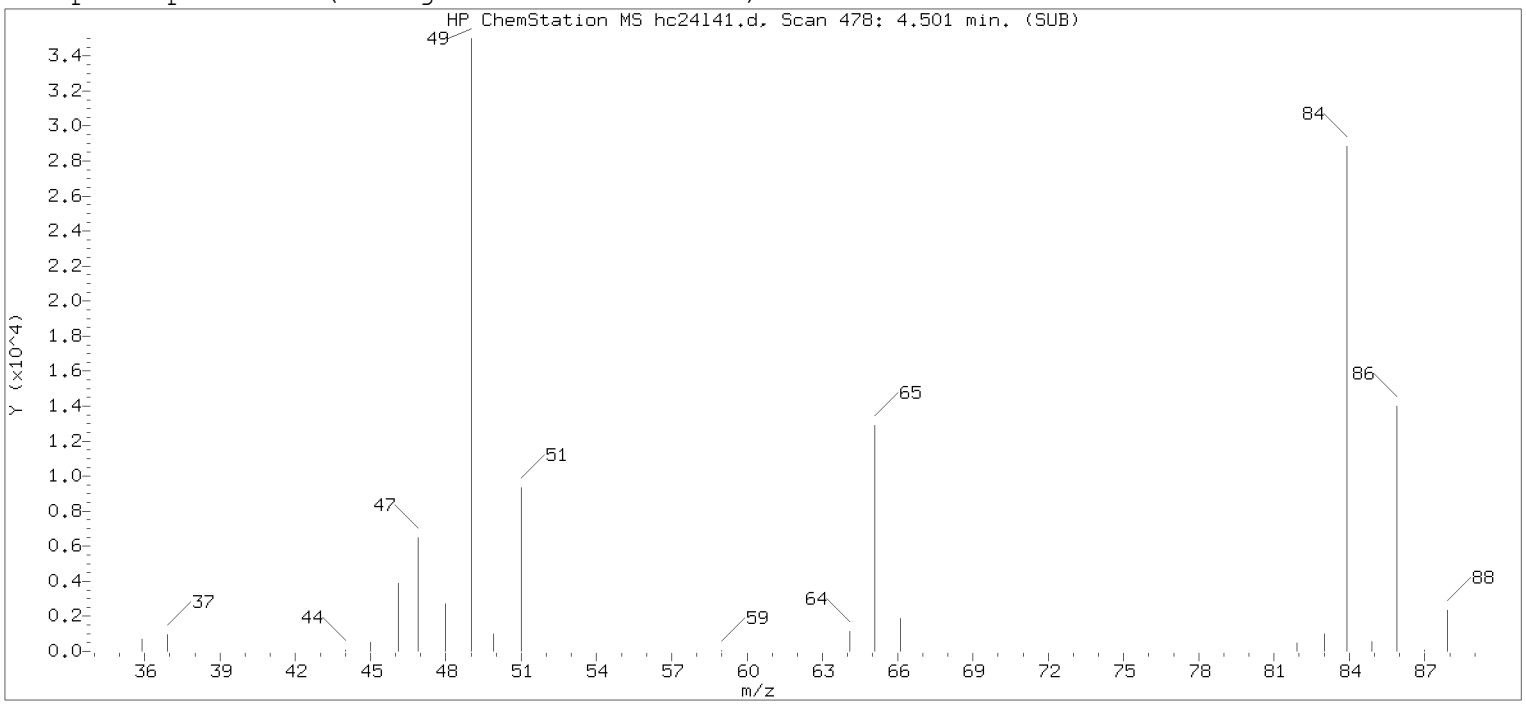
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 478
Retention Time (minutes): 4.501
Quant Ion : 65.00
Area (flag) : 105206M
On-Column Amount (ng) : 50.0000
Integration start scan : 453 Integration stop scan: 616
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

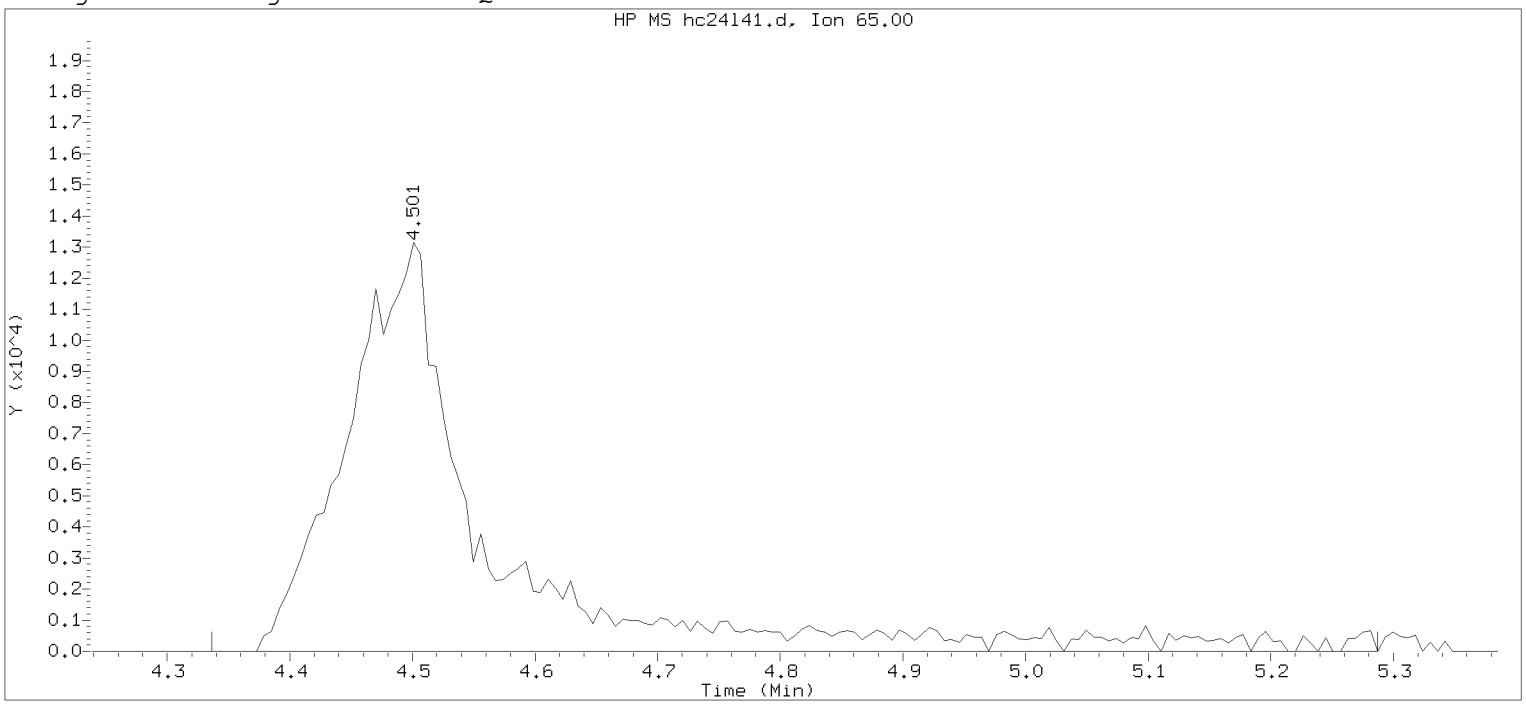
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/29/2018 at 09:30.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24l41.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

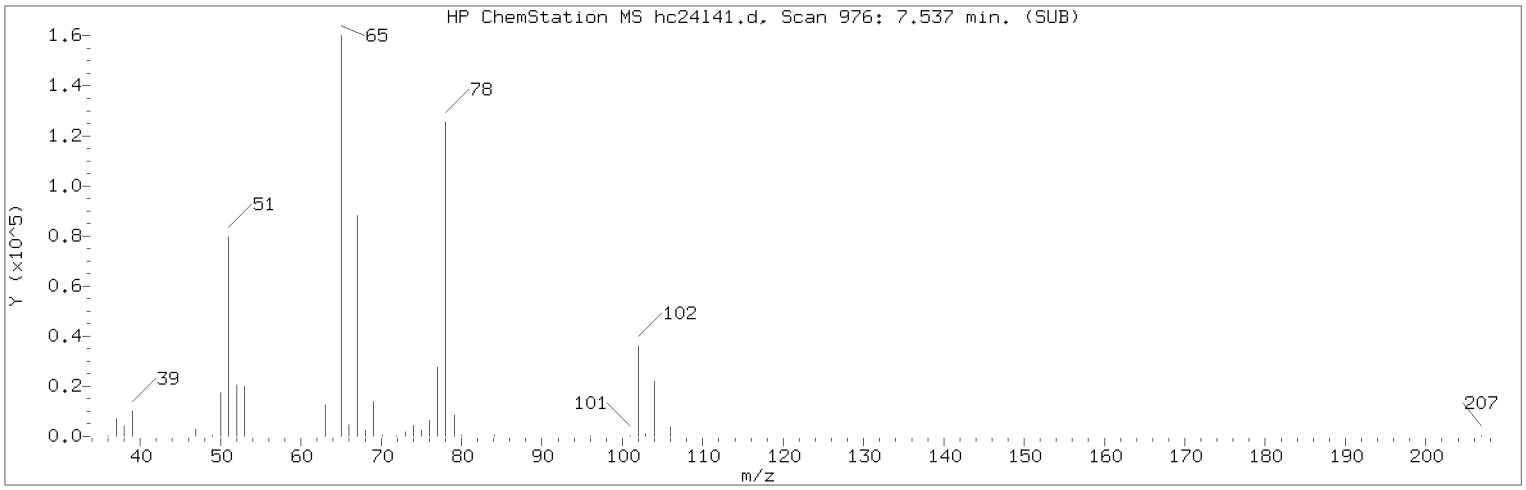
Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 22:09 jgc14951

Sample Name: LCSH62 Lab Sample ID: LCSH62

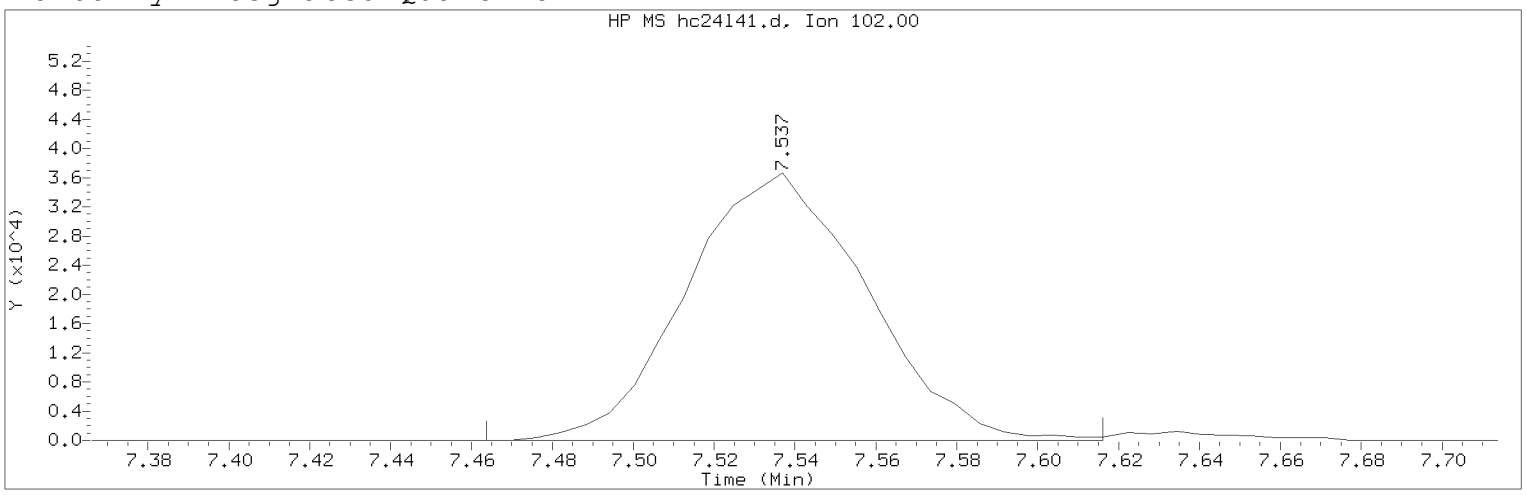
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 478		
Retention Time (minutes)	: 4.501		
Quant Ion	: 65.00		
Area	: 104064		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 450	Integration stop scan:	606
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Joel G. Chachapoya on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24141.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:31 rcr00559

Sample Name: LCSH62 Lab Sample ID: LCSH62

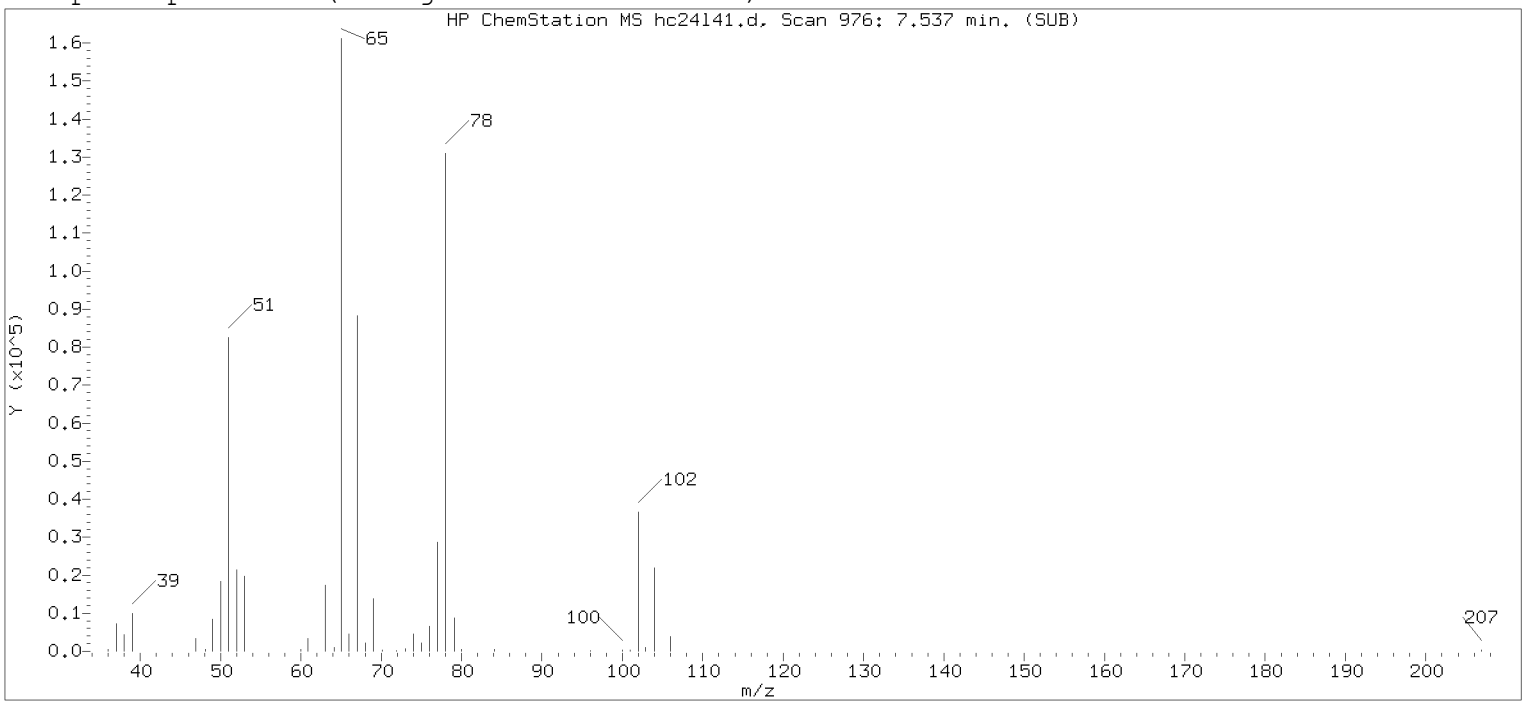
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 113178M
On-Column Amount (ng) : 10.1237
Integration start scan : 963 Integration stop scan: 988
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

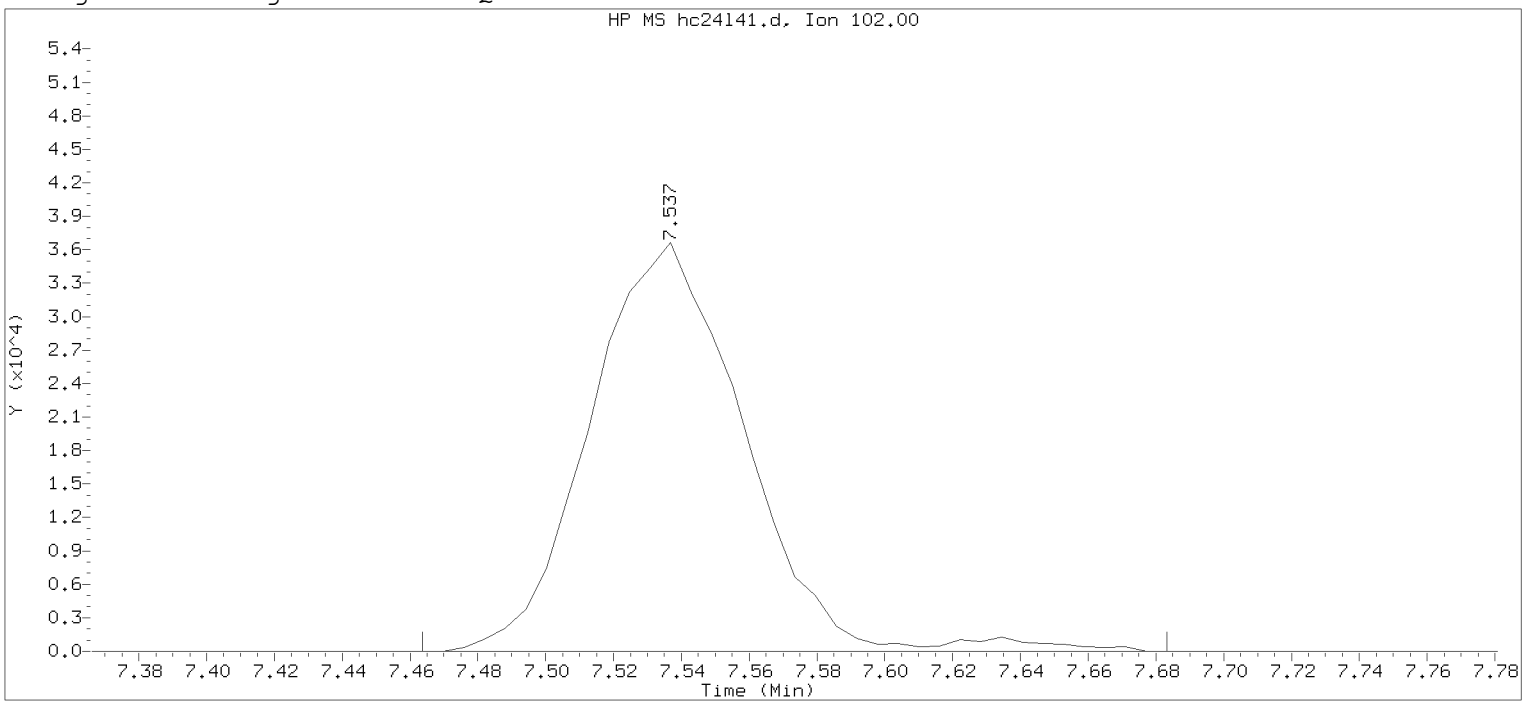
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/29/2018 at 09:30.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24141.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:02 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 22:09 jgc14951

Sample Name: LCSH62 Lab Sample ID: LCSH62

Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 115532
On-column Amount (ng) : 10.3343
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct24b.b/hc24142.d Injection date and time: **24-OCT-2018 21:23**
Data file Sample Info. Line: LCDH62;LCDH62;1;3;LCSD;;DAA3178;;hc24b10; Instrument ID: **HP19094.i** Batch: **H182973AA**
Date, time and analyst ID of latest file update: 26-Oct-2018 12:32 rcr00559

Blank Data file reference: **/chem2/HP19094.i/18oct24b.b/hc24b10.d**

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: **12025**
Calibration date and time (Last Method Edit): 24-OCT-2018 21:31
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct24b.b/hc24c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482	(0.006)	475	65	115052	(1)	50.00	
63) Fluorobenzene	7.963	(0.006)	1046	96	2569695	(-5)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1985996	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1000280	(-4)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(-0.001)	113	631501	9.751	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.525	(0.001)	102	115188M	10.202	102%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2509387	9.817	98%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	916399	9.847	98%		80 - 120

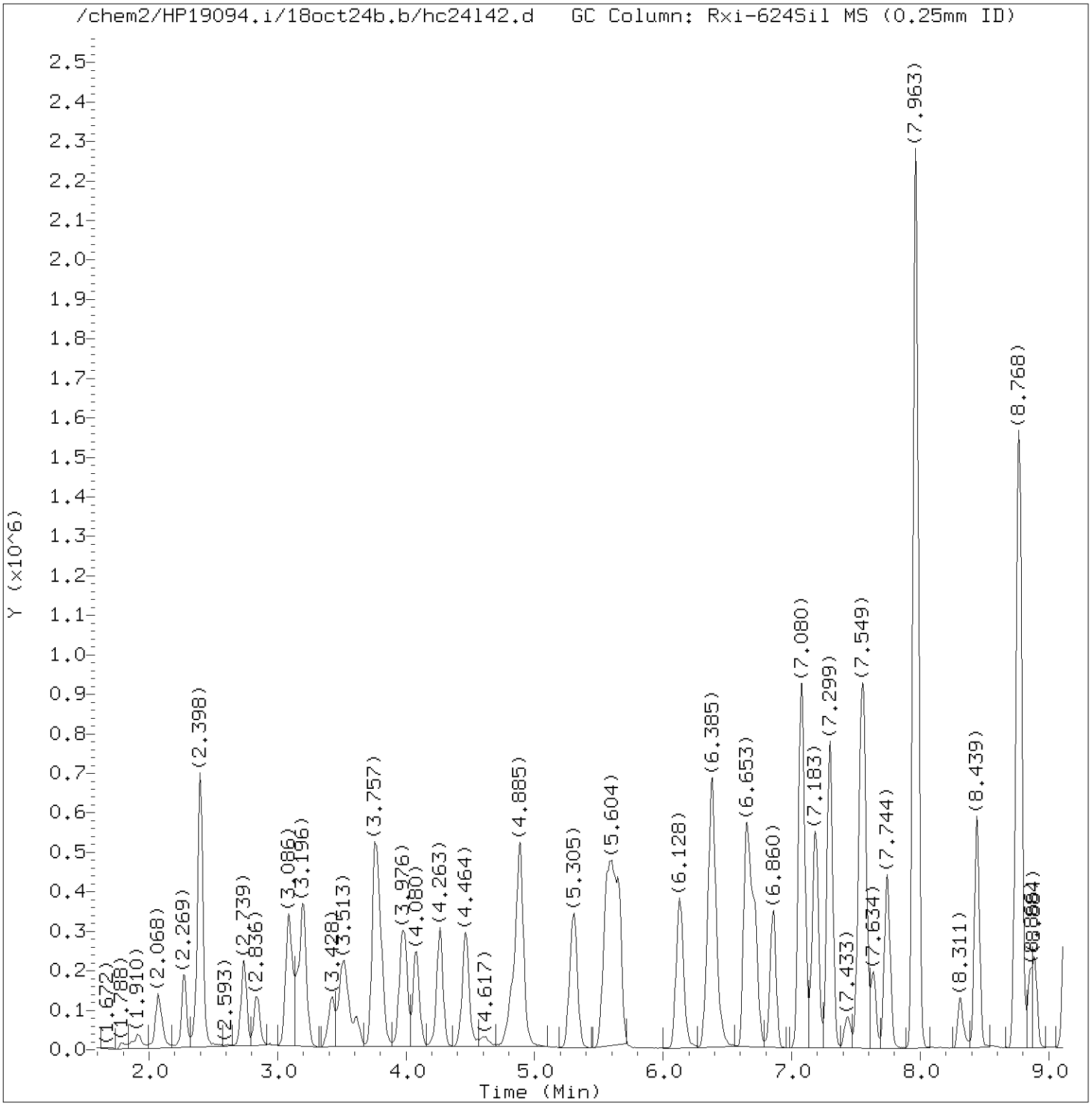
M = Surrogate Standard was manually integrated.

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
5) Vinyl Chloride	(2)	2.398	(-0.000)	62	334884	3.636	3.64			0.1	1
15) 1,1-Dichloroethene	(2)	3.757	(-0.001)	96	238028	4.724	4.72			0.4	1
31) trans-1,2-Dichloroethene	(2)	4.891	(-0.001)	96	267812	4.710	4.71			0.8	1
39) cis-1,2-Dichloroethene	(2)	6.372	(0.000)	96	300273	4.779	4.78			0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	287961	4.663	4.66			0.2	1

Total number of targets = 5

Digitally signed by Joel G. Chachapoya on 10/26/2018 at 17:47. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/29/2018 at 09:30. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

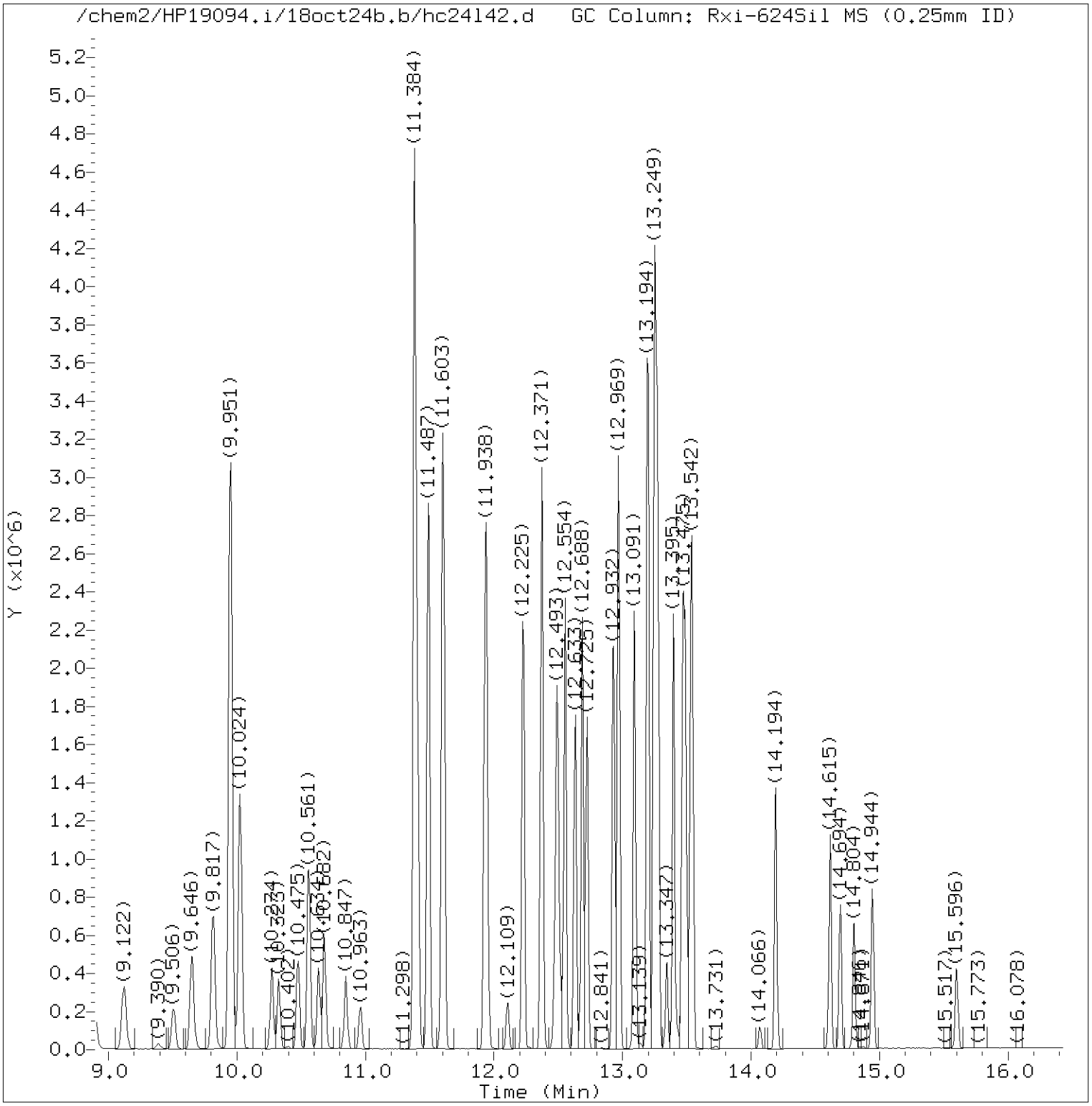
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l42.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:32 rcr00559

Sample Name: LCDH62 Lab Sample ID: LCDH62

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l42.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:32 rcr00559

Sample Name: LCDH62 Lab Sample ID: LCDH62

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct24b.b/hc24l42.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:32 rcr00559

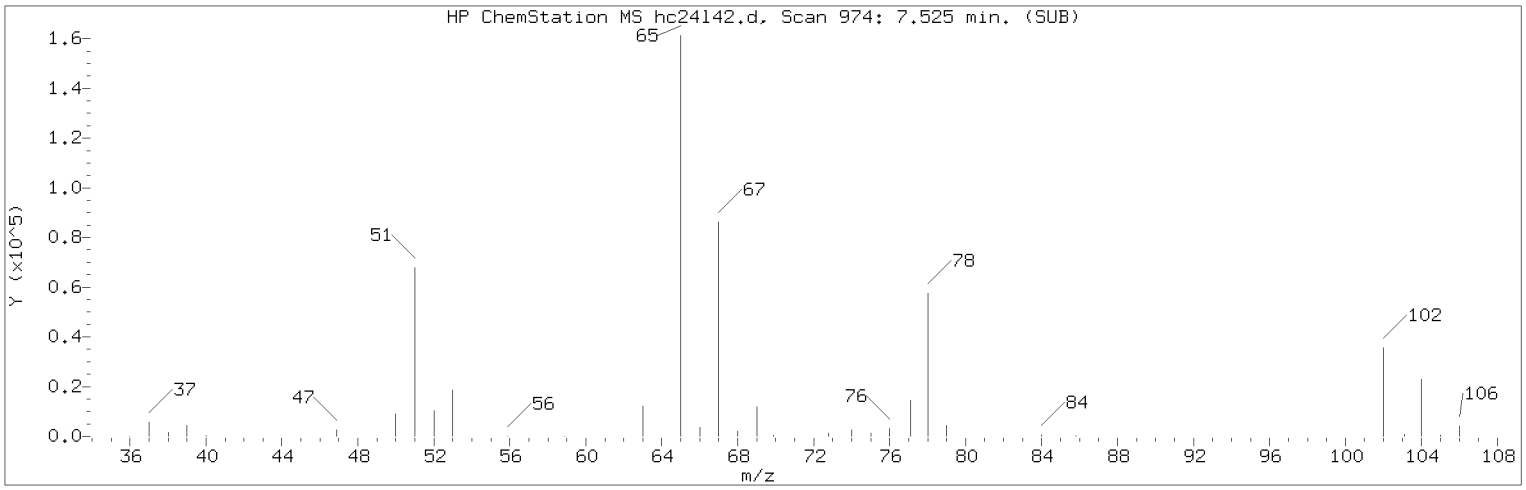
Sample Name: LCDH62 Lab Sample ID: LCDH62

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
5) Vinyl Chloride	(2)	2.398	62	334884	3.636
15) 1,1-Dichloroethene	(2)	3.757	96	238028	4.724
26)*t-Butyl Alcohol-d10	(1)	4.482	65	115052	50.000
31) trans-1,2-Dichloroethene	(2)	4.891	96	267812	4.710
39) cis-1,2-Dichloroethene	(2)	6.372	96	300273	4.779
50)$Dibromofluoromethane	(2)	7.073	113	631501	9.751
57)$1,2-Dichloroethane-d4	(2)	7.525	102	115188M	10.202
63)*Fluorobenzene	(2)	7.963	96	2569695	10.000
67) Trichloroethene	(2)	8.439	95	287961	4.663
82)$Toluene-d8	(3)	9.951	98	2509387	9.817
97)*Chlorobenzene-d5	(3)	11.384	117	1985996	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	916399	9.847
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1000280	10.000

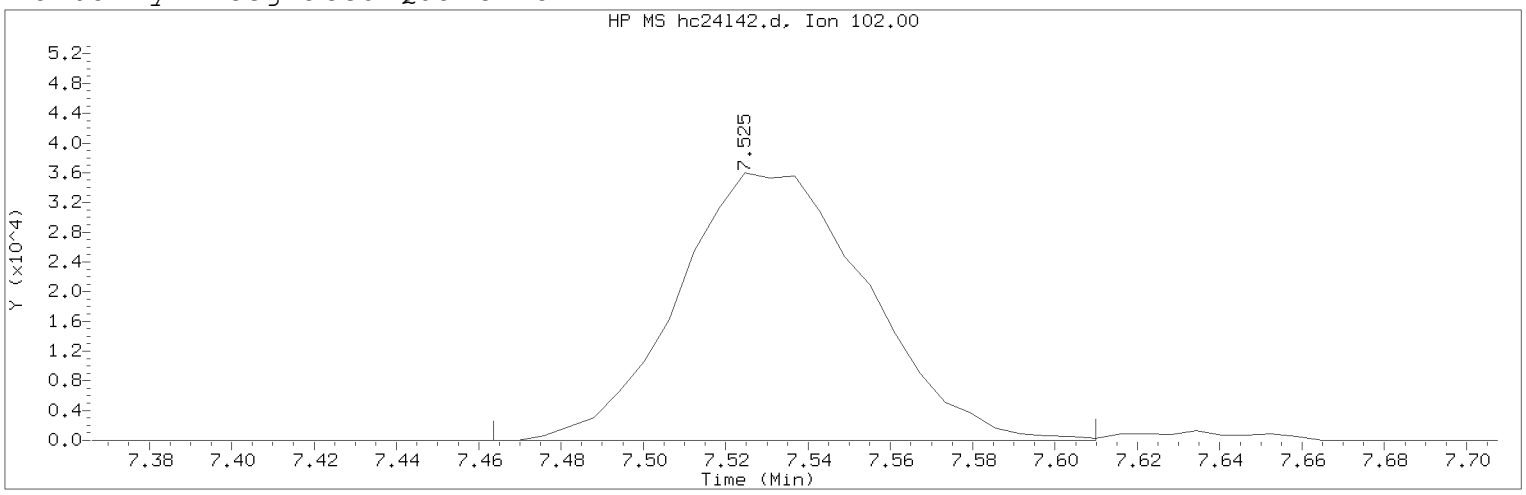
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24142.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 26-Oct-2018 12:32 rcr00559

Sample Name: LCDH62 Lab Sample ID: LCDH62

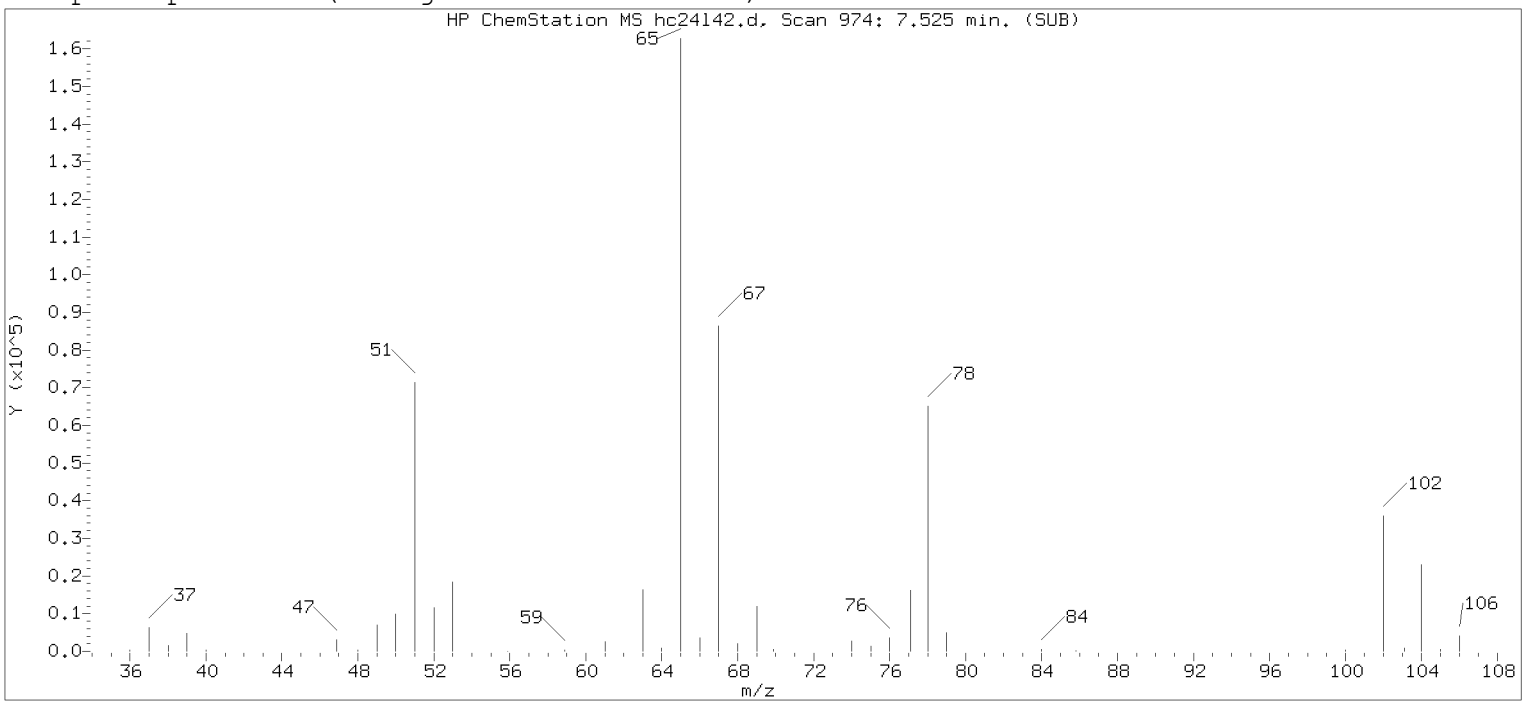
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 974
Retention Time (minutes): 7.525
Quant Ion : 102.00
Area (flag) : 115188M
On-Column Amount (ng) : 10.2019
Integration start scan : 963 Integration stop scan: 987
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

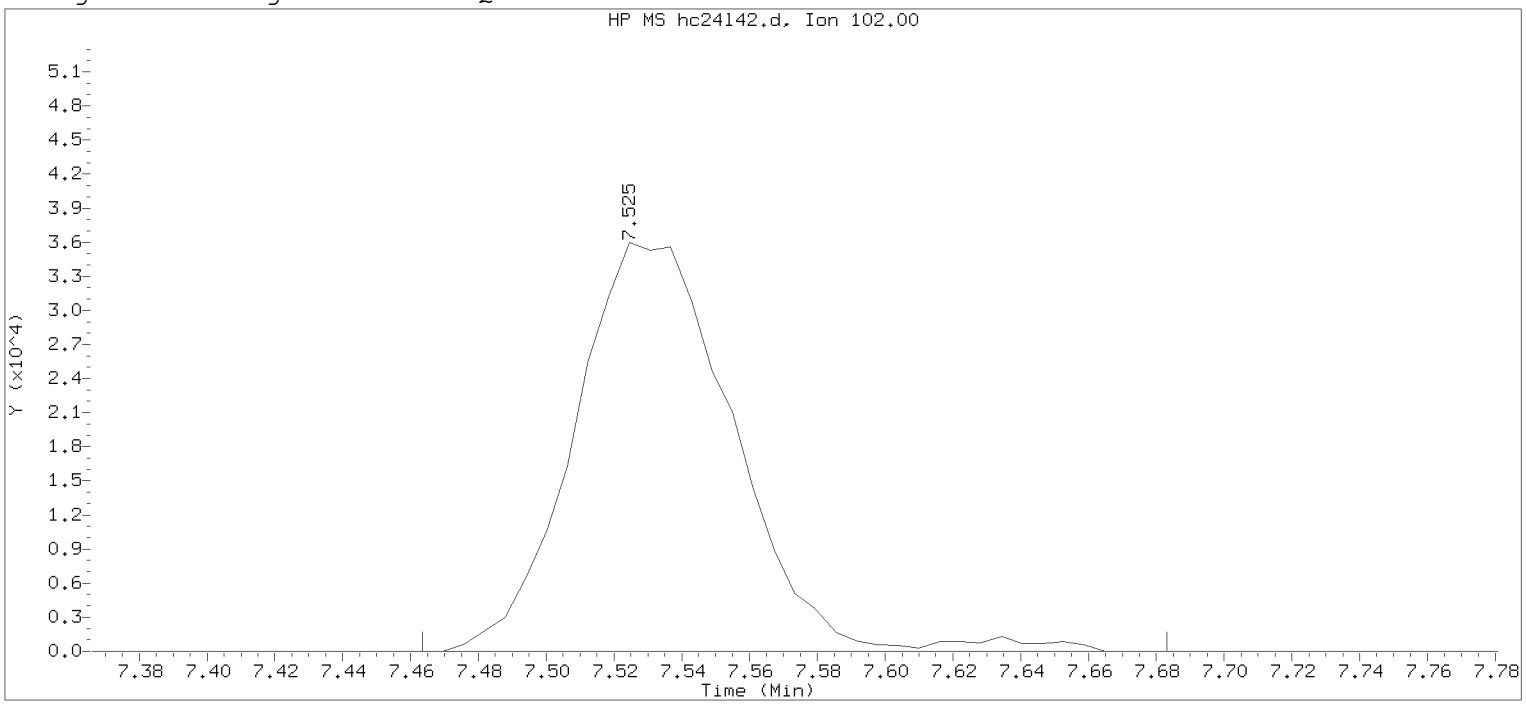
Analyst responsible for change: Digitally signed by Joel G. Chachapoya
on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/29/2018 at 09:30.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct24b.b/hc24142.d Instrument ID: HP19094.i
Injection date and time: 24-OCT-2018 21:23 Analyst ID: JGC14951

Method used: /chem2/HP19094.i/18oct24b.b/m8260c25.m Sublist used: 12025
Calibration date and time: 24-OCT-2018 21:31
Date, time and analyst ID of latest file update: 24-Oct-2018 22:09 jgc14951

Sample Name: LCDH62 Lab Sample ID: LCDH62

Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 974
Retention Time (minutes): 7.525
Quant Ion : 102.00
Area : 117535
On-column Amount (ng) : 10.4098
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

Digitally signed by Joel G. Chachapoya on 10/26/2018 at 17:47.
Target 3.5 esignature user ID: jgc14951

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU-5
Groundwater Samples
Collected on 10/16/18

SDG# RAF24

GROUP	SAMPLE NUMBERS
1999463	9856079-9856089

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman

Dana M. Kauffman
Manager

Date: 11/08/2018

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF24
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU-5

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9856079	5W8B	10/16/2018 09:05	10/17/2018 09:40
9856080	5W5B	10/16/2018 11:15	10/17/2018 09:40
9856081	5W7B	10/16/2018 10:30	10/17/2018 09:40
9856082	5W7B Matrix Spike	10/16/2018 10:30	10/17/2018 09:40
9856083	5W7B Matrix Spike Dup	10/16/2018 10:30	10/17/2018 09:40
9856084	5W7B Duplicate	10/16/2018 10:30	10/17/2018 09:40
9856085	5WC21	10/16/2018 14:10	10/17/2018 09:40
9856086	5WDUP	10/16/2018 14:15	10/17/2018 09:40
9856087	5WC22	10/16/2018 12:30	10/17/2018 09:40
9856088	5WC23	10/16/2018 13:25	10/17/2018 09:40
9856089	5W12A	10/16/2018 09:50	10/17/2018 09:40

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Sample pH Log

SDG: RAF24

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9856079	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:41:54PM	1201
9856080	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:41:10PM	1201
9856081	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:28:21PM	1201
9856082	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:37:18PM	1201
9856083	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:39:08PM	1201
9856085	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:39:52PM	1201
9856086	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:40:33PM	1201
9856087	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:36:25PM	1201
9856088	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:35:47PM	1201
9856089	008A	<2	<2	PK	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/18/2018 5:35:07PM	1201

*pH Check Code Key	**Chlorine Present Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added) **PA** = Original container checked - pH adjusted to correct range. (Preservative was added) **PV** = Volatile container checked **PC** = pH checked (unpreserved container) **SPK** = Subsampled from an original container. Original container checked - pH is within correct range **SPA** = Subsampled from an original container. Subsample container checked - pH adjusted to correct range. **SPC** = Subsampled from an original container. pH checked (unpreserved container). **SUP** = Subsampled from original container. Unable to be preserved due to the matrix of the sample. **UP** = Unable to preserve due to matrix of the sample. **NA** = Not applicable	**NA** = Chlorine Not Checked **Y** = Chlorine Present **N** = Chlorine Not Present

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10639 ICPMS - Water, 3020A - U4

The sample is digested with nitric and hydrochloric acid.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3020A, July 1992

06032 Cobalt

The solution resulting from the metals digestion is analyzed by ICP/MS.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 6020A, February 2007.

Analysis Reports / Field Chain of Custody

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REVISED

ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: November 02, 2018 09:53

Project: RAAP - Radford, VA - HWMU-5

Account #: 11200
Group Number: 1999463
SDG: RAF24
State of Sample Origin: VA

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

To view our laboratory's current scopes of accreditation please go to http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/ . Historical copies may be requested through your project manager.

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
5W8B Grab Groundwater	10/16/2018 09:05	9856079
5W5B Grab Groundwater	10/16/2018 11:15	9856080
5W7B Grab Groundwater	10/16/2018 10:30	9856081
5W7B Matrix Spike Grab Groundwater	10/16/2018 10:30	9856082
5W7B Matrix Spike Dup Grab Groundwater	10/16/2018 10:30	9856083
5W7B Duplicate Grab Groundwater	10/16/2018 10:30	9856084
5WC21 Grab Groundwater	10/16/2018 14:10	9856085
5WDUP Grab Groundwater	10/16/2018 14:15	9856086
5WC22 Grab Groundwater	10/16/2018 12:30	9856087
5WC23 Grab Groundwater	10/16/2018 13:25	9856088
5W12A Grab Groundwater	10/16/2018 09:50	9856089

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

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Project Name: RAAP - Radford, VA - HWMU-5
ELLE Group #: 1999463

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 6020A, Metals

Sample #s: 9856088

Reporting limits were raised due to interference from the sample matrix.

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Analysis Report

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Sample Description: **5W8B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 09:05
SDG#: RAF24-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856079
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:14	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: **5W5B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 11:15
SDG#: RAF24-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856080
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:16	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

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Analysis Report

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Sample Description: **5W7B Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF24-03BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856081
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020A**	**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	9.3	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:01	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

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Analysis Report

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Sample Description: **5W7B Matrix Spike Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF24-03MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856082
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	263	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:08	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5W7B Matrix Spike Dup Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF24-03MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856083
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020A**	**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	275	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:10	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

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Analysis Report

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Sample Description: **5W7B Duplicate Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 10:30
SDG#: RAF24-03DUP

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856084
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020A**	**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	9.0	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:05	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC21 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 14:10
SDG#: RAF24-04

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856085
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	38.7	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:23	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: **5WDUP Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 14:15
SDG#: RAF24-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856086
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals		**SW-846 6020A**	**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	38.7	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:25	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: **5WC22 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 12:30
SDG#: RAF24-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856087
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result		Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**		**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	4.9	J	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:27	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

REVISED

Sample Description: **5WC23 Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 13:25
SDG#: RAF24-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856088
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	5.0	25.0	5

Reporting limits were raised due to interference from the sample matrix.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	1	182941063902A	10/31/2018 11:50	Choon Y Tian	5
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

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Analysis Report

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Sample Description: **5W12A Grab Groundwater**
2018 - 2nd Semiannual Groundwater Corrective
RAAP, Radford, VA - HWMU 5

Project Name: **RAAP - Radford, VA - HWMU-5**

Submittal Date/Time: 10/17/2018 09:40
Collection Date/Time: 10/16/2018 09:50
SDG#: RAF24-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9856089
ELLE Group #: 1999463
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
Metals	**SW-846 6020A**		**ug/l**	**ug/l**	**ug/l**	
06032	Cobalt	7440-48-4	N.D.	1.0	5.0	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
06032	Cobalt	SW-846 6020A	2	182941063902A	10/29/2018 07:32	Choon Y Tian	1
10639	ICPMS - Water, 3020A - U4	SW-846 3020A	1	182941063902	10/23/2018 04:38	James L Mertz	1

*=This limit was used in the evaluation of the final result

REVISED

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1999463
Reported: 11/02/2018 09:53

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 was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ug/l	MDL** ug/l	LOQ ug/l
Batch number: 182941063902A	Sample number(s): 9856079-9856089		
Cobalt	N.D.	1.0	5.0

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 182941063902A	Sample number(s): 9856079-9856089								
Cobalt	250	260.15			104		86-113		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: 182941063902A	Sample number(s): 9856079-9856089 UNSPK: 9856081									
Cobalt	9.30	250	263.09	250	274.95	102	106	80-120	4	20

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	BKG Conc ug/l	DUP Conc ug/l	DUP RPD	DUP RPD Max
Batch number: 182941063902A	Sample number(s): 9856079-9856089 BKG: 9856081			
Cobalt	9.30	9.05	3 (1)	20

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

11200/1999463/98560079-89

CHAIN OF CUSTODY RECORD

JUR 9/21/18

Laboratory: ELLE, LLC, 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client:	Draper Aden Associates	**Consultant:**	Draper Aden Associates	**Sample Site:**	RFAAP, Radford, Virginia
Attn:	0	**Attn:**	Janet C. Frazier	**Location:**	HWMU5
Address	0	**Address:**	2206 South Main Street		2018- 2nd Semiannual Groundwater Corrective
	0		Blacksburg, Virginia 24060	**Event:**	Action Monitoring Event
Phone:	0	**Phone:**	(540) 552-0444	**DAA JN:**	B03204-18A
Fax:	0	**Fax:**	(540) 552-0291	**Lab JN:**	
Fax:	0				

Project Specific (PS) or Batch (B) QC:
Sample Collection for Project Complete? YES
MPS:
Carrier: 12.754.02X.Y0-5662-8684
Tracking Number:

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; V VOA; AG Amber Glass; CG Clear Glass

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on ice: YES

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	1-500ml P							
Sample ID	**Date: 2018**	**Time**	**Box 1: Matrix**	**Number of Bottles**	**8260C/5030C 25 ml purge Appendix J Analyte List**	**Cobalt only-Total 6020A /3020A (appendix J)**							
5W8B	10/16	0905	GW	4	X	X							
5W5B	10/16	1015	GW	4	X	X							
5W7B	10/16	1030	GW	~~12~~ 10	X	X							
5WC21	10/16	1410	GW	4	X	X							
5WDUP	10/16	1415	GW	4	X	X							
5WC22	10/16	1230	GW	4	X	X							
5WC23	10/16	1325	GW	4	X	X							
5W12A	10/16	0950	GW	4	X	X							
Trip Blank 1	10/16	—	T	2	X								
Trip Blank 2			T	2	X								

GENERAL NOTES:
1. 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.

Cobalt - report QL = 5 µg/L
DL = 1 µg/L
JUR 9/21/18

USE FOR QC

Clients Special Instructions: level 1 with edd.

Received by lab in Good Condition ____ Yes ____ No Custody Seal Intact ____ Yes ____ No Temperature upon arrival ____ Received on Ice ____ Yes ____ No
Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 10/16/18	#1 Relinquished by (Signature):	Date: 10/16/18	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name: DAA	Time: 1700	Company Name:	Time:	
Sampler Name (Print): KY-Tran Vo	Date: 10/16/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/17/18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ELLE	Time: 0940	

ONMD 10/25/18

1/1 10/24/18

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Sample Administration Receipt Documentation Log

Doc Log ID: 230265

Group Number(s): 1999463

Client: Draper Aden Assoc.

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/17/2018 9:40
Number of Packages:	1	Number of Projects:	1

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	4
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	Yes	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 10:23 on 10/17/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT146	0.8	DT	Wet	Y	Bagged	N

2425 New Holland Pike
Lancaster, PA 17601-2425
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F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

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.

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

Tests 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.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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. 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. 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.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Metals in Liquid Data

Case Narrative/Conformance Summary

Metals in Liquid

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF24

ICP Metals

Fraction: Metals in Liquid

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9856079	5W8B	X		1	
9856080	5W5B	X		1	
9856081	5W7B	X		1	Background/Unspiked
9856082	5W7B Matrix Spike	X		1	Matrix Spike
9856083	5W7B Matrix Spike Dup	X		1	Matrix Spike Duplicate
9856084	5W7B Duplicate	X		1	Duplicate
9856085	5WC21	X		1	
9856086	5WDUP	X		1	Field Duplicate Sample
9856087	5WC22	X		1	
9856088	5WC23	X		5	
9856089	5W12A	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

The instrument detection limits (IDLs) are used for determining the U flags on the initial and continuing calibration blanks. The highest IDL is selected when multiple

Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF24

ICP Metals

Fraction: Metals in Liquid

instruments are used for an analysis. The method detection limits (MDLs) are used for determining all other U flags.

(Sample number(s): 9856088: Analysis: 06032)
Reporting limits were raised due to interference from the sample matrix.

No other problems were encountered with the analysis of the samples.

Abbreviation Key

BKG – Background	AF - Cold Vapor Atomic Fluorescence
DUP – Duplicate	U - Below MDL
MS - Matrix Spike	B - Below LOQ
MSD - Matrix Spike Dup	N - Matrix Spike out of specifications
B – Blank	* - Duplicate out of specifications
Q - Laboratory Control Sample	E - Matrix Effects exist as proven by Serial Dilution or Spiked Dilution
Y - Laboratory Control Sample Duplicate	A - Post Digestion Spike
P - ICP Atomic Emission Spectrometer	L - Serial Dilution
MS - ICP Mass Spectrometry	R - Internal Standard Relative Intensity OOS
CV - Cold Vapor	NR - Not Required

Sample Data

Metals in Liquid

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856079 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856080 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856081BKG % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	9.3			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856082MS % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	263			MS

Comments:

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METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856083MSD % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	275			MS

Comments:

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_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856084DUP % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	9.0			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856085 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	38.7			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856086 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	38.7			MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856087 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	4.9	B		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856088 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	5.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 1
INORGANIC ANALYSIS DATA SHEET
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Lab Sample ID: 9856089 % Solids: 0.0
Concentration Units: UG/L Date Received: 10/17/2018

CAS No.	Analyte	Concentration	C	Q	M
7440-48-4	Cobalt	1.0	U		MS

Comments:

_____
_____
_____
_____

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence NR = Not Required	U = Below MDL, B = Below LOQ

Quality Control and Calibration Summary Forms

Metals in Liquid

QUALITY CONTROL REFERENCE LIST

SDG No.: RAF24
Matrix: WATER

Analyte	Batch Number	Lab Sample ID
Cobalt	182941063902	9856079
		9856080
		9856081BKG
		9856082MS
		9856083MSD
		9856084DUP
		9856085
		9856086
		9856087
		9856088
		9856089
		P29463BB
		P29463BQ

LEGEND:

BKG = Background	B = Blank
DUP = Duplicate	Q = Laboratory Control Sample
MS = Matrix Spike	Y = Laboratory Control Sample Duplicate
MSD = Matrix Spike Duplicate	

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF24

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59	500.0	525.51	105.1	250.0	250.55	100.2	250.0	253.20	101.3

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF24

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59				250.0	264.93	106.0	250.0	259.18	103.7

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Concentration Units: UG/L

Analyte	Mass	Initial Calibration True	Found	%R(1)	Continuing Calibration True	Found	%R(2)	True	Found	%R(2)
Cobalt	59				250.0	252.23	100.9			

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

QUALITY ASSURANCE SUMMARY
FORM 2A
INITIAL AND CONTINUING CALIBRATION VERIFICATION
SDG No.: RAF24

Method: MS
Run Name: 1830404E05
Calibration Date(s): 10/31/2018
Concentration Units: UG/L

		Initial Calibration			Continuing Calibration					
Analyte	Mass	True	Found	%R(1)	True	Found	%R(2)	True	Found	%R(2)
Cobalt	59	500.0	523.16	104.6	250.0	260.74	104.3	250.0	255.46	102.2

(1) Control Limits: 90 - 110
(2) Control Limits: 90 - 110
* Outside Limits. If Continuing Calibration is outside limits, high, only ND samples are accepted.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 2B
LOW LEVEL CHECK STANDARD
SDG No.: RAF24

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Cobalt	59	1.0	0.95	95.0	1.02	102.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Concentration Units: UG/L

Analyte	Mass	Initial True	Initial Found	Initial %R	Final Found	Final %R
Cobalt	59	1.0			0.97	97.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1830404E05
Calibration Date(s): 10/31/2018
Concentration Units: UG/L

			Initial		Final	
Analyte	Mass	True	Found	%R	Found	%R
Cobalt	59	1.0	1.13	113.0	1.21	121.0

Control limits: 70% - 130%

For 6010B - Control limits apply to values up to 10 times the true value of the low level check standard. If LLC is out of specification, high, results < RL are acceptable.
For 6010C - If Low Level Check (LLC) is out of specification, results > CCV are acceptable. If LLC is out of specification, high, results < RL are acceptable.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018
Preparation Blank Matrix: WATER

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)								Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59	0.21	U	0.21	U	0.21	U	0.21	U	59	1.000	U	182941063902A

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

Method: MS
Run Name: 1830201E07
Calibration Date(s): 10/29/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59			0.21	U	0.21	U						

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer MS = ICP Mass Spectrometry CV = Cold Vapor AF = Cold Vapor Atomic Fluorescence	U= Below IDL/MDL B= Below LOQ

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QUALITY ASSURANCE SUMMARY
FORM 3
BLANKS
SDG No.: RAF24

Method: MS
Run Name: 1830404E05
Calibration Date(s): 10/31/2018

		Initial Calibration Blank (ug/L)		Continuing Calibration Blank (ug/L)						Preparation Blank (UG/L)			
Analyte	Mass		C	1	C	2	C	3	C	Mass		C	Batch Number
Cobalt	59	0.21	U	0.21	U	0.21	U						

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below IDL/MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF24

Instrument ID: 27813
Run Name: 1830201E07
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	107199	107.2	106185.2	106.2
Calcium	44	300000	300000	302894	101.0	304817.8	101.6
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		199.6	97.4
Iron	57	250000	250000	248039	99.2	247769.5	99.1
Magnesium	24	100000	100000	102592	102.6	102451.0	102.5
Molybdenum	98	2000	2000	2124	106.2	2130.6	106.5
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	101767	101.8	102461.2	102.5
Sodium	23	250000	250000	244430	97.8	244242.5	97.7
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2139	107.0	2120.7	106.0

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF24

Instrument ID: 27813
Run Name: 1830201E07
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	107081	107.1	106560.2	106.6
Calcium	44	300000	300000	301907	100.6	302190.4	100.7
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		202.2	98.6
Iron	57	250000	250000	241918	96.8	241479.0	96.6
Magnesium	24	100000	100000	102987	103.0	102330.9	102.3
Molybdenum	98	2000	2000	2138	106.9	2125.7	106.3
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	102797	102.8	102867.7	102.9
Sodium	23	250000	250000	243890	97.6	243997.8	97.6
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2080	104.0	2137.5	106.9

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF24

Instrument ID: 27813
Run Name: 1830201E07
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	105648	105.6	106693.9	106.7
Calcium	44	300000	300000	302059	100.7	303755.7	101.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		205.6	100.3
Iron	57	250000	250000	242817	97.1	241726.7	96.7
Magnesium	24	100000	100000	103146	103.1	103406.8	103.4
Molybdenum	98	2000	2000	2176	108.8	2177.4	108.9
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	102485	102.5	103398.4	103.4
Sodium	23	250000	250000	246715	98.7	248088.1	99.2
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2082	104.1	2133.3	106.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF24

Instrument ID: 19204
Run Name: 1830404E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	103932	103.9	104607.1	104.6
Calcium	44	300000	300000	304309	101.4	305914.7	102.0
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		212.7	103.8
Iron	57	250000	250000	261944	104.8	264661.2	105.9
Magnesium	24	100000	100000	104712	104.7	105318.7	105.3
Molybdenum	98	2000	2000	2315	115.8	2289.7	114.5
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	107082	107.1	108446.4	108.4
Sodium	23	250000	250000	255053	102.0	257737.4	103.1
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2180	109.0	2154.3	107.7

Control Limits: All Metals 80%-120%

QUALITY ASSURANCE SUMMARY
FORM 4B
ICP-MS INTERFERENCE CHECK SAMPLE
SDG No.: RAF24

Instrument ID: 19204
Run Name: 1830404E05
Concentration Units: ug/L

Analyte	Mass	True		Found			
		Sol. A	Sol. AB	Sol. A	%R	Sol. AB	%R
Aluminum	27	100000	100000	102648	102.6	100257.7	100.3
Calcium	44	300000	300000	294649	98.2	289020.5	96.3
Carbon	13	20000	20000	NA		NA	
Chloride	37	100000	100000	NA		NA	
Cobalt	59	0	205	1		209.2	102.0
Iron	57	250000	250000	255667	102.3	253478.6	101.4
Magnesium	24	100000	100000	102850	102.9	101033.5	101.0
Molybdenum	98	2000	2000	2317	115.9	2296.5	114.8
Phosphorus	31	10000	10000	NA		NA	
Potassium	39	100000	100000	105177	105.2	104237.4	104.2
Sodium	23	250000	250000	250093	100.0	247025.2	98.8
Sulfur	34	10000	10000	NA		NA	
Titanium	47	2000	2000	2096	104.8	2074.0	103.7

Control Limits: All Metals 80%-120%

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QUALITY ASSURANCE SUMMARY
FORM 5A(MS/MSD)
MATRIX SPIKE/MATRIX SPIKE DUPLICATE
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9856081BKG Matrix Spike Lab Sample ID: 9856082MS Matrix Spike Duplicate Lab Sample ID: 9856083MSD
Batch Number(s): 182941063902

		BKG Sample		MS Sample		MSD Sample		MS Spike	MSD Spike		MS		MSD				Control Limit		
Analyte	Mass	Result	C	Result	C	Result	C	Added	Added	Units	%R	Q	%R	Q	RPD	Q	%R	RPD	M
Cobalt	59	9.3003		263.0878		274.9451		250.0000	250.0000	UG/L	102		106		4		80 - 120	20	MS

Note: Results shown are reported on an as-received basis.
If Matrix Spike/ Matrix Spike Duplicate were out of specification, see Post Digestion Spike form.

METHODS:
P = ICP Atomic Emission Spectrometer CV = Cold Vapor
MS = ICP Mass Spectrometry AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL, B= Below LOQ
FLAGS:
N = Matrix Spike OOS, * = Duplicate OOS

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QUALITY ASSURANCE SUMMARY
FORM 6
DUPLICATES
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9856081BKG Duplicate Lab Sample ID: 9856084DUP
Batch Number(s): 182941063902
Concentration Units: UG/L

Analyte	Mass	Control Limit	Samples (S)	C	Duplicate (D)	C	RPD	Q	M
Cobalt	59	5.0	9.3003		9.0468		3		MS

NOTE: An asterisk (*) in column "Q" indicates poor duplicate precision (RPD > 20% OR |(S) - (D)| > LOQ for values < 5x LOQ).
The data are considered to be valid because the laboratory control sample is within the control limits. See the Laboratory Control Sample.

Note: Results shown are reported on an as-received basis.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
* = Duplicate Out of Spec

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QUALITY ASSURANCE SUMMARY
FORM 7
LABORATORY CONTROL SAMPLE
SDG No.: RAF24
Matrix: WATER

Analyte	Mass	Batch Number	Units	True	Found	C	Control Limits (%)	%R	M	In Spec
Cobalt	59	182941063902	UG/L	250.000	260.150		86 - 113	104	MS	Yes

METHODS:	CONCENTRATION QUALIFIERS:
P = ICP Atomic Emission Spectrometer	U= Below MDL
MS = ICP Mass Spectrometry	B= Below LOQ
CV = Cold Vapor	
AF = Cold Vapor Atomic Fluorescence	

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QUALITY ASSURANCE SUMMARY
FORM 9
SERIAL DILUTIONS
SDG No.: RAF24
Matrix: WATER Level (low/med): LOW

Background Lab Sample ID: 9856081BKG Serial Dilution Lab Sample ID: 9856081L
Batch Number(s): 182941063902
Concentration Units: UG/L

Analyte	Mass	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Diff.	Q	M
Cobalt	59	9.3003		9.0441	B	3		MS

NOTE: An E in column Q indicates the presence of a chemical or physical interference in the matrix when the % difference is greater than 10%. This applies only when (I) is greater than or equal to 50x MDL for ICP, 100x MDL for ICP-MS (6020), 50x MDL for ICP-MS (200.8), or 25x MDL for GFAA.

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry

CONCENTRATION QUALIFIERS:
U= Below MDL
B= Below LOQ
FLAGS:
E = Matrix Effects exist as proven by Serial Dilution or Spiked Dilution

QUALITY ASSURANCE SUMMARY
FORM 10
INSTRUMENT DETECTION LIMITS (QUARTERLY)
SDG No.: RAF24

Method: MS
Instrument ID: 19204
Date: 07/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Cobalt	59		0.21

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Instrument ID: 27813
Date: 09/2018

Analyte	MASS (amu)	Background	IDL (UG/L)
Cobalt	59		0.13

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF24
Matrix: WATER

Method: MS
Date: 04/2016

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Cobalt	59		5.0	1.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

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QUALITY ASSURANCE SUMMARY
FORM 10 MDL
METHOD DETECTION LIMITS (ANNUALLY)
SDG No.: RAF24
Matrix: WATER

Method: MS
Date: 10/2018

Analyte	Mass	Background	LOQ (UG/L)	MDL (UG/L)
Cobalt	59		5.0	1.0

The LOQ/MDL must be adjusted for % Solids and Sample Weight for samples reporting in mg/kg and ug/L.

Comments:

_____
_____
_____
_____

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

Method: MS
Batch Number: 182941063902

Lab Sample ID	Date	Initial Volume(ml)	Final Volume(ml)
9856079	10/23/2018	50.00	50
9856080	10/23/2018	50.00	50
9856085	10/23/2018	50.00	50
9856086	10/23/2018	50.00	50
9856087	10/23/2018	50.00	50
9856088	10/23/2018	50.00	50
9856089	10/23/2018	50.00	50
9856081BKG	10/23/2018	50.00	50
9856084DUP	10/23/2018	50.00	50
9856083MSD	10/23/2018	50.00	50
9856082MS	10/23/2018	50.00	50
P29463BB	10/23/2018	50.00	50
P29463BQ	10/23/2018	1.00	1

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF24

Method: MS
Instrument ID: 27813
Run Name: 1830201E07

Run Start Date: 10/29/2018
Run End Date: 10/29/2018

Lab Sample ID	D/F	Time	Analytes
			CO
S0	1.00	05:51	X
S	1.00	05:53	X
ICV	1.00	05:55	X
ICB	1.00	05:57	X
LLC	1.00	06:00	X
ICSA	1.00	06:02	X
ICSAB	1.00	06:04	X
ZZZZZZ	1.00	06:06	
CCV	1.00	06:08	X
CCB	1.00	06:11	X
ZZZZZZ	1.00	06:13	
ZZZZZZ	1.00	06:15	
ZZZZZZ	1.00	06:17	
ZZZZZZ	1.00	06:19	
ZZZZZZ	1.00	06:21	
ZZZZZZ	1.00	06:24	
ZZZZZZ	1.00	06:26	
ZZZZZZ	10.00	06:28	
CCV	1.00	06:30	X
CCB	1.00	06:32	X
ZZZZZZ	1.00	06:35	
ZZZZZZ	1.00	06:37	
ZZZZZZ	1.00	06:39	
ZZZZZZ	10.00	06:41	
LLC	1.00	06:43	X
ICSA	1.00	06:46	X
ICSAB	1.00	06:48	X
ZZZZZZ	1.00	06:50	
CCV	1.00	06:52	X
CCB	1.00	06:54	X
P29463BB	1.00	06:57	X
P29463BQ	1.00	06:59	X
9856081BKG	1.00	07:01	X
9856081A	1.00	07:03	
9856084DUP	1.00	07:05	X
9856082MS	1.00	07:08	X
9856083MSD	1.00	07:10	X
9856081L	5.00	07:12	X

METHODS:
- P = ICP Atomic Emission Spectrometer
- MS = ICP Mass Spectrometry
- CV = Cold Vapor
- AF = Cold Vapor Atomic Fluorescence

LEGEND:
- BKG = Background
- DUP = Duplicate
- MS = Matrix Spike
- MSD = Matrix Spike Duplicate
- A = Post Digest Spike
- L = Serial Dilution
- B = Blank
- Q = Laboratory Control Sample
- Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF24

Method: MS
Instrument ID: 27813
Run Name: 1830201E07

Run Start Date: 10/29/2018
Run End Date: 10/29/2018

Lab Sample ID	D/F	Time	Analytes
			CO
9856079	1.00	07:14	X
9856080	1.00	07:16	X
CCV	1.00	07:19	X
CCB	1.00	07:21	X
9856085	1.00	07:23	X
9856086	1.00	07:25	X
9856087	1.00	07:27	X
ZZZZZZ	1.00	07:30	
9856089	1.00	07:32	X
9856089	10.00	07:34	
LLC	1.00	07:44	X
ICSA	1.00	07:46	X
ICSAB	1.00	07:48	X
ZZZZZZ	1.00	07:51	
CCV	1.00	07:53	X
CCB	1.00	07:55	X

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 14
ANALYSIS RUN LOG
SDG No.: RAF24

Method: MS
Instrument ID: 19204
Run Name: 1830404E05

Run Start Date: 10/31/2018
Run End Date: 10/31/2018

Lab Sample ID	D/F	Time	Analytes																															
			CO																																	
S0	1.00	11:32	X																																
S	1.00	11:34	X																																
ICV	1.00	11:36	X																																
ICB	1.00	11:38	X																																
LLC	1.00	11:40	X																																
ICSA	1.00	11:41	X																																
ICSAB	1.00	11:43	X																																
ZZZZZZ	1.00	11:45																																	
CCV	1.00	11:47	X																																
CCB	1.00	11:49	X																																
9856088	5.00	11:50	X																																
9856088	10.00	11:52																																	
LLC	1.00	11:54	X																																
ICSA	1.00	11:56	X																																
ICSAB	1.00	11:57	X																																
ZZZZZZ	1.00	11:59																																	
CCV	1.00	12:01	X																																
CCB	1.00	12:03	X																																

METHODS:
P = ICP Atomic Emission Spectrometer
MS = ICP Mass Spectrometry
CV = Cold Vapor
AF = Cold Vapor Atomic Fluorescence

LEGEND:
BKG = Background
DUP = Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF24

Instrument ID: 27813
Run Name: 1830201E07

Start Date: 10/29/2018
End Date: 10/29/2018

Standard	Elements Applies to	Standard	Elements Applies to
IN-3-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-3-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	05:51	100													
S	05:53	100													
ICV	05:55	99													
ICB	05:57	98													
LLC	06:00	101													
ICSA	06:02	99													
ICSAB	06:04	100													
ZZZZZZ	06:06														
CCV	06:08	105													
CCB	06:11	102													
ZZZZZZ	06:13														
ZZZZZZ	06:15														
ZZZZZZ	06:17														
ZZZZZZ	06:19														
ZZZZZZ	06:21														
ZZZZZZ	06:24														
ZZZZZZ	06:26														
ZZZZZZ	06:28														
CCV	06:30	102													
CCB	06:32	102													
ZZZZZZ	06:35														
ZZZZZZ	06:37														
ZZZZZZ	06:39														
ZZZZZZ	06:41														
LLC	06:43	104													
ICSA	06:46	101													
ICSAB	06:48	103													
ZZZZZZ	06:50														
CCV	06:52	104													
CCB	06:54	105													
P29463BB	06:57	108													
P29463BQ	06:59	107													
9856081BKG	07:01	106													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike
FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF24

Instrument ID: 27813
Run Name: 1830201E07

Start Date: 10/29/2018
End Date: 10/29/2018

Standard	Elements Applies to	Standard	Elements Applies to
IN-3-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-3-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
9856081A	07:03	103													
9856084DUP	07:05	110													
9856082MS	07:08	110													
9856083MSD	07:10	107													
9856081L	07:12	110													
9856079	07:14	109													
9856080	07:16	112													
CCV	07:19	113													
CCB	07:21	113													
9856085	07:23	114													
9856086	07:25	115													
9856087	07:27	114													
ZZZZZZ	07:30														
9856089	07:32	113													
9856089	07:34														
LLC	07:44	106													
ICSA	07:46	105													
ICSAB	07:48	106													
ZZZZZZ	07:51														
CCV	07:53	116													
CCB	07:55	110													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

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QUALITY ASSURANCE SUMMARY
FORM 16
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
SDG No.: RAF24

Instrument ID: 19204
Run Name: 1830404E05

Start Date: 10/31/2018
End Date: 10/31/2018

Standard	Elements Applies to	Standard	Elements Applies to
IN-1-115	CO		

Lab Sample ID	Time	Internal Standards %RI For: Element IN-1-115	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q	Element	Q
S0	11:32	100													
S	11:34	104													
ICV	11:36	100													
ICB	11:38	102													
LLC	11:40	104													
ICSA	11:41	96													
ICSAB	11:43	95													
ZZZZZZ	11:45														
CCV	11:47	100													
CCB	11:49	101													
9856088	11:50	108													
9856088	11:52														
LLC	11:54	98													
ICSA	11:56	95													
ICSAB	11:57	96													
ZZZZZZ	11:59														
CCV	12:01	101													
CCB	12:03	93													

LEGEND:
BKG = Background
DUP = Duplicate
L = Serial Dilution
B = Blank
Q = Laboratory Control Sample
Y = Laboratory Control Sample Duplicate
MS = Matrix Spike
MSD = Matrix Spike Duplicate
A = Post Digest Spike

FLAG:
R = Internal Standard Relative Intensity OOS

INTERNAL STANDARD ELEMENTS:
BE = Beryllium
BI = Bismuth
GE = Germanium
HO = Holmium
IN = Indium
LI = Lithium
SC = Scandium
TB = Terbium
Y = Yttrium

Raw Data

Metals in Liquid

ICP-MS Data

Metals in Liquid

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18J29B00.E07

Run Name: 1830201E07

Analyst: 1242

Reviewed By:	Reviewed Date
Choon Y Tian	10/29/2018 08:32
Tara L Snyder	10/30/2018 14:29

Verified By:	Verified Date
Deborah A Krady	10/31/2018 14:10

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	BE	9
	B	11
SC-3		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-2		115
	SE	78
IN-3		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-3		209
	TL	205
	PB	208
	U	238

Run Name: 1830201E07 Date/Time: 10/29/2018 5:51:24
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
BE	9	0.00000	2.66700	0.000	0.00561	-0.00286	-0.00274
B	11	0.00000	2952.97700	0.000	-0.93436	-0.19334	1.12770
NA	23	0.00000	8009.13000	0.000	1.42617	0.09609	-1.52226
MG	24	0.00000	503.35700	0.000	1.97592	-1.39162	-0.58430
AL	27	0.00000	113.33700	0.000	-1.77362	-0.89129	2.66491
K	39	0.00000	6891.87700	0.000	7.68660	-7.57799	-0.10861
CA	44	0.00000	126.67000	0.000	22.75065	-4.06556	-18.68509
SC-1	45	671514.75700	0.00000	0.000	685207.57000	669217.02000	660119.68000
SC-2	45	81898.20300	0.00000	0.000	81274.91000	80882.23000	83537.47000
SC-3	45	42632.78000	0.00000	0.000	41760.00000	43756.08000	42382.26000
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.00000	13.33300	0.000	0.04434	-0.02217	-0.02217
CR	52	0.00000	80.00000	0.000	0.02896	0.01006	-0.03901
MN	55	0.00000	303.34700	0.000	-0.14620	-0.10106	0.24726
FE	57	0.00000	90.00000	0.000	-1.82826	2.41092	-0.58267
CO	59	0.00000	83.33700	0.000	-0.00154	-0.04243	0.04397
NI	60	0.00000	90.00000	0.000	0.06694	0.01673	-0.08366
CU	63	0.00000	103.33700	0.000	-0.00051	-0.00787	0.00838
ZN	66	0.00000	43.33300	0.000	-0.01589	0.03645	-0.02056
GE-1	72	647606.71300	0.00000	0.000	660409.37000	639132.30000	643278.47000
GE-2	72	102050.01700	0.00000	0.000	99935.65000	101888.95000	104325.45000
GE-3	72	129064.28000	0.00000	0.000	127612.01000	131050.45000	128530.38000
AS	75	0.00000	4.00000	0.000	0.00140	-0.00208	0.00068
SE	78	0.00000	1.55700	0.000	0.04652	-0.00884	-0.03767
SR	88	0.00000	90.00000	0.000	-0.03389	-0.04319	0.07708
MO	98	0.00000	43.33300	0.000	0.00956	-0.00613	-0.00343
AG	107	0.00000	3.33300	0.000	-0.00213	-0.00213	0.00425
CD	111	0.00000	0.66700	0.000	-0.00330	-0.00330	0.00660
IN-2	115	152147.97300	0.00000	0.000	150565.22000	149585.35000	156293.35000
IN-3	115	59728.97300	0.00000	0.000	57997.91000	62336.76000	58852.25000
SN	120	0.00000	253.34300	0.000	0.04841	-0.03379	-0.01462
SB	121	0.00000	10.00000	0.000	0.01827	-0.01809	-0.00018
BA	137	0.00000	10.00000	0.000	0.00209	0.04085	-0.04294
TB-3	159	175165.98000	0.00000	0.000	173695.13000	176767.54000	175035.27000
TL	205	0.00000	83.33300	0.000	0.00281	-0.01186	0.00905
PB	208	0.00000	83.33300	0.000	-0.00303	-0.00129	0.00432
BI-3	209	115717.41000	0.00000	0.000	113334.28000	118316.47000	115501.48000
U	238	0.00000	6.66700	0.000	-0.00185	-0.00185	0.00371

Run Name: 1830201E07 Date/Time: 10/29/2018 5:53:34
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	678298.08700	0.00000	0.000	666666.16000	673525.61000	694702.49000
SC-3	45	43378.47300	0.00000	0.000	41629.91000	45802.19000	42703.32000
AL	27	10000.00000	181565.49000	5.100	10290.00596	9406.10737	10303.88667
B	11	1000.00000	107018.08700	0.900	1001.35766	1008.25570	990.38664
BE	9	100.00000	22807.89300	3.100	103.10037	100.06088	96.83876
CA	44	10000.00000	25459.50000	5.000	10120.75917	9448.60836	10430.63246
CR	52	1000.00000	774312.88000	4.500	1026.16969	947.76200	1026.06831
FE	57	10000.00000	156857.08000	4.500	10250.75886	9476.32760	10272.91354
K	39	10000.00000	500254.50000	5.300	10260.39038	9391.39874	10348.21089
MG	24	10000.00000	555132.64700	4.700	10343.08510	9462.70226	10194.21264
MN	55	1000.00000	406562.55700	5.200	1029.29035	939.47300	1031.23665
NA	23	10000.00000	1220016.64700	3.700	10225.68152	9576.81363	10197.50485
TI	47	1000.00000	16776.74700	4.400	1007.42856	952.34956	1040.22188
V	51	1000.00000	623778.92300	4.500	1026.00430	948.34286	1025.65284
IN-2	115	149874.01700	0.00000	0.000	153659.07000	147631.88000	148331.10000
IN-3	115	59767.04000	0.00000	0.000	56888.93000	63112.16000	59300.03000
AG	107	100.00000	158891.38300	4.400	102.93950	94.91248	102.14802
AS	75	1000.00000	82291.95000	5.200	1039.03352	940.57211	1020.39438
BA	137	1000.00000	228516.48700	4.200	1030.41313	951.67647	1017.91040
CD	111	100.00000	20484.93000	5.100	102.83760	94.15757	103.00483
CO	59	1000.00000	1310873.36700	4.600	1037.76303	949.06698	1013.16998
CU	63	1000.00000	973557.85000	5.000	1034.94309	942.57911	1022.47780
MO	98	100.00000	83847.91700	5.600	102.45564	93.64100	103.90336
NI	60	1000.00000	347582.13000	5.000	1038.77573	943.55213	1017.67214
SB	121	100.00000	56612.08000	4.500	103.12143	94.88014	101.99843
SE	78	100.00000	2393.98300	3.300	96.22024	102.21537	101.56438
SN	120	100.00000	71215.59300	5.700	102.69021	93.49353	103.81626
SR	88	100.00000	53993.06700	4.400	100.80617	95.21838	103.97544
ZN	66	1000.00000	128186.34700	4.600	1043.59285	951.45550	1004.95165
BI-3	209	116512.08000	0.00000	0.000	113848.33000	120215.26000	115472.65000
PB	208	100.00000	393238.36700	2.800	100.82159	96.83901	102.33940
TL	205	100.00000	295098.47300	3.100	101.08650	96.50226	102.41125
U	238	100.00000	362787.47000	2.800	100.47193	96.96874	102.55934
SC-2	45	83447.09300	0.00000	0.000	85297.13000	82743.09000	82301.06000
GE-1	72	654551.05700	0.00000	0.000	644771.90000	648209.87000	670671.40000
GE-2	72	101237.32700	0.00000	0.000	102865.31000	99854.70000	100991.97000
GE-3	72	129911.66300	0.00000	0.000	126410.82000	132111.30000	131212.87000
TB-3	159	179585.00300	0.00000	0.000	176119.51000	183195.99000	179439.51000

Run Name: 1830201E07 Date/Time: 10/29/2018 5:55:45
Tube Number: 3
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	649010.81000	0.00000	0.000	636810.54000	655261.63000	654960.26000
SC-3	45	42161.29000	0.00000	0.000	41699.91000	42603.07000	42180.89000
AL	27	5195.62876	91889.87000	1.200	5194.44083	5136.04719	5256.39826
B	11	758.89751	78387.32300	2.200	778.19123	749.45221	749.04909
BE	9	54.59235	11917.41700	2.200	55.89410	54.29239	53.59055
CA	44	5294.98805	13179.60000	0.900	5344.35287	5294.27604	5246.33524
CR	52	538.09033	405580.15000	0.500	538.44312	535.47609	540.35178
FE	57	5179.65954	79128.48300	1.400	5108.50725	5178.16702	5252.30434
K	39	5265.12847	259646.59000	1.400	5235.83284	5208.43707	5351.11552
MG	24	5250.32219	283961.23300	0.500	5243.81968	5226.67757	5280.46932
MN	55	536.25370	212404.69700	1.600	529.68712	532.91277	546.16121
NA	23	4786.11844	572315.30300	1.300	4776.15876	4727.56489	4854.63169
TI	47	557.68292	9103.09000	3.300	561.90462	537.26206	573.88207
V	51	531.33392	322598.97300	1.200	530.10622	525.83207	538.06347
IN-2	115	151760.11300	0.00000	0.000	155214.31000	151468.30000	148597.73000
IN-3	115	59195.66300	0.00000	0.000	58297.53000	58747.20000	60542.26000
AG	107	53.16486	83779.33000	1.300	53.36041	53.72327	52.41089
AS	75	525.56566	42910.21000	1.300	524.51555	532.65445	519.52700
BA	137	524.95190	118979.95700	1.000	523.55900	530.57965	520.71704
CD	111	51.73024	10512.63000	1.000	51.39209	52.32836	51.47027
CO	59	525.50675	683356.16000	1.100	524.01823	531.75398	520.74805
CU	63	531.97923	513804.32700	1.200	533.62236	537.46366	524.85167
MO	98	51.94781	43233.33000	1.100	51.52667	52.56722	51.74955
NI	60	531.51579	183334.70000	0.900	527.45065	537.10739	529.98932
SB	121	54.25518	30464.12300	3.200	56.27348	53.10833	53.38372
SE	78	51.45740	1248.28000	3.600	50.74024	50.06745	53.56452
SN	120	53.92462	38212.96000	1.000	54.20436	54.26018	53.30933
SR	88	53.05510	28449.10700	1.100	52.39594	53.33445	53.43491
ZN	66	528.73700	67246.57700	1.300	532.86676	532.36969	520.97456
BI-3	209	116356.74300	0.00000	0.000	115179.34000	115310.73000	118580.16000
PB	208	52.09755	204716.11300	2.000	51.31121	53.29680	51.68465
TL	205	53.18479	156857.68700	1.600	52.37710	54.10768	53.06960
U	238	51.60957	187078.28300	0.800	51.13833	51.78866	51.90172
SC-2	45	83674.93000	0.00000	0.000	85598.99000	83527.35000	81898.45000
GE-1	72	628990.59000	0.00000	0.000	620590.85000	632555.46000	633825.46000
GE-2	72	102792.14700	0.00000	0.000	102765.48000	102574.13000	103036.83000
GE-3	72	130119.63700	0.00000	0.000	128538.80000	129396.06000	132424.05000
TB-3	159	176482.85700	0.00000	0.000	175460.74000	175600.45000	178387.38000

Run Name: 1830201E07 Date/Time: 10/29/2018 5:57:57
Tube Number: 4
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	634631.10700	0.00000	0.000	639804.44000	635713.97000	628374.91000
SC-3	45	41579.76300	0.00000	0.000	41559.84000	41539.03000	41640.42000
AL	27	-4.05037	40.00000	0.000	-6.34585	-2.89844	-2.90683
B	11	140.99956	16519.74000	2.500	144.94437	139.90165	138.15267
BE	9	0.03506	10.00000	26.100	0.03472	0.04437	0.02610
CA	44	77.89851	313.34300	15.900	80.71271	64.31128	88.67154
CR	52	0.42870	396.68700	12.600	0.46040	0.36640	0.45930
FE	57	1.06823	103.33300	35.100	0.85022	0.85355	1.50091
K	39	2.77267	6858.47700	135.200	6.71578	2.34777	-0.74556
MG	24	-1.35714	420.02000	0.000	-1.16453	-2.66443	-0.24248
MN	55	-0.21182	213.34700	0.000	0.01067	-0.29691	-0.34923
NA	23	-5.15940	7211.97000	0.000	-4.26902	-6.04572	-5.16347
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.03906	36.66700	130.700	0.09479	-0.00545	0.02786
IN-2	115	145898.56700	0.00000	0.000	142250.25000	148102.81000	147342.64000
IN-3	115	58533.17000	0.00000	0.000	59604.83000	58469.54000	57525.14000
AG	107	0.00001	3.33300	26635.100	-0.00213	0.00430	-0.00213
AS	75	0.11672	13.33300	33.500	0.12169	0.07540	0.15305
BA	137	0.04607	20.00000	96.200	0.04469	0.09106	0.00246
CD	111	0.00345	1.33300	338.800	-0.00330	-0.00330	0.01696
CO	59	0.03922	133.34000	58.400	0.04260	0.06025	0.01480
CU	63	0.04712	146.67300	50.400	0.06863	0.05106	0.02167
MO	98	0.06551	96.67000	40.600	0.07959	0.08213	0.03482
NI	60	-0.09243	56.66700	0.000	-0.11468	-0.05315	-0.10947
SB	121	0.53914	310.01300	19.000	0.65411	0.50486	0.45846
SE	78	-0.02616	0.88700	0.000	-0.00597	-0.06452	-0.00800
SN	120	0.04560	280.01300	245.700	-0.07538	0.14581	0.06637
SR	88	-0.07937	46.66700	0.000	-0.05608	-0.11074	-0.07130
ZN	66	4.59600	620.03300	15.100	4.19435	5.39738	4.19628
BI-3	209	113640.81300	0.00000	0.000	114907.14000	113979.92000	112035.38000
PB	208	-0.00479	63.33300	0.000	-0.00328	-0.01093	-0.00017
TL	205	0.01897	136.67300	24.400	0.01612	0.01648	0.02431
U	238	0.02264	86.66700	61.500	0.03167	0.00660	0.02967
SC-2	45	80849.27000	0.00000	0.000	78187.69000	81013.88000	83346.24000
GE-1	72	611821.52700	0.00000	0.000	610185.85000	612669.25000	612609.48000
GE-2	72	99585.65700	0.00000	0.000	96149.55000	100649.36000	101958.06000
GE-3	72	126801.00700	0.00000	0.000	127903.81000	123616.12000	128883.09000
TB-3	159	173816.06700	0.00000	0.000	175713.28000	171894.24000	173840.68000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:00:07
Tube Number: 5
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	629528.97300	0.00000	0.000	594499.48000	620595.89000	673491.55000
SC-3	45	42291.49000	0.00000	0.000	42381.33000	42933.58000	41559.56000
AL	27	396.80559	7145.29300	5.000	377.26030	416.82071	396.33576
B	11	83.20016	10773.22000	9.000	90.34329	83.80359	75.45359
BE	9	0.60151	129.33300	10.900	0.62836	0.64935	0.52680
CA	44	681.41011	1810.17000	7.000	643.12103	666.07005	735.03924
CR	52	4.72548	3650.58300	3.000	4.80641	4.56075	4.80928
FE	57	93.95449	1526.79700	1.200	92.65510	94.60654	94.60184
K	39	401.95697	26200.82700	1.500	402.88361	395.67229	407.31500
MG	24	102.04530	6024.78000	4.700	98.38736	100.27815	107.47038
MN	55	9.98751	4260.78300	6.400	9.78171	9.47228	10.70854
NA	23	870.68047	110906.75000	3.000	860.02837	851.45739	900.55567
TI	47	26.26014	430.02300	1.900	26.81356	25.86654	26.10032
V	51	0.96135	600.04000	17.400	0.92823	1.14247	0.81334
IN-2	115	148753.58000	0.00000	0.000	152253.79000	146517.26000	147489.69000
IN-3	115	60363.42000	0.00000	0.000	58916.01000	61147.40000	61026.85000
AG	107	0.52677	850.05300	11.200	0.52067	0.47088	0.58876
AS	75	2.17713	185.33300	9.500	2.14186	1.99078	2.39874
BA	137	3.93338	920.06700	8.500	3.54807	4.10057	4.15150
CD	111	1.01856	212.00000	10.200	0.91634	1.01616	1.12319
CO	59	0.94604	1336.77300	17.300	1.13344	0.87379	0.83089
CU	63	39.99744	39497.89700	2.500	39.72982	39.15081	41.11169
MO	98	1.99226	1733.50300	4.000	1.94232	1.95106	2.08338
NI	60	3.48417	1316.77000	5.500	3.26786	3.56042	3.62423
SB	121	2.09716	1210.09700	5.900	2.23693	2.05115	2.00341
SE	78	1.75843	43.33700	5.200	1.85480	1.67353	1.74698
SN	120	2.09173	1760.17000	10.700	1.89747	2.33777	2.03995
SR	88	6.41793	3587.24300	5.600	6.73273	6.49902	6.02203
ZN	66	15.11048	2003.54000	4.100	14.44427	15.65669	15.23047
BI-3	209	113875.38300	0.00000	0.000	112962.07000	116591.88000	112072.20000
PB	208	3.10187	12002.51300	2.700	3.09717	3.02040	3.18804
TL	205	0.54875	1663.49700	9.700	0.59351	0.48950	0.56324
U	238	0.51786	1843.54000	3.500	0.49837	0.52136	0.53386
SC-2	45	82445.08000	0.00000	0.000	82682.86000	82622.15000	82030.23000
GE-1	72	612048.15300	0.00000	0.000	579138.74000	607079.48000	649926.24000
GE-2	72	102563.48000	0.00000	0.000	103761.87000	101365.05000	102563.52000
GE-3	72	128273.64000	0.00000	0.000	125572.29000	130870.14000	128378.49000
TB-3	159	175128.39700	0.00000	0.000	172674.96000	180310.23000	172400.00000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:02:16
Tube Number: 6
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	626093.99000	0.00000	0.000	623834.29000	633781.20000	620666.48000
SC-3	45	42284.93000	0.00000	0.000	41900.32000	42452.33000	42502.14000
AL	27	107199.01224	1899441.48300	1.000	106037.04559	107365.67066	108194.32048
B	11	29.90416	5626.41000	1.700	30.43758	29.85958	29.41533
BE	9	0.04208	11.33300	34.800	0.02638	0.04454	0.05531
CA	44	302894.45119	749121.37000	1.400	299554.94723	301472.31137	307656.09496
CR	52	0.69344	603.37000	7.700	0.72287	0.72529	0.63216
FE	57	248039.35737	3796028.38000	0.800	247782.40573	246091.33073	250244.33563
K	39	101766.75158	4908288.15700	1.700	100393.71494	101168.26345	103738.27636
MG	24	102592.33093	5555975.75000	1.100	101555.65206	102463.58165	103757.75907
MN	55	2.71317	1376.78300	16.400	2.95584	2.98282	2.20087
NA	23	244429.78295	28917882.90000	0.700	243579.56386	243185.76808	246524.01692
TI	47	2138.55666	35015.89300	2.200	2128.36592	2190.92550	2096.37855
V	51	0.04911	43.33300	70.400	0.07727	0.01054	0.05952
IN-2	115	140148.63300	0.00000	0.000	144475.62000	135203.53000	140766.75000
IN-3	115	59046.88000	0.00000	0.000	57416.70000	60227.52000	59496.42000
AG	107	0.01696	30.00000	2.800	0.01750	0.01658	0.01681
AS	75	1.04029	88.66700	3.400	1.06260	1.05889	0.99939
BA	137	1.18149	276.67700	11.700	1.18529	1.04124	1.31795
CD	111	0.22998	47.33300	24.800	0.23008	0.28690	0.17296
CO	59	0.88716	1233.42700	9.400	0.90304	0.79741	0.96104
CU	63	0.88034	950.07300	2.900	0.89734	0.85052	0.89317
MO	98	2123.82611	1761063.36000	1.400	2148.76612	2090.65669	2132.05552
NI	60	1.13040	476.69000	19.400	1.29639	0.88168	1.21314
SB	121	1.29233	733.37700	7.500	1.37755	1.31243	1.18700
SE	78	-0.02437	0.89000	0.000	-0.03548	-0.00292	-0.03471
SN	120	-0.07288	200.01000	0.000	-0.07927	-0.05037	-0.08899
SR	88	16.18171	8712.92300	5.000	16.40773	15.28465	16.85276
ZN	66	0.95080	163.34300	18.400	0.87955	0.82277	1.15008
BI-3	209	110120.61300	0.00000	0.000	108947.66000	109875.04000	111539.14000
PB	208	0.83659	3190.29000	4.900	0.78897	0.86302	0.85779
TL	205	-0.00713	60.00000	0.000	-0.01767	-0.01058	0.00685
U	238	0.03610	130.00700	30.100	0.04824	0.02736	0.03269
SC-2	45	81948.53700	0.00000	0.000	83316.16000	78761.09000	83768.36000
GE-1	72	601362.18000	0.00000	0.000	603645.97000	604723.27000	595717.30000
GE-2	72	97371.71700	0.00000	0.000	100035.58000	93521.92000	98557.65000
GE-3	72	125912.95700	0.00000	0.000	124644.97000	124826.49000	128267.41000
TB-3	159	175809.79700	0.00000	0.000	174607.38000	176261.15000	176560.86000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:04:37
Tube Number: 7
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	664423.26000	0.00000	0.000	655187.22000	669763.27000	668319.29000
SC-3	45	43381.56000	0.00000	0.000	43454.90000	43374.82000	43314.96000
AL	27	106185.18165	1930148.40700	1.300	104905.21349	105947.79556	107702.53592
B	11	7.45905	3682.47300	15.500	8.63739	7.41632	6.32345
BE	9	0.02700	8.66700	49.800	0.02455	0.04152	0.01494
CA	44	304817.76603	773369.72700	2.400	300317.24089	300759.26838	313376.78882
CR	52	203.23448	157671.31000	1.100	200.67591	203.90148	205.12605
FE	57	247769.50036	3890142.75700	1.700	244518.33944	246382.15937	252408.00226
K	39	102461.19220	5069507.53000	1.100	101704.01615	101941.53992	103738.02055
MG	24	102451.00390	5691888.66700	0.800	101605.75014	102458.46924	103288.79232
MN	55	205.25169	83837.41300	2.900	201.55133	202.19707	212.00667
NA	23	244242.53602	29644210.39000	1.300	242003.94171	242877.82665	247845.83970
TI	47	2120.74022	35623.88700	1.200	2106.41491	2106.13246	2149.67330
V	51	207.99667	129950.11300	1.600	206.31077	205.89916	211.78009
IN-2	115	144767.82000	0.00000	0.000	142928.26000	144050.32000	147324.88000
IN-3	115	59706.66700	0.00000	0.000	59706.40000	59535.45000	59878.15000
AG	107	48.19845	76618.72700	1.400	48.21700	48.84889	47.52945
AS	75	104.35983	8598.61000	2.400	103.22245	102.66617	107.19087
BA	137	0.83215	200.01000	29.400	0.56952	1.05384	0.87309
CD	111	95.20336	19514.20300	0.400	95.16071	95.62009	94.82927
CO	59	199.63519	261922.01000	1.400	198.03407	198.09692	202.77459
CU	63	196.36024	191382.26000	1.500	192.93770	197.65307	198.48994
MO	98	2130.58675	1786749.92000	0.600	2131.92188	2143.22515	2116.61321
NI	60	194.13125	67597.13300	0.700	192.65880	194.83438	194.90058
SB	121	1.24734	716.71300	16.100	1.04149	1.25705	1.44347
SE	78	97.17964	2248.18300	1.300	98.54172	96.17970	96.81752
SN	120	-0.13691	156.67300	0.000	-0.11810	-0.15980	-0.13283
SR	88	17.10168	9309.97300	2.000	16.92284	16.87905	17.50315
ZN	66	93.37341	12015.42300	1.900	91.65396	95.20711	93.25915
BI-3	209	110112.40700	0.00000	0.000	109452.80000	110380.42000	110504.00000
PB	208	0.85124	3243.61300	3.600	0.85560	0.81871	0.87942
TL	205	-0.01181	46.66700	0.000	-0.01051	-0.01424	-0.01068
U	238	0.03121	113.33700	22.200	0.03921	0.02723	0.02720
SC-2	45	85451.61300	0.00000	0.000	84049.93000	85066.05000	87238.86000
GE-1	72	639073.74000	0.00000	0.000	634094.91000	644055.85000	639070.46000
GE-2	72	100528.99000	0.00000	0.000	98444.86000	100800.28000	102341.83000
GE-3	72	130107.11700	0.00000	0.000	129448.01000	130557.54000	130315.80000
TB-3	159	178057.26300	0.00000	0.000	175965.72000	179856.74000	178349.33000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:06:47
Tube Number: 8
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	641756.20300	0.00000	0.000	656293.43000	646889.13000	622086.05000
SC-3	45	43769.57000	0.00000	0.000	42091.00000	42622.72000	46594.99000
AL	27	1.54077	143.33700	130.800	2.15966	3.17403	-0.71140
B	11	-1.29013	2697.59700	0.000	-1.38106	-0.17774	-2.31160
BE	9	0.00671	4.00000	236.200	-0.00269	0.02502	-0.00219
CA	44	60.55574	286.68000	34.400	66.86244	37.30730	77.49746
CR	52	0.34095	346.68700	22.300	0.40010	0.36754	0.25522
FE	57	20.28079	413.35300	6.200	21.11756	18.83701	20.88780
K	39	16.96128	7899.04300	94.900	32.59675	17.84388	0.44321
MG	24	4.70907	780.04300	26.200	4.67080	5.96310	3.49330
MN	55	0.56024	543.36000	22.400	0.43150	0.56673	0.68249
NA	23	50.13507	14323.89700	16.300	56.56530	52.92258	40.91735
TI	47	1.35001	23.33300	60.200	1.22712	0.60591	2.21701
V	51	0.04242	40.00000	71.000	0.06032	0.05929	0.00763
IN-2	115	154059.14700	0.00000	0.000	147609.20000	149649.30000	164918.94000
IN-3	115	60380.28700	0.00000	0.000	59164.83000	58271.21000	63704.82000
AG	107	0.01048	20.00000	62.800	0.01692	0.01076	0.00377
AS	75	0.09396	12.00000	70.200	0.02492	0.10070	0.15625
BA	137	0.11922	36.66700	96.200	0.13363	0.22598	-0.00194
CD	111	0.00308	1.33300	179.900	-0.00330	0.00670	0.00585
CO	59	0.02551	120.00700	89.400	0.00491	0.02161	0.05001
CU	63	0.05361	156.67700	93.900	0.11137	0.03056	0.01889
MO	98	2.08657	1810.18300	8.600	1.99412	2.29433	1.97126
NI	60	-0.09598	56.66700	0.000	-0.08459	-0.05245	-0.15090
SB	121	0.03461	30.00000	137.400	0.08883	0.00000	0.01501
SE	78	-0.03722	0.67000	0.000	-0.03610	-0.03648	-0.03908
SN	120	-0.22256	96.67000	0.000	-0.27224	-0.16992	-0.22553
SR	88	-0.01658	83.33700	0.000	-0.09269	-0.01551	0.05847
ZN	66	7.31230	990.07700	5.900	7.45533	7.65466	6.82690
BI-3	209	115019.37000	0.00000	0.000	112820.60000	113072.51000	119165.00000
PB	208	0.00280	93.33700	311.400	0.01281	-0.00299	-0.00144
TL	205	0.00476	96.66700	128.900	0.00645	0.00986	-0.00204
U	238	0.00652	30.00000	43.600	0.00384	0.00950	0.00623
SC-2	45	84198.43300	0.00000	0.000	80098.56000	81686.17000	90810.57000
GE-1	72	626762.05000	0.00000	0.000	633457.18000	628060.03000	618768.94000
GE-2	72	102903.50700	0.00000	0.000	99090.64000	102624.15000	106995.73000
GE-3	72	129690.34700	0.00000	0.000	126834.70000	126471.80000	135764.54000
TB-3	159	174412.32700	0.00000	0.000	168955.29000	170355.27000	183926.42000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:08:57
Tube Number: 9
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	676157.69700	0.00000	0.000	660850.30000	678964.52000	688658.27000
SC-3	45	43511.76300	0.00000	0.000	43163.59000	42832.90000	44538.80000
AL	27	2562.12272	46814.30300	2.700	2522.32304	2641.32077	2522.72437
B	11	260.01442	29939.63000	0.900	261.61248	261.19837	257.23240
BE	9	25.86675	5883.84300	2.200	26.50939	25.61783	25.47305
CA	44	2549.36786	6615.04700	3.400	2477.37091	2644.66488	2526.06779
CR	52	262.49969	204247.53000	3.100	253.41102	269.05690	265.03116
FE	57	2564.84406	40483.75300	3.500	2463.30441	2636.35642	2594.87135
K	39	2646.67155	138209.74300	3.200	2552.35611	2711.77123	2675.88731
MG	24	2591.46157	144891.90300	2.800	2526.02939	2668.73128	2579.62402
MN	55	259.84374	106386.73000	2.000	253.81722	262.52358	263.19041
NA	23	2465.24433	308184.49300	3.200	2386.57098	2542.13859	2467.02342
TI	47	275.99398	4647.55000	4.100	276.47497	287.05116	264.45582
V	51	261.13883	163633.91300	2.100	255.41796	266.50145	261.49709
IN-2	115	157523.76700	0.00000	0.000	155617.64000	156746.05000	160207.61000
IN-3	115	62474.30000	0.00000	0.000	61004.74000	62186.34000	64231.82000
AG	107	24.92744	41461.70700	1.600	24.77833	25.37367	24.63031
AS	75	249.10709	21469.31300	3.400	243.21146	258.71863	245.39118
BA	137	244.05201	58401.61700	2.300	237.75224	248.67030	245.73349
CD	111	24.44139	5242.34300	0.700	24.40147	24.63131	24.29139
CO	59	250.55093	343996.37000	2.400	244.20543	256.19696	251.25041
CU	63	250.58631	255540.95300	1.700	246.69478	255.18869	249.87545
MO	98	25.28271	22234.62000	2.100	24.70940	25.76392	25.37480
NI	60	250.66563	91288.99700	2.200	248.65323	256.86971	246.47395
SB	121	23.83488	14134.25700	2.400	23.41210	24.47740	23.61515
SE	78	25.05868	632.01300	1.700	25.49956	24.62285	25.05363
SN	120	25.05467	18876.67700	2.400	25.73681	24.71296	24.71423
SR	88	25.22829	14320.98300	3.100	25.13565	26.06338	24.48584
ZN	66	249.66093	33539.65700	3.000	244.80904	258.16546	246.00831
BI-3	209	118287.80700	0.00000	0.000	115734.14000	118025.87000	121103.41000
PB	208	25.15222	100542.44000	1.200	24.82090	25.26265	25.37310
TL	205	24.96286	74915.82700	3.500	23.98830	25.71501	25.18528
U	238	24.98678	92090.26700	2.000	24.46318	25.43709	25.06007
SC-2	45	85934.92700	0.00000	0.000	85307.63000	85720.77000	86776.38000
GE-1	72	663991.01700	0.00000	0.000	650165.81000	671226.55000	670580.69000
GE-2	72	106796.96000	0.00000	0.000	105595.06000	106813.36000	107982.46000
GE-3	72	134348.67000	0.00000	0.000	130134.39000	134562.60000	138349.02000
TB-3	159	178052.94300	0.00000	0.000	170678.86000	179722.69000	183757.28000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:11:06
Tube Number: 10
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	668951.50000	0.00000	0.000	718929.83000	640434.99000	647489.68000
SC-3	45	44347.92000	0.00000	0.000	43545.60000	45310.87000	44187.29000
AL	27	-4.02410	43.33300	0.000	-4.70157	-3.18541	-4.18532
B	11	50.75120	8138.90000	5.700	47.82064	53.59149	50.84147
BE	9	0.02148	7.33300	71.000	0.00479	0.03467	0.02498
CA	44	99.54235	390.02000	24.400	90.42049	81.13811	127.06845
CR	52	0.36566	373.34700	34.500	0.25473	0.33949	0.50274
FE	57	0.39600	100.00300	685.600	-1.99104	3.34945	-0.17041
K	39	8.80945	7612.20000	132.900	20.10413	-3.27416	9.59837
MG	24	-1.36367	446.69000	0.000	0.08117	-2.35046	-1.82171
MN	55	-0.34241	173.34300	0.000	-0.41611	-0.35889	-0.25222
NA	23	7.33511	9239.88700	33.300	6.91118	5.12936	9.96478
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.03511	36.66700	66.300	0.04162	0.05446	0.00926
IN-2	115	151920.14700	0.00000	0.000	152416.30000	156855.84000	146488.30000
IN-3	115	61101.80000	0.00000	0.000	59315.08000	61854.50000	62135.82000
AG	107	0.00411	10.00000	154.200	0.01054	-0.00213	0.00392
AS	75	0.05381	8.66700	46.800	0.02474	0.06861	0.06808
BA	137	0.01329	13.33300	485.400	-0.04294	0.08373	-0.00091
CD	111	0.00311	1.33300	178.500	0.00652	0.00612	-0.00330
CO	59	0.01298	103.33300	149.800	0.03544	0.00190	0.00160
CU	63	0.03787	143.34300	80.800	0.05915	0.00282	0.05165
MO	98	0.06927	103.33700	59.300	0.11624	0.04027	0.05131
NI	60	-0.13626	43.33300	0.000	-0.08503	-0.20319	-0.12055
SB	121	0.50444	303.34300	10.500	0.44408	0.52738	0.54187
SE	78	-0.03688	0.67000	0.000	-0.03699	-0.03777	-0.03588
SN	120	-0.15582	146.67300	0.000	-0.17322	-0.07204	-0.22219
SR	88	-0.11285	30.00000	0.000	-0.09288	-0.09594	-0.14974
ZN	66	4.45702	626.70700	25.800	5.62974	4.40603	3.33530
BI-3	209	116636.63000	0.00000	0.000	112688.71000	117186.75000	120034.43000
PB	208	-0.00960	46.66700	0.000	-0.01607	-0.00868	-0.00405
TL	205	0.01202	120.00300	79.800	0.01349	0.00178	0.02079
U	238	0.01653	66.66700	39.100	0.02094	0.00910	0.01954
SC-2	45	83856.22000	0.00000	0.000	84281.85000	86564.74000	80722.07000
GE-1	72	645977.51700	0.00000	0.000	683363.82000	618510.07000	636058.66000
GE-2	72	102650.70300	0.00000	0.000	102421.62000	105775.26000	99755.23000
GE-3	72	131943.57000	0.00000	0.000	128044.62000	132525.20000	135260.89000
TB-3	159	175536.91700	0.00000	0.000	169666.42000	176694.61000	180249.72000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:13:16
Tube Number: 11 Batch: 182951063902A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	659639.45700	0.00000	0.000	628245.50000	671127.88000	679544.99000
SC-3	45	44551.67300	0.00000	0.000	44508.27000	45942.26000	43204.49000
AL	27	4.75108	206.84700	355.500	24.24867	-5.30685	-4.68859
B	11	6.36276	3541.77000	23.100	7.95430	6.07972	5.05426
BE	9	0.00610	4.00000	140.400	-0.00228	0.01483	0.00575
CA	44	13.22761	166.78300	563.800	99.01588	-36.07550	-23.25756
CR	52	0.37974	386.68700	26.700	0.48580	0.36993	0.28347
FE	57	10.55914	263.52000	176.700	32.10522	-0.38539	-0.04239
K	39	10.43904	7733.50300	147.800	27.72249	-1.93026	5.52489
MG	24	4.53439	785.60300	412.700	26.14049	-6.18485	-6.35246
MN	55	0.08048	350.13300	471.100	0.51141	-0.20197	-0.06799
NA	23	31.55866	12297.91300	168.100	92.82689	0.39853	1.45056
TI	47	0.19341	3.33300	173.200	0.58024	0.00000	0.00000
V	51	0.03521	36.67700	243.800	0.13390	-0.02217	-0.00610
IN-2	115	147413.75300	0.00000	0.000	143901.73000	144546.27000	153793.26000
IN-3	115	61929.44000	0.00000	0.000	61866.52000	62357.43000	61564.37000
AG	107	0.00192	6.66700	365.100	0.01001	-0.00213	-0.00213
AS	75	0.06046	9.33300	79.300	0.04515	0.11417	0.02206
BA	137	0.04156	20.00000	268.700	0.16814	-0.04294	-0.00052
CD	111	0.00922	2.66700	57.900	0.00612	0.01539	0.00616
CO	59	0.03368	133.35000	185.900	0.10494	0.00867	-0.01257
CU	63	-0.00709	100.01000	0.000	0.07217	-0.06688	-0.02655
MO	98	0.04405	83.34000	196.200	0.14384	-0.00615	-0.00556
NI	60	1.00852	456.69000	26.300	0.93473	0.78766	1.30318
SB	121	0.08974	63.33300	11.100	0.10120	0.08336	0.08466
SE	78	-0.05542	0.22300	0.000	-0.06452	-0.06452	-0.03724
SN	120	-0.18095	130.01000	0.000	-0.20800	-0.18221	-0.15264
SR	88	-0.06027	60.00300	0.000	0.04728	-0.09652	-0.13158
ZN	66	0.69022	136.67300	26.900	0.49090	0.85783	0.72195
BI-3	209	117527.13700	0.00000	0.000	118620.31000	118499.89000	115461.21000
PB	208	-0.01126	40.00300	0.000	-0.00634	-0.01382	-0.01363
TL	205	-0.00725	63.33300	0.000	-0.00525	-0.01188	-0.00461
U	238	0.00539	26.67000	189.800	0.01709	-0.00185	0.00093
SC-2	45	79857.57700	0.00000	0.000	78289.40000	78389.27000	82894.06000
GE-1	72	641915.85000	0.00000	0.000	620040.38000	644938.12000	660769.05000
GE-2	72	100201.33000	0.00000	0.000	98335.70000	99100.12000	103168.17000
GE-3	72	134075.25700	0.00000	0.000	133181.58000	135310.03000	133734.16000
TB-3	159	176788.22700	0.00000	0.000	174830.33000	180260.15000	175274.20000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:15:26
Tube Number: 12 Batch: 182951063902A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	678507.17700	0.00000	0.000	675136.16000	680786.16000	679599.21000
SC-3	45	44862.92000	0.00000	0.000	43074.34000	45842.73000	45671.69000
AL	27	2042.87069	38513.89700	2.700	2053.58352	1984.00682	2091.02172
B	11	259.48630	29992.43300	1.200	256.03158	260.76889	261.65843
BE	9	4.16244	952.70700	3.700	4.07496	4.33800	4.07437
CA	44	4218.75410	11187.89700	5.200	4472.87015	4080.21987	4103.17228
CR	52	52.74560	42358.55000	2.300	54.14716	52.25367	51.83596
FE	57	1032.80631	16850.35700	4.000	1071.87992	989.90275	1036.63626
K	39	10377.25891	537179.26300	2.700	10686.41413	10124.95999	10320.40260
MG	24	2052.23142	118346.61700	3.400	2123.85448	1983.73769	2049.10209
MN	55	52.18494	22270.94000	2.300	53.50435	51.25248	51.79799
NA	23	10239.67397	1292294.33000	3.500	10656.76161	10017.01473	10045.24557
TI	47	255.60230	4434.16700	6.100	272.84915	242.84782	251.10992
V	51	50.75799	32787.39700	2.500	52.22253	50.06904	49.98240
IN-2	115	148329.64000	0.00000	0.000	145263.48000	149309.93000	150415.51000
IN-3	115	61558.52300	0.00000	0.000	59557.66000	61723.82000	63394.09000
AG	107	50.97439	83514.14300	2.200	51.68507	51.54278	49.69533
AS	75	11.30012	962.70700	4.400	11.78439	11.32214	10.79381
BA	137	52.17876	12309.21000	1.500	52.38633	51.30826	52.84168
CD	111	5.11284	1080.71700	2.000	5.22054	5.10328	5.01469
CO	59	260.17133	351724.21300	2.400	266.89179	258.98478	254.63742
CU	63	52.28219	52592.52000	2.100	53.29944	52.45164	51.09550
MO	98	49.70068	43002.54700	1.700	50.36407	50.01708	48.72090
NI	60	53.85953	19390.14300	3.900	56.25723	52.24014	53.08121
SB	121	6.28585	3677.28000	4.400	6.58611	6.23475	6.03670
SE	78	10.42167	248.22700	6.500	11.08524	10.44759	9.73217
SN	120	51.93342	38263.20000	2.800	53.48896	51.72197	50.58933
SR	88	41.78135	23313.12300	0.500	41.96892	41.83843	41.53672
ZN	66	520.46734	68827.67000	2.100	532.50640	510.92215	517.97347
BI-3	209	115550.67300	0.00000	0.000	113073.09000	116581.83000	116997.10000
PB	208	15.43892	60302.63000	1.400	15.57740	15.55333	15.18605
TL	205	2.08576	6188.34700	1.600	2.11197	2.09836	2.04695
U	238	0.00368	20.00000	197.400	0.00099	0.01192	-0.00185
SC-2	45	82374.36000	0.00000	0.000	81405.58000	80993.28000	84724.22000
GE-1	72	655764.31700	0.00000	0.000	652470.93000	658621.87000	656200.15000
GE-2	72	101919.35700	0.00000	0.000	99502.28000	101455.93000	104799.86000
GE-3	72	132851.18700	0.00000	0.000	129337.38000	135087.92000	134128.26000
TB-3	159	180879.08000	0.00000	0.000	174060.78000	185146.17000	183430.29000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:17:37
Tube Number: 13 Batch: 182951063902A
Sample Number: **9862002** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	660102.31000	0.00000	0.000	671256.40000	657500.77000	651549.76000
SC-3	45	44806.00000	0.00000	0.000	45110.42000	45672.18000	43635.40000
AL	27	2024.95315	38112.99300	4.200	1952.13601	2004.02121	2118.70224
B	11	171.05856	20222.90000	1.600	168.66495	174.10454	170.40618
BE	9	1.13019	253.33300	8.800	1.01579	1.19102	1.18376
CA	44	90066.20230	236017.60300	2.700	88827.88336	88526.16819	92844.55533
CR	52	12.97152	10470.70700	2.400	12.62429	13.05613	13.23415
FE	57	2241.08071	36419.59700	2.800	2221.04490	2190.62418	2311.57304
K	39	3535.40607	187589.81300	3.000	3456.26872	3492.79431	3657.15520
MG	24	29338.32720	1683254.66300	2.400	28965.61816	28902.91131	30146.45214
MN	55	455.91155	191887.02300	2.400	448.15075	451.26020	468.32369
NA	23	25927.77002	3256603.28300	2.700	25376.78858	25696.66933	26709.85213
TI	47	67.49470	1170.09300	6.800	62.97877	67.29434	72.21099
V	51	3.97925	2580.32700	3.700	3.91916	3.87068	4.14790
IN-2	115	149949.39700	0.00000	0.000	146991.34000	146537.94000	156318.91000
IN-3	115	60991.44700	0.00000	0.000	61081.24000	61633.12000	60259.98000
AG	107	1.01999	1660.15000	3.500	1.01259	1.05836	0.98901
AS	75	20.41297	1720.78300	4.600	19.82261	19.92700	21.48932
BA	137	231.54093	54076.56700	3.200	223.20055	234.43255	236.98968
CD	111	2.00709	420.67700	8.300	2.02835	1.83055	2.16238
CO	59	2.78812	3820.60300	4.700	2.67879	2.75025	2.93532
CU	63	83.62392	83308.67000	2.500	81.48305	83.64260	85.74610
MO	98	6.36867	5501.27700	5.800	6.02234	6.75390	6.32976
NI	60	10.46200	3807.29700	7.400	11.21216	9.66037	10.51347
SB	121	4.35170	2526.99000	5.900	4.14236	4.27618	4.63654
SE	78	4.14157	100.44300	12.600	4.19523	4.63571	3.59377
SN	120	4.22133	3320.54700	6.500	3.96537	4.18589	4.51273
SR	88	375.95833	207107.60000	1.800	370.22924	374.38677	383.25896
ZN	66	38.77223	5121.09000	4.800	37.25451	38.20306	40.85911
BI-3	209	114521.43700	0.00000	0.000	116238.73000	113809.37000	113516.21000
PB	208	7.31783	28369.71000	2.200	7.16312	7.31127	7.47909
TL	205	1.04400	3110.47000	4.700	0.98697	1.07110	1.07393
U	238	7.33804	26177.32000	3.300	7.09761	7.33122	7.58531
SC-2	45	85626.43300	0.00000	0.000	82571.94000	84744.89000	89562.47000
GE-1	72	639277.24300	0.00000	0.000	649368.86000	636555.50000	631907.37000
GE-2	72	103392.20300	0.00000	0.000	101162.58000	102200.35000	106813.68000
GE-3	72	132854.28000	0.00000	0.000	133532.99000	133423.08000	131606.77000
TB-3	159	179032.35000	0.00000	0.000	179054.18000	181600.80000	176442.07000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:19:46
Tube Number: 14 Batch: 182951063902A
Sample Number: **9862003** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	668163.58300	0.00000	0.000	689281.55000	678345.38000	636863.82000
SC-3	45	43806.26000	0.00000	0.000	43354.54000	43485.20000	44579.04000
AL	27	2549.07725	46901.45700	0.400	2547.62724	2560.88496	2538.71956
B	11	305.90230	34246.10700	5.400	296.47935	296.38497	324.84259
BE	9	4.24290	954.03700	9.100	3.83577	4.29229	4.60064
CA	44	97548.85514	249994.75000	0.800	98289.10679	97610.52611	96746.93252
CR	52	55.80727	43776.24700	1.600	56.82536	55.22206	55.37438
FE	57	1755.02410	27914.13000	3.300	1818.11385	1702.52465	1744.43379
K	39	13135.42218	662374.28700	1.200	13249.52388	13199.43065	12957.31200
MG	24	32618.08655	1830271.84700	0.700	32833.18138	32393.47660	32627.60167
MN	55	489.91127	201596.22700	2.300	500.14961	491.75180	477.83240
NA	23	35107.40099	4309568.79000	0.800	35130.01560	35379.56505	34812.62232
TI	47	272.26108	4617.54700	2.600	269.29869	280.37028	267.11427
V	51	53.94062	34037.10000	1.400	54.77461	53.79349	53.25378
IN-2	115	147260.03000	0.00000	0.000	138677.09000	148018.00000	155085.00000
IN-3	115	61572.98700	0.00000	0.000	59874.77000	61630.84000	63213.35000
AG	107	49.09787	80446.39300	3.400	51.03956	48.12020	48.13385
AS	75	27.23426	2315.53300	3.600	28.21597	27.22239	26.26441
BA	137	270.30762	63727.71000	1.600	274.26168	265.63882	271.02235
CD	111	4.75115	1003.37700	9.100	5.23179	4.61939	4.40228
CO	59	253.78174	343194.50000	2.500	261.18069	250.63778	249.52675
CU	63	52.66486	53000.82000	1.300	53.43731	52.34181	52.21547
MO	98	52.41967	45366.73300	1.500	53.32942	52.08633	51.84327
NI	60	51.01994	18375.50300	4.200	53.37347	50.45068	49.23568
SB	121	5.97312	3493.89300	7.900	6.46304	5.93617	5.52015
SE	78	10.84482	256.00300	7.200	11.73535	10.28553	10.51358
SN	120	51.09361	37654.96000	3.600	52.87967	51.22619	49.17497
SR	88	412.37000	229235.46300	3.000	426.62698	405.47085	405.01215
ZN	66	511.29075	67611.78300	3.400	530.23092	506.90780	496.73352
BI-3	209	115163.44700	0.00000	0.000	114010.85000	114544.42000	116935.07000
PB	208	15.83276	61631.49700	2.000	15.76131	16.17496	15.56202
TL	205	2.03697	6028.30000	5.300	2.04243	1.92588	2.14261
U	238	6.38565	22907.53300	3.300	6.51130	6.50624	6.13941
SC-2	45	81922.53000	0.00000	0.000	76017.56000	84280.95000	85469.08000
GE-1	72	641871.63300	0.00000	0.000	655864.68000	651903.90000	617846.32000
GE-2	72	100364.65000	0.00000	0.000	97025.22000	101254.63000	102814.10000
GE-3	72	131626.46700	0.00000	0.000	130324.41000	131404.18000	133150.81000
TB-3	159	178296.50000	0.00000	0.000	175662.36000	178378.24000	180848.90000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:21:58
Tube Number: 15 Batch: 182951063902A
Sample Number: **9862004** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	646878.33700	0.00000	0.000	648528.27000	650671.98000	641434.76000
SC-3	45	43599.09700	0.00000	0.000	42662.95000	43786.31000	44348.03000
AL	27	3169.69504	58000.94000	2.300	3249.89407	3150.94146	3108.24960
B	11	340.39050	36620.29000	0.600	339.62336	338.95198	342.59616
BE	9	4.49194	980.04000	2.900	4.60937	4.51190	4.35457
CA	44	95229.05137	242865.83000	1.900	97229.43207	93905.55889	94552.16316
CR	52	57.44676	44832.67700	3.300	59.61553	56.26404	56.46072
FE	57	2639.75247	41734.46700	2.100	2702.83907	2604.11943	2612.29891
K	39	13373.32836	670972.41000	1.900	13657.16979	13283.54448	13179.27080
MG	24	32327.27638	1805242.99700	0.800	32612.69721	32074.03071	32295.10122
MN	55	495.09559	202746.18000	2.800	510.57626	484.17717	490.53333
NA	23	34689.31969	4237495.14300	1.900	35306.56702	34767.82088	33993.57116
TI	47	278.42716	4697.59000	5.100	294.86059	269.00181	271.41909
V	51	54.69937	34344.24700	2.900	56.52742	53.80448	53.76622
IN-2	115	135351.66700	0.00000	0.000	141376.74000	127586.16000	137092.10000
IN-3	115	60101.19300	0.00000	0.000	59190.96000	61321.22000	59791.40000
AG	107	49.95108	79899.72700	4.600	50.00756	47.63640	52.20928
AS	75	27.14115	2254.19000	1.200	26.75393	27.36009	27.30945
BA	137	275.39347	63369.28000	1.600	279.03010	270.31391	276.83641
CD	111	5.22091	1078.05000	3.200	5.28243	5.34583	5.03447
CO	59	261.82595	345678.05700	2.100	263.20773	255.75487	266.51526
CU	63	54.00659	53061.07300	0.200	53.87966	54.02076	54.11935
MO	98	53.53915	45226.28700	2.300	54.45293	52.15156	54.01295
NI	60	56.75869	19957.58700	2.800	58.17557	57.09900	55.00150
SB	121	6.49356	3710.64000	5.200	6.87647	6.37904	6.22519
SE	78	11.19274	243.11300	3.000	10.83063	11.48511	11.26249
SN	120	52.16216	37537.91000	1.100	52.48348	51.51402	52.48899
SR	88	410.84684	222982.70700	2.800	411.01631	399.07640	422.44779
ZN	66	526.02624	67943.37700	2.700	511.85749	526.40977	539.81147
BI-3	209	113078.82300	0.00000	0.000	112829.73000	113545.39000	112861.35000
PB	208	16.52660	63171.05300	1.600	16.80254	16.50288	16.27439
TL	205	2.16997	6298.40700	2.600	2.10961	2.22131	2.17898
U	238	6.10405	21508.58300	2.100	5.97243	6.22935	6.11039
SC-2	45	77994.24700	0.00000	0.000	80410.51000	73031.44000	80540.79000
GE-1	72	618426.71000	0.00000	0.000	621228.00000	623488.31000	610563.82000
GE-2	72	94835.33300	0.00000	0.000	95859.43000	90131.13000	98515.44000
GE-3	72	131263.89000	0.00000	0.000	130497.84000	130404.69000	132889.14000
TB-3	159	176593.65000	0.00000	0.000	173910.70000	178527.71000	177342.54000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:24:08
Tube Number: 16 Batch: 182951063902A
Sample Number: **9858799** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	667636.69700	0.00000	0.000	675487.49000	683766.24000	643656.36000
SC-3	45	43455.11000	0.00000	0.000	42171.39000	44849.36000	43344.58000
AL	27	2684.20431	48968.14300	1.900	2737.39073	2634.41804	2680.80415
B	11	88.33595	11977.47300	3.200	87.43133	86.04475	91.53177
BE	9	0.12853	31.33300	31.500	0.09388	0.11869	0.17301
CA	44	86669.57209	220251.62300	2.900	87884.58449	83771.07809	88353.05369
CR	52	3.46677	2773.67700	1.300	3.49059	3.41316	3.49656
FE	57	3991.80904	62812.78300	4.900	4111.86422	3764.54558	4099.01732
K	39	3007.51619	155806.13000	2.600	3061.39658	2916.63784	3044.51415
MG	24	47937.06398	2666478.60300	3.000	49015.91857	46315.19762	48480.07574
MN	55	456.96179	186515.40000	2.900	459.82989	442.64989	468.40561
NA	23	28000.60983	3409392.97000	3.100	28684.99361	27015.86751	28300.96835
TI	47	32.61554	550.04300	12.900	30.62139	37.43324	29.79198
V	51	4.76585	3000.41700	7.100	4.39149	5.05717	4.84888
IN-2	115	143488.51000	0.00000	0.000	143238.42000	142830.20000	144396.91000
IN-3	115	61135.83000	0.00000	0.000	59350.69000	62547.21000	61509.59000
AG	107	0.00405	10.00000	150.700	0.00420	-0.00213	0.01009
AS	75	5.84478	497.34300	6.900	5.66852	6.30367	5.56216
BA	137	402.59082	94210.88300	2.200	411.26585	393.39340	403.11321
CD	111	0.05718	12.66700	12.500	0.06541	0.05259	0.05353
CO	59	1.96676	2723.67300	8.500	2.14499	1.81369	1.94161
CU	63	6.07218	6158.18700	4.100	6.36032	5.90232	5.95391
MO	98	4.43459	3850.65000	2.800	4.57946	4.37691	4.34740
NI	60	5.32604	1986.87000	5.700	5.55672	4.98498	5.43641
SB	121	0.30300	186.67700	24.000	0.23063	0.30220	0.37617
SE	78	0.06113	2.88700	151.400	-0.00638	0.02316	0.16661
SN	120	0.27853	463.36000	33.500	0.18084	0.28776	0.36699
SR	88	701.29371	387107.35300	1.500	709.90613	689.16081	704.81418
ZN	66	21.30704	2840.37300	7.000	21.39865	19.76669	22.75578
BI-3	209	112773.17300	0.00000	0.000	107879.07000	116007.49000	114432.96000
PB	208	2.41441	9254.94700	7.900	2.63435	2.29755	2.31134
TL	205	0.02391	150.00700	47.900	0.01903	0.01570	0.03700
U	238	31.25925	109721.75700	3.400	32.45404	30.37524	30.94849
SC-2	45	80999.99300	0.00000	0.000	81134.39000	80449.91000	81415.68000
GE-1	72	633499.40300	0.00000	0.000	637977.02000	648130.81000	614390.38000
GE-2	72	99595.98000	0.00000	0.000	99592.52000	99320.96000	99874.46000
GE-3	72	131989.42700	0.00000	0.000	128547.97000	134159.18000	133261.13000
TB-3	159	178737.11000	0.00000	0.000	174678.47000	182125.97000	179406.89000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:26:19
Tube Number: 17 Batch: 182951063902A
Sample Number: **9862013** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	630273.65000	0.00000	0.000	599037.96000	647247.49000	644535.50000
SC-3	45	43388.47300	0.00000	0.000	44237.24000	45020.34000	40907.84000
AL	27	2727.83775	49627.04700	5.200	2614.12168	2683.43940	2885.95217
B	11	18.43764	4546.05000	19.700	22.38987	17.67930	15.24374
BE	9	0.15729	36.00000	20.100	0.12721	0.19036	0.15431
CA	44	104555.53162	264983.40000	4.800	102443.01380	100986.56789	110237.01316
CR	52	3.49755	2790.37300	5.700	3.28477	3.52414	3.68375
FE	57	4313.76962	67707.69000	5.600	4159.19198	4191.61003	4590.50685
K	39	1757.54526	93666.75700	7.200	1687.85437	1681.92323	1902.85818
MG	24	18941.88411	1051312.69300	4.700	18442.85228	18411.29592	19971.50412
MN	55	117.88812	48250.82300	3.600	113.62317	118.04885	121.99233
NA	23	1022.68211	132057.35300	5.100	991.56450	993.98027	1082.50154
TI	47	34.67820	580.03300	20.800	26.85564	36.14150	41.03745
V	51	3.31076	2076.88000	9.300	3.03919	3.24822	3.64488
IN-2	115	151785.40000	0.00000	0.000	148536.00000	152438.83000	154381.37000
IN-3	115	59692.11000	0.00000	0.000	60820.86000	60427.91000	57827.56000
AG	107	-0.00007	3.33300	0.000	0.00405	-0.00213	-0.00213
AS	75	3.01253	252.00000	5.900	2.83617	3.19087	3.01057
BA	137	45.86413	10480.96300	5.900	44.50595	44.10436	48.98210
CD	111	0.02274	5.33300	106.500	0.04459	-0.00330	0.02692
CO	59	1.87072	2536.98300	1.100	1.87450	1.84942	1.88824
CU	63	3.22621	3243.81300	3.900	3.25016	3.08939	3.33906
MO	98	1.75467	1513.46700	4.700	1.66913	1.76279	1.83209
NI	60	5.83569	2116.90300	5.300	5.72680	5.59518	6.18511
SB	121	0.09461	63.33300	50.600	0.05125	0.08660	0.14600
SE	78	-0.00058	1.55300	0.000	-0.00845	-0.00989	0.01660
SN	120	-0.09875	183.34300	0.000	-0.12249	-0.10705	-0.06671
SR	88	141.81103	76471.78000	3.500	137.72077	140.31216	147.40017
ZN	66	15.40060	2016.88000	2.000	15.43631	15.07645	15.68903
BI-3	209	112555.90700	0.00000	0.000	116230.74000	115130.85000	106306.13000
PB	208	2.65787	10155.30300	8.500	2.60925	2.45934	2.90501
TL	205	0.01835	133.34000	29.700	0.01901	0.01260	0.02345
U	238	2.40160	8413.04000	5.200	2.29140	2.37469	2.53872
SC-2	45	84735.07300	0.00000	0.000	82913.88000	83306.25000	87985.09000
GE-1	72	614323.01000	0.00000	0.000	587544.21000	627322.41000	628102.41000
GE-2	72	102530.18000	0.00000	0.000	98747.47000	104024.22000	104818.85000
GE-3	72	130019.36300	0.00000	0.000	131596.18000	132596.11000	125865.80000
TB-3	159	173937.24300	0.00000	0.000	175671.79000	178427.03000	167712.91000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:28:28
Tube Number: 18 Batch: 182951063902A
Sample Number: **9862013** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: SW846-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	662593.38700	0.00000	0.000	634967.49000	646732.84000	706079.83000
SC-3	45	44324.17000	0.00000	0.000	43053.82000	44668.53000	45250.16000
AL	27	276.70275	5254.43300	2.800	283.08640	279.03663	267.98523
B	11	1.13661	3020.98700	215.800	2.80139	2.28915	-1.68070
BE	9	0.02064	7.33300	102.300	0.02571	-0.00256	0.03878
CA	44	10199.65895	26561.33700	1.700	10401.08488	10084.56121	10113.33077
CR	52	0.73838	666.70300	15.000	0.85663	0.72167	0.63684
FE	57	427.25519	6941.90700	4.300	446.77408	424.84705	410.14446
K	39	181.58267	16332.83700	3.600	187.69172	182.45801	174.59827
MG	24	1862.28683	106179.80300	2.700	1918.41064	1842.90257	1825.54729
MN	55	11.25104	4984.33300	11.900	12.78724	10.67424	10.29164
NA	23	499.65288	70252.33000	2.100	511.47487	492.97601	494.50776
TI	47	4.05619	70.00000	36.200	2.39936	5.20341	4.56580
V	51	0.24909	173.34300	12.500	0.23591	0.22658	0.28477
IN-2	115	146820.41700	0.00000	0.000	145801.94000	142644.26000	152015.05000
IN-3	115	61353.54000	0.00000	0.000	59776.28000	61202.96000	63081.38000
AG	107	0.00201	6.66700	178.200	0.00416	0.00401	-0.00213
AS	75	0.32192	31.33300	21.600	0.29101	0.40155	0.27321
BA	137	4.23672	1003.40700	10.800	4.67627	4.26746	3.76643
CD	111	0.00295	1.33300	183.500	-0.00330	0.00622	0.00594
CO	59	0.16767	313.35000	32.200	0.11083	0.21833	0.17383
CU	63	0.24089	346.68300	20.100	0.26296	0.27439	0.18531
MO	98	0.14944	173.34300	5.900	0.15067	0.15759	0.14006
NI	60	0.64638	323.35300	1.900	0.66050	0.63908	0.63956
SB	121	-0.00045	10.00000	0.000	0.03482	-0.01809	-0.01809
SE	78	-0.06452	0.00000	0.000	-0.06452	-0.06452	-0.06452
SN	120	-0.18373	126.67300	0.000	-0.16058	-0.20639	-0.18422
SR	88	13.58538	7615.59000	2.200	13.88098	13.58968	13.28549
ZN	66	1.71916	270.01300	26.000	2.23379	1.48903	1.43466
BI-3	209	114225.71000	0.00000	0.000	111760.75000	115554.46000	115361.92000
PB	208	0.22417	946.71300	8.100	0.22253	0.20683	0.24316
TL	205	-0.01471	40.00000	0.000	-0.01441	-0.01488	-0.01485
U	238	0.22204	796.72300	8.900	0.21934	0.20374	0.24305
SC-2	45	82451.78000	0.00000	0.000	80279.79000	80621.66000	86453.89000
GE-1	72	640235.35300	0.00000	0.000	612373.43000	637442.80000	670889.83000
GE-2	72	101230.37300	0.00000	0.000	99642.56000	100699.87000	103348.69000
GE-3	72	132027.21300	0.00000	0.000	128841.73000	132273.19000	134966.72000
TB-3	159	174838.27000	0.00000	0.000	169456.85000	176986.54000	178071.42000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:30:41
Tube Number: 19
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	659092.49000	0.00000	0.000	659271.32000	673297.41000	644708.74000
SC-3	45	43655.77000	0.00000	0.000	42412.03000	43706.22000	44849.06000
AL	27	2531.19101	46393.37700	2.500	2603.27370	2511.21433	2479.08500
B	11	254.85638	28653.20700	3.300	253.76812	247.12805	263.67298
BE	9	25.53139	5661.09700	2.100	25.28268	25.16220	26.14929
CA	44	2599.08193	6765.13300	0.200	2594.78033	2606.48406	2595.98139
CR	52	258.70850	201872.49700	2.300	265.21318	257.29449	253.61783
FE	57	2514.25866	39818.91000	1.000	2492.69807	2541.76982	2508.30810
K	39	2588.38092	135680.75700	3.400	2674.03357	2592.40967	2498.69952
MG	24	2576.84147	144522.30300	2.300	2606.45991	2615.62592	2508.43858
MN	55	255.80432	105046.90300	1.500	260.17351	253.75202	253.48743
NA	23	2416.15365	303075.15300	3.400	2462.91038	2463.30867	2322.24190
TI	47	272.20813	4600.89700	1.100	275.28019	269.49711	271.84710
V	51	257.51377	161871.09700	1.300	261.30026	255.20227	256.03878
IN-2	115	148502.88000	0.00000	0.000	155736.51000	145337.66000	144434.47000
IN-3	115	61013.27000	0.00000	0.000	59302.77000	61901.19000	61835.85000
AG	107	24.73717	40187.94300	0.300	24.68292	24.69340	24.83519
AS	75	254.20917	21391.87700	1.500	258.42095	251.04278	253.16379
BA	137	249.21777	58216.82000	1.600	252.88763	245.15318	249.61249
CD	111	24.81513	5196.32700	2.700	25.48517	24.17044	24.78978
CO	59	253.20387	339360.36300	1.900	257.54835	248.08959	253.97366
CU	63	250.42876	249334.85000	1.400	254.49272	249.05382	247.73974
MO	98	25.03861	21500.30000	0.900	25.14353	25.19213	24.78017
NI	60	252.09426	89655.73700	1.200	255.65126	249.84755	250.78396
SB	121	25.10528	14534.70700	2.800	25.61509	25.39170	24.30906
SE	78	25.74048	611.34700	4.200	24.62206	25.81409	26.78529
SN	120	25.62580	18853.29700	1.000	25.84682	25.69902	25.33155
SR	88	25.97984	14394.46700	6.900	27.20799	23.92770	26.80384
ZN	66	252.77522	33138.58700	4.900	266.95524	247.06384	244.30659
BI-3	209	112824.08000	0.00000	0.000	108464.83000	113859.87000	116147.54000
PB	208	25.83194	98433.24700	1.700	26.27783	25.83586	25.38212
TL	205	25.73155	73597.94700	1.800	26.22001	25.70156	25.27308
U	238	25.64331	90061.94000	3.700	26.41257	25.91887	24.59848
SC-2	45	83668.33700	0.00000	0.000	87962.94000	81807.84000	81234.23000
GE-1	72	635331.07300	0.00000	0.000	631855.93000	651660.93000	622476.36000
GE-2	72	101812.12000	0.00000	0.000	106381.80000	101133.21000	97921.35000
GE-3	72	129538.82000	0.00000	0.000	124261.43000	131819.41000	132535.62000
TB-3	159	176761.50300	0.00000	0.000	168642.89000	181412.01000	180229.61000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:32:51
Tube Number: 20
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	639232.28000	0.00000	0.000	624071.90000	633922.45000	659702.49000
SC-3	45	43431.90700	0.00000	0.000	42622.52000	43585.85000	44087.35000
AL	27	-5.60956	13.33300	0.000	-5.22592	-5.79826	-5.80449
B	11	52.80755	7982.81700	7.700	56.98207	52.60522	48.83537
BE	9	0.01600	6.00000	53.200	0.00731	0.01639	0.02430
CA	44	76.22213	323.34700	47.700	77.42968	39.28025	111.95647
CR	52	0.35931	360.01700	20.300	0.39380	0.40844	0.27569
FE	57	-1.13030	73.33300	0.000	-1.26033	-0.09275	-2.03783
K	39	3.54591	7198.65300	184.000	10.63254	2.21820	-2.21302
MG	24	-0.60591	480.02700	0.000	0.46635	-1.71928	-0.56481
MN	55	-0.44109	130.00700	0.000	-0.55877	-0.44089	-0.32361
NA	23	-7.56378	7238.70300	0.000	-5.50136	-8.42313	-8.76686
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.02568	30.00000	214.700	-0.00588	0.08935	-0.00642
IN-2	115	152454.96000	0.00000	0.000	149534.50000	161931.22000	145899.16000
IN-3	115	60723.77300	0.00000	0.000	58953.43000	60489.23000	62728.66000
AG	107	0.00000	3.33300	0.000	0.00424	-0.00213	-0.00213
AS	75	0.07865	10.66700	46.000	0.04978	0.11920	0.06698
BA	137	0.01360	13.33300	360.200	-0.04294	0.04341	0.04033
CD	111	-0.00001	0.66700	0.000	0.00658	-0.00330	-0.00330
CO	59	0.01109	100.00700	197.400	0.02834	0.01846	-0.01353
CU	63	0.01119	116.67000	248.600	0.00817	-0.01500	0.04038
MO	98	-0.00097	43.33300	0.000	-0.00351	0.00703	-0.00642
NI	60	-0.11607	50.00000	0.000	-0.05484	-0.11679	-0.17660
SB	121	0.44084	263.34300	19.600	0.53633	0.41768	0.36850
SE	78	-0.06452	0.00000	0.000	-0.06452	-0.06452	-0.06452
SN	120	-0.14585	153.34000	0.000	-0.20063	-0.10730	-0.12964
SR	88	-0.08235	46.66700	0.000	-0.09242	-0.05771	-0.09694
ZN	66	4.52631	633.37300	6.800	4.79741	4.59006	4.19146
BI-3	209	113909.98300	0.00000	0.000	111872.88000	114514.24000	115342.83000
PB	208	-0.00484	63.33300	0.000	-0.00279	-0.00580	-0.00591
TL	205	-0.01470	40.00000	0.000	-0.01795	-0.00786	-0.01827
U	238	0.00475	23.33300	69.700	0.00676	0.00656	0.00093
SC-2	45	84761.50000	0.00000	0.000	82964.82000	88687.16000	82632.52000
GE-1	72	624287.64700	0.00000	0.000	617059.95000	617834.09000	637968.90000
GE-2	72	102586.83700	0.00000	0.000	100649.79000	104073.35000	103037.37000
GE-3	72	131892.48000	0.00000	0.000	126632.02000	133372.35000	135673.07000
TB-3	159	174846.66700	0.00000	0.000	167409.26000	177161.99000	179968.75000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:35:03
Tube Number: 21 Batch: 182971063901A
Sample Number: **9861087** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	631645.89000	0.00000	0.000	610689.76000	630954.01000	653293.90000
SC-3	45	44274.09000	0.00000	0.000	41980.37000	44758.89000	46083.01000
AL	27	4.57301	203.34300	35.800	2.75117	5.91910	5.04877
B	11	10553.37803	1024740.81300	2.400	10778.91724	10598.23702	10282.97982
BE	9	0.03211	9.33300	43.000	0.03693	0.01652	0.04286
CA	44	303260.78474	784525.84700	3.000	313103.74747	301493.64883	295184.95792
CR	52	5.00161	4044.02700	2.600	4.85333	5.10814	5.04337
FE	57	254.92823	4180.74000	2.800	246.98475	260.93144	256.86849
K	39	53668.82425	2710814.75000	3.100	55522.90571	53189.50131	52294.06573
MG	24	382257.60384	21651358.84300	3.200	396010.99922	377660.73856	373101.07374
MN	55	136.18485	56831.81700	2.700	139.72529	136.43169	132.39756
NA	23	1745524	215957810	3.100	1804961	1731648	1699962
TI	47	0.95780	16.66700	65.400	0.61518	0.57699	1.68123
V	51	18.87531	12025.32300	6.500	20.28351	18.13799	18.20444
IN-2	115	134497.56000	0.00000	0.000	129187.55000	136274.38000	138030.75000
IN-3	115	57848.97700	0.00000	0.000	55730.03000	59264.69000	58552.21000
AG	107	0.00637	13.33300	115.500	-0.00213	0.01055	0.01070
AS	75	26.59239	2125.50700	2.600	26.85702	27.11218	25.80796
BA	137	13.29337	2957.09700	5.400	12.47177	13.57661	13.83173
CD	111	0.02366	5.33300	26.900	0.02806	0.01636	0.02655
CO	59	21.39210	27249.43300	2.800	22.04469	20.87218	21.25942
CU	63	3.55803	3450.51700	10.900	3.98579	3.23483	3.45349
MO	98	39.18149	31846.52000	4.700	41.09451	37.41182	39.03815
NI	60	87.87585	29680.96300	2.100	90.04346	86.80536	86.77873
SB	121	0.66372	373.35300	25.300	0.70085	0.48005	0.81027
SE	78	3.48739	76.22300	5.900	3.68352	3.27449	3.50418
SN	120	-0.16891	130.00700	0.000	-0.19154	-0.17308	-0.14210
SR	88	5653.70849	2952080.06000	2.000	5741.85448	5524.05744	5695.21355
ZN	66	7.77567	1006.73700	6.500	8.18618	7.20633	7.93450
BI-3	209	98900.23000	0.00000	0.000	95677.34000	99454.02000	101569.33000
PB	208	1.94497	6557.57000	6.200	2.08423	1.87320	1.87748
TL	205	0.02308	130.00300	69.000	0.01272	0.01512	0.04142
U	238	4.51967	13931.28700	1.700	4.46313	4.60698	4.48889
SC-2	45	83880.25000	0.00000	0.000	79706.59000	85026.37000	86907.79000
GE-1	72	587365.93000	0.00000	0.000	578447.61000	586318.55000	597331.63000
GE-2	72	97485.98000	0.00000	0.000	93936.44000	98253.96000	100267.54000
GE-3	72	126310.94700	0.00000	0.000	123012.29000	127279.85000	128640.70000
TB-3	159	168816.02000	0.00000	0.000	165708.44000	171317.42000	169422.20000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:37:14
Tube Number: 22 Batch: 182971063901A
Sample Number: **9861089** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	683368.06300	0.00000	0.000	682547.96000	687361.08000	680195.15000
SC-3	45	46193.79000	0.00000	0.000	45210.91000	45551.58000	47818.88000
AL	27	14.67276	403.42000	85.300	29.03639	8.84940	6.13248
B	11	908.94713	98286.31000	3.800	947.00016	901.19703	878.64421
BE	9	0.02311	8.00000	65.800	0.03181	0.00555	0.03196
CA	44	166.11235	583.42700	38.800	236.59181	151.77366	109.97158
CR	52	0.70659	670.04300	13.500	0.79838	0.60738	0.71400
FE	57	12.17128	296.89700	142.000	32.13402	2.08795	2.29186
K	39	19.56109	8486.92700	132.000	49.35234	3.90021	5.43073
MG	24	71.44107	4747.41000	47.500	110.64590	52.65284	51.02446
MN	55	0.46732	526.97700	158.300	1.31811	0.10705	-0.02320
NA	23	531.30051	77105.11300	23.100	672.01952	473.99542	447.88660
TI	47	0.38081	6.66700	173.200	1.14244	0.00000	0.00000
V	51	0.20396	150.01300	17.300	0.20825	0.23701	0.16663
IN-2	115	148556.20700	0.00000	0.000	144395.96000	150337.48000	150935.18000
IN-3	115	63878.48000	0.00000	0.000	63412.66000	63031.35000	65191.43000
AG	107	-0.00213	0.00000	0.000	-0.00213	-0.00213	-0.00213
AS	75	0.18602	20.66700	19.000	0.22580	0.15844	0.17383
BA	137	1.18246	300.01700	13.900	1.27513	0.99301	1.27923
CD	111	-0.00024	0.66700	0.000	0.00589	-0.00330	-0.00330
CO	59	0.04789	156.74300	317.300	0.22299	-0.04989	-0.02942
CU	63	2.72025	2947.08700	13.900	3.06469	2.31543	2.78062
MO	98	0.09375	130.01700	116.100	0.21770	0.04984	0.01371
NI	60	0.06381	120.00300	84.100	0.12039	0.01369	0.05734
SB	121	0.01474	20.00000	107.900	0.01516	-0.00136	0.03043
SE	78	-0.03686	0.66700	0.000	-0.06452	-0.06452	0.01845
SN	120	-0.22093	103.33300	0.000	-0.17188	-0.21078	-0.28013
SR	88	0.52762	400.06000	60.900	0.89812	0.35959	0.32514
ZN	66	1.14768	203.34300	22.300	1.05824	1.43606	0.94874
BI-3	209	116767.87700	0.00000	0.000	116502.26000	114090.15000	119711.22000
PB	208	-0.00528	63.33300	0.000	0.00664	-0.01353	-0.00895
TL	205	-0.02293	16.66700	0.000	-0.02176	-0.02508	-0.02195
U	238	0.01743	70.01300	137.000	0.04500	0.00377	0.00351
SC-2	45	84757.94300	0.00000	0.000	82320.76000	84835.31000	87117.76000
GE-1	72	649681.81300	0.00000	0.000	646304.25000	657303.43000	645437.76000
GE-2	72	104772.72300	0.00000	0.000	102694.56000	104134.64000	107488.97000
GE-3	72	138195.41300	0.00000	0.000	136481.94000	135048.38000	143055.92000
TB-3	159	180762.44300	0.00000	0.000	177983.94000	178782.65000	185520.74000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:39:24
Tube Number: 23 Batch: 182971063901A
Sample Number: **9861090** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	670369.96300	0.00000	0.000	681812.80000	663736.79000	665560.30000
SC-3	45	46357.31000	0.00000	0.000	46975.85000	46133.37000	45962.71000
AL	27	1.73403	156.67300	100.300	-0.24901	2.44959	3.00152
B	11	6907.18729	713042.12700	2.500	6714.71676	6957.28286	7049.56225
BE	9	0.01478	6.00000	57.400	0.02313	0.00617	0.01505
CA	44	288957.84104	783284.20700	2.600	280411.52966	291648.71092	294813.28254
CR	52	3.21828	2753.67700	3.100	3.19433	3.32737	3.13315
FE	57	163.36003	2837.04300	4.900	154.20999	168.51287	167.35723
K	39	67756.81495	3584492.86300	1.700	66405.28529	68517.37198	68347.78758
MG	24	371136.93327	22028568.84000	2.300	361405.06836	375569.45751	376436.27395
MN	55	413.66671	180197.47000	2.200	403.21304	420.76461	417.02248
NA	23	1364174	176860444	2.300	1329229	1371462	1391832
TI	47	0.56188	10.00000	173.200	0.00000	0.00000	1.68563
V	51	4.13484	2773.69300	6.600	3.82176	4.31355	4.26920
IN-2	115	139201.68700	0.00000	0.000	129231.40000	138898.44000	149475.22000
IN-3	115	59542.58300	0.00000	0.000	58582.21000	60570.27000	59475.27000
AG	107	0.00415	10.00000	152.200	-0.00213	0.00407	0.01050
AS	75	0.93483	80.66700	16.700	0.96624	0.76535	1.07290
BA	137	21.49519	4914.39300	8.800	19.30972	22.72978	22.44608
CD	111	0.00643	2.00000	149.700	0.00665	0.01594	-0.00330
CO	59	0.11682	236.67700	16.200	0.13772	0.10102	0.11172
CU	63	0.28089	376.68300	21.600	0.21816	0.33908	0.28544
MO	98	18.45853	15485.62700	3.500	18.10347	19.21371	18.05840
NI	60	2.56550	980.06700	8.100	2.46721	2.80300	2.42628
SB	121	0.02322	23.33300	88.000	0.03590	0.03413	-0.00036
SE	78	0.60260	14.89000	20.100	0.61381	0.47644	0.71756
SN	120	-0.16814	133.34000	0.000	-0.09916	-0.28810	-0.11717
SR	88	7146.93131	3842024.63000	1.100	7158.99381	7064.14692	7217.65321
ZN	66	2.08693	310.01300	6.600	2.12722	2.20001	1.93355
BI-3	209	100944.47000	0.00000	0.000	101629.67000	101277.37000	99926.37000
PB	208	0.07952	343.34300	26.800	0.08069	0.05765	0.10022
TL	205	-0.02465	10.00000	0.000	-0.02077	-0.02464	-0.02854
U	238	17.80573	55988.23000	2.300	17.37372	17.87030	18.17317
SC-2	45	89701.84000	0.00000	0.000	81868.40000	90488.77000	96748.35000
GE-1	72	616673.10300	0.00000	0.000	624502.22000	613973.00000	611544.09000
GE-2	72	102368.98700	0.00000	0.000	98303.89000	100196.81000	108606.26000
GE-3	72	131775.41000	0.00000	0.000	131304.16000	131939.77000	132082.30000
TB-3	159	173126.97300	0.00000	0.000	171665.08000	174525.88000	173189.96000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:41:40
Tube Number: 24 Batch: 182971063901A
Sample Number: **9861090** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: DOD-U4

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	699887.72700	0.00000	0.000	732200.46000	677886.40000	689576.32000
SC-3	45	46918.98700	0.00000	0.000	45972.47000	49192.85000	45591.64000
AL	27	-3.83490	50.00000	0.000	-4.78837	-2.46447	-4.25187
B	11	1383.78760	151517.59000	3.200	1341.14497	1429.27507	1380.94275
BE	9	-0.00341	2.00000	0.000	0.00449	-0.00298	-0.01175
CA	44	29053.03415	79776.22000	3.400	29676.77212	27922.79995	29559.53039
CR	52	0.57246	566.70000	16.400	0.52783	0.50915	0.68039
FE	57	13.63304	326.68700	52.700	14.63788	5.99766	20.26360
K	39	6856.12745	373515.86700	4.500	6947.37981	6513.67284	7107.32971
MG	24	40164.88719	2412015.85000	2.600	40761.46358	38964.62257	40768.57544
MN	55	41.55643	18619.15300	2.400	40.88912	41.09188	42.68830
NA	23	140389.86214	18411373.89300	4.200	142007.58340	133834.88810	145327.11493
TI	47	0.56489	10.00000	100.300	0.56176	0.00000	1.13290
V	51	0.34284	246.67700	4.000	0.35547	0.34487	0.32817
IN-2	115	160788.28300	0.00000	0.000	162979.18000	169857.62000	149528.05000
IN-3	115	62954.42700	0.00000	0.000	62469.14000	64337.62000	62056.52000
AG	107	-0.00011	3.33300	0.000	-0.00213	-0.00213	0.00393
AS	75	0.11284	14.00000	36.500	0.16031	0.08663	0.09160
BA	137	2.64091	646.70300	3.100	2.71664	2.55527	2.65081
CD	111	-0.00330	0.00000	0.000	-0.00330	-0.00330	-0.00330
CO	59	-0.02600	53.33300	0.000	-0.02061	-0.00773	-0.04966
CU	63	-0.02199	86.66700	0.000	-0.05713	-0.00140	-0.00742
MO	98	1.76280	1603.48000	5.500	1.82889	1.65253	1.80698
NI	60	0.08506	126.67000	173.500	-0.03883	0.24837	0.04564
SB	121	0.00955	16.66700	263.300	0.01566	0.03107	-0.01809
SE	78	0.00326	1.78000	1107.100	0.01232	0.03391	-0.03646
SN	120	-0.28588	53.33300	0.000	-0.29021	-0.31830	-0.24912
SR	88	660.48262	375445.51700	1.700	659.45589	649.57409	672.41788
ZN	66	0.27455	83.33700	143.600	0.25928	0.67630	-0.11194
BI-3	209	112688.62300	0.00000	0.000	113474.67000	113827.64000	110763.56000
PB	208	-0.00032	80.00000	0.000	-0.00305	0.00470	-0.00260
TL	205	-0.02385	13.33300	0.000	-0.02506	-0.02507	-0.02141
U	238	1.69324	5948.26300	3.500	1.64790	1.67102	1.76079
SC-2	45	93857.04000	0.00000	0.000	93869.67000	99999.85000	87701.60000
GE-1	72	664580.42000	0.00000	0.000	688633.74000	645377.37000	659730.15000
GE-2	72	115053.34000	0.00000	0.000	114733.39000	118926.97000	111499.66000
GE-3	72	138344.89300	0.00000	0.000	138520.50000	139780.86000	136733.32000
TB-3	159	180598.75300	0.00000	0.000	181028.57000	182510.93000	178256.76000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:43:57
Tube Number: 25
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	675474.58700	0.00000	0.000	646923.47000	692338.82000	687161.47000
SC-3	45	45772.44000	0.00000	0.000	47106.77000	43344.86000	46865.69000
AL	27	426.33714	8295.92700	2.300	415.32384	429.88495	433.80264
B	11	348.84509	39074.41300	4.700	367.85452	338.95415	339.72661
BE	9	0.51388	119.33300	18.000	0.52134	0.41767	0.60262
CA	44	697.00340	1993.52700	15.000	646.10745	817.09950	627.80326
CR	52	4.39981	3683.93000	1.600	4.34942	4.47773	4.37227
FE	57	90.23958	1593.48000	6.800	96.85853	84.72877	89.13144
K	39	425.98499	29583.58700	4.800	405.54518	446.77924	425.63055
MG	24	111.03178	7038.59300	7.100	102.51674	117.98387	112.59472
MN	55	9.77759	4514.19000	8.000	9.15441	10.65432	9.52404
NA	23	969.78647	132530.72700	6.000	927.76493	1036.48081	945.11367
TI	47	23.65878	420.02000	10.300	22.47856	22.04623	26.45155
V	51	1.10998	743.38300	13.100	1.05403	1.27560	1.00030
IN-2	115	152753.98700	0.00000	0.000	151503.32000	146683.33000	160075.31000
IN-3	115	62263.33700	0.00000	0.000	64232.17000	58920.74000	63637.10000
AG	107	0.47152	786.72300	6.700	0.50080	0.43776	0.47599
AS	75	2.13019	186.66700	8.300	1.96056	2.31395	2.11607
BA	137	4.40606	1056.75300	15.500	4.47088	5.05513	3.69216
CD	111	0.93790	199.33300	29.700	0.72231	1.25245	0.83895
CO	59	1.02346	1480.12700	17.900	0.87127	1.22607	0.97303
CU	63	41.50070	42202.12300	4.800	40.08854	43.79492	40.61865
MO	98	1.81085	1626.81300	9.700	1.61098	1.88172	1.93984
NI	60	3.84991	1490.13000	5.100	4.04539	3.85048	3.65386
SB	121	1.80132	1073.41700	4.000	1.72196	1.86092	1.82109
SE	78	2.04987	51.33700	16.600	2.11228	2.35455	1.68278
SN	120	1.73933	1553.48000	10.000	1.92033	1.72603	1.57164
SR	88	6.31040	3640.60300	4.000	6.04095	6.35606	6.53419
ZN	66	14.70639	2006.87700	10.500	14.96108	16.10297	13.05514
BI-3	209	114598.98700	0.00000	0.000	117511.15000	108140.56000	118145.25000
PB	208	2.97228	11569.08700	3.500	2.94622	3.08551	2.88512
TL	205	0.46452	1433.46700	6.700	0.49889	0.43872	0.45596
U	238	0.52120	1866.88000	1.600	0.52819	0.52365	0.51176
SC-2	45	87310.35000	0.00000	0.000	85840.72000	83226.83000	92863.50000
GE-1	72	640826.13700	0.00000	0.000	621334.60000	652720.73000	648423.08000
GE-2	72	108349.78300	0.00000	0.000	104567.84000	106090.04000	114391.47000
GE-3	72	135313.82700	0.00000	0.000	136895.40000	128224.29000	140821.79000
TB-3	159	175691.82000	0.00000	0.000	180273.14000	166449.20000	180353.12000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:46:07
Tube Number: 26
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	681097.33300	0.00000	0.000	691159.36000	681592.18000	670540.46000
SC-3	45	45772.07000	0.00000	0.000	46042.74000	44829.15000	46444.32000
AL	27	107081.36576	2053168.40700	2.400	107409.71370	109459.71798	104374.66561
B	11	162.51600	19976.57300	1.000	164.34280	161.61135	161.59385
BE	9	0.01163	5.33300	90.100	0.00546	0.00570	0.02372
CA	44	301907.44145	807981.50000	2.400	301942.46091	309282.58884	294497.27460
CR	52	0.70821	666.70700	20.500	0.69699	0.56893	0.85871
FE	57	241918.12210	4006763.69300	1.800	240739.23282	246721.47748	238293.65599
K	39	102797.42231	5365430.13000	2.400	104436.91171	104040.58837	99914.76685
MG	24	102987.38273	6035534.70000	2.000	102708.94469	105223.20826	101029.99525
MN	55	3.01334	1620.14700	6.100	2.85313	2.97469	3.21219
NA	23	243890.43557	31224925.36700	2.300	244276.40254	249185.58635	238209.31782
TI	47	2080.42582	36867.14000	2.400	2024.01927	2121.54406	2095.71412
V	51	0.02299	30.00000	128.900	0.02307	-0.00668	0.05259
IN-2	115	138895.93300	0.00000	0.000	136681.49000	141738.12000	138268.19000
IN-3	115	60074.98300	0.00000	0.000	59073.58000	60761.66000	60389.71000
AG	107	0.04599	76.66700	41.100	0.06781	0.03496	0.03519
AS	75	1.03117	89.33300	16.500	1.22780	0.92984	0.93586
BA	137	1.08772	260.01000	4.500	1.10663	1.03171	1.12482
CD	111	0.21671	45.33300	12.400	0.24325	0.21723	0.18964
CO	59	1.01365	1420.11700	19.900	1.20731	0.80483	1.02881
CU	63	0.82232	910.06000	2.800	0.82768	0.84209	0.79718
MO	98	2137.87014	1803570.02300	2.100	2188.83270	2106.28998	2118.48774
NI	60	1.24627	526.69700	4.500	1.19464	1.23904	1.30513
SB	121	1.23335	713.38000	9.900	1.19562	1.37016	1.13426
SE	78	-0.00377	1.33700	0.000	0.05780	-0.03492	-0.03418
SN	120	-0.15198	146.67700	0.000	-0.12977	-0.19145	-0.13473
SR	88	16.53727	9056.52000	5.000	17.48148	15.93287	16.19748
ZN	66	1.11418	186.67700	40.500	1.63368	0.88921	0.81965
BI-3	209	106068.48700	0.00000	0.000	107325.26000	105017.77000	105862.43000
PB	208	0.91941	3370.28300	9.000	1.01100	0.89827	0.84896
TL	205	-0.01366	40.00000	0.000	-0.01015	-0.00975	-0.02108
U	238	0.04452	153.34000	16.200	0.05199	0.04400	0.03757
SC-2	45	83176.15300	0.00000	0.000	80560.77000	84050.88000	84916.81000
GE-1	72	645223.22000	0.00000	0.000	652520.69000	641956.79000	641192.18000
GE-2	72	98610.00000	0.00000	0.000	96815.04000	99914.07000	99100.89000
GE-3	72	131811.37700	0.00000	0.000	130425.08000	132624.61000	132384.44000
TB-3	159	174649.90000	0.00000	0.000	175083.65000	172575.43000	176290.62000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:48:14
Tube Number: 27
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	692054.94000	0.00000	0.000	699597.26000	685107.80000	691459.76000
SC-3	45	46815.22700	0.00000	0.000	46785.34000	46534.17000	47126.17000
AL	27	106560.17891	2090287.10700	0.300	106311.77853	106920.71968	106448.03851
B	11	98.24951	13474.05000	0.400	97.86736	98.56267	98.31850
BE	9	0.02835	9.33300	17.500	0.03075	0.03165	0.02265
CA	44	302190.43634	827405.64000	0.200	301413.57967	302849.04715	302308.68221
CR	52	201.17800	168433.72700	0.200	201.36491	200.65163	201.51746
FE	57	241479.04419	4091563.16700	0.200	241629.08518	241044.10949	241763.93791
K	39	102867.66662	5492398.66700	1.600	101034.25514	104331.19496	103237.54976
MG	24	102330.92869	6134966.36700	1.500	101223.22288	104129.04234	101640.52086
MN	55	203.59848	89749.02000	0.500	204.86782	203.11749	202.81011
NA	23	243997.84425	31958479.52300	0.600	242717.91341	245527.53151	243748.08783
TI	47	2137.46640	38748.66300	1.000	2140.76508	2115.59324	2156.04089
V	51	203.13768	136965.93000	1.000	204.68197	200.81542	203.91565
IN-2	115	146860.56300	0.00000	0.000	144597.80000	147172.86000	148811.03000
IN-3	115	61668.49700	0.00000	0.000	60680.77000	61263.31000	63061.41000
AG	107	47.68431	78284.58000	1.300	48.40655	47.33030	47.31609
AS	75	108.95018	9270.35700	1.200	110.48306	107.96362	108.40385
BA	137	1.19662	293.34700	18.200	1.07618	1.06554	1.44814
CD	111	93.36809	19766.56700	1.300	94.49787	92.09490	93.51149
CO	59	202.23954	274001.59000	1.400	203.79028	203.87052	199.05783
CU	63	198.55302	199846.00700	1.200	199.85621	199.90088	195.90196
MO	98	2125.70201	1841194.40000	0.300	2127.35067	2130.08541	2119.66996
NI	60	198.31127	71291.90000	3.000	201.64590	201.80946	191.47845
SB	121	1.25955	746.70700	6.200	1.30248	1.30713	1.16903
SE	78	102.04390	2394.87000	0.700	102.60038	101.17251	102.35880
SN	120	-0.23934	86.66700	0.000	-0.23281	-0.24772	-0.23751
SR	88	16.38689	9216.66000	1.000	16.39300	16.54293	16.22474
ZN	66	95.29215	12662.62000	1.600	95.32344	96.77161	93.78141
BI-3	209	108591.82300	0.00000	0.000	106730.07000	108212.67000	110832.73000
PB	208	0.85483	3213.61000	5.100	0.84188	0.81910	0.90349
TL	205	-0.02365	13.33300	0.000	-0.01744	-0.02854	-0.02498
U	238	0.03369	120.00300	16.900	0.03725	0.03672	0.02711
SC-2	45	89790.78300	0.00000	0.000	87662.13000	89632.15000	92078.07000
GE-1	72	658919.44300	0.00000	0.000	659071.16000	650540.77000	667146.40000
GE-2	72	104550.75300	0.00000	0.000	103066.66000	102623.07000	107962.53000
GE-3	72	136562.00700	0.00000	0.000	135309.92000	138005.71000	136370.39000
TB-3	159	178422.35000	0.00000	0.000	175317.42000	179052.95000	180896.68000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:50:28
Tube Number: 28
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	686441.03300	0.00000	0.000	677747.10000	690443.51000	691132.49000
SC-3	45	46551.08000	0.00000	0.000	44618.50000	47868.83000	47165.91000
AL	27	2.72564	176.67700	21.200	3.28312	2.13072	2.76307
B	11	64.52633	9813.90300	2.000	64.84690	65.64007	63.09202
BE	9	0.01148	5.33300	192.100	0.03212	-0.01175	0.01406
CA	44	77.85674	350.02000	16.600	90.85345	77.65142	65.06536
CR	52	0.28508	323.34700	24.200	0.34640	0.21056	0.29829
FE	57	23.19766	486.69300	21.300	27.64391	17.86880	24.08027
K	39	31.07822	9159.84300	52.100	49.48470	24.72911	19.02084
MG	24	7.18166	976.85700	57.600	8.08352	2.66492	10.79655
MN	55	0.39605	503.36000	29.100	0.48352	0.26557	0.43904
NA	23	147.11035	27874.68300	6.400	155.15705	136.76844	149.40557
TI	47	1.46518	26.66700	77.100	0.57880	1.07901	2.73772
V	51	0.04246	43.33300	19.000	0.04008	0.03586	0.05144
IN-2	115	154698.36300	0.00000	0.000	151619.49000	152865.64000	159609.96000
IN-3	115	62522.23700	0.00000	0.000	59977.15000	64318.19000	63271.37000
AG	107	0.01371	26.66700	64.600	0.00414	0.01539	0.02162
AS	75	0.09752	12.66700	50.500	0.07228	0.15430	0.06599
BA	137	0.02616	16.66700	84.600	0.00060	0.03827	0.03962
CD	111	0.00608	2.00000	151.600	0.00641	-0.00330	0.01512
CO	59	0.01875	113.34000	133.300	0.04194	-0.00771	0.02201
CU	63	-0.00118	106.67000	0.000	0.02667	0.00816	-0.03838
MO	98	1.95449	1760.17000	4.200	2.03765	1.87445	1.95136
NI	60	-0.04024	80.00300	0.000	-0.08695	0.03496	-0.06875
SB	121	0.02143	23.33300	92.700	0.03465	0.03109	-0.00143
SE	78	-0.00084	1.55700	0.000	0.04575	-0.01004	-0.03823
SN	120	-0.27787	60.00000	0.000	-0.32947	-0.25293	-0.25120
SR	88	-0.00187	93.33700	0.000	-0.00137	-0.06425	0.06001
ZN	66	6.33132	896.73000	10.400	5.71915	6.25165	7.02317
BI-3	209	113180.56300	0.00000	0.000	106617.66000	117359.23000	115564.80000
PB	208	-0.00391	66.66700	0.000	-0.00465	-0.00113	-0.00594
TL	205	-0.01684	33.33300	0.000	-0.01373	-0.01509	-0.02171
U	238	0.00383	20.00000	7.700	0.00417	0.00362	0.00370
SC-2	45	88764.84300	0.00000	0.000	85338.17000	89502.09000	91454.27000
GE-1	72	655110.50000	0.00000	0.000	650918.08000	657473.51000	656939.91000
GE-2	72	105538.39300	0.00000	0.000	102159.96000	106995.82000	107459.40000
GE-3	72	137181.05000	0.00000	0.000	131303.41000	140478.10000	139761.64000
TB-3	159	173043.21000	0.00000	0.000	163492.97000	177939.90000	177696.76000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:52:44
Tube Number: 29
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	703438.53000	0.00000	0.000	708340.22000	703726.94000	698248.43000
SC-3	45	46962.70000	0.00000	0.000	46805.49000	45852.77000	48229.84000
AL	27	2587.90475	51015.53700	4.700	2510.75304	2727.66913	2525.29209
B	11	297.50750	35192.92000	2.200	292.82217	294.70680	304.99353
BE	9	24.38495	5771.80700	2.400	23.74044	24.54696	24.86747
CA	44	2604.28342	7285.60000	5.300	2584.03313	2750.98221	2477.83492
CR	52	258.11562	216664.48300	2.700	256.38647	265.74936	252.21102
FE	57	2509.41695	42726.92300	3.400	2490.22375	2601.96779	2436.05931
K	39	2692.03192	151483.23300	5.200	2620.66183	2852.89865	2602.53526
MG	24	2669.38874	160961.63700	4.900	2640.18191	2812.45172	2555.53260
MN	55	259.48594	114604.83700	2.600	259.58992	266.05529	252.81260
NA	23	2694.45965	362167.87300	11.700	2532.71208	3058.03341	2492.63346
TI	47	264.04761	4800.95000	3.900	275.93505	259.13378	257.07401
V	51	260.08439	175828.84700	2.700	258.40652	267.79253	254.05413
IN-2	115	154696.32300	0.00000	0.000	152239.89000	155512.28000	156336.80000
IN-3	115	62140.07300	0.00000	0.000	60650.24000	61013.96000	64756.02000
AG	107	25.67554	42444.96000	3.500	26.24662	26.14559	24.63441
AS	75	264.56957	22661.79300	3.700	266.27842	273.28382	254.14647
BA	137	258.29215	61420.55300	3.100	260.06840	265.31363	249.49442
CD	111	25.37352	5411.06700	1.800	25.68759	25.58223	24.85072
CO	59	264.92914	361479.94300	2.900	267.12821	271.18051	256.47870
CU	63	264.82344	268403.85700	2.900	268.21074	270.28942	255.97016
MO	98	25.72911	22488.49300	4.900	25.07754	27.17208	24.93770
NI	60	269.27079	97462.04000	3.700	272.87201	276.87904	258.06132
SB	121	24.41956	14387.85300	5.300	24.40174	25.72651	23.13044
SE	78	26.51391	656.90700	5.600	25.46339	25.86597	28.21238
SN	120	25.95288	19450.81700	1.100	25.73679	25.82944	26.29243
SR	88	26.71205	15055.13300	7.100	27.73318	27.89415	24.50882
ZN	66	265.85912	35487.65700	4.300	269.79469	274.75820	253.02448
BI-3	209	116559.57000	0.00000	0.000	114846.67000	113375.97000	121456.07000
PB	208	25.60974	100787.10300	3.000	25.67267	26.33648	24.82007
TL	205	25.21394	74462.64300	4.100	25.54578	26.05270	24.04334
U	238	24.84240	90149.21000	4.200	24.20443	26.04101	24.28177
SC-2	45	89042.74300	0.00000	0.000	86534.63000	90548.46000	90045.14000
GE-1	72	672562.83000	0.00000	0.000	673909.29000	675492.41000	668286.79000
GE-2	72	107619.49000	0.00000	0.000	105282.43000	108021.73000	109554.31000
GE-3	72	139502.75700	0.00000	0.000	138439.30000	137207.61000	142861.36000
TB-3	159	178475.43300	0.00000	0.000	176451.07000	174965.27000	184009.96000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:54:53
Tube Number: 30
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	669270.59000	0.00000	0.000	598936.32000	705406.01000	703469.44000
SC-3	45	47293.83700	0.00000	0.000	46785.55000	48310.35000	46785.61000
AL	27	-2.62632	73.33300	0.000	-0.22421	-4.36971	-3.28503
B	11	113.83517	14537.05000	13.500	131.25104	107.87063	102.38384
BE	9	0.02070	7.33300	42.500	0.01803	0.01354	0.03051
CA	44	78.17791	356.68000	31.100	106.21573	62.31315	66.00486
CR	52	0.27686	323.35000	26.600	0.30158	0.33507	0.19395
FE	57	1.01756	116.67000	145.200	2.47054	1.06510	-0.48296
K	39	17.30913	8582.80300	15.800	16.57555	15.02225	20.32959
MG	24	-0.44572	533.36300	0.000	-0.23082	0.29290	-1.39922
MN	55	-0.41971	150.00300	0.000	-0.25757	-0.51613	-0.48544
NA	23	72.02923	18408.66300	5.700	76.51052	68.42119	71.15597
TI	47	0.36800	6.66700	86.600	0.55199	0.00000	0.55199
V	51	0.00241	16.66700	1285.300	0.03720	-0.00780	-0.02217
IN-2	115	146443.42700	0.00000	0.000	139999.88000	146236.03000	153094.37000
IN-3	115	62849.72700	0.00000	0.000	61895.55000	63572.80000	63080.83000
AG	107	0.00779	16.66700	86.800	0.00394	0.01560	0.00383
AS	75	0.13623	16.00000	45.700	0.18567	0.15668	0.06633
BA	137	0.02664	16.66700	241.100	0.08365	0.03922	-0.04294
CD	111	-0.00330	0.00000	0.000	-0.00330	-0.00330	-0.00330
CO	59	0.02951	130.00700	124.300	-0.01285	0.05025	0.05114
CU	63	0.06259	173.34000	60.500	0.02254	0.06736	0.09786
MO	98	0.06126	100.00300	83.000	0.05171	0.11618	0.01590
NI	60	-0.12234	50.00000	0.000	-0.14775	-0.09666	-0.12262
SB	121	0.49562	306.68300	24.600	0.37371	0.49605	0.61709
SE	78	0.00114	1.55300	6295.500	-0.06452	0.07807	-0.01012
SN	120	-0.09468	196.67700	0.000	-0.12657	-0.06654	-0.09092
SR	88	-0.07913	50.00000	0.000	-0.04231	-0.11530	-0.07978
ZN	66	4.60366	666.70700	18.000	5.00482	5.15680	3.64938
BI-3	209	117134.36700	0.00000	0.000	115502.51000	120072.02000	115828.57000
PB	208	-0.00694	56.66700	0.000	-0.00850	-0.01146	-0.00086
TL	205	-0.00274	76.66700	0.000	0.00905	0.00105	-0.01832
U	238	0.00538	26.66700	102.100	0.00371	0.01152	0.00092
SC-2	45	84027.87300	0.00000	0.000	79123.40000	84464.14000	88496.08000
GE-1	72	645921.80000	0.00000	0.000	582794.72000	682083.66000	672887.02000
GE-2	72	102819.75300	0.00000	0.000	98596.43000	103058.89000	106803.94000
GE-3	72	137673.57700	0.00000	0.000	135320.23000	140509.96000	137190.54000
TB-3	159	176138.00700	0.00000	0.000	171348.92000	180220.92000	176844.18000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:57:03
Tube Number: 31 Batch: 182941063902A
Sample Number: **PBW** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	685578.58300	0.00000	0.000	697870.46000	654432.02000	704433.27000
SC-3	45	47173.29300	0.00000	0.000	45531.26000	47758.42000	48230.20000
AL	27	-2.95881	66.66700	0.000	-2.15233	-3.34738	-3.37671
B	11	58.87724	9197.51700	6.400	57.88728	63.01549	55.72895
BE	9	-0.00023	2.66700	0.000	0.00529	-0.00266	-0.00331
CA	44	-32.54720	50.00000	0.000	-17.16171	-33.06098	-47.41892
CR	52	0.34917	383.35000	18.100	0.31278	0.42216	0.31259
FE	57	1.98393	133.33700	216.100	-0.33653	6.93049	-0.64216
K	39	13.66427	8355.98300	85.200	23.26025	17.02138	0.71119
MG	24	-3.41463	353.35000	0.000	-4.61364	-2.37675	-3.25350
MN	55	-0.29872	203.34300	0.000	-0.24376	-0.42403	-0.22839
NA	23	67.61597	17777.83700	3.800	70.56334	66.01483	66.26976
TI	47	0.18025	3.33300	173.200	0.00000	0.54075	0.00000
V	51	-0.00288	13.33300	0.000	-0.02217	0.00691	0.00662
IN-2	115	152534.86000	0.00000	0.000	150469.48000	152510.93000	154624.17000
IN-3	115	64411.06300	0.00000	0.000	62680.55000	65330.80000	65221.84000
AG	107	-0.00213	0.00000	0.000	-0.00213	-0.00213	-0.00213
AS	75	0.10164	13.33300	14.900	0.11334	0.08457	0.10703
BA	137	0.07983	30.00000	105.500	0.16540	0.07699	-0.00290
CD	111	0.00278	1.33300	189.700	0.00599	-0.00330	0.00563
CO	59	-0.00505	83.33300	0.000	0.02282	-0.03646	-0.00152
CU	63	-0.05574	53.33300	0.000	-0.07686	-0.02176	-0.06860
MO	98	-0.00805	40.00000	0.000	-0.04046	0.02447	-0.00815
NI	60	1.31724	593.36700	29.100	0.89184	1.63366	1.42622
SB	121	0.06312	50.00000	66.500	0.01555	0.07874	0.09507
SE	78	-0.02812	0.88700	0.000	-0.00917	-0.06452	-0.01066
SN	120	-0.21349	110.00700	0.000	-0.18312	-0.25455	-0.20280
SR	88	-0.09286	43.33300	0.000	-0.07922	-0.11671	-0.08266
ZN	66	0.43471	106.67000	12.100	0.48014	0.44699	0.37698
BI-3	209	120372.66300	0.00000	0.000	118065.15000	119488.31000	123564.53000
PB	208	-0.01221	36.66700	0.000	-0.00878	-0.00893	-0.01893
TL	205	-0.01869	30.00000	0.000	-0.01517	-0.02193	-0.01896
U	238	0.00172	13.33300	93.800	0.00359	0.00083	0.00075
SC-2	45	86259.70700	0.00000	0.000	84684.40000	85246.78000	88847.94000
GE-1	72	662282.49000	0.00000	0.000	677805.30000	632735.46000	676306.71000
GE-2	72	104185.09300	0.00000	0.000	102995.85000	105433.79000	104125.64000
GE-3	72	143417.25000	0.00000	0.000	140720.53000	144459.65000	145071.57000
TB-3	159	183186.53300	0.00000	0.000	181231.74000	181895.56000	186432.30000

Run Name: 1830201E07 Date/Time: 10/29/2018 6:59:15
Tube Number: 32 Batch: 182941063902A
Sample Number: **LCSW** Class: **********

Initial Vol: 1.00 Final Vol: 1.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	714793.11700	0.00000	0.000	730984.91000	718090.54000	695303.90000
SC-3	45	47300.39000	0.00000	0.000	46354.25000	48902.07000	46644.85000
AL	27	2092.52874	41565.53000	3.900	2165.45556	2004.84257	2107.28809
B	11	305.98261	36673.12300	3.600	295.59182	304.78342	317.57258
BE	9	3.90316	941.36700	4.800	4.06369	3.69797	3.94783
CA	44	4251.27080	11885.14700	6.400	4389.06433	3937.26923	4427.47885
CR	52	52.81453	44725.89300	1.800	53.32301	51.70980	53.41077
FE	57	1021.20593	17554.47300	8.200	1049.92617	927.05292	1086.63871
K	39	10557.93615	576135.08300	2.700	10748.67258	10229.85091	10695.28495
MG	24	2090.08523	127059.28700	4.300	2117.38356	1990.72982	2162.14231
MN	55	53.12801	23903.57300	2.800	52.59019	51.97209	54.82174
NA	23	10566.81982	1405854.25000	3.900	10734.27390	10095.84439	10870.34117
TI	47	270.62865	4947.68000	11.300	271.37902	239.80258	300.70434
V	51	51.80857	35270.15700	5.400	52.42974	48.74373	54.25224
IN-2	115	157223.51300	0.00000	0.000	157996.80000	156196.15000	157477.59000
IN-3	115	64089.98700	0.00000	0.000	62592.25000	65330.04000	64347.67000
AG	107	50.01416	85324.50300	2.600	50.45277	48.56350	51.02623
AS	75	10.09170	896.03700	6.100	10.60838	10.25056	9.41617
BA	137	52.65385	12929.90300	0.800	52.93510	52.19555	52.83090
CD	111	4.96701	1093.38300	1.100	5.03243	4.93733	4.93127
CO	59	260.14993	366214.67000	2.400	266.45045	254.06384	259.93549
CU	63	52.29207	54777.79700	2.000	52.83336	51.10455	52.93831
MO	98	49.77234	44841.65000	2.000	50.80628	49.71338	48.79736
NI	60	52.96414	19864.18000	1.300	53.18745	52.18516	53.51980
SB	121	6.34620	3870.68000	7.300	6.26589	6.84207	5.93063
SE	78	10.53788	266.22700	4.900	10.16011	10.33170	11.12184
SN	120	51.38202	39416.38000	4.300	53.93621	49.99594	50.21393
SR	88	41.91361	24348.16000	3.000	41.76931	40.72532	43.24620
ZN	66	522.09121	71878.80000	2.600	534.25115	507.83986	524.18262
BI-3	209	117183.83700	0.00000	0.000	115281.12000	119920.47000	116349.92000
PB	208	15.22304	60302.06300	0.700	15.26305	15.09717	15.30889
TL	205	2.05588	6185.03000	4.700	2.16690	1.98976	2.01096
U	238	0.00365	20.00000	131.500	0.00093	0.00082	0.00918
SC-2	45	90052.34300	0.00000	0.000	89975.41000	88013.07000	92168.55000
GE-1	72	680824.78300	0.00000	0.000	695828.97000	680792.26000	665853.12000
GE-2	72	108542.96700	0.00000	0.000	107881.86000	107165.18000	110581.86000
GE-3	72	140959.60000	0.00000	0.000	138853.61000	143658.38000	140366.81000
TB-3	159	180556.73700	0.00000	0.000	175735.29000	186331.52000	179603.40000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:01:28
Tube Number: 33 Batch: 182941063902A
Sample Number: **9856081** Class: U*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	727133.09000	0.00000	0.000	718025.15000	739346.16000	724027.96000
SC-3	45	47360.65700	0.00000	0.000	47096.30000	48250.42000	46735.25000
AL	27	2611.95477	51934.81000	3.900	2614.70648	2509.31988	2711.83795
B	11	110.84585	15556.73300	4.600	115.95918	105.83867	110.73971
BE	9	0.64796	161.33300	1.100	0.65074	0.63968	0.65346
CA	44	10879.94686	30265.34700	2.300	10904.64684	10621.28406	11113.90967
CR	52	4.89525	4234.12300	2.900	4.92077	5.02094	4.74404
FE	57	3.56942	160.00700	85.700	3.58935	0.50098	6.61795
K	39	2495.65683	142260.20000	1.700	2484.08322	2461.15103	2541.73622
MG	24	6075.09662	368946.79000	1.500	6065.29984	5989.14814	6170.84187
MN	55	376.94370	167781.26000	2.000	374.12937	371.18868	385.51305
NA	23	12327.04552	1641472.63000	2.100	12386.41773	12038.52956	12556.18926
TI	47	0.18278	3.33300	173.200	0.54835	0.00000	0.00000
V	51	0.04101	43.33300	79.300	0.02206	0.07857	0.02240
IN-2	115	150135.40000	0.00000	0.000	153514.68000	146551.26000	150340.26000
IN-3	115	63240.14000	0.00000	0.000	61491.59000	64837.14000	63391.69000
AG	107	0.00184	6.66700	186.900	0.00398	0.00367	-0.00213
AS	75	0.18791	20.66700	28.700	0.18721	0.24213	0.13439
BA	137	96.24479	23303.67700	2.800	99.39190	94.54194	94.80053
CD	111	0.11348	25.33300	19.200	0.12934	0.12250	0.08860
CO	59	9.30026	12992.91000	8.100	9.79420	8.42818	9.67841
CU	63	6.24070	6555.03000	6.200	5.79608	6.48462	6.44141
MO	98	0.05759	96.67000	61.900	0.09871	0.03603	0.03803
NI	60	11.69674	4404.13300	3.500	11.77799	12.05750	11.25472
SB	121	0.10400	73.33700	51.000	0.06764	0.07948	0.16488
SE	78	0.18619	6.00000	30.900	0.12596	0.19184	0.24077
SN	120	0.17444	400.02700	7.200	0.17578	0.16123	0.18631
SR	88	33.29770	19109.99000	3.400	32.58084	32.72130	34.59096
ZN	66	42.00365	5751.33000	1.800	41.85234	42.83637	41.32225
BI-3	209	116734.71700	0.00000	0.000	111720.87000	121144.02000	117339.26000
PB	208	2.88939	11465.72000	4.100	2.89047	2.77159	3.00612
TL	205	0.08278	330.01300	25.900	0.08099	0.10506	0.06229
U	238	0.16379	600.04300	16.200	0.18206	0.13330	0.17599
SC-2	45	86018.26300	0.00000	0.000	86363.11000	84313.37000	87378.31000
GE-1	72	684569.80700	0.00000	0.000	673463.11000	698040.77000	682205.54000
GE-2	72	104084.03000	0.00000	0.000	107166.98000	101656.42000	103428.69000
GE-3	72	141942.37700	0.00000	0.000	138279.53000	143978.16000	143569.44000
TB-3	159	181589.20300	0.00000	0.000	177289.88000	184499.33000	182978.40000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:03:37
Tube Number: 34 Batch: 182941063902A
Sample Number: **9856081** Class: UP********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	703985.19700	0.00000	0.000	707917.18000	712832.80000	691205.61000
SC-3	45	46932.75300	0.00000	0.000	47738.60000	46795.60000	46264.06000
AL	27	3420.05085	67362.97000	2.200	3356.45836	3399.63233	3504.06187
B	11	179.48620	22477.41700	0.800	179.67497	177.96307	180.82056
BE	9	1.61369	384.67700	8.000	1.69336	1.46473	1.68297
CA	44	12233.90675	33702.78700	3.600	11830.55476	12157.88779	12713.27771
CR	52	12.44610	10527.47000	1.400	12.26378	12.45299	12.62151
FE	57	200.72550	3507.22300	7.300	202.02086	185.53696	214.61868
K	39	3293.90108	183613.11300	2.800	3194.28511	3310.90073	3376.51739
MG	24	6192.12918	372582.82000	3.100	5987.38134	6227.71877	6361.28744
MN	55	397.37476	175234.58000	3.100	383.33277	402.41610	406.37541
NA	23	14139.08691	1864385.54700	2.700	13705.48306	14307.61641	14404.16125
TI	47	53.40223	970.06300	5.800	51.93684	51.32781	56.94204
V	51	2.11430	1443.45700	15.200	1.91266	2.48593	1.94431
IN-2	115	157658.86700	0.00000	0.000	157401.63000	152930.26000	162644.71000
IN-3	115	61443.81300	0.00000	0.000	61262.05000	62386.04000	60683.35000
AG	107	1.04542	1713.50300	1.400	1.03414	1.03954	1.06257
AS	75	4.25450	364.67700	4.300	4.04632	4.32118	4.39600
BA	137	106.84404	25140.23000	4.200	103.17925	105.55569	111.79718
CD	111	2.12265	448.67700	6.000	2.12696	2.24733	1.99366
CO	59	11.71398	15892.50300	4.400	11.40068	11.43512	12.30613
CU	63	89.60506	89921.63700	2.200	87.92475	89.06744	91.82299
MO	98	3.93956	3443.87300	3.100	3.86532	3.87465	4.07872
NI	60	21.09049	7638.91700	5.200	19.95441	21.15998	22.15708
SB	121	3.92930	2300.27000	1.000	3.95790	3.88630	3.94371
SE	78	3.76924	96.44700	6.600	3.99306	3.81158	3.50308
SN	120	4.11247	3267.17000	10.600	3.60937	4.36020	4.36785
SR	88	46.44779	25854.09000	4.800	44.67221	45.71364	48.95754
ZN	66	73.70597	9766.89000	4.900	71.36577	71.86642	77.88571
BI-3	209	116464.67700	0.00000	0.000	117045.97000	118963.48000	113384.58000
PB	208	8.63388	34011.70700	3.500	8.50420	8.42174	8.97570
TL	205	1.03340	3137.16300	8.900	1.00358	1.13629	0.96032
U	238	1.18028	4287.53300	8.800	1.05977	1.23973	1.24135
SC-2	45	89231.07700	0.00000	0.000	87118.09000	85971.07000	94604.07000
GE-1	72	674398.63300	0.00000	0.000	680414.36000	682946.55000	659834.99000
GE-2	72	106504.92700	0.00000	0.000	105181.14000	103510.46000	110823.18000
GE-3	72	138732.25700	0.00000	0.000	139670.39000	138672.46000	137853.92000
TB-3	159	179548.15700	0.00000	0.000	180441.58000	179796.29000	178406.60000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:05:55
Tube Number: 35 Batch: 182941063902A
Sample Number: **9856084** Class: D*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	723093.27000	0.00000	0.000	724568.35000	728949.21000	715762.25000
SC-3	45	49223.03000	0.00000	0.000	48711.13000	49905.20000	49052.76000
AL	27	2563.31314	52988.38700	2.700	2561.24432	2495.98278	2632.71232
B	11	69.07184	10842.61300	0.700	68.81502	69.62551	68.77500
BE	9	0.71790	177.33300	12.300	0.67758	0.65713	0.81898
CA	44	10600.11187	30659.43700	2.300	10358.56605	10603.79022	10837.97934
CR	52	4.83062	4340.84000	6.200	4.86908	4.51451	5.10827
FE	57	2.60237	150.00700	111.200	-0.69307	4.72196	3.77821
K	39	2407.73483	142936.36700	1.500	2406.86019	2373.03892	2443.30539
MG	24	5926.60086	374125.10000	1.600	5911.50249	5840.64905	6027.65104
MN	55	370.31114	171349.86700	1.500	365.35286	369.06092	376.51965
NA	23	12118.13346	1677602.78700	2.600	11908.23533	11961.22187	12484.94318
TI	47	0.17549	3.33300	173.200	0.00000	0.00000	0.52648
V	51	0.03433	40.00000	83.400	0.06336	0.03349	0.00614
IN-2	115	156068.45700	0.00000	0.000	150509.88000	156310.08000	161385.41000
IN-3	115	65606.03300	0.00000	0.000	66034.33000	65522.93000	65260.84000
AG	107	-0.00213	0.00000	0.000	-0.00213	-0.00213	-0.00213
AS	75	0.14306	17.33300	24.200	0.10511	0.17270	0.15137
BA	137	93.01746	23373.84000	3.400	91.55953	90.87808	96.61478
CD	111	0.07059	16.66700	39.700	0.10257	0.05894	0.05026
CO	59	9.04676	13129.64700	1.600	8.94342	8.97905	9.21781
CU	63	6.41362	6978.58300	3.000	6.33729	6.63093	6.27265
MO	98	-0.02652	23.33300	0.000	-0.01947	-0.03009	-0.03000
NI	60	12.36901	4824.33700	3.900	11.93850	12.26956	12.89898
SB	121	0.06203	50.00000	92.400	0.12561	0.04627	0.01422
SE	78	0.12280	4.66700	37.700	0.10189	0.17583	0.09068
SN	120	-0.11822	186.67700	0.000	-0.11558	-0.16502	-0.07406
SR	88	32.75707	19500.58000	3.400	31.47027	33.46055	33.34037
ZN	66	42.91817	6094.81300	5.700	43.18262	45.22847	40.34342
BI-3	209	121666.83700	0.00000	0.000	120678.88000	122877.43000	121444.20000
PB	208	2.86427	11852.52000	0.600	2.86829	2.87931	2.84522
TL	205	0.11101	430.02000	11.100	0.10884	0.09996	0.12423
U	238	0.14325	550.03300	6.200	0.13382	0.14446	0.15147
SC-2	45	88785.40700	0.00000	0.000	85961.69000	88315.89000	92078.64000
GE-1	72	681938.81700	0.00000	0.000	688578.58000	685260.22000	671977.65000
GE-2	72	106431.54300	0.00000	0.000	102131.03000	107085.08000	110078.52000
GE-3	72	142972.87300	0.00000	0.000	139660.39000	147325.75000	141932.48000
TB-3	159	186671.95700	0.00000	0.000	186087.77000	186664.51000	187263.59000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:08:05
Tube Number: 36 Batch: 182941063902A
Sample Number: **9856082** Class: R*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	715574.72700	0.00000	0.000	709446.63000	714799.36000	722478.19000
SC-3	45	48678.02000	0.00000	0.000	49283.81000	48119.34000	48630.91000
AL	27	4506.13017	92024.38300	1.600	4424.34214	4540.07691	4553.97144
B	11	336.30636	40059.69000	1.200	338.40047	338.68606	331.83255
BE	9	4.63886	1119.38300	1.300	4.65681	4.57194	4.68783
CA	44	14497.71502	41409.01000	1.500	14251.49088	14568.93942	14672.71476
CR	52	56.12581	48912.56700	3.500	53.91580	57.66163	56.79999
FE	57	999.17628	17704.49300	0.400	995.02404	1003.14731	999.35748
K	39	12737.12106	713940.66700	1.900	12458.60363	12913.18768	12839.57187
MG	24	7909.22327	493510.17700	2.200	7733.51107	8088.90455	7905.25418
MN	55	419.05245	191660.32700	3.200	405.66503	432.15510	419.33721
NA	23	21778.37449	2973980.89300	1.700	21370.09207	22075.91735	21889.11404
TI	47	264.99074	4994.38300	1.800	264.15996	270.01369	260.79858
V	51	50.65574	35523.78000	1.700	50.11656	50.20176	51.64890
IN-2	115	155827.05000	0.00000	0.000	149131.18000	156604.17000	161745.80000
IN-3	115	65726.70700	0.00000	0.000	65357.10000	65464.27000	66358.75000
AG	107	48.66973	85170.29300	1.100	48.22606	49.23750	48.54562
AS	75	10.44394	951.37000	7.700	10.91189	9.52053	10.89940
BA	137	139.31780	35068.85000	0.900	139.84480	140.29626	137.81234
CD	111	5.04183	1138.05300	5.500	5.33646	5.00729	4.78172
CO	59	263.08775	379937.41700	1.300	259.78451	266.65417	262.82457
CU	63	58.29624	62629.05700	1.800	57.13697	59.16873	58.58302
MO	98	48.53483	44848.38700	2.000	49.12440	49.06632	47.41376
NI	60	63.30361	24330.90000	1.000	63.10782	64.00329	62.79972
SB	121	5.83830	3650.59300	1.500	5.91937	5.84522	5.75032
SE	78	10.10358	252.89300	4.200	10.51603	9.66488	10.12984
SN	120	50.09295	39439.65300	2.500	48.85251	51.30928	50.11707
SR	88	71.96717	42808.63700	2.200	70.34820	73.49031	72.06299
ZN	66	551.22874	77852.95000	1.000	546.44795	556.84629	550.39199
BI-3	209	121391.75300	0.00000	0.000	121959.87000	120407.09000	121808.30000
PB	208	17.72281	72717.06300	0.900	17.85014	17.76729	17.55101
TL	205	2.13050	6638.59700	4.200	2.03697	2.21448	2.14003
U	238	0.15603	596.70300	19.000	0.12187	0.17412	0.17210
SC-2	45	88365.89000	0.00000	0.000	82843.97000	88455.12000	93798.58000
GE-1	72	680450.32700	0.00000	0.000	675822.41000	675729.13000	689799.44000
GE-2	72	105814.16300	0.00000	0.000	99260.81000	106551.84000	111629.84000
GE-3	72	143296.17300	0.00000	0.000	143722.03000	142528.12000	143638.37000
TB-3	159	187329.41300	0.00000	0.000	190743.79000	182957.73000	188286.72000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:10:14
Tube Number: 37 Batch: 182941063902A
Sample Number: **9856083** Class: M*********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	734621.37000	0.00000	0.000	718805.46000	733236.16000	751822.49000
SC-3	45	49035.85300	0.00000	0.000	47697.99000	49263.23000	50146.34000
AL	27	4666.06056	95978.74700	1.100	4726.69430	4643.14251	4628.34485
B	11	360.70523	43862.10700	2.700	371.81710	357.40836	352.89024
BE	9	4.42830	1096.04700	7.500	4.81110	4.26206	4.21173
CA	44	14931.08341	42937.06300	3.400	15370.74758	15040.73089	14381.77177
CR	52	56.14545	49297.59000	0.900	56.35998	56.52550	55.55089
FE	57	972.91755	17357.52000	4.800	1025.41481	937.04196	956.29587
K	39	12911.36580	728807.54000	1.800	13153.71389	12885.99224	12694.39126
MG	24	8170.35348	513458.78300	1.900	8340.84661	8136.14435	8034.06948
MN	55	433.54523	199750.86300	1.000	438.44708	432.21457	429.97405
NA	23	22206.43642	3053618.28700	2.600	22868.33553	21985.20140	21765.77233
TI	47	254.79509	4837.64300	0.700	255.06648	256.40211	252.91670
V	51	50.85095	35918.50700	0.900	51.36133	50.57602	50.61548
IN-2	115	154258.56300	0.00000	0.000	151537.05000	150752.25000	160486.39000
IN-3	115	63822.54000	0.00000	0.000	60978.75000	65601.39000	64887.48000
AG	107	50.46875	85704.07700	2.600	51.86842	49.26161	50.27622
AS	75	10.87047	960.70700	6.400	11.22328	11.31315	10.07499
BA	137	152.19154	37150.74000	5.300	160.83900	144.95093	150.78468
CD	111	5.12300	1123.38700	3.200	5.05103	5.00570	5.31226
CO	59	274.94508	385259.05700	3.000	284.00926	268.34944	272.47654
CU	63	61.07055	63646.84700	3.300	63.33667	59.42015	60.45483
MO	98	50.91455	45654.41300	2.800	52.55022	50.07419	50.11924
NI	60	65.03507	24250.78300	3.100	67.34825	63.52748	64.22949
SB	121	6.01557	3643.92300	9.300	6.65699	5.76863	5.62109
SE	78	10.60084	262.44700	5.200	11.00916	10.81760	9.97574
SN	120	51.69789	39503.38300	1.600	52.45520	51.83114	50.80732
SR	88	76.13164	43945.14700	2.100	77.74269	74.57268	76.07955
ZN	66	562.82728	77111.99300	3.800	586.31175	543.98165	558.18844
BI-3	209	118885.37300	0.00000	0.000	116248.45000	118438.08000	121969.59000
PB	208	18.31948	73599.18700	1.800	18.68229	18.02572	18.25043
TL	205	2.20263	6718.61700	1.300	2.21659	2.22176	2.16953
U	238	0.17973	673.38000	22.700	0.13900	0.22042	0.17977
SC-2	45	89435.48000	0.00000	0.000	86585.24000	87519.52000	94201.68000
GE-1	72	694843.35000	0.00000	0.000	682591.86000	697084.29000	704853.90000
GE-2	72	106549.51000	0.00000	0.000	104287.09000	103871.91000	111489.53000
GE-3	72	140923.68300	0.00000	0.000	137209.06000	142316.87000	143245.12000
TB-3	159	184731.33700	0.00000	0.000	178225.08000	189719.67000	186249.26000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:12:24
Tube Number: 38 Batch: 182941063902A
Sample Number: **9856081** Class: UL********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	696067.10300	0.00000	0.000	700337.26000	678335.54000	709528.51000
SC-3	45	49280.12700	0.00000	0.000	48892.12000	47969.26000	50979.00000
AL	27	503.54337	10520.71300	4.300	493.22557	528.23496	489.16958
B	11	80.13817	11613.85300	3.900	80.47935	83.05821	76.87694
BE	9	0.10783	28.00000	13.300	0.12409	0.10220	0.09719
CA	44	2188.69755	6454.98000	2.100	2135.63952	2209.80583	2220.64729
CR	52	1.30502	1243.43300	5.900	1.29111	1.23632	1.38761
FE	57	-0.01002	103.33700	0.000	2.11371	-1.76613	-0.37763
K	39	489.13624	35406.64000	4.100	482.01973	512.00458	473.38440
MG	24	1201.94543	76362.90000	4.800	1191.86170	1263.89347	1150.08112
MN	55	73.83513	34474.76300	2.900	71.99360	76.19951	73.31228
NA	23	2352.24462	333338.83000	2.900	2315.19683	2431.48607	2310.05098
TI	47	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
V	51	0.01076	23.33300	78.200	0.02044	0.00678	0.00507
IN-2	115	158847.48300	0.00000	0.000	160308.16000	155306.63000	160927.66000
IN-3	115	65647.54700	0.00000	0.000	64888.58000	65530.54000	66523.52000
AG	107	0.00169	6.66700	390.800	-0.00213	0.00934	-0.00213
AS	75	0.05426	9.33300	100.800	0.06313	-0.00435	0.10398
BA	137	19.30829	4864.35700	2.100	18.87862	19.69002	19.35624
CD	111	0.02020	5.33300	132.200	0.01466	-0.00330	0.04925
CO	59	1.80883	2700.33700	5.400	1.92136	1.74208	1.76305
CU	63	1.20158	1400.12000	9.000	1.32027	1.10985	1.17462
MO	98	0.01679	63.33300	71.000	0.00304	0.02423	0.02310
NI	60	2.35678	1000.07000	0.900	2.33462	2.36159	2.37415
SB	121	0.01926	23.33300	94.900	-0.00184	0.03018	0.02946
SE	78	-0.04720	0.44300	0.000	-0.01257	-0.06452	-0.06452
SN	120	-0.01615	266.67700	0.000	-0.03356	-0.02391	0.00903
SR	88	6.49352	3950.68700	8.200	5.90973	6.62796	6.94288
ZN	66	7.86081	1156.75700	11.400	6.91142	7.97750	8.69351
BI-3	209	121193.01300	0.00000	0.000	120861.00000	119064.57000	123653.47000
PB	208	0.53502	2276.83000	5.000	0.50565	0.54097	0.55843
TL	205	0.01052	120.00700	24.000	0.01066	0.00793	0.01296
U	238	0.04227	166.67300	52.300	0.06721	0.02511	0.03450
SC-2	45	90223.41300	0.00000	0.000	90850.30000	89321.07000	90498.87000
GE-1	72	673903.90000	0.00000	0.000	678013.90000	657340.15000	686357.65000
GE-2	72	109913.35700	0.00000	0.000	107962.63000	109240.89000	112536.55000
GE-3	72	145202.08300	0.00000	0.000	142832.44000	142488.93000	150284.88000
TB-3	159	185506.14700	0.00000	0.000	185105.21000	182153.94000	189259.29000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:14:34
Tube Number: 39 Batch: 182941063902A
Sample Number: **9856079** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	724182.82700	0.00000	0.000	726727.33000	725393.43000	720427.72000
SC-3	45	49541.20000	0.00000	0.000	48079.90000	49614.35000	50929.35000
AL	27	122.95922	2687.00300	7.700	118.26678	116.81759	133.79328
B	11	47.81098	8497.10300	0.800	48.07702	48.00220	47.35373
BE	9	0.17443	45.33300	38.100	0.10280	0.23416	0.18633
CA	44	13017.31448	37825.95000	4.600	13685.79219	12839.35469	12526.79655
CR	52	0.88832	880.05300	5.400	0.88411	0.84224	0.93863
FE	57	29.84447	640.03700	10.100	27.53562	28.73177	33.26602
K	39	1940.54171	117468.26000	2.100	1974.32503	1951.27652	1896.02358
MG	24	5421.68573	344399.37000	2.200	5550.18510	5394.86674	5320.00535
MN	55	126.34236	59060.20700	0.900	127.37829	126.60671	125.04209
NA	23	5826.62303	816369.75300	2.200	5930.38112	5868.54460	5680.94338
TI	47	0.52158	10.00000	2.900	0.53713	0.52052	0.50708
V	51	0.07667	70.00300	51.400	0.10783	0.08980	0.03237
IN-2	115	150537.14300	0.00000	0.000	147819.07000	151768.23000	152024.13000
IN-3	115	64895.29000	0.00000	0.000	63834.25000	63682.66000	67168.96000
AG	107	-0.00017	3.33300	0.000	0.00376	-0.00213	-0.00213
AS	75	0.07799	11.33300	44.100	0.04226	0.11079	0.08093
BA	137	83.72806	20809.69700	1.400	84.88183	83.72868	82.57368
CD	111	0.03584	8.66700	40.800	0.03321	0.05159	0.02272
CO	59	0.94927	1446.79300	9.600	0.84858	0.97229	1.02694
CU	63	0.21787	343.35000	7.100	0.20108	0.22107	0.23146
MO	98	0.00343	50.00000	878.200	0.03741	-0.00710	-0.02002
NI	60	2.49534	1040.07300	7.400	2.40435	2.70729	2.37438
SB	121	0.01441	20.00000	114.700	0.03146	-0.00153	0.01330
SE	78	0.44271	12.22000	26.800	0.33069	0.43056	0.56688
SN	120	-0.11209	190.01000	0.000	-0.12041	-0.14625	-0.06960
SR	88	19.45299	11498.38700	3.700	18.64799	20.03315	19.67783
ZN	66	13.88861	1980.20700	7.500	14.98357	13.77669	12.90556
BI-3	209	119418.60000	0.00000	0.000	117996.44000	117663.38000	122595.98000
PB	208	0.12689	596.70300	10.500	0.13433	0.13477	0.11157
TL	205	-0.00316	76.66700	0.000	0.00157	-0.00506	-0.00600
U	238	0.08870	336.68300	15.700	0.10426	0.07727	0.08456
SC-2	45	85911.75700	0.00000	0.000	84402.82000	84603.98000	88728.47000
GE-1	72	696118.74000	0.00000	0.000	698430.85000	699995.69000	689929.68000
GE-2	72	105041.39700	0.00000	0.000	102120.59000	104174.23000	108829.37000
GE-3	72	143940.82300	0.00000	0.000	140115.93000	142974.06000	148732.48000
TB-3	159	185174.78300	0.00000	0.000	180921.29000	184923.24000	189679.82000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:16:45
Tube Number: 40 Batch: 182941063902A
Sample Number: **9856080** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	717909.41700	0.00000	0.000	649386.32000	728549.13000	775792.80000
SC-3	45	50735.57300	0.00000	0.000	52244.61000	50357.83000	49604.28000
AL	27	9.37027	333.35000	33.000	6.44637	12.61304	9.05138
B	11	36.66607	7161.07000	14.700	42.17211	36.42515	31.40095
BE	9	0.00779	4.66700	160.900	0.00656	0.02090	-0.00408
CA	44	37560.27124	111528.13700	3.100	36479.15653	37423.95474	38777.70244
CR	52	0.89786	910.05700	6.500	0.92306	0.93936	0.83115
FE	57	15.13206	386.71700	48.200	23.29602	12.85823	9.24194
K	39	2731.11584	165933.88000	3.300	2634.68257	2744.70502	2813.95992
MG	24	15886.01009	1032156.57300	3.100	15320.72456	16136.18331	16201.12239
MN	55	47.64061	23022.18300	3.500	45.94239	47.71279	49.26666
NA	23	8628.14002	1233530.45000	1.900	8447.97290	8664.21874	8772.22841
TI	47	0.17095	3.33300	173.200	0.00000	0.51284	0.00000
V	51	0.08681	80.00300	38.200	0.12405	0.06057	0.07582
IN-2	115	159668.26700	0.00000	0.000	159669.27000	165523.72000	153811.81000
IN-3	115	67038.93700	0.00000	0.000	67783.35000	67650.84000	65682.62000
AG	107	0.00342	10.00000	162.100	0.00896	0.00342	-0.00213
AS	75	0.02388	6.66700	144.600	0.01558	-0.00573	0.06178
BA	137	24.48035	6291.68000	4.100	24.08415	23.74527	25.61164
CD	111	0.01973	5.33300	65.900	0.02249	0.03115	0.00557
CO	59	0.13908	300.01700	22.200	0.17075	0.13755	0.10894
CU	63	2.08875	2400.29300	1.900	2.04618	2.09571	2.12435
MO	98	0.01869	66.67300	210.100	0.06374	0.00080	-0.00846
NI	60	2.13323	933.39300	9.600	2.22384	1.89873	2.27712
SB	121	0.01873	23.33300	98.400	-0.00254	0.02866	0.03006
SE	78	1.44027	38.44300	8.300	1.39939	1.57458	1.34685
SN	120	-0.19052	133.33700	0.000	-0.22106	-0.13379	-0.21670
SR	88	76.44836	46362.60300	2.500	74.57612	76.36393	78.40504
ZN	66	26.55753	3870.65000	4.200	25.29113	26.99377	27.38768
BI-3	209	123188.49000	0.00000	0.000	126159.97000	124221.12000	119184.38000
PB	208	0.09434	480.01300	15.000	0.08903	0.08360	0.11040
TL	205	-0.01467	43.33300	0.000	-0.01290	-0.01583	-0.01529
U	238	0.04294	173.34000	46.000	0.06176	0.04467	0.02239
SC-2	45	90834.08300	0.00000	0.000	91132.20000	92238.82000	89131.23000
GE-1	72	693766.53000	0.00000	0.000	657780.15000	696310.54000	727208.90000
GE-2	72	111116.98300	0.00000	0.000	111974.17000	112225.19000	109151.59000
GE-3	72	148071.43300	0.00000	0.000	150692.80000	148003.37000	145518.13000
TB-3	159	189716.26000	0.00000	0.000	192231.05000	190191.68000	186726.05000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:19:13
Tube Number: 41
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	715461.29000	0.00000	0.000	682538.97000	727321.00000	736523.90000
SC-3	45	50929.51000	0.00000	0.000	50648.80000	51581.16000	50558.57000
AL	27	2529.58205	54109.08700	1.900	2504.15739	2498.72554	2585.86321
B	11	276.36404	33449.62700	3.600	287.59116	269.26755	272.23342
BE	9	24.18521	5815.81700	4.600	25.45747	23.70936	23.38879
CA	44	2485.24571	7552.16700	5.000	2390.83141	2439.59410	2625.31161
CR	52	253.20863	230567.24300	2.500	251.21755	248.02846	260.37988
FE	57	2463.02468	45501.69000	1.400	2468.27314	2427.30576	2493.49513
K	39	2580.47589	157910.50000	1.400	2573.18750	2548.24615	2619.99403
MG	24	2548.59331	166791.09000	2.600	2536.18196	2488.68034	2620.91762
MN	55	250.84628	120195.89000	1.900	250.39902	246.21268	255.92714
NA	23	2461.58084	360170.92300	2.400	2456.63862	2404.23776	2523.86614
TI	47	273.79004	5401.18300	4.600	266.21937	288.45626	266.69449
V	51	253.83705	186164.26300	2.200	250.78660	250.54750	260.17705
IN-2	115	157228.80700	0.00000	0.000	164352.93000	155937.04000	151396.45000
IN-3	115	67778.98300	0.00000	0.000	67176.73000	69293.01000	66867.21000
AG	107	24.31239	43859.16300	3.800	24.07208	23.53778	25.32732
AS	75	258.49282	24164.24000	2.700	255.38639	253.70562	266.38645
BA	137	246.62109	64005.68000	1.900	242.96373	245.00557	251.89397
CD	111	24.57882	5720.53300	1.900	24.04188	24.92250	24.77208
CO	59	259.18397	385899.64300	2.200	257.49503	254.44724	265.60964
CU	63	257.34234	284630.49000	1.900	256.77273	252.80611	262.44819
MO	98	25.70398	24508.46300	3.700	25.66178	24.76298	26.68720
NI	60	258.35955	102050.88300	3.300	257.94233	249.98197	267.15435
SB	121	24.57333	15806.06000	5.100	23.44325	24.34125	25.93550
SE	78	26.49226	665.79300	6.300	25.13138	25.98245	28.36295
SN	120	24.85654	20328.76700	2.600	24.10409	25.21605	25.24947
SR	88	25.88040	15942.72300	3.600	24.80792	26.30128	26.53200
ZN	66	257.27850	37496.10000	1.100	254.73555	256.71602	260.38392
BI-3	209	124580.87300	0.00000	0.000	124725.71000	127430.70000	121586.21000
PB	208	25.22963	106160.53700	2.900	24.73101	24.89839	26.05948
TL	205	24.83434	78439.08700	2.600	24.59607	24.33852	25.56843
U	238	25.09278	97330.93700	4.200	24.43094	24.55152	26.29588
SC-2	45	88872.05700	0.00000	0.000	92209.05000	88415.23000	85991.89000
GE-1	72	686682.34300	0.00000	0.000	652518.23000	698351.08000	709177.72000
GE-2	72	110679.74000	0.00000	0.000	112597.79000	109242.54000	110198.89000
GE-3	72	149168.67700	0.00000	0.000	148760.58000	150892.86000	147852.59000
TB-3	159	190759.41300	0.00000	0.000	188838.40000	195982.56000	187457.28000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:21:22
Tube Number: 42
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	661453.19300	0.00000	0.000	635709.95000	697367.26000	651282.37000
SC-3	45	49340.28300	0.00000	0.000	48008.85000	49363.91000	50648.09000
AL	27	-4.40595	40.00000	0.000	-4.35730	-3.92839	-4.93215
B	11	82.82883	11297.60000	7.200	89.52411	78.17488	80.78752
BE	9	0.00938	4.66700	64.400	0.01631	0.00530	0.00651
CA	44	75.77655	366.68300	30.900	48.77634	91.07739	87.47592
CR	52	0.34023	393.35300	20.000	0.32618	0.28034	0.41417
FE	57	-2.62314	56.66700	0.000	-2.34498	-2.99951	-2.52493
K	39	2.72487	8125.83300	373.500	13.44797	1.52467	-6.79804
MG	24	-0.54127	550.02700	0.000	-1.11130	0.40573	-0.91824
MN	55	-0.50651	116.66700	0.000	-0.51461	-0.45653	-0.54838
NA	23	33.29457	13866.83700	3.000	32.14468	34.05735	33.68166
TI	47	0.17931	3.33300	173.200	0.53793	0.00000	0.00000
V	51	0.01056	23.33300	69.000	0.00676	0.00596	0.01896
IN-2	115	156678.11700	0.00000	0.000	151265.07000	155763.25000	163006.03000
IN-3	115	67360.68700	0.00000	0.000	65110.12000	69801.69000	67170.25000
AG	107	-0.00026	3.33300	0.000	-0.00213	-0.00213	0.00346
AS	75	0.07405	11.33300	90.100	0.06275	0.01372	0.14569
BA	137	-0.00463	10.00000	0.000	-0.00283	0.03189	-0.04294
CD	111	-0.00052	0.66700	0.000	-0.00330	0.00505	-0.00330
CO	59	0.00714	106.67300	540.700	-0.03637	0.02046	0.03733
CU	63	0.02825	146.67300	170.000	0.05385	-0.02716	0.05807
MO	98	0.00069	50.00000	2358.900	-0.00808	0.01958	-0.00942
NI	60	-0.18245	30.00000	0.000	-0.20597	-0.18492	-0.15646
SB	121	0.45108	300.01300	12.100	0.46773	0.49548	0.39003
SE	78	-0.05554	0.22300	0.000	-0.06452	-0.03758	-0.06452
SN	120	-0.11220	196.67700	0.000	-0.15088	-0.12864	-0.05708
SR	88	-0.10724	36.66700	0.000	-0.09952	-0.10410	-0.11810
ZN	66	4.99153	770.05300	5.700	5.09867	4.66661	5.20932
BI-3	209	121856.74000	0.00000	0.000	118792.65000	123837.92000	122939.65000
PB	208	-0.00509	66.66700	0.000	-0.00387	-0.00936	-0.00205
TL	205	-0.00483	73.33300	0.000	-0.00860	-0.00304	-0.00285
U	238	0.01048	46.66700	58.800	0.01436	0.01370	0.00337
SC-2	45	87913.56700	0.00000	0.000	82904.13000	88466.02000	92370.55000
GE-1	72	635823.45700	0.00000	0.000	617589.29000	664337.18000	625543.90000
GE-2	72	106864.51000	0.00000	0.000	102834.00000	106180.15000	111579.38000
GE-3	72	147971.97000	0.00000	0.000	146123.22000	148851.43000	148941.26000
TB-3	159	187835.17000	0.00000	0.000	184221.52000	189739.74000	189544.25000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:23:31
Tube Number: 43 Batch: 182941063902A
Sample Number: **9856085** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	738310.87300	0.00000	0.000	755816.55000	728080.69000	731035.38000
SC-3	45	50638.26300	0.00000	0.000	49293.85000	50758.37000	51862.57000
AL	27	1733.47316	36896.58700	2.800	1776.71223	1742.22460	1681.48265
B	11	41.33340	7929.45300	1.000	41.51521	40.83869	41.64631
BE	9	0.40441	103.33300	5.100	0.39734	0.38842	0.42747
CA	44	76301.08088	226042.13300	1.200	77160.43374	76448.48152	75294.32737
CR	52	2.25994	2143.55700	9.200	2.09699	2.18780	2.49504
FE	57	14.87846	380.01700	25.700	10.45771	17.06585	17.11182
K	39	2685.65024	163063.31300	1.200	2698.06578	2710.93588	2647.94904
MG	24	29949.97283	1942099.50000	2.200	30357.74469	30305.71150	29186.46229
MN	55	4372.86594	2077532.20700	0.900	4372.41333	4411.56829	4334.61620
NA	23	21392.66246	3038955.37000	1.100	21607.57845	21437.98680	21132.42213
TI	47	0.33919	6.66700	173.200	0.00000	1.01758	0.00000
V	51	0.05205	53.33300	122.800	0.11870	0.04623	-0.00878
IN-2	115	161543.07300	0.00000	0.000	153246.66000	163591.36000	167791.20000
IN-3	115	67940.25000	0.00000	0.000	65793.41000	69359.44000	68667.90000
AG	107	0.00150	6.66700	209.400	-0.00213	0.00329	0.00334
AS	75	0.27102	30.00000	10.600	0.23791	0.28590	0.28927
BA	137	15.00776	3914.03000	3.500	15.16366	14.41945	15.44017
CD	111	0.19393	46.00000	7.100	0.19151	0.18149	0.20881
CO	59	38.74454	57902.56000	2.200	39.54340	38.83171	37.85851
CU	63	1.29998	1556.80000	9.700	1.42175	1.30786	1.17033
MO	98	0.01065	60.00000	326.800	-0.00853	0.05083	-0.01035
NI	60	21.08106	8442.73700	3.600	21.43448	21.60748	20.20121
SB	121	0.07474	60.00000	33.400	0.06203	0.10352	0.05868
SE	78	1.60120	43.11000	10.700	1.40640	1.67049	1.72670
SN	120	-0.14108	173.34000	0.000	-0.02524	-0.22417	-0.17383
SR	88	82.68854	50824.54000	0.400	82.93409	82.84329	82.28825
ZN	66	16.74752	2493.63700	8.800	16.65104	18.26213	15.32939
BI-3	209	121967.09700	0.00000	0.000	118267.02000	123795.76000	123838.51000
PB	208	0.02154	176.66700	29.900	0.01875	0.01696	0.02891
TL	205	0.07644	323.35000	25.500	0.09830	0.06074	0.07028
U	238	0.14656	563.36700	5.400	0.15559	0.14078	0.14332
SC-2	45	92346.19000	0.00000	0.000	87932.57000	94462.51000	94643.49000
GE-1	72	704563.09000	0.00000	0.000	714011.55000	703613.43000	696064.29000
GE-2	72	111606.39700	0.00000	0.000	107600.09000	113866.05000	113353.05000
GE-3	72	149259.69300	0.00000	0.000	143468.11000	152590.11000	151720.86000
TB-3	159	193494.58700	0.00000	0.000	186530.31000	197889.25000	196064.20000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:25:42
Tube Number: 44 Batch: 182941063902A
Sample Number: **9856086** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	712330.84700	0.00000	0.000	713467.72000	708727.33000	714797.49000
SC-3	45	52056.23000	0.00000	0.000	51250.49000	52704.84000	52213.36000
AL	27	1763.65782	38607.46000	0.600	1755.32819	1776.61609	1759.02918
B	11	37.62024	7244.44300	2.400	38.62421	37.30715	36.92937
BE	9	0.42252	104.00000	18.500	0.43829	0.49164	0.33763
CA	44	74405.35718	226654.53000	0.400	74243.05322	74710.59828	74262.42003
CR	52	2.27597	2216.91000	7.900	2.12212	2.47473	2.23108
FE	57	15.75706	406.69000	25.700	13.07241	20.41599	13.78279
K	39	2601.03686	162638.34700	1.200	2584.62528	2581.11557	2637.36972
MG	24	29430.14432	1962429.39700	0.800	29402.89541	29223.24747	29664.29006
MN	55	4345.93682	2122815.23000	0.700	4310.94754	4358.91173	4367.95119
NA	23	21076.73037	3078492.66000	1.300	21089.15146	20805.53033	21335.50933
TI	47	0.16333	3.33300	173.200	0.00000	0.49000	0.00000
V	51	0.10246	93.33300	16.300	0.11332	0.08323	0.11083
IN-2	115	164364.88300	0.00000	0.000	162552.48000	166525.01000	164017.16000
IN-3	115	68519.92300	0.00000	0.000	67000.18000	70023.76000	68535.83000
AG	107	-0.00034	3.33300	0.000	-0.00213	0.00324	-0.00213
AS	75	0.40928	43.33300	10.600	0.36260	0.44838	0.41686
BA	137	13.96720	3677.28700	3.200	13.52493	14.43144	13.94525
CD	111	0.22276	53.33300	22.300	0.18800	0.27958	0.20071
CO	59	38.67478	58304.55000	1.000	38.64620	38.31875	39.05939
CU	63	1.37025	1650.15000	2.800	1.37595	1.32946	1.40534
MO	98	-0.00317	46.66700	0.000	-0.00931	-0.03148	0.03129
NI	60	20.23338	8172.57000	6.100	20.63355	18.84832	21.21826
SB	121	0.02318	26.66700	102.700	0.02912	-0.00303	0.04344
SE	78	1.38359	38.00000	10.200	1.34800	1.26392	1.53886
SN	120	-0.25495	83.33300	0.000	-0.24457	-0.28547	-0.23483
SR	88	80.83268	50089.00700	3.900	82.30055	77.24769	82.94981
ZN	66	24.77177	3697.26000	4.800	23.57484	25.93461	24.80585
BI-3	209	126115.49000	0.00000	0.000	124109.82000	128097.71000	126138.94000
PB	208	0.00929	130.00000	81.100	0.01686	0.00180	0.00920
TL	205	0.09138	383.35300	23.700	0.07324	0.08548	0.11542
U	238	0.10398	416.69000	21.900	0.08351	0.12847	0.09995
SC-2	45	92752.21300	0.00000	0.000	90085.71000	93023.48000	95147.45000
GE-1	72	691173.16700	0.00000	0.000	691323.82000	691063.74000	691131.94000
GE-2	72	112026.49000	0.00000	0.000	110310.31000	110551.37000	115217.79000
GE-3	72	152681.30700	0.00000	0.000	149386.21000	156815.53000	151842.18000
TB-3	159	197500.00000	0.00000	0.000	191357.05000	202102.87000	199040.08000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:27:53
Tube Number: 45 Batch: 182941063902A
Sample Number: **9856087** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	725758.87000	0.00000	0.000	733703.27000	732835.30000	710738.04000
SC-3	45	51012.54300	0.00000	0.000	50788.42000	49985.70000	52263.51000
AL	27	11.15953	373.35300	27.300	9.63273	14.66457	9.18129
B	11	35.01080	7087.03300	7.500	32.98068	34.06848	37.98324
BE	9	0.02922	10.00000	2.500	0.02877	0.02882	0.03008
CA	44	152716.33371	455485.65700	3.200	153043.30062	157498.12451	147607.57601
CR	52	5.65538	5251.14700	3.900	5.44798	5.88426	5.63390
FE	57	34.66378	746.71300	9.200	38.27127	33.45128	32.26881
K	39	4239.77426	254512.29300	2.000	4254.51149	4316.66130	4148.14999
MG	24	47896.91466	3128678.49700	1.700	47726.67107	48800.49095	47163.58196
MN	55	2333.97737	1117007.82300	1.900	2319.85997	2383.99993	2298.07222
NA	23	25809.67544	3690857.03000	2.500	25822.59823	26443.67513	25162.75295
TI	47	0.17222	3.33300	173.200	0.00000	0.51666	0.00000
V	51	0.22834	183.34000	49.100	0.34701	0.21401	0.12399
IN-2	115	165466.44700	0.00000	0.000	165233.81000	167592.07000	163573.46000
IN-3	115	68118.32700	0.00000	0.000	66908.57000	68055.67000	69390.74000
AG	107	-0.00026	3.33300	0.000	0.00349	-0.00213	-0.00213
AS	75	0.09373	13.33300	37.300	0.12477	0.10055	0.05588
BA	137	31.42651	8206.03700	7.000	33.22644	28.97900	32.07408
CD	111	0.17946	42.66700	15.300	0.19697	0.19359	0.14783
CO	59	4.91659	7452.16300	2.000	5.01961	4.82019	4.90998
CU	63	0.11597	246.67700	29.100	0.15032	0.08295	0.11464
MO	98	0.14027	183.34000	50.300	0.21422	0.07372	0.13288
NI	60	5.22276	2176.90700	9.000	4.72019	5.29238	5.65571
SB	121	0.02319	26.66700	38.600	0.02918	0.01289	0.02749
SE	78	0.41462	12.66700	11.400	0.36483	0.45854	0.42048
SN	120	-0.16381	156.67300	0.000	-0.10617	-0.22161	-0.16363
SR	88	130.27469	80215.84700	1.500	130.86635	131.89956	128.05815
ZN	66	9.25741	1403.45000	9.100	9.82467	8.28494	9.66263
BI-3	209	123521.91000	0.00000	0.000	123494.53000	123322.81000	123748.39000
PB	208	0.00425	106.66700	85.600	0.00026	0.00510	0.00740
TL	205	0.03111	186.67700	46.200	0.04498	0.01627	0.03207
U	238	1.02581	3954.09300	4.800	0.97574	1.07345	1.02824
SC-2	45	94473.68000	0.00000	0.000	92491.31000	96184.09000	94745.64000
GE-1	72	702505.32700	0.00000	0.000	711371.47000	704322.72000	691821.79000
GE-2	72	113189.20000	0.00000	0.000	113404.17000	113575.60000	112587.83000
GE-3	72	150252.41700	0.00000	0.000	149709.21000	148518.35000	152529.69000
TB-3	159	193430.80300	0.00000	0.000	195376.89000	190543.08000	194372.44000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:30:07
Tube Number: 46 Batch: 182941063902A
Sample Number: **9856088** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	0.00000	0.00000	0.000	1156873	1144174	1158950
SC-3	45	0.00000	0.00000	0.000	76669.63800	79656.42500	79263.45600
AL	27	0.00000	0.00000	0.000	80.00300	70.00300	60.00200
B	11	0.00000	0.00000	0.000	4350.65000	4242.62600	4590.72200
BE	9	0.00000	0.00000	0.000	6.00000	4.00000	8.00000
CA	44	0.00000	0.00000	0.000	241394.19600	246008.76600	244137.90700
CR	52	0.00000	0.00000	0.000	550.05500	320.01400	340.01600
FE	57	0.00000	0.00000	0.000	160.00500	180.00700	210.01100
K	39	0.00000	0.00000	0.000	134477.72300	137869.41200	139090.37900
MG	24	0.00000	0.00000	0.000	1903024	1936461	1922294
MN	55	0.00000	0.00000	0.000	294235.32800	297746.87100	300815.66000
NA	23	0.00000	0.00000	0.000	2281736	2302129	2267051
TI	47	0.00000	0.00000	0.000	10.00000	0.00000	0.00000
V	51	0.00000	0.00000	0.000	30.00100	80.00300	80.00300
IN-2	115	0.00000	0.00000	0.000	236911.24600	252765.50400	260982.75000
IN-3	115	0.00000	0.00000	0.000	102524.52000	105889.70500	102807.19600
AG	107	0.00000	0.00000	0.000	20.00100	0.00000	0.00000
AS	75	0.00000	0.00000	0.000	20.00000	12.00000	24.00000
BA	137	0.00000	0.00000	0.000	3030.44500	2710.36300	2520.34600
CD	111	0.00000	0.00000	0.000	14.00000	4.00000	4.00000
CO	59	0.00000	0.00000	0.000	990.06400	980.06000	980.07400
CU	63	0.00000	0.00000	0.000	120.00500	120.00500	130.00600
MO	98	0.00000	0.00000	0.000	100.00300	50.00200	70.00200
NI	60	0.00000	0.00000	0.000	1420.12300	1460.12400	1470.11900
SB	121	0.00000	0.00000	0.000	10.00000	10.00000	40.00200
SE	78	0.00000	0.00000	0.000	4.00000	4.66700	12.00000
SN	120	0.00000	0.00000	0.000	40.00100	50.00200	50.00200
SR	88	0.00000	0.00000	0.000	39335.38500	40127.28500	41300.56100
ZN	66	0.00000	0.00000	0.000	1040.07200	940.06400	680.04000
BI-3	209	0.00000	0.00000	0.000	190701.87200	193107.92700	189863.35700
PB	208	0.00000	0.00000	0.000	20.00100	0.00000	0.00000
TL	205	0.00000	0.00000	0.000	120.00400	100.00400	110.00400
U	238	0.00000	0.00000	0.000	950.07100	1020.08800	890.06100
SC-2	45	0.00000	0.00000	0.000	133473.03500	143606.73600	152697.30200
GE-1	72	0.00000	0.00000	0.000	1119261	1107836	1131159
GE-2	72	0.00000	0.00000	0.000	165751.71600	174918.96200	182997.12600
GE-3	72	0.00000	0.00000	0.000	226808.68800	232164.46900	230466.22700
TB-3	159	0.00000	0.00000	0.000	294206.40200	296401.07000	292452.41800

Run Name: 1830201E07 Date/Time: 10/29/2018 7:32:16
Tube Number: 47 Batch: 182941063902A
Sample Number: **9856089** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 1.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	721091.26300	0.00000	0.000	721467.49000	721389.05000	720417.25000
SC-3	45	51136.28300	0.00000	0.000	51791.84000	50537.52000	51079.49000
AL	27	2.36127	186.67700	67.000	3.79278	2.62763	0.66341
B	11	26.56475	6110.60300	4.600	25.40234	26.45689	27.83500
BE	9	0.00749	4.66700	63.500	0.00473	0.01298	0.00476
CA	44	64254.38364	192263.78300	1.700	63287.99110	65391.58151	64083.57833
CR	52	1.35731	1336.82000	14.700	1.28856	1.20137	1.58200
FE	57	4.64949	193.34300	13.500	4.87223	5.13706	3.93917
K	39	2184.87277	135501.07300	2.200	2137.71323	2233.72686	2183.17823
MG	24	29368.72632	1923420.12700	2.200	28729.03606	29991.91364	29385.22927
MN	55	39.26454	19203.26000	3.400	39.67161	37.78180	40.34021
NA	23	8805.90429	1269057.77000	1.600	8813.31846	8938.92826	8665.46614
TI	47	0.16853	3.33300	173.200	0.00000	0.00000	0.50559
V	51	0.11358	100.00000	11.100	0.12532	0.11524	0.10018
IN-2	115	159189.65700	0.00000	0.000	163338.90000	154460.34000	159769.73000
IN-3	115	67207.14700	0.00000	0.000	67039.61000	66496.93000	68084.90000
AG	107	0.00537	13.33300	120.900	0.00908	0.00917	-0.00213
AS	75	0.09545	13.33300	35.700	0.12444	0.10404	0.05789
BA	137	53.96067	13897.45000	1.400	53.24194	53.87330	54.76676
CD	111	0.01685	4.66700	77.000	0.00539	0.01422	0.03093
CO	59	0.08722	223.34300	41.800	0.07827	0.12736	0.05603
CU	63	0.01520	133.33700	262.600	-0.02391	0.01363	0.05586
MO	98	0.00470	53.33300	133.600	0.01190	0.00172	0.00047
NI	60	1.28956	606.70300	20.400	1.07317	1.21314	1.58236
SB	121	0.01333	20.00000	119.500	-0.00236	0.02948	0.01288
SE	78	0.17955	6.22000	18.600	0.21647	0.15155	0.17063
SN	120	-0.17441	146.67300	0.000	-0.14429	-0.24371	-0.13521
SR	88	73.25340	44547.21000	2.400	71.89259	75.27036	72.59726
ZN	66	4.07343	636.71000	7.000	3.76134	4.14492	4.31403
BI-3	209	124176.96700	0.00000	0.000	126723.61000	122484.32000	123322.97000
PB	208	-0.00307	76.66700	0.000	-0.00029	-0.00681	-0.00211
TL	205	-0.02104	23.33300	0.000	-0.02854	-0.01565	-0.01894
U	238	0.13962	546.70000	23.700	0.11975	0.12134	0.17777
SC-2	45	89274.71300	0.00000	0.000	91596.21000	86534.43000	89693.50000
GE-1	72	698270.61300	0.00000	0.000	701142.33000	696727.49000	696942.02000
GE-2	72	110092.89300	0.00000	0.000	112889.95000	109425.45000	107963.28000
GE-3	72	148949.41000	0.00000	0.000	150599.94000	145983.01000	150265.28000
TB-3	159	191297.94700	0.00000	0.000	194594.10000	186948.16000	192351.58000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:34:27
Tube Number: 48 Batch: 182941063902A
Sample Number: **9856089** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	692006.00300	0.00000	0.000	704950.69000	663726.08000	707341.24000
SC-3	45	51056.01300	0.00000	0.000	49995.80000	52675.21000	50497.03000
AL	27	-3.71018	56.66700	0.000	-3.48156	-2.72107	-4.92792
B	11	14.92545	4626.07000	7.700	14.84648	16.11557	13.81430
BE	9	0.01143	5.33300	121.000	0.01355	0.02408	-0.00334
CA	44	6589.35809	19807.26300	5.800	6647.57473	6183.31993	6937.17959
CR	52	0.40497	466.69300	18.800	0.34261	0.48979	0.38250
FE	57	-1.08096	86.67000	0.000	0.28162	-2.65089	-0.87362
K	39	211.59799	20544.81700	8.900	227.88916	191.04487	215.85996
MG	24	2819.90873	184877.64000	3.200	2834.42999	2723.11005	2902.18615
MN	55	3.54848	2063.54700	5.700	3.33523	3.57226	3.73796
NA	23	861.84552	132628.98300	1.800	870.12624	844.01962	871.39069
TI	47	0.32685	6.66700	173.200	0.00000	0.98055	0.00000
V	51	-0.00861	10.00000	0.000	-0.02217	-0.00899	0.00533
IN-2	115	161575.82000	0.00000	0.000	160512.36000	157231.86000	166983.24000
IN-3	115	68178.22000	0.00000	0.000	67039.69000	68536.98000	68957.99000
AG	107	0.00344	10.00000	163.100	0.00908	0.00335	-0.00213
AS	75	0.05800	10.00000	65.000	0.08118	0.07834	0.01448
BA	137	5.11841	1346.78000	4.400	5.33385	5.14013	4.88124
CD	111	0.00539	2.00000	279.200	0.02277	-0.00330	-0.00330
CO	59	-0.02654	56.66700	0.000	-0.03038	-0.03112	-0.01812
CU	63	0.04696	170.01000	73.900	0.08581	0.01902	0.03603
MO	98	-0.02393	26.66700	0.000	-0.01996	-0.02065	-0.03117
NI	60	0.05293	123.33700	202.500	0.17671	-0.00819	-0.00972
SB	121	-0.01299	3.33300	0.000	-0.01809	-0.01809	-0.00280
SE	78	-0.00307	1.55700	0.000	0.01350	0.04181	-0.06452
SN	120	-0.24227	93.33300	0.000	-0.23209	-0.22257	-0.27216
SR	88	7.64411	4807.65300	6.300	7.94585	7.08962	7.89686
ZN	66	5.15229	803.38700	6.000	5.35897	5.30255	4.79536
BI-3	209	124648.29700	0.00000	0.000	122635.84000	127854.44000	123454.61000
PB	208	-0.00228	80.00000	0.000	-0.00200	-0.00511	0.00027
TL	205	-0.01899	30.00000	0.000	-0.01567	-0.02237	-0.01895
U	238	0.01111	50.00000	63.600	0.01909	0.00568	0.00855
SC-2	45	89787.77700	0.00000	0.000	90267.76000	88164.16000	90931.41000
GE-1	72	676237.74000	0.00000	0.000	686670.77000	655291.44000	686751.01000
GE-2	72	108731.34000	0.00000	0.000	108858.26000	104807.86000	112527.90000
GE-3	72	151629.44700	0.00000	0.000	148669.54000	154974.39000	151244.41000
TB-3	159	193669.91000	0.00000	0.000	187800.13000	199720.95000	193488.65000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:44:29
Tube Number: 49
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	639855.13300	0.00000	0.000	658215.30000	628663.47000	632686.63000
SC-3	45	46491.13300	0.00000	0.000	46072.93000	47257.14000	46143.33000
AL	27	418.72533	8279.27000	3.400	408.20218	412.97555	434.99825
B	11	58.88599	8594.48300	1.500	58.97998	59.69744	57.98057
BE	9	0.54589	120.00000	9.000	0.54833	0.59358	0.49575
CA	44	663.03497	1940.21000	6.300	661.76033	622.19522	705.14936
CR	52	4.50506	3830.63000	4.800	4.32782	4.44180	4.74557
FE	57	103.36539	1836.84700	4.600	98.56175	103.54870	107.98572
K	39	427.81919	30174.90300	1.800	435.59306	427.26335	420.60116
MG	24	119.48870	7666.09300	3.000	116.55594	123.51414	118.39601
MN	55	10.18240	4774.29700	5.800	9.67777	10.83789	10.03154
NA	23	961.48402	133781.59700	1.800	962.77472	978.52807	943.14926
TI	47	25.73241	463.36000	20.700	20.18030	26.23299	30.78394
V	51	1.09756	750.04300	5.700	1.04802	1.16816	1.07649
IN-2	115	151804.01000	0.00000	0.000	143673.89000	153958.70000	157779.44000
IN-3	115	63561.09000	0.00000	0.000	64263.13000	63245.20000	63174.94000
AG	107	0.46936	796.72000	23.400	0.34858	0.49677	0.56273
AS	75	2.04404	183.33300	15.700	1.80165	1.92314	2.40734
BA	137	4.10880	1010.07300	7.500	3.89963	3.96309	4.46369
CD	111	0.97442	213.33300	10.500	0.97580	0.87181	1.07566
CO	59	0.96683	1440.12000	6.300	1.01961	0.90027	0.98061
CU	63	41.16278	42790.53000	2.300	40.17399	42.01812	41.29624
MO	98	1.85657	1703.49000	3.000	1.80964	1.91840	1.84169
NI	60	4.18036	1643.48000	4.800	4.28378	3.94964	4.30767
SB	121	1.91663	1166.75700	5.400	2.03288	1.88249	1.83452
SE	78	2.23405	55.55300	12.300	2.43399	2.34842	1.91973
SN	120	1.66227	1526.80700	5.800	1.63134	1.76971	1.58575
SR	88	6.18801	3647.25700	0.700	6.14129	6.22531	6.19744
ZN	66	14.75584	2060.23300	2.700	14.88140	14.31622	15.06990
BI-3	209	121761.60300	0.00000	0.000	123120.96000	120618.34000	121545.51000
PB	208	2.93154	12136.05700	4.500	2.80860	2.91401	3.07201
TL	205	0.45325	1486.81000	7.200	0.49089	0.43621	0.43266
U	238	0.51880	1973.56000	9.200	0.47274	0.56778	0.51588
SC-2	45	83752.11700	0.00000	0.000	79545.59000	84904.67000	86806.09000
GE-1	72	622220.63000	0.00000	0.000	644081.75000	605469.29000	617110.85000
GE-2	72	102841.93000	0.00000	0.000	98756.72000	104214.74000	105554.33000
GE-3	72	142145.13300	0.00000	0.000	144185.94000	140852.11000	141397.35000
TB-3	159	184284.52000	0.00000	0.000	186261.77000	182146.07000	184445.72000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:46:43
Tube Number: 50
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	709705.25000	0.00000	0.000	712668.27000	724642.33000	691805.15000
SC-3	45	47825.37000	0.00000	0.000	47346.90000	48842.17000	47287.04000
AL	27	105647.64039	2116687.62700	1.800	105927.12172	103635.02606	107380.77338
B	11	18.13066	5095.55700	1.500	18.09028	17.87548	18.42621
BE	9	0.03311	10.66700	41.700	0.02162	0.02928	0.04842
CA	44	302059.17217	844724.26000	1.900	301540.36274	296474.16807	308162.98569
CR	52	0.70143	690.04000	16.500	0.56854	0.77703	0.75871
FE	57	242816.62472	4202235.87300	1.700	242627.07003	238887.73626	246935.06787
K	39	102485.36441	5589062.41700	1.900	102364.58407	100598.96173	104492.54741
MG	24	103145.96091	6315907.82300	2.100	104114.64272	100624.64948	104698.59053
MN	55	3.04977	1706.84000	11.500	3.29411	2.64615	3.20905
NA	23	246714.67728	33006267.01000	1.700	246313.87287	242822.85454	251007.30443
TI	47	2082.12367	38537.89300	4.700	2089.64500	1980.09141	2176.63461
V	51	0.04602	46.66700	81.400	0.05116	0.00626	0.08063
IN-2	115	148947.09000	0.00000	0.000	143911.30000	148257.00000	154672.97000
IN-3	115	62501.41700	0.00000	0.000	62427.93000	64225.24000	60851.08000
AG	107	0.03981	70.00300	69.100	0.07008	0.03296	0.01639
AS	75	0.88818	80.66700	12.000	0.78758	0.87707	0.99988
BA	137	1.31039	323.34700	9.900	1.25404	1.21775	1.45938
CD	111	0.20180	44.00000	20.100	0.24867	0.17812	0.17861
CO	59	0.85491	1260.09700	9.500	0.87643	0.76504	0.92325
CU	63	0.81259	936.73300	6.000	0.75786	0.82914	0.85078
MO	98	2176.04807	1909170.28700	3.300	2173.63458	2104.69808	2249.81155
NI	60	1.07346	483.35700	23.300	1.00651	0.86417	1.34970
SB	121	1.37065	823.39300	1.300	1.38377	1.37738	1.35080
SE	78	-0.03714	0.66700	0.000	-0.06452	-0.03622	-0.01068
SN	120	-0.21431	106.67000	0.000	-0.23630	-0.18731	-0.21934
SR	88	17.44123	9933.81000	2.600	17.08334	17.29108	17.94928
ZN	66	1.17664	203.34300	6.200	1.15484	1.25810	1.11698
BI-3	209	114436.68700	0.00000	0.000	112980.26000	116966.67000	113363.13000
PB	208	0.87649	3466.99000	5.900	0.93573	0.84486	0.84887
TL	205	-0.01598	36.66700	0.000	-0.02155	-0.00829	-0.01809
U	238	0.03652	136.67300	17.000	0.04361	0.03383	0.03213
SC-2	45	87229.58700	0.00000	0.000	82753.40000	86988.09000	91947.27000
GE-1	72	682190.98000	0.00000	0.000	686203.35000	692684.91000	667684.68000
GE-2	72	102744.31300	0.00000	0.000	99350.46000	101112.95000	107769.53000
GE-3	72	142004.23700	0.00000	0.000	139166.09000	143964.00000	142882.62000
TB-3	159	186085.14000	0.00000	0.000	180036.13000	190348.20000	187871.09000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:48:55
Tube Number: 51
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	693863.63700	0.00000	0.000	669648.04000	692115.77000	719827.10000
SC-3	45	48410.79000	0.00000	0.000	47287.37000	48821.91000	49123.09000
AL	27	106693.93223	2163752.00000	2.100	109014.22265	104632.40962	106435.16442
B	11	4.64368	3541.77000	42.400	6.50711	4.83724	2.58669
BE	9	0.01675	6.66700	77.600	0.00601	0.03121	0.01303
CA	44	303755.72663	859918.37000	1.100	307530.36651	301307.86821	302428.94518
CR	52	203.80928	176426.37700	1.100	205.91838	203.92816	201.58129
FE	57	241726.66389	4234957.75000	0.700	243641.05410	240169.91281	241369.02476
K	39	103398.35544	5708458.04000	0.700	104183.92345	102886.56046	103124.58241
MG	24	103406.79149	6409956.99000	1.400	105010.11075	102200.42537	103009.83836
MN	55	204.04204	92989.10300	1.700	207.69782	203.71396	200.71433
NA	23	248088.12898	33594890.33300	1.600	252686.68625	245375.91998	246201.78070
TI	47	2133.33385	39975.31700	3.000	2195.80959	2136.84536	2067.34661
V	51	206.60404	144043.05300	0.500	207.16322	205.46252	207.18637
IN-2	115	152885.17300	0.00000	0.000	150760.68000	148267.54000	159627.30000
IN-3	115	63553.40000	0.00000	0.000	61554.25000	64778.56000	64327.39000
AG	107	48.52583	82085.59700	1.700	49.48075	48.01519	48.08156
AS	75	107.85013	9454.46700	2.200	110.56427	106.69399	106.29213
BA	137	1.26987	320.01700	15.000	1.14516	1.48925	1.17519
CD	111	95.32304	20790.02300	2.400	97.33681	92.78011	95.85221
CO	59	205.63428	287027.84000	2.600	211.72137	201.32156	203.85991
CU	63	202.22809	209706.42300	2.400	207.73980	199.64301	199.30146
MO	98	2177.44288	1943011.48000	2.100	2224.04860	2131.56526	2176.71479
NI	60	202.70409	75090.65000	2.700	208.28385	197.34401	202.48441
SB	121	1.33216	813.39000	3.600	1.38654	1.30034	1.30960
SE	78	95.97995	2341.75000	5.700	96.16042	101.38244	90.39700
SN	120	-0.20364	116.67000	0.000	-0.23458	-0.18878	-0.18758
SR	88	17.65425	10227.41000	3.300	17.47243	17.19331	18.29700
ZN	66	93.52380	12799.44000	5.400	98.88780	92.79773	88.88586
BI-3	209	115194.63000	0.00000	0.000	111600.32000	116038.48000	117945.09000
PB	208	0.86200	3433.64700	2.500	0.88651	0.85179	0.84772
TL	205	-0.01813	30.00000	0.000	-0.01085	-0.01833	-0.02519
U	238	0.03721	140.01000	14.000	0.04130	0.03135	0.03898
SC-2	45	89630.65300	0.00000	0.000	86876.62000	89381.84000	92633.50000
GE-1	72	671688.59300	0.00000	0.000	649692.37000	673924.83000	691448.58000
GE-2	72	104927.37700	0.00000	0.000	102140.70000	104274.87000	108366.56000
GE-3	72	141913.48000	0.00000	0.000	138157.02000	142438.78000	145144.64000
TB-3	159	185849.34700	0.00000	0.000	179481.54000	188664.94000	189401.56000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:51:08
Tube Number: 52
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	689095.61700	0.00000	0.000	698859.21000	655906.24000	712521.40000
SC-3	45	49688.33300	0.00000	0.000	49494.35000	48831.84000	50738.81000
AL	27	4.24395	220.01000	83.400	8.12115	3.42983	1.18086
B	11	-4.78857	2520.89700	0.000	-5.86149	-2.95554	-5.54868
BE	9	0.00227	3.33300	563.700	0.00527	-0.01175	0.01329
CA	44	58.39022	316.68000	61.200	38.87248	99.62911	36.66907
CR	52	0.27769	340.01700	13.700	0.23410	0.29600	0.30298
FE	57	18.48258	436.69000	14.900	21.55758	16.27040	17.61978
K	39	12.77799	8759.58000	48.000	19.07644	12.44542	6.81210
MG	24	3.63327	820.05300	25.200	4.00965	2.58997	4.30020
MN	55	0.27977	483.36000	45.600	0.29654	0.39818	0.14458
NA	23	71.29657	19236.27000	8.100	76.38685	72.46945	65.03340
TI	47	1.03313	20.00000	48.300	1.04357	0.52886	1.52696
V	51	0.04761	50.00000	27.400	0.03395	0.04893	0.05995
IN-2	115	153932.51700	0.00000	0.000	154148.80000	152469.18000	155179.57000
IN-3	115	65767.99300	0.00000	0.000	66970.49000	65091.02000	65242.47000
AG	107	0.01121	23.33300	78.700	0.00909	0.00364	0.02090
AS	75	0.12092	15.33300	85.500	0.05966	0.06278	0.24033
BA	137	0.03684	20.00000	110.100	-0.00394	0.03731	0.07715
CD	111	0.00845	2.66700	120.400	0.01410	-0.00330	0.01456
CO	59	0.01421	113.33700	80.600	0.00364	0.01260	0.02638
CU	63	0.01823	133.34000	170.400	0.00364	0.05390	-0.00285
MO	98	1.94023	1840.19000	0.700	1.94704	1.95006	1.92359
NI	60	-0.12776	50.00000	0.000	-0.18180	-0.20595	0.00446
SB	121	-0.00731	6.66700	0.000	-0.01809	-0.00189	-0.00193
SE	78	-0.02842	0.88700	0.000	-0.06452	-0.00990	-0.01085
SN	120	-0.25984	76.66700	0.000	-0.21941	-0.24125	-0.31885
SR	88	0.01705	110.00300	511.900	0.08052	-0.08249	0.05312
ZN	66	6.29657	936.73300	8.700	6.19937	6.88888	5.80144
BI-3	209	120440.78000	0.00000	0.000	120436.87000	120448.21000	120437.26000
PB	208	-0.00903	50.00000	0.000	-0.01640	-0.00903	-0.00165
TL	205	-0.02199	20.00000	0.000	-0.02526	-0.01871	-0.02199
U	238	0.00614	30.00000	43.400	0.00348	0.00881	0.00614
SC-2	45	84727.66300	0.00000	0.000	86112.02000	83617.88000	84453.09000
GE-1	72	669274.37700	0.00000	0.000	673608.04000	642646.12000	691568.97000
GE-2	72	102784.31700	0.00000	0.000	101272.99000	104597.20000	102482.76000
GE-3	72	146104.81700	0.00000	0.000	145559.02000	146094.67000	146660.76000
TB-3	159	187837.47700	0.00000	0.000	190901.01000	184182.87000	188428.55000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:53:22
Tube Number: 53
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	680320.60300	0.00000	0.000	686128.74000	650826.67000	704006.40000
SC-3	45	51069.25300	0.00000	0.000	51691.46000	50336.65000	51179.65000
AL	27	2503.09354	53690.88000	1.900	2451.63739	2511.17059	2546.47265
B	11	256.63184	29739.94300	4.900	250.91754	271.02174	247.95625
BE	9	24.98187	5715.12000	2.900	25.09886	25.64747	24.19928
CA	44	2437.10268	7425.51000	7.200	2268.80275	2620.13752	2422.36776
CR	52	251.62447	229733.31700	2.600	245.04809	258.22828	251.59704
FE	57	2473.30024	45812.80300	2.200	2413.00452	2515.55196	2491.34425
K	39	2552.23573	156695.11700	1.400	2515.37332	2588.81260	2552.52128
MG	24	2508.28072	164632.06700	1.500	2472.35512	2506.05314	2546.43390
MN	55	247.86181	119089.84300	2.100	242.21581	252.40358	248.96604
NA	23	2417.02413	354777.80700	2.800	2340.32372	2462.06358	2448.68510
TI	47	248.43782	4910.99700	4.300	236.85941	258.11969	250.33437
V	51	252.62265	185770.33700	1.800	249.36049	257.84725	250.66020
IN-2	115	160921.46300	0.00000	0.000	161889.63000	165615.95000	155258.81000
IN-3	115	68988.98300	0.00000	0.000	68805.92000	67809.25000	70351.78000
AG	107	24.17879	44410.91700	0.800	24.05505	24.40861	24.07273
AS	75	253.54936	24126.15300	2.000	250.75238	259.49291	250.40281
BA	137	242.54956	64055.77300	3.000	242.24015	250.02146	235.38707
CD	111	24.32593	5760.54300	3.000	23.78595	25.14985	24.04198
CO	59	252.23004	382265.65700	1.600	251.41621	256.71693	248.55699
CU	63	253.05728	284875.29300	2.200	251.82377	259.24968	248.09839
MO	98	24.58773	23867.47700	3.100	24.24444	25.45333	24.06541
NI	60	253.30822	101851.64300	2.600	252.12686	260.47912	247.31868
SB	121	23.64048	15479.01000	1.300	23.91552	23.69142	23.31449
SE	78	26.81486	690.46000	5.000	25.33414	27.13205	27.97840
SN	120	24.44867	20352.17700	2.700	23.75732	25.09262	24.49608
SR	88	24.01637	15061.74300	1.800	23.71697	24.50948	23.82265
ZN	66	251.81165	37359.04700	1.100	248.83189	252.56069	254.04237
BI-3	209	127603.00700	0.00000	0.000	127492.21000	126845.58000	128471.23000
PB	208	24.68636	106434.19700	0.500	24.59265	24.83525	24.63117
TL	205	24.78098	80199.88700	1.200	24.45740	25.05205	24.83350
U	238	24.36703	96863.12000	0.600	24.19691	24.46333	24.44085
SC-2	45	88717.66300	0.00000	0.000	88073.55000	91806.08000	86273.36000
GE-1	72	676965.06700	0.00000	0.000	682000.38000	657729.91000	691164.91000
GE-2	72	108375.34300	0.00000	0.000	107519.18000	111216.25000	106390.60000
GE-3	72	151262.66700	0.00000	0.000	149902.53000	151699.83000	152185.64000
TB-3	159	194787.75000	0.00000	0.000	192903.16000	195738.45000	195721.64000

Run Name: 1830201E07 Date/Time: 10/29/2018 7:55:37
Tube Number: 54
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	717874.31300	0.00000	0.000	720621.16000	681957.18000	751044.60000
SC-3	45	48551.11000	0.00000	0.000	46905.54000	49805.54000	48942.25000
AL	27	2.89965	183.42000	408.400	16.56481	-3.47062	-4.39522
B	11	46.70455	8285.63700	10.800	49.30642	49.94032	40.86690
BE	9	0.01915	7.33300	159.400	-0.01175	0.04928	0.01992
CA	44	83.50142	380.05300	38.600	120.43709	69.21658	60.85060
CR	52	0.36306	406.69300	14.900	0.34826	0.42296	0.31796
FE	57	12.44264	313.67700	156.800	34.90768	-0.25047	2.67072
K	39	21.30671	9013.76700	82.700	41.49294	9.07238	13.35481
MG	24	8.97149	1109.43700	212.800	31.01607	-1.71829	-2.38332
MN	55	-0.17998	260.09700	0.000	0.28716	-0.39498	-0.43212
NA	23	46.82760	15365.57000	91.500	96.21601	20.01144	24.25536
TI	47	0.53226	10.00000	3.100	0.55058	0.51852	0.52767
V	51	0.03541	40.00000	109.500	0.06666	0.04754	-0.00798
IN-2	115	157369.49700	0.00000	0.000	157564.78000	160801.34000	153742.37000
IN-3	115	65425.12000	0.00000	0.000	63361.43000	67090.06000	65823.87000
AG	107	0.01738	33.33300	110.900	0.03937	0.00347	0.00928
AS	75	0.15212	18.00000	61.700	0.24891	0.14592	0.06154
BA	137	0.02473	16.66700	253.300	0.08072	-0.04294	0.03641
CD	111	0.00896	2.66700	237.000	0.03348	-0.00330	-0.00330
CO	59	0.01474	113.34000	86.300	0.02908	0.01031	0.00483
CU	63	0.08519	203.35300	82.300	0.15503	0.08567	0.01487
MO	98	0.10175	140.01300	61.700	0.17296	0.05430	0.07798
NI	60	-0.13459	46.67000	0.000	-0.01480	-0.15634	-0.23263
SB	121	0.37825	246.67700	16.300	0.31472	0.43766	0.38236
SE	78	-0.05564	0.22300	0.000	-0.03789	-0.06452	-0.06452
SN	120	-0.11745	186.67700	0.000	-0.10537	-0.11939	-0.12758
SR	88	-0.02559	83.33300	0.000	0.02471	-0.06851	-0.03296
ZN	66	4.77299	716.71000	10.000	5.32218	4.45233	4.54446
BI-3	209	120084.40300	0.00000	0.000	117420.48000	121163.19000	121669.54000
PB	208	-0.00818	53.33300	0.000	-0.00871	-0.01154	-0.00428
TL	205	-0.01542	40.00000	0.000	-0.01845	-0.00899	-0.01881
U	238	0.01072	46.66700	79.000	0.02002	0.00345	0.00870
SC-2	45	85318.57700	0.00000	0.000	82170.59000	88818.90000	84966.24000
GE-1	72	696753.45300	0.00000	0.000	700926.40000	665332.33000	724001.63000
GE-2	72	105084.73700	0.00000	0.000	103549.83000	106199.40000	105504.98000
GE-3	72	143086.63000	0.00000	0.000	139851.29000	146193.07000	143215.53000
TB-3	159	184774.28700	0.00000	0.000	183562.63000	183593.81000	187166.42000

US EPA Tune Check Report

Operator Name	US19_USR_INS27814
Acq/Data Batch	D:\Agilent\ICPMH\1\DATA\EPA_Tune.b
Acq. Date-Time	2018-10-29 03:58:11
Report Comment	---
Instrument Name	G8403A SG18254097

[No Gas]

Sensitivity

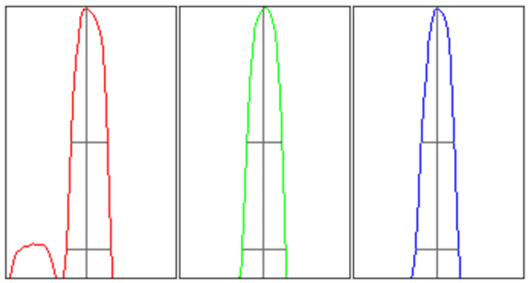
Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
7	10.00	599	5987.29			1.212	5.000
89	10.00	3485	34852.17			0.652	5.000
205	10.00	1892	18920.05			1.072	5.000

Mass	RSD% (Flag)
7	
89	
205	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	603	609	597	595	590
89	3472	3463	3523	3485	3484
205	1874	1901	1923	1884	1877

Integration Time [sec] 0.1

Resolution/Axis



Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	968.39	6.95	6.90 - 7.10	
89	5786.11	89.00	88.90 - 89.10	
205	3367.39	205.00	204.90 - 205.10	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.65	0.790	0.800	
89	0.63	0.766	0.800	
205	0.60	0.765	0.800	

Integration Time [sec] 0.1

Acquisition Time [sec] 113.7

Y Axis Linear

US EPA Tune Check Report

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.65 L/min	Dilution Gas	0.45 L/min
RF Power	1550 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.10 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	10.4 V	Deflect	16.0 V
Extract 2	-215.0 V	Cell Entrance	-40 V	Plate Bias	-50 V
Omega Bias	-85 V	Cell Exit	-60 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	200 V		

QP Parameters

Mass Gain	124	Axis Gain	0.9994	QP Bias	-3.0 V
Mass Offset	124	Axis Offset	0.06		

Hardware Settings

Torch

Torch H	0.4 mm	Torch V	-0.1 mm		

EM

Discriminator	4.1 mV	Analog HV	2142 V	Pulse HV	1522 V

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ICP-MS Run Data Report

Method Reference Name(s):

Date File Name: 18J31D00.E05

Run Name: 1830404E05

Analyst: 1242

Reviewed By: Patrick J Engle

Reviewed Date: 10/31/2018 13:05

Verified By: Deborah A Krady

Verified Date: 10/31/2018 14:10

Instrument Parameters:

Rinse Time (sec): 25.00

INTERNAL STD.	ELEMENT	MASS
SC-1		45
	NA	23
	MG	24
	AL	27
	K	39
	CA	44
	TI	47
	V	51
	CR	52
	MN	55
	FE	57
IN-1		115
	CO	59
	NI	60
	CU	63
	ZN	66
	AS	75
	SR	88
	MO	98
	AG	107
	CD	111
	SN	120
	SB	121
	BA	137
BI-1		209
	TL	203
	PB	208
	U	238

Run Name: 1830404E05 Date/Time: 10/31/2018 11:32:44
Tube Number: 1
Sample Number: **S0**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
NA	23	0.00000	43372.46000	0.000	0.39669	18.92480	-19.32149
MG	24	0.00000	113.34000	0.000	-1.05310	0.62292	0.43017
AL	27	0.00000	86.67300	0.000	1.42850	1.93758	-3.36609
K	39	0.00000	4757.79000	0.000	1.33986	7.34808	-8.68794
CA	44	0.00000	40.00000	0.000	-18.88105	19.81295	-0.93190
SC-1	45	25041.15700	0.00000	0.000	25334.92000	24293.26000	25495.29000
TI	47	0.00000	3.33300	0.000	-0.34879	0.69759	-0.34879
V	51	0.00000	20.00000	0.000	0.03972	-0.03955	-0.00017
CR	52	0.00000	606.71700	0.000	-0.13285	0.25552	-0.12268
MN	55	0.00000	133.34000	0.000	0.07257	-0.14075	0.06817
FE	57	0.00000	226.68000	0.000	4.30185	-0.87063	-3.43123
CO	59	0.00000	66.67300	0.000	0.01015	0.01181	-0.02197
NI	60	0.00000	216.68000	0.000	0.16952	-0.11868	-0.05084
CU	63	0.00000	436.69700	0.000	0.02731	0.09647	-0.12378
ZN	66	0.00000	176.67700	0.000	-0.38121	0.26995	0.11127
GE-1	72	84221.94700	0.00000	0.000	83702.53000	83713.05000	85250.26000
AS	75	0.00000	8.00000	0.000	0.02862	-0.08528	0.05665
SR	88	0.00000	3.33300	0.000	-0.01715	-0.01715	0.03429
MO	98	0.00000	50.00000	0.000	-0.01432	0.00130	0.01302
AG	107	0.00000	20.00000	0.000	0.00711	-0.01413	0.00703
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
IN-1	115	29519.64000	0.00000	0.000	29733.92000	28981.84000	29843.16000
SN	120	0.00000	173.34700	0.000	0.09600	-0.05547	-0.04054
SB	121	0.00000	6.66700	0.000	0.00975	0.01052	-0.02027
BA	137	0.00000	6.66700	0.000	-0.06518	-0.06518	0.13036
TB-1	159	159034.25300	0.00000	0.000	158271.23000	161401.36000	157430.17000
TL	203	0.00000	10.00000	0.000	0.00824	0.00007	-0.00831
PB	208	0.00000	353.35000	0.000	0.02247	0.00839	-0.03085
BI-1	209	126346.89000	0.00000	0.000	125379.79000	123755.25000	129905.63000
U	238	0.00000	20.00000	0.000	-0.00219	0.00651	-0.00433

Run Name: 1830404E05 Date/Time: 10/31/2018 11:34:41
Tube Number: 2
Sample Number: **S1**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24913.86300	0.00000	0.000	25484.97000	24142.17000	25114.45000
AL	27	10000.00000	82910.18700	1.700	9811.24097	10037.65654	10151.10249
CA	44	10000.00000	10851.56700	4.100	9599.09486	10421.26833	9979.63681
CR	52	1000.00000	638877.13700	2.500	974.98404	1025.88458	999.13138
FE	57	10000.00000	116129.92700	3.900	9570.35895	10346.96444	10082.67660
K	39	10000.00000	190526.86000	3.200	9672.30540	10316.26578	10011.42882
MG	24	10000.00000	326041.52300	3.600	9636.94044	10347.88227	10015.17729
MN	55	1000.00000	210799.35700	2.900	970.03528	1027.01037	1002.95435
NA	23	10000.00000	742289.78000	3.100	9736.58599	10336.26263	9927.15138
TI	47	1000.00000	9800.64700	4.500	950.59877	1009.81277	1039.58846
V	51	1000.00000	496026.08700	2.200	984.97074	1024.82164	990.20762
IN-1	115	30777.21300	0.00000	0.000	31168.89000	31292.54000	29870.21000
AG	107	100.00000	146168.35700	2.300	98.21969	99.24746	102.53286
AS	75	1000.00000	72209.24700	2.600	978.19890	992.72844	1029.07267
BA	137	1000.00000	105432.78000	3.400	973.55273	988.39885	1038.04842
CD	111	100.00000	14189.03000	2.800	99.73511	97.37095	102.89394
CO	59	1000.00000	1293542.40300	2.400	986.34039	986.26306	1027.39655
CU	63	1000.00000	1103880.79300	2.700	987.74894	981.27590	1030.97516
MO	98	100.00000	74871.80000	4.500	98.49534	96.44120	105.06345
NI	60	1000.00000	379252.33700	3.700	973.10362	984.66231	1042.23408
SB	121	100.00000	34476.91000	3.100	97.20370	99.45007	103.34622
SN	120	100.00000	38498.42300	3.800	99.65977	96.40932	103.93091
SR	88	100.00000	20039.39300	4.200	97.77006	97.42957	104.80037
ZN	66	1000.00000	103743.58700	3.800	983.51656	972.56121	1043.92223
BI-1	209	130442.56000	0.00000	0.000	129582.64000	130594.35000	131150.69000
PB	208	100.00000	406962.76700	0.300	100.32247	99.76376	99.91378
TL	203	100.00000	125691.99000	1.600	101.83773	99.37934	98.78293
U	238	100.00000	486166.46700	0.600	100.68109	99.86507	99.45384
GE-1	72	85764.53300	0.00000	0.000	86508.69000	84858.35000	85926.56000
TB-1	159	156713.91000	0.00000	0.000	157424.05000	155466.53000	157251.15000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:36:40
Tube Number: 3
Sample Number: **ICV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24379.64000	0.00000	0.000	23511.29000	25525.03000	24102.60000
AL	27	5488.65682	44473.60300	8.900	6022.75182	5065.57114	5377.64750
CA	44	5221.91120	5558.13000	8.300	5723.38658	4952.97872	4989.36830
CR	52	512.62227	320600.89000	3.700	532.58342	494.93343	510.34996
FE	57	4975.39811	56629.74000	3.700	5139.81896	4776.68916	5009.68621
K	39	5046.94399	96377.72700	2.600	5181.58144	4915.52503	5043.72548
MG	24	5029.23485	160441.45000	3.800	5195.49734	4819.74865	5072.45855
MN	55	522.96679	107949.31700	2.200	536.27184	517.65051	514.97803
NA	23	4871.68208	375463.95000	2.700	4987.50530	4726.67297	4900.86796
TI	47	530.15022	5091.27300	5.400	499.27386	535.57150	555.60530
V	51	499.29709	242212.41300	3.900	519.88246	481.66610	496.34270
IN-1	115	29402.88000	0.00000	0.000	29396.90000	30187.64000	28624.10000
AG	107	55.14152	77009.46700	3.200	53.57511	54.78709	57.06234
AS	75	523.81203	36131.55300	3.600	518.80803	507.96033	544.66773
BA	137	524.48637	52872.82300	2.600	510.72658	537.90999	524.82255
CD	111	51.37149	6963.90700	2.700	50.56433	50.60524	52.94491
CO	59	523.15772	646699.43000	1.300	517.46609	521.34355	530.66352
CU	63	525.68237	554634.19700	2.100	526.08753	514.44780	536.51177
MO	98	52.55959	37628.29700	3.100	51.89455	51.39304	54.39118
NI	60	542.92094	196911.33300	5.500	577.53888	523.06997	528.15399
SB	121	54.72688	18040.00700	3.400	52.65887	56.22326	55.29852
SN	120	52.00899	19211.71700	3.500	52.81898	49.90444	53.30355
SR	88	51.08967	9787.46000	1.900	50.18352	50.95514	52.13035
ZN	66	530.00137	52606.80000	5.300	549.25588	498.08013	542.66810
BI-1	209	128655.14000	0.00000	0.000	127295.17000	129432.69000	129237.56000
PB	208	50.53587	203034.87700	0.800	50.05946	50.78606	50.76209
TL	203	51.68468	64079.89000	1.700	52.15101	52.23069	50.67234
U	238	49.82112	238904.79000	2.100	50.16550	50.66155	48.63631
GE-1	72	87411.62300	0.00000	0.000	86570.05000	88744.47000	86920.35000
TB-1	159	161111.28300	0.00000	0.000	161025.27000	162233.37000	160075.21000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:38:26
Tube Number: 4
Sample Number: **ICB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24252.50700	0.00000	0.000	24202.47000	24342.66000	24212.39000
AL	27	-8.38034	16.66700	0.000	-9.20148	-6.73756	-9.20199
CA	44	-21.23973	16.66700	0.000	-18.03050	-18.14009	-27.54860
CR	52	0.44520	866.74700	25.500	0.32453	0.46145	0.54963
FE	57	-7.03773	140.01300	0.000	-8.78891	-7.96782	-4.35646
K	39	-2.56587	4564.32700	0.000	-5.51557	16.72998	-18.91201
MG	24	-0.31689	100.00700	0.000	0.00699	0.61463	-1.57227
MN	55	-0.12373	103.34000	0.000	-0.33428	-0.09313	0.05620
NA	23	17.37449	43208.84700	56.700	25.30374	6.34323	20.47649
TI	47	0.34738	6.66700	347.100	-0.34879	1.73972	-0.34879
V	51	-0.00503	16.66700	0.000	-0.03955	-0.01893	0.04339
IN-1	115	29976.17000	0.00000	0.000	30424.74000	29641.54000	29862.23000
AG	107	0.00708	30.00000	266.800	-0.00721	0.02848	-0.00003
AS	75	0.18803	21.33300	62.300	0.22144	0.05782	0.28484
BA	137	0.06558	13.33300	172.700	-0.06518	0.13169	0.13023
CD	111	0.01950	2.66700	173.200	0.00000	0.05852	0.00000
CO	59	0.04100	120.00700	118.500	0.07906	-0.01373	0.05767
CU	63	-0.04732	393.36000	0.000	-0.11099	-0.11241	0.08144
MO	98	0.02652	70.00300	138.800	-0.00207	0.01359	0.06804
NI	60	-0.06513	196.67700	0.000	0.36555	-0.12927	-0.43167
SB	121	1.14321	390.03300	33.400	0.77178	1.12392	1.53392
SN	120	0.28008	280.01700	74.100	0.08313	0.26028	0.49681
SR	88	-0.01714	0.00000	0.000	-0.01715	-0.01715	-0.01715
ZN	66	-1.22136	56.67000	0.000	-0.70582	-1.17853	-1.77972
BI-1	209	126656.78700	0.00000	0.000	126662.64000	125672.31000	127635.41000
PB	208	-0.01080	313.35300	0.000	-0.01414	-0.01864	0.00037
TL	203	0.02436	40.00000	120.000	-0.00012	0.01646	0.05674
U	238	0.00905	63.33700	93.200	0.00415	0.00421	0.01880
GE-1	72	85683.88700	0.00000	0.000	87162.61000	84859.34000	85029.71000
TB-1	159	155536.65000	0.00000	0.000	155294.58000	156735.64000	154579.73000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:40:12
Tube Number: 5
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24563.33000	0.00000	0.000	24493.22000	24693.52000	24503.25000
AL	27	397.39257	3330.58700	4.200	388.70784	386.68812	416.78175
CA	44	750.54397	840.07300	21.500	921.96348	727.65643	602.01198
CR	52	4.31977	3317.26700	5.800	4.05343	4.36064	4.54522
FE	57	95.16457	1310.13300	16.700	90.19598	82.34921	112.94851
K	39	392.46408	11862.47700	2.000	384.09739	394.12920	399.16566
MG	24	96.26512	3207.23000	7.000	88.55587	101.11895	99.12054
MN	55	10.60272	2333.65700	2.300	10.85995	10.57549	10.37271
NA	23	932.35344	106869.94000	1.400	931.28801	945.56445	920.20786
TI	47	22.75779	223.35000	16.900	18.33335	25.38879	24.55123
V	51	1.03733	526.70700	8.600	1.06748	0.93650	1.10801
IN-1	115	30661.68700	0.00000	0.000	31930.21000	30127.33000	29927.52000
AG	107	0.55036	823.40700	19.900	0.57928	0.64275	0.42905
AS	75	2.09873	159.33300	20.200	2.18058	1.63906	2.47655
BA	137	3.96967	423.36300	6.900	3.68159	4.00265	4.22479
CD	111	0.86451	122.00000	15.000	0.78766	0.79162	1.01424
CO	59	1.13388	1533.50700	10.000	1.21262	1.18575	1.00329
CU	63	39.50702	43876.09700	4.200	38.41964	38.70059	41.40084
MO	98	2.16463	1666.86000	3.500	2.17058	2.23638	2.08693
NI	60	4.27590	1836.90300	9.600	3.82803	4.63150	4.36817
SB	121	2.31795	803.40700	11.200	2.29976	2.58677	2.06732
SN	120	1.60035	790.07000	14.900	1.43986	1.87396	1.48723
SR	88	6.20548	1240.13300	10.900	5.56000	6.14855	6.90789
ZN	66	16.25301	1856.91000	12.800	14.12786	16.36176	18.26939
BI-1	209	129001.79000	0.00000	0.000	130535.10000	127664.72000	128805.55000
PB	208	2.95978	12259.64000	4.900	2.81063	3.09706	2.97165
TL	203	0.48234	610.04700	5.200	0.50851	0.47948	0.45904
U	238	0.50513	2450.37700	7.600	0.54663	0.49805	0.47069
GE-1	72	87387.99700	0.00000	0.000	85834.45000	87725.52000	88604.02000
TB-1	159	155608.78000	0.00000	0.000	154202.40000	156513.90000	156110.04000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:41:58
Tube Number: 6
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24102.39700	0.00000	0.000	23240.73000	24493.09000	24573.37000
AL	27	103932.26814	832606.99000	2.200	106422.08600	103451.83767	101922.88076
CA	44	304308.80626	318421.96000	2.200	311735.93844	302653.02019	298537.46015
CR	52	1.02951	1223.45700	21.200	0.91450	1.28122	0.89282
FE	57	261944.27768	2937266.72300	3.500	272114.28425	259122.39586	254596.15294
K	39	107081.97594	1929080.23300	3.400	111150.66689	104351.47807	105743.78287
MG	24	104712.23379	3302329.43000	2.400	107544.37594	102792.59774	103799.72768
MN	55	3.67820	876.74700	7.600	4.00142	3.52340	3.50979
NA	23	255053.23618	17294179.74300	2.300	261605.70683	250196.11196	253357.88976
TI	47	2180.10956	20646.74000	6.500	2343.35341	2093.62158	2103.35367
V	51	0.01615	26.66700	79.600	0.02526	0.00145	0.02174
IN-1	115	28399.67300	0.00000	0.000	28319.83000	27758.77000	29120.42000
AG	107	0.03282	63.33300	26.100	0.02303	0.03895	0.03647
AS	75	0.87661	66.00000	8.400	0.84825	0.95981	0.82178
BA	137	1.19953	123.34000	25.100	1.48033	0.88081	1.23745
CD	111	0.11199	14.66700	15.800	0.09187	0.12497	0.11913
CO	59	1.05732	1326.81300	0.600	1.06329	1.05159	1.05708
CU	63	0.79441	1230.12300	1.900	0.78774	0.81203	0.78346
MO	98	2315.29284	1599152.89300	2.500	2295.70441	2379.83459	2270.33952
NI	60	1.23410	640.05700	33.900	0.75216	1.51038	1.43976
SB	121	1.58299	510.04000	5.600	1.68153	1.55524	1.51219
SN	120	-0.05965	146.67700	0.000	-0.10245	-0.23962	0.16311
SR	88	17.24456	3192.26000	4.300	17.95460	17.29422	16.48486
ZN	66	1.95622	356.69700	18.000	1.99604	2.28635	1.58627
BI-1	209	118073.70300	0.00000	0.000	118202.32000	117032.02000	118986.77000
PB	208	0.89829	3637.13000	5.100	0.93051	0.91879	0.84557
TL	203	0.01796	30.00000	96.700	0.01803	0.00055	0.03530
U	238	0.03201	160.01000	35.000	0.02064	0.03236	0.04303
GE-1	72	80387.14000	0.00000	0.000	78560.46000	79897.16000	82703.80000
TB-1	159	154022.69700	0.00000	0.000	153536.90000	156146.41000	152384.78000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:43:43
Tube Number: 7
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23975.32300	0.00000	0.000	23160.32000	24202.68000	24562.97000
AL	27	104607.10027	833432.90700	3.200	108069.92184	104282.61259	101468.76638
CA	44	305914.68811	318446.56300	1.700	311541.93535	304954.31322	301247.81578
CR	52	211.74046	130629.06300	2.900	218.68478	207.67952	208.85707
FE	57	264661.19192	2952442.87000	3.000	272475.56768	264986.79077	256521.21732
K	39	108446.38114	1943367.42000	3.200	112139.29540	107884.50609	105315.34192
MG	24	105318.68362	3303117.87000	3.600	109408.53020	104697.98682	101849.53384
MN	55	213.99292	43511.21000	2.500	219.13548	214.37469	208.46859
NA	23	257737.43580	17381964.32300	2.700	265615.87977	255218.51218	252377.91546
TI	47	2154.33051	20299.37000	6.400	2269.04665	2191.31450	2002.63038
V	51	206.15065	98417.48300	2.100	211.23544	203.32861	203.88791
IN-1	115	28150.61000	0.00000	0.000	28651.54000	27249.18000	28551.11000
AG	107	55.73404	74477.13000	5.300	54.48728	59.11084	53.60399
AS	75	111.93957	7400.75700	1.700	110.91801	114.12954	110.77116
BA	137	0.89802	93.33700	76.500	1.66611	0.68435	0.34359
CD	111	105.17801	13646.46700	4.300	104.60429	109.97137	100.95837
CO	59	212.65934	251645.64300	2.600	211.10322	218.77040	208.10441
CU	63	212.91062	215287.98000	2.800	210.13029	219.74351	208.85804
MO	98	2289.65343	1567136.07300	3.900	2200.34093	2378.73051	2289.88885
NI	60	213.88020	74341.61700	4.400	210.37665	224.49448	206.76947
SB	121	1.65135	526.71000	14.300	1.38153	1.74843	1.82410
SN	120	-0.09860	130.01000	0.000	-0.19076	0.00041	-0.10543
SR	88	18.10791	3323.94700	0.900	18.25539	18.12507	17.94327
ZN	66	104.55280	10074.35700	2.500	103.99998	107.37057	102.28784
BI-1	209	118184.11700	0.00000	0.000	119202.51000	119006.35000	116343.49000
PB	208	0.95024	3830.45000	7.300	0.93271	0.89124	1.02677
TL	203	0.01514	26.66700	88.500	0.00039	0.02657	0.01845
U	238	0.03040	153.34300	34.100	0.03394	0.03851	0.01874
GE-1	72	83066.90700	0.00000	0.000	84053.50000	83207.62000	81939.60000
TB-1	159	158766.84300	0.00000	0.000	160888.71000	155541.02000	159870.80000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:45:28
Tube Number: 8
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23892.28700	0.00000	0.000	25084.63000	23541.27000	23050.96000
AL	27	2.96153	106.67300	169.500	5.14395	-2.77858	6.51921
CA	44	112.57301	153.34000	59.000	36.37797	158.57932	142.76172
CR	52	0.23163	720.06000	122.900	-0.01581	0.54262	0.16808
FE	57	15.54425	386.69700	60.200	8.82129	11.58660	26.22487
K	39	18.09032	4867.84300	38.700	25.80921	16.29044	12.17132
MG	24	6.04627	300.02000	55.200	9.63059	3.02501	5.48321
MN	55	0.39176	206.67700	34.000	0.50365	0.42717	0.24448
NA	23	99.10220	47997.51000	29.000	71.51632	96.92578	128.86450
TI	47	3.23043	33.33700	86.900	2.69132	0.73101	6.26896
V	51	-0.02503	6.66700	0.000	-0.03955	-0.03955	0.00401
IN-1	115	29620.40300	0.00000	0.000	29623.91000	29614.14000	29623.16000
AG	107	0.01192	36.66700	150.000	0.01429	-0.00703	0.02850
AS	75	0.09631	14.66700	62.200	0.11545	0.14431	0.02916
BA	137	0.13184	20.00000	129.400	-0.06518	0.23039	0.23030
CD	111	0.01464	2.00000	100.000	0.02928	0.01464	0.00000
CO	59	0.02913	103.33700	96.900	0.00235	0.05860	0.02644
CU	63	-0.04003	396.69700	0.000	-0.07459	-0.04622	0.00073
MO	98	1.98439	1480.16700	21.200	1.65110	1.84602	2.45604
NI	60	-0.21114	140.01000	0.000	-0.23857	-0.23845	-0.15638
SB	121	0.05003	23.33300	193.600	0.00986	-0.02027	0.16049
SN	120	-0.19091	103.34000	0.000	-0.22706	-0.30832	-0.03737
SR	88	0.01741	6.66700	343.800	-0.01715	0.08652	-0.01715
ZN	66	2.59887	436.69700	54.900	4.23620	1.63034	1.93008
BI-1	209	121715.39700	0.00000	0.000	120031.07000	121784.75000	123330.37000
PB	208	0.00192	350.02300	1376.500	-0.02865	0.01789	0.01654
TL	203	-0.00259	6.66700	0.000	0.00033	0.00021	-0.00831
U	238	0.00522	43.33300	64.000	0.00238	0.00889	0.00438
GE-1	72	83714.65700	0.00000	0.000	84797.86000	83127.51000	83218.60000
TB-1	159	151997.13700	0.00000	0.000	152282.93000	152257.86000	151450.62000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:47:14
Tube Number: 9
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24209.07000	0.00000	0.000	24572.99000	24943.76000	23110.46000
AL	27	2541.11034	20509.55000	6.400	2596.25441	2357.06744	2670.00916
CA	44	2517.10013	2683.75300	5.200	2624.63410	2372.71900	2553.94730
CR	52	262.68175	163345.53000	5.500	255.50322	253.23779	279.30425
FE	57	2540.21596	28821.90000	3.500	2477.29465	2500.59990	2642.75335
K	39	2525.14662	50153.05300	5.700	2544.60738	2371.97937	2658.85311
MG	24	2551.86734	80906.70000	3.400	2519.54477	2485.12919	2650.92805
MN	55	257.79497	52877.90000	3.600	256.95114	248.88465	267.54911
NA	23	2629.26361	220473.20000	4.200	2607.07860	2532.51962	2748.19262
TI	47	264.66402	2523.70000	6.800	284.17295	248.34573	261.47339
V	51	260.17207	125298.39300	5.000	255.03668	250.55460	274.92492
IN-1	115	29531.37000	0.00000	0.000	30201.26000	29419.91000	28972.94000
AG	107	27.75476	38942.16700	2.800	26.86925	28.36491	28.03012
AS	75	261.49201	18121.57000	3.900	250.08053	265.13760	269.25792
BA	137	262.30853	26548.39300	2.200	255.64179	265.91036	265.37343
CD	111	26.87765	3659.21000	3.400	25.83351	27.25693	27.54251
CO	59	260.74220	323624.23300	4.100	248.83220	264.09077	269.30362
CU	63	261.24836	277095.89000	1.800	256.80973	260.64275	266.29260
MO	98	26.28620	18927.72700	3.000	25.49573	26.31465	27.04822
NI	60	259.53818	94607.56000	4.300	247.72530	261.06752	269.82172
SB	121	26.52943	8780.14300	4.600	25.49177	26.22919	27.86733
SN	120	25.23913	9453.87000	4.500	23.99158	26.19794	25.52786
SR	88	25.49711	4907.85000	3.600	24.84266	26.54694	25.10173
ZN	66	262.58087	26289.96000	1.100	265.29818	263.08219	259.36226
BI-1	209	127185.55300	0.00000	0.000	126140.32000	126804.02000	128612.32000
PB	208	25.41548	101119.12000	0.500	25.38977	25.30642	25.55024
TL	203	25.64597	31438.05000	1.500	26.07466	25.33895	25.52430
U	238	24.69833	117101.08000	0.800	24.61191	24.55817	24.92491
GE-1	72	86196.19000	0.00000	0.000	85160.13000	86557.37000	86871.07000
TB-1	159	154647.21000	0.00000	0.000	153042.79000	156199.37000	154699.47000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:49:00
Tube Number: 10
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23811.68300	0.00000	0.000	24192.49000	23581.11000	23661.45000
AL	27	-3.25859	56.67000	0.000	-6.71455	-1.51481	-1.54640
CA	44	14.25025	53.33700	211.700	48.61373	2.00069	-7.86368
CR	52	0.56983	926.74300	15.100	0.50246	0.54007	0.66697
FE	57	4.64311	266.68700	79.000	1.87136	8.80046	3.25751
K	39	11.99616	4741.07300	94.200	22.29573	-0.08820	13.78095
MG	24	-0.24199	100.00700	0.000	-2.20225	0.09848	1.37779
MN	55	0.08483	143.34000	386.000	0.05677	0.42538	-0.22767
NA	23	65.22361	45623.17300	4.400	63.52687	63.61084	68.53310
TI	47	0.36864	6.66700	168.500	-0.34879	0.72919	0.72553
V	51	-0.03246	3.33300	0.000	-0.03955	-0.01826	-0.03955
IN-1	115	29953.72300	0.00000	0.000	30043.35000	29604.30000	30213.52000
AG	107	-0.00240	16.66700	0.000	-0.00012	0.00009	-0.00717
AS	75	0.09392	14.66700	92.000	-0.00122	0.11561	0.16737
BA	137	0.03157	10.00000	305.900	0.03194	-0.06518	0.12796
CD	111	0.01943	2.66700	115.300	0.00000	0.04394	0.01435
CO	59	0.03103	106.67300	117.800	-0.00635	0.06667	0.03275
CU	63	-0.04803	393.36000	0.000	0.02277	-0.17796	0.01110
MO	98	0.09008	116.67300	77.100	0.14930	0.01369	0.10726
NI	60	-0.23286	133.34000	0.000	-0.37863	-0.10128	-0.21866
SB	121	0.75490	260.01700	24.400	0.54416	0.88416	0.83639
SN	120	-0.12193	130.01000	0.000	-0.09687	-0.03709	-0.23182
SR	88	0.01742	6.66700	343.700	-0.01715	0.08656	-0.01715
ZN	66	-1.51500	26.66700	0.000	-1.48315	-1.47875	-1.58312
BI-1	209	124369.44300	0.00000	0.000	126869.65000	125207.81000	121030.87000
PB	208	-0.01070	306.69000	0.000	-0.01426	-0.03375	0.01591
TL	203	0.03651	53.33700	56.400	0.02441	0.02484	0.06029
U	238	0.00352	36.66700	152.000	0.00413	0.00853	-0.00211
GE-1	72	85777.33700	0.00000	0.000	85563.80000	86075.64000	85692.57000
TB-1	159	153011.44000	0.00000	0.000	154569.97000	153493.74000	150970.61000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:50:46
Tube Number: 11 Batch: 182941063902A
Sample Number: **9856088** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 5.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	25681.93700	0.00000	0.000	25384.93000	26386.64000	25274.24000
AL	27	-0.75491	83.33700	0.000	-3.33531	4.37477	-3.30418
CA	44	9487.59367	10611.46300	9.000	10390.57221	8684.56906	9387.63973
CR	52	0.39643	886.74000	26.700	0.31131	0.51485	0.36312
FE	57	0.00186	233.35000	356432.700	2.56267	4.98370	-7.54077
K	39	253.91687	9750.63000	4.000	251.21834	265.05400	245.47826
MG	24	3363.51445	113120.49300	4.900	3521.76806	3195.83221	3372.94309
MN	55	83.51507	18273.40000	2.900	84.55495	80.78099	85.20927
NA	23	1959.23959	185706.92300	3.800	1952.45970	1888.82878	2036.43030
TI	47	-0.34879	0.00000	0.000	-0.34879	-0.34879	-0.34879
V	51	-0.00022	20.00000	0.000	0.03956	-0.02052	-0.01969
IN-1	115	31799.05300	0.00000	0.000	31859.21000	32019.90000	31518.05000
AG	107	-0.00975	6.66700	0.000	-0.01413	-0.00098	-0.01413
AS	75	0.10859	16.66700	56.600	0.17955	0.07162	0.07459
BA	137	1.49499	170.01000	10.800	1.30864	1.57511	1.60122
CD	111	0.02723	4.00000	49.700	0.04083	0.02708	0.01376
CO	59	0.12066	233.34700	47.100	0.05814	0.16901	0.13482
CU	63	-0.16212	286.68700	0.000	-0.10711	-0.18701	-0.19225
MO	98	-0.00514	50.00000	0.000	0.02070	0.00741	-0.04353
NI	60	0.40804	393.36000	51.300	0.39875	0.62186	0.20350
SB	121	0.20451	80.00700	68.600	0.34392	0.06335	0.20628
SN	120	-0.24401	90.00300	0.000	-0.24420	-0.19517	-0.29268
SR	88	7.63983	1586.85700	13.200	8.70458	7.51032	6.70458
ZN	66	-0.50214	136.67700	0.000	0.27127	-1.22309	-0.55461
BI-1	209	130478.51700	0.00000	0.000	131097.58000	128744.91000	131593.06000
PB	208	-0.00161	360.02300	0.000	-0.00936	-0.00041	0.00496
TL	203	0.00223	13.33300	542.000	0.01544	-0.00831	-0.00043
U	238	0.07316	376.70000	5.200	0.06936	0.07696	0.07316
GE-1	72	89917.53000	0.00000	0.000	88319.54000	90766.67000	90666.38000
TB-1	159	159993.56000	0.00000	0.000	160195.98000	158604.82000	161179.88000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:52:33
Tube Number: 12 Batch: 182941063902A
Sample Number: **9856088** Class: **********

Initial Vol: 50.00 Final Vol: 50.00 DF: 10.00 Protocol: RAAP RADFORD, DA

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	25160.81300	0.00000	0.000	24372.78000	25504.77000	25604.89000
AL	27	-4.54314	50.00300	0.000	-9.21016	-4.54796	0.12869
CA	44	5141.79078	5658.14300	2.700	5169.96446	5263.99826	4991.40963
CR	52	0.47557	916.75700	44.600	0.68385	0.25951	0.48336
FE	57	5.14913	286.68300	124.700	12.28988	3.30151	-0.14400
K	39	107.02954	6798.82300	21.300	83.50972	128.96764	108.61127
MG	24	1690.24098	55746.73700	3.800	1764.46076	1656.82015	1649.44203
MN	55	43.06616	9293.69000	4.200	45.12454	42.44499	41.62893
NA	23	992.32204	113635.39300	5.400	1053.91494	961.31237	961.73882
TI	47	-0.01657	3.33300	0.000	-0.34879	0.64788	-0.34879
V	51	-0.01338	13.33300	0.000	-0.03955	-0.01987	0.01927
IN-1	115	31408.23700	0.00000	0.000	31989.11000	30827.37000	31408.23000
AG	107	0.00362	26.66700	374.900	0.01877	-0.00048	-0.00743
AS	75	-0.01518	7.33300	0.000	-0.03476	-0.03175	0.02098
BA	137	0.61512	73.33700	21.600	0.75580	0.59735	0.49220
CD	111	0.00000	0.00000	0.000	0.00000	0.00000	0.00000
CO	59	0.06525	156.67700	55.600	0.02795	0.10047	0.06732
CU	63	-0.13551	313.36000	0.000	-0.09091	-0.13302	-0.18260
MO	98	0.02614	73.34000	100.500	0.03319	-0.00295	0.04818
NI	60	0.01696	236.68300	359.500	0.03951	0.06344	-0.05208
SB	121	0.12183	50.00300	80.800	0.06343	0.06658	0.23549
SN	120	-0.28189	73.33700	0.000	-0.34549	-0.08034	-0.41984
SR	88	3.96398	816.74300	21.700	4.87784	3.16995	3.84415
ZN	66	-0.84138	100.00300	0.000	-0.01559	-1.20166	-1.30691
BI-1	209	128687.57700	0.00000	0.000	131968.55000	125208.92000	128885.26000
PB	208	-0.02598	256.68000	0.000	-0.03664	-0.01838	-0.02291
TL	203	0.00550	16.66700	435.000	-0.00831	0.03313	-0.00831
U	238	0.03033	166.68000	26.800	0.03227	0.02139	0.03731
GE-1	72	86347.49000	0.00000	0.000	88079.40000	87121.25000	83841.82000
TB-1	159	157914.43000	0.00000	0.000	158774.86000	156300.96000	158667.47000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:54:20
Tube Number: 13
Sample Number: **LLC**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24382.75700	0.00000	0.000	24793.21000	23571.39000	24783.67000
AL	27	389.89725	3243.91300	9.700	347.47348	401.76466	420.45362
CA	44	719.59077	800.07300	10.900	631.69727	783.60878	743.46625
CR	52	4.13193	3173.87000	10.000	4.44940	4.28219	3.66419
FE	57	101.88398	1376.81300	3.000	98.40244	103.60041	103.64908
K	39	400.67219	11912.36700	10.100	401.24782	440.93961	359.82913
MG	24	98.38977	3250.56000	1.000	98.53917	99.28710	97.34304
MN	55	10.54453	2303.64700	10.400	11.48410	10.80753	9.34197
NA	23	931.11067	105929.00700	6.500	869.52554	990.44592	933.36055
TI	47	28.89632	280.02000	10.000	26.31058	32.00618	28.37220
V	51	0.87275	443.36300	16.700	1.03384	0.83384	0.75058
IN-1	115	28831.62300	0.00000	0.000	29095.56000	28774.96000	28624.35000
AG	107	0.52329	736.72700	17.300	0.61538	0.51997	0.43452
AS	75	1.85775	133.33300	22.200	1.55481	1.69187	2.32657
BA	137	4.38848	440.03700	5.000	4.34756	4.19383	4.62406
CD	111	0.97346	129.33300	16.400	0.80479	0.99459	1.12101
CO	59	1.20591	1526.85000	12.800	1.11525	1.38459	1.11789
CU	63	41.02513	42852.55000	0.500	40.79889	41.17083	41.10566
MO	98	1.91685	1393.50000	2.400	1.96493	1.87335	1.91226
NI	60	4.21104	1706.86000	10.300	3.78463	4.65150	4.19698
SB	121	2.40495	783.40000	4.500	2.31105	2.52315	2.38064
SN	120	1.66373	766.73300	26.000	1.51563	2.15158	1.32396
SR	88	6.35128	1196.79700	13.700	6.78942	6.91854	5.34588
ZN	66	15.33225	1660.19000	14.100	12.92096	17.11075	15.96505
BI-1	209	124045.88000	0.00000	0.000	123757.69000	126695.23000	121684.72000
PB	208	3.04364	12116.43700	2.900	3.14589	2.98977	2.99525
TL	203	0.54339	660.06000	11.000	0.48649	0.60610	0.53758
U	238	0.45589	2126.98000	2.700	0.45103	0.44683	0.46982
GE-1	72	85590.30000	0.00000	0.000	85100.44000	86539.93000	85130.53000
TB-1	159	153078.55700	0.00000	0.000	152409.70000	154172.28000	152653.69000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:56:06
Tube Number: 14
Sample Number: **ICSA**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24723.27700	0.00000	0.000	24983.78000	25023.56000	24162.49000
AL	27	102648.47686	843596.11000	2.900	99809.48749	102435.46485	105700.47825
CA	44	294649.42423	316325.97700	1.700	291703.84984	291643.33773	300601.08512
CR	52	0.61298	990.09700	37.600	0.86258	0.40748	0.56887
FE	57	255666.77372	2941884.54000	2.400	253091.07249	251259.15387	262650.09480
K	39	105176.91932	1944680.80300	1.900	102929.85633	106029.24881	106571.65281
MG	24	102849.55014	3328064.74000	1.600	101370.12568	102478.86904	104699.65570
MN	55	3.44845	853.41000	14.600	4.00962	3.29370	3.04202
NA	23	250092.75313	17398971.40700	2.100	245171.42161	249353.67421	255753.16357
TI	47	2096.23926	20379.52700	5.600	1971.97238	2111.24711	2205.49828
V	51	0.05509	46.66700	18.100	0.06093	0.06077	0.04357
IN-1	115	28093.43000	0.00000	0.000	28901.25000	27830.11000	27548.93000
AG	107	0.01612	40.00000	127.400	0.00043	0.00856	0.03936
AS	75	1.17010	84.66700	3.500	1.12374	1.20202	1.18453
BA	137	0.70350	73.33700	87.900	0.33864	0.35418	1.41767
CD	111	0.10913	14.00000	67.100	0.04501	0.09349	0.18888
CO	59	1.06256	1316.81000	9.300	0.95027	1.13423	1.10318
CU	63	0.71345	1133.43300	23.000	0.55133	0.87901	0.71001
MO	98	2317.41397	1583123.04700	3.000	2238.21304	2341.09335	2372.93553
NI	60	1.39986	690.06000	10.400	1.28672	1.56328	1.34959
SB	121	1.49221	476.70300	7.400	1.61645	1.45494	1.40524
SN	120	-0.12774	120.01000	0.000	-0.16541	-0.03827	-0.17955
SR	88	17.97834	3290.58000	6.300	16.76913	19.01535	18.15055
ZN	66	1.00170	263.35000	56.000	1.30340	0.35477	1.34694
BI-1	209	116438.04000	0.00000	0.000	116809.84000	114982.63000	117521.65000
PB	208	0.95663	3797.11700	8.500	0.96739	1.03163	0.87088
TL	203	0.01255	23.33300	149.000	-0.00831	0.02779	0.01818
U	238	0.03019	150.01300	39.400	0.02094	0.02601	0.04362
GE-1	72	80890.46700	0.00000	0.000	82172.11000	80592.02000	79907.27000
TB-1	159	154287.46300	0.00000	0.000	154573.19000	155158.02000	153131.18000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:57:51
Tube Number: 15
Sample Number: **ICSAB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24626.67300	0.00000	0.000	25044.29000	24412.95000	24422.78000
AL	27	100257.69135	820912.77300	1.100	98976.92940	100823.50219	100972.64247
CA	44	289020.52483	309089.15700	1.800	283190.52795	292924.59926	290946.44728
CR	52	203.78716	129233.70300	1.000	204.43181	205.38734	201.54232
FE	57	253478.60973	2905697.76700	1.800	248146.23776	256712.39651	255577.19492
K	39	104237.35796	1919665.49000	2.300	101494.45352	105544.22300	105673.39738
MG	24	101033.54039	3256924.84700	1.000	100076.69127	100925.86548	102098.06443
MN	55	202.26801	42267.29700	1.700	199.76512	206.20805	200.83087
NA	23	247025.15465	17123146.41300	0.600	246890.00392	248547.88169	245637.57833
TI	47	2074.00260	20095.72700	1.700	2069.87051	2111.93149	2040.20581
V	51	203.22979	99685.20300	2.200	199.64819	208.25103	201.79015
IN-1	115	28270.47000	0.00000	0.000	29452.84000	27909.74000	27448.83000
AG	107	55.38187	74317.39300	4.200	52.69603	56.67284	56.77673
AS	75	112.38222	7457.45700	3.500	108.01311	113.35002	115.78353
BA	137	1.48950	150.01300	73.900	0.92556	2.75764	0.78530
CD	111	103.67527	13509.65700	2.700	100.84442	103.71390	106.46749
CO	59	209.22186	248477.48000	4.400	199.03381	212.02817	216.60361
CU	63	212.06055	215276.48000	3.300	204.11832	214.59298	217.47036
MO	98	2296.48913	1578464.45700	2.800	2221.69173	2337.26211	2330.51354
NI	60	209.30624	73074.69300	2.900	203.52161	208.84874	215.54838
SB	121	1.47649	473.37000	9.100	1.34339	1.61064	1.47543
SN	120	-0.30753	56.66700	0.000	-0.41645	-0.29839	-0.20776
SR	88	17.22731	3180.57700	8.300	18.12293	17.97095	15.58805
ZN	66	103.61462	10034.19000	2.700	105.25803	100.41966	105.16615
BI-1	209	114927.80300	0.00000	0.000	114315.97000	117958.86000	112508.58000
PB	208	0.90419	3560.41000	4.100	0.93712	0.86460	0.91085
TL	203	0.01615	26.67000	216.900	-0.00831	0.00048	0.05627
U	238	0.02424	123.34300	71.500	0.00976	0.04345	0.01952
GE-1	72	82356.22000	0.00000	0.000	81366.77000	81679.53000	84022.36000
TB-1	159	152878.29700	0.00000	0.000	150762.82000	155156.33000	152715.74000

Run Name: 1830404E05 Date/Time: 10/31/2018 11:59:36
Tube Number: 16
Sample Number: **RINSE**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23614.74000	0.00000	0.000	23852.05000	22809.82000	24182.35000
AL	27	7.29872	140.00700	63.100	7.21043	2.74152	11.94421
CA	44	103.67867	143.34300	46.800	98.10641	154.75783	58.17176
CR	52	0.46880	860.08300	32.800	0.50684	0.29964	0.59991
FE	57	19.55011	430.02700	37.300	17.48555	13.52235	27.64243
K	39	20.68985	4851.12000	39.800	24.00538	26.74186	11.32231
MG	24	6.57375	310.02300	32.500	8.70597	6.58253	4.43275
MN	55	0.29035	183.34300	23.700	0.21520	0.30552	0.35033
NA	23	144.28006	50462.61700	13.700	143.36192	164.48652	124.99173
TI	47	1.41773	16.66700	114.600	2.84842	-0.34879	1.75357
V	51	-0.01796	10.00000	0.000	-0.03955	0.00447	-0.01879
IN-1	115	28855.72700	0.00000	0.000	28791.84000	28892.14000	28883.20000
AG	107	-0.00198	16.66700	0.000	-0.00682	0.01501	-0.01413
AS	75	0.03284	10.00000	411.400	-0.08508	0.18027	0.00334
BA	137	0.00215	6.66700	5435.200	-0.06518	0.13679	-0.06518
CD	111	0.01001	1.33300	173.200	0.00000	0.03002	0.00000
CO	59	0.05330	130.01300	30.600	0.03703	0.06965	0.05321
CU	63	-0.07837	346.69300	0.000	-0.01636	-0.10460	-0.11416
MO	98	1.92475	1400.17000	21.500	1.77225	1.60933	2.39266
NI	60	0.00522	213.34300	804.700	-0.03098	0.05132	-0.00467
SB	121	0.01062	10.00000	503.800	-0.02027	0.07240	-0.02027
SN	120	-0.26694	73.34000	0.000	-0.27577	-0.33204	-0.19301
SR	88	0.01834	6.66700	167.600	0.03617	0.03598	-0.01715
ZN	66	2.92185	456.70000	26.300	3.79102	2.64083	2.33371
BI-1	209	120308.02000	0.00000	0.000	119736.13000	120392.35000	120795.58000
PB	208	-0.00745	310.02300	0.000	-0.00438	-0.01018	-0.00779
TL	203	0.00894	20.00000	0.900	0.00902	0.00893	0.00887
U	238	-0.00061	16.66700	0.000	-0.00433	0.00682	-0.00433
GE-1	72	83398.09000	0.00000	0.000	83448.07000	82170.81000	84575.39000
TB-1	159	150053.72300	0.00000	0.000	149894.63000	154116.27000	146150.27000

Run Name: 1830404E05 Date/Time: 10/31/2018 12:01:26
Tube Number: 17
Sample Number: **CCV**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	24196.01000	0.00000	0.000	23802.21000	24242.72000	24543.10000
AL	27	2579.73244	20836.74000	2.000	2614.87737	2519.96954	2604.35041
CA	44	2434.97332	2597.08000	4.400	2527.02700	2318.88665	2459.00631
CR	52	257.94458	160536.79300	1.500	262.42691	254.78964	256.61720
FE	57	2528.89392	28698.59000	3.200	2610.64174	2450.98302	2525.05702
K	39	2556.13364	50735.11300	3.300	2608.11407	2602.67975	2457.60711
MG	24	2499.50962	79278.06000	0.800	2510.51185	2476.96888	2511.04814
MN	55	251.70559	51652.22700	0.400	251.28061	252.96006	250.87610
NA	23	2593.47568	218078.11000	2.300	2653.55285	2591.57096	2535.30321
TI	47	264.08755	2517.05700	0.300	263.48019	264.97863	263.80382
V	51	254.42548	122604.87300	3.200	262.50558	246.24844	254.52242
IN-1	115	29861.82300	0.00000	0.000	30084.98000	29445.18000	30055.31000
AG	107	27.38158	38855.64700	2.200	26.74846	27.96812	27.42817
AS	75	256.11028	17955.34700	1.200	255.24574	259.49038	253.59471
BA	137	253.17795	25917.13700	0.800	251.18959	255.15699	253.18726
CD	111	25.23140	3475.16300	2.300	24.66469	25.18589	25.84361
CO	59	255.46370	320773.69000	1.500	255.76206	259.07805	251.55099
CU	63	254.91954	273492.40300	0.300	254.91823	254.17341	255.66698
MO	98	26.72039	19458.75000	3.400	25.70425	27.49445	26.96249
NI	60	253.18846	93379.41000	1.100	250.72238	256.12453	252.71846
SB	121	25.08679	8399.85700	1.700	24.72908	25.56987	24.96142
SN	120	24.23248	9187.04300	8.400	25.42178	25.38346	21.89220
SR	88	25.71126	5007.87700	6.800	26.62305	23.70787	26.80287
ZN	66	254.29407	25752.24700	2.700	256.23777	246.58660	260.05783
BI-1	209	123045.42700	0.00000	0.000	124855.57000	121524.30000	122756.41000
PB	208	25.67875	98812.19700	3.100	25.18931	26.59893	25.24801
TL	203	26.18338	31046.87000	2.300	25.55917	26.77380	26.21717
U	238	24.89795	114183.75700	2.200	24.68113	25.52728	24.48545
GE-1	72	85559.75700	0.00000	0.000	85493.67000	86688.80000	84496.80000
TB-1	159	152321.15300	0.00000	0.000	154112.46000	153039.41000	149811.59000

Run Name: 1830404E05 Date/Time: 10/31/2018 12:03:12
Tube Number: 18
Sample Number: **CCB**

Note: All Analyte values are in ppb, except Internal Standards, C, P, S and CL are in counts per second.

					INTEGRATIONS		
Element	MASS	CONC. MEAN (ppb)	CPS MEAN	%RSD	#1	#2	#3
SC-1	45	23925.30000	0.00000	0.000	23611.21000	24022.29000	24142.40000
AL	27	2.16880	100.00300	260.800	8.66433	-1.68005	-0.47787
CA	44	-8.08766	30.00000	0.000	11.70334	-37.05890	1.09259
CR	52	0.39540	823.39700	59.700	0.63734	0.38279	0.16606
FE	57	-1.76491	196.68000	0.000	1.48625	-6.02640	-0.75459
K	39	2.26154	4587.67300	761.100	11.50976	-17.59910	12.87396
MG	24	2.46893	186.67700	155.500	-0.87700	1.62304	6.66076
MN	55	0.14466	156.68000	300.700	-0.07658	-0.13521	0.64576
NA	23	94.89610	47840.21300	11.500	84.21340	94.52875	105.94616
TI	47	0.00218	3.33300	27891.500	-0.34879	-0.34879	0.70413
V	51	0.00929	23.33300	563.000	0.00298	-0.03955	0.06443
IN-1	115	27555.23000	0.00000	0.000	26947.00000	27679.13000	28039.56000
AG	107	-0.00649	10.00000	0.000	-0.00632	-0.00653	-0.00663
AS	75	0.23519	22.66700	27.900	0.20157	0.19320	0.31081
BA	137	-0.06518	0.00000	0.000	-0.06518	-0.06518	-0.06518
CD	111	0.01609	2.00000	173.200	0.04828	0.00000	0.00000
CO	59	0.02417	90.00700	127.700	0.04325	0.04068	-0.01143
CU	63	-0.03319	376.69700	0.000	-0.11335	-0.00041	0.01418
MO	98	0.08336	103.34000	104.600	-0.00860	0.09375	0.16495
NI	60	-0.18319	140.01000	0.000	-0.26342	-0.12559	-0.16057
SB	121	0.76546	243.35000	23.500	0.57590	0.78586	0.93464
SN	120	-0.00674	160.01000	0.000	-0.11346	-0.12292	0.21615
SR	88	0.01935	6.66700	326.700	-0.01715	-0.01715	0.09234
ZN	66	-1.56741	20.00000	0.000	-1.77972	-1.67242	-1.25011
BI-1	209	120199.81000	0.00000	0.000	121209.70000	122592.26000	116797.47000
PB	208	-0.01198	293.35300	0.000	0.01046	-0.01947	-0.02694
TL	203	0.03784	53.33300	16.400	0.03450	0.03401	0.04500
U	238	0.00155	26.66700	358.800	0.00674	0.00224	-0.00433
GE-1	72	84204.41700	0.00000	0.000	84456.10000	84979.87000	83177.28000
TB-1	159	149850.78700	0.00000	0.000	149172.99000	148732.82000	151646.55000

US EPA Tune Check Report

Operator Name	US19_USR_INS14259
Acq/Data Batch	C:\Agilent\ICPMH\1\DATA\~EPATUNEaa.b
Acq. Date-Time	10/31/2018 4:21:13 AM
Report Comment	ICP-MS #19204 (E05) Daily Tune Check
Instrument Name	G3281A JP12071581

[No Gas]

Sensitivity

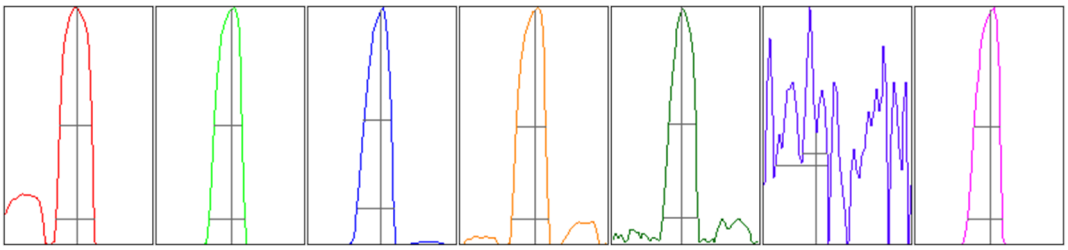
Mass	Conc. [ug/l]	Count	CPS	Resp (Required) [cps/ug/l]	Resp (Flag)	RSD%	RSD% (Required)
7	10.00	844	8444.81			1.018	5.000
89	10.00	5952	59517.17			0.924	5.000
205	10.00	3146	31460.88			0.675	5.000
70	1.00	275	2752.43	0.00		62.515	
156	1.00	16	163.51	0.00		14.572	
220	1.00	1	6.20	0.00		36.780	
140	10.00	5469	54692.20	0.00		0.818	

Mass	RSD% (Flag)
7	
89	
205	
70	
156	
220	
140	

Mass	Rep#1 Count	Rep#2 Count	Rep#3 Count	Rep#4 Count	Rep#5 Count
7	847	848	843	854	831
89	6024	5969	5921	5966	5878
205	3177	3130	3151	3150	3123
70	228	286	155	142	565
156	16	17	13	16	20
220	1	1	1	0	1
140	5491	5451	5473	5525	5406

Integration Time [sec] 0.1

Resolution/Axis



US EPA Tune Check Report

Mass	Peak Height	Axis	Axis (Required)	Axis (Flag)
7	1347.57	7.00	6.90 - 7.10	
89	10846.62	89.05	88.90 - 89.10	
205	5911.11	205.00	204.90 - 205.10	
70	479.13	70.05	-	
156	31.65	155.95	-	
220	0.75	219.60	-	
140	10554.22	140.05	-	

Mass	W-50%	W-10%	W-10% (Required)	W-10% (Flag)
7	0.66	0.765	0.800	
89	0.57	0.727	0.800	
205	0.54	0.748	0.800	
70	0.60	0.752		
156	0.54	0.720		
220	0.49	1.035		
140	0.54	0.714		

Integration Time [sec]	0.1
Acquisition Time [sec]	260.3
Y Axis	Linear

Tune Parameters

Plasma Parameters

Plasma Mode	---	Nebulizer Gas	0.25 L/min	Dilution Gas	0.70 L/min
RF Power	1600 W	Option Gas	---	Auxiliary Gas	0.90 L/min
RF Matching	1.60 V	Nebulizer Pump	0.10 rps	Plasma Gas	15.0 L/min
Sample Depth	10.0 mm	S/C Temp	20 °C		

Lens Parameters

Extract 1	0.0 V	Omega Lens	11.0 V	Deflect	14.6 V
Extract 2	-200.0 V	Cell Entrance	-32 V	Plate Bias	-20 V
Omega Bias	-100 V	Cell Exit	-59 V		

Cell Parameters

Use Gas	No	3rd Gas Flow	---	Energy Discrimination	5.0 V
He Flow	0.0 mL/min	OctP Bias	-8.0 V		
H2 Flow	0.0 mL/min	OctP RF	190 V		

QP Parameters

Mass Gain	122	Axis Gain	0.9988	QP Bias	-3.0 V
Mass Offset	126	Axis Offset	0.03		

Hardware Settings

Torch

Torch H	0.9 mm	Torch V	-1.2 mm

EM

Discriminator	4.5 mV	Analog HV	1754 V	Pulse HV	1227 V

Extraction/Distillation/Digestion Logs

Metals in Liquid

LLENS Worksheet for ICP/MS SW846 Water

Batch# 18 294 10639 02

Start Time: 10/23/18 4:38 **End Time:** 10/23/18 8:42 **Hot Block:** Block15

Pipette ID: JU06758
Reflux Cap Lot#: 18034028254CN

Spike/Reagent	Lot#	Volume Added(mL)
HNO3	191695	3.00
ICP/MS Spike	1824914#1	0.50
LCS	1824914#1	0.50

Method Ref:

	SampleID	Date Due	ST	P	H	Balance	PH<2	BC	Vessel Lot#	Location ID	Comments
1)	PBW	.							1807160		
2)	LCSW	.							1807160		
3)	9856079	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/E7	
4)	9856080	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/F7	
5)	**9856081U**	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET3/F10	
6)	**9856082R**	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/C9	
7)	**9856083M**	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/F8	
8)	**9856084D**	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/F9	
9)	9856085	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/E8	
10)	9856086FD	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/D8	
11)	9856087	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/C9	
12)	9856088	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/D9	
13)	9856089	10/26/18 09:40	WW	N7			Y	802A	1807160	WMET05/E9	

Prep Employee:1184 D/I _____

10/23/2018

v 1.1.0

Batch# 18 294 1063 902

LLENS Batch Chronology and Change Log - ICP/MS SW846 Water

	Operation	Instrument	Operation Date	ANALYST
1)	Batch Creation		10/21/18 8:07	1184
2)	Sample Vol		10/23/18 4:39	1184
3)	Final Vol	CLEAR	10/23/18 4:39	1184
4)	Trial		10/23/18 4:39	1184
5)	Upload Prep	US19PCC0678	10/23/18 8:42	1184

Sample ID	Analysis	D	Operation	Measurement	Original Entry Date/Time	Data	Units	Analyst	Data Changed Date/Time	Analyst	Reason

Analysis: 0639 ICP/MS SW846 Water

Batch# 18 294 1063 902

Sample ID	Due Date	P	EPA#	SDG#	Initial Volume	Final Volume	Trial
PBW					50.0000	50.0000	1
LCSW					1.0000	1.0000	1
9856079	10/26/18	N7	5W-8B	RAF24-01	50.0000	50.0000	1
9856080	10/26/18	N7	5W-5B	RAF24-02	50.0000	50.0000	1
9856081U	10/26/18	N7	5W-7B	RAF24-03BKG	50.0000	50.0000	1
9856082R	10/26/18	N7	5W-7B	RAF24-03MS	50.0000	50.0000	1
9856083M	10/26/18	N7	5W-7B	RAF24-03MSD	50.0000	50.0000	1
9856084D	10/26/18	N7	5W-7B	RAF24-03DUP	50.0000	50.0000	1
9856085	10/26/18	N7	5WC21	RAF24-04	50.0000	50.0000	1
9856086FD	10/26/18	N7	5WDUP	RAF24-05FD	50.0000	50.0000	1
9856087	10/26/18	N7	5WC22	RAF24-06	50.0000	50.0000	1
9856088	10/26/18	N7	5WC23	RAF24-07	50.0000	50.0000	1
9856089	10/26/18	N7	5W12A	RAF24-08	50.0000	50.0000	1

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Arsenic	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Barium	16C1	190		190		10	No action taken.
	16MW8	130		130		10	No action taken.
	16MW9	540		540		10	No action taken.
	16WC1A	280		280		10	No action taken.
	16WC1B	120		120		10	No action taken.
	16WC2B	110		110		10	No action taken.
	16-2	230		230		10	No action taken.
	16-3	720		720		10	No action taken.
	16-5	170		170		10	No action taken.
	16SPRING	220		220		10	No action taken.
	16WDUP	290		290		10	No action taken. Blind field duplicate of 16WC1A.
Beryllium	16C1	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16MW8	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16MW9	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16WC1A	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16-2	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16-5	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.
	16SPRING	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Beryllium	16WDUP	1	U	U	J	1	Analyte not detected at or above the QL. MS/MSD recovered low. Blind field duplicate of 16WC1A.
Cadmium	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Chromium	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the QL.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Cobalt	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	5	U	U		5	Analyte not detected at or above the QL.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	8.3		8.3		5	No action taken.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Cobalt	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	8.6		8.6		5	No action taken. Blind field duplicate of 16WC1A.
Copper	16C1	5	U	U		5	Analyte not detected at or above the QL.
	16MW8	17		17		5	No action taken.
	16MW9	5	U	U		5	Analyte not detected at or above the QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the QL.
	16WC1B	5	U	U		5	Analyte not detected at or above the QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the QL.
	16-2	5	U	U		5	Analyte not detected at or above the QL.
	16-3	5	U	U		5	Analyte not detected at or above the QL.
	16-5	5	U	U		5	Analyte not detected at or above the QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Lead	16C1	2	U	U		2	Analyte not detected at or above the QL.
	16MW8	4.4		4.4		2	No action taken.
	16MW9	2	U	U		2	Analyte not detected at or above the QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the QL.
	16WC1B	2	U	U		2	Analyte not detected at or above the QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Nickel	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	12		12		10	No action taken.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Nickel	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Vanadium	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
Zinc	16C1	30	U	U		30	Analyte not detected at or above the QL.
	16MW8	70		70		30	No action taken.
	16MW9	30	U	U		30	Analyte not detected at or above the QL.
	16WC1A	30	U	U		30	Analyte not detected at or above the QL.
	16WC1B	30	U	U		30	Analyte not detected at or above the QL.
	16WC2B	30	U	U		30	Analyte not detected at or above the QL.
	16-2	30	U	U		30	Analyte not detected at or above the QL.
	16-3	30	U	U		30	Analyte not detected at or above the QL.
	16-5	30	U	U		30	Analyte not detected at or above the QL.
	16SPRING	30	U	U		30	Analyte not detected at or above the QL.
	16WDUP	30	U	U		30	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 7470A							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Mercury	16C1	2	U	U		2	Analyte not detected at or above the QL.
	16MW8	2	U	U		2	Analyte not detected at or above the QL.
	16MW9	2	U	U		2	Analyte not detected at or above the QL.
	16WC1A	2	U	U		2	Analyte not detected at or above the QL.
	16WC1B	2	U	U		2	Analyte not detected at or above the QL.
	16WC2B	2	U	U		2	Analyte not detected at or above the QL.
	16-2	2	U	U		2	Analyte not detected at or above the QL.
	16-3	2	U	U		2	Analyte not detected at or above the QL.
	16-5	2	U	U		2	Analyte not detected at or above the QL.
	16SPRING	2	U	U		2	Analyte not detected at or above the QL.
	16WDUP	2	U	U		2	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Benzene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
2-Butanone	16C1	10	U	U		10	Analyte not detected at or above the QL.
	16MW8	10	U	U		10	Analyte not detected at or above the QL.
	16MW9	10	U	U		10	Analyte not detected at or above the QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the QL.
	16-5	10	U	U		10	Analyte not detected at or above the QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	10	U	U		10	
	Trip_Blank_2	10	U	U		10	
	Trip_Blank_3	10	U	U		10	
Carbon tetrachloride	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Carbon tetrachloride	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Chloroethane	16C1	2.8		2.8	J	1	Result is estimated. CV %D > +/-20%.
	16MW8	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16MW9	1.2		1.2	J	1	Result is estimated. CV %D > +/-20%.
	16WC1A	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-2	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-5	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16SPRING	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WDUP	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Dichlorodifluoromethane	16C1	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16MW8	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16MW9	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16WC1A	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16WC1B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16WC2B	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16-2	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16-3	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Dichlorodifluoromethane	16-5	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16SPRING	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low.
	16WDUP	1	U	U	J	1	Analyte not detected at or above the QL. CV %D > +/-20%. LCS/LCSD recovered low. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
1,1-Dichloroethane	16C1	5		5		1	No action taken.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	4.9		4.9		1	No action taken.
	16WC1A	2.7		2.7		1	No action taken.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	2.7		2.7		1	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
1,1-Dichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethene	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Diethyl ether	16C1	38		38	J	12.5	Result estimated. Original result reported but exceded calibration range. Dilution performed outside holding time but concentration consistent with original result.
	16MW8	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16MW9	39		39	J	12.5	Result estimated. Original result reported but exceded calibration range. Dilution performed outside holding time but concentration consistent with original result.
	16WC1A	16		16		12.5	No action taken.
	16WC1B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WC2B	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-2	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-3	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16-5	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16SPRING	12.5	U	U		12.5	Analyte not detected at or above the QL.
	16WDUP	16		16		12.5	No action taken. Blind field duplicate of 16WC1A.
	Trip_Blank_1	13	U	U		12.5	
	Trip_Blank_2	13	U	U		12.5	
	Trip_Blank_3	13	U	U		12.5	
Dimethyl ether	16C1	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16MW8	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16MW9	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WC1A	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WC1B	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WC2B	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-2	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-3	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16-5	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16SPRING	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%.
	16WDUP	12.5	U	U	J	12.5	Analyte not detected at or above the QL. CV %D > +/-20%. Blind field duplicate of 16WC1A.
	Trip_Blank_1	13	U	U		12.5	
	Trip_Blank_2	13	U	U		12.5	
	Trip_Blank_3	13	U	U		12.5	
Ethylbenzene	16C1	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Ethylbenzene	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Chloromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Methylene chloride	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Methylene chloride	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Tetrachloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Tetrahydrofuran	16C1	25	U	U		25	Analyte not detected at or above the QL.
	16MW8	25	U	U		25	Analyte not detected at or above the QL.
	16MW9	25	U	U		25	Analyte not detected at or above the QL.
	16WC1A	25	U	U		25	Analyte not detected at or above the QL.
	16WC1B	25	U	U		25	Analyte not detected at or above the QL.
	16WC2B	25	U	U		25	Analyte not detected at or above the QL.
	16-2	25	U	U		25	Analyte not detected at or above the QL.
	16-3	25	U	U		25	Analyte not detected at or above the QL.
	16-5	25	U	U		25	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
Tetrahydrofuran	16SPRING	25	U	U		25	Analyte not detected at or above the QL.
	16WDUP	25	U	U		25	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	25	U	U		25	
	Trip_Blank_2	25	U	U		25	
	Trip_Blank_3	25	U	U		25	
Toluene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
1,1,1-Trichloroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1,1-Trichloroethane	Trip_Blank_3	1	U	U		1	
Trichloroethene	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Trichlorofluoromethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.
	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
1,1,2-Trichloro-1,2,2-Trifluoroethane	16C1	1	U	U		1	Analyte not detected at or above the QL.
	16MW8	1	U	U		1	Analyte not detected at or above the QL.
	16MW9	1	U	U		1	Analyte not detected at or above the QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1,2-Trichloro-1,2,2-Trifluoroethane	16WC1A	1	U	U		1	Analyte not detected at or above the QL.
	16WC1B	1	U	U		1	Analyte not detected at or above the QL.
	16WC2B	1	U	U		1	Analyte not detected at or above the QL.
	16-2	1	U	U		1	Analyte not detected at or above the QL.
	16-3	1	U	U		1	Analyte not detected at or above the QL.
	16-5	1	U	U		1	Analyte not detected at or above the QL.
	16SPRING	1	U	U		1	Analyte not detected at or above the QL.
	16WDUP	1	U	U		1	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	1	U	U		1	
	Trip_Blank_2	1	U	U		1	
	Trip_Blank_3	1	U	U		1	
Xylenes (Total)	16C1	3	U	U		3	Analyte not detected at or above the QL.
	16MW8	3	U	U		3	Analyte not detected at or above the QL.
	16MW9	3	U	U		3	Analyte not detected at or above the QL.
	16WC1A	3	U	U		3	Analyte not detected at or above the QL.
	16WC1B	3	U	U		3	Analyte not detected at or above the QL.
	16WC2B	3	U	U		3	Analyte not detected at or above the QL.
	16-2	3	U	U		3	Analyte not detected at or above the QL.
	16-3	3	U	U		3	Analyte not detected at or above the QL.
	16-5	3	U	U		3	Analyte not detected at or above the QL.
	16SPRING	3	U	U		3	Analyte not detected at or above the QL.
	16WDUP	3	U	U		3	Analyte not detected at or above the QL. Blind field duplicate of 16WC1A.
	Trip_Blank_1	3	U	U		3	
	Trip_Blank_2	3	U	U		3	
	Trip_Blank_3	3	U	U		3	

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
Diethyl phthalate	16C1	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW8	5	U	U		5	Analyte not detected at or above the DL or QL.
	16MW9	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1A	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC1B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WC2B	5	U	U		5	Analyte not detected at or above the DL or QL.
	16-2	5	U	U		5	Analyte not detected at or above the DL or QL.
	16-3	5	U	U		5	Analyte not detected at or above the DL or QL.
	16-5	5	U	U		5	Analyte not detected at or above the DL or QL.
	16SPRING	5	U	U		5	Analyte not detected at or above the DL or QL.
	16WDUP	5	U	U		5	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,4-Dinitrotoluene	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16-2	10	U	U		10	Analyte not detected at or above the QL.
	16-3	10	U	U		10	Analyte not detected at or above the DL or QL.
	16-5	10	U	U		10	Analyte not detected at or above the DL or QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.
2,6-Dinitrotoluene	16C1	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW8	10	U	U		10	Analyte not detected at or above the DL or QL.
	16MW9	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1A	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC1B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16WC2B	10	U	U		10	Analyte not detected at or above the DL or QL.
	16-2	10	U	U		10	Analyte not detected at or above the DL or QL.
	16-3	10	U	U		10	Analyte not detected at or above the DL or QL.
	16-5	10	U	U		10	Analyte not detected at or above the DL or QL.
	16SPRING	10	U	U		10	Analyte not detected at or above the DL or QL.

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 8270D							
Laboratory: ELLE, Lancaster, PA							
2,6-Dinitrotoluene	16WDUP	10	U	U		10	Analyte not detected at or above the DL or QL. Blind field duplicate of 16WC1A.

Definitions:

Appendix IX monitoring events and compliance monitoring wells:
For Appendix IX monitoring events, all compliance well results evaluated to the project detection limit.
See separate table for Appendix IX monitoring event detection limits.
QLDenotes permit quantitation limit**.**
Q Denotes data qualifier.
U Denotes analyte not detected at or above laboratory detection limit (DL) or 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 detection limit /QL.
UN Denotes analyte concentration is less than the quantitation limit and five times the blank concentration. Analyte was not reliably detected due to blank contamination.
R Denotes result rejected.
Laboratory Data Qualifiers,
"U" and "<", denote not detected at or above the detection limit or QL.
B or J denote result detected between DL and QL, associated value should be considered an estimated concentration.

Appendix IX monitoring events:
Third Quarter 2003, Second Quarter 2004, Second Quarter 2005, Third Quarter 2006, Second Quarter 2007, Second Quarter 2008, Second Quarter 2009, Second Quarter 2010, 2Q 2011, 2Q 2012, 2Q 2013. 2Q 2014, 2Q 2015, 2Q 2016, 2Q 2017

Definitions for Non-Appendix IX Monitoring Events and plume monitoring wells:
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. See data validation report for further explanation.
UN Denotes analyte concentration is less than five times the blank concentration. Analyte was not reliably detected due to blank contamination.

J Denotes analyte reported at or above QL and associated result is estimated. When used with "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. See data validation report for further explanation.
Laboratory Data Qualifiers, "U" and "<", denote not detected at or above the QL.

Comprehensive Data Validation Report

Draper Aden Associates
Engineering ◆ Surveying ◆ Environmental Services

Radford Army Ammunition Plant (RFAAP), Radford, Virginia

Sample/Blind Field Duplicate Results Greater Than the Quantitation Limit

Facility: HWMU-16 Monitoring Event: Fourth Quarter 2018

Analyte	Sample ID	Laboratory Result (ug/L)	Q	Validated Result (ug/L)	Q	QL (ug/L)	Validation Notes
Method: 6020B							
Laboratory: Shealy Environmental Services, West Columbia, SC							
Barium	16WC1A	280		280		10	No action taken.
	16WDUP	290		290		10	No action taken. Blind field duplicate of 16WC1A.
Cobalt	16WC1A	8.3		8.3		5	No action taken.
	16WDUP	8.6		8.6		5	No action taken. Blind field duplicate of 16WC1A.
Method: 8260C							
Laboratory: ELLE, Lancaster, PA							
1,1-Dichloroethane	16WC1A	2.7		2.7		1	No action taken.
	16WDUP	2.7		2.7		1	No action taken. Blind field duplicate of 16WC1A.
Diethyl ether	16WC1A	16		16		13	No action taken.
	16WDUP	16		16		13	No action taken. Blind field duplicate of 16WC1A.

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.

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Type I Data Package

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Project: RAAP - Radford, VA - HWMU16
Groundwater and Water Samples
Collected on 10/09/18-10/11/18

SDG# RAF20

GROUP	SAMPLE NUMBERS
1998085	9850249-9850264

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-18-27
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by: Dana M. Kauffman **Date:** **11/19/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Barbara Weyandt at (717) 556-7264.

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Sample Reference List for SDG Number RAF20
with a Data Package Type of I

11200 - Draper Aden Associates, Inc.
Project: RAAP - Radford, VA - HWMU16

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9850249	16C1	10/11/2018 12:00	10/12/2018 09:35
9850250	16MW8	10/11/2018 08:15	10/12/2018 09:35
9850251	16MW9	10/11/2018 11:15	10/12/2018 09:35
9850252	16WC1A	10/11/2018 10:00	10/12/2018 09:35
9850253	16WC1A MS	10/11/2018 10:00	10/12/2018 09:35
9850254	16WC1A MSD	10/11/2018 10:00	10/12/2018 09:35
9850255	16WDUP	10/11/2018 10:10	10/12/2018 09:35
9850256	16WC1B	10/11/2018 09:10	10/12/2018 09:35
9850257	16-2	10/10/2018 11:35	10/12/2018 09:35
9850258	16-3	10/09/2018 13:45	10/12/2018 09:35
9850259	16-5	10/10/2018 09:45	10/12/2018 09:35
9850260	16WC2B	10/10/2018 10:50	10/12/2018 09:35
9850261	16SPRING	10/10/2018 09:55	10/12/2018 09:35
9850262	Trip Blank_1	10/09/2018 00:00	10/12/2018 09:35
9850263	Trip Blank_2	10/10/2018 00:00	10/12/2018 09:35
9850264	Trip Blank_3	10/10/2018 00:00	10/12/2018 09:35

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Sample pH Log

SDG: RAF20

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9850249	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:14:01PM	14951
9850249	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:57PM	14951
9850249	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:00:43PM	24788
9850249	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:50PM	24788
9850250	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:57PM	14951
9850250	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:01:03PM	24788
9850250	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:53PM	24788
9850251	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:57PM	14951
9850251	038C	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:57PM	14951
9850251	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:20:44PM	24788
9850251	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:23PM	24788
9850252	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:57PM	14951
9850252	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:07PM	24788
9850252	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:08PM	24788
9850253	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850253	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850253	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:38PM	24788
9850254	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850254	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850254	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:37PM	24788
9850255	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850255	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:15PM	24788
9850255	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:23:05PM	24788
9850256	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850256	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:00:51PM	24788
9850256	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:45PM	24788
9850257	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850257	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:00:57PM	24788
9850257	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:20:52PM	24788
9850258	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850258	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:20:59PM	24788
9850258	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:58PM	24788
9850259	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850259	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:23:13PM	24788
9850259	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:23:39PM	24788
9850260	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850260	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:30PM	24788
9850260	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:22:00PM	24788

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	*pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	**Chlorine Present?	Corrective Substance	CS Lot #	Record Date	Employee
9850261	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850261	153A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:20:34PM	24788
9850261	153B		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/12/2018 9:21:16PM	24788
9850262	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850263	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951
9850264	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	10/22/2018 8:13:58PM	14951

*pH Check Code Key
PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

**Chlorine Present Code Key
NA = Chlorine Not Checked
Y = Chlorine Present
N = Chlorine Not Present

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01163 GC/MS VOA Water Prep

An undiluted aliquot of the water sample or a dilution of the sample is purged with an inert gas and the volatiles are collected on an adsorbent trap that is subsequently desorbed onto a gas chromatographic column.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030C, May 2003.

11996 VOCs- 25ml Water by 8260C

The water sample is purged and the volatile compounds are collected on a sorbent trap that is subsequently desorbed onto the GC/MS system for chromatographic and mass spectral analysis.

Reference: Volatile Organic Compounds by Gas Chromatography/ Mass Spectrometry (GC/MS), SW-846 Method 8260C, August 2006.

11010 8270D BNA Extraction

The sample aliquot is extracted with methylene chloride by either separatory funnel or liquid/liquid apparatus. Extraction is performed at both a pH of 11 and 2. The extract is concentrated prior to analysis.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 3510C, Rev 3, December 1996

14241 SVOAs 8270D MINI

The sample extract is analyzed by capillary column Gas Chromatography/Mass Spectrometry.

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8270D, February 2007.

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Draper Aden Associates, Inc.
2206 South Main Street
Blacksburg VA 24060

Report Date: November 02, 2018 13:48

Project: RAAP - Radford, VA - HWMU16

Account #: 11200
Group Number: 1998085
SDG: RAF20
State of Sample Origin: VA

Electronic Copy To	Draper Aden Associates, Inc.	Attn: Janet Frazier
Electronic Copy To	Draper Aden Associates, Inc.	Attn: Kathy Olsen

Respectfully Submitted,

Barbara Weyandt

Barbara A. Weyandt
Specialist

(717) 556-7264

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
16C1 Grab Groundwater	10/11/2018 12:00	9850249
16MW8 Grab Groundwater	10/11/2018 08:15	9850250
16MW9 Grab Groundwater	10/11/2018 11:15	9850251
16WC1A Grab Groundwater	10/11/2018 10:00	9850252
16WC1A MS Grab Groundwater	10/11/2018 10:00	9850253
16WC1A MSD Grab Groundwater	10/11/2018 10:00	9850254
16WDUP Grab Groundwater	10/11/2018 10:10	9850255
16WC1B Grab Groundwater	10/11/2018 09:10	9850256
16-2 Grab Groundwater	10/10/2018 11:35	9850257
16-3 Grab Groundwater	10/09/2018 13:45	9850258
16-5 Grab Groundwater	10/10/2018 09:45	9850259
16WC2B Grab Groundwater	10/10/2018 10:50	9850260
16SPRING Grab Groundwater	10/10/2018 09:55	9850261
Trip Blank_1 Water	10/09/2018	9850262
Trip Blank_2 Water	10/10/2018	9850263
Trip Blank_3 Water	10/10/2018	9850264

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Project Name: RAAP - Radford, VA - HWMU16
ELLE Group #: 1998085

General Comments:

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below.

Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are included in this data set.

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:

SW-846 8260C 25mL purge, GC/MS Volatiles

Sample #s: 9850250, 9850252, 9850255, 9850256, 9850257, 9850258, 9850259, 9850260, 9850261, 9850262, 9850263, 9850264

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Sample #s: 9850249, 9850251

The concentration reported for ethyl ether is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time and confirms the initial analysis.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:

chloroethane.

SW-846 8270D, GC/MS Semivolatiles

Sample #s: 9850252

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

Batch #: 18288WAT026 (Sample number(s): 9850249-9850261 UNSPK: 9850252)

The recovery(ies) for one or more surrogates exceeded the acceptance window indicating a positive bias for sample(s) 9850251

The recovery(ies) for one or more surrogates were below the acceptance window for sample(s) 9850252

Sample Description: **16C1 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 12:00
SDG#: RAF20-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850249
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	2.8	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	5.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	38.E	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

The concentration reported for ethyl ether is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time and confirms the initial analysis.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Description: **16C1 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 12:00
SDG#: RAF20-01

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850249
ELLE Group #: 1998085
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 12:36	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 12:36	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 15:56	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16MW8 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 08:15
SDG#: RAF20-02

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850250
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 13:19	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 13:19	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 16:25	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16MW9 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 11:15
SDG#: RAF20-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850251
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	1.2	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	4.9	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	39.E	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

The concentration reported for ethyl ether is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time and confirms the initial analysis.

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated: chloroethane.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Sample Description: **16MW9 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 11:15
SDG#: RAF20-03

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850251
ELLE Group #: 1998085
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 13:41	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 13:41	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 16:53	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WC1A Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 10:00
SDG#: RAF20-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850252
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	2.7	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	16	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 14:24	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 14:24	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 13:04	Kira N Beck	1

Sample Description: **16WC1A Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 10:00
SDG#: RAF20-04BKG

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850252
ELLE Group #: 1998085
Matrix: Groundwater

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WC1A MS Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 10:00
SDG#: RAF20-04MS

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850253
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	5.2	1.0	1
11996	2-Butanone	78-93-3	33	10	1
11996	Carbon Tetrachloride	56-23-5	5.7	1.0	1
11996	Chloroethane	75-00-3	4.8	1.0	1
11996	Chloromethane	74-87-3	3.9	1.0	1
11996	Dichlorodifluoromethane	75-71-8	3.8	1.0	1
11996	1,1-Dichloroethane	75-34-3	7.7	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.8	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	20	13	1
11996	Ethylbenzene	100-41-4	5.1	1.0	1
11996	Freon 113	76-13-1	5.4	1.0	1
11996	Methylene Chloride	75-09-2	5.0	1.0	1
11996	Tetrachloroethene	127-18-4	5.9	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	5.2	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.3	1.0	1
11996	Trichloroethene	79-01-6	5.3	1.0	1
11996	Trichlorofluoromethane	75-69-4	4.2	1.0	1
11996	Xylene (Total)	1330-20-7	16	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	40	5	1
14241	2,4-Dinitrotoluene	121-14-2	43	10	1
14241	2,6-Dinitrotoluene	606-20-2	43	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 14:46	Jennifer K Howe	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 15:28	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 14:46	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H182951AA	10/22/2018 15:28	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 13:33	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WC1A MSD Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 10:00
SDG#: RAF20-04MSD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850254
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	5.3	1.0	1
11996	2-Butanone	78-93-3	35	10	1
11996	Carbon Tetrachloride	56-23-5	5.9	1.0	1
11996	Chloroethane	75-00-3	4.9	1.0	1
11996	Chloromethane	74-87-3	4.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	4.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	7.9	1.0	1
11996	1,1-Dichloroethene	75-35-4	5.9	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	20	13	1
11996	Ethylbenzene	100-41-4	5.3	1.0	1
11996	Freon 113	76-13-1	5.5	1.0	1
11996	Methylene Chloride	75-09-2	5.0	1.0	1
11996	Tetrachloroethene	127-18-4	5.9	1.0	1
11996	Tetrahydrofuran	109-99-9	26	25	1
11996	Toluene	108-88-3	5.3	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	5.5	1.0	1
11996	Trichloroethene	79-01-6	5.6	1.0	1
11996	Trichlorofluoromethane	75-69-4	4.4	1.0	1
11996	Xylene (Total)	1330-20-7	16	3.0	1
GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	41	5	1
14241	2,4-Dinitrotoluene	121-14-2	44	10	1
14241	2,6-Dinitrotoluene	606-20-2	42	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 15:07	Jennifer K Howe	1
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 15:50	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 15:07	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	2	H182951AA	10/22/2018 15:50	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 14:01	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WDUP Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 10:10
SDG#: RAF20-05FD

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850255
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	2.7	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	16	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 16:11	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 16:11	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 17:22	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WC1B Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/11/2018 09:10
SDG#: RAF20-06

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850256
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 16:32	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 16:32	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 17:51	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16-2 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018 11:35
SDG#: RAF20-07

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850257
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 16:54	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 16:54	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 18:19	Kira N Beck	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16-3 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/09/2018 13:45
SDG#: RAF20-08

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850258
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 17:15	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 17:15	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/18/2018 23:37	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16-5 Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018 09:45
SDG#: RAF20-09

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850259
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 17:37	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 17:37	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/19/2018 00:06	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16WC2B Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018 10:50
SDG#: RAF20-10

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850260
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 17:58	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 17:58	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/19/2018 00:34	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **16SPRING Grab Groundwater**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018 09:55
SDG#: RAF20-11

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850261
ELLE Group #: 1998085
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

GC/MS Semivolatiles	**SW-846 8270D**		**ug/l**	**ug/l**	
14241	Diethylphthalate	84-66-2	< 5	5	1
14241	2,4-Dinitrotoluene	121-14-2	< 10	10	1
14241	2,6-Dinitrotoluene	606-20-2	< 10	10	1

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 18:20	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 18:20	Jennifer K Howe	1
14241	3 SVOCs 8270D	SW-846 8270D	1	18288WAT026	10/19/2018 01:03	Brandon K Cordova	1
11010	8270D BNA Extraction	SW-846 3510C	1	18288WAT026	10/16/2018 09:00	Joshua S Ruth	1

Sample Description: **Trip Blank_1 Water**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/09/2018
SDG#: RAF20-12TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850262
ELLE Group #: 1998085
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 11:32	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 11:32	Jennifer K Howe	1

Sample Description: **Trip Blank_2 Water**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018
SDG#: RAF20-13TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850263
ELLE Group #: 1998085
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 11:53	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 11:53	Jennifer K Howe	1

Sample Description: **Trip Blank_3 Water**
2018 - 2nd Semiannual Monitoring Event
RAAP - Radford, VA - HWMU16

Project Name: **RAAP - Radford, VA - HWMU16**

Submittal Date/Time: 10/12/2018 09:35
Collection Date/Time: 10/10/2018
SDG#: RAF20-14TB

Draper Aden Associates, Inc.
ELLE Sample #: WW 9850264
ELLE Group #: 1998085
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260C 25mL purge**		**ug/l**	**ug/l**	
11996	Benzene	71-43-2	< 1.0	1.0	1
11996	2-Butanone	78-93-3	< 10	10	1
11996	Carbon Tetrachloride	56-23-5	< 1.0	1.0	1
11996	Chloroethane	75-00-3	< 1.0	1.0	1
11996	Chloromethane	74-87-3	< 1.0	1.0	1
11996	Dichlorodifluoromethane	75-71-8	< 1.0	1.0	1
11996	1,1-Dichloroethane	75-34-3	< 1.0	1.0	1
11996	1,1-Dichloroethene	75-35-4	< 1.0	1.0	1
11996	Dimethyl ether	115-10-6	< 13	13	1
11996	Ethyl ether	60-29-7	< 13	13	1
11996	Ethylbenzene	100-41-4	< 1.0	1.0	1
11996	Freon 113	76-13-1	< 1.0	1.0	1
11996	Methylene Chloride	75-09-2	< 1.0	1.0	1
11996	Tetrachloroethene	127-18-4	< 1.0	1.0	1
11996	Tetrahydrofuran	109-99-9	< 25	25	1
11996	Toluene	108-88-3	< 1.0	1.0	1
11996	1,1,1-Trichloroethane	71-55-6	< 1.0	1.0	1
11996	Trichloroethene	79-01-6	< 1.0	1.0	1
11996	Trichlorofluoromethane	75-69-4	< 1.0	1.0	1
11996	Xylene (Total)	1330-20-7	< 3.0	3.0	1

Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
11996	8260C (25 ml)	SW-846 8260C 25mL purge	1	H182951AA	10/22/2018 12:15	Jennifer K Howe	1
01163	GC/MS VOA Water Prep	SW-846 5030C	1	H182951AA	10/22/2018 12:15	Jennifer K Howe	1

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1998085
Reported: 11/02/2018 13:48

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 was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	LOQ
	ug/l	ug/l
Batch number: H182951AA	Sample number(s): 9850249-9850264	
Benzene	< 1.0	1.0
2-Butanone	< 10	10
Carbon Tetrachloride	< 1.0	1.0
Chloroethane	< 1.0	1.0
Chloromethane	< 1.0	1.0
Dichlorodifluoromethane	< 1.0	1.0
1,1-Dichloroethane	< 1.0	1.0
1,1-Dichloroethene	< 1.0	1.0
Dimethyl ether	< 13	13
Ethyl ether	< 13	13
Ethylbenzene	< 1.0	1.0
Freon 113	< 1.0	1.0
Methylene Chloride	< 1.0	1.0
Tetrachloroethene	< 1.0	1.0
Tetrahydrofuran	< 25	25
Toluene	< 1.0	1.0
1,1,1-Trichloroethane	< 1.0	1.0
Trichloroethene	< 1.0	1.0
Trichlorofluoromethane	< 1.0	1.0
Xylene (Total)	< 3.0	3.0
Batch number: 18288WAT026	Sample number(s): 9850249-9850261	
Diethylphthalate	< 5	5
2,4-Dinitrotoluene	< 10	10
2,6-Dinitrotoluene	< 10	10

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: H182951AA	Sample number(s): 9850249-9850264								
Benzene	5.00	4.53	5.00	4.47	91	89	80-120	1	30
2-Butanone	37.5	32.57	37.5	30.24	87	81	59-141	7	30
Carbon Tetrachloride	5.00	4.91	5.00	4.81	98	96	64-141	2	30
Chloroethane	5.00	3.56	5.00	3.52	71	70	63-120	1	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1998085
Reported: 11/02/2018 13:48

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Chloromethane	5.00	3.62	5.00	3.61	72	72	56-124	0	30
Dichlorodifluoromethane	5.00	3.38	5.00	3.34	68	67	43-123	1	30
1,1-Dichloroethane	5.00	4.56	5.00	4.52	91	90	74-120	1	30
1,1-Dichloroethene	5.00	4.86	5.00	4.71	97	94	80-131	3	30
Dimethyl ether	5.00	3.72	5.00	3.72	74	74	70-130	0	30
Ethyl ether	5.00	3.90	5.00	3.90	78	78	72-121	0	30
Ethylbenzene	5.00	4.75	5.00	4.65	95	93	80-120	2	30
Freon 113	5.00	4.43	5.00	4.37	89	87	75-133	1	30
Methylene Chloride	5.00	4.49	5.00	4.45	90	89	80-120	1	30
Tetrachloroethene	5.00	5.11	5.00	5.02	102	100	80-120	2	30
Tetrahydrofuran	25	22.14	25	20.17	89	81	67-137	9	30
Toluene	5.00	4.78	5.00	4.72	96	94	80-120	1	30
1,1,1-Trichloroethane	5.00	4.67	5.00	4.63	93	93	78-126	1	30
Trichloroethene	5.00	4.67	5.00	4.70	93	94	80-120	1	30
Trichlorofluoromethane	5.00	3.71	5.00	3.60	74	72	62-136	3	30
Xylene (Total)	15	14.89	15	14.63	99	98	80-120	2	30
	ug/l	ug/l	ug/l	ug/l					
Batch number: 18288WAT026	Sample number(s): 9850249-9850261								
Diethylphthalate	50	38.34			77		61-111		
2,4-Dinitrotoluene	50	41.38			83		69-117		
2,6-Dinitrotoluene	50	40.26			81		69-122		

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: H182951AA	Sample number(s): 9850249-9850264 UNSPK: 9850252									
Benzene	0.150	5.00	5.22	5.00	5.32	101	103	80-120	2	30
2-Butanone	< 10	37.5	33.16	37.5	35.35	88	94	59-141	6	30
Carbon Tetrachloride	< 1.0	5.00	5.72	5.00	5.89	114	118	64-141	3	30
Chloroethane	0.970	5.00	4.78	5.00	4.89	76	78	63-120	2	30
Chloromethane	< 1.0	5.00	3.90	5.00	4.00	78	80	56-124	2	30
Dichlorodifluoromethane	< 1.0	5.00	3.85	5.00	4.01	77	80	43-123	4	30
1,1-Dichloroethane	2.69	5.00	7.67	5.00	7.89	100	104	74-120	3	30
1,1-Dichloroethene	0.125	5.00	5.81	5.00	5.95	114	116	80-131	2	30
Dimethyl ether	< 13	5.00	4.32	5.00	4.35	86	87	70-130	1	30
Ethyl ether	16.11	5.00	20.21	5.00	20.41	82	86	72-121	1	30
Ethylbenzene	< 1.0	5.00	5.10	5.00	5.29	102	106	80-120	4	30

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1998085
Reported: 11/02/2018 13:48

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Freon 113	< 1.0	5.00	5.41	5.00	5.52	108	110	75-133	2	30
Methylene Chloride	0.0700	5.00	4.96	5.00	5.05	98	100	80-120	2	30
Tetrachloroethene	0.133	5.00	5.88	5.00	5.93	115	116	80-120	1	30
Tetrahydrofuran	1.01	25	23.46	25	25.5	90	98	67-137	8	30
Toluene	< 1.0	5.00	5.20	5.00	5.28	104	106	80-120	2	30
1,1,1-Trichloroethane	< 1.0	5.00	5.33	5.00	5.52	107	110	78-126	3	30
Trichloroethene	0.0770	5.00	5.33	5.00	5.55	105	109	80-120	4	30
Trichlorofluoromethane	< 1.0	5.00	4.24	5.00	4.38	85	88	62-136	3	30
Xylene (Total)	< 3.0	15	16.02	15	16.32	107	109	80-120	2	30
	ug/l	ug/l	ug/l	ug/l	ug/l					
Batch number: 18288WAT026	Sample number(s): 9850249-9850261 UNSPK: 9850252									
Diethylphthalate	< 5	50	39.77	50	41.1	80	82	61-111	3	30
2,4-Dinitrotoluene	< 10	50	42.95	50	43.83	86	88	69-117	2	30
2,6-Dinitrotoluene	< 10	50	43.03	50	42.16	86	84	69-122	2	30

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: H182951AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9850249	101	104	99	96
9850250	100	104	100	97
9850251	101	104	99	96
9850252	101	103	100	96
9850253	99	101	100	97
9850254	100	102	100	97
9850255	100	100	99	97
9850256	100	104	99	96
9850257	101	103	100	98
9850258	101	105	100	97
9850259	101	102	101	96
9850260	101	103	99	96
9850261	101	103	100	95
9850262	101	104	100	97
9850263	100	107	100	96
9850264	101	103	100	97

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Draper Aden Associates, Inc. Group Number: 1998085
Reported: 11/02/2018 13:48

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: 8260C (25 ml)
Batch number: H182951AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	100	106	101	96
LCS	98	102	102	97
LCSD	99	103	100	97
MS	99	101	100	97
MSD	100	102	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: 3 SVOCs 8270D
Batch number: 18288WAT026

	Nitrobenzene-d5	2-Fluorobiphenyl	Terphenyl-d14
9850249	58	62	95
9850250	60	62	56
9850251	96	96	128*
9850252	15*	17*	22*
9850253	83	79	91
9850254	80	80	92
9850255	66	70	77
9850256	63	65	67
9850257	65	66	97
9850258	65	65	89
9850259	66	65	94
9850260	57	58	90
9850261	69	66	91
Blank	60	60	103
LCS	65	69	94
MS	83	79	91
MSD	80	80	92
Limits:	30-111	39-105	27-126

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

A. 11200 G. 1998085 S. 9850249-04

CHAIN OF CUSTODY RECORD

Laboratory: Eurofins Lancaster Laboratories Environmental, LLC , 2425 New Holland Pike, Lancaster, PA, 17605-2425/ Barb Weyandt, Manager/ (717) 656-2300

Client: 0 **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Janet C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2018 - 2nd Semiannual Monitoring Event **DAA JN:** B03204-18A **Lab JN:**	**Project Specific (PS) or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** UPS **Tracking Number:** 1Z 754 02X 40 5701 8259 1Z 754 02X 40 5559 8049

Box 1: Matrix	Box 2: Preservative	Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water GW Groundwater L Leachate S Soil T Trip Blank E Equipment Blank P Product O Other	A HCL B HNO_3 C H_2SO_4 D $Na_2S_2O_3$ E NaOH F ZnAc G Other (Specify) H None	F Filtered U Unfiltered **Box 5: Sample Container Type** P Plastic AG Amber Glass V VOA CG Clear Glass	G Grab C Composite	Copy to Consultant: YES Bill: CLIENT OTHER Preserved and shipped on ice: YES

Box 4 - Sample Type					G	G							
Box 3 - Filtered/Unfiltered					U	U							
Required pH of Sample					<2	-							
Box 2 - Preservative					A	H							
Box 5 - Sample Container Type					3-40ml V	2-250 ML AG							
Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	8260C/5030C - 25 ml purge	8270D/3510C (Semivolatiles)							
16C1	10/11	1200	GW	5	X	X							
16MW8	10/11	0815	GW	5	X	X							
16MW9	10/11	1115	GW	5	X	X							
16WC1A	10/11	1000	GW	15	X	X							USE FOR QC
16WDUP	10/11	1010	GW	5	X	X							
16WC1B	10/11	0910	GW	5	X	X							
16-2	10/10	1135	GW	5	X	X							
16-3	10/9	1345	GW	5	X	X							
16-5	10/10	0945	GW	5	X	X							
16WC2B	10/10	1050	GW	5	X	X							
16SPRING	10/10	0955	GW	5	X	X							
Trip Blank1	10/9	—	GW	3	X								1 per day. Delete if not required. JVK 10/5/18
Trip Blank2	10/10	—	GW	3	X								
Trip Blank3	10/10	—	GW	3	X								

GENERAL NOTES:

1. DAA EDD required.
2. Level 1 deliverables required. (Full deliverable) JVK 10/5/18
3. See attached target analyte list.
4. 1 Trip Blank to be analyzed per day of sample collection.
5. Project required LOQs attached. Please report these LOQs.
6. Report to at or above project QL's.

Clients Special Instructions: Level 1 with edd. See attached target analyte list. See Genral Notes block.

Received by lab in Good Condition ____ Yes X No Custody Seal Intact X Yes ____ No Temperature upon arrival 01-23C Received on Ice X Yes ____ No

Describe problems, if any: 2 amber 250 ml containers arrived broken.

Sampler Name (Print): Ken Coddington	Date: 10/9/18	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date:	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name:	Time:	
Sampler Name (Print): Ky-Tran Vo	Date: 10/9/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10-10-18	30 DYS ORG/6 MTHS INORG
Sampler Signature:	Time: 0700	Company Name:	Time:	Company Name: ESE	Time: 935	

1/3 JVK 10.5.18

ANALYTICAL METHOD: 8260C/5030C 25 ml purge volume
TYPE METHOD: GCMS
CLASS: VOLATILE

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	Carbon tetrachloride	56-23-5	1
2.	chloromethane ; (Methyl chloride)	74-87-3	1
3.	2-butanone (methyl ethyl ketone - MEK)	78-93-3	10
4.	1,1-dichloroethane	75-34-3	1
5.	Dichlorodifluoromethane	75-71-8	1
6.	Ethylbenzene	100-41-4	1
7.	Tetrachloroethene	127-18-4	1
8.	Toluene (methyl benzene)	108-88-3	1
9.	1,1,1-trichloroethane (methyl chloroform)	71-55-6	1
10.	Trichloroethene	79-01-6	1
11.	Trichlorofluoromethane (CFC-11)	75-69-4	1
12.	Xylenes (total)	1330-20-7	3
13	Chloroethane	75-00-3	1
14	Diethyl ether	60-29-7	12.5
15	Dimethyl ether	115-10-6	12.5
16	Methylene chloride	75-09-2	1
17	1,1,2-Trichloro-1,2,2-Trifluoroethane	76-13-1	1
18	Benzene	71-43-2	1
19	1,1-Dichloroethene	75-35-4	1
20	Tetrahydrofuran		25

Notes
13-16 added 10/03. JCF
Revised 10/31/03 JCF

17 added 0704. Revised 7/28/2004
10/2008 JCF
18 added 04 2011. JCF
19 added 04 2014 KPO
20 added 04 2016 JCF

25 ml purge volume

ANALYTICAL METHOD: 8270D/3510C
TYPE METHOD: GCMS
CLASS: SEMIVOLATILE

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	2,4-dinitrotoluene	121-14-2	10
2.	2,6-dinitrotoluene	606-20-2	10
3.	Diethylphthalate		5

10/13 – diethylphthate added

eurofins | Lancaster Laboratories Environmental

Sample Administration Receipt Documentation Log

Doc Log ID: 229911

Group Number(s): 1998085

Client: Draper Aden Associates

Delivery and Receipt Information

Delivery Method:	UPS	Arrival Timestamp:	10/12/2018 9:35
Number of Packages:	2	Number of Projects:	1
State/Province of Origin:	VA		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	No
Custody Seal Intact:	Yes	VOA Vial Headspace ≥ 6mm:	No
Samples Chilled:	Yes	Total Trip Blank Qty:	6
Paperwork Enclosed:	Yes	Trip Blank Type:	HCl
Samples Intact:	No	Air Quality Samples Present:	No
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	Yes		

Unpacked by Melvin Sanchez (8943) at 16:11 on 10/12/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	0.9	DT	Wet	Y	Bagged	N
2	DT131	2.3	DT	Wet	Y	Bagged	N

Samples Not Intact Details

Sample ID on Label	Bottle Code	Bottle Quantity	Container Salvageable?	Comments
16WC1A MS	250 ml round amber glass - None	2	N	

Container Quantity Discrepancy Details

Sample ID on COC	Container Qty. Received	Container Qty. on COC	Comments
16-3	7	5	
Trip Blank 1	2	3	
Trip Blank 2	2	3	
Trip Blank 3	2	3	

2425 New Holland Pike
Lancaster, PA 17601-5825
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Client: Draper Aden Associates

Sample Date/Time Discrepancy Details

Sample ID on COC	Date/Time on Label	Comments
Trip Blank 1	10/10/2018 --	Only one vial.
Trip Blank 3	10/09/2018 --	Only one vial.

2425 New Holland Pike
Lancaster, PA 17601-5125
T | 717-656-2300
F | 717-656-2681
www.LancasterLabs.com

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	**mL**	milliliter(s)
C	degrees Celsius	**MPN**	Most Probable Number
cfu	colony forming units	**N.D.**	non-detect
CP Units	cobalt-chloroplatinate units	**ng**	nanogram(s)
F	degrees Fahrenheit	**NTU**	nephelometric turbidity units
g	gram(s)	**pg/L**	picogram/liter
IU	International Units	**RL**	Reporting Limit
kg	kilogram(s)	**TNTC**	Too Numerous To Count
L	liter(s)	**µg**	microgram(s)
lb.	pound(s)	**µL**	microliter(s)
m3	cubic meter(s)	**umhos/cm**	micromhos/cm
meq	milliequivalents	**MCL**	Maximum Contamination Limit
mg	milligram(s)		

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

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.

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

Tests 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.

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

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
P^	Concentration difference between the primary and confirmation column > 40%. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.
Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9850249	16C1	X		1	
9850250	16MW8	X		1	
9850251	16MW9	X		1	
9850252	16WC1A	X		1	Unspiked
9850253	16WC1A MS	X		1	Matrix Spike
9850254	16WC1A MSD	X		1	Matrix Spike Duplicate
9850255	16WDUP	X		1	Field Duplicate Sample
9850256	16WC1B	X		1	
9850257	16-2	X		1	
9850258	16-3	X		1	
9850259	16-5	X		1	
9850260	16WC2B	X		1	
9850261	16SPRING	X		1	
9850262	Trip Blank_1	X		1	Trip Blank
9850263	Trip Blank_2	X		1	Trip Blank
9850264	Trip Blank_3	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

(Sample number(s): 9850249, 9850251: Analysis: 11996)
The concentration reported for ethyl ether is estimated since it exceeds the calibration range of the instrument. A further diluted analysis was performed from a previously opened container with headspace and/or outside of the method holding time and confirms the initial analysis. Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

GC/MS Volatiles

Fraction: Volatiles by GC/MS

(Sample number(s): 9850249, 9850251: Analysis: 11996)
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

(Sample number(s): 9850249, 9850251: Analysis: 11996)
The referenced method allows a maximum of 20% of the analytes in the calibration to exceed the 20% Drift continuing calibration verification criteria. The reported concentration in the associated sample(s) is considered to be estimated. Therefore the result for the following analyte(s) is estimated:
chloroethane.

(Sample number(s): 9850250, 9850252, 9850255-9850264: Analysis: 11996)
Project defined calibration criteria are not met. The calibration is compliant with the method defined criteria.
A Method Detection Limit (MDL) standard is analyzed to confirm sensitivity of the instrument for samples with non-detect analytes associated with a continuing calibration verification standard exhibiting low response (outside the 20%D criteria). The MDL standard shows adequate sensitivity at or below the reporting limit.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
8260C (25 ml)	H182951AA	VBLKH44	10/22/2018 11:10
		LCSH44	10/22/2018 09:01
		LCDH44	10/22/2018 09:23
		LCSH45	10/22/2018 09:44
		LCDH45	10/22/2018 10:06
		9850249	10/22/2018 12:36
		9850250	10/22/2018 13:19
		9850251	10/22/2018 13:41
		9850252 UNSPK	10/22/2018 14:24
		9850253 MS	10/22/2018 14:46
		9850253 MS	10/22/2018 15:28
		9850254 MSD	10/22/2018 15:07
		9850254 MSD	10/22/2018 15:50
		9850255	10/22/2018 16:11
		9850256	10/22/2018 16:32
		9850257	10/22/2018 16:54
		9850258	10/22/2018 17:15
		9850259	10/22/2018 17:37
		9850260	10/22/2018 17:58
		9850261	10/22/2018 18:20
		9850262	10/22/2018 11:32
		9850263	10/22/2018 11:53
		9850264	10/22/2018 12:15

Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: RAF20
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H182951AA / VBLKH44 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
Dichlorodifluoromethane	10/22/18	N.D.	ug/l	0.05	1.0
Chloromethane	10/22/18	N.D.	ug/l	0.06	1.0
Chloroethane	10/22/18	N.D.	ug/l	0.07	1.0
Trichlorofluoromethane	10/22/18	N.D.	ug/l	0.05	1.0
Ethyl ether	10/22/18	N.D.	ug/l	0.05	13
1,1-Dichloroethene	10/22/18	N.D.	ug/l	0.06	1.0
Freon 113	10/22/18	N.D.	ug/l	0.06	1.0
Methylene Chloride	10/22/18	N.D.	ug/l	0.07	1.0
1,1-Dichloroethane	10/22/18	N.D.	ug/l	0.07	1.0
2-Butanone	10/22/18	N.D.	ug/l	0.6	10
Tetrahydrofuran	10/22/18	N.D.	ug/l	0.8	25
1,1,1-Trichloroethane	10/22/18	N.D.	ug/l	0.06	1.0
Carbon Tetrachloride	10/22/18	N.D.	ug/l	0.07	1.0
Benzene	10/22/18	N.D.	ug/l	0.05	1.0
Trichloroethene	10/22/18	N.D.	ug/l	0.06	1.0
Toluene	10/22/18	N.D.	ug/l	0.07	1.0
Tetrachloroethene	10/22/18	N.D.	ug/l	0.06	1.0
Ethylbenzene	10/22/18	N.D.	ug/l	0.06	1.0
Xylene (Total)	10/22/18	N.D.	ug/l	0.1	3.0
Dimethyl ether	10/22/18	N.D.	ug/l	0.04	13

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: RAF20
Matrix: LIQUID

Fraction: Volatiles by GC/MS

H182951AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l	Spike Added	10 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKH44	106	80 - 120	96	80 - 120	100	80 - 120	101	80 - 120
LCSH44	102	80 - 120	97	80 - 120	98	80 - 120	102	80 - 120
LCDH44	103	80 - 120	97	80 - 120	99	80 - 120	100	80 - 120
9850249	104	80 - 120	96	80 - 120	101	80 - 120	99	80 - 120
9850250	104	80 - 120	97	80 - 120	100	80 - 120	100	80 - 120
9850251	104	80 - 120	96	80 - 120	101	80 - 120	99	80 - 120
9850252 UNSPK	103	80 - 120	96	80 - 120	101	80 - 120	100	80 - 120
9850253 MS	101	80 - 120	97	80 - 120	99	80 - 120	100	80 - 120
9850254 MSD	102	80 - 120	97	80 - 120	100	80 - 120	100	80 - 120
9850255	100	80 - 120	97	80 - 120	100	80 - 120	99	80 - 120
9850256	104	80 - 120	96	80 - 120	100	80 - 120	99	80 - 120
9850257	103	80 - 120	98	80 - 120	101	80 - 120	100	80 - 120
9850258	105	80 - 120	97	80 - 120	101	80 - 120	100	80 - 120
9850259	102	80 - 120	96	80 - 120	101	80 - 120	101	80 - 120
9850260	103	80 - 120	96	80 - 120	101	80 - 120	99	80 - 120
9850261	103	80 - 120	95	80 - 120	101	80 - 120	100	80 - 120
9850262	104	80 - 120	97	80 - 120	101	80 - 120	100	80 - 120
9850263	107	80 - 120	96	80 - 120	100	80 - 120	100	80 - 120
9850264	103	80 - 120	97	80 - 120	101	80 - 120	100	80 - 120

GC/MS Volatiles

Fraction: Volatiles by GC/MS

UNSPK: 9850252 MS: 9850253 MSD: 9850254 **Analyte**	Batch: **H182951AA** (Sample number(s): 9850249-9850264)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	N.D.	3.85	4.01	77	80	43-123	4	30
Chloromethane	5.00	N.D.	3.90	4.00	78	80	56-124	2	30
Chloroethane	5.00	0.970 J	4.78	4.89	76	78	63-120	2	30
Trichlorofluoromethane	5.00	N.D.	4.24	4.38	85	88	62-136	3	30
Ethyl ether	5.00	16.11	20.21	20.41	82	86	72-121	1	30
1,1-Dichloroethene	5.00	0.125 J	5.81	5.95	114	116	80-131	2	30
Freon 113	5.00	N.D.	5.41	5.52	108	110	75-133	2	30
Methylene Chloride	5.00	0.0700	4.96	5.05	98	100	80-120	2	30
1,1-Dichloroethane	5.00	2.69	7.67	7.89	100	104	74-120	3	30
2-Butanone	37.5	N.D.	33.16	35.35	88	94	59-141	6	30
Tetrahydrofuran	25	1.01 J	23.46 J	25.5	90	98	67-137	8	30
1,1,1-Trichloroethane	5.00	N.D.	5.33	5.52	107	110	78-126	3	30
Carbon Tetrachloride	5.00	N.D.	5.72	5.89	114	118	64-141	3	30
Benzene	5.00	0.150 J	5.22	5.32	101	103	80-120	2	30
Trichloroethene	5.00	0.0770 J	5.33	5.55	105	109	80-120	4	30
Toluene	5.00	N.D.	5.20	5.28	104	106	80-120	2	30
Tetrachloroethene	5.00	0.133 J	5.88	5.93	115	116	80-120	1	30
Ethylbenzene	5.00	N.D.	5.10	5.29	102	106	80-120	4	30
Xylene (Total)	15	N.D.	16.02	16.32	107	109	80-120	2	30
Dimethyl ether	5.00	N.D.	4.32 J	4.35 J	86	87	70-130	1	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF20
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSH44 LCSD: LCDH44	Batch: **H182951AA** (Sample number(s): 9850249-9850264)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dichlorodifluoromethane	5.00	3.38	3.34	68	67	43-123	1	30
Chloromethane	5.00	3.62	3.61	72	72	56-124	0	30
Chloroethane	5.00	3.56	3.52	71	70	63-120	1	30
Trichlorofluoromethane	5.00	3.71	3.60	74	72	62-136	3	30
Ethyl ether	5.00	3.90 J	3.90 J	78	78	72-121	0	30
1,1-Dichloroethene	5.00	4.86	4.71	97	94	80-131	3	30
Freon 113	5.00	4.43	4.37	89	87	75-133	1	30
Methylene Chloride	5.00	4.49	4.45	90	89	80-120	1	30
1,1-Dichloroethane	5.00	4.56	4.52	91	90	74-120	1	30
2-Butanone	37.5	32.57	30.24	87	81	59-141	7	30
Tetrahydrofuran	25	22.14 J	20.17 J	89	81	67-137	9	30
1,1,1-Trichloroethane	5.00	4.67	4.63	93	93	78-126	1	30
Carbon Tetrachloride	5.00	4.91	4.81	98	96	64-141	2	30
Benzene	5.00	4.53	4.47	91	89	80-120	1	30
Trichloroethene	5.00	4.67	4.70	93	94	80-120	1	30
Toluene	5.00	4.78	4.72	96	94	80-120	1	30
Tetrachloroethene	5.00	5.11	5.02	102	100	80-120	2	30
Ethylbenzene	5.00	4.75	4.65	95	93	80-120	2	30
Xylene (Total)	15	14.89	14.63	99	98	80-120	2	30

LCS: LCSH45 LCSD: LCDH45	Batch: **H182951AA** (Sample number(s): 9850249-9850264)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Dimethyl ether	5.00	3.72 J	3.72 J	74	74	70-130	0	30

Fraction: Volatiles by GC/MS

11996: 8260C (25 ml) Analyte Name	Default MDL	Default LOQ	Units
Dichlorodifluoromethane	0.05	1.0	ug/l
Chloromethane	0.06	1.0	ug/l
Chloroethane	0.07	1.0	ug/l
Trichlorofluoromethane	0.05	1.0	ug/l
Ethyl ether	0.05	13	ug/l
1,1-Dichloroethene	0.06	1.0	ug/l
Freon 113	0.06	1.0	ug/l
Methylene Chloride	0.07	1.0	ug/l
1,1-Dichloroethane	0.07	1.0	ug/l
2-Butanone	0.6	10	ug/l
Tetrahydrofuran	0.8	25	ug/l
1,1,1-Trichloroethane	0.06	1.0	ug/l
Carbon Tetrachloride	0.07	1.0	ug/l
Benzene	0.05	1.0	ug/l
Trichloroethene	0.06	1.0	ug/l
Toluene	0.07	1.0	ug/l
Tetrachloroethene	0.06	1.0	ug/l
Ethylbenzene	0.06	1.0	ug/l
Xylene (Total)	0.1	3.0	ug/l
Dimethyl ether	0.04	13	ug/l

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: hy02t07.d BFB Injection Date: 05/02/18

Instrument ID: HP19094 BFB Injection Time: 18:32

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	22.13
75	30.0 - 60.0% of mass 95	52.51
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.74 (0.91)1
174	Greater than 50.0% of mass 95	81.35
175	5.0 - 9.0% of mass 174	6.02 (7.39)1
176	Greater than 95.0%, but less than 101.0% of mass 174	78.44 (96.43)1
177	5.0 - 9.0% of mass 176	5.34 (6.81)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hy02i11.d	05/02/18	19:15
02	VSTD10	hy02i12.d	05/02/18	19:36
03	VSTD5	hy02i13.d	05/02/18	19:58
04	VSTD2	hy02i14.d	05/02/18	20:19
05	VSTD1	hy02i15.d	05/02/18	20:40
06	VSTD.5	hy02i16.d	05/02/18	21:02
07	VSTD.2	hy02i17.d	05/02/18	21:23
08	MDL0.1 - MDL0.1	hy02m11.d	05/02/18	21:45
09	LCSH88	hy02v11.d	05/02/18	22:07

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hs24t05.d BFB Injection Date: 09/24/18

Instrument ID: HP19094 BFB Injection Time: 17:53

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	18.30
75	30.0 - 60.0% of mass 95	48.01
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	7.23
173	Less than 2.0% of mass 174	0.88 (0.99)1
174	Greater than 50.0% of mass 95	88.37
175	5.0 - 9.0% of mass 174	6.59 (7.45)1
176	Greater than 95.0%, but less than 101.0% of mass 174	86.23 (97.58)1
177	5.0 - 9.0% of mass 176	6.27 (7.28)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD25	hs24i01.d	09/24/18	18:29
02	VSTD10	hs24i02.d	09/24/18	18:50
03	VSTD5	hs24i03.d	09/24/18	19:11
04	VSTD2	hs24i04.d	09/24/18	19:33
05	VSTD1	hs24i05.d	09/24/18	19:54
06	VSTD.5	hs24i06.d	09/24/18	20:16
07	VSTD.2	hs24i07.d	09/24/18	20:37
08	MDL0.1 - MDL0.1	hs24m01.d	09/24/18	20:59
09	ICVHLG	hs24v01.d	09/24/18	21:20

FORM V VOA

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5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hc22t01.d BFB Injection Date: 10/22/18

Instrument ID: HP19094 BFB Injection Time: 07:43

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.84
75	30.0 - 60.0% of mass 95	47.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.41
173	Less than 2.0% of mass 174	1.12 (1.32)1
174	Greater than 50.0% of mass 95	85.00
175	5.0 - 9.0% of mass 174	6.61 (7.78)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.84 (98.64)1
177	5.0 - 9.0% of mass 176	5.97 (7.12)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD10	hc22c01.d	10/22/18	08:19
02	VSTD10	hc22c02.d	10/22/18	08:40
03	LCSH44	hc22l01.d	10/22/18	09:01
04	LCDH44	hc22l02.d	10/22/18	09:23
05	LCSH45	hc22l03.d	10/22/18	09:44
06	LCDH45	hc22l04.d	10/22/18	10:06
07	MDLH44 - MDLH44	hc22m01.d	10/22/18	10:27
08	MDLH45 - MDLH45	hc22m02.d	10/22/18	10:49
09	VBLKH44	hc22b01.d	10/22/18	11:10
10	9850262	hc22s02.d	10/22/18	11:32
11	9850263	hc22s03.d	10/22/18	11:53
12	9850264	hc22s04.d	10/22/18	12:15
13	9850249	hc22s05.d	10/22/18	12:36
14	9850250	hc22s07.d	10/22/18	13:19
15	9850251	hc22s08.d	10/22/18	13:41
16	9850252	hc22s10.d	10/22/18	14:24
17	9850253MS	hc22s11.d	10/22/18	14:46
18	9850254MSD	hc22s12.d	10/22/18	15:07
19	9850253MSMS1	hc22s13.d	10/22/18	15:28
20	9850254MSDMS	hc22s14.d	10/22/18	15:50
21	9850255	hc22s15.d	10/22/18	16:11
22	9850256	hc22s16.d	10/22/18	16:32

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: hc22t01.d BFB Injection Date: 10/22/18

Instrument ID: HP19094 BFB Injection Time: 07:43

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	17.84
75	30.0 - 60.0% of mass 95	47.63
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.41
173	Less than 2.0% of mass 174	1.12 (1.32)1
174	Greater than 50.0% of mass 95	85.00
175	5.0 - 9.0% of mass 174	6.61 (7.78)1
176	Greater than 95.0%, but less than 101.0% of mass 174	83.84 (98.64)1
177	5.0 - 9.0% of mass 176	5.97 (7.12)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9850257	hc22s17.d	10/22/18	16:54
24	9850258	hc22s18.d	10/22/18	17:15
25	9850259	hc22s19.d	10/22/18	17:37
26	9850260	hc22s20.d	10/22/18	17:58
27	9850261	hc22s21.d	10/22/18	18:20

FORM V VOA

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	#0.3380	0.3844	0.3955	0.3840	0.4097	0.4153	0.4089	0.3908	7	AVG #
Chloromethane	#0.3666	0.3812	0.3853	0.3730	0.3900	0.3939	0.3892	0.3827	3	AVG #
Vinyl Chloride	#0.3437	0.3452	0.3656	0.3476	0.3655	0.3717	0.3695	0.3584	3	AVG #
1,3-Butadiene	0.4071	0.3994	0.4295	0.4025	0.4024	0.4033	0.3977	0.4060	3	AVG
Bromomethane	#0.2658	0.2790	0.2802	0.2752	0.2802	0.2863	0.2838	0.2786	2	AVG #
Chloroethane	#0.2153	0.2148	0.2244	0.2134	0.2173	0.2205	0.2162	0.2174	2	AVG #
Dichlorofluoromethane	0.4863	0.4967	0.5291	0.5160	0.5340	0.5250	0.5325	0.5171	4	AVG
Trichlorofluoromethane	#0.4040	0.4488	0.4614	0.4428	0.4717	0.4709	0.4699	0.4528	5	AVG #
Ethyl ether	0.1522	0.1489	0.1504	0.1542	0.1545	0.1583	0.1563	0.1535	2	AVG
Freon 123a	0.2447	0.2821	0.2934	0.2879	0.3015	0.3019	0.2965	0.2869	7	AVG
Acrolein	2.1198	2.0592	2.1962	2.0635	2.3423	2.4323	2.3181	2.2188	7	AVG
1,1-Dichloroethene	#0.1600	0.1855	0.2038	0.1994	0.2077	0.2075	0.2086	0.1961	9	AVG #
Freon 113	#0.1774	0.2175	0.2391	0.2337	0.2475	0.2531	0.2494	0.2311	11	AVG #
Acetone	#3.2559	2.8395	2.9519	2.8356	2.9753	3.0172	2.9856	2.9801	5	AVG #
Methyl Iodide	0.3727	0.3995	0.4135	0.4033	0.4227	0.4255	0.4237	0.4087	5	AVG
Carbon Disulfide	#0.5967	0.6051	0.6303	0.6060	0.6379	0.6471	0.6440	0.6239	3	AVG #
Allyl Chloride	0.3543	0.3501	0.3714	0.3743	0.3829	0.3890	0.3870	0.3727	4	AVG
Methyl Acetate	#	8.0473	8.9174	8.2822	8.4178	8.3747	8.1582	8.3663	4	AVG #
Methylene Chloride	#0.2543	0.2082	0.2246	0.2127	0.2144	0.2186	0.2156	0.2212	7	AVG #
t-Butyl Alcohol	0.8075	0.8290	0.8990	0.8853	0.8581	0.9014	0.7939	0.8535	5	AVG
Acrylonitrile	3.6046	3.6151	3.8689	3.5796	4.0954	4.1849	3.9920	3.8486	7	AVG
trans-1,2-Dichloroethene	#0.2055	0.2092	0.2290	0.2160	0.2279	0.2325	0.2290	0.2213	5	AVG #
Methyl Tertiary Butyl Ether	#0.3525	0.3879	0.4149	0.4082	0.4218	0.4292	0.4083	0.4032	6	AVG #
n-Hexane	0.2565	0.3255	0.3632	0.3491	0.3833	0.3933	0.3923	0.3519	14	AVG
1,1-Dichloroethane	#0.3762	0.4022	0.4348	0.4176	0.4398	0.4430	0.4357	0.4213	6	AVG #
di-Isopropyl Ether	0.7011	0.7115	0.7555	0.7496	0.7609	0.7819	0.7771	0.7482	4	AVG
2-Chloro-1,3-Butadiene	0.3109	0.3474	0.3840	0.3818	0.4066	0.4138	0.4095	0.3791	10	AVG
Ethyl t-butyl ether	0.5277	0.5761	0.6125	0.6028	0.6146	0.6262	0.5944	0.5935	6	AVG
cis-1,2-Dichloroethene	#0.2191	0.2336	0.2512	0.2409	0.2547	0.2573	0.2548	0.2445	6	AVG #
2,2-Dichloropropane	0.2529	0.2750	0.3029	0.3083	0.3200	0.3278	0.3195	0.3009	9	AVG
2-Butanone	#4.7407	4.4717	4.8604	4.4839	5.2815	5.3633	4.9464	4.8783	7	AVG #
Propionitrile	1.1750	1.3038	1.3751	1.2700	1.4479	1.4295	1.2676	1.3241	7	AVG
Methacrylonitrile	4.3615	4.3517	4.7414	4.3969	5.1979	5.2827	5.0894	4.7745	9	AVG
Bromochloromethane	0.1024	0.0949	0.1024	0.1048	0.1062	0.1068	0.1056	0.1033	4	AVG
Tetrahydrofuran	1.2361	1.1778	1.2836	1.2200	1.3946	1.4399	1.3263	1.2969	7	AVG
Chloroform	#0.3416	0.3782	0.4144	0.3892	0.4020	0.4101	0.4064	0.3917	6	AVG #
1,1,1-Trichloroethane	#0.2842	0.3160	0.3433	0.3371	0.3555	0.3569	0.3525	0.3351	8	AVG #
Cyclohexane	#0.3470	0.4028	0.4493	0.4389	0.4704	0.4796	0.4739	0.4374	11	AVG #
Cyclohexane(2)	#0.2914	0.3151	0.3783	0.3668	0.3893	0.3943	0.3892	0.3606	11	AVG #
Cyclohexane(3)	#0.1022	0.1183	0.1318	0.1288	0.1387	0.1419	0.1407	0.1289	11	AVG #
1,1-Dichloropropene	0.2759	0.2910	0.3278	0.3191	0.3346	0.3387	0.3371	0.3177	8	AVG
Carbon Tetrachloride	#0.2319	0.2693	0.2968	0.2885	0.3032	0.3144	0.3103	0.2878	10	AVG #
Isobutyl Alcohol	0.2897	0.3375	0.3434	0.3190	0.3348	0.3491	0.3379	0.3302	6	AVG
Benzene	#0.8848	0.9069	0.9593	0.9138	0.9669	0.9701	0.9685	0.9386	4	AVG #
1,2-Dichloroethane	#0.2384	0.2152	0.2154	0.2064	0.2100	0.2143	0.2124	0.2160	5	AVG #
t-Amyl methyl ether	0.4510	0.4674	0.5059	0.4955	0.5077	0.5220	0.4947	0.4920	5	AVG
n-Heptane	0.2678	0.3330	0.3732	0.3588	0.3968	0.4037	0.4063	0.3628	14	AVG
n-Butanol	0.2534	0.2553	0.2725	0.2718	0.2920	0.3060	0.3017	0.2790	8	AVG
Trichloroethene	#0.2151	0.2224	0.2471	0.2423	0.2494	0.2532	0.2529	0.2403	6	AVG #
Methylcyclohexane	#0.4063	0.4157	0.4453	0.4529	0.4752	0.4906	0.4911	0.4539	8	AVG #
1,2-Dichloropropane	#0.2175	0.2096	0.2288	0.2255	0.2362	0.2385	0.2379	0.2277	5	AVG #
Methyl Methacrylate	7.4866	7.5623	8.6561	8.1346	9.7939	10.147	10.081	8.8375	13	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dibromomethane	0.0859	0.0918	0.0963	0.0957	0.0964	0.0974	0.0982	0.0945	5	AVG
1,4-Dioxane		0.0512	0.0674	0.0735	0.0717	0.0692	0.0699	0.0672	12	AVG
Bromodichloromethane	#0.2375	0.2374	0.2531	0.2486	0.2658	0.2725	0.2772	0.2560	6	AVG #
2-Nitropropane	2.1943	2.1326	2.3103	2.2662	2.7615	2.9069	2.9516	2.5034	14	AVG
cis-1,3-Dichloropropene	#0.2646	0.2677	0.2918	0.2956	0.3133	0.3253	0.3282	0.2981	9	AVG #
4-Methyl-2-Pentanone	#10.423	10.703	12.049	11.150	13.294	13.683	13.638	12.134	12	AVG #
Toluene	#0.6968	0.7194	0.7473	0.7411	0.7565	0.7709	0.7625	0.7421	4	AVG #
trans-1,3-Dichloropropene	#0.2330	0.2716	0.2792	0.2845	0.2990	0.3169	0.3174	0.2859	10	AVG #
Ethyl Methacrylate	0.2095	0.2309	0.2354	0.2500	0.2537	0.2684	0.2669	0.2450	9	AVG
1,1,2-Trichloroethane	#0.1691	0.1575	0.1727	0.1725	0.1711	0.1785	0.1739	0.1708	4	AVG #
Tetrachloroethene	#0.2956	0.3305	0.3401	0.3373	0.3460	0.3515	0.3460	0.3353	6	AVG #
1,3-Dichloropropane	0.2838	0.2841	0.3046	0.3097	0.3104	0.3149	0.3111	0.3026	4	AVG
2-Hexanone	#7.3199	7.3166	8.1580	7.5786	9.0091	9.2952	9.1412	8.2598	11	AVG #
Dibromochloromethane	#0.1948	0.1857	0.1947	0.2070	0.2115	0.2179	0.2208	0.2046	6	AVG #
1,2-Dibromoethane	#0.1471	0.1541	0.1589	0.1562	0.1643	0.1719	0.1680	0.1601	5	AVG #
1-Chlorohexane	0.4437	0.4223	0.4433	0.4259	0.4476	0.4585	0.4569	0.4426	3	AVG
Chlorobenzene	#0.7275	0.7494	0.8164	0.7808	0.8015	0.8151	0.8204	0.7873	5	AVG #
1,1,1,2-Tetrachloroethane	0.2148	0.2441	0.2605	0.2596	0.2721	0.2837	0.2840	0.2598	9	AVG
Ethylbenzene	#1.2688	1.3813	1.4741	1.4462	1.4984	1.5393	1.5444	1.4504	7	AVG #
m+p-Xylene	#0.4752	0.5146	0.5391	0.5376	0.5603	0.5690	0.5701	0.5380	6	AVG #
o-Xylene	#0.4328	0.4897	0.5241	0.5154	0.5368	0.5477	0.5536	0.5143	8	AVG #
Styrene	#0.6878	0.7466	0.8289	0.8287	0.8757	0.8924	0.9000	0.8229	10	AVG #
Bromoform	#0.0962	0.1042	0.1113	0.1109	0.1171	0.1227	0.1250	0.1125	9	AVG #
Isopropylbenzene	#1.1958	1.3049	1.4259	1.4006	1.4806	1.4990	1.5215	1.4040	8	AVG #
1,1,2,2-Tetrachloroethane	#0.3905	0.3709	0.3819	0.3843	0.4123	0.4144	0.4225	0.3967	5	AVG #
Bromobenzene	0.5278	0.5708	0.6063	0.6016	0.6293	0.6307	0.6550	0.6030	7	AVG
trans-1,4-Dichloro-2-butene	3.2707	3.2389	3.7050	3.4423	4.2002	4.3536	4.3928	3.8005	13	AVG
1,2,3-Trichloropropane	0.0983	0.1022	0.1028	0.1034	0.1042	0.1033	0.1036	0.1025	2	AVG
n-Propylbenzene	2.8181	3.0518	3.2914	3.2490	3.4590	3.4886	3.5948	3.2790	8	AVG
2-Chlorotoluene	0.5518	0.6185	0.6460	0.6324	0.6632	0.6645	0.6753	0.6360	7	AVG
1,3,5-Trimethylbenzene	1.8494	2.0479	2.2234	2.2089	2.3773	2.3691	2.4731	2.2213	10	AVG
4-Chlorotoluene	0.5465	0.6043	0.6553	0.6366	0.6706	0.6636	0.6842	0.6373	7	AVG
tert-Butylbenzene	0.3899	0.4598	0.4952	0.4960	0.5055	0.5106	0.5245	0.4831	9	AVG
Pentachloroethane	0.3255	0.3274	0.3543	0.3751	0.4049	0.4175	0.4346	0.3770	12	AVG
1,2,4-Trimethylbenzene	1.8578	2.1050	2.2557	2.2683	2.4136	2.4170	2.5493	2.2667	10	AVG
sec-Butylbenzene	2.3074	2.5867	2.9178	2.8538	3.0767	3.1336	3.2726	2.8784	12	AVG
1,3-Dichlorobenzene	#1.0200	1.1416	1.2276	1.1973	1.2481	1.2485	1.3039	1.1981	8	AVG #
p-Isopropyltoluene	1.8768	2.1348	2.3564	2.3843	2.5700	2.6128	2.7544	2.3842	13	AVG
1,4-Dichlorobenzene	#1.0899	1.0941	1.1950	1.1603	1.2155	1.2175	1.2607	1.1761	6	AVG #
1,2,3-Trimethylbenzene	1.0207	0.9774	1.0183	1.0334	1.0455	1.0757	1.1084	1.0399	4	AVG
Benzyl Chloride		0.1092	0.1229	0.1383	0.1502	0.1669	0.1729	0.1434	17	AVG
n-Butylbenzene	0.9426	1.0785	1.2030	1.1681	1.2616	1.2878	1.3425	1.1834	12	AVG
1,2-Dichlorobenzene	#0.9680	1.0221	1.0665	1.0569	1.0918	1.0822	1.1123	1.0571	5	AVG #
1,2-Dibromo-3-chloropropane	#1.6120	1.6792	2.1671	1.8688	2.3036	2.3298	2.4378	2.0569	16	AVG #
1,3,5-Trichlorobenzene	0.7724	0.8416	0.8987	0.8625	0.9221	0.9492	0.9929	0.8913	8	AVG
1,2,4-Trichlorobenzene	#0.6328	0.6854	0.7128	0.7113	0.7490	0.7750	0.8160	0.7260	8	AVG #
Hexachlorobutadiene	0.2548	0.2553	0.2675	0.2668	0.2841	0.2891	0.3032	0.2744	7	AVG
Naphthalene	0.9415	1.0203	1.1133	1.1358	1.2217	1.2836	1.3262	1.1489	12	AVG
1,2,3-Trichlorobenzene	0.5182	0.5589	0.5959	0.5792	0.6174	0.6490	0.6602	0.5970	8	AVG
Dibromofluoromethane	0.2512	0.2521	0.2524	0.2530	0.2528	0.2517	0.2511	0.2520	0	AVG
Dibromofluoromethane(2)	0.2598	0.2573	0.2615	0.2599	0.2578	0.2618	0.2579	0.2594	1	AVG

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 09/24/18 09/24/18

Heated Purge: (Y/N) Y Calibration Times: 18:29 20:37

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hs24i07.d RRF0.5= hs24i06.d RRF 1 = hs24i05.d
RRF 2 = hs24i04.d RRF 5 = hs24i03.d RRF 10= hs24i02.d RRF 25= hs24i01.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
1,2-Dichloroethane-d4	0.0442	0.0434	0.0434	0.0451	0.0436	0.0447	0.0432	0.0439	2	AVG
1,2-Dichloroethane-d4(2)	0.2145	0.2128	0.2150	0.2127	0.2086	0.2137	0.2105	0.2125	1	AVG
1,2-Dichloroethane-d4(3)	0.0282	0.0281	0.0289	0.0277	0.0280	0.0285	0.0276	0.0281	2	AVG
Toluene-d8	1.3052	1.2869	1.2788	1.3015	1.2877	1.2898	1.2594	1.2870	1	AVG
Toluene-d8(2)	0.8344	0.8306	0.8301	0.8441	0.8303	0.8321	0.8133	0.8307	1	AVG
4-Bromofluorobenzene	0.4770	0.4703	0.4684	0.4767	0.4646	0.4676	0.4556	0.4686	2	AVG
4-Bromofluorobenzene(2)	0.4124	0.4112	0.4059	0.4114	0.4017	0.4081	0.3976	0.4069	1	AVG

Average %RSD 7

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i01.d	VSTD025
/chem2/HP19094.i/18sep24i.b/hs24i02.d	VSTD010
/chem2/HP19094.i/18sep24i.b/hs24i03.d	VSTD005
/chem2/HP19094.i/18sep24i.b/hs24i04.d	VSTD002
/chem2/HP19094.i/18sep24i.b/hs24i05.d	VSTD001
/chem2/HP19094.i/18sep24i.b/hs24i06.d	VSTD0.5
/chem2/HP19094.i/18sep24i.b/hs24i07.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	123769	126410	127180	147863	137024	140183	136477	134129	6	Yes
Fluorobenzene	2609636	2675616	2745022	2771401	2758903	2743076	2763999	2723950	2	Yes
Chlorobenzene-d5	2080614	2091043	2142668	2139668	2171615	2144655	2139400	2129952	2	Yes
1,4-Dichlorobenzene-d4	1041754	1077251	1089195	1109693	1123390	1119082	1132249	1098945	3	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hs24i01.d	hs24i02.d	hs24i03.d	hs24i04.d	hs24i05.d	hs24i06.d	hs24i07.d	Avg. RT
t-Butyl Alcohol-d10	4.470	4.483	4.482	4.476	4.470	4.477	4.482	4.477
Fluorobenzene	7.970	7.970	7.963	7.964	7.963	7.964	7.970	7.966
Chlorobenzene-d5	11.384	11.384	11.384	11.384	11.383	11.384	11.384	11.384
1,4-Dichlorobenzene-d4	13.255	13.249	13.249	13.249	13.249	13.249	13.249	13.250

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 09/25/2018 at 07:39.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3172	4.06	5	-19	#
# Chloromethane	0.3827	0.3497	4.57	5	-9	#
# Vinyl Chloride	0.3584	0.3392	4.73	5	-5	#
1,3-Butadiene	0.4060	0.3387	4.17	5	-17	
# Bromomethane	0.2786	0.2311	4.15	5	-17	#
# Chloroethane	0.2174	0.1959	4.51	5	-10	#
Dichlorofluoromethane	0.5171	0.4978	4.81	5	-4	
# Trichlorofluoromethane	0.4528	0.4031	4.45	5	-11	#
Ethyl ether	0.1535	0.1414	4.61	5	-8	
Freon 123a	0.2869	0.2963	5.16	5	3	
Acrolein	2.2188	1.8796	31.77	37.5	-15	
# 1,1-Dichloroethene	0.1961	0.2212	5.64	5	13	#
# Freon 113	0.2311	0.2437	5.27	5	5	#
# Acetone	2.9801	2.5719	32.36	37.5	-14	#
Methyl Iodide	0.4087	0.3967	4.85	5	-3	
# Carbon Disulfide	0.6239	0.5961	4.78	5	-4	#
Allyl Chloride	0.3727	0.3366	4.52	5	-10	
# Methyl Acetate	8.3663	7.1758	4.29	5	-14	#
# Methylene Chloride	0.2212	0.2191	4.95	5	-1	#
t-Butyl Alcohol	0.8535	0.8243	48.29	50	-3	
Acrylonitrile	3.8486	3.5584	23.11	25	-8	
# trans-1,2-Dichloroethene	0.2213	0.2368	5.35	5	7	#
# Methyl Tertiary Butyl Ether	0.4032	0.3967	4.92	5	-2	#
n-Hexane	0.3519	0.3623	5.15	5	3	
# 1,1-Dichloroethane	0.4213	0.4392	5.21	5	4	#
di-Isopropyl Ether	0.7482	0.7508	5.02	5	0	
2-Chloro-1,3-Butadiene	0.3791	0.3807	5.02	5	0	
Ethyl t-butyl ether	0.5935	0.5760	4.85	5	-3	
# cis-1,2-Dichloroethene	0.2445	0.2605	5.33	5	7	#
2,2-Dichloropropane	0.3009	0.3204	5.32	5	6	
# 2-Butanone	4.8783	4.5905	35.29	37.5	-6	#
Propionitrile	1.3241	1.3362	37.84	37.5	1	
Methacrylonitrile	4.7745	4.5420	35.67	37.5	-5	
Bromochloromethane	0.1033	0.0938	4.54	5	-9	
Tetrahydrofuran	1.2969	1.2254	23.62	25	-6	
# Chloroform	0.3917	0.4191	5.35	5	7	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3351	0.3556	5.31	5	6	#
# Cyclohexane	0.4374	0.4418	5.05	5	1	#
1,1-Dichloropropene	0.3177	0.3305	5.20	5	4	
# Carbon Tetrachloride	0.2878	0.3045	5.29	5	6	#
Isobutyl Alcohol	0.3302	0.3194	120.92	125	-3	
# Benzene	0.9386	0.9606	5.12	5	2	#
# 1,2-Dichloroethane	0.2160	0.2161	5.00	5	0	#
t-Amyl methyl ether	0.4920	0.4796	4.87	5	-3	
n-Heptane	0.3628	0.3736	5.15	5	3	
n-Butanol	0.2790	0.2586	231.70	250	-7	
# Trichloroethene	0.2403	0.2508	5.22	5	4	#
# Methylcyclohexane	0.4539	0.4251	4.68	5	-6	#
# 1,2-Dichloropropane	0.2277	0.2359	5.18	5	4	#
Methyl Methacrylate	8.8375	8.4056	4.76	5	-5	
Dibromomethane	0.0945	0.0974	5.15	5	3	
1,4-Dioxane	0.0672	0.0678	126.10	125	1	
# Bromodichloromethane	0.2560	0.2699	5.27	5	5	#
2-Nitropropane	2.5034	2.0564	4.11	5	-18	
# cis-1,3-Dichloropropene	0.2981	0.3034	5.09	5	2	#
# 4-Methyl-2-Pentanone	12.134	11.2665	23.21	25	-7	#
# Toluene	0.7421	0.7621	5.14	5	3	#
# trans-1,3-Dichloropropene	0.2859	0.2900	5.07	5	1	#
Ethyl Methacrylate	0.2450	0.2371	4.84	5	-3	
# 1,1,2-Trichloroethane	0.1708	0.1782	5.22	5	4	#
# Tetrachloroethene	0.3353	0.3454	5.15	5	3	#
1,3-Dichloropropane	0.3026	0.3017	4.98	5	0	
# 2-Hexanone	8.2598	7.5207	22.76	25	-9	#
# Dibromochloromethane	0.2046	0.2117	5.17	5	3	#
# 1,2-Dibromoethane	0.1601	0.1646	5.14	5	3	#
1-Chlorohexane	0.4426	0.4372	4.94	5	-1	
# Chlorobenzene	0.7873	0.7981	5.07	5	1	#
1,1,1,2-Tetrachloroethane	0.2598	0.2675	5.15	5	3	
# Ethylbenzene	1.4504	1.4813	5.11	5	2	#
# m+p-Xylene	0.5380	0.5552	10.32	10	3	#
# o-Xylene	0.5143	0.5235	5.09	5	2	#
# Styrene	0.8229	0.8625	5.24	5	5	#

Compounds with required minimum RRF.
Maximum % Drift = 30 %

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 09/24/18 Time: 21:20

Lab File ID: hs24v01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	$\overline{RRF}$	RRF	CONC.	CONC.	DRIFT	
# Bromoform	0.1125	0.1136	5.05	5	1	#
# Isopropylbenzene	1.4040	1.4667	5.22	5	4	#
# 1,1,2,2-Tetrachloroethane	0.3967	0.3962	4.99	5	0	#
Bromobenzene	0.6030	0.6209	5.15	5	3	
trans-1,4-Dichloro-2-butene	3.8005	3.6717	24.15	25	-3	
1,2,3-Trichloropropane	0.1025	0.1010	4.92	5	-2	
n-Propylbenzene	3.2790	3.4213	5.22	5	4	
2-Chlorotoluene	0.6360	0.6495	5.11	5	2	
1,3,5-Trimethylbenzene	2.2213	2.2866	5.15	5	3	
4-Chlorotoluene	0.6373	0.6518	5.11	5	2	
tert-Butylbenzene	0.4831	0.4924	5.10	5	2	
Pentachloroethane	0.3770	0.3672	4.87	5	-3	
1,2,4-Trimethylbenzene	2.2667	2.3009	5.08	5	2	
sec-Butylbenzene	2.8784	3.0190	5.24	5	5	
# 1,3-Dichlorobenzene	1.1981	1.2031	5.02	5	0	#
p-Isopropyltoluene	2.3842	2.5039	5.25	5	5	
# 1,4-Dichlorobenzene	1.1761	1.1959	5.08	5	2	#
1,2,3-Trimethylbenzene	1.0399	0.9939	4.78	5	-4	
Benzyl Chloride	0.1434	0.1356	4.73	5	-5	
n-Butylbenzene	1.1834	1.2376	5.23	5	5	
# 1,2-Dichlorobenzene	1.0571	1.0599	5.01	5	0	#
# 1,2-Dibromo-3-chloropropane	2.0569	2.1820	5.30	5	6	#
1,3,5-Trichlorobenzene	0.8913	0.9013	5.06	5	1	
# 1,2,4-Trichlorobenzene	0.7260	0.7345	5.06	5	1	#
Hexachlorobutadiene	0.2744	0.2834	5.16	5	3	
Naphthalene	1.1489	1.1935	5.19	5	4	
1,2,3-Trichlorobenzene	0.5970	0.6118	5.12	5	2	
			Average %Drift		5	

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date(s): 05/02/18 05/02/18

Heated Purge: (Y/N) Y Calibration Times: 19:15 21:23

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

LAB FILE ID: RRF0.2= hy02i17.d RRF0.5= hy02i16.d RRF 1 = hy02i15.d
RRF 2 = hy02i14.d RRF 5 = hy02i13.d RRF 10= hy02i12.d RRF 25= hy02i11.d

COMPOUND	RRF0.2	RRF0.5	RRF 1	RRF 2	RRF 5	RRF 10	RRF 25	RRF	% RSD	CAL. METHOD
Dimethyl ether	0.3386	0.3353	0.2933	0.3164	0.3235	0.3148	0.3253	0.3210	5	AVG
Acetonitrile	1.3045	1.3808	1.2557	1.1805	1.1636	1.0924	1.0738	1.2073	9	AVG
Vinyl Acetate	0.3155	0.2879	0.2935	0.3123	0.2982	0.3172	0.3162	0.3058	4	AVG
Methyl Acrylate	0.0917	0.0916	0.0965	0.0933	0.0946	0.0954	0.0975	0.0944	2	AVG
1-Chlorobutane	0.4459	0.3974	0.3542	0.4876	0.4909	0.4956	0.4897	0.4516	12	AVG
Chloroacetonitrile	0.0036	0.0030	0.0039	0.0040	0.0031	0.0041	0.0046	0.0038	15	AVG
2-Chloroethyl vinyl ether	0.0762	0.0858	0.0872	0.0926	0.0953	0.0974	0.0984	0.0904	9	AVG
cis-1,4-Dichloro-2-butene	5.6633	6.5513	5.6636	6.1849	7.9391	6.6860	6.6395	6.4754	12	AVG
Cyclohexanone	0.3645	0.2849	0.3292	0.3093	0.3122	0.3993	0.3058	0.3293	12	AVG
Hexachloroethane	0.3743	0.3585	0.3237	0.4363	0.4562	0.4921	0.5058	0.4210	17	AVG

Average %RSD 10

Compounds with required minimum RRF.
All compounds must meet a maximum %RSD of 20.

FORM VI VOA

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Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP19094.i/18may02b.b/hy02i11.d	VSTD025
/chem2/HP19094.i/18may02b.b/hy02i12.d	VSTD010
/chem2/HP19094.i/18may02b.b/hy02i13.d	VSTD005
/chem2/HP19094.i/18may02b.b/hy02i14.d	VSTD002
/chem2/HP19094.i/18may02b.b/hy02i15.d	VSTD001
/chem2/HP19094.i/18may02b.b/hy02i16.d	VSTD0.5
/chem2/HP19094.i/18may02b.b/hy02i17.d	VSTD0.2

Area Summary

File ID:

Internal Standard Name	hy02i11.d	hy02i12.d	hy02i13.d	hy02i14.d	hy02i15.d	hy02i16.d	hy02i17.d	Avg. Area	%RSD	In Spec
t-Butyl Alcohol-d10	98437	91579	74336	92293	90627	78931	87604	87687	9	Yes
Fluorobenzene	2303816	2321054	2326423	2301576	2267030	2334989	2247400	2300327	1	Yes
Chlorobenzene-d5	1683927	1697976	1698280	1681083	1663736	1693467	1641487	1679994	1	Yes
1,4-Dichlorobenzene-d4	883503	883093	890934	885161	872428	891691	866486	881899	1	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	hy02i11.d	hy02i12.d	hy02i13.d	hy02i14.d	hy02i15.d	hy02i16.d	hy02i17.d	Avg. RT
t-Butyl Alcohol-d10	4.458	4.489	4.495	4.470	4.483	4.464	4.476	4.476
Fluorobenzene	7.970	7.976	7.976	7.970	7.970	7.970	7.970	7.971
Chlorobenzene-d5	11.396	11.396	11.396	11.396	11.396	11.396	11.396	11.396
1,4-Dichlorobenzene-d4	13.267	13.267	13.268	13.268	13.268	13.267	13.267	13.267

* indicates the retention time is greater than 30 seconds from the average RT.

Report generated on 05/02/2018 at 22:25.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 ICV Date: 05/02/18 Time: 22:07

Lab File ID: hy02v11.d Init. Calib. Date(s): 05/02/18 05/02/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Dimethyl ether	0.3210	0.3151	4.91	5	-2
Acetonitrile	1.2073	1.3135	40.80	37.5	9
Vinyl Acetate	0.3058	0.2888	11.80	12.5	-6
Methyl Acrylate	0.0944	0.0999	26.46	25	6
1-Chlorobutane	0.4516	0.4576	5.07	5	1
Chloroacetonitrile	0.0038	0.0037	247.49	250	-1
2-Chloroethyl vinyl ether	0.0904	0.0919	5.08	5	2
cis-1,4-Dichloro-2-butene	6.4754	6.7681	13.06	12.5	5
Cyclohexanone	0.3293	0.3493	132.59	125	6
Hexachloroethane	0.4210	0.4432	5.26	5	5
			Average %Drift		4

Compounds with required minimum RRF.
Maximum % Drift = 30 %

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Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/18sep24i.b/hs24i07.d
/chem2/HP19094.i/18sep24i.b/hs24i06.d
/chem2/HP19094.i/18sep24i.b/hs24i05.d
/chem2/HP19094.i/18sep24i.b/hs24i04.d
/chem2/HP19094.i/18sep24i.b/hs24i03.d
/chem2/HP19094.i/18sep24i.b/hs24i02.d
/chem2/HP19094.i/18sep24i.b/hs24i01.d

File /chem2/HP19094.i/18sep24i.b/hs24i02.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/18oct22a.b/hc22c01.d

RT Summary

Internal Standard Name	File ID: hc22c01.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.477	4.483	Yes
Fluorobenzene	7.970	7.970	Yes
Chlorobenzene-d5	11.384	11.384	Yes
1,4-Dichlorobenzene-d4	13.249	13.249	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hc22c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	117595	126410	63205	252820	Yes
Fluorobenzene	2589169	2675616	1337808	5351232	Yes
Chlorobenzene-d5	1976724	2091043	1045522	4182086	Yes
1,4-Dichlorobenzene-d4	1046678	1077251	538626	2154502	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

report generated on 10/22/2018 at 08:43

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/22/18 Time: 08:19

Lab File ID: hc22c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# Dichlorodifluoromethane	0.3908	0.3628	9.28	10	-7	#
# Chloromethane	0.3827	0.3088	8.07	10	-19	#
# Vinyl Chloride	0.3584	0.2927	8.17	10	-18	#
1,3-Butadiene	0.4060	0.2750	6.77	10	-32	<-
# Bromomethane	0.2786	0.2330	8.36	10	-16	#
# Chloroethane	0.2174	0.1698	7.81	10	-22	#<-
Dichlorofluoromethane	0.5171	0.4072	7.87	10	-21	<-
# Trichlorofluoromethane	0.4528	0.4031	8.90	10	-11	#
Ethyl ether	0.1535	0.1292	8.42	10	-16	
Freon 123a	0.2869	0.2520	8.79	10	-12	
Acrolein	2.2188	2.0206	455.33	500	-9	
# 1,1-Dichloroethene	0.1961	0.1808	9.22	10	-8	#
# Freon 113	0.2311	0.2128	9.21	10	-8	#
# Acetone	2.9801	2.4847	83.38	100	-17	#
Methyl Iodide	0.4087	0.3801	9.30	10	-7	
# Carbon Disulfide	0.6239	0.5358	8.59	10	-14	#
Allyl Chloride	0.3727	0.3199	8.58	10	-14	
# Methyl Acetate	8.3663	7.2557	8.67	10	-13	#
# Methylene Chloride	0.2212	0.1881	8.50	10	-15	#
t-Butyl Alcohol	0.8535	0.6758	158.37	200	-21	<-
Acrylonitrile	3.8486	3.6476	47.39	50	-5	
# trans-1,2-Dichloroethene	0.2213	0.2004	9.06	10	-9	#
# Methyl Tertiary Butyl Ether	0.4032	0.3628	9.00	10	-10	#
n-Hexane	0.3519	0.3230	9.18	10	-8	
# 1,1-Dichloroethane	0.4213	0.3720	8.83	10	-12	#
di-Isopropyl Ether	0.7482	0.6361	8.50	10	-15	
2-Chloro-1,3-Butadiene	0.3791	0.3328	8.78	10	-12	
Ethyl t-butyl ether	0.5935	0.5101	8.59	10	-14	
# cis-1,2-Dichloroethene	0.2445	0.2219	9.07	10	-9	#
2,2-Dichloropropane	0.3009	0.2734	9.08	10	-9	
# 2-Butanone	4.8783	4.4696	91.62	100	-8	#
Propionitrile	1.3241	1.2601	190.32	200	-5	
Methacrylonitrile	4.7745	4.4922	94.09	100	-6	
Bromochloromethane	0.1033	0.0947	9.17	10	-8	
Tetrahydrofuran	1.2969	1.2109	93.37	100	-7	
# Chloroform	0.3917	0.3499	8.93	10	-11	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/22/18 Time: 08:19

Lab File ID: hc22c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# 1,1,1-Trichloroethane	0.3351	0.2995	8.94	10	-11	#
# Cyclohexane	0.4374	0.3863	8.83	10	-12	#
# Cyclohexane(2)	0.3606	0.3263	9.05	10	-10	#
# Cyclohexane(3)	0.1289	0.1163	9.02	10	-10	#
1,1-Dichloropropene	0.3177	0.2848	8.96	10	-10	
# Carbon Tetrachloride	0.2878	0.2735	9.50	10	-5	#
Isobutyl Alcohol	0.3302	0.2931	443.87	500	-11	
# Benzene	0.9386	0.8285	8.83	10	-12	#
# 1,2-Dichloroethane	0.2160	0.1790	8.29	10	-17	#
t-Amyl methyl ether	0.4920	0.4275	8.69	10	-13	
n-Heptane	0.3628	0.3278	9.03	10	-10	
n-Butanol	0.2790	0.2623	940.15	1000	-6	
# Trichloroethene	0.2403	0.2180	9.07	10	-9	#
# Methylcyclohexane	0.4539	0.4094	9.02	10	-10	#
# 1,2-Dichloropropane	0.2277	0.2031	8.92	10	-11	#
Methyl Methacrylate	8.8375	8.3244	9.42	10	-6	
Dibromomethane	0.0945	0.0842	8.91	10	-11	
1,4-Dioxane	0.0672	0.0680	506.53	500	1	
# Bromodichloromethane	0.2560	0.2315	9.04	10	-10	#
2-Nitropropane	2.5034	2.4414	97.53	100	-2	
# cis-1,3-Dichloropropene	0.2981	0.2740	9.19	10	-8	#
# 4-Methyl-2-Pentanone	12.134	11.4529	94.38	100	-6	#
# Toluene	0.7421	0.6759	9.11	10	-9	#
# trans-1,3-Dichloropropene	0.2859	0.2725	9.53	10	-5	#
Ethyl Methacrylate	0.2450	0.2198	8.97	10	-10	
# 1,1,2-Trichloroethane	0.1708	0.1560	9.14	10	-9	#
# Tetrachloroethene	0.3353	0.3285	9.80	10	-2	#
1,3-Dichloropropane	0.3026	0.2719	8.98	10	-10	
# 2-Hexanone	8.2598	7.6450	92.56	100	-7	#
# Dibromochloromethane	0.2046	0.2016	9.85	10	-1	#
# 1,2-Dibromoethane	0.1601	0.1488	9.30	10	-7	#
1-Chlorohexane	0.4426	0.3920	8.86	10	-11	
# Chlorobenzene	0.7873	0.7398	9.40	10	-6	#
1,1,1,2-Tetrachloroethane	0.2598	0.2581	9.93	10	-1	
# Ethylbenzene	1.4504	1.3434	9.26	10	-7	#
# m+p-Xylene	0.5380	0.5136	19.10	20	-5	#

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/22/18 Time: 08:19

Lab File ID: hc22c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

			ACTUAL	TRUE	%	
COMPOUND	RRF	RRF10	CONC.	CONC.	DRIFT	
# o-Xylene	0.5143	0.4899	9.53	10	-5	#
# Styrene	0.8229	0.7903	9.60	10	-4	#
# Bromoform	0.1125	0.1152	10.24	10	2	#
# Isopropylbenzene	1.4040	1.3320	9.49	10	-5	#
# 1,1,2,2-Tetrachloroethane	0.3967	0.3475	8.76	10	-12	#
Bromobenzene	0.6030	0.5700	9.45	10	-5	
trans-1,4-Dichloro-2-butene	3.8005	3.6867	97.01	100	-3	
1,2,3-Trichloropropane	0.1025	0.0895	8.73	10	-13	
n-Propylbenzene	3.2790	3.0011	9.15	10	-8	
2-Chlorotoluene	0.6360	0.5925	9.32	10	-7	
1,3,5-Trimethylbenzene	2.2213	2.0607	9.28	10	-7	
4-Chlorotoluene	0.6373	0.5959	9.35	10	-6	
tert-Butylbenzene	0.4831	0.4621	9.57	10	-4	
Pentachloroethane	0.3770	0.3871	10.27	10	3	
1,2,4-Trimethylbenzene	2.2667	2.1006	9.27	10	-7	
sec-Butylbenzene	2.8784	2.7076	9.41	10	-6	
# 1,3-Dichlorobenzene	1.1981	1.1318	9.45	10	-6	#
p-Isopropyltoluene	2.3842	2.3049	9.67	10	-3	
# 1,4-Dichlorobenzene	1.1761	1.0995	9.35	10	-7	#
1,2,3-Trimethylbenzene	1.0399	0.9404	9.04	10	-10	
Benzyl Chloride	0.1434	0.1408	9.82	10	-2	
n-Butylbenzene	1.1834	1.1036	9.33	10	-7	
# 1,2-Dichlorobenzene	1.0571	0.9636	9.12	10	-9	#
# 1,2-Dibromo-3-chloropropane	2.0569	1.9844	9.65	10	-4	#
1,3,5-Trichlorobenzene	0.8913	0.8320	9.33	10	-7	
# 1,2,4-Trichlorobenzene	0.7260	0.6366	8.77	10	-12	#
Hexachlorobutadiene	0.2744	0.2571	9.37	10	-6	
Naphthalene	1.1489	0.9440	8.22	10	-18	
1,2,3-Trichlorobenzene	0.5970	0.4851	8.13	10	-19	
Dibromofluoromethane	0.2520	0.2501	9.92	10	-1	
Dibromofluoromethane(2)	0.2594	0.2549	9.83	10	-2	
1,2-Dichloroethane-d4	0.0439	0.0444	10.11	10	1	
1,2-Dichloroethane-d4(2)	0.2125	0.2025	9.53	10	-5	
1,2-Dichloroethane-d4(3)	0.0281	0.0283	10.06	10	1	
Toluene-d8	1.2870	1.2845	9.98	10	0	

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/22/18 Time: 08:19

Lab File ID: hc22c01.d Init. Calib. Date(s): 09/24/18 09/24/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	RRF	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT
Toluene-d8(2)	0.8307	0.8335	10.03	10	0
4-Bromofluorobenzene	0.4686	0.4545	9.70	10	-3
4-Bromofluorobenzene(2)	0.4069	0.4177	10.27	10	3

Average %Drift 9

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP19094.i/18may02b.b/hy02i17.d
/chem2/HP19094.i/18may02b.b/hy02i16.d
/chem2/HP19094.i/18may02b.b/hy02i15.d
/chem2/HP19094.i/18may02b.b/hy02i14.d
/chem2/HP19094.i/18may02b.b/hy02i13.d
/chem2/HP19094.i/18may02b.b/hy02i12.d
/chem2/HP19094.i/18may02b.b/hy02i11.d

File /chem2/HP19094.i/18may02b.b/hy02i12.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP19094.i/18oct22a.b/hc22c02.d

RT Summary

Internal Standard Name	File ID: hc22c02.d	ICAL RT	In Spec
t-Butyl Alcohol-d10	4.489	4.489	Yes
Fluorobenzene	7.963	7.976	Yes
Chlorobenzene-d5	11.384	11.396	Yes
1,4-Dichlorobenzene-d4	13.249	13.267	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: hc22c02.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl Alcohol-d10	111311	91579	45790	183158	Yes
Fluorobenzene	2630845	2321054	1160527	4642108	Yes
Chlorobenzene-d5	1984744	1697976	848988	3395952	Yes
1,4-Dichlorobenzene-d4	1047465	883093	441546	1766186	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

Comments: _____

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19094 Calibration Date: 10/22/18 Time: 08:40

Lab File ID: hc22c02.d Init. Calib. Date(s): 05/02/18 05/02/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: RXI-624SILM.25

COMPOUND	$\overline{RRF}$	RRF10	ACTUAL CONC.	TRUE CONC.	% DRIFT	
Dimethyl ether	0.3210	0.2388	7.44	10	-26	<-
Acetonitrile	1.2073	1.1262	373.11	400	-7	
Vinyl Acetate	0.3058	0.2215	7.24	10	-28	<-
Methyl Acrylate	0.0944	0.0885	46.88	50	-6	
1-Chlorobutane	0.4516	0.4017	8.90	10	-11	
Chloroacetonitrile	0.0038	0.0048	638.08	500	28	
2-Chloroethyl vinyl ether	0.0904	0.0789	8.72	10	-13	
cis-1,4-Dichloro-2-butene	6.4754	4.5556	14.07	20	-30	<-
Cyclohexanone	0.3293	0.3268	496.19	500	-1	
Hexachloroethane	0.4210	0.4226	10.04	10	0	

Average %Drift 15

Compounds with required minimum RRF.
All compounds must meet a maximum % Drift of 20.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hc22c01.d Date Analyzed: 10/22/18

Instrument ID: HP19094 Time Analyzed: 08:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	117595	4.476	2589169	7.970	1976724	11.384	1046678	13.249
UPPER LIMIT	235190	4.976	5178338	8.470	3953448	11.884	2093356	13.749
LOWER LIMIT	58798	3.976	1294584	7.470	988362	10.884	523339	12.749
LAB SAMPLE ID								
01 LCSH44	118963	4.495	2637183	7.970	1981549	11.384	1046118	13.249
02 LCDH44	133371	4.488	2625631	7.970	2002470	11.384	1066788	13.249
03 LCSH45	102213	4.482	2654371	7.970	1999318	11.384	1065641	13.249
04 LCDH45	127956	4.470	2678986	7.964	2021643	11.384	1071682	13.249
05 MDLH44 - MD	117593	4.489	2675680	7.970	2012697	11.384	1076100	13.249
06 MDLH45 - MD	125159	4.476	2638912	7.970	2004196	11.384	1069844	13.249
07 VBLKH44	126340	4.489	2637888	7.970	2003910	11.384	1069069	13.249
08 9850262	121149	4.501	2546036	7.970	1949687	11.384	1039698	13.249
09 9850263	117351	4.489	2553419	7.964	1973688	11.384	1044043	13.249
10 9850264	110304	4.476	2560853	7.964	1964732	11.384	1060063	13.249
11 9850249	114866	4.489	2552639	7.964	1970812	11.384	1043948	13.249
12 9850250	118273	4.482	2560192	7.964	1984506	11.384	1054547	13.249
13 9850251	96612	4.501	2563826	7.964	2000219	11.384	1057618	13.249
14 9850252	114100	4.482	2565613	7.970	1972380	11.384	1062449	13.249
15 9850253MS	117521	4.489	2589815	7.964	1990724	11.384	1063612	13.249
16 9850254MSD	114705	4.476	2545587	7.970	1968210	11.384	1058933	13.249
17 9850253MSMS1	128553	4.476	2548779	7.964	1969901	11.384	1055635	13.249
18 9850254MSDMS	125384	4.495	2551674	7.964	1969985	11.384	1056648	13.249
19 9850255	109428	4.489	2526417	7.970	1956545	11.384	1047270	13.249
20 9850256	120435	4.483	2541149	7.970	1970429	11.384	1059713	13.249
21 9850257	118525	4.489	2548879	7.964	1961369	11.384	1054025	13.249
22 9850258	113979	4.477	2532132	7.964	1957499	11.384	1059087	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

8A
VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): hc22c01.d Date Analyzed: 10/22/18

Instrument ID: HP19094 Time Analyzed: 08:19

Matrix: (soil/water) WATER Level: (low/med) LOW Column: (pack/cap) CAP

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	117595	4.476	2589169	7.970	1976724	11.384	1046678	13.249
UPPER LIMIT	235190	4.976	5178338	8.470	3953448	11.884	2093356	13.749
LOWER LIMIT	58798	3.976	1294584	7.470	988362	10.884	523339	12.749
LAB SAMPLE ID								
23 9850259	118225	4.482	2537691	7.970	1951495	11.384	1045720	13.249
24 9850260	118201	4.495	2539591	7.964	1957703	11.384	1052680	13.249
25 9850261	108494	4.489	2522311	7.970	1966736	11.384	1048843	13.249

IS1 (TBA)=t-Butyl Alcohol-d10
IS2 (FBZ)=Fluorobenzene
IS3 (CBZ)=Chlorobenzene-d5
IS4 (DCB)=1,4-Dichlorobenzene-d4

UPPER LIMIT = + 100%
of internal standard area.
LOWER LIMIT = - 50%
of internal standard area.

Column used to flag values outside QC limits with an asterisk
* Values outside of QC limits.

FORM VIII VOA

^

Sample Data

Volatiles by GC/MS

Data file: /chem2/HP19094.i/18oct22a.b/hc22s05.d Injection date and time: **22-OCT-2018 12:36**
Data file Sample Info. Line: 94280;9850249;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145 ;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	114866	(-2)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2552639	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1970812	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1043948	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.067	(0.001)	113	648357	10.078	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	116132	10.354	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2513381	9.909	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	884941	9.582	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)	2.142	(0.000)	45	598643M	7.306	7.31		J	0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)	2.836	(0.000)	64	154927	2.792	2.79			0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.422	(0.000)	59	1474392	37.622	37.62		E	0.05	13
15) 1,1-Dichloroethene	(2)	3.757	(-0.000)	96	9087	0.182	0.18		J	0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)	4.464	(0.000)	84	40918	0.725	0.72		J	0.07	1
33) 1,1-Dichloroethane	(2)	5.549	(0.000)	63	539544	5.017	5.02			0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)	6.720	(0.005)	71	31488	10.569	10.57		J	0.8	25
51) 1,1,1-Trichloroethane	(2)	7.092	(-0.000)	97	12793	0.150	0.15		J	0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)	7.567	(-0.000)	78	63883	0.267	0.27		J	0.05	1
67) Trichloroethene	(2)	8.445	(-0.000)	95	11906	0.194	0.19		J	0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)	10.561	(0.000)	166	16125	0.244	0.24		J	0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

M = Compound was manually integrated. E = Compound concentration above calibration range.

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s05.d Injection date and time: **22-OCT-2018 12:36**
Data file Sample Info. Line: 94280;9850249;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

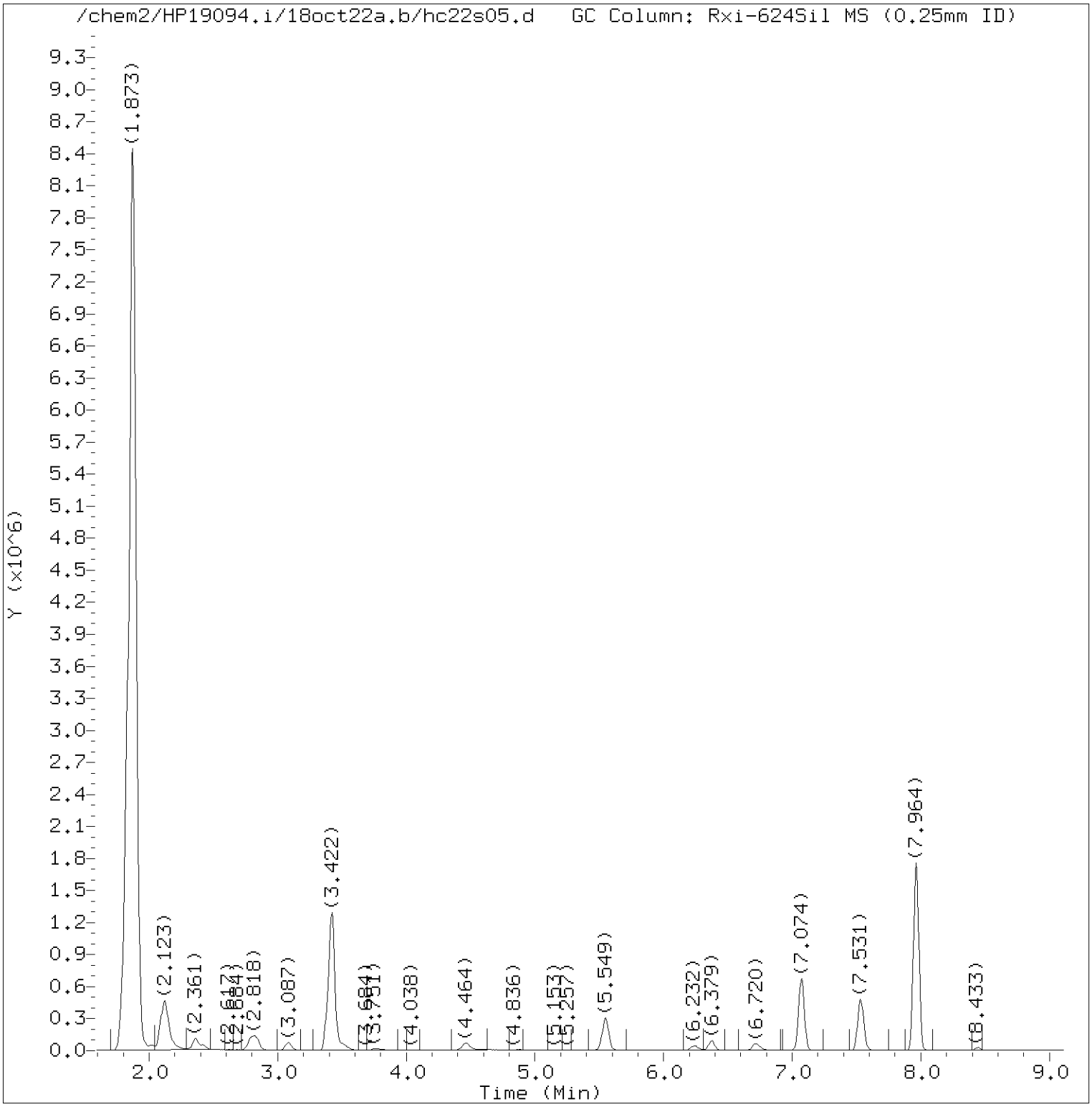
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

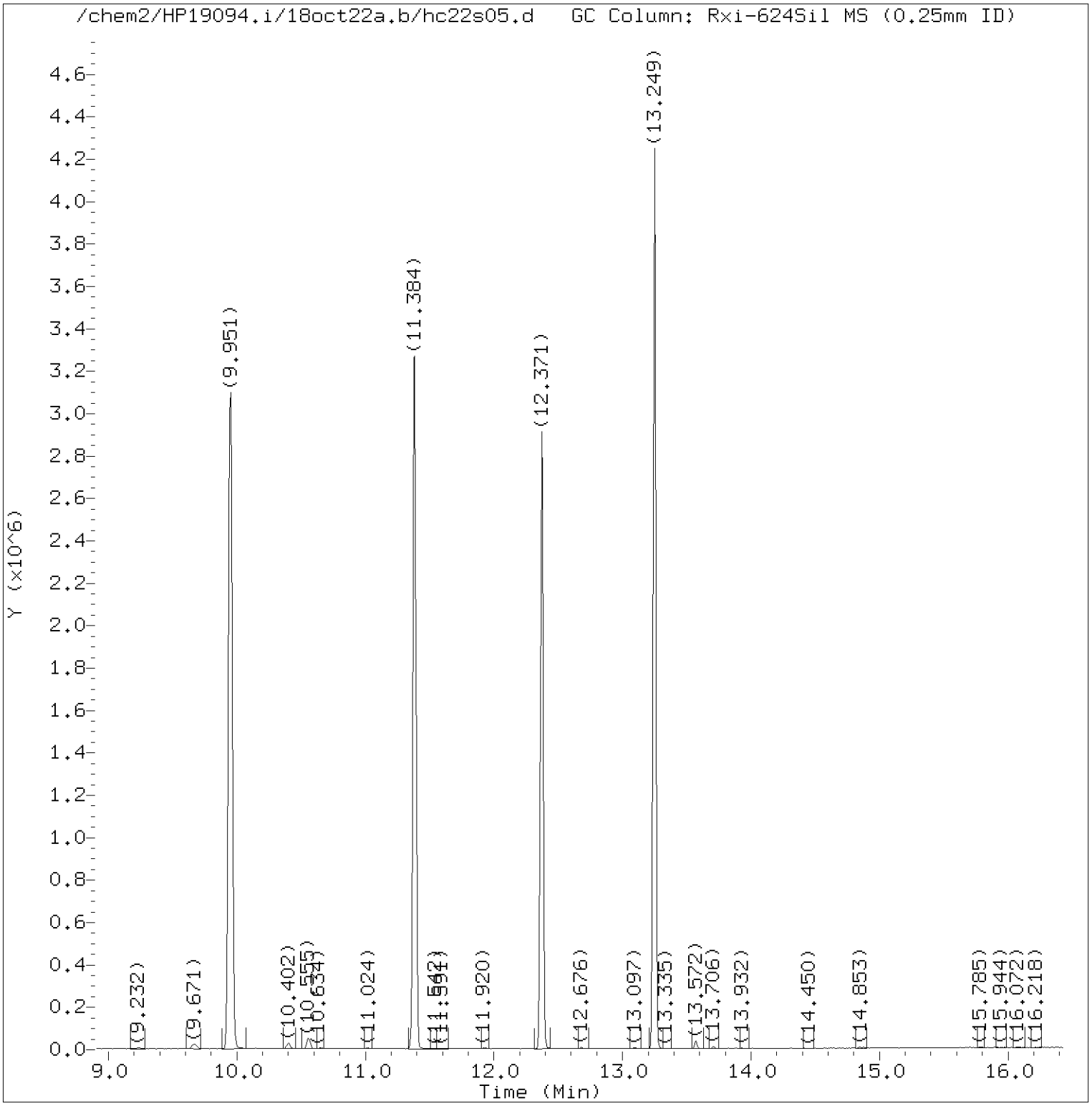
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.142	45	598643M	7.306
8) Chloroethane	(2)	2.837	64	154927	2.792
11) Ethyl ether	(2)	3.422	59	1474392	37.622
15) 1,1-Dichloroethene	(2)	3.757	96	9087	0.182
23) Methylene Chloride	(2)	4.464	84	40918	0.725
26)*t-Butyl Alcohol-d10	(1)	4.489	65	114866	50.000
33) 1,1-Dichloroethane	(2)	5.549	63	539544	5.017
48) Tetrahydrofuran	(1)	6.720	71	31488	10.569
50)$Dibromofluoromethane	(2)	7.067	113	648357	10.078
51) 1,1,1-Trichloroethane	(2)	7.092	97	12793	0.150
57)$1,2-Dichloroethane-d4	(2)	7.531	102	116132	10.354
58) Benzene	(2)	7.567	78	63883	0.267
63)*Fluorobenzene	(2)	7.964	96	2552639	10.000
67) Trichloroethene	(2)	8.445	95	11906	0.194
82)$Toluene-d8	(3)	9.951	98	2513381	9.909
89) Tetrachloroethene	(3)	10.561	166	16125	0.244
97)*Chlorobenzene-d5	(3)	11.384	117	1970812	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	884941	9.582
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1043948	10.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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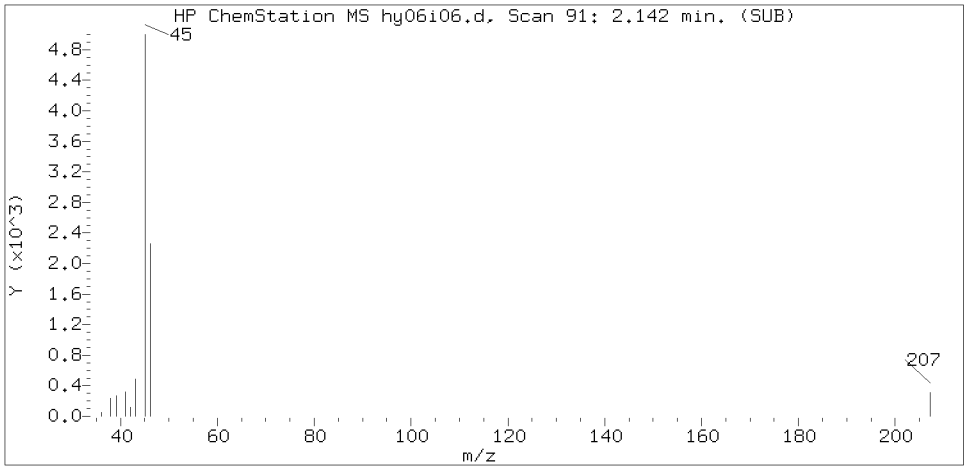
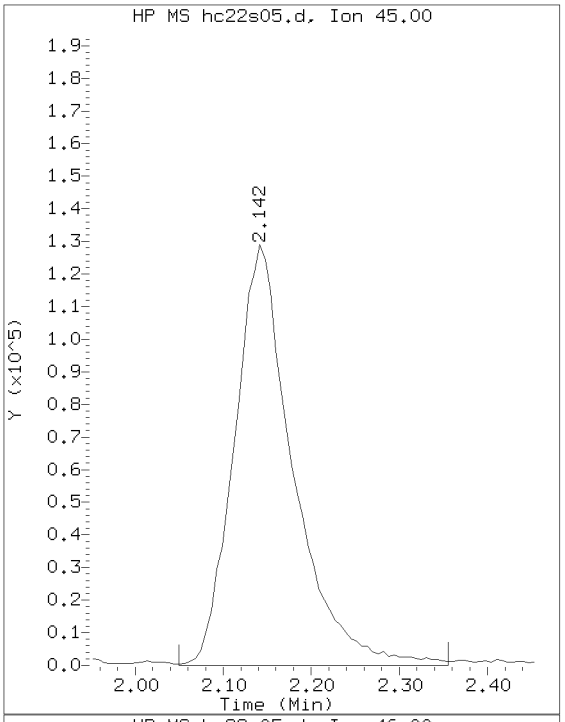
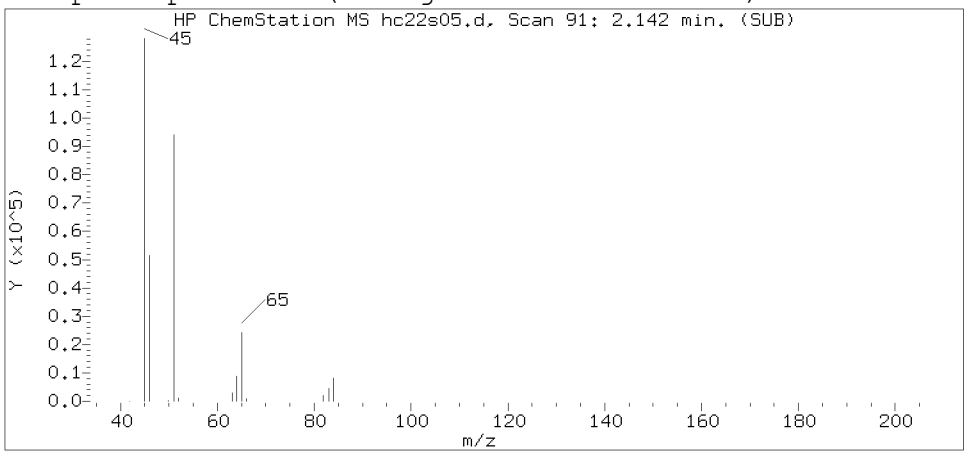
Target 3.5 esignature user ID: jkh09052

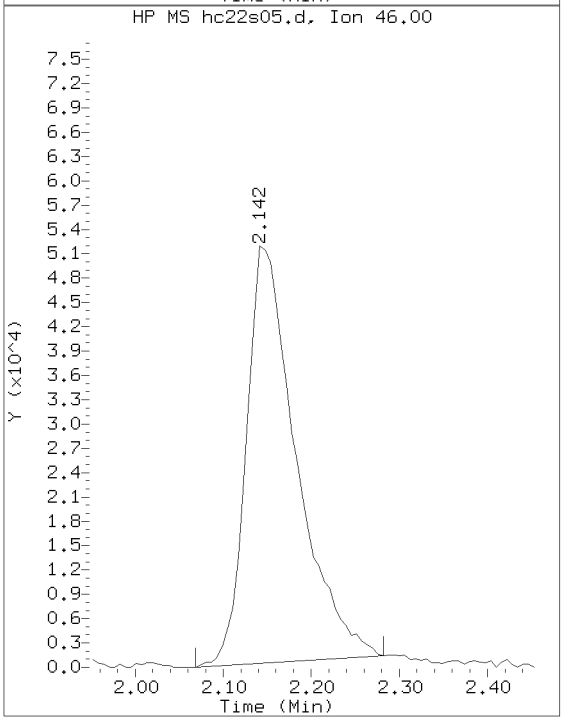
Reference Standard Spectrum for Dimethyl ether



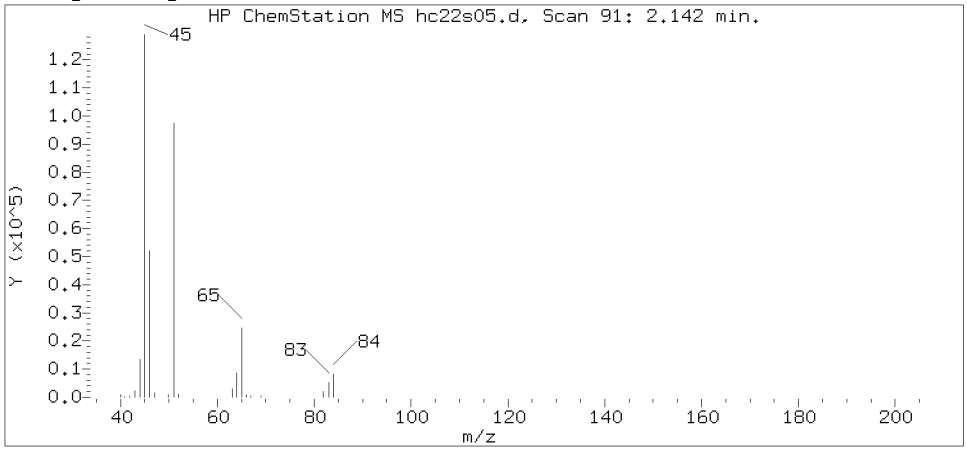


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 91
Retention Time (minutes)	: 2.142
Relative Retention Time	: 0.00054
Quant Ion	: 45.00
Area (flag)	: 598643M
On-Column Amount (ng)	: 7.3055

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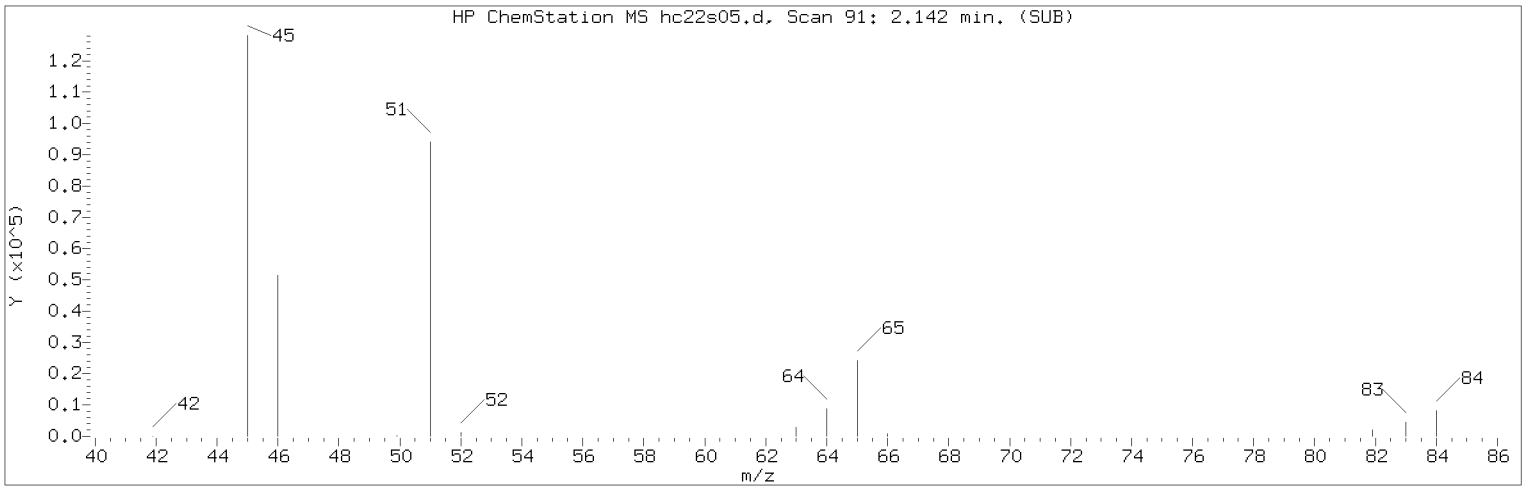
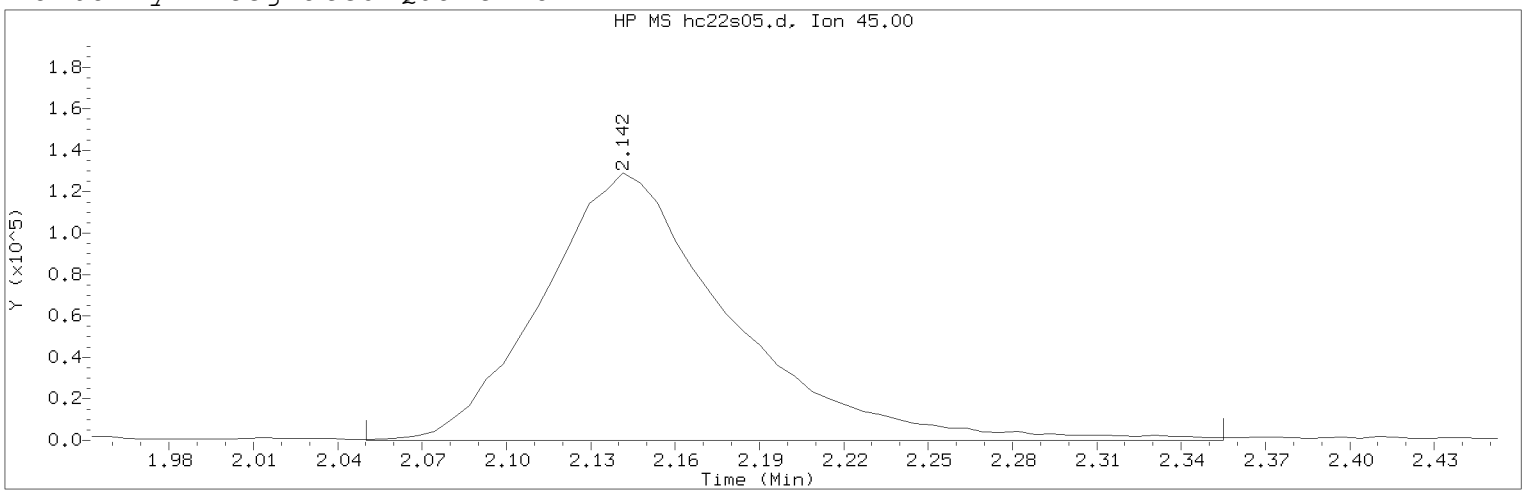
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

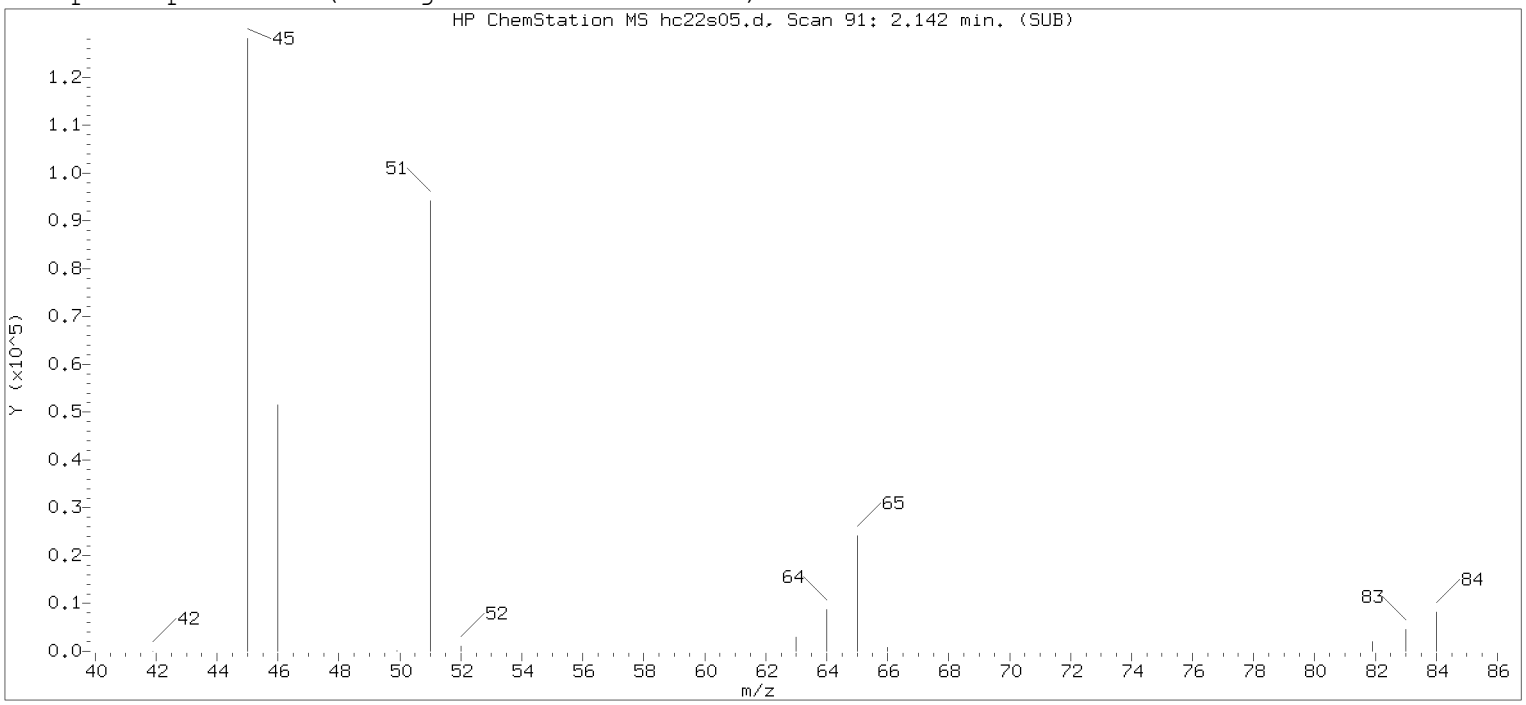
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Quant Ion : 45.00
Area (flag) : 598643M
On-Column Amount (ng) : 7.3055
Integration start scan : 75 Integration stop scan: 125
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

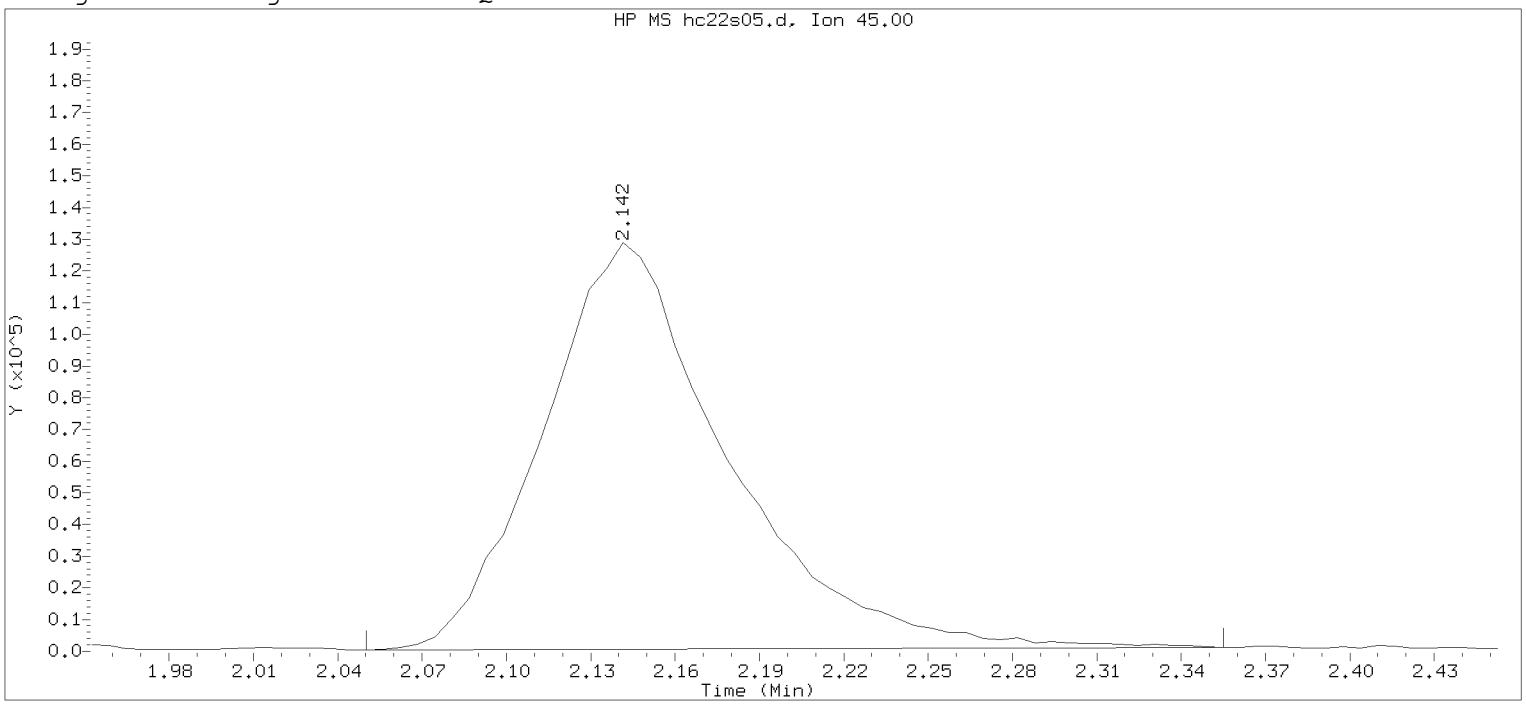
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

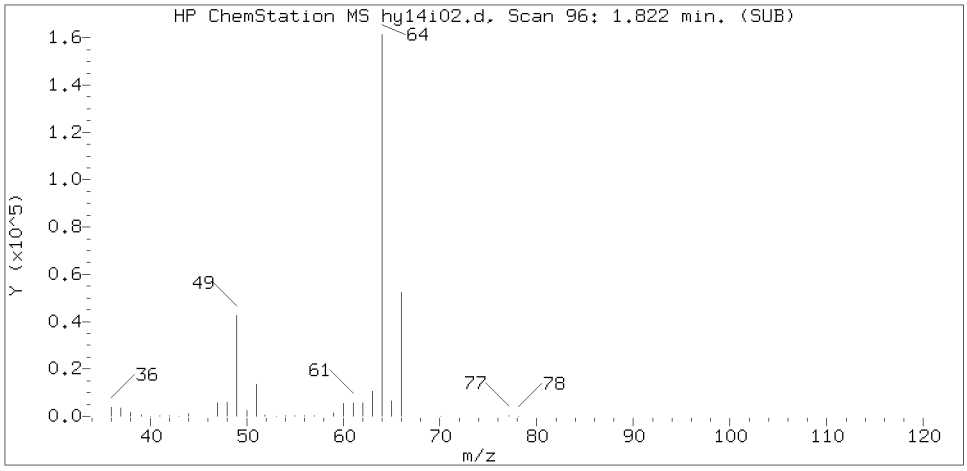
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 12:54 Automation

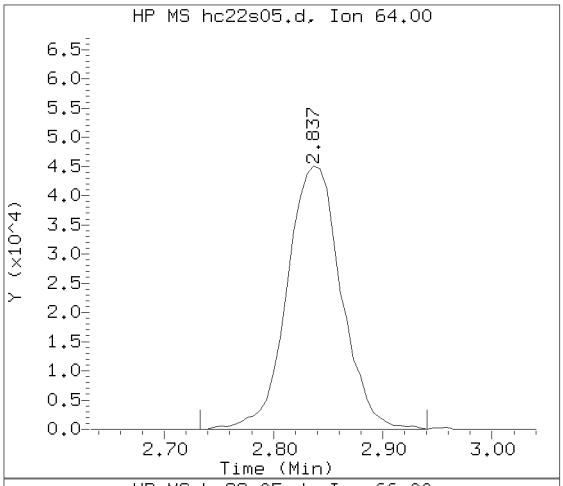
Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 91
Retention Time (minutes): 2.142
Quant Ion : 45.00
Area : 583347
On-column Amount (ng) : 7.1189
Integration start scan : 75 Integration stop scan: 125
Y at integration start : 436 Y at integration end: 1203

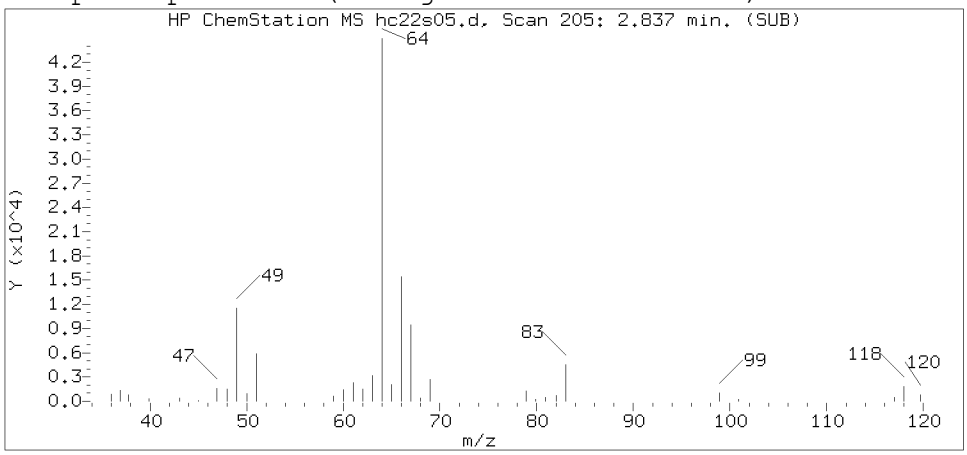
Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkhowe0052

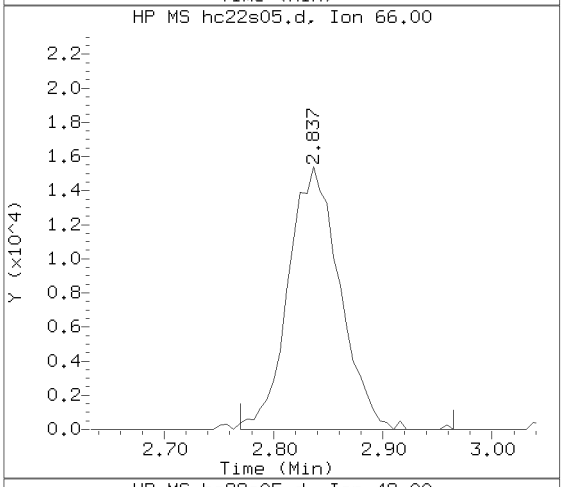
Reference Standard Spectrum for Chloroethane



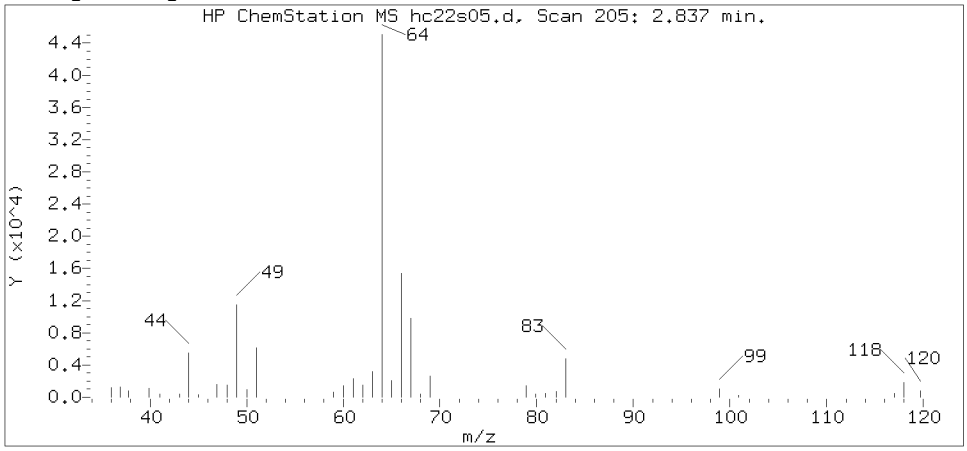


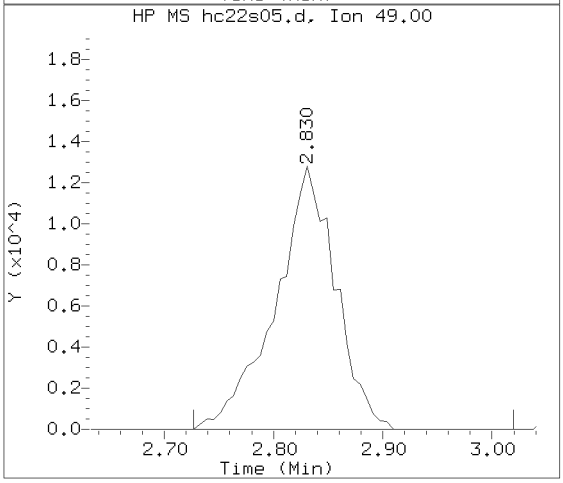
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 205
Retention Time (minutes)	: 2.837
Relative Retention Time	: 0.00050
Quant Ion	: 64.00
Area (flag)	: 154927
On-Column Amount (ng)	: 2.7919

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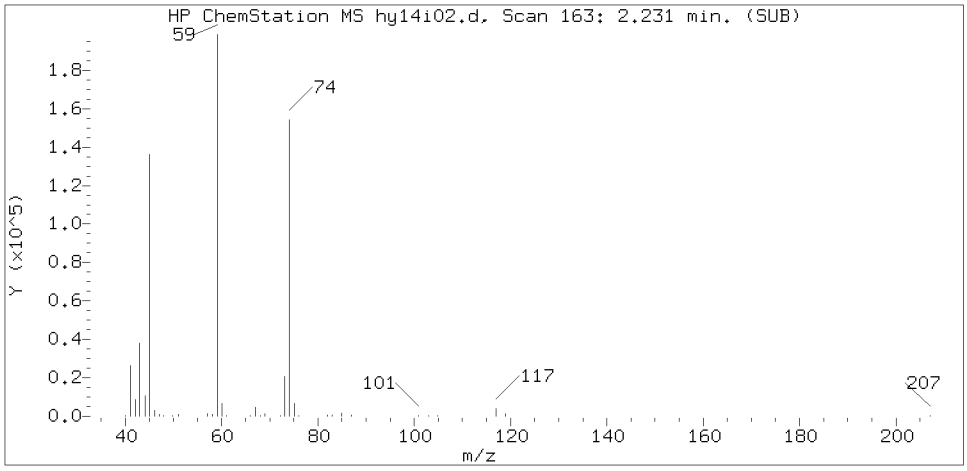
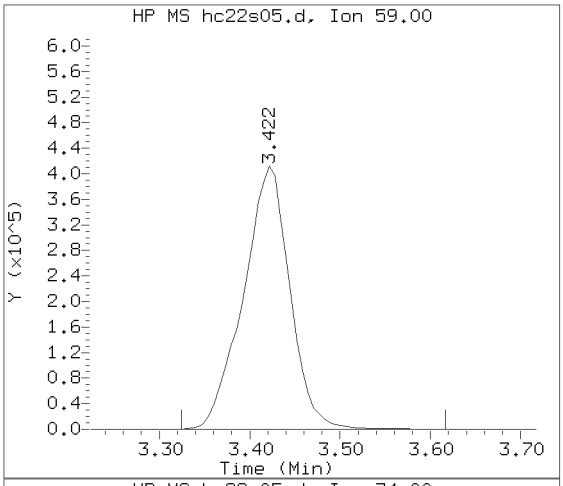
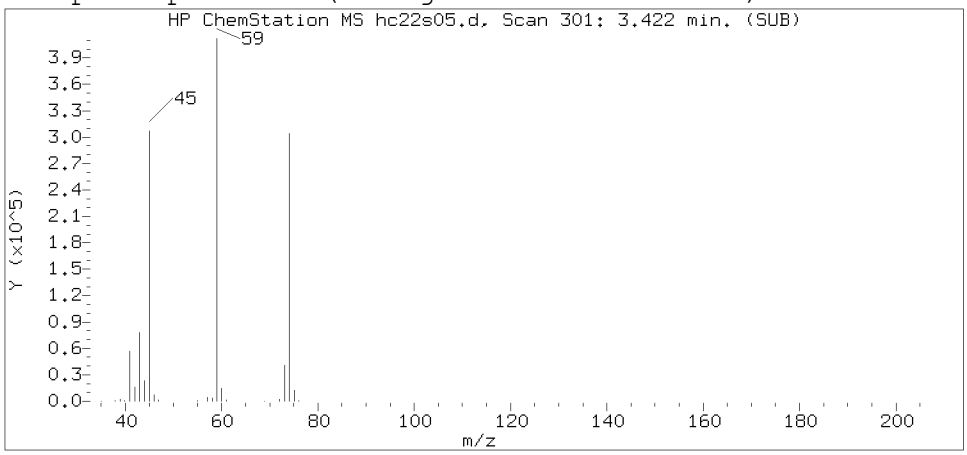
Target 3.5 esignature user ID: jkh09052

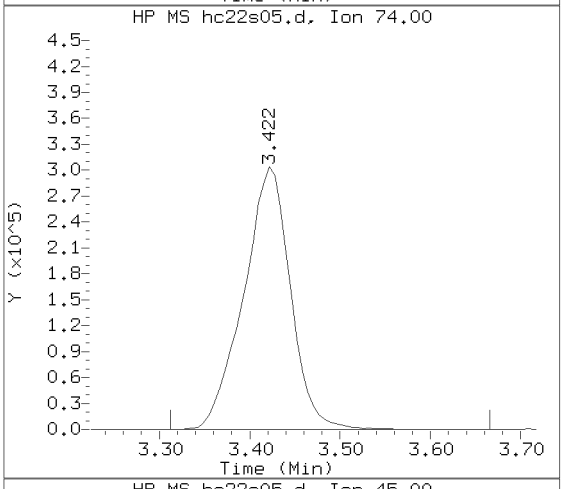
Reference Standard Spectrum for Ethyl ether



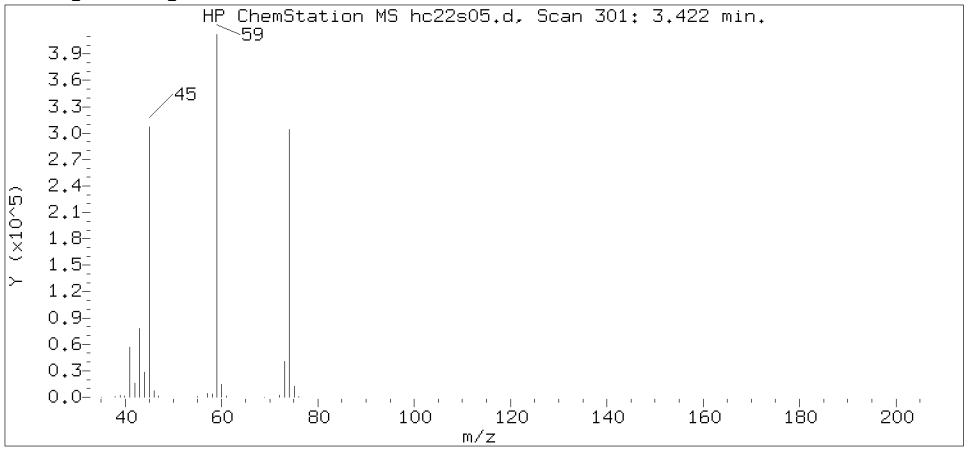


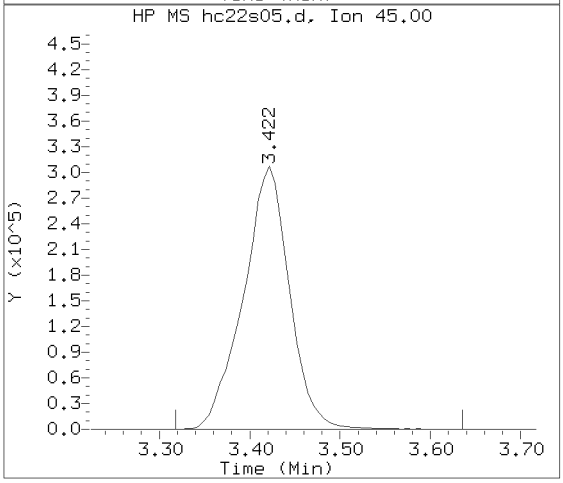
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 301
Retention Time (minutes): 3.422
Relative Retention Time : 0.00044
Quant Ion : 59.00
Area (flag) : 1474392
On-Column Amount (ng) : 37.6216

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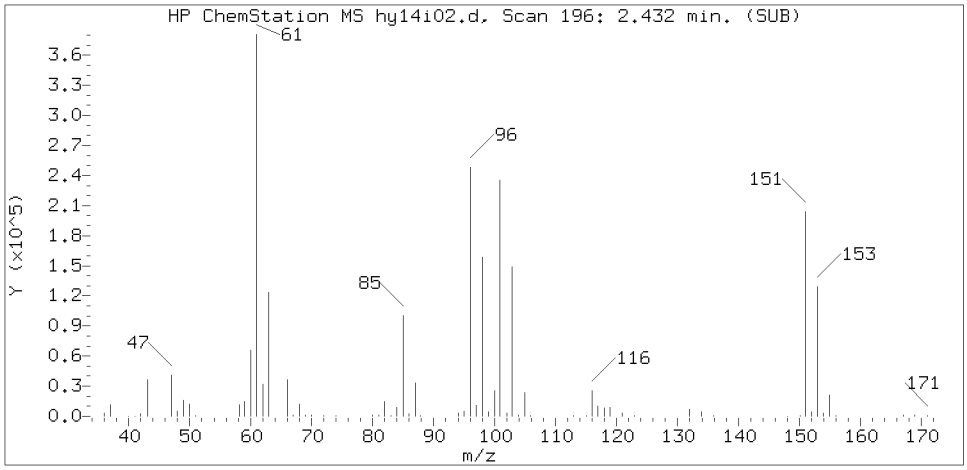
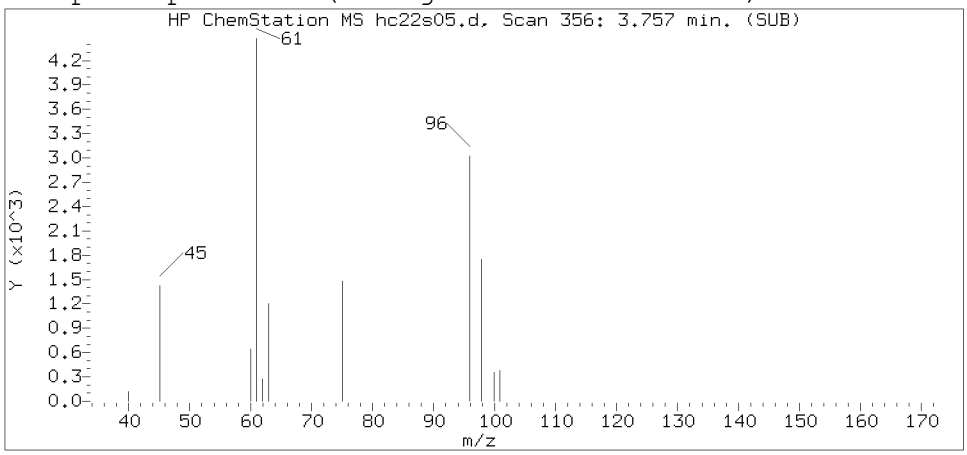
Target 3.5 esignature user ID: jkh09052

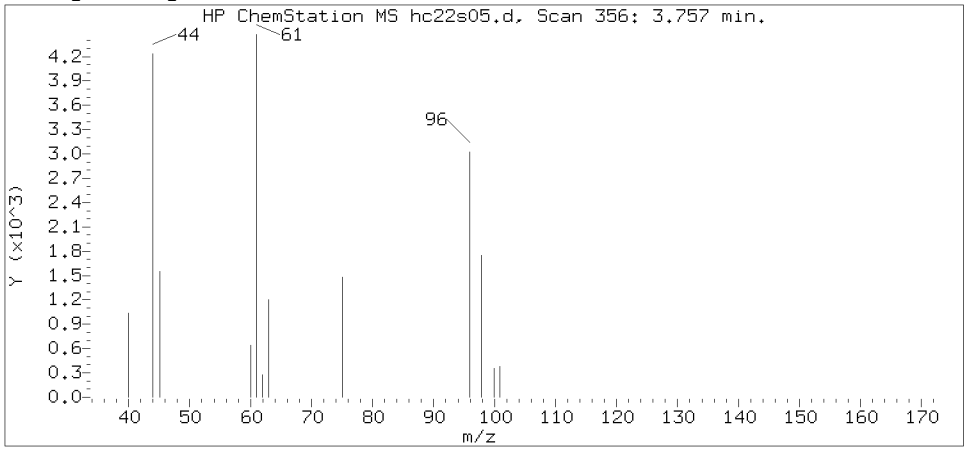
Reference Standard Spectrum for 1,1-Dichloroethene

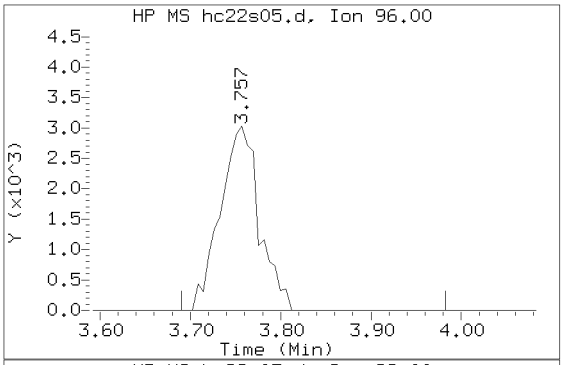


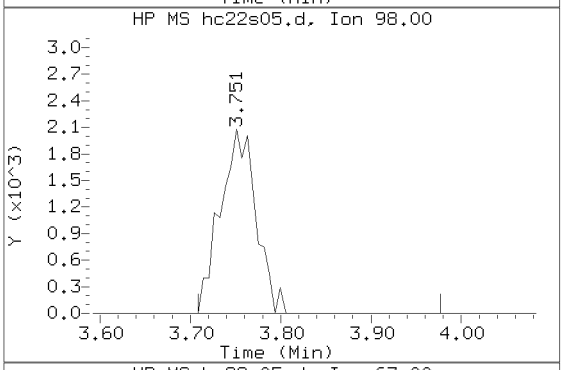
Sample Spectrum (Background Subtracted)

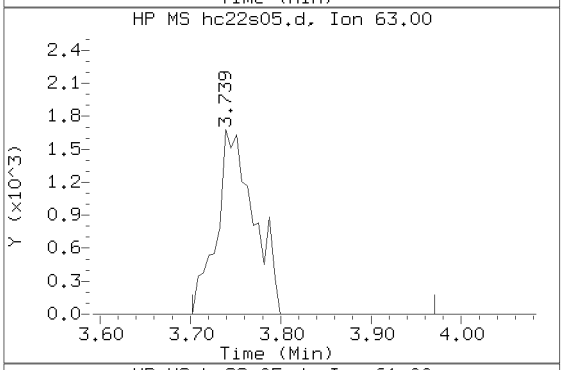


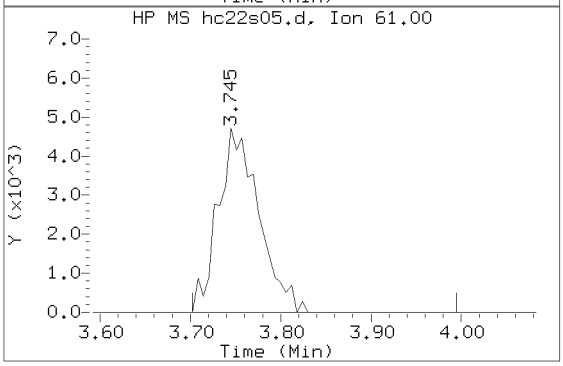
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

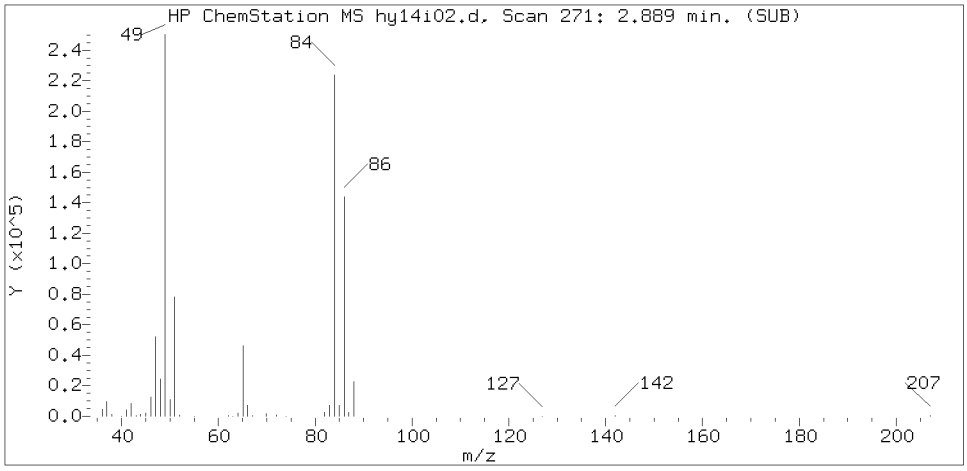
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

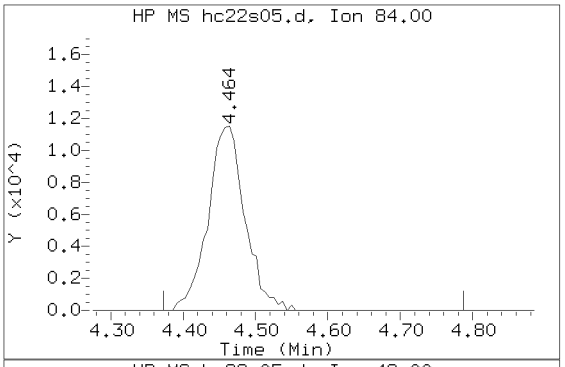
Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 356
Retention Time (minutes): 3.757
Relative Retention Time :-0.00036
Quant Ion : 96.00
Area (flag) : 9087
On-Column Amount (ng) : 0.1816

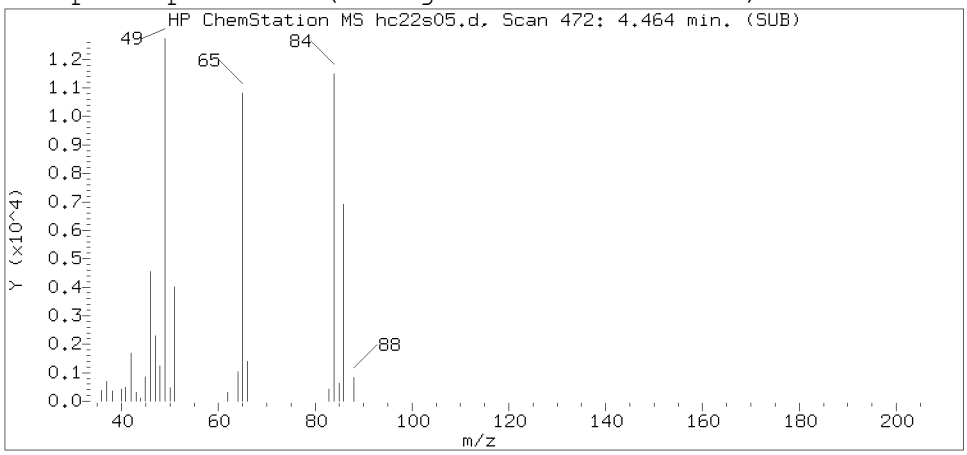
Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

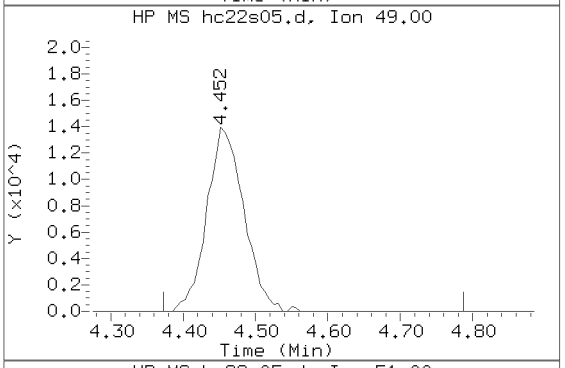
Reference Standard Spectrum for Methylene Chloride

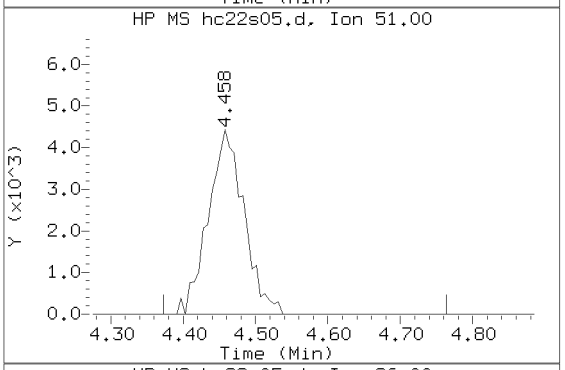




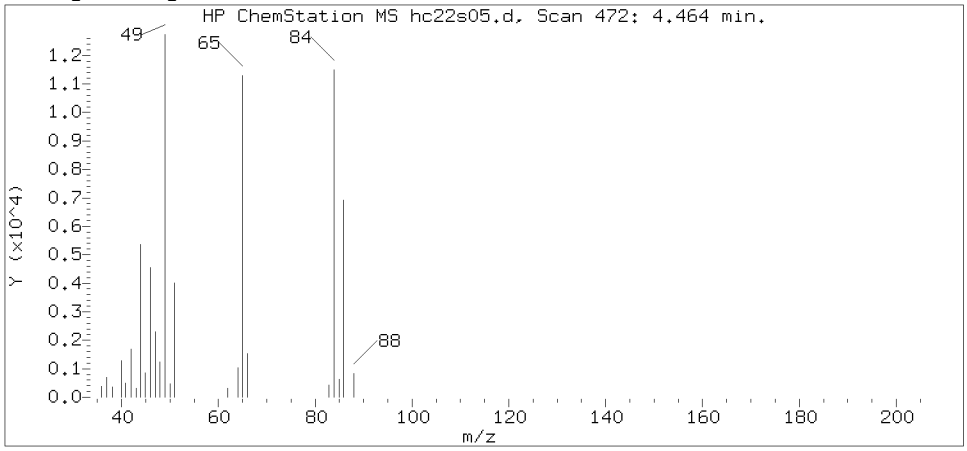
Sample Spectrum (Background Subtracted)

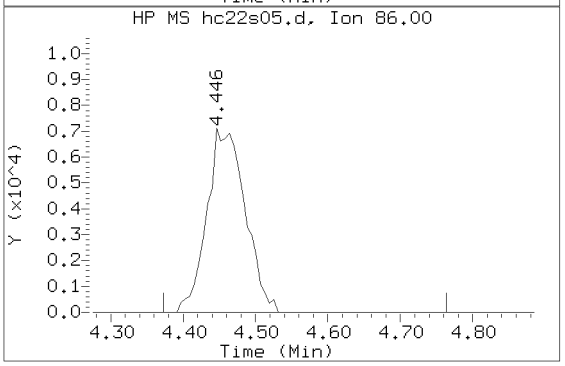






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

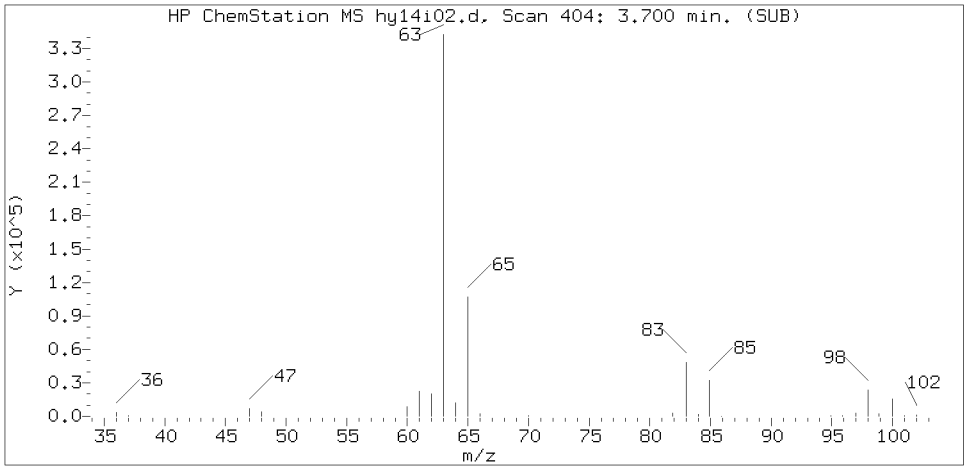
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

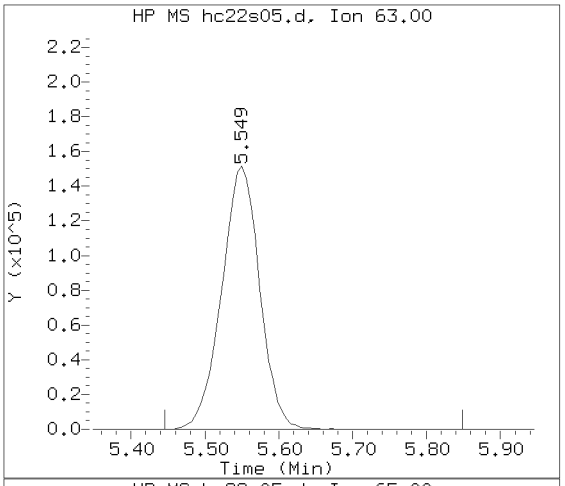
Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 472
Retention Time (minutes): 4.464
Relative Retention Time : 0.00034
Quant Ion : 84.00
Area (flag) : 40918
On-Column Amount (ng) : 0.7247

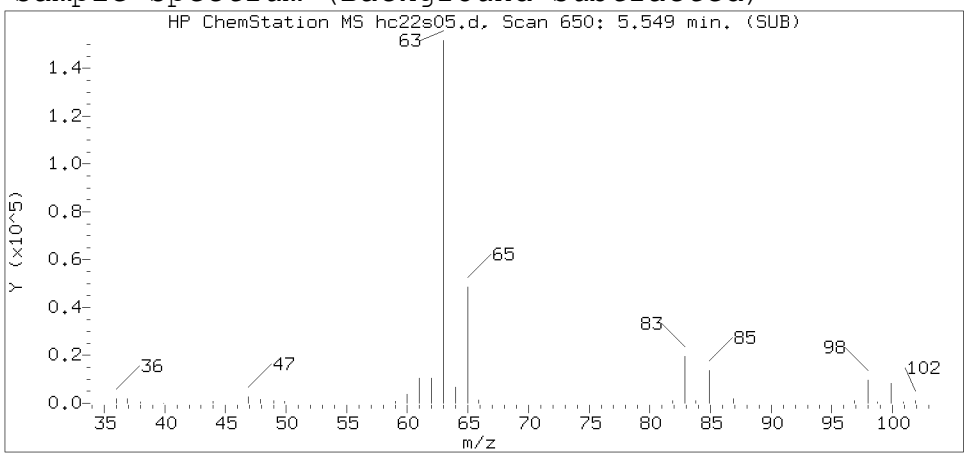
Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

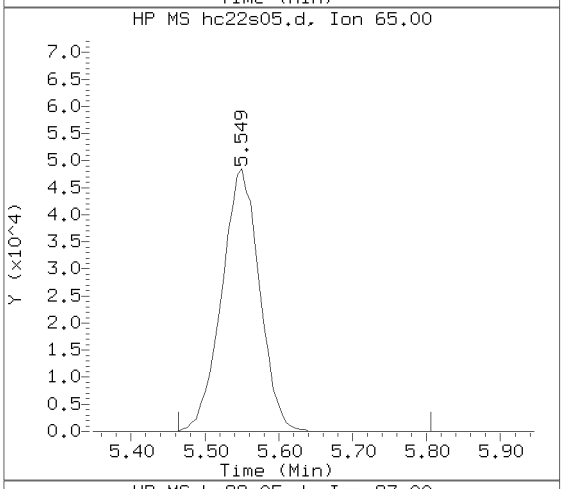
Reference Standard Spectrum for 1,1-Dichloroethane



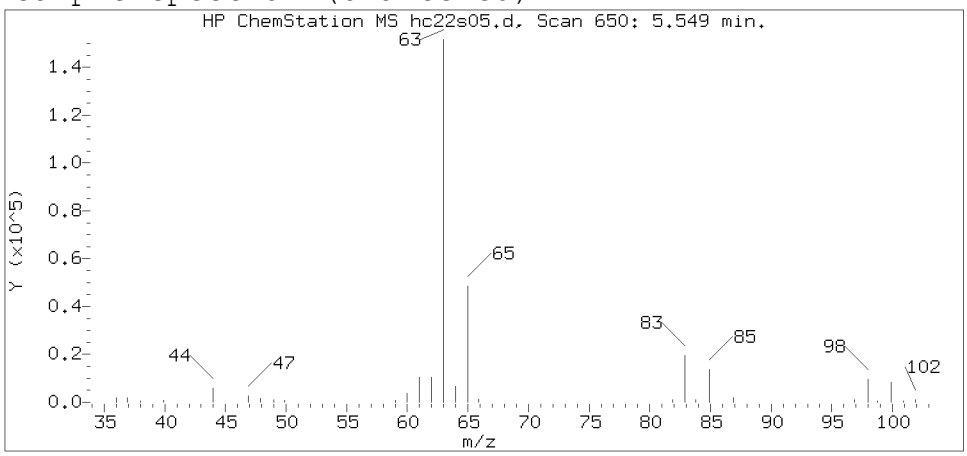


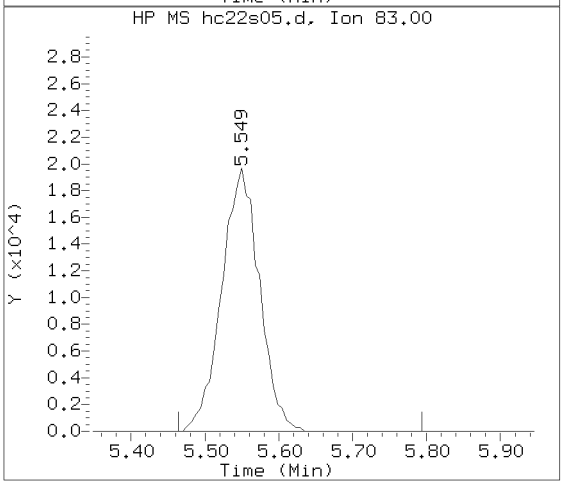
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

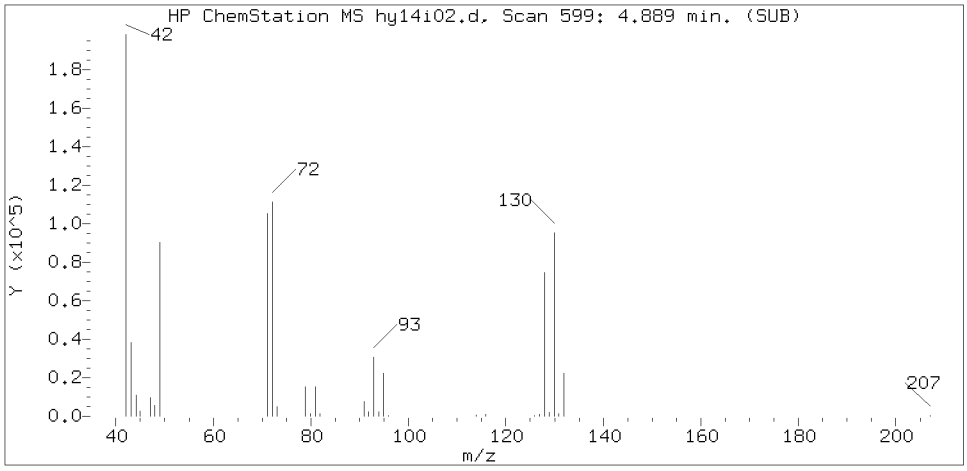
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

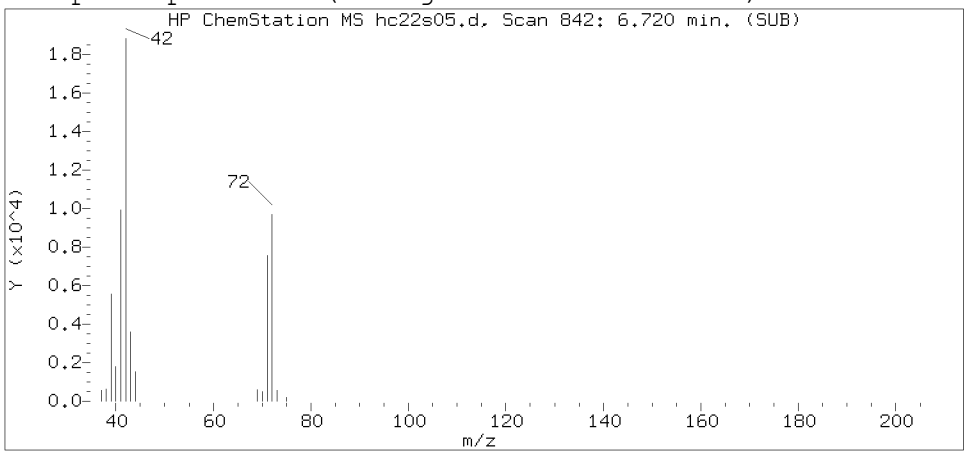
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 650
Retention Time (minutes): 5.549
Relative Retention Time : 0.00023
Quant Ion : 63.00
Area (flag) : 539544
On-Column Amount (ng) : 5.0167

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

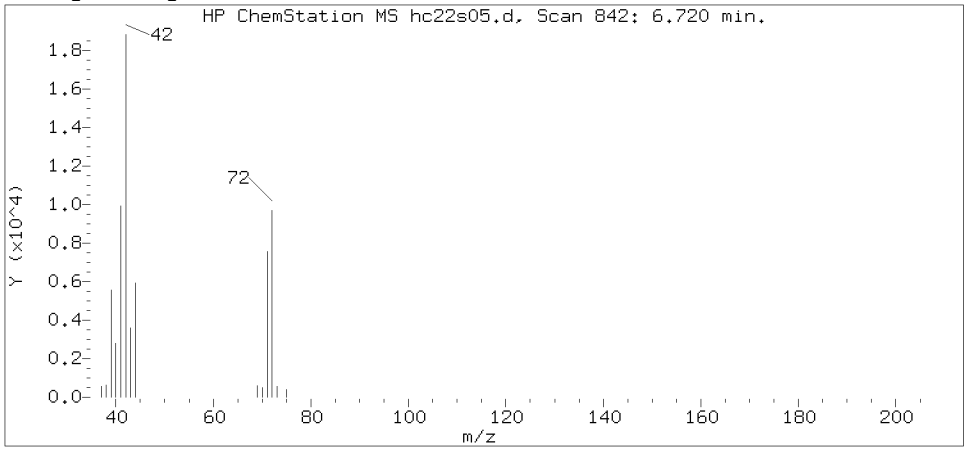
Reference Standard Spectrum for Tetrahydrofuran

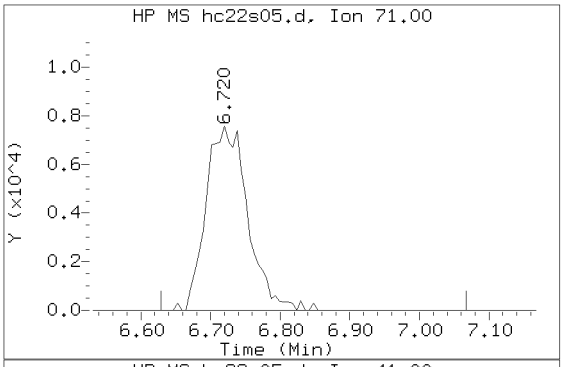


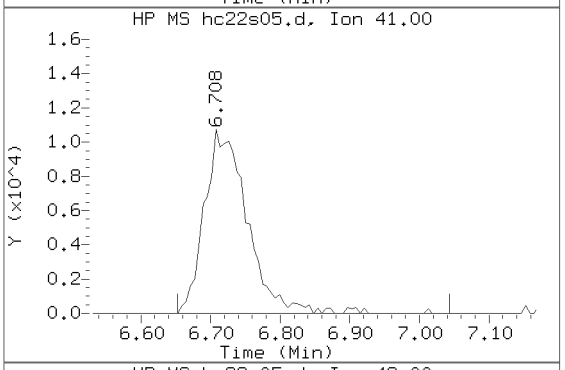
Sample Spectrum (Background Subtracted)

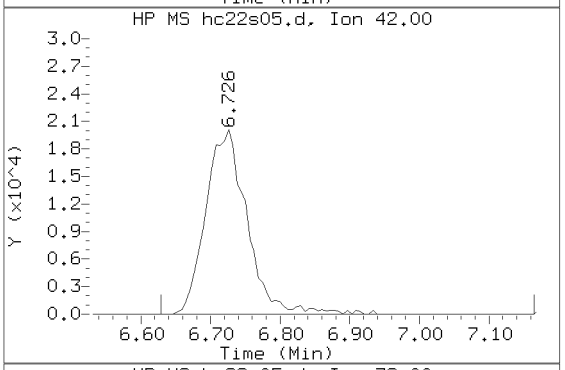


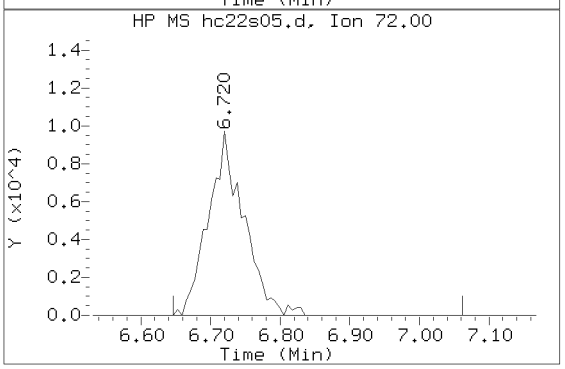
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 842
Retention Time (minutes)	: 6.720
Relative Retention Time	: 0.00544
Quant Ion	: 71.00
Area (flag)	: 31488
On-Column Amount (ng)	: 10.5686

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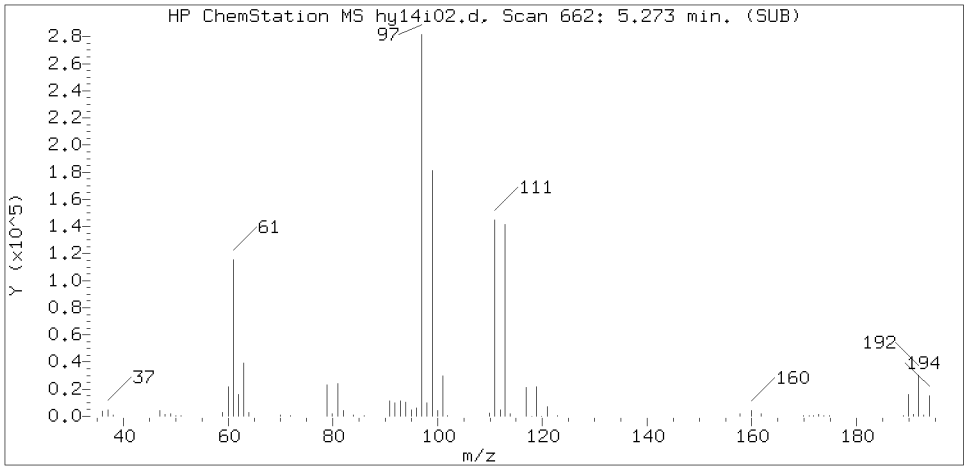
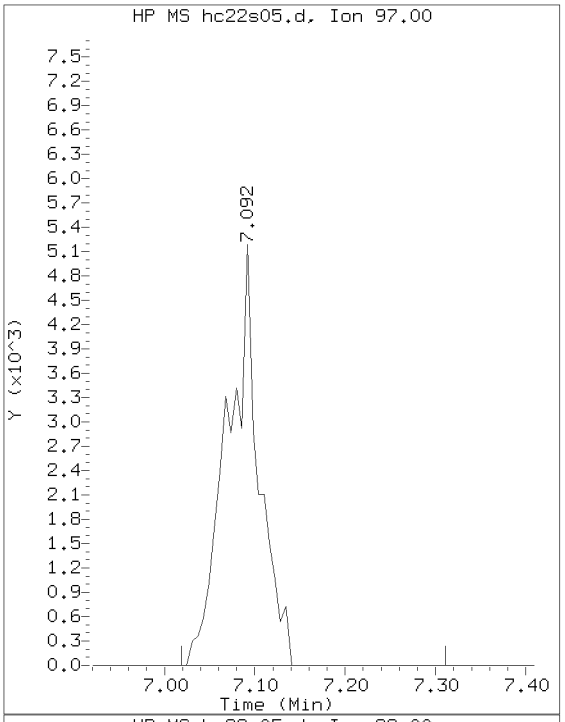
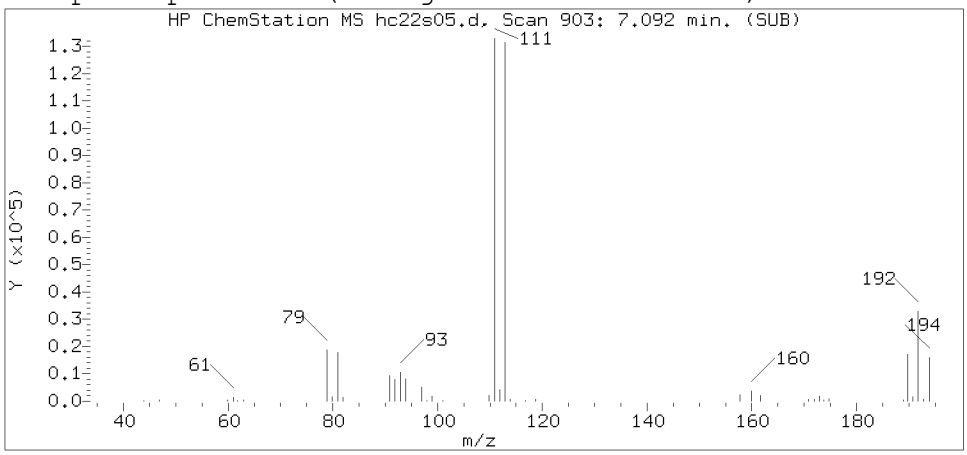
Target 3.5 esignature user ID: jkh09052

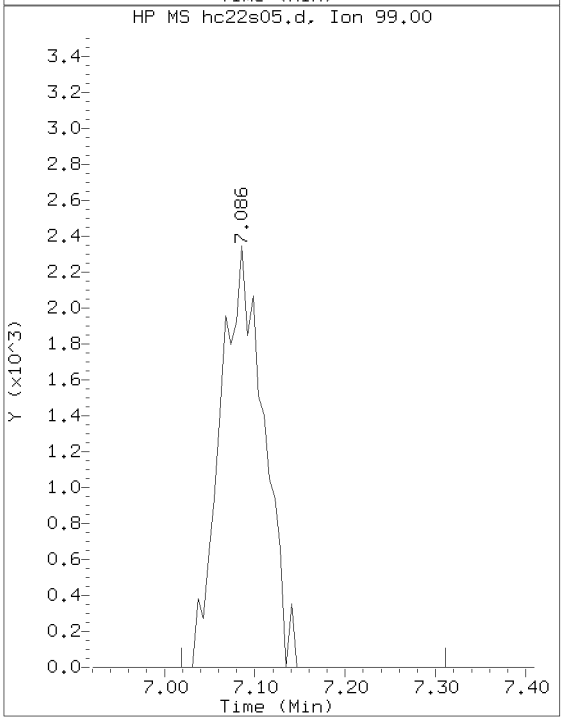
Reference Standard Spectrum for 1,1,1-Trichloroethane



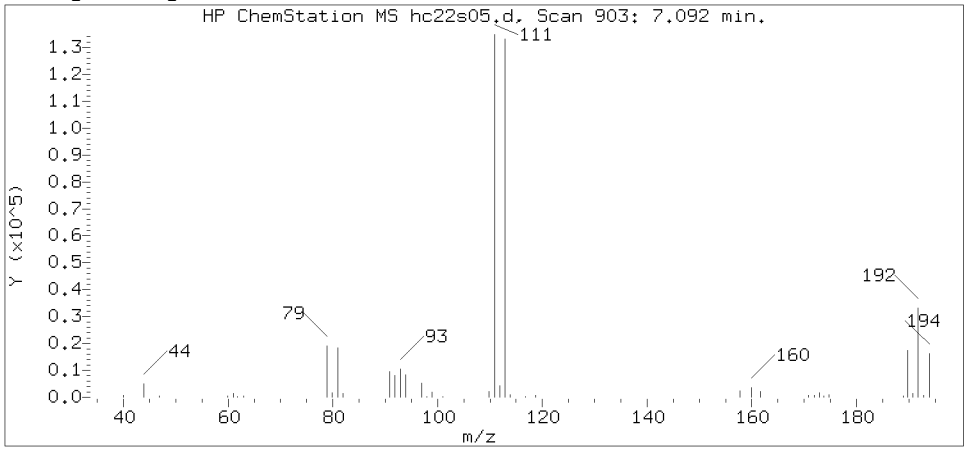


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Relative Retention Time :-0.00068
Quant Ion : 97.00
Area (flag) : 12793
On-Column Amount (ng) : 0.1496

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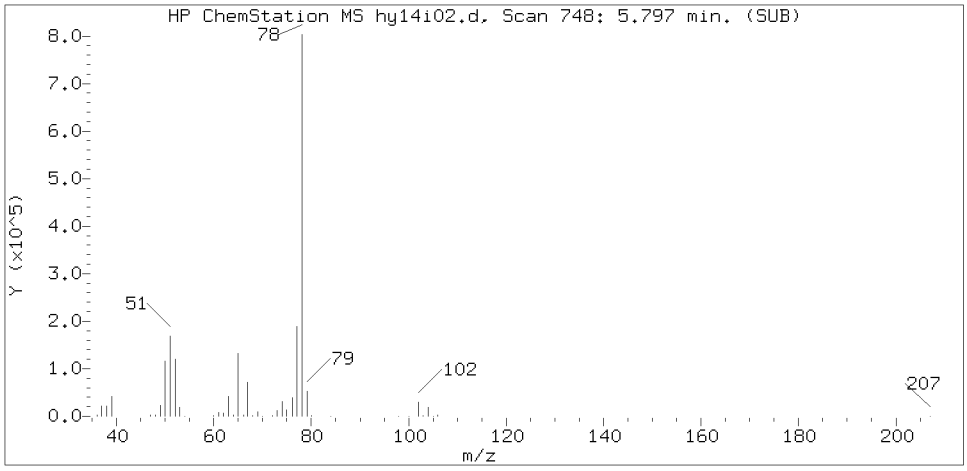
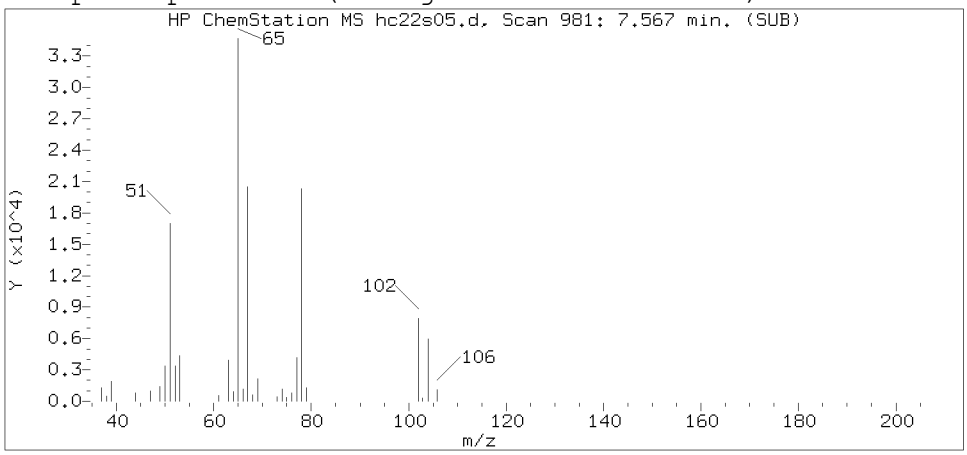
Target 3.5 esignature user ID: jkh09052

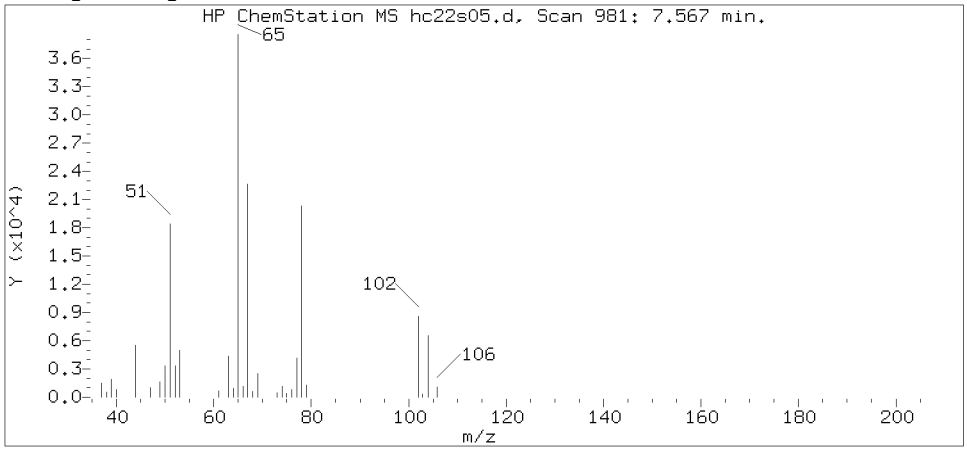
Reference Standard Spectrum for Benzene

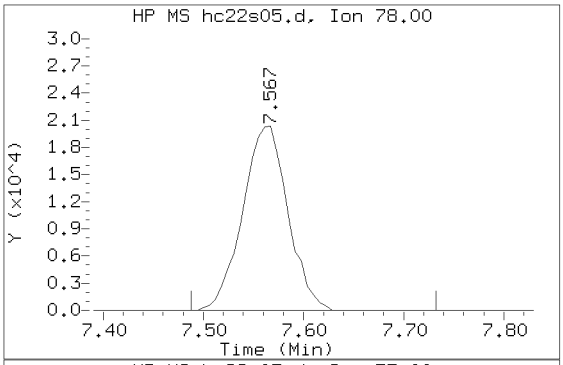


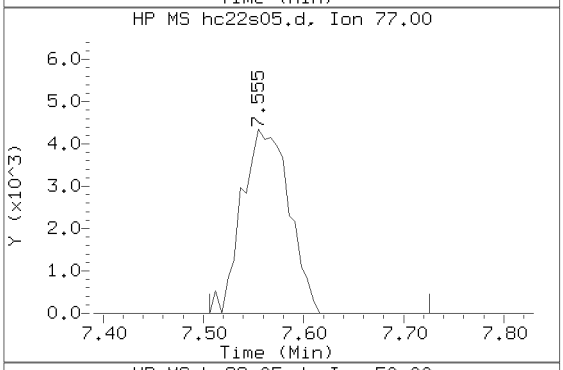
Sample Spectrum (Background Subtracted)

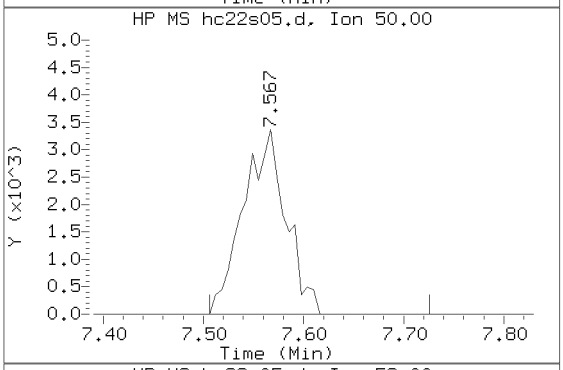


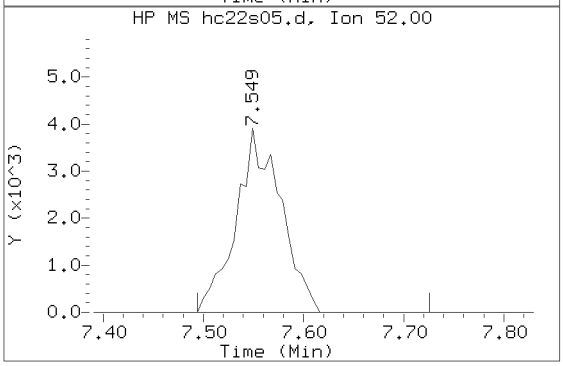
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number	: 58
Compound Name	: Benzene
Scan Number	: 981
Retention Time (minutes)	: 7.567
Relative Retention Time	:-0.00073
Quant Ion	: 78.00
Area (flag)	: 63883
On-Column Amount (ng)	: 0.2666

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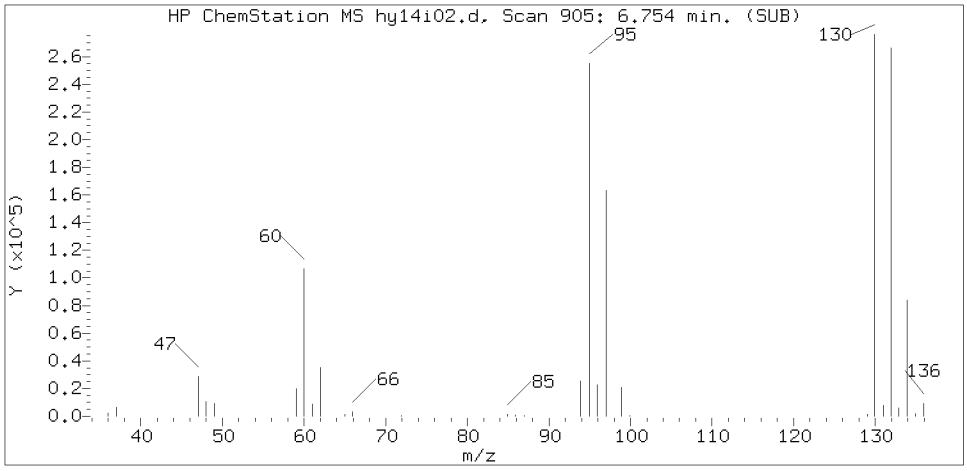
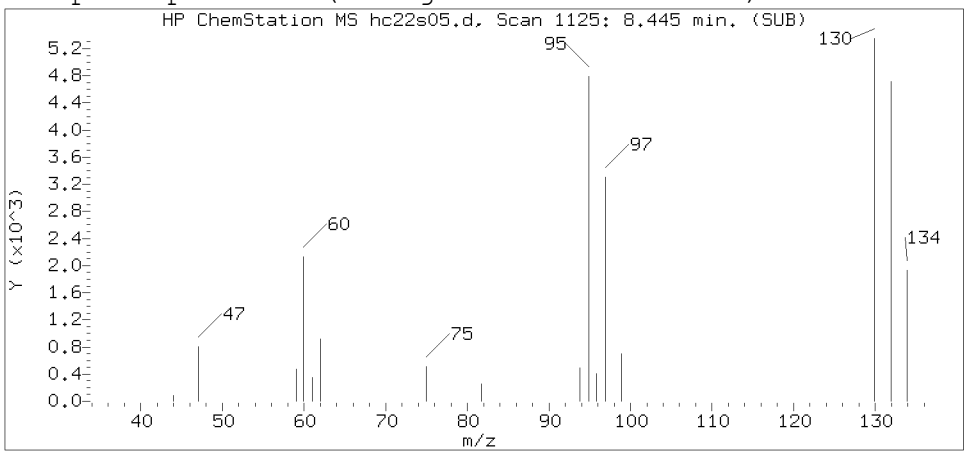
Target 3.5 esignature user ID: jkh09052

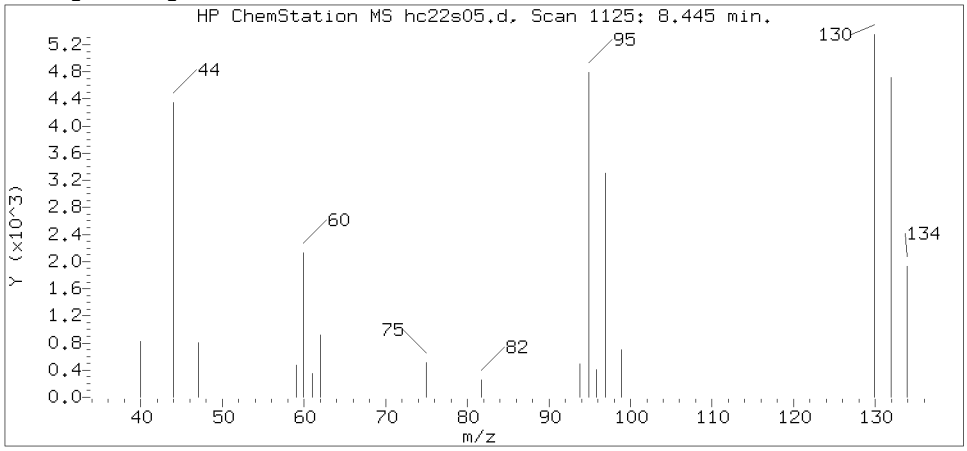
Reference Standard Spectrum for Trichloroethene

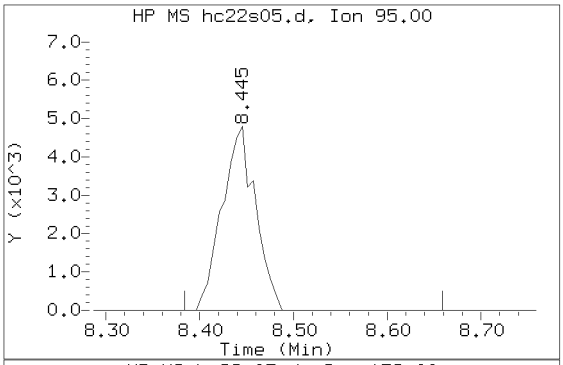


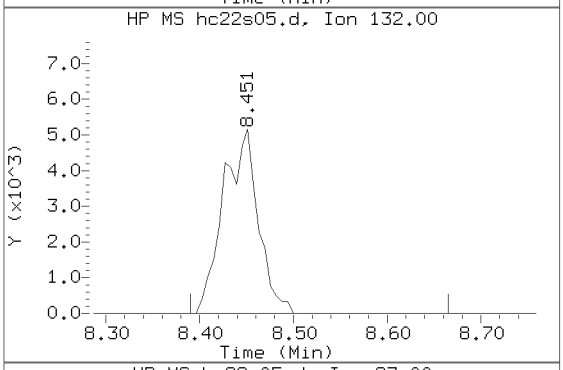
Sample Spectrum (Background Subtracted)

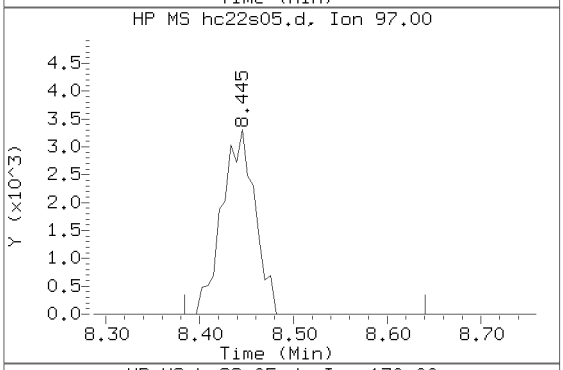


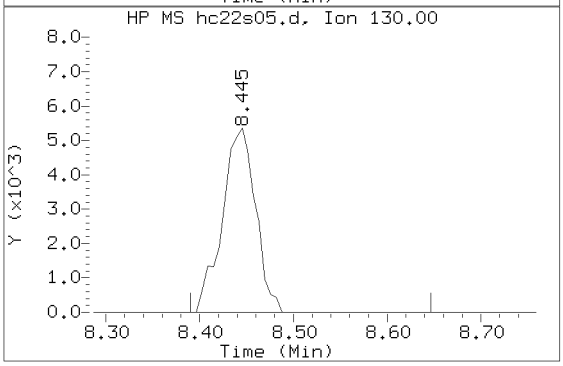
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1125
Retention Time (minutes): 8.445
Relative Retention Time :-0.00081
Quant Ion : 95.00
Area (flag) : 11906
On-Column Amount (ng) : 0.1941

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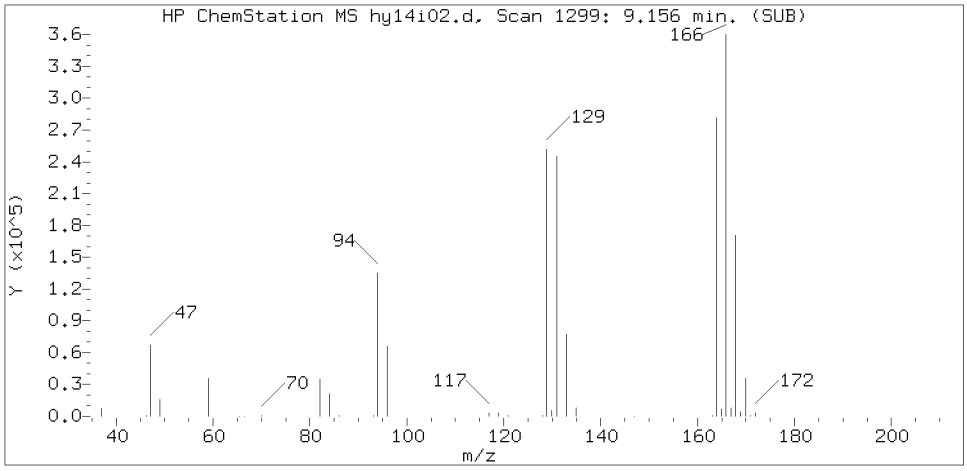
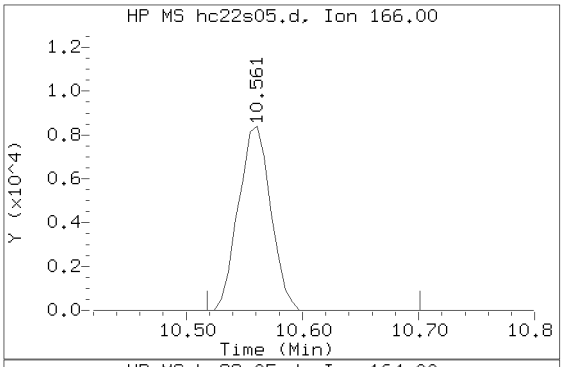
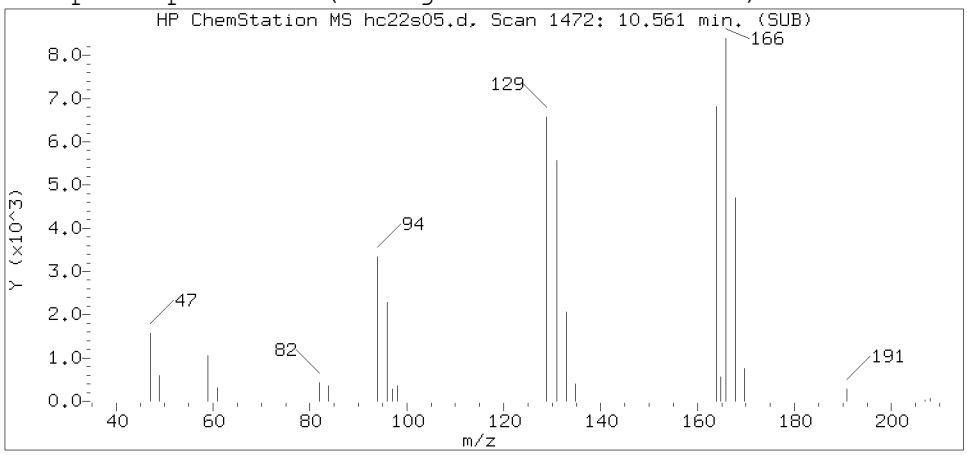
Target 3.5 esignature user ID: jkh09052

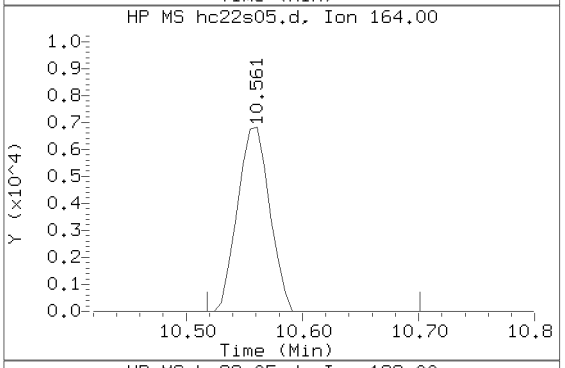
Reference Standard Spectrum for Tetrachloroethene

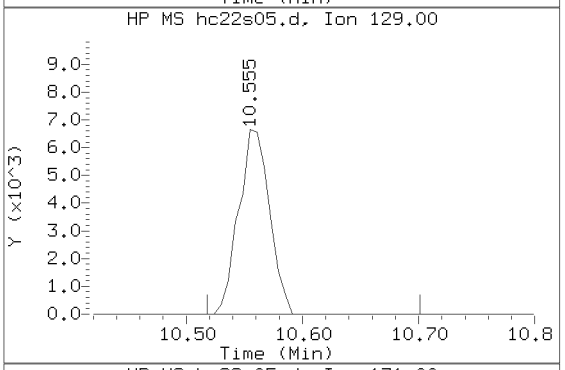




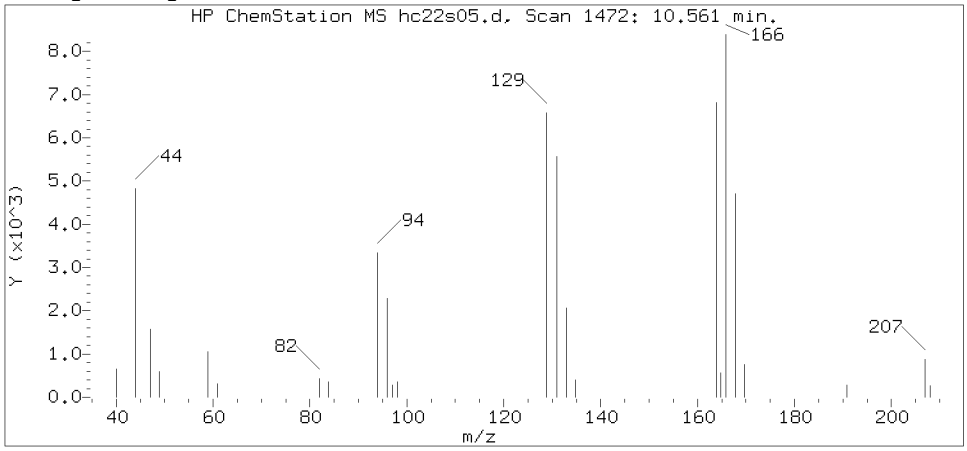
Sample Spectrum (Background Subtracted)

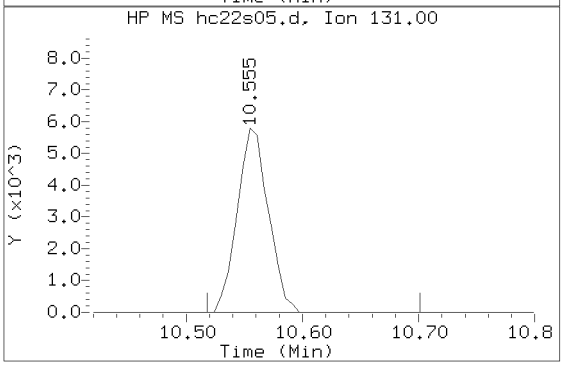






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s05.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:36 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:19 jkh09052

Sample Name: 94280 Lab Sample ID: 9850249

Compound Number	: 89
Compound Name	: Tetrachloroethene
Scan Number	: 1472
Retention Time (minutes)	: 10.561
Relative Retention Time	: 0.00000
Quant Ion	: 166.00
Area (flag)	: 16125
On-Column Amount (ng)	: 0.2440

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

94281 Lancaster Laboratories 9850250
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct22a.b/hc22s07.d Injection date and time: **22-OCT-2018 13:19**
Data file Sample Info. Line: 94281;9850250;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(-0.006)	475	65	118273	(1)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2560192	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1984506	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1054547	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	647975	10.042	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	117207	10.419	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2542251	9.953	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	899189	9.669	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.422	(0.000)	59	143479	3.650	3.65		J	0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(-0.000)	63	19985	0.185	0.19		J	0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s07.d Injection date and time: **22-OCT-2018 13:19**
Data file Sample Info. Line: 94281;9850250;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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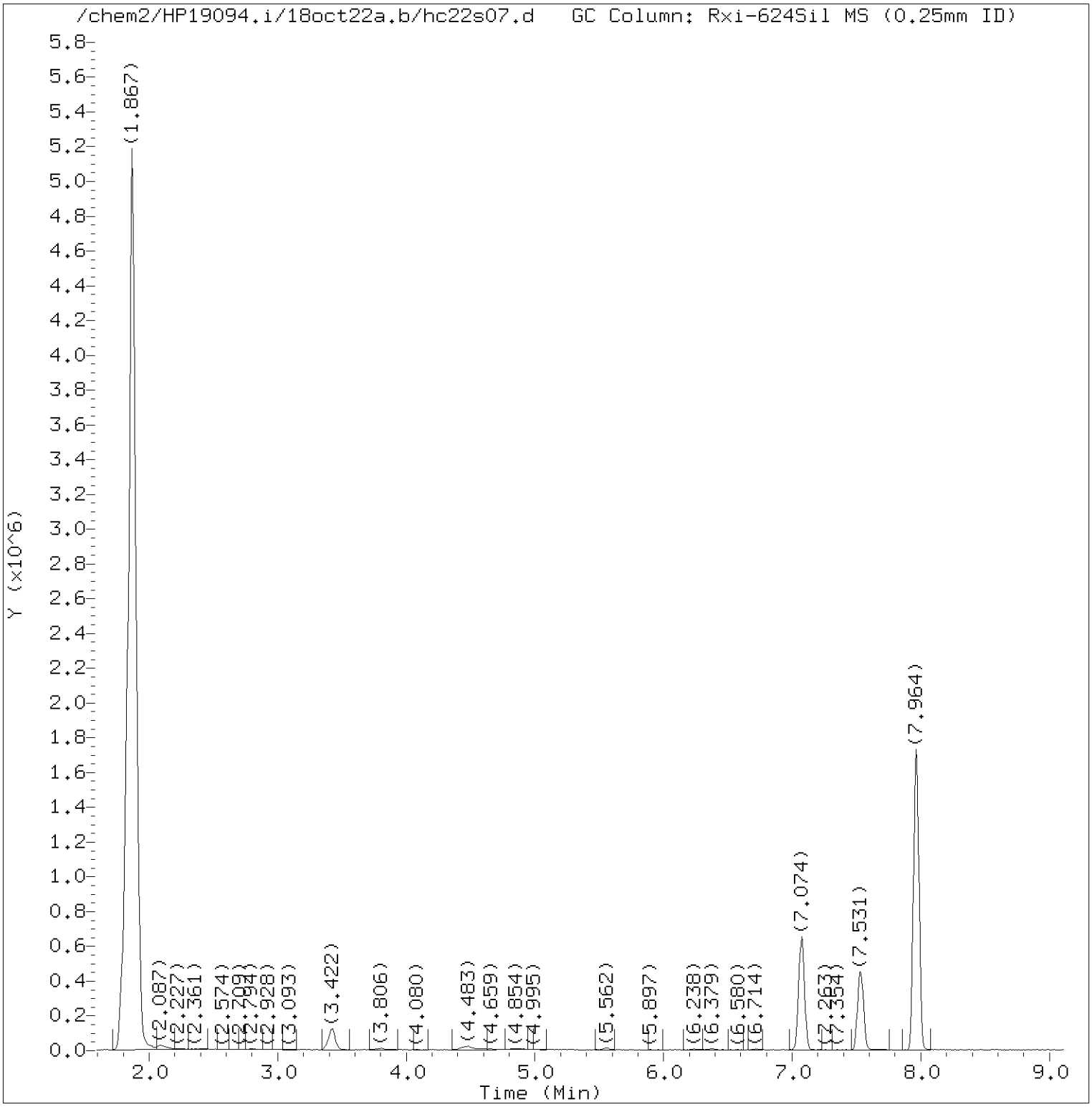
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

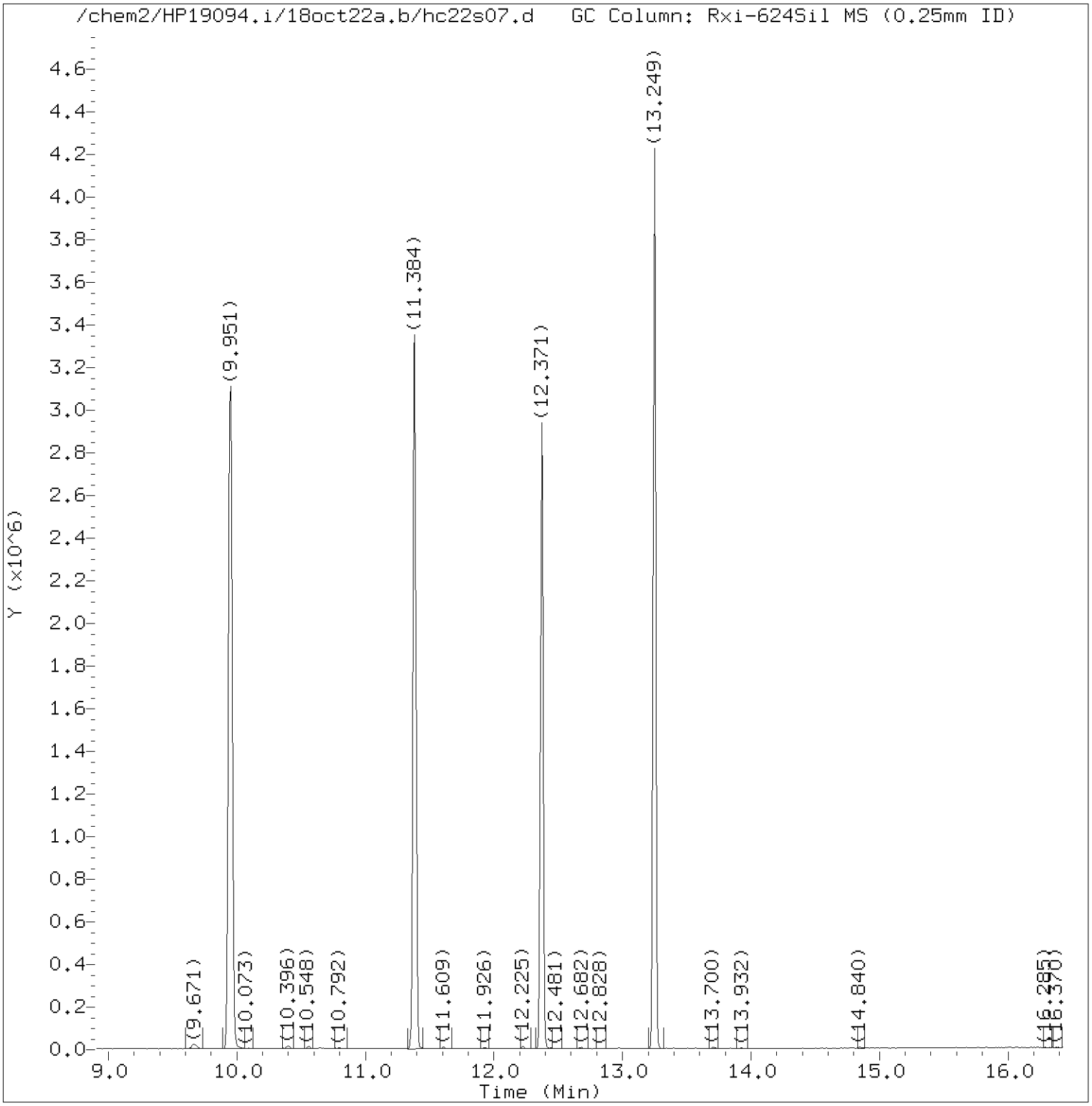
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Sample Name: 94281 Lab Sample ID: 9850250

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Sample Name: 94281 Lab Sample ID: 9850250

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

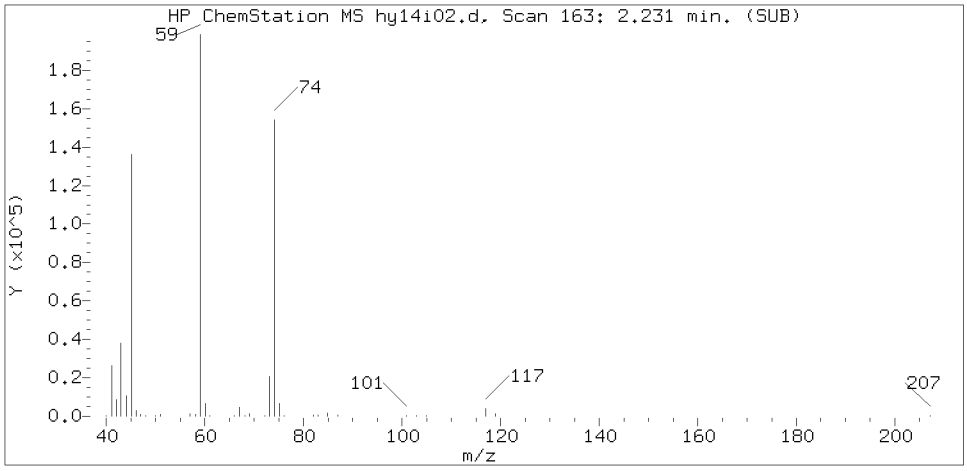
Sample Name: 94281 Lab Sample ID: 9850250

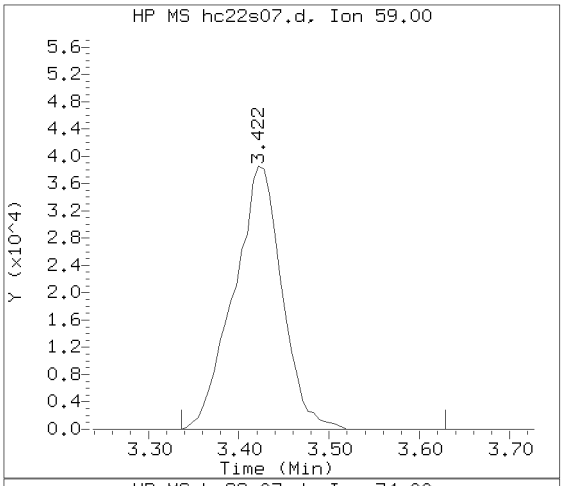
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
11) Ethyl ether	(2)	3.422	59	143479	3.650
26)*t-Butyl Alcohol-d10	(1)	4.483	65	118273	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	19985	0.185
50)$Dibromofluoromethane	(2)	7.074	113	647975	10.042
57)$1,2-Dichloroethane-d4	(2)	7.537	102	117207	10.419
63)*Fluorobenzene	(2)	7.964	96	2560192	10.000
82)$Toluene-d8	(3)	9.951	98	2542251	9.953
97)*Chlorobenzene-d5	(3)	11.384	117	1984506	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	899189	9.669
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1054547	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

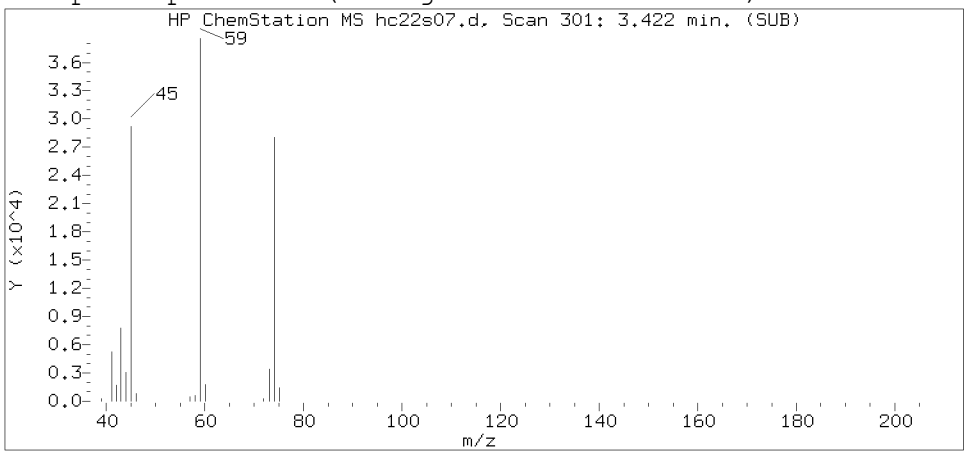
Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

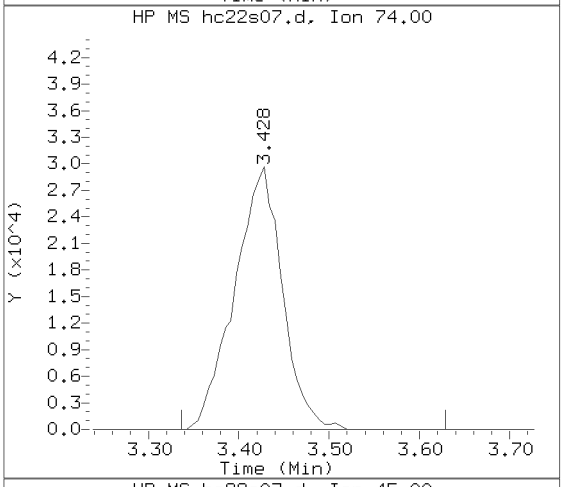
Reference Standard Spectrum for Ethyl ether



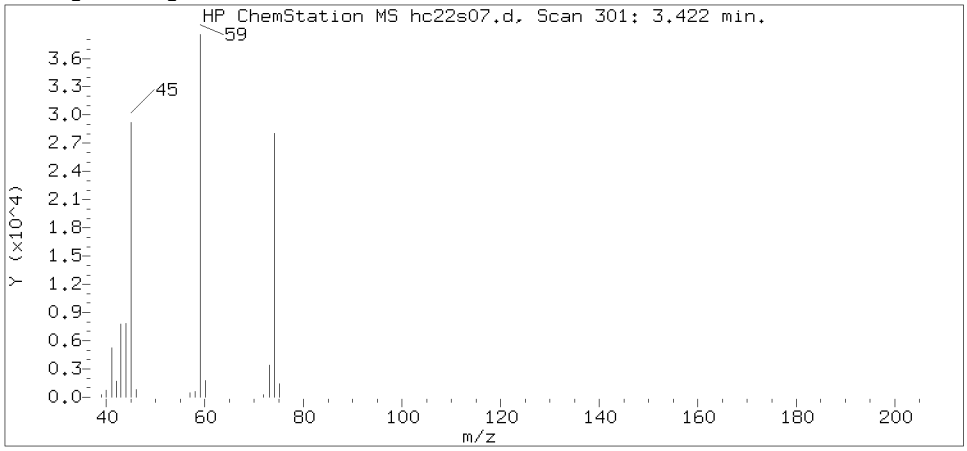


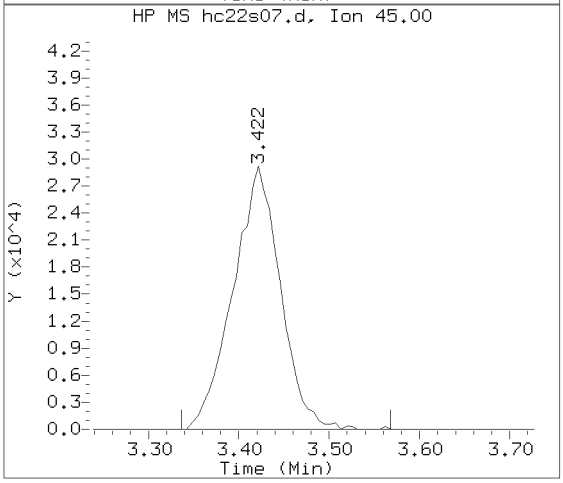
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Sample Name: 94281 Lab Sample ID: 9850250

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 301
Retention Time (minutes)	: 3.422
Relative Retention Time	: 0.00044
Quant Ion	: 59.00
Area (flag)	: 143479
On-Column Amount (ng)	: 3.6503

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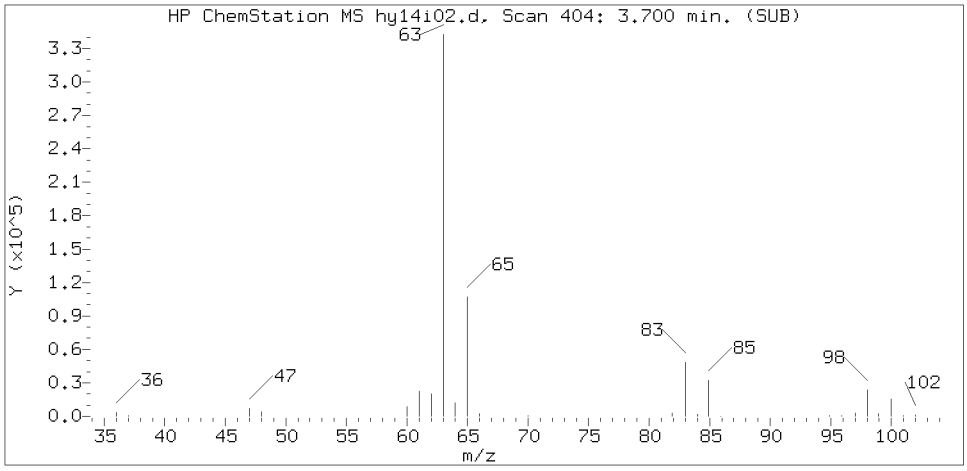
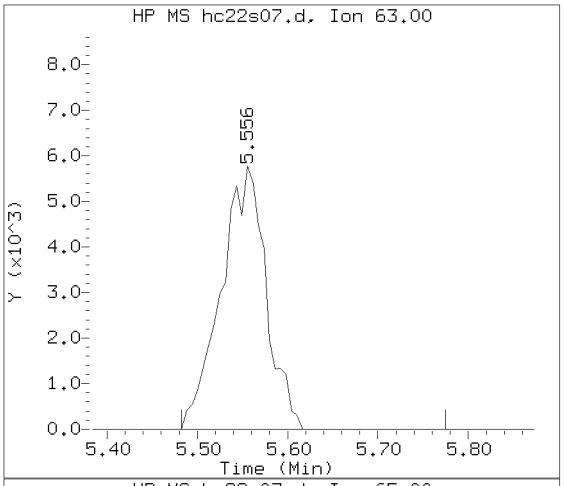
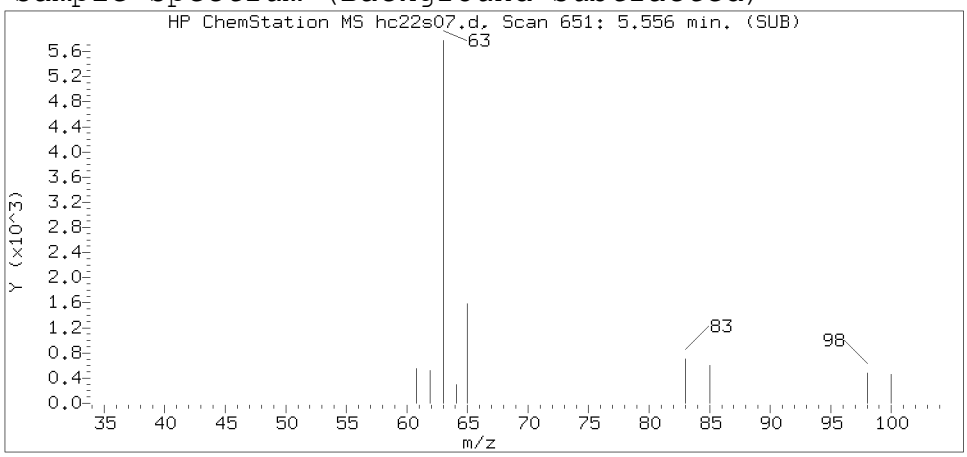
Target 3.5 esignature user ID: jkh09052

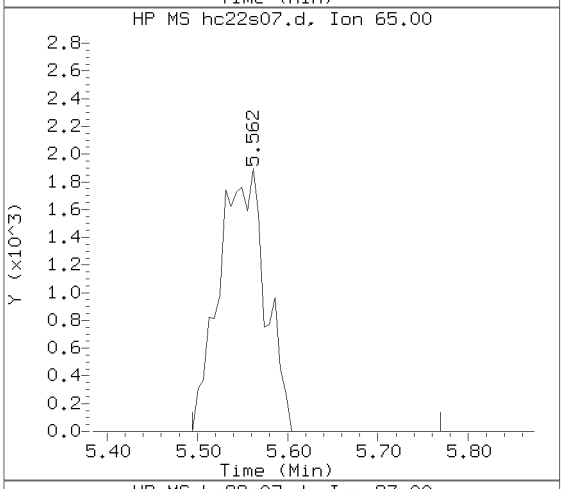
Reference Standard Spectrum for 1,1-Dichloroethane



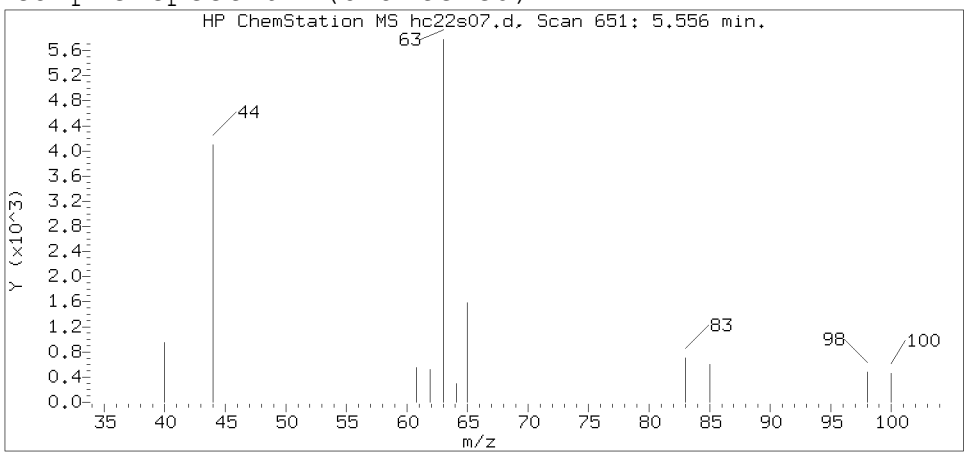


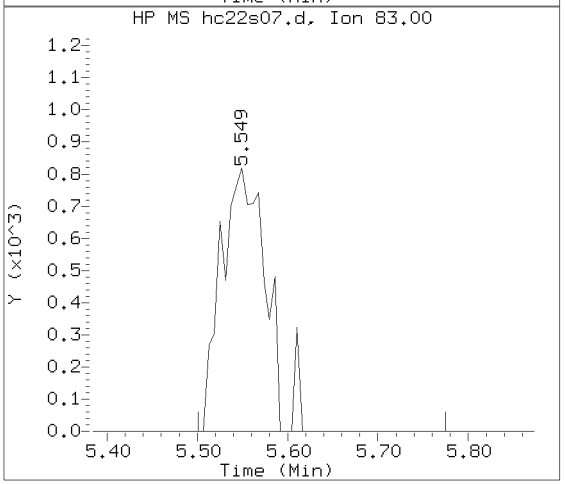
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s07.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:22 jkh09052

Sample Name: 94281 Lab Sample ID: 9850250

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 651
Retention Time (minutes): 5.556
Relative Retention Time :-0.00053
Quant Ion : 63.00
Area (flag) : 19985
On-Column Amount (ng) : 0.1853

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Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s08.d Injection date and time: **22-OCT-2018 13:41**
Data file Sample Info. Line: 94282;9850251;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.501	(-0.024)	478	65	96612	(-18)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2563826	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	2000219	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1057618	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(-0.001)	113	650272	10.063	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	117239	10.407	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2541661	9.873	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	896293	9.563	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)	2.849	(-0.001)	64	66873	1.200	1.20			0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.434	(-0.001)	59	1540778	39.144	39.14		E	0.05	13
15) 1,1-Dichloroethene	(2)	3.763	(-0.001)	96	8391	0.167	0.17		J	0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)	4.476	(-0.001)	84	4173	0.074	0.07		J	0.07	1
33) 1,1-Dichloroethane	(2)	5.555	(-0.000)	63	534039	4.944	4.94			0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)	7.567	(-0.000)	78	54126	0.225	0.22		J	0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

E = Compound concentration above calibration range.

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s08.d Injection date and time: **22-OCT-2018 13:41**
Data file Sample Info. Line: 94282;9850251;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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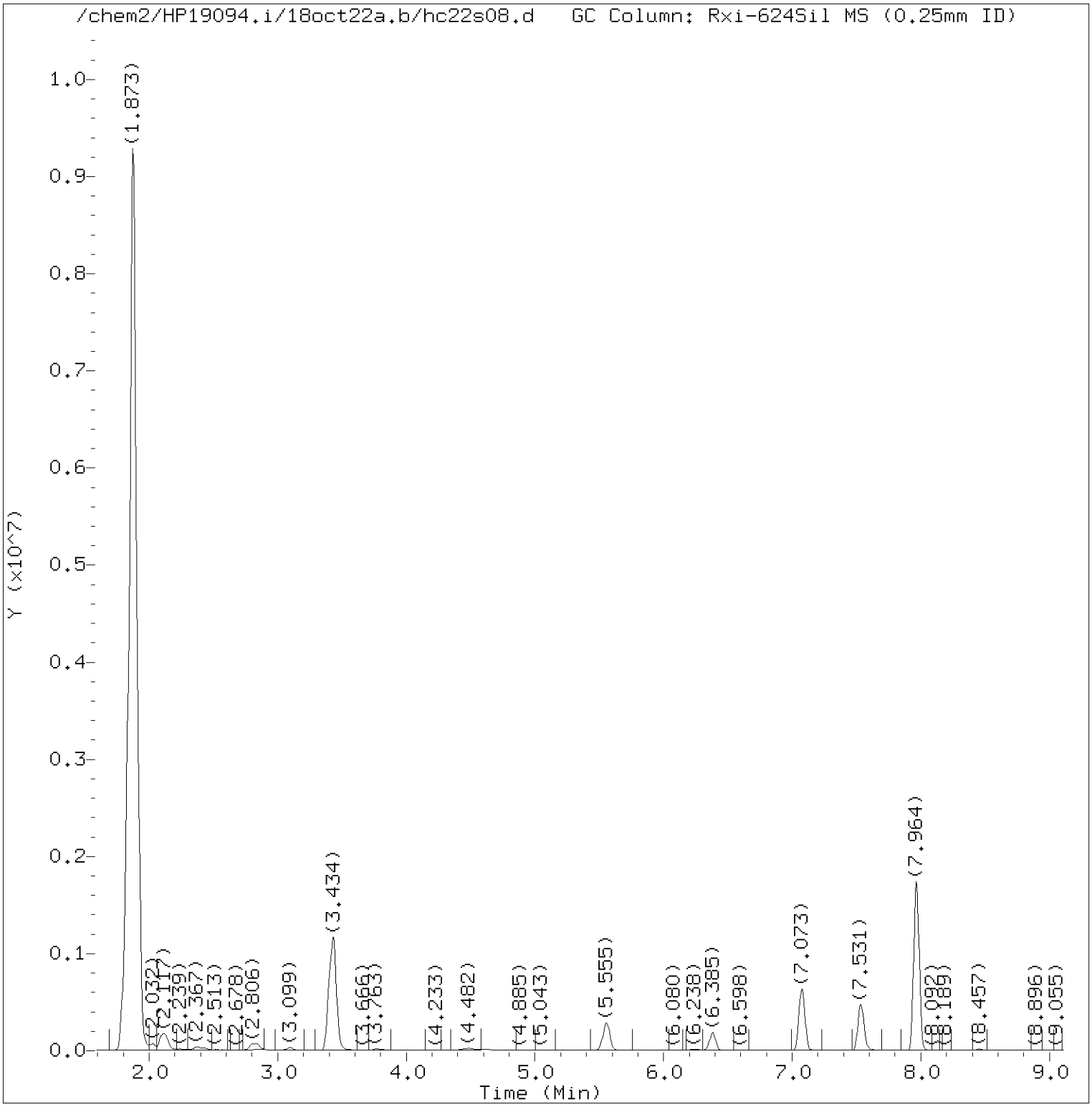
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

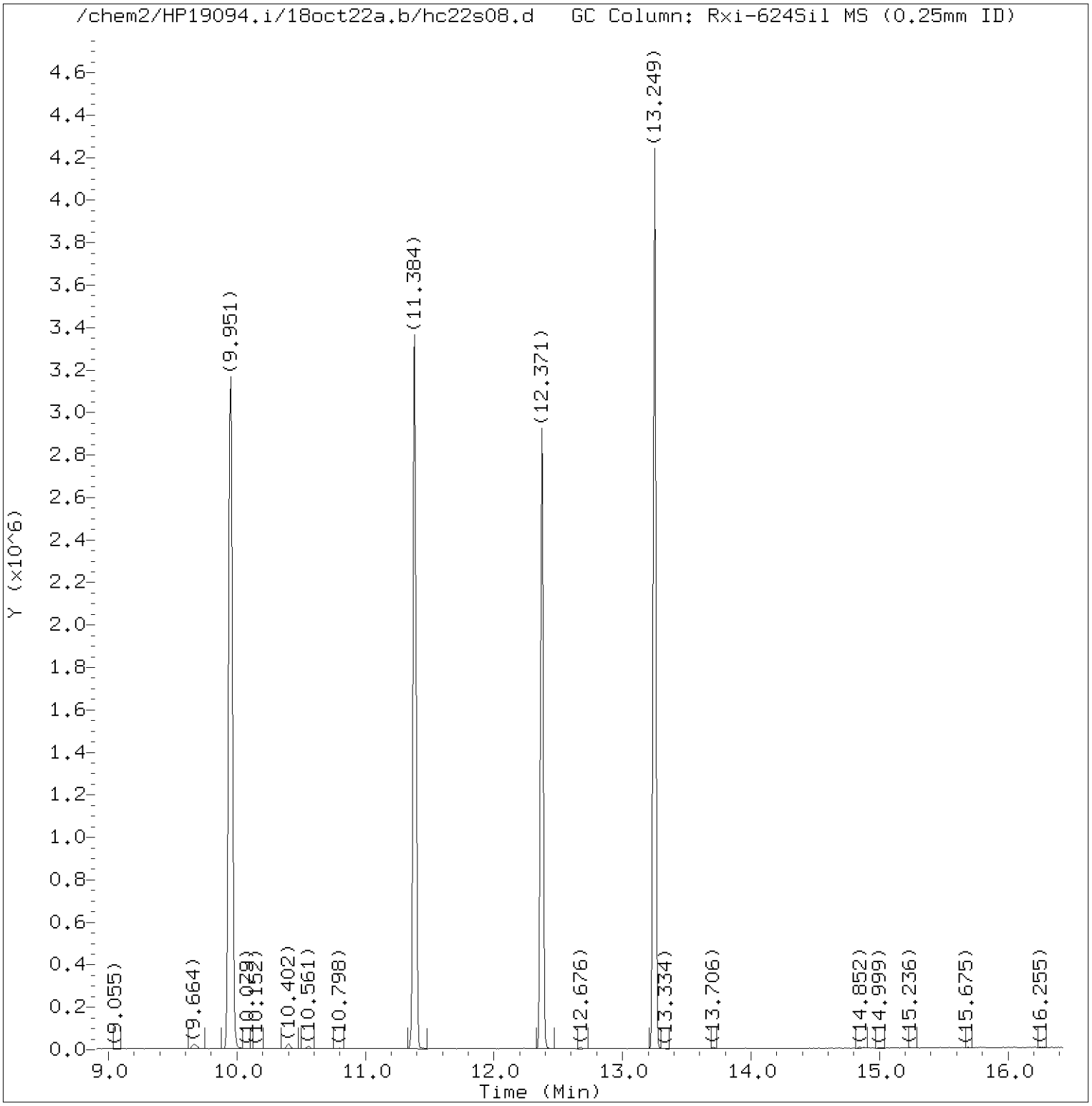
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

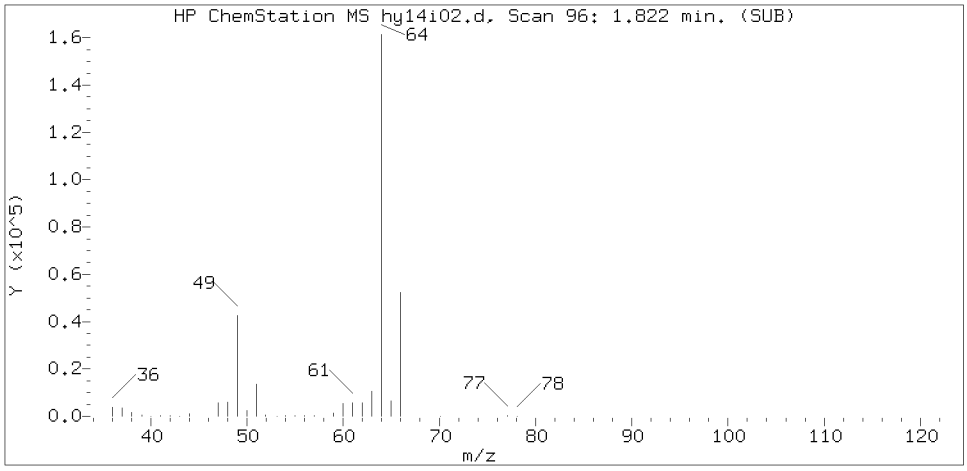
Sample Name: 94282 Lab Sample ID: 9850251

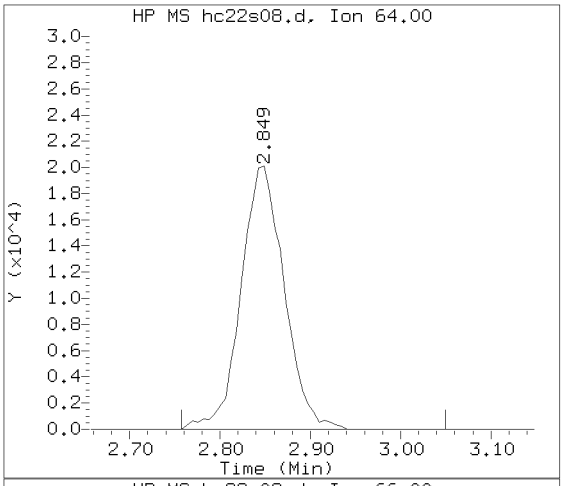
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
8) Chloroethane	(2)	2.849	64	66873	1.200
11) Ethyl ether	(2)	3.434	59	1540778	39.144
15) 1,1-Dichloroethene	(2)	3.763	96	8391	0.167
23) Methylene Chloride	(2)	4.476	84	4173	0.074
26)*t-Butyl Alcohol-d10	(1)	4.501	65	96612	50.000
33) 1,1-Dichloroethane	(2)	5.555	63	534039	4.944
50)$Dibromofluoromethane	(2)	7.080	113	650272	10.063
57)$1,2-Dichloroethane-d4	(2)	7.537	102	117239	10.407
58) Benzene	(2)	7.567	78	54126	0.225
63)*Fluorobenzene	(2)	7.964	96	2563826	10.000
82)$Toluene-d8	(3)	9.951	98	2541661	9.873
97)*Chlorobenzene-d5	(3)	11.384	117	2000219	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	896293	9.563
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1057618	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

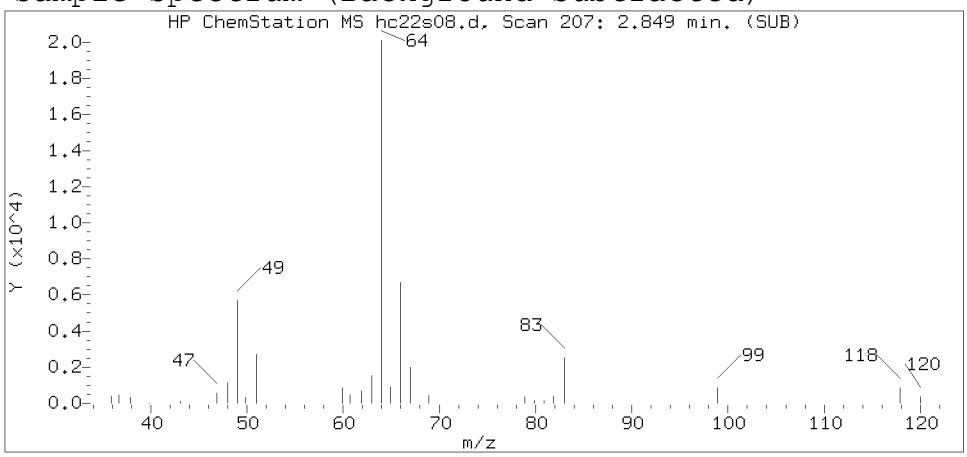
Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

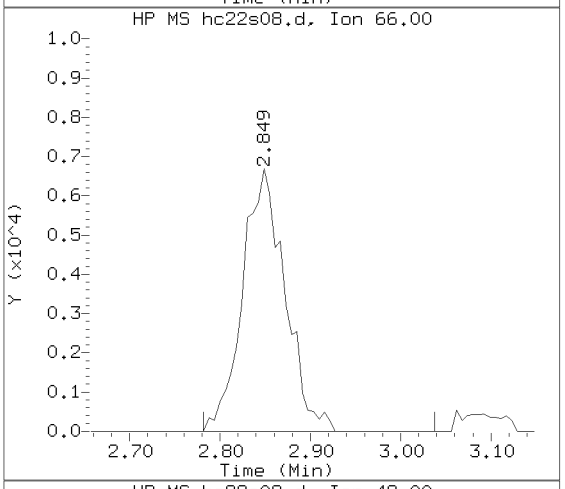
Reference Standard Spectrum for Chloroethane



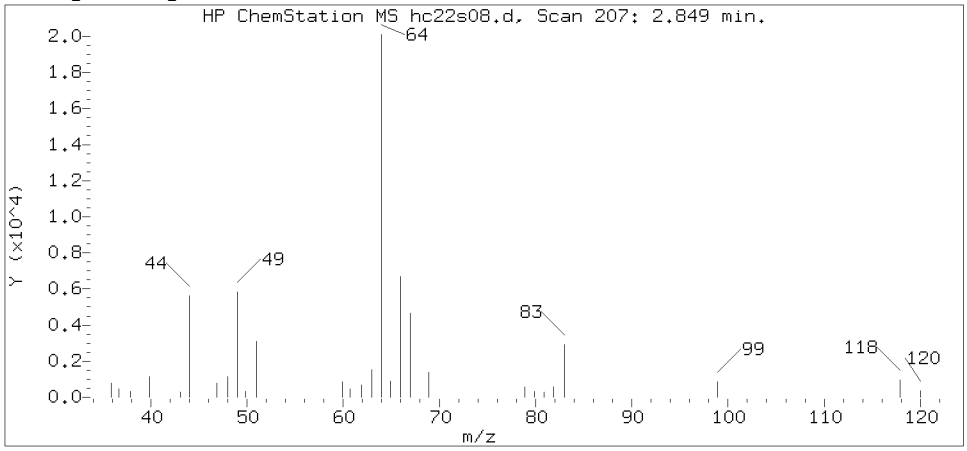


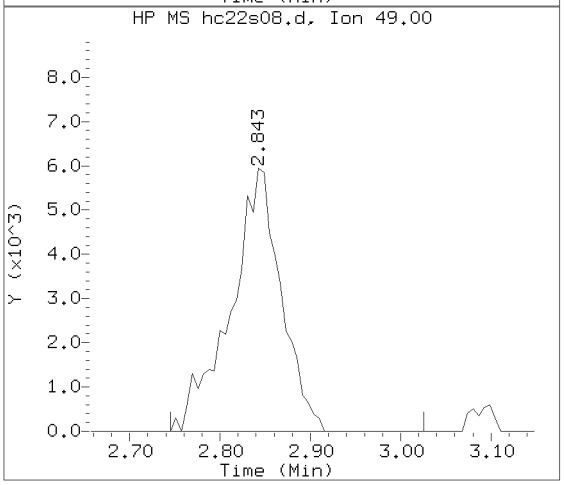
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

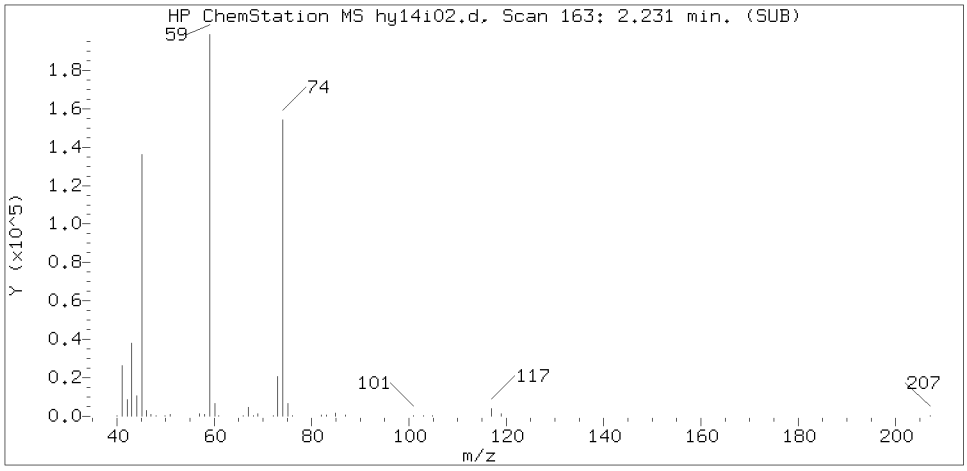
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

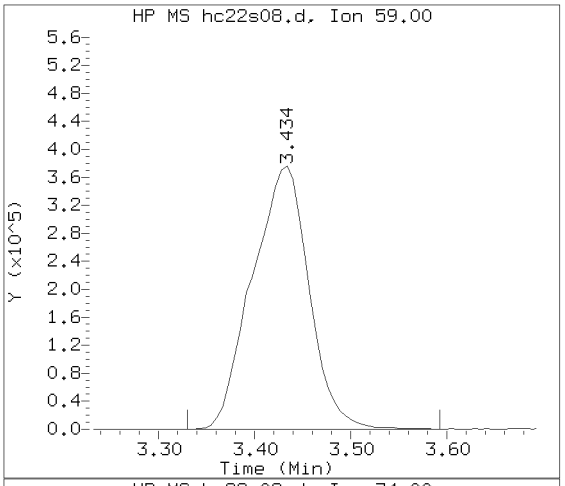
Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 207
Retention Time (minutes): 2.849
Relative Retention Time :-0.00103
Quant Ion : 64.00
Area (flag) : 66873
On-Column Amount (ng) : 1.1998

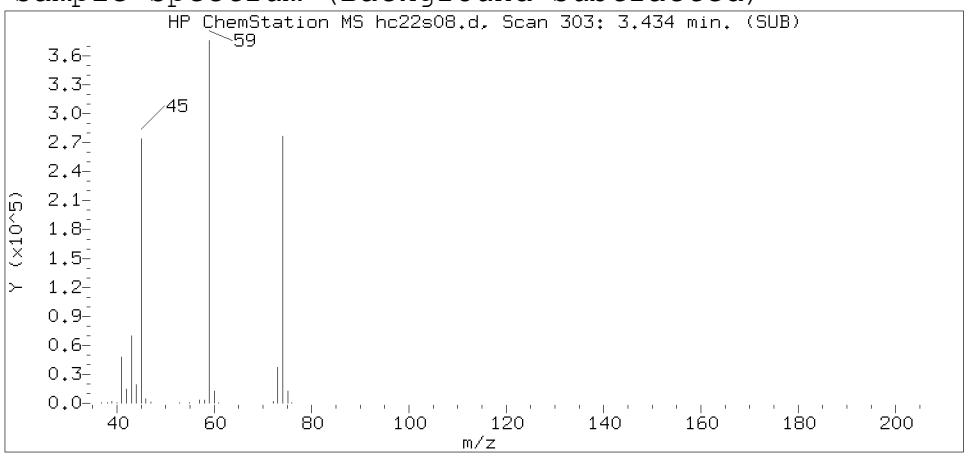
Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

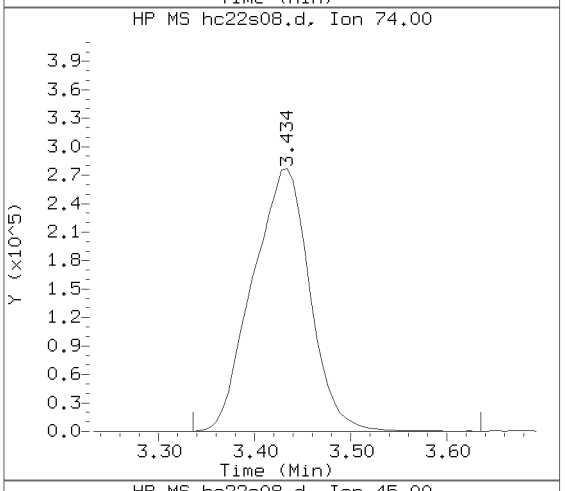
Reference Standard Spectrum for Ethyl ether



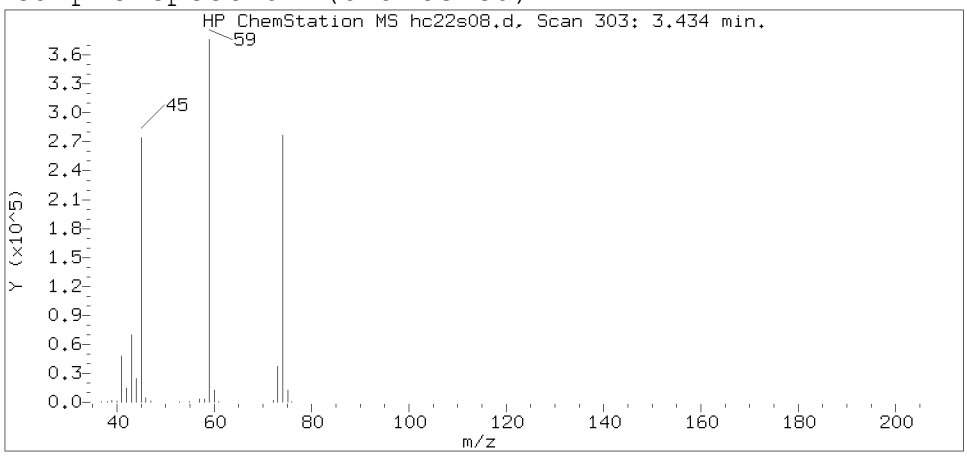


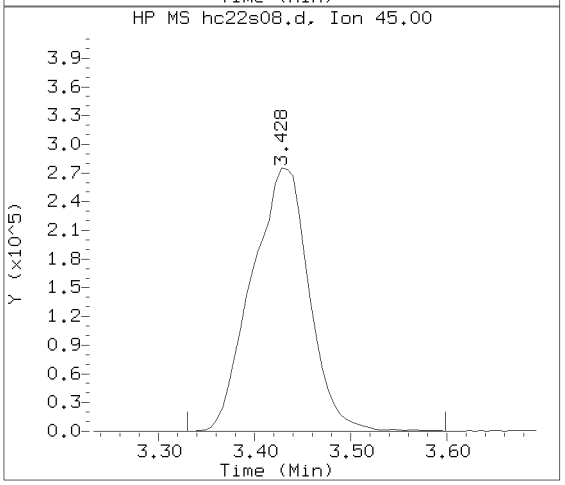
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 303
Retention Time (minutes): 3.434
Relative Retention Time :-0.00108
Quant Ion : 59.00
Area (flag) : 1540778
On-Column Amount (ng) : 39.1440

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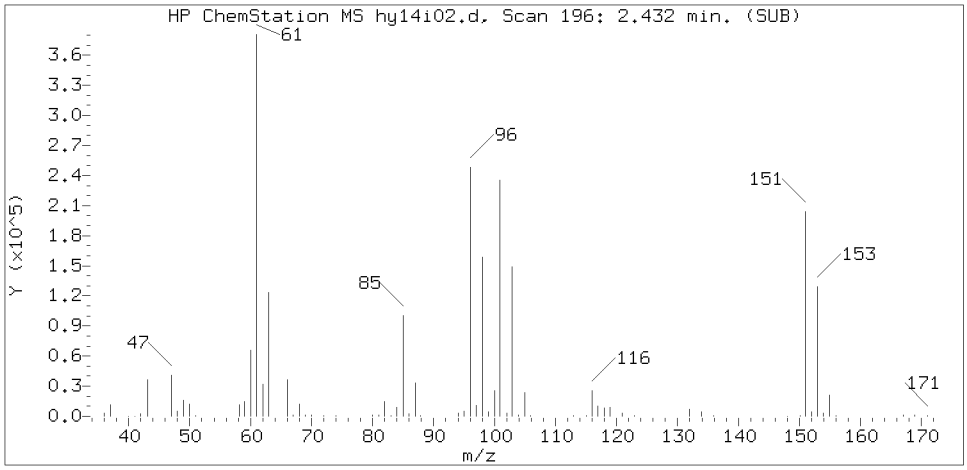
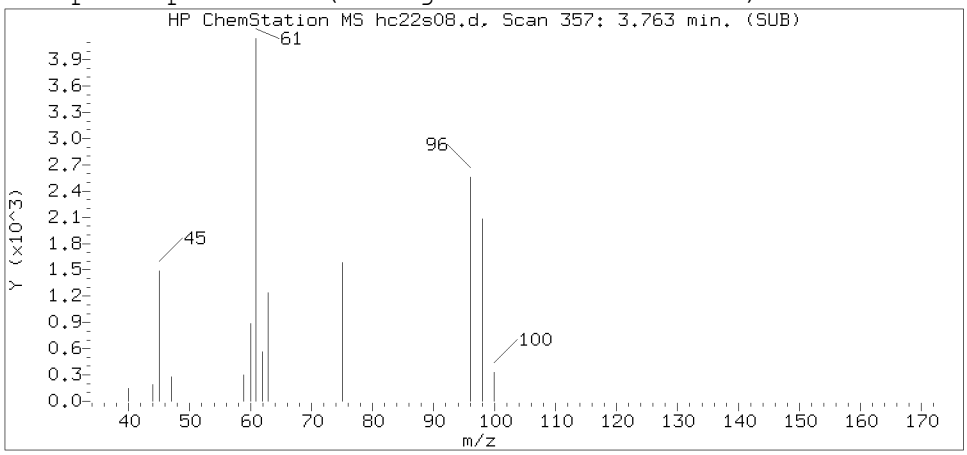
Target 3.5 esignature user ID: jkh09052

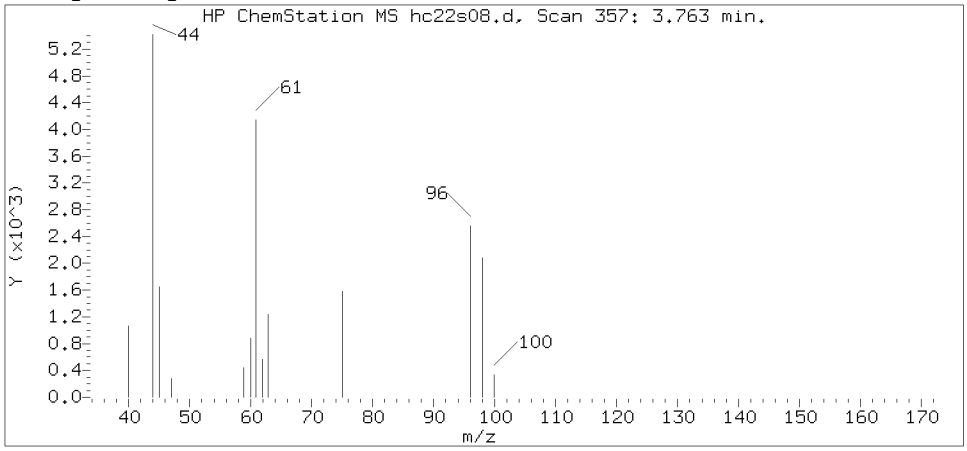
Reference Standard Spectrum for 1,1-Dichloroethene

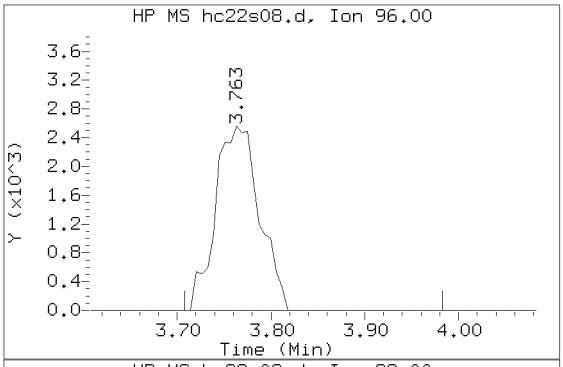


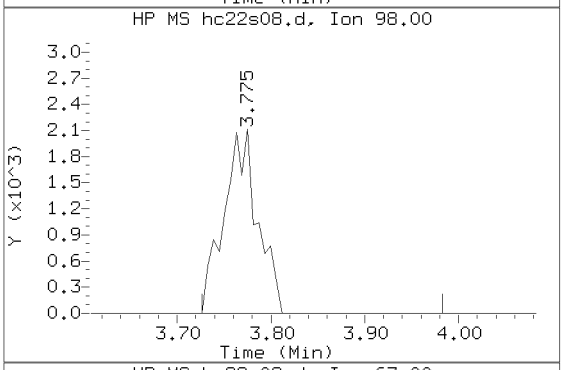
Sample Spectrum (Background Subtracted)

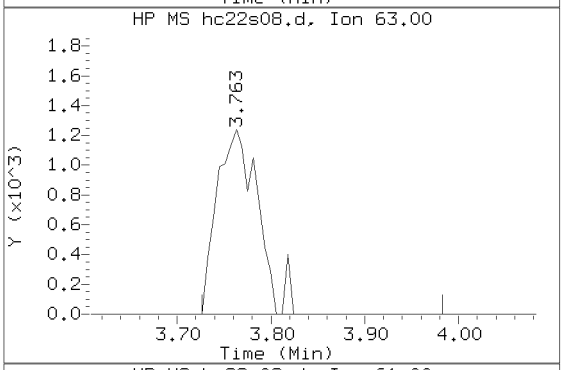


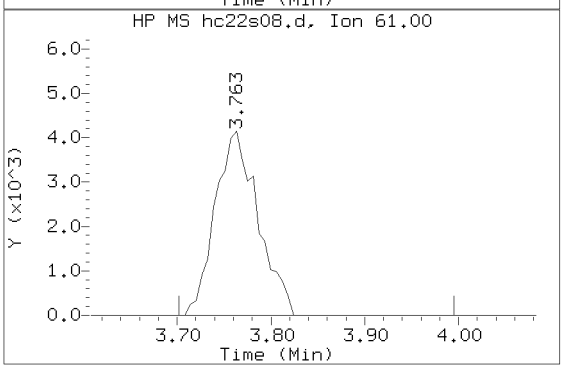
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 357
Retention Time (minutes): 3.763
Relative Retention Time :-0.00112
Quant Ion : 96.00
Area (flag) : 8391
On-Column Amount (ng) : 0.1669

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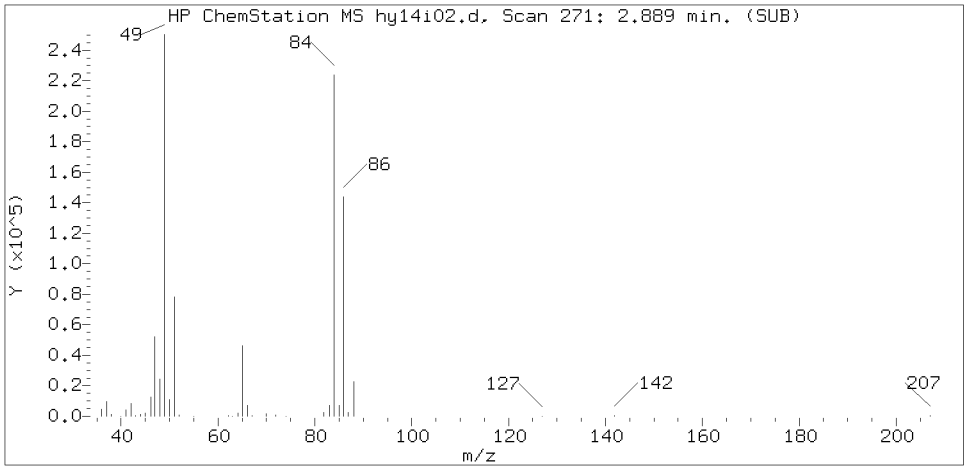
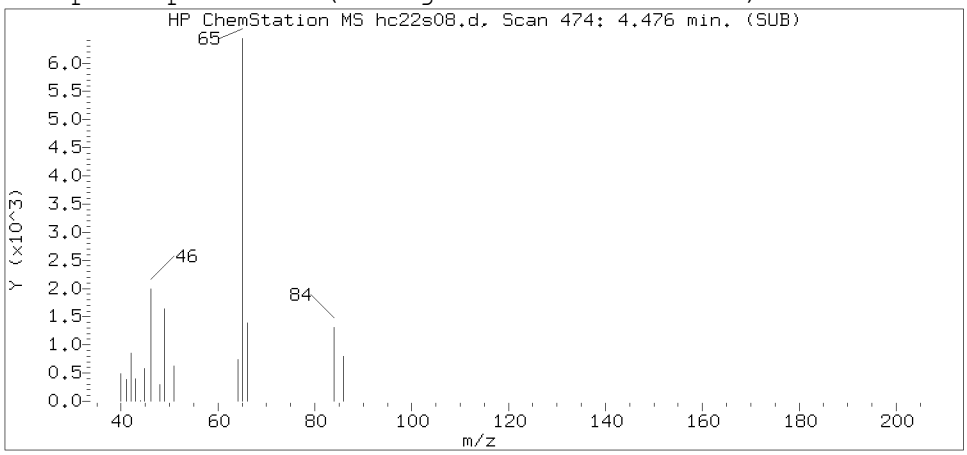
Target 3.5 esignature user ID: jkh09052

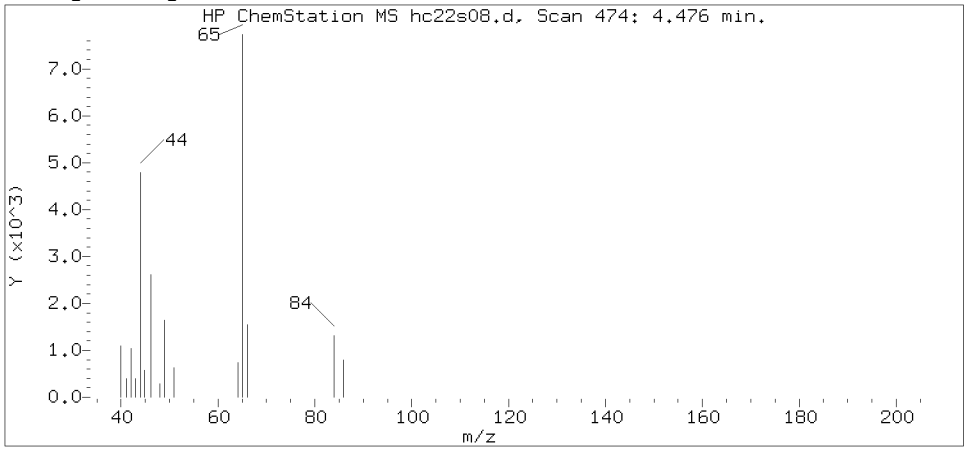
Reference Standard Spectrum for Methylene Chloride

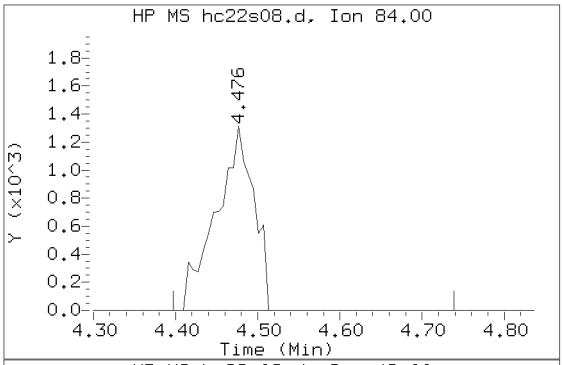


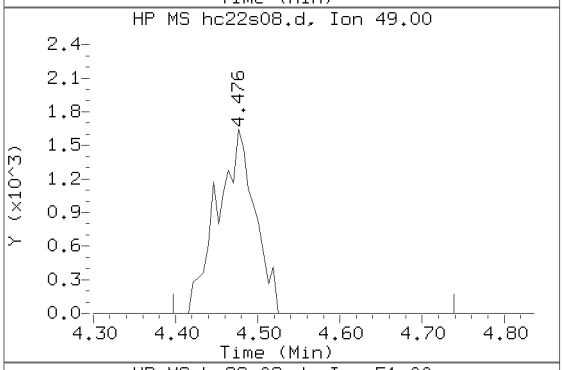
Sample Spectrum (Background Subtracted)

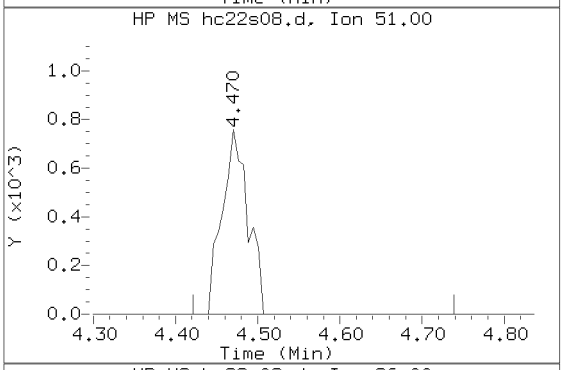


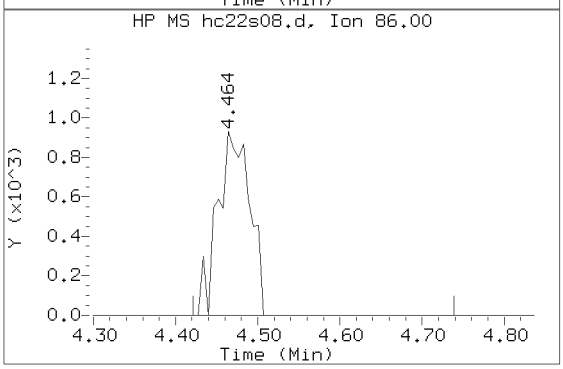
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 23
Compound Name : Methylene Chloride
Scan Number : 474
Retention Time (minutes): 4.476
Relative Retention Time :-0.00119
Quant Ion : 84.00
Area (flag) : 4173
On-Column Amount (ng) : 0.0736

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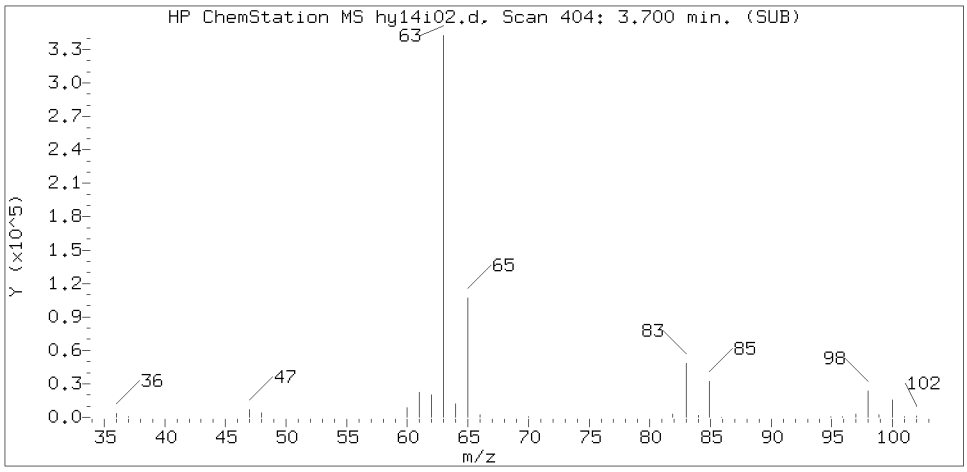
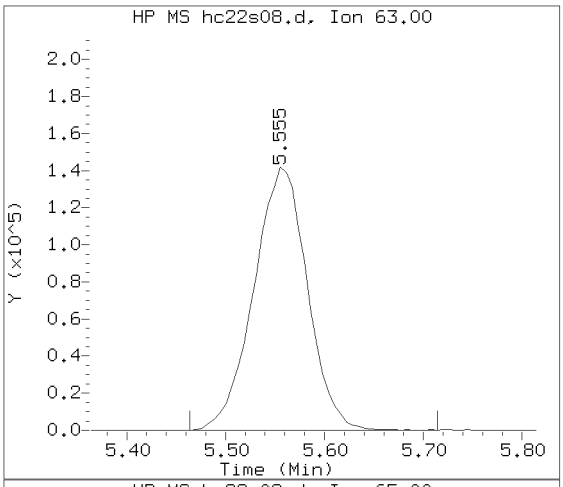
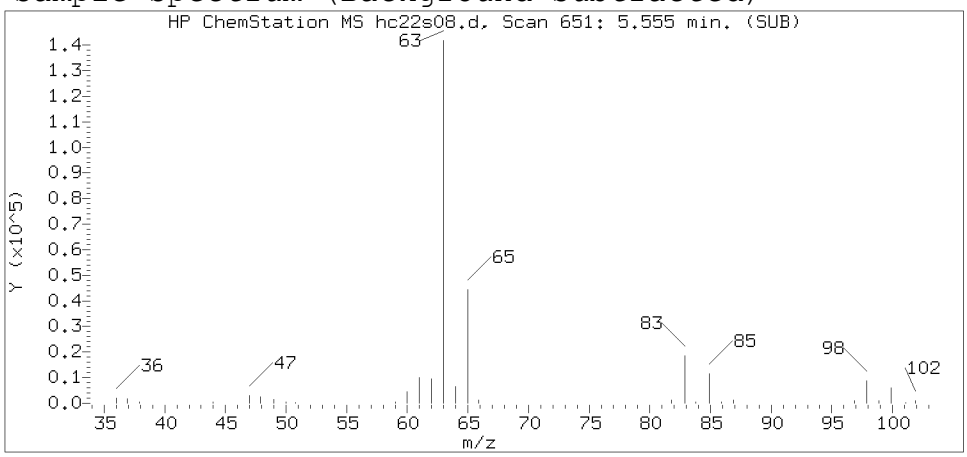
Target 3.5 esignature user ID: jkh09052

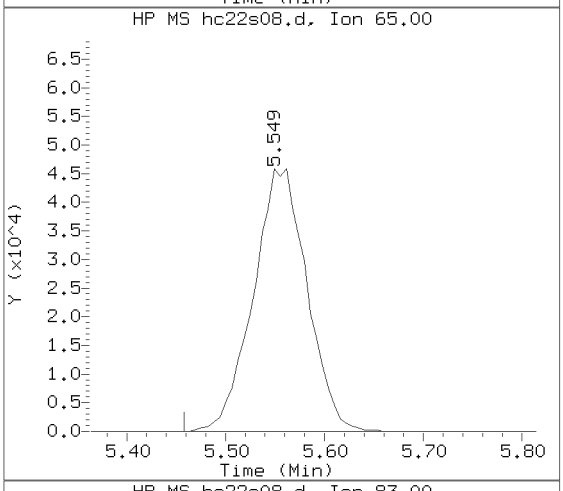
Reference Standard Spectrum for 1,1-Dichloroethane



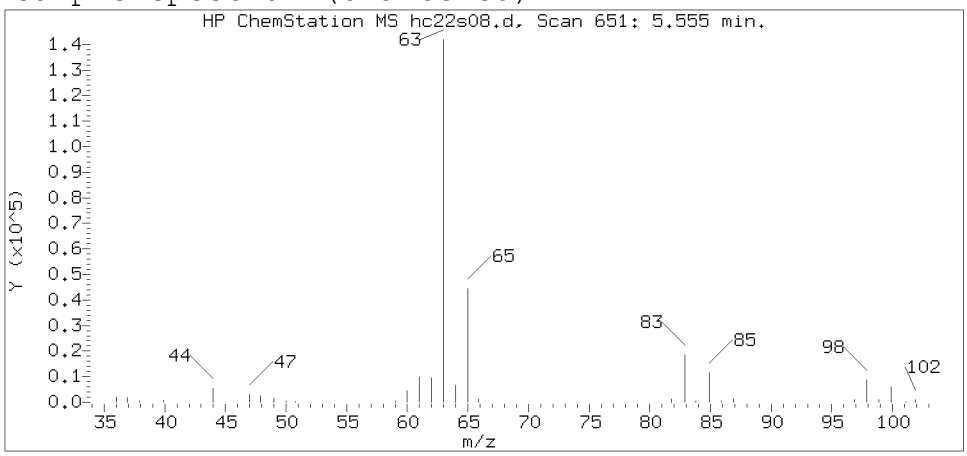


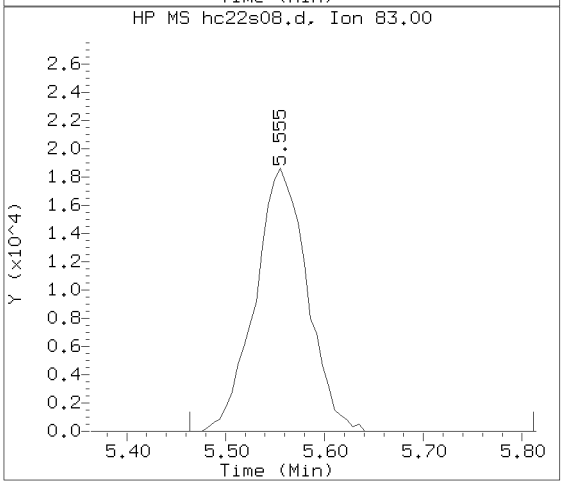
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 651
Retention Time (minutes): 5.555
Relative Retention Time :-0.00053
Quant Ion : 63.00
Area (flag) : 534039
On-Column Amount (ng) : 4.9438

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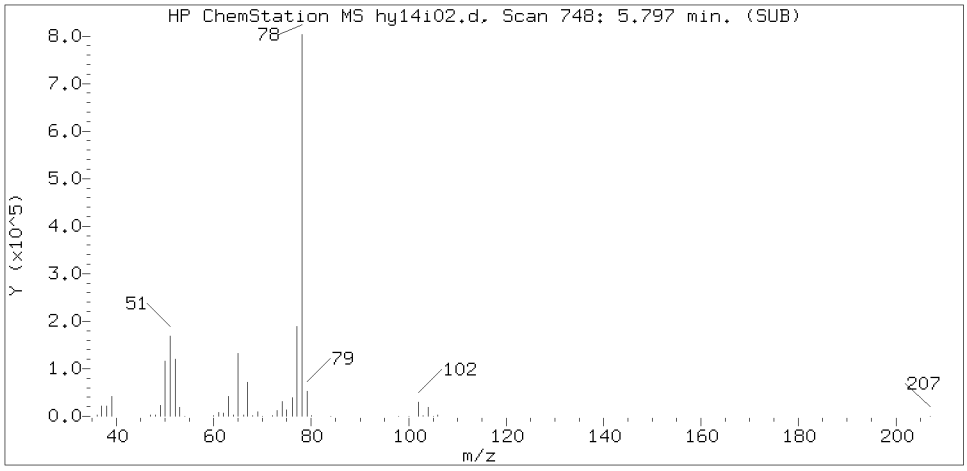
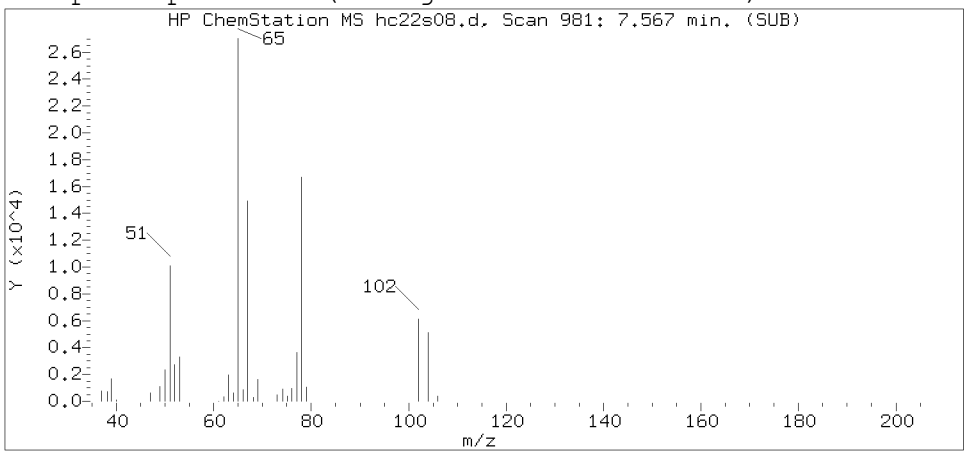
Target 3.5 esignature user ID: jkh09052

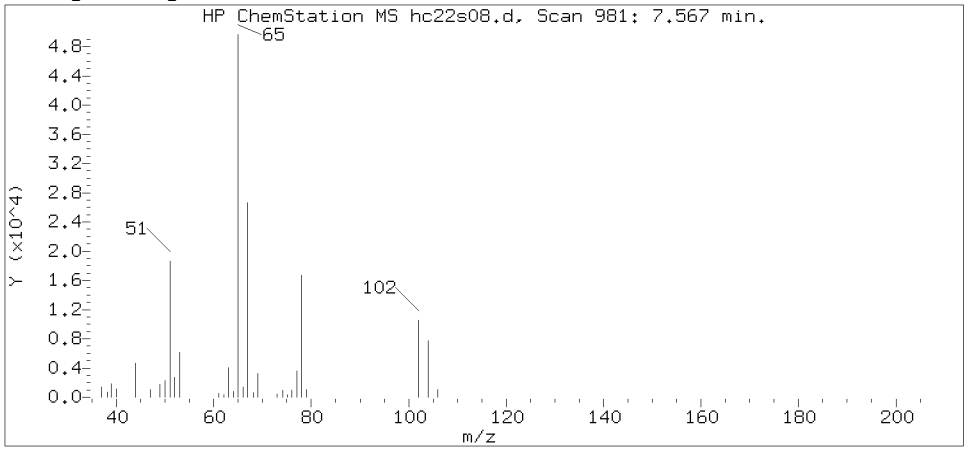
Reference Standard Spectrum for Benzene

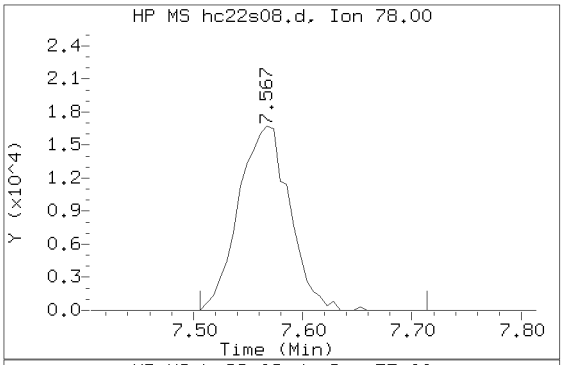


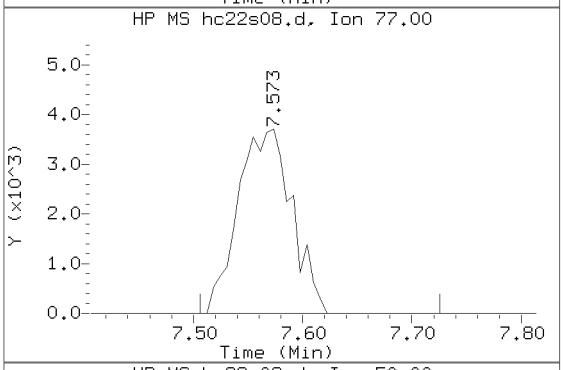
Sample Spectrum (Background Subtracted)

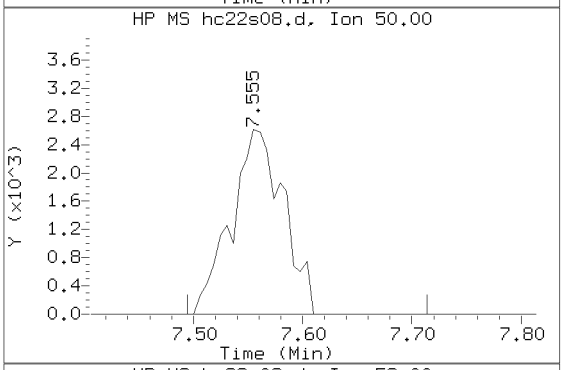


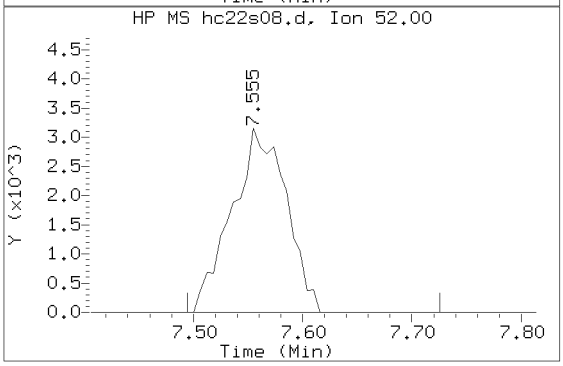
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s08.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 13:41 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:24 jkh09052

Sample Name: 94282 Lab Sample ID: 9850251

Compound Number : 58
Compound Name : Benzene
Scan Number : 981
Retention Time (minutes): 7.567
Relative Retention Time :-0.00073
Quant Ion : 78.00
Area (flag) : 54126
On-Column Amount (ng) : 0.2249

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

94283 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850252

Data file: /chem2/HP19094.i/18oct22a.b/hc22s10.d Injection date and time: **22-OCT-2018 14:24**
Data file Sample Info. Line: 94283;9850252;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482	(-0.006)	475	65	114100	(-3)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2565613	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1972380	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1062449	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	649971	10.052	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	116131	10.302	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2527108	9.955	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	890877	9.639	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)	2.842	(0.000)	64	54115	0.970	0.97		J	0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.434	(-0.000)	59	634457	16.107	16.11			0.05	13
15) 1,1-Dichloroethene	(2)	3.757	(0.000)	96	6286	0.125	0.12		J	0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)	4.470	(0.000)	84	3980	0.070	0.07		J	0.07	1
33) 1,1-Dichloroethane	(2)	5.562	(-0.000)	63	290704	2.689	2.69			0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)	6.720	(0.003)	71	2996	1.012	1.01		J	0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)	7.567	(0.000)	78	36226	0.150	0.15		J	0.05	1
67) Trichloroethene	(2)	8.451	(-0.000)	95	4751	0.077	0.08		J	0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)	10.554	(0.000)	166	8785	0.133	0.13		J	0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

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Data file: /chem2/HP19094.i/18oct22a.b/hc22s10.d Injection date and time: **22-OCT-2018 14:24**
Data file Sample Info. Line: 94283;9850252;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

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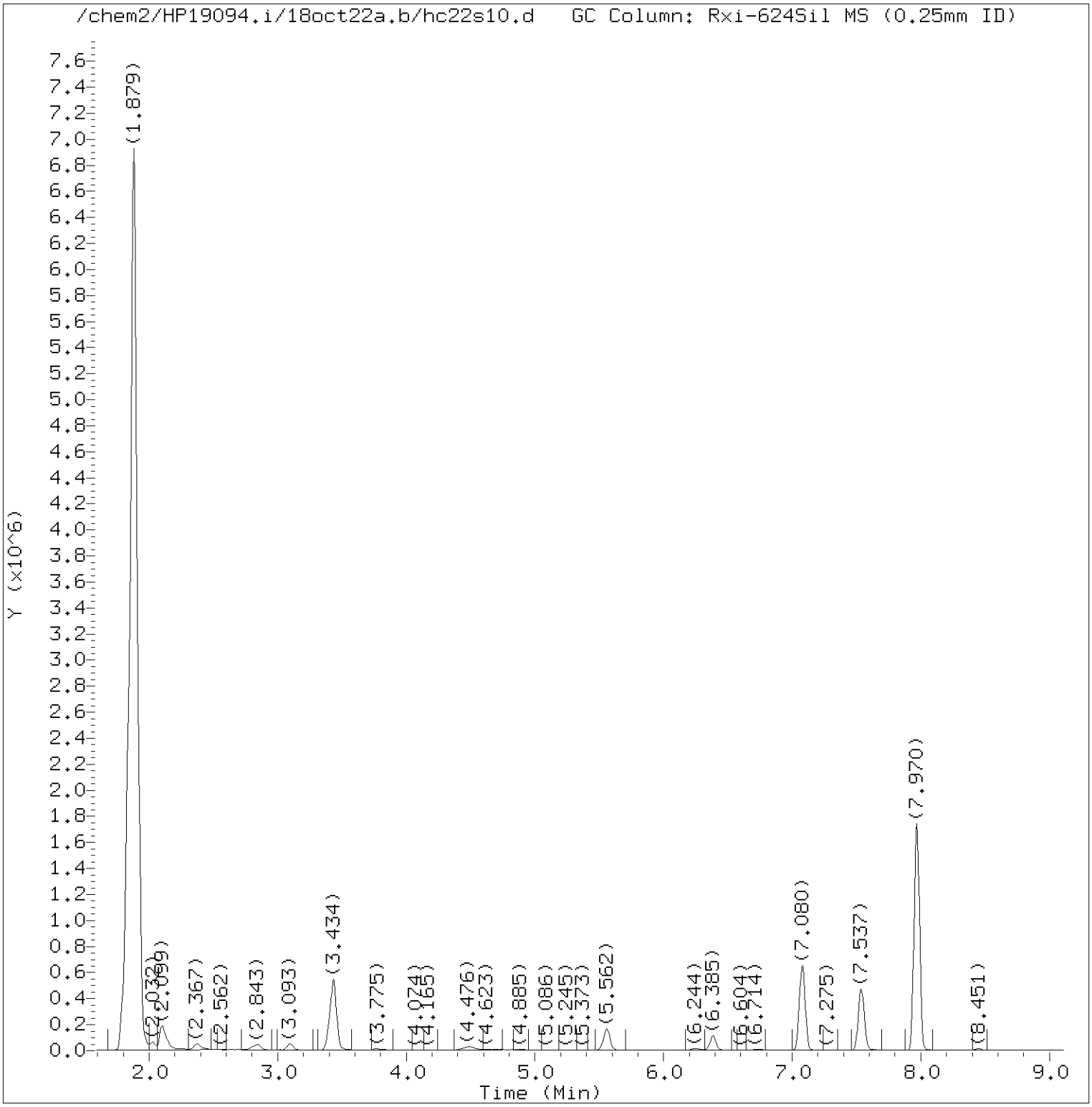
Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

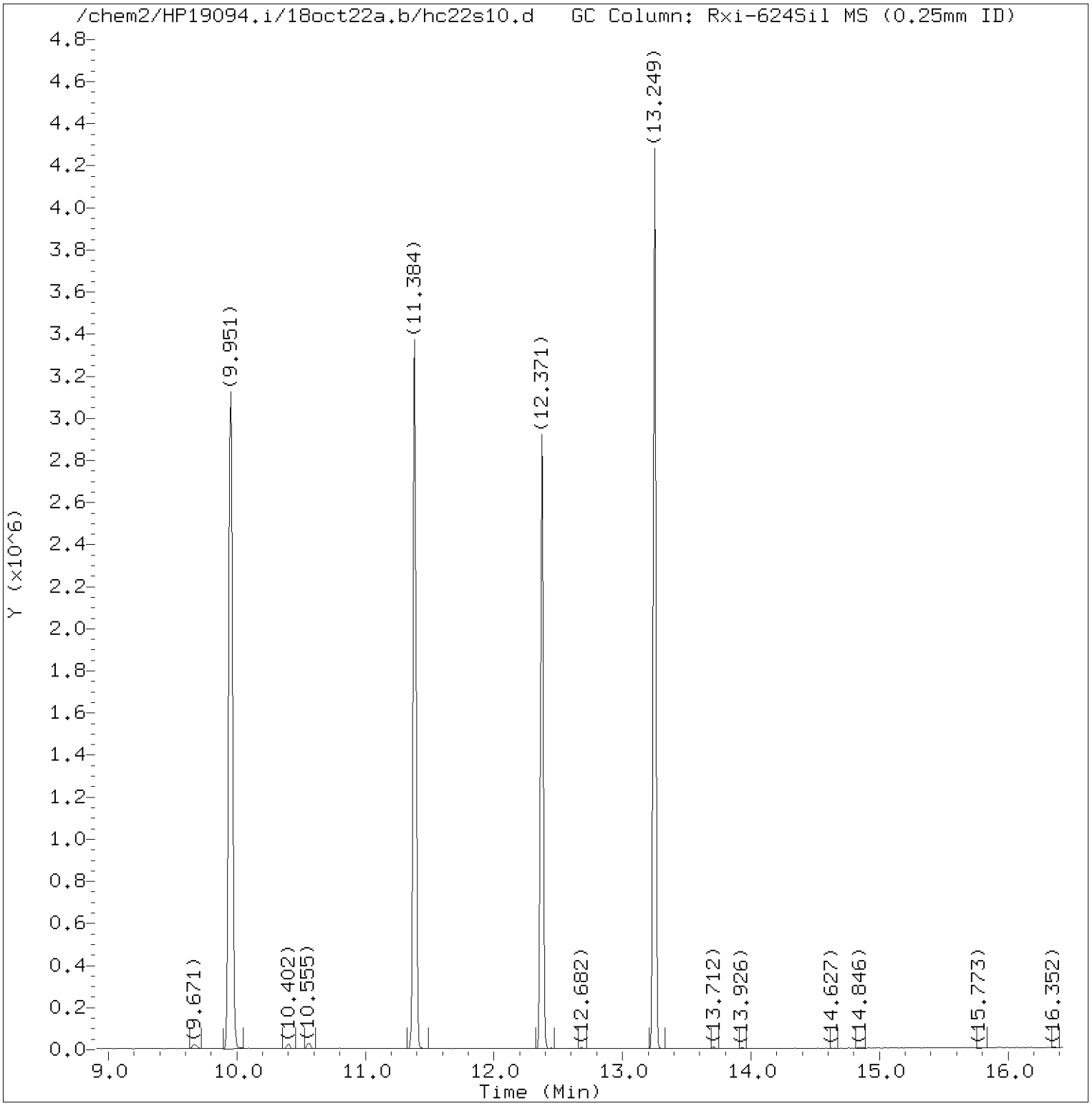
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

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on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
8) Chloroethane	(2)	2.843	64	54115	0.970
11) Ethyl ether	(2)	3.434	59	634457	16.107
15) 1,1-Dichloroethene	(2)	3.757	96	6286	0.125
23) Methylene Chloride	(2)	4.470	84	3980	0.070
26)*t-Butyl Alcohol-d10	(1)	4.482	65	114100	50.000
33) 1,1-Dichloroethane	(2)	5.562	63	290704	2.689
48) Tetrahydrofuran	(1)	6.720	71	2996	1.012
50)$Dibromofluoromethane	(2)	7.080	113	649971	10.052
57)$1,2-Dichloroethane-d4	(2)	7.537	102	116131	10.302
58) Benzene	(2)	7.567	78	36226	0.150
63)*Fluorobenzene	(2)	7.970	96	2565613	10.000
67) Trichloroethene	(2)	8.451	95	4751	0.077
82)$Toluene-d8	(3)	9.951	98	2527108	9.955
89) Tetrachloroethene	(3)	10.555	166	8785	0.133
97)*Chlorobenzene-d5	(3)	11.384	117	1972380	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	890877	9.639
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1062449	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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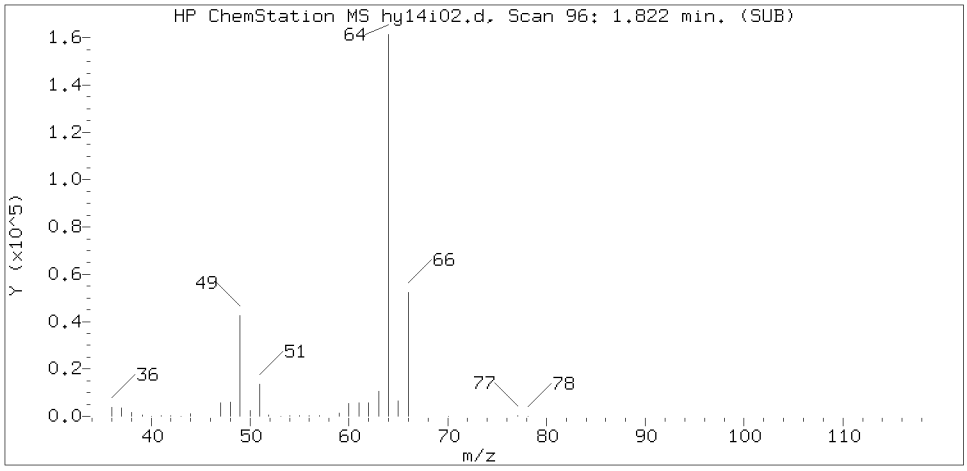
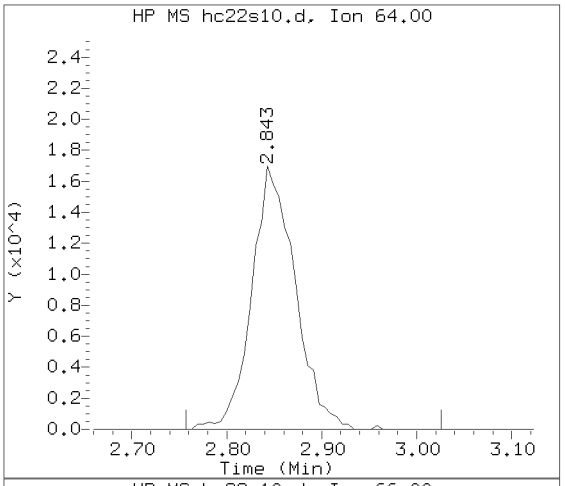
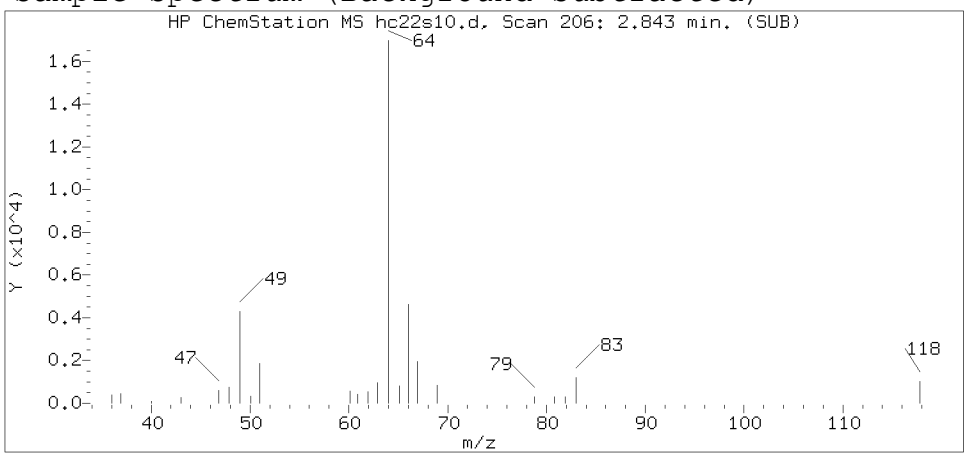
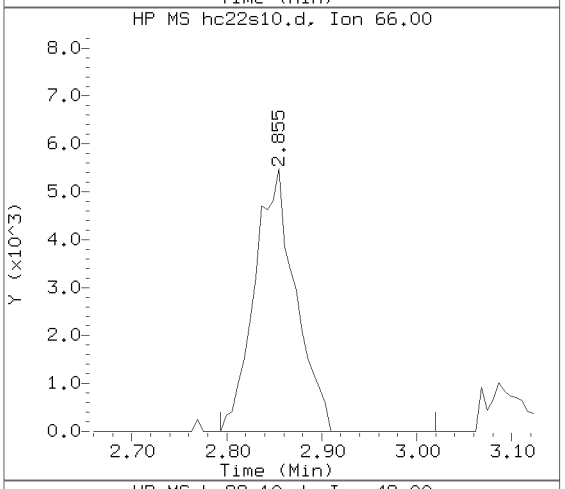
Reference Standard Spectrum for Chloroethane



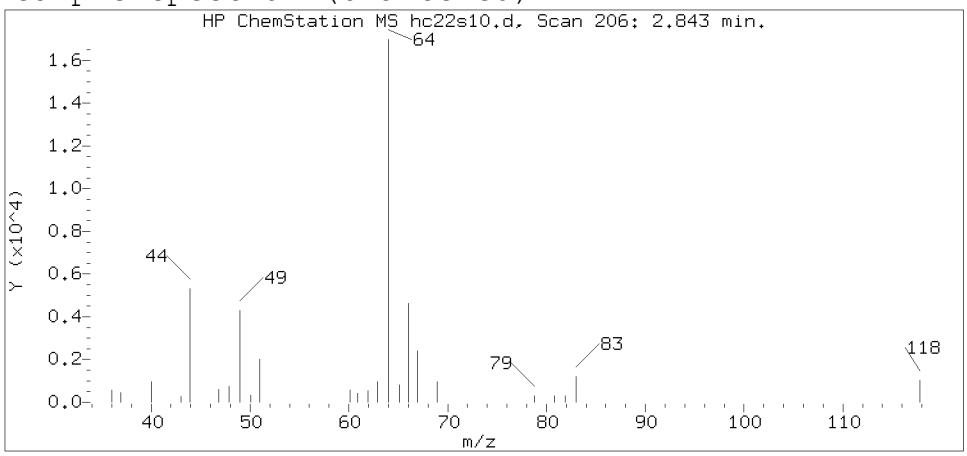


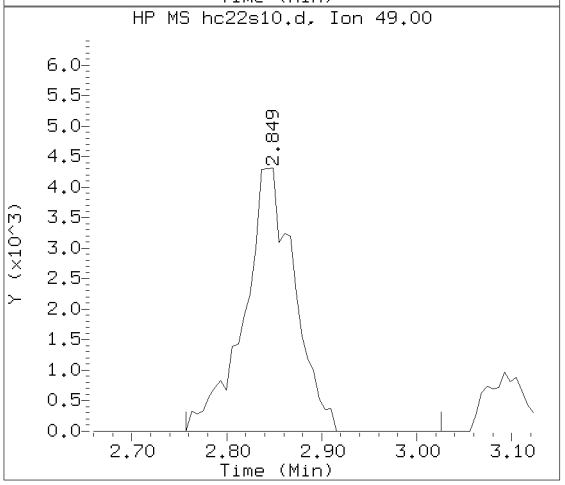
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 8
Compound Name	: Chloroethane
Scan Number	: 206
Retention Time (minutes)	: 2.843
Relative Retention Time	: 0.00001
Quant Ion	: 64.00
Area (flag)	: 54115
On-Column Amount (ng)	: 0.9703

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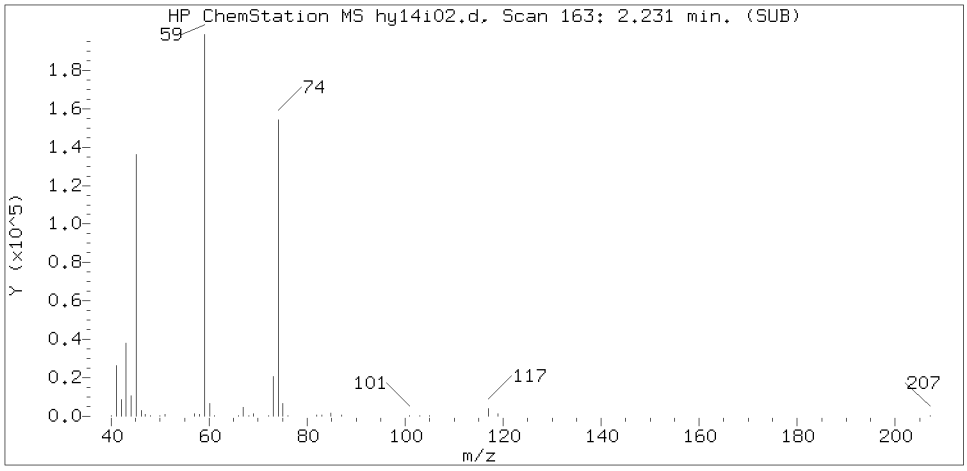
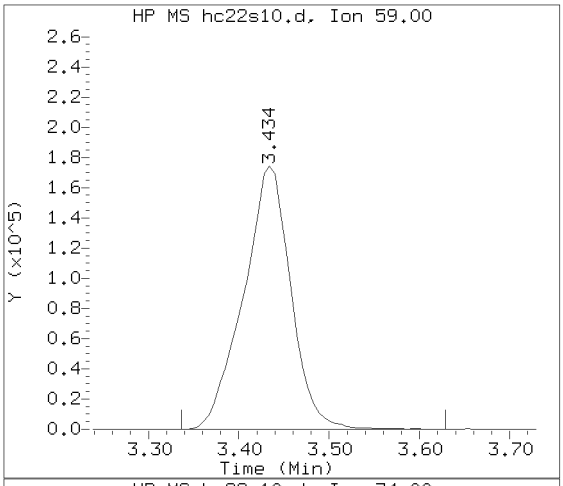
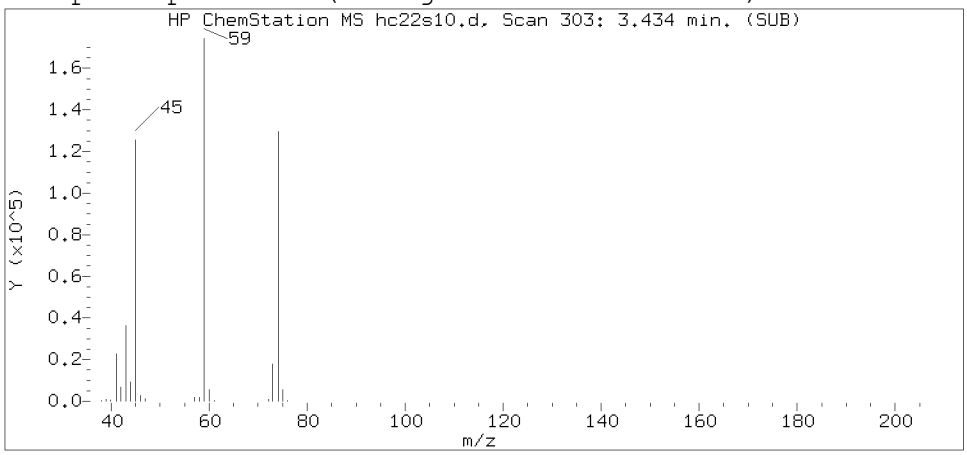
Target 3.5 esignature user ID: jkh09052

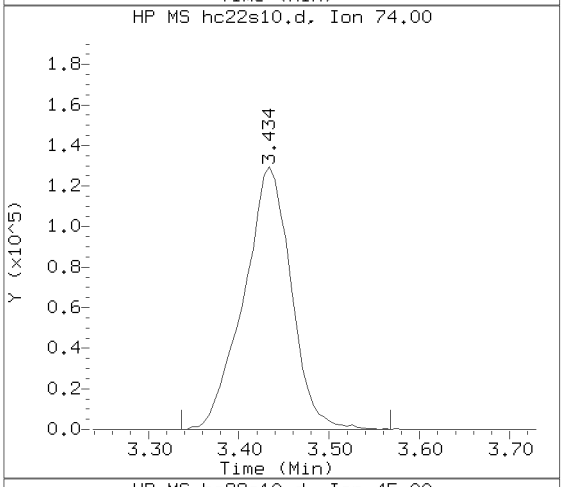
Reference Standard Spectrum for Ethyl ether



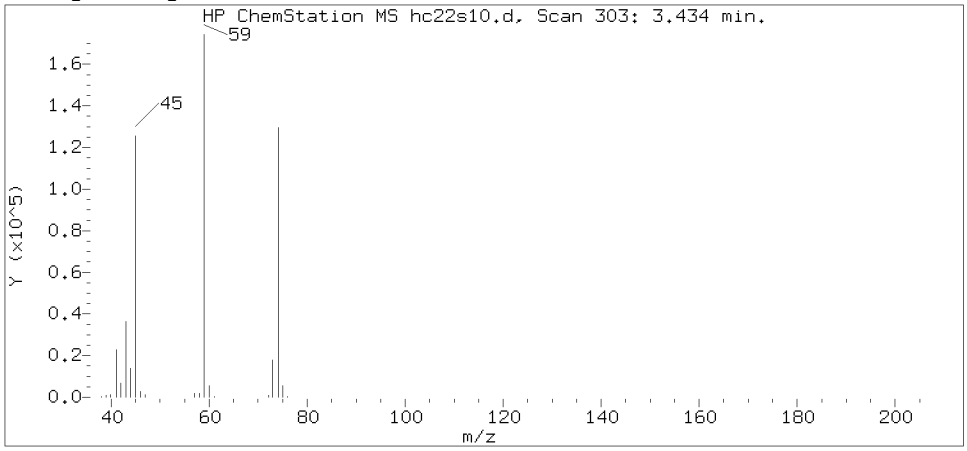


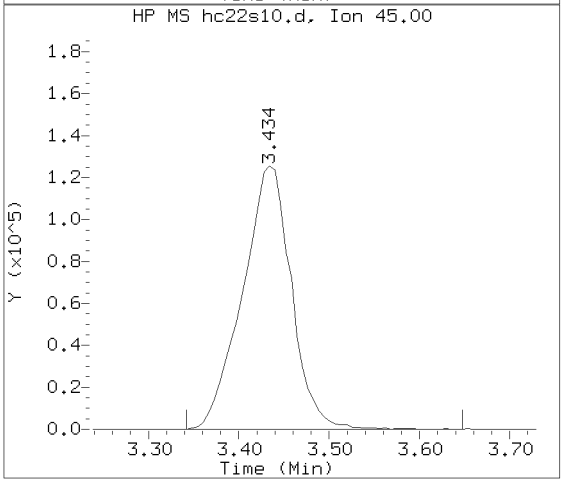
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 303
Retention Time (minutes): 3.434
Relative Retention Time :-0.00076
Quant Ion : 59.00
Area (flag) : 634457
On-Column Amount (ng) : 16.1074

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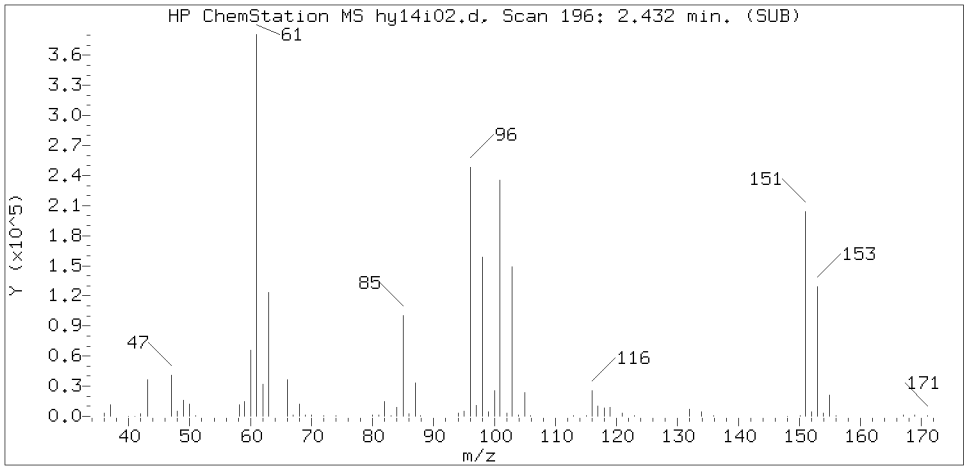
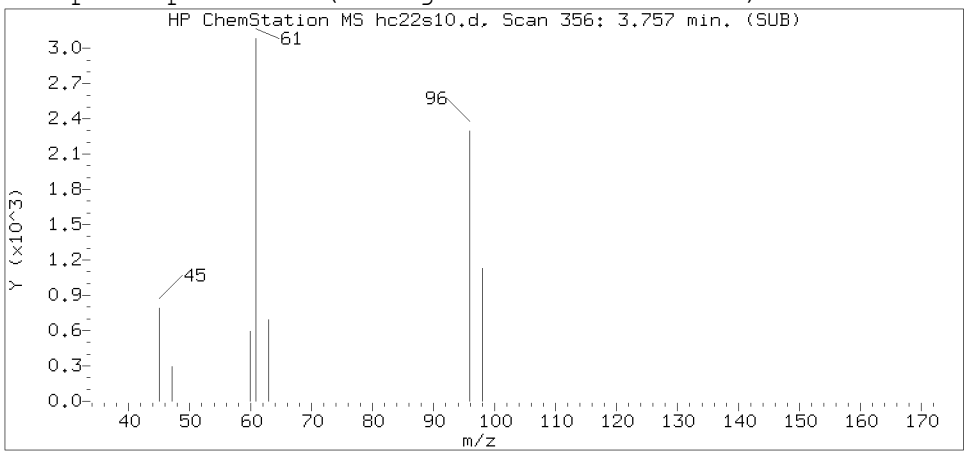
Target 3.5 esignature user ID: jkh09052

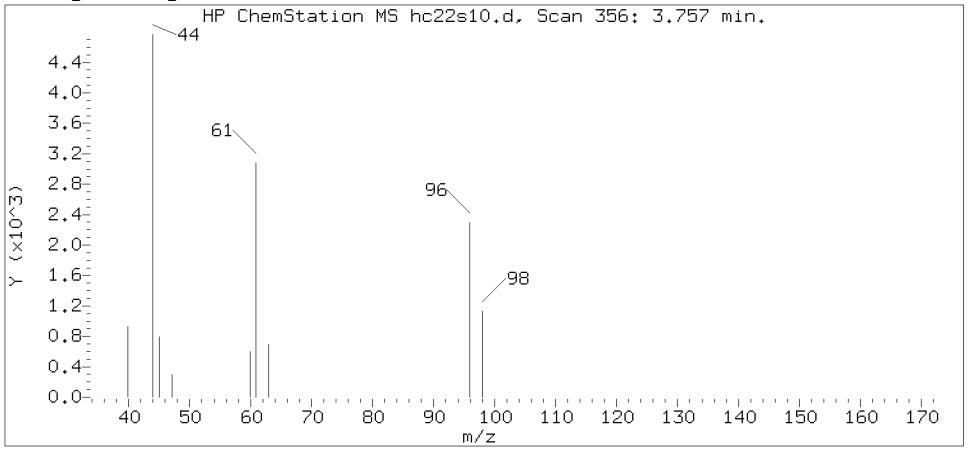
Reference Standard Spectrum for 1,1-Dichloroethene

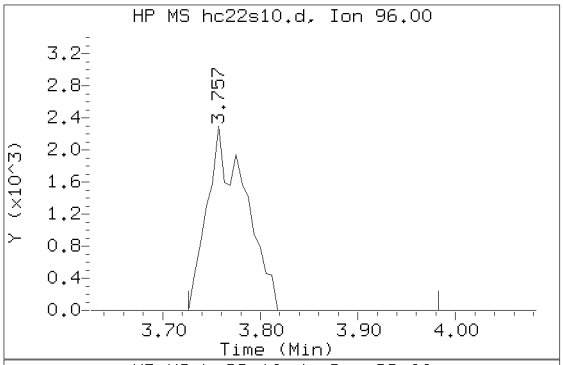


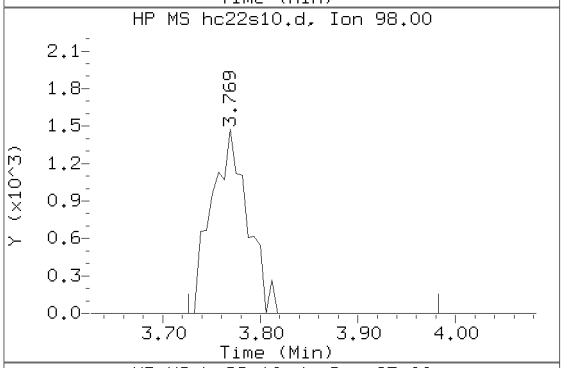
Sample Spectrum (Background Subtracted)

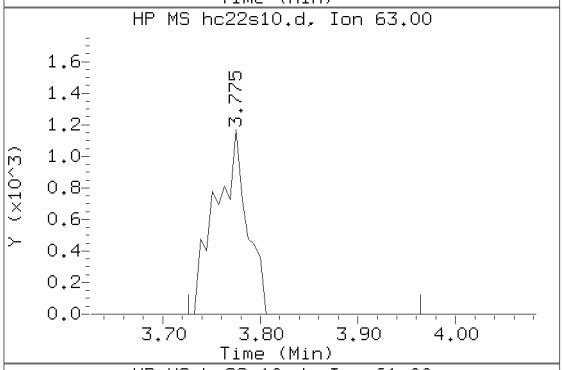


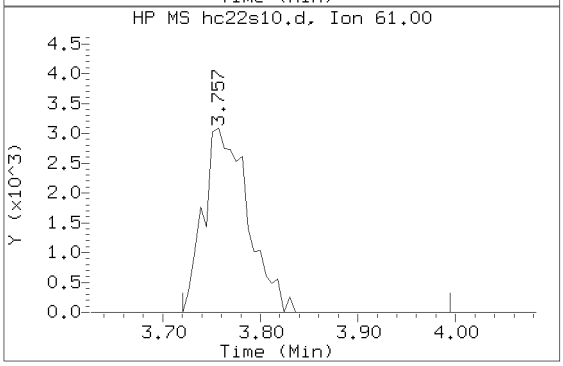
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 15
Compound Name	: 1,1-Dichloroethene
Scan Number	: 356
Retention Time (minutes)	: 3.757
Relative Retention Time	: 0.00001
Quant Ion	: 96.00
Area (flag)	: 6286
On-Column Amount (ng)	: 0.1250

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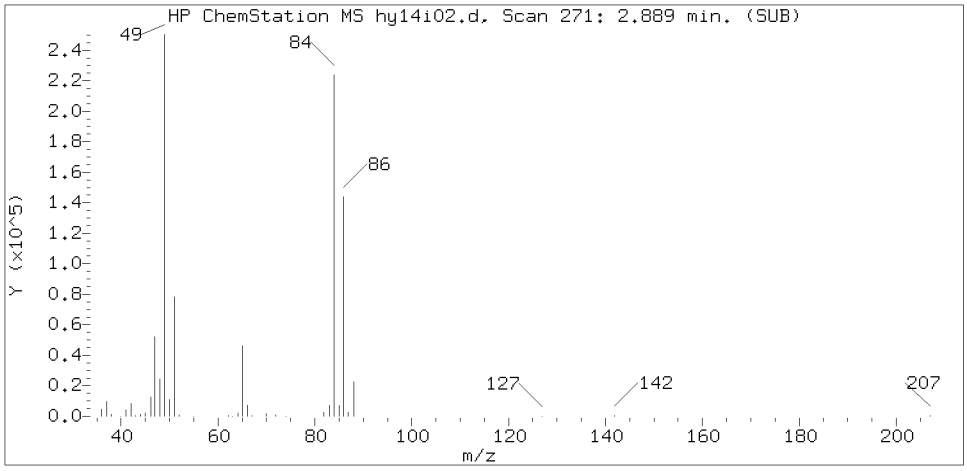
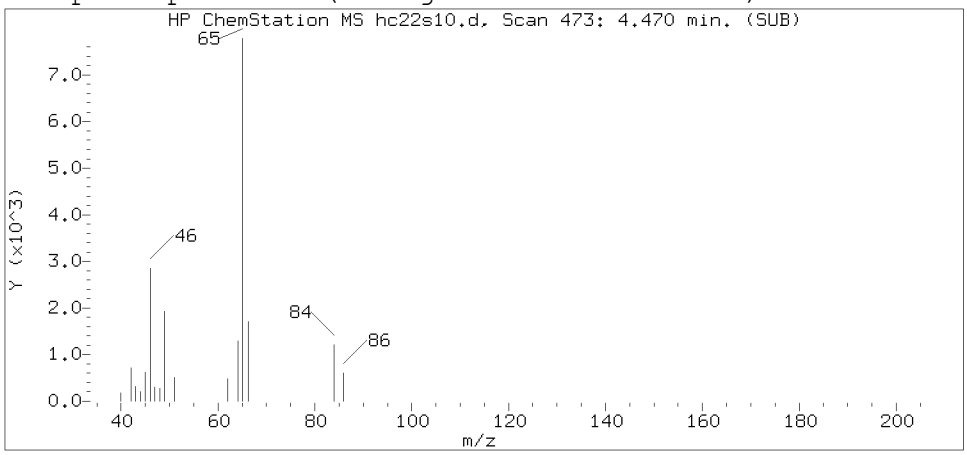
Target 3.5 esignature user ID: jkh09052

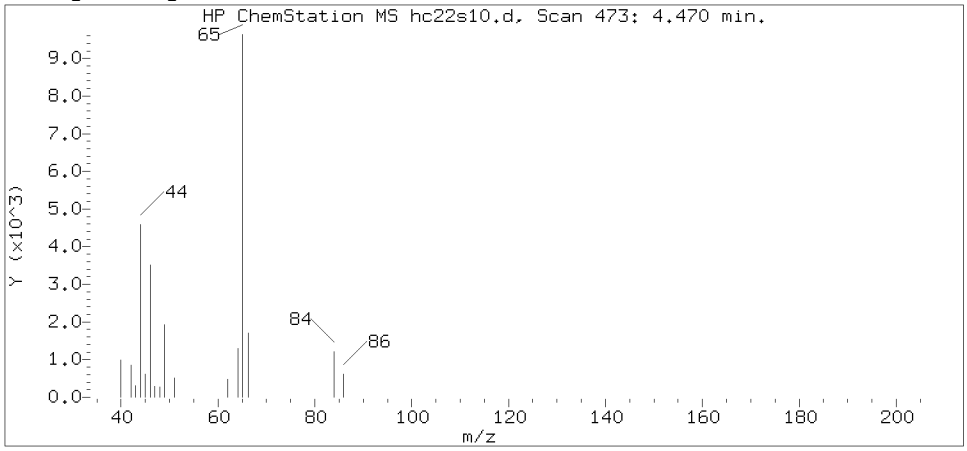
Reference Standard Spectrum for Methylene Chloride

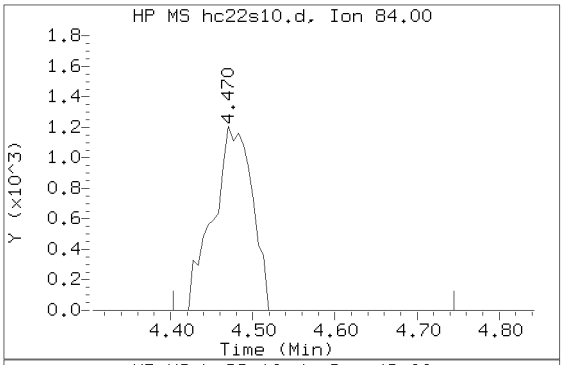


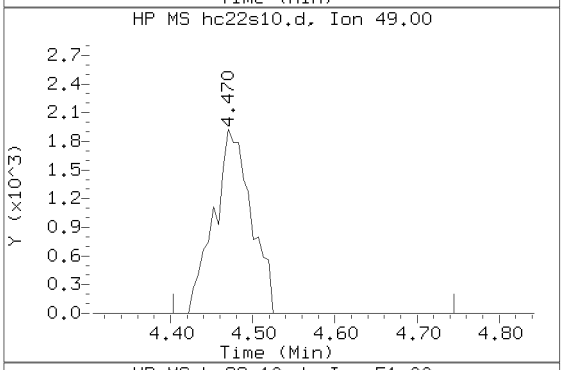
Sample Spectrum (Background Subtracted)

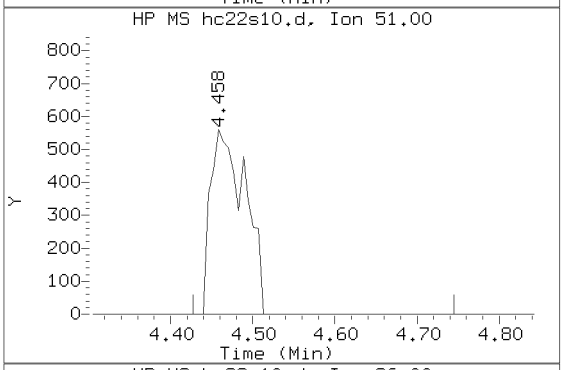


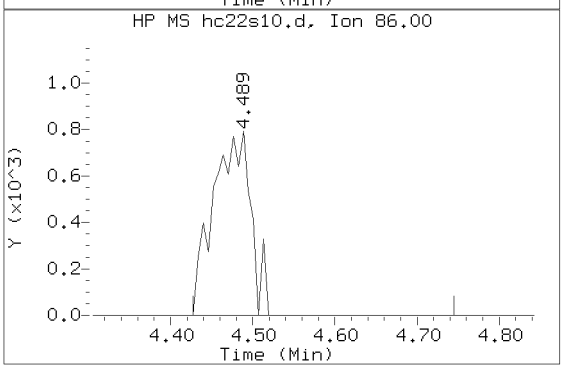
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 23
Compound Name	: Methylene Chloride
Scan Number	: 473
Retention Time (minutes)	: 4.470
Relative Retention Time	: 0.00001
Quant Ion	: 84.00
Area (flag)	: 3980
On-Column Amount (ng)	: 0.0701

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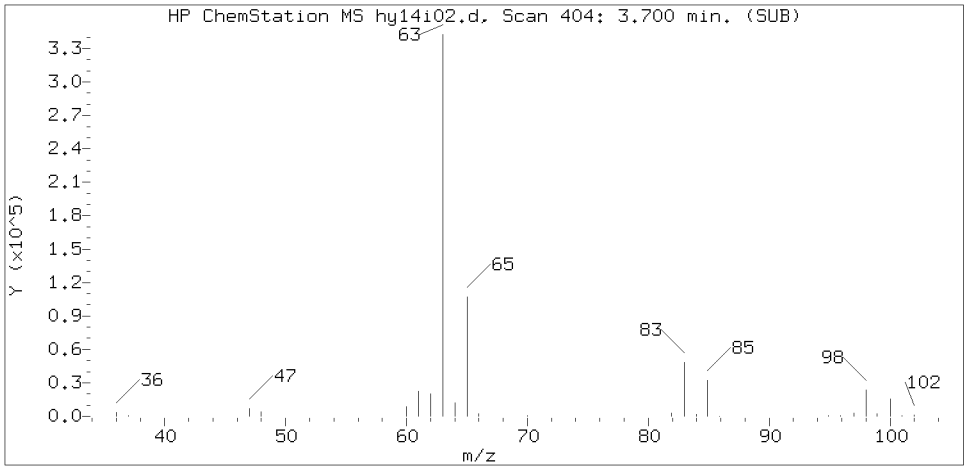
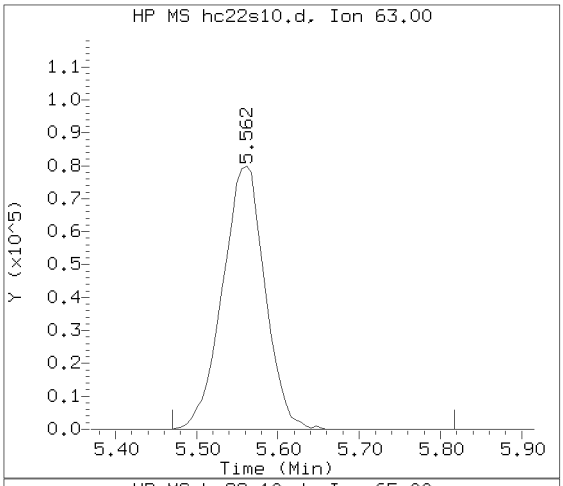
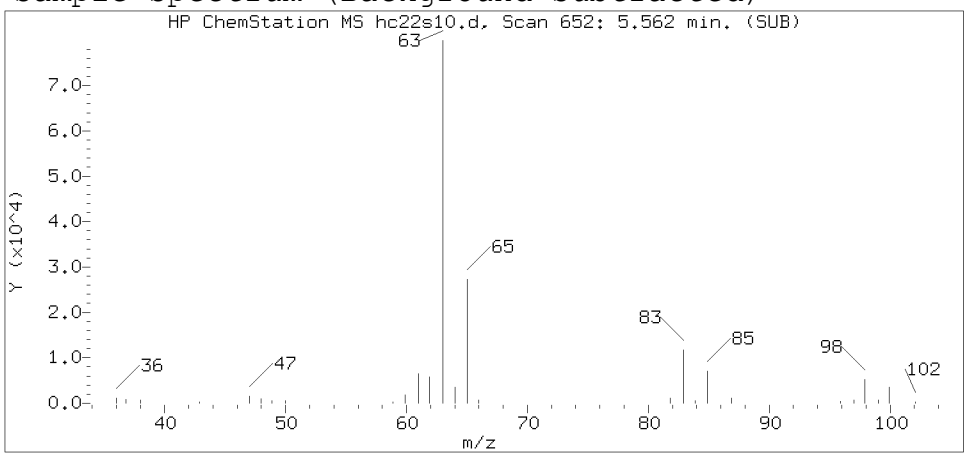
Target 3.5 esignature user ID: jkh09052

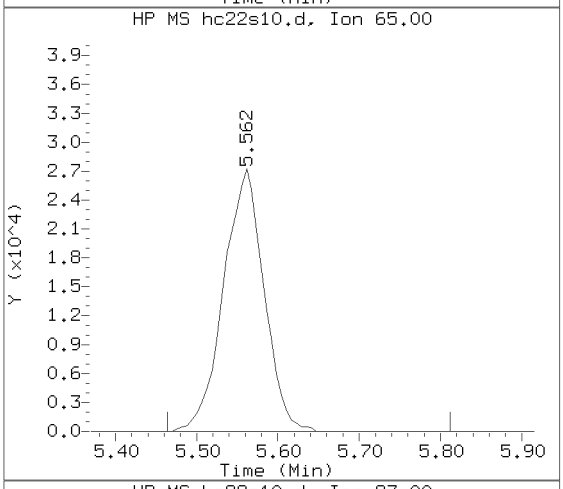
Reference Standard Spectrum for 1,1-Dichloroethane



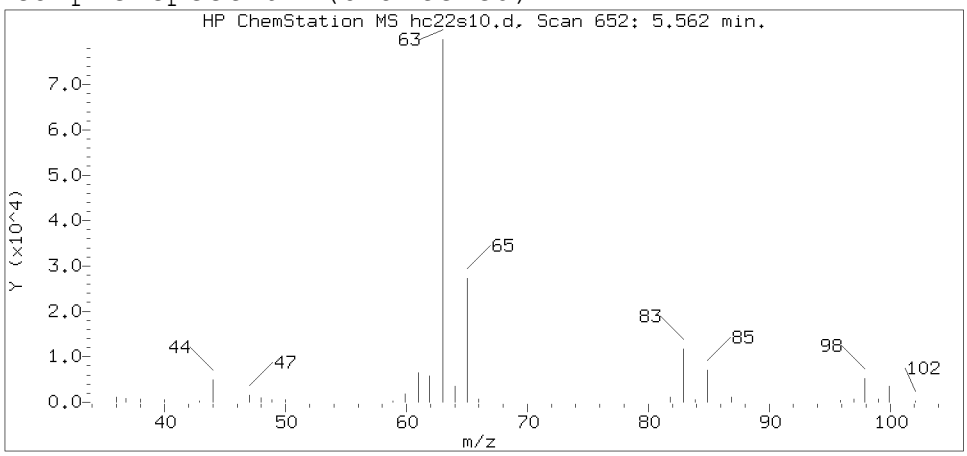


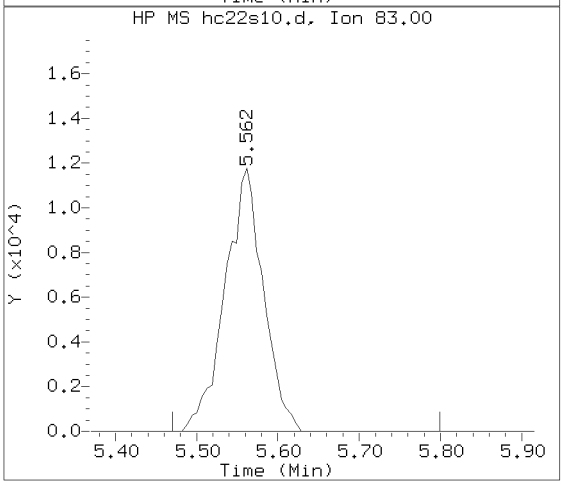
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

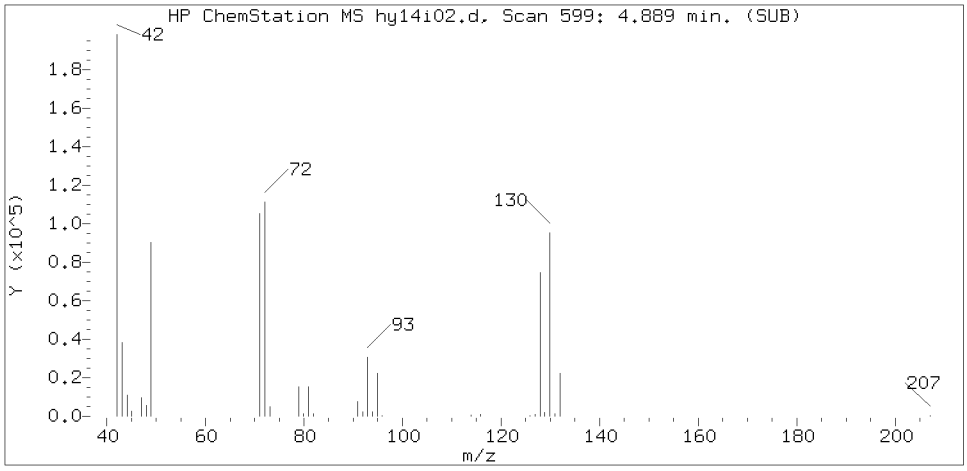
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

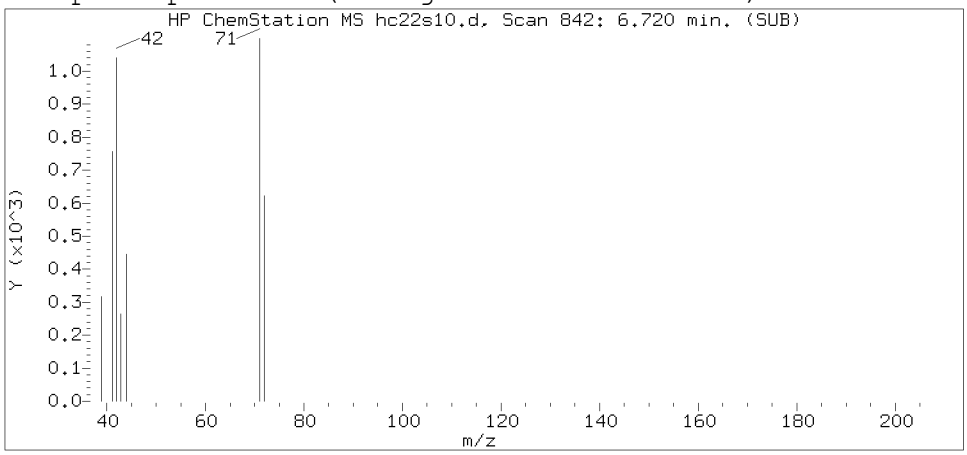
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 652
Retention Time (minutes): 5.562
Relative Retention Time :-0.00076
Quant Ion : 63.00
Area (flag) : 290704
On-Column Amount (ng) : 2.6893

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

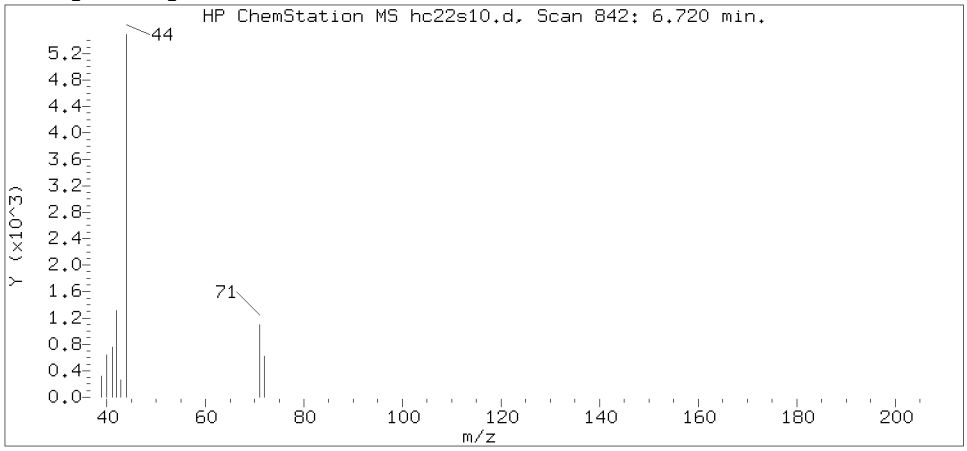
Reference Standard Spectrum for Tetrahydrofuran

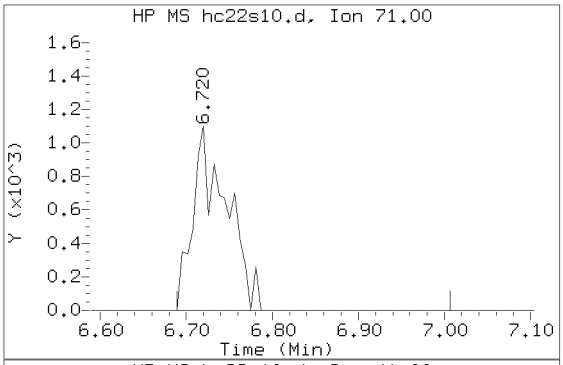


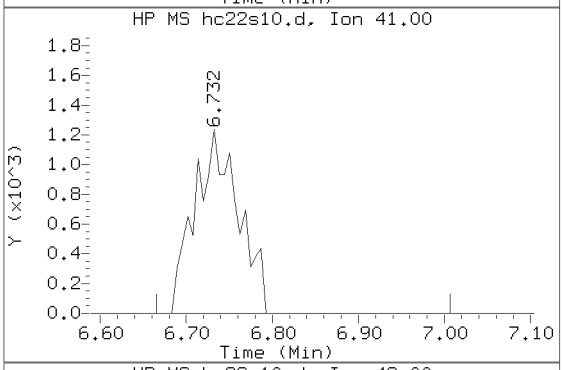
Sample Spectrum (Background Subtracted)

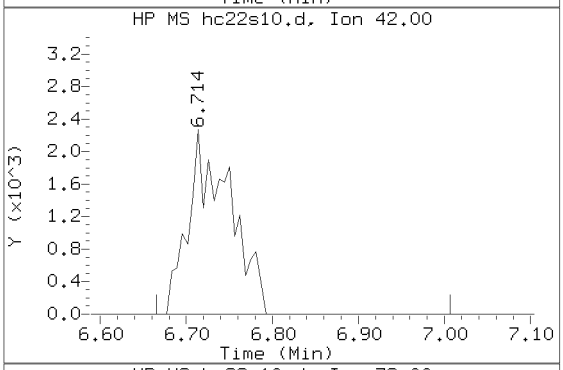


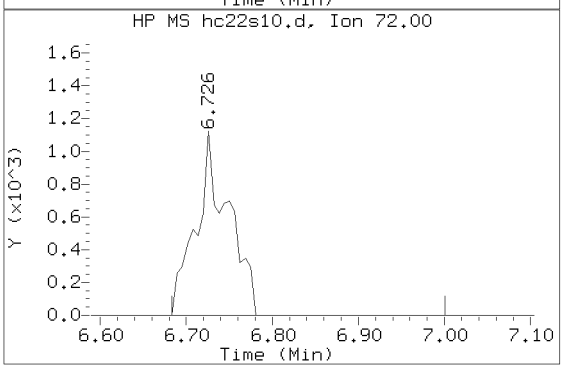
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 842
Retention Time (minutes)	: 6.720
Relative Retention Time	: 0.00339
Quant Ion	: 71.00
Area (flag)	: 2996
On-Column Amount (ng)	: 1.0123

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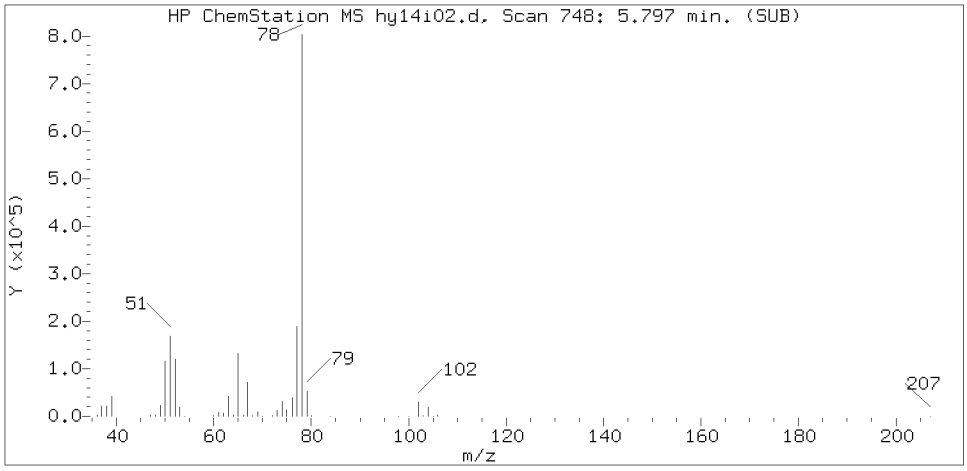
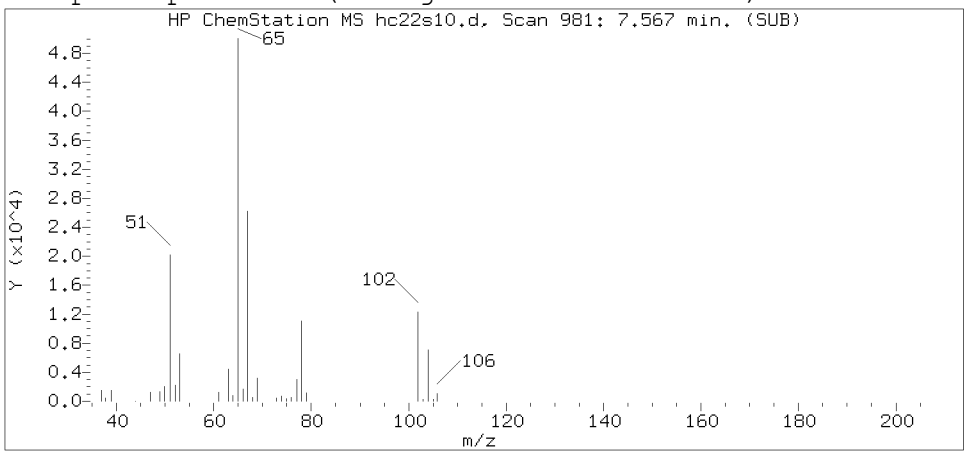
Target 3.5 esignature user ID: jkh09052

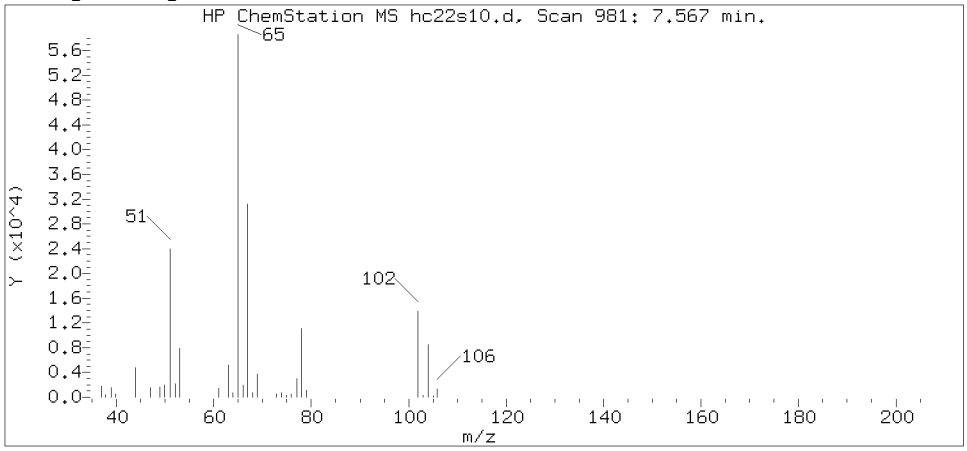
Reference Standard Spectrum for Benzene

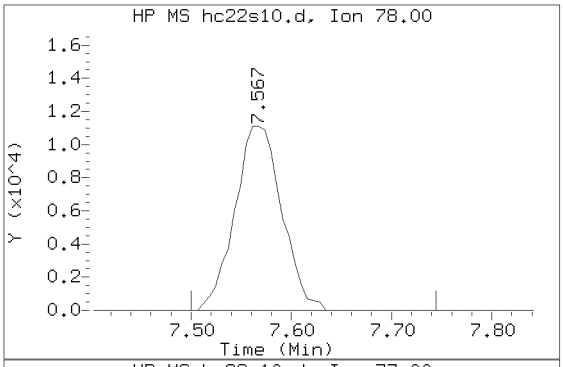


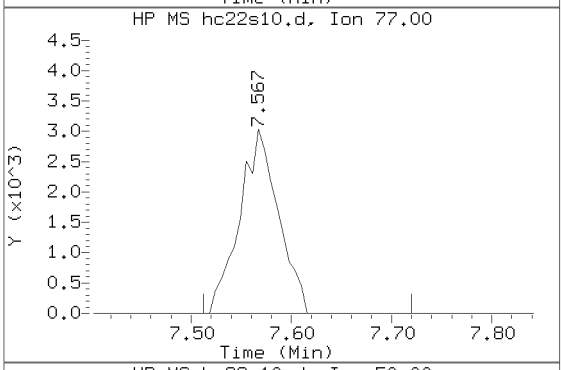
Sample Spectrum (Background Subtracted)

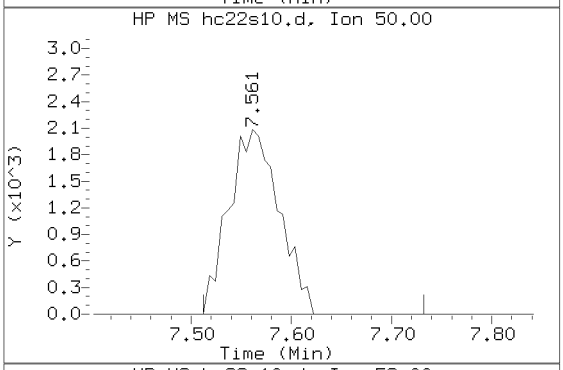


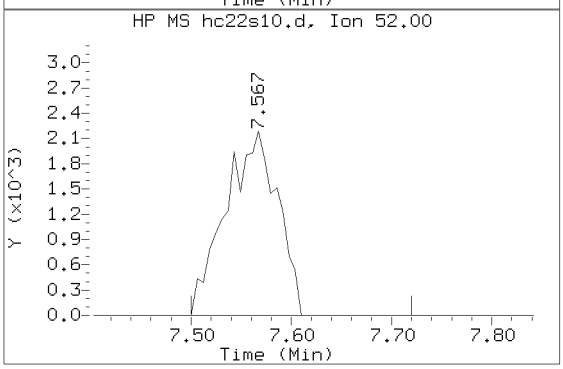
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 58
Compound Name	: Benzene
Scan Number	: 981
Retention Time (minutes)	: 7.567
Relative Retention Time	: 0.00000
Quant Ion	: 78.00
Area (flag)	: 36226
On-Column Amount (ng)	: 0.1504

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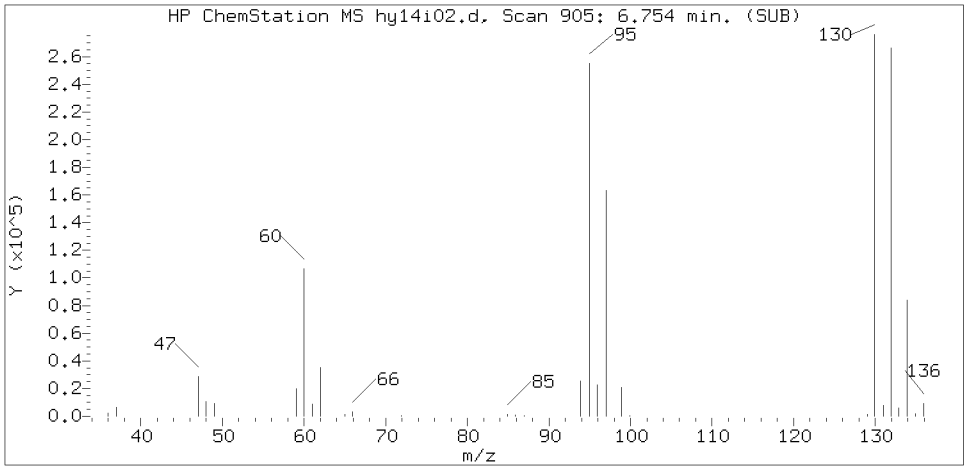
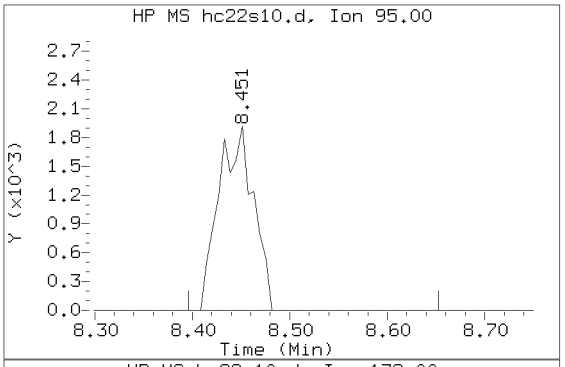
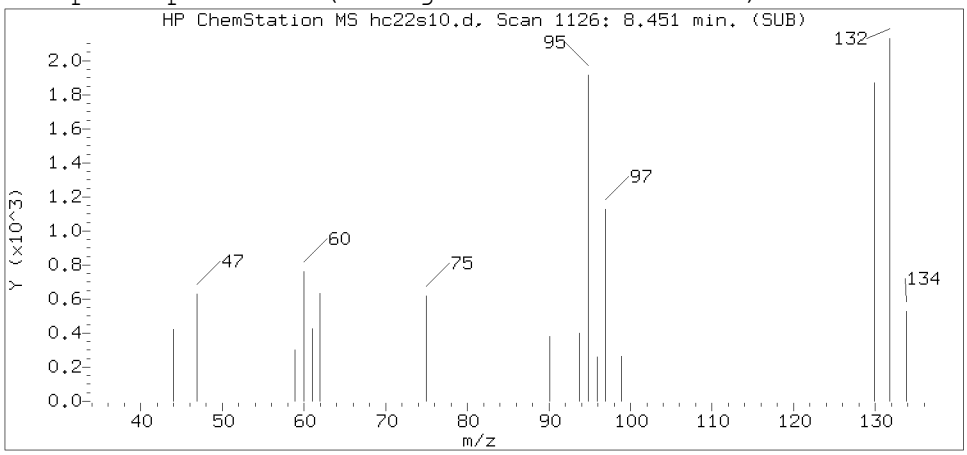
Target 3.5 esignature user ID: jkh09052

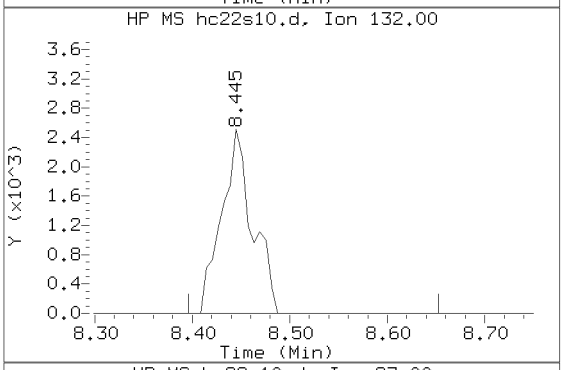
Reference Standard Spectrum for Trichloroethene

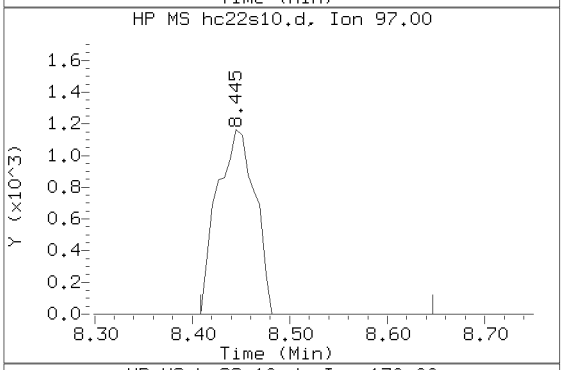




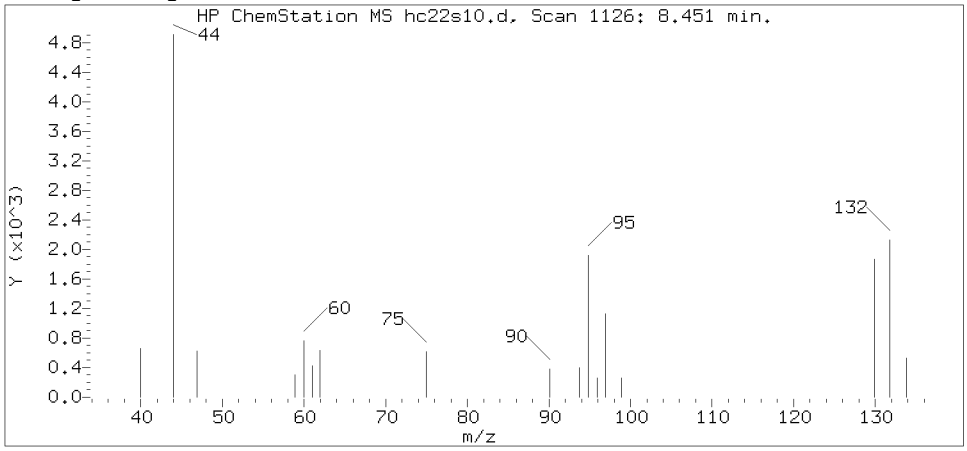
Sample Spectrum (Background Subtracted)

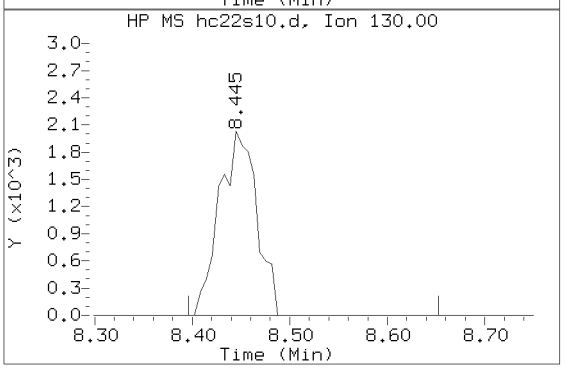






Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number : 67
Compound Name : Trichloroethene
Scan Number : 1126
Retention Time (minutes): 8.451
Relative Retention Time :-0.00077
Quant Ion : 95.00
Area (flag) : 4751
On-Column Amount (ng) : 0.0771

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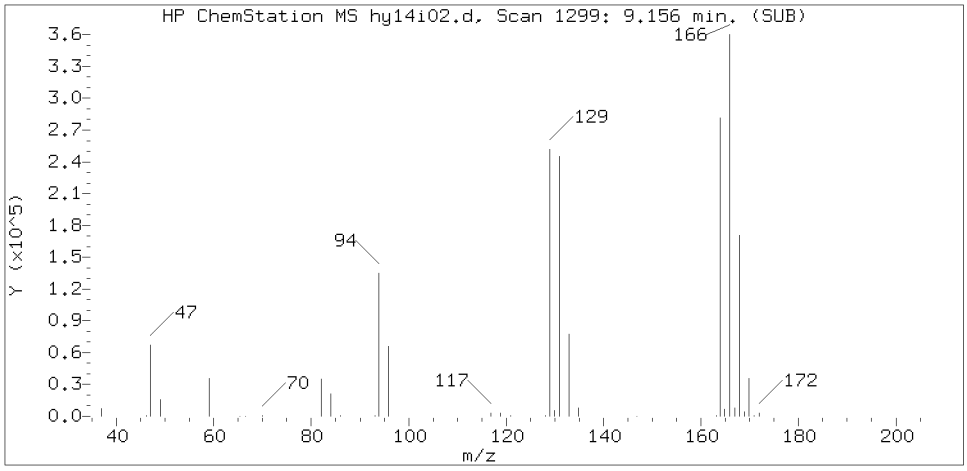
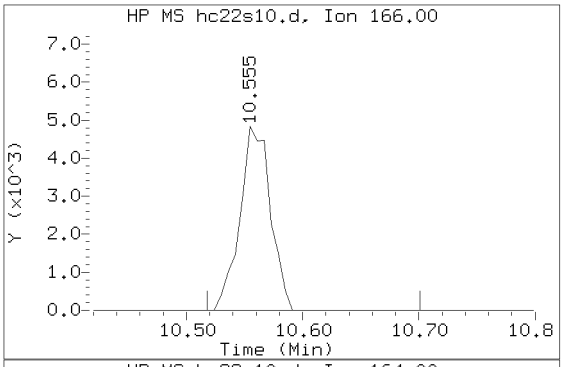
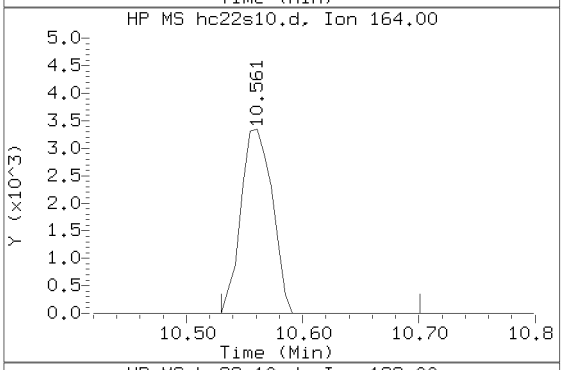
Target 3.5 esignature user ID: jkh09052

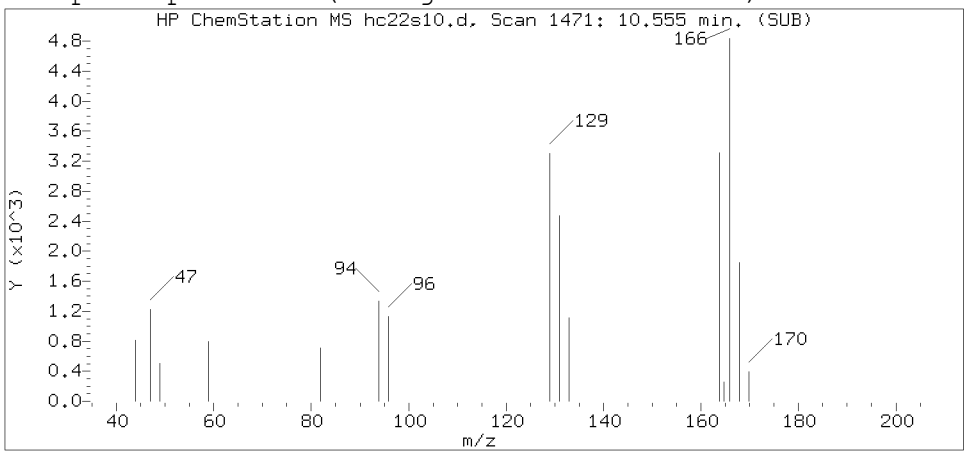
Reference Standard Spectrum for Tetrachloroethene

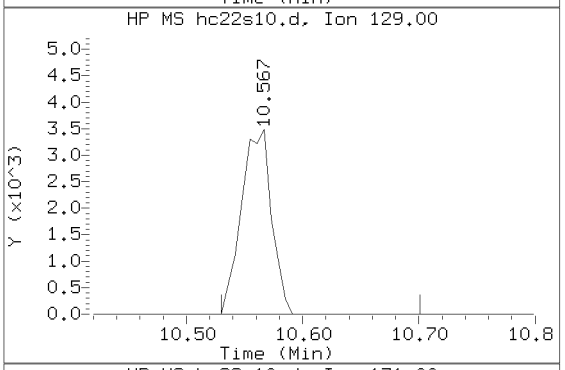




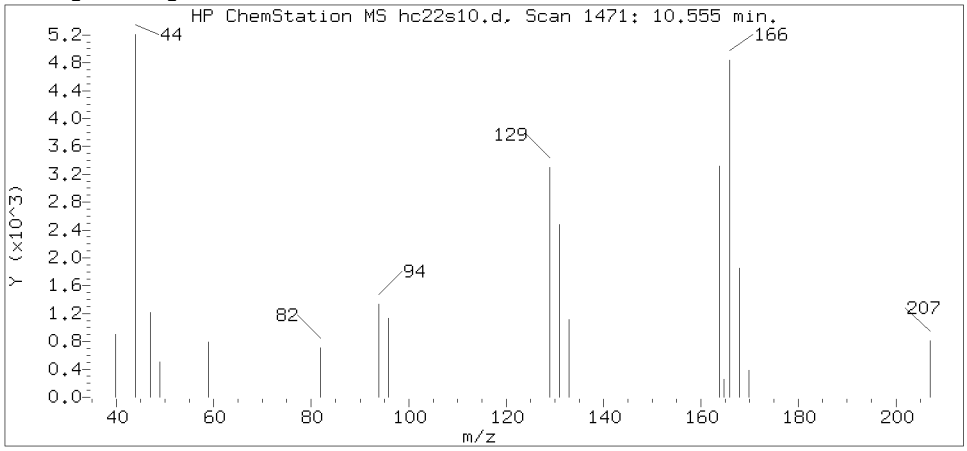


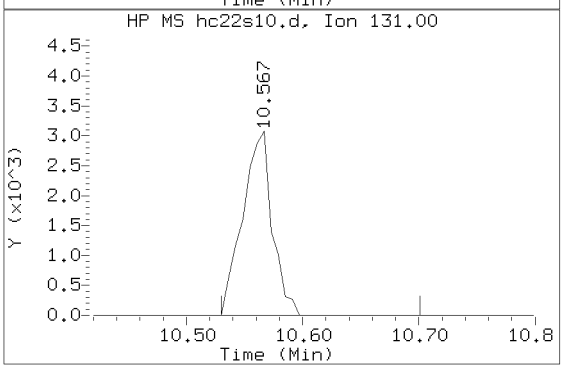
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s10.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:24 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:26 jkh09052

Sample Name: 94283 Lab Sample ID: 9850252

Compound Number	: 89
Compound Name	: Tetrachloroethene
Scan Number	: 1471
Retention Time (minutes)	: 10.555
Relative Retention Time	: 0.00054
Quant Ion	: 166.00
Area (flag)	: 8785
On-Column Amount (ng)	: 0.1328

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s15.d Injection date and time: **22-OCT-2018 16:11**
Data file Sample Info. Line: 94284;9850255;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	109428	(-7)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2526417	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1956545	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1047270	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	636090	9.990	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	110782	9.980	100%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2497782	9.919	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	887526	9.680	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)	2.148	(-0.000)	45	71303	0.879	0.88		J	0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)	2.849	(-0.000)	64	52086	0.948	0.95		J	0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.428	(-0.000)	59	624974	16.113	16.11			0.05	13
15) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	5771	0.117	0.12		J	0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)	4.483	(-0.001)	84	4143	0.074	0.07		J	0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(-0.000)	63	290674	2.731	2.73			0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)	6.738	(0.001)	71	2440	0.860	0.86		J	0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)	7.567	(-0.000)	78	38795	0.164	0.16		J	0.05	1
67) Trichloroethene	(2)	8.445	(0.000)	95	5141	0.085	0.08		J	0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)	10.561	(-0.000)	166	8252	0.126	0.13		J	0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s15.d Injection date and time: **22-OCT-2018 16:11**
Data file Sample Info. Line: 94284;9850255;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

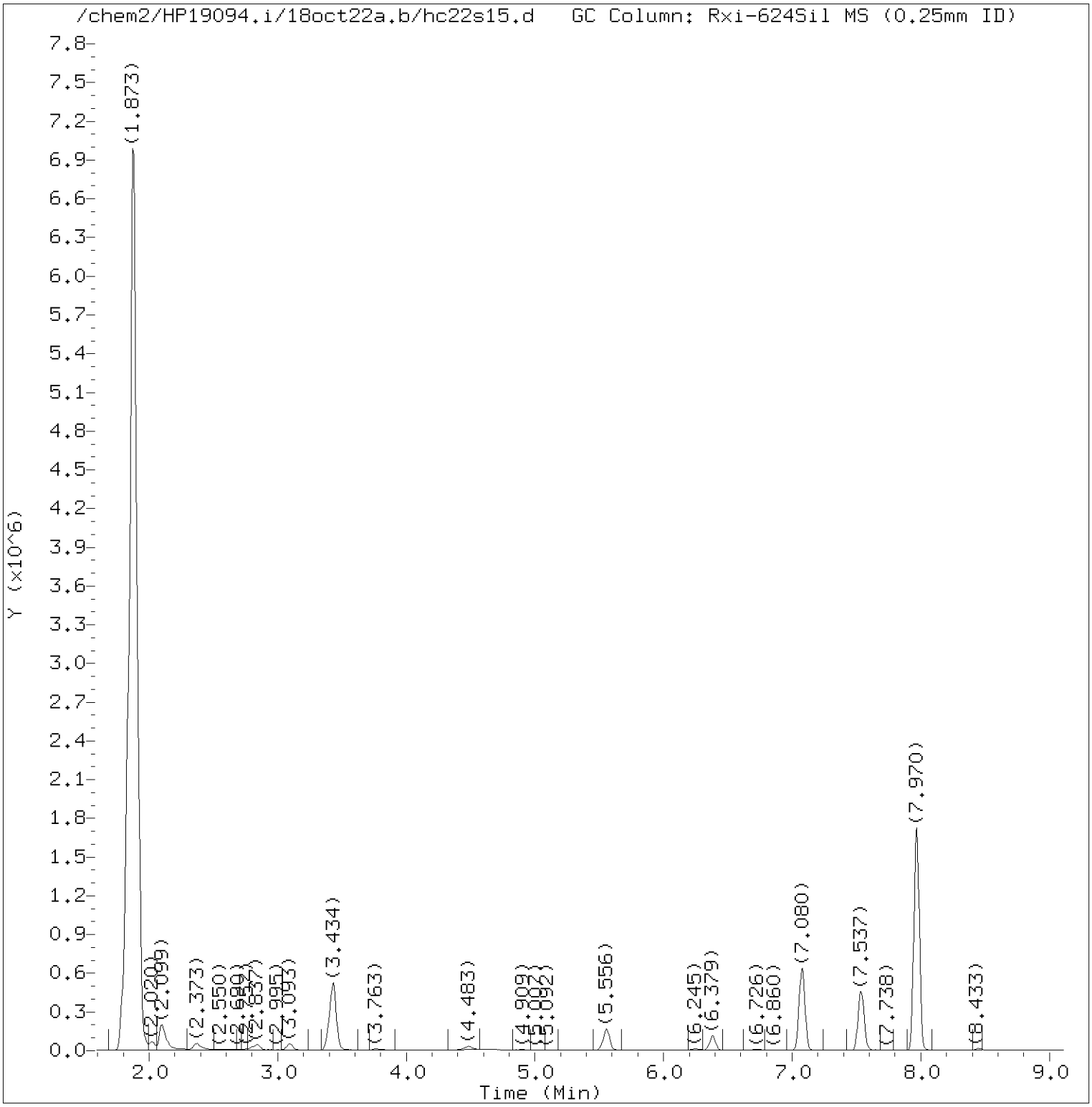
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

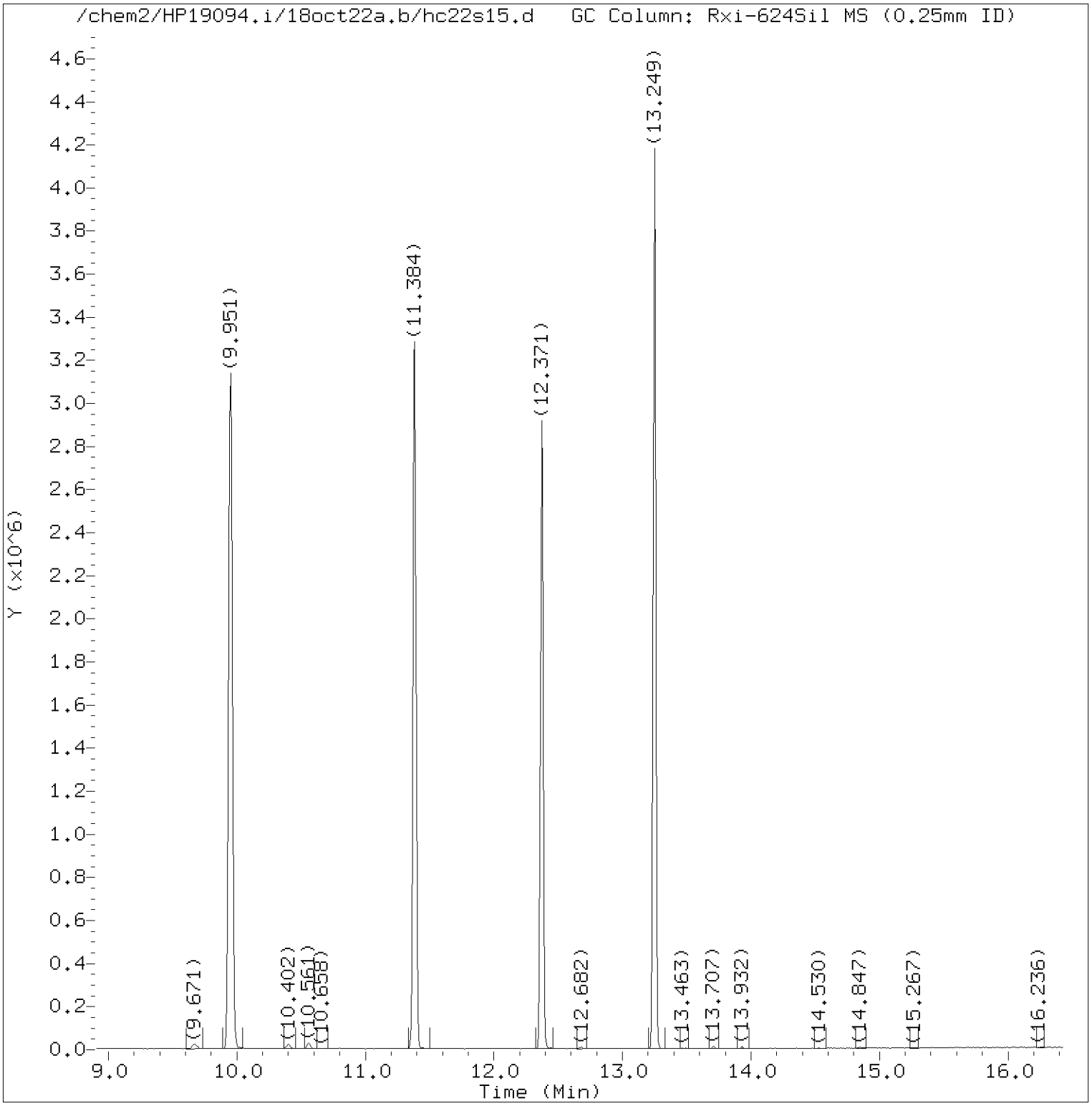
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.148	45	71303	0.879
8) Chloroethane	(2)	2.849	64	52086	0.948
11) Ethyl ether	(2)	3.428	59	624974	16.113
15) 1,1-Dichloroethene	(2)	3.763	96	5771	0.117
23) Methylene Chloride	(2)	4.483	84	4143	0.074
26)*t-Butyl Alcohol-d10	(1)	4.489	65	109428	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	290674	2.731
48) Tetrahydrofuran	(1)	6.738	71	2440	0.860
50)$Dibromofluoromethane	(2)	7.080	113	636090	9.990
57)$1,2-Dichloroethane-d4	(2)	7.531	102	110782	9.980
58) Benzene	(2)	7.567	78	38795	0.164
63)*Fluorobenzene	(2)	7.970	96	2526417	10.000
67) Trichloroethene	(2)	8.445	95	5141	0.085
82)$Toluene-d8	(3)	9.951	98	2497782	9.919
89) Tetrachloroethene	(3)	10.561	166	8252	0.126
97)*Chlorobenzene-d5	(3)	11.384	117	1956545	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	887526	9.680
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1047270	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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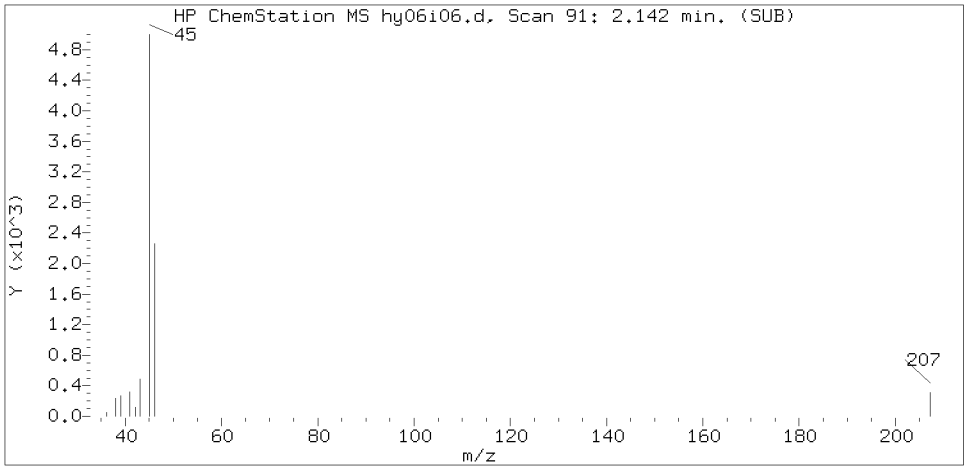
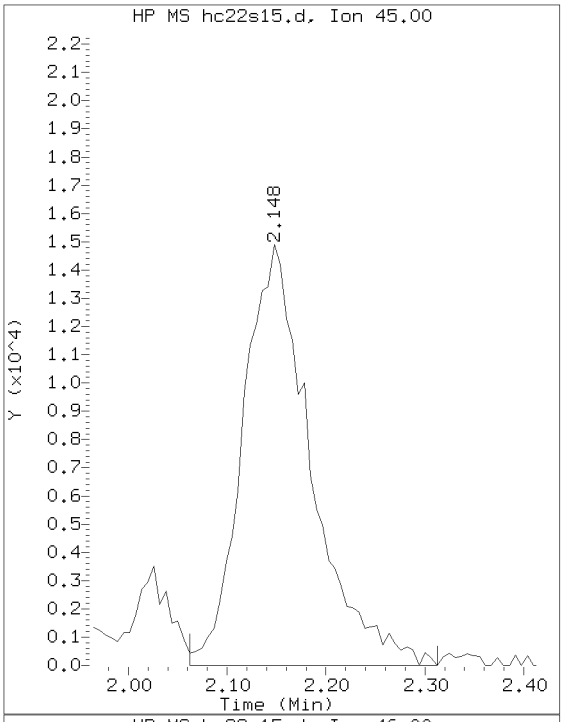
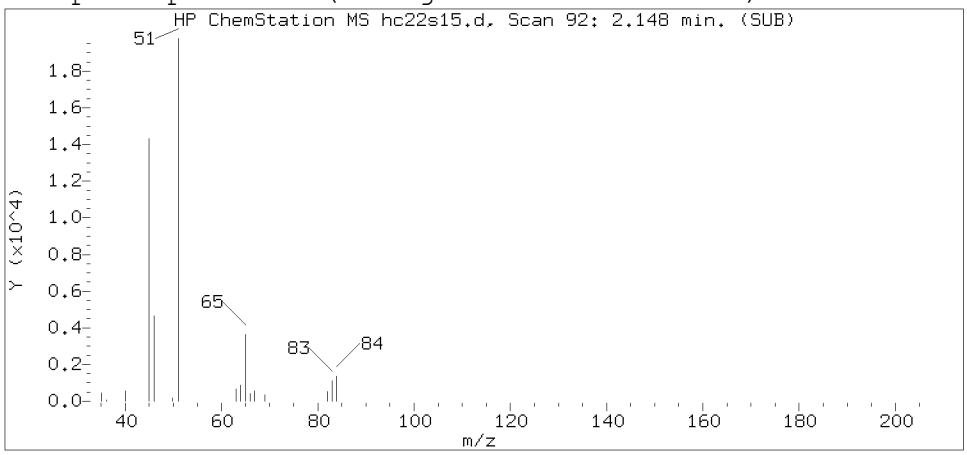
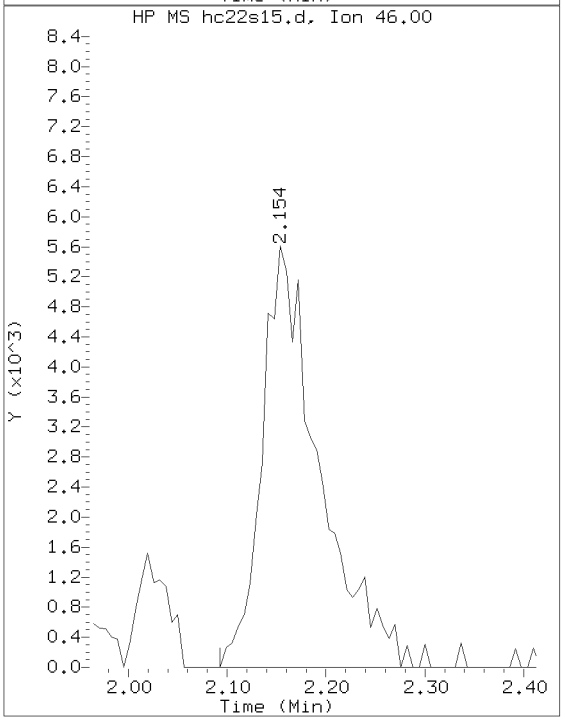
Reference Standard Spectrum for Dimethyl ether



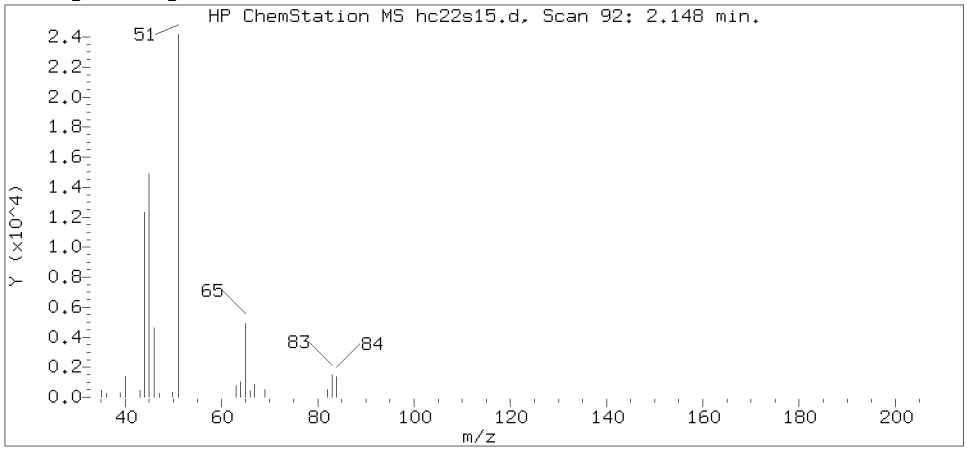


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 92
Retention Time (minutes)	: 2.148
Relative Retention Time	:-0.00003
Quant Ion	: 45.00
Area (flag)	: 71303
On-Column Amount (ng)	: 0.8792

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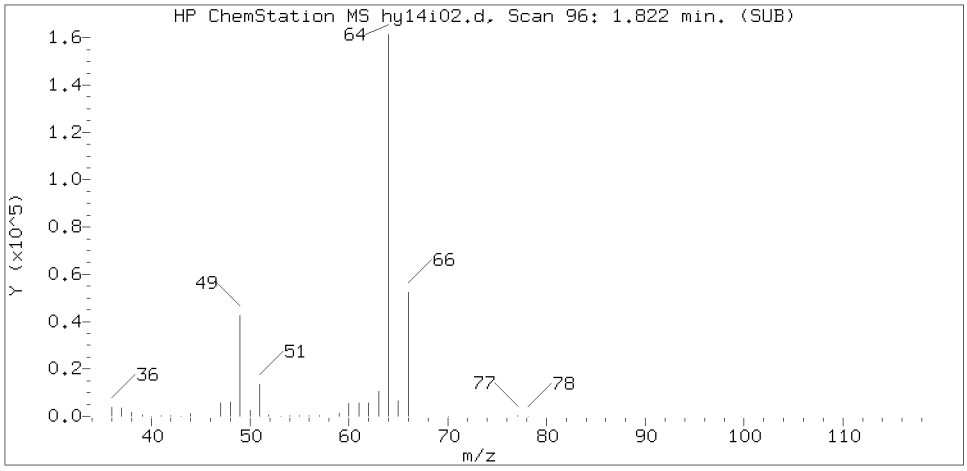
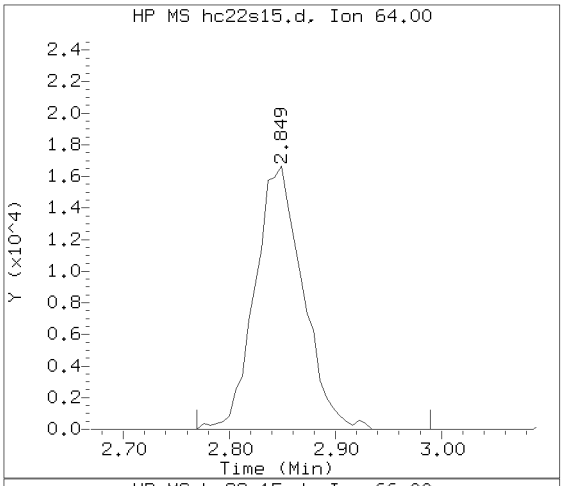
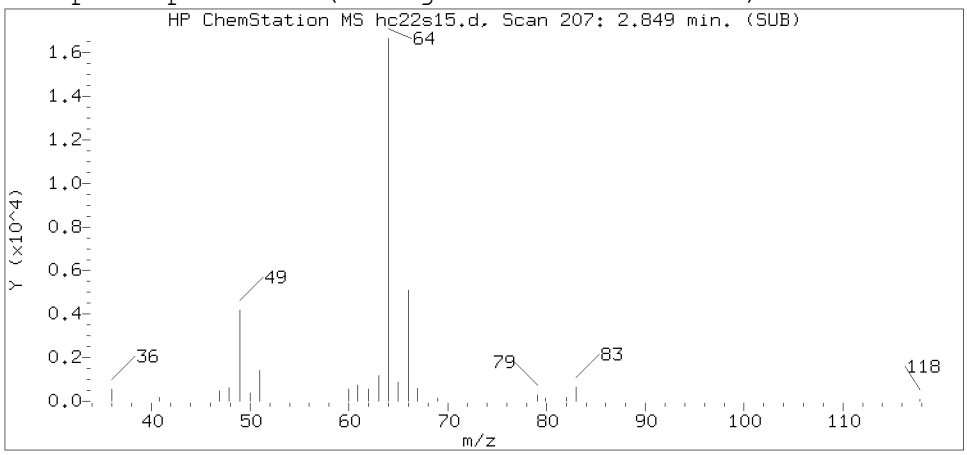
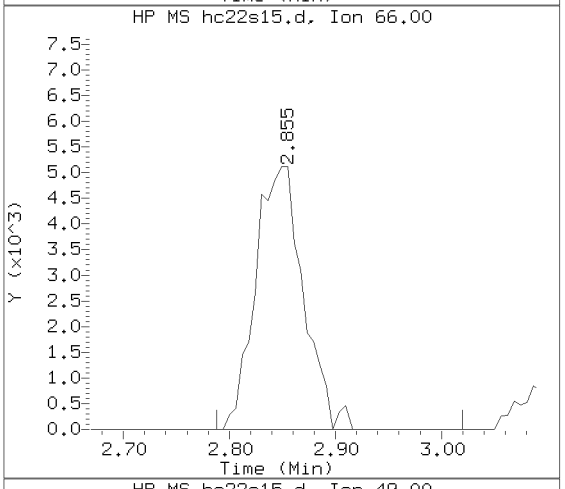
Reference Standard Spectrum for Chloroethane



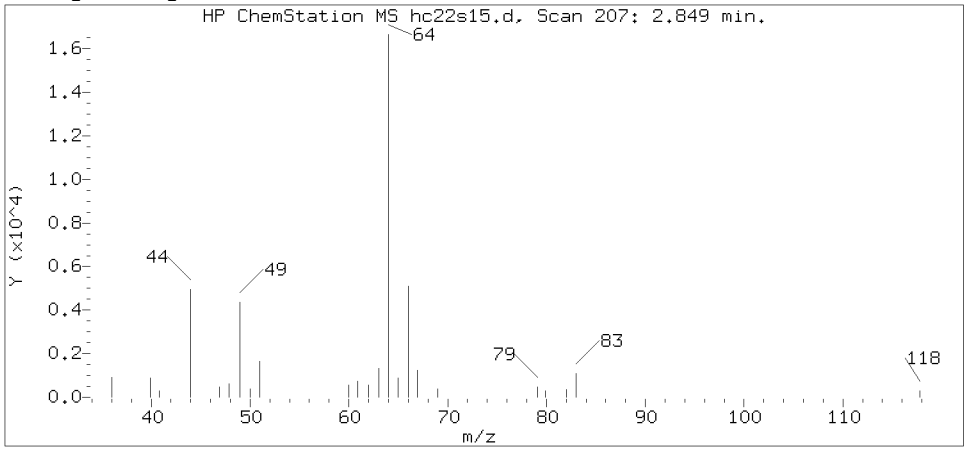


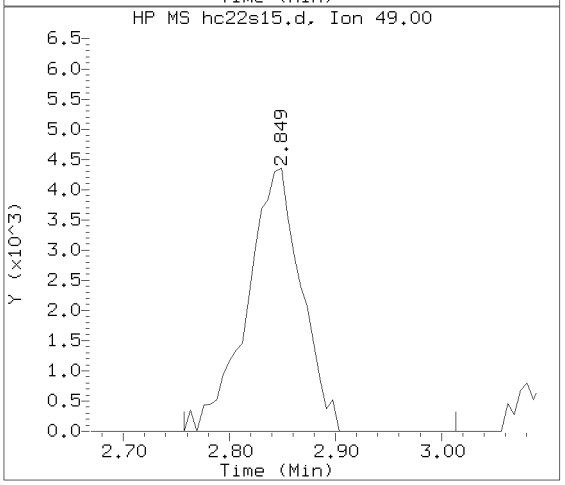
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 8
Compound Name : Chloroethane
Scan Number : 207
Retention Time (minutes): 2.849
Relative Retention Time :-0.00077
Quant Ion : 64.00
Area (flag) : 52086
On-Column Amount (ng) : 0.9484

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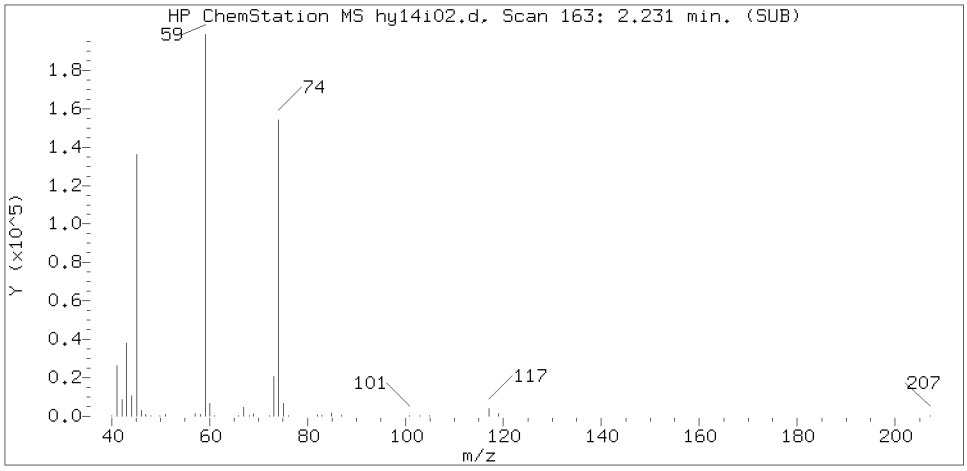
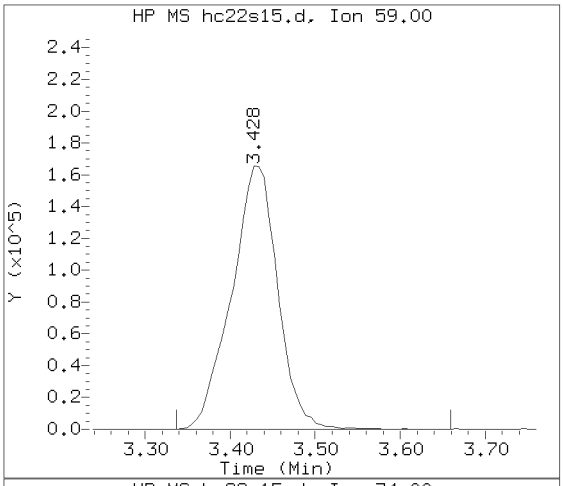
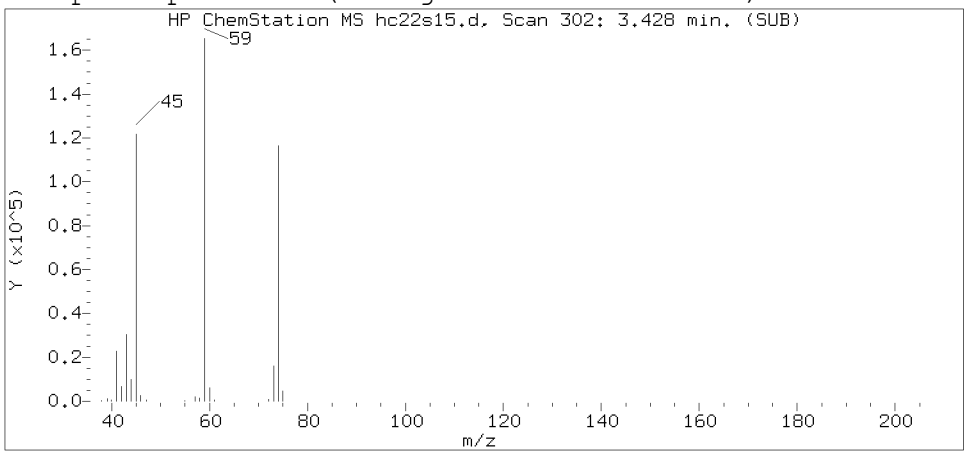
Target 3.5 esignature user ID: jgc14951

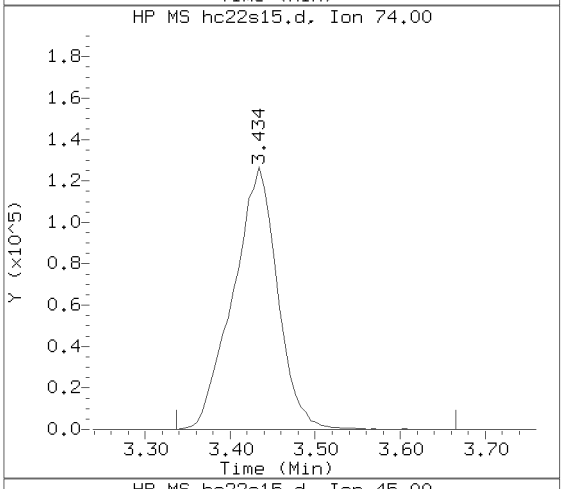
Reference Standard Spectrum for Ethyl ether



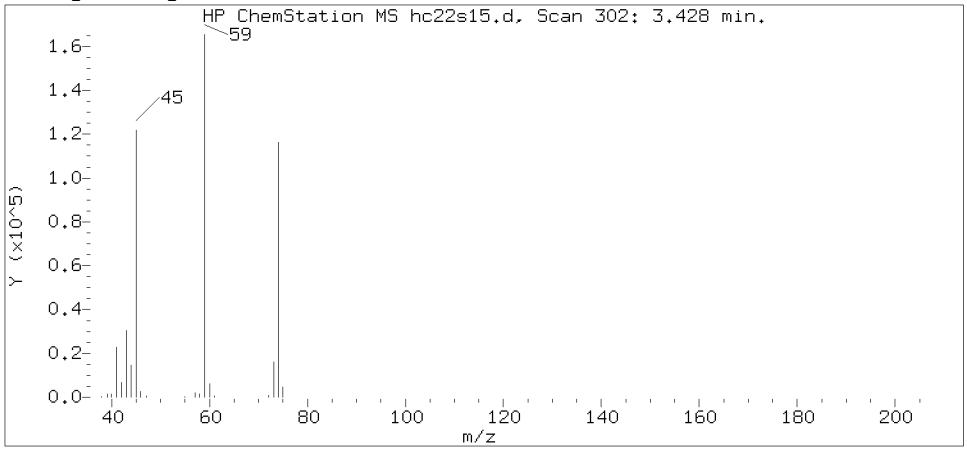


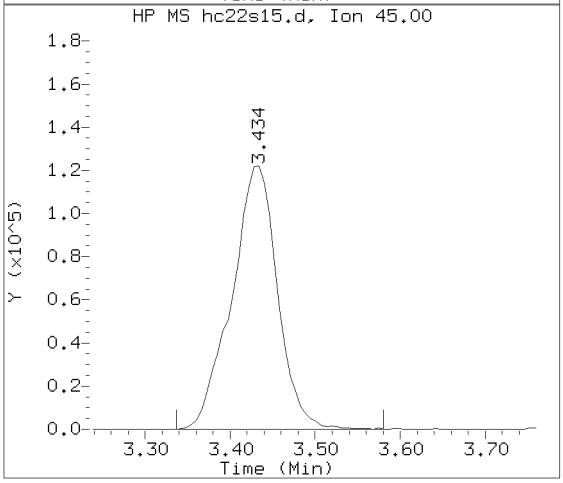
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 302
Retention Time (minutes): 3.428
Relative Retention Time :-0.00001
Quant Ion : 59.00
Area (flag) : 624974
On-Column Amount (ng) : 16.1128

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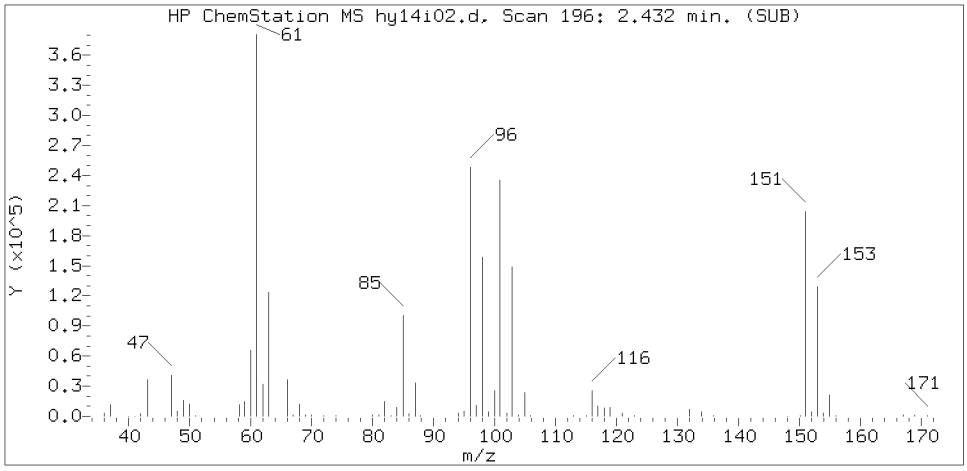
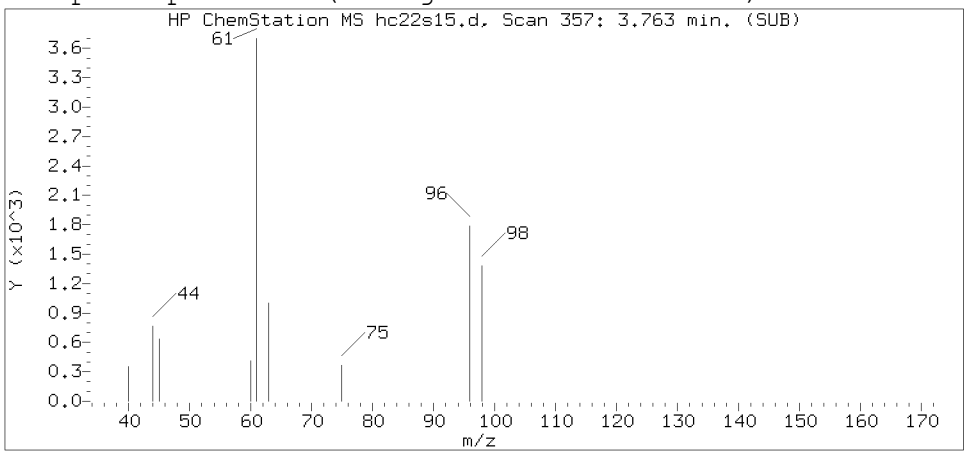
Target 3.5 esignature user ID: jgc14951

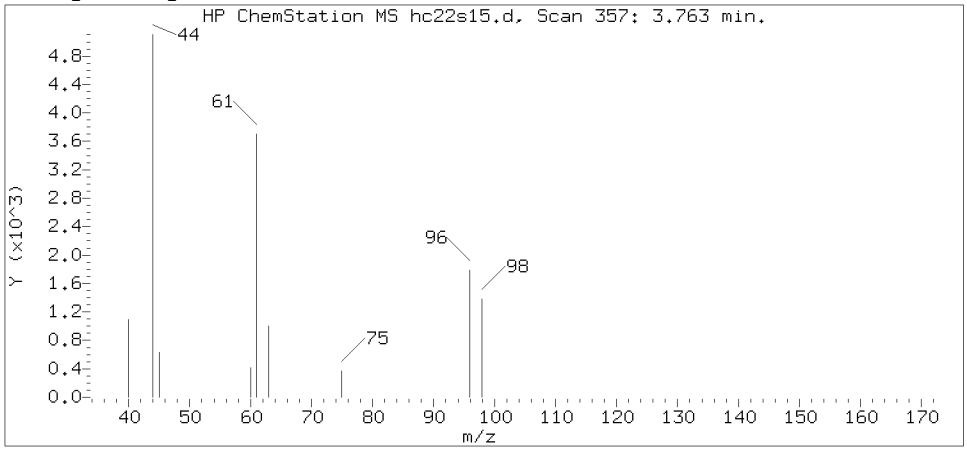
Reference Standard Spectrum for 1,1-Dichloroethene

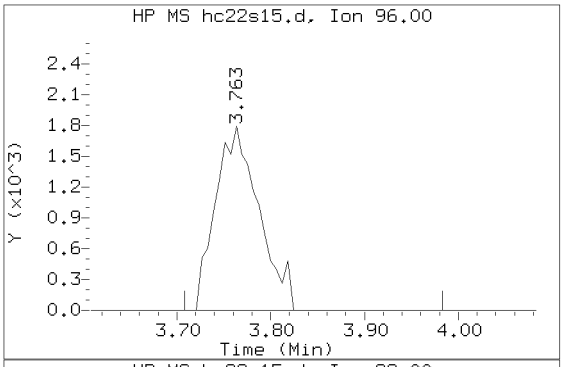


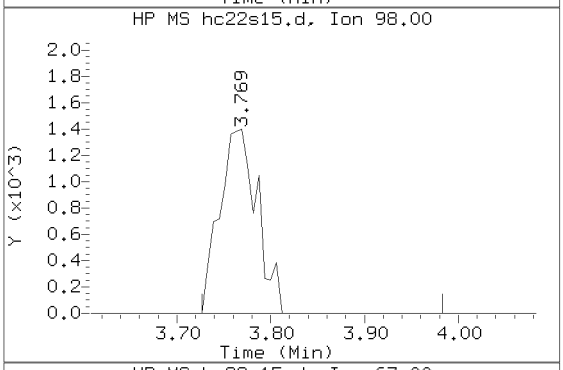
Sample Spectrum (Background Subtracted)

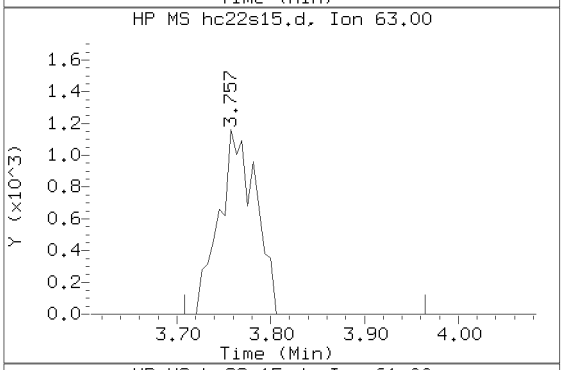


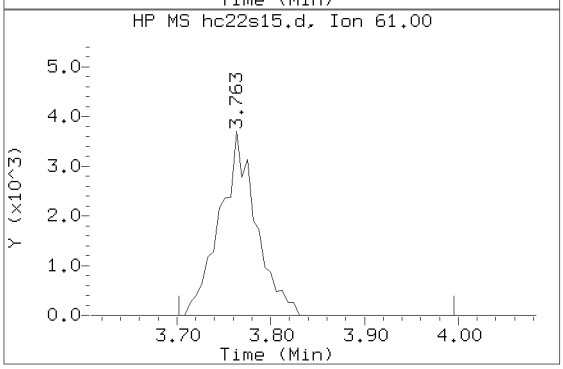
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 15
Compound Name : 1,1-Dichloroethene
Scan Number : 357
Retention Time (minutes): 3.763
Relative Retention Time :-0.00077
Quant Ion : 96.00
Area (flag) : 5771
On-Column Amount (ng) : 0.1165

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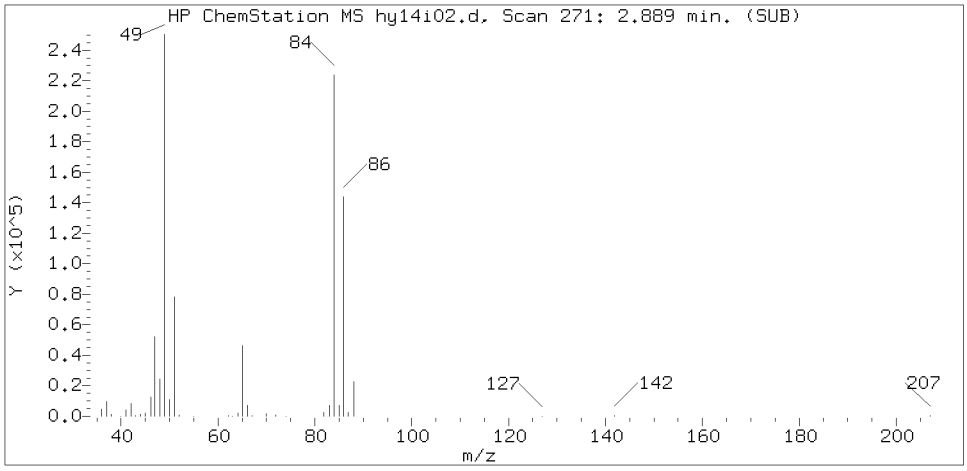
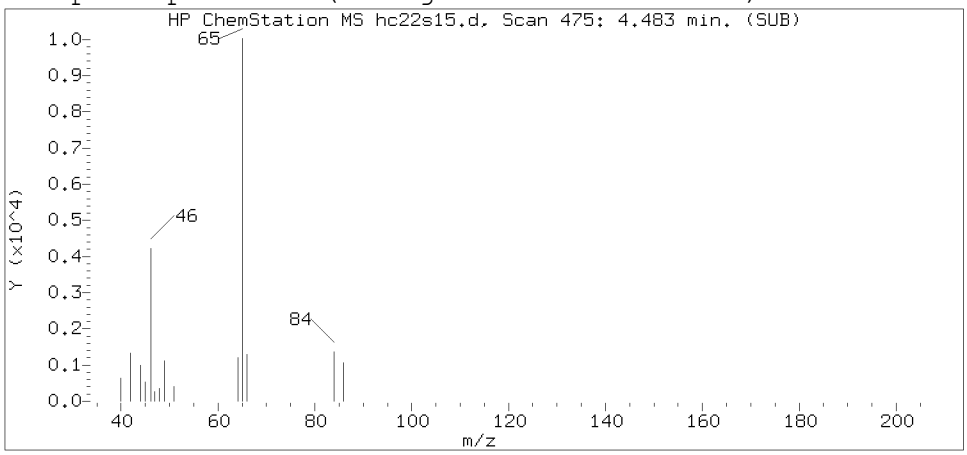
Target 3.5 esignature user ID: jgc14951

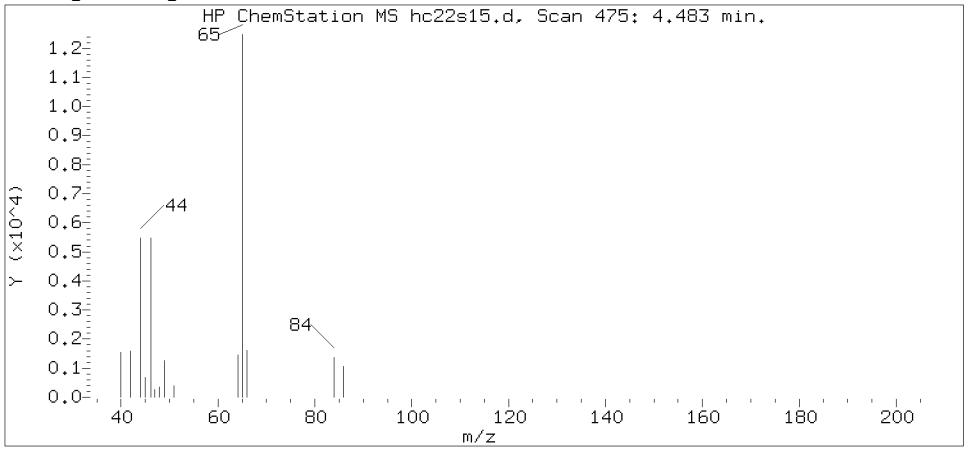
Reference Standard Spectrum for Methylene Chloride

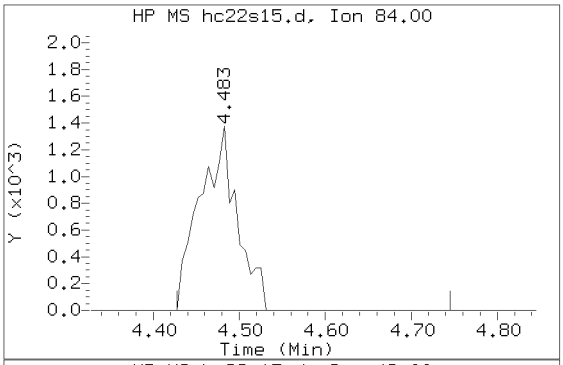


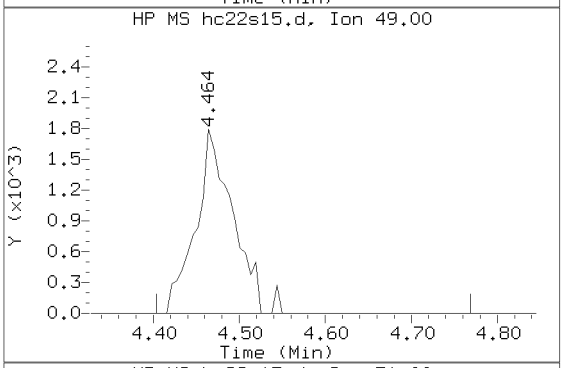
Sample Spectrum (Background Subtracted)

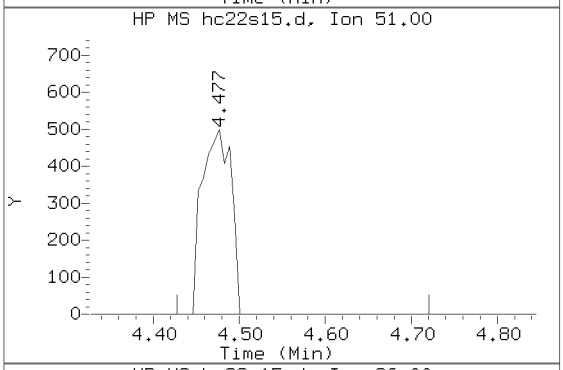


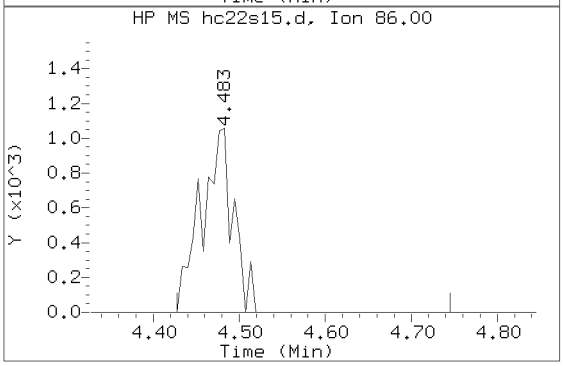
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number	: 23
Compound Name	: Methylene Chloride
Scan Number	: 475
Retention Time (minutes)	: 4.483
Relative Retention Time	:-0.00153
Quant Ion	: 84.00
Area (flag)	: 4143
On-Column Amount (ng)	: 0.0741

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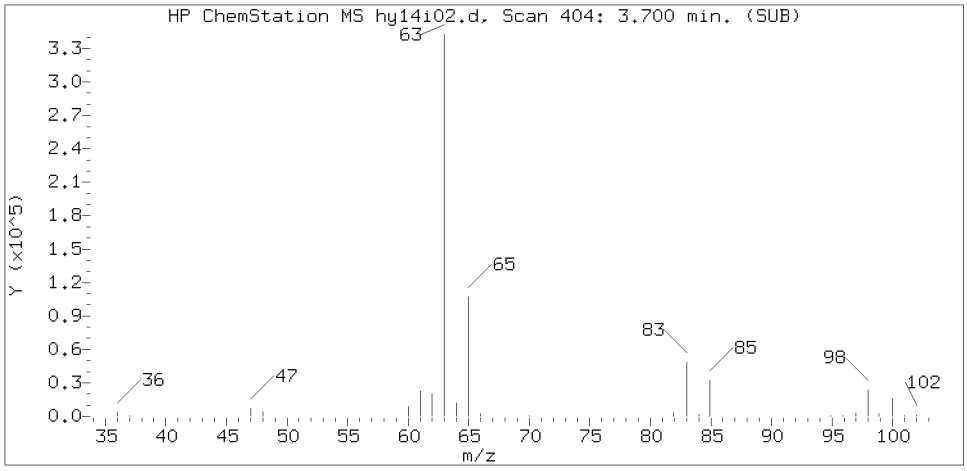
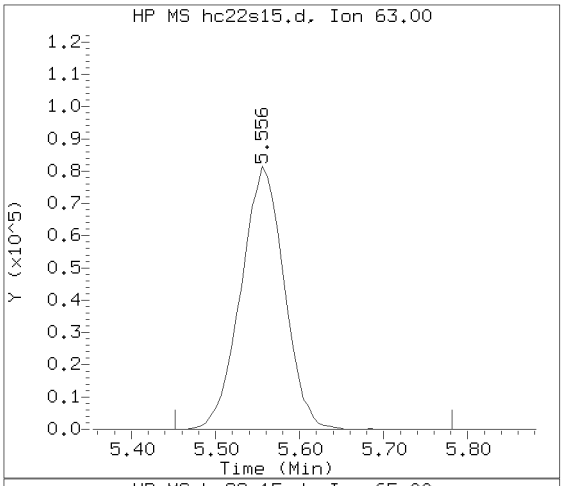
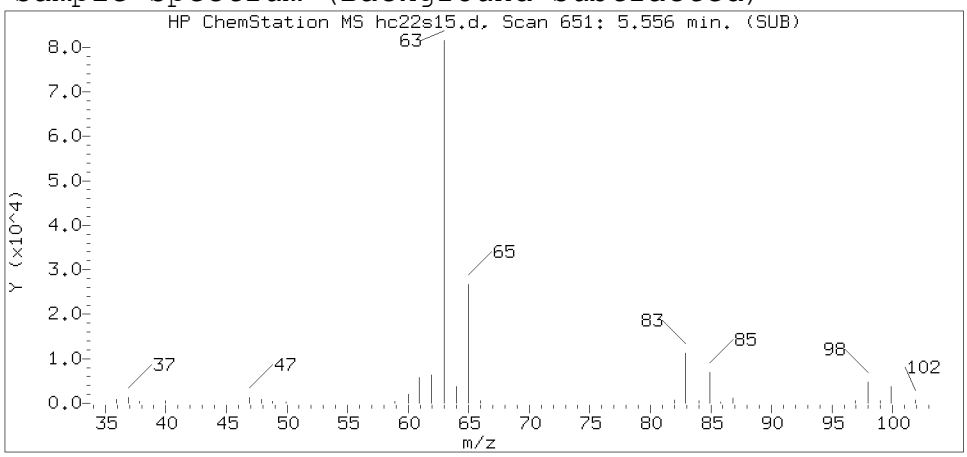
Target 3.5 esignature user ID: jgc14951

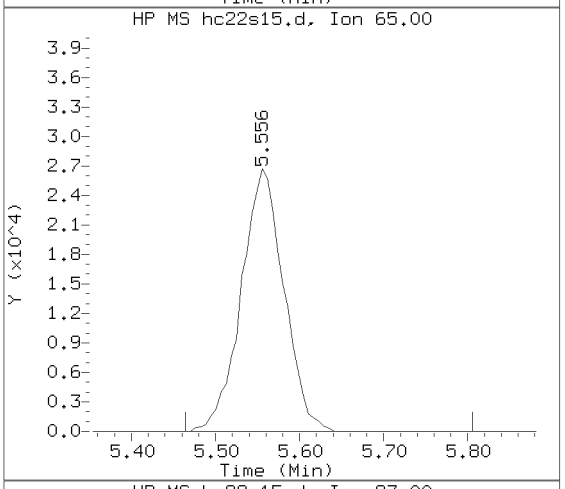
Reference Standard Spectrum for 1,1-Dichloroethane



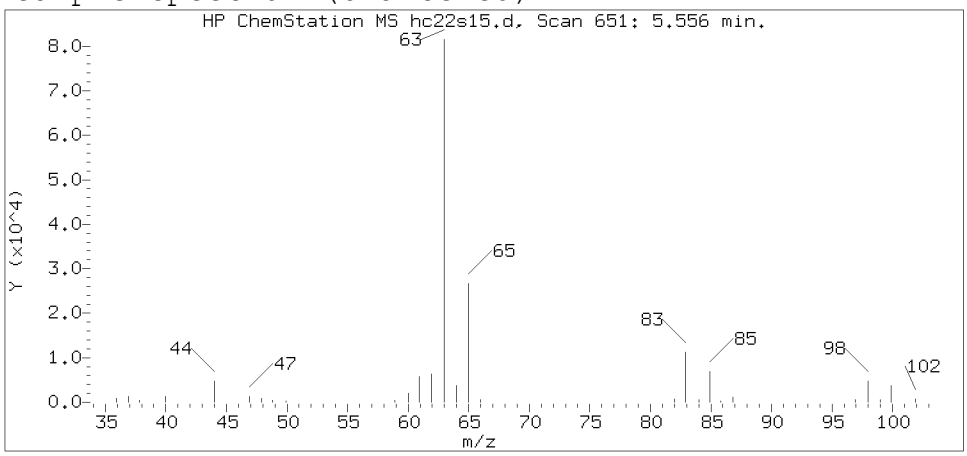


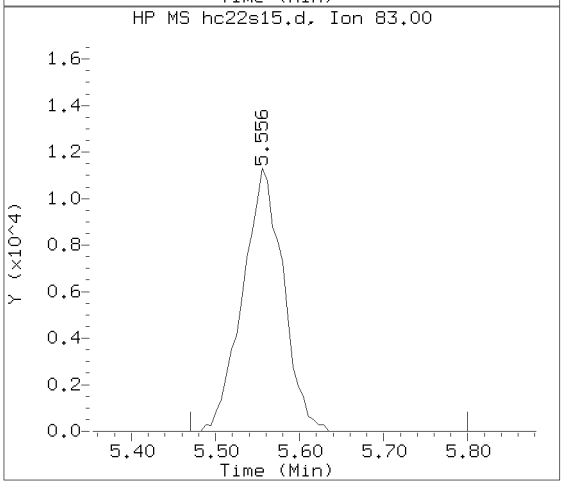
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 651
Retention Time (minutes): 5.556
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 290674
On-Column Amount (ng) : 2.7307

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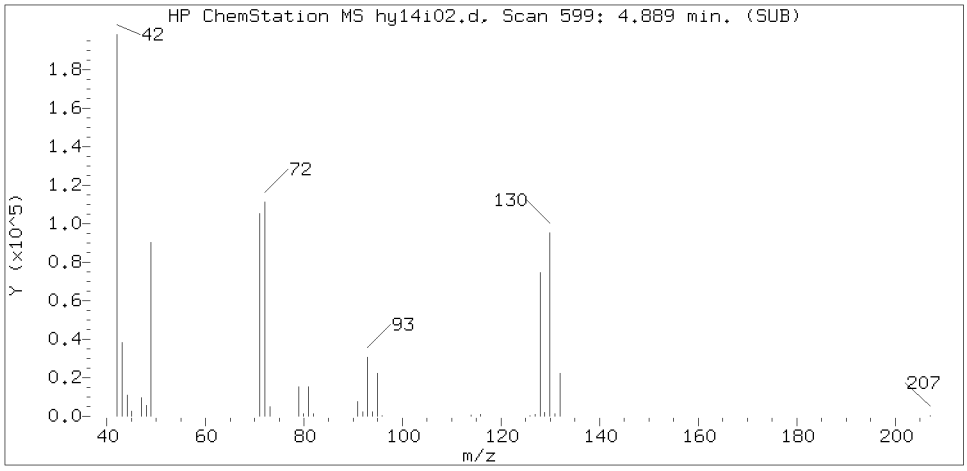
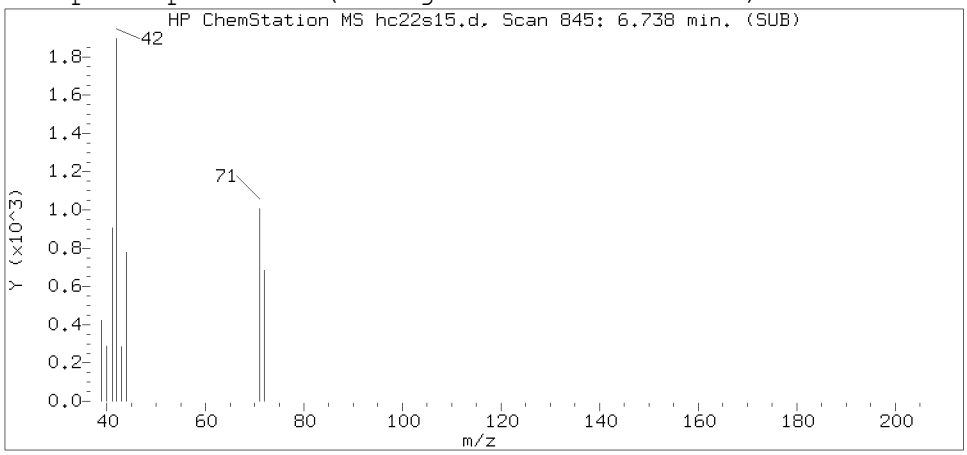
Target 3.5 esignature user ID: jgc14951

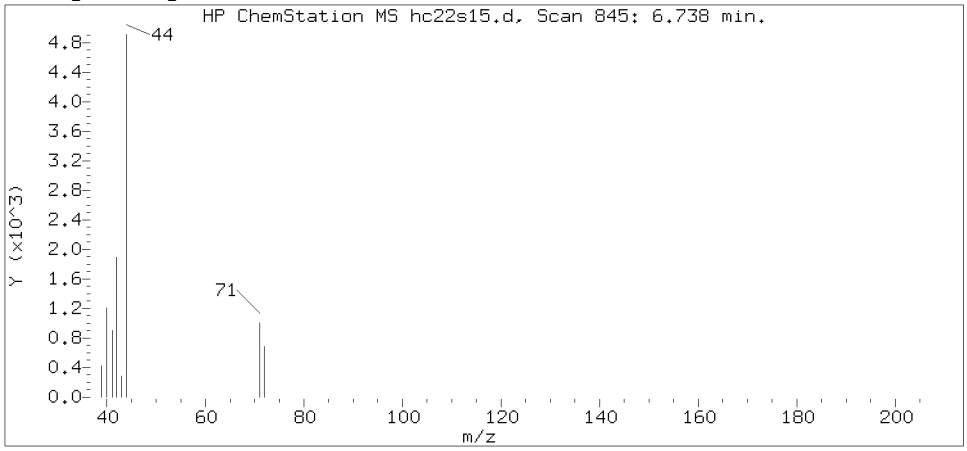
Reference Standard Spectrum for Tetrahydrofuran

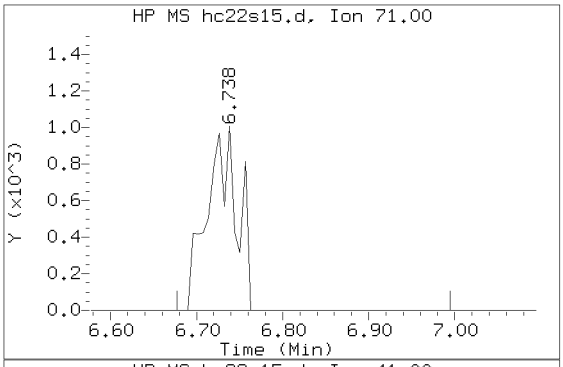


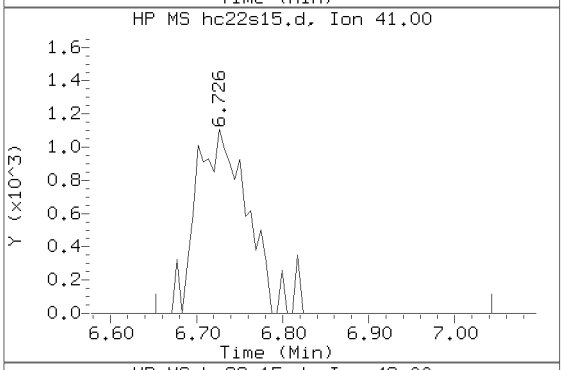
Sample Spectrum (Background Subtracted)

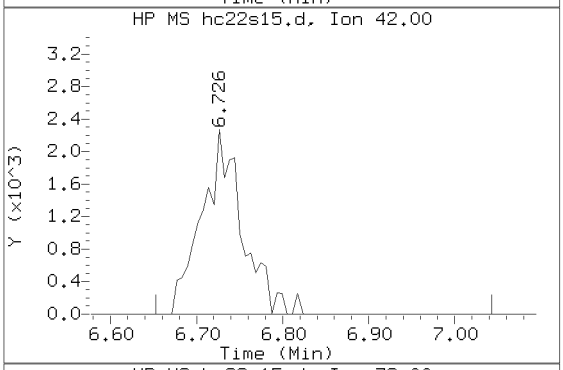


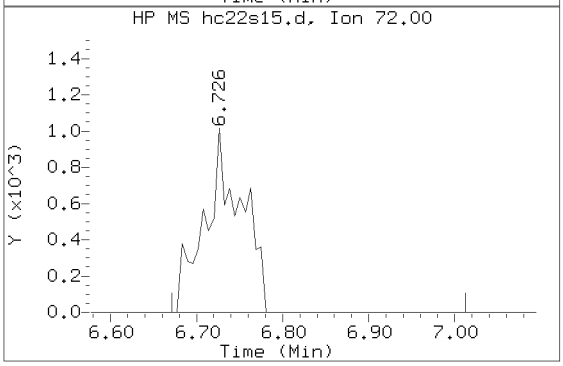
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number	: 48
Compound Name	: Tetrahydrofuran
Scan Number	: 845
Retention Time (minutes)	: 6.738
Relative Retention Time	: 0.00138
Quant Ion	: 71.00
Area (flag)	: 2440
On-Column Amount (ng)	: 0.8597

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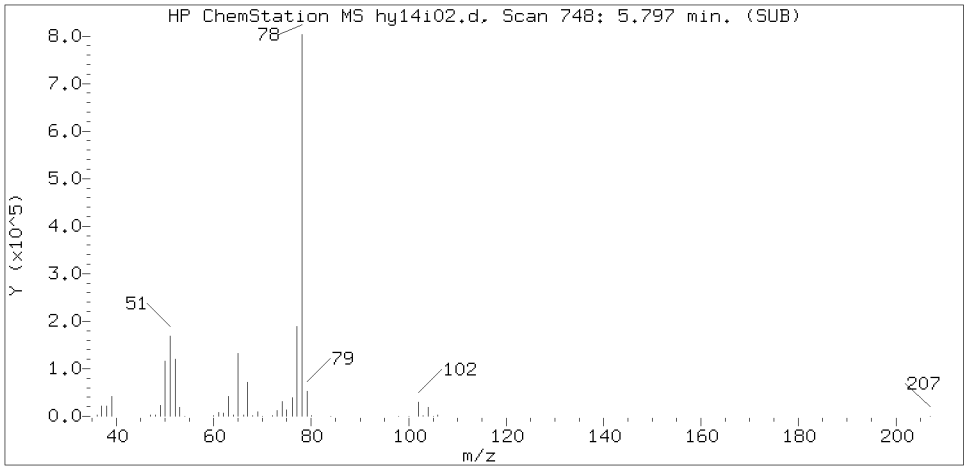
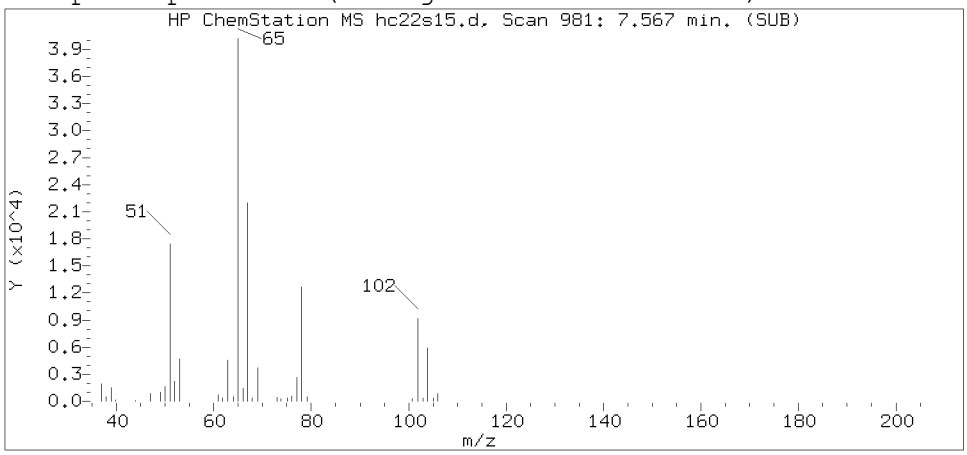
Target 3.5 esignature user ID: jgc14951

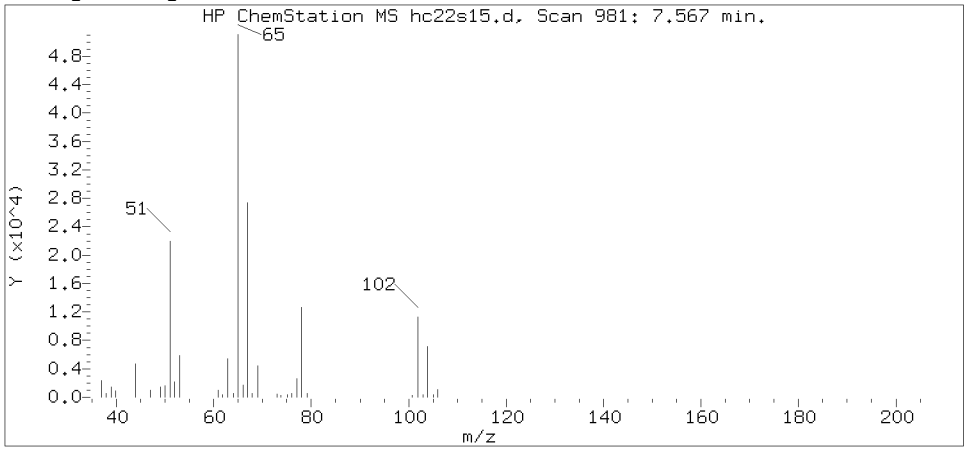
Reference Standard Spectrum for Benzene

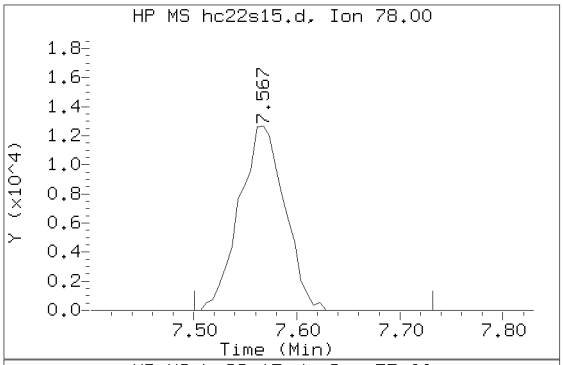


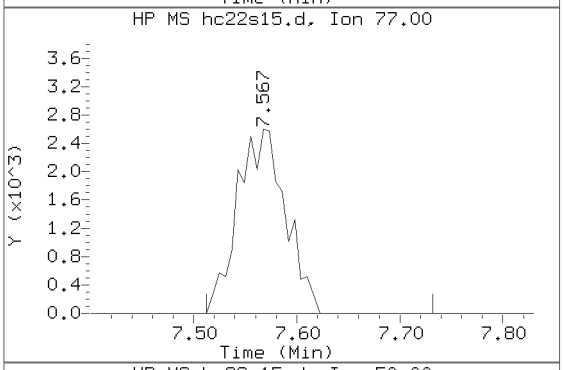
Sample Spectrum (Background Subtracted)

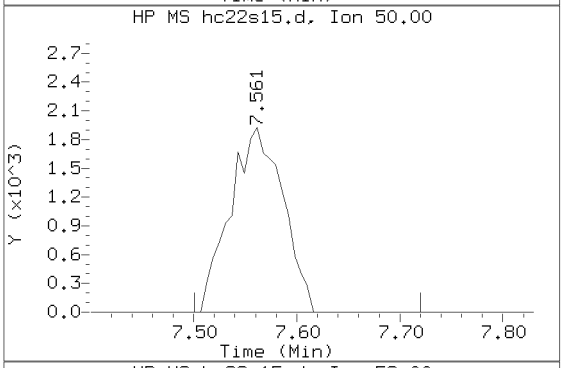


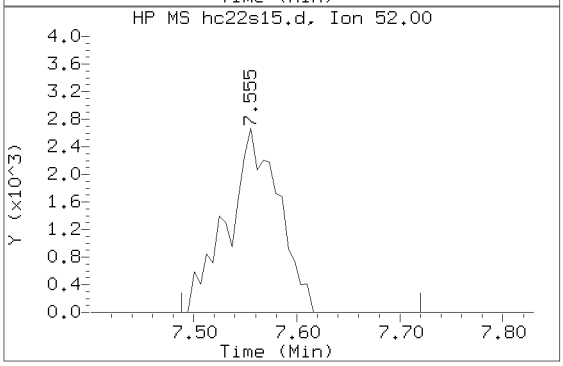
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 58
Compound Name : Benzene
Scan Number : 981
Retention Time (minutes): 7.567
Relative Retention Time :-0.00000
Quant Ion : 78.00
Area (flag) : 38795
On-Column Amount (ng) : 0.1636

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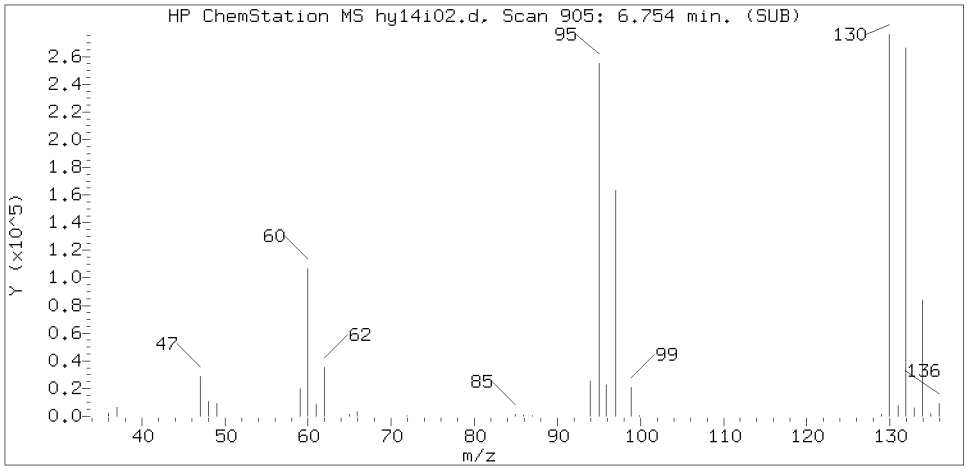
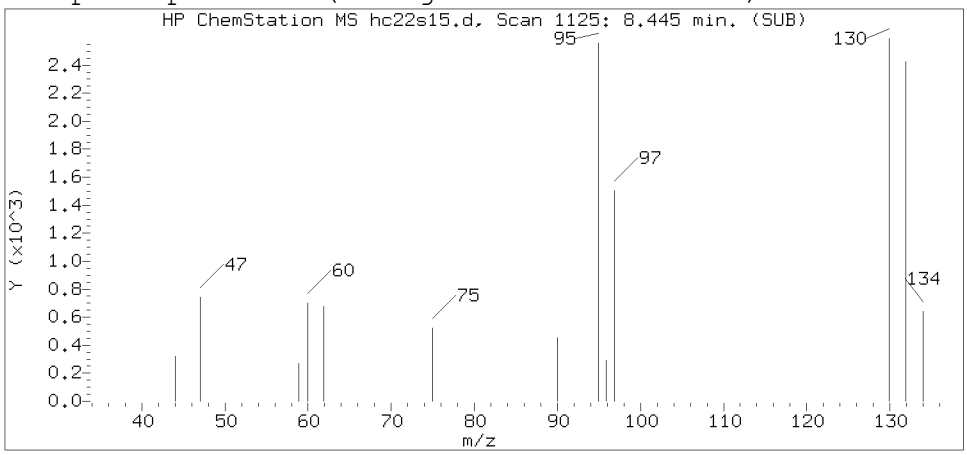
Target 3.5 esignature user ID: jgc14951

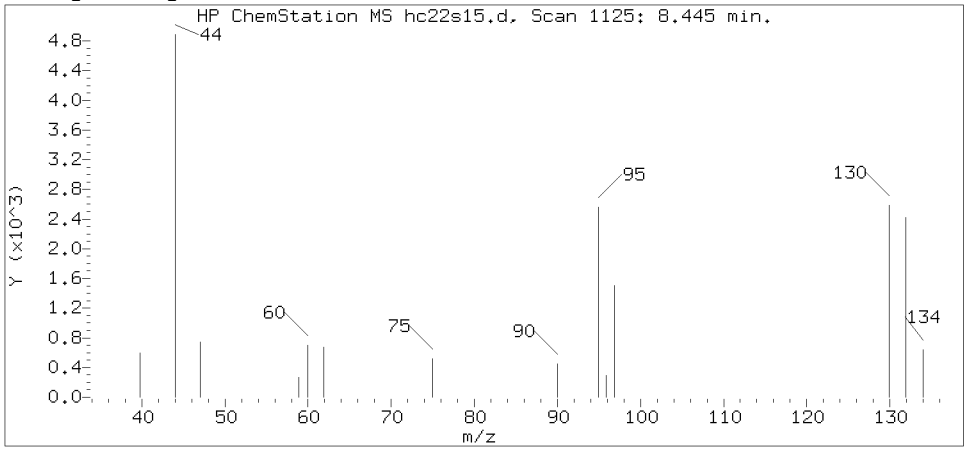
Reference Standard Spectrum for Trichloroethene

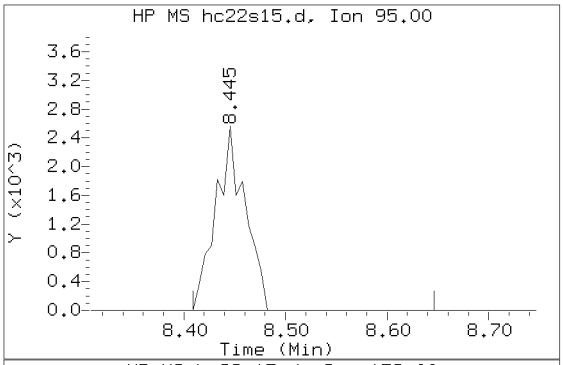


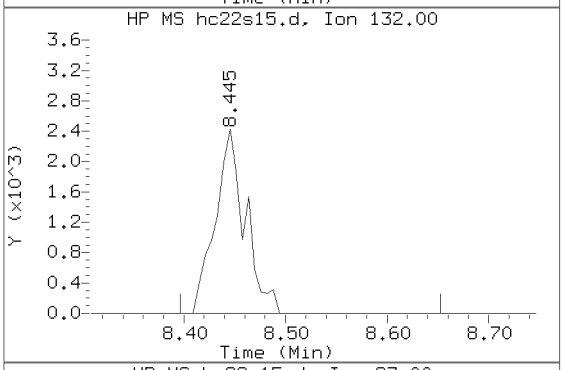
Sample Spectrum (Background Subtracted)

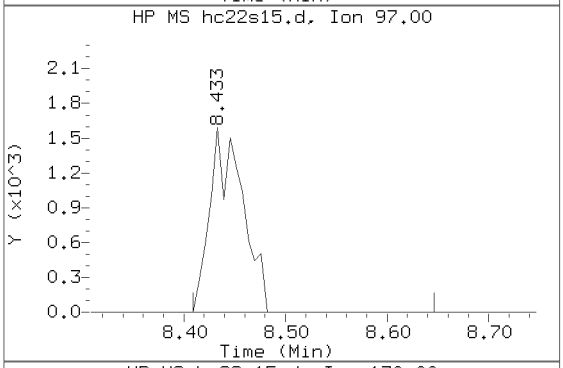


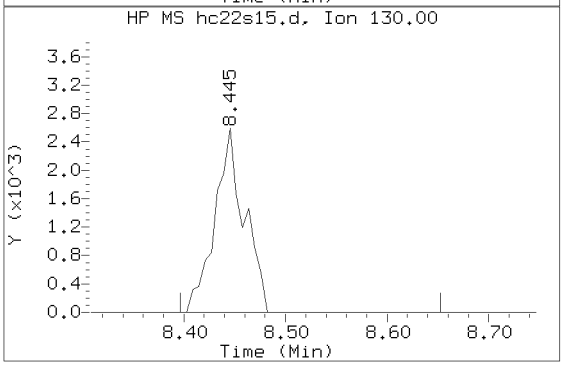
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number	: 67
Compound Name	: Trichloroethene
Scan Number	: 1125
Retention Time (minutes)	: 8.445
Relative Retention Time	: 0.00000
Quant Ion	: 95.00
Area (flag)	: 5141
On-Column Amount (ng)	: 0.0847

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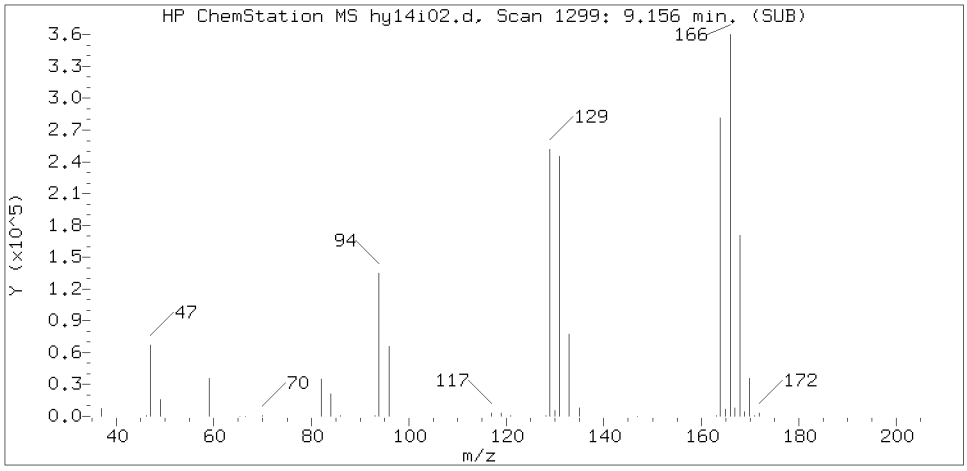
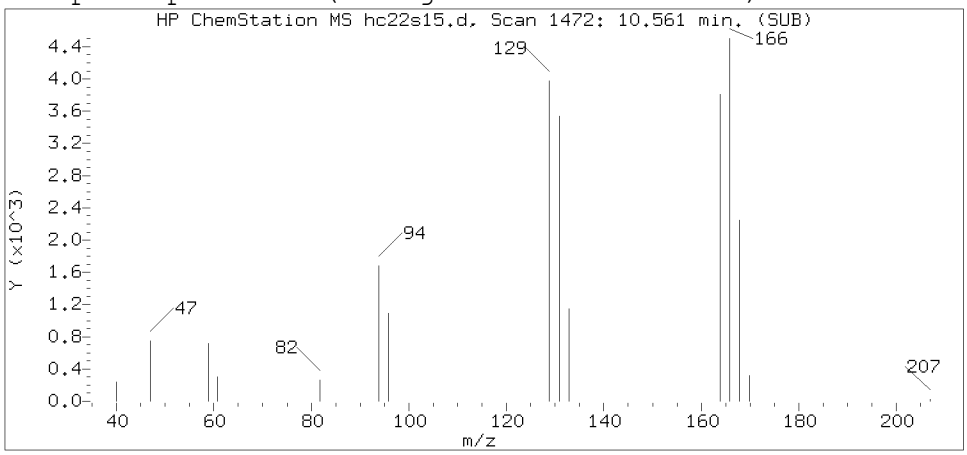
Target 3.5 esignature user ID: jgc14951

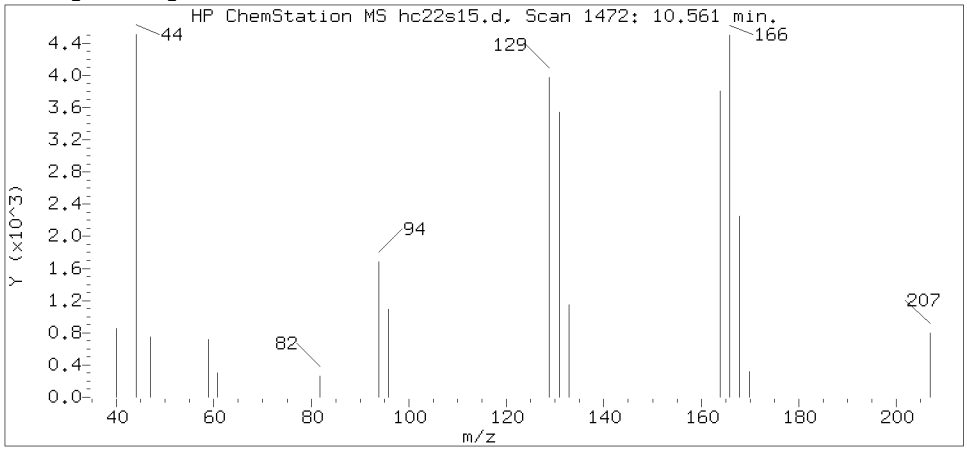
Reference Standard Spectrum for Tetrachloroethene

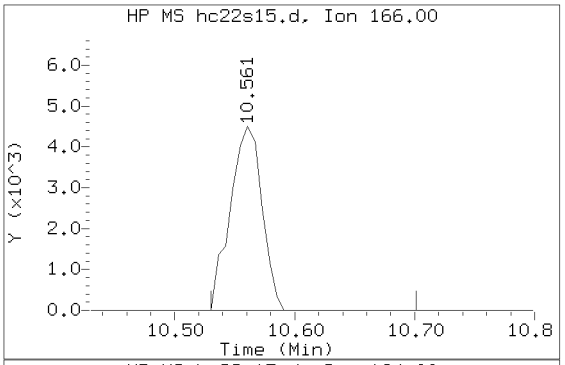


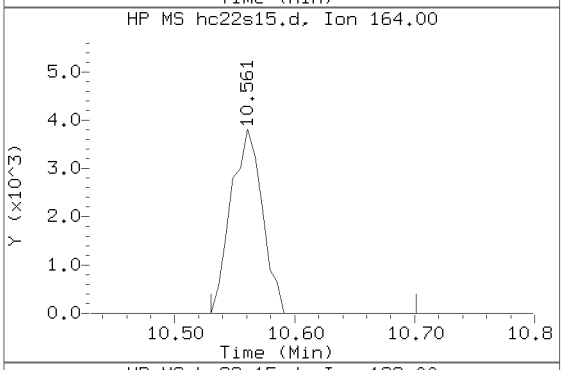
Sample Spectrum (Background Subtracted)

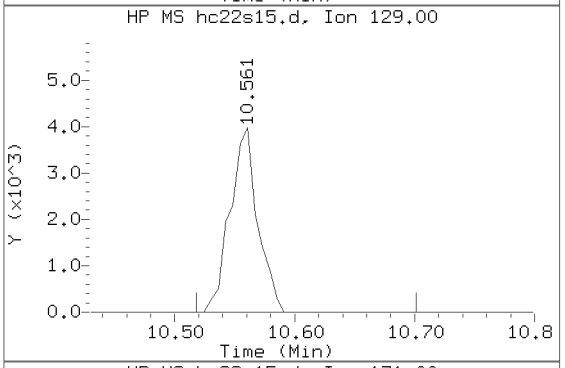


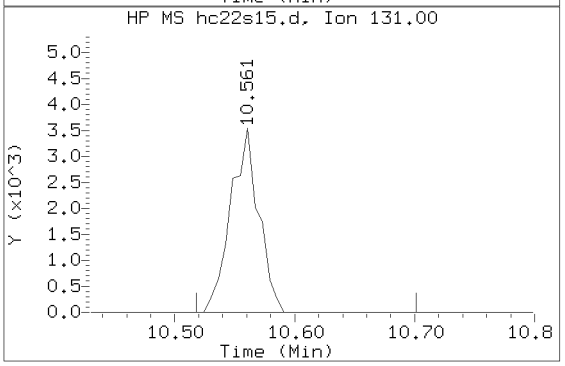
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s15.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:03 jgc14951

Sample Name: 94284 Lab Sample ID: 9850255

Compound Number : 89
Compound Name : Tetrachloroethene
Scan Number : 1472
Retention Time (minutes): 10.561
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 8252
On-Column Amount (ng) : 0.1258

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Target 3.5 esignature user ID: jgc14951

94285 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850256

Data file: /chem2/HP19094.i/18oct22a.b/hc22s16.d Injection date and time: **22-OCT-2018 16:32**
Data file Sample Info. Line: 94285;9850256;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(-0.006)	475	65	120435	(2)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2541149	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1970429	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1059713	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	643456	10.047	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.543	(-0.001)	102	116347	10.420	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2503549	9.872	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	889212	9.630	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)	2.142	(0.000)	45	11624	0.143	0.14		J	0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)	3.422	(0.000)	59	20892	0.536	0.54		J	0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(-0.000)	63	9375	0.088	0.09		J	0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s16.d Injection date and time: **22-OCT-2018 16:32**
Data file Sample Info. Line: 94285;9850256;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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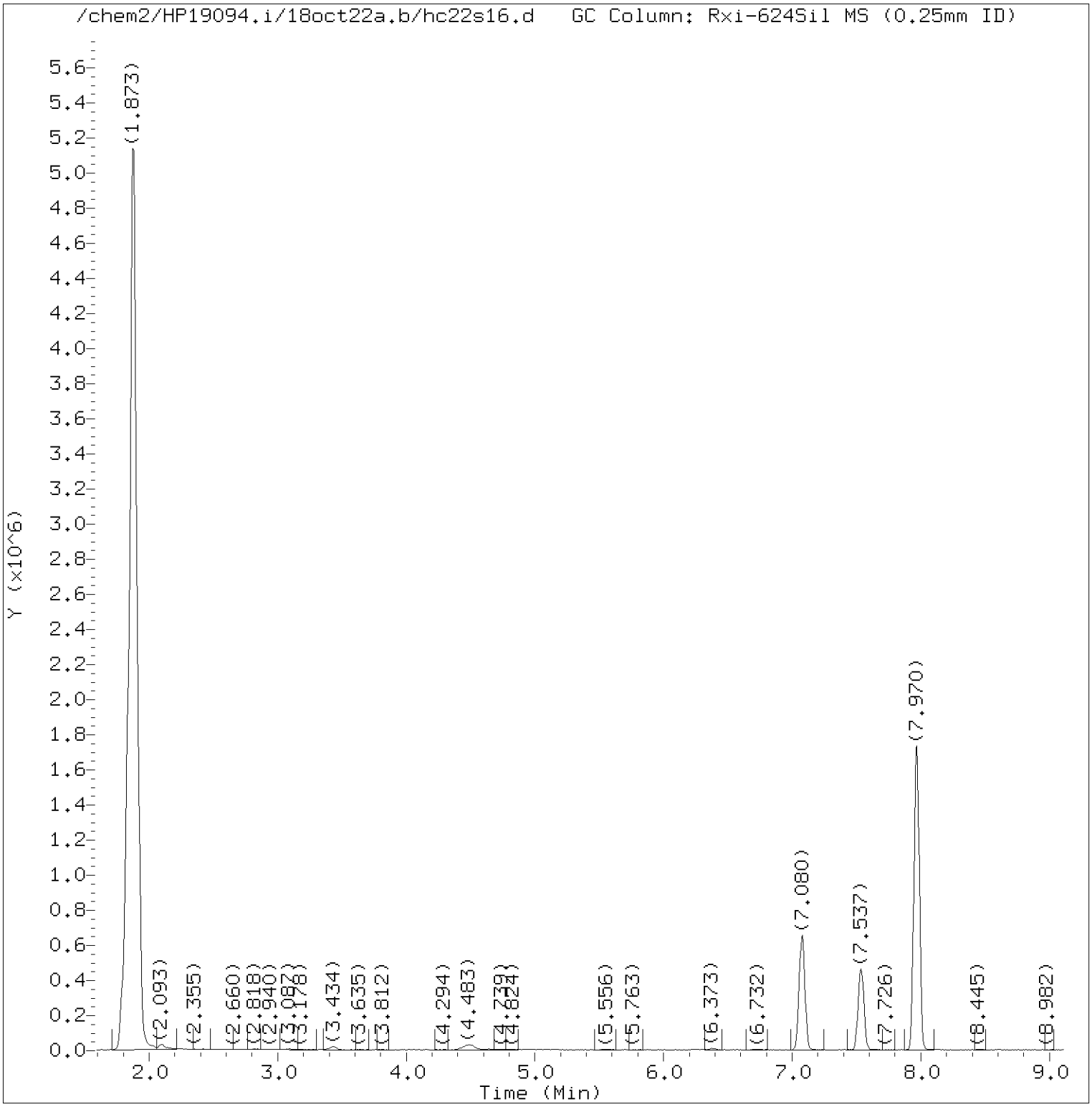
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

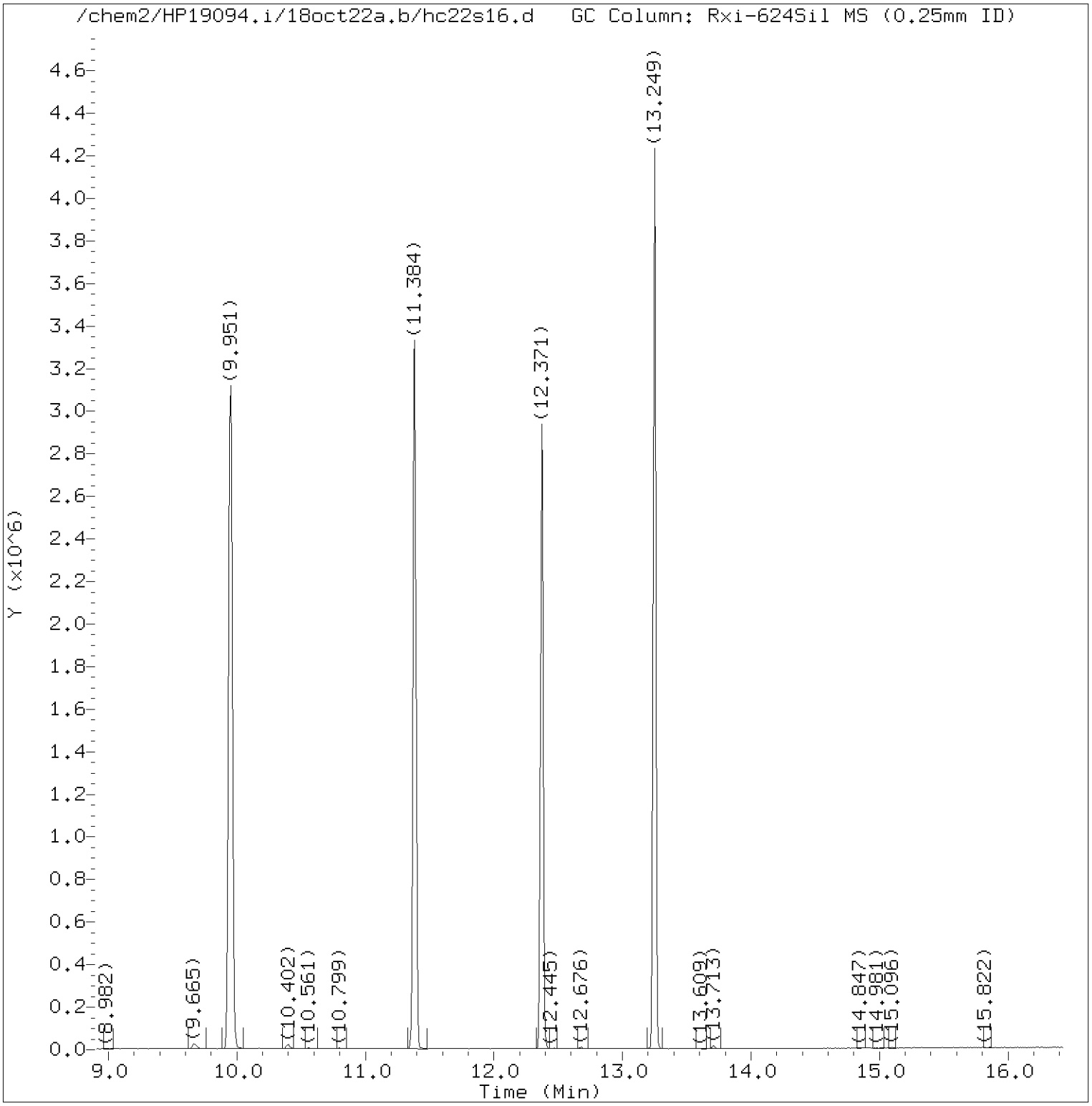
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Sample Name: 94285 Lab Sample ID: 9850256

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Sample Name: 94285 Lab Sample ID: 9850256

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

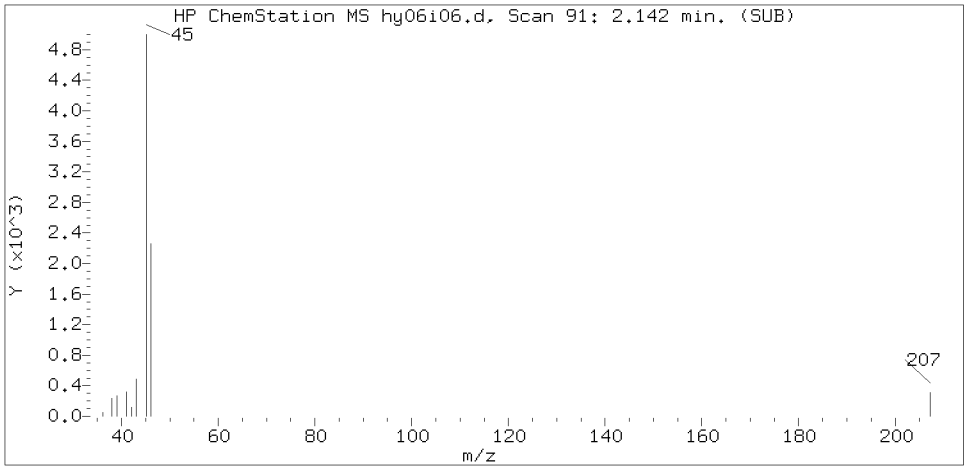
Sample Name: 94285 Lab Sample ID: 9850256

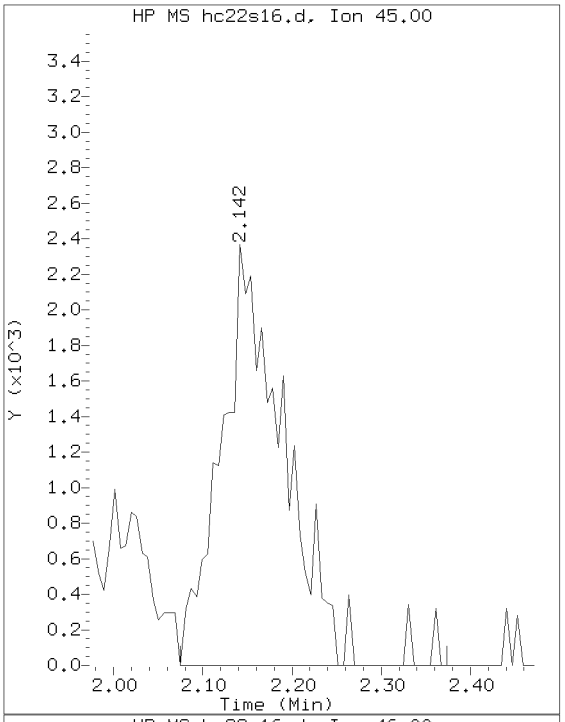
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.142	45	11624	0.143
11) Ethyl ether	(2)	3.422	59	20892	0.536
26)*t-Butyl Alcohol-d10	(1)	4.483	65	120435	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	9375	0.088
50)$Dibromofluoromethane	(2)	7.080	113	643456	10.047
57)$1,2-Dichloroethane-d4	(2)	7.543	102	116347	10.420
63)*Fluorobenzene	(2)	7.970	96	2541149	10.000
82)$Toluene-d8	(3)	9.951	98	2503549	9.872
97)*Chlorobenzene-d5	(3)	11.384	117	1970429	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	889212	9.630
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1059713	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

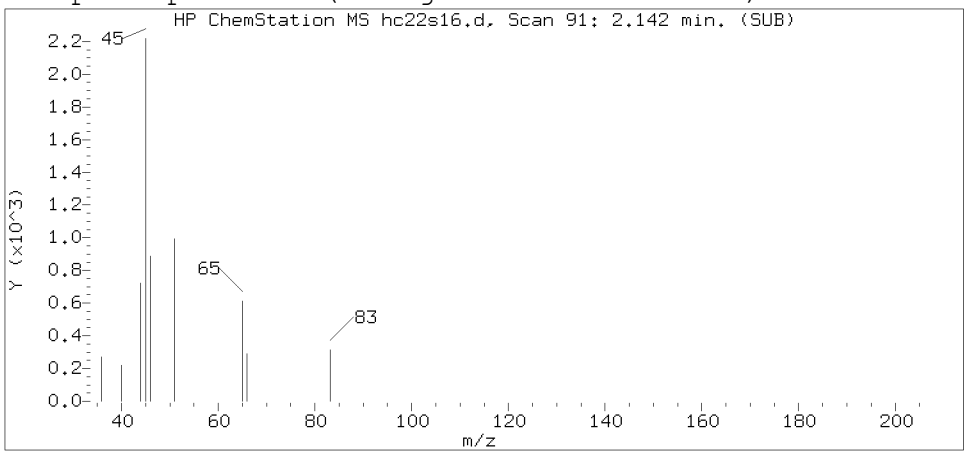
Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

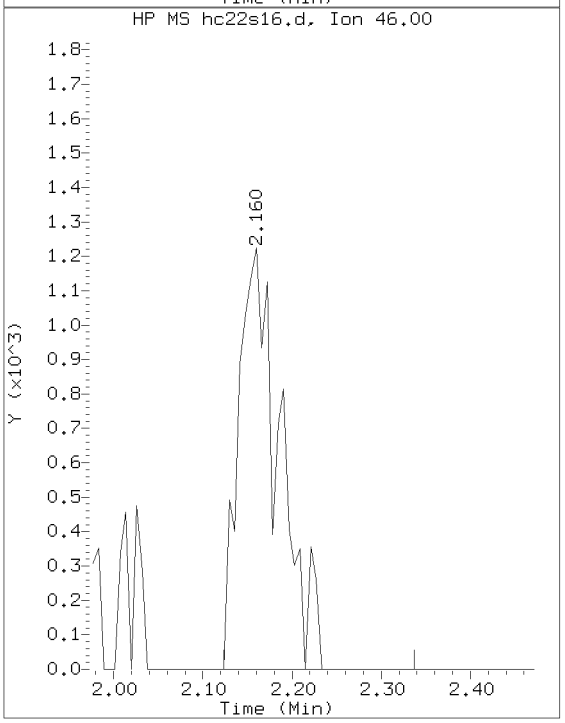
Reference Standard Spectrum for Dimethyl ether



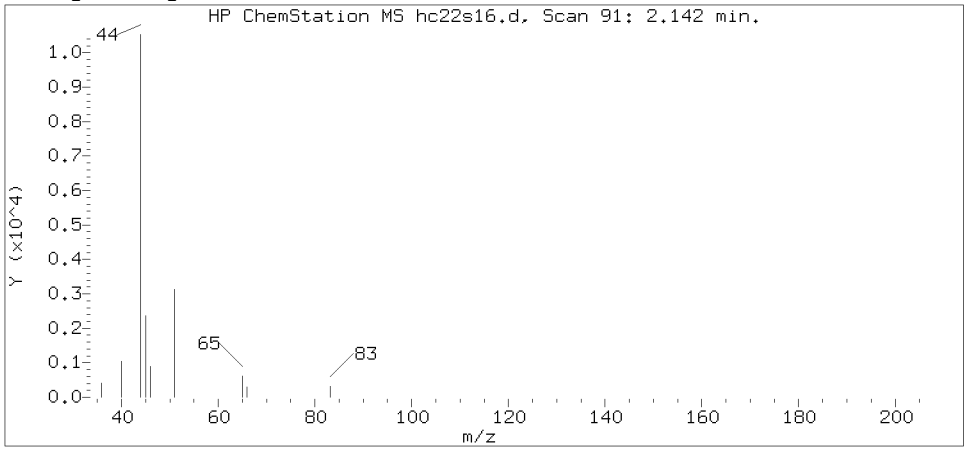


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Sample Name: 94285 Lab Sample ID: 9850256

Compound Number	: 4
Compound Name	: Dimethyl ether
Scan Number	: 91
Retention Time (minutes)	: 2.142
Relative Retention Time	: 0.00074
Quant Ion	: 45.00
Area (flag)	: 11624
On-Column Amount (ng)	: 0.1425

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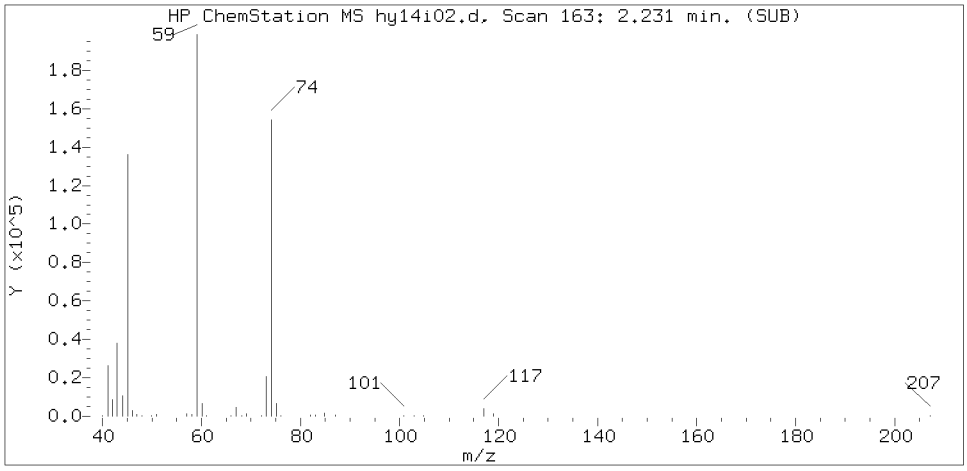
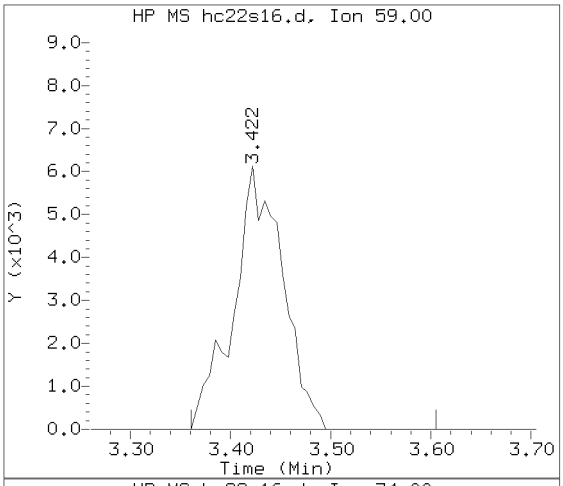
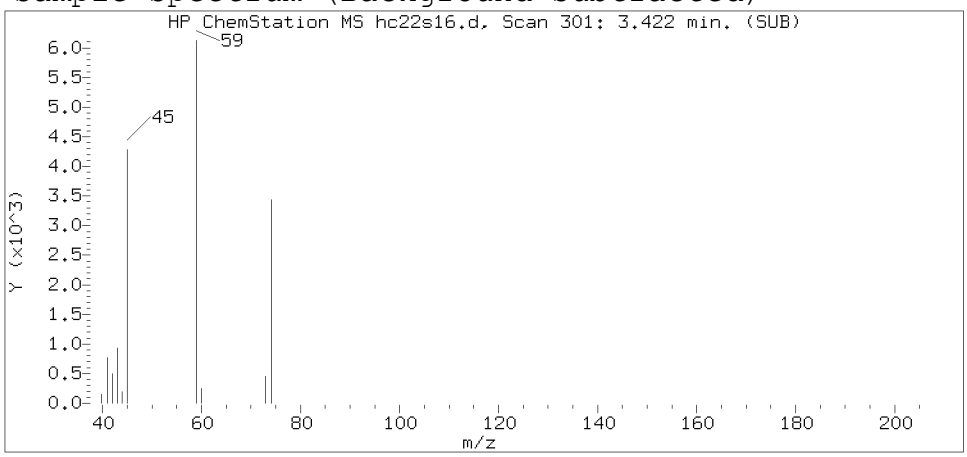
Target 3.5 esignature user ID: jgc14051

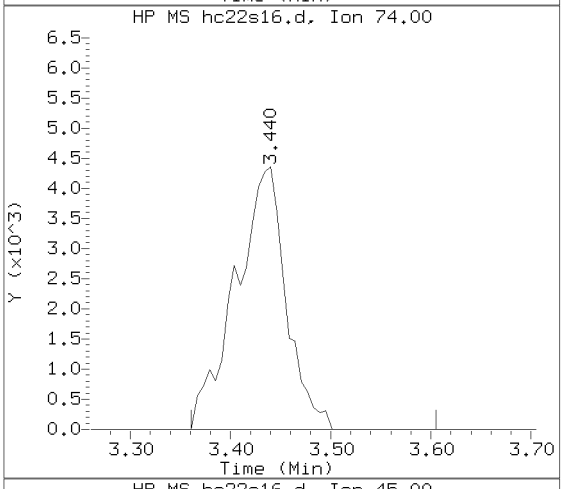
Reference Standard Spectrum for Ethyl ether



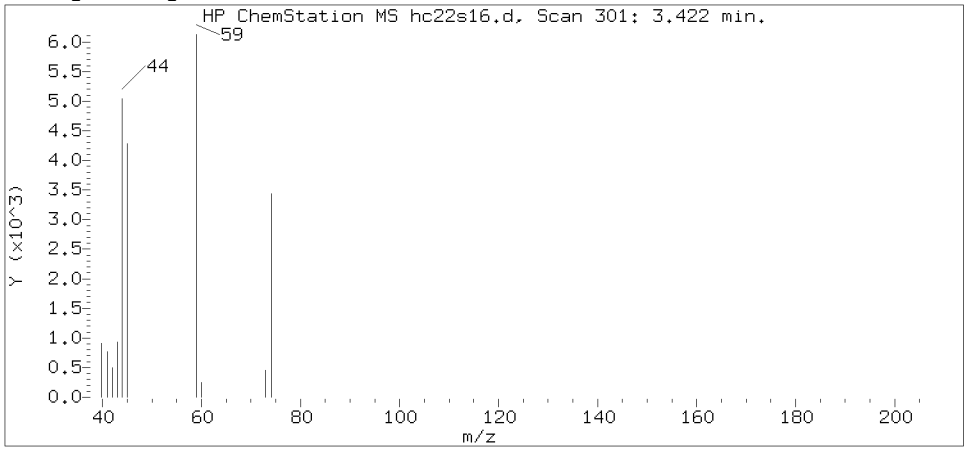


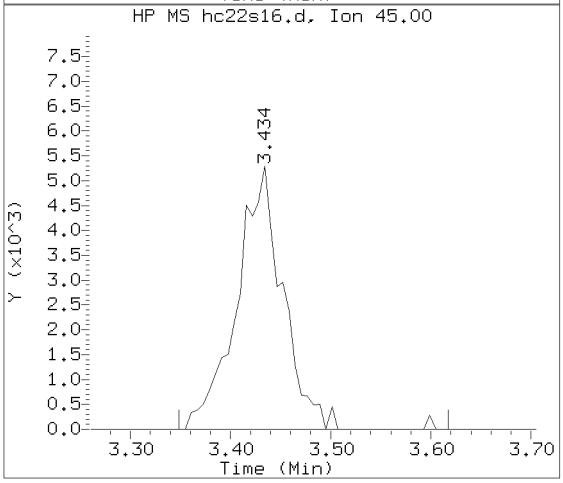
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Sample Name: 94285 Lab Sample ID: 9850256

Compound Number	: 11
Compound Name	: Ethyl ether
Scan Number	: 301
Retention Time (minutes)	: 3.422
Relative Retention Time	: 0.00076
Quant Ion	: 59.00
Area (flag)	: 20892
On-Column Amount (ng)	: 0.5355

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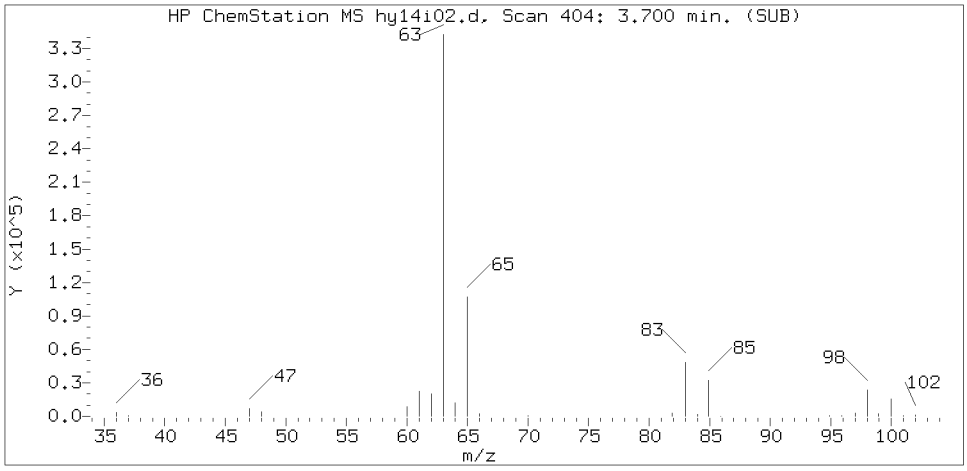
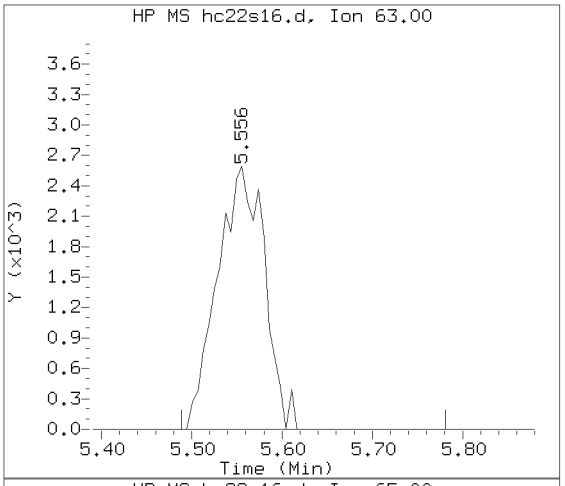
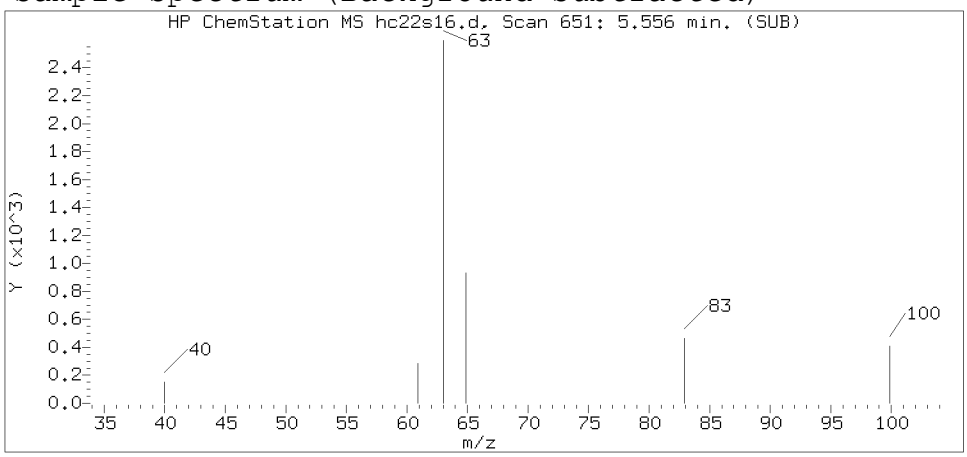
Target 3.5 esignature user ID: jgc14051

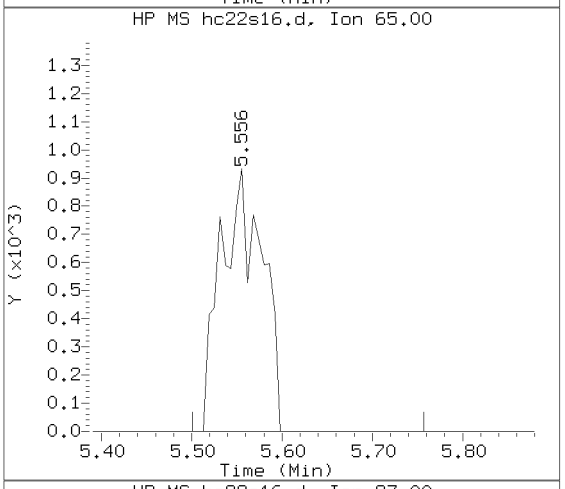
Reference Standard Spectrum for 1,1-Dichloroethane



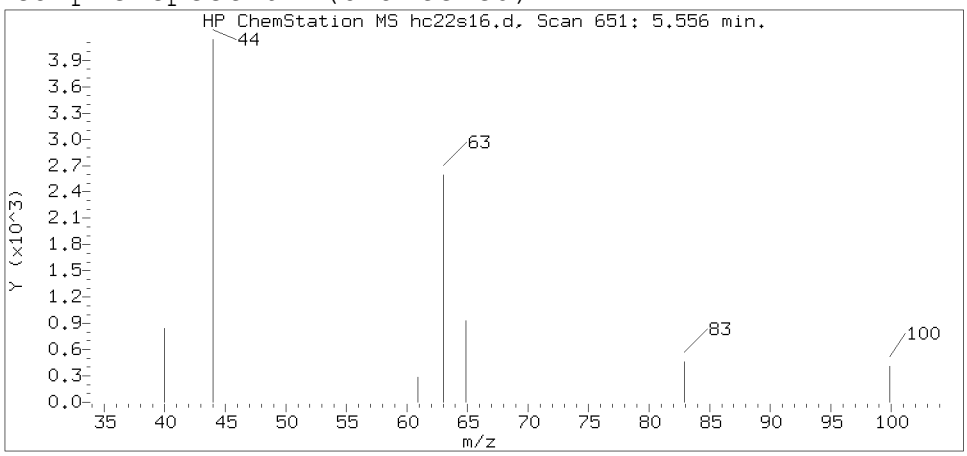


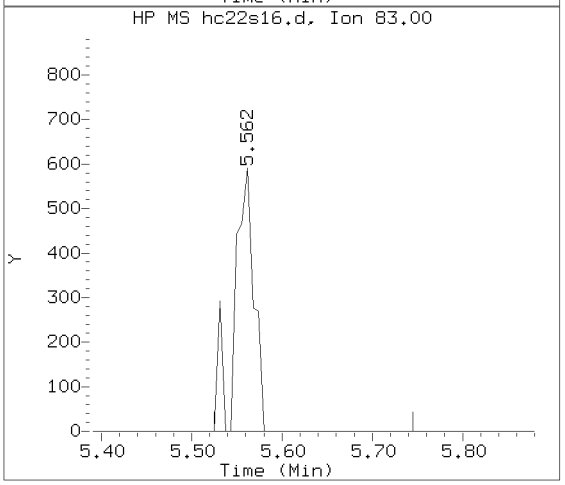
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s16.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:50 Automation

Sample Name: 94285 Lab Sample ID: 9850256

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 651
Retention Time (minutes): 5.556
Relative Retention Time :-0.00000
Quant Ion : 63.00
Area (flag) : 9375
On-Column Amount (ng) : 0.0876

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14051

94286 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850257

Data file: /chem2/HP19094.i/18oct22a.b/hc22s17.d Injection date and time: **22-OCT-2018 16:54**
Data file Sample Info. Line: 94286;9850257;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	118525	(1)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2548879	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1961369	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1054025	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.068	(0.001)	113	645975	10.055	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	115465	10.310	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2516762	9.970	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	899355	9.785	98%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)	2.270	(0.001)	50	58599	0.601	0.60		J	0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)	5.562	(-0.001)	63	11336	0.106	0.11		J	0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s17.d Injection date and time: **22-OCT-2018 16:54**
Data file Sample Info. Line: 94286;9850257;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

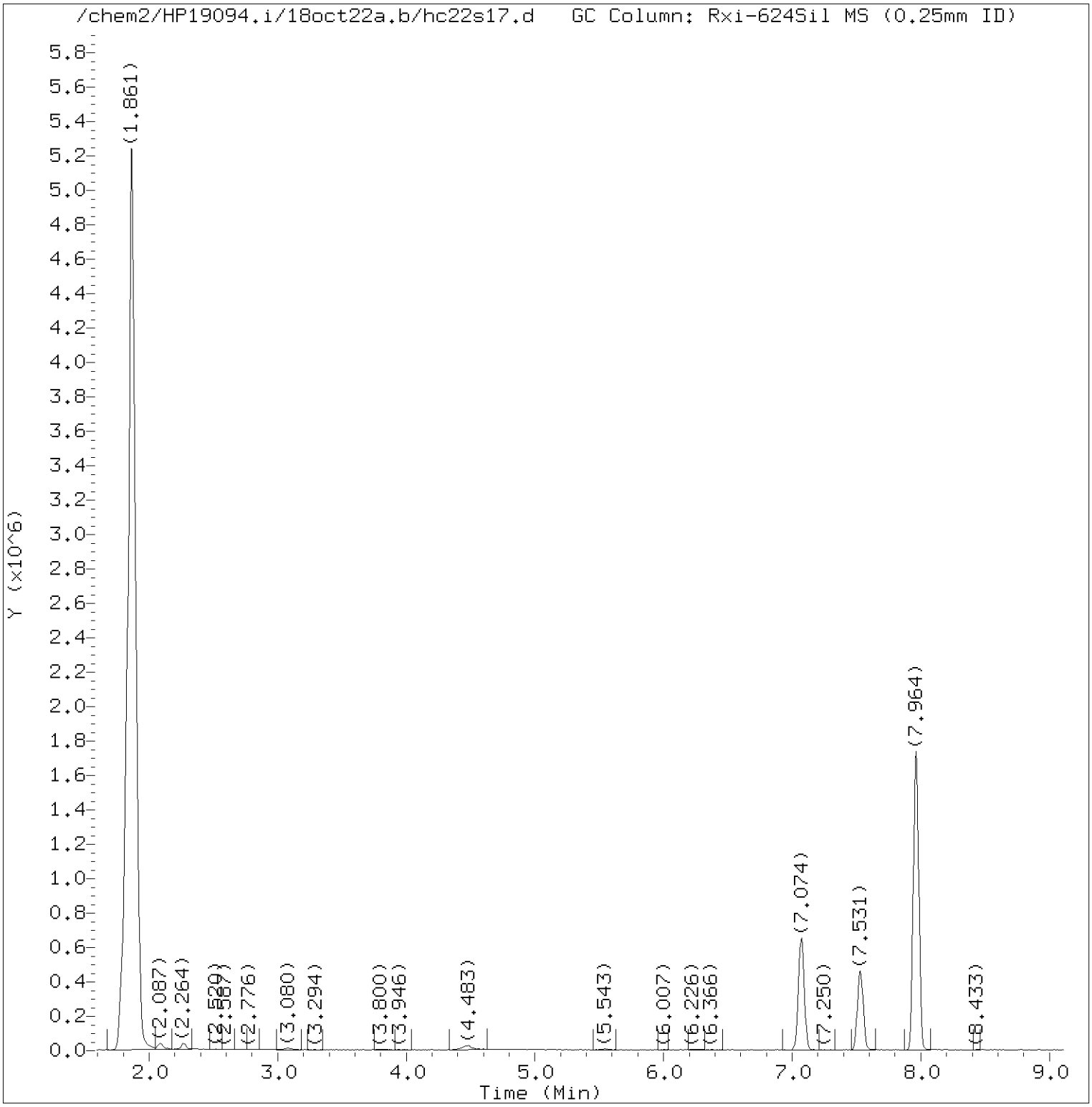
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

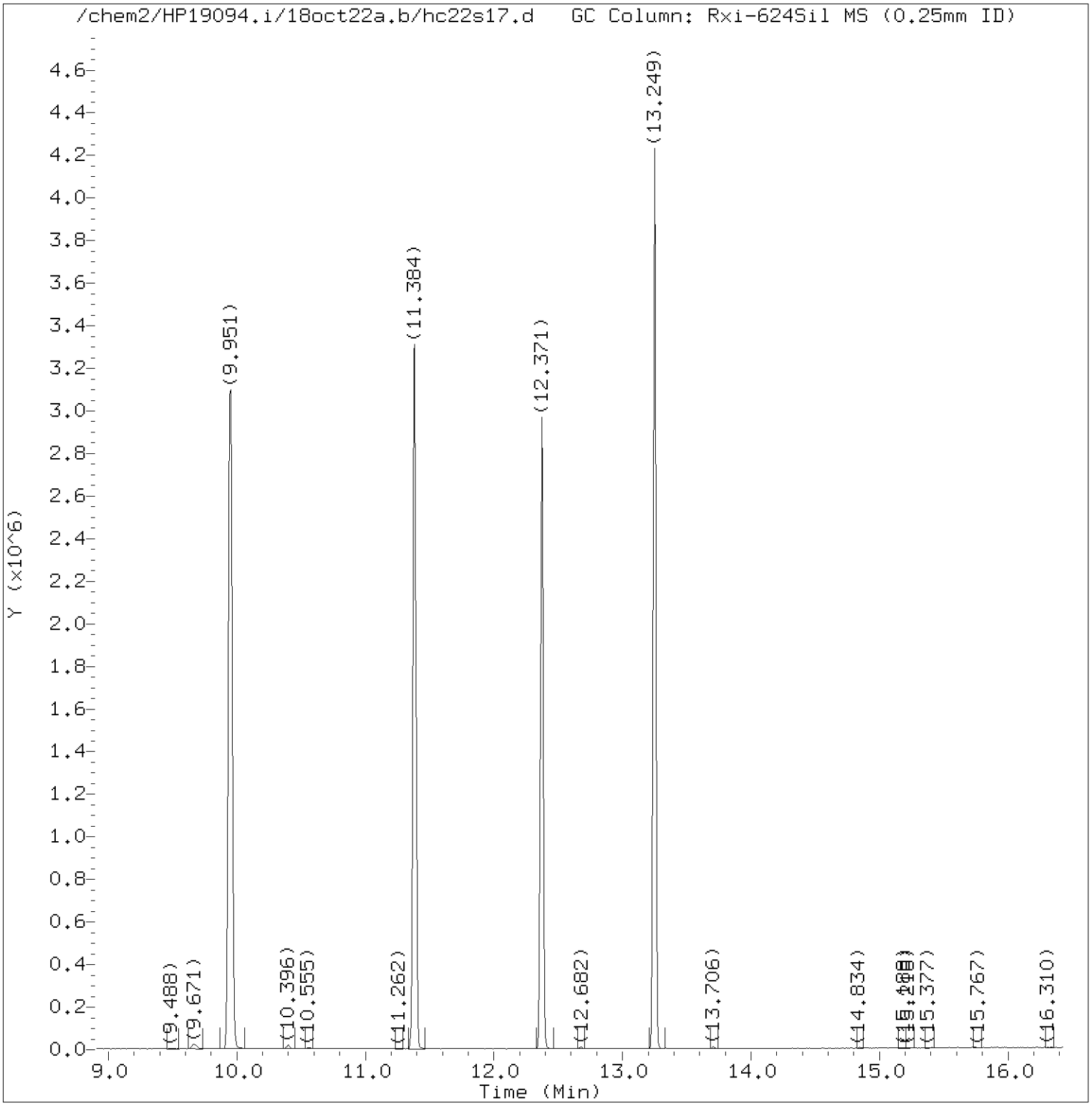
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Sample Name: 94286 Lab Sample ID: 9850257

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Sample Name: 94286 Lab Sample ID: 9850257

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

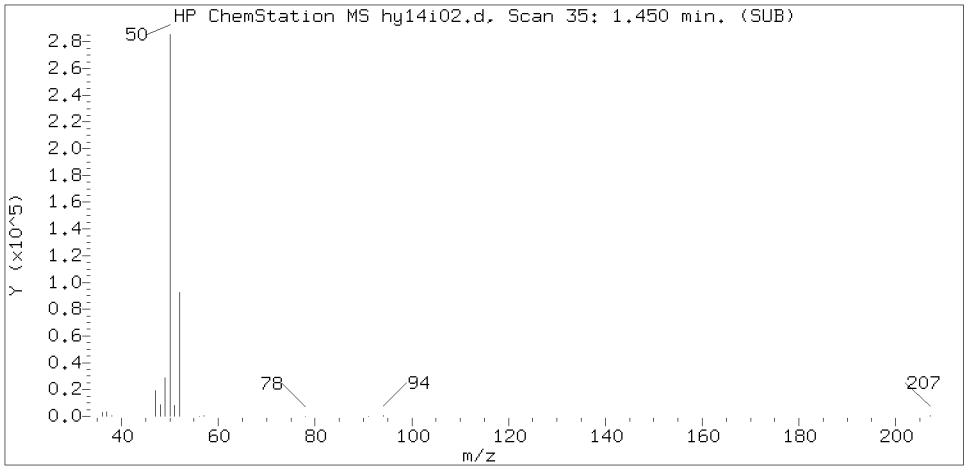
Sample Name: 94286 Lab Sample ID: 9850257

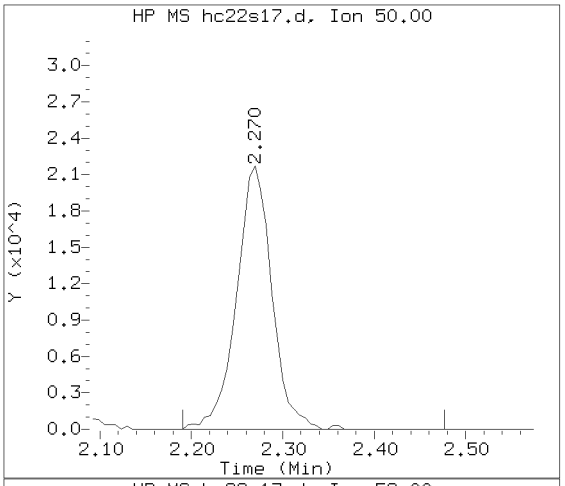
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Chloromethane	(2)	2.270	50	58599	0.601
26)*t-Butyl Alcohol-d10	(1)	4.489	65	118525	50.000
33) 1,1-Dichloroethane	(2)	5.562	63	11336	0.106
50)$Dibromofluoromethane	(2)	7.068	113	645975	10.055
57)$1,2-Dichloroethane-d4	(2)	7.531	102	115465	10.310
63)*Fluorobenzene	(2)	7.964	96	2548879	10.000
82)$Toluene-d8	(3)	9.951	98	2516762	9.970
97)*Chlorobenzene-d5	(3)	11.384	117	1961369	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	899355	9.785
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1054025	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

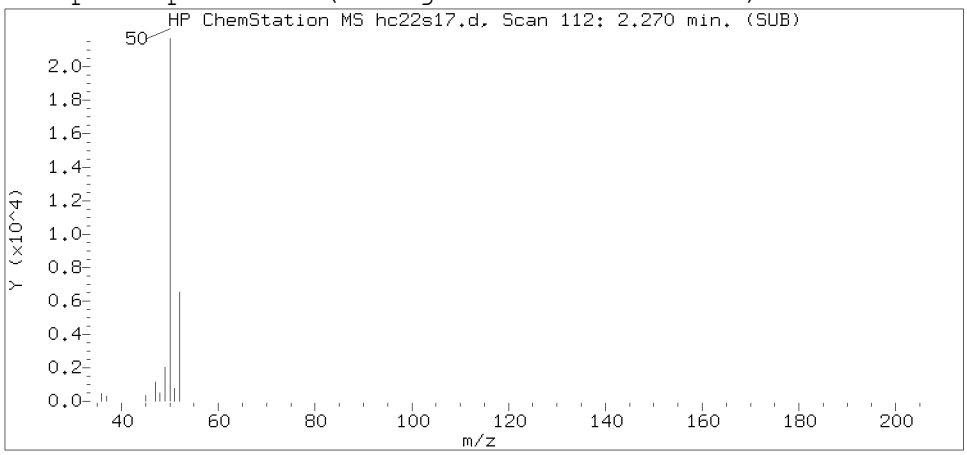
Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

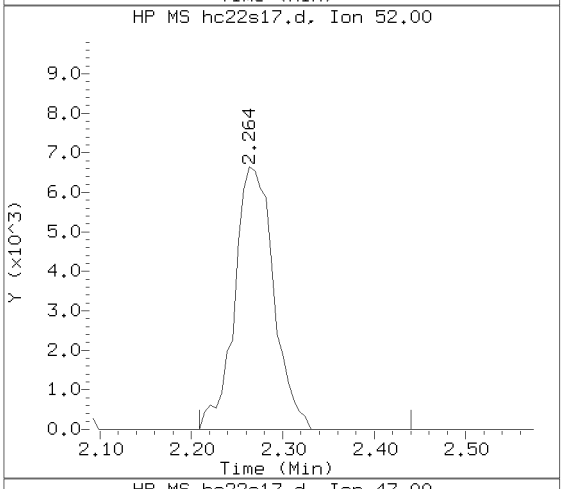
Reference Standard Spectrum for Chloromethane



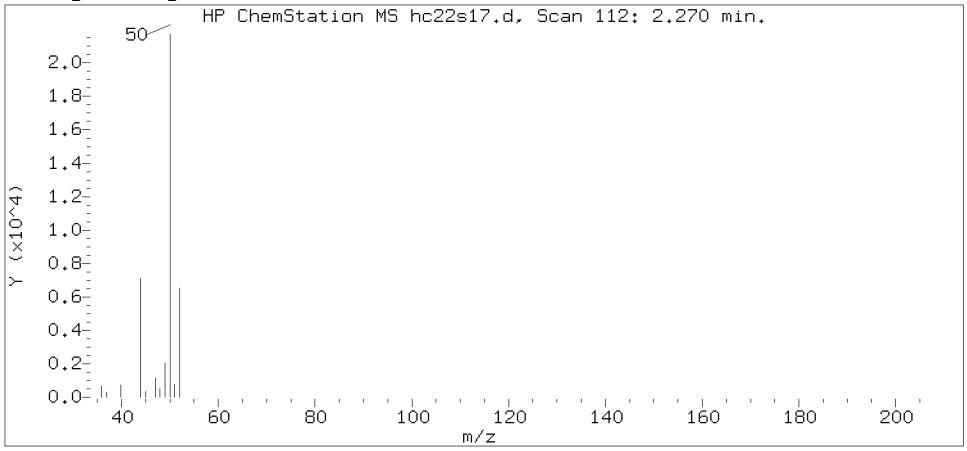


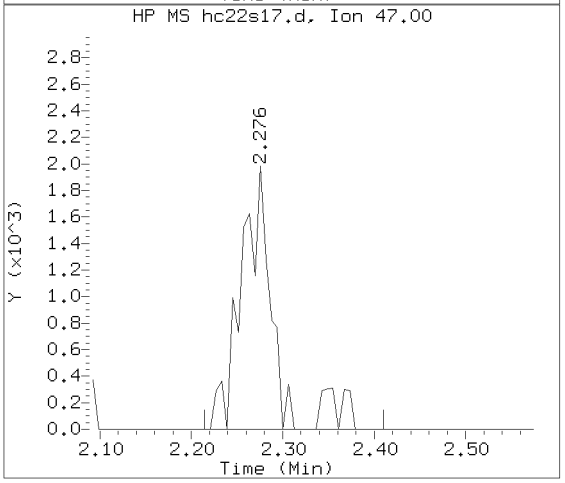
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Sample Name: 94286 Lab Sample ID: 9850257

Compound Number	: 2
Compound Name	: Chloromethane
Scan Number	: 112
Retention Time (minutes)	: 2.270
Relative Retention Time	: 0.00131
Quant Ion	: 50.00
Area (flag)	: 58599
On-Column Amount (ng)	: 0.6007

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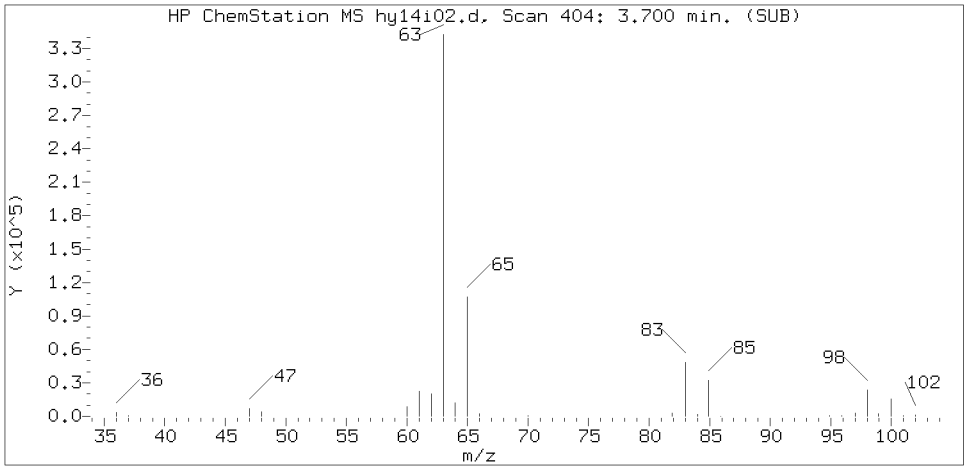
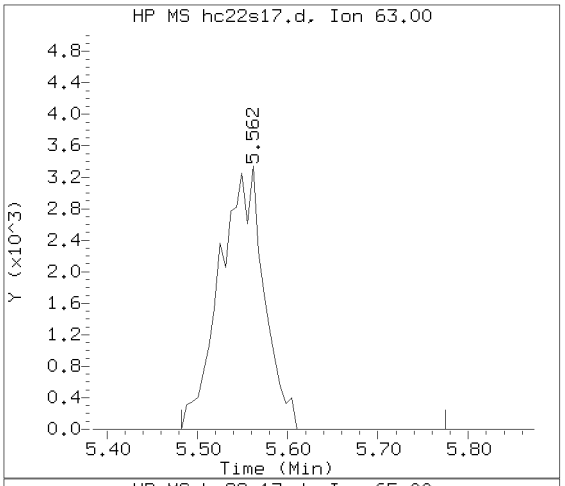
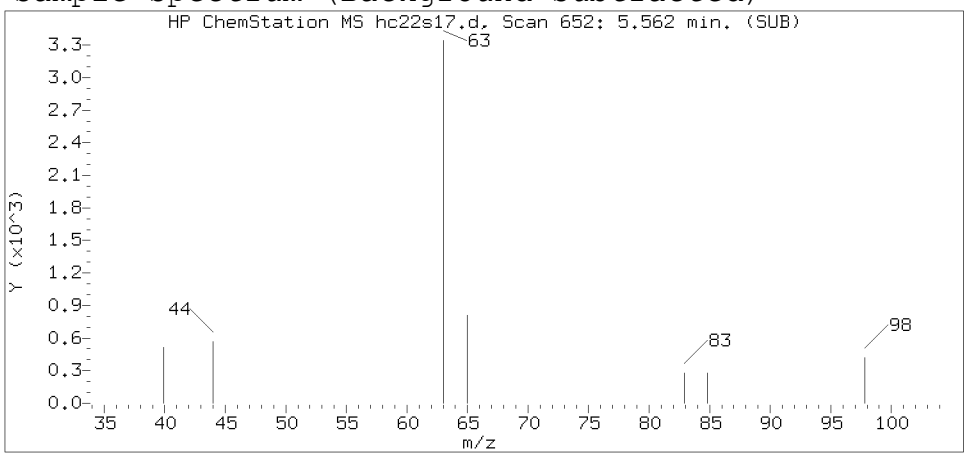
Target 3.5 esignature user ID: jgc14951

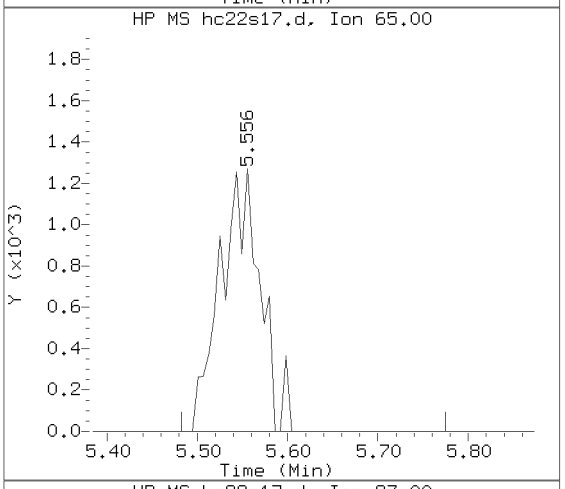
Reference Standard Spectrum for 1,1-Dichloroethane



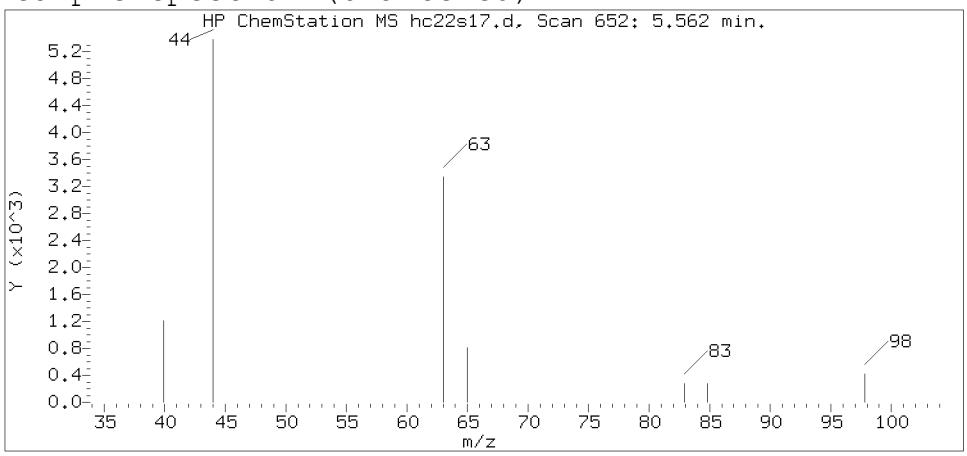


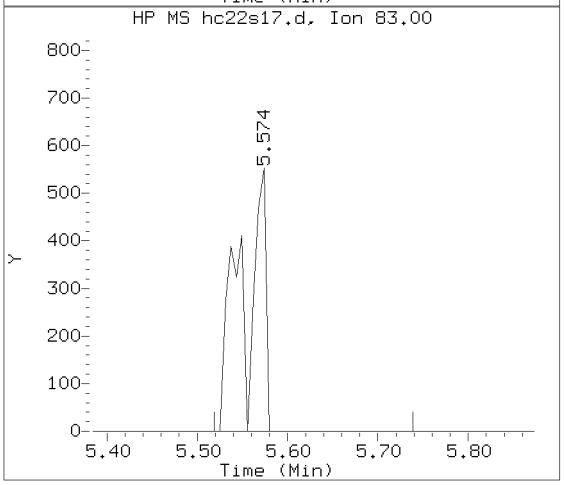
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s17.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 16:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:04 jgc14951

Sample Name: 94286 Lab Sample ID: 9850257

Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 652
Retention Time (minutes): 5.562
Relative Retention Time :-0.00130
Quant Ion : 63.00
Area (flag) : 11336
On-Column Amount (ng) : 0.1056

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:12.
Target 3.5 esignature user ID: jgc14951

94287 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850258

Data file: /chem2/HP19094.i/18oct22a.b/hc22s18.d Injection date and time: **22-OCT-2018 17:15**
Data file Sample Info. Line: 94287;9850258;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.000)	474	65	113979	(-3)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2532132	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1957499	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1059087	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	643669	10.086	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	116278	10.451	105%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2516811	9.990	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	885531	9.654	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.075	(-0.000)	85	20086	0.203	0.20		J	0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s18.d Injection date and time: **22-OCT-2018 17:15**
Data file Sample Info. Line: 94287;9850258;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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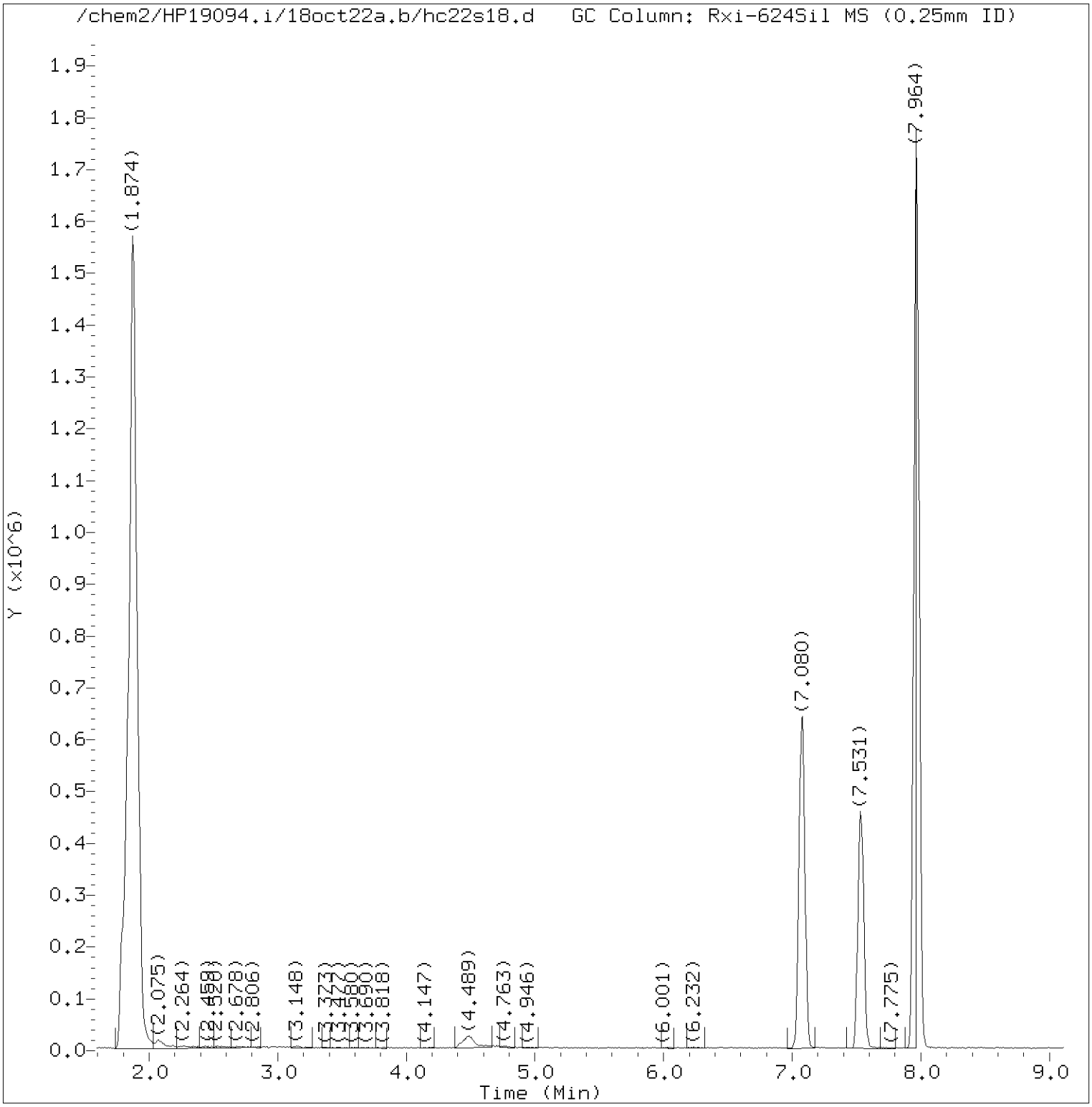
Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

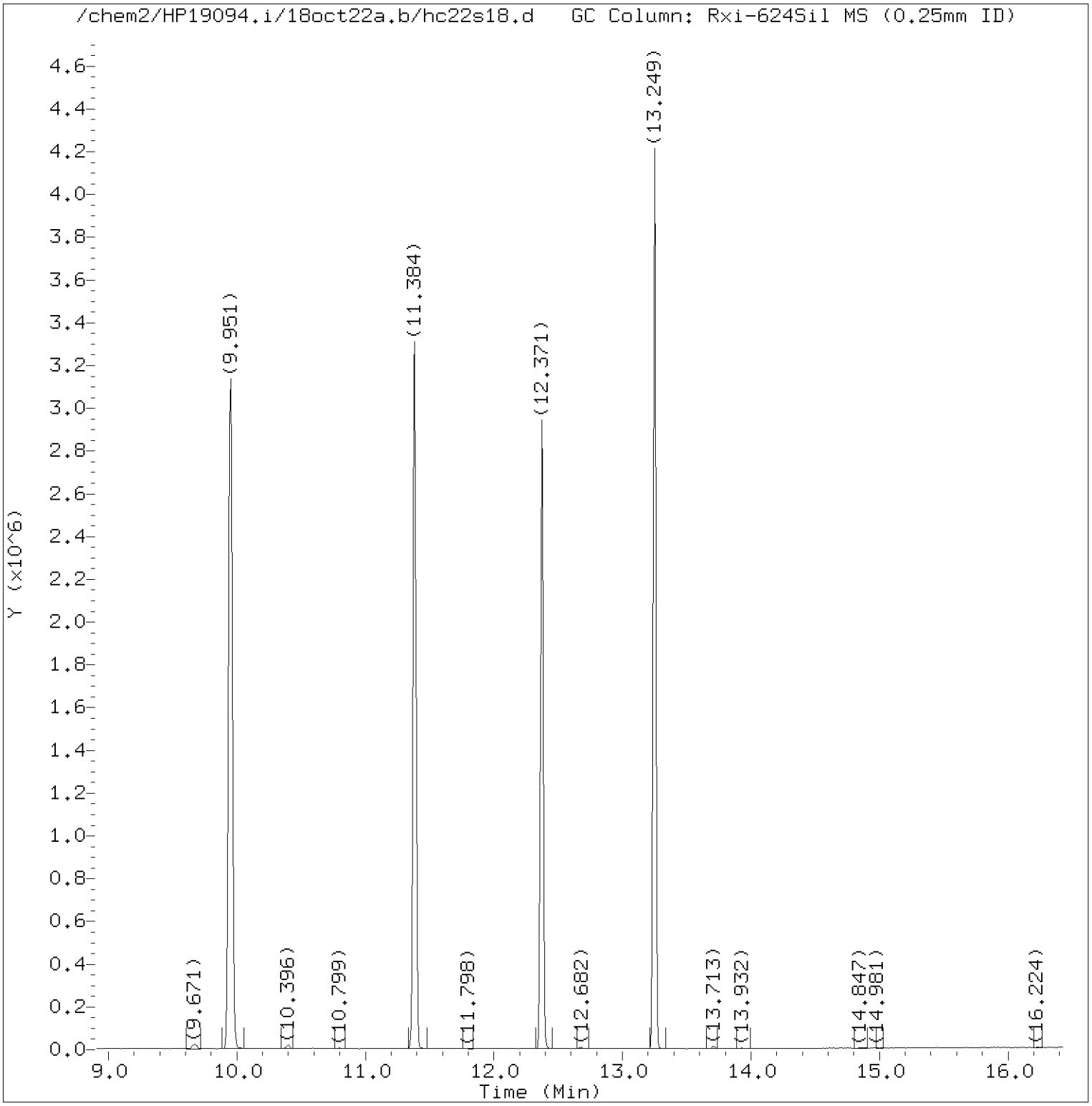
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s18.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

Sample Name: 94287 Lab Sample ID: 9850258

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s18.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

Sample Name: 94287 Lab Sample ID: 9850258

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s18.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

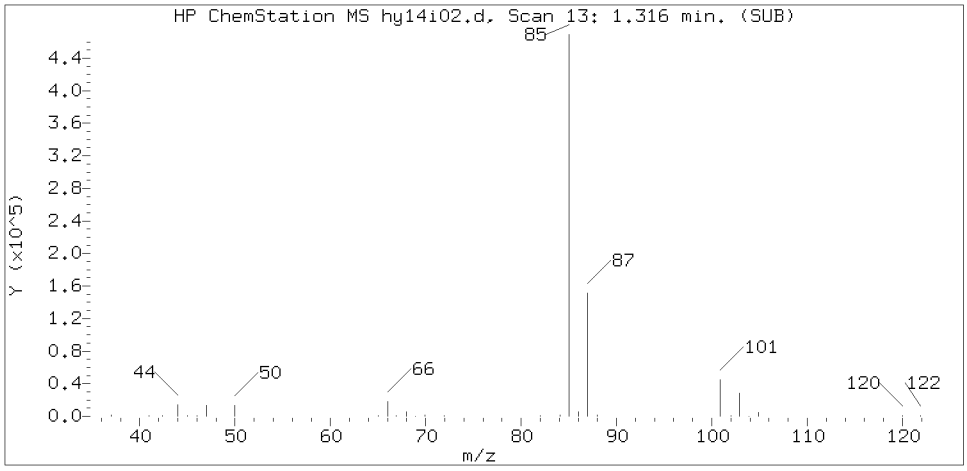
Sample Name: 94287 Lab Sample ID: 9850258

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	20086	0.203
26)*t-Butyl Alcohol-d10	(1)	4.477	65	113979	50.000
50)$Dibromofluoromethane	(2)	7.074	113	643669	10.086
57)$1,2-Dichloroethane-d4	(2)	7.531	102	116278	10.451
63)*Fluorobenzene	(2)	7.964	96	2532132	10.000
82)$Toluene-d8	(3)	9.951	98	2516811	9.990
97)*Chlorobenzene-d5	(3)	11.384	117	1957499	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	885531	9.654
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1059087	10.000

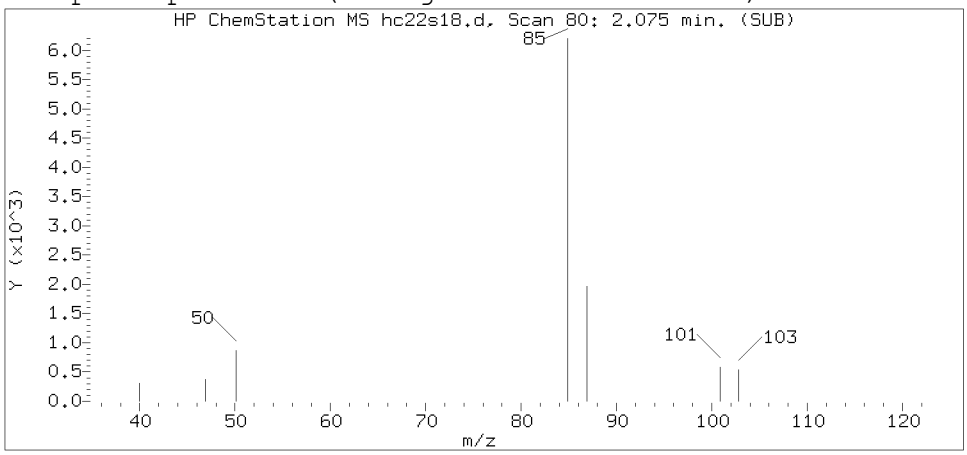
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

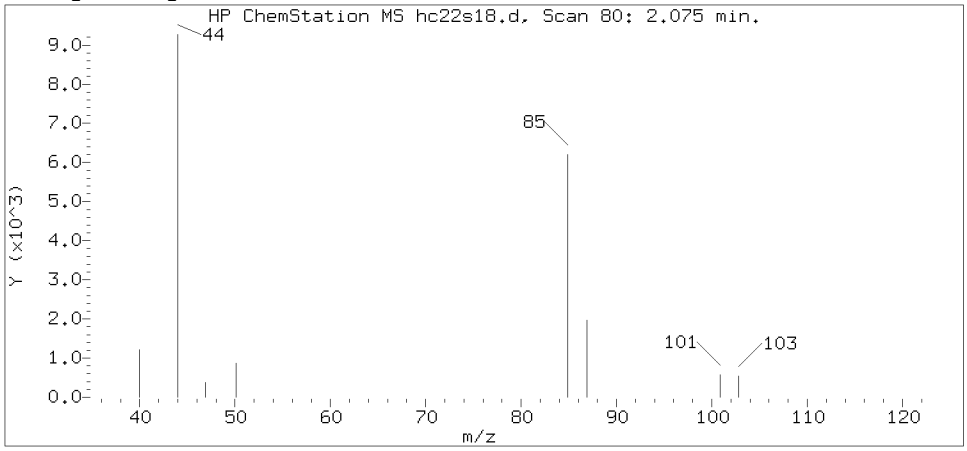
Reference Standard Spectrum for Dichlorodifluoromethane

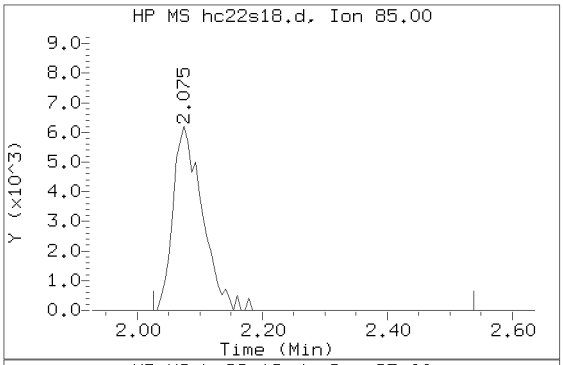


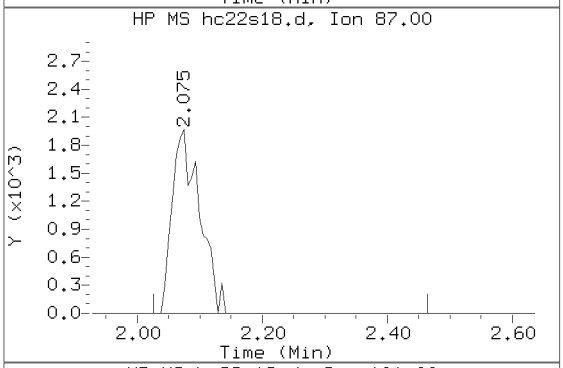
Sample Spectrum (Background Subtracted)

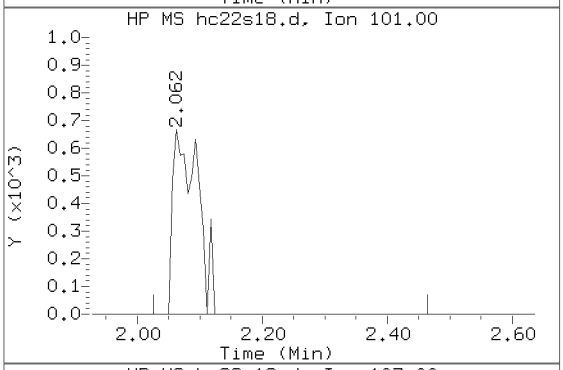


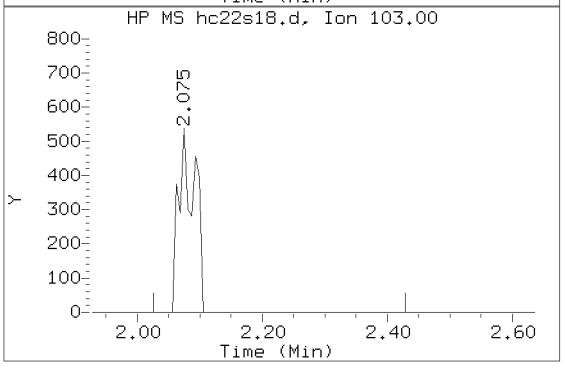
Sample Spectrum (Unaltered)











Data File: /chem2/HP19094.i/18oct22a.b/hc22s18.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:05 jgc14951

Sample Name: 94287 Lab Sample ID: 9850258

Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Relative Retention Time :-0.00021
Quant Ion : 85.00
Area (flag) : 20086
On-Column Amount (ng) : 0.2030

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s19.d Injection date and time: **22-OCT-2018 17:37**
Data file Sample Info. Line: 94288;9850259;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.482	(-0.006)	475	65	118225	(1)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2537691	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1951495	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1045720	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.001)	113	644346	10.074	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	114074	10.231	102%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2525406	10.055	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	880946	9.634	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)	2.276	(0.000)	50	29747	0.306	0.31		J	0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s19.d Injection date and time: **22-OCT-2018 17:37**
Data file Sample Info. Line: 94288;9850259;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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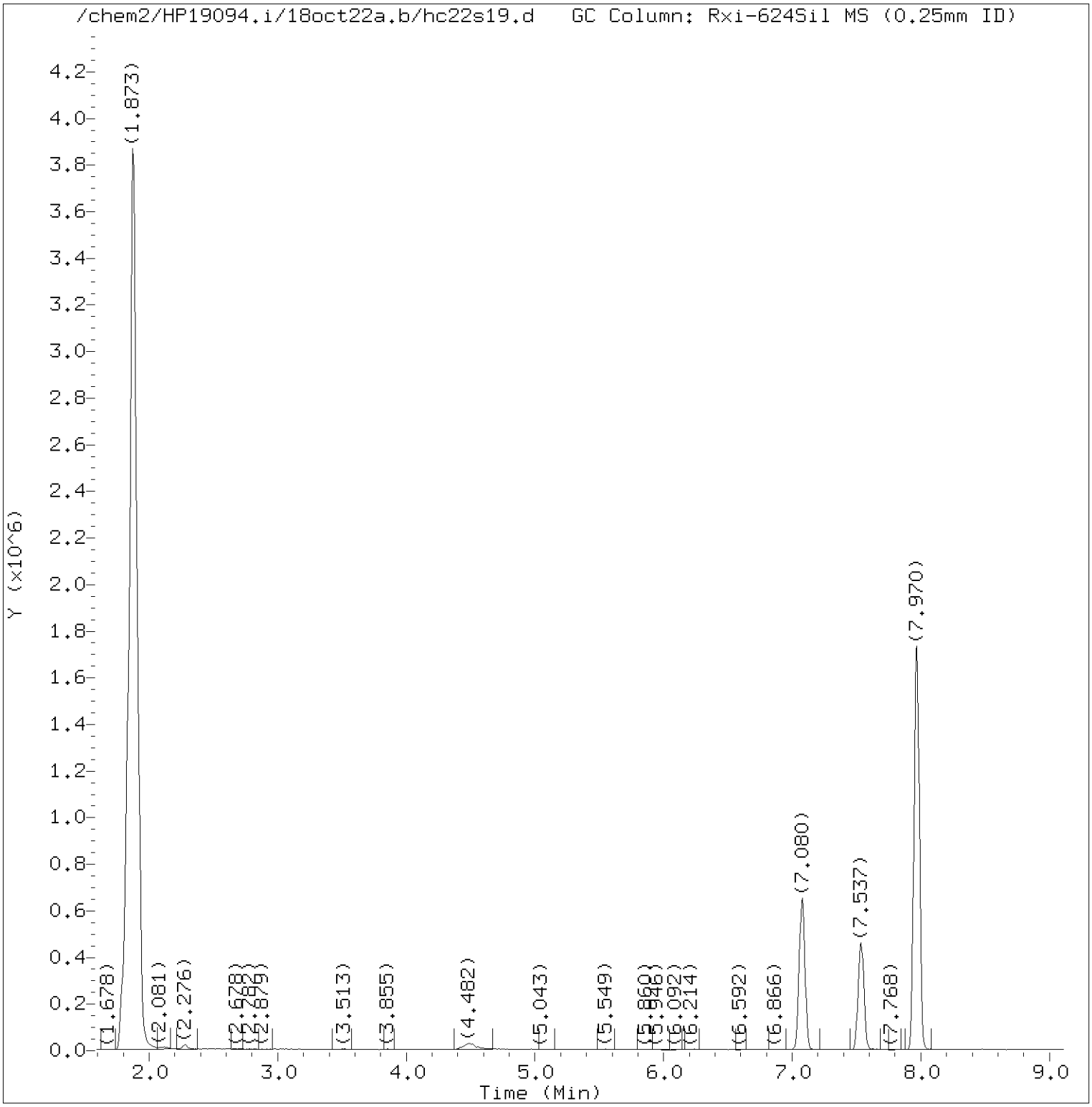
Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

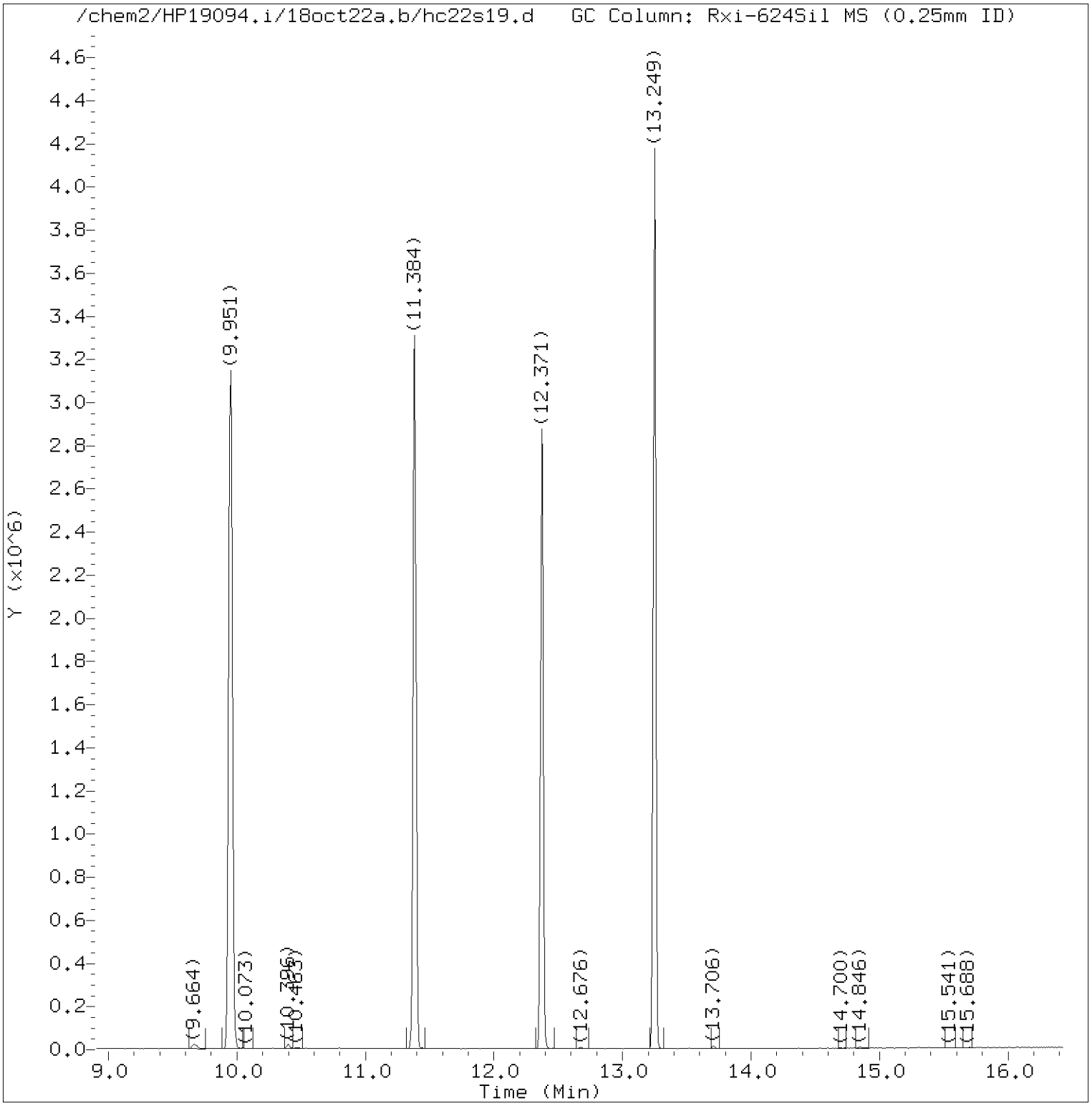
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s19.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

Sample Name: 94288 Lab Sample ID: 9850259

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s19.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

Sample Name: 94288 Lab Sample ID: 9850259

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s19.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

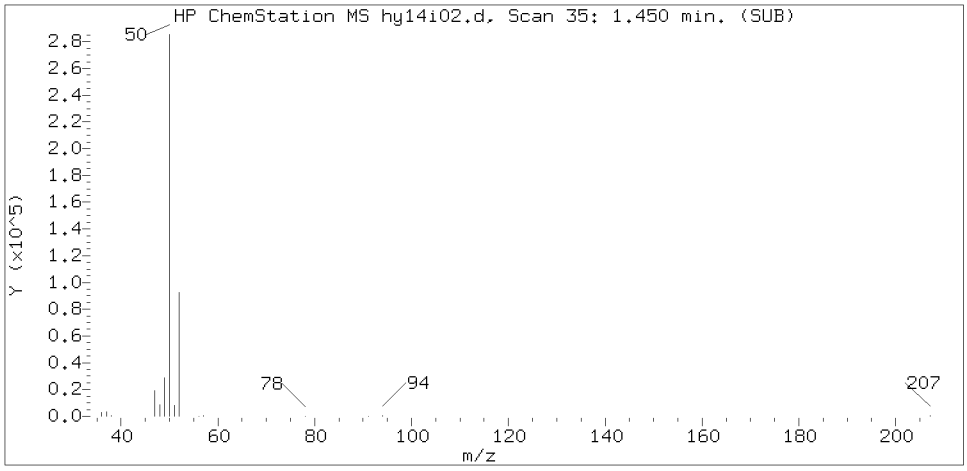
Sample Name: 94288 Lab Sample ID: 9850259

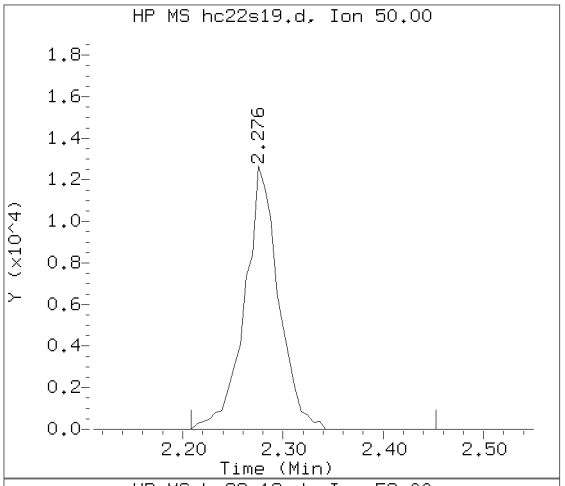
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Chloromethane	(2)	2.276	50	29747	0.306
26)*t-Butyl Alcohol-d10	(1)	4.482	65	118225	50.000
50)$Dibromofluoromethane	(2)	7.073	113	644346	10.074
57)$1,2-Dichloroethane-d4	(2)	7.537	102	114074	10.231
63)*Fluorobenzene	(2)	7.970	96	2537691	10.000
82)$Toluene-d8	(3)	9.951	98	2525406	10.055
97)*Chlorobenzene-d5	(3)	11.384	117	1951495	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	880946	9.634
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1045720	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

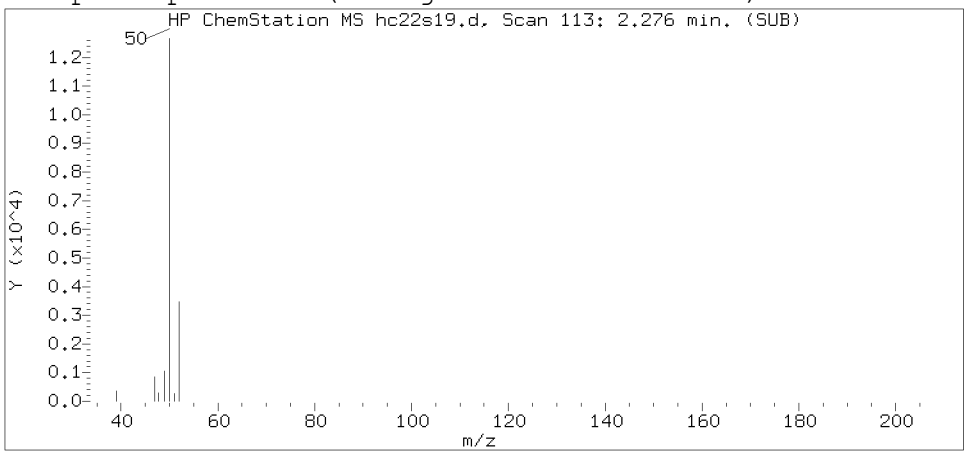
Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

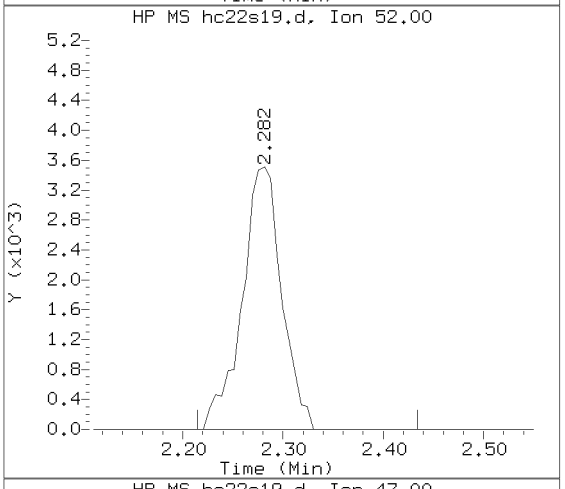
Reference Standard Spectrum for Chloromethane



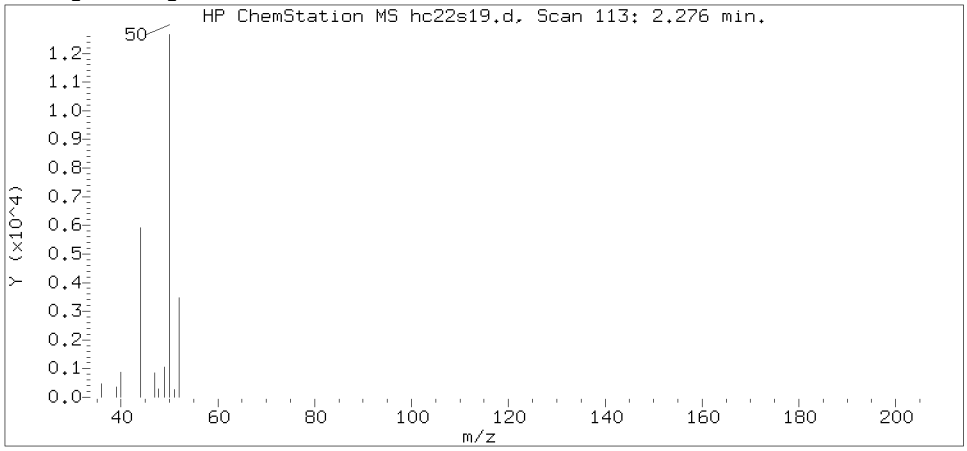


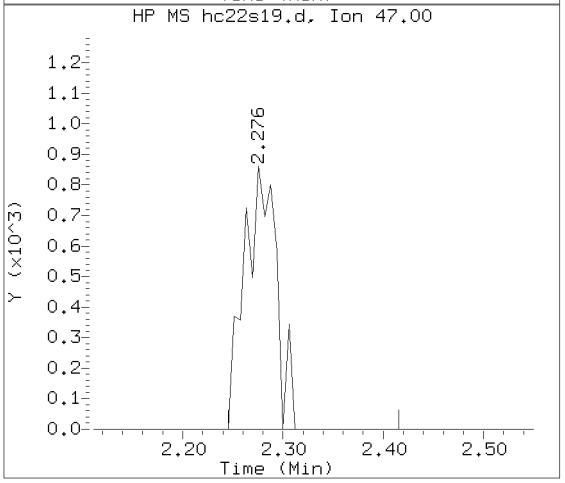
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s19.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:07 jgc14951

Sample Name: 94288 Lab Sample ID: 9850259

Compound Number	: 2
Compound Name	: Chloromethane
Scan Number	: 113
Retention Time (minutes)	: 2.276
Relative Retention Time	: 0.00078
Quant Ion	: 50.00
Area (flag)	: 29747
On-Column Amount (ng)	: 0.3063

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s20.d Injection date and time: **22-OCT-2018 17:58**
Data file Sample Info. Line: 94289;9850260;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495	(-0.018)	477	65	118201	(1)	50.00	
63) Fluorobenzene	7.963	(0.006)	1046	96	2539591	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1957703	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1052680	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.000)	113	647674	10.119	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	115184	10.322	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2505278	9.943	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	884598	9.643	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)	2.276	(0.000)	50	15458	0.159	0.16		J	0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)	7.080	(0.000)	97	16981	0.200	0.20		J	0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

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Data file: /chem2/HP19094.i/18oct22a.b/hc22s20.d Injection date and time: **22-OCT-2018 17:58**
Data file Sample Info. Line: 94289;9850260;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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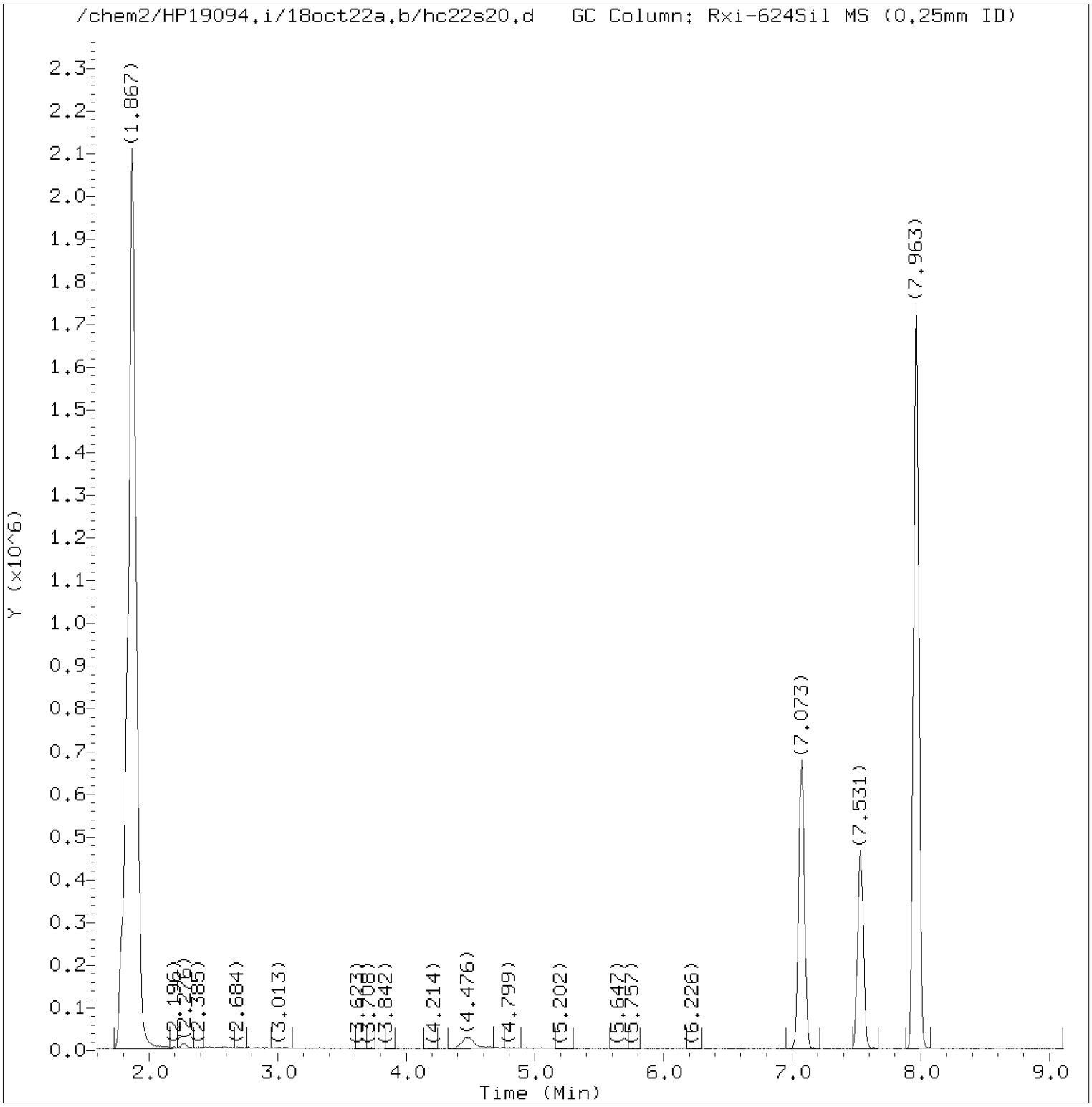
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

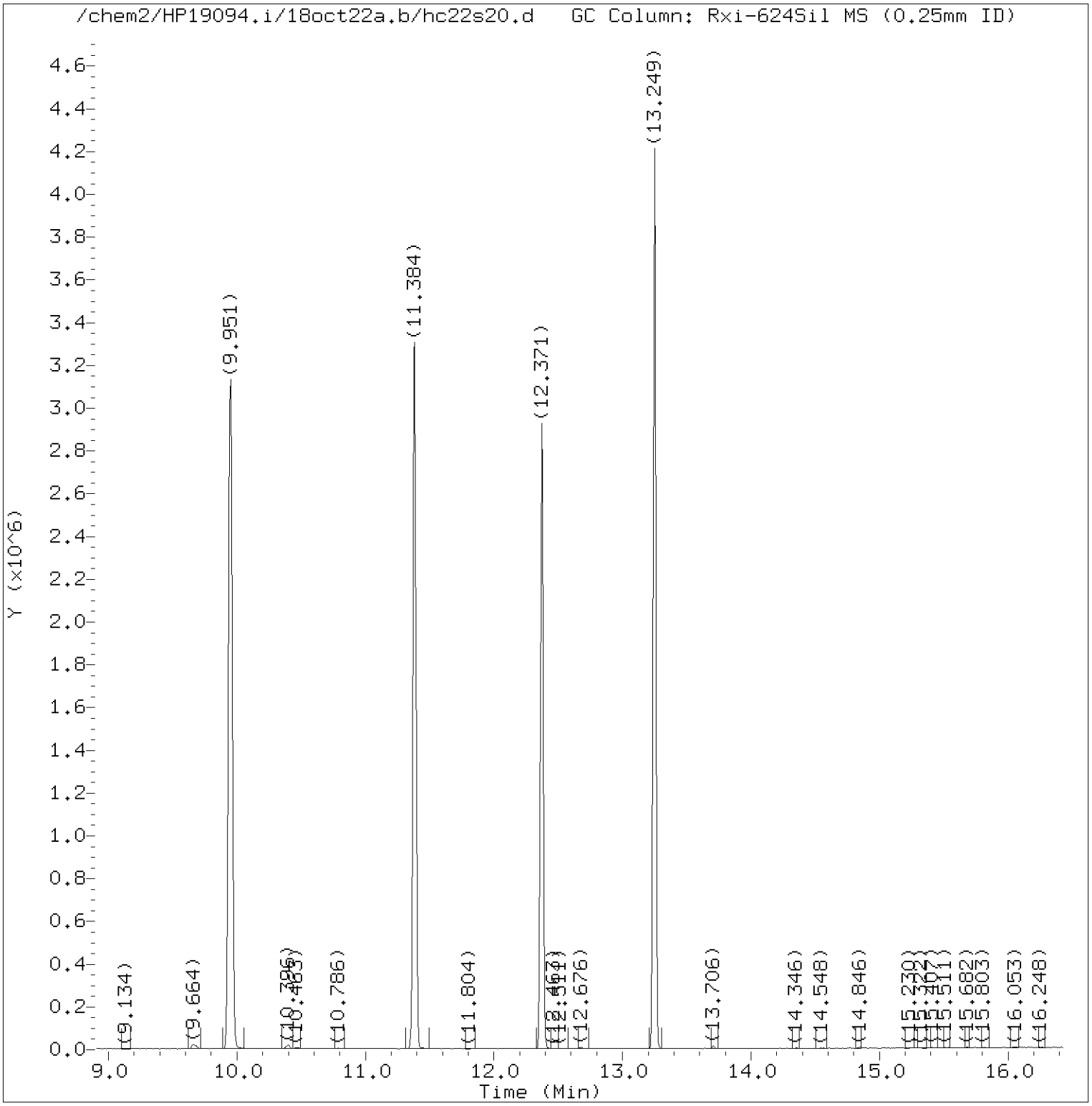
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s20.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:58 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94289 Lab Sample ID: 9850260

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s20.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:58 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94289 Lab Sample ID: 9850260

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s20.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:58 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94289 Lab Sample ID: 9850260

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
2) Chloromethane	(2)	2.276	50	15458	0.159
26)*t-Butyl Alcohol-d10	(1)	4.495	65	118201	50.000
50)$Dibromofluoromethane	(2)	7.073	113	647674	10.119
51) 1,1,1-Trichloroethane	(2)	7.080	97	16981	0.200
57)$1,2-Dichloroethane-d4	(2)	7.537	102	115184	10.322
63)*Fluorobenzene	(2)	7.963	96	2539591	10.000
82)$Toluene-d8	(3)	9.951	98	2505278	9.943
97)*Chlorobenzene-d5	(3)	11.384	117	1957703	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	884598	9.643
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1052680	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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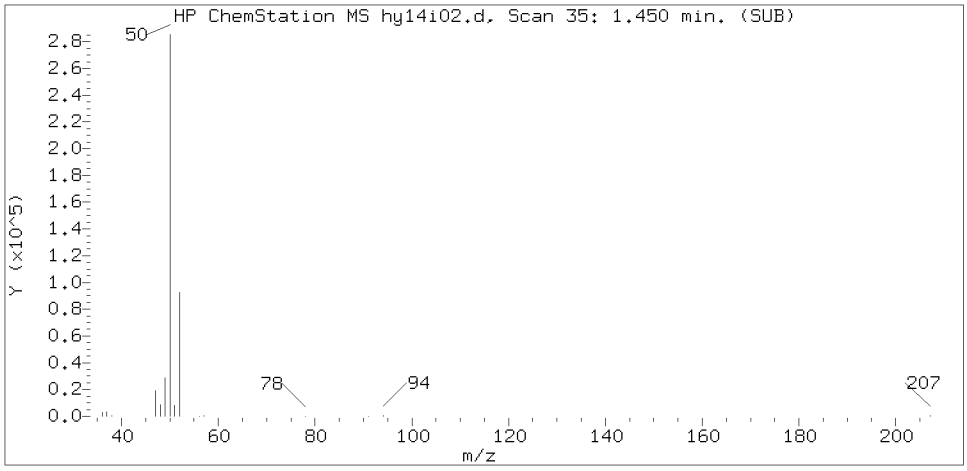
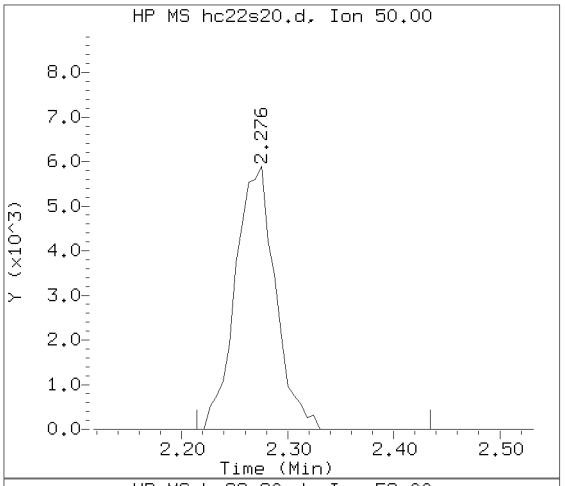
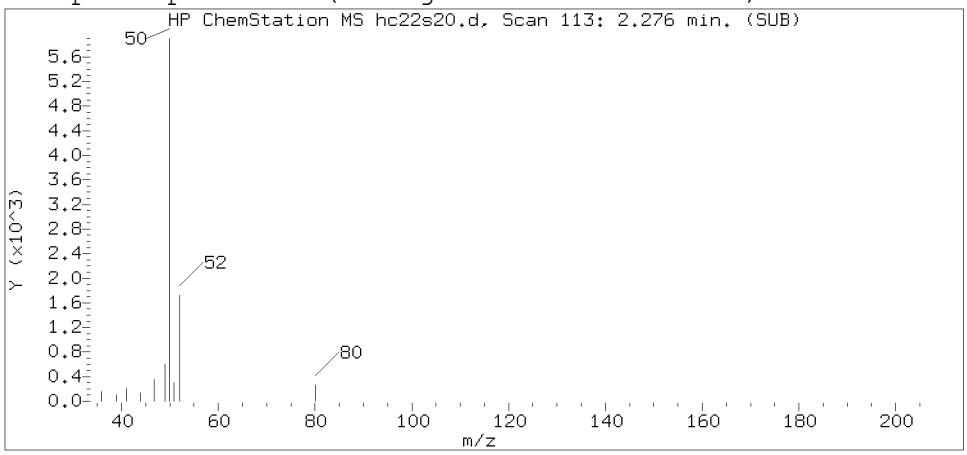
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

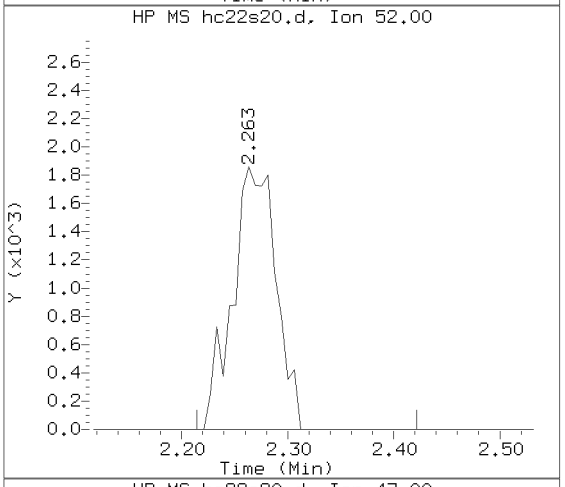
Reference Standard Spectrum for Chloromethane



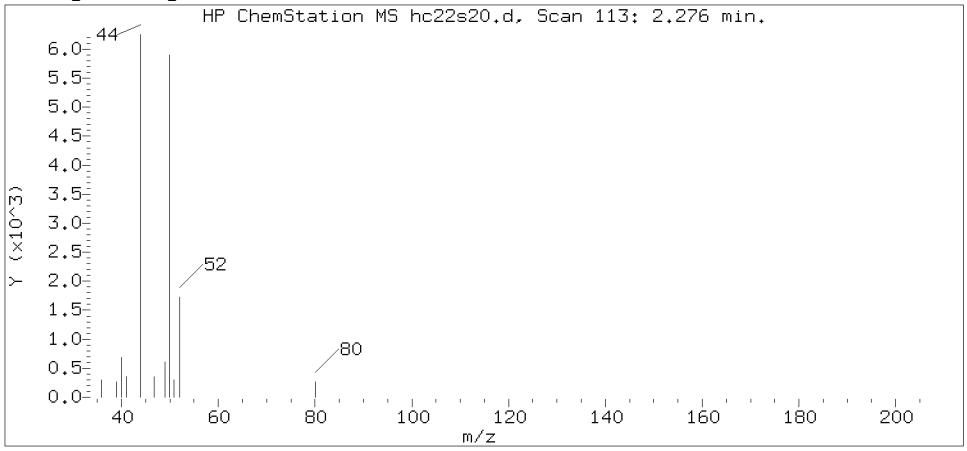


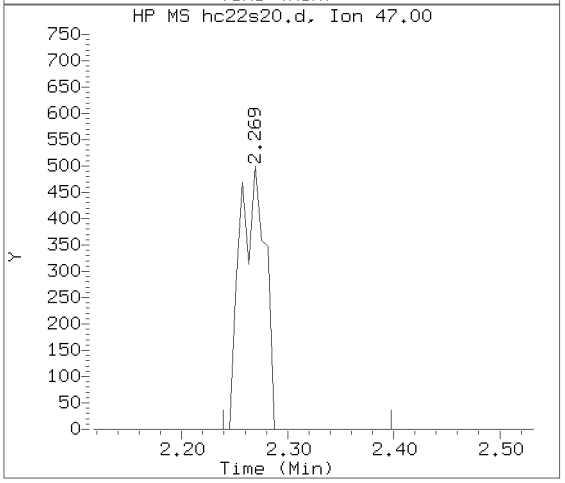
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s20.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:58 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94289 Lab Sample ID: 9850260

Compound Number	: 2
Compound Name	: Chloromethane
Scan Number	: 113
Retention Time (minutes)	: 2.276
Relative Retention Time	: 0.00056
Quant Ion	: 50.00
Area (flag)	: 15458
On-Column Amount (ng)	: 0.1590

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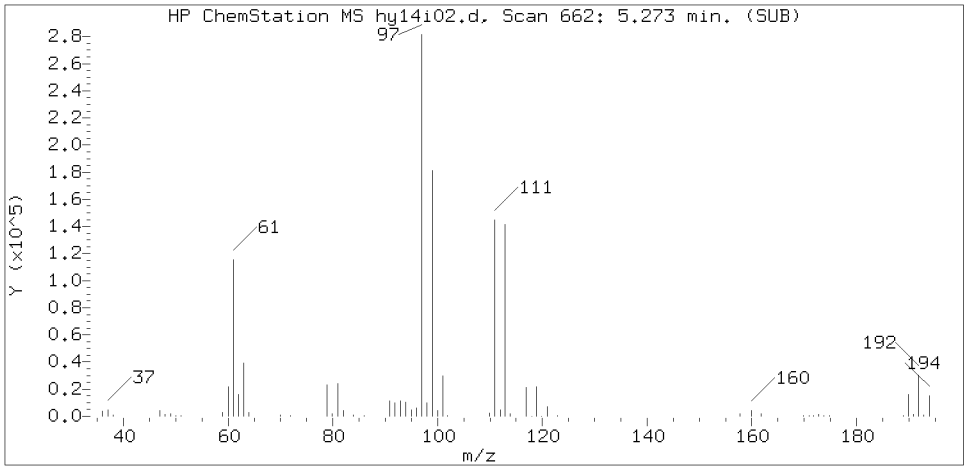
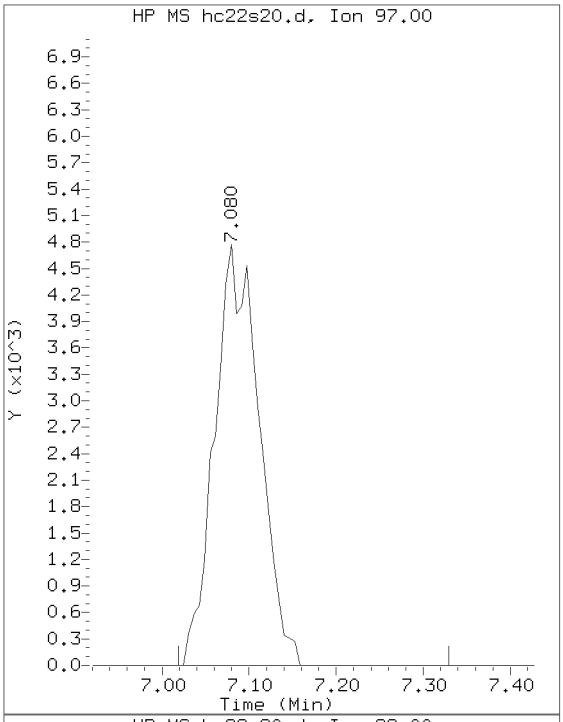
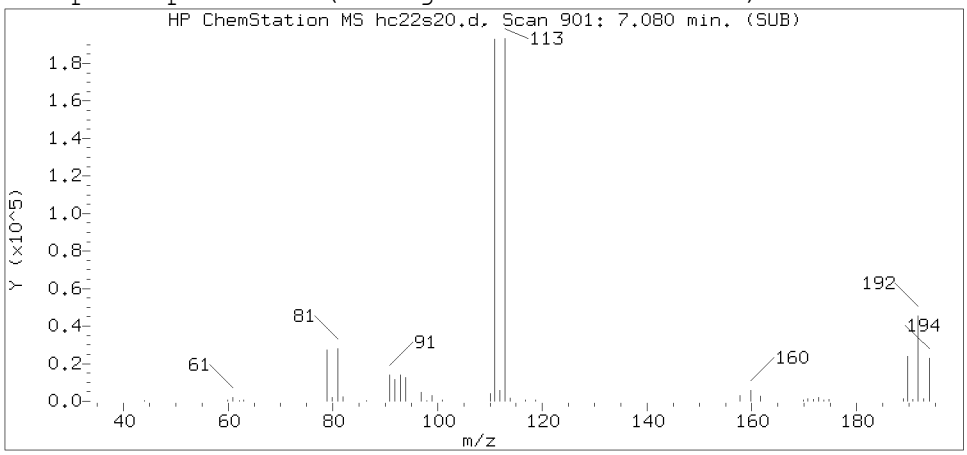
Target 3.5 esignature user ID: jgc14951

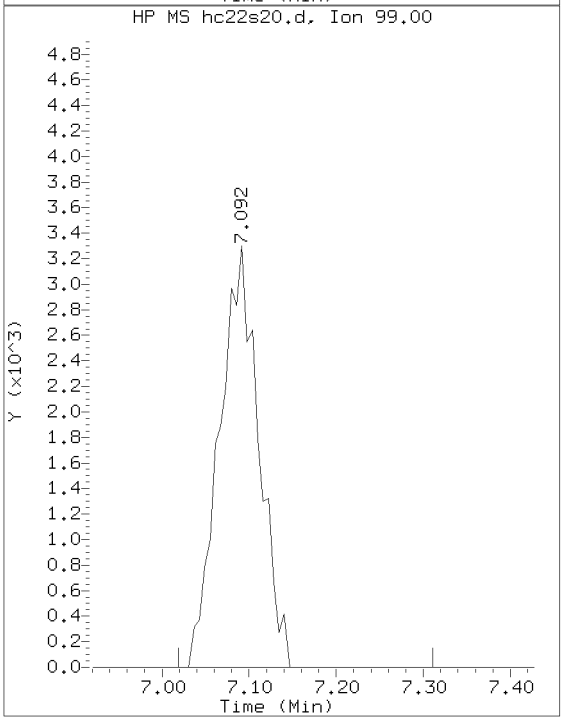
Reference Standard Spectrum for 1,1,1-Trichloroethane



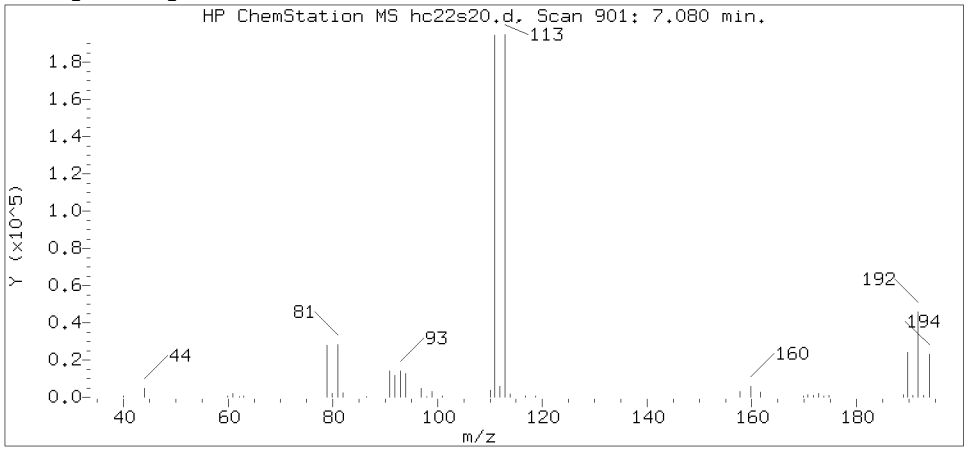


Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)



Data File: /chem2/HP19094.i/18oct22a.b/hc22s20.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 17:58 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94289 Lab Sample ID: 9850260

Compound Number	: 51
Compound Name	: 1,1,1-Trichloroethane
Scan Number	: 901
Retention Time (minutes)	: 7.080
Relative Retention Time	: 0.00085
Quant Ion	: 97.00
Area (flag)	: 16981
On-Column Amount (ng)	: 0.1996

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Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s21.d Injection date and time: **22-OCT-2018 18:20**
Data file Sample Info. Line: 94290;9850261;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9145;9274

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	108494	(-8)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2522311	(-3)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1966736	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1048843	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	642261	10.103	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	114125	10.298	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2520949	9.959	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	874422	9.488	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(0.000)	63	28430	0.268	0.27		J	0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s21.d Injection date and time: **22-OCT-2018 18:20**
Data file Sample Info. Line: 94290;9850261;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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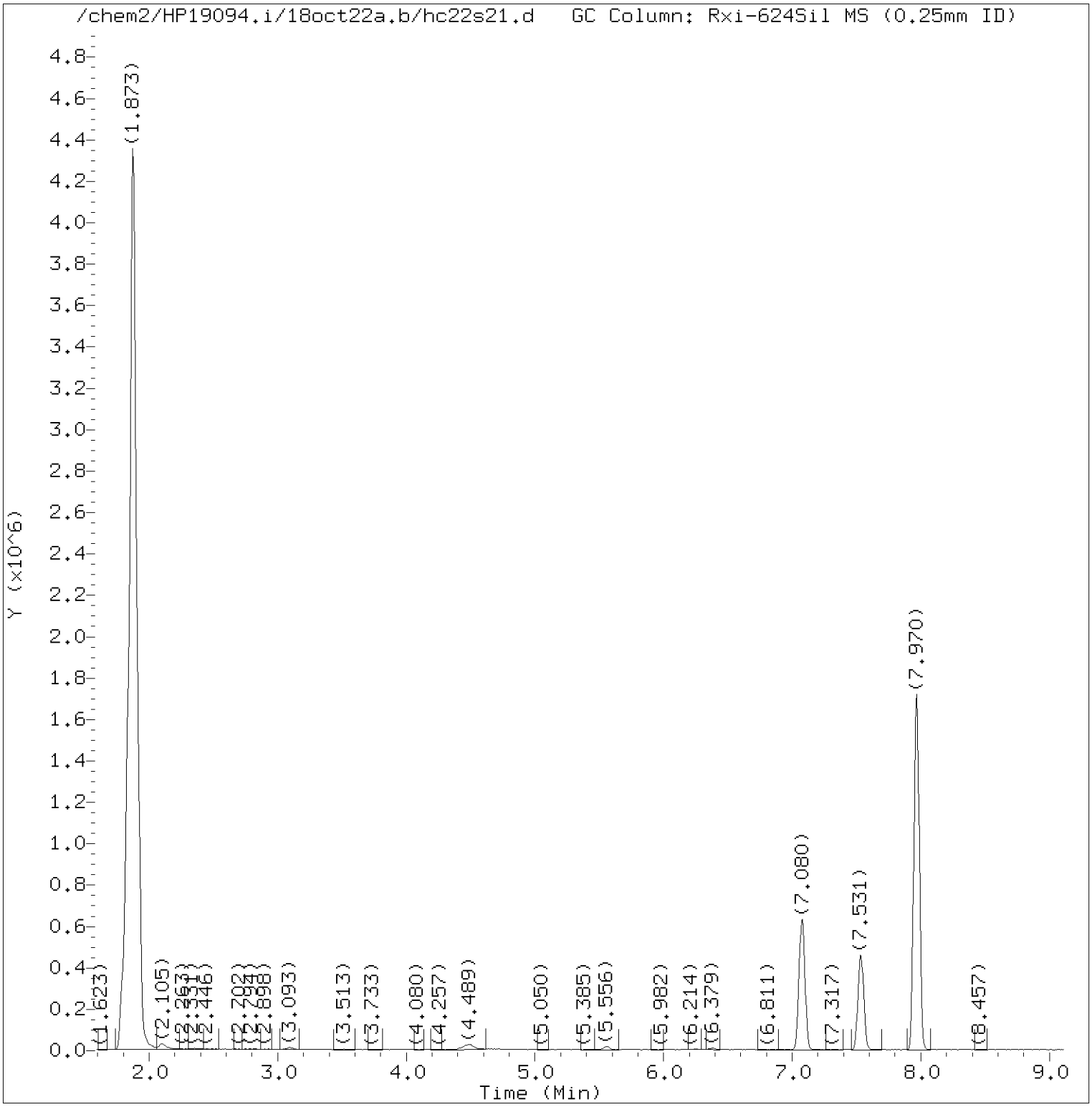
Total number of targets = 22

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11. Target 3.5 esignature user ID: jgc14951

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

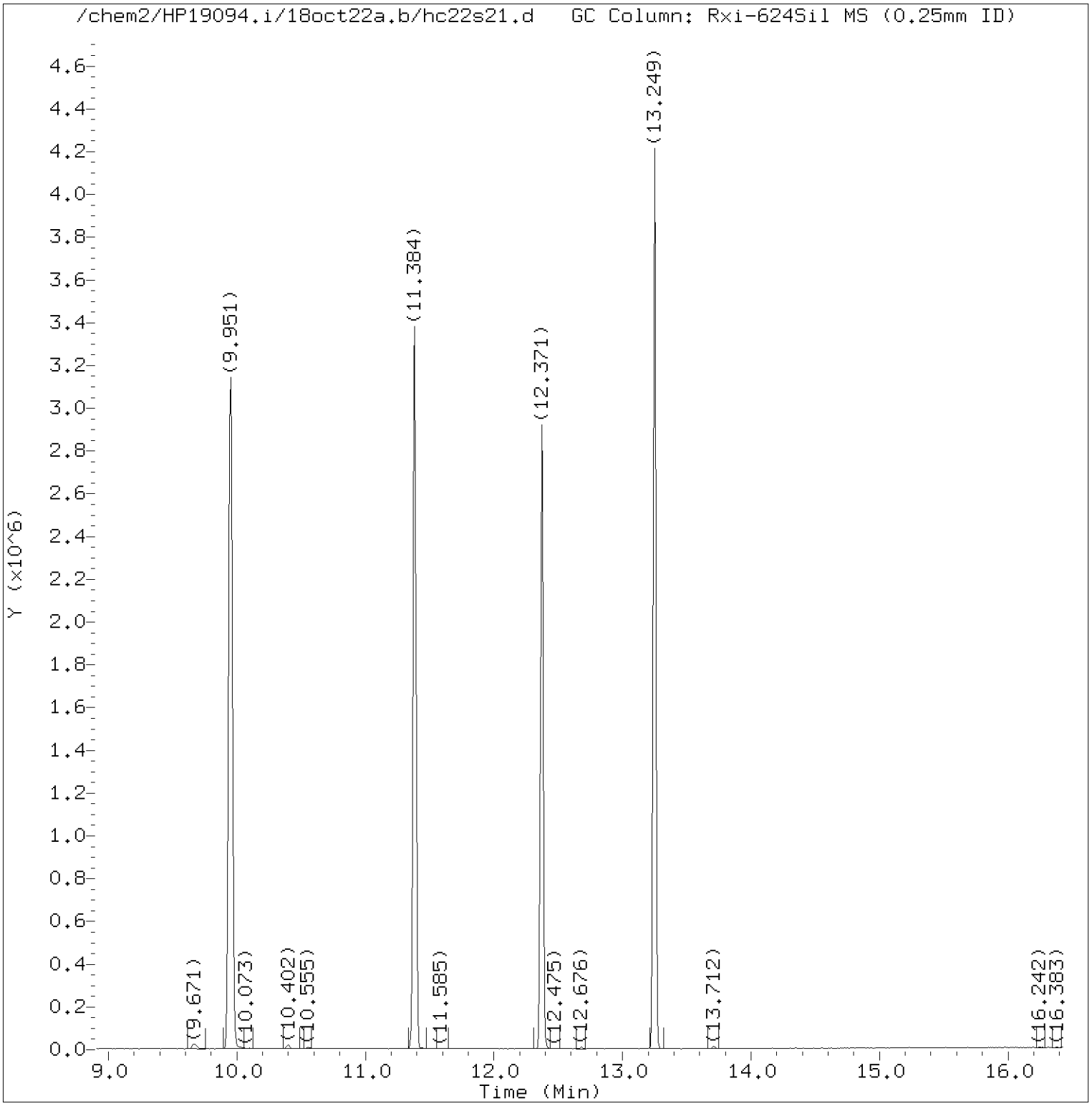
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s21.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 18:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94290 Lab Sample ID: 9850261

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s21.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 18:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94290 Lab Sample ID: 9850261

Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s21.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 18:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

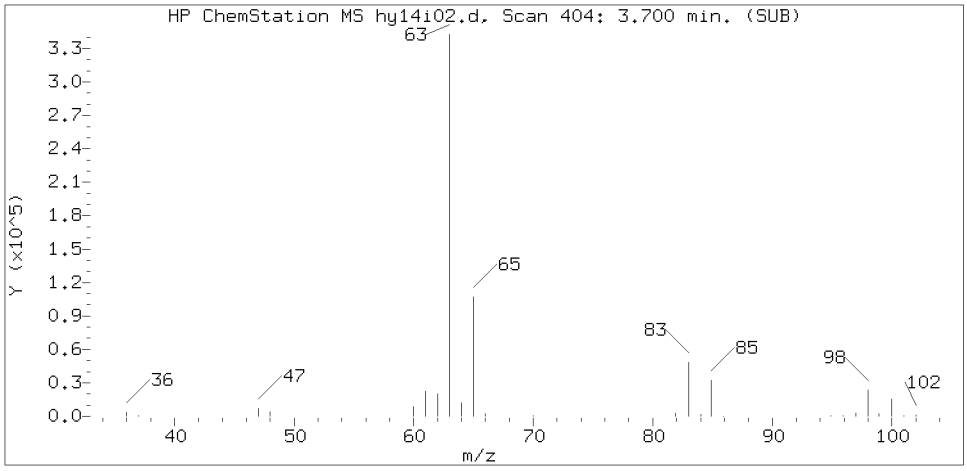
Sample Name: 94290 Lab Sample ID: 9850261

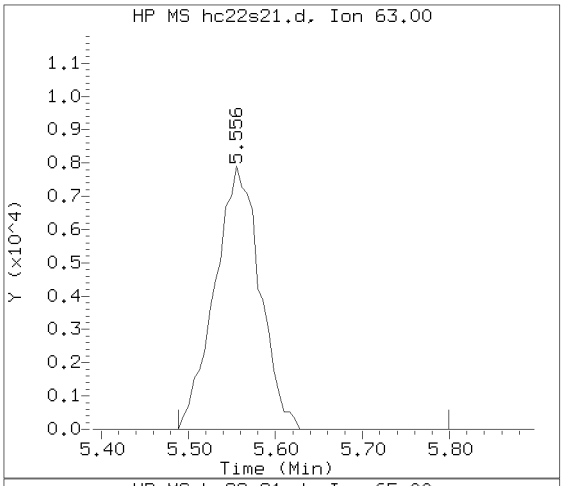
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	108494	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	28430	0.268
50)$Dibromofluoromethane	(2)	7.080	113	642261	10.103
57)$1,2-Dichloroethane-d4	(2)	7.537	102	114125	10.298
63)*Fluorobenzene	(2)	7.970	96	2522311	10.000
82)$Toluene-d8	(3)	9.951	98	2520949	9.959
97)*Chlorobenzene-d5	(3)	11.384	117	1966736	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	874422	9.488
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1048843	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

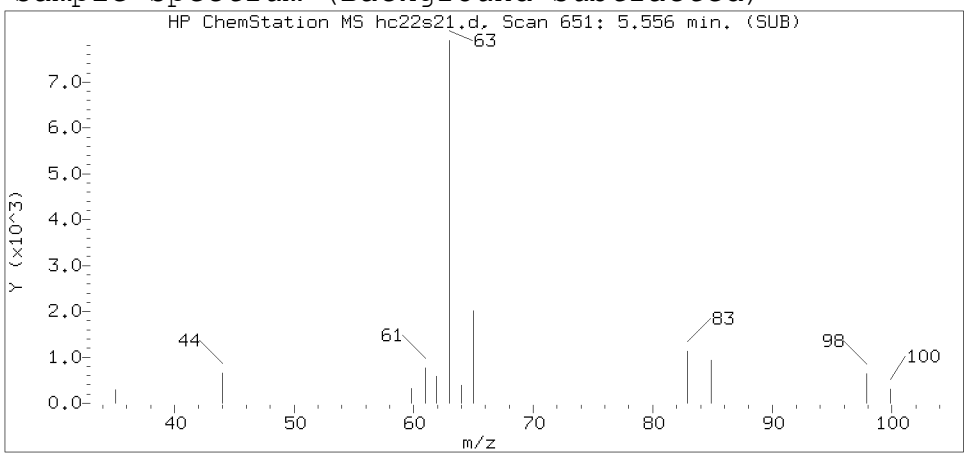
Digitally signed by Joel G. Chachapoya
on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

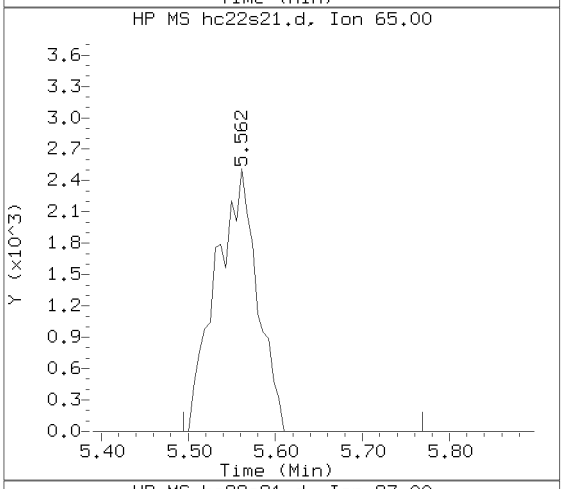
Reference Standard Spectrum for 1,1-Dichloroethane



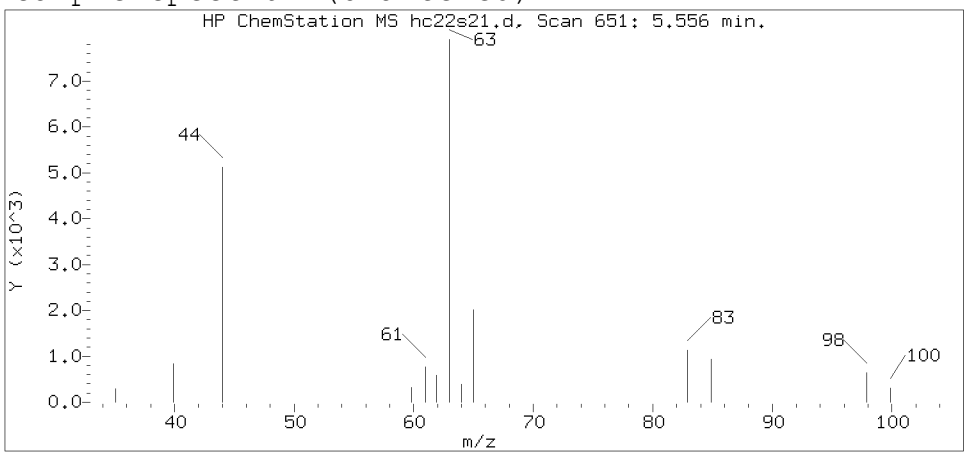


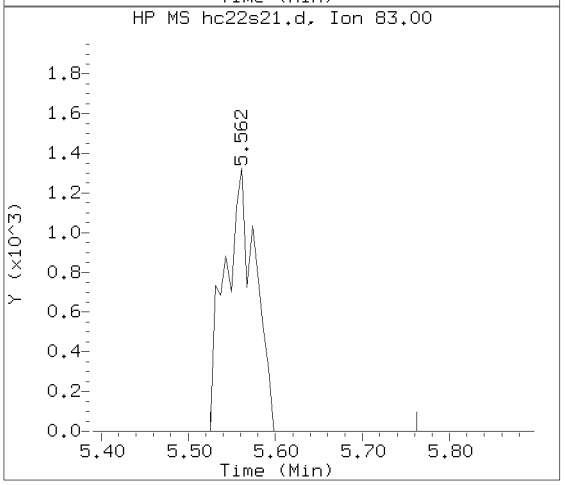
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP19094.i/18oct22a.b/hc22s21.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 18:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 20:08 jgc14951

Sample Name: 94290 Lab Sample ID: 9850261

Compound Number	: 33
Compound Name	: 1,1-Dichloroethane
Scan Number	: 651
Retention Time (minutes)	: 5.556
Relative Retention Time	: 0.00000
Quant Ion	: 63.00
Area (flag)	: 28430
On-Column Amount (ng)	: 0.2675

Digitally signed by Joel G. Chachapoya on 10/22/2018 at 20:11.
Target 3.5 esignature user ID: jgc14951

Data file: /chem2/HP19094.i/18oct22a.b/hc22s02.d Injection date and time: **22-OCT-2018 11:32**
Data file Sample Info. Line: 94291;9850262;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:16 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.501	(-0.024)	478	65	121149	(3)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2546036	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1949687	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1039698	(-1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	647105	10.084	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	116737	10.435	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2515794	10.026	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	885453	9.692	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s02.d Injection date and time: **22-OCT-2018 11:32**
Data file Sample Info. Line: 94291;9850262;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:16 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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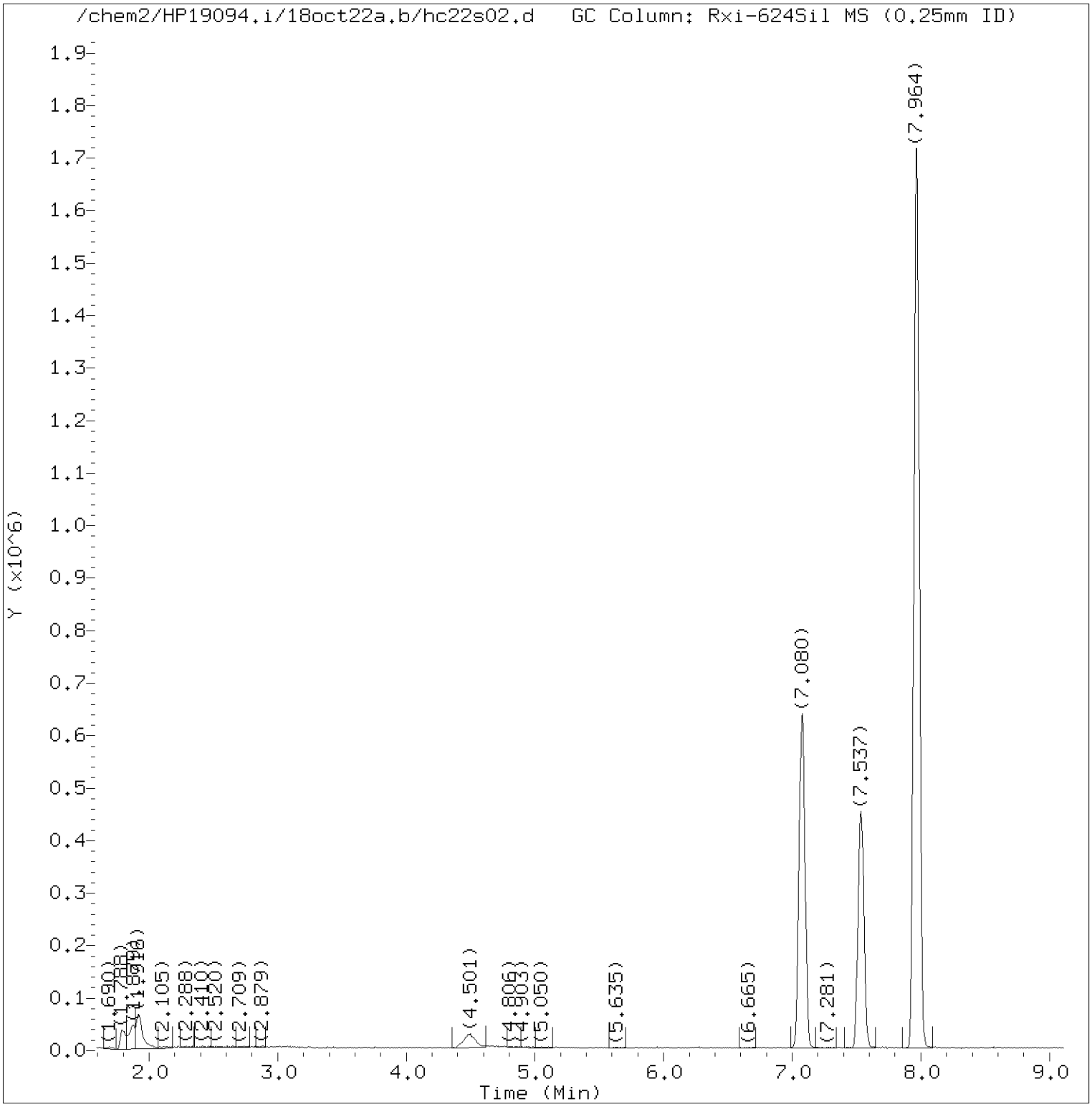
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

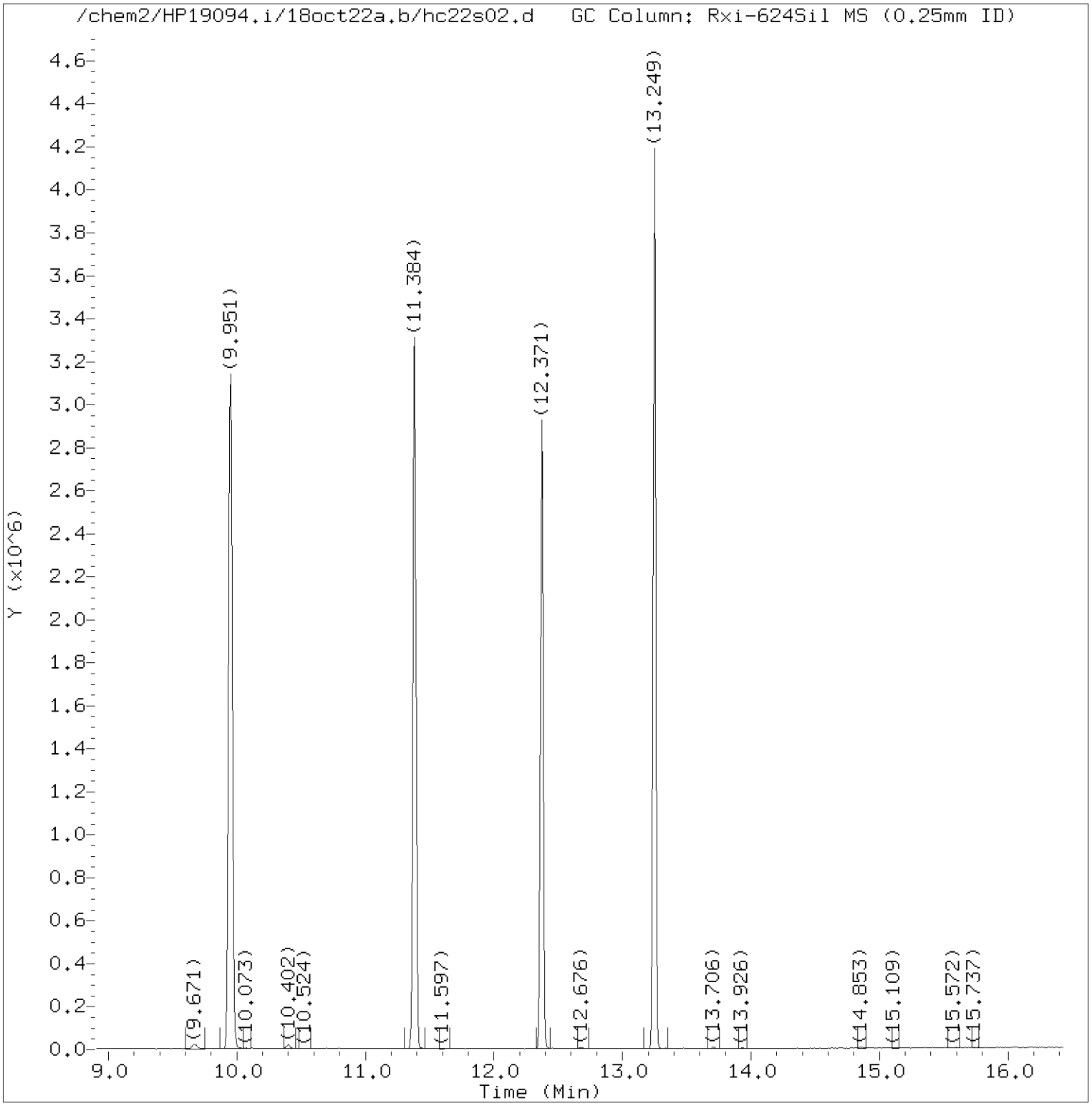
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:16 jkh09052

Sample Name: 94291 Lab Sample ID: 9850262

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:16 jkh09052

Sample Name: 94291 Lab Sample ID: 9850262

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:32 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:16 jkh09052

Sample Name: 94291 Lab Sample ID: 9850262

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.501	65	121149	50.000
50)$Dibromofluoromethane	(2)	7.080	113	647105	10.084
57)$1,2-Dichloroethane-d4	(2)	7.531	102	116737	10.435
63)*Fluorobenzene	(2)	7.970	96	2546036	10.000
82)$Toluene-d8	(3)	9.951	98	2515794	10.026
97)*Chlorobenzene-d5	(3)	11.384	117	1949687	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	885453	9.692
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1039698	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s03.d Injection date and time: **22-OCT-2018 11:53**
Data file Sample Info. Line: 94292;9850263;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	117351	(0)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2553419	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1973688	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1044043	(0)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.000)	113	645749	10.034	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	119872	10.684	107%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2527989	9.952	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	886013	9.580	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s03.d Injection date and time: **22-OCT-2018 11:53**
Data file Sample Info. Line: 94292;9850263;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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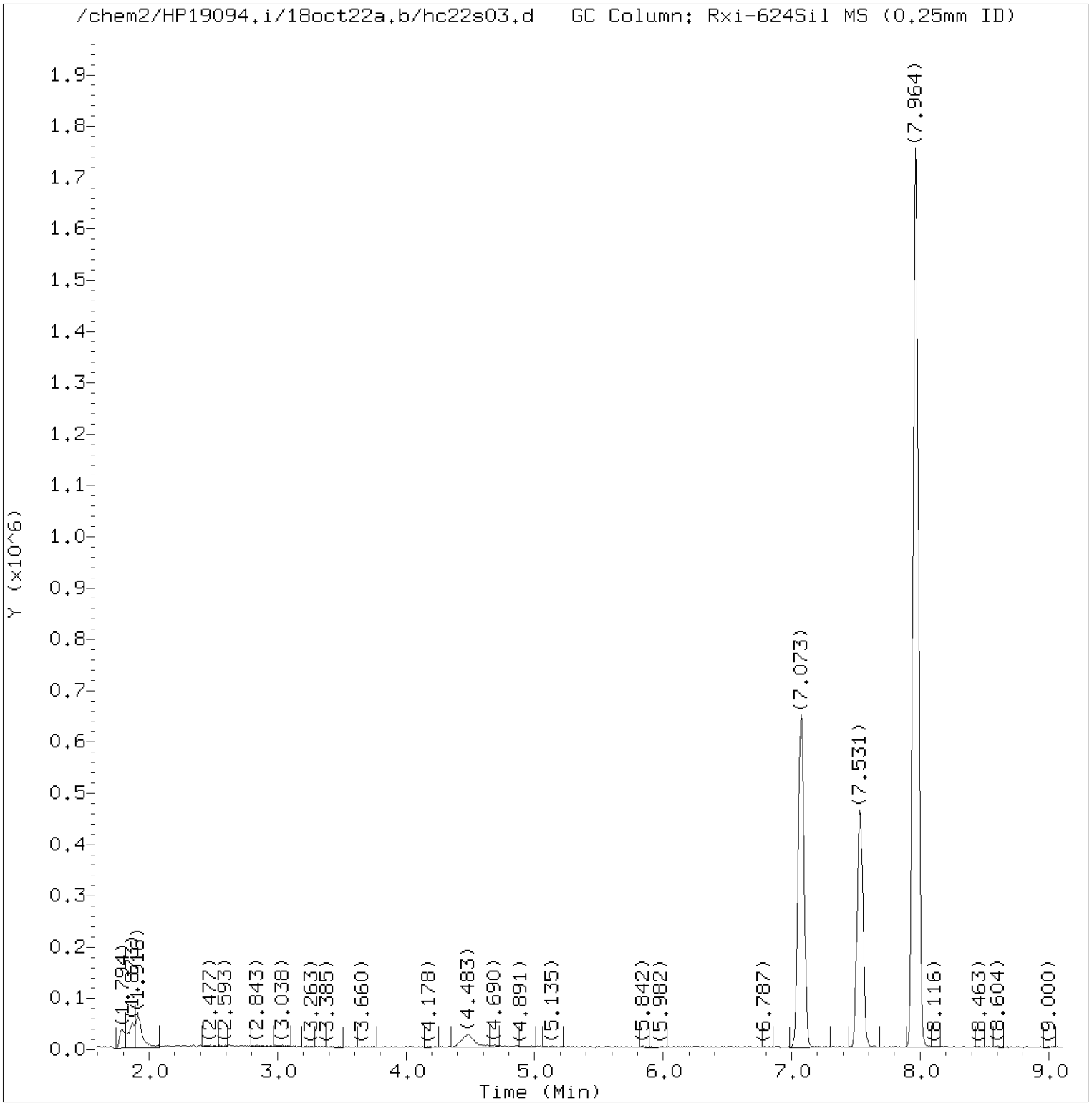
Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

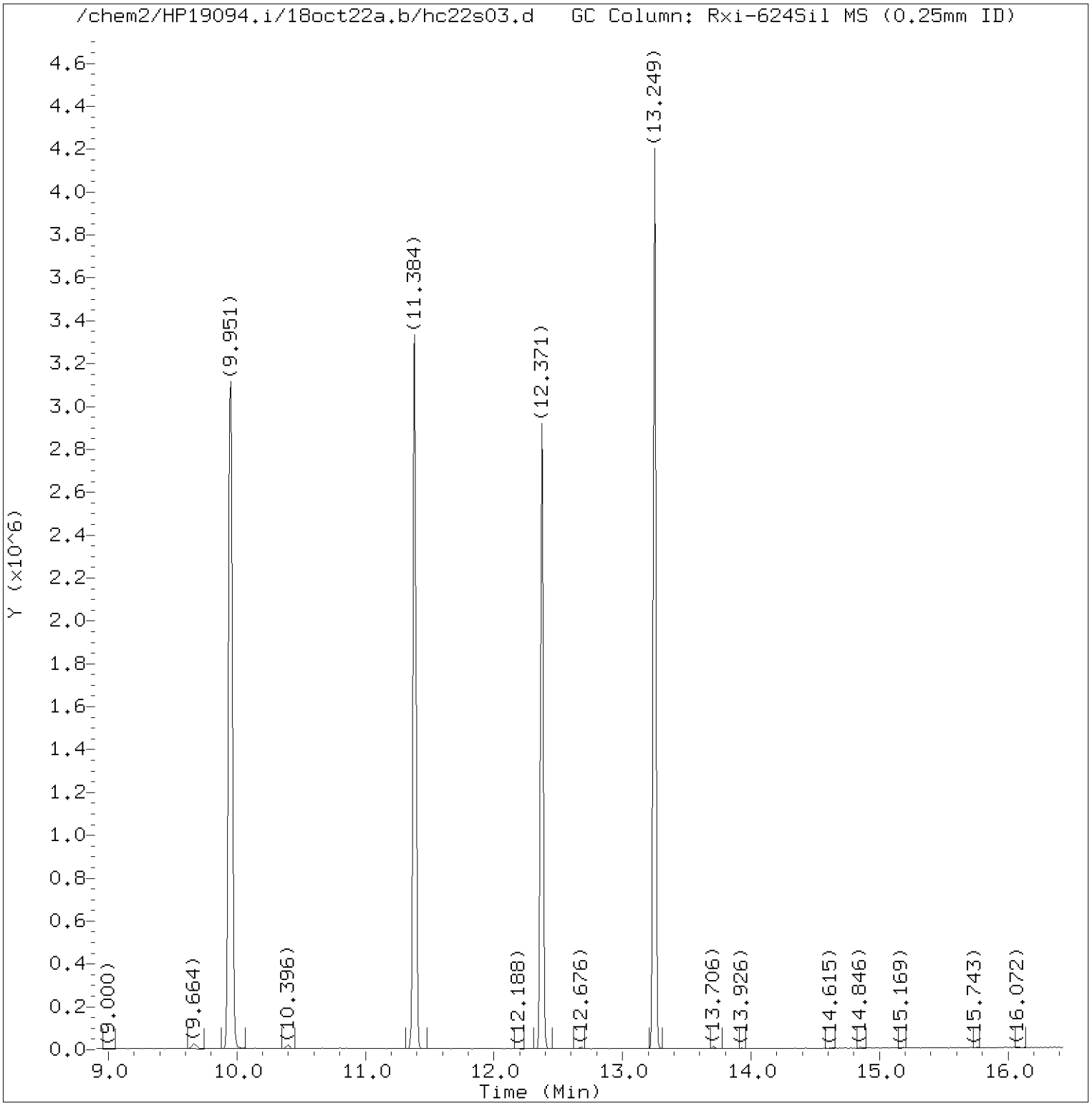
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:53 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94292 Lab Sample ID: 9850263

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:53 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94292 Lab Sample ID: 9850263

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:53 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94292 Lab Sample ID: 9850263

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	117351	50.000
50)$Dibromofluoromethane	(2)	7.073	113	645749	10.034
57)$1,2-Dichloroethane-d4	(2)	7.531	102	119872	10.684
63)*Fluorobenzene	(2)	7.964	96	2553419	10.000
82)$Toluene-d8	(3)	9.951	98	2527989	9.952
97)*Chlorobenzene-d5	(3)	11.384	117	1973688	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	886013	9.580
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1044043	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s04.d Injection date and time: **22-OCT-2018 12:15**
Data file Sample Info. Line: 94293;9850264;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145;9179

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.477	(0.000)	474	65	110304	(-6)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2560853	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1964732	(-1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1060063	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	649938	10.070	101%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(-0.001)	102	115473	10.262	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2520599	9.968	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	894014	9.711	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

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Data file: /chem2/HP19094.i/18oct22a.b/hc22s04.d Injection date and time: **22-OCT-2018 12:15**
Data file Sample Info. Line: 94293;9850264;1;0;;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

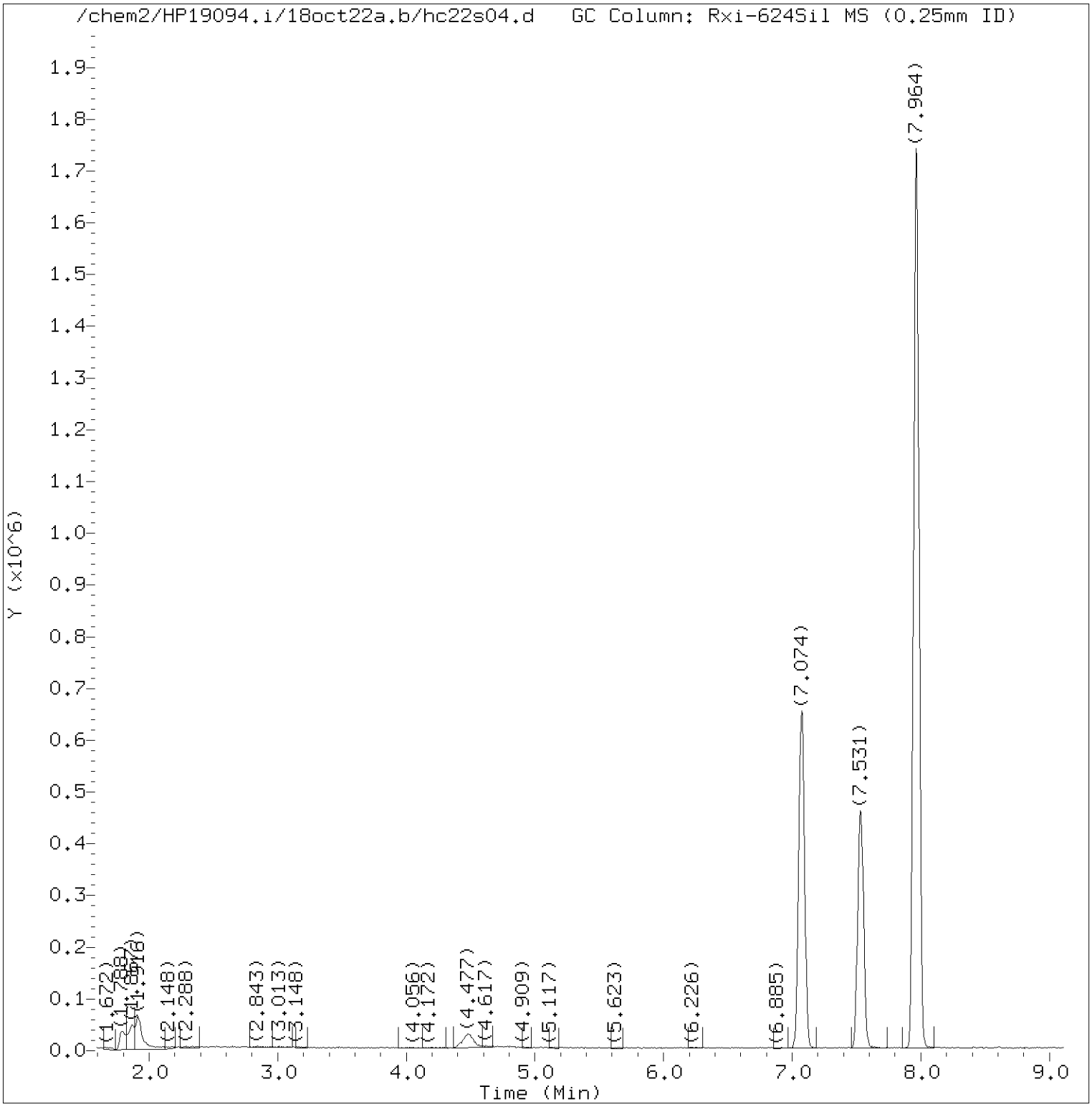
Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

THIS SPACE
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:29. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

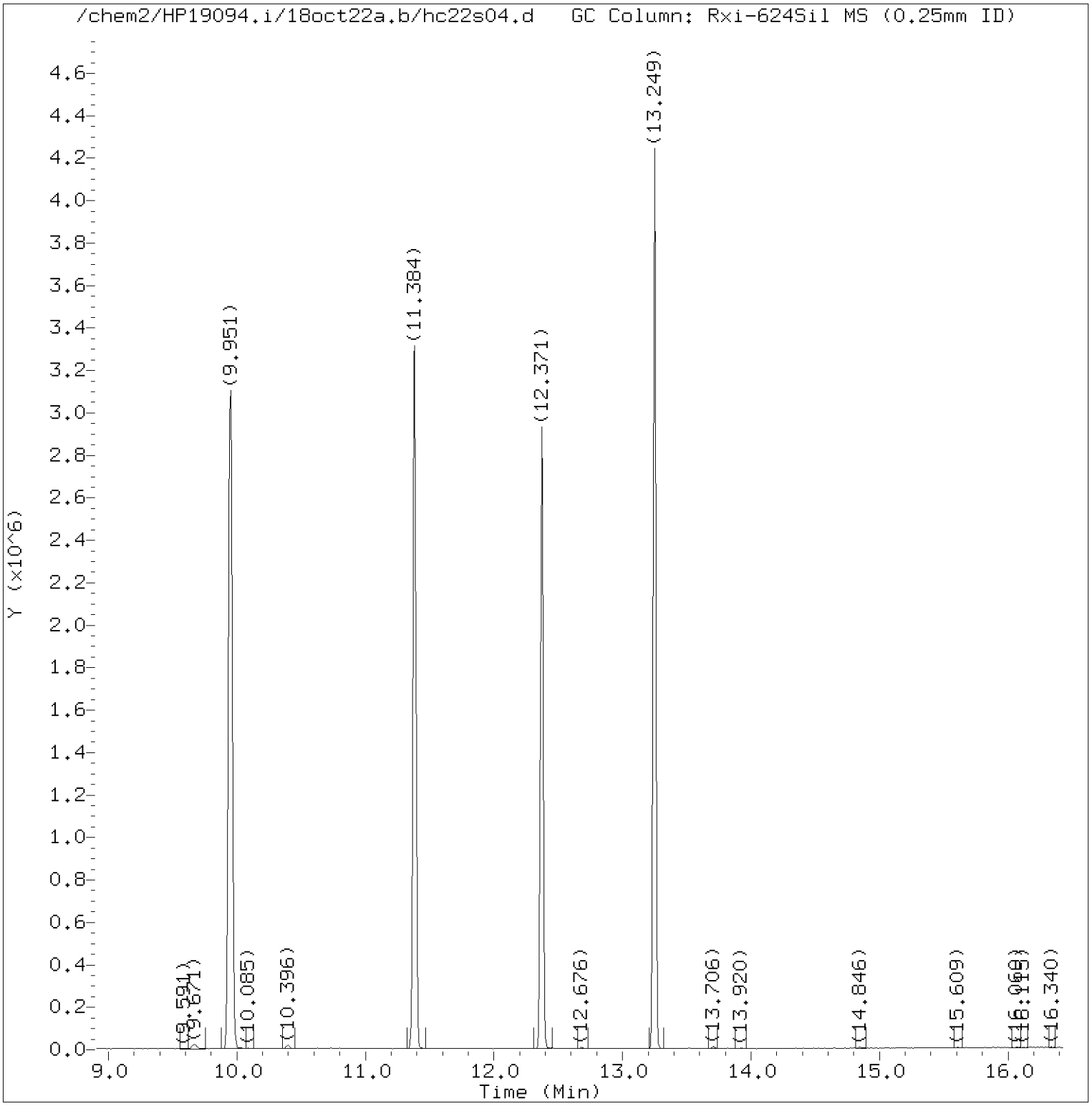
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94293 Lab Sample ID: 9850264

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94293 Lab Sample ID: 9850264

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 12:15 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:17 jkh09052

Sample Name: 94293 Lab Sample ID: 9850264

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.477	65	110304	50.000
50)$Dibromofluoromethane	(2)	7.074	113	649938	10.070
57)$1,2-Dichloroethane-d4	(2)	7.537	102	115473	10.262
63)*Fluorobenzene	(2)	7.964	96	2560853	10.000
82)$Toluene-d8	(3)	9.951	98	2520599	9.968
97)*Chlorobenzene-d5	(3)	11.384	117	1964732	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	894014	9.711
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1060063	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:29.
Target 3.5 esignature user ID: jkh09052

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18SEP24I\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
jkh09052	HS24T05.D	BFB AUG07-18	09/24/2018	17:53		
JKH09052	HS24X01.D	blk	09/24/2018	18:07		
JKH09052	HS24i01.D	VSTD025	09/24/2018	18:29		
JKH09052	HS24i02.D	VSTD010	09/24/2018	18:50		
JKH09052	HS24i03.D	VSTD005	09/24/2018	19:11		
JKH09052	HS24i04.D	VSTD002	09/24/2018	19:33		
JKH09052	HS24i05.D	VSTD001	09/24/2018	19:54		
JKH09052	HS24i06.D	VSTD0.5	09/24/2018	20:16		
JKH09052	HS24i07.D	VSTD0.2	09/24/2018	20:37		
JKH09052	HS24M01.D	MDL0.1	09/24/2018	20:59		
JKH09052	HS24V01.D	ICVHLG	09/24/2018	21:20		

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18MAY02B\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
DVV10203	HY02T05.D	BFB FEB13-18	05/02/2018	18:06		
DVV10203	HY02T06.D	BFB FEB13-18	05/02/2018	18:15		
DVV10203	HY02T07.D	BFB FEB13-18	05/02/2018	18:32		
DVV10203	HY02X11.D	blk	05/02/2018	18:54		
DVV10203	HY02I11.D	VSTD025	05/02/2018	19:15		
DVV10203	HY02I12.D	VSTD010	05/02/2018	19:36		
DVV10203	HY02I13.D	VSTD005	05/02/2018	19:58		
DVV10203	HY02I14.D	VSTD002	05/02/2018	20:19		
DVV10203	HY02I15.D	VSTD001	05/02/2018	20:40		
DVV10203	HY02I16.D	VSTD0.5	05/02/2018	21:02		
DVV10203	HY02I17.D	VSTD0.2	05/02/2018	21:23		
DVV10203	HY02M11.D	MDL0.1	05/02/2018	21:45		
DVV10203	HY02V11.D	ICVHSM	05/02/2018	22:07		
DVV10203	HY02V12.D	ICVDHSM	05/02/2018	22:28		
DVV10203	HY02C01.D	VSTD010	05/02/2018	22:49	H181221AA	
DVV10203	HY02S01.D	LCSH87	05/02/2018	23:11	H181221AA	
DVV10203	HY02S02.D	LCDH87	05/02/2018	23:32	H181221AA	
DVV10203	HY02X60.D	BLK	05/02/2018	23:53	H181221AA	
DVV10203	HY02B01.D	VBLKH87	05/03/2018	00:15	H181221AA	
DVV10203	HY02S05.D	9571212DL	05/03/2018	00:36	H181221AA	10
DVV10203	HY02S06.D	9573419	05/03/2018	00:58	H181221AA	
DVV10203	HY02S07.D	9583593	05/03/2018	01:20	H181221AA	
DVV10203	HY02S08.D	9583706	05/03/2018	01:41	H181221AA	
DVV10203	HY02S09.D	9583587	05/03/2018	02:03	H181221AA	
DVV10203	HY02S10.D	9583594	05/03/2018	02:24	H181221AA	
DVV10203	HY02S11.D	9583707	05/03/2018	02:46	H181221AA	
DVV10203	HY02S12.D	9583590	05/03/2018	03:07	H181221AA	
DVV10203	HY02S13.D	9583592	05/03/2018	03:28	H181221AA	
DVV10203	HY02S14.D	9583708	05/03/2018	03:50	H181221AA	
DVV10203	HY02S15.D	9583709	05/03/2018	04:11	H181221AA	
DVV10203	HY02S16.D	9583710	05/03/2018	04:33	H181221AA	
DVV10203	HY02S17.D	9583713	05/03/2018	04:55	H181221AA	
DVV10203	HY02S18.D	9583711	05/03/2018	05:16	H181221AA	10
DVV10203	HY02S19.D	9583711DL	05/03/2018	05:38	H181221AA	100
DVV10203	HY02S20.D	9583712	05/03/2018	05:59	H181221AA	1000
DVV10203	HY02S21.D	9583712DL	05/03/2018	06:21	H181221AA	10000

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP19094 **HP #30**

Data Directory Path is - D:\DATA\18OCT22A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
JKH09052	HC22T01.D	BFB AUG07-18	10/22/2018	07:43		
JKH09052	HC22X00.D	VBLKH44	10/22/2018	07:57	H182951AA	
JKH09052	HC22C01.D	VSTD010	10/22/2018	08:19	H182951AA	
JKH09052	HC22C02.D	VSTD010	10/22/2018	08:40	H182951AA	
JKH09052	HC22L01.D	LCSH44	10/22/2018	09:01	H182951AA	
JKH09052	HC22L02.D	LCDH44	10/22/2018	09:23	H182951AA	
JKH09052	HC22L03.D	LCSH45	10/22/2018	09:44	H182951AA	
JKH09052	HC22L04.D	LCDH45	10/22/2018	10:06	H182951AA	
JKH09052	HC22M01.D	MDLH44	10/22/2018	10:27	H182951AA	
JKH09052	HC22M02.D	MDLH45	10/22/2018	10:49	H182951AA	
JKH09052	HC22B01.D	VBLKH44	10/22/2018	11:10	H182951AA	
JKH09052	HC22S02.D	9850262	10/22/2018	11:32	H182951AA	
JKH09052	HC22S03.D	9850263	10/22/2018	11:53	H182951AA	
JKH09052	HC22S04.D	9850264	10/22/2018	12:15	H182951AA	
JKH09052	HC22S05.D	9850249	10/22/2018	12:36	H182951AA	
JKH09052	HC22S06.D	9850249DL	10/22/2018	12:58	H182951AA	2.5
JKH09052	HC22S07.D	9850250	10/22/2018	13:19	H182951AA	
JKH09052	HC22S08.D	9850251	10/22/2018	13:41	H182951AA	
JKH09052	HC22S09.D	9850251DL	10/22/2018	14:02	H182951AA	2.5
JKH09052	HC22S10.D	9850252	10/22/2018	14:24	H182951AA	
JKH09052	HC22S11.D	9850253MS	10/22/2018	14:46	H182951AA	
JKH09052	HC22S12.D	9850254MSD	10/22/2018	15:07	H182951AA	
JKH09052	HC22S13.D	9850253MS	10/22/2018	15:28	H182951AA	
JKH09052	HC22S14.D	9850254MSD	10/22/2018	15:50	H182951AA	
JKH09052	HC22S15.D	9850255	10/22/2018	16:11	H182951AA	
JKH09052	HC22S16.D	9850256	10/22/2018	16:32	H182951AA	
JKH09052	HC22S17.D	9850257	10/22/2018	16:54	H182951AA	
JKH09052	HC22S18.D	9850258	10/22/2018	17:15	H182951AA	
JKH09052	HC22S19.D	9850259	10/22/2018	17:37	H182951AA	
JKH09052	HC22S20.D	9850260	10/22/2018	17:58	H182951AA	
JKH09052	HC22S21.D	9850261	10/22/2018	18:20	H182951AA	
JKH09052	HC22S22.D	9850249DL	10/22/2018	18:41	H182951AA	2.5
JKH09052	HC22S23.D	9850251DL	10/22/2018	19:03	H182951AA	2.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Page 1

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

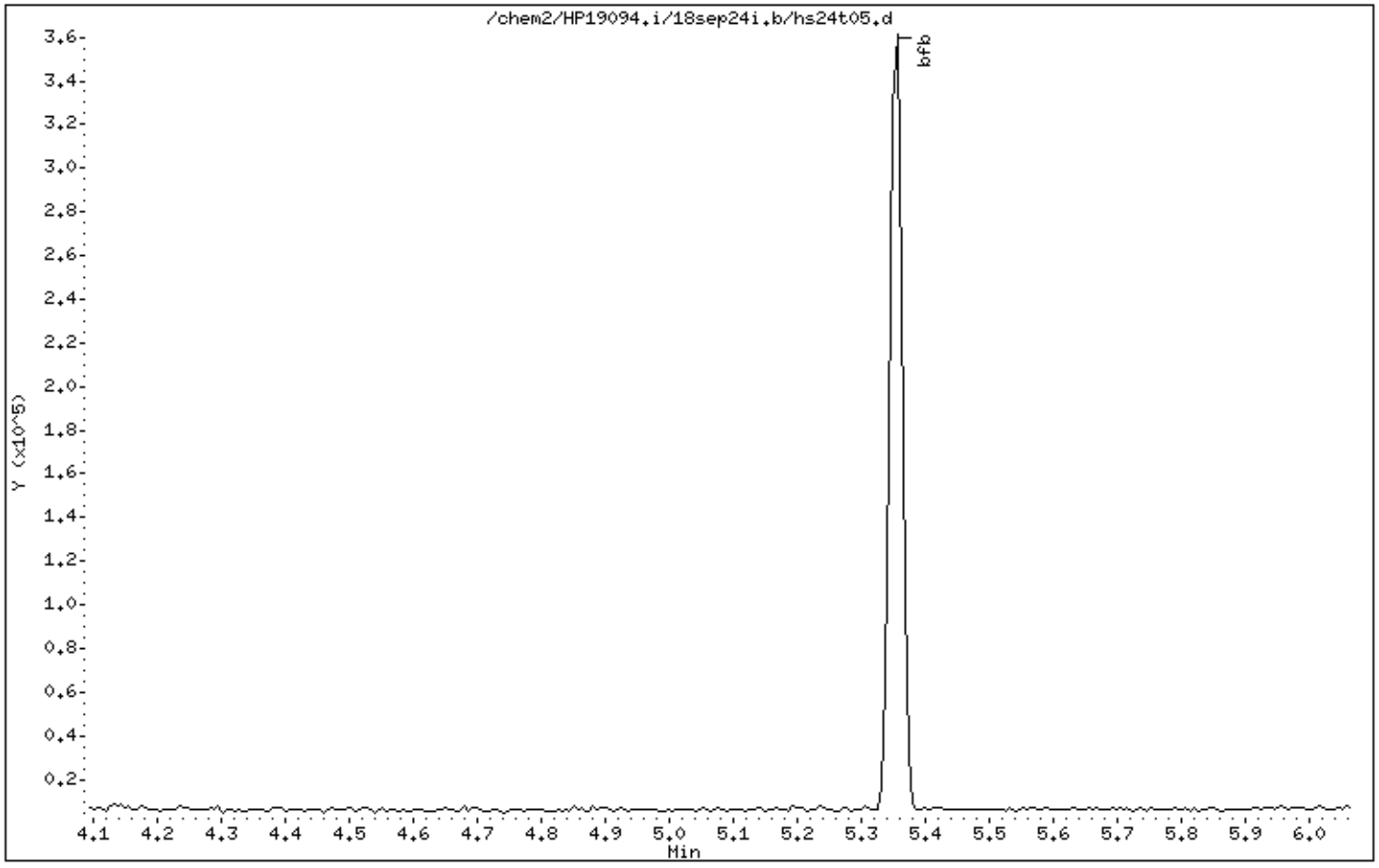
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18sep24i.b/hs24t05.d

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng

Instrument: HP19094.i

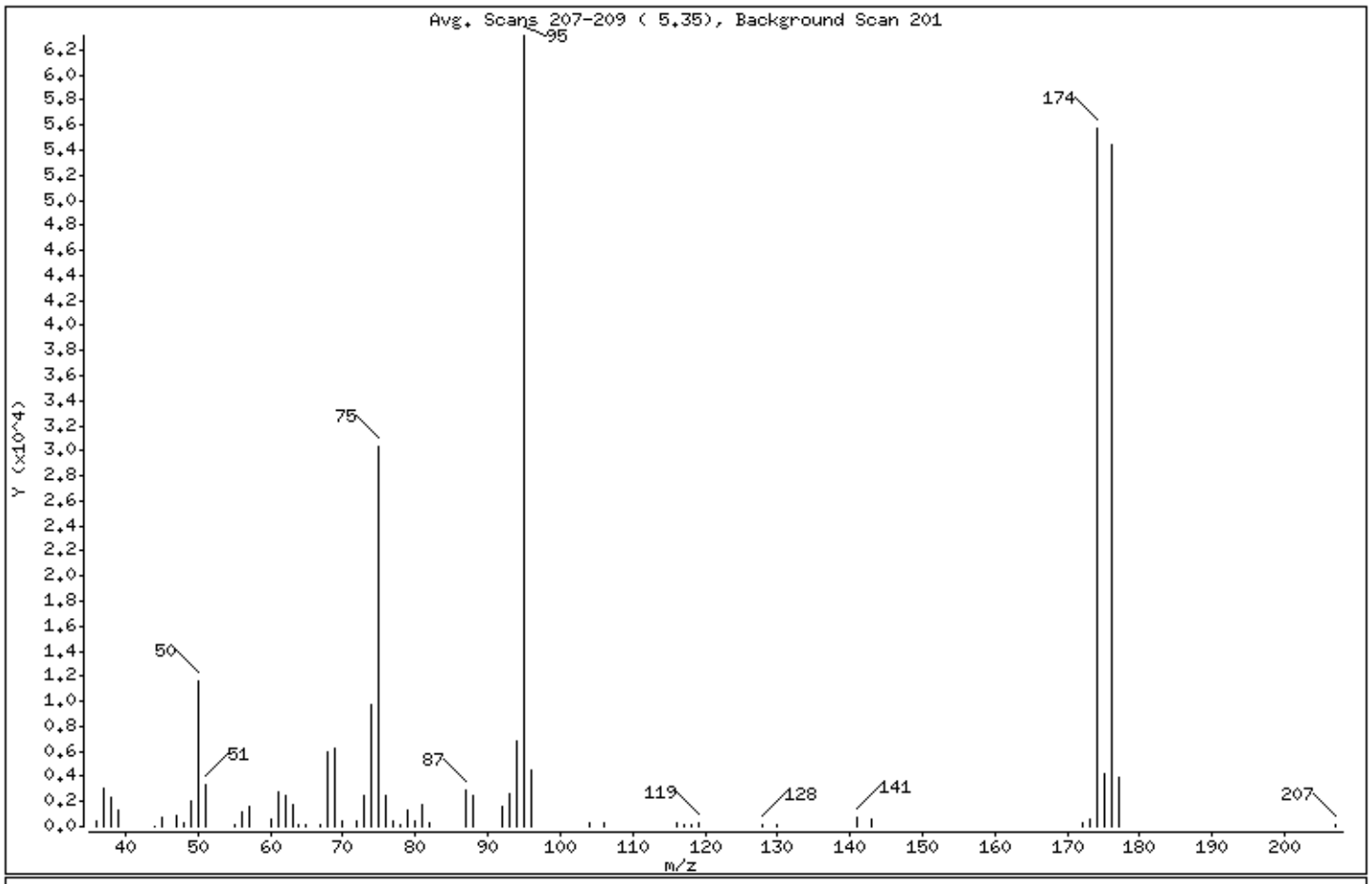
Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: jkh09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	18.30
75	30.00 - 60.00% of mass 95	48.01
96	5.00 - 9.00% of mass 95	7.23
173	Less than 2.00% of mass 174	0.88 (0.99)
174	50.00 - 100.00% of mass 95	88.37
175	5.00 - 9.00% of mass 174	6.59 (7.45)
176	95.00 - 101.00% of mass 174	86.23 (97.58)
177	5.00 - 9.00% of mass 176	6.27 (7.28)

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052

Date : 24-SEP-2018 17:53

Client ID: BFB 50ng Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

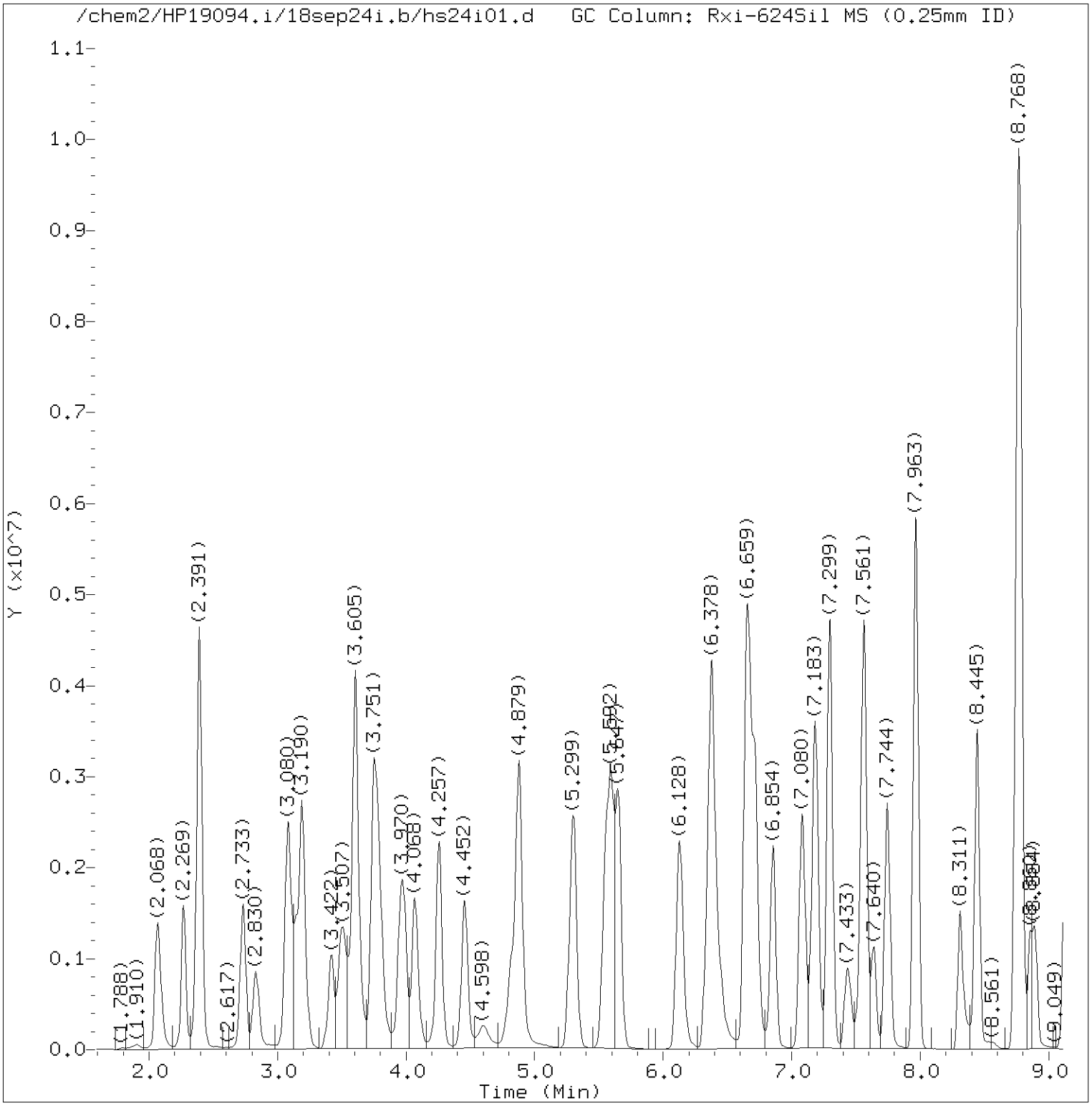
Operator: jkh09052

Column phase: Rxi-624Sil MS Column diameter: 0.25

Data File: hs24t05.d
Spectrum: Avg. Scans 207-209 (5.35), Background Scan 201
Location of Maximum: 95.00
Number of points: 59

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	380	61.00	2761	78.00	85	117.00	165
37.00	3109	62.00	2478	79.00	1339	118.00	125
38.00	2327	63.00	1778	80.00	478	119.00	271
39.00	1285	64.00	95	81.00	1678	128.00	207
44.00	4	65.00	114	82.00	305	130.00	104
45.00	778	67.00	89	87.00	2896	141.00	746
47.00	856	68.00	6016	88.00	2501	143.00	552
48.00	257	69.00	6278	92.00	1547	172.00	224
49.00	2059	70.00	428	93.00	2614	173.00	555
50.00	11554	72.00	423	94.00	6758	174.00	55792
51.00	3390	73.00	2434	95.00	63136	175.00	4158
55.00	180	74.00	9779	96.00	4567	176.00	54440
56.00	1094	75.00	30304	104.00	228	177.00	3961
57.00	1606	76.00	2509	106.00	307	207.00	187
60.00	530	77.00	454	116.00	237		

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:31.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

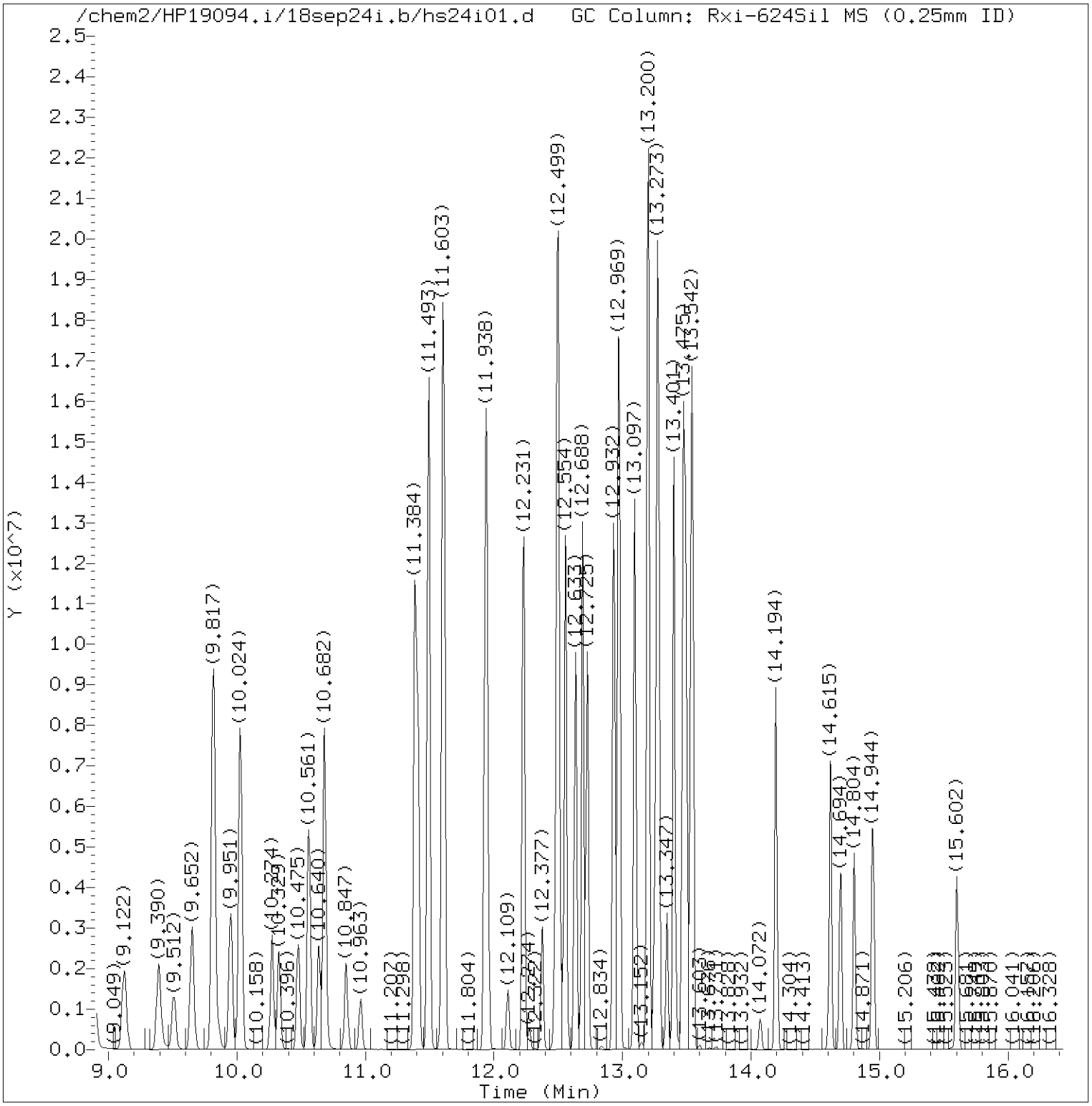
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	2667477	26.155
2) Chloromethane	(2)	2.269	50	2539335	25.424
5) Vinyl Chloride	(2)	2.391	62	2410925	25.776
6) 1,3-Butadiene	(2)	2.391	39	2594646	24.489
7) Bromomethane	(2)	2.733	94	1851509	25.463
8) Chloroethane	(2)	2.830	64	1410558	24.864
9) Dichlorofluoromethane	(2)	3.080	67	3474207	25.746
10) Trichlorofluoromethane	(2)	3.141	101	3065694	25.945
11) Ethyl ether	(2)	3.416	59	1019569	25.448
12) Freon 123a	(2)	3.501	67	1934522	25.841
13) Acrolein	(1)	3.605	56	7172863	1305.987
15) 1,1-Dichloroethene	(2)	3.745	96	1360935	26.597
16) Freon 113	(2)	3.775	101	1627334	26.985
14) Acetone	(1)	3.787	43	1847599M	250.454
17) Methyl Iodide	(2)	3.958	142	2764121	25.916
18) Carbon Disulfide	(2)	4.068	76	4201344	25.805
21) Methyl Acetate	(1)	4.233	43	504865	24.378
22) Allyl Chloride	(2)	4.257	41	2524824	25.958
23) Methylene Chloride	(2)	4.458	84	1406291	24.362
26)*t-Butyl Alcohol-d10	(1)	4.470	65	123769M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	982548	465.083
29) Acrylonitrile	(1)	4.812	53	1235214M	129.656
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	2663697	25.312
31) trans-1,2-Dichloroethene	(2)	4.879	96	1493749	25.866
32) n-Hexane	(2)	5.299	57	2559536	27.873
33) 1,1-Dichloroethane	(2)	5.543	63	2842374M	25.851
34) di-Isopropyl Ether	(2)	5.592	45	5070137	25.966
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	2671346	27.000
40) 1,2-Dichloroethene (Total)	(2)		96	3155804	51.914
37) Ethyl t-butyl ether	(2)	6.128	59	3878205	25.041
38) 2-Butanone	(1)	6.348	43	3061047	253.491
39) cis-1,2-Dichloroethene	(2)	6.372	96	1662055	26.048
41) 2,2-Dichloropropane	(2)	6.391	77	2084281	26.541
42) Propionitrile	(1)	6.446	54	1568878	478.649
45) Methacrylonitrile	(1)	6.653	67	3149545	266.488
47) Bromochloromethane	(2)	6.714	128	688648	25.549
48) Tetrahydrofuran	(1)	6.720	71	820759	255.663
49) Chloroform	(2)	6.854	83	2651699	25.940

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	655219	9.962
50)$Dibromofluoromethane	(2)	7.073	111	673113	9.943
51) 1,1,1-Trichloroethane	(2)	7.086	97	2299905	26.303
52) Cyclohexane	(2)	7.183	56	3091541	27.084
52) Cyclohexane	(2)	7.183	84	2539041	26.980
52) Cyclohexane	(2)	7.183	69	918069	27.291
54) Carbon Tetrachloride	(2)	7.293	117	2024542	26.959
55) 1,1-Dichloropropene	(2)	7.299	75	2199442	26.527
56) Isobutyl Alcohol	(1)	7.433	41	1045544	1279.099
57)$1,2-Dichloroethane-d4	(2)	7.531	102	112838	9.841
57)$1,2-Dichloroethane-d4	(2)	7.537	65	549372	9.906
57)$1,2-Dichloroethane-d4	(2)	7.537	104	71973	9.801
58) Benzene	(2)	7.561	78	6318666	25.796
59) 1,2-Dichloroethane	(2)	7.640	62	1386008M	24.587
60) t-Amyl methyl ether	(2)	7.744	73	3227765	25.138
62) n-Heptane	(2)	7.963	43	2650704	27.997
63)*Fluorobenzene	(2)	7.970	96	2609636	10.000
65) n-Butanol	(1)	8.311	56	1867070	2703.605
67) Trichloroethene	(2)	8.445	95	1649864	26.306
69) Methylcyclohexane	(2)	8.750	83	3203740	27.048
70) 1,2-Dichloropropane	(2)	8.787	63	1552299	26.120
71) Methyl Methacrylate	(1)	8.854	69	623886	28.519
72) 1,4-Dioxane	(1)	8.872	88	216251M	1300.575
73) Dibromomethane	(2)	8.890	93	640944	25.985
74) Bromodichloromethane	(2)	9.122	83	1808486	27.068
76) 2-Nitropropane	(1)	9.390	41	1826609	294.768
80) cis-1,3-Dichloropropene	(2)	9.652	75	2141489	27.530
81) 4-Methyl-2-Pentanone	(1)	9.817	43	8439729	280.977
82)$Toluene-d8	(3)	9.951	98	2620387	9.785
82)$Toluene-d8	(3)	9.951	100	1692208	9.791
83) Toluene	(3)	10.024	92	3966390	25.689
85) 1,3-Dichloropropene (total)	(3)		75	3792374	55.280
84) trans-1,3-Dichloropropene	(3)	10.274	75	1650885	27.750
86) Ethyl Methacrylate	(3)	10.329	69	1388174	27.235
88) 1,1,2-Trichloroethane	(3)	10.475	97	904681	25.463
89) Tetrachloroethene	(3)	10.561	166	1799885	25.801
90) 1,3-Dichloropropane	(3)	10.640	76	1618164	25.698
91) 2-Hexanone	(1)	10.682	43	5656981	276.677

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	1148646	26.975
95) 1,2-Dibromoethane	(3)	10.963	107	873629	26.234
96) 1-Chlorohexane	(3)	11.384	91	2376499	25.807
97)*Chlorobenzene-d5	(3)	11.384	117	2080614	10.000
98) Chlorobenzene	(3)	11.408	112	4267356	26.051
100) Ethylbenzene	(3)	11.493	91	8033395	26.621
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	1477189	27.325
101) m+p-Xylene	(3)	11.603	106	5930803	52.987
105) Xylene (Total)	(3)		106	8810207	79.883
104) o-Xylene	(3)	11.932	106	2879404	26.908
106) Styrene	(3)	11.944	104	4681599	27.345
107) Bromoform	(3)	12.109	173	650012	27.775
108) Isopropylbenzene	(3)	12.231	105	7914371	27.092
111)$4-Bromofluorobenzene	(3)	12.377	95	947875	9.722
111)$4-Bromofluorobenzene	(3)	12.377	174	827331	9.773
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	1100327M	26.627
114) Bromobenzene	(4)	12.493	156	1705745	27.152
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	2718489	288.965
116) 1,2,3-Trichloropropane	(4)	12.524	110	269907	25.264
117) n-Propylbenzene	(4)	12.554	91	9362269	27.408
119) 2-Chlorotoluene	(4)	12.633	126	1758732	26.546
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	6440866	27.834
122) 4-Chlorotoluene	(4)	12.725	126	1781873	26.840
125) tert-Butylbenzene	(4)	12.932	134	1366112	27.146
126) Pentachloroethane	(4)	12.969	167	1131984	28.820
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	6639441	28.118
128) sec-Butylbenzene	(4)	13.097	105	8523009	28.424
131) 1,3-Dichlorobenzene	(4)	13.194	146	3395836	27.206
132) p-Isopropyltoluene	(4)	13.200	119	7173555	28.882
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1041754	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	3283435	26.798
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	2886733	26.647
136) Benzyl Chloride	(4)	13.347	126	450358	30.147
138) n-Butylbenzene	(4)	13.493	92	3496269	28.360
139) 1,2-Dichlorobenzene	(4)	13.529	146	2896879	26.305
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	150859	29.629
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	2585997	27.849
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	2125128	28.097

M = Compound was manually integrated.
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on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	789734	27.625
147) Naphthalene	(4)	14.804	128	3453963	28.858
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	1719365	27.647

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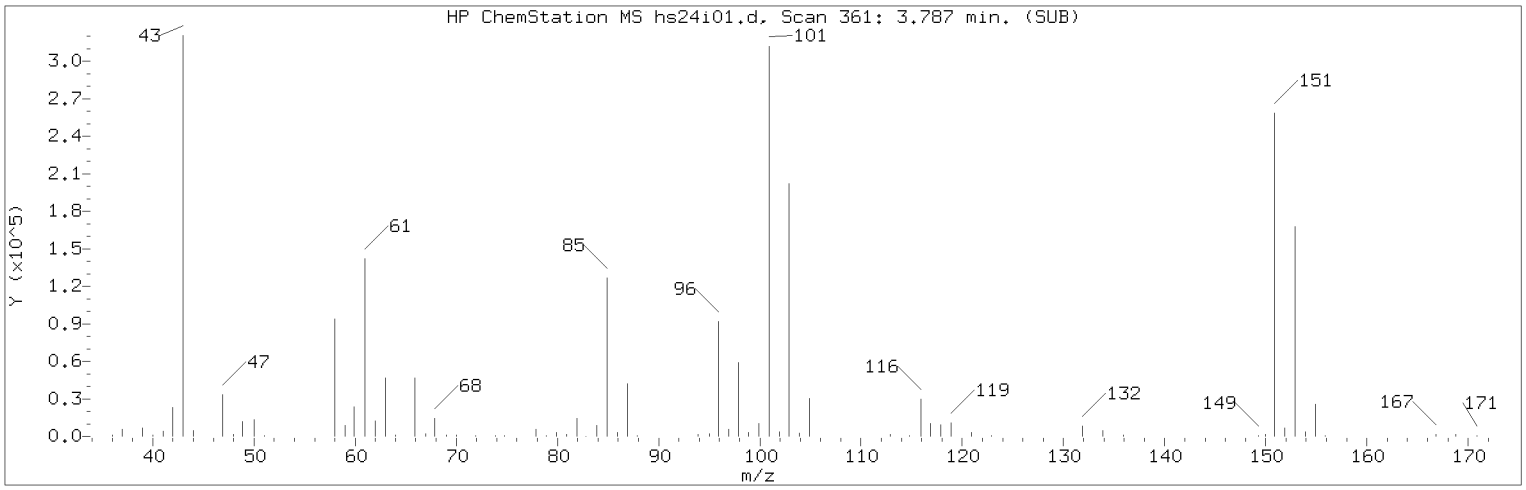
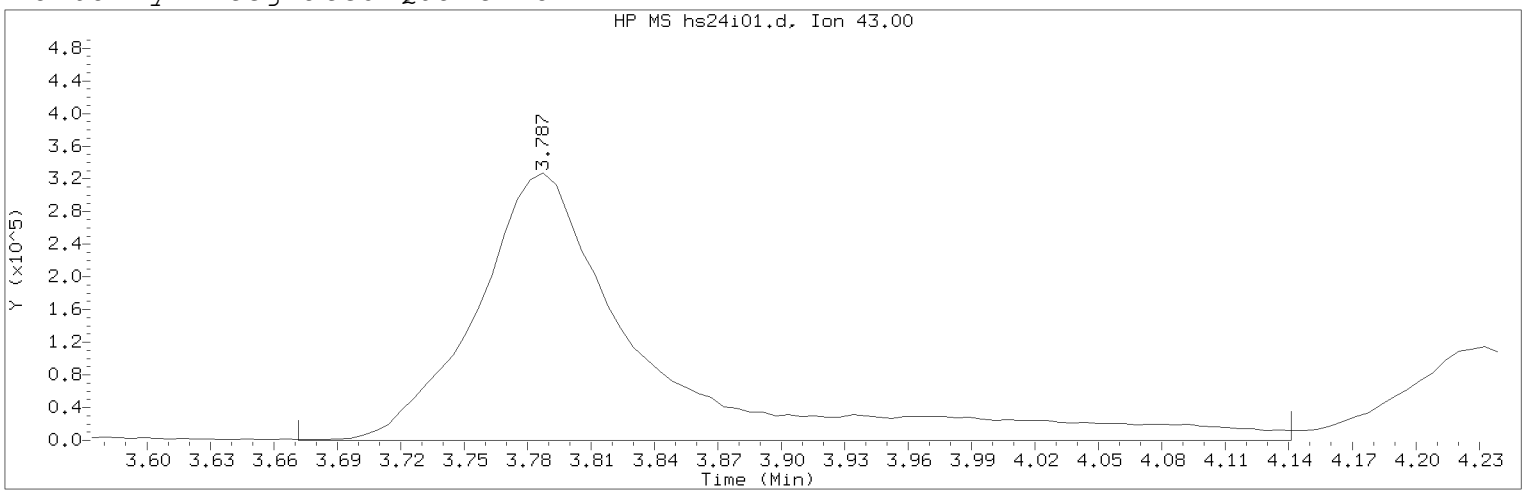
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

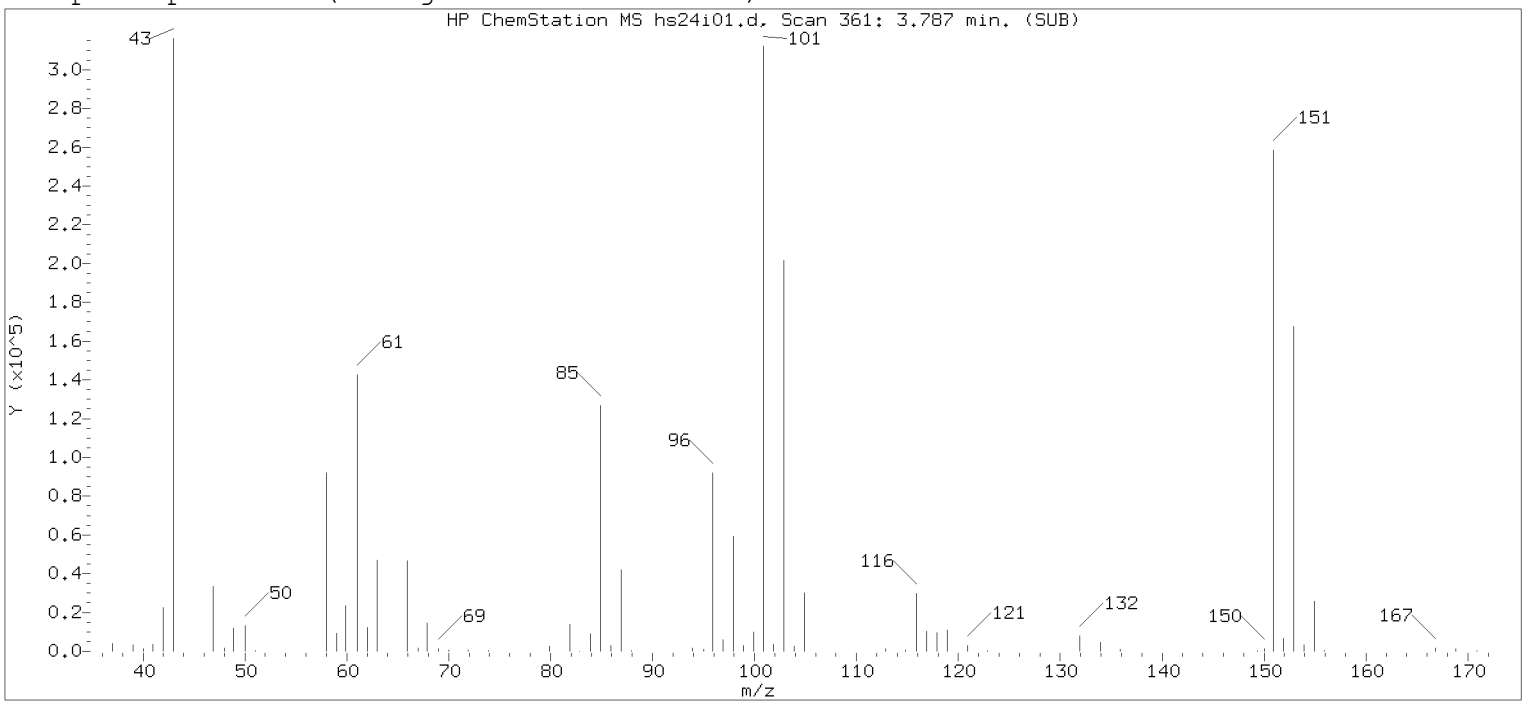
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 1847599M
On-Column Amount (ng) : 250.4543
Integration start scan : 341 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

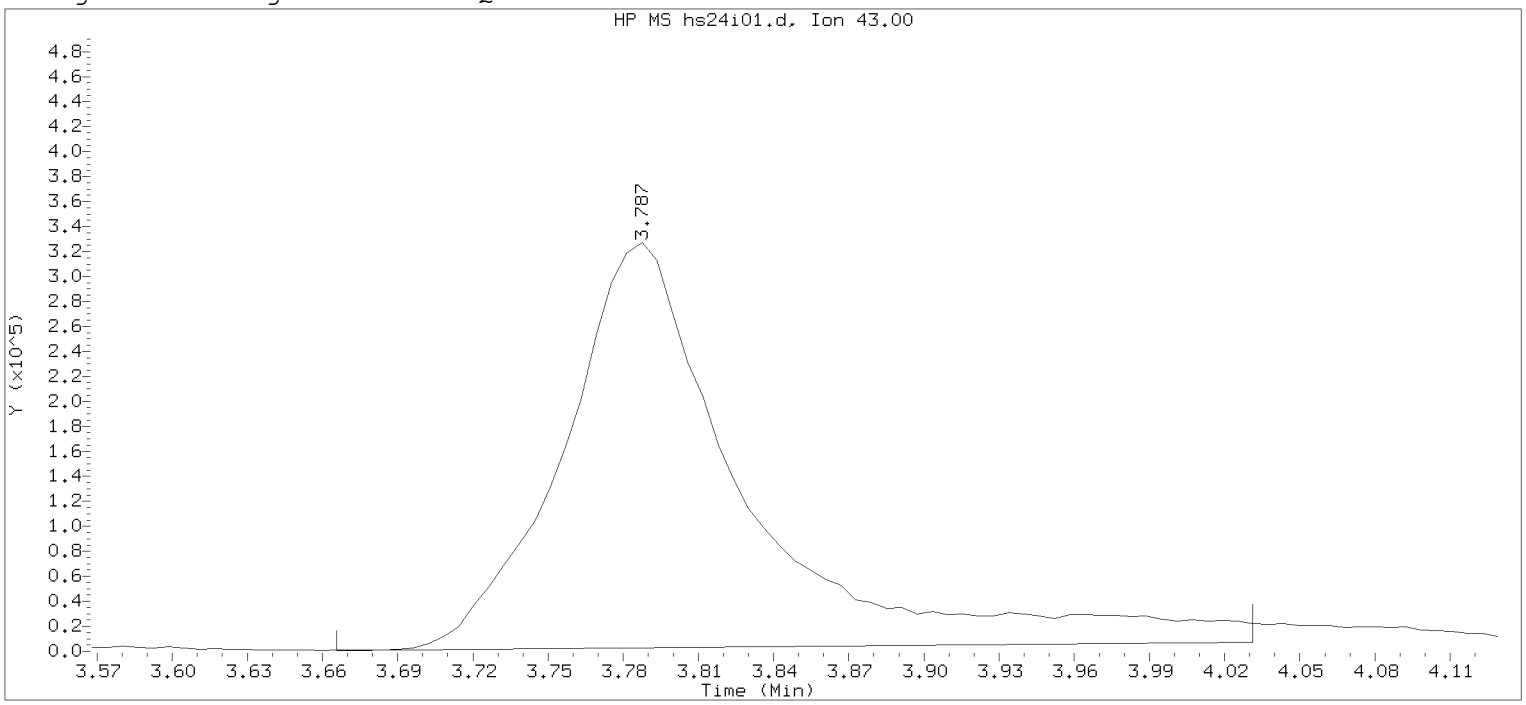
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area : 1639725
On-column Amount (ng) : 243.3952
Integration start scan : 340 Integration stop scan: 400
Y at integration start : 625 Y at integration end: 7448

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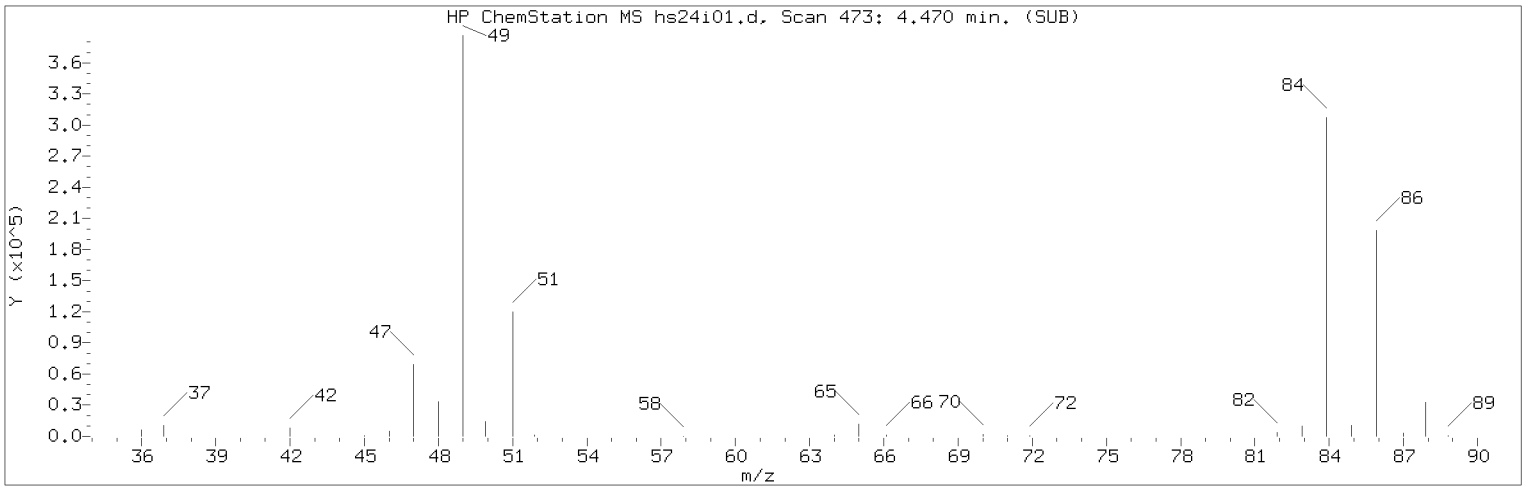
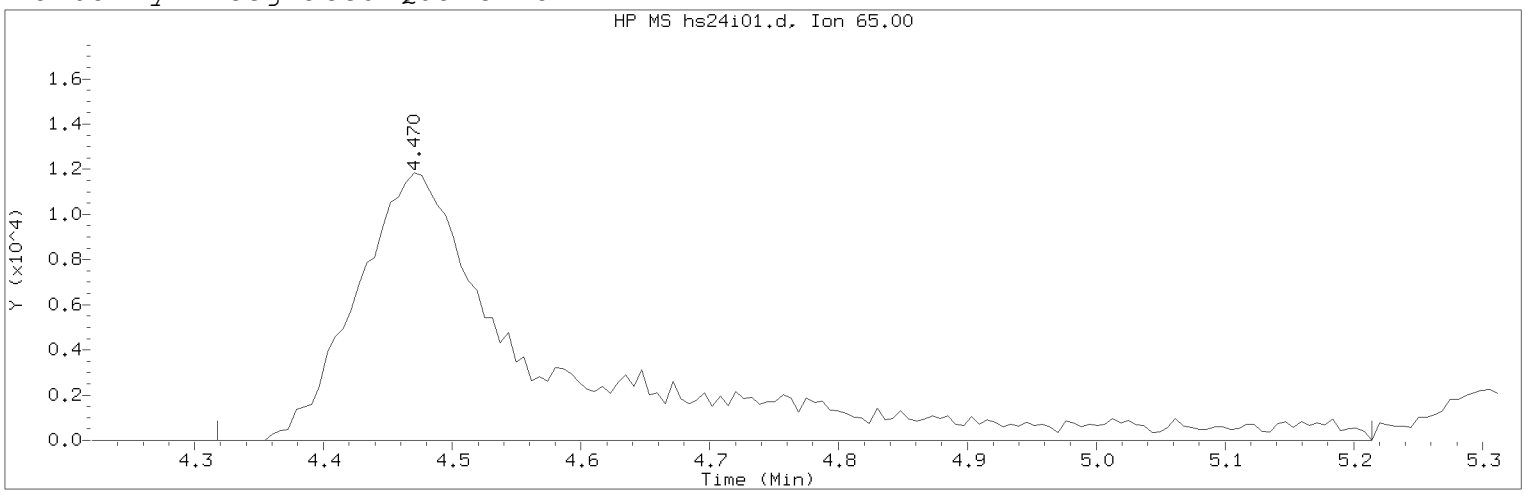
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

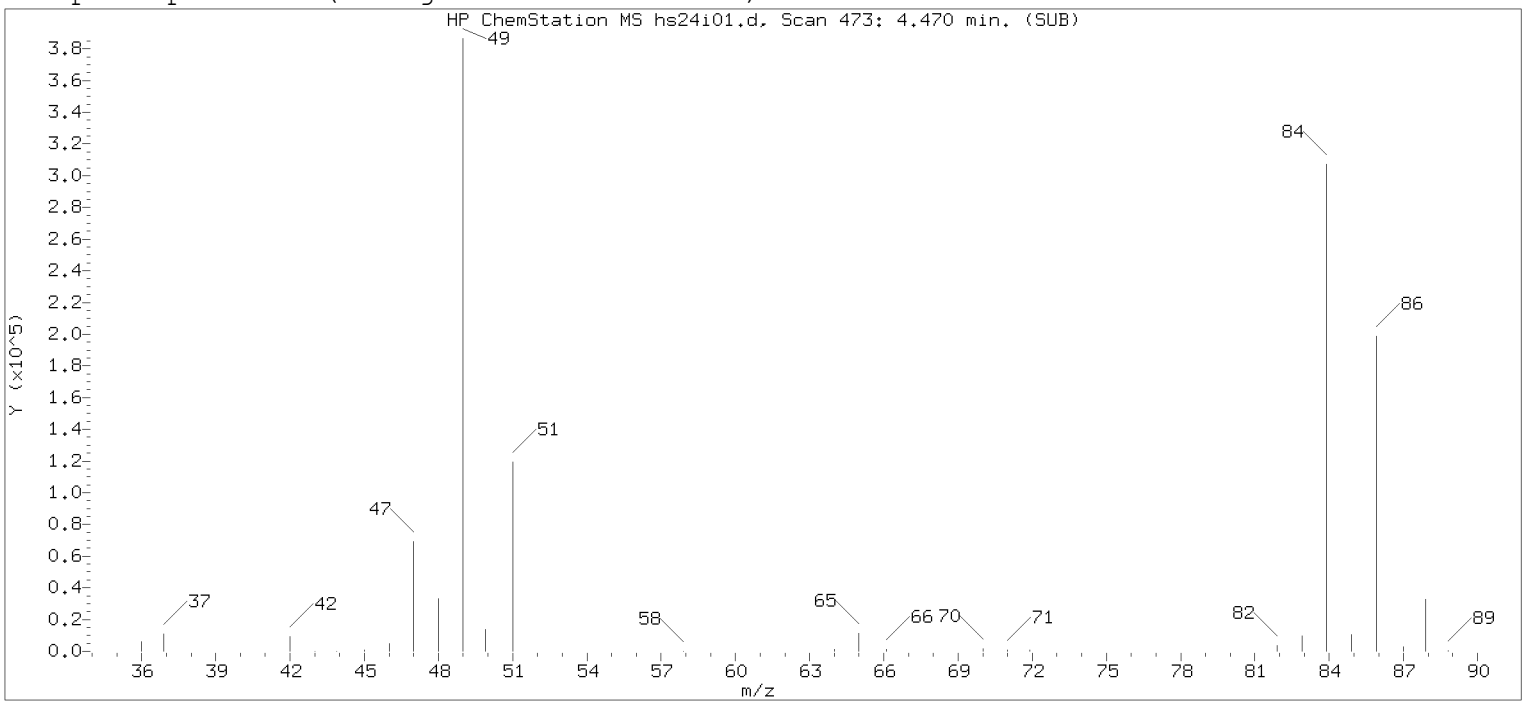
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 123769M
On-Column Amount (ng) : 50.0000
Integration start scan : 447 Integration stop scan: 594
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

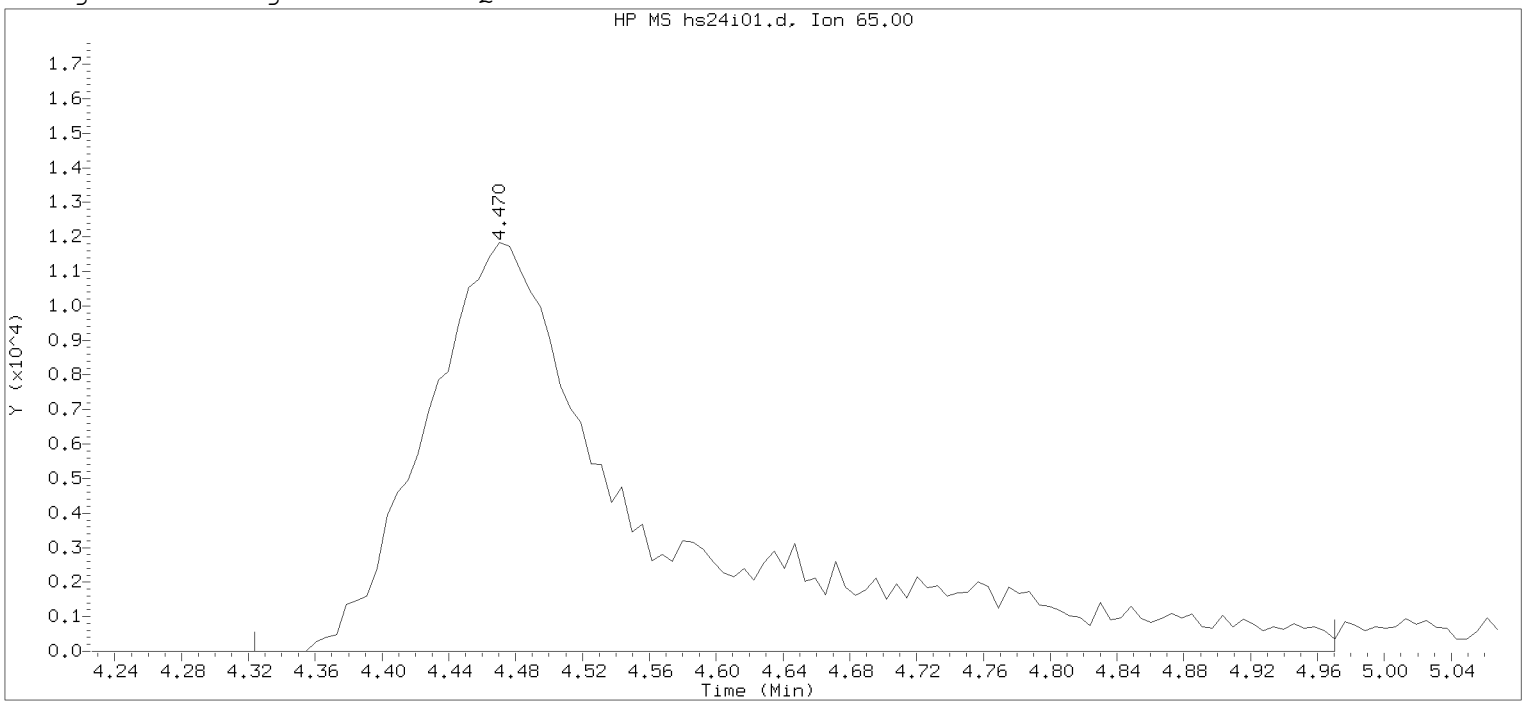
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

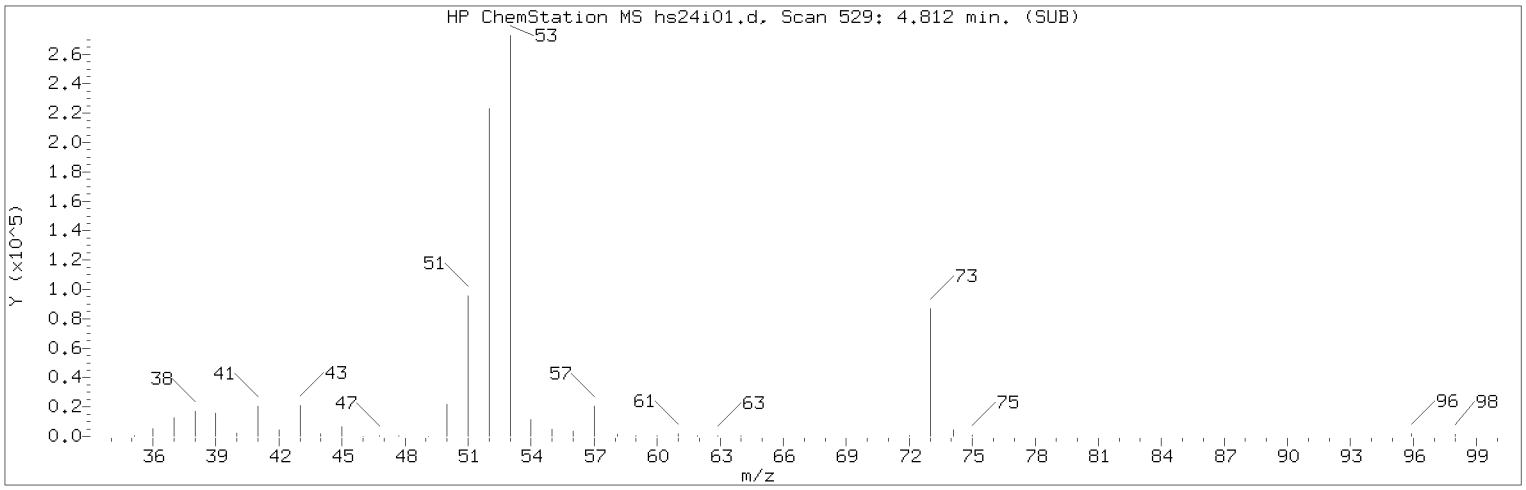
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

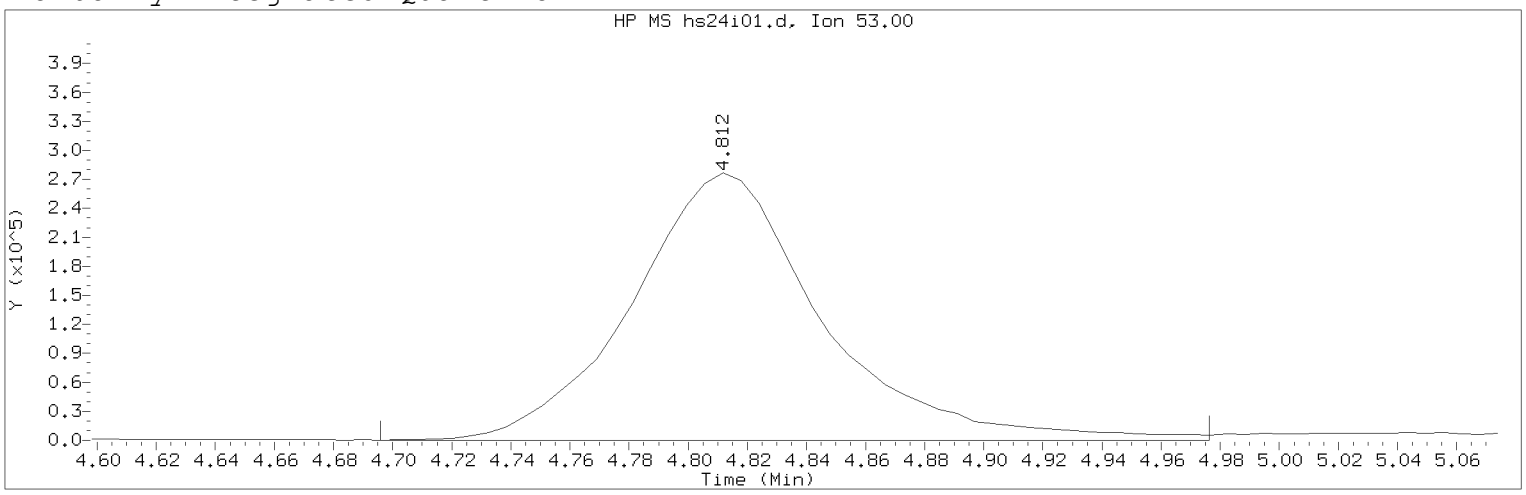
Compound Number	: 26
Compound Name	: t-Butyl Alcohol-d10
Scan Number	: 473
Retention Time (minutes)	: 4.470
Quant Ion	: 65.00
Area	: 114590
On-column Amount (ng)	: 50.0000
Integration start scan	: 448 Integration stop scan: 554
Y at integration start	: 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

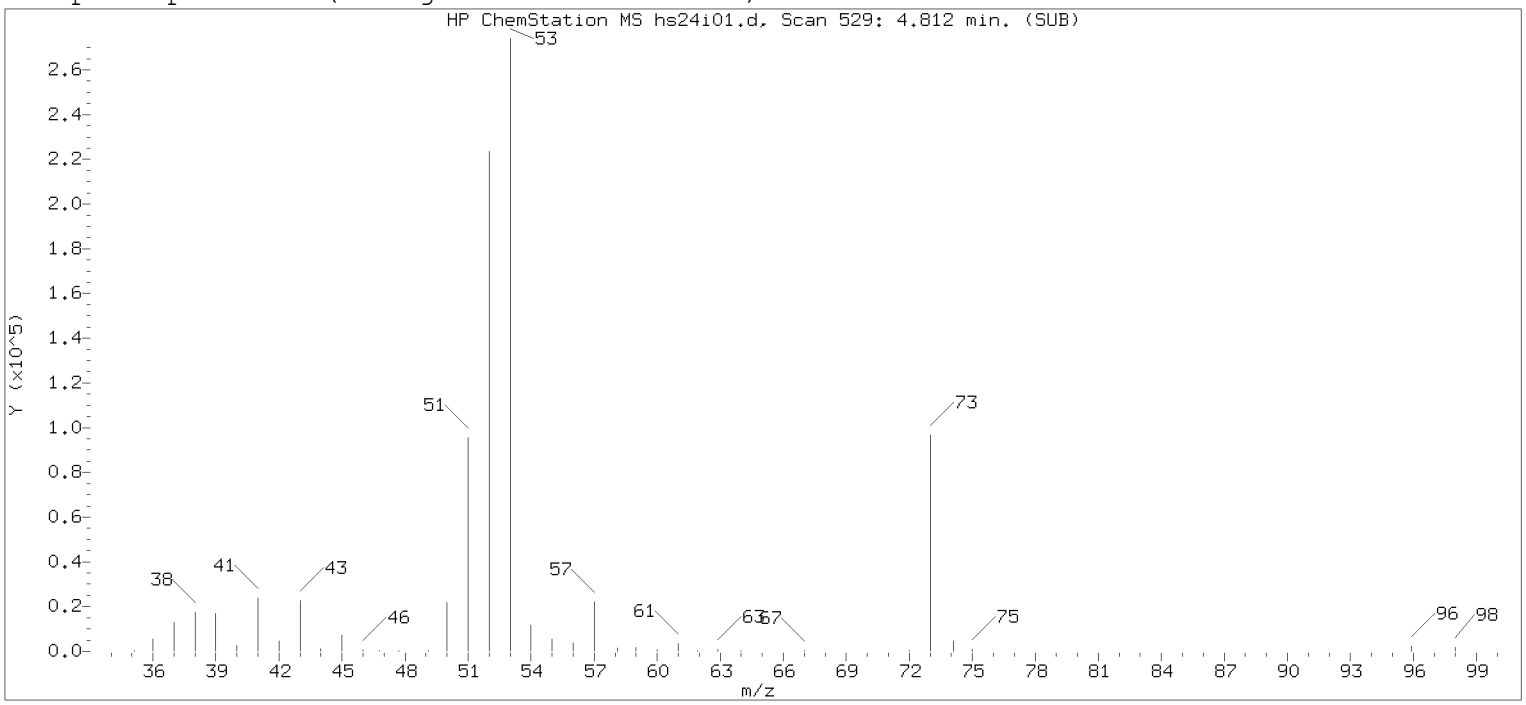
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area (flag) : 1235214M
On-Column Amount (ng) : 129.6558
Integration start scan : 509 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

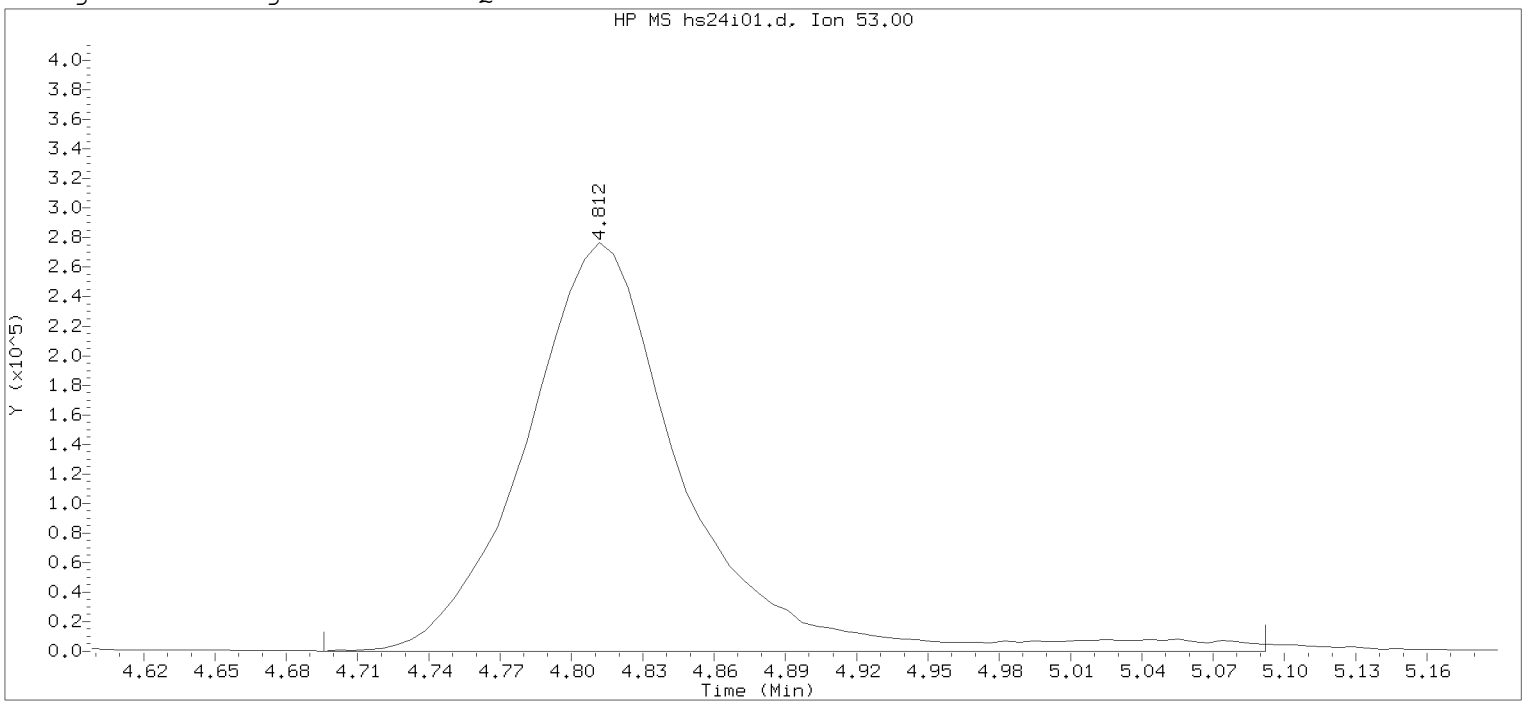
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

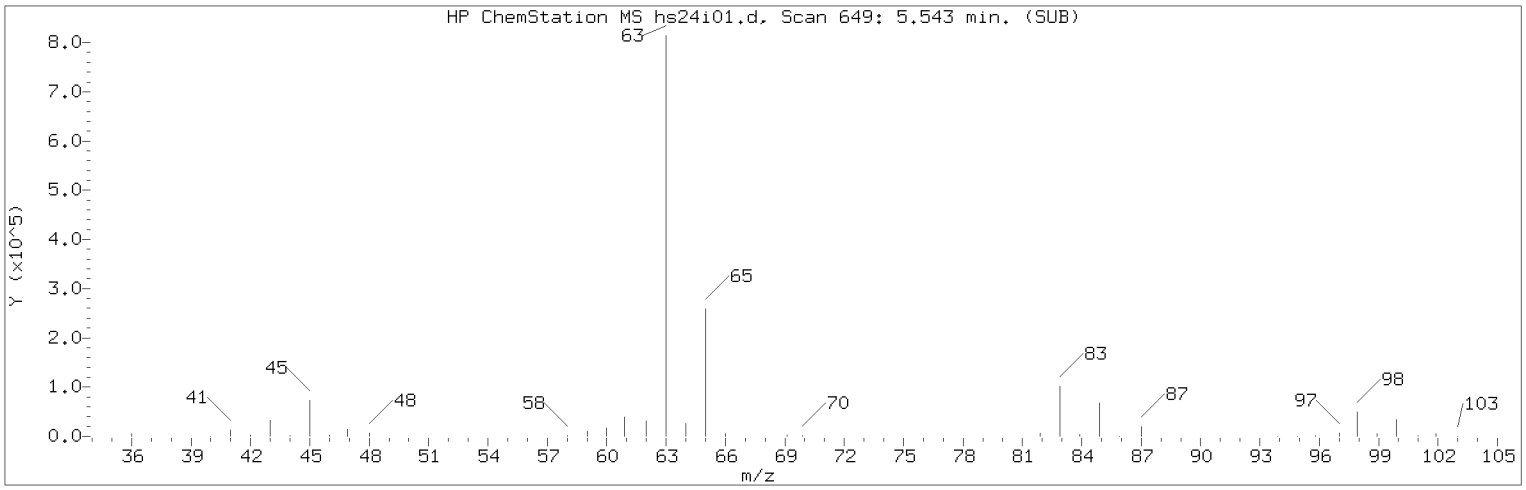
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

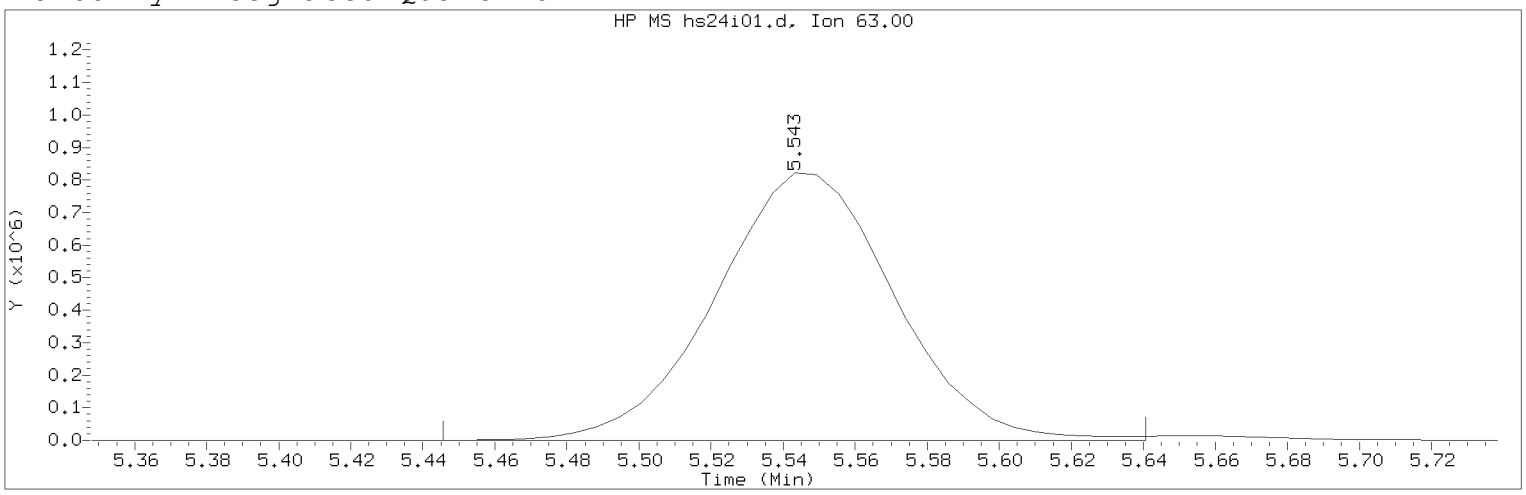
Compound Number : 29
Compound Name : Acrylonitrile
Scan Number : 529
Retention Time (minutes): 4.812
Quant Ion : 53.00
Area : 1282020
On-column Amount (ng) : 129.1888
Integration start scan : 509 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

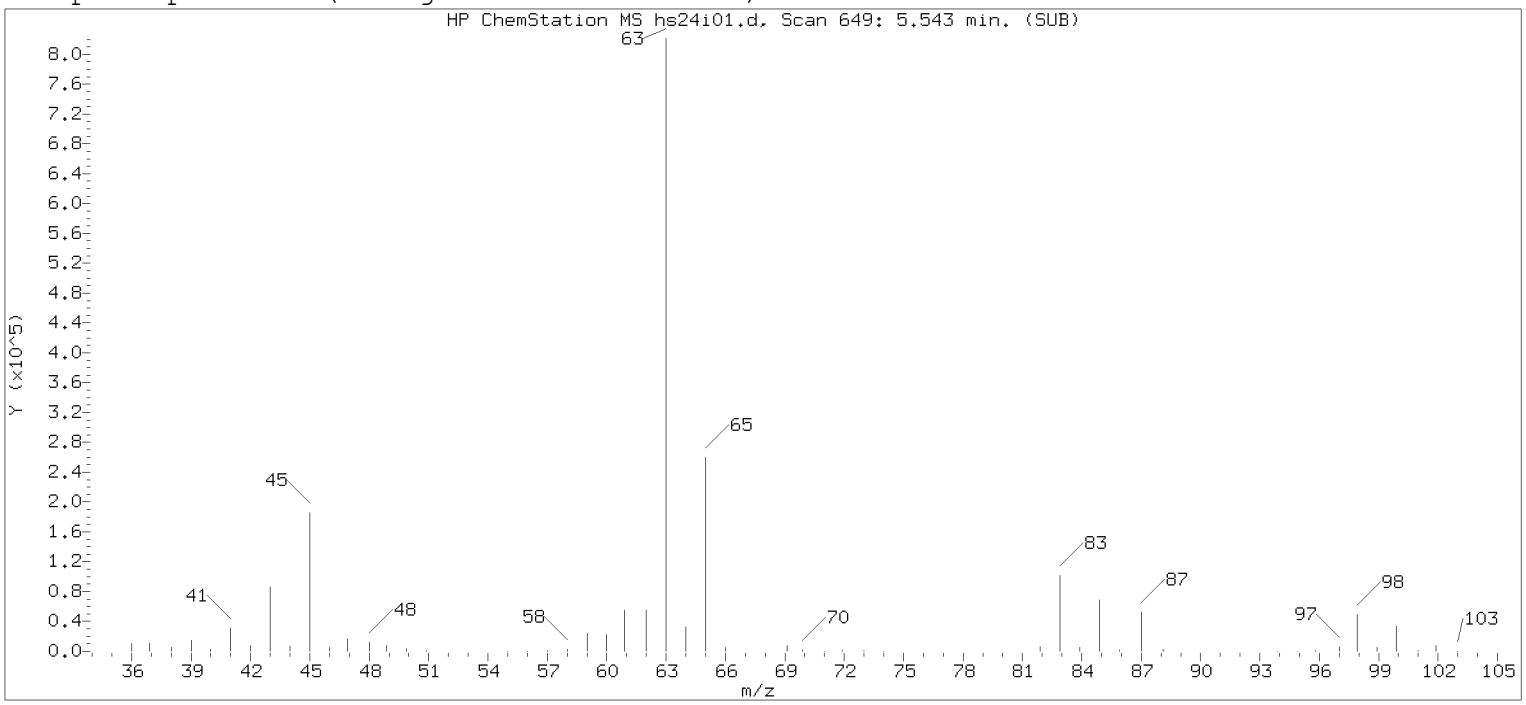
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area (flag) : 2842374M
On-Column Amount (ng) : 25.8511
Integration start scan : 632 Integration stop scan: 664
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

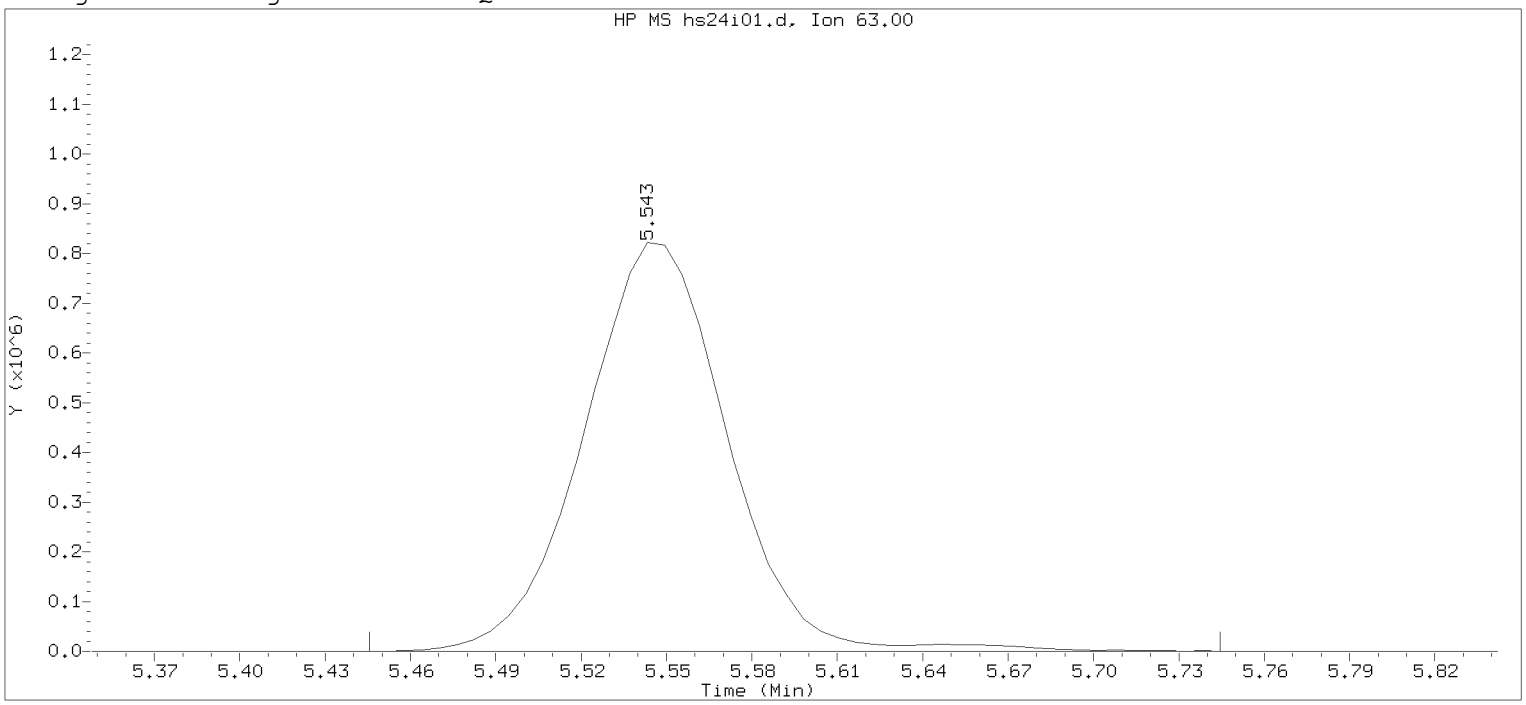
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

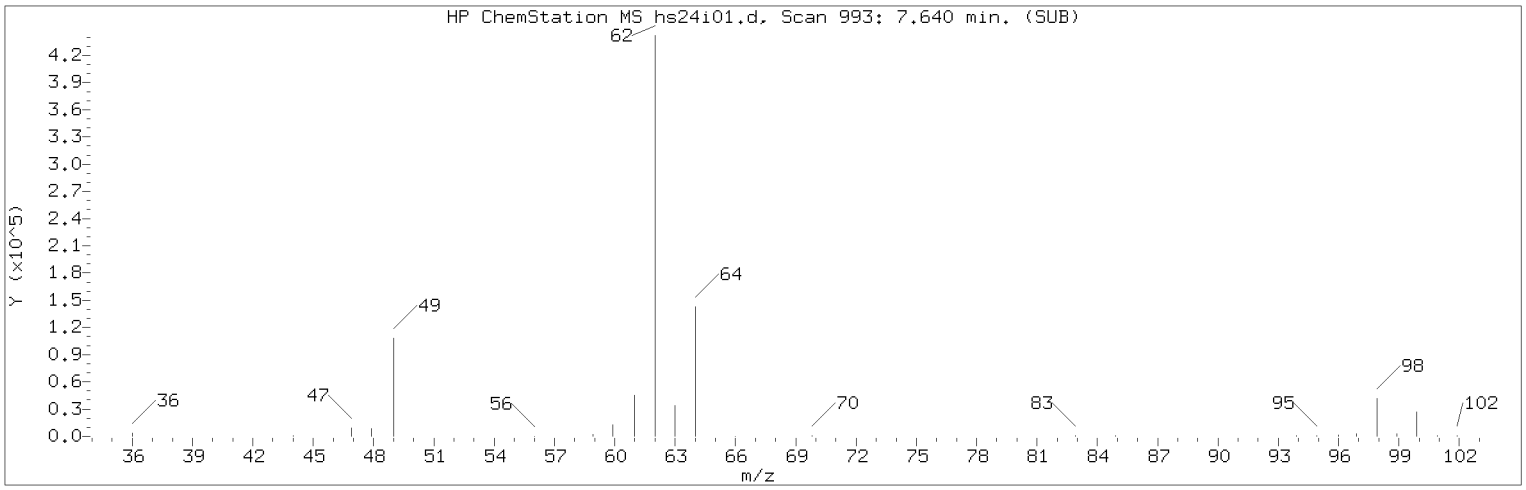
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

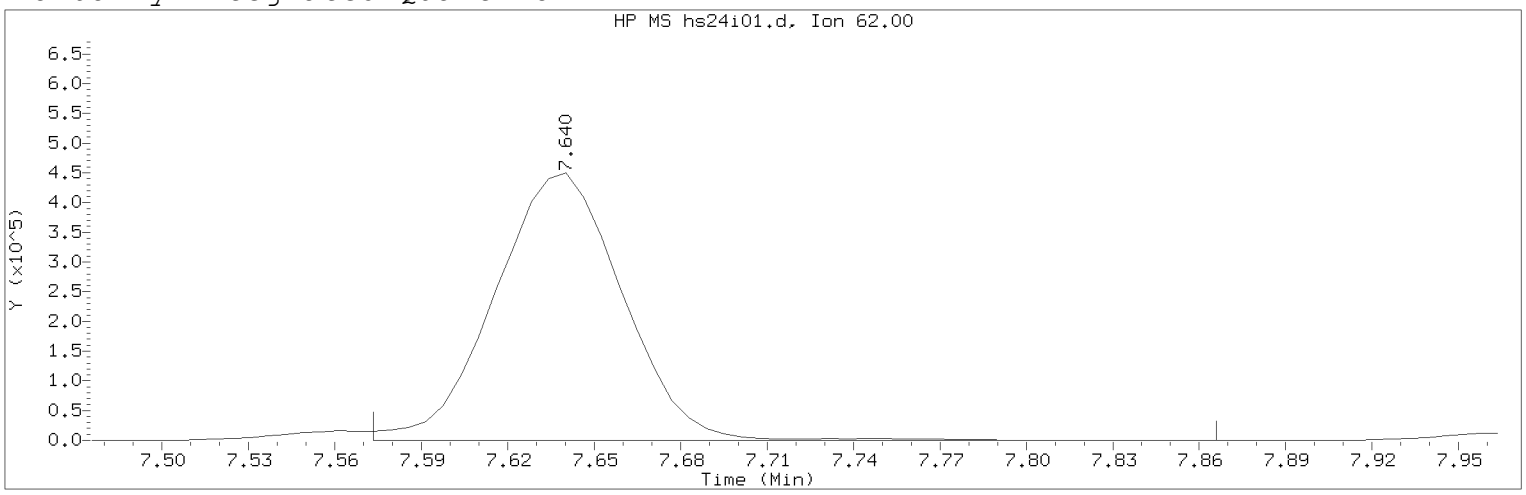
Compound Number : 33
Compound Name : 1,1-Dichloroethane
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 63.00
Area : 2874978
On-column Amount (ng) : 24.9330
Integration start scan : 632 Integration stop scan: 681
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used. AE20 Page 219 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

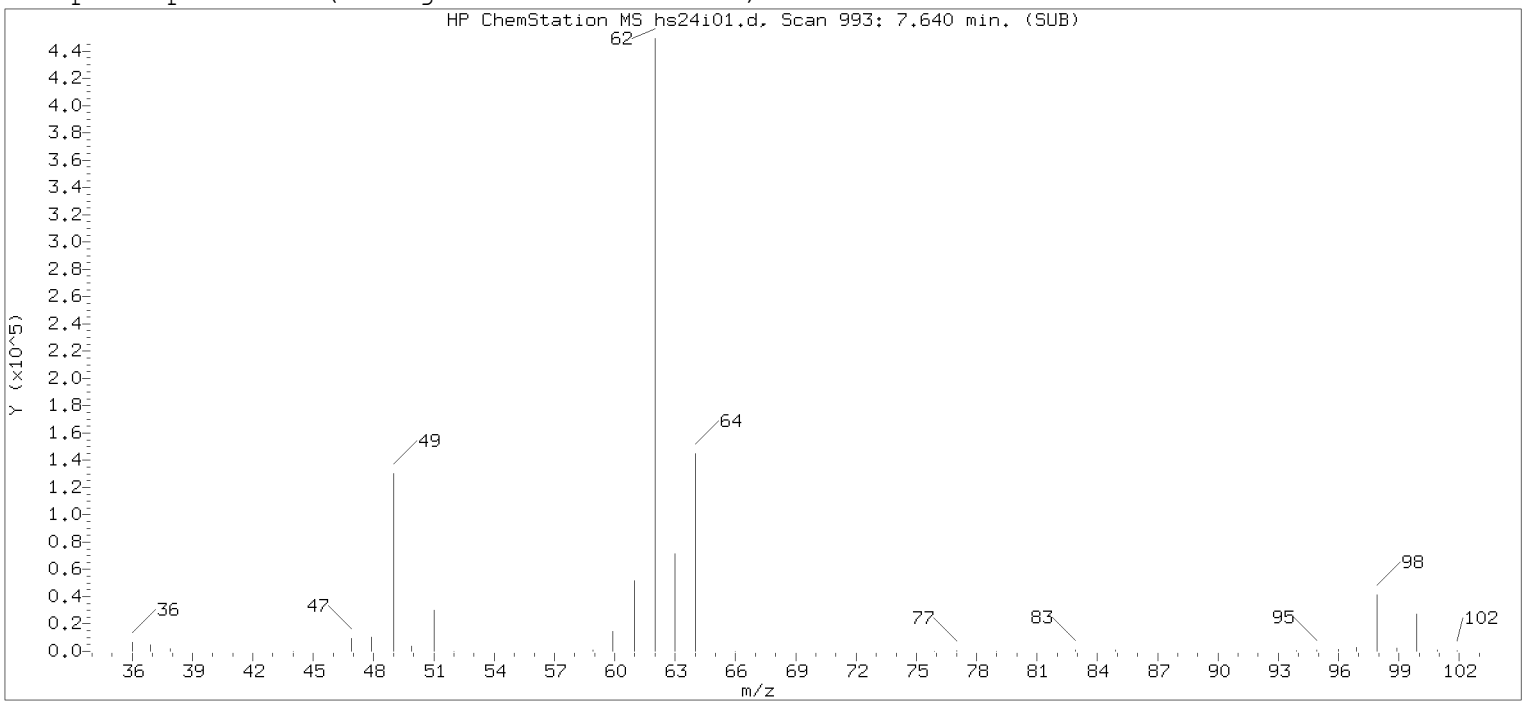
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area (flag) : 1386008M
On-Column Amount (ng) : 24.5870
Integration start scan : 981 Integration stop scan: 1029
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

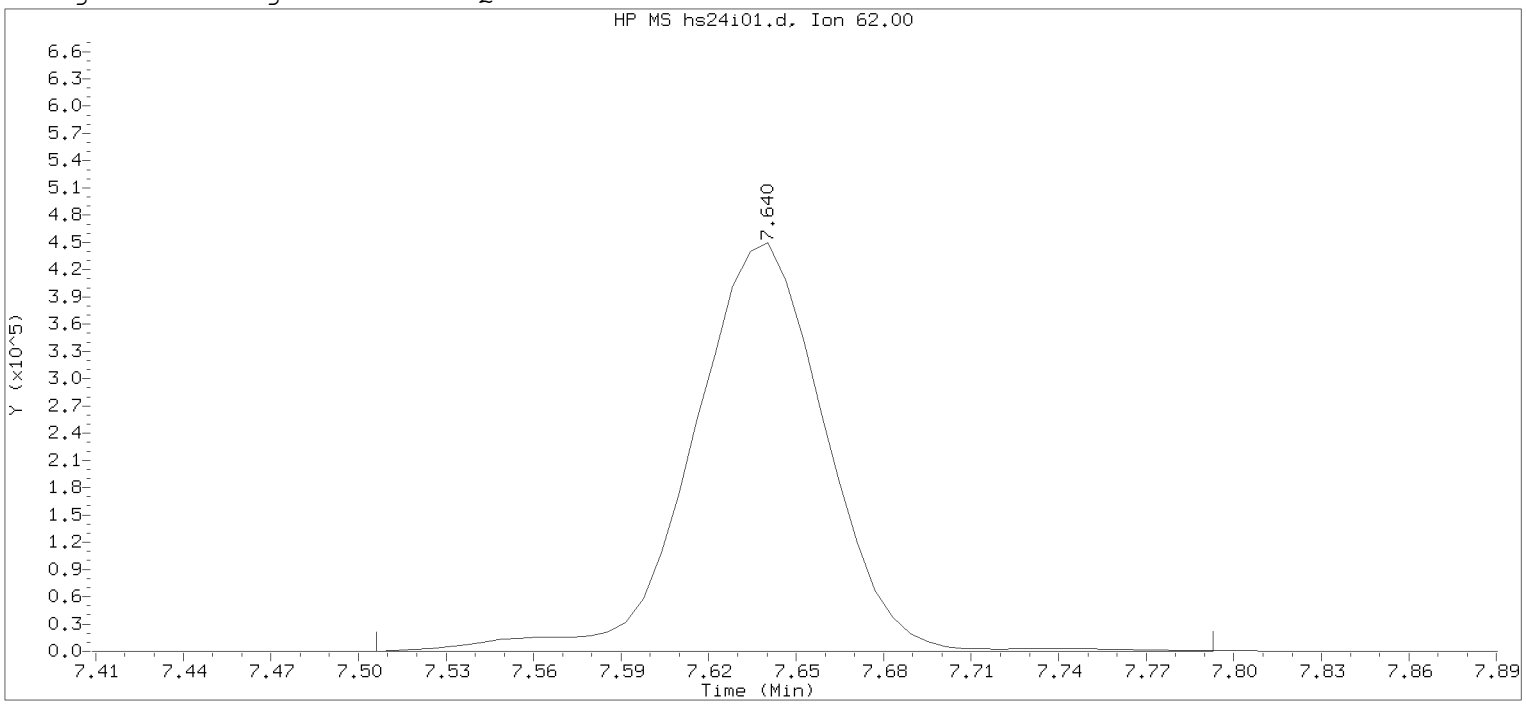
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

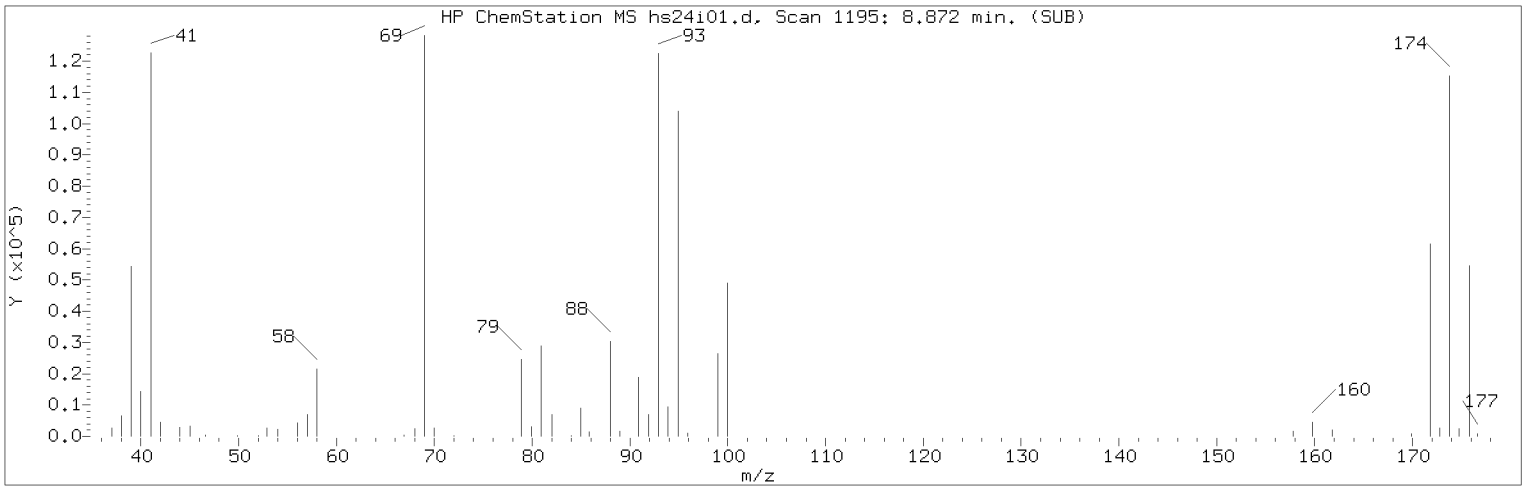
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

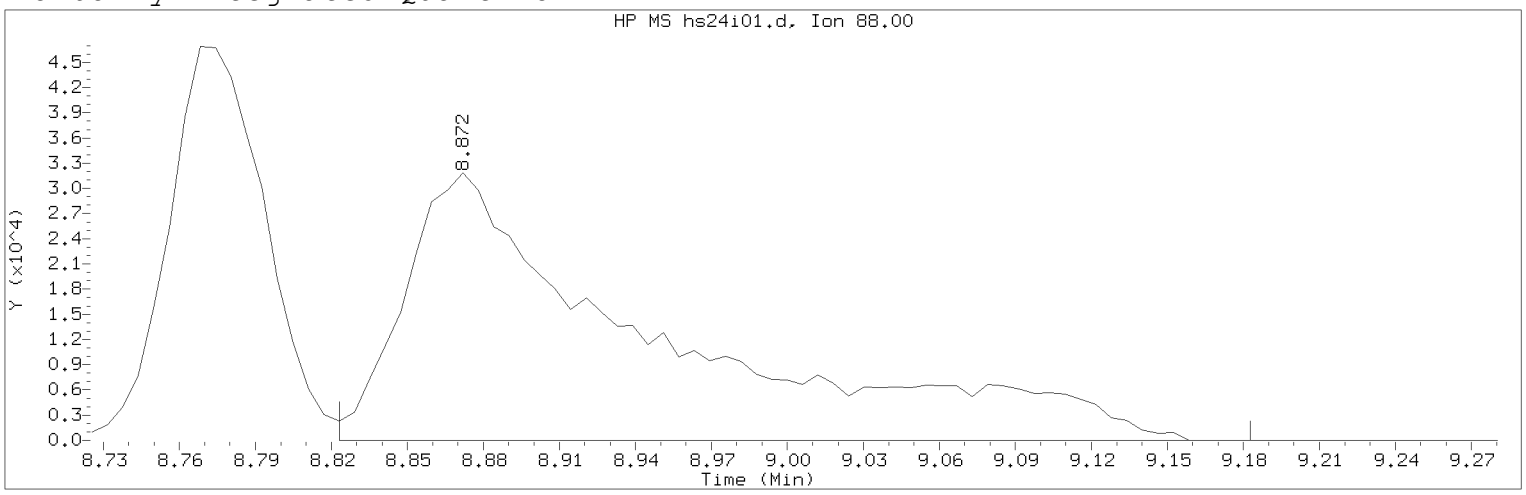
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.640
Quant Ion : 62.00
Area : 1414553
On-column Amount (ng) : 25.1444
Integration start scan : 970 Integration stop scan: 1017
Y at integration start : 0 Y at integration end: 260

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

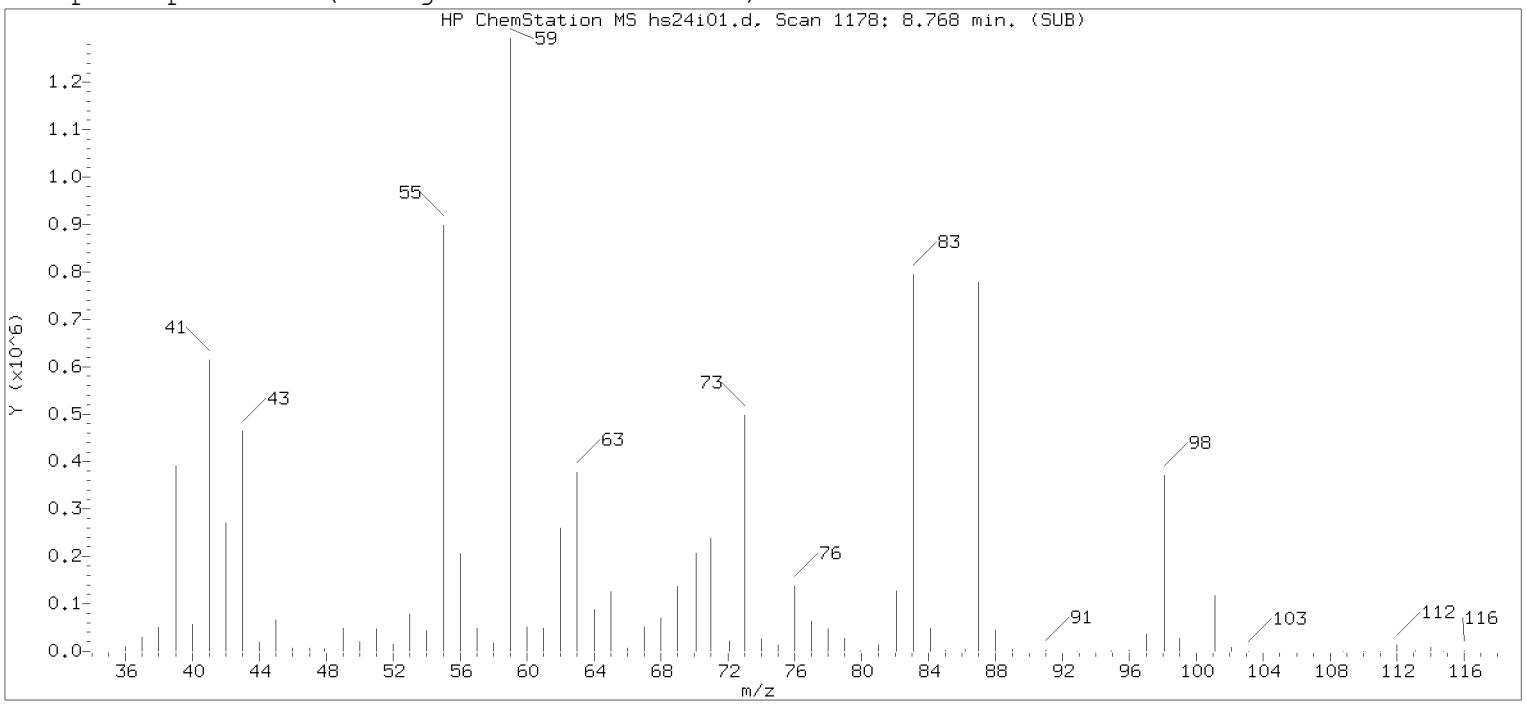
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 216251M
On-Column Amount (ng) : 1300.5754
Integration start scan : 1186 Integration stop scan: 1245
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

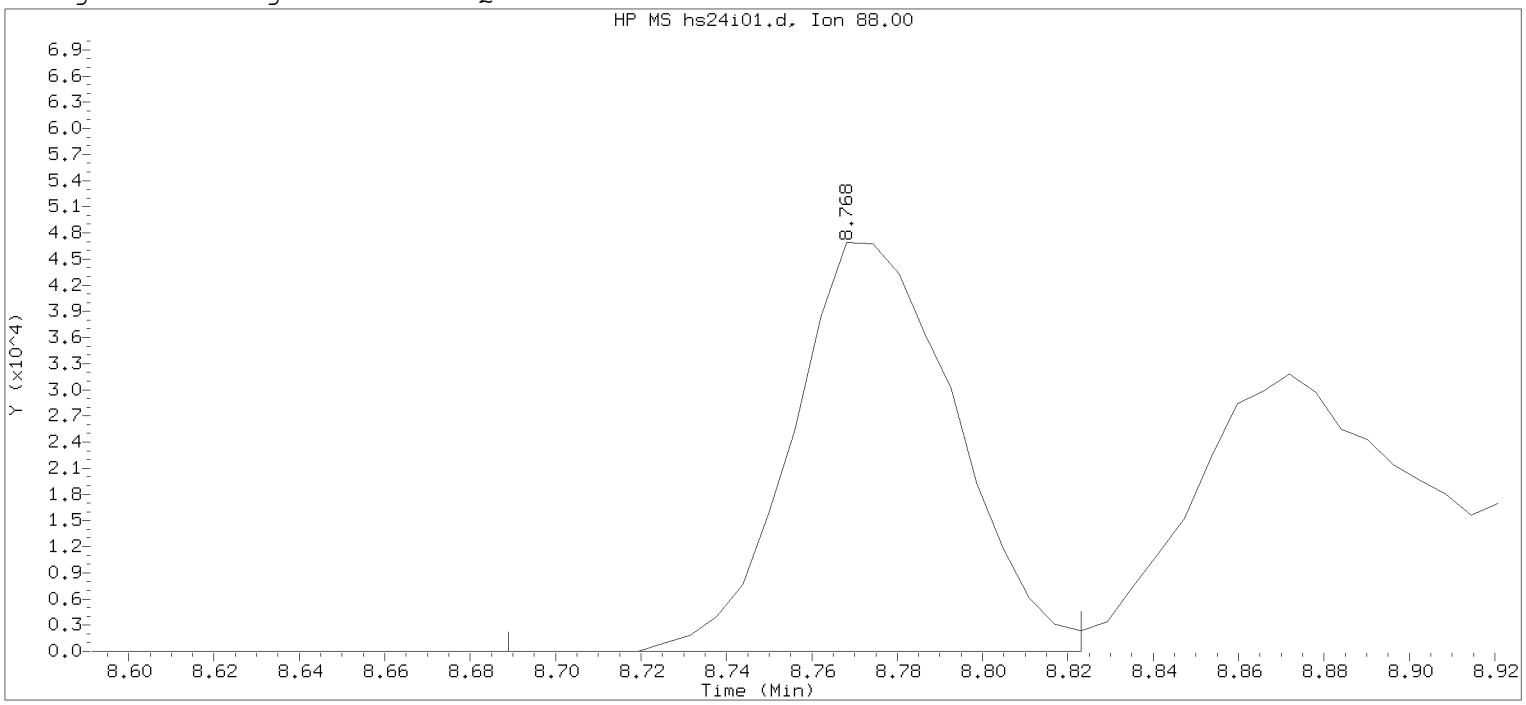
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 124030		
On-column Amount (ng)	: 962.4201		
Integration start scan	: 1164	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

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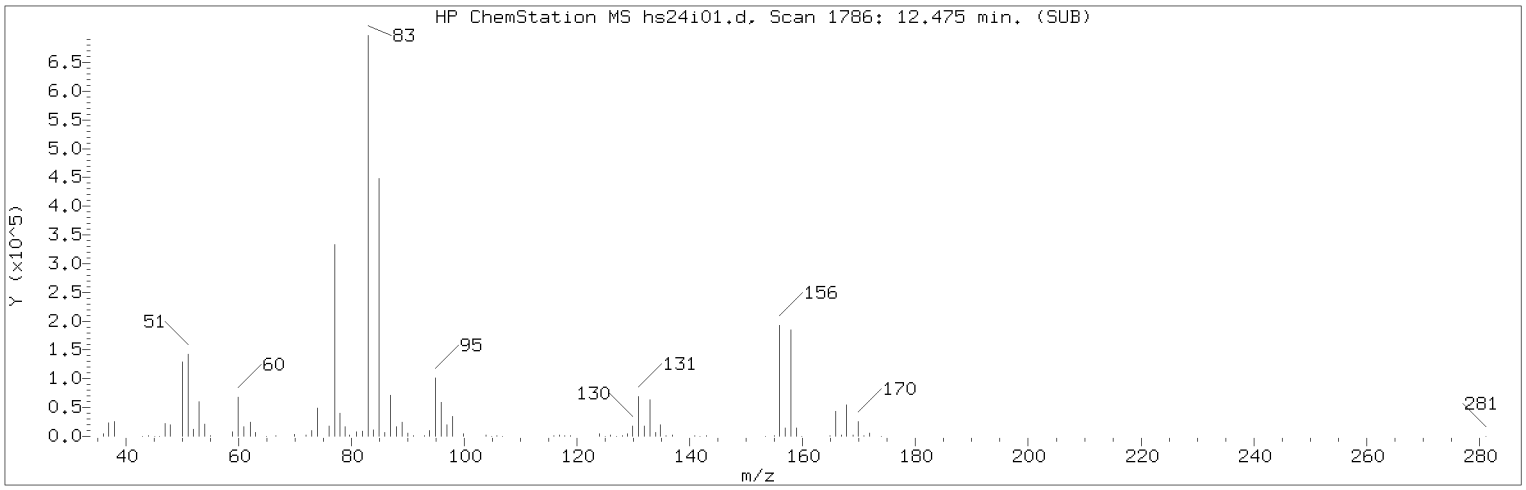
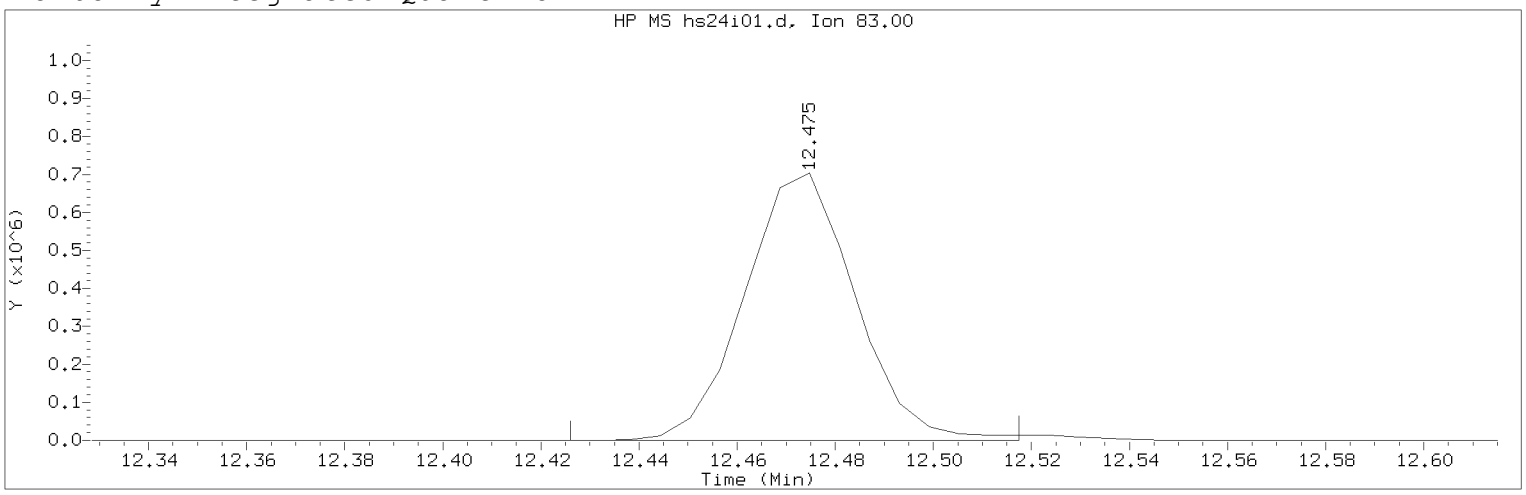
Target 3.5 esignature used. AE20 Page 223

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

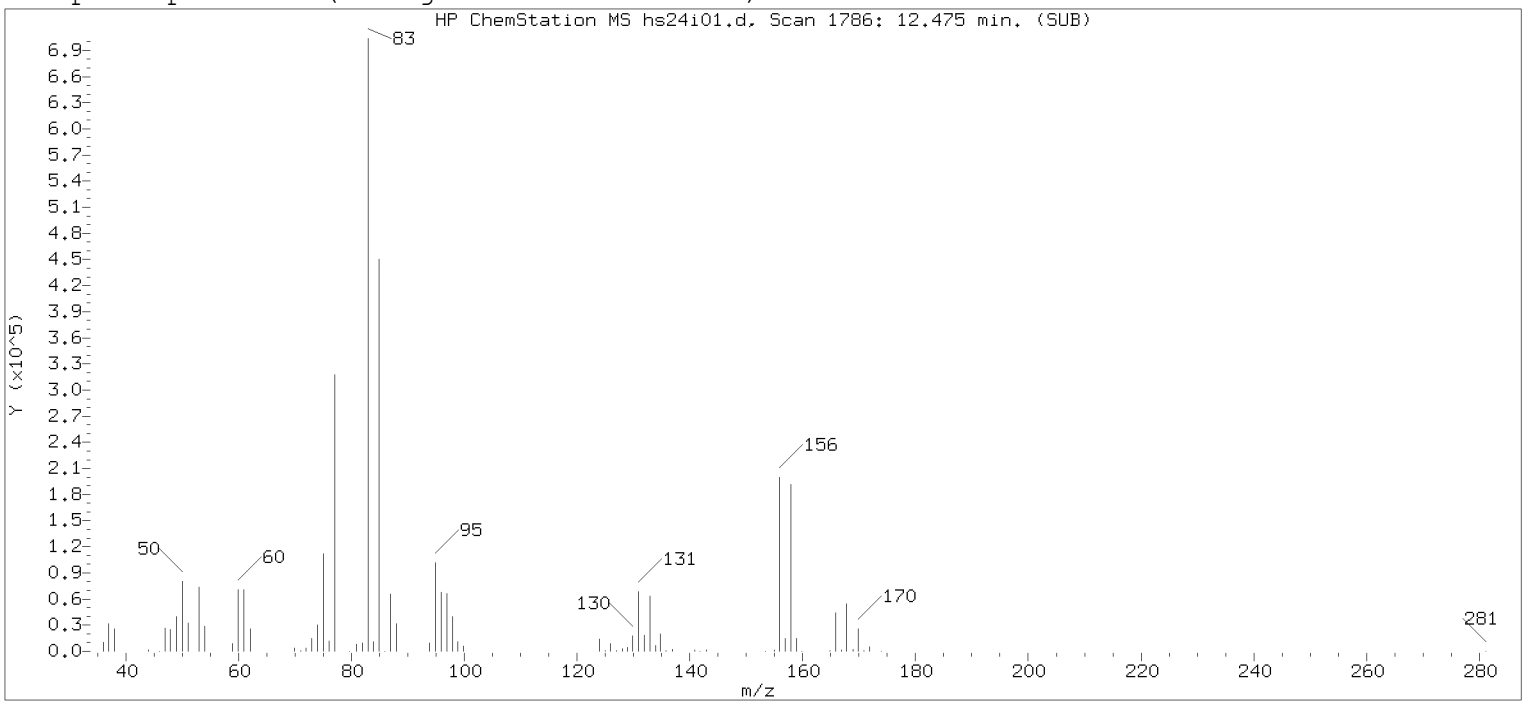
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 1100327M
On-Column Amount (ng) : 26.6273
Integration start scan : 1777 Integration stop scan: 1792
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

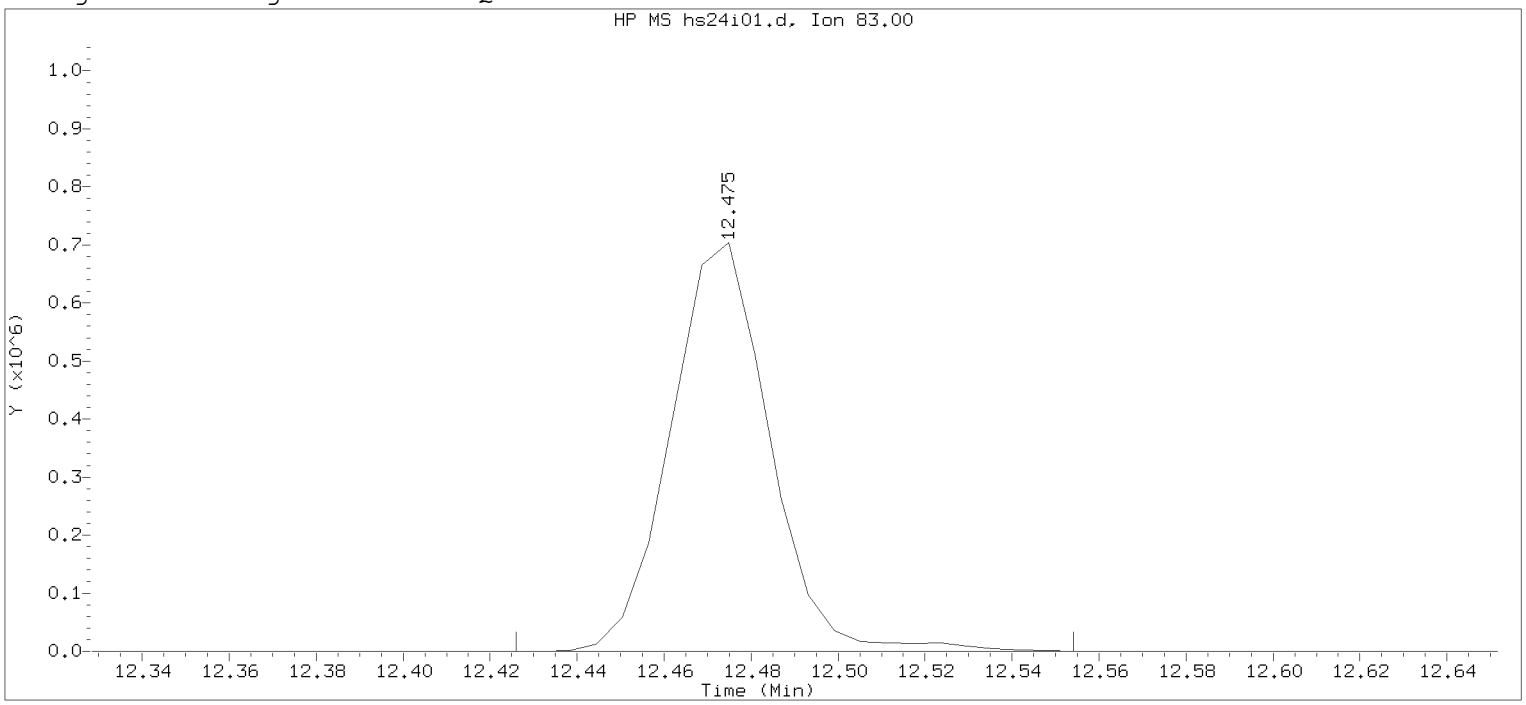
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



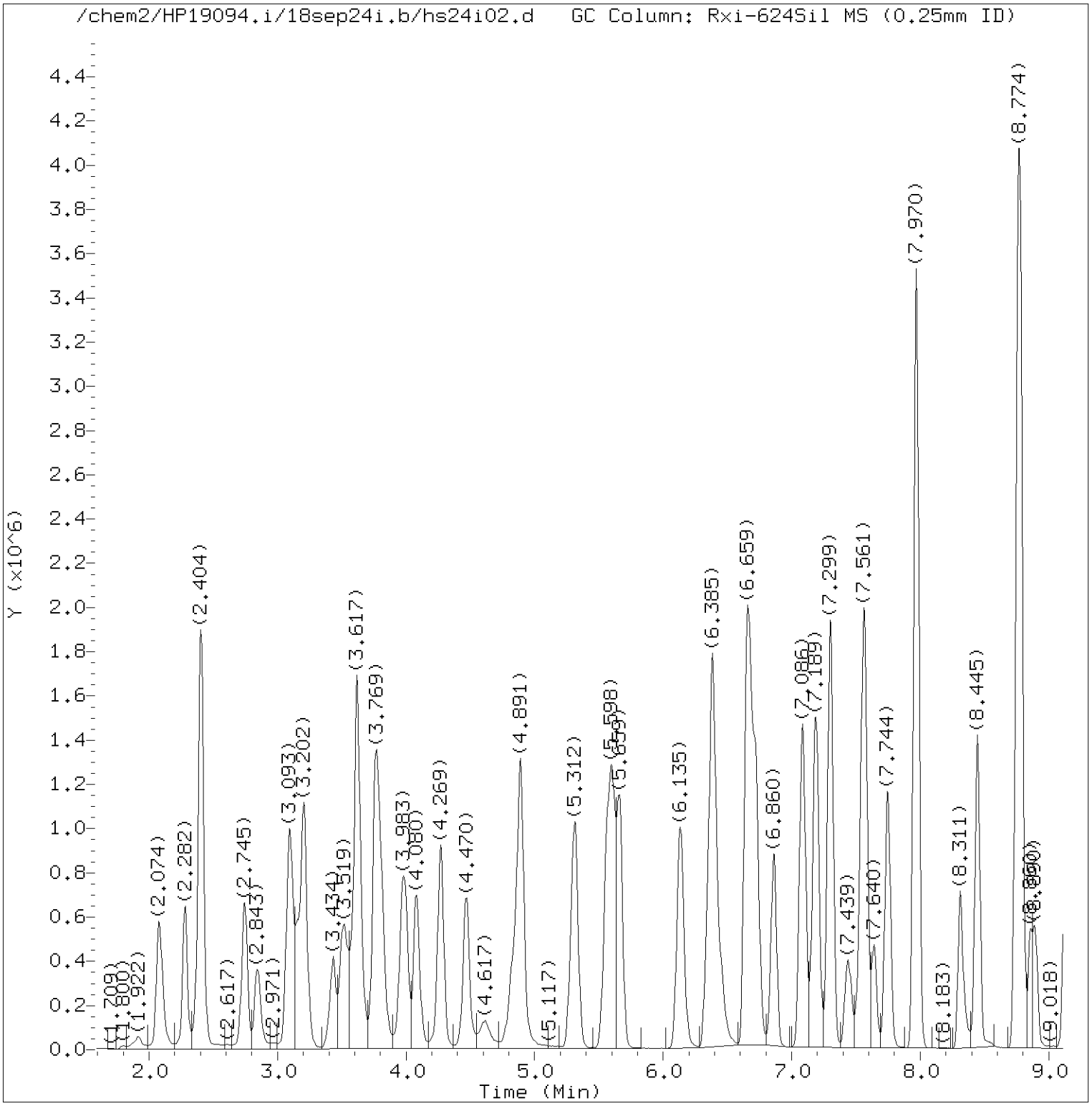
Data File: /chem2/HP19094.i/18sep24i.b/hs24i01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:29 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 1111309
On-column Amount (ng) : 25.3663
Integration start scan : 1777 Integration stop scan: 1798
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used. AE20 Page 225



Total Ion Chromatogram (TIC)

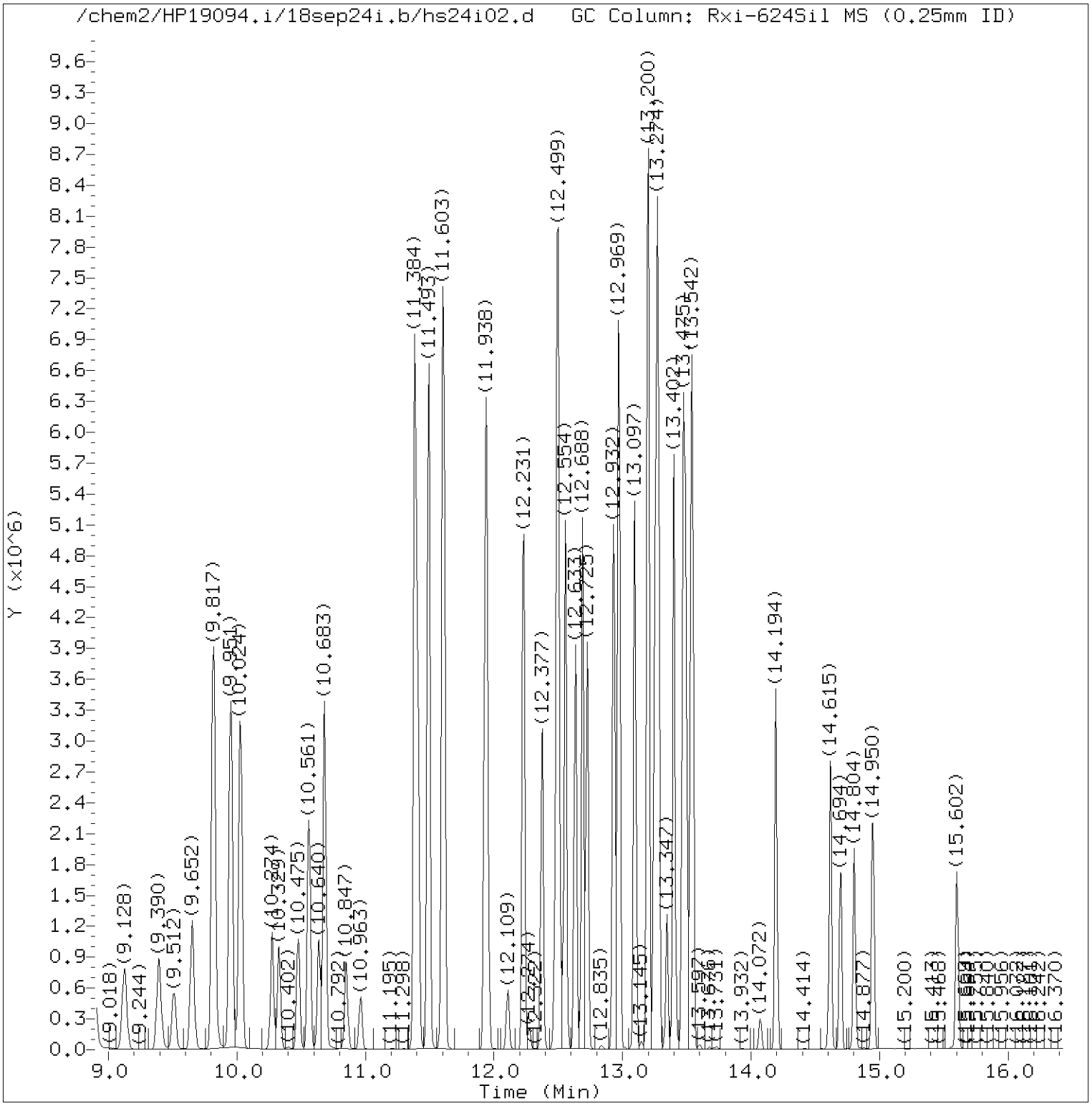
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	1111195	10.627
2) Chloromethane	(2)	2.282	50	1053821	10.291
5) Vinyl Chloride	(2)	2.404	62	994450	10.370
6) 1,3-Butadiene	(2)	2.404	39	1079138	9.934
7) Bromomethane	(2)	2.739	94	765899	10.273
8) Chloroethane	(2)	2.843	64	589896	10.142
9) Dichlorofluoromethane	(2)	3.093	67	1404728	10.153
10) Trichlorofluoromethane	(2)	3.154	101	1259997	10.400
11) Ethyl ether	(2)	3.434	59	423587	10.312
12) Freon 123a	(2)	3.513	67	807807	10.524
13) Acrolein	(1)	3.617	56	3074728	548.130
15) 1,1-Dichloroethene	(2)	3.757	96	555090	10.581
16) Freon 113	(2)	3.794	101	677125	10.951
14) Acetone	(1)	3.806	43	762811	101.244
17) Methyl Iodide	(2)	3.970	142	1138408	10.410
18) Carbon Disulfide	(2)	4.080	76	1731295	10.372
21) Methyl Acetate	(1)	4.251	43	211729	10.010
22) Allyl Chloride	(2)	4.269	41	1040687	10.436
23) Methylene Chloride	(2)	4.464	84	584981	9.884
26)*t-Butyl Alcohol-d10	(1)	4.483	65	126410	50.000
28) t-Butyl Alcohol	(1)	4.617	59	455794M	211.240
29) Acrylonitrile	(1)	4.824	53	529018	54.369
30) Methyl Tertiary Butyl Ether	(2)	4.873	73	1148303	10.643
31) trans-1,2-Dichloroethene	(2)	4.891	96	621983	10.505
32) n-Hexane	(2)	5.318	57	1052293	11.177
33) 1,1-Dichloroethane	(2)	5.556	63	1185400	10.515
34) di-Isopropyl Ether	(2)	5.604	45	2092042	10.450
35) 2-Chloro-1,3-Butadiene	(2)	5.665	53	1107150	10.914
40) 1,2-Dichloroethene (Total)	(2)		96	1310379	21.027
37) Ethyl t-butyl ether	(2)	6.135	59	1675402	10.551
38) 2-Butanone	(1)	6.342	43	1355942	109.942
39) cis-1,2-Dichloroethene	(2)	6.385	96	688396	10.523
41) 2,2-Dichloropropane	(2)	6.397	77	877144	10.894
42) Propionitrile	(1)	6.446	54	722828	215.920
45) Methacrylonitrile	(1)	6.659	67	1335578	110.644
47) Bromochloromethane	(2)	6.720	128	285662	10.337
48) Tetrahydrofuran	(1)	6.720	71	364027	111.024
49) Chloroform	(2)	6.866	83	1097143	10.468

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.080	113	673469	9.987
50)$Dibromofluoromethane	(2)	7.074	111	700447	10.091
51) 1,1,1-Trichloroethane	(2)	7.092	97	954892M	10.651
52) Cyclohexane	(2)	7.189	56	1283297	10.965
52) Cyclohexane	(2)	7.189	84	1055029	10.934
52) Cyclohexane	(2)	7.189	69	379671	11.008
54) Carbon Tetrachloride	(2)	7.299	117	841170	10.925
55) 1,1-Dichloropropene	(2)	7.305	75	906209	10.660
56) Isobutyl Alcohol	(1)	7.439	41	441325	528.629
57)$1,2-Dichloroethane-d4	(2)	7.531	102	119504	10.165
57)$1,2-Dichloroethane-d4	(2)	7.537	65	571691	10.054
57)$1,2-Dichloroethane-d4	(2)	7.537	104	76384	10.145
58) Benzene	(2)	7.567	78	2595708	10.336
59) 1,2-Dichloroethane	(2)	7.647	62	573462M	9.922
60) t-Amyl methyl ether	(2)	7.744	73	1396741	10.610
62) n-Heptane	(2)	7.970	43	1080061	11.126
63)*Fluorobenzene	(2)	7.970	96	2675616	10.000
65) n-Butanol	(1)	8.311	56	773741	1097.005
67) Trichloroethene	(2)	8.445	95	677458	10.535
69) Methylcyclohexane	(2)	8.756	83	1312618	10.809
70) 1,2-Dichloropropane	(2)	8.787	63	638119	10.473
71) Methyl Methacrylate	(1)	8.854	69	256545	11.482
72) 1,4-Dioxane	(1)	8.878	88	87437M	514.877
73) Dibromomethane	(2)	8.896	93	260508	10.301
74) Bromodichloromethane	(2)	9.122	83	729114	10.644
76) 2-Nitropropane	(1)	9.390	41	734933	116.122
80) cis-1,3-Dichloropropene	(2)	9.652	75	870258	10.912
81) 4-Methyl-2-Pentanone	(1)	9.817	43	3459344	112.763
82)$Toluene-d8	(3)	9.951	98	2697002	10.021
82)$Toluene-d8	(3)	9.951	100	1740056	10.017
83) Toluene	(3)	10.024	92	1612018	10.388
85) 1,3-Dichloropropene (total)	(3)		75	1532900	21.995
84) trans-1,3-Dichloropropene	(3)	10.274	75	662642	11.083
86) Ethyl Methacrylate	(3)	10.329	69	561170	10.955
88) 1,1,2-Trichloroethane	(3)	10.475	97	373327	10.455
89) Tetrachloroethene	(3)	10.561	166	735072	10.485
90) 1,3-Dichloropropane	(3)	10.640	76	658558	10.406
91) 2-Hexanone	(1)	10.683	43	2350012	112.535

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	455725	10.649
95) 1,2-Dibromoethane	(3)	10.963	107	359375	10.738
96) 1-Chlorohexane	(3)	11.384	91	958778	10.360
97)*Chlorobenzene-d5	(3)	11.384	117	2091043	10.000
98) Chlorobenzene	(3)	11.408	112	1704436	10.353
100) Ethylbenzene	(3)	11.493	91	3218789	10.613
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	593286	10.920
101) m+p-Xylene	(3)	11.603	106	2379515	21.153
105) Xylene (Total)	(3)		106	3524795	31.800
104) o-Xylene	(3)	11.932	106	1145280	10.649
106) Styrene	(3)	11.951	104	1866075	10.845
107) Bromoform	(3)	12.109	173	256472	10.904
108) Isopropylbenzene	(3)	12.231	105	3134574	10.677
111)$4-Bromofluorobenzene	(3)	12.377	95	977708	9.978
111)$4-Bromofluorobenzene	(3)	12.377	174	853274	10.029
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	446396M	10.447
114) Bromobenzene	(4)	12.493	156	679412	10.458
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	1100680	114.554
116) 1,2,3-Trichloropropane	(4)	12.524	110	111265M	10.072
117) n-Propylbenzene	(4)	12.554	91	3758147	10.639
119) 2-Chlorotoluene	(4)	12.633	126	715824	10.449
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2552095	10.665
122) 4-Chlorotoluene	(4)	12.725	126	714849	10.413
125) tert-Butylbenzene	(4)	12.932	134	550044	10.570
126) Pentachloroethane	(4)	12.969	167	449742	11.073
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	2603683	10.663
128) sec-Butylbenzene	(4)	13.097	105	3375632	10.887
131) 1,3-Dichlorobenzene	(4)	13.194	146	1344989	10.421
132) p-Isopropyltoluene	(4)	13.200	119	2814592	10.959
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1077251	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	1311510	10.351
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	1158798	10.344
136) Benzyl Chloride	(4)	13.347	126	179783	11.638
138) n-Butylbenzene	(4)	13.493	92	1387276	10.882
139) 1,2-Dichlorobenzene	(4)	13.530	146	1165776	10.237
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	58902	11.327
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	1022554	10.649
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	834904	10.675

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	311460	10.536
147) Naphthalene	(4)	14.804	128	1382804	11.173
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	699158	10.872

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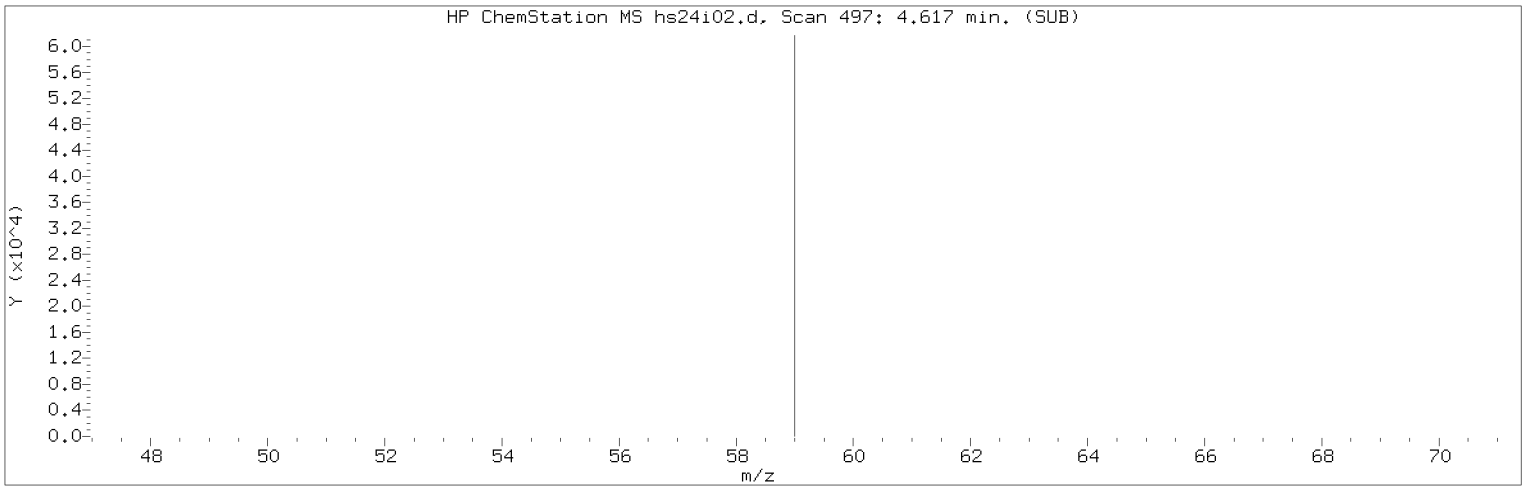
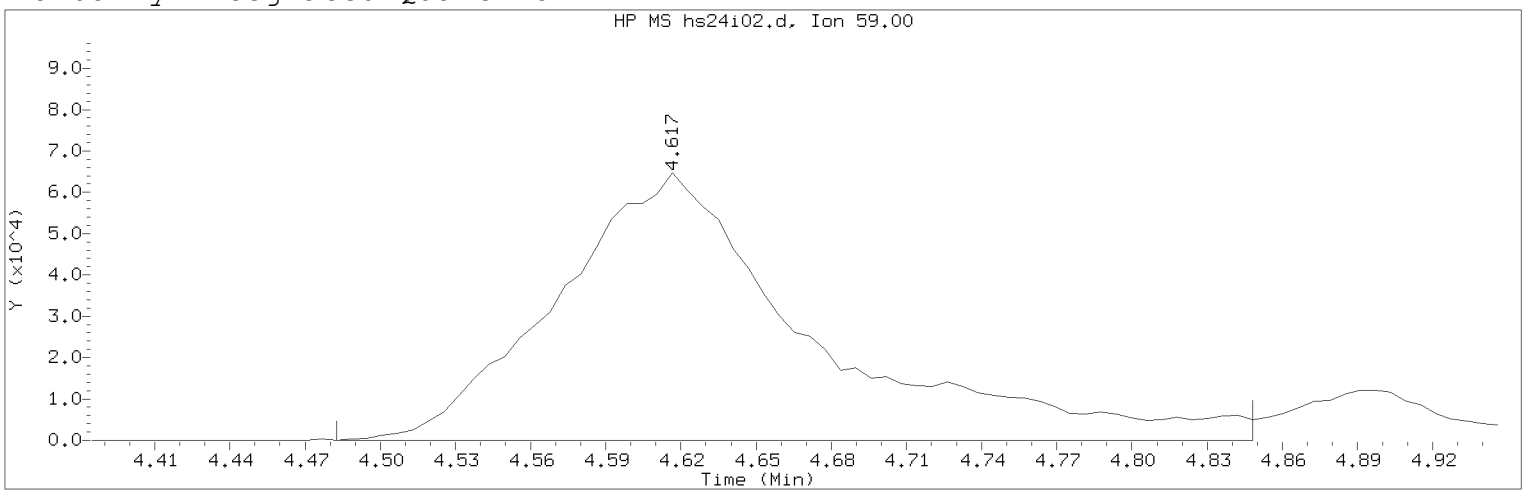
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

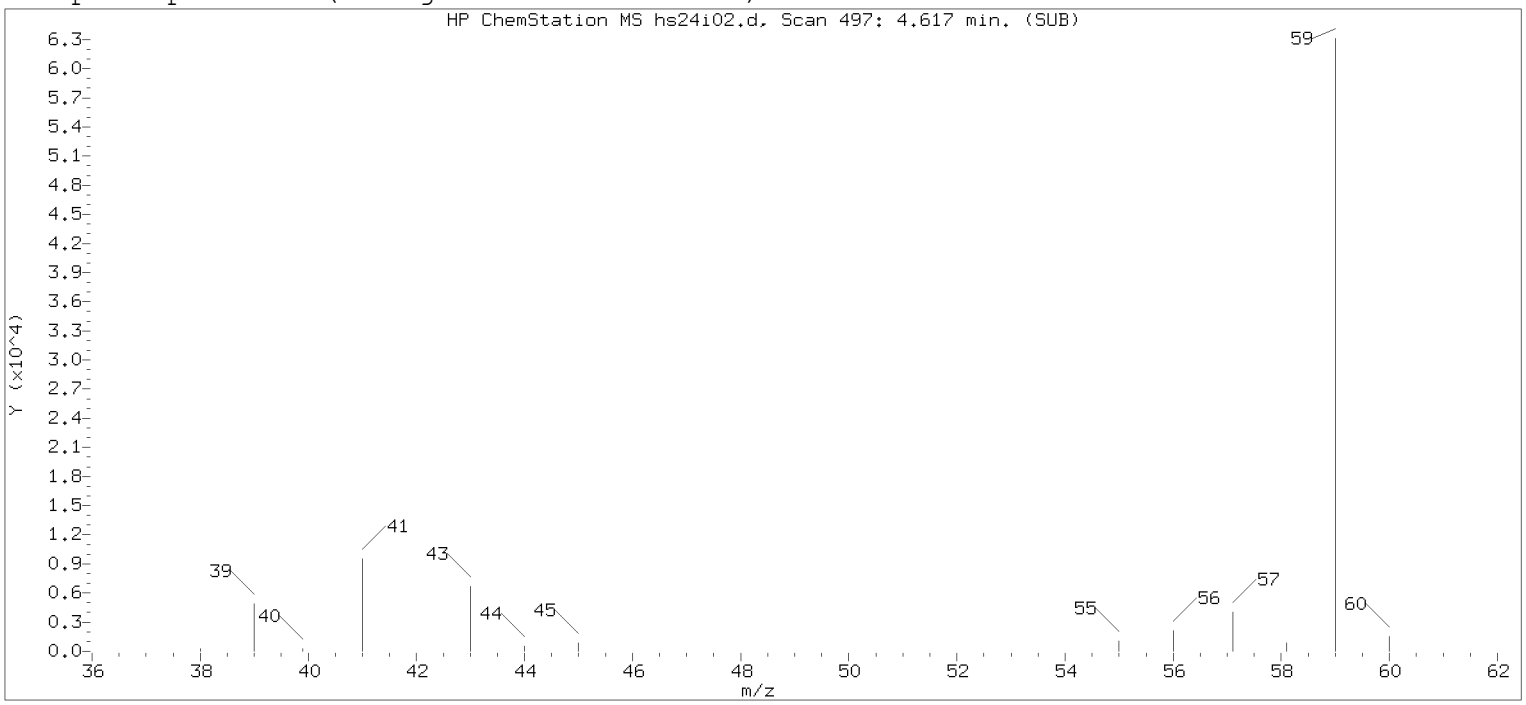
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area (flag) : 455794M
On-Column Amount (ng) : 211.2399
Integration start scan : 474 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

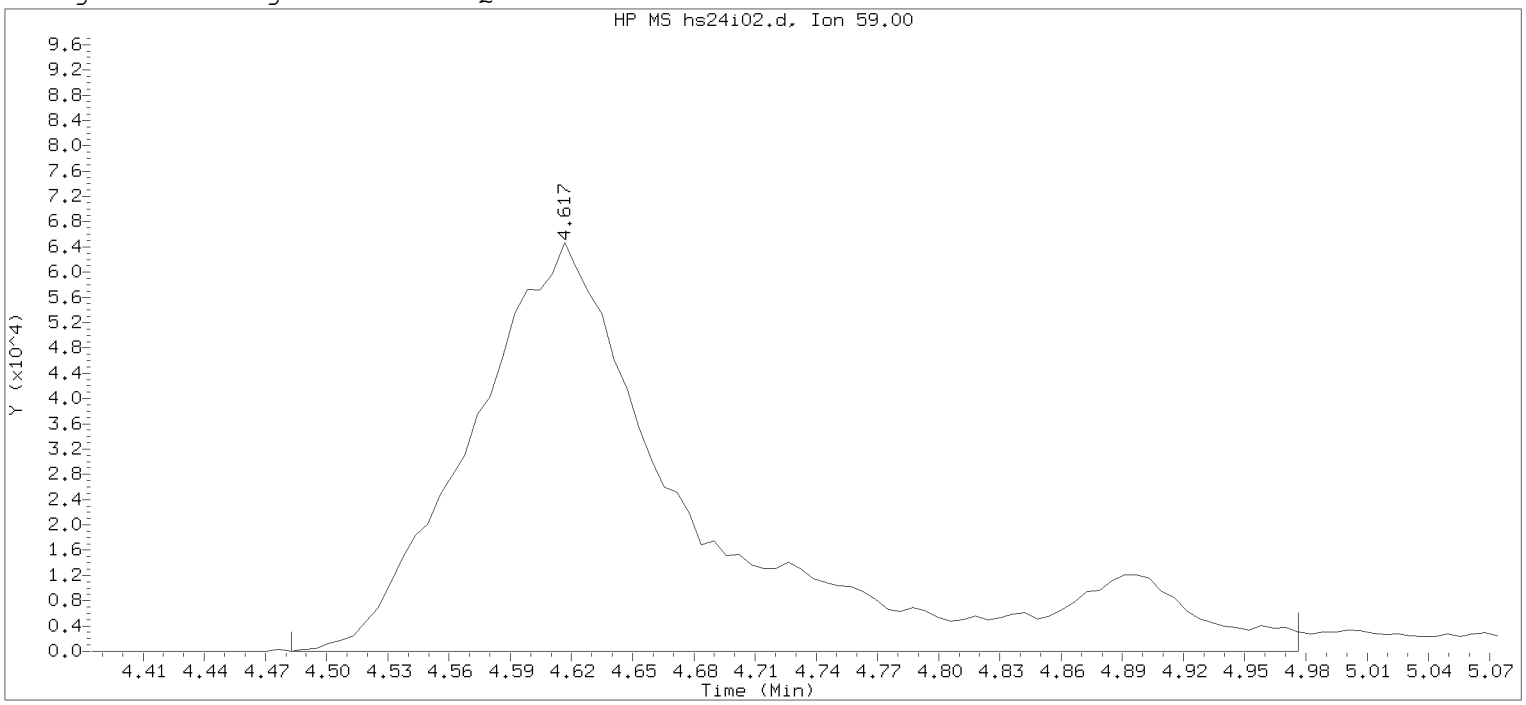
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

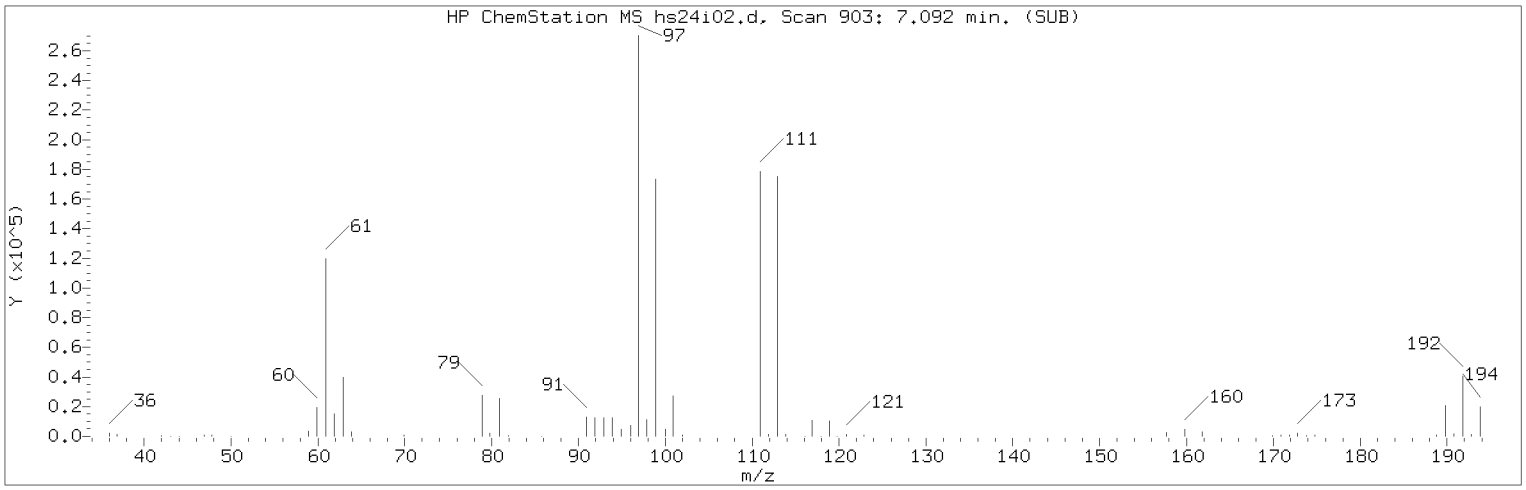
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

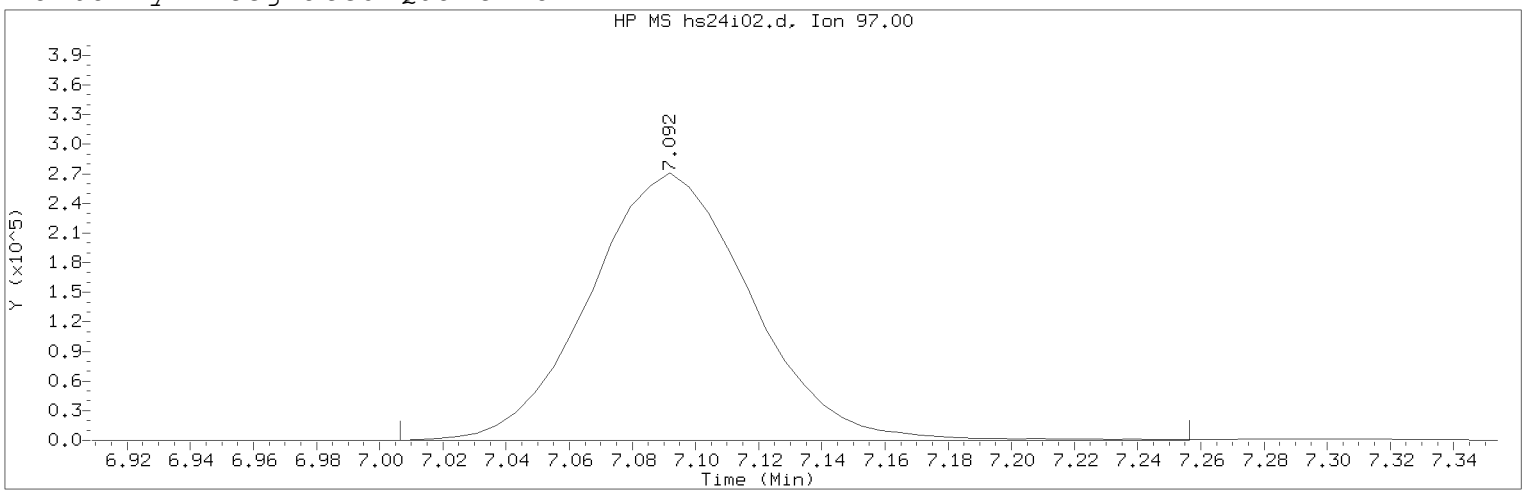
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 497
Retention Time (minutes): 4.617
Quant Ion : 59.00
Area : 508509
On-column Amount (ng) : 200.0000
Integration start scan : 474 Integration stop scan: 555
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

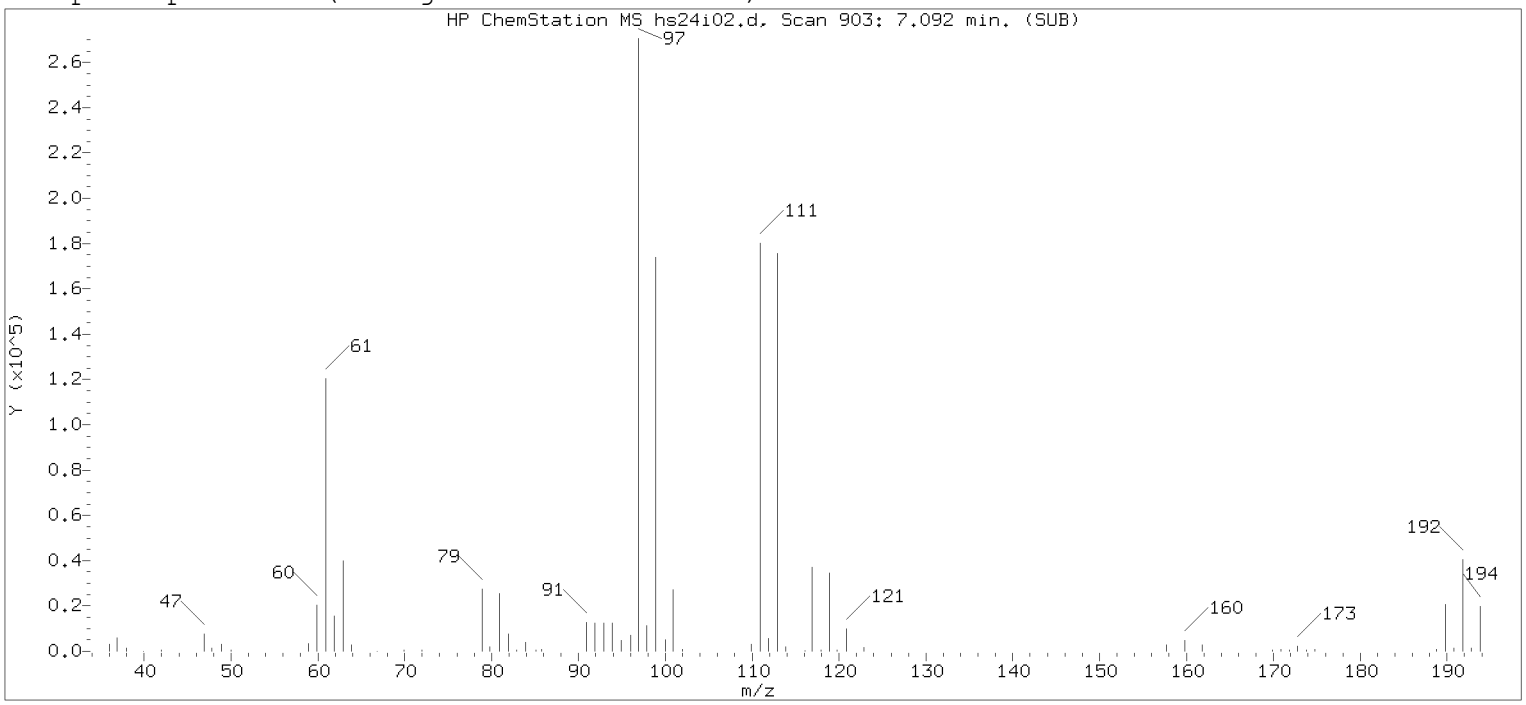
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area (flag) : 954892M
On-Column Amount (ng) : 10.6514
Integration start scan : 888 Integration stop scan: 929
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

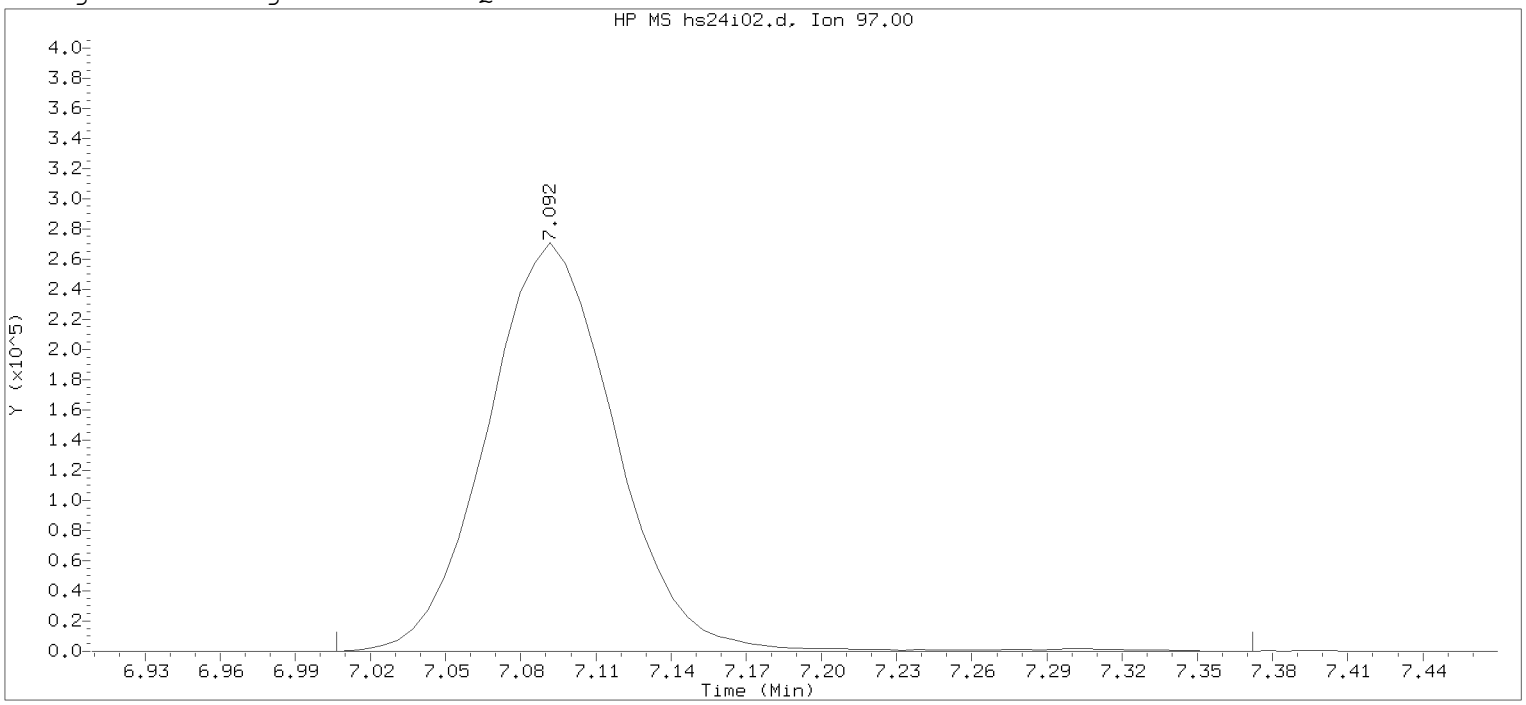
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area : 960539
On-column Amount (ng) : 10.0000
Integration start scan : 888 Integration stop scan: 948
Y at integration start : 0 Y at integration end: 0

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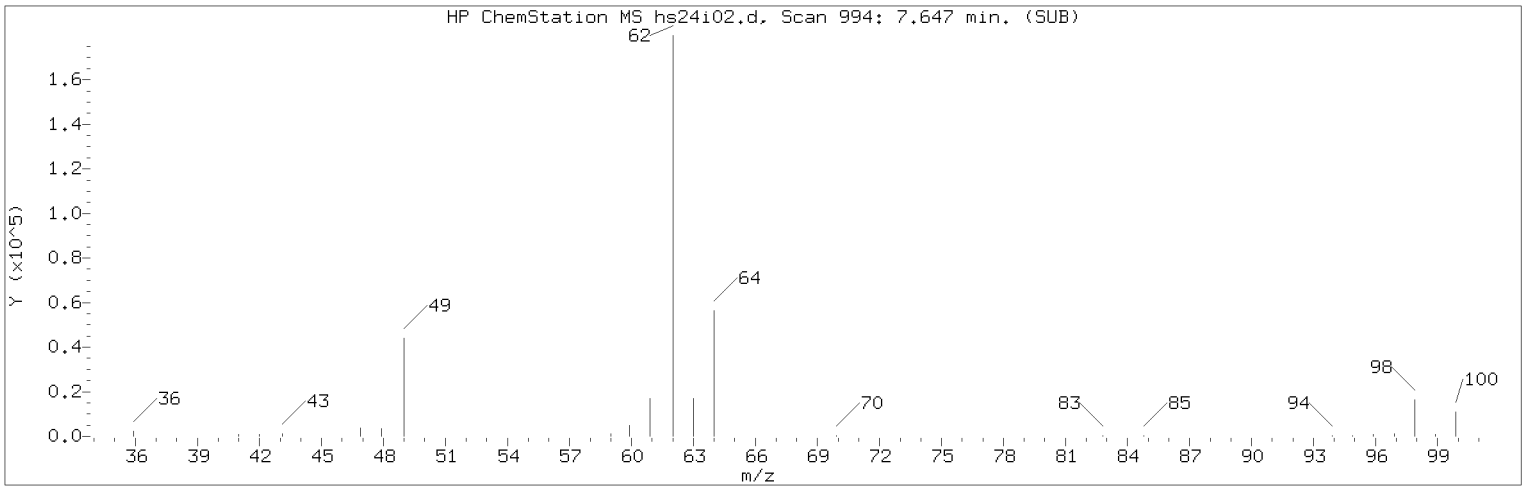
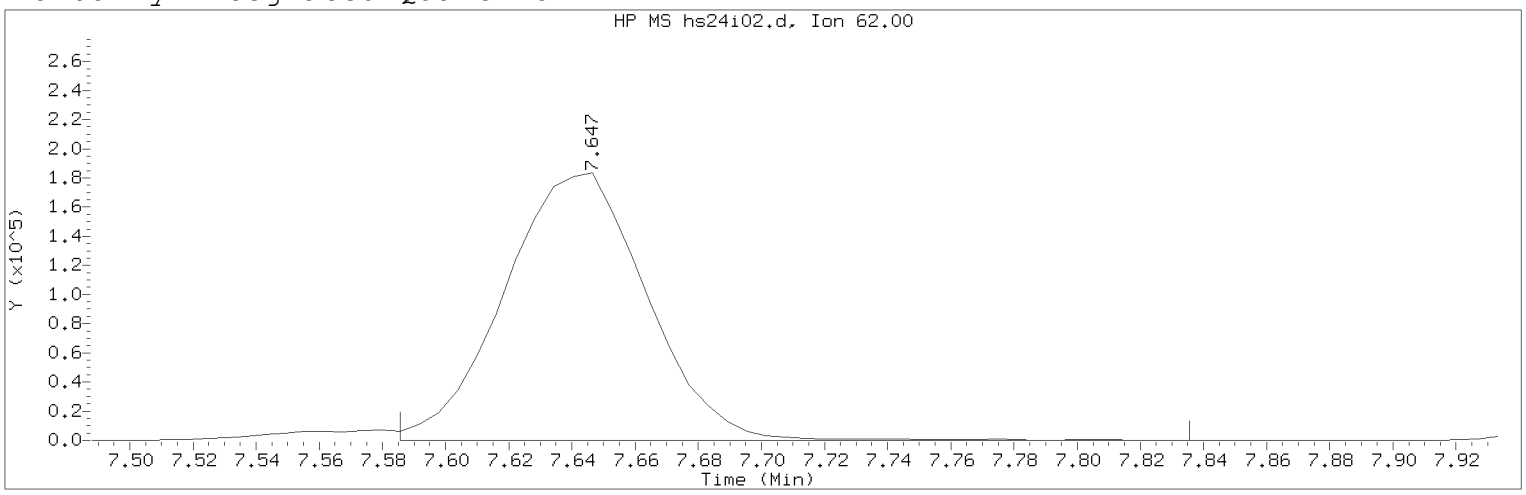
Target 3.5 esignature used. AE20 Page 235 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

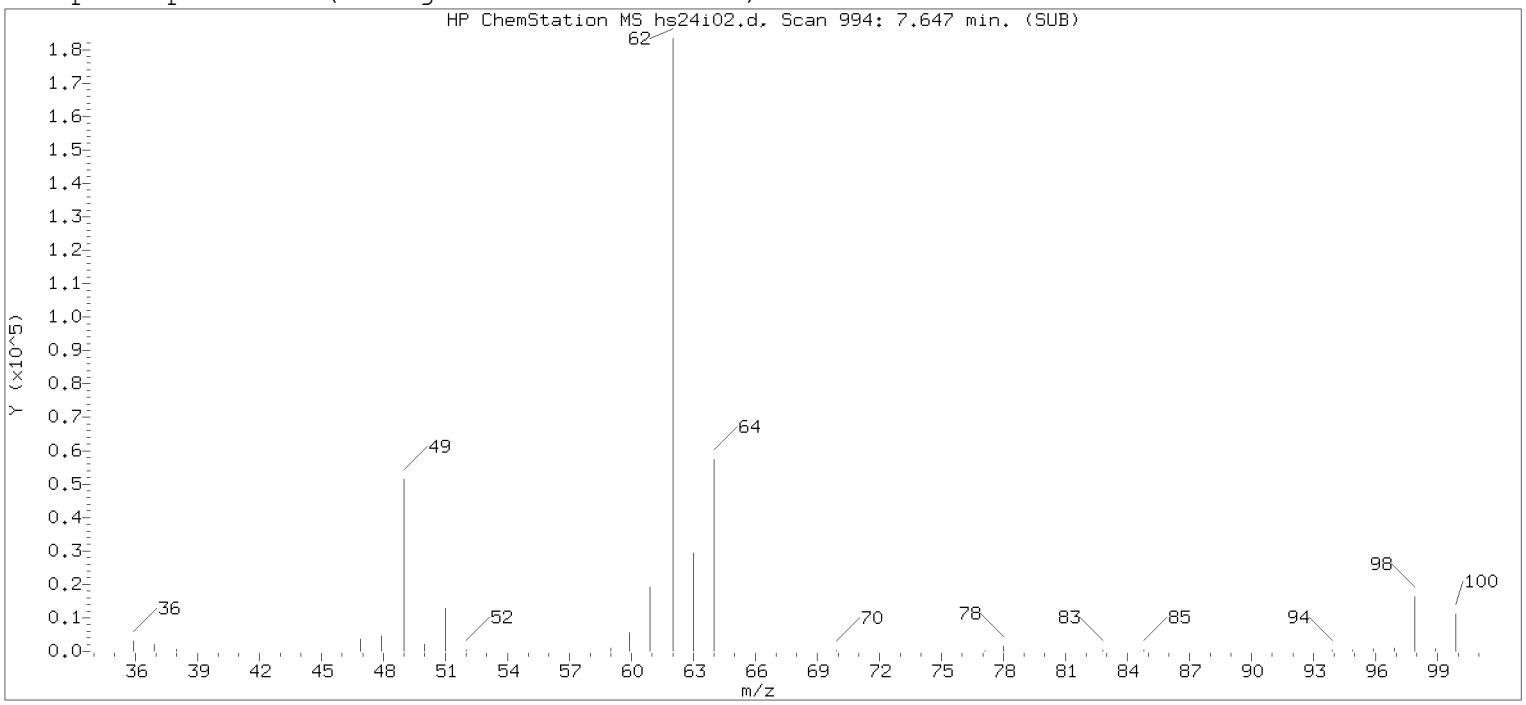
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area (flag) : 573462M
On-Column Amount (ng) : 9.9220
Integration start scan : 983 Integration stop scan: 1024
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

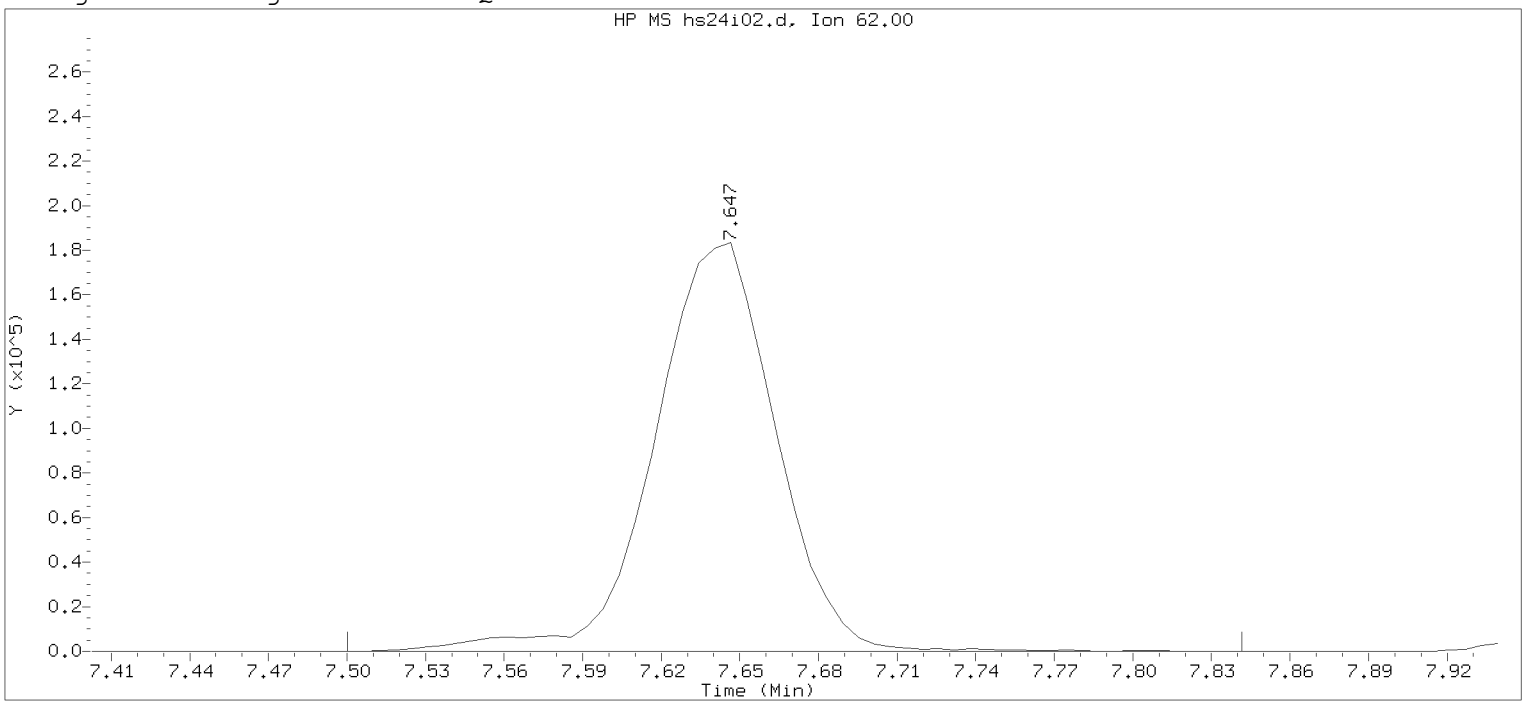
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

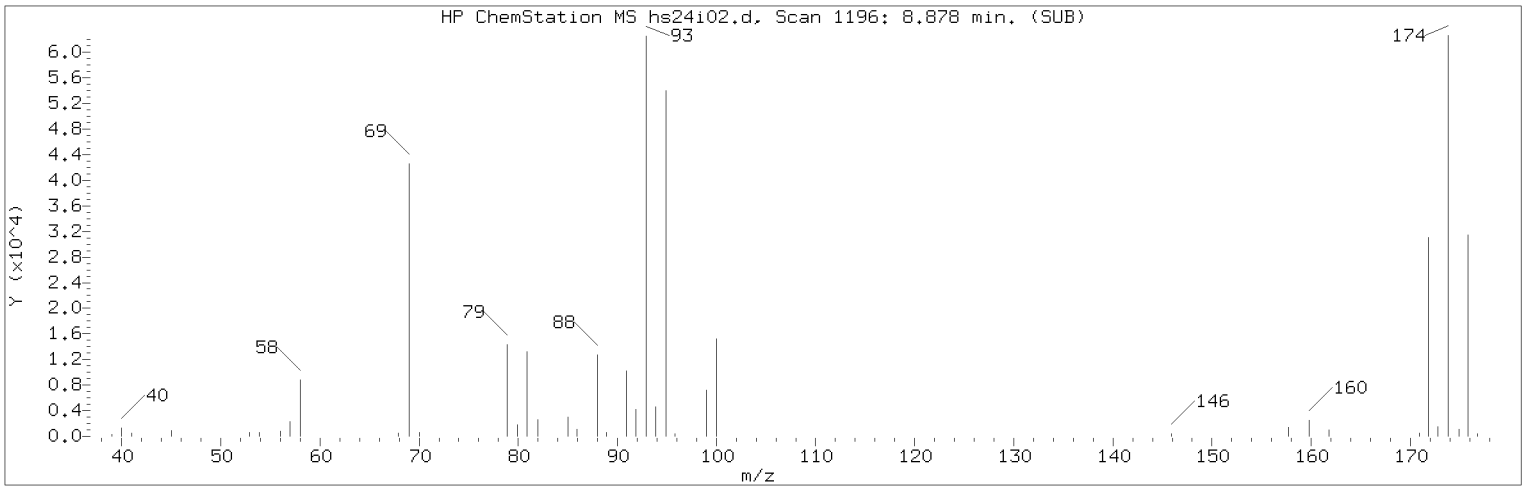
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

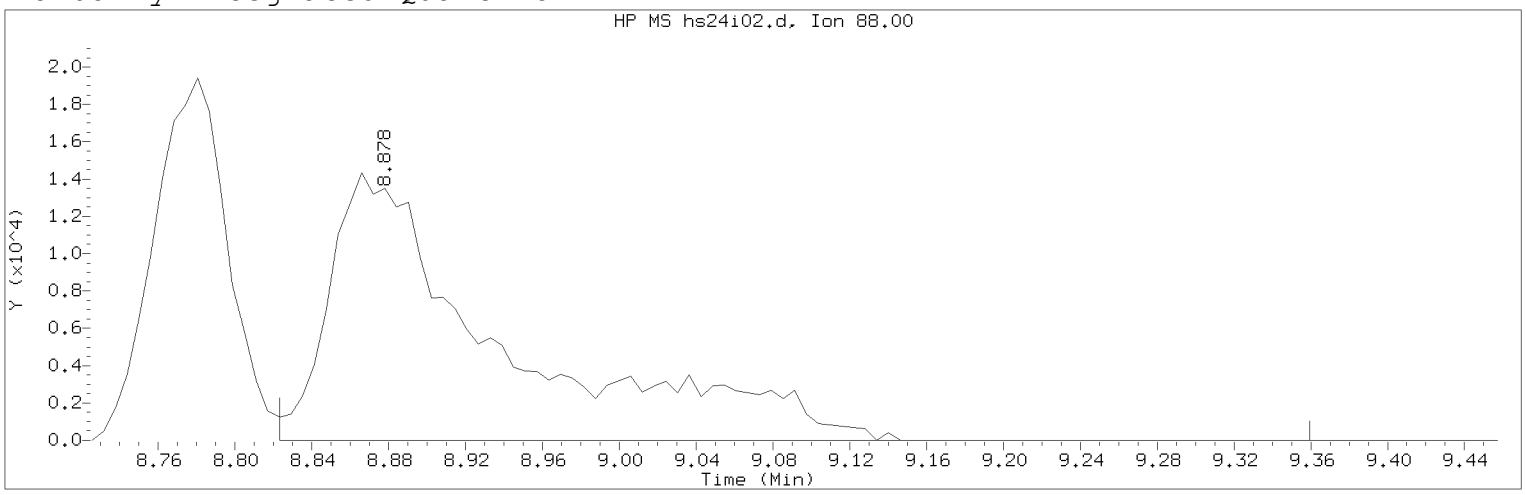
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 994
Retention Time (minutes): 7.647
Quant Ion : 62.00
Area : 590569
On-column Amount (ng) : 10.0000
Integration start scan : 969 Integration stop scan: 1025
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

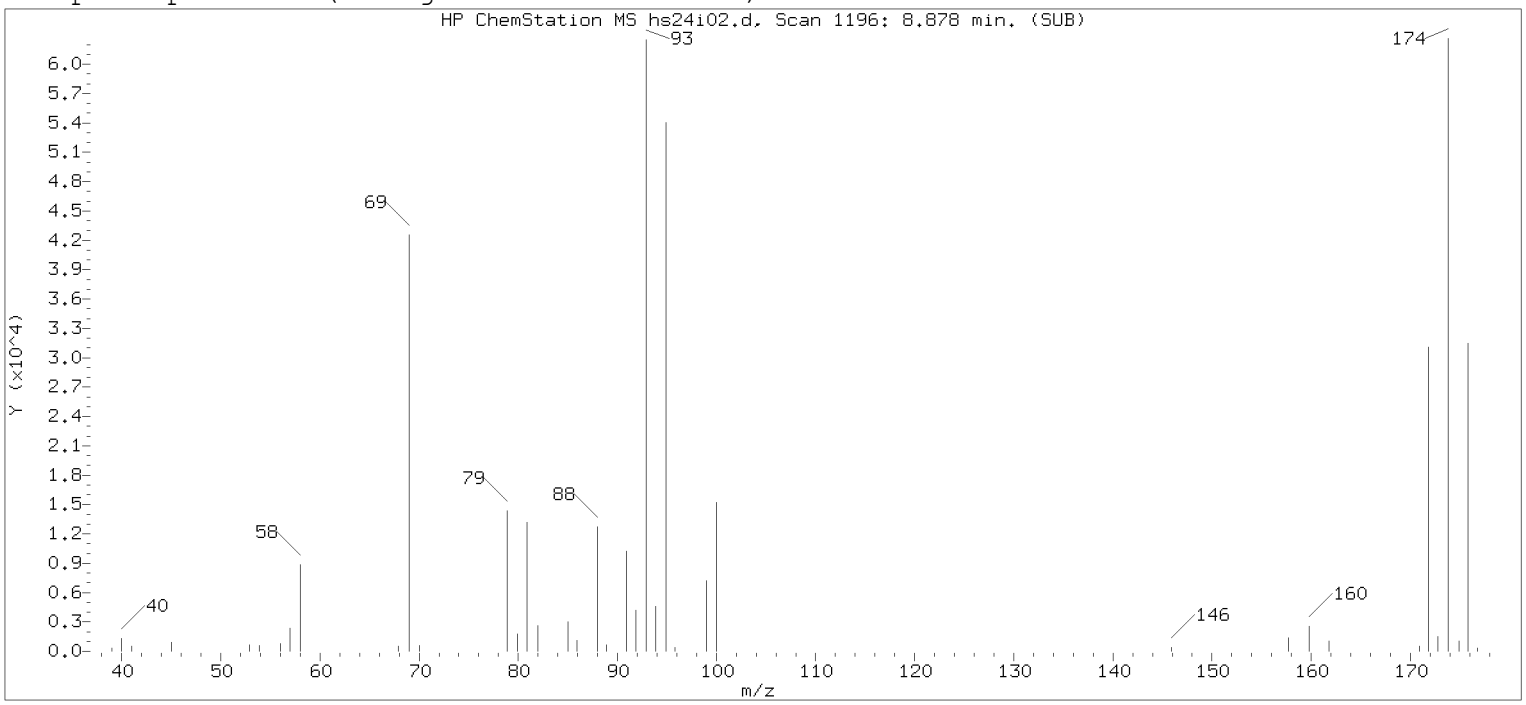
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 87437M
On-Column Amount (ng) : 514.8766
Integration start scan : 1186 Integration stop scan: 1274
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

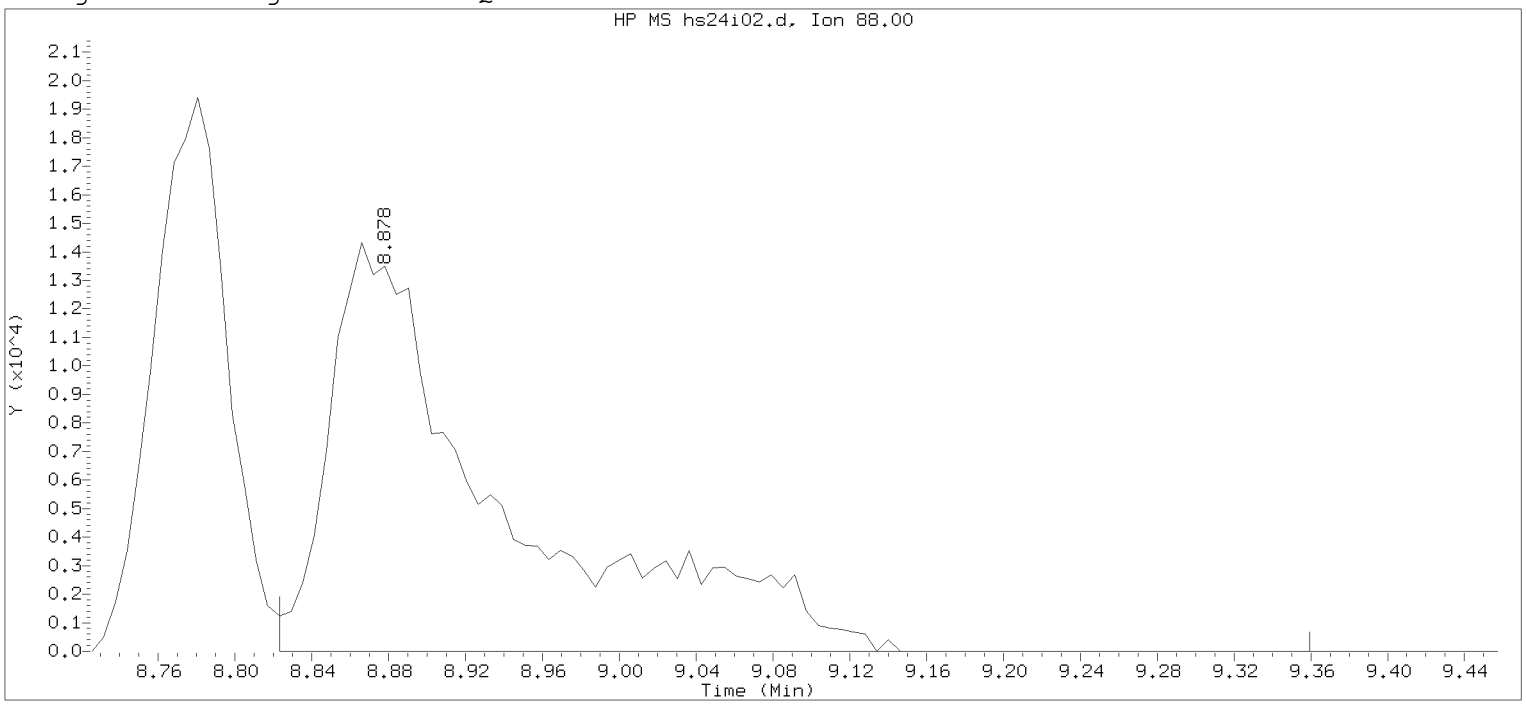
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

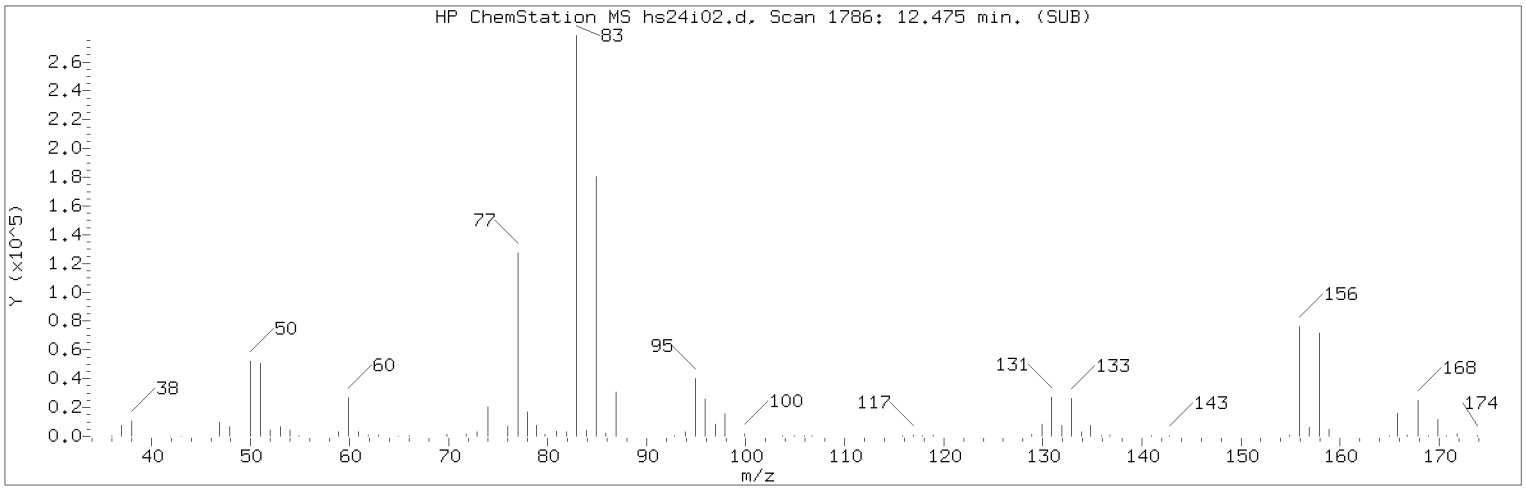
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

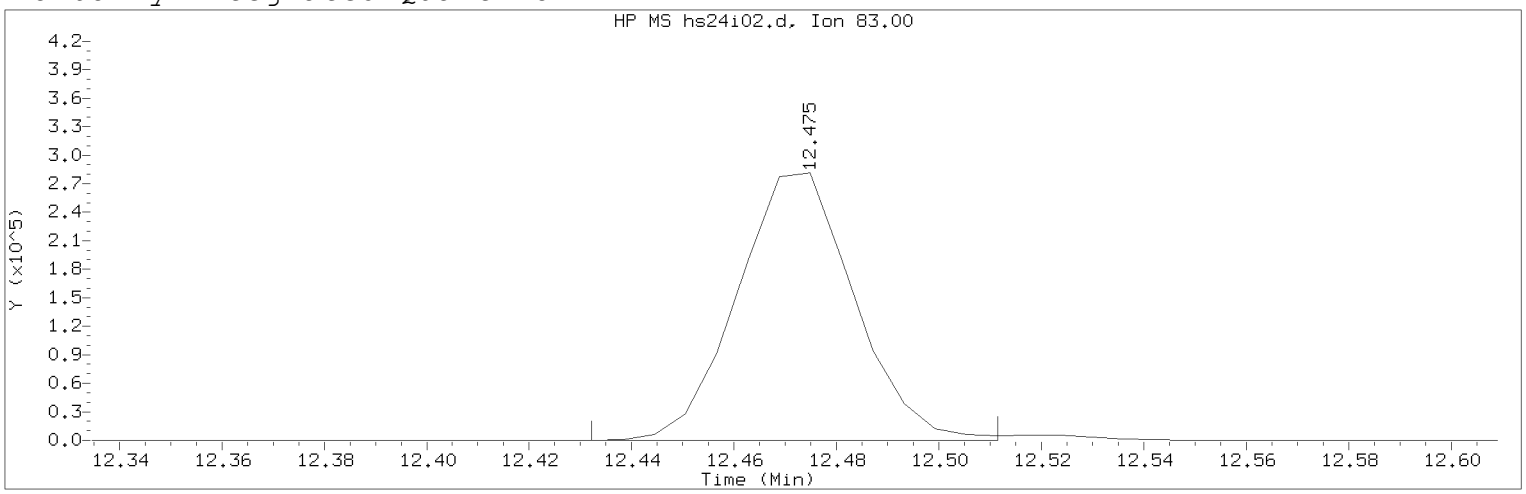
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1196		
Retention Time (minutes)	: 8.878		
Quant Ion	: 88.00		
Area	: 87437		
On-column Amount (ng)	: 500.0000		
Integration start scan	: 1186	Integration stop scan:	1274
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

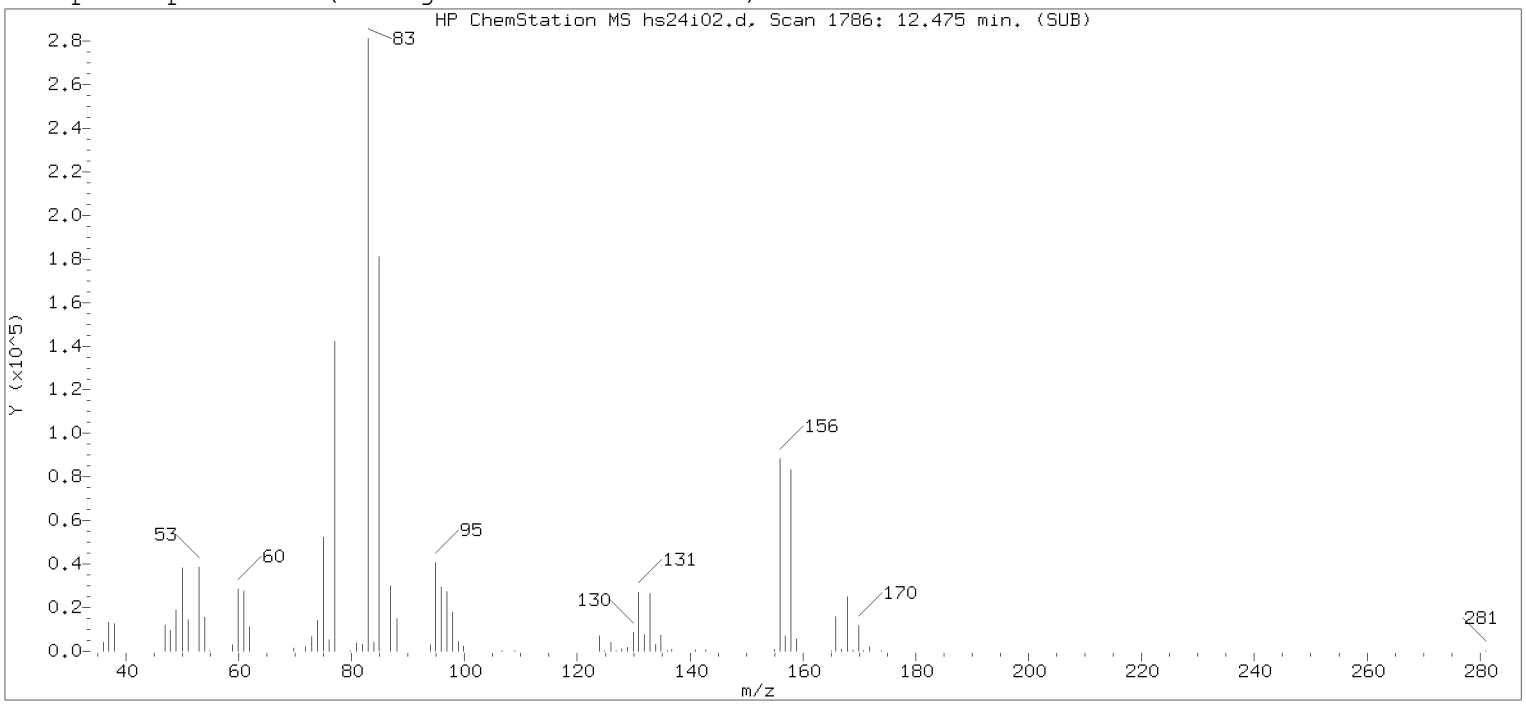
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 446396M
On-Column Amount (ng) : 10.4466
Integration start scan : 1778 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

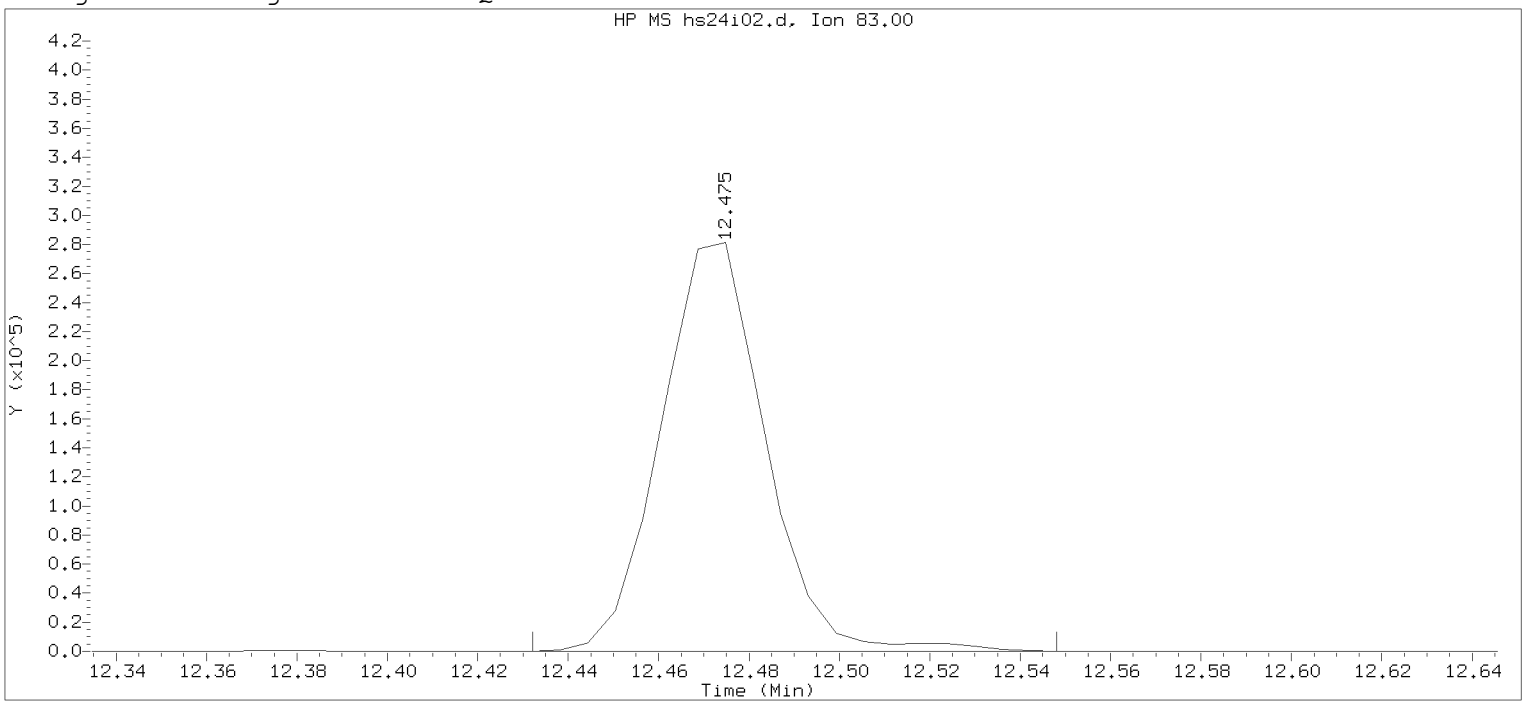
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

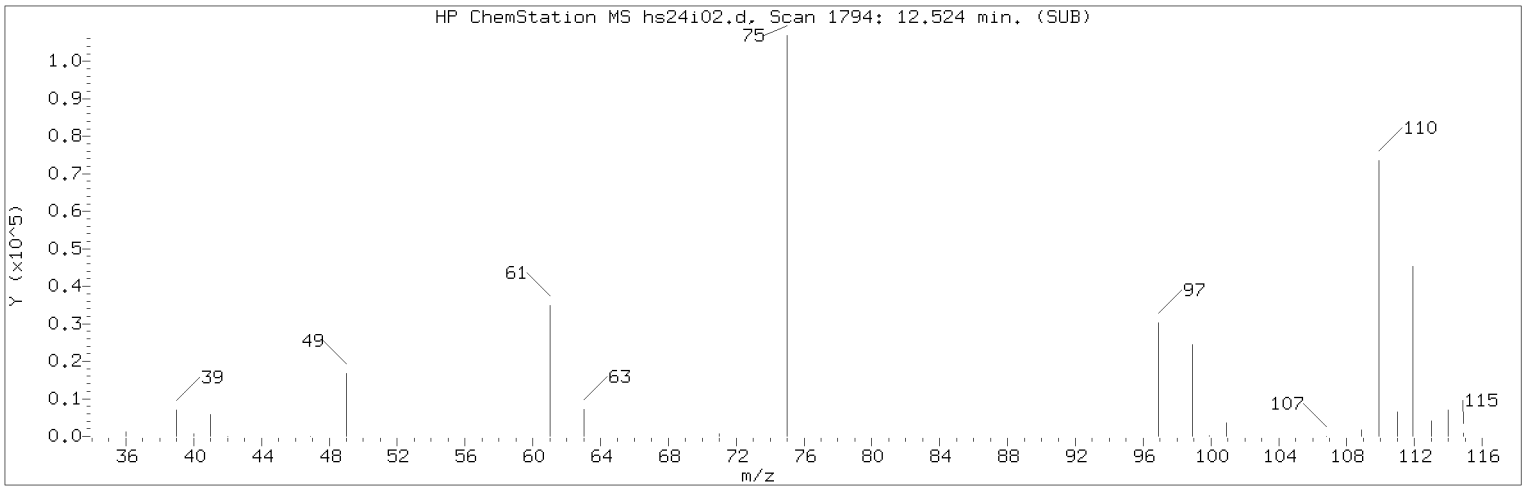
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

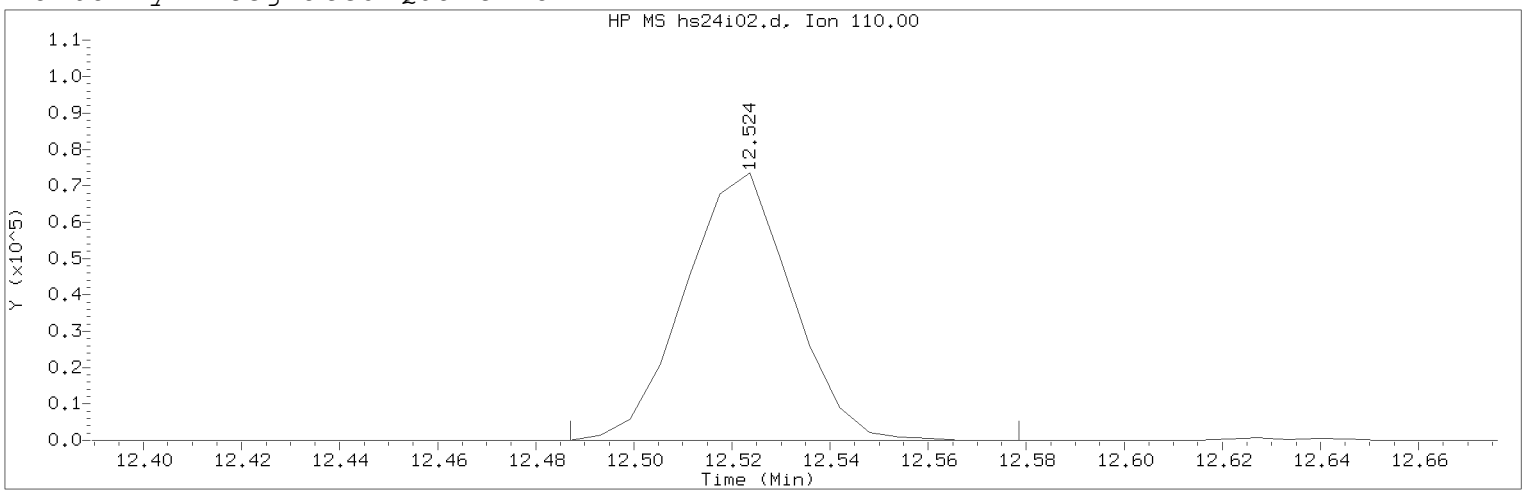
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 452299
On-column Amount (ng) : 10.0000
Integration start scan : 1778 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:29.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

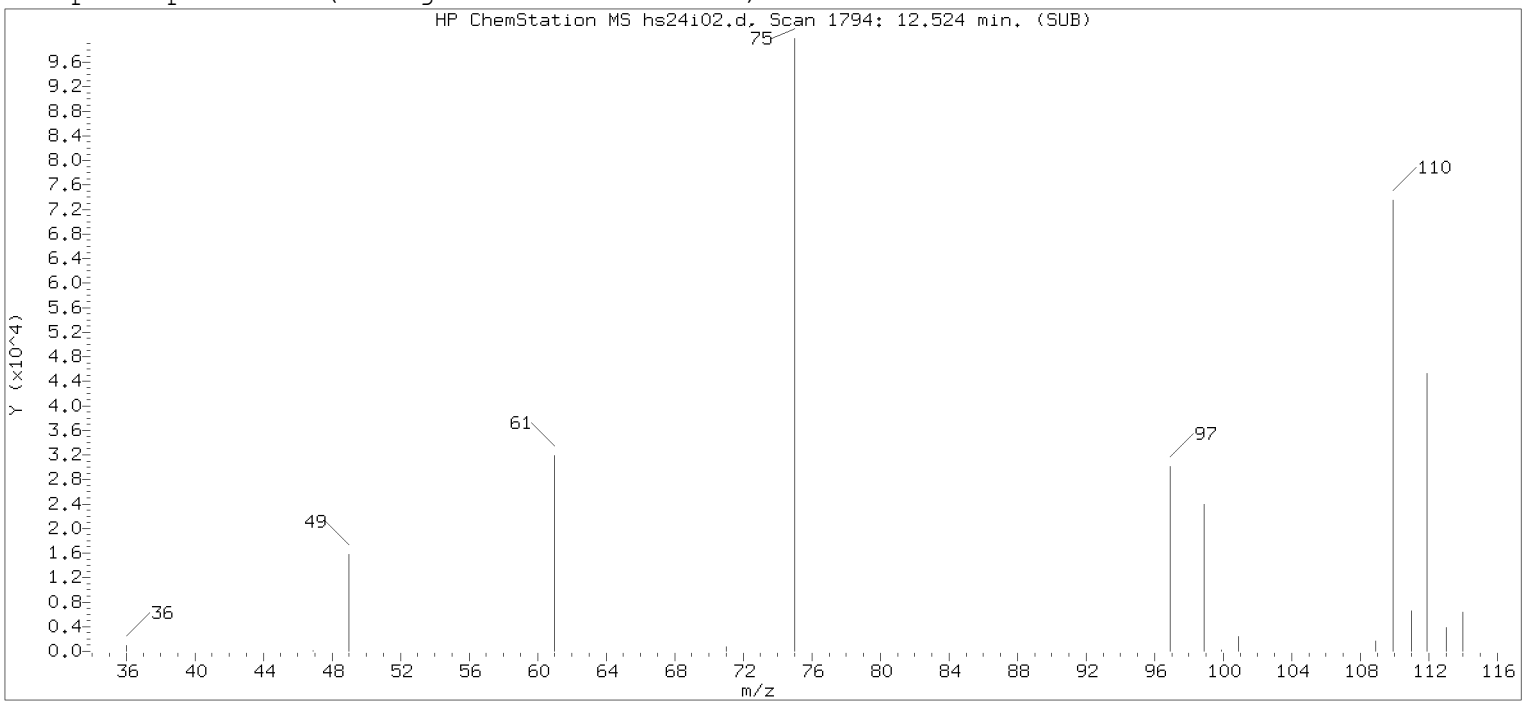
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 111265M
On-Column Amount (ng) : 10.0716
Integration start scan : 1787 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

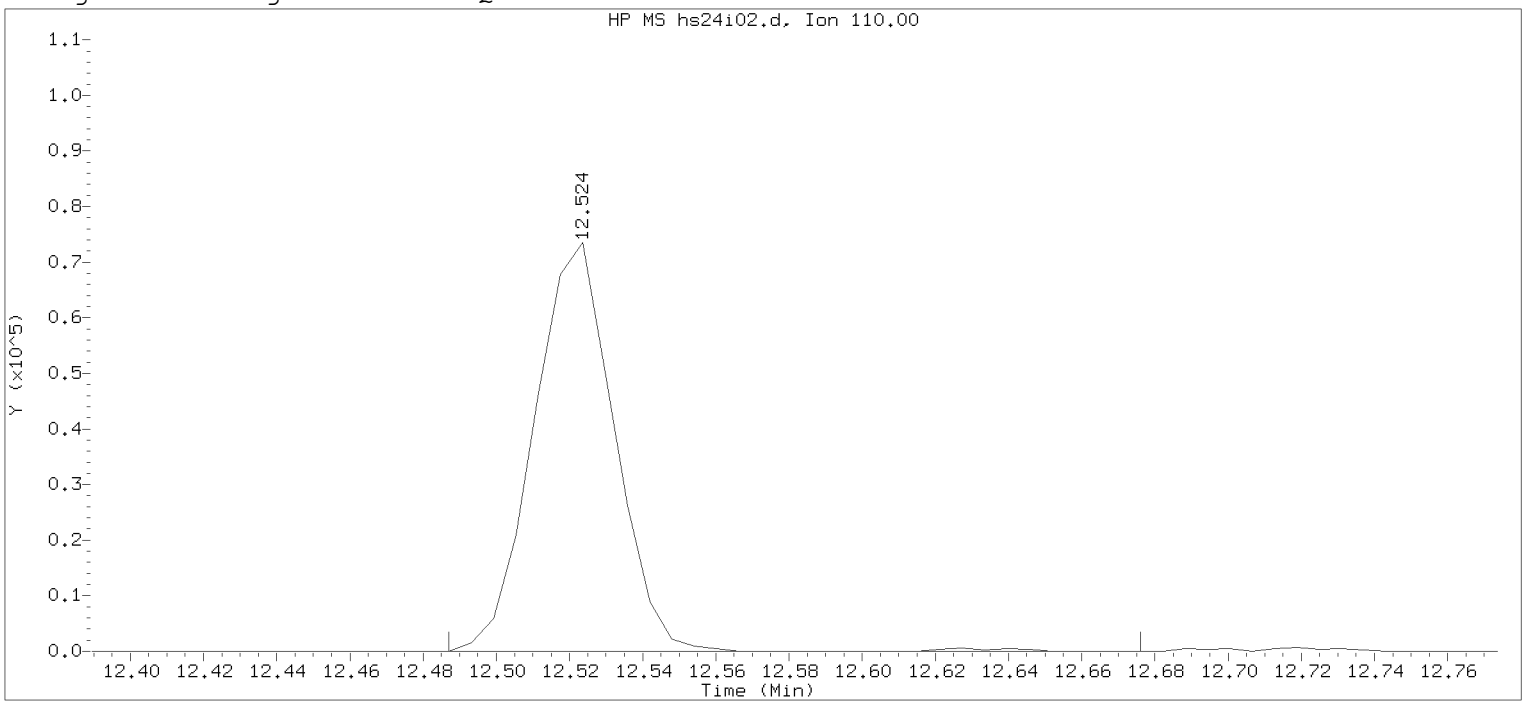
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:29.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i02.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 18:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:50
Date, time and analyst ID of latest file update: 25-Sep-2018 06:50 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 112033
On-column Amount (ng) : 10.0000
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

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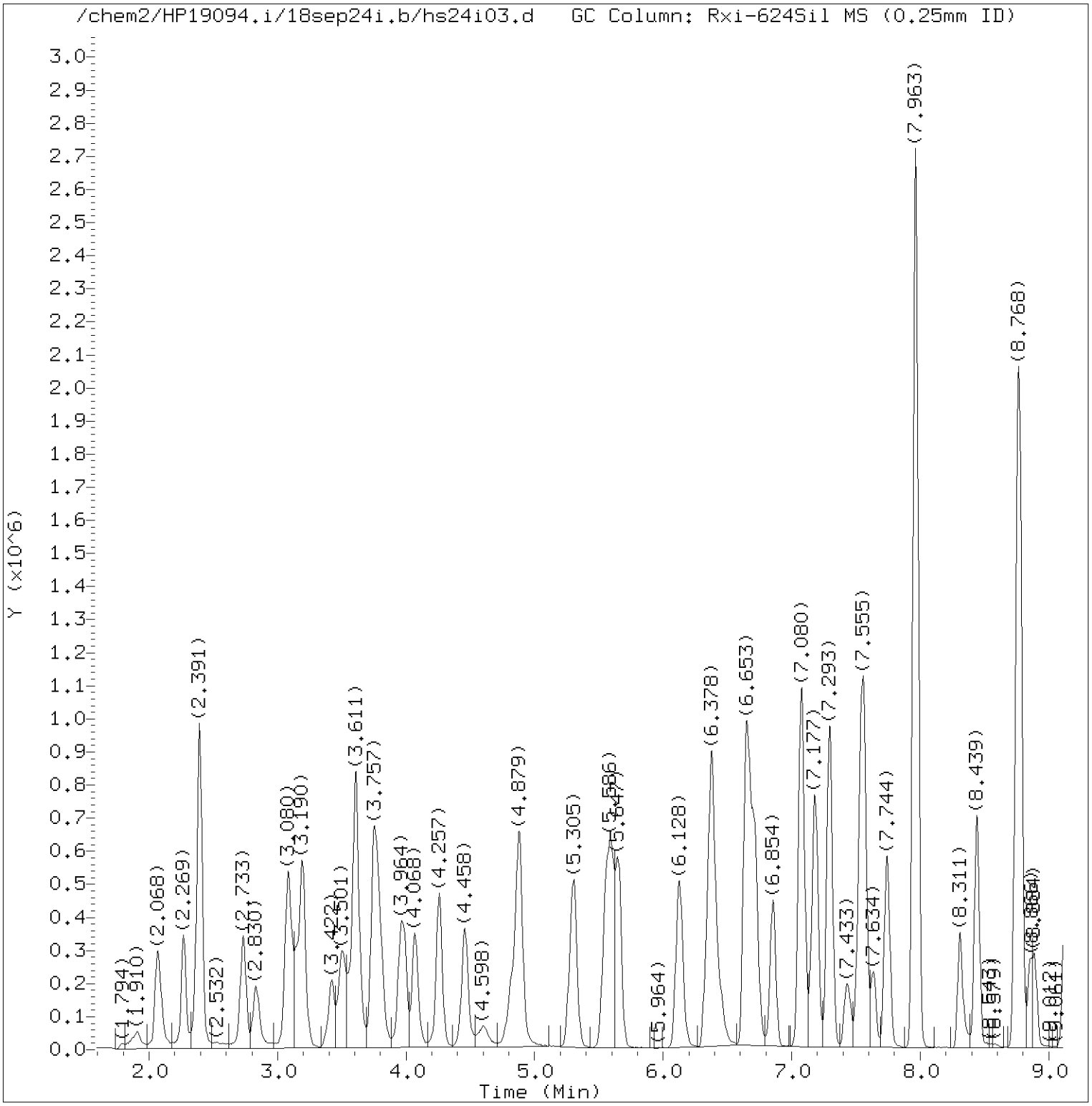
Target 3.5 esignature used. AE20 Page 243 of 1072



Total Ion Chromatogram (TIC)

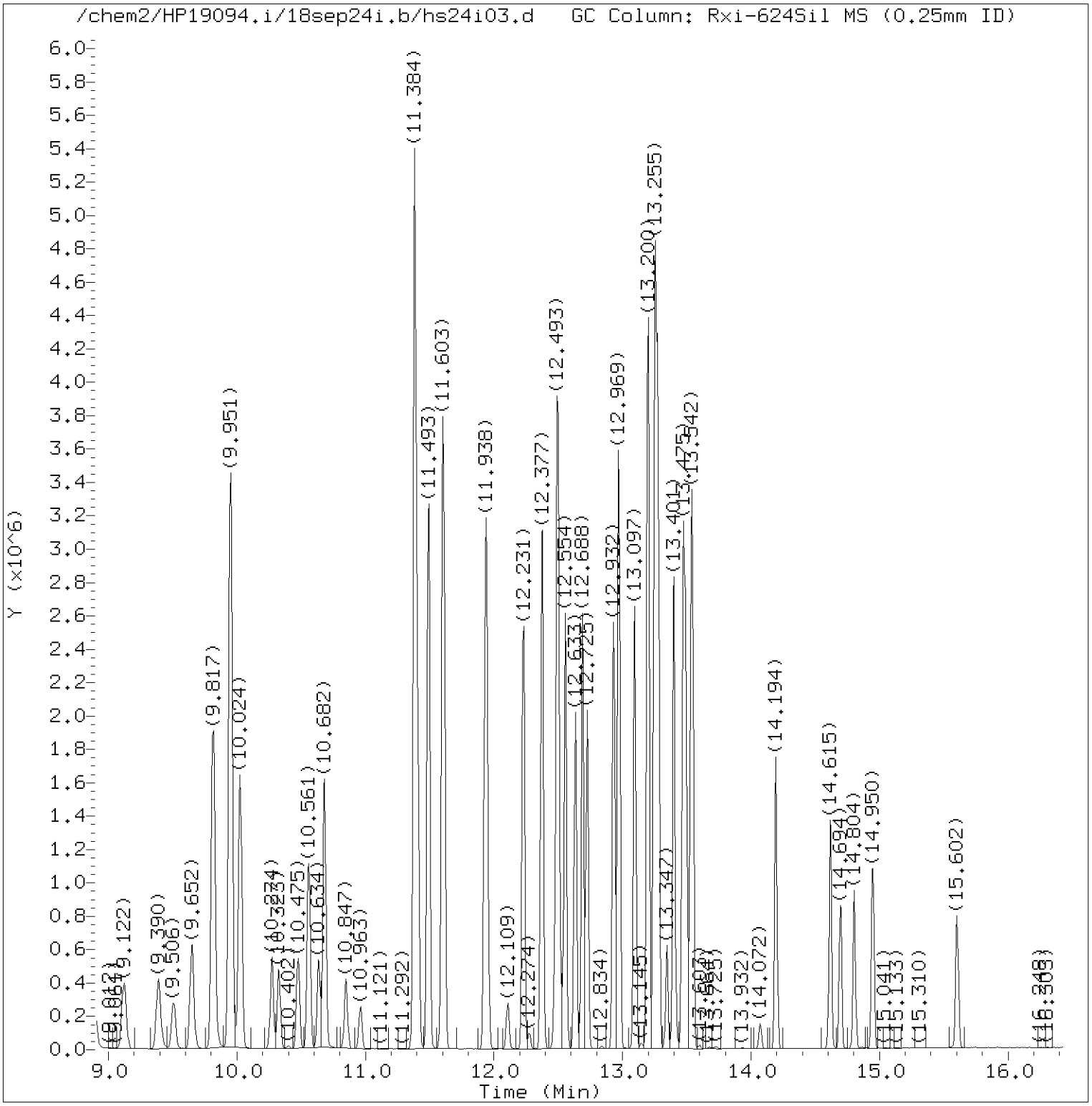
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	562282	5.241
2) Chloromethane	(2)	2.269	50	535240	5.095
5) Vinyl Chloride	(2)	2.391	62	501670	5.099
6) 1,3-Butadiene	(2)	2.391	39	552344M	4.956
7) Bromomethane	(2)	2.733	94	384528	5.027
8) Chloroethane	(2)	2.830	64	298270	4.998
9) Dichlorofluoromethane	(2)	3.080	67	732855	5.163
10) Trichlorofluoromethane	(2)	3.141	101	647481	5.209
11) Ethyl ether	(2)	3.422	59	212003	5.030
12) Freon 123a	(2)	3.507	67	413759	5.254
13) Acrolein	(1)	3.611	56	1489451	263.916
15) 1,1-Dichloroethene	(2)	3.745	96	285012	5.295
16) Freon 113	(2)	3.775	101	339708	5.355
14) Acetone	(1)	3.787	43	378399M	49.919
17) Methyl Iodide	(2)	3.958	142	580104	5.171
18) Carbon Disulfide	(2)	4.068	76	875498	5.112
21) Methyl Acetate	(1)	4.239	43	107057	5.031
22) Allyl Chloride	(2)	4.257	41	525571	5.137
23) Methylene Chloride	(2)	4.452	84	294254	4.846
26)*t-Butyl Alcohol-d10	(1)	4.482	65	127180M	50.000
28) t-Butyl Alcohol	(1)	4.598	59	218266	100.544
29) Acrylonitrile	(1)	4.812	53	260426	26.603
30) Methyl Tertiary Butyl Ether	(2)	4.860	73	578958	5.230
31) trans-1,2-Dichloroethene	(2)	4.885	96	312820	5.150
32) n-Hexane	(2)	5.305	57	526068	5.446
33) 1,1-Dichloroethane	(2)	5.543	63	603578	5.219
34) di-Isopropyl Ether	(2)	5.592	45	1044288	5.084
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	558039	5.362
40) 1,2-Dichloroethene (Total)	(2)		96	662378	10.358
37) Ethyl t-butyl ether	(2)	6.128	59	843514	5.178
38) 2-Butanone	(1)	6.342	43	671705	54.133
39) cis-1,2-Dichloroethene	(2)	6.372	96	349558	5.208
41) 2,2-Dichloropropane	(2)	6.391	77	439160	5.316
42) Propionitrile	(1)	6.445	54	368280	109.345
45) Methacrylonitrile	(1)	6.653	67	661065	54.434
47) Bromochloromethane	(2)	6.708	128	145716	5.139
48) Tetrahydrofuran	(1)	6.714	71	177366	53.767
49) Chloroform	(2)	6.854	83	551731	5.131

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	693943	10.030
50)$Dibromofluoromethane	(2)	7.067	111	707652	9.937
51) 1,1,1-Trichloroethane	(2)	7.086	97	487870	5.304
52) Cyclohexane	(2)	7.183	56	645692	5.378
52) Cyclohexane	(2)	7.183	84	534268	5.397
52) Cyclohexane	(2)	7.177	69	190372	5.380
54) Carbon Tetrachloride	(2)	7.293	117	416126	5.268
55) 1,1-Dichloropropene	(2)	7.299	75	459178	5.265
56) Isobutyl Alcohol	(1)	7.427	41	212923	253.500
57)$1,2-Dichloroethane-d4	(2)	7.537	102	119553M	9.912
57)$1,2-Dichloroethane-d4	(2)	7.531	65	572526	9.814
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76935	9.960
58) Benzene	(2)	7.561	78	1327137	5.151
59) 1,2-Dichloroethane	(2)	7.634	62	288210	4.861
60) t-Amyl methyl ether	(2)	7.744	73	696807	5.159
62) n-Heptane	(2)	7.963	43	544674	5.469
63)*Fluorobenzene	(2)	7.963	96	2745022	10.000
65) n-Butanol	(1)	8.305	56	371428M	523.420
67) Trichloroethene	(2)	8.445	95	342245	5.188
69) Methylcyclohexane	(2)	8.750	83	652245	5.235
70) 1,2-Dichloropropane	(2)	8.780	63	324215	5.186
71) Methyl Methacrylate	(1)	8.854	69	124559	5.541
72) 1,4-Dioxane	(1)	8.872	88	45616M	266.986
73) Dibromomethane	(2)	8.890	93	132300	5.099
74) Bromodichloromethane	(2)	9.122	83	364823	5.191
76) 2-Nitropropane	(1)	9.390	41	351207	55.156
80) cis-1,3-Dichloropropene	(2)	9.646	75	430070	5.256
81) 4-Methyl-2-Pentanone	(1)	9.817	43	1690753	54.779
82)$Toluene-d8	(3)	9.951	98	2759111	10.005
82)$Toluene-d8	(3)	9.951	100	1778973	9.995
83) Toluene	(3)	10.024	92	810475	5.097
85) 1,3-Dichloropropene (total)	(3)		75	750377	10.484
84) trans-1,3-Dichloropropene	(3)	10.274	75	320307	5.228
86) Ethyl Methacrylate	(3)	10.323	69	271825	5.179
88) 1,1,2-Trichloroethane	(3)	10.475	97	183350	5.011
89) Tetrachloroethene	(3)	10.561	166	370654	5.159
90) 1,3-Dichloropropane	(3)	10.640	76	332490	5.127
91) 2-Hexanone	(1)	10.682	43	1145783	54.536

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	226639	5.168
95) 1,2-Dibromoethane	(3)	10.963	107	175991	5.132
96) 1-Chlorohexane	(3)	11.384	91	479490	5.056
97)*Chlorobenzene-d5	(3)	11.384	117	2142668	10.000
98) Chlorobenzene	(3)	11.408	112	858660	5.090
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291506	5.236
100) Ethylbenzene	(3)	11.493	91	1605334	5.166
101) m+p-Xylene	(3)	11.603	106	1200436	10.414
105) Xylene (Total)	(3)		106	1775566	15.633
104) o-Xylene	(3)	11.932	106	575130	5.219
106) Styrene	(3)	11.944	104	938150	5.321
107) Bromoform	(3)	12.109	173	125482	5.207
108) Isopropylbenzene	(3)	12.231	105	1586197	5.273
111)$4-Bromofluorobenzene	(3)	12.371	95	995484	9.915
111)$4-Bromofluorobenzene	(3)	12.377	174	860774	9.873
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	224515M	5.196
114) Bromobenzene	(4)	12.493	156	342709	5.218
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	534181	55.258
116) 1,2,3-Trichloropropane	(4)	12.524	110	56735M	5.079
117) n-Propylbenzene	(4)	12.554	91	1883753	5.275
119) 2-Chlorotoluene	(4)	12.633	126	361184	5.214
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1294691	5.351
122) 4-Chlorotoluene	(4)	12.725	126	365201	5.261
125) tert-Butylbenzene	(4)	12.932	134	275287	5.232
126) Pentachloroethane	(4)	12.969	167	220484	5.369
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1314436	5.324
128) sec-Butylbenzene	(4)	13.097	105	1675573	5.345
131) 1,3-Dichlorobenzene	(4)	13.194	146	679711	5.208
132) p-Isopropyltoluene	(4)	13.200	119	1399618	5.390
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1089195	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	661942	5.167
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	569393	5.027
136) Benzyl Chloride	(4)	13.347	126	81818	5.238
138) n-Butylbenzene	(4)	13.493	92	687040	5.330
139) 1,2-Dichlorobenzene	(4)	13.529	146	594602	5.164
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	29297	5.600
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	502164	5.172
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	407904	5.158

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

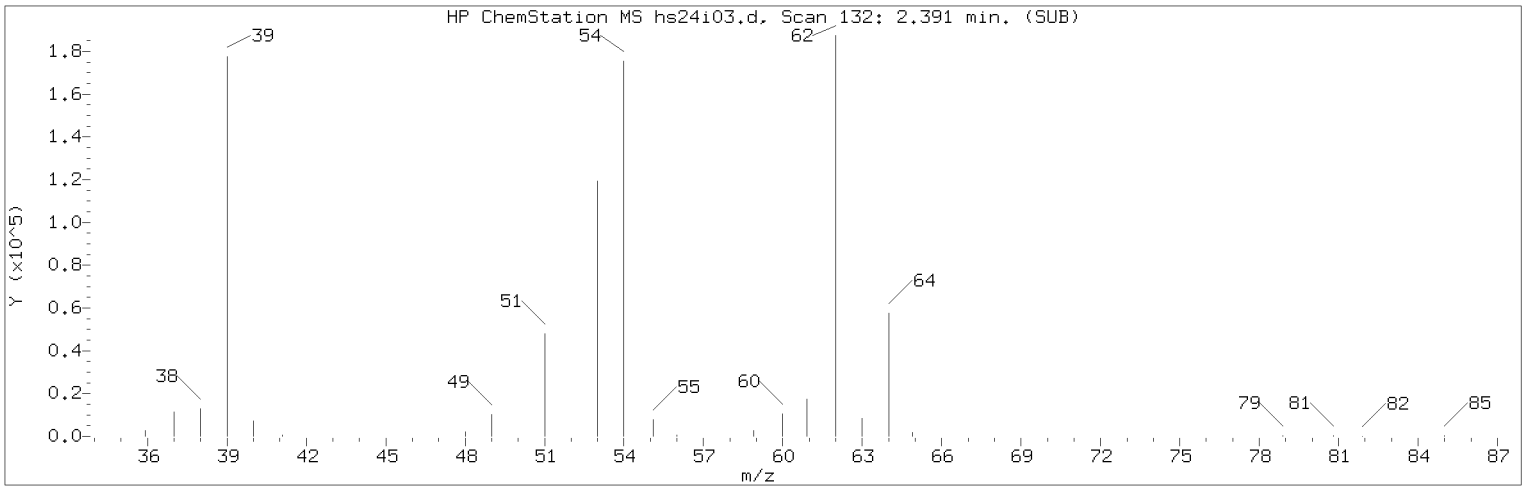
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

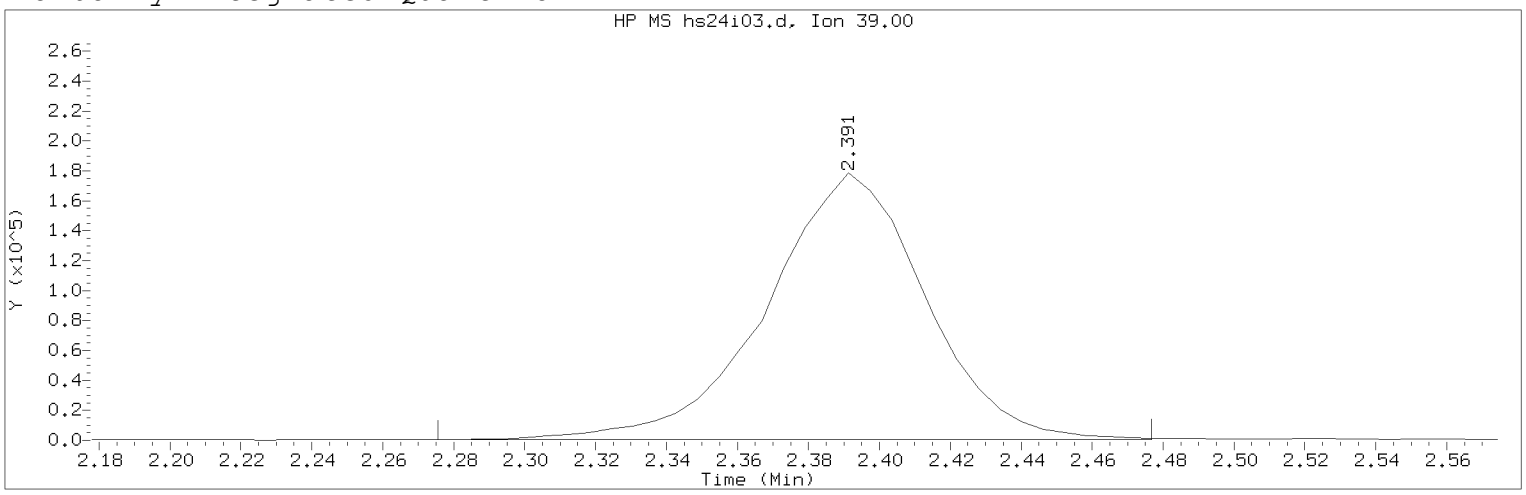
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	154730	5.177
147) Naphthalene	(4)	14.804	128	665320	5.317
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	336232	5.171

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

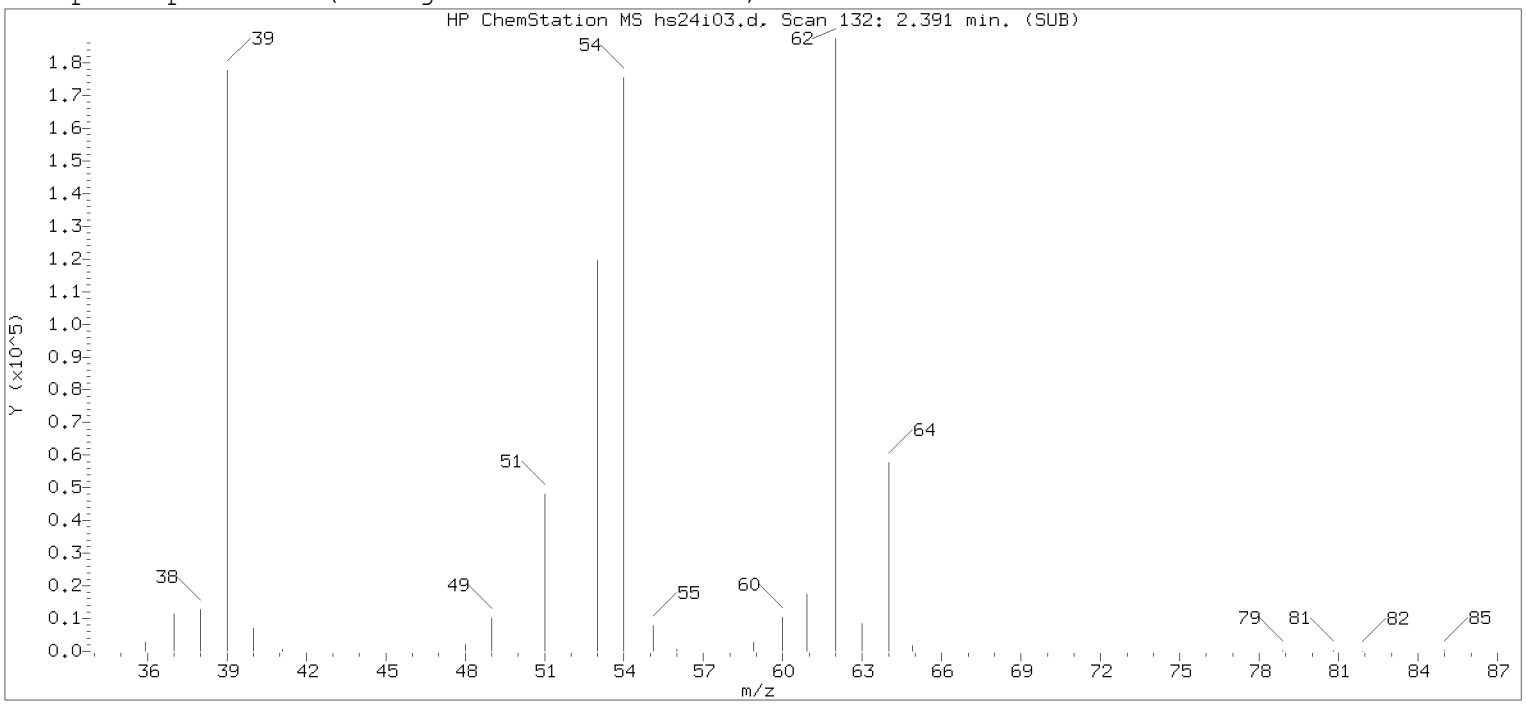
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 552344M
On-Column Amount (ng) : 4.9561
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 458 Y at integration end: 458

Reason for manual integration: improper integration

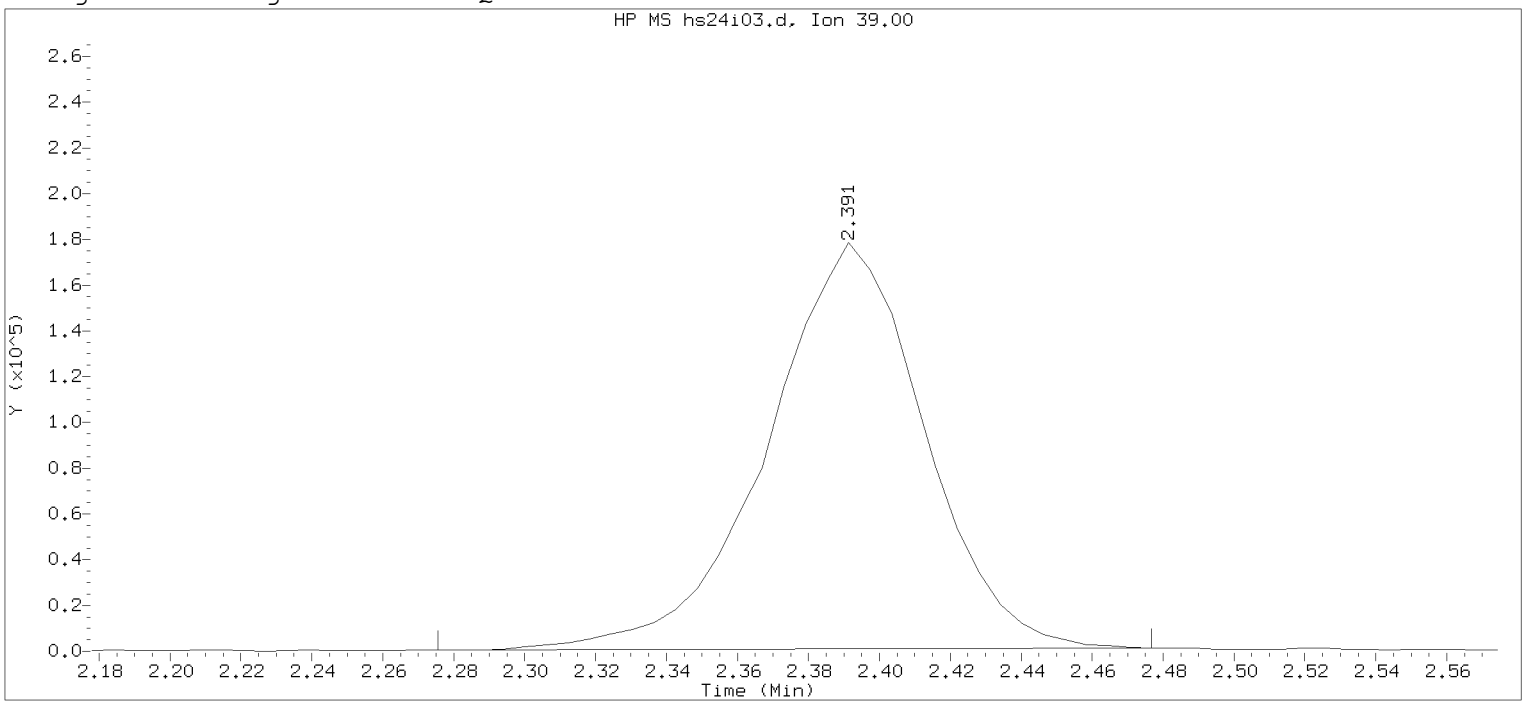
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

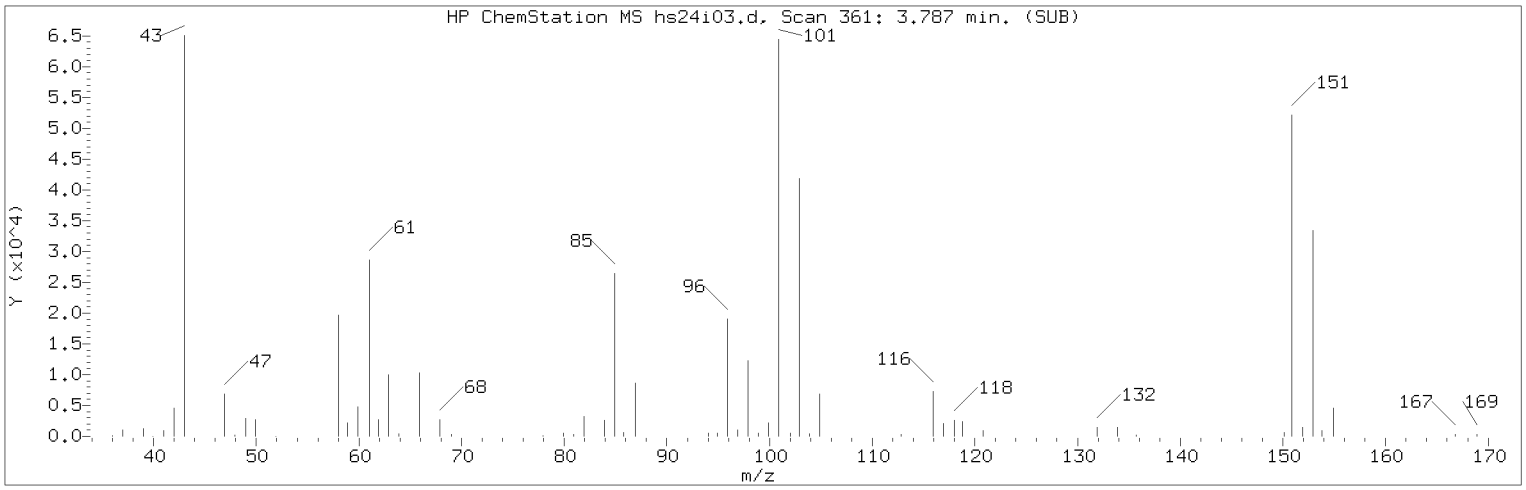
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

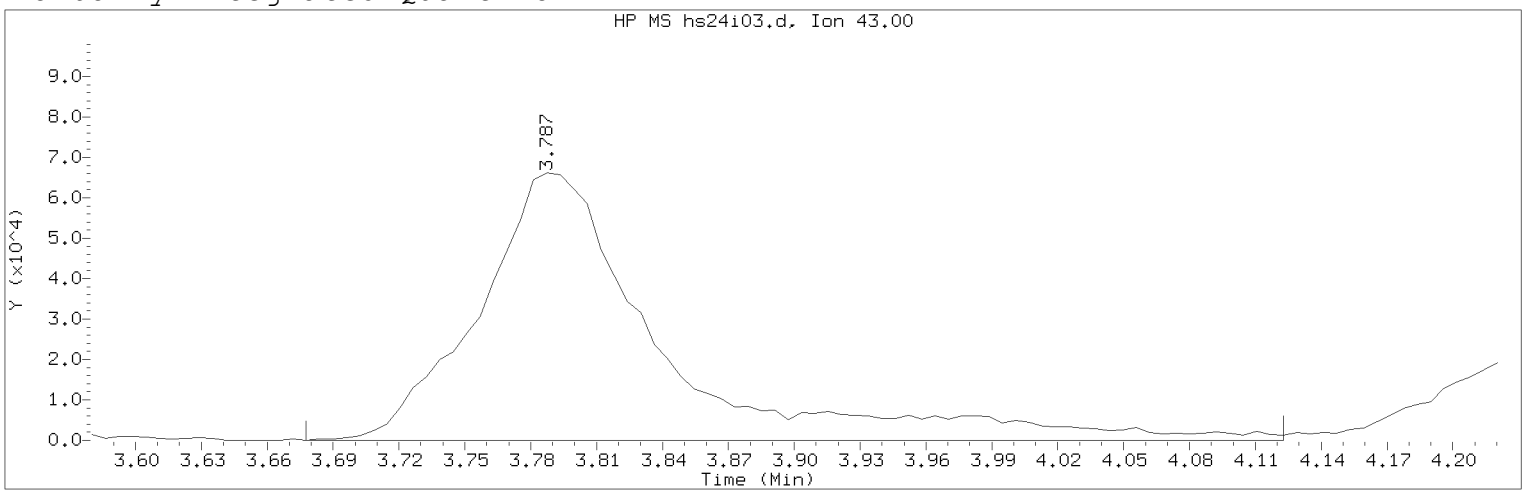
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 547218
On-column Amount (ng) : 4.9849
Integration start scan : 112 Integration stop scan: 145
Y at integration start : 437 Y at integration end: 1303

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

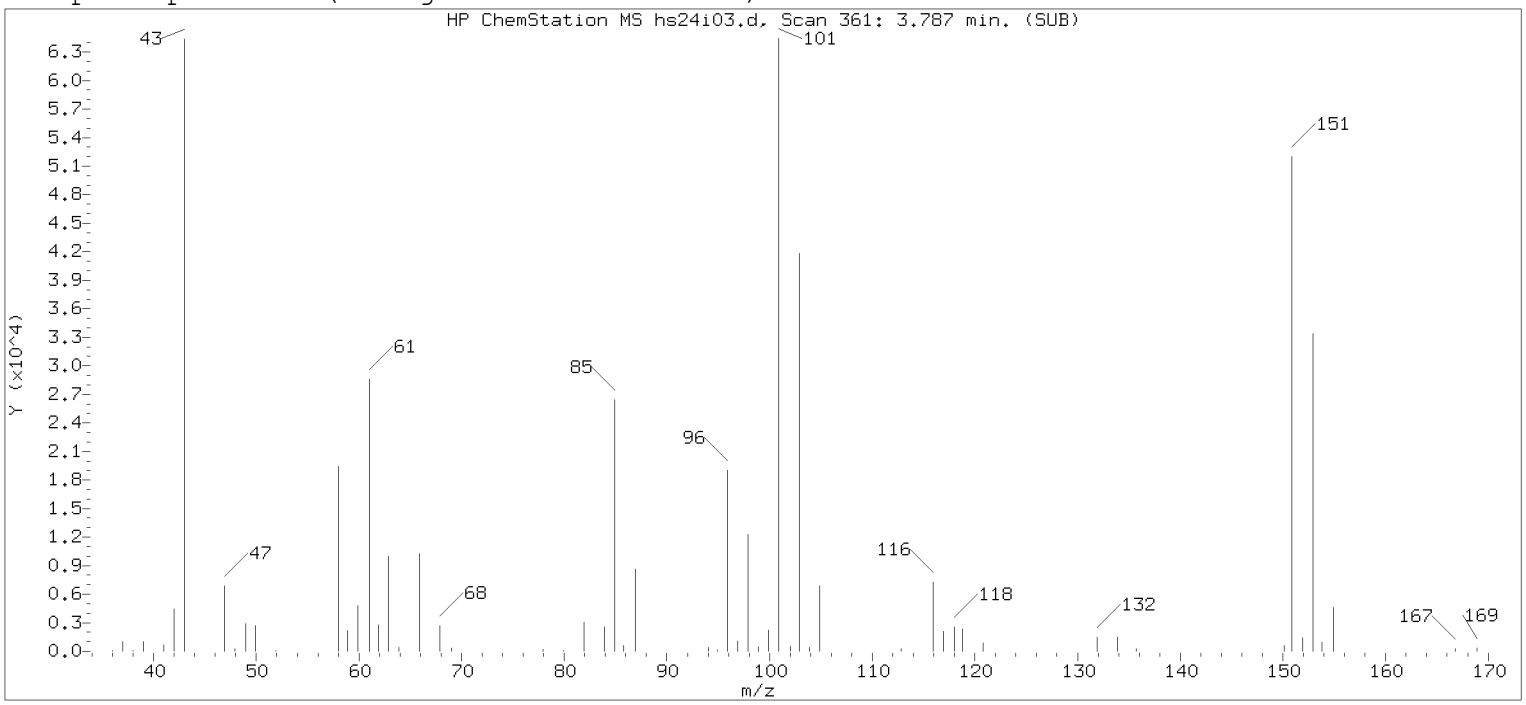
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 378399M
On-Column Amount (ng) : 49.9188
Integration start scan : 342 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

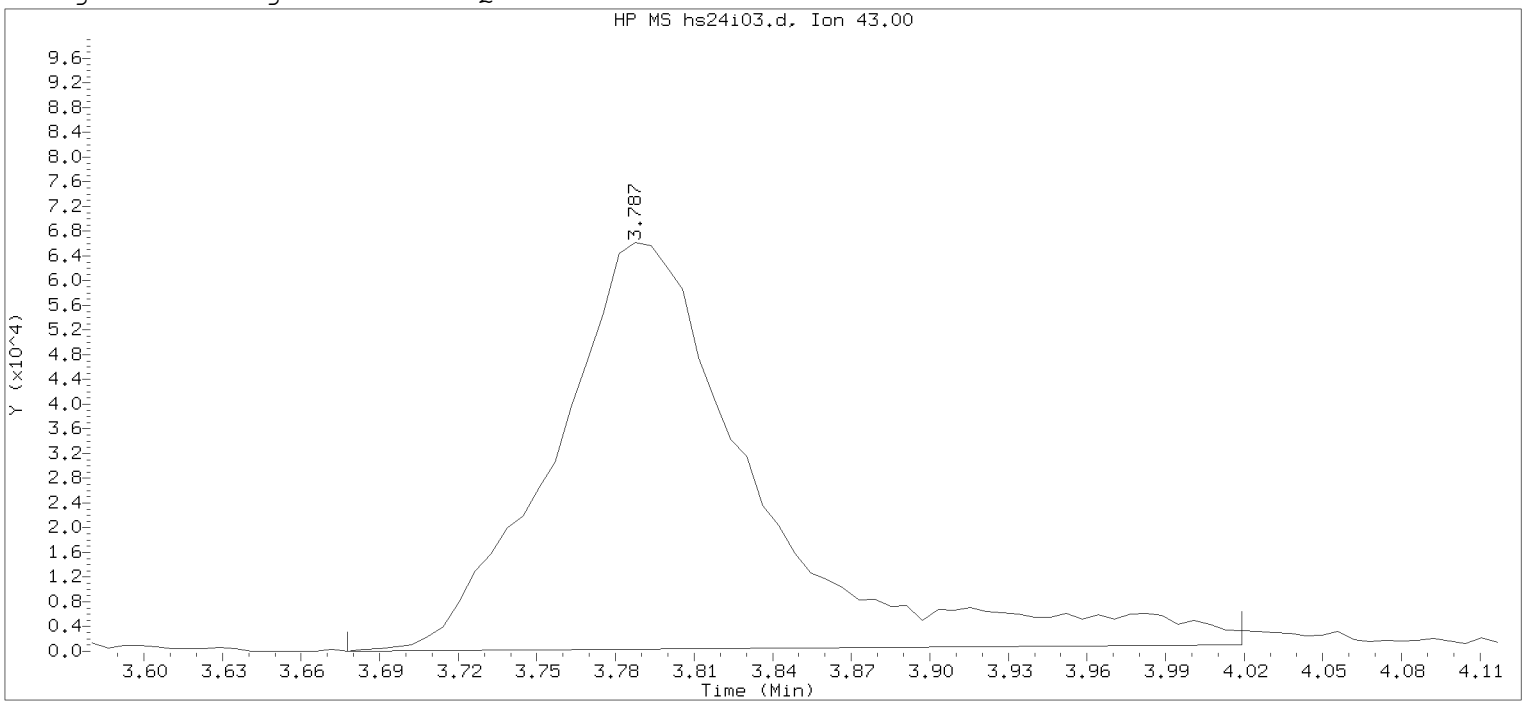
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

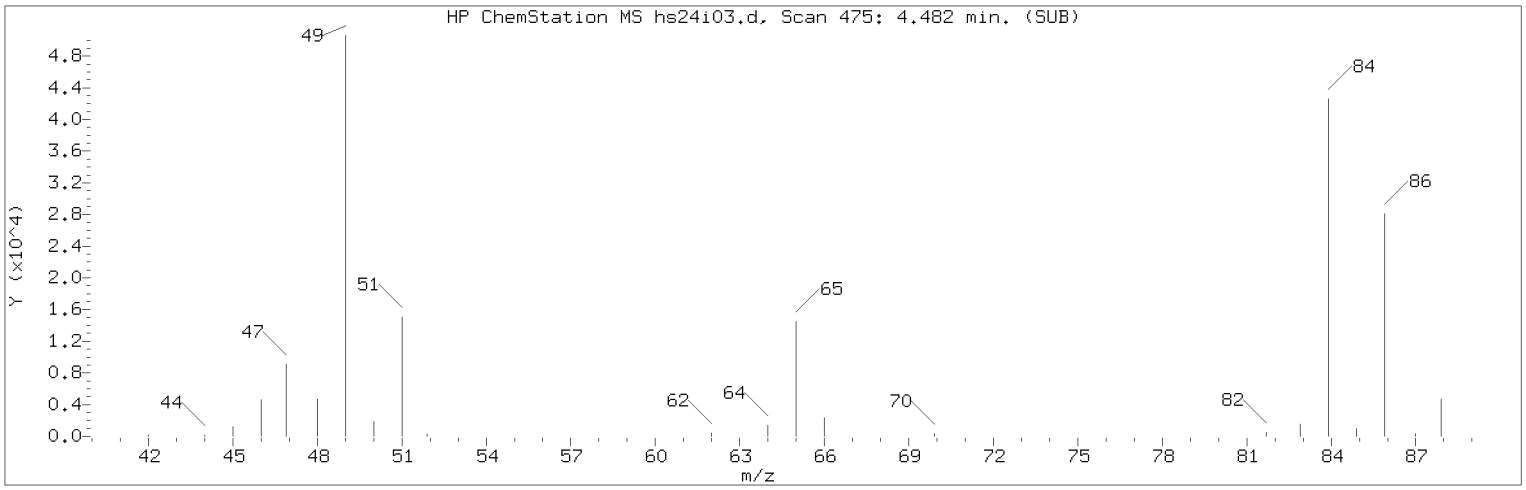
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

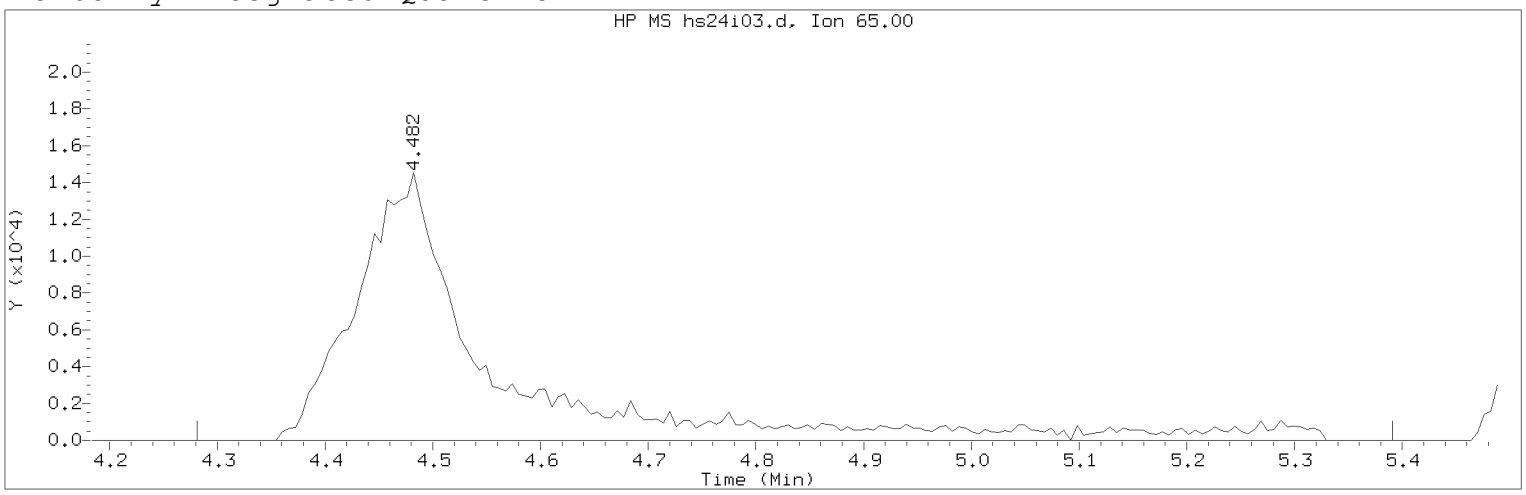
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area : 353758
On-column Amount (ng) : 50.2605
Integration start scan : 342 Integration stop scan: 398
Y at integration start : 0 Y at integration end: 1061

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

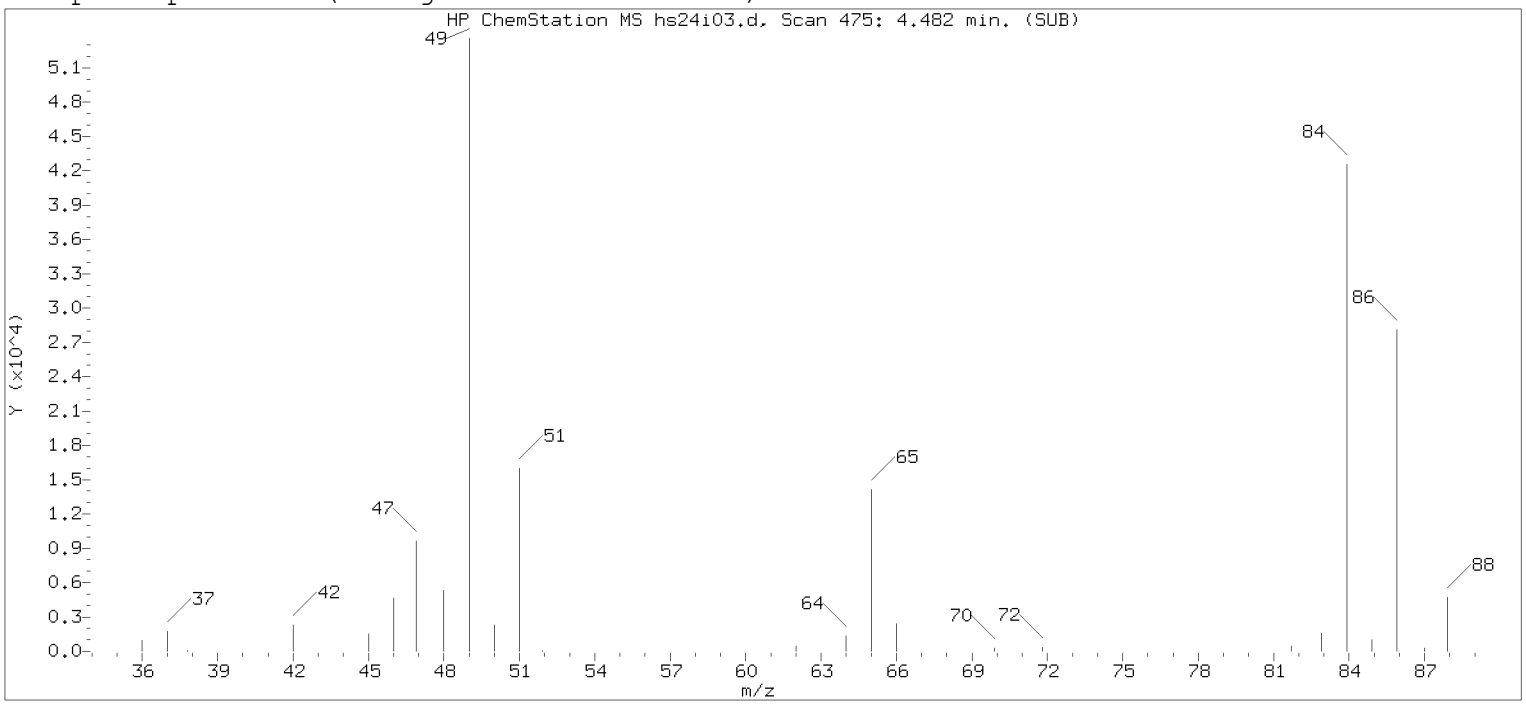
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.482
Quant Ion : 65.00
Area (flag) : 127180M
On-Column Amount (ng) : 50.0000
Integration start scan : 441 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

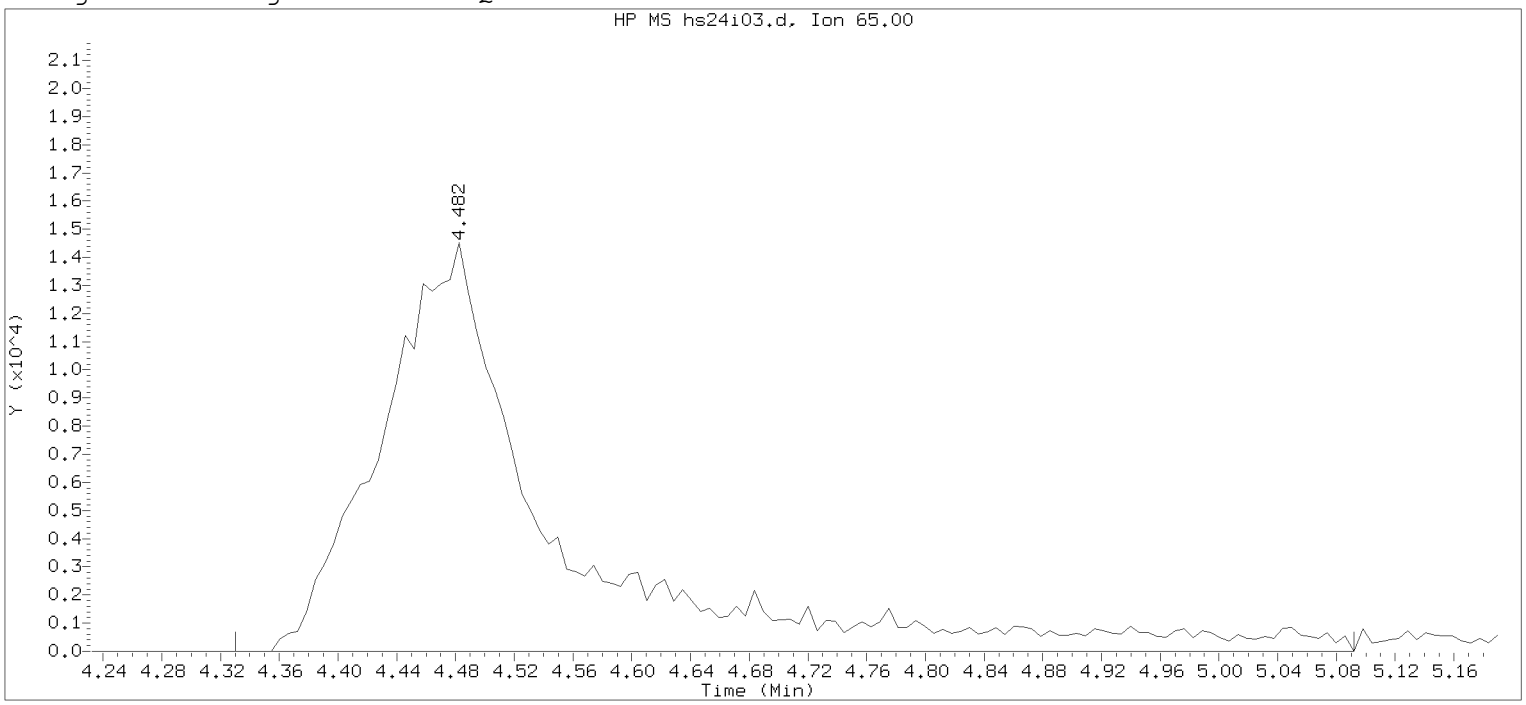
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 475		
Retention Time (minutes)	: 4.482		
Quant Ion	: 65.00		
Area	: 119408		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	574
Y at integration start	: 0	Y at integration end:	0

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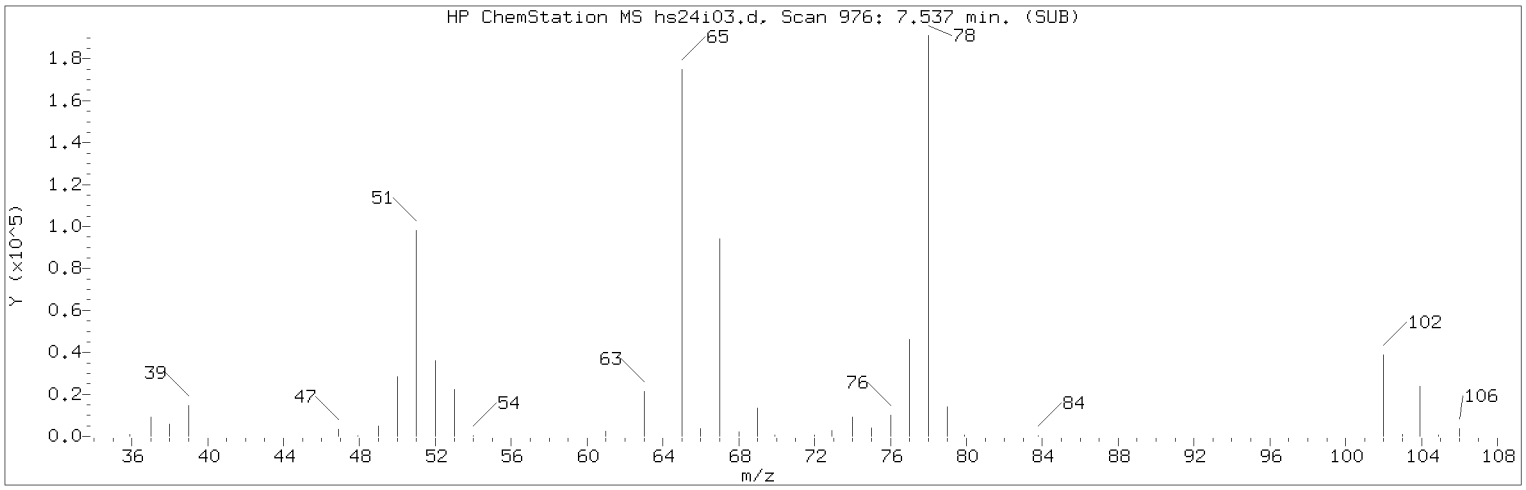
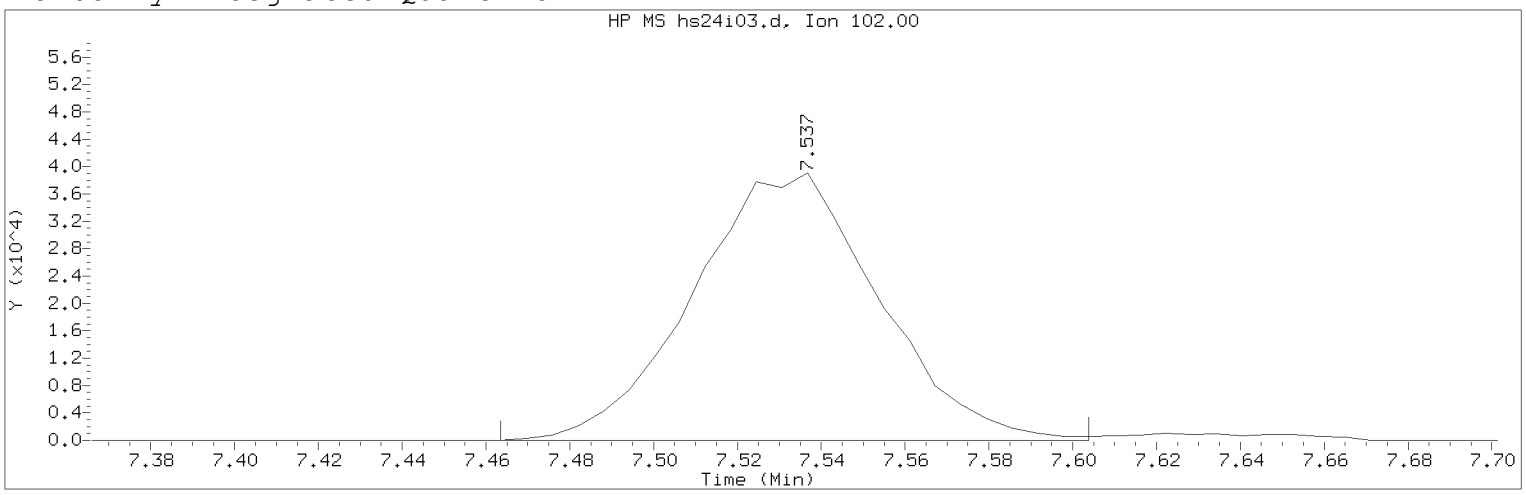
Target 3.5 esignature used. AE20 Page 255 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

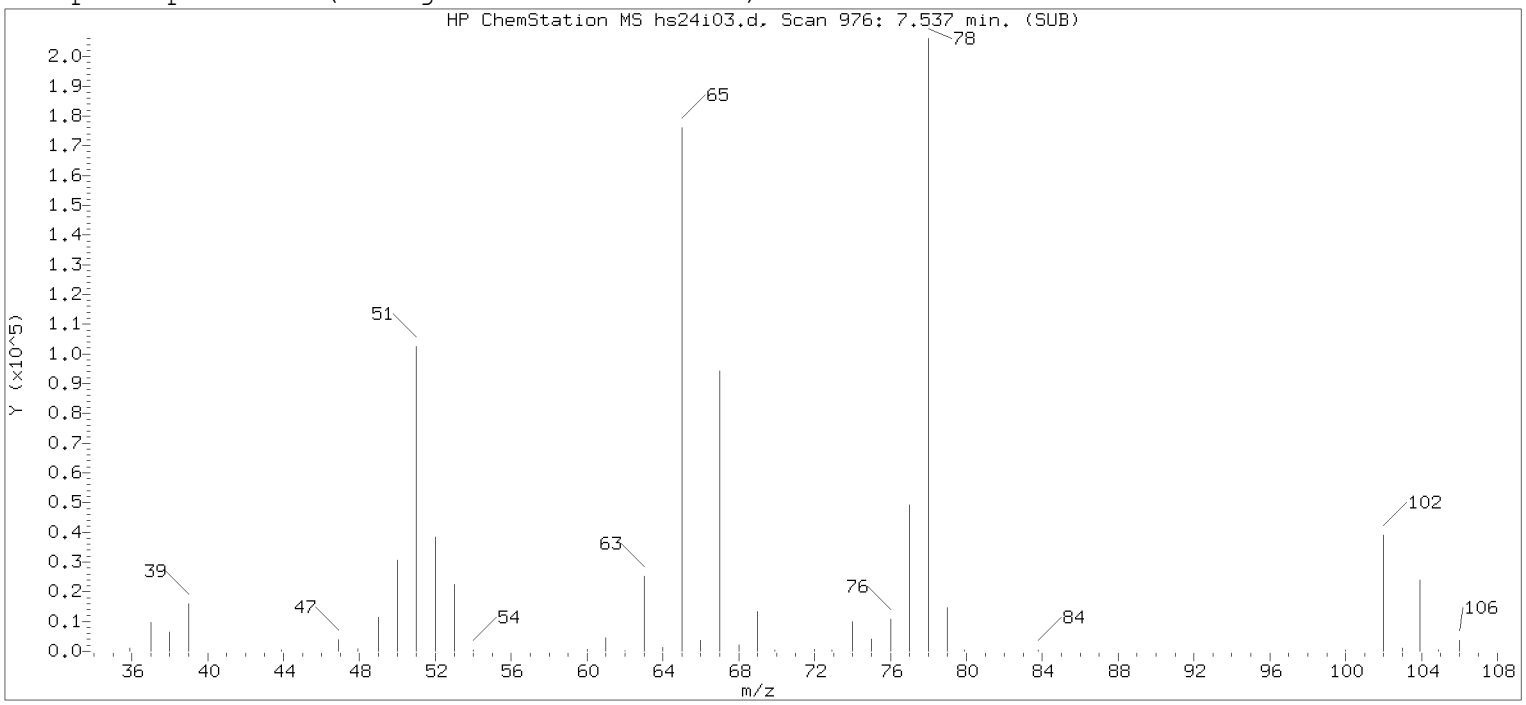
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 119553M
On-Column Amount (ng) : 9.9122
Integration start scan : 963 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

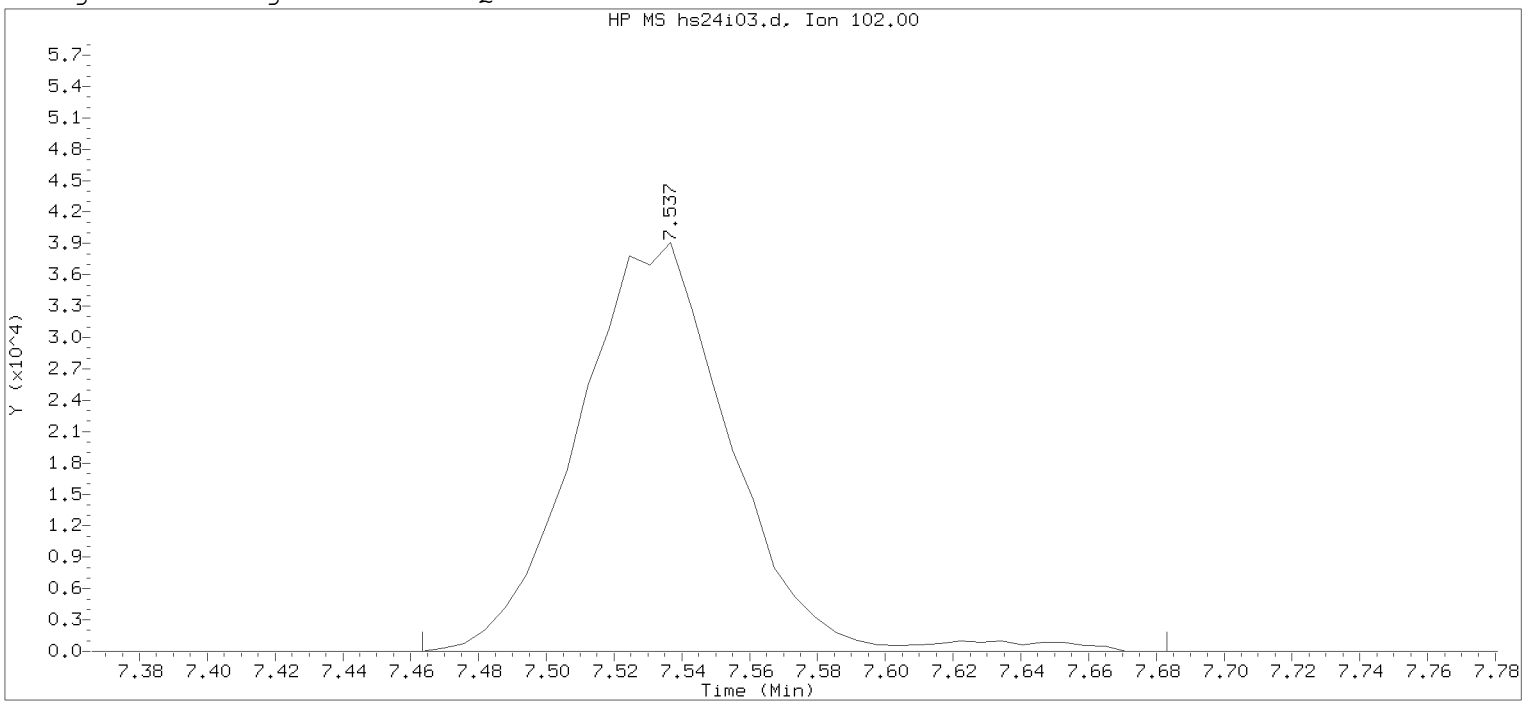
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 122323
On-column Amount (ng) : 10.0921
Integration start scan : 963 Integration stop scan: 999
Y at integration start : 0 Y at integration end: 0

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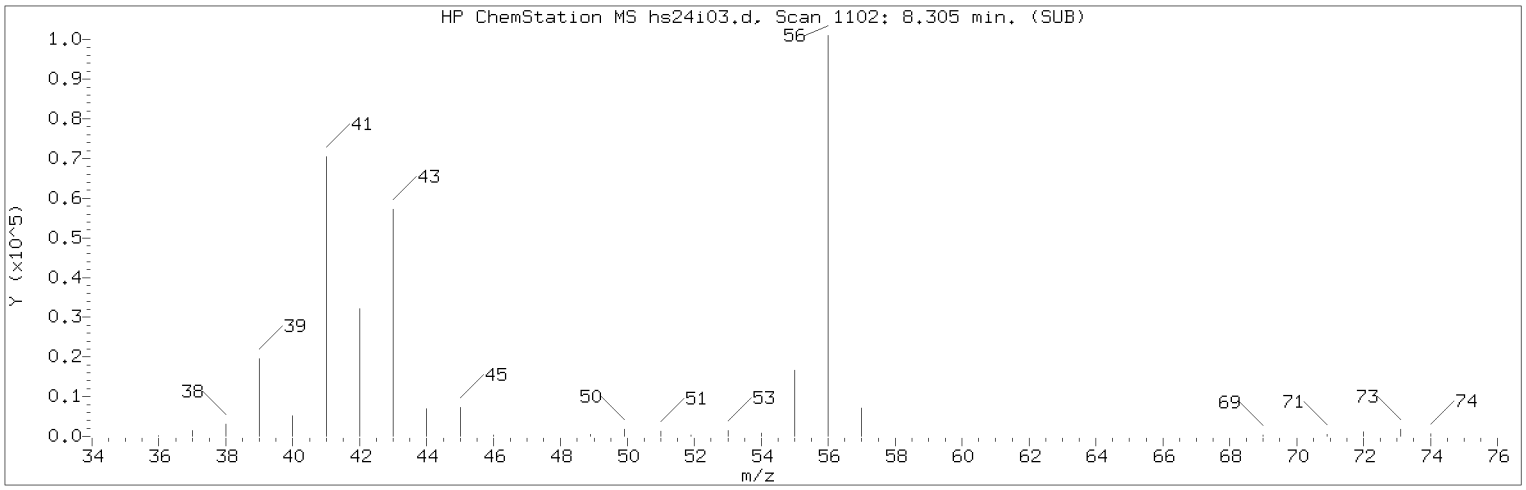
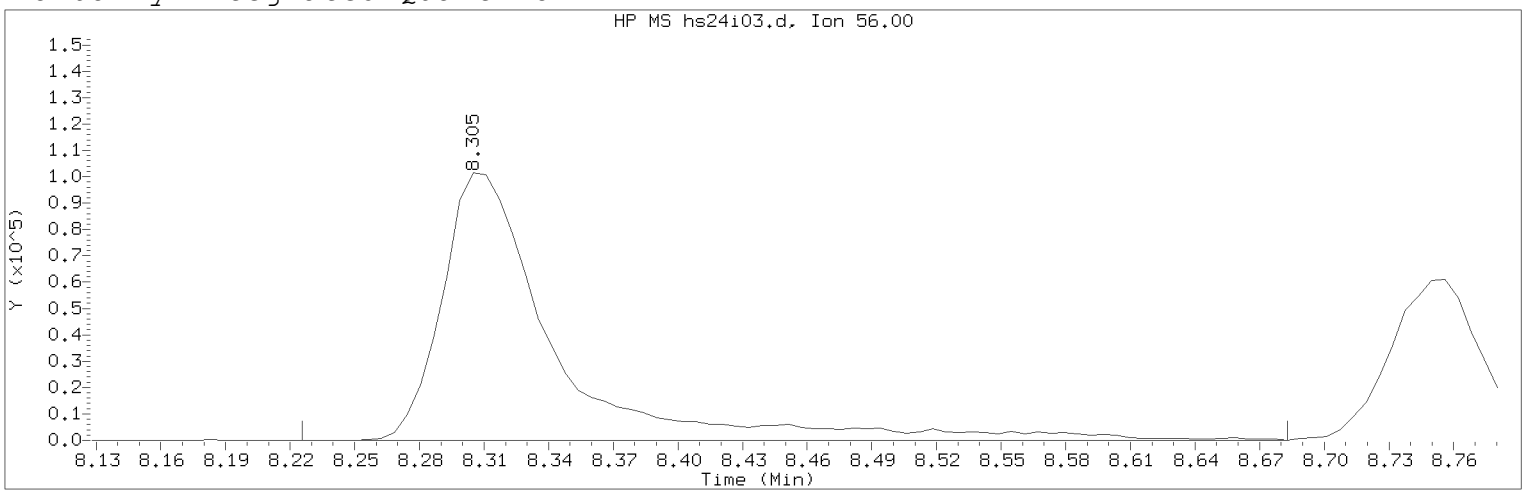
Target 3.5 esignature used. AE20 Page 257

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

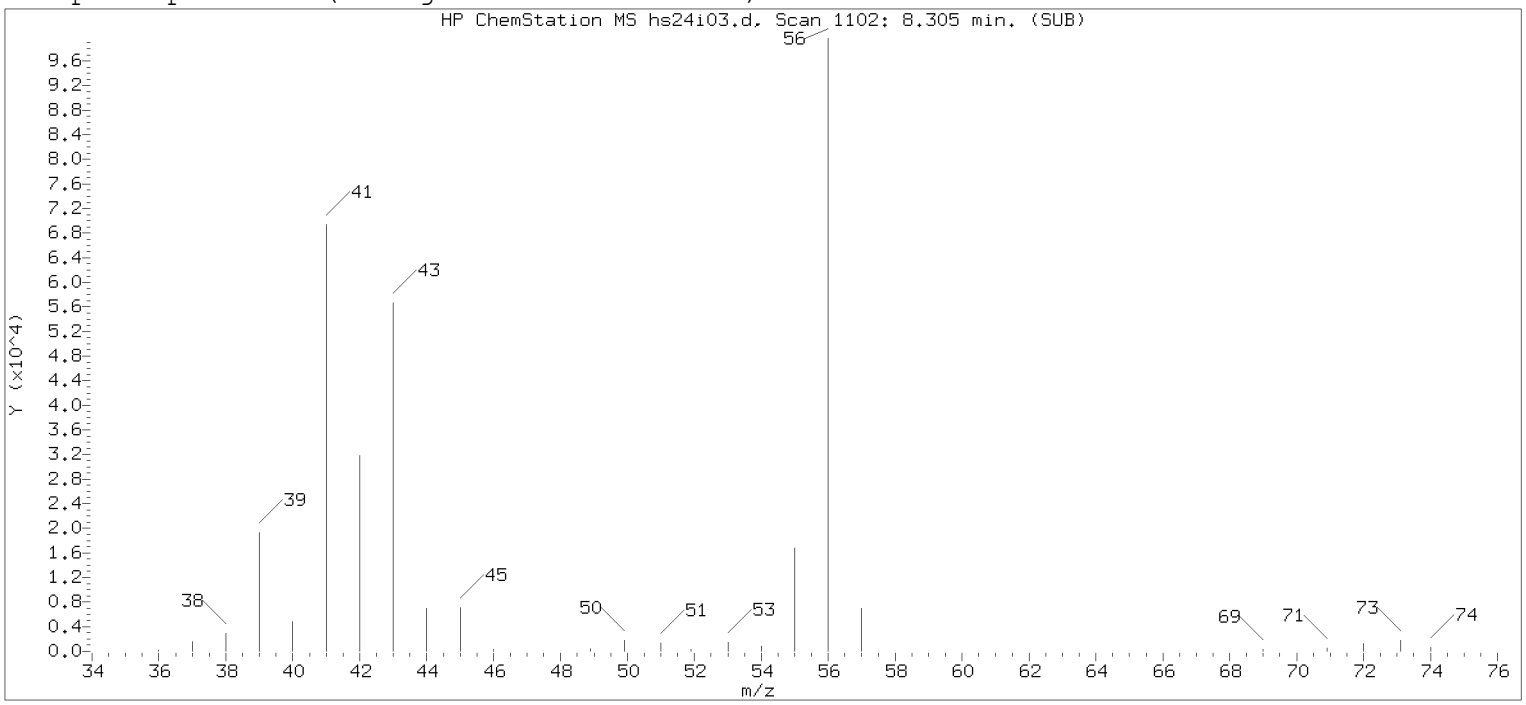
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 371428M
On-Column Amount (ng) : 523.4201
Integration start scan : 1088 Integration stop scan: 1163
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

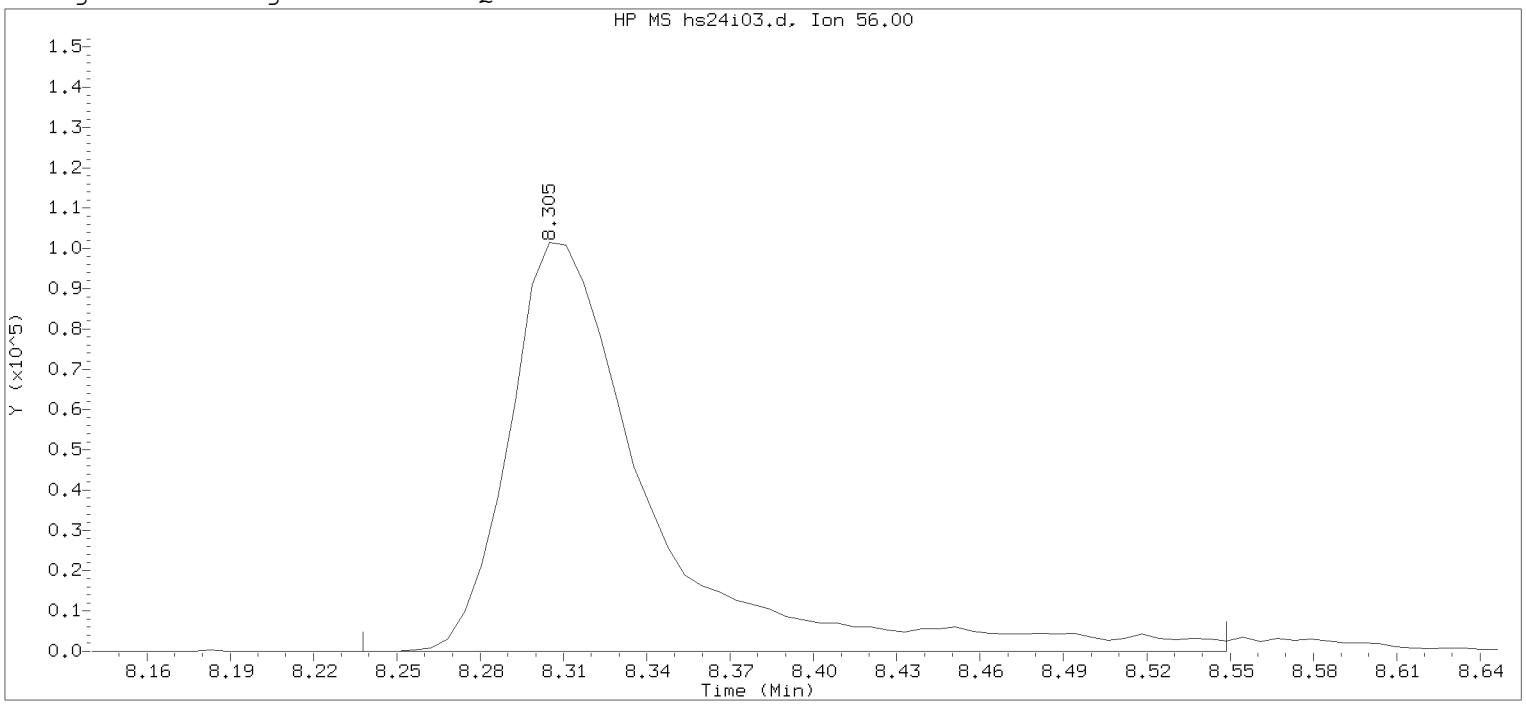
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

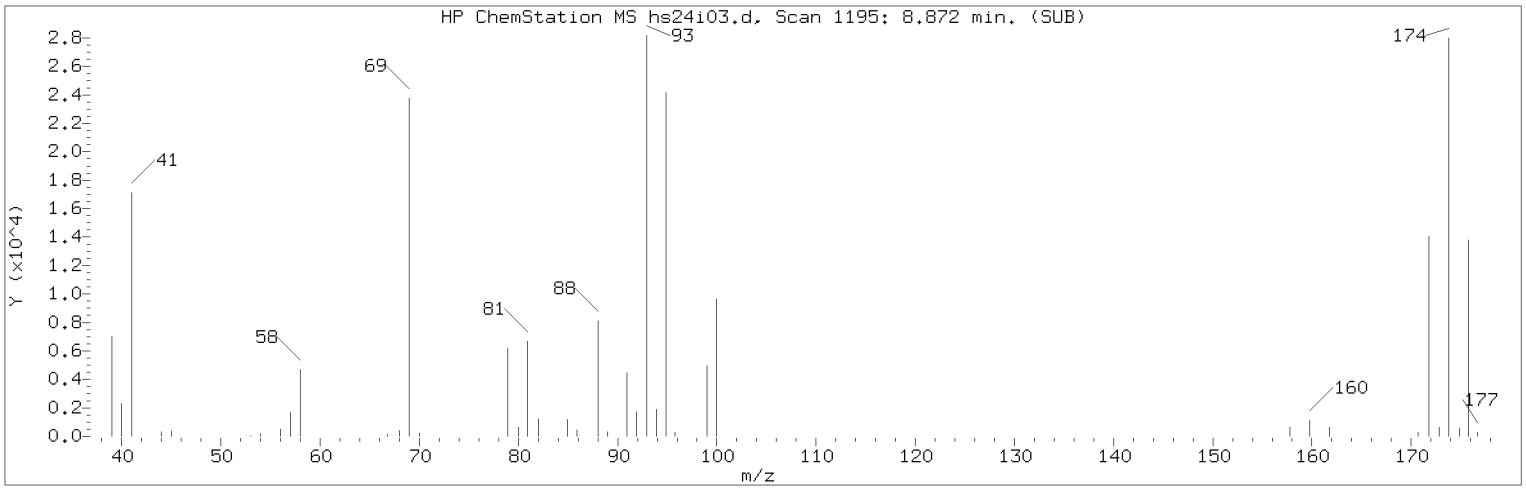
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

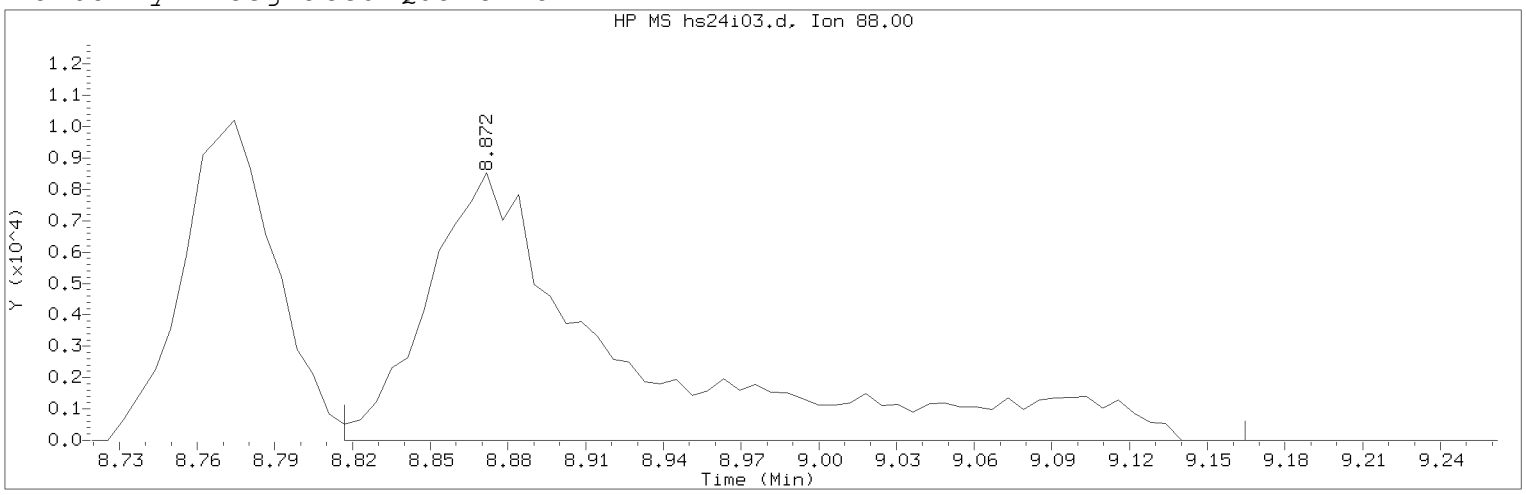
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 359413		
On-column Amount (ng)	: 483.9616		
Integration start scan	: 1090	Integration stop scan:	1141
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

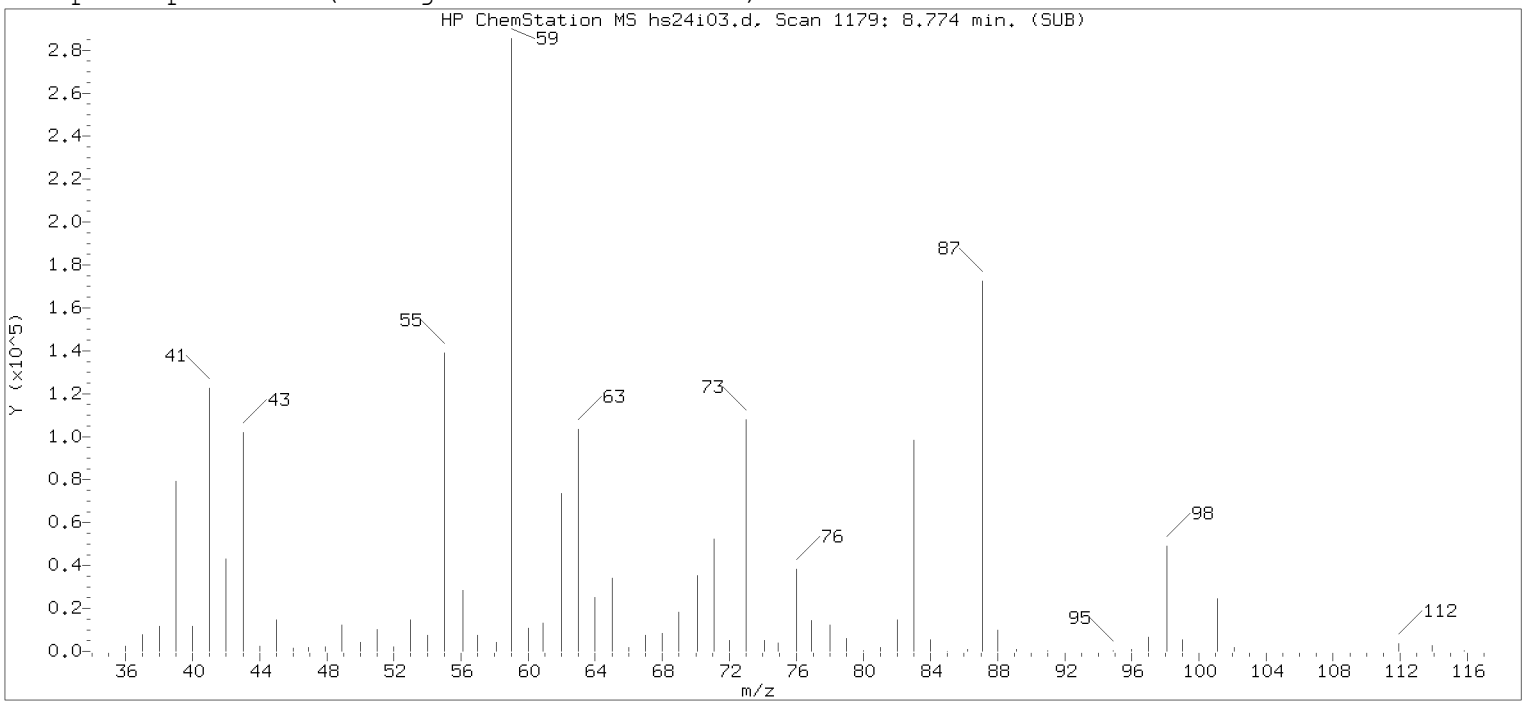
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 45616M
On-Column Amount (ng) : 266.9855
Integration start scan : 1185 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

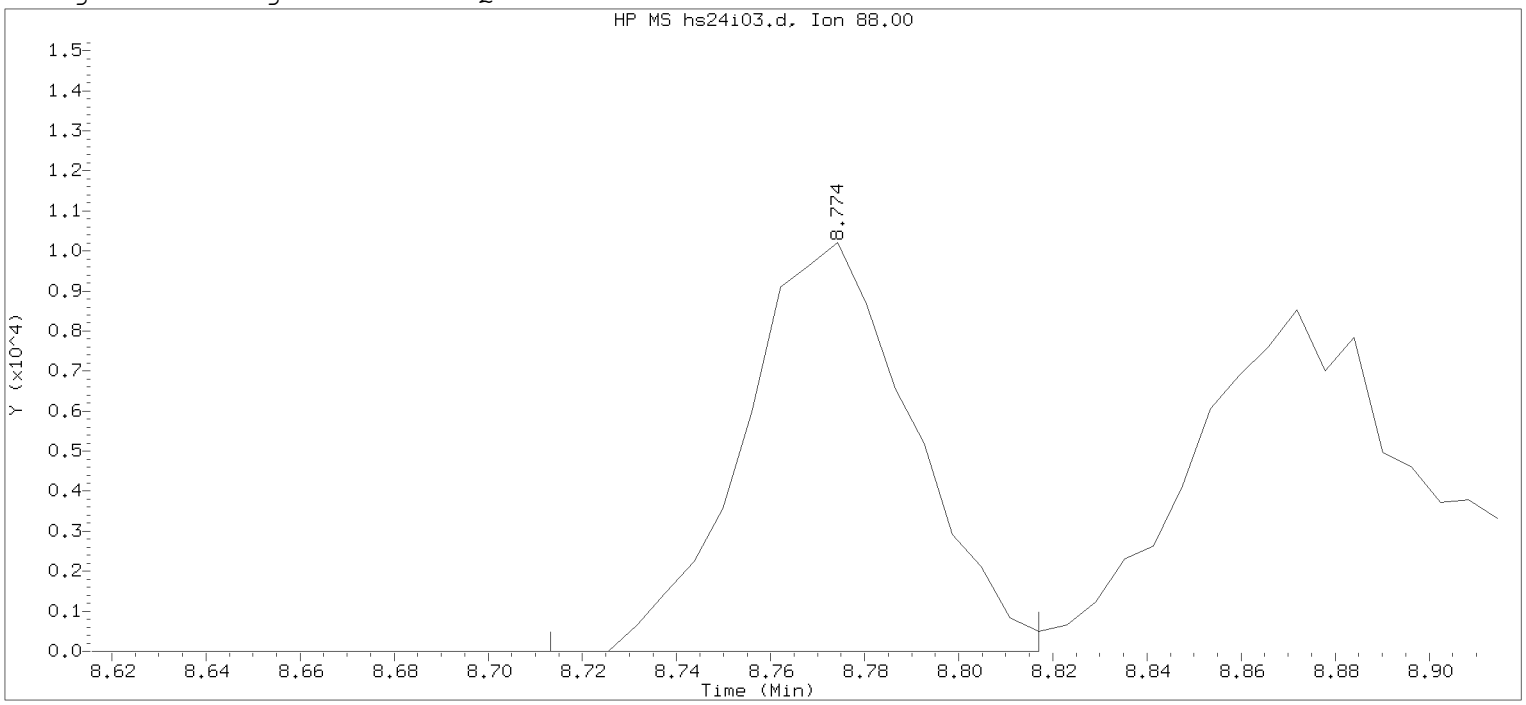
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

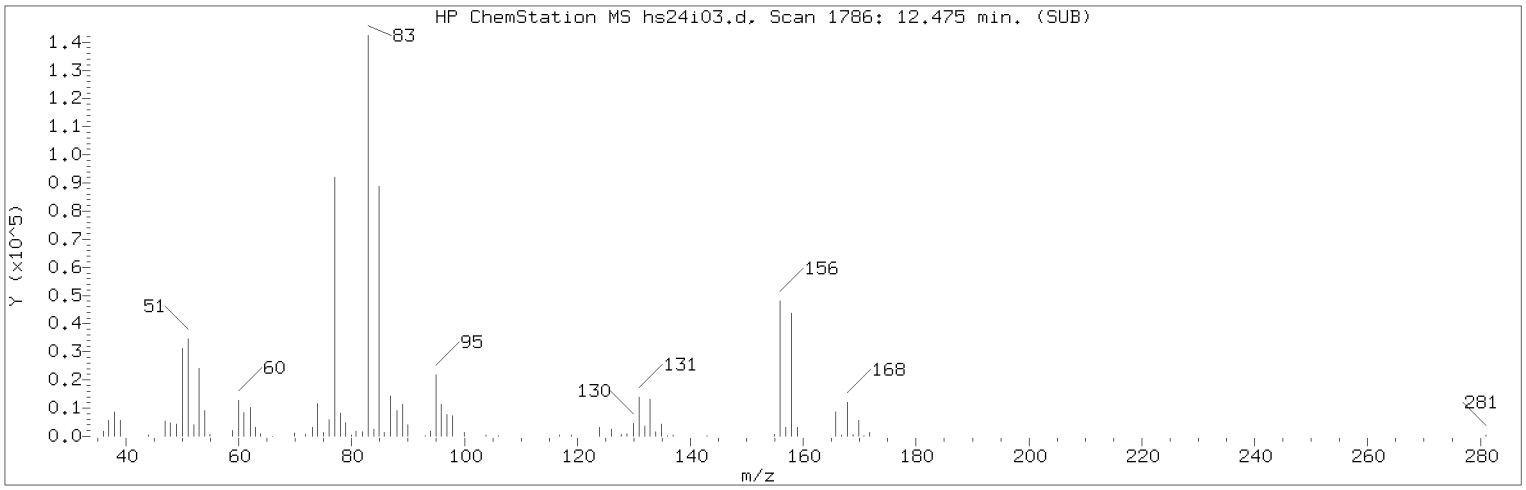
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

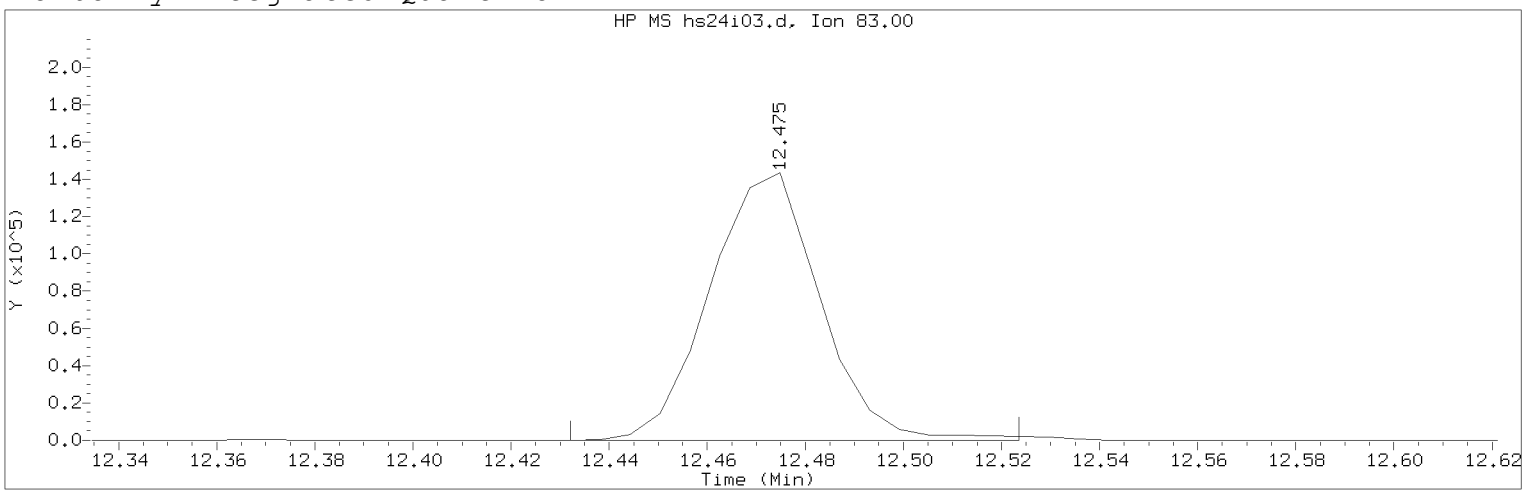
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 25388
On-column Amount (ng) : 205.7756
Integration start scan : 1168 Integration stop scan: 1185
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 261

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

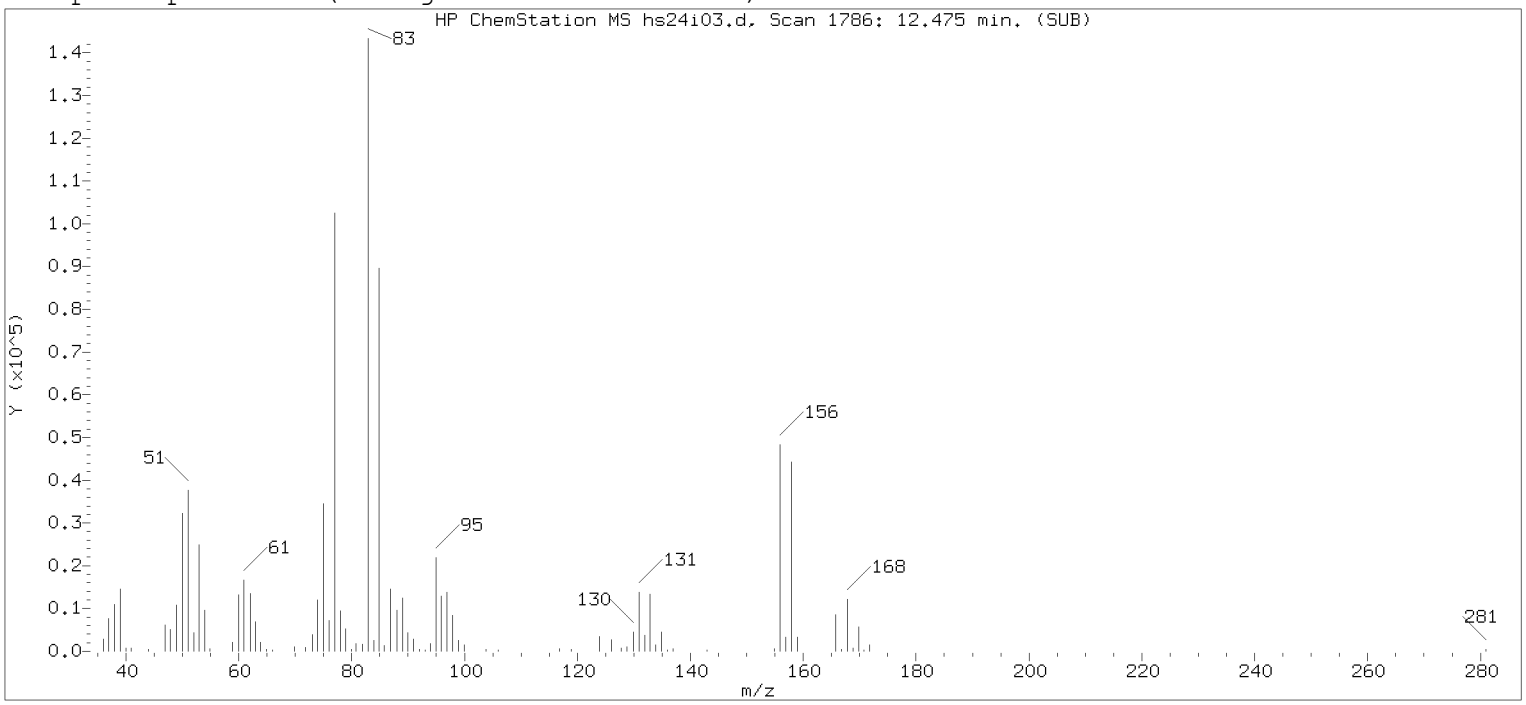
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 224515M
On-Column Amount (ng) : 5.1965
Integration start scan : 1778 Integration stop scan: 1793
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

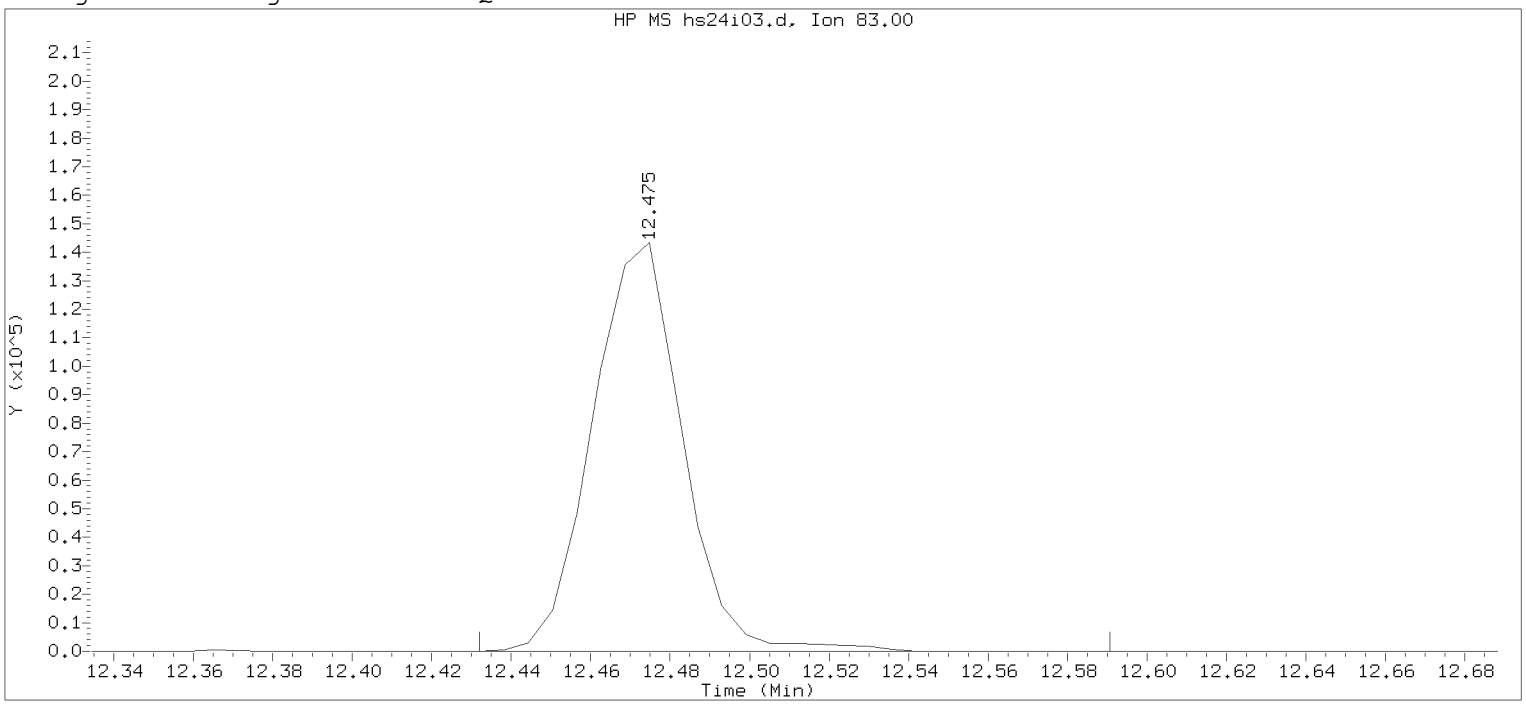
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

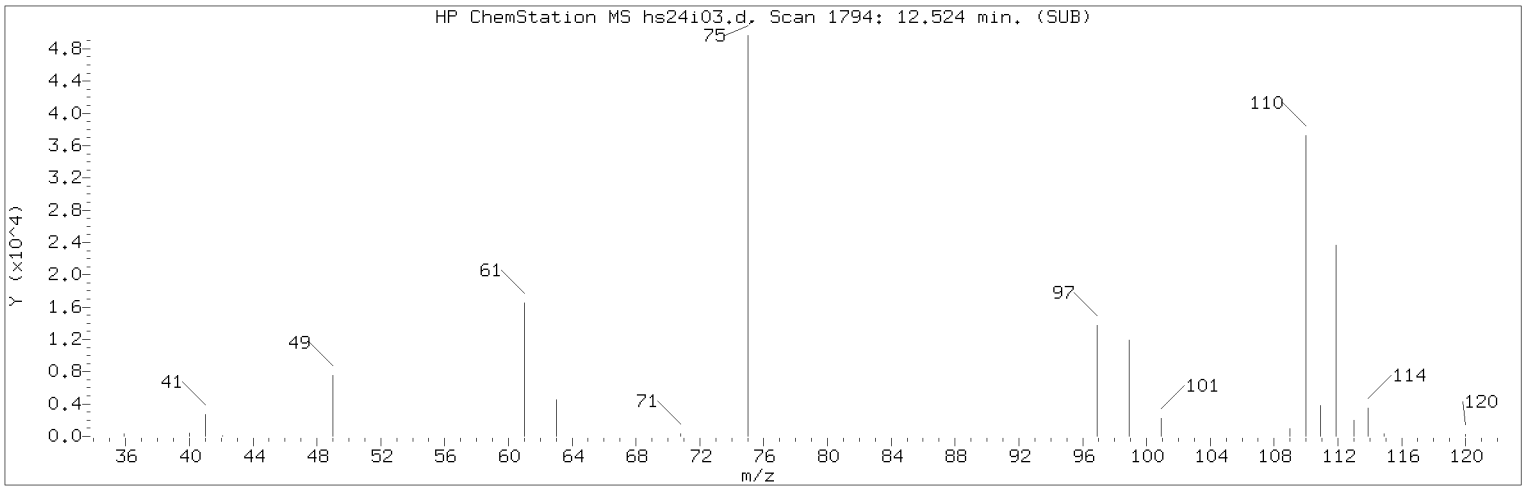
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

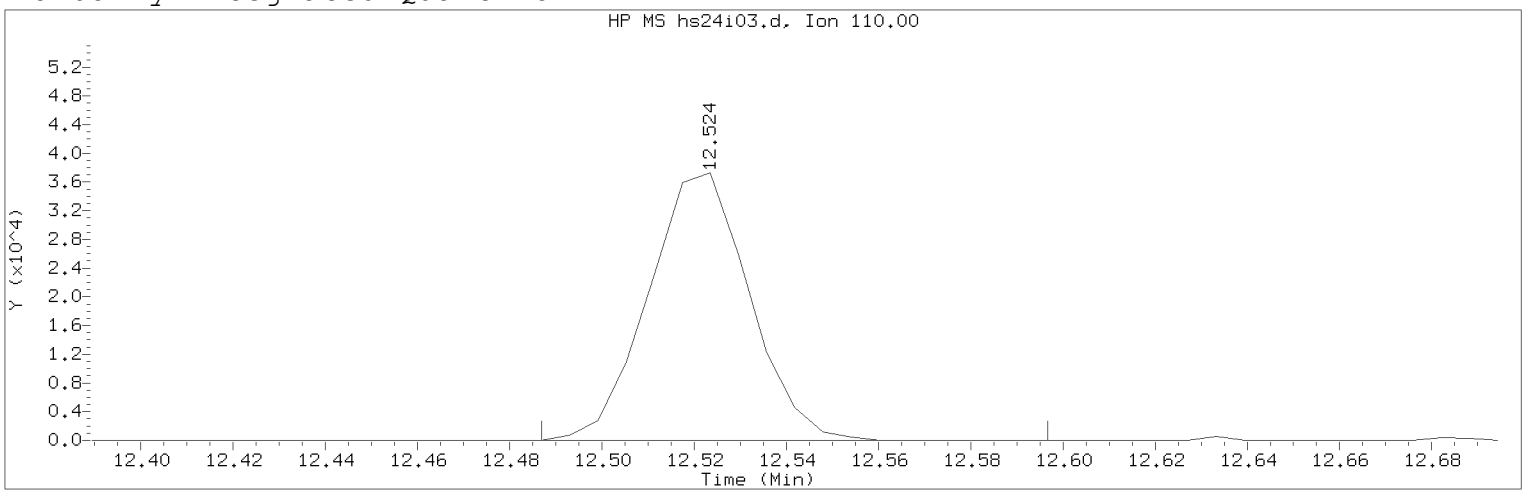
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 225435
On-column Amount (ng) : 4.9474
Integration start scan : 1778 Integration stop scan: 1804
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

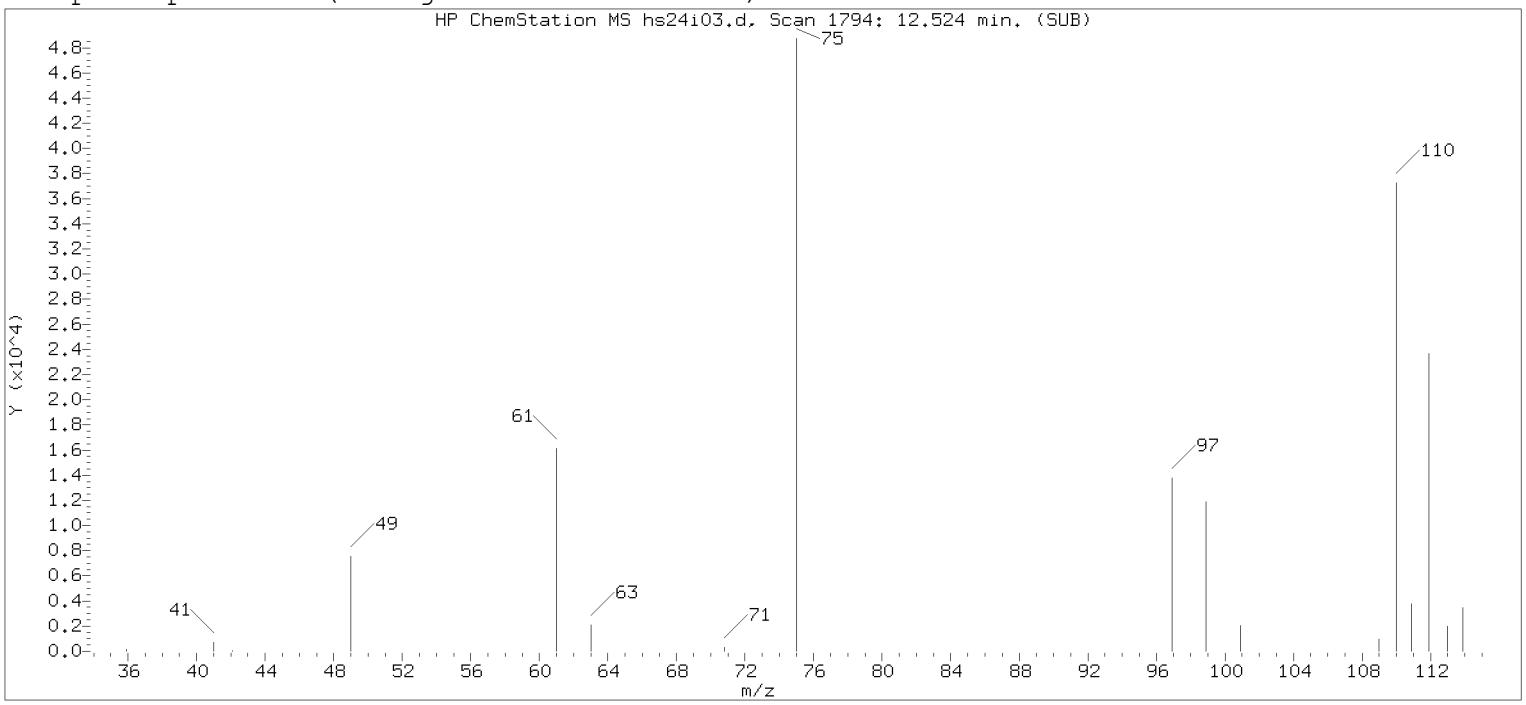
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 56735M
On-Column Amount (ng) : 5.0793
Integration start scan : 1787 Integration stop scan: 1805
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

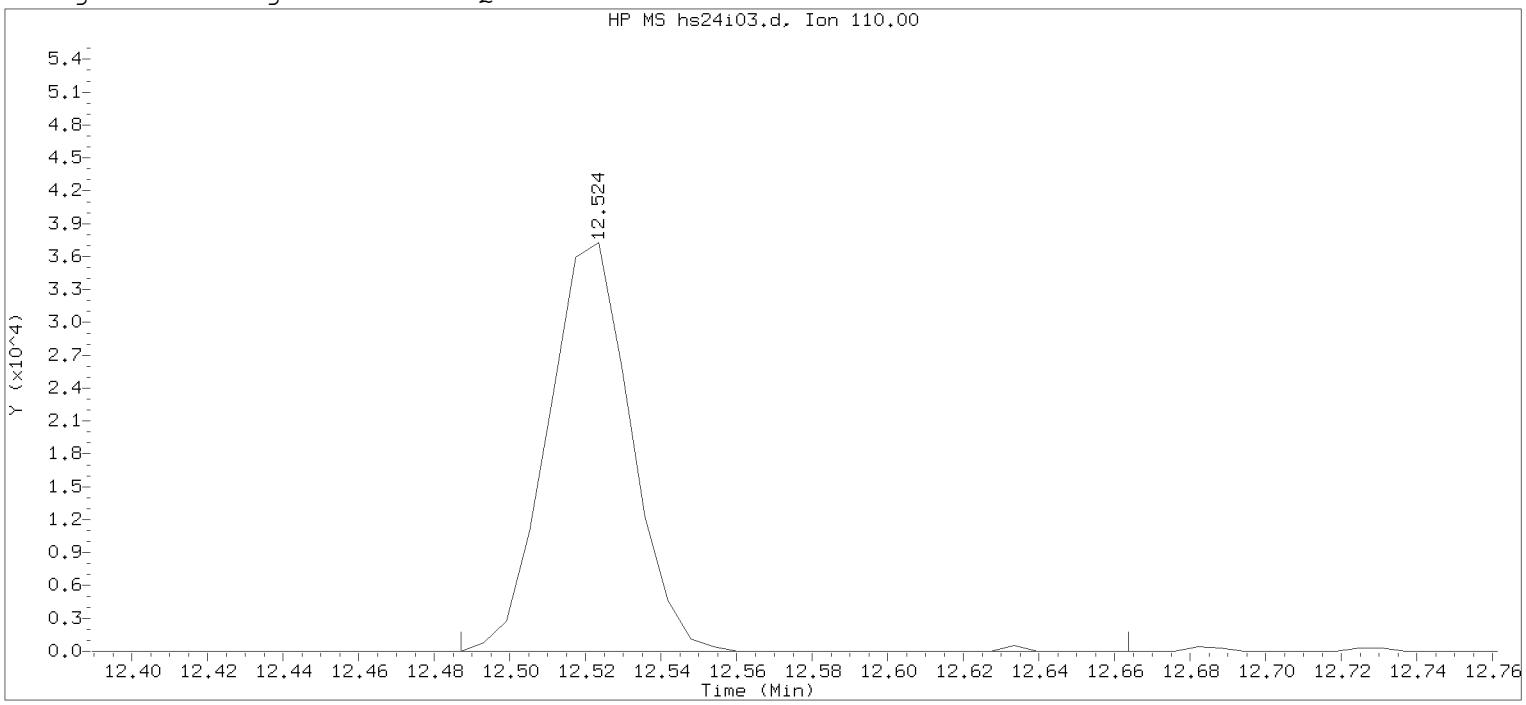
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



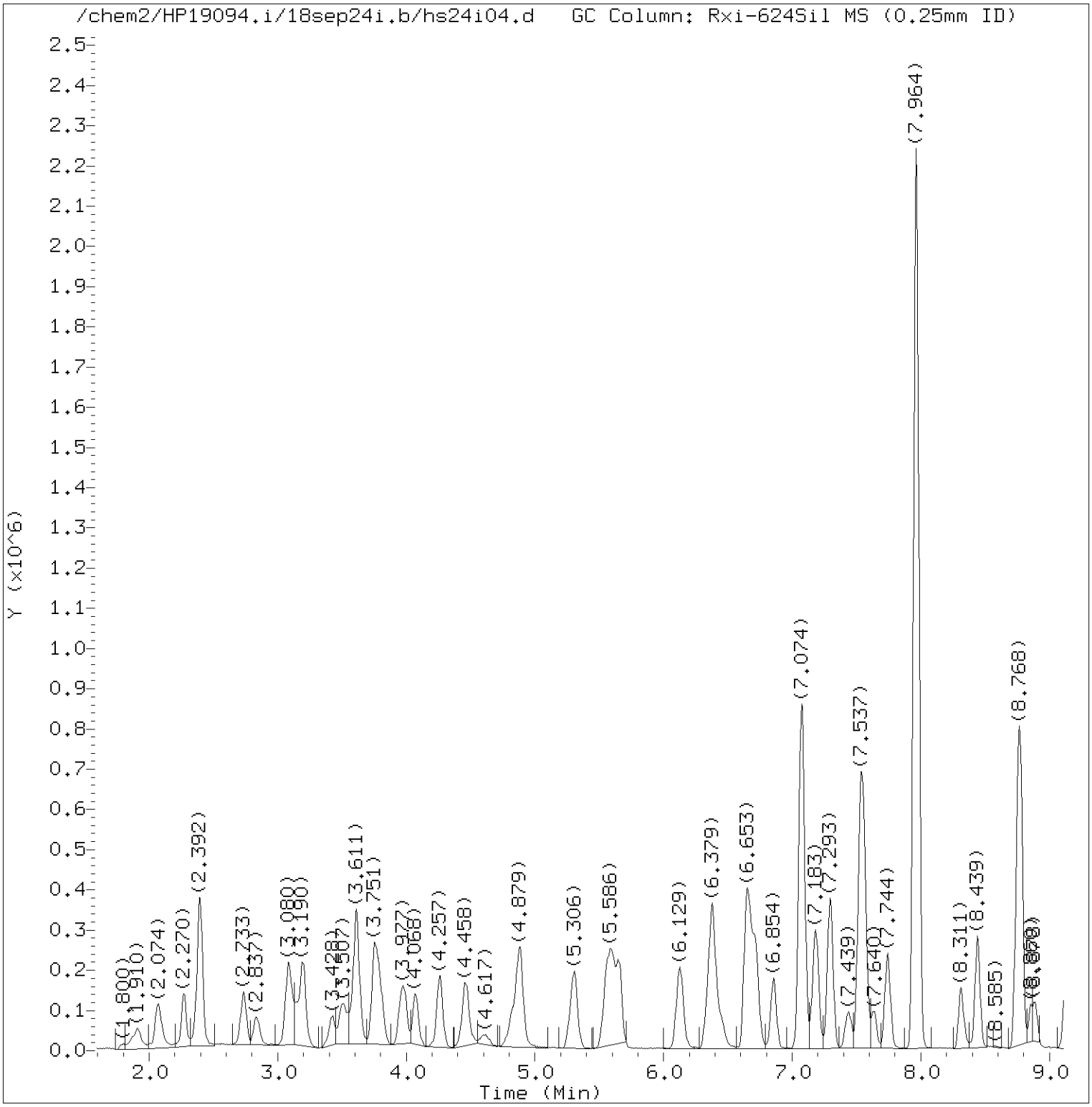
Data File: /chem2/HP19094.i/18sep24i.b/hs24i03.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:11 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 56920
On-column Amount (ng) : 5.0340
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

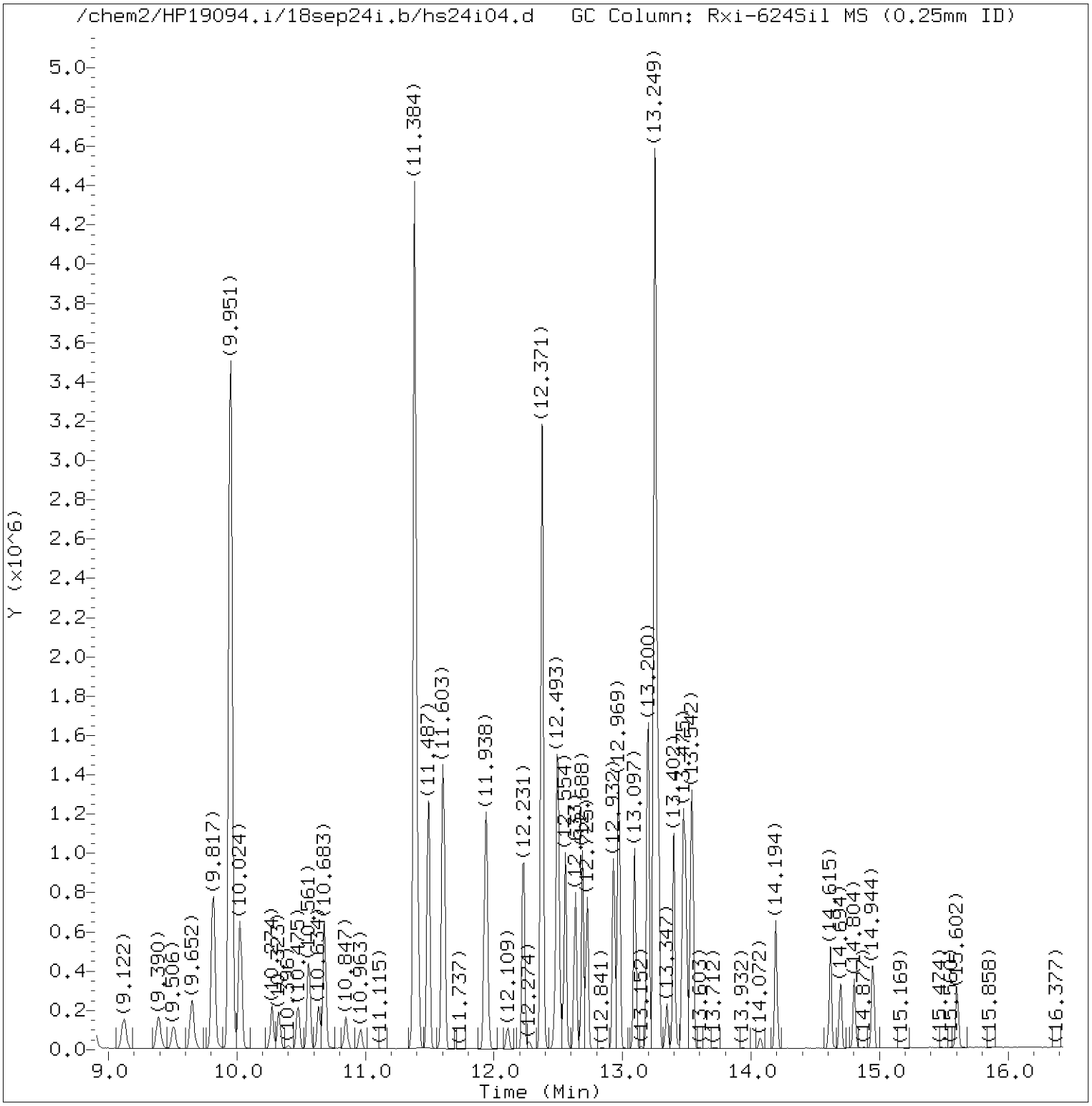
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	212842	1.965
2) Chloromethane	(2)	2.270	50	206767	1.949
5) Vinyl Chloride	(2)	2.392	62	192690	1.940
6) 1,3-Butadiene	(2)	2.392	39	223122M	1.983
7) Bromomethane	(2)	2.733	94	152532	1.975
8) Chloroethane	(2)	2.830	64	118265	1.963
9) Dichlorofluoromethane	(2)	3.080	67	286031	1.996
10) Trichlorofluoromethane	(2)	3.141	101	245427M	1.956
11) Ethyl ether	(2)	3.416	59	85465M	2.009
12) Freon 123a	(2)	3.507	67	159597	2.007
13) Acrolein	(1)	3.611	56	610220	93.000
15) 1,1-Dichloroethene	(2)	3.751	96	110543	2.034
16) Freon 113	(2)	3.781	101	129533	2.023
14) Acetone	(1)	3.800	43	167715M	19.030
17) Methyl Iodide	(2)	3.958	142	223559	1.974
18) Carbon Disulfide	(2)	4.074	76	335903	1.943
21) Methyl Acetate	(1)	4.233	43	48985	1.980
22) Allyl Chloride	(2)	4.257	41	207468	2.009
23) Methylene Chloride	(2)	4.452	84	117905	1.923
26)*t-Butyl Alcohol-d10	(1)	4.476	65	147863M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	104728M	41.495
29) Acrylonitrile	(1)	4.812	53	105857	9.301
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	226282	2.025
31) trans-1,2-Dichloroethene	(2)	4.885	96	119713	1.952
32) n-Hexane	(2)	5.306	57	193515	1.984
33) 1,1-Dichloroethane	(2)	5.543	63	231472	1.982
34) di-Isopropyl Ether	(2)	5.592	45	415509	2.004
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	211615	2.014
40) 1,2-Dichloroethene (Total)	(2)		96	253223	3.922
37) Ethyl t-butyl ether	(2)	6.129	59	334132M	2.032
38) 2-Butanone	(1)	6.348	43	265202	18.383
39) cis-1,2-Dichloroethene	(2)	6.379	96	133510	1.970
41) 2,2-Dichloropropane	(2)	6.385	77	170897	2.049
42) Propionitrile	(1)	6.446	54	150231	38.365
45) Methacrylonitrile	(1)	6.647	67	260058	18.418
47) Bromochloromethane	(2)	6.708	128	58062	2.028
48) Tetrahydrofuran	(1)	6.720	71	72155	18.814
49) Chloroform	(2)	6.854	83	215747	1.987

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.074	113	701118	10.038
50)$Dibromofluoromethane	(2)	7.074	111	720366	10.019
51) 1,1,1-Trichloroethane	(2)	7.086	97	186862	2.012
52) Cyclohexane	(2)	7.189	56	243250	2.007
52) Cyclohexane	(2)	7.183	84	203326	2.034
52) Cyclohexane	(2)	7.183	69	71385	1.998
54) Carbon Tetrachloride	(2)	7.293	117	159920	2.005
55) 1,1-Dichloropropene	(2)	7.293	75	176849	2.008
56) Isobutyl Alcohol	(1)	7.439	41	94332	96.599
57)$1,2-Dichloroethane-d4	(2)	7.537	102	125039M	10.268
57)$1,2-Dichloroethane-d4	(2)	7.531	65	589363	10.006
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76732	9.839
58) Benzene	(2)	7.561	78	506487	1.947
59) 1,2-Dichloroethane	(2)	7.634	62	114381	1.911
60) t-Amyl methyl ether	(2)	7.744	73	274629	2.014
62) n-Heptane	(2)	7.964	43	198879M	1.978
63)*Fluorobenzene	(2)	7.964	96	2771401	10.000
65) n-Butanol	(1)	8.311	56	160778M	194.877
67) Trichloroethene	(2)	8.439	95	134309	2.016
69) Methylcyclohexane	(2)	8.750	83	251052	1.996
70) 1,2-Dichloropropane	(2)	8.787	63	125013	1.981
71) Methyl Methacrylate	(1)	8.854	69	48112	1.841
72) 1,4-Dioxane	(1)	8.866	88	21749M	109.489
73) Dibromomethane	(2)	8.890	93	53023	2.024
74) Bromodichloromethane	(2)	9.122	83	137803	1.942
76) 2-Nitropropane	(1)	9.390	41	134032	18.105
80) cis-1,3-Dichloropropene	(2)	9.652	75	163843	1.983
81) 4-Methyl-2-Pentanone	(1)	9.817	43	659459	18.377
82)$Toluene-d8	(3)	9.951	98	2784763	10.112
82)$Toluene-d8	(3)	9.951	100	1806074	10.161
83) Toluene	(3)	10.024	92	317158	1.997
85) 1,3-Dichloropropene (total)	(3)		75	285594	3.973
84) trans-1,3-Dichloropropene	(3)	10.274	75	121751	1.990
86) Ethyl Methacrylate	(3)	10.323	69	106995	2.041
88) 1,1,2-Trichloroethane	(3)	10.475	97	73815	2.020
89) Tetrachloroethene	(3)	10.561	166	144328	2.012
90) 1,3-Dichloropropane	(3)	10.634	76	132513	2.046
91) 2-Hexanone	(1)	10.683	43	448236	18.350

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	88599	2.023
95) 1,2-Dibromoethane	(3)	10.963	107	66850	1.952
96) 1-Chlorohexane	(3)	11.384	91	182251	1.924
97)*Chlorobenzene-d5	(3)	11.384	117	2139668	10.000
98) Chlorobenzene	(3)	11.408	112	334112	1.983
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	111074	1.998
100) Ethylbenzene	(3)	11.493	91	618859	1.994
101) m+p-Xylene	(3)	11.603	106	460102	3.997
105) Xylene (Total)	(3)		106	680646	6.001
104) o-Xylene	(3)	11.932	106	220544	2.004
106) Styrene	(3)	11.945	104	354610	2.014
107) Bromoform	(3)	12.109	173	47440	1.971
108) Isopropylbenzene	(3)	12.231	105	599350	1.995
111)$4-Bromofluorobenzene	(3)	12.371	95	1020043	10.174
111)$4-Bromofluorobenzene	(3)	12.377	174	880214	10.110
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	85286M	1.938
114) Bromobenzene	(4)	12.493	156	133526	1.995
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	203595	18.115
116) 1,2,3-Trichloropropane	(4)	12.518	110	22957M	2.017
117) n-Propylbenzene	(4)	12.554	91	721086	1.982
119) 2-Chlorotoluene	(4)	12.633	126	140344	1.989
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	490251	1.989
122) 4-Chlorotoluene	(4)	12.725	126	141279	1.998
125) tert-Butylbenzene	(4)	12.932	134	110083M	2.054
126) Pentachloroethane	(4)	12.969	167	83251	1.990
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	503413	2.001
128) sec-Butylbenzene	(4)	13.097	105	633366	1.983
131) 1,3-Dichlorobenzene	(4)	13.194	146	265730	1.999
132) p-Isopropyltoluene	(4)	13.200	119	529167	2.000
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1109693	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	257515	1.973
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	229342	1.987
136) Benzyl Chloride	(4)	13.347	126	30686M	1.928
138) n-Butylbenzene	(4)	13.493	92	259241	1.974
139) 1,2-Dichlorobenzene	(4)	13.530	146	234578	2.000
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	11053	1.817
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	191417	1.935
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	157858	1.959

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

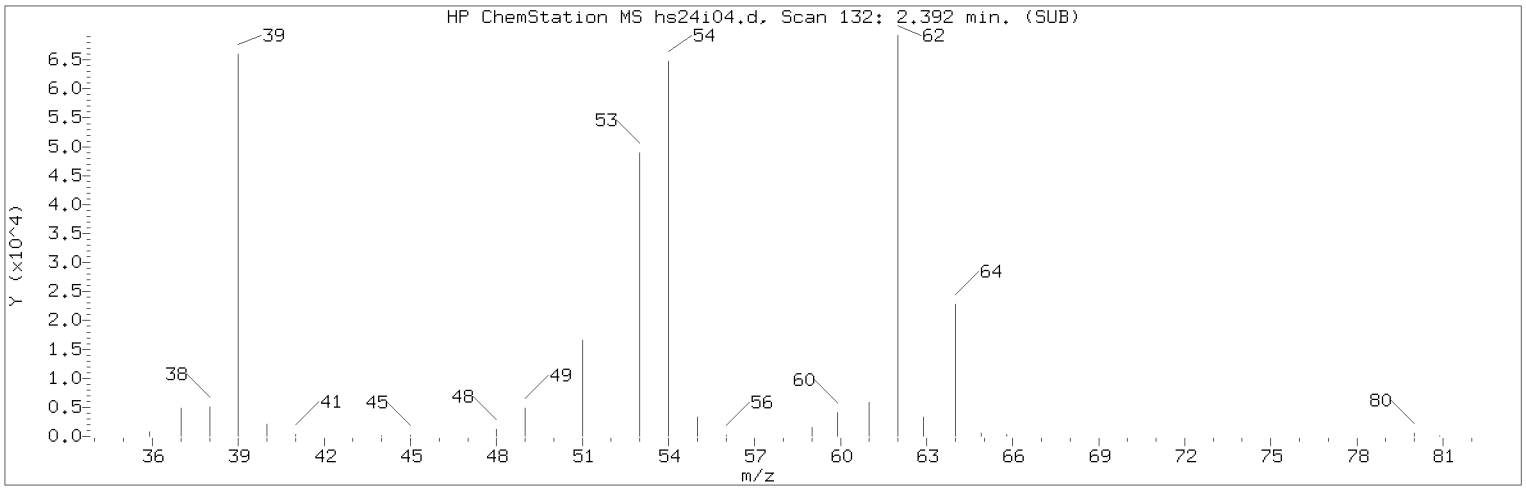
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

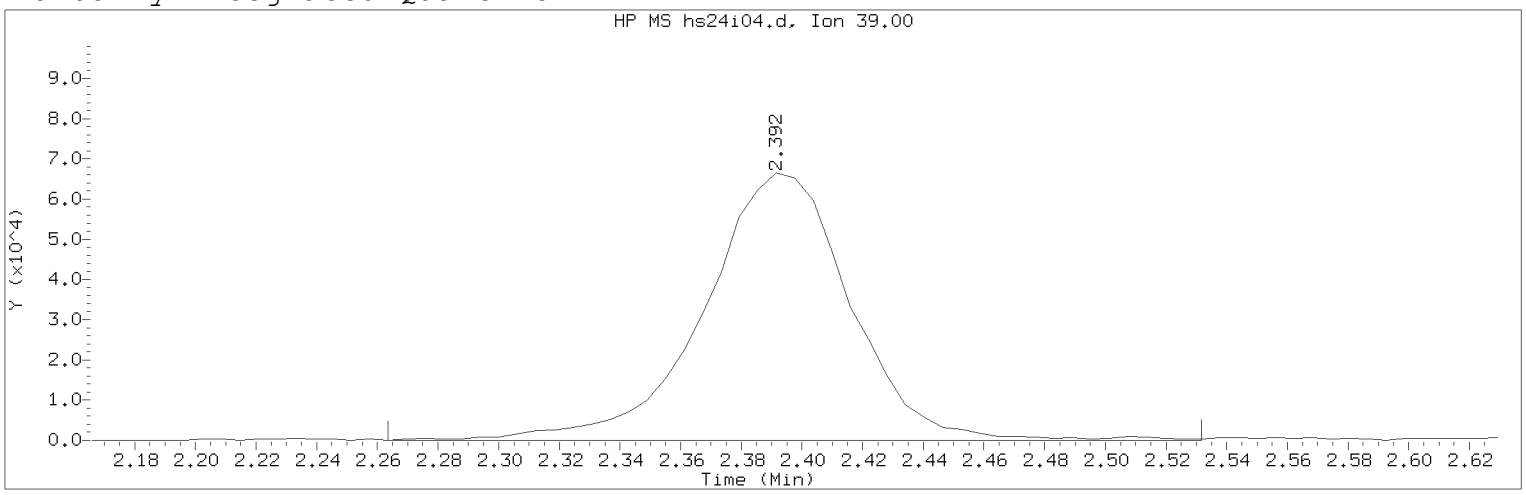
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	59215	1.945
147) Naphthalene	(4)	14.804	128	252080	1.977
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	128555	1.941

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

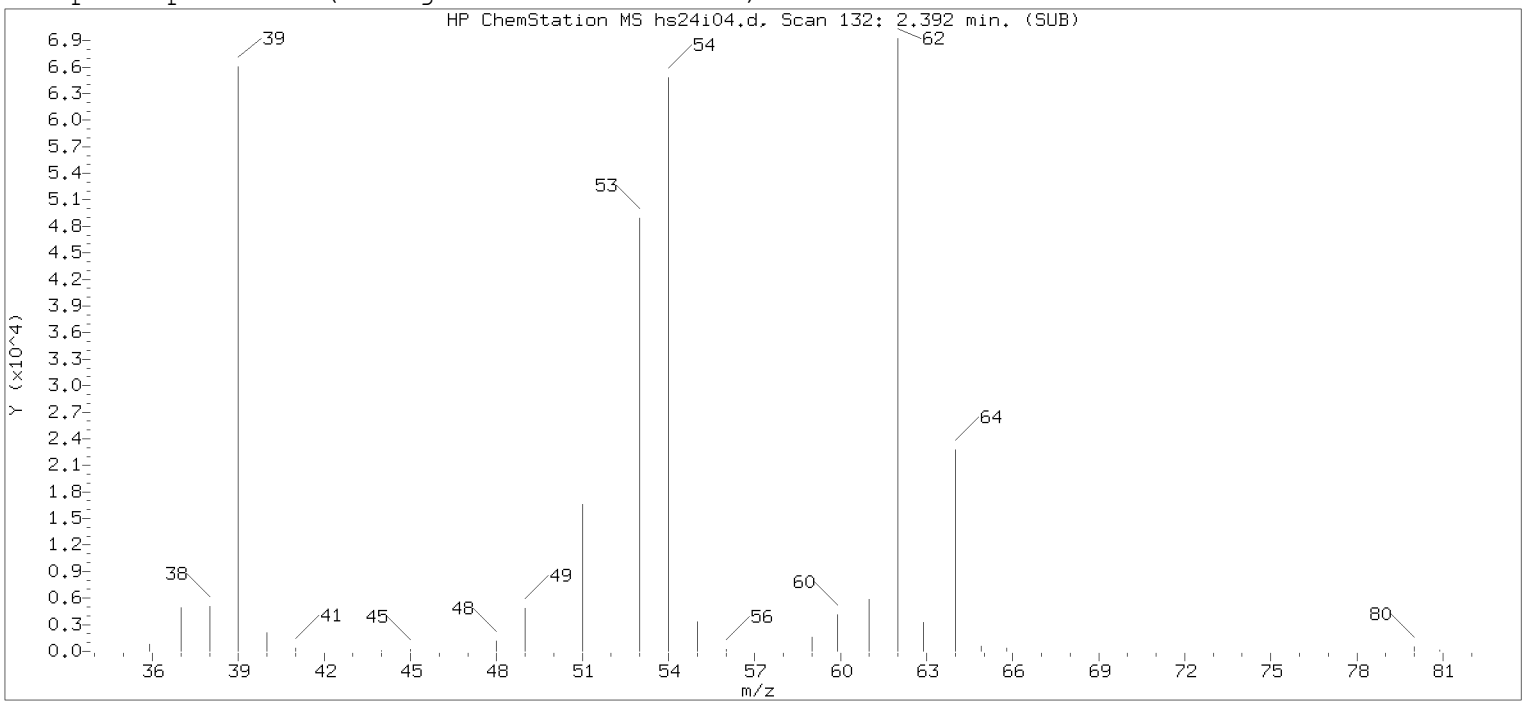
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 223122M
On-Column Amount (ng) : 1.9830
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

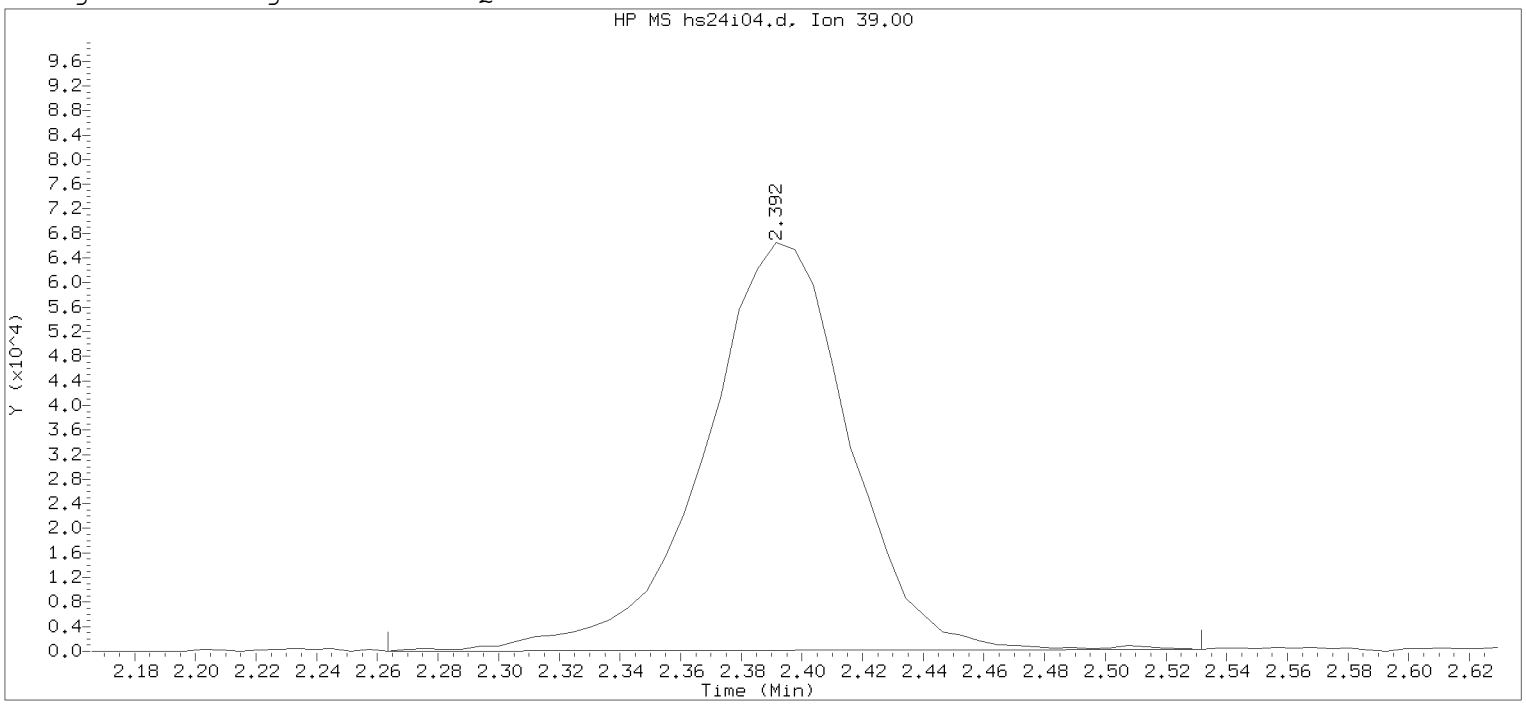
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

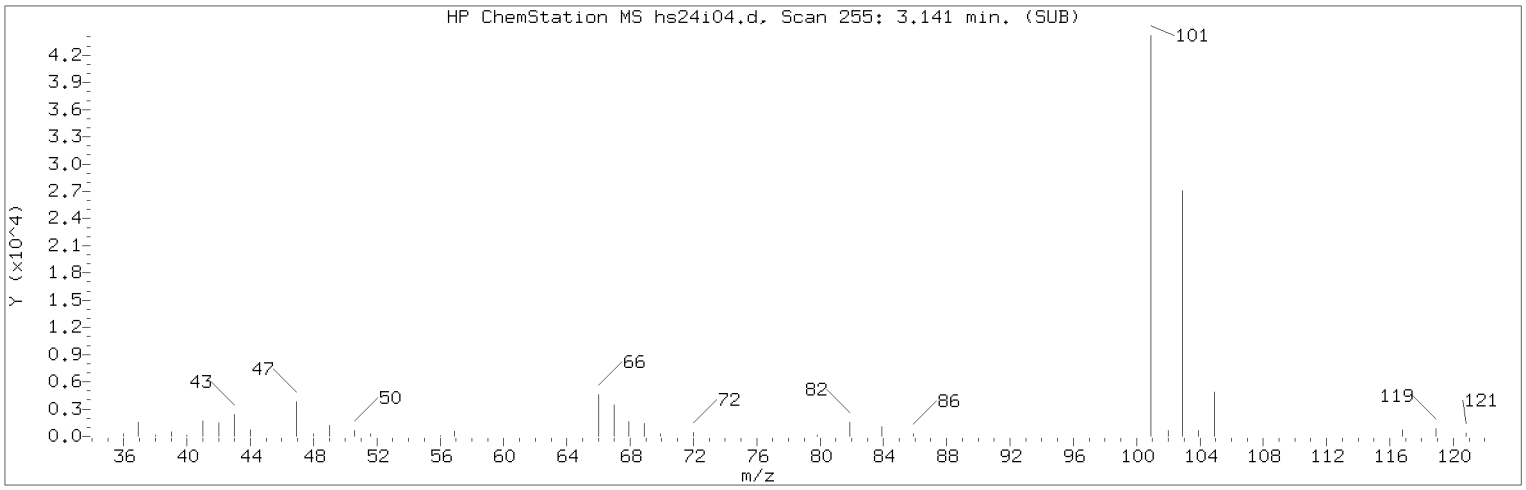
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

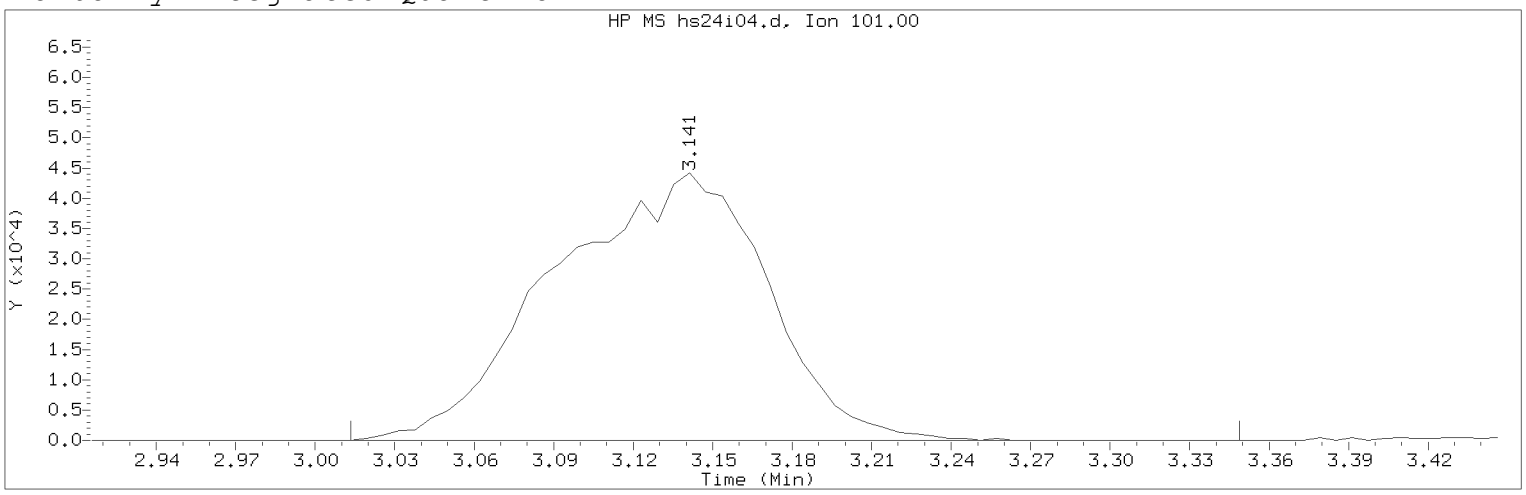
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area : 220168
On-column Amount (ng) : 1.9899
Integration start scan : 110 Integration stop scan: 154
Y at integration start : 0 Y at integration end: 359

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

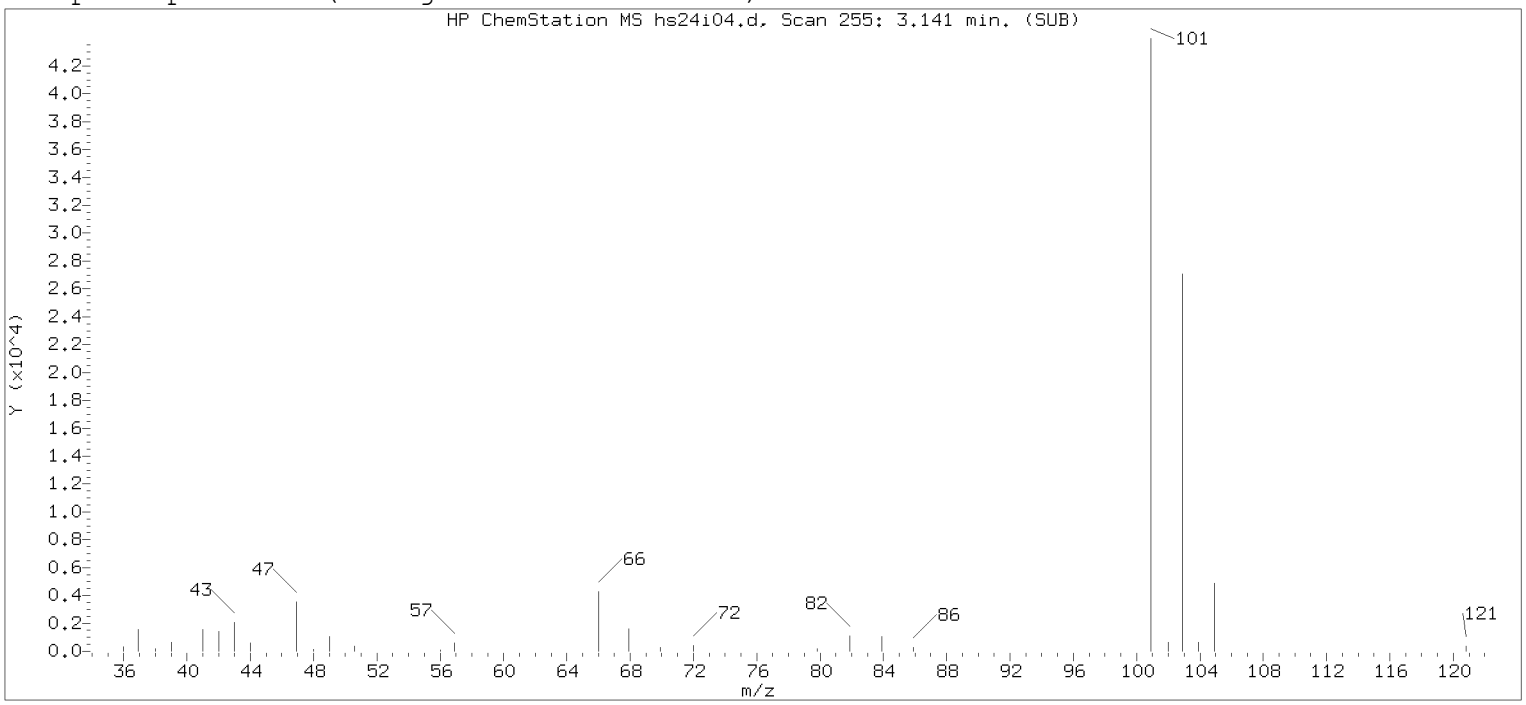
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area (flag) : 245427M
On-Column Amount (ng) : 1.9558
Integration start scan : 233 Integration stop scan: 288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

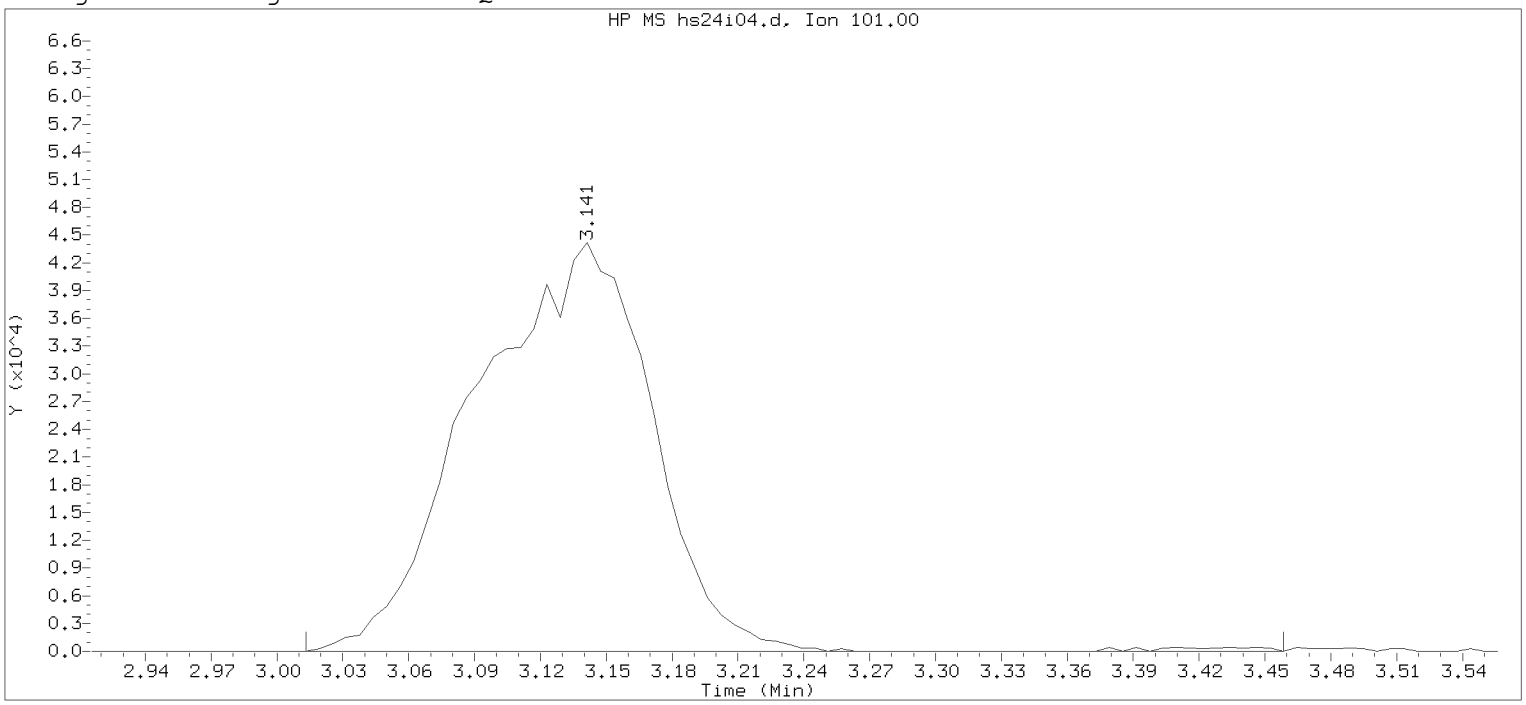
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

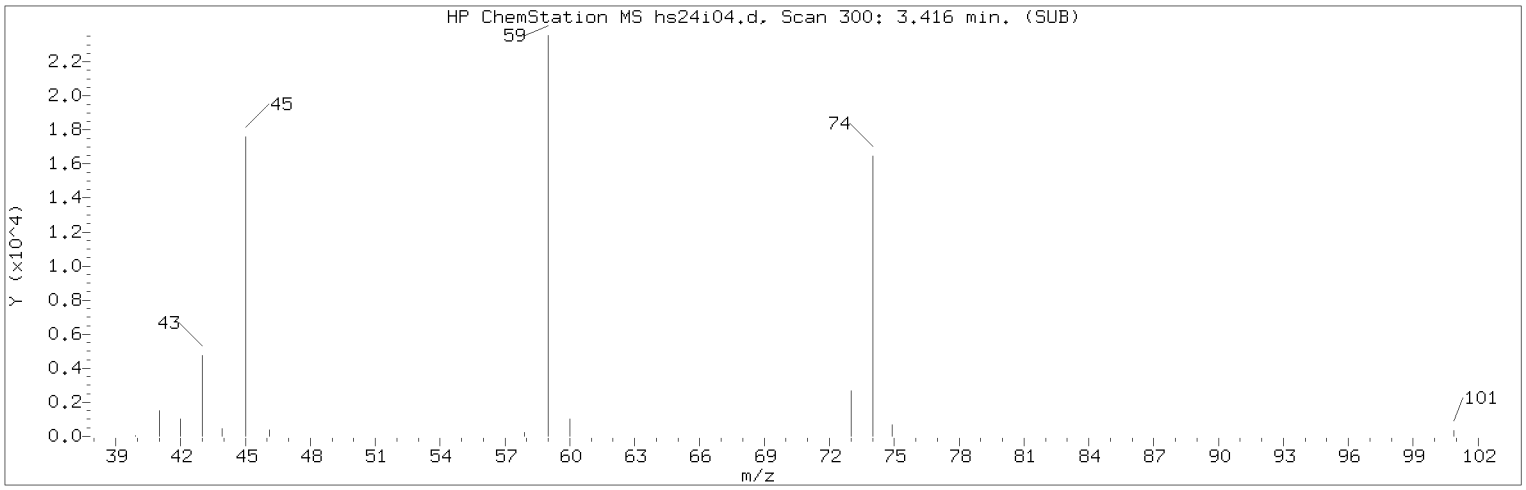
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

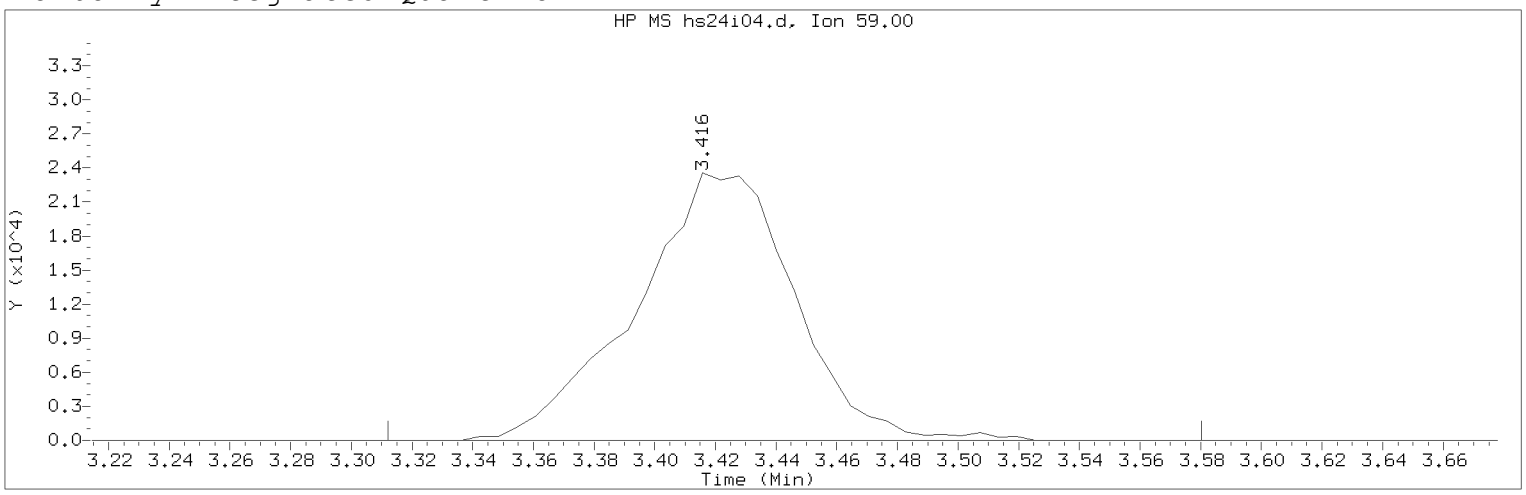
Compound Number : 10
Compound Name : Trichlorofluoromethane
Scan Number : 255
Retention Time (minutes): 3.141
Quant Ion : 101.00
Area : 246940
On-column Amount (ng) : 1.9182
Integration start scan : 233 Integration stop scan: 306
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

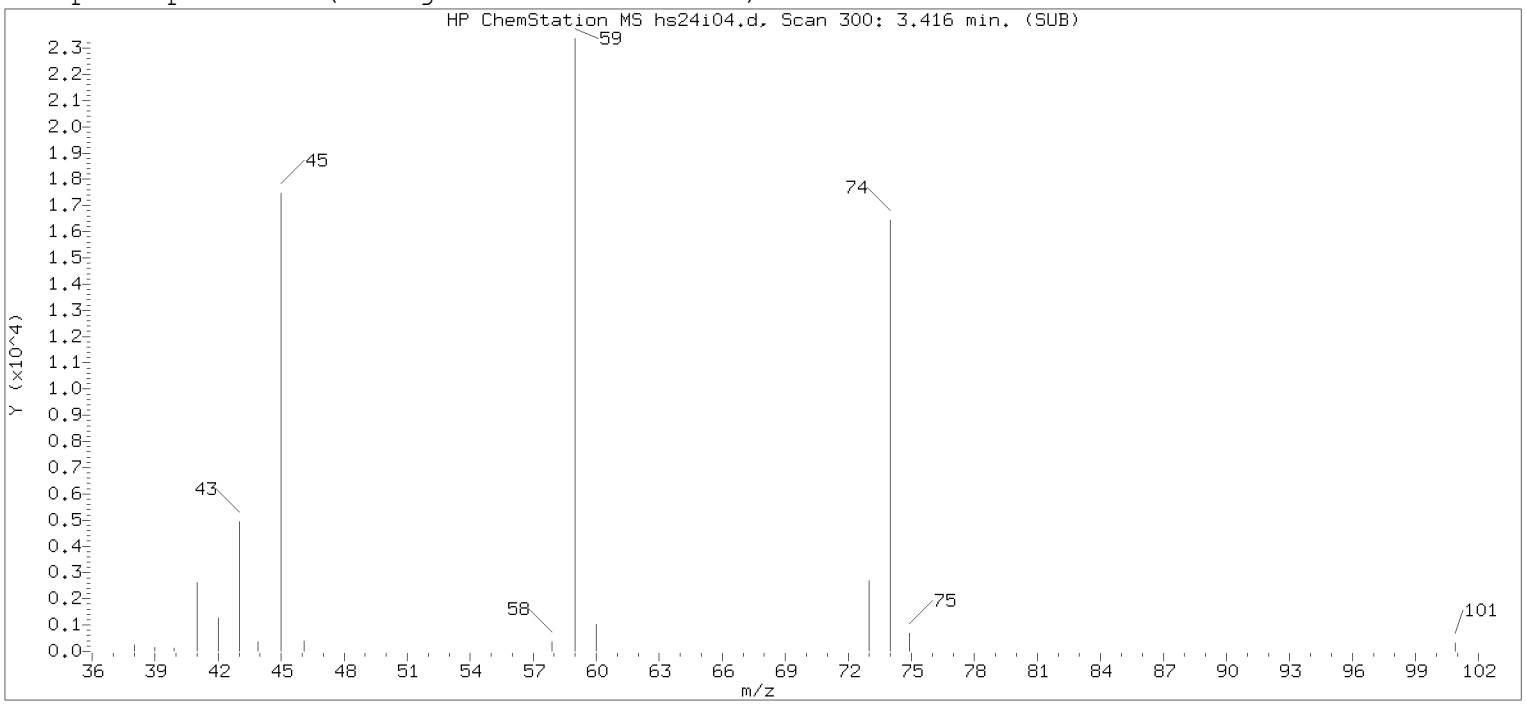
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area (flag) : 85465M
On-Column Amount (ng) : 2.0086
Integration start scan : 282 Integration stop scan: 326
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

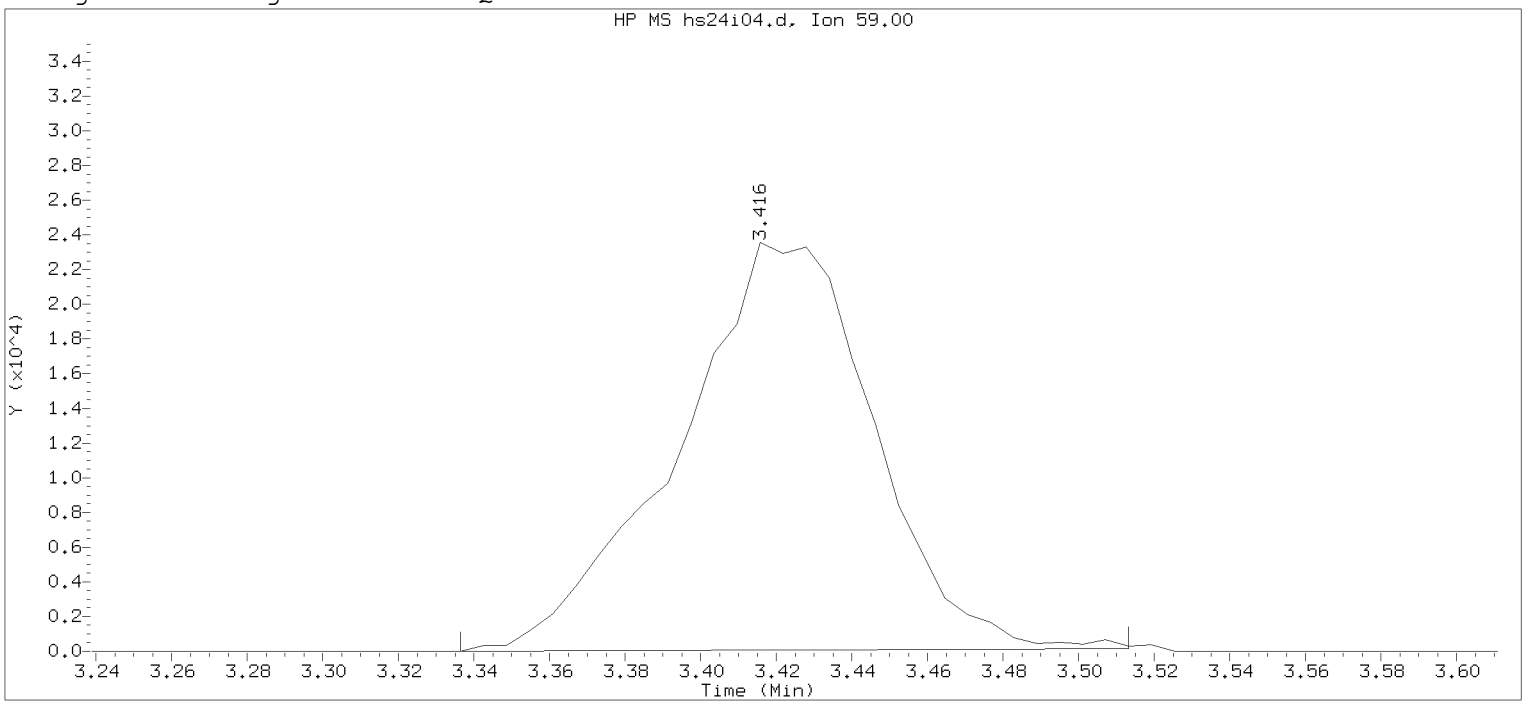
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

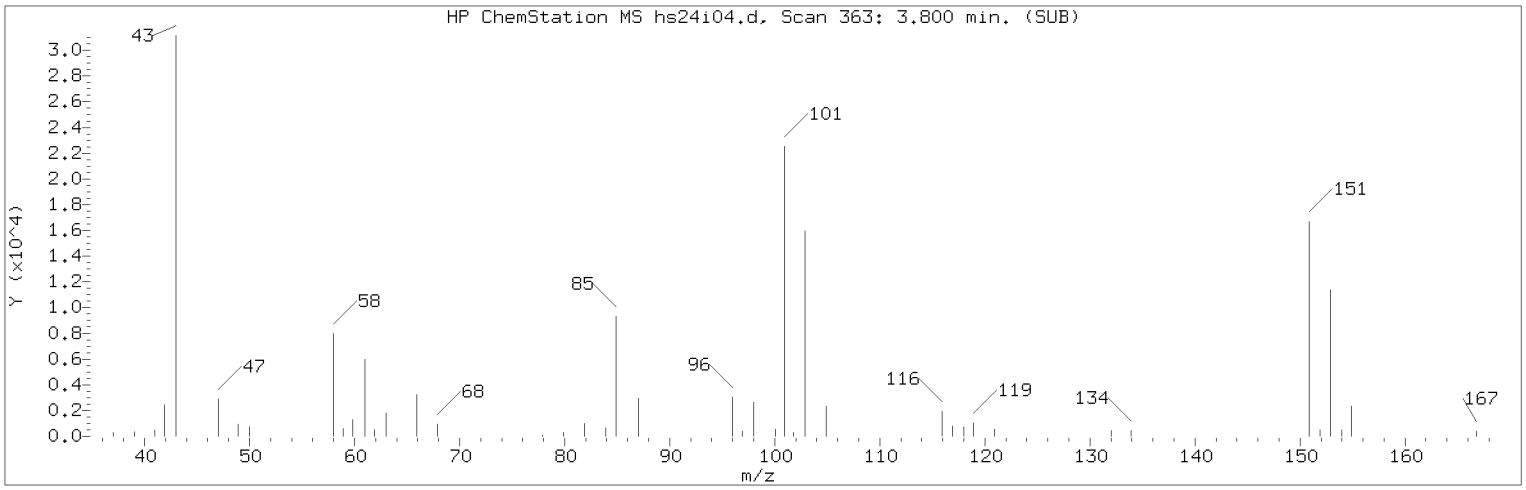
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

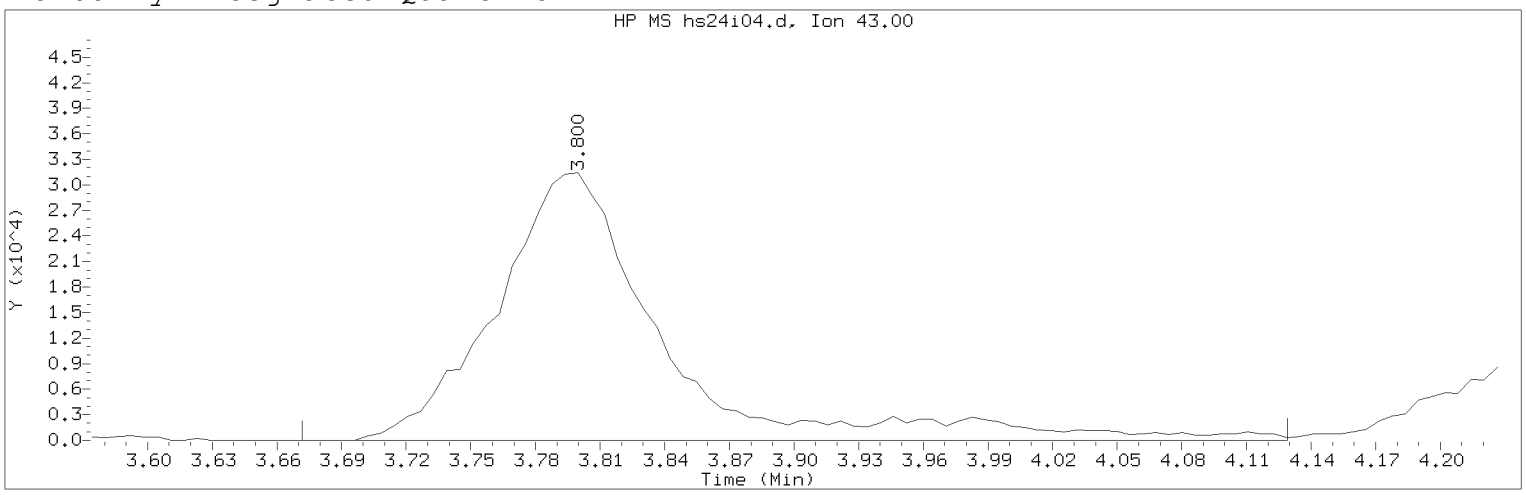
Compound Number : 11
Compound Name : Ethyl ether
Scan Number : 300
Retention Time (minutes): 3.416
Quant Ion : 59.00
Area : 84538
On-column Amount (ng) : 1.9630
Integration start scan : 286 Integration stop scan: 315
Y at integration start : 0 Y at integration end: 140

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

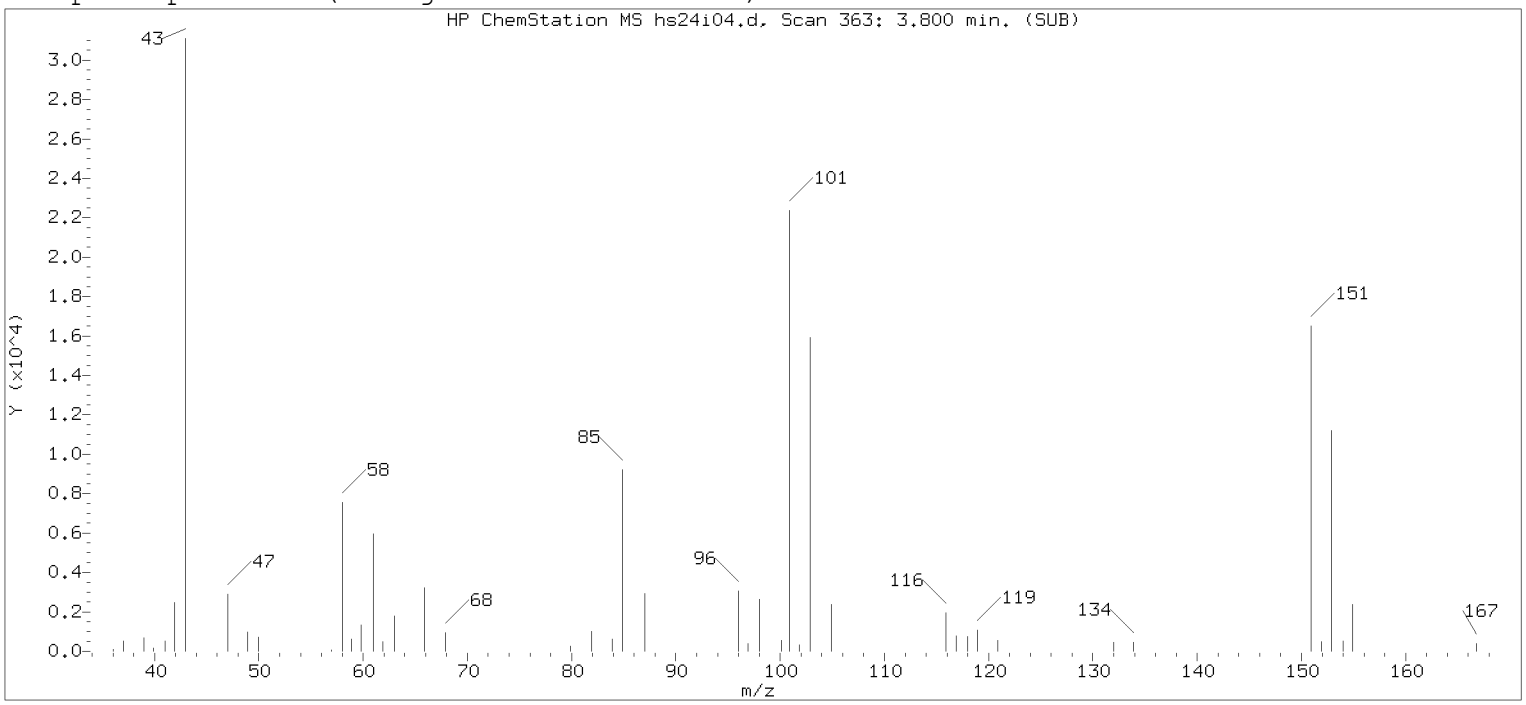
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 167715M
On-Column Amount (ng) : 19.0303
Integration start scan : 341 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

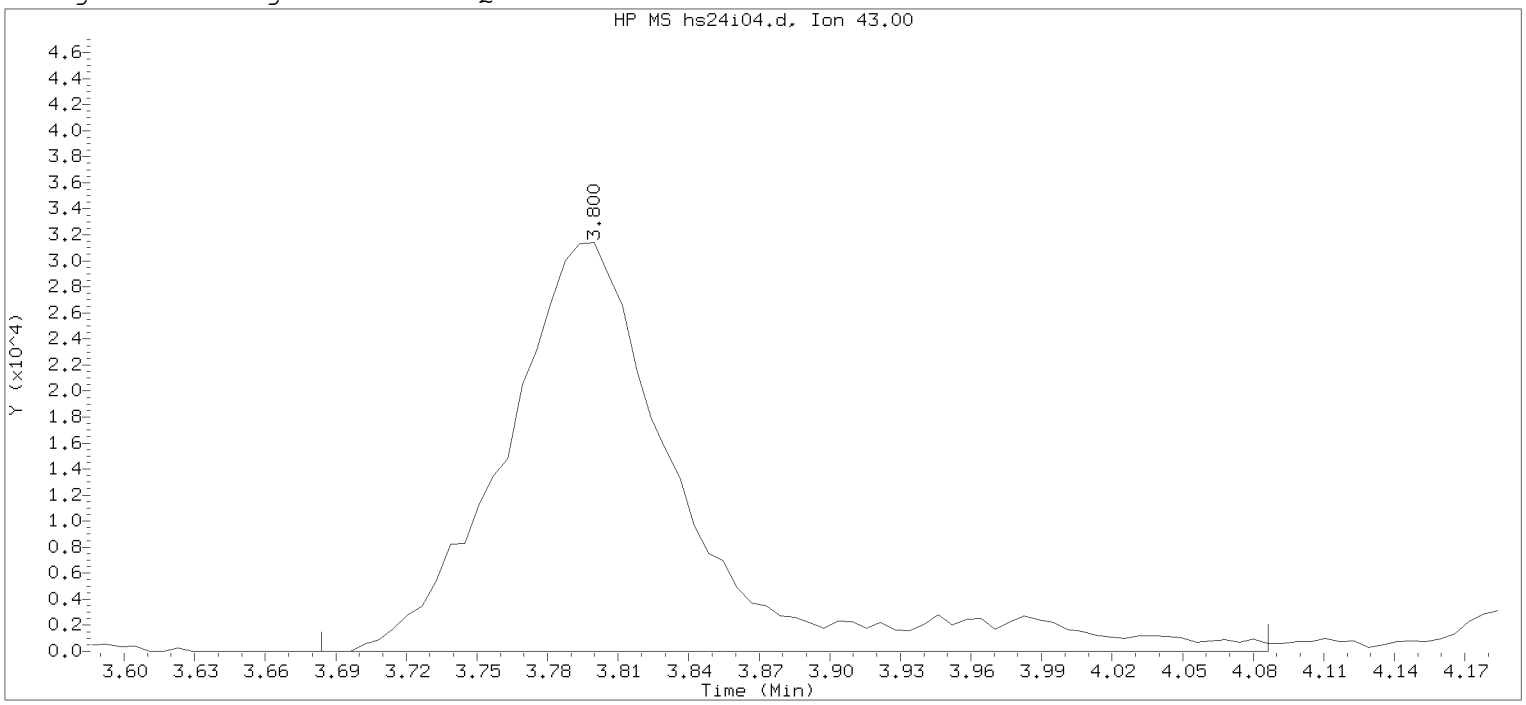
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

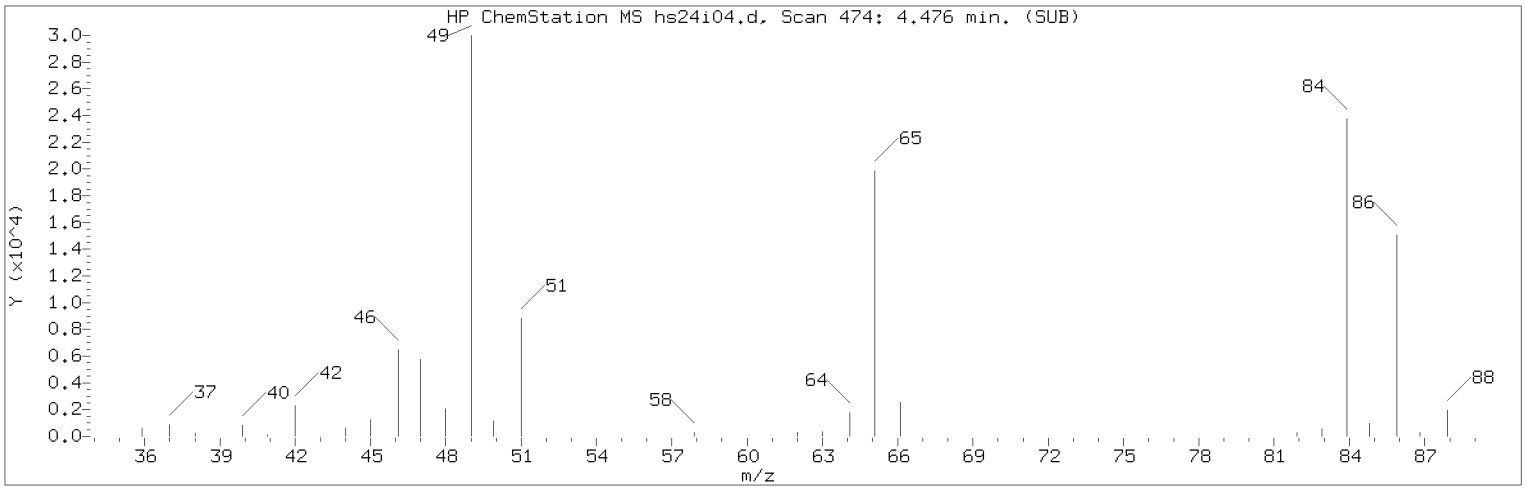
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

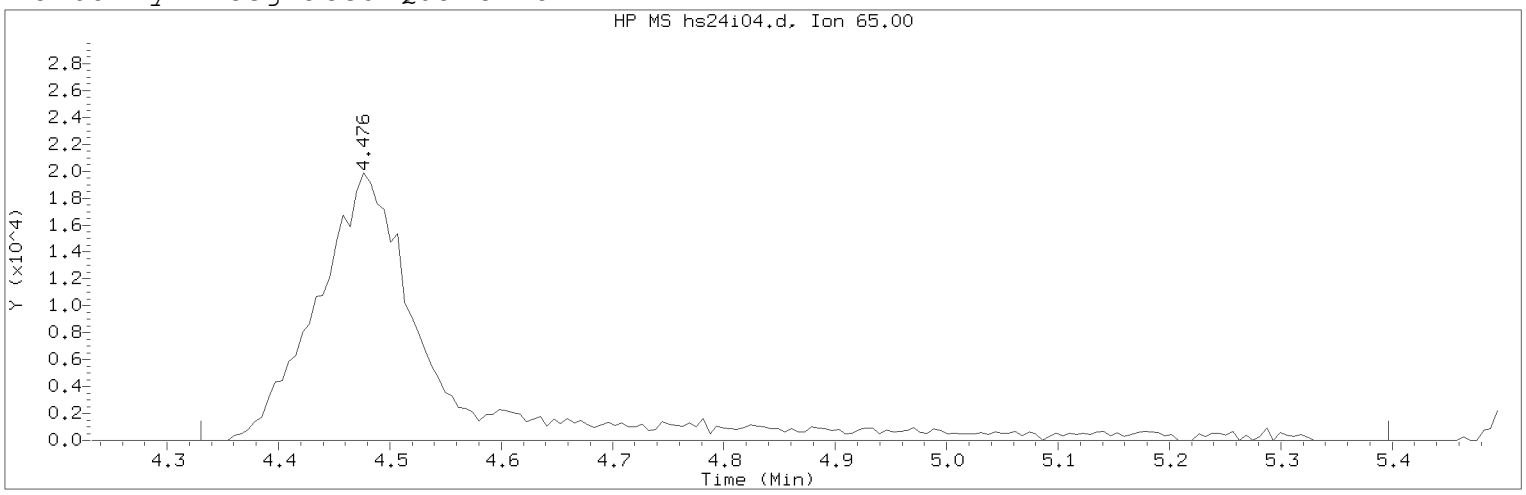
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area : 165832
On-column Amount (ng) : 19.2516
Integration start scan : 343 Integration stop scan: 409
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

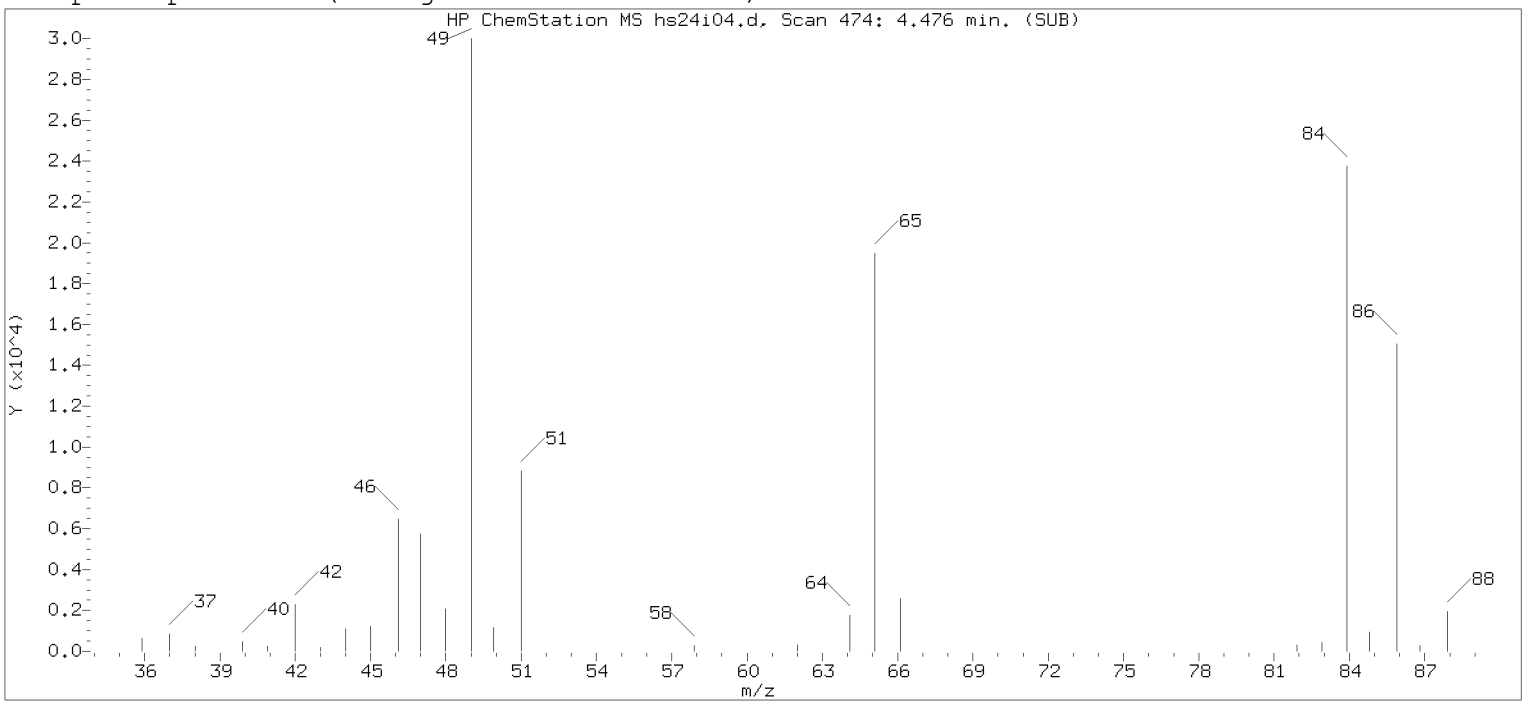
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area (flag) : 147863M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 624
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

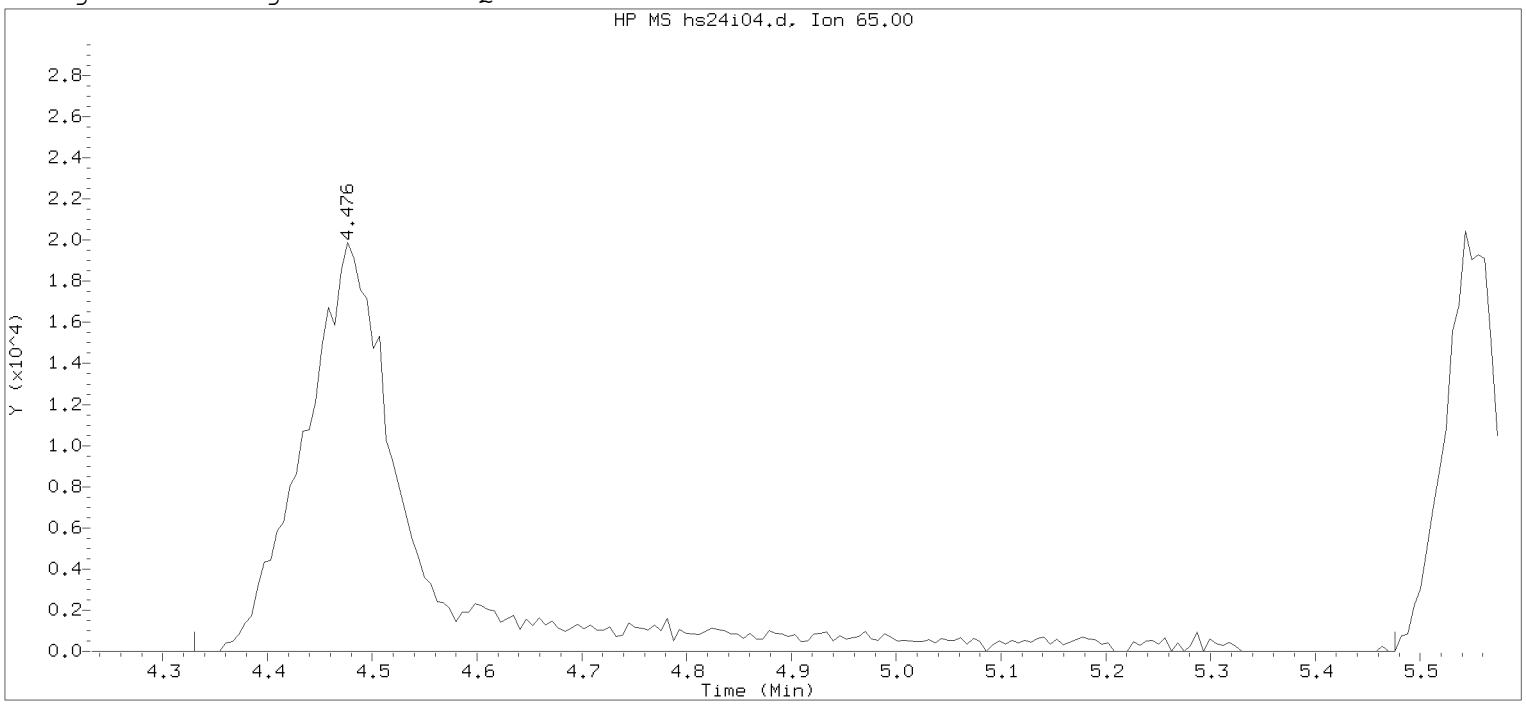
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

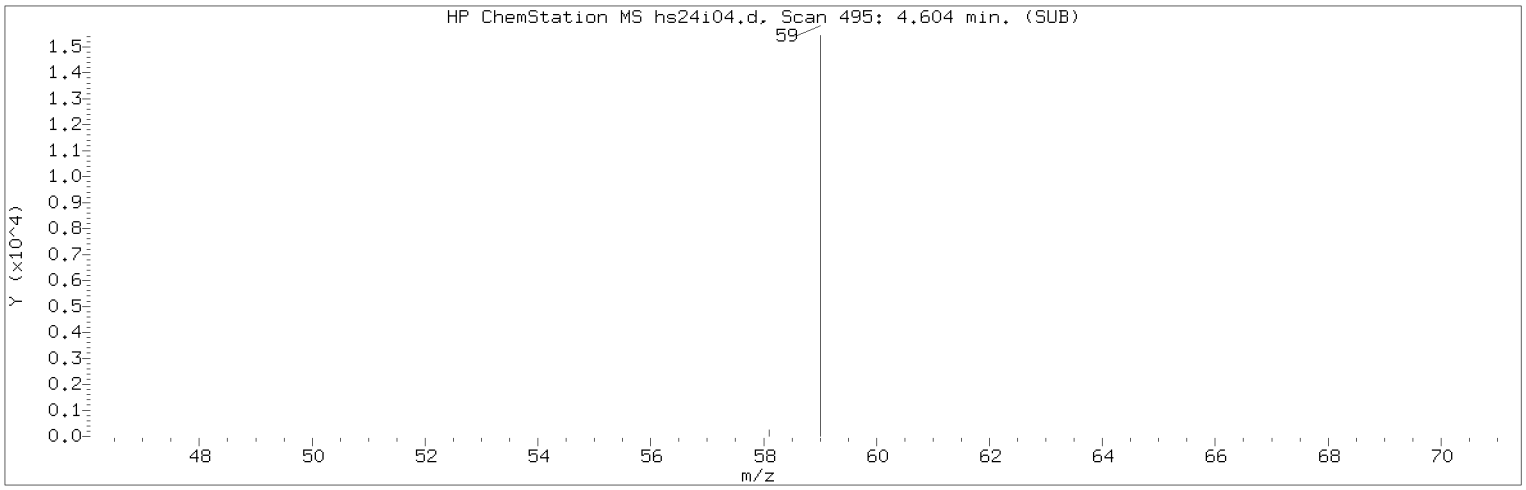
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

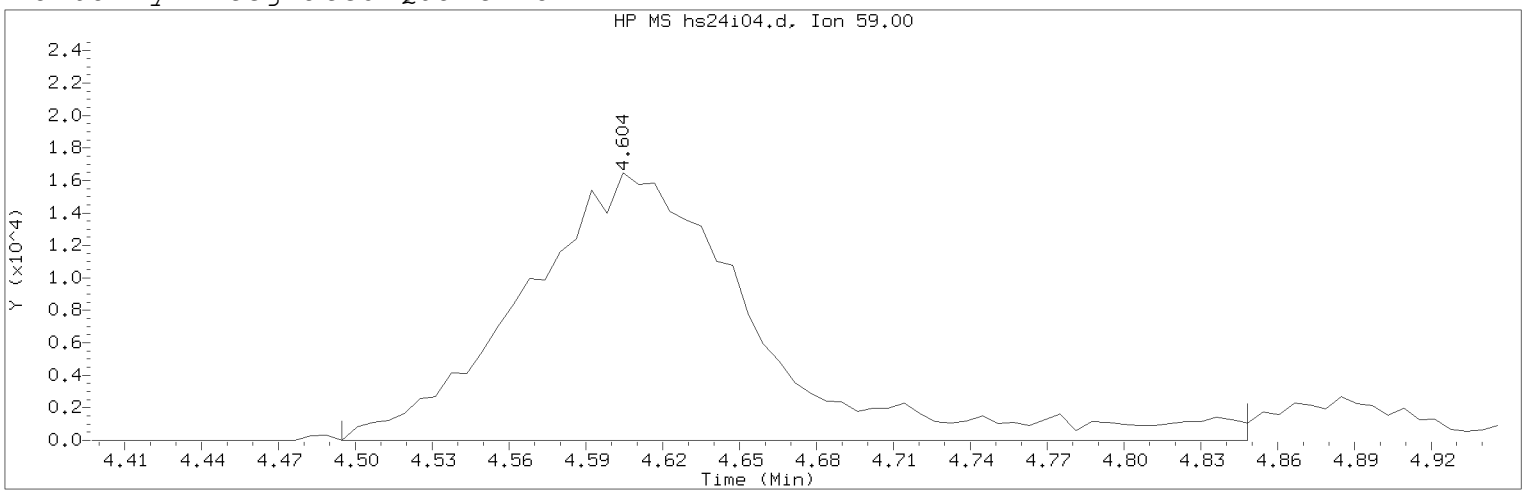
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.476
Quant Ion : 65.00
Area : 147958
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 637
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

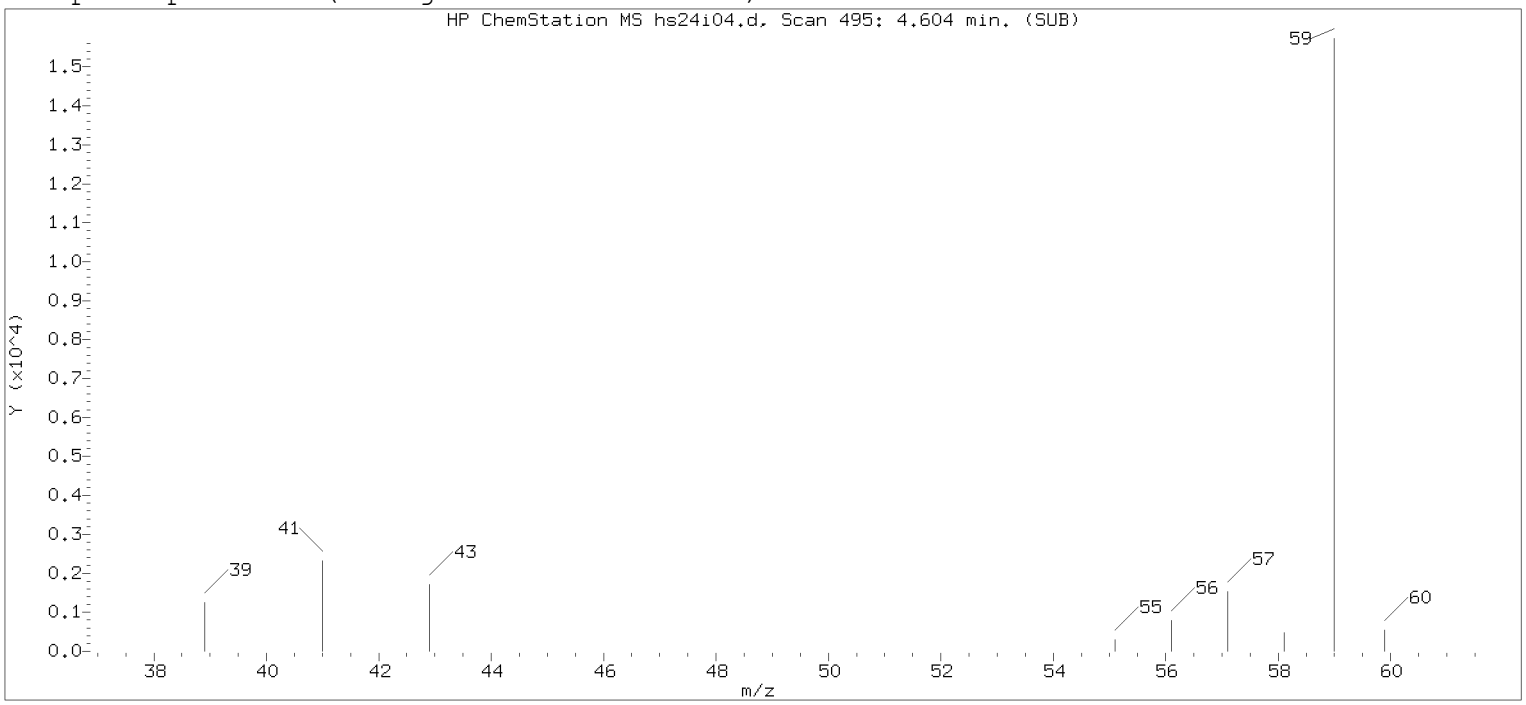
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 104728M
On-Column Amount (ng) : 41.4946
Integration start scan : 476 Integration stop scan: 534
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

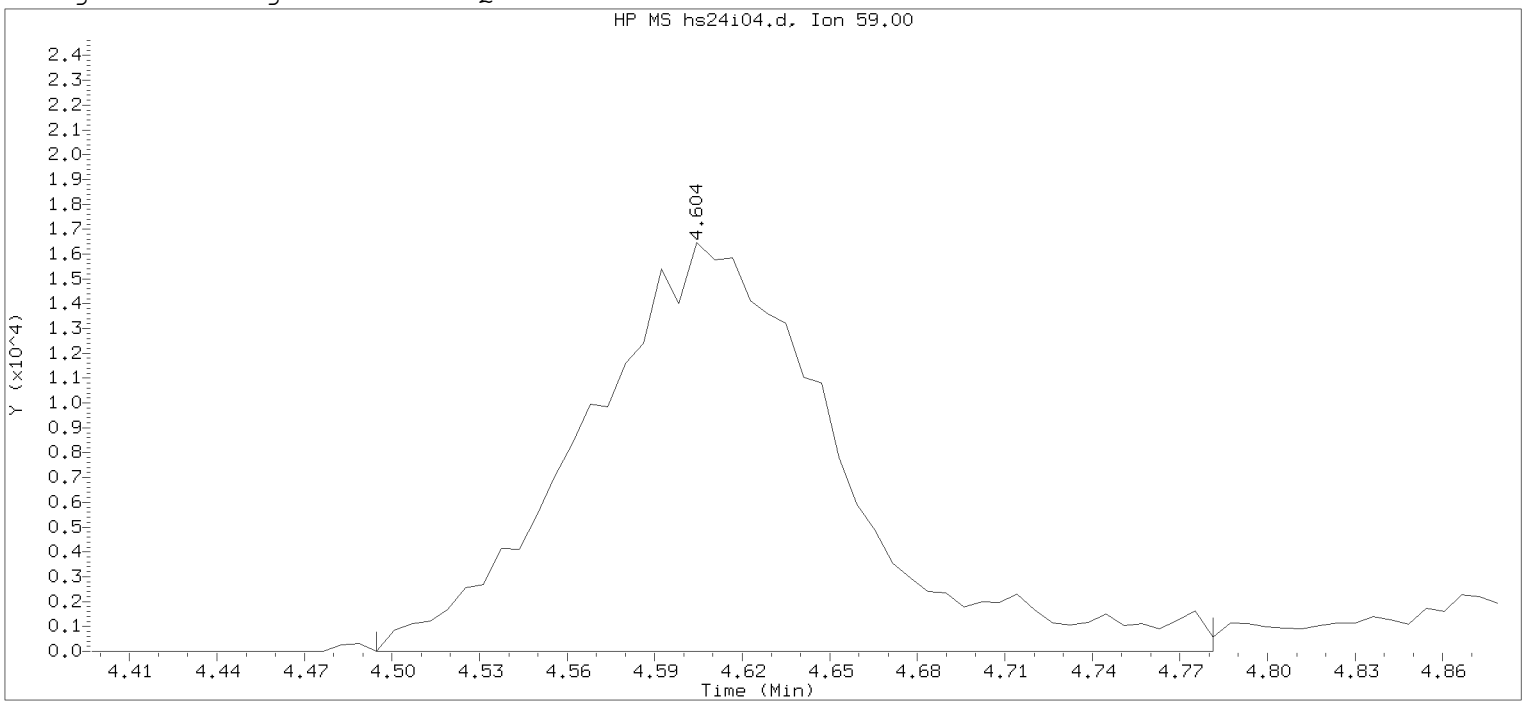
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

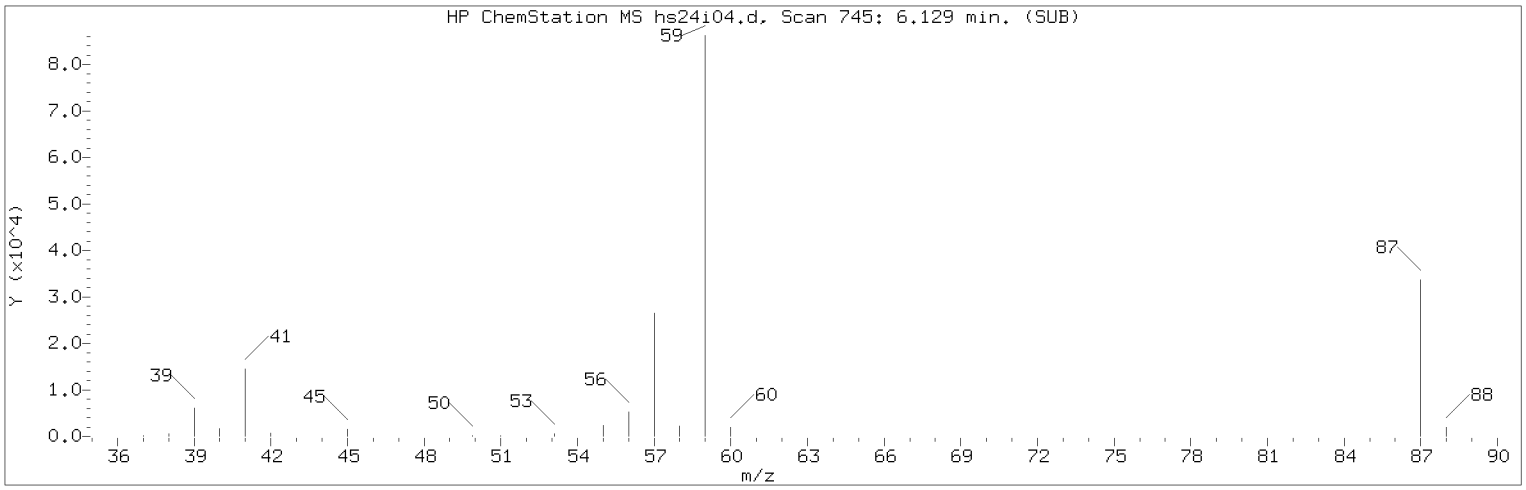
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

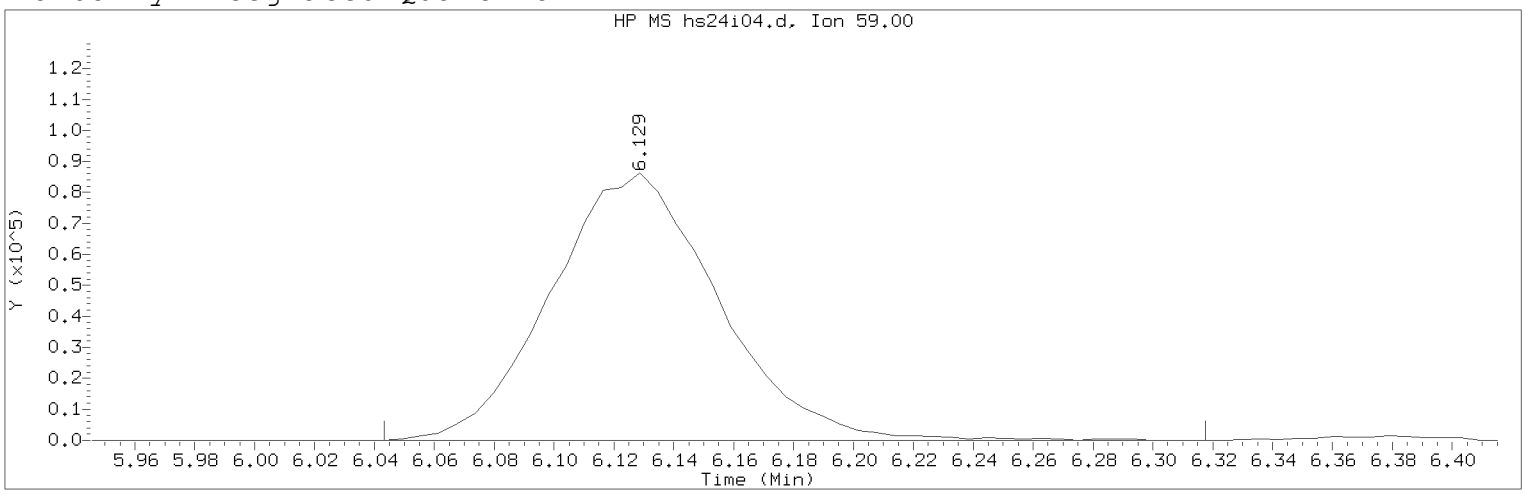
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 495		
Retention Time (minutes)	: 4.604		
Quant Ion	: 59.00		
Area	: 100186		
On-column Amount (ng)	: 38.4816		
Integration start scan	: 476	Integration stop scan:	523
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 283 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

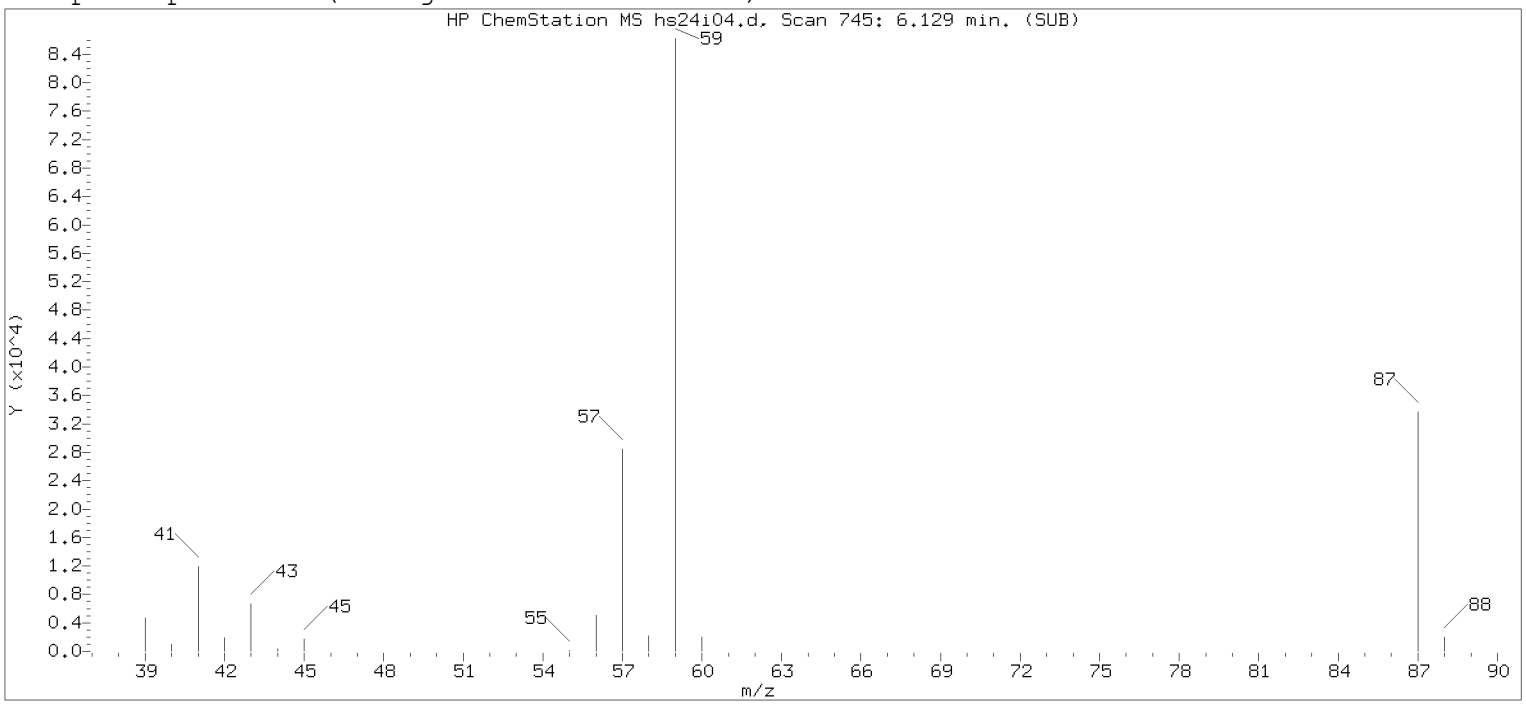
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area (flag) : 334132M
On-Column Amount (ng) : 2.0315
Integration start scan : 730 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

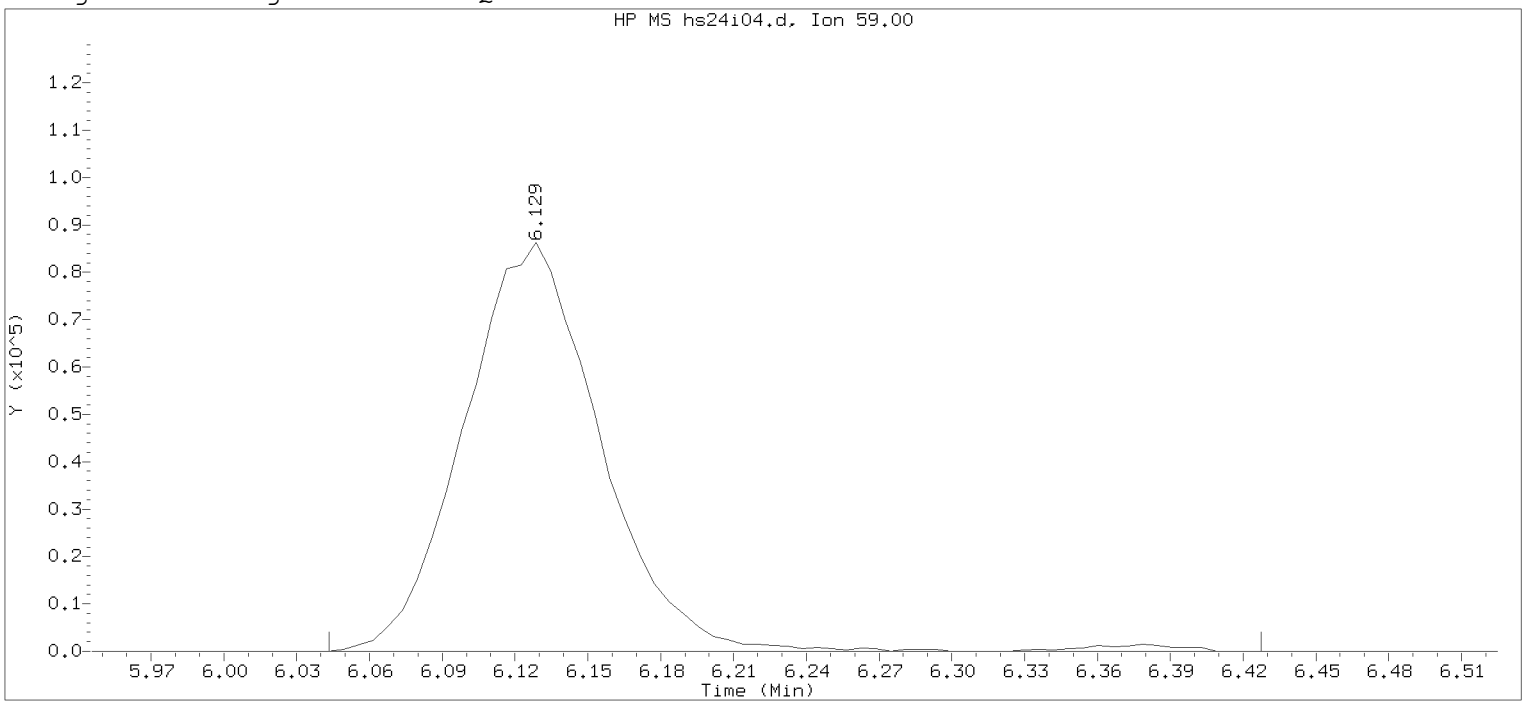
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

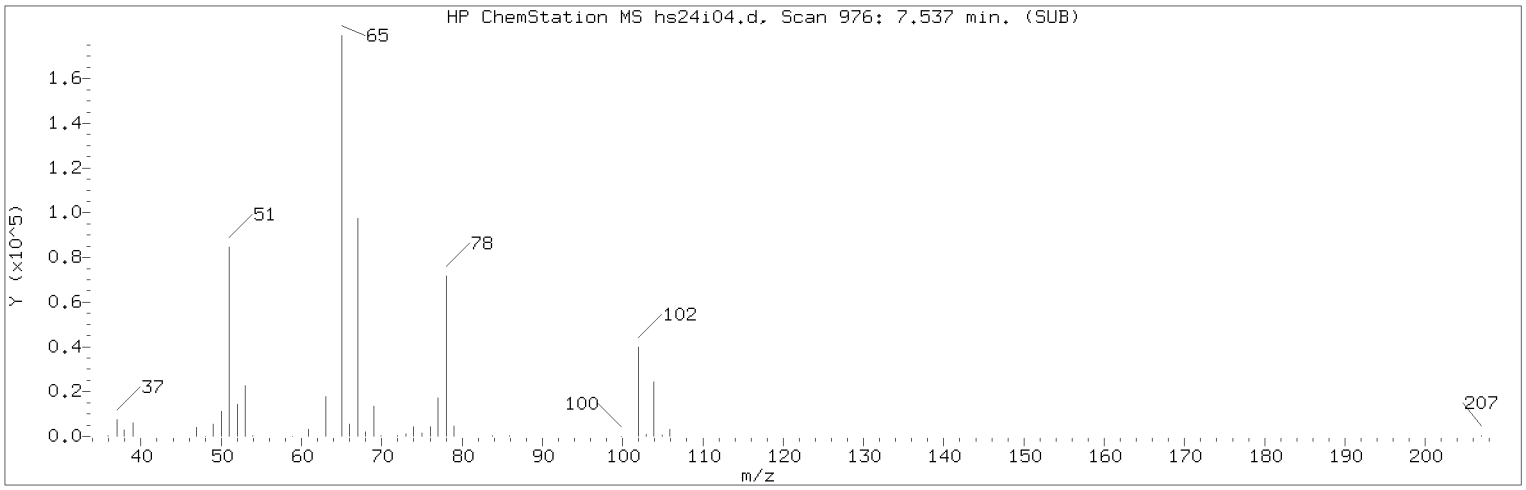
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

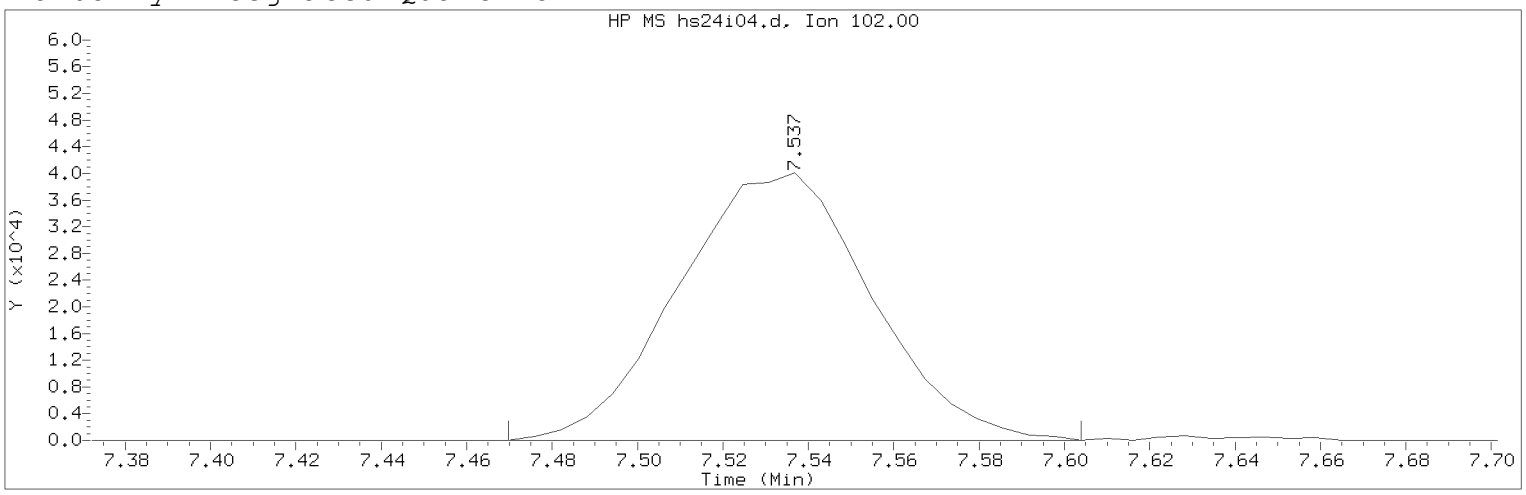
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.129
Quant Ion : 59.00
Area : 338010
On-column Amount (ng) : 1.9953
Integration start scan : 730 Integration stop scan: 793
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

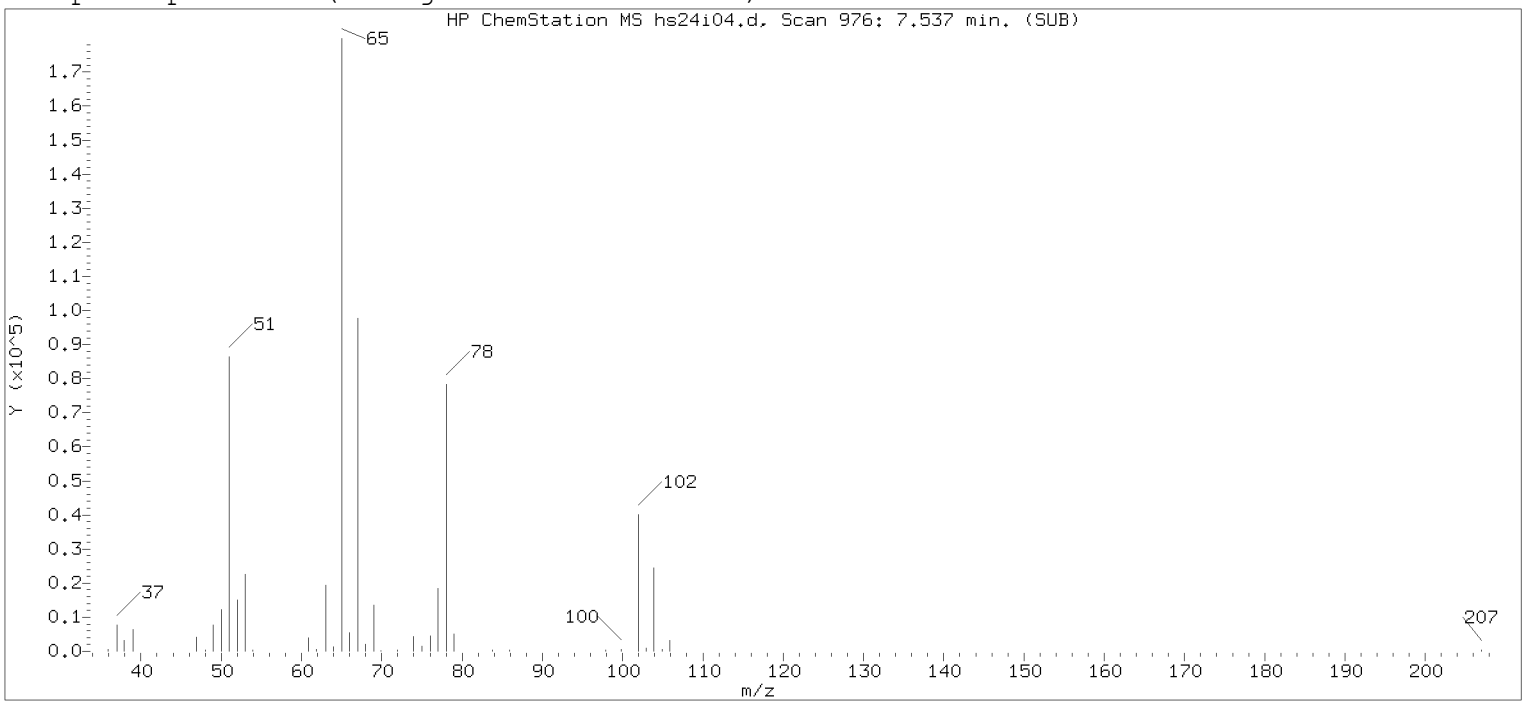
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area (flag) : 125039M
On-Column Amount (ng) : 10.2684
Integration start scan : 964 Integration stop scan: 986
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

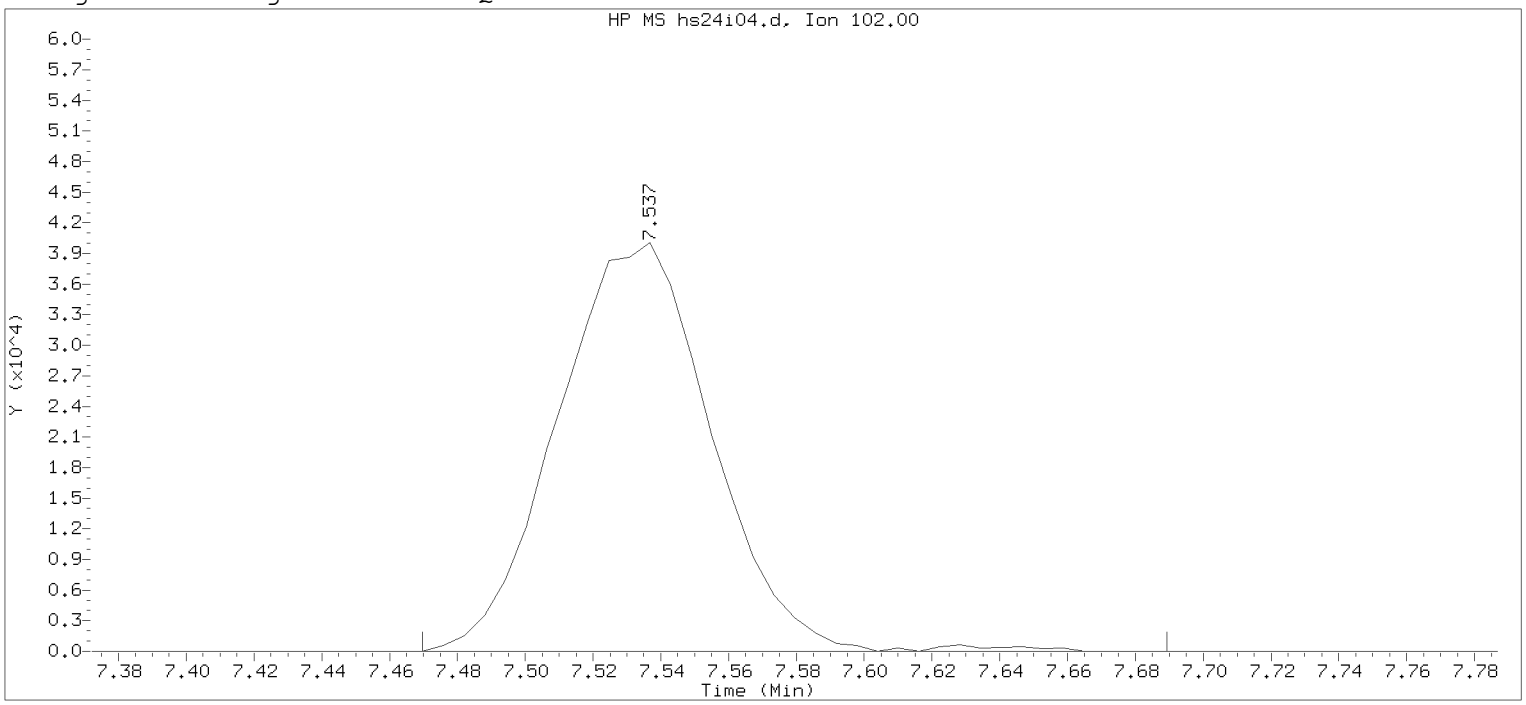
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

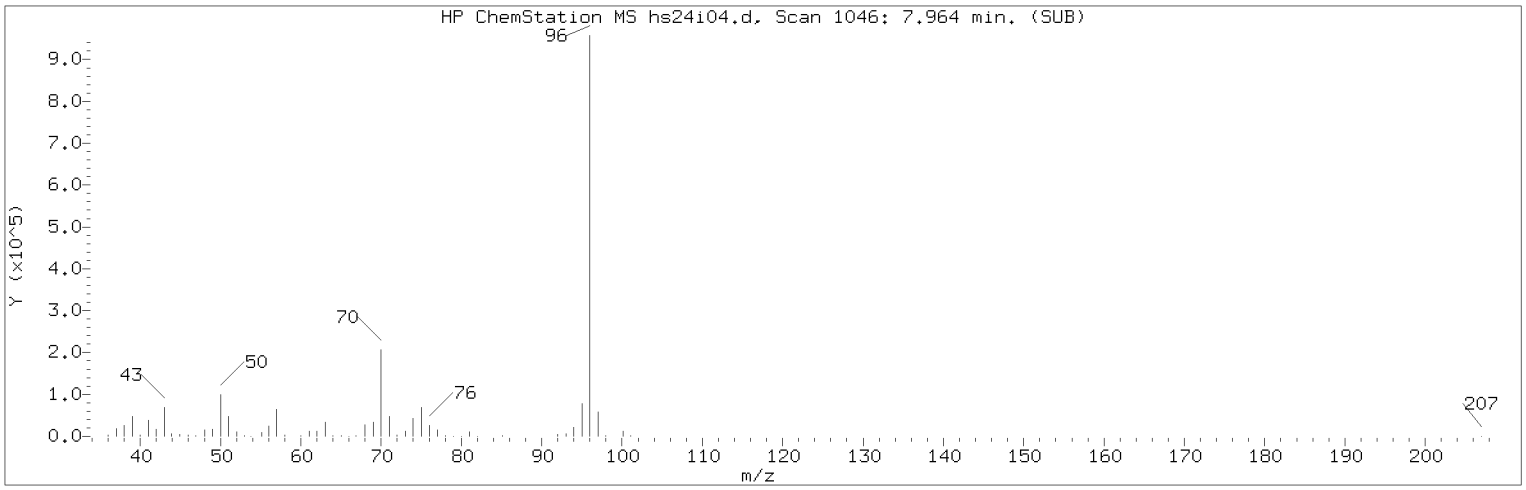
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

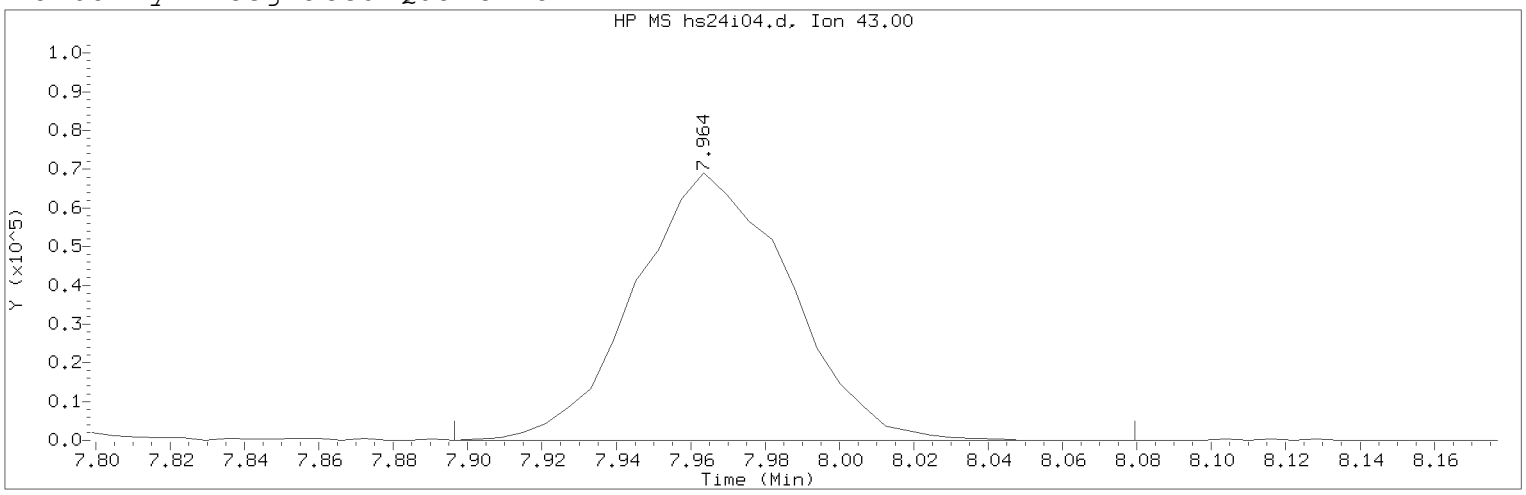
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 976
Retention Time (minutes): 7.537
Quant Ion : 102.00
Area : 126184
On-column Amount (ng) : 10.2319
Integration start scan : 964 Integration stop scan: 1000
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

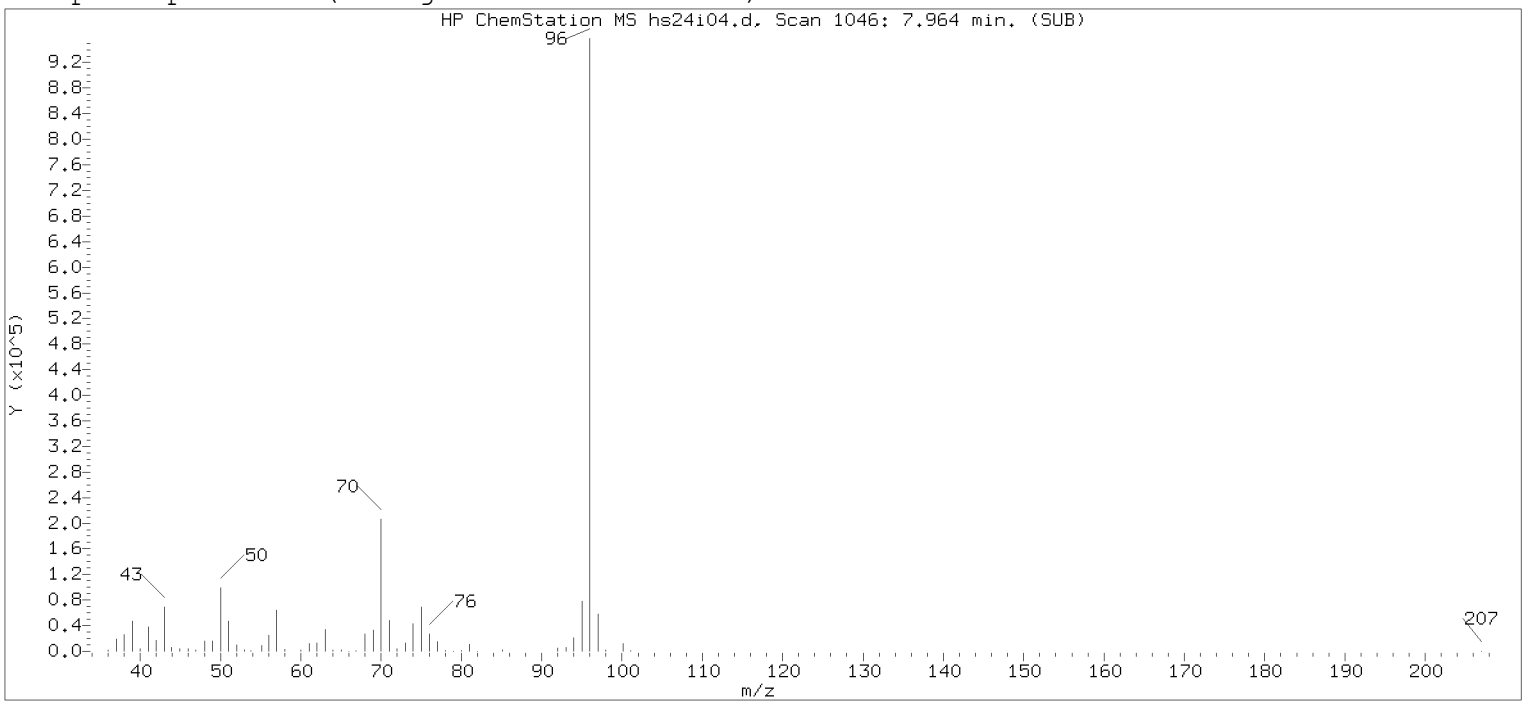
Compound Number : 62
Compound Name : n-Heptane
Scan Number : 1046
Retention Time (minutes): 7.964
Quant Ion : 43.00
Area (flag) : 198879M
On-Column Amount (ng) : 1.9780
Integration start scan : 1034 Integration stop scan: 1064
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

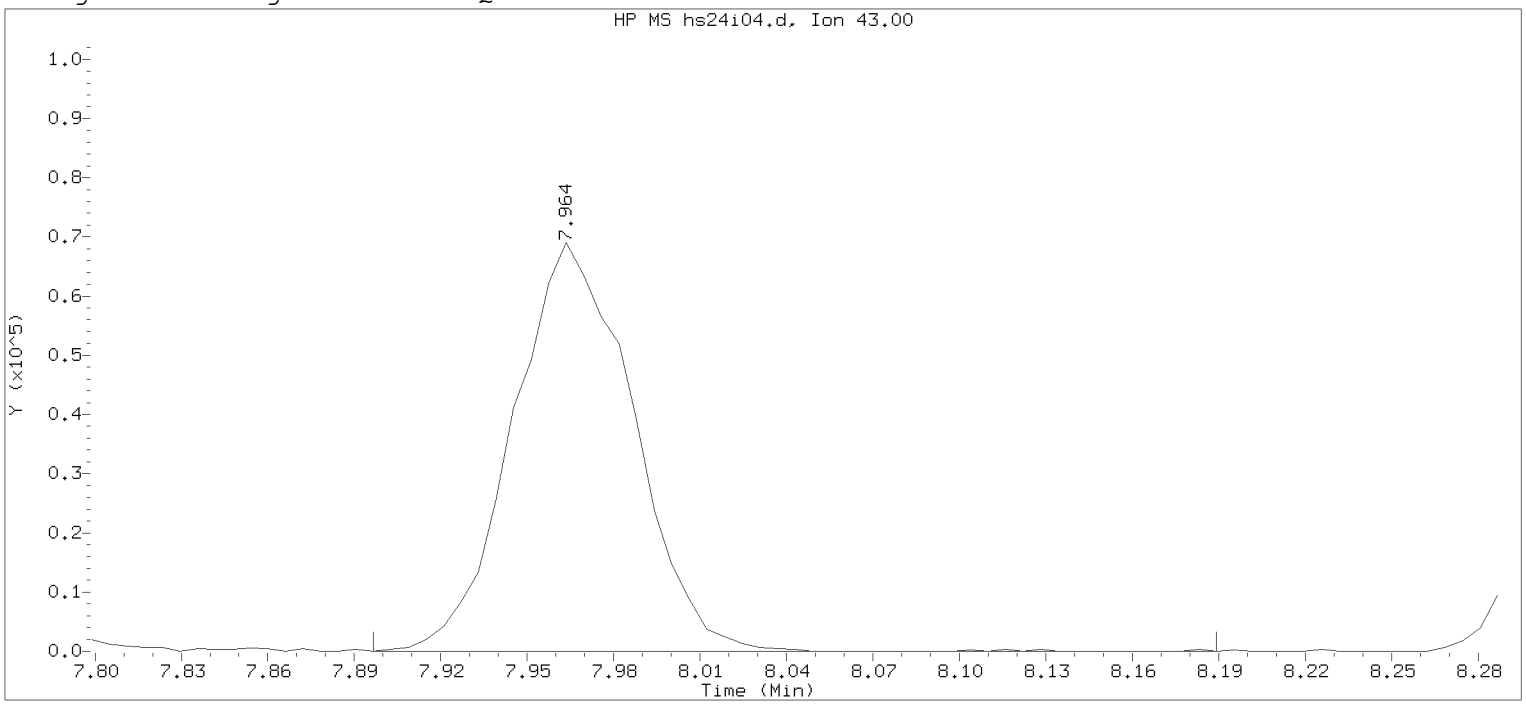
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

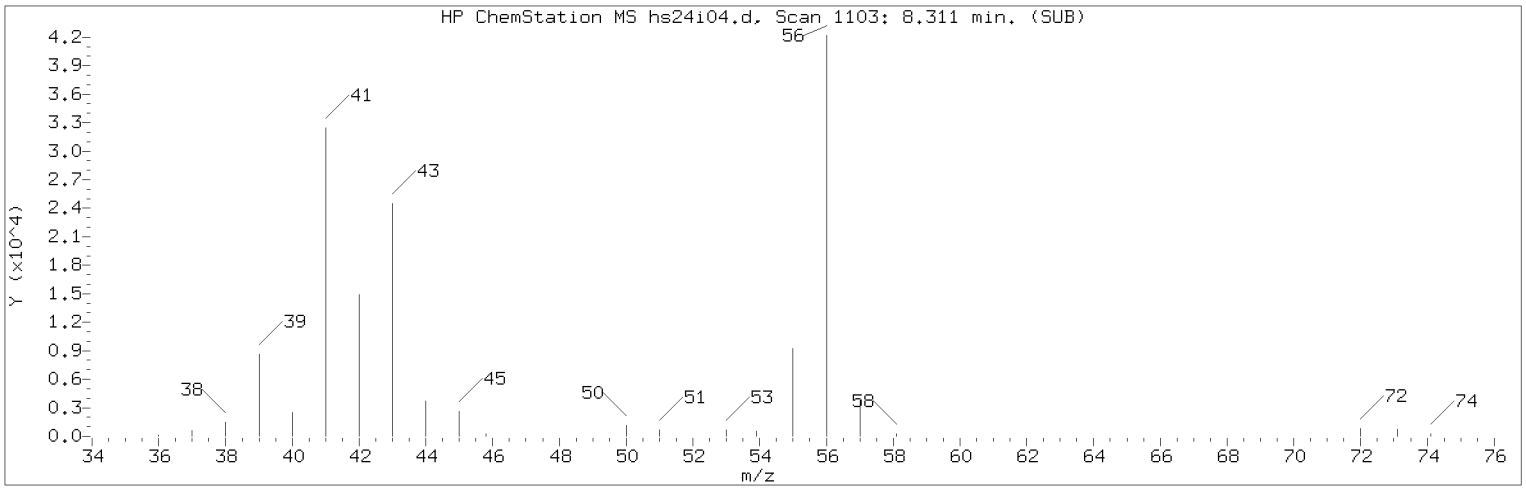
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

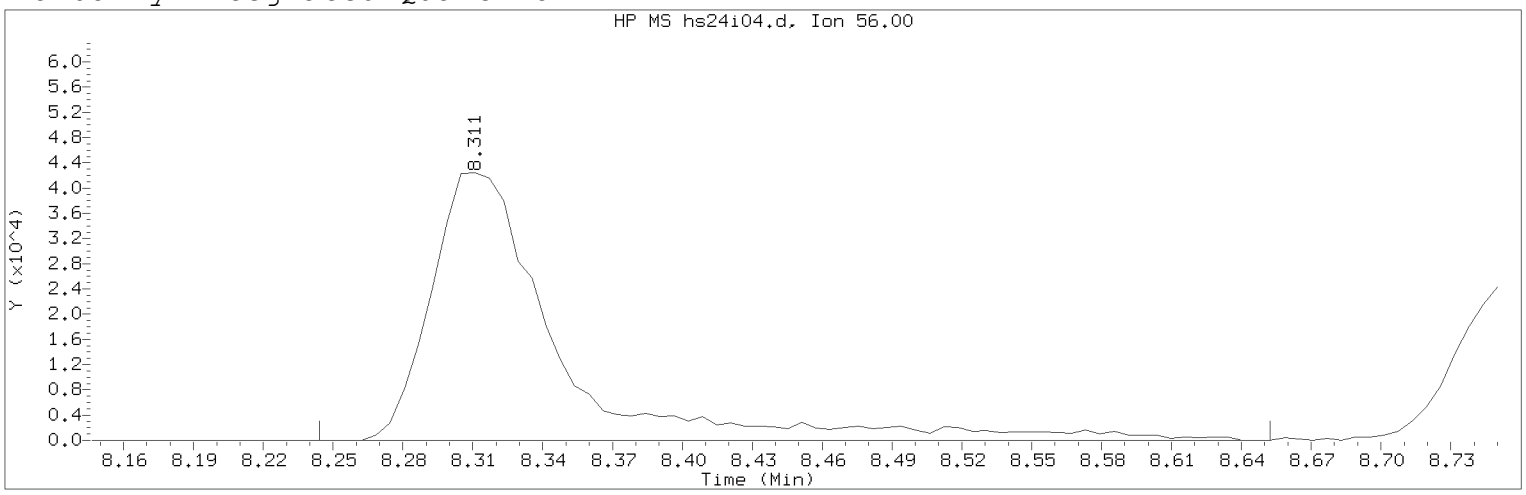
Compound Number	: 62		
Compound Name	: n-Heptane		
Scan Number	: 1046		
Retention Time (minutes)	: 7.964		
Quant Ion	: 43.00		
Area	: 199330		
On-column Amount (ng)	: 1.8366		
Integration start scan	: 1034	Integration stop scan:	1082
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 289 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

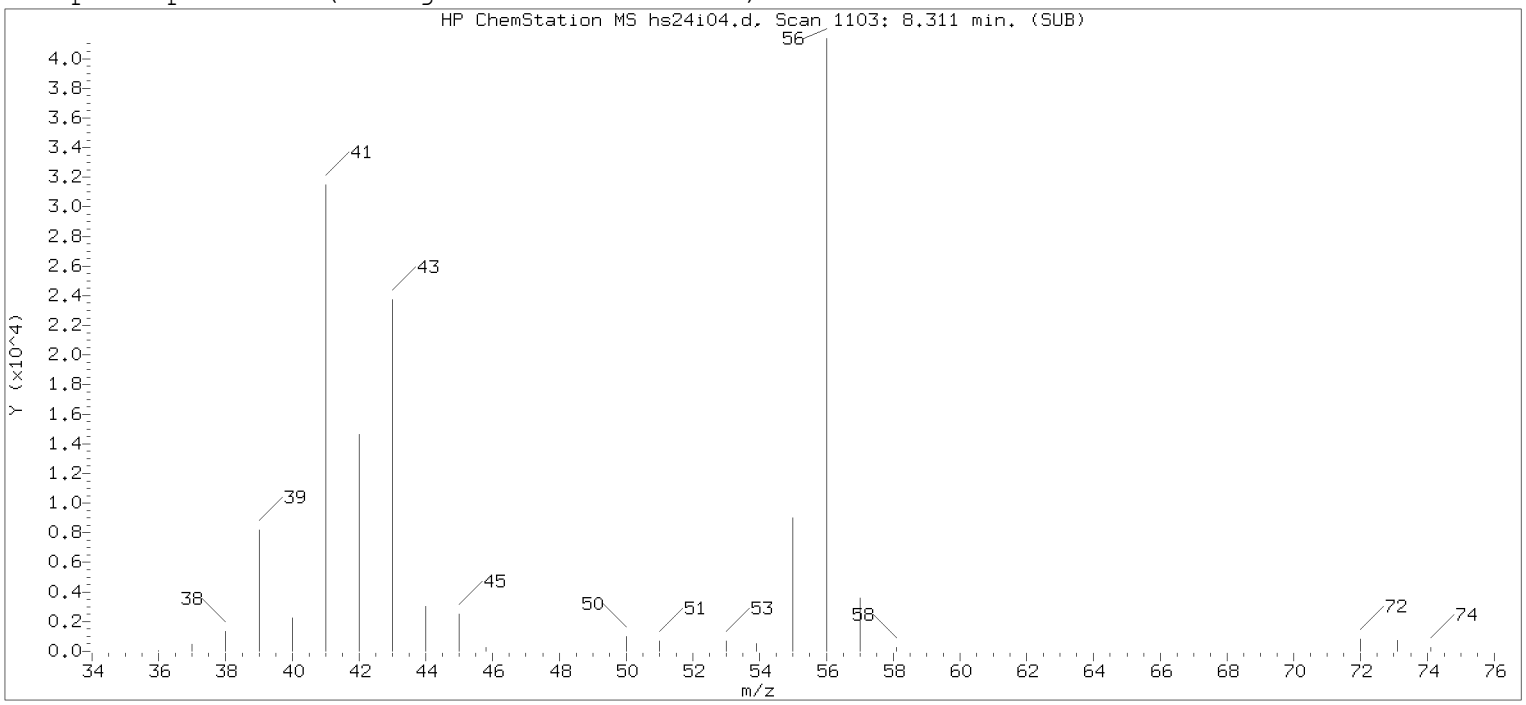
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1103
Retention Time (minutes): 8.311
Quant Ion : 56.00
Area (flag) : 160778M
On-Column Amount (ng) : 194.8775
Integration start scan : 1091 Integration stop scan: 1158
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

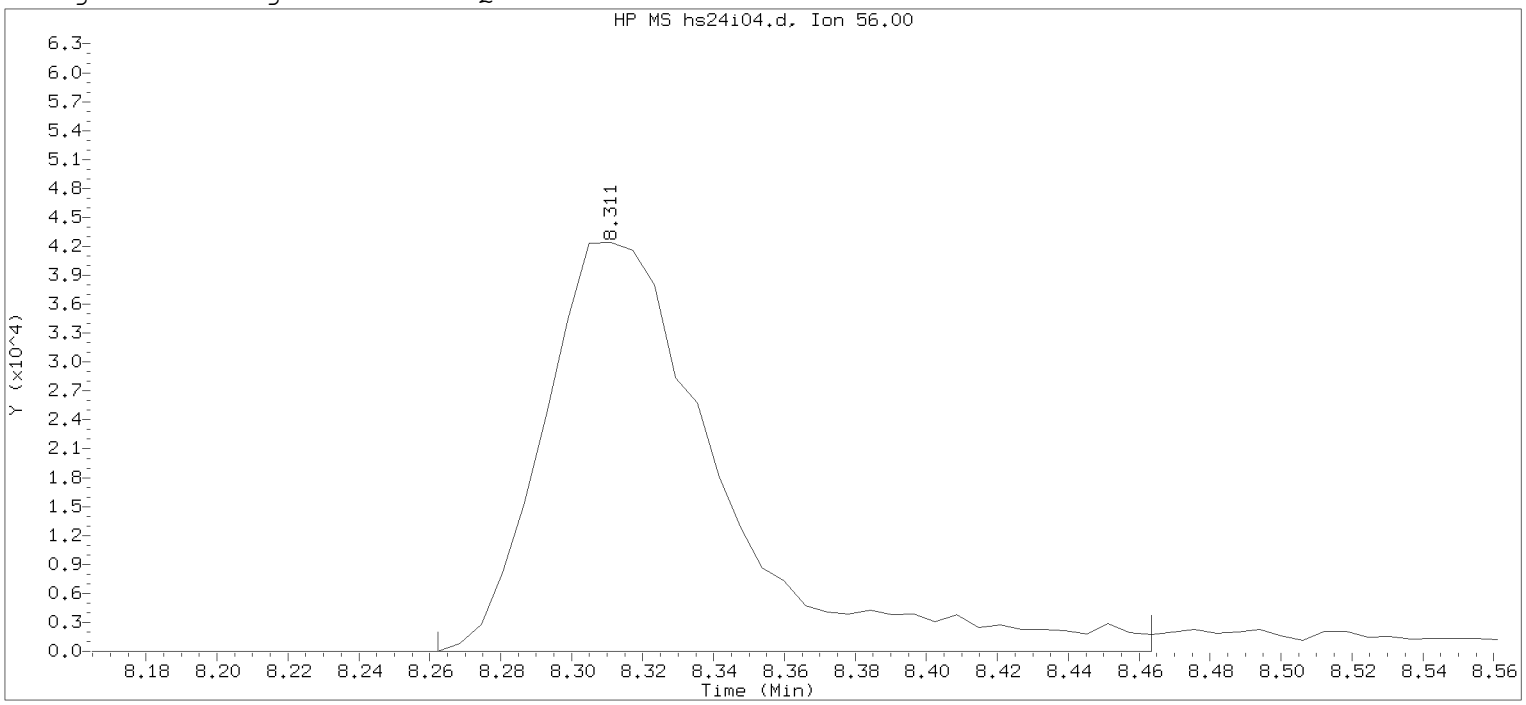
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1103		
Retention Time (minutes)	: 8.311		
Quant Ion	: 56.00		
Area	: 147095		
On-column Amount (ng)	: 168.2954		
Integration start scan	: 1094	Integration stop scan:	1127
Y at integration start	: 0	Y at integration end:	0

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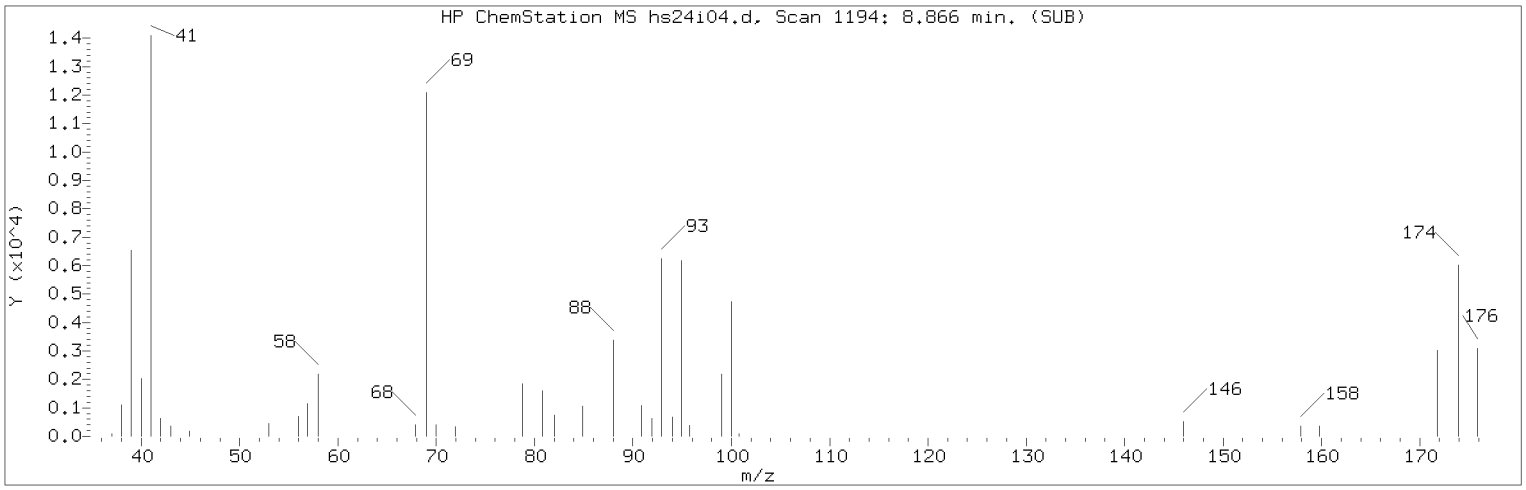
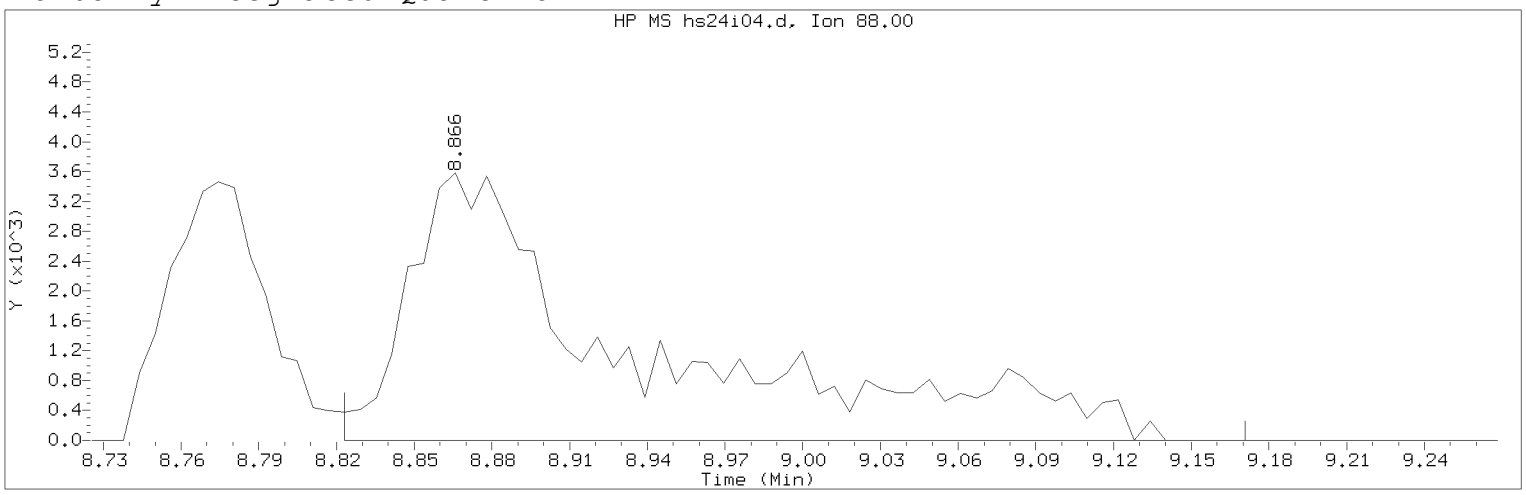
Target 3.5 esignature used. AE20 Page 291

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

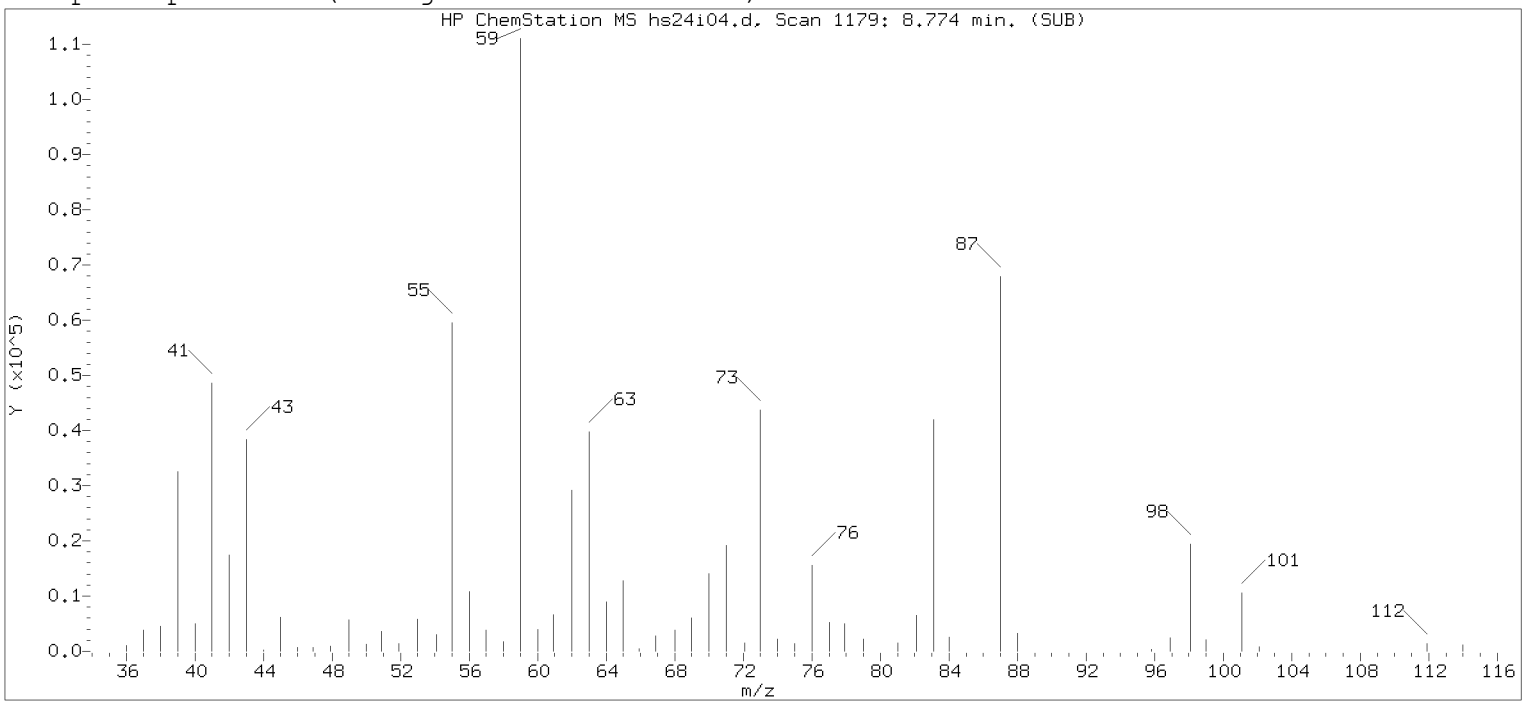
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 21749M
On-Column Amount (ng) : 109.4886
Integration start scan : 1186 Integration stop scan: 1243
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

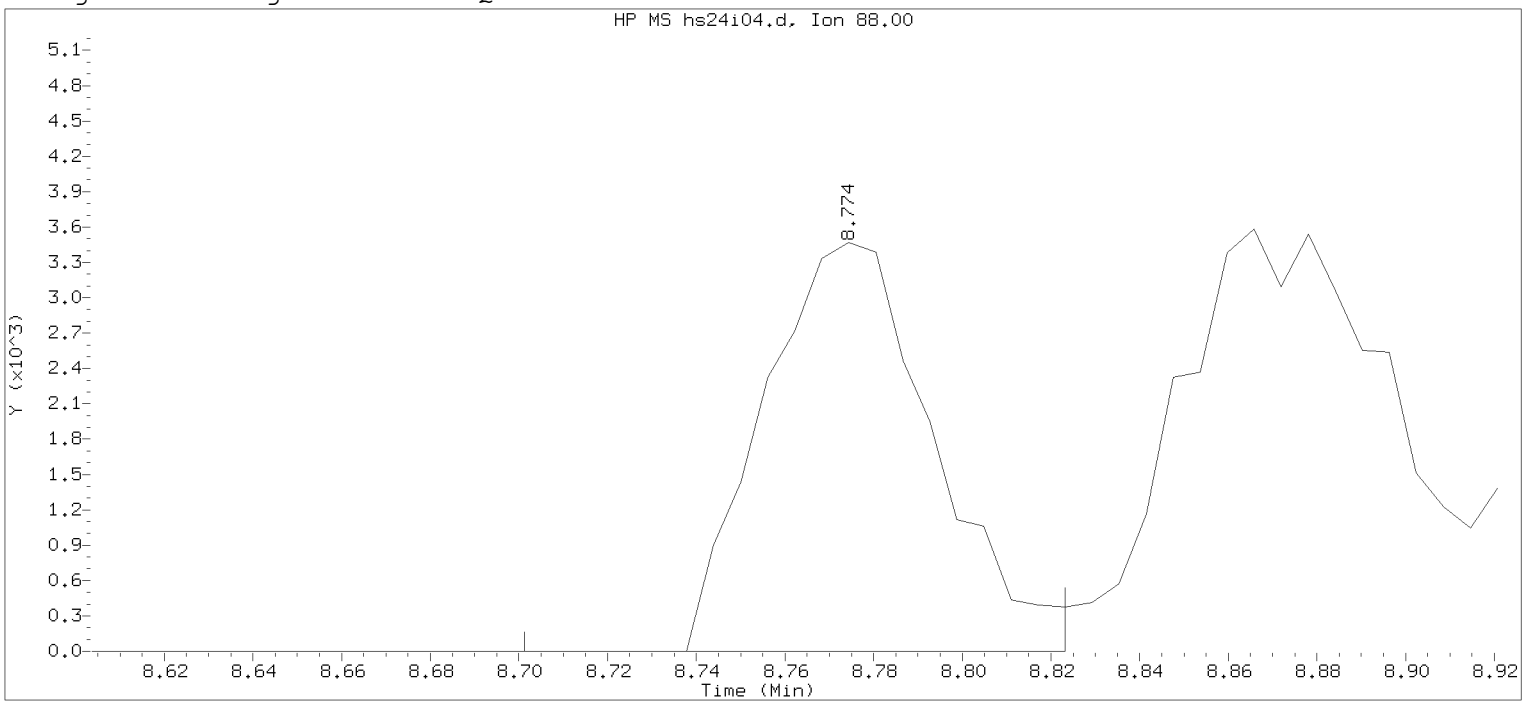
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

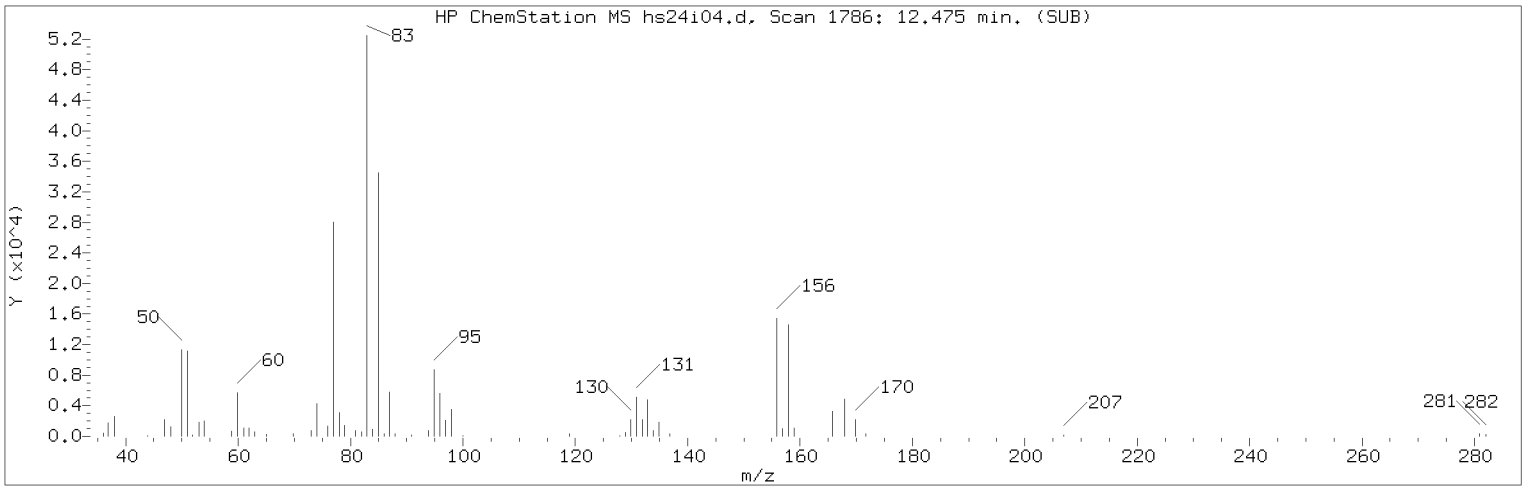
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

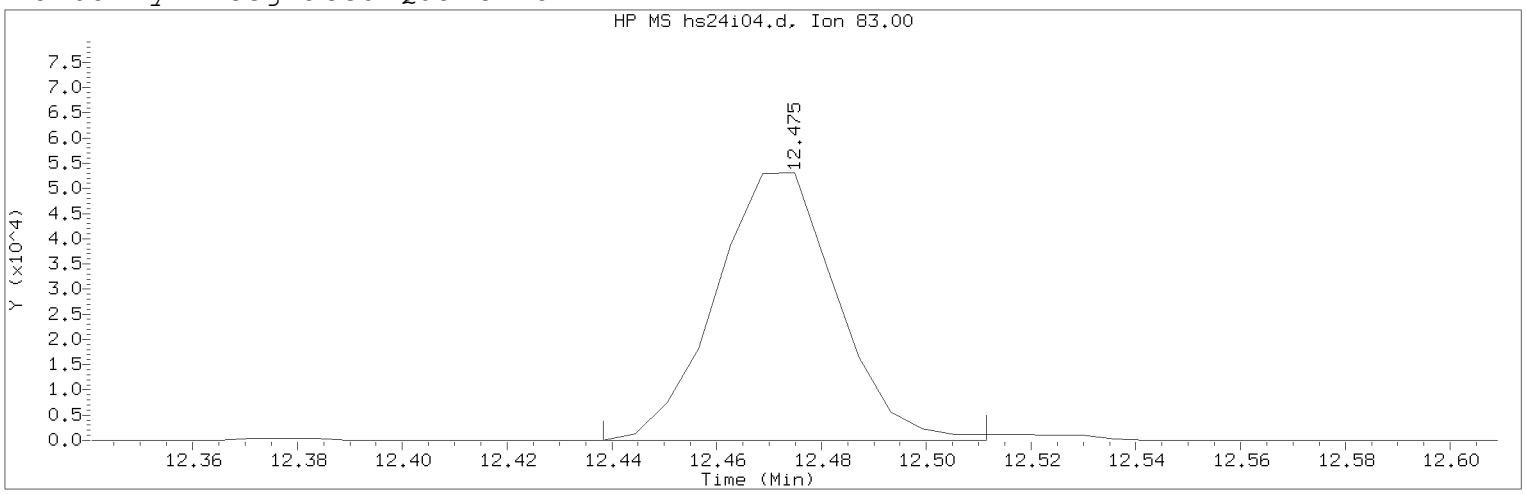
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1179
Retention Time (minutes): 8.774
Quant Ion : 88.00
Area : 9210
On-column Amount (ng) : 66.8956
Integration start scan : 1166 Integration stop scan: 1186
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

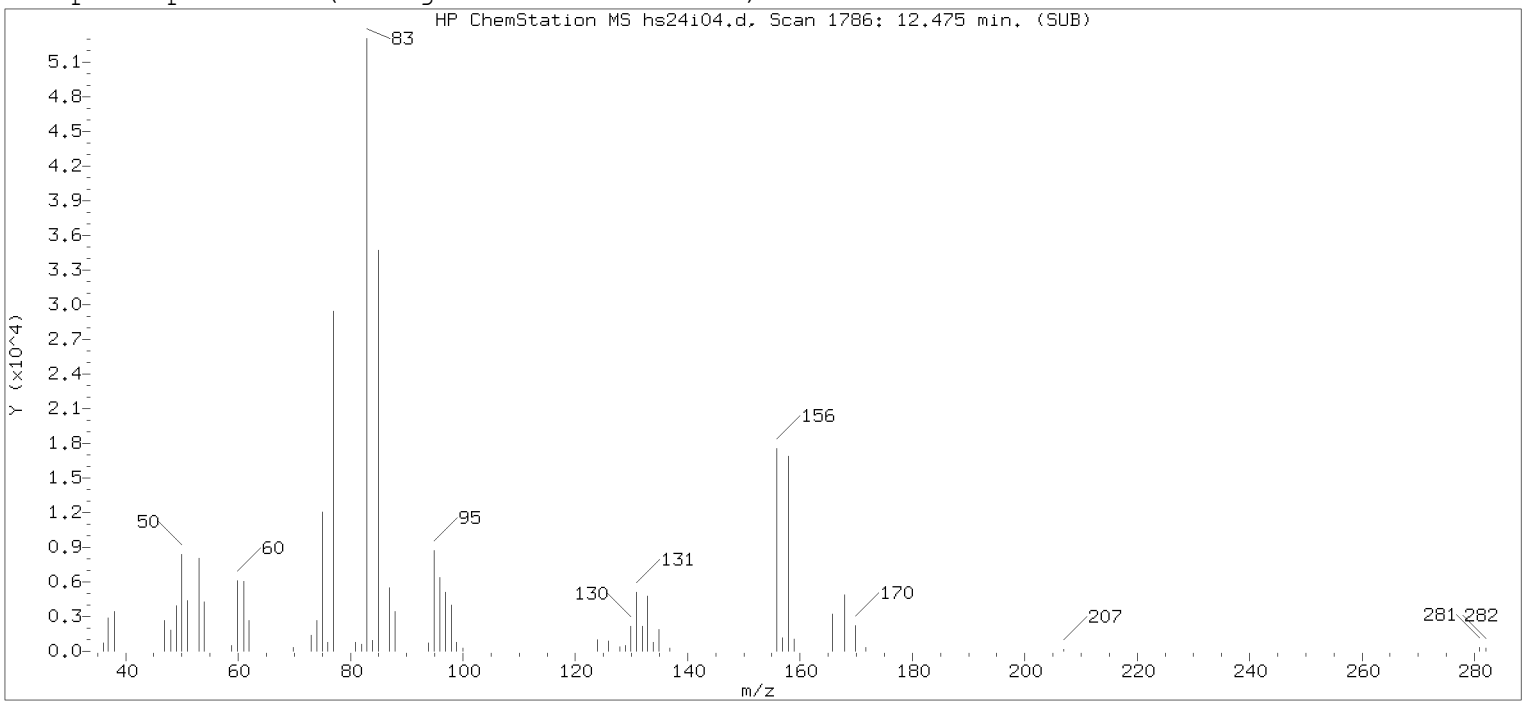
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 85286M
On-Column Amount (ng) : 1.9375
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

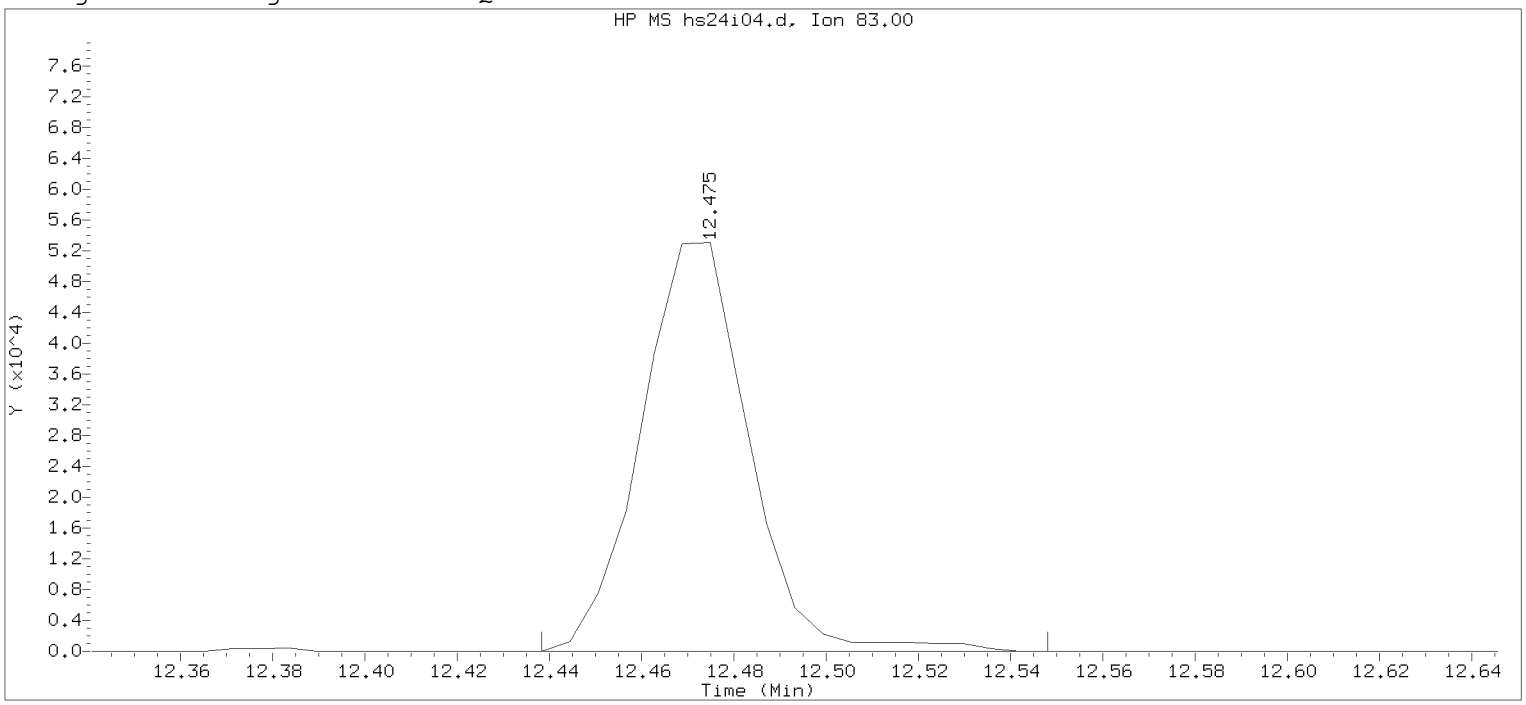
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

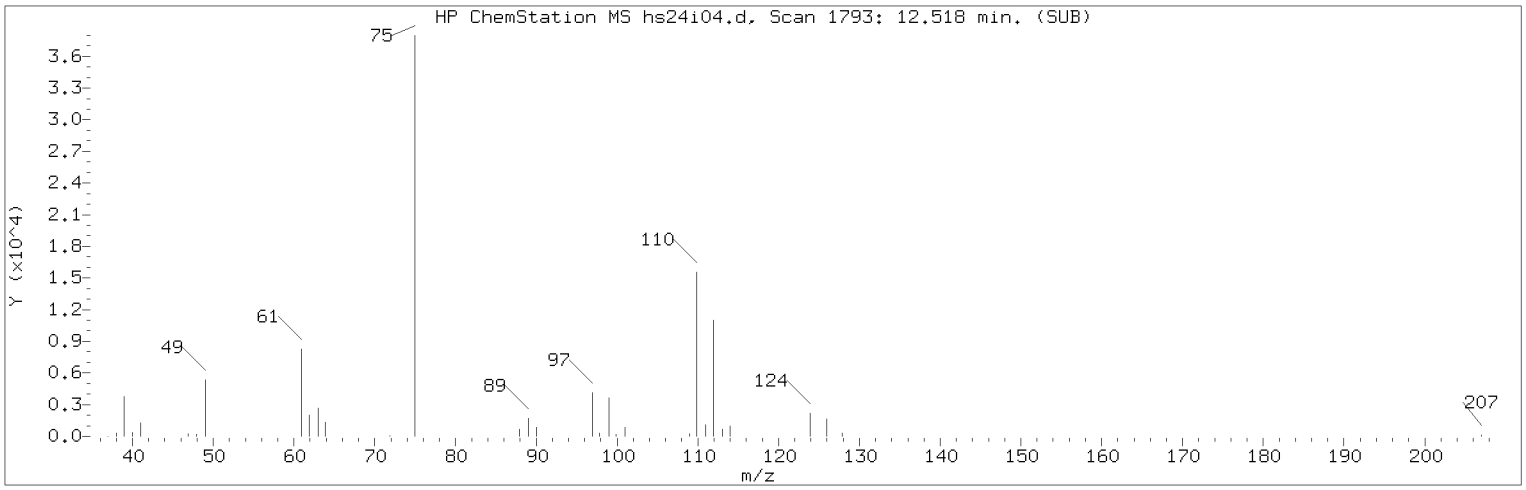
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

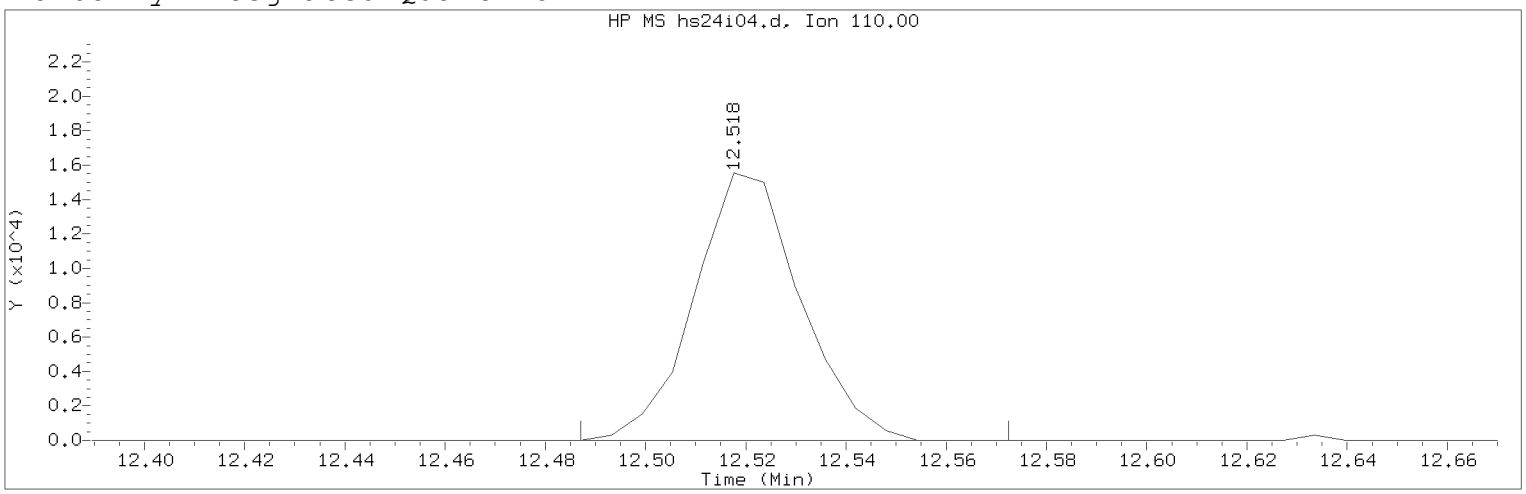
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 86557
On-column Amount (ng) : 1.8966
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

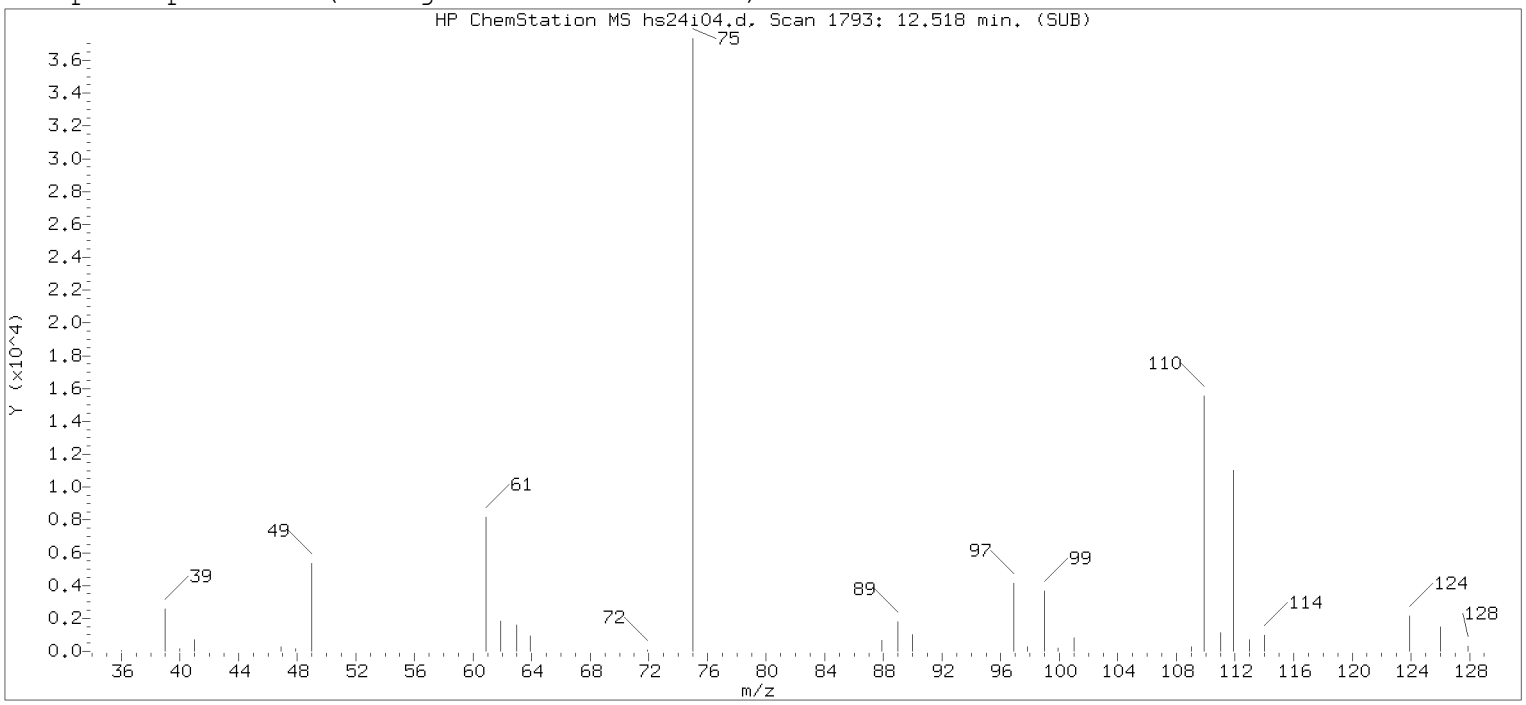
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 22957M
On-Column Amount (ng) : 2.0173
Integration start scan : 1787 Integration stop scan: 1801
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

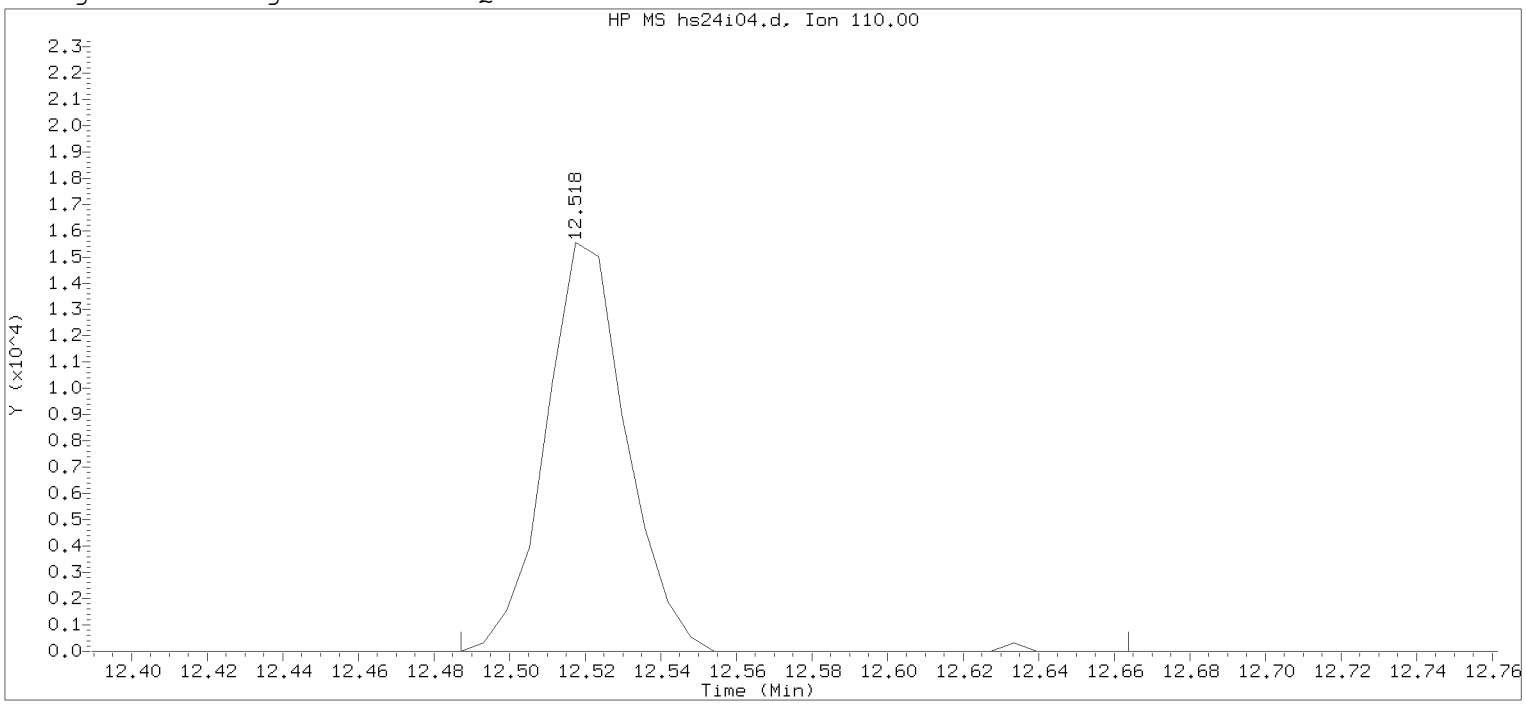
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

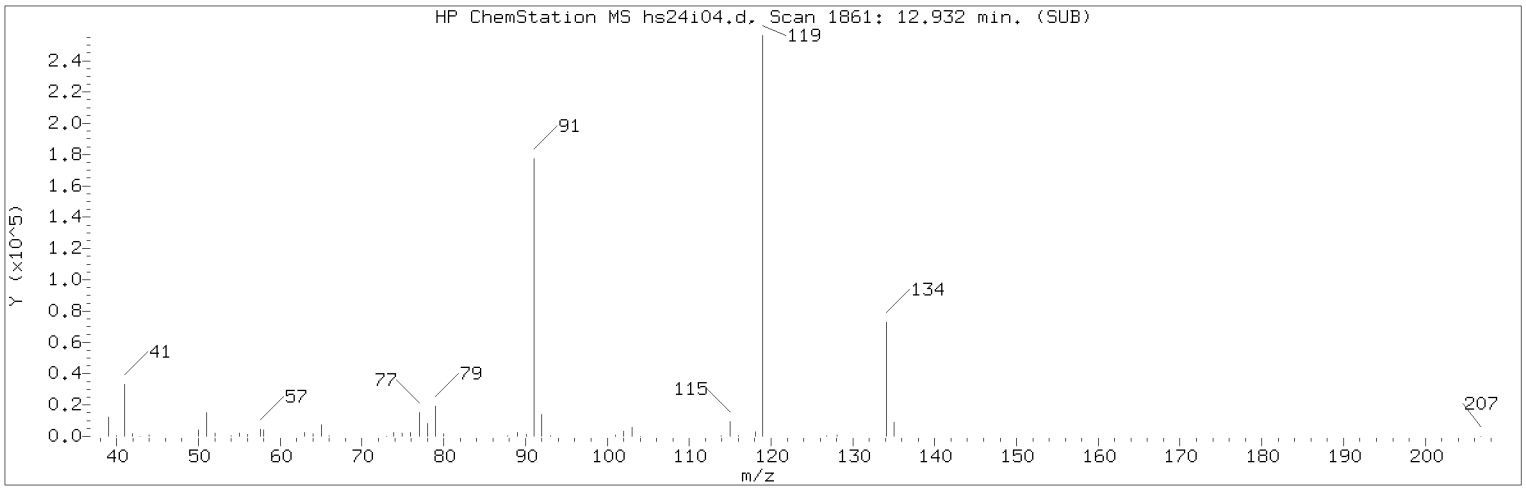
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

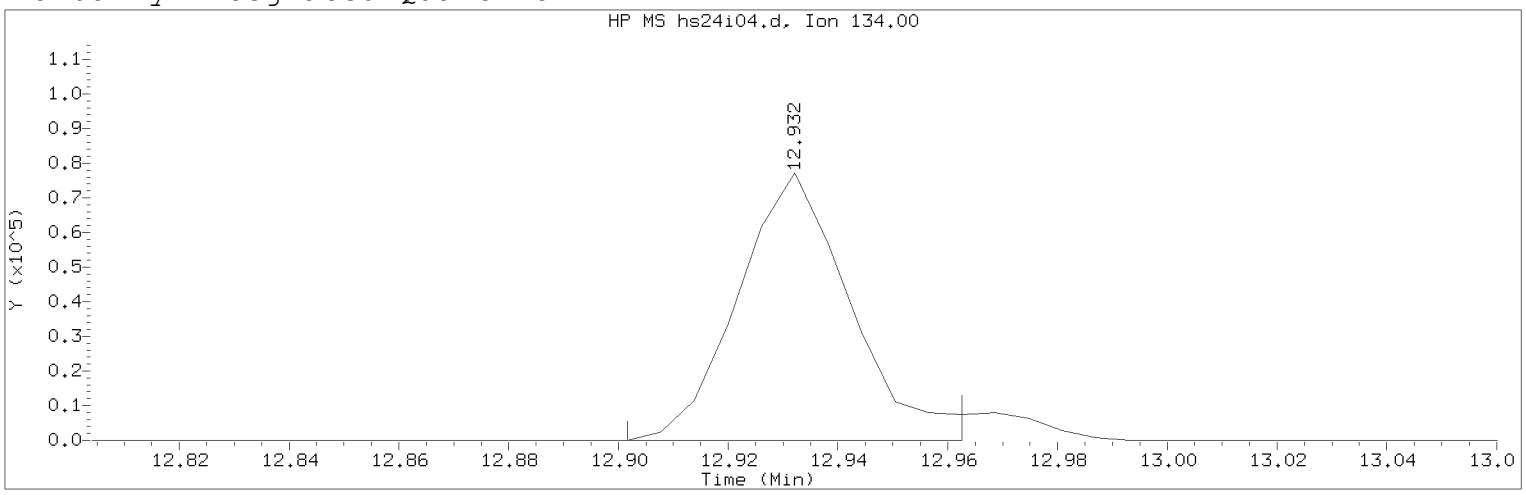
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 23069
On-column Amount (ng) : 2.0019
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 297 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

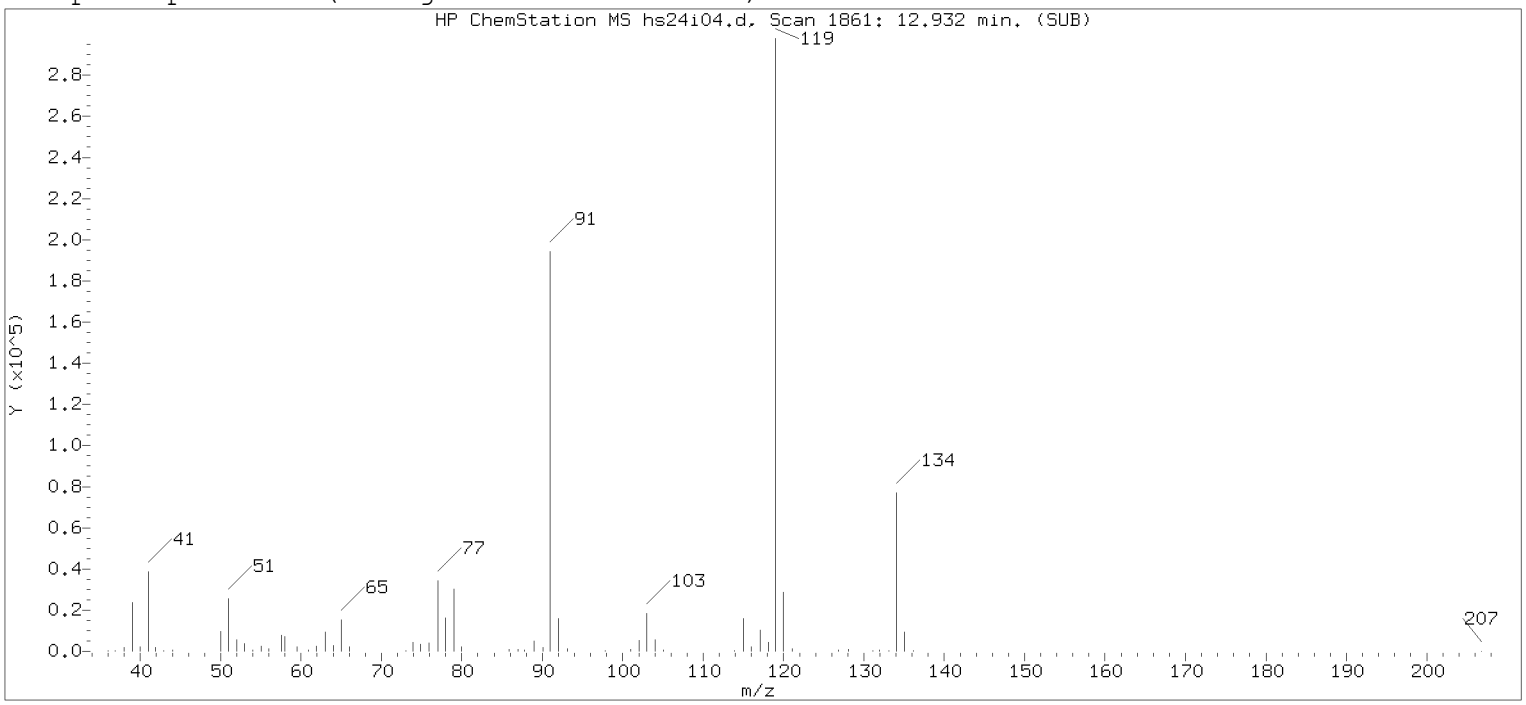
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 110083M
On-Column Amount (ng) : 2.0535
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

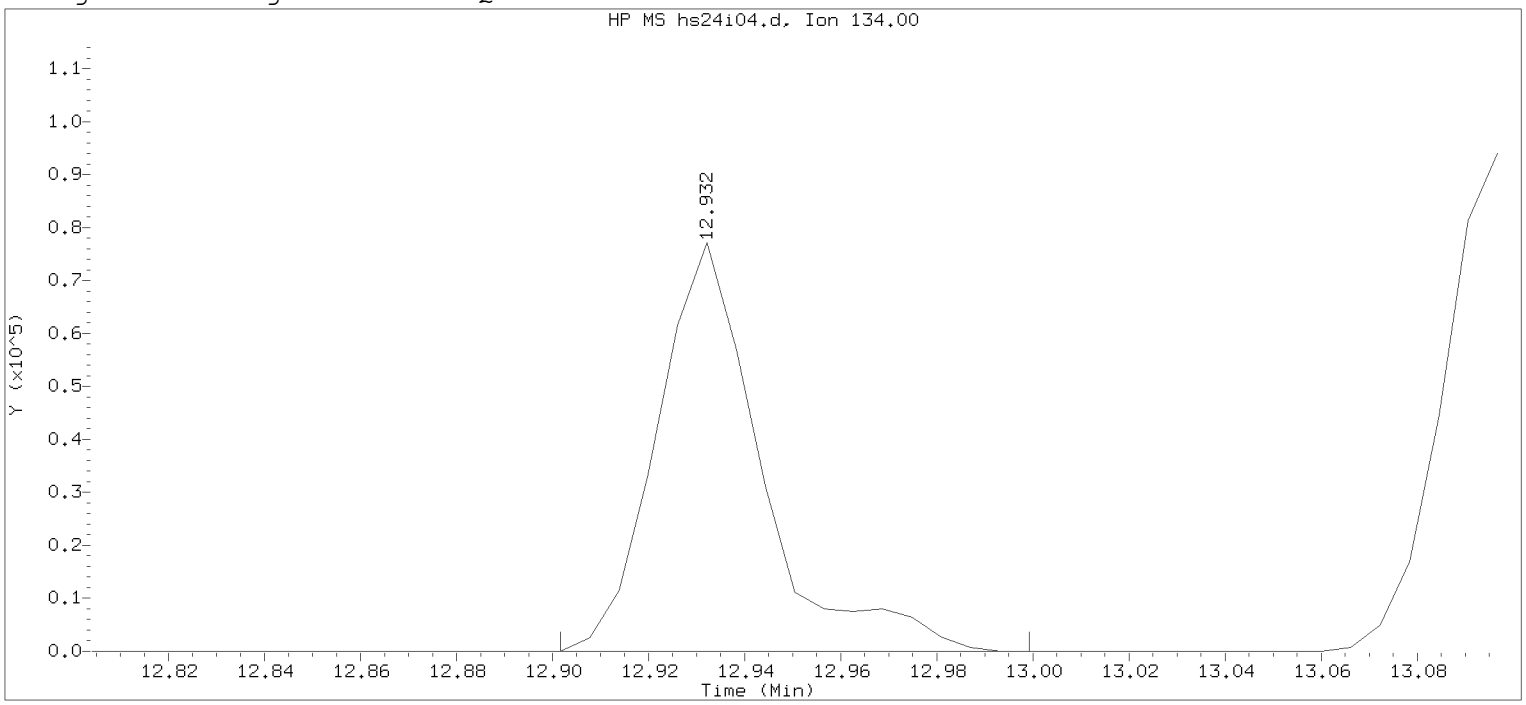
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

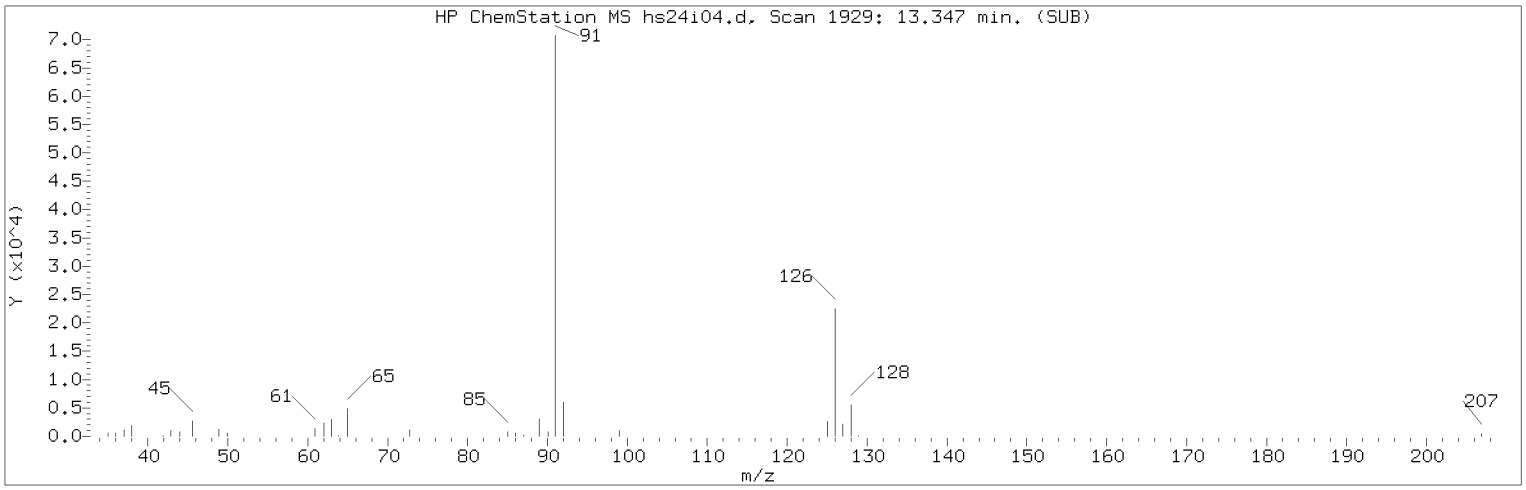
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

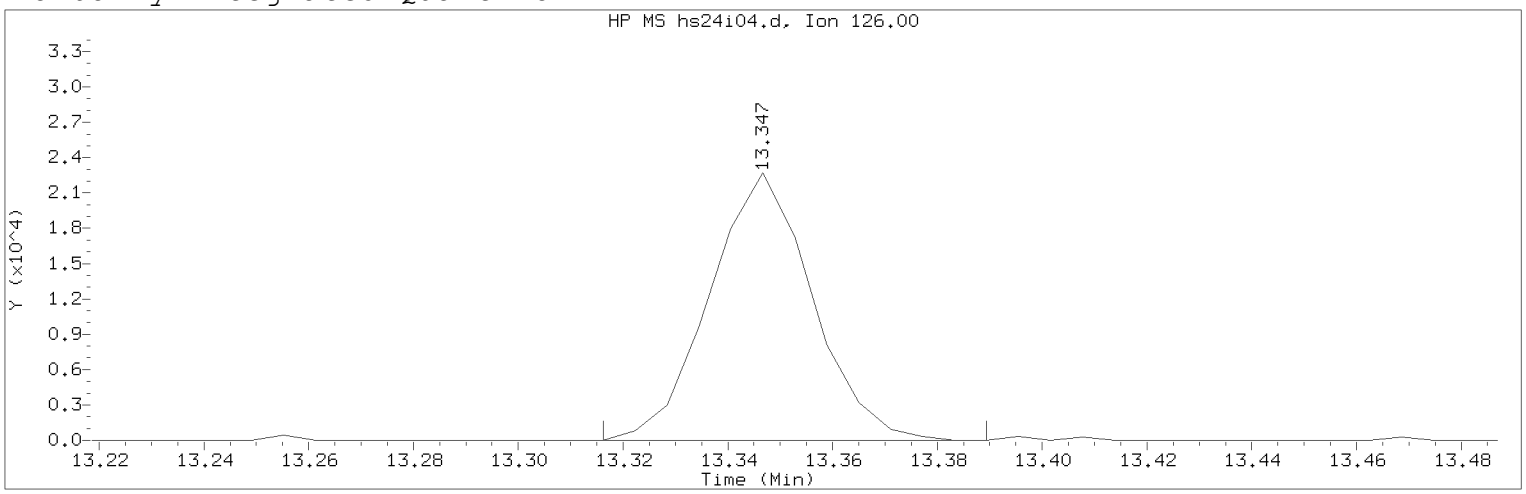
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 116606
On-column Amount (ng) : 2.0344
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE2 - 24-SEP-2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

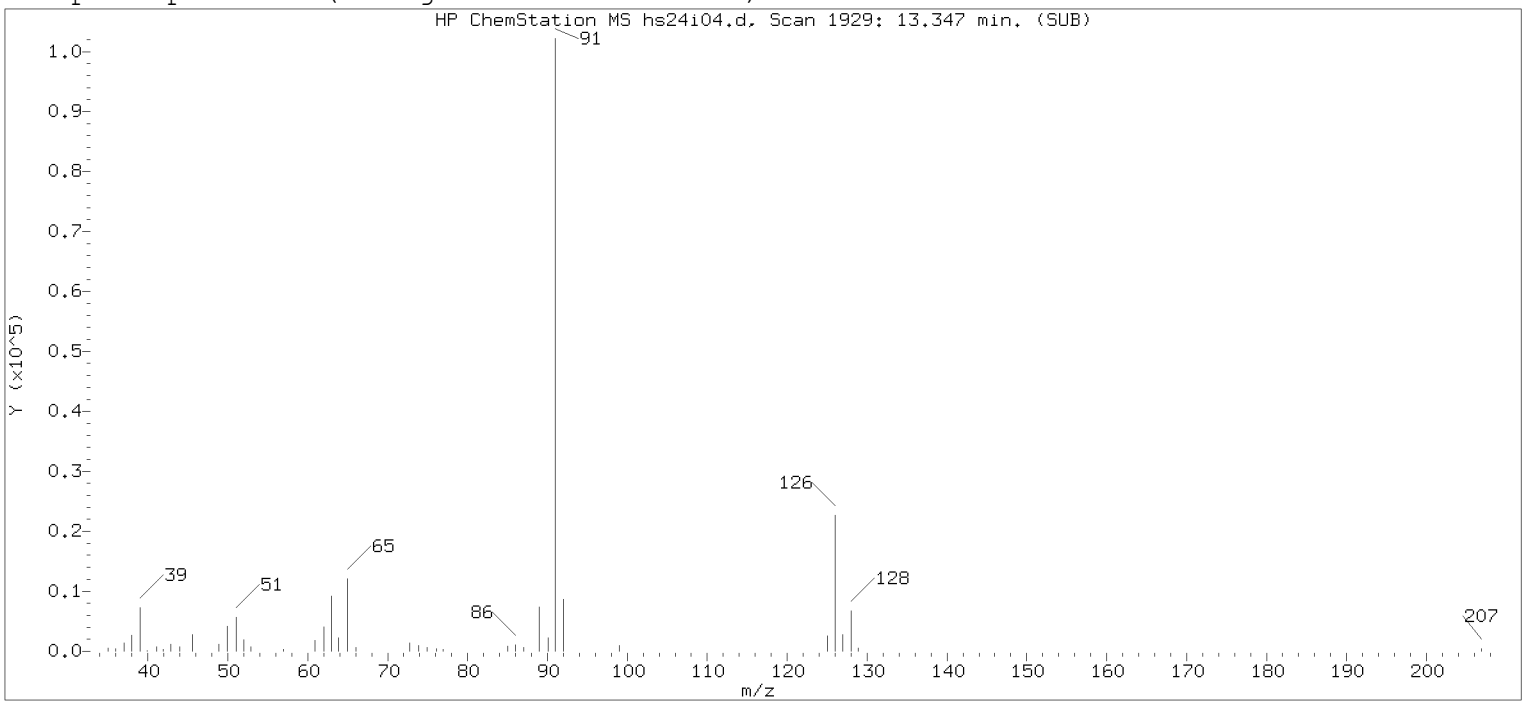
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 30686M
On-Column Amount (ng) : 1.9284
Integration start scan : 1923 Integration stop scan: 1935
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

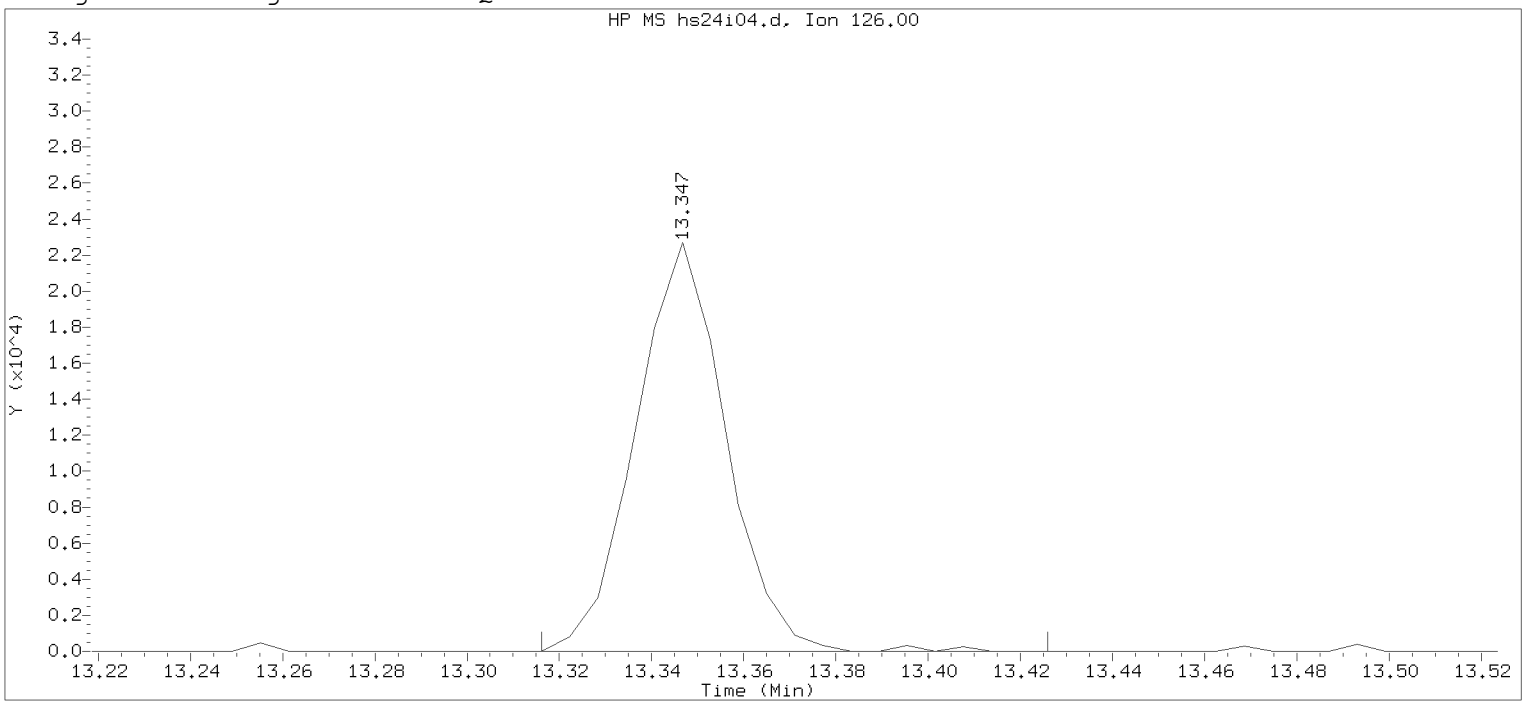
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



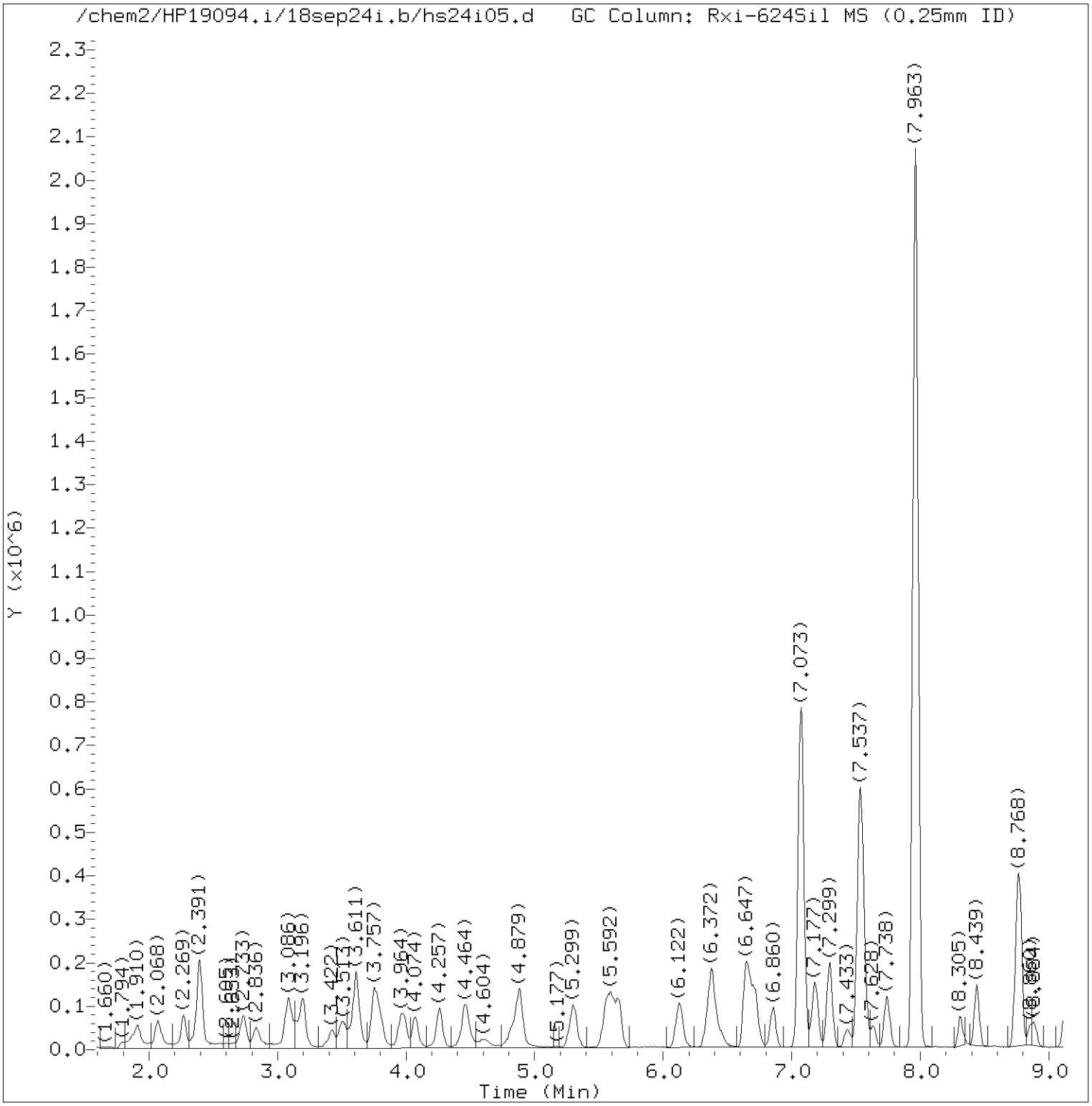
Data File: /chem2/HP19094.i/18sep24i.b/hs24i04.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:33 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 30896
On-column Amount (ng) : 1.7699
Integration start scan : 1923 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jkh09052



Total Ion Chromatogram (TIC)

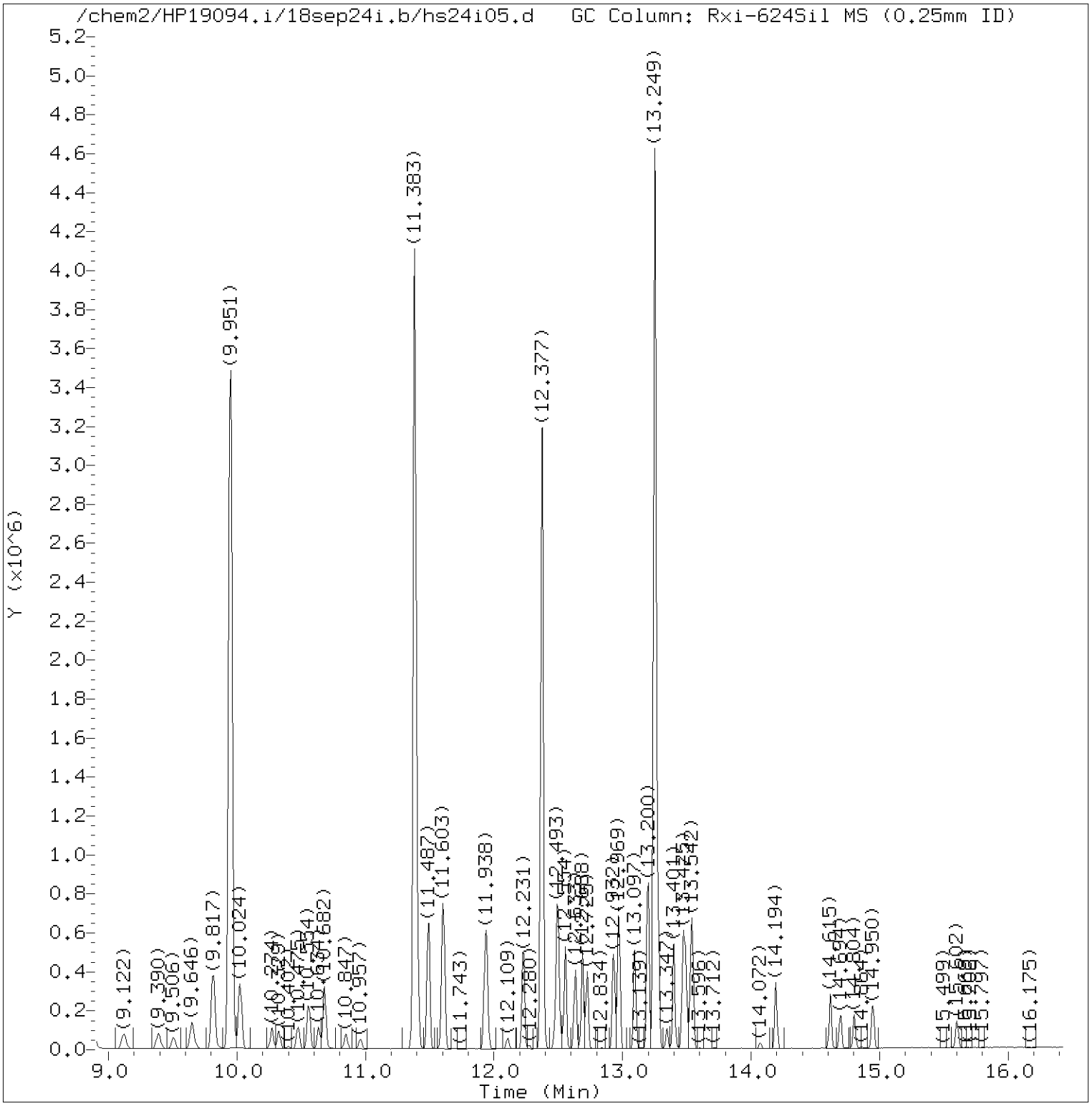
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.068	85	109107	1.012
2) Chloromethane	(2)	2.269	50	106297	1.007
6) 1,3-Butadiene	(2)	2.385	39	118482M	1.058
5) Vinyl Chloride	(2)	2.397	62	100865	1.020
7) Bromomethane	(2)	2.739	94	77295	1.005
8) Chloroethane	(2)	2.836	64	61896	1.032
9) Dichlorofluoromethane	(2)	3.080	67	145968	1.023
10) Trichlorofluoromethane	(2)	3.141	101	127294	1.019
11) Ethyl ether	(2)	3.428	59	41485	0.979
12) Freon 123a	(2)	3.513	67	80944	1.023
13) Acrolein	(1)	3.611	56	300932	49.491
15) 1,1-Dichloroethene	(2)	3.751	96	56220	1.039
16) Freon 113	(2)	3.775	101	65967	1.035
14) Acetone	(1)	3.787	43	80897M	9.905
17) Methyl Iodide	(2)	3.952	142	114085	1.012
18) Carbon Disulfide	(2)	4.074	76	173907	1.010
21) Methyl Acetate	(1)	4.232	43	24438	1.066
22) Allyl Chloride	(2)	4.257	41	102466	0.996
23) Methylene Chloride	(2)	4.452	84	61955	1.015
26)*t-Butyl Alcohol-d10	(1)	4.470	65	137024M	50.000
28) t-Butyl Alcohol	(1)	4.604	59	49275M	21.068
29) Acrylonitrile	(1)	4.824	53	53013	5.026
30) Methyl Tertiary Butyl Ether	(2)	4.854	73	114458	1.029
31) trans-1,2-Dichloroethene	(2)	4.891	96	63184	1.035
32) n-Hexane	(2)	5.299	57	100196	1.032
33) 1,1-Dichloroethane	(2)	5.555	63	119955	1.032
34) di-Isopropyl Ether	(2)	5.592	45	208438	1.010
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	105930	1.013
40) 1,2-Dichloroethene (Total)	(2)		96	132499	2.062
37) Ethyl t-butyl ether	(2)	6.128	59	168973M	1.032
38) 2-Butanone	(1)	6.336	43	133197	9.963
39) cis-1,2-Dichloroethene	(2)	6.372	96	69315	1.028
41) 2,2-Dichloropropane	(2)	6.391	77	83581	1.007
42) Propionitrile	(1)	6.445	54	75366	20.769
45) Methacrylonitrile	(1)	6.647	67	129937	9.931
47) Bromochloromethane	(2)	6.701	128	28262	0.992
48) Tetrahydrofuran	(1)	6.720	71	35178	9.898
49) Chloroform	(2)	6.860	83	114336	1.058

M = Compound was manually integrated.
* = Compound is an internal standard.

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	696307	10.014
50)$Dibromofluoromethane	(2)	7.073	111	721346	10.079
51) 1,1,1-Trichloroethane	(2)	7.086	97	94711	1.025
52) Cyclohexane	(2)	7.177	56	123949	1.027
52) Cyclohexane	(2)	7.183	84	104356	1.049
52) Cyclohexane	(2)	7.183	69	36367	1.023
55) 1,1-Dichloropropene	(2)	7.293	75	90431	1.032
54) Carbon Tetrachloride	(2)	7.299	117	81897	1.032
56) Isobutyl Alcohol	(1)	7.427	41	47053	51.995
57)$1,2-Dichloroethane-d4	(2)	7.524	102	119829	9.885
57)$1,2-Dichloroethane-d4	(2)	7.531	65	593178	10.117
57)$1,2-Dichloroethane-d4	(2)	7.531	104	79680	10.263
58) Benzene	(2)	7.561	78	264658	1.022
59) 1,2-Dichloroethane	(2)	7.628	62	59426M	0.997
60) t-Amyl methyl ether	(2)	7.738	73	139571	1.028
62) n-Heptane	(2)	7.963	43	102958	1.029
63)*Fluorobenzene	(2)	7.963	96	2758903	10.000
65) n-Butanol	(1)	8.305	56	74668M	97.664
67) Trichloroethene	(2)	8.445	95	68161	1.028
69) Methylcyclohexane	(2)	8.750	83	122857	0.981
70) 1,2-Dichloropropane	(2)	8.780	63	63132	1.005
71) Methyl Methacrylate	(1)	8.847	69	23722	0.979
72) 1,4-Dioxane	(1)	8.878	88	9241M	50.201
73) Dibromomethane	(2)	8.884	93	26560	1.019
74) Bromodichloromethane	(2)	9.122	83	69831	0.989
76) 2-Nitropropane	(1)	9.390	41	63314	9.229
80) cis-1,3-Dichloropropene	(2)	9.646	75	80509	0.979
81) 4-Methyl-2-Pentanone	(1)	9.811	43	330202	9.930
82)$Toluene-d8	(3)	9.951	98	2776980	9.936
82)$Toluene-d8	(3)	9.951	100	1802725	9.993
83) Toluene	(3)	10.024	92	162279	1.007
85) 1,3-Dichloropropene (total)	(3)		75	141132	1.955
84) trans-1,3-Dichloropropene	(3)	10.274	75	60623	0.976
86) Ethyl Methacrylate	(3)	10.329	69	51127	0.961
88) 1,1,2-Trichloroethane	(3)	10.475	97	37494	1.011
89) Tetrachloroethene	(3)	10.560	166	73862	1.014
90) 1,3-Dichloropropane	(3)	10.634	76	66150	1.007
91) 2-Hexanone	(1)	10.682	43	223568	9.877

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	42278	0.951
95) 1,2-Dibromoethane	(3)	10.963	107	34504	0.993
96) 1-Chlorohexane	(3)	11.383	91	96260	1.002
97)*Chlorobenzene-d5	(3)	11.383	117	2171615	10.000
98) Chlorobenzene	(3)	11.408	112	177295	1.037
100) Ethylbenzene	(3)	11.493	91	320107	1.016
99) 1,1,1,2-Tetrachloroethane	(3)	11.493	131	56567	1.003
101) m+p-Xylene	(3)	11.603	106	234132	2.004
105) Xylene (Total)	(3)		106	347952	3.023
104) o-Xylene	(3)	11.932	106	113820	1.019
106) Styrene	(3)	11.944	104	180005	1.007
107) Bromoform	(3)	12.109	173	24175	0.990
108) Isopropylbenzene	(3)	12.231	105	309640	1.016
111)$4-Bromofluorobenzene	(3)	12.371	95	1017139	9.995
111)$4-Bromofluorobenzene	(3)	12.377	174	881427	9.975
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	42904M	0.963
114) Bromobenzene	(4)	12.493	156	68106	1.005
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	101534	9.749
116) 1,2,3-Trichloropropane	(4)	12.524	110	11546	1.002
117) n-Propylbenzene	(4)	12.554	91	369750	1.004
119) 2-Chlorotoluene	(4)	12.633	126	72571	1.016
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	249772	1.001
122) 4-Chlorotoluene	(4)	12.725	126	73614	1.028
125) tert-Butylbenzene	(4)	12.932	134	55631M	1.025
126) Pentachloroethane	(4)	12.969	167	39799	0.940
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	253402	0.995
128) sec-Butylbenzene	(4)	13.097	105	327784	1.014
131) 1,3-Dichlorobenzene	(4)	13.194	146	137902	1.025
132) p-Isopropyltoluene	(4)	13.200	119	264718	0.988
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1123390	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	134240	1.016
135) 1,2,3-Trimethylbenzene	(4)	13.279	120	114395M	0.979
136) Benzyl Chloride	(4)	13.347	126	13809	0.857
138) n-Butylbenzene	(4)	13.493	92	135142	1.017
139) 1,2-Dichlorobenzene	(4)	13.529	146	119809	1.009
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	5939	1.054
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	100961	1.008
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	80077	0.982

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on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	30050	0.975
147) Naphthalene	(4)	14.804	128	125068	0.969
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	66944	0.998

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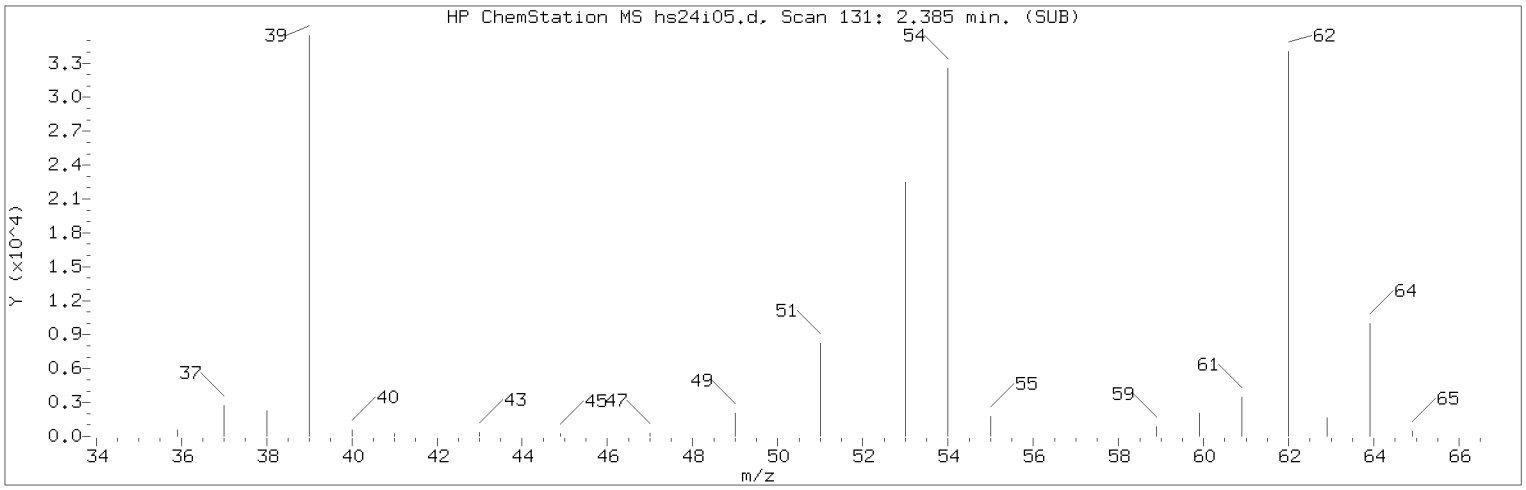
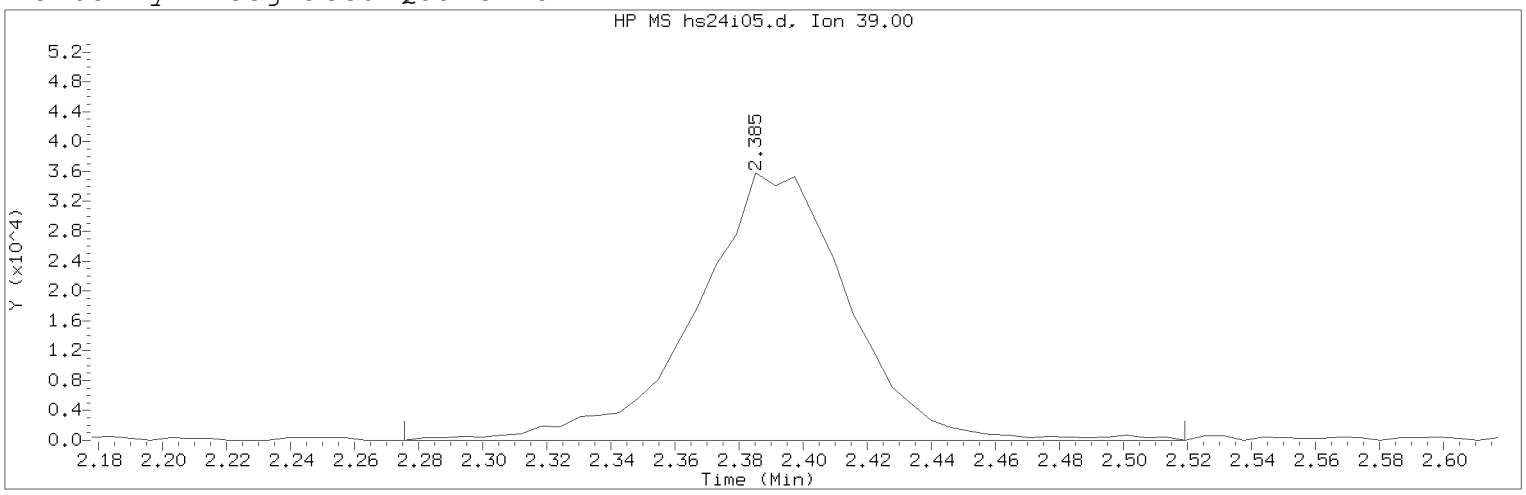
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

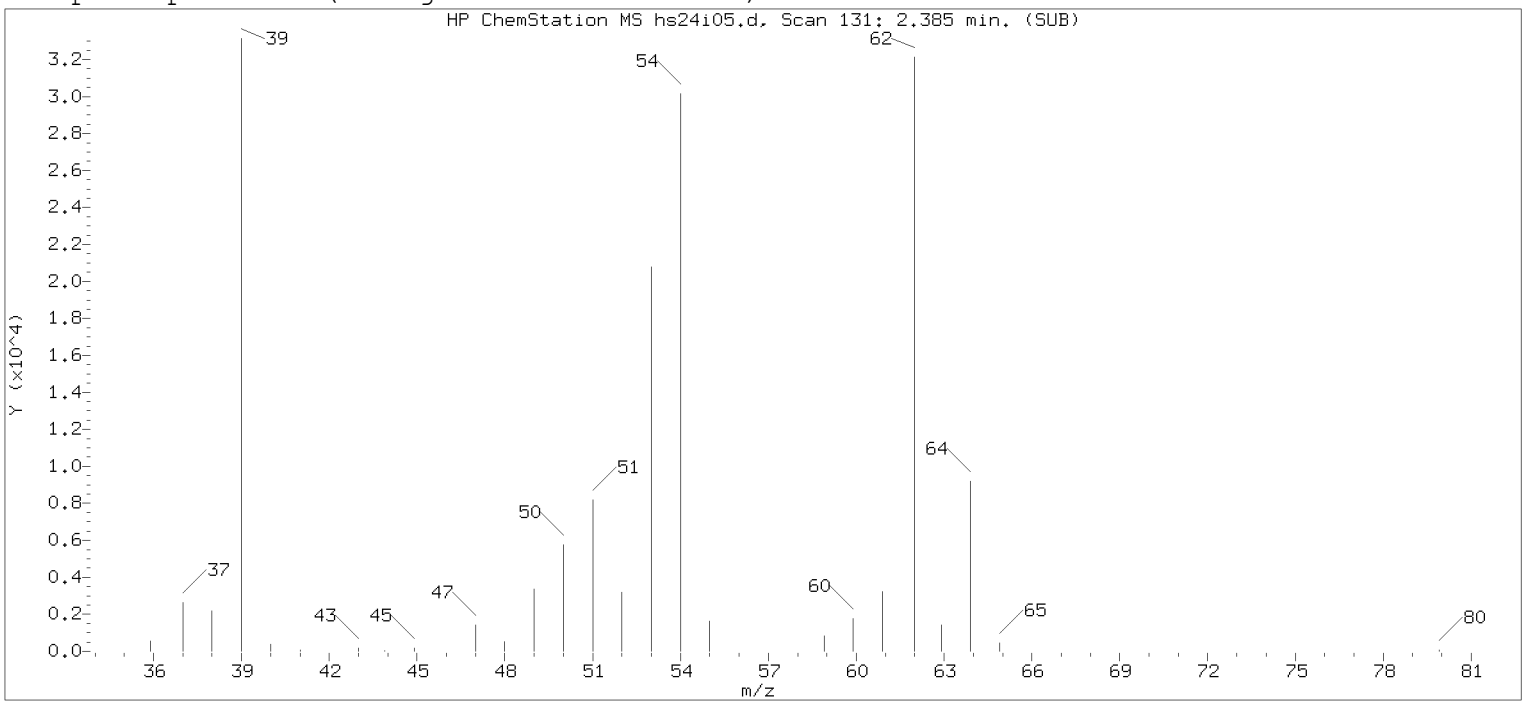
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area (flag) : 118482M
On-Column Amount (ng) : 1.0578
Integration start scan : 112 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

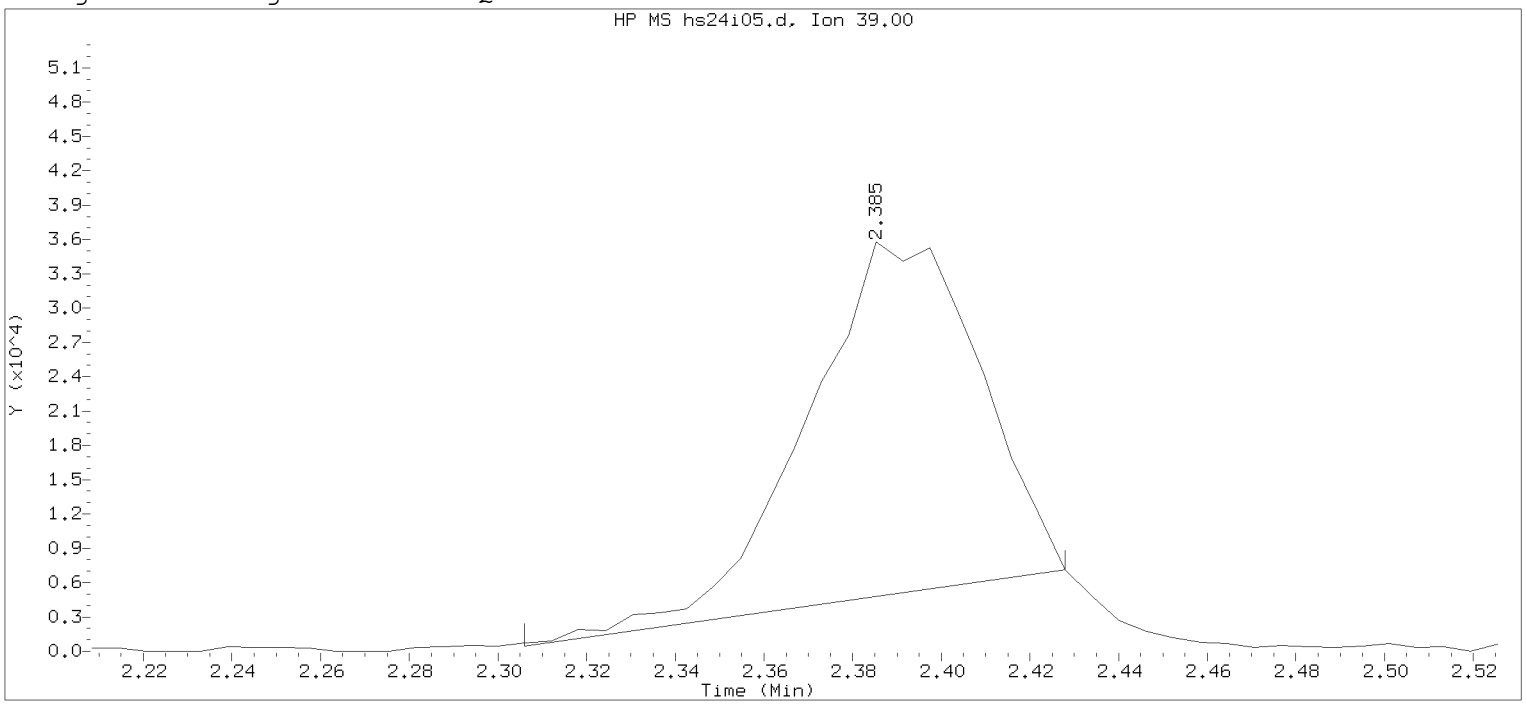
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

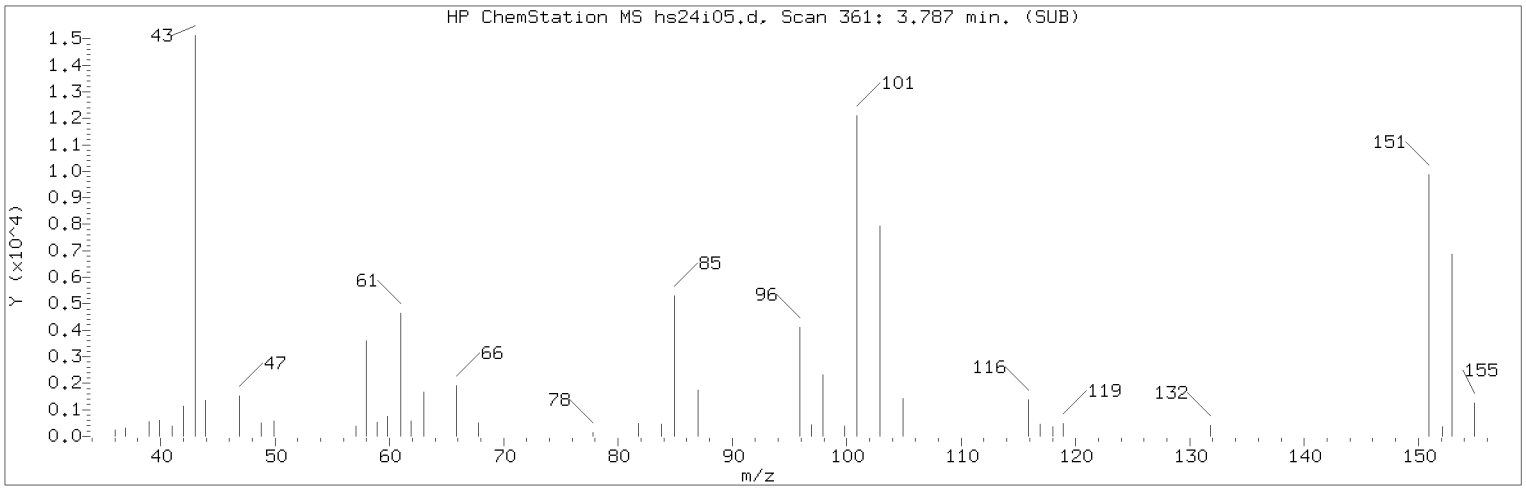
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

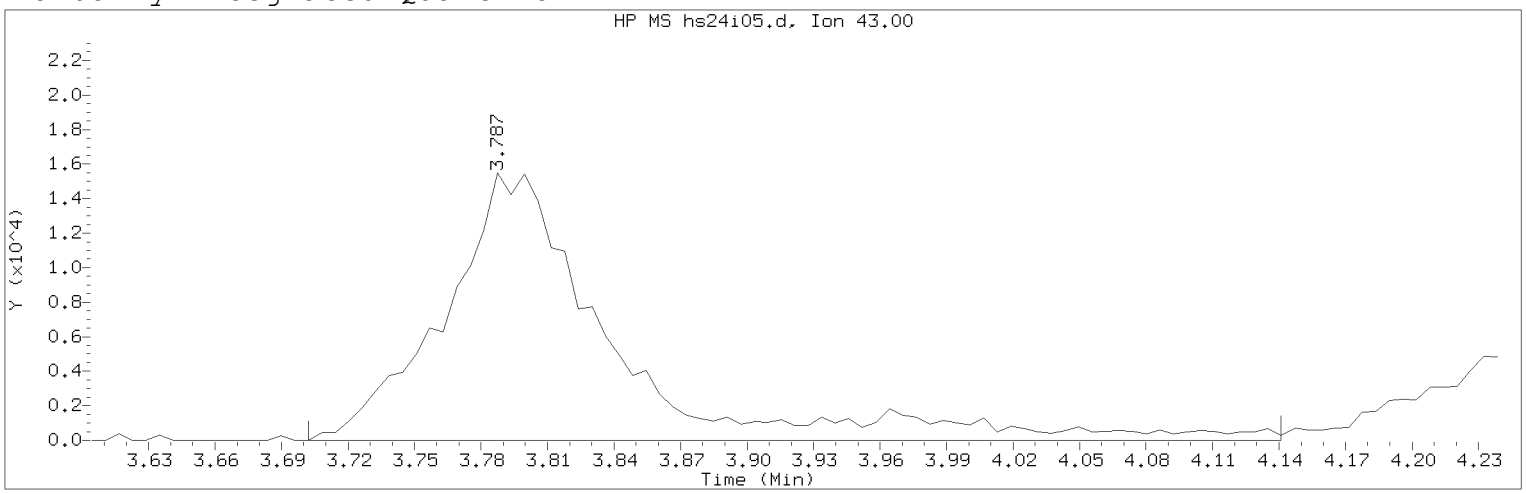
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.385
Quant Ion : 39.00
Area : 83022
On-column Amount (ng) : 0.7928
Integration start scan : 117 Integration stop scan: 137
Y at integration start : 469 Y at integration end: 7133

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



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Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

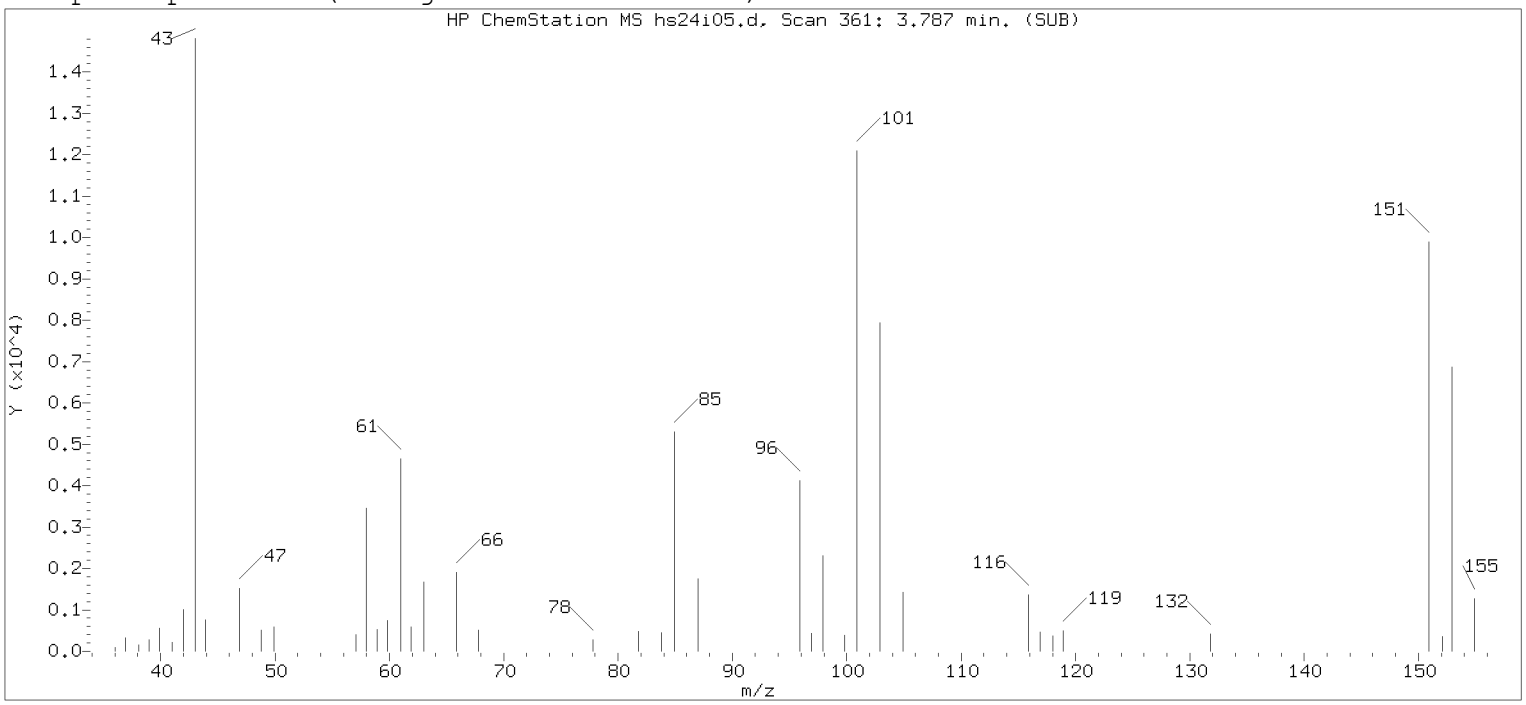
Compound Number : 14
Compound Name : Acetone
Scan Number : 361
Retention Time (minutes): 3.787
Quant Ion : 43.00
Area (flag) : 80897M
On-Column Amount (ng) : 9.9053
Integration start scan : 346 Integration stop scan: 418
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

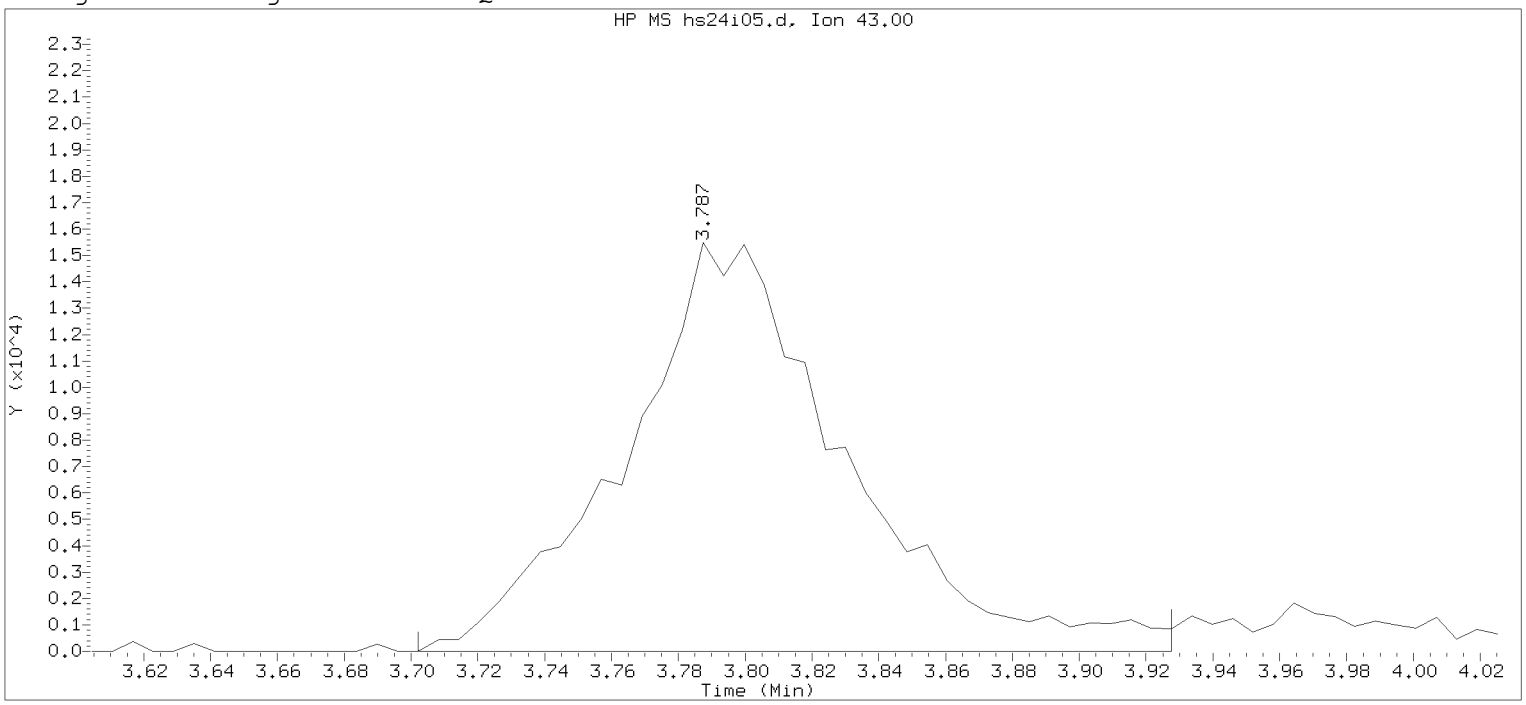
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

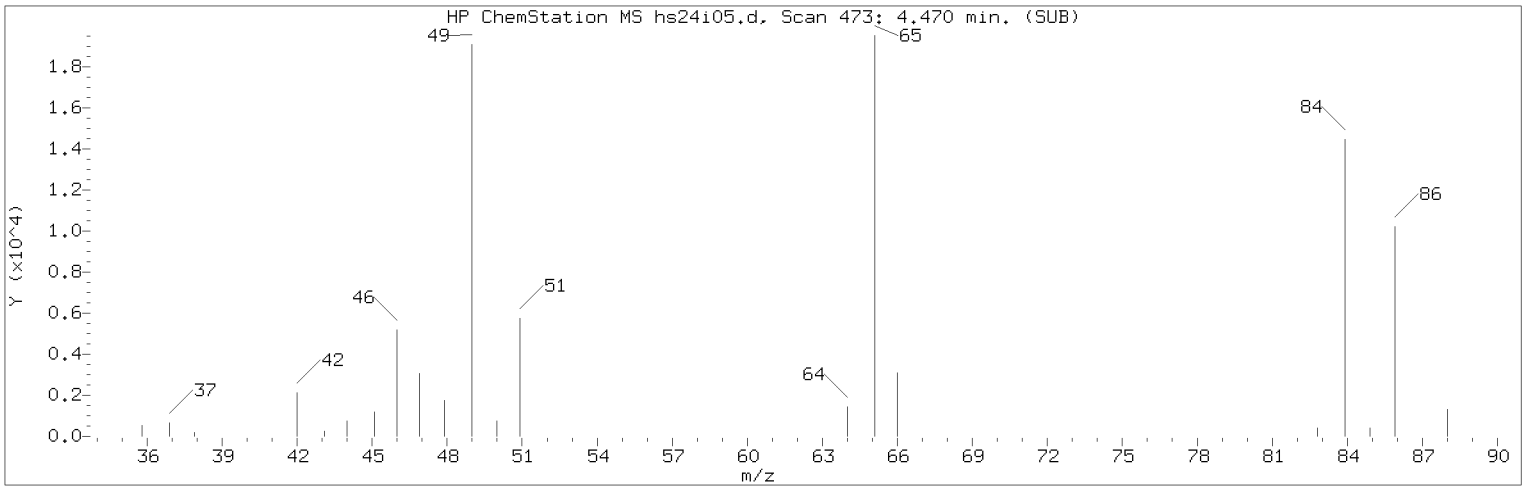
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

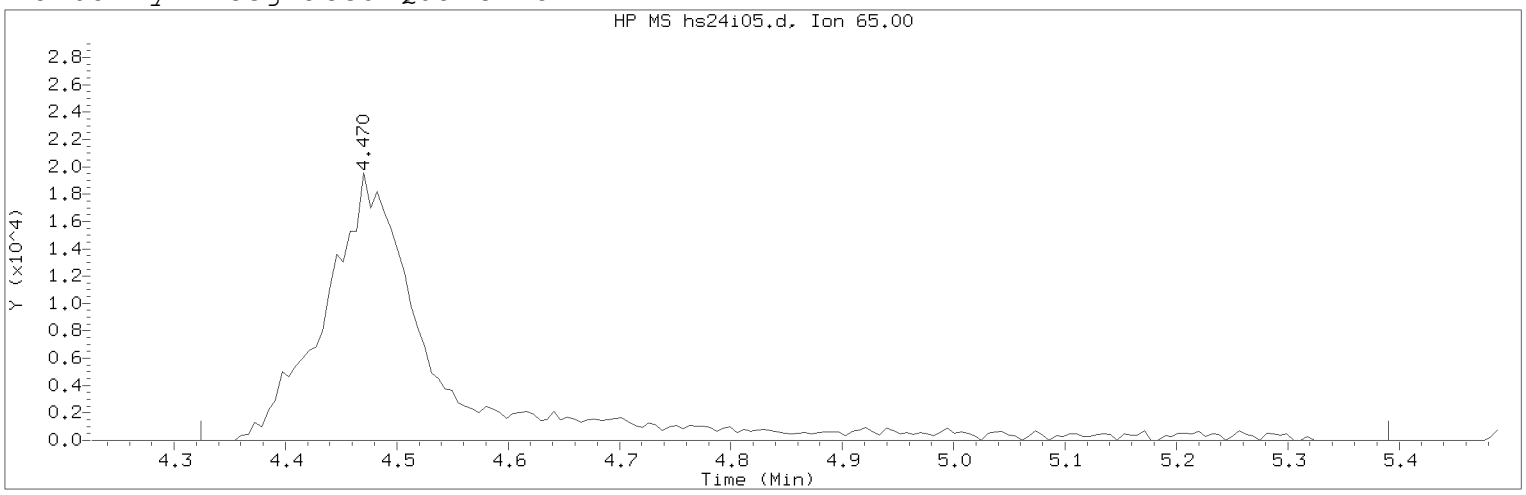
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 361		
Retention Time (minutes)	: 3.787		
Quant Ion	: 43.00		
Area	: 70990		
On-column Amount (ng)	: 9.1768		
Integration start scan	: 346	Integration stop scan:	383
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

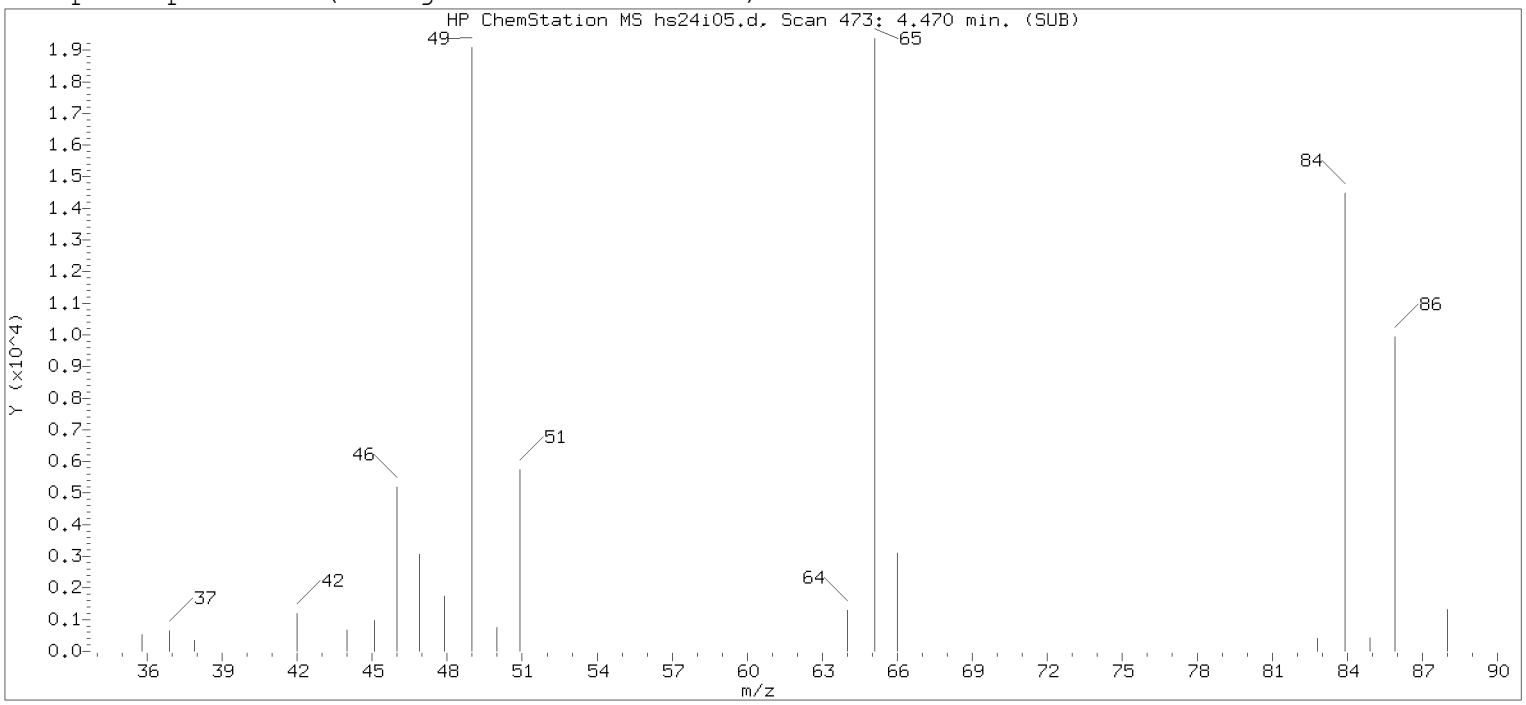
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 137024M
On-Column Amount (ng) : 50.0000
Integration start scan : 448 Integration stop scan: 623
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

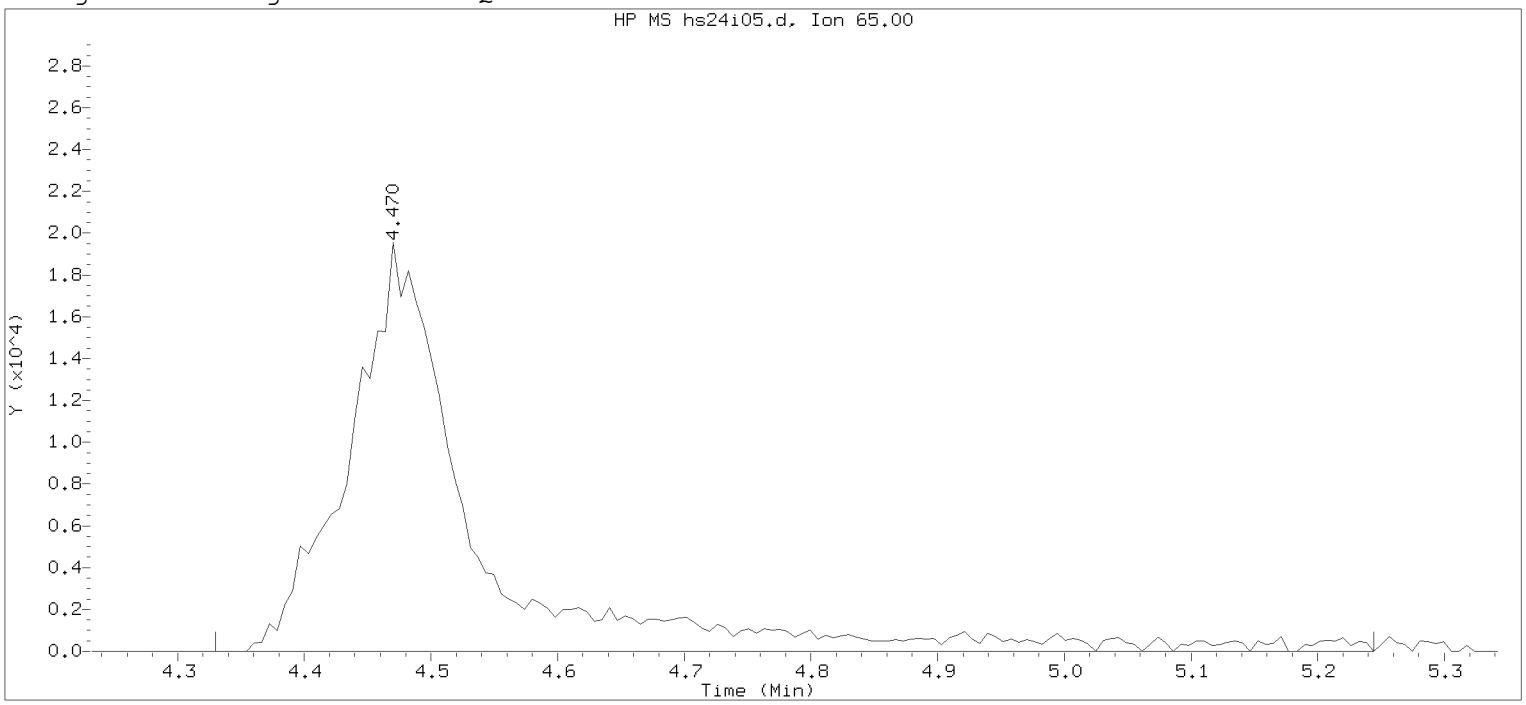
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

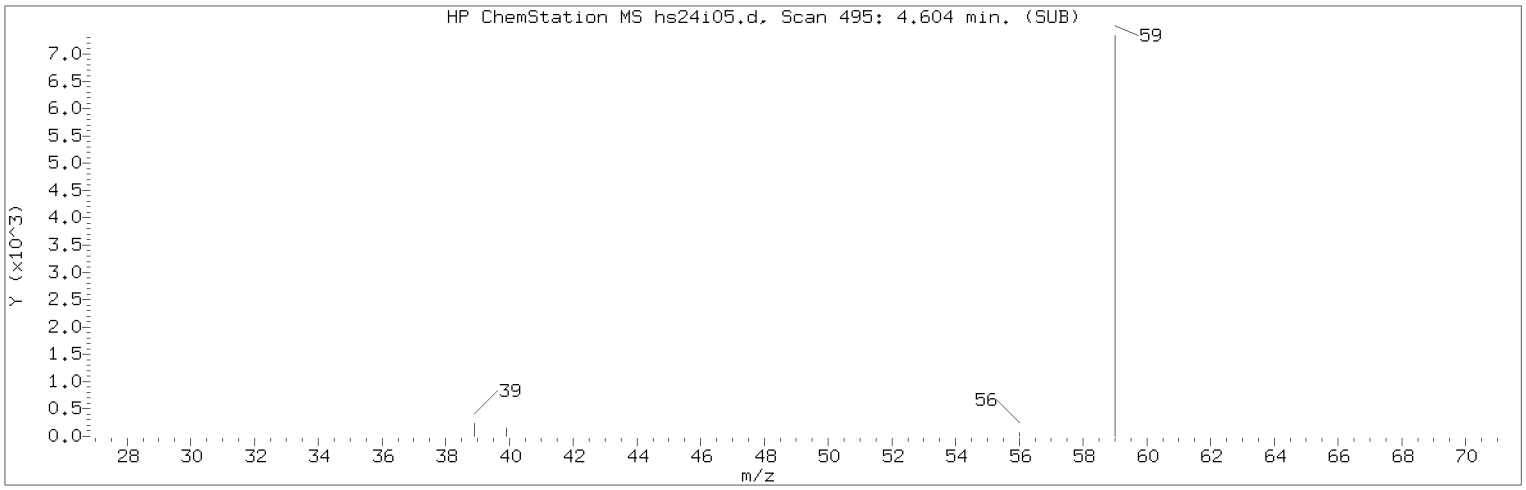
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

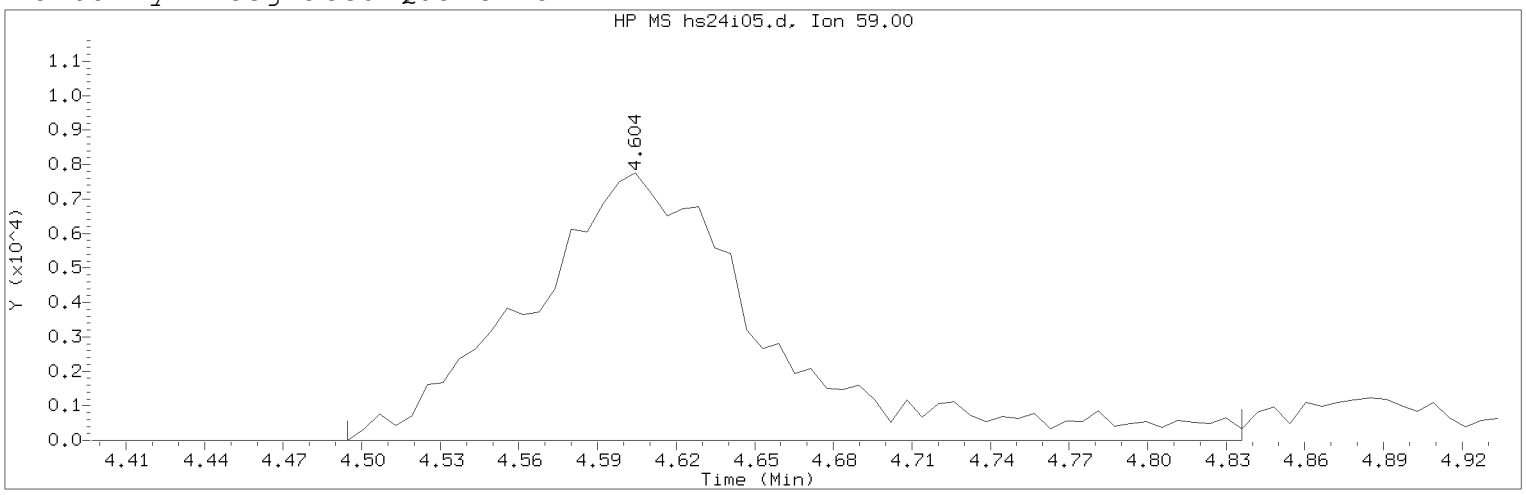
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 135610
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

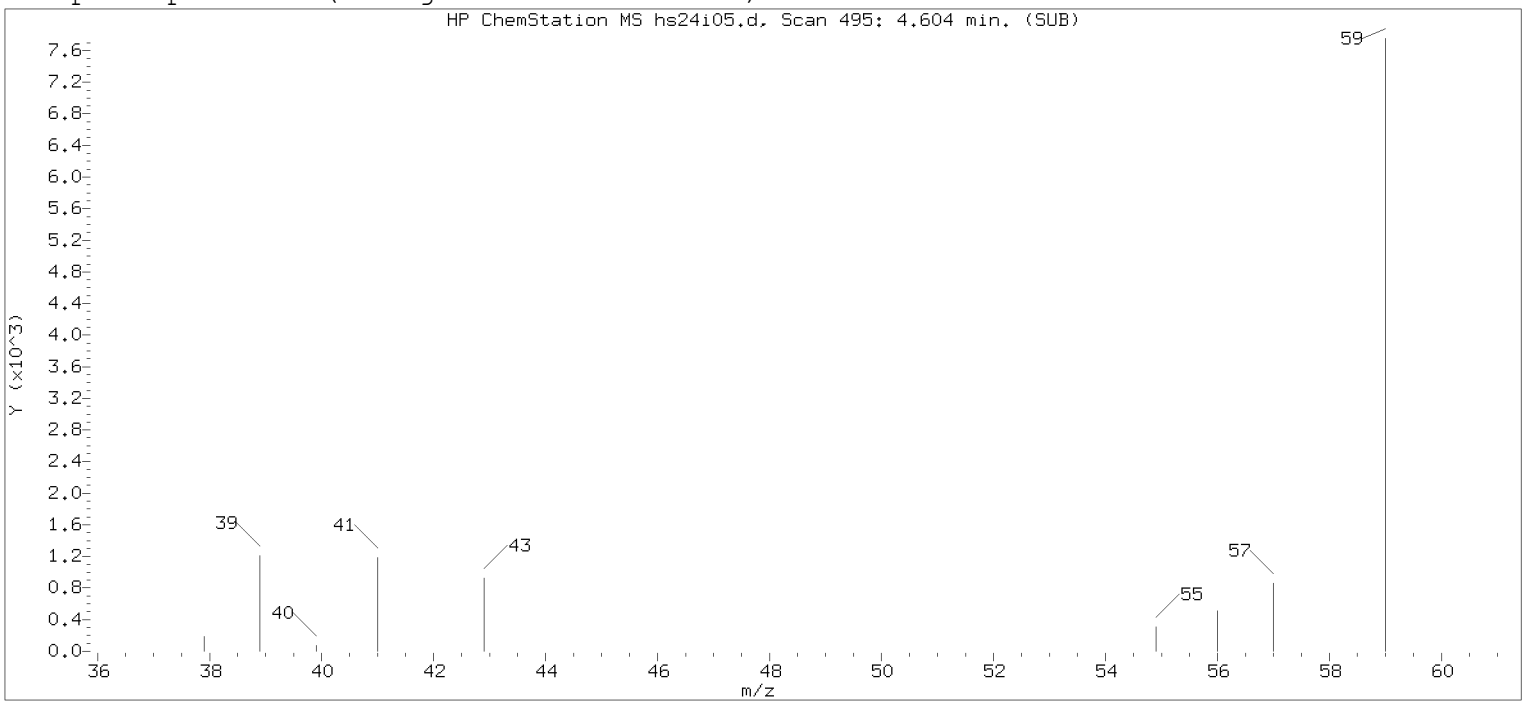
Compound Number : 28
Compound Name : t-Butyl Alcohol
Scan Number : 495
Retention Time (minutes): 4.604
Quant Ion : 59.00
Area (flag) : 49275M
On-Column Amount (ng) : 21.0678
Integration start scan : 476 Integration stop scan: 532
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

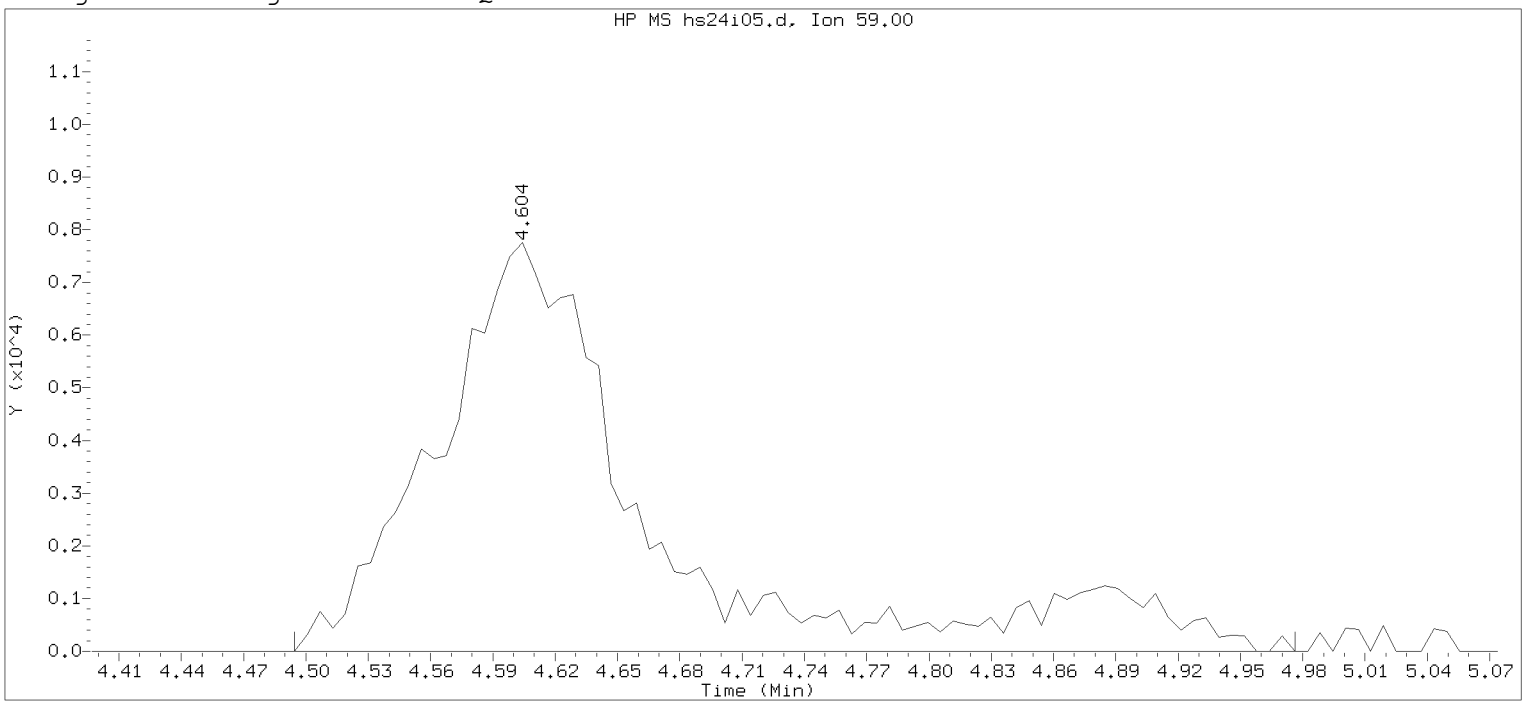
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

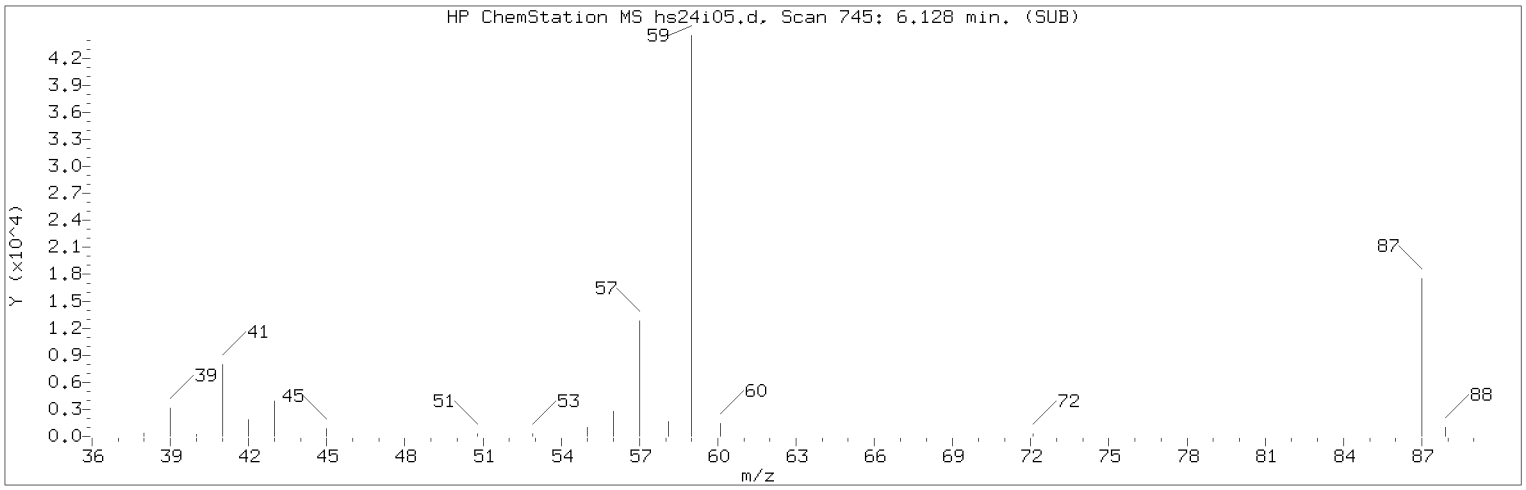
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

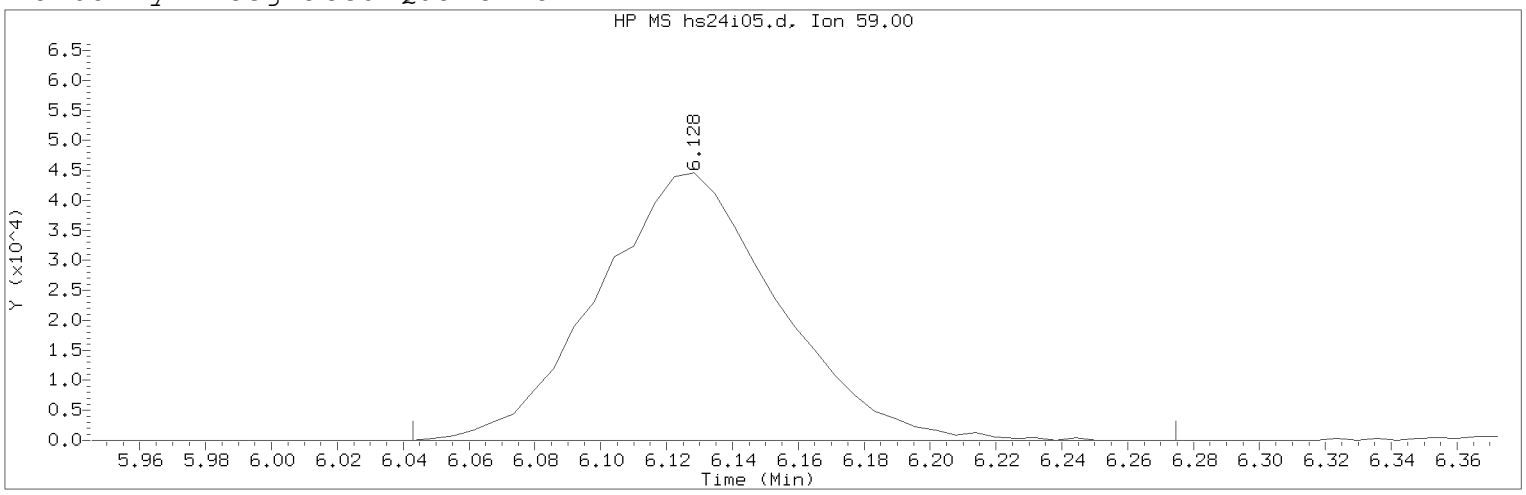
Compound Number	: 28		
Compound Name	: t-Butyl Alcohol		
Scan Number	: 495		
Retention Time (minutes)	: 4.604		
Quant Ion	: 59.00		
Area	: 54917		
On-column Amount (ng)	: 22.3410		
Integration start scan	: 476	Integration stop scan:	555
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 315

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

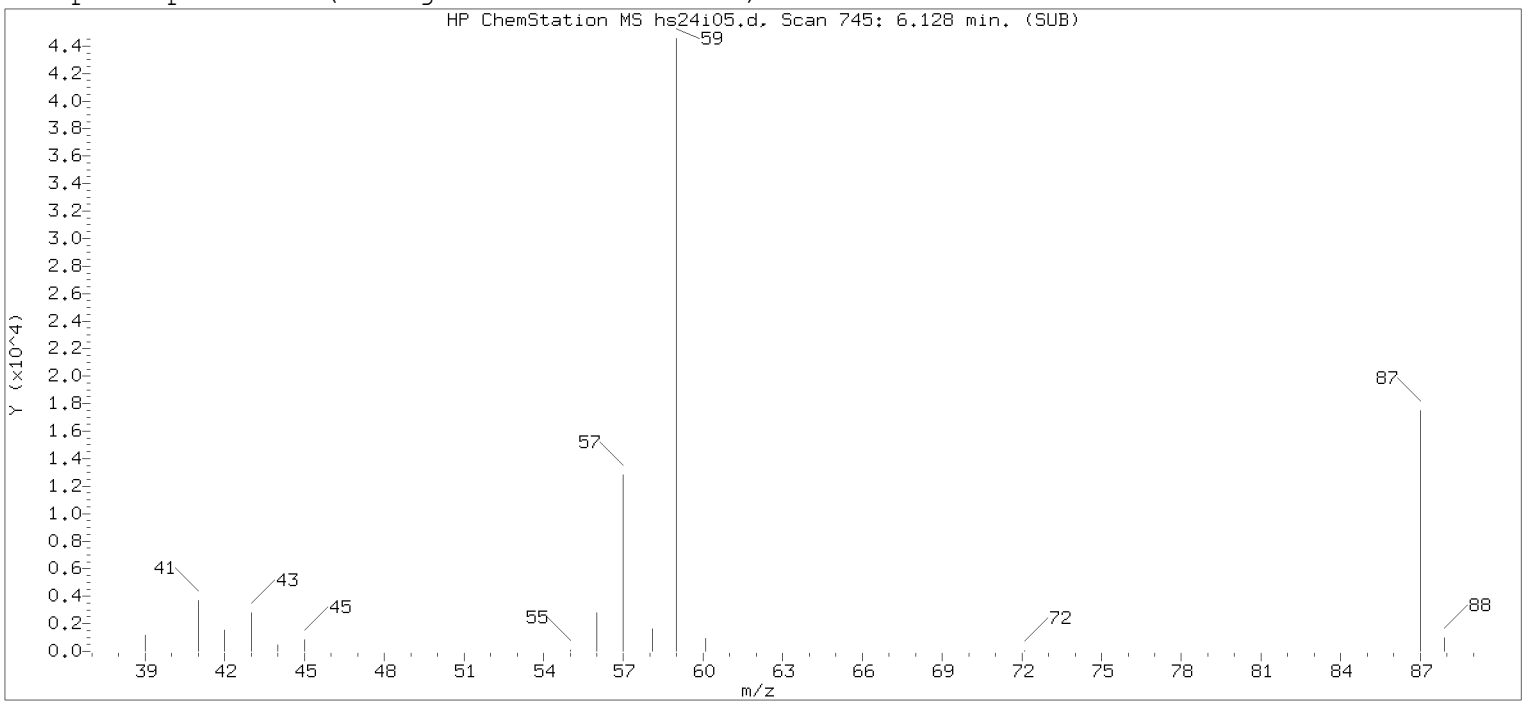
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area (flag) : 168973M
On-Column Amount (ng) : 1.0320
Integration start scan : 730 Integration stop scan: 768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

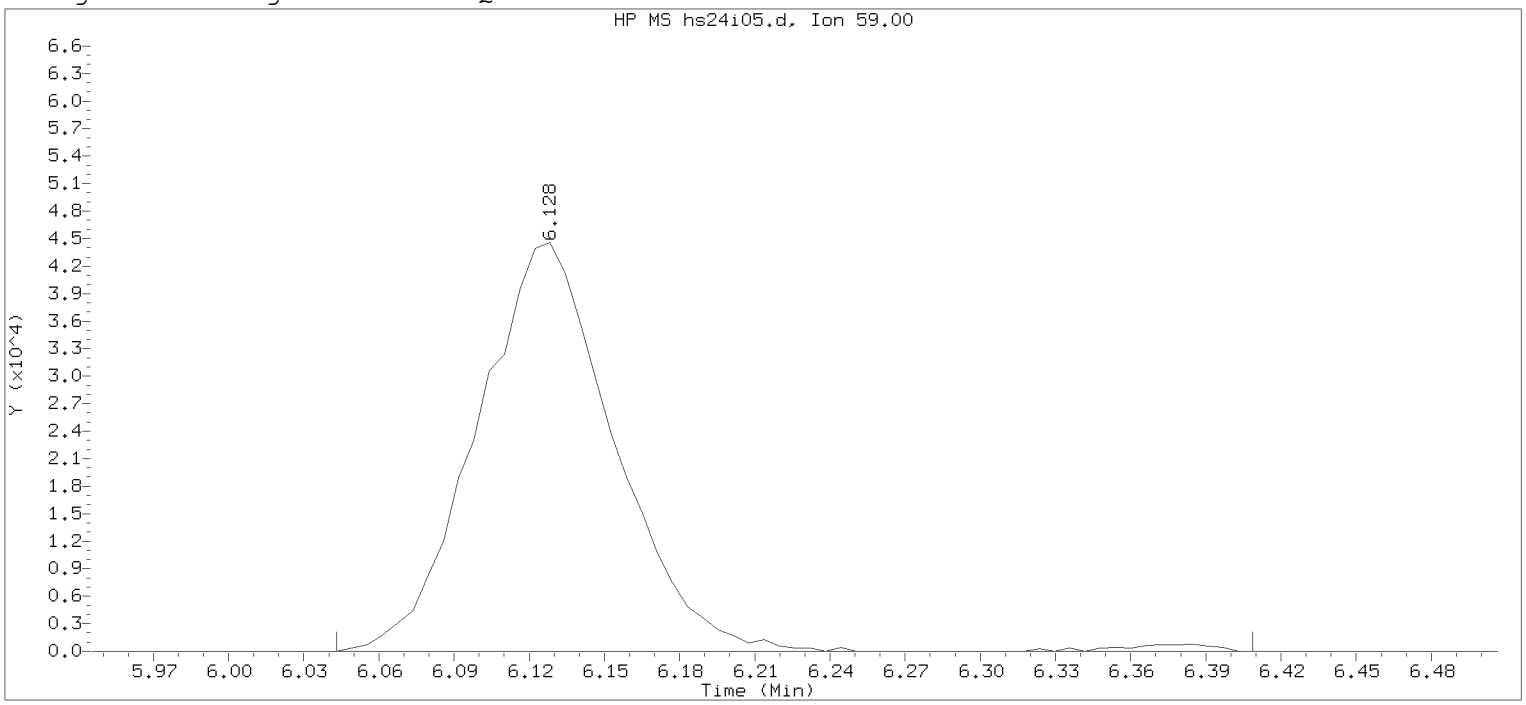
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

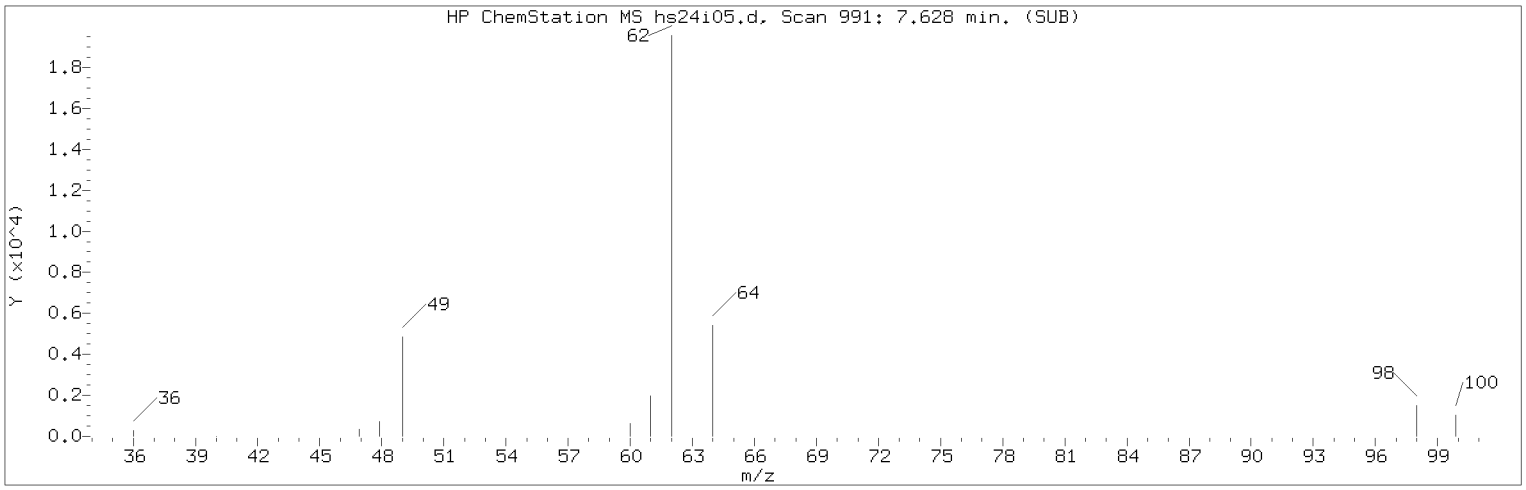
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

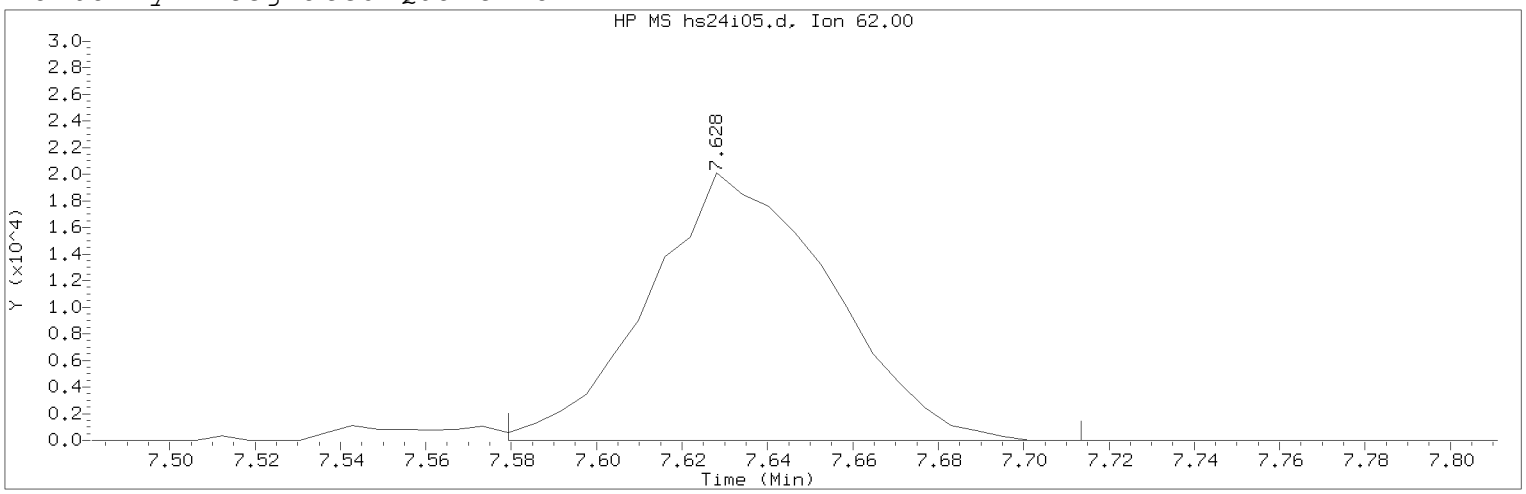
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 745
Retention Time (minutes): 6.128
Quant Ion : 59.00
Area : 170974
On-column Amount (ng) : 1.0111
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used for this record.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

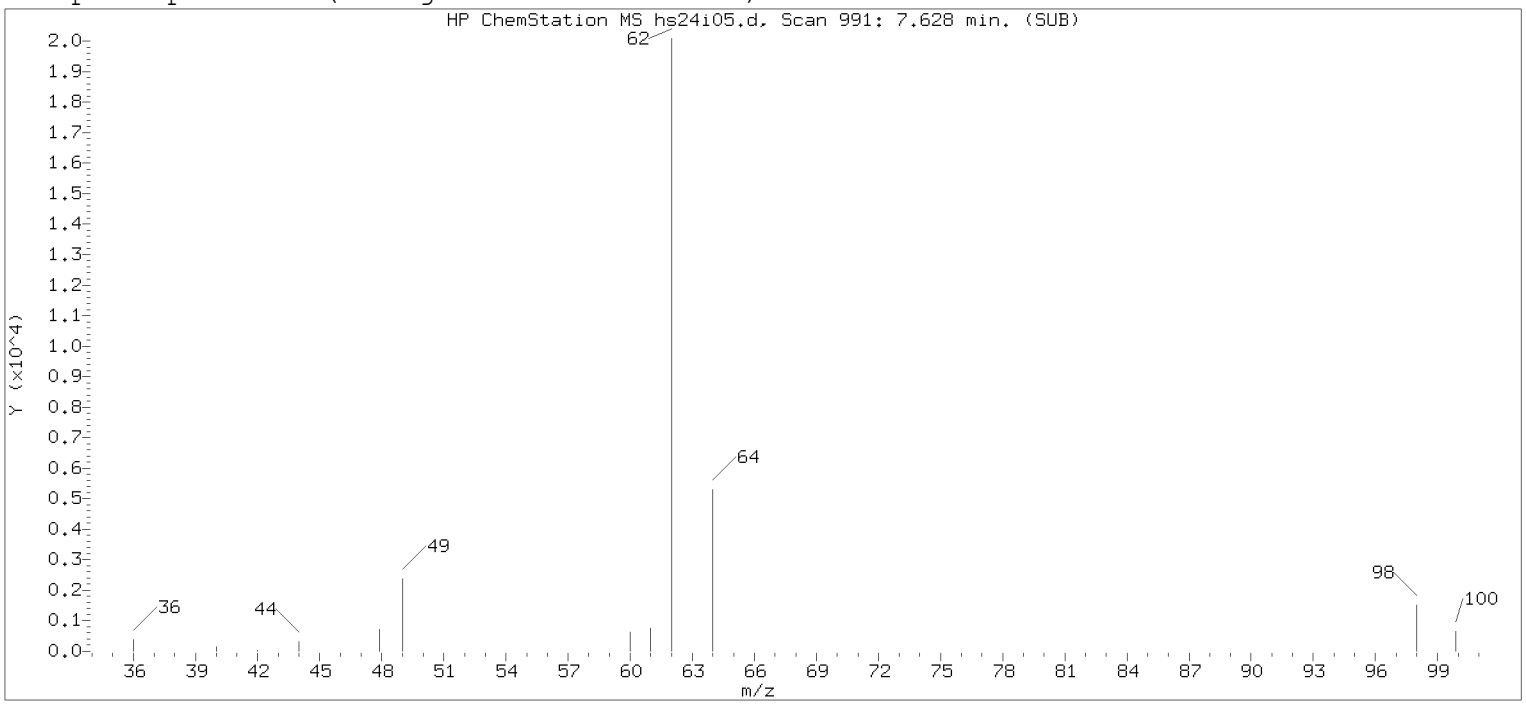
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 59426M
On-Column Amount (ng) : 0.9971
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

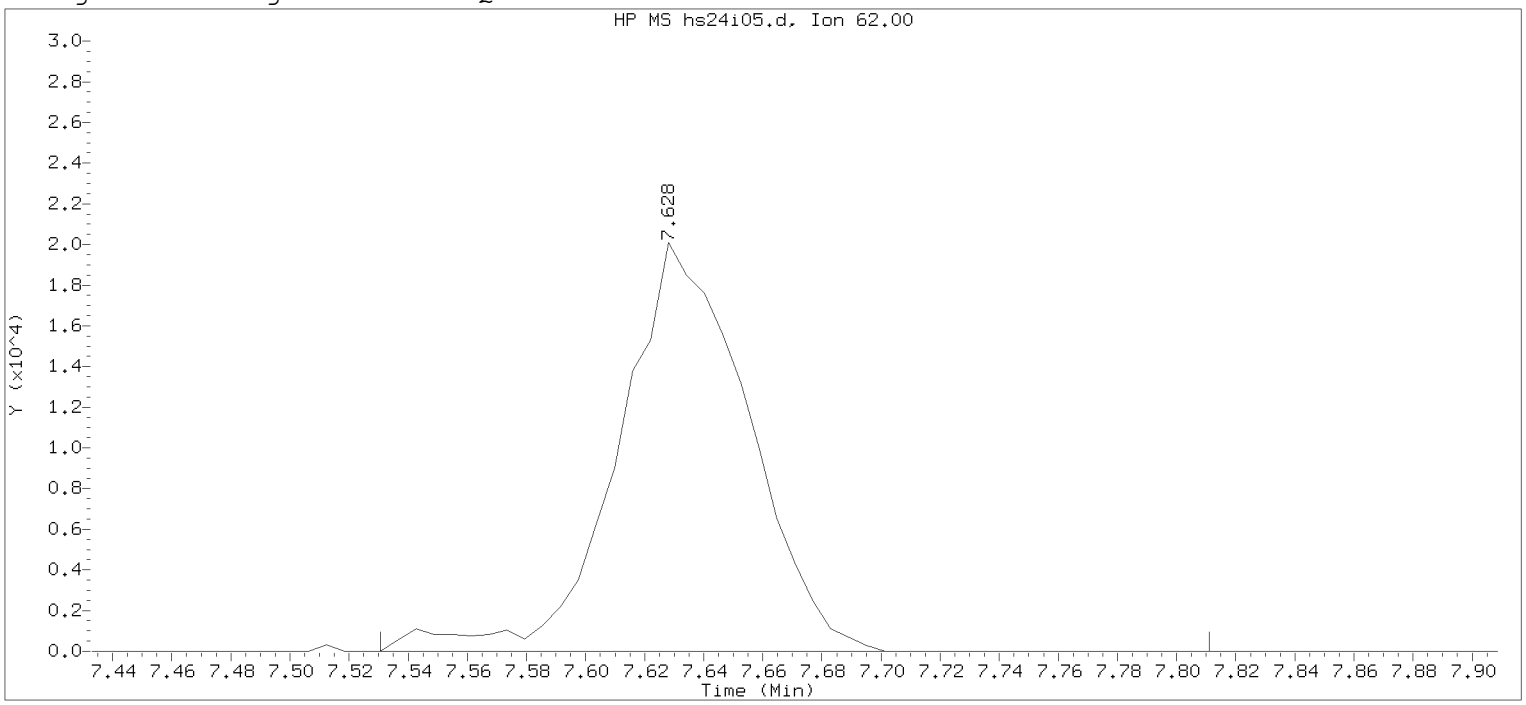
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

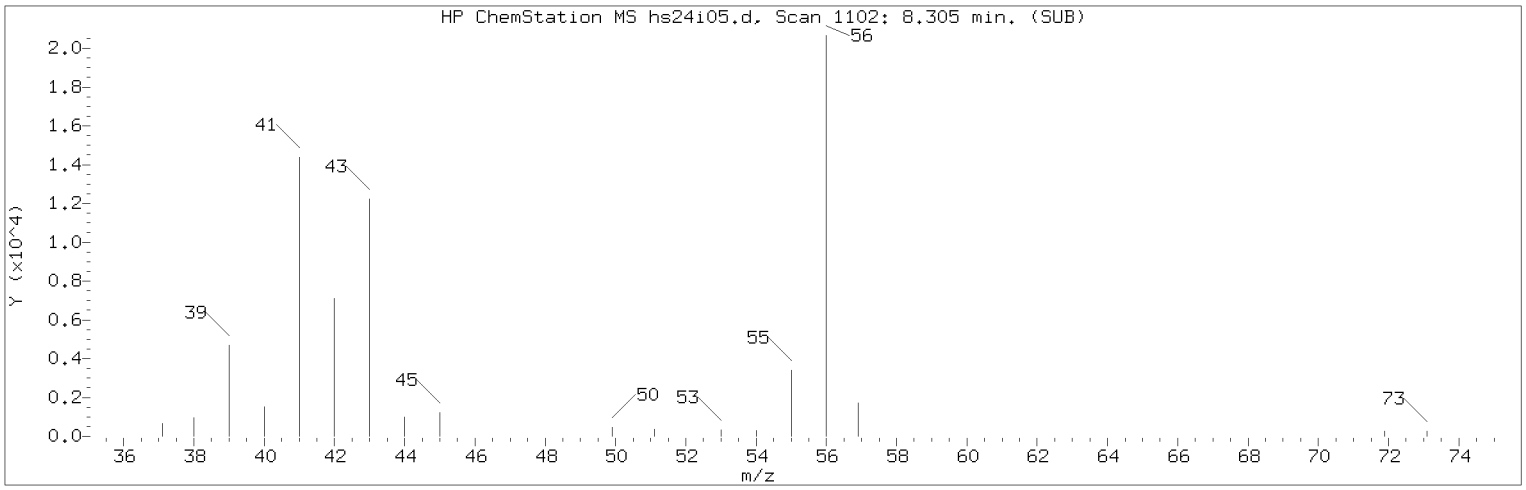
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

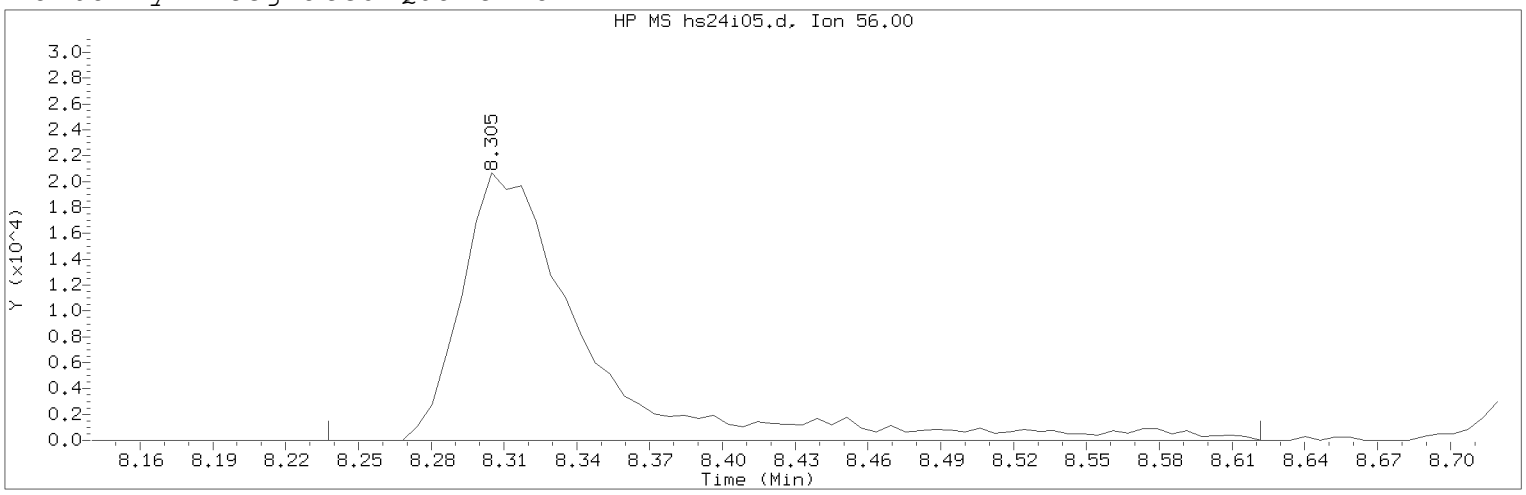
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 61591
On-column Amount (ng) : 1.0425
Integration start scan : 974 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

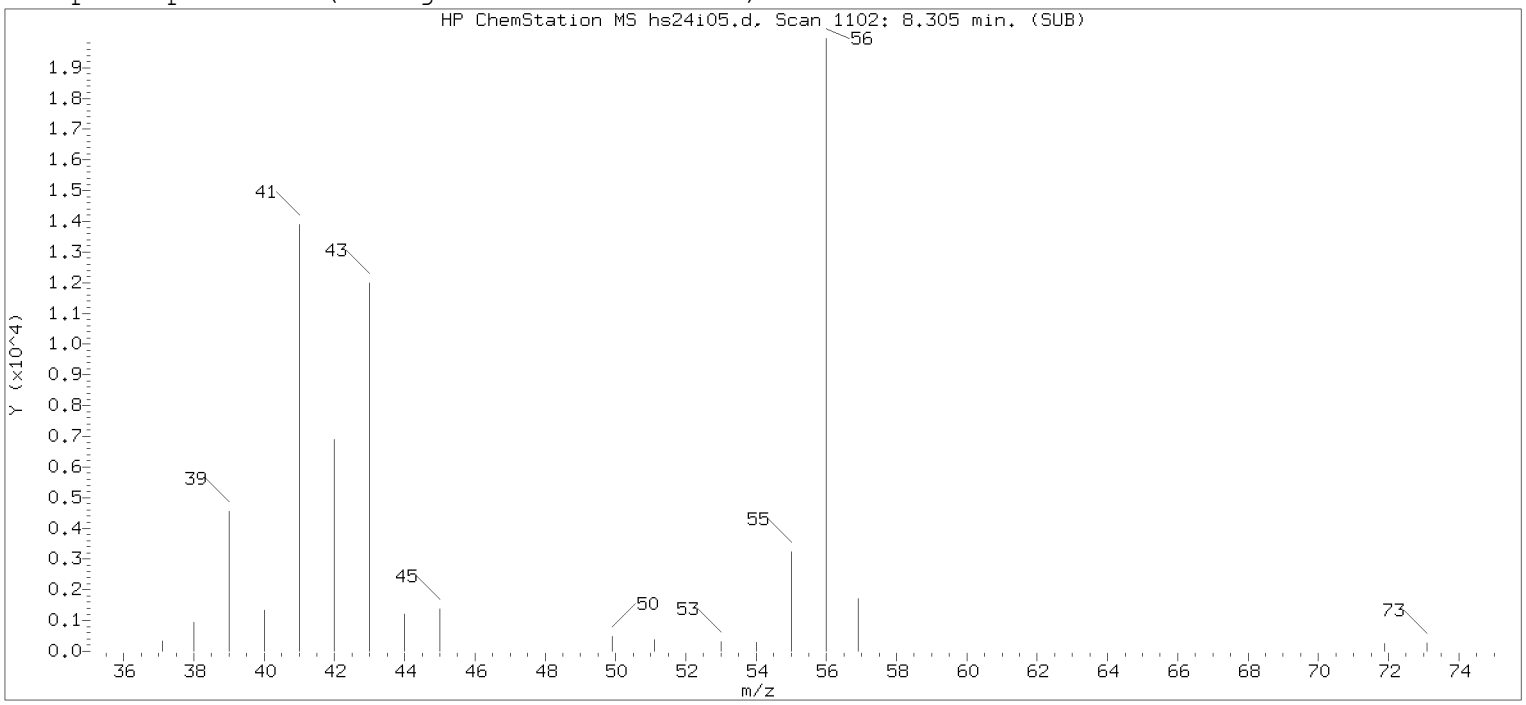
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 74668M
On-Column Amount (ng) : 97.6635
Integration start scan : 1090 Integration stop scan: 1153
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

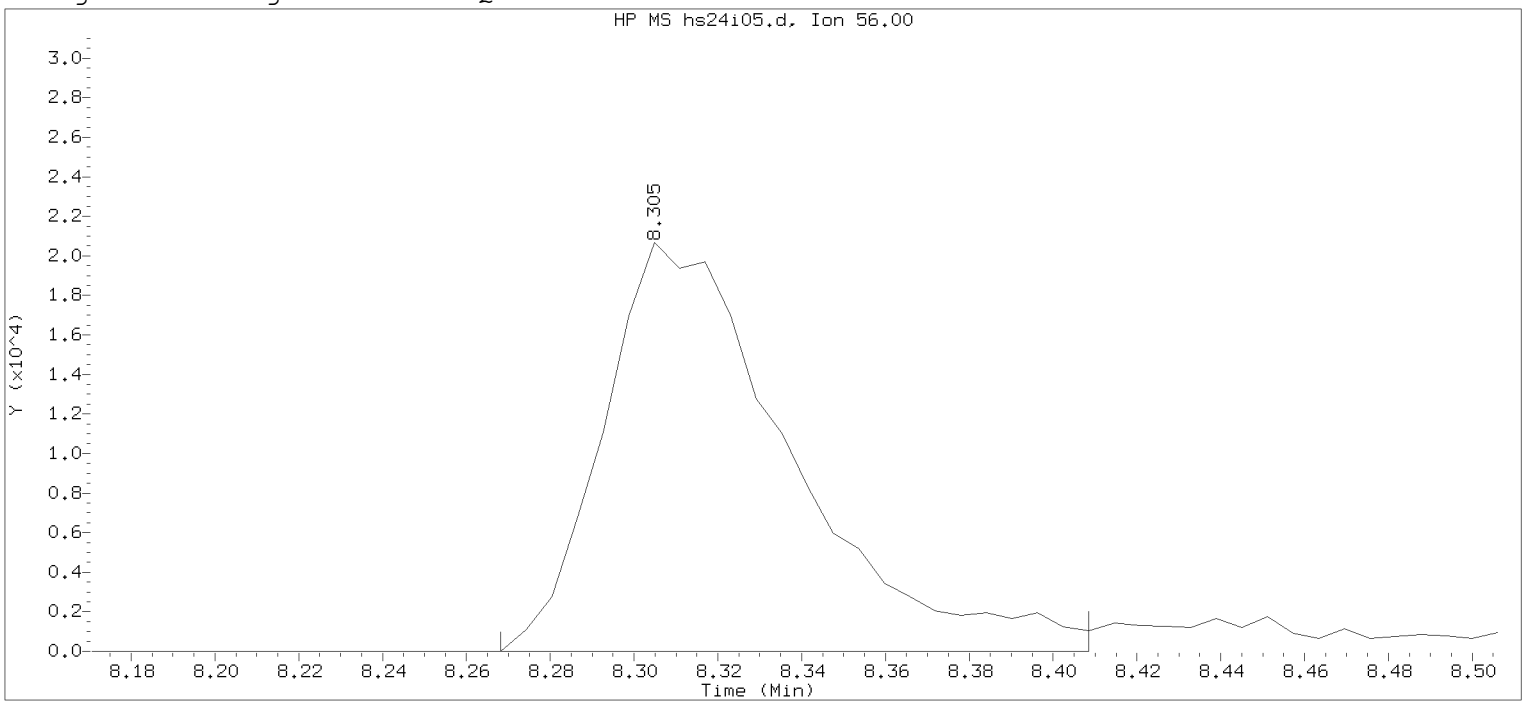
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

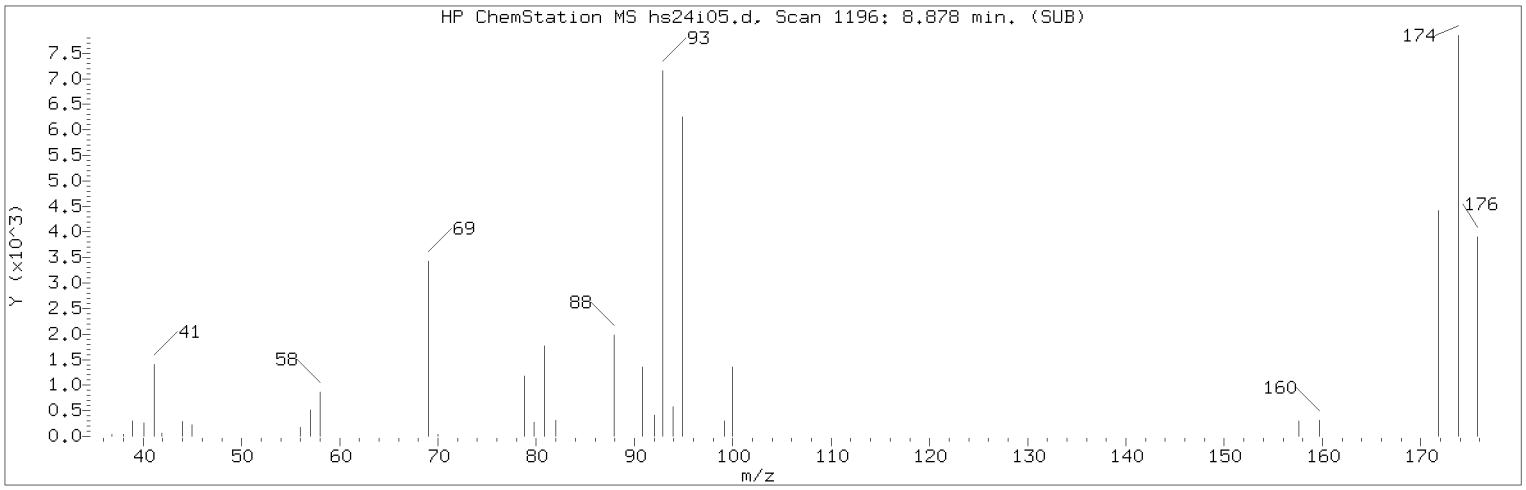
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

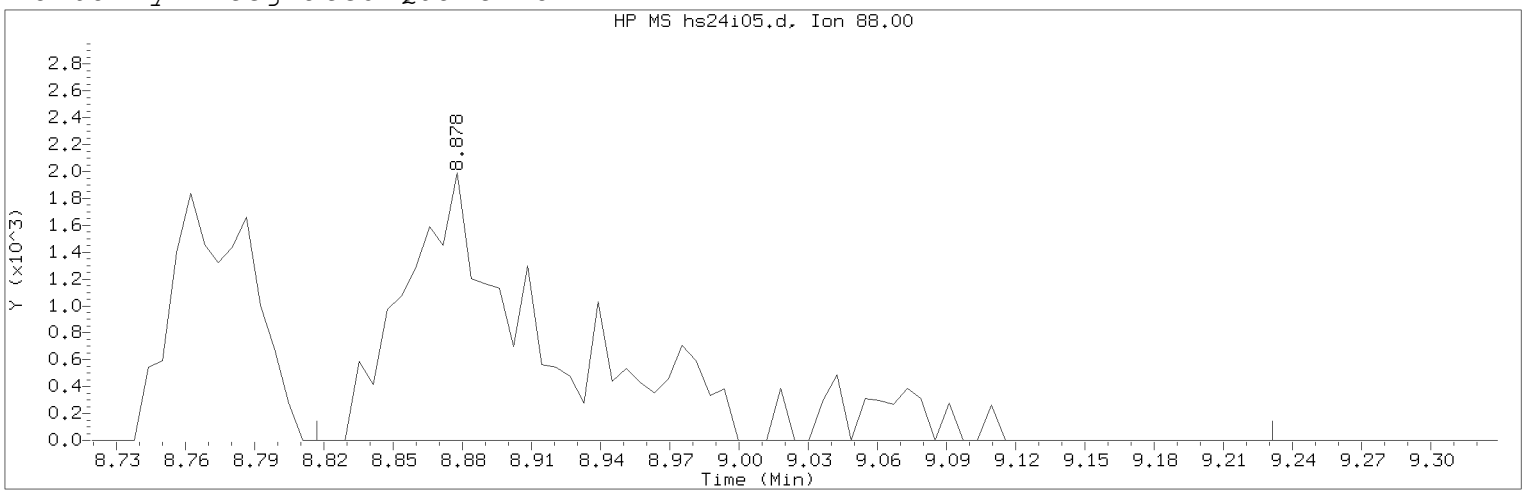
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 64395		
On-column Amount (ng)	: 83.6678		
Integration start scan	: 1095	Integration stop scan:	1118
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 321

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

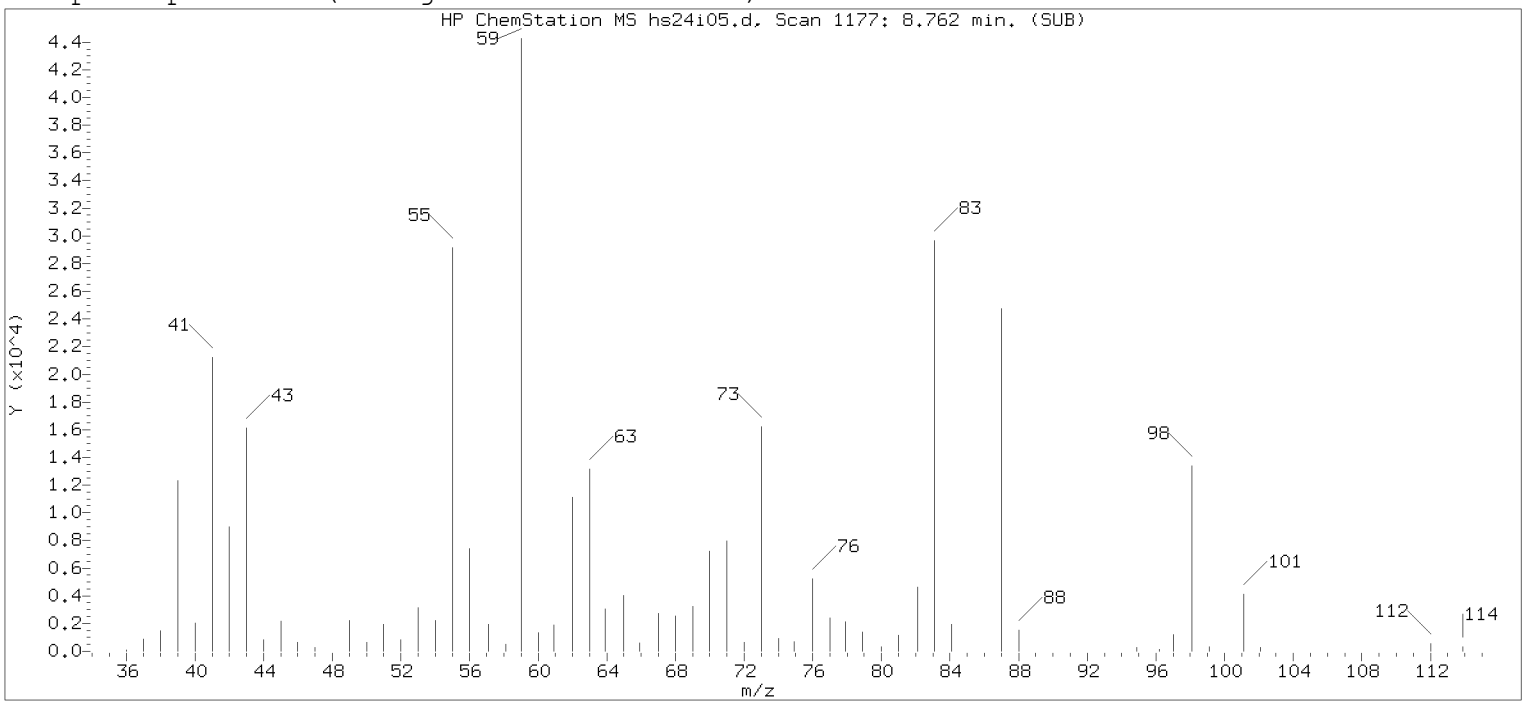
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 9241M
On-Column Amount (ng) : 50.2009
Integration start scan : 1185 Integration stop scan: 1253
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

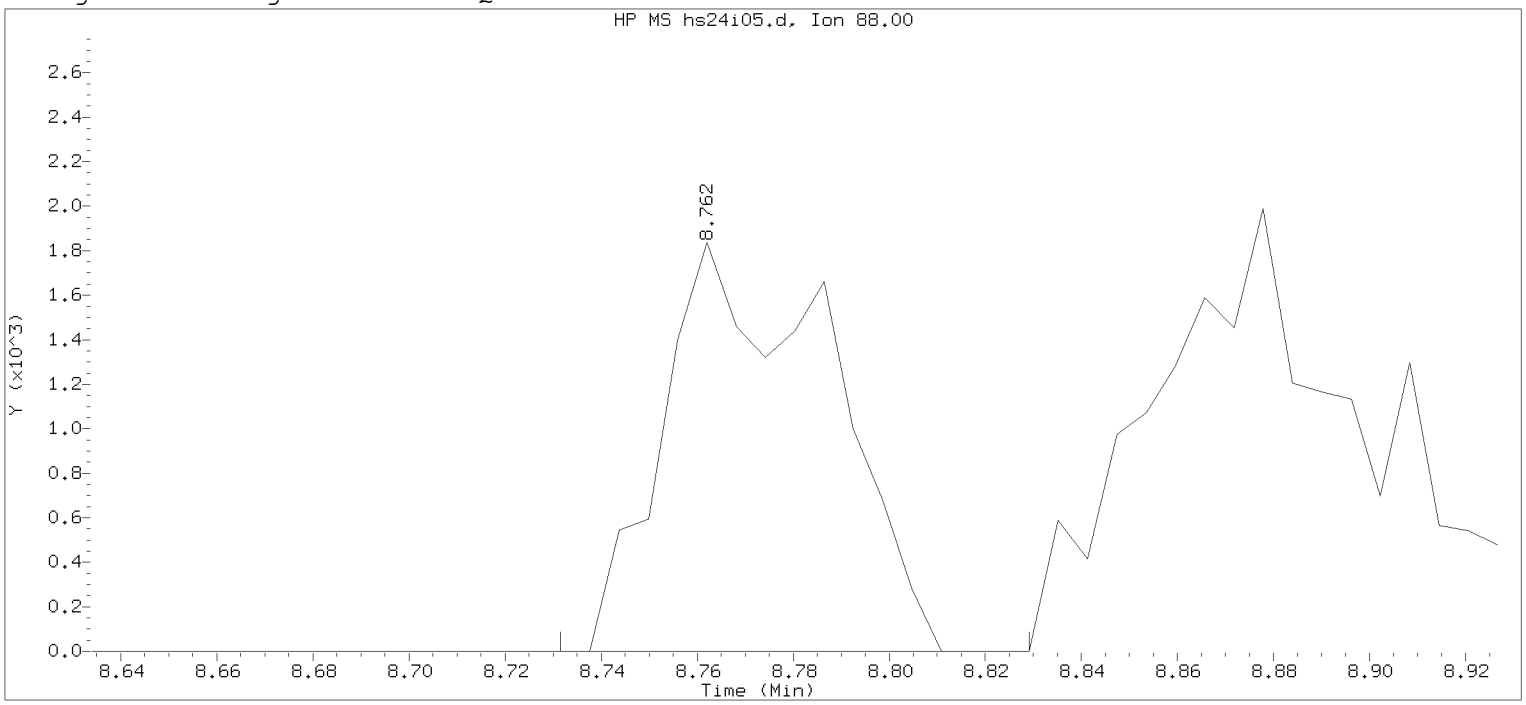
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

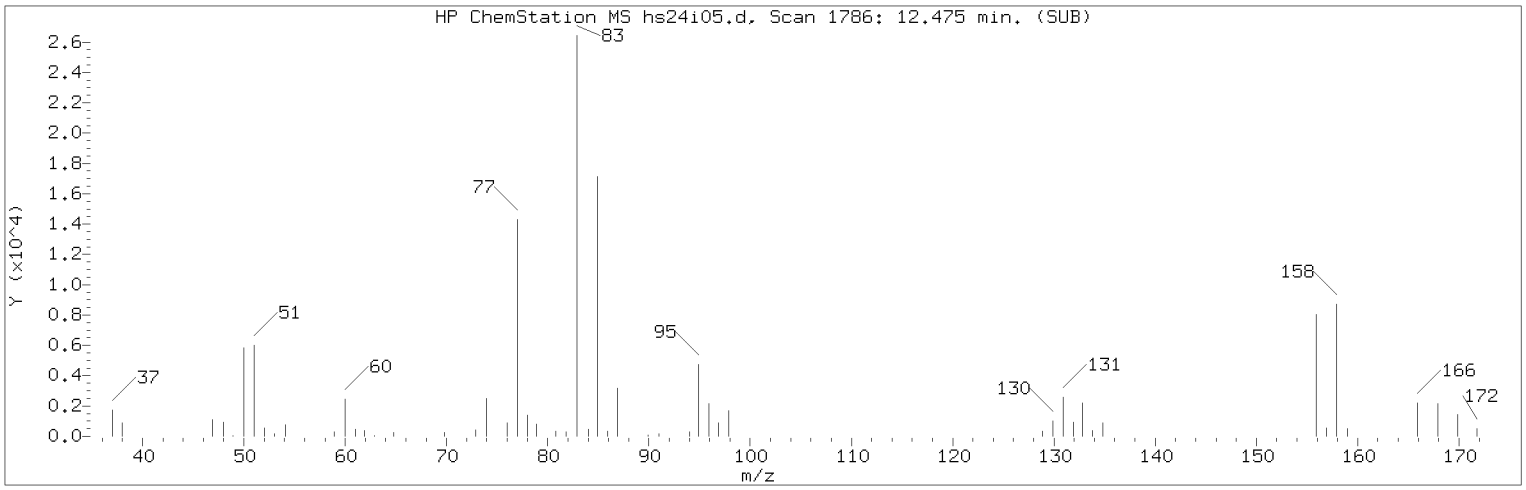
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

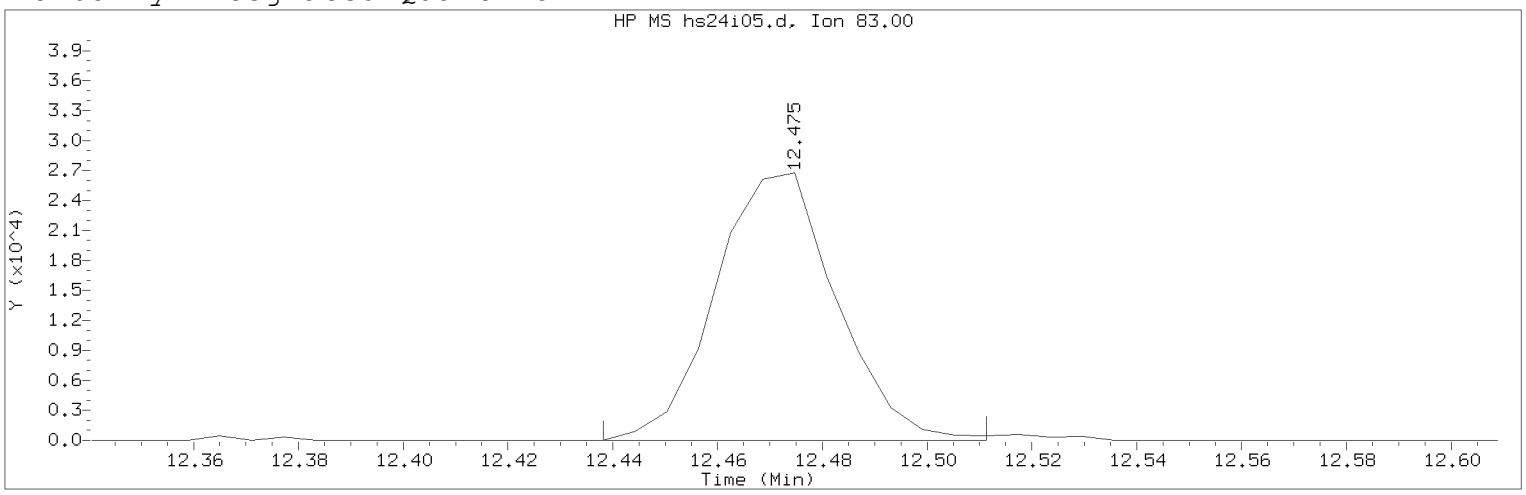
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1177		
Retention Time (minutes)	: 8.762		
Quant Ion	: 88.00		
Area	: 4467		
On-column Amount (ng)	: 37.5984		
Integration start scan	: 1171	Integration stop scan:	1187
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 323

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

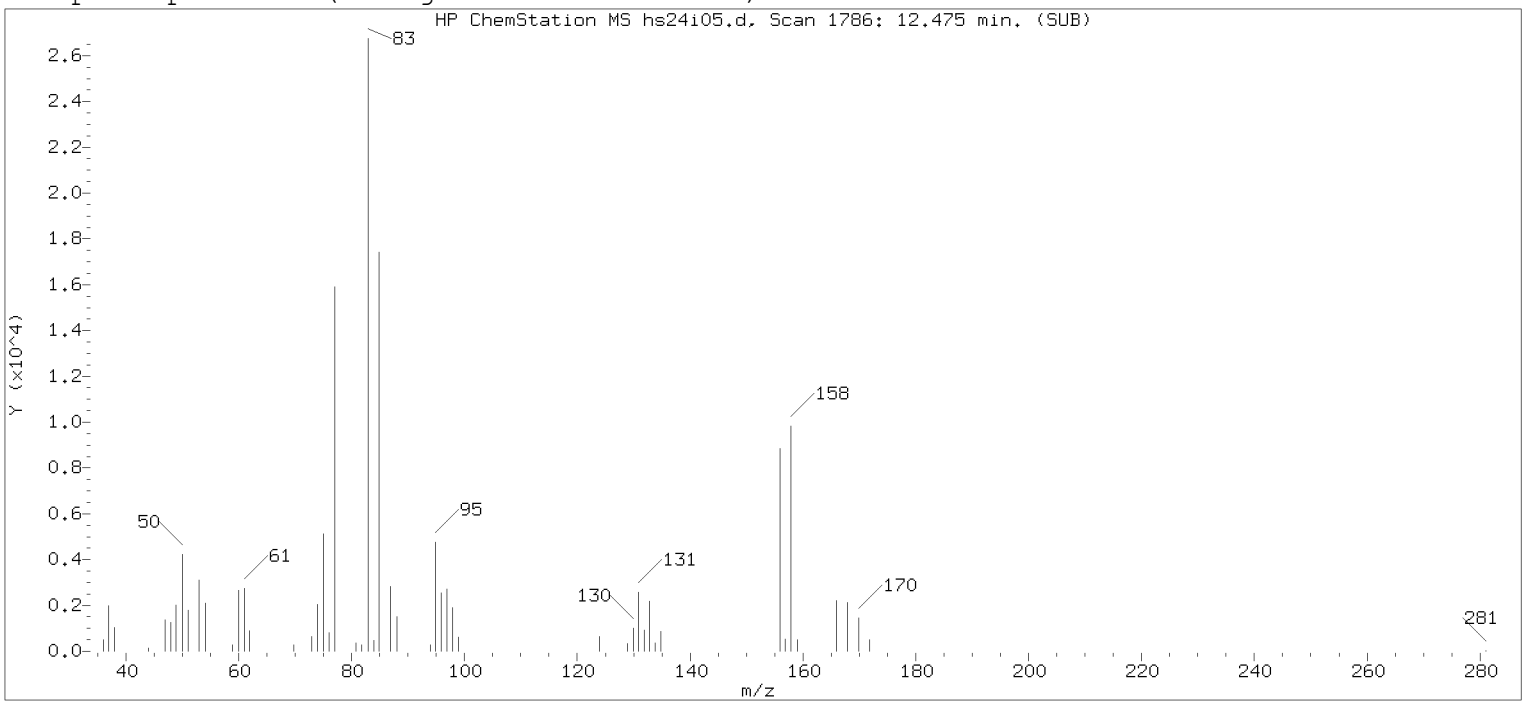
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area (flag) : 42904M
On-Column Amount (ng) : 0.9628
Integration start scan : 1779 Integration stop scan: 1791
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

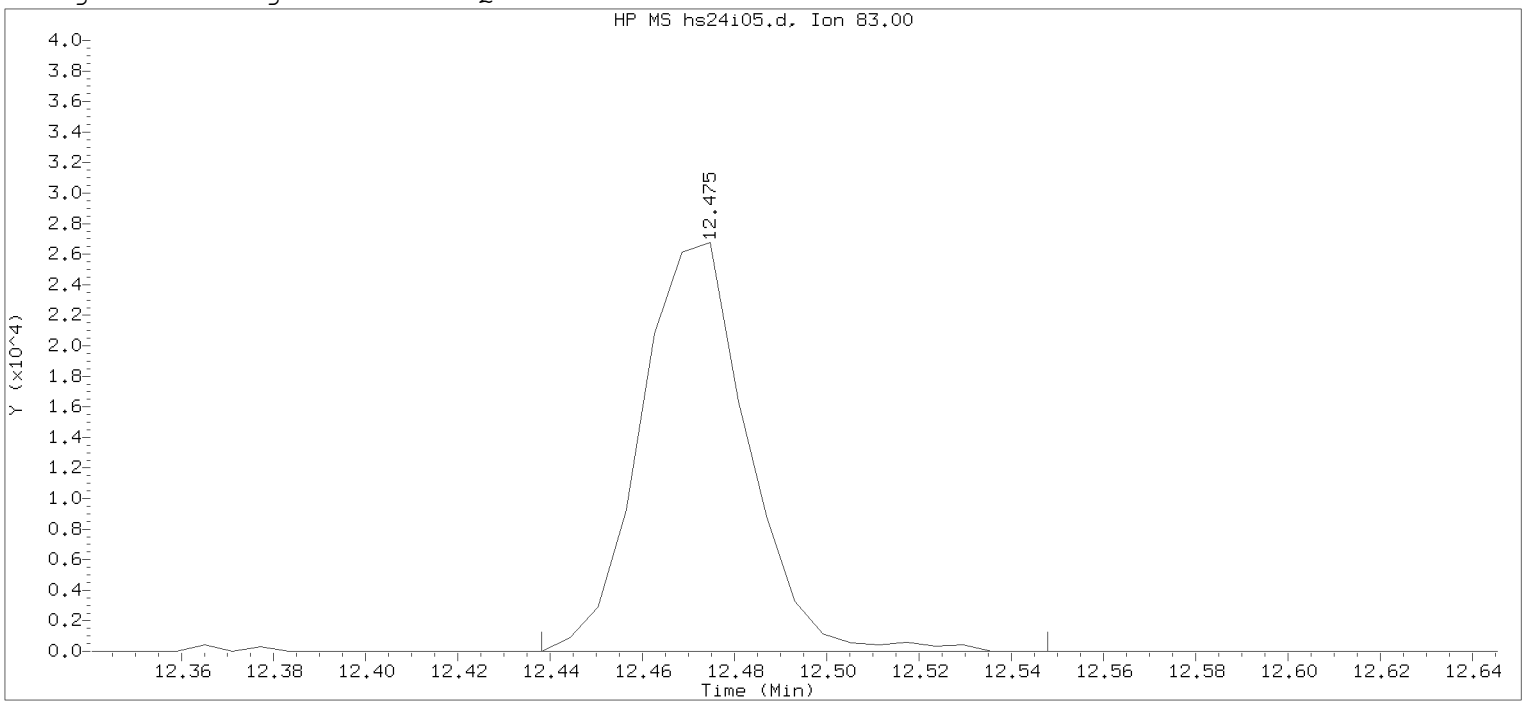
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

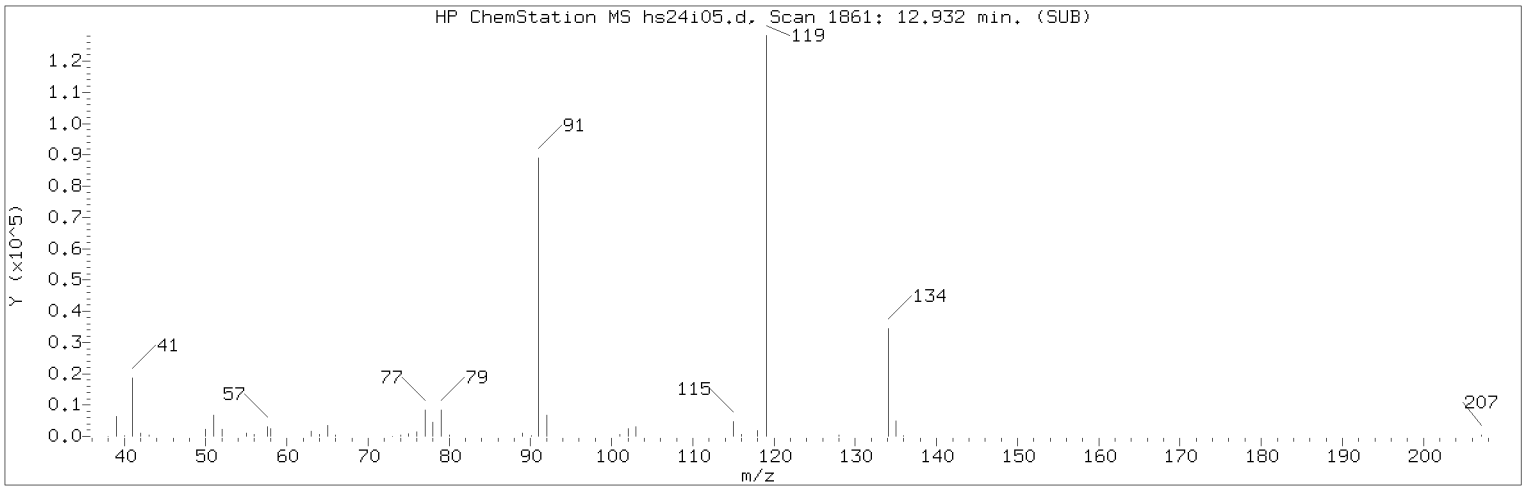
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

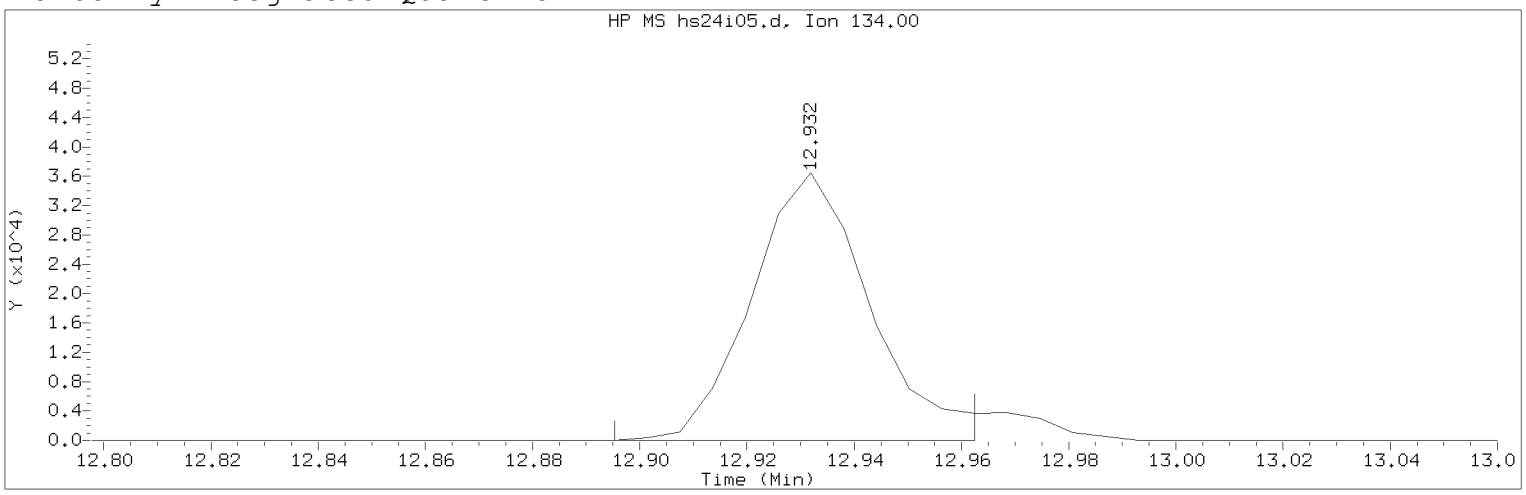
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1786
Retention Time (minutes): 12.475
Quant Ion : 83.00
Area : 43396
On-column Amount (ng) : 0.9508
Integration start scan : 1779 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

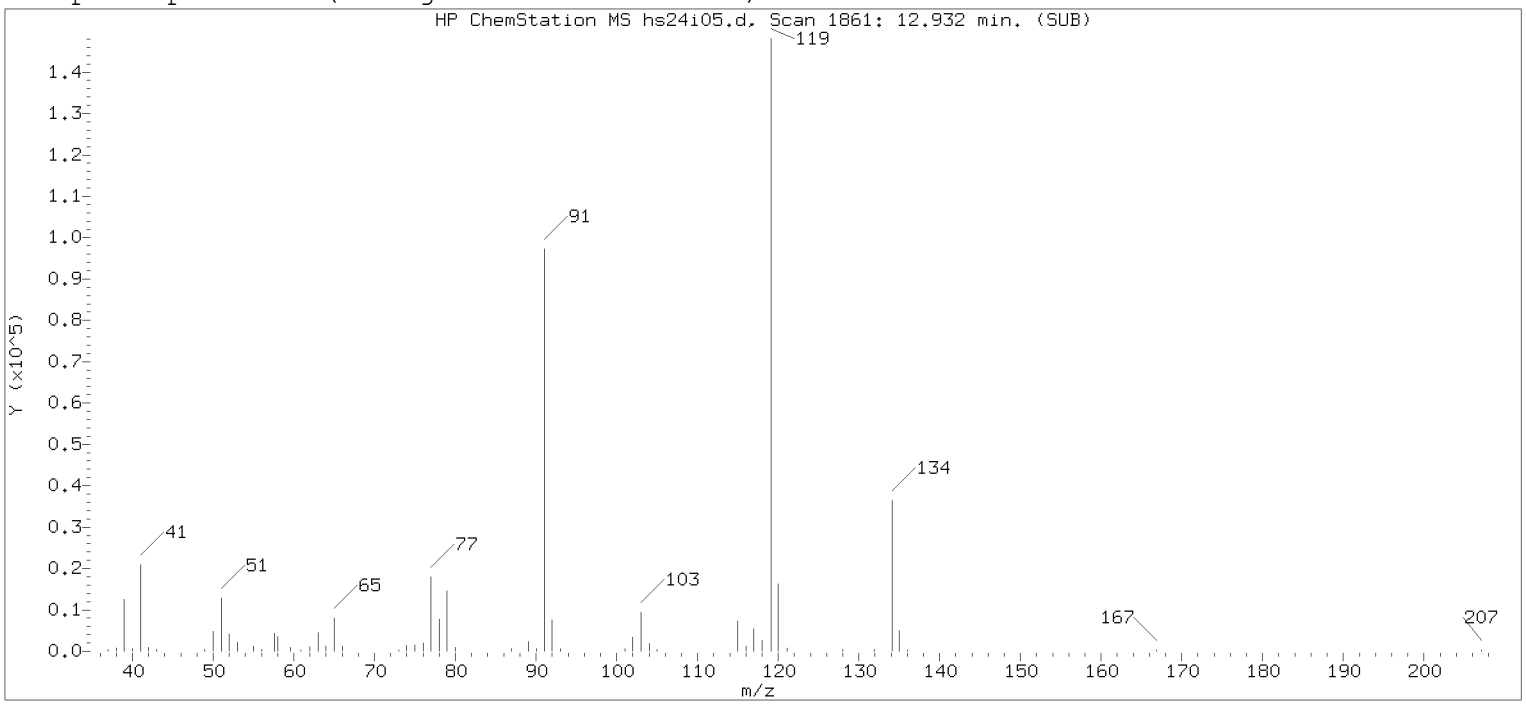
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 55631M
On-Column Amount (ng) : 1.0251
Integration start scan : 1854 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

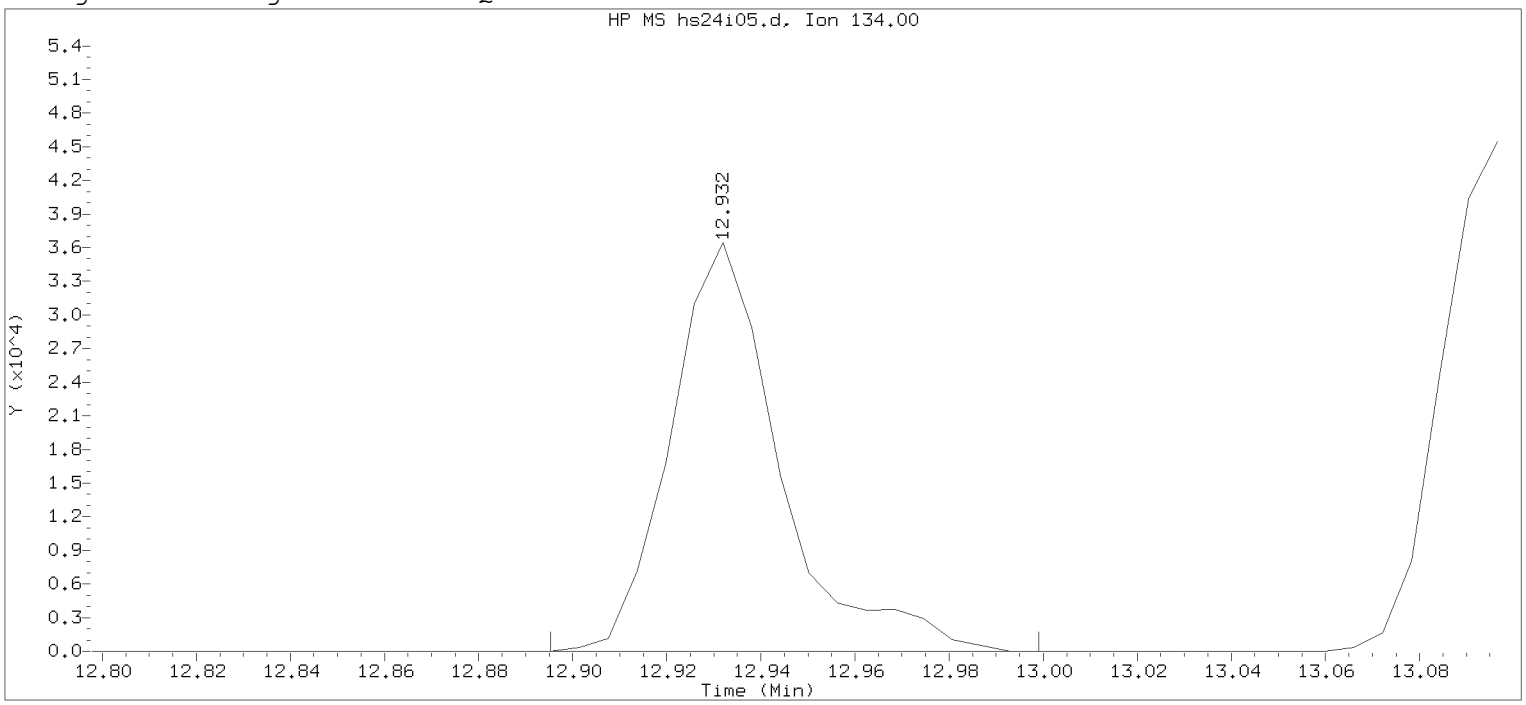
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

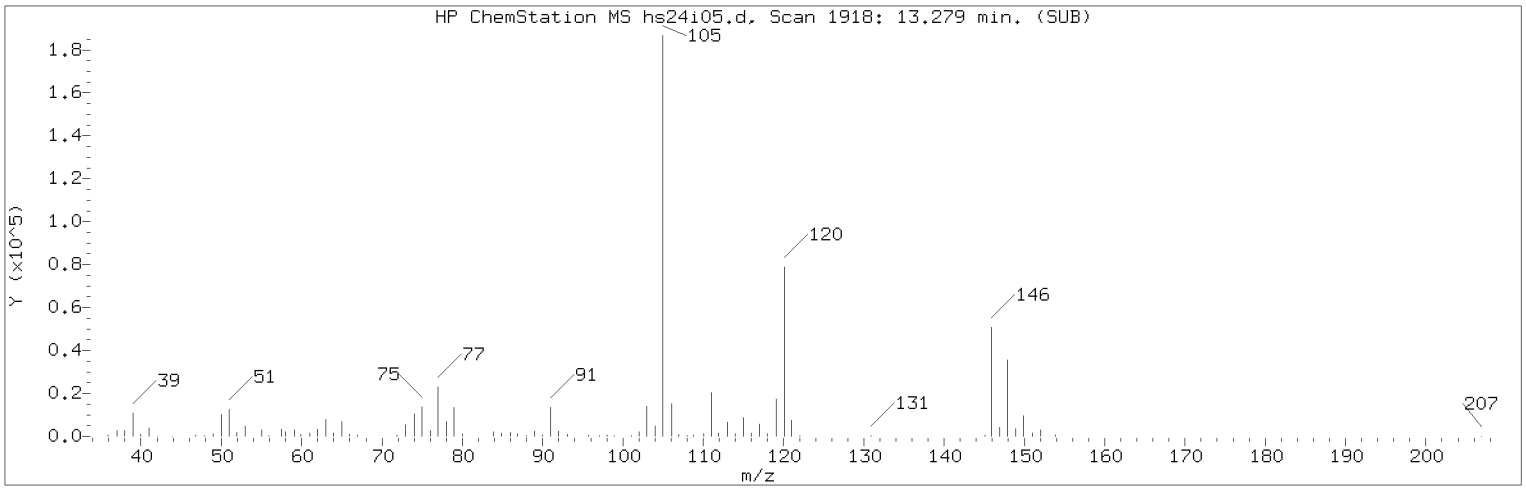
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

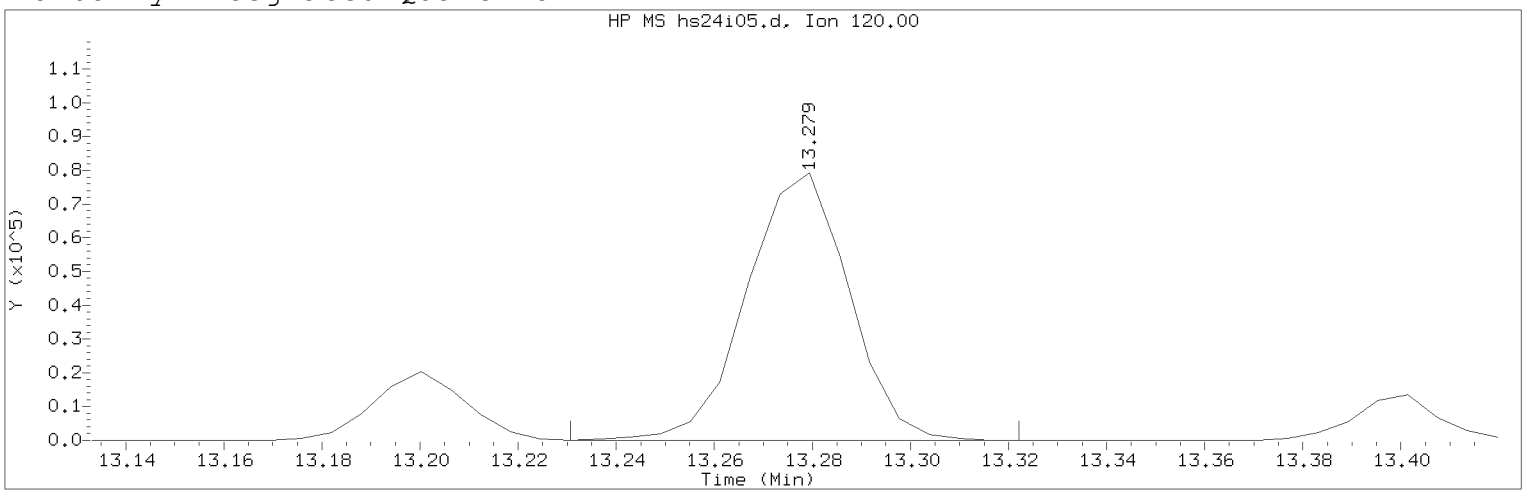
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 58647
On-column Amount (ng) : 1.0086
Integration start scan : 1854 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

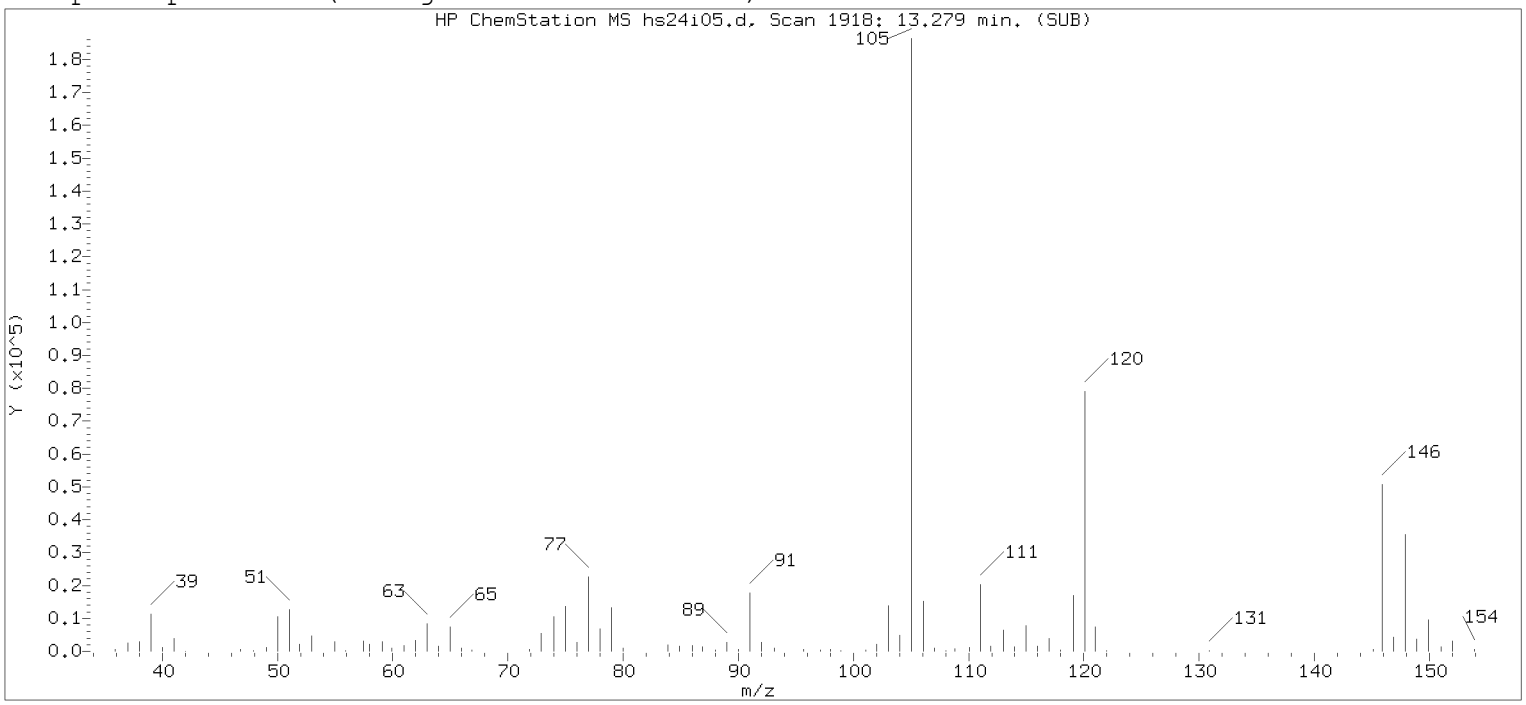
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area (flag) : 114395M
On-Column Amount (ng) : 0.9792
Integration start scan : 1909 Integration stop scan: 1924
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

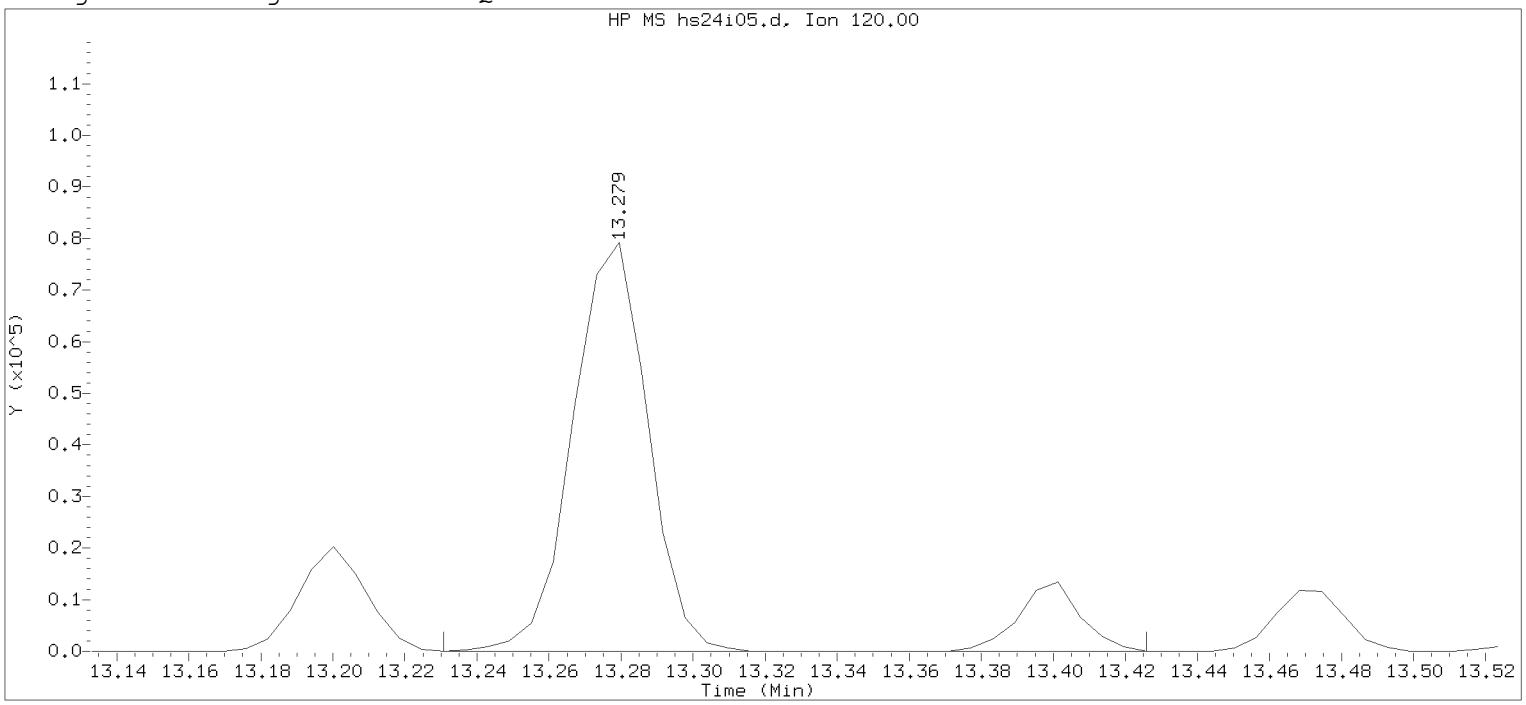
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



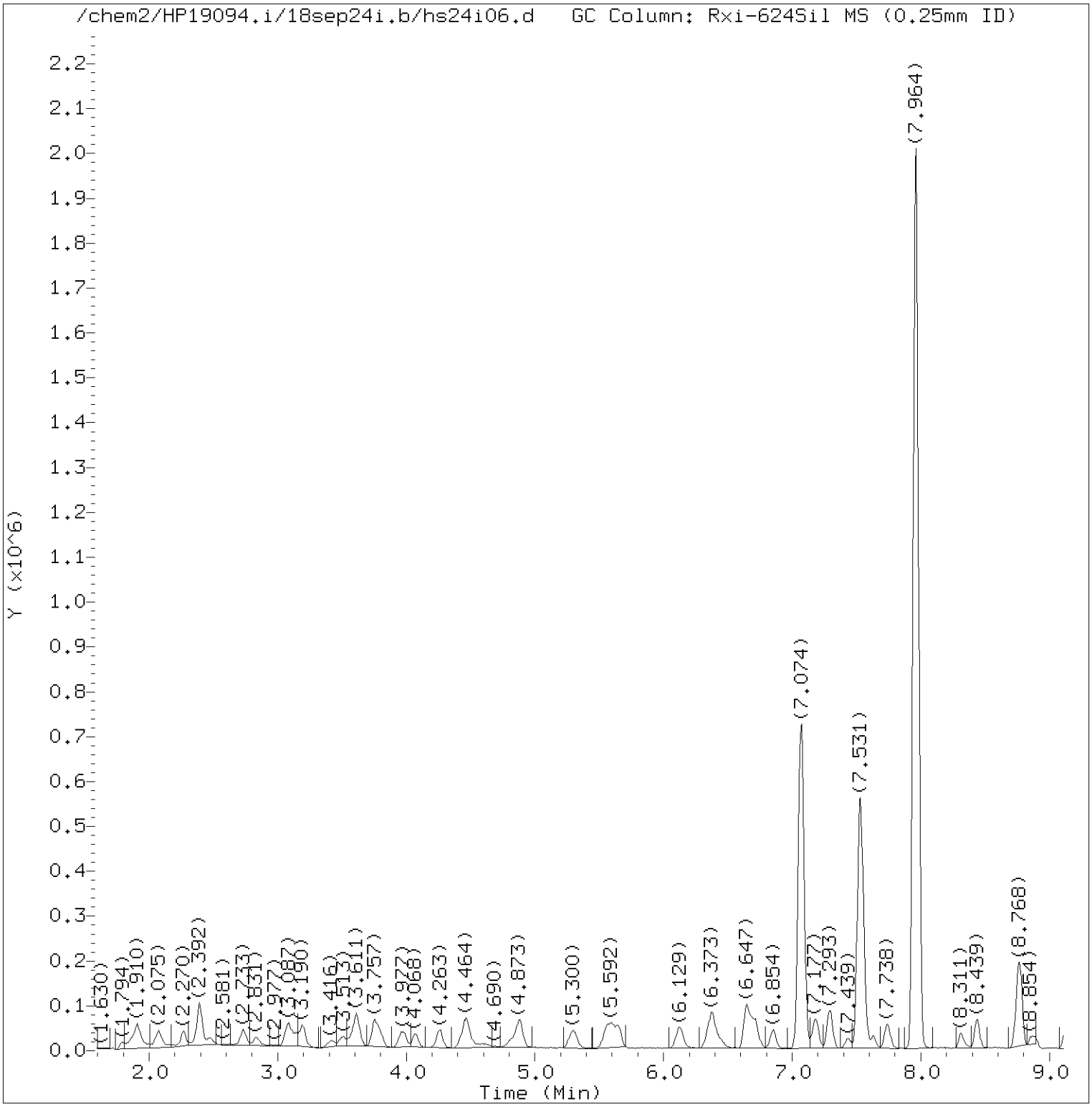
Data File: /chem2/HP19094.i/18sep24i.b/hs24i05.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 19:54 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.279
Quant Ion : 120.00
Area : 130549
On-column Amount (ng) : 1.0710
Integration start scan : 1909 Integration stop scan: 1941
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Jan 2018



Total Ion Chromatogram (TIC)

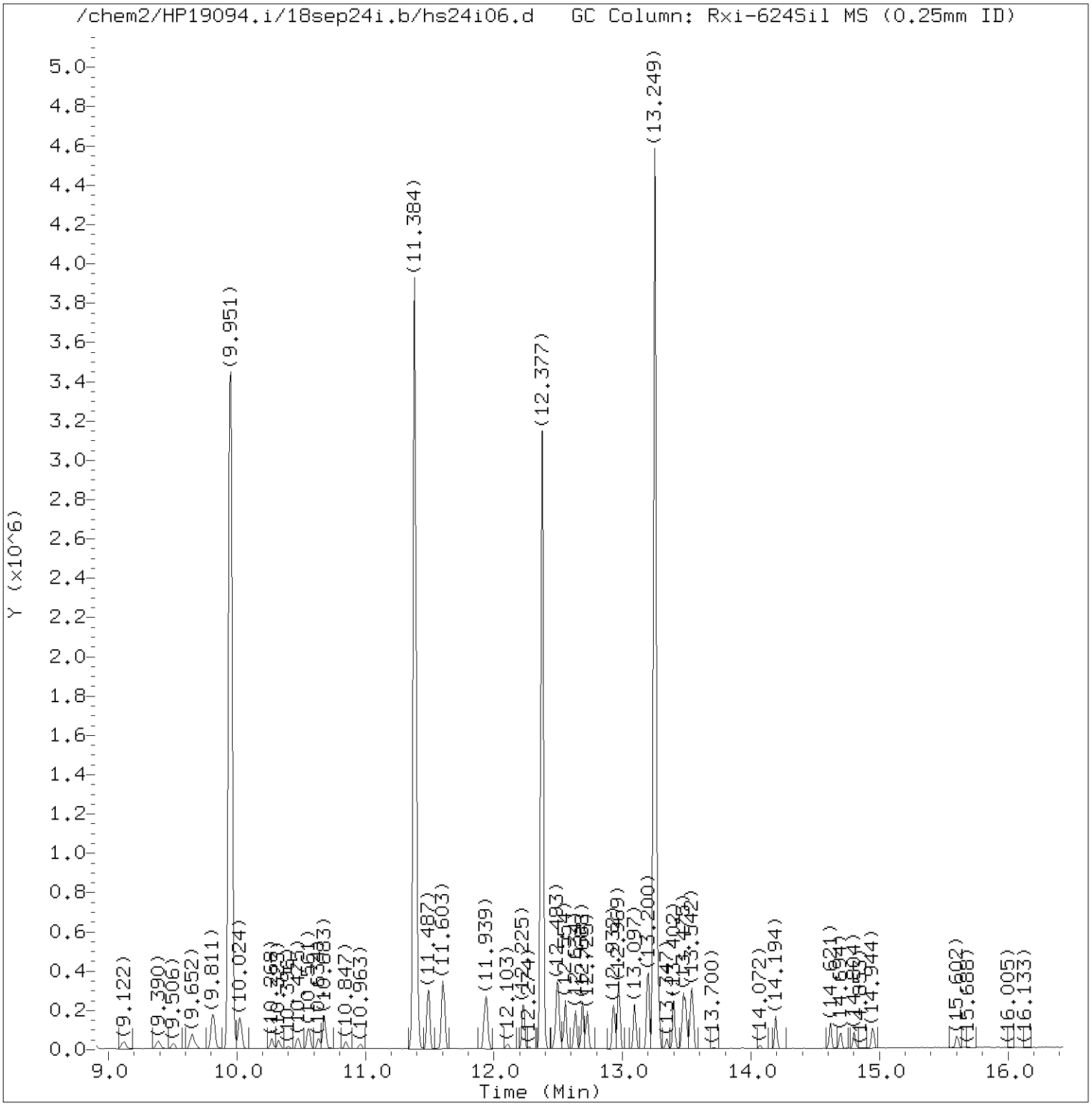
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	52718	0.492
2) Chloromethane	(2)	2.270	50	52280	0.498
6) 1,3-Butadiene	(2)	2.386	39	54776M	0.492
5) Vinyl Chloride	(2)	2.398	62	47346	0.482
7) Bromomethane	(2)	2.733	94	38272	0.501
8) Chloroethane	(2)	2.831	64	29455	0.494
9) Dichlorofluoromethane	(2)	3.080	67	68125	0.480
10) Trichlorofluoromethane	(2)	3.141	101	61550	0.496
11) Ethyl ether	(2)	3.422	59	20421	0.485
12) Freon 123a	(2)	3.501	67	38697	0.492
13) Acrolein	(1)	3.611	56	144331	23.202
15) 1,1-Dichloroethene	(2)	3.751	96	25447	0.473
16) Freon 113	(2)	3.794	101	29825	0.471
14) Acetone	(1)	3.800	43	39805M	4.764
17) Methyl Iodide	(2)	3.958	142	54798	0.489
18) Carbon Disulfide	(2)	4.068	76	82997	0.485
21) Methyl Acetate	(1)	4.214	43	11281	0.481
22) Allyl Chloride	(2)	4.257	41	48017	0.470
23) Methylene Chloride	(2)	4.452	84	28557	0.471
26)*t-Butyl Alcohol-d10	(1)	4.477	65	140183M	50.000
28) t-Butyl Alcohol	(1)	4.605	59	23242	9.713
29) Acrylonitrile	(1)	4.800	53	25339	2.348
30) Methyl Tertiary Butyl Ether	(2)	4.861	73	53197	0.481
31) trans-1,2-Dichloroethene	(2)	4.891	96	28696	0.473
32) n-Hexane	(2)	5.300	57	44645	0.463
33) 1,1-Dichloroethane	(2)	5.556	63	55167	0.477
34) di-Isopropyl Ether	(2)	5.592	45	97579	0.475
35) 2-Chloro-1,3-Butadiene	(2)	5.647	53	47649	0.458
40) 1,2-Dichloroethene (Total)	(2)		96	60740	0.951
37) Ethyl t-butyl ether	(2)	6.117	59	79009M	0.485
38) 2-Butanone	(1)	6.336	43	62685	4.583
39) cis-1,2-Dichloroethene	(2)	6.366	96	32044	0.478
41) 2,2-Dichloropropane	(2)	6.391	77	37720	0.457
42) Propionitrile	(1)	6.446	54	36555	9.847
45) Methacrylonitrile	(1)	6.647	67	61003	4.557
47) Bromochloromethane	(2)	6.702	128	13020	0.460
48) Tetrahydrofuran	(1)	6.714	71	16511	4.541
49) Chloroform	(2)	6.854	83	51878	0.483

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	691568	10.003
50)$Dibromofluoromethane	(2)	7.068	111	705727	9.917
51) 1,1,1-Trichloroethane	(2)	7.086	97	43339	0.472
52) Cyclohexane	(2)	7.183	56	55245	0.460
52) Cyclohexane	(2)	7.177	84	43224	0.437
52) Cyclohexane	(2)	7.177	69	16219	0.459
54) Carbon Tetrachloride	(2)	7.293	117	36936	0.468
55) 1,1-Dichloropropene	(2)	7.299	75	39906	0.458
56) Isobutyl Alcohol	(1)	7.433	41	23659	25.555
57)$1,2-Dichloroethane-d4	(2)	7.531	102	118986	9.872
57)$1,2-Dichloroethane-d4	(2)	7.525	65	583630	10.011
57)$1,2-Dichloroethane-d4	(2)	7.531	104	76978	9.972
58) Benzene	(2)	7.555	78	124386	0.483
59) 1,2-Dichloroethane	(2)	7.628	62	29519M	0.498
60) t-Amyl methyl ether	(2)	7.738	73	64107	0.475
63)*Fluorobenzene	(2)	7.964	96	2743076	10.000
62) n-Heptane	(2)	7.976	43	45673	0.459
65) n-Butanol	(1)	8.305	56	35795M	45.764
67) Trichloroethene	(2)	8.439	95	30507	0.463
69) Methylcyclohexane	(2)	8.756	83	57016	0.458
70) 1,2-Dichloropropane	(2)	8.781	63	28744	0.460
71) Methyl Methacrylate	(1)	8.854	69	10601	0.428
72) 1,4-Dioxane	(1)	8.866	88	3592M	19.073
73) Dibromomethane	(2)	8.890	93	12594	0.486
74) Bromodichloromethane	(2)	9.122	83	32561	0.464
76) 2-Nitropropane	(1)	9.390	41	29896	4.260
80) cis-1,3-Dichloropropene	(2)	9.652	75	36712	0.449
81) 4-Methyl-2-Pentanone	(1)	9.811	43	150042	4.410
82)$Toluene-d8	(3)	9.951	98	2759998	9.999
82)$Toluene-d8	(3)	9.951	100	1781368	9.999
83) Toluene	(3)	10.024	92	77148	0.485
85) 1,3-Dichloropropene (total)	(3)		75	65838	0.924
84) trans-1,3-Dichloropropene	(3)	10.274	75	29126	0.475
86) Ethyl Methacrylate	(3)	10.323	69	24760	0.471
88) 1,1,2-Trichloroethane	(3)	10.475	97	16887	0.461
89) Tetrachloroethene	(3)	10.555	166	35437	0.493
90) 1,3-Dichloropropane	(3)	10.634	76	30460	0.469
91) 2-Hexanone	(1)	10.683	43	102566	4.429

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$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	19914	0.454
95) 1,2-Dibromoethane	(3)	10.963	107	16520	0.481
96) 1-Chlorohexane	(3)	11.384	91	45289	0.477
97)*Chlorobenzene-d5	(3)	11.384	117	2144655	10.000
98) Chlorobenzene	(3)	11.408	112	80357	0.476
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	26174	0.470
100) Ethylbenzene	(3)	11.493	91	148120	0.476
101) m+p-Xylene	(3)	11.603	106	110361	0.957
105) Xylene (Total)	(3)		106	162876	1.433
104) o-Xylene	(3)	11.932	106	52515	0.476
106) Styrene	(3)	11.945	104	80057M	0.454
107) Bromoform	(3)	12.103	173	11176	0.463
108) Isopropylbenzene	(3)	12.231	105	139927	0.465
111)$4-Bromofluorobenzene	(3)	12.371	95	1008561	10.036
111)$4-Bromofluorobenzene	(3)	12.377	174	881794	10.105
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	20751	0.467
114) Bromobenzene	(4)	12.493	156	31936	0.473
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	45404	4.261
116) 1,2,3-Trichloropropane	(4)	12.524	110	5721	0.499
117) n-Propylbenzene	(4)	12.554	91	170760	0.465
119) 2-Chlorotoluene	(4)	12.634	126	34609	0.486
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	114586	0.461
122) 4-Chlorotoluene	(4)	12.725	126	33813	0.474
125) tert-Butylbenzene	(4)	12.932	134	25726M	0.476
126) Pentachloroethane	(4)	12.969	167	18317	0.434
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	117785	0.464
128) sec-Butylbenzene	(4)	13.097	105	144734	0.449
131) 1,3-Dichlorobenzene	(4)	13.194	146	63877	0.476
132) p-Isopropyltoluene	(4)	13.200	119	119452	0.448
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1119082	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	61222	0.465
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	54691	0.470
136) Benzyl Chloride	(4)	13.347	126	6108	0.381
138) n-Butylbenzene	(4)	13.493	92	60346	0.456
139) 1,2-Dichlorobenzene	(4)	13.530	146	57190	0.483
143) 1,2-Dibromo-3-chloropropane	(1)	14.078	155	2354	0.408
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	47093	0.472
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	38351	0.472

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$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

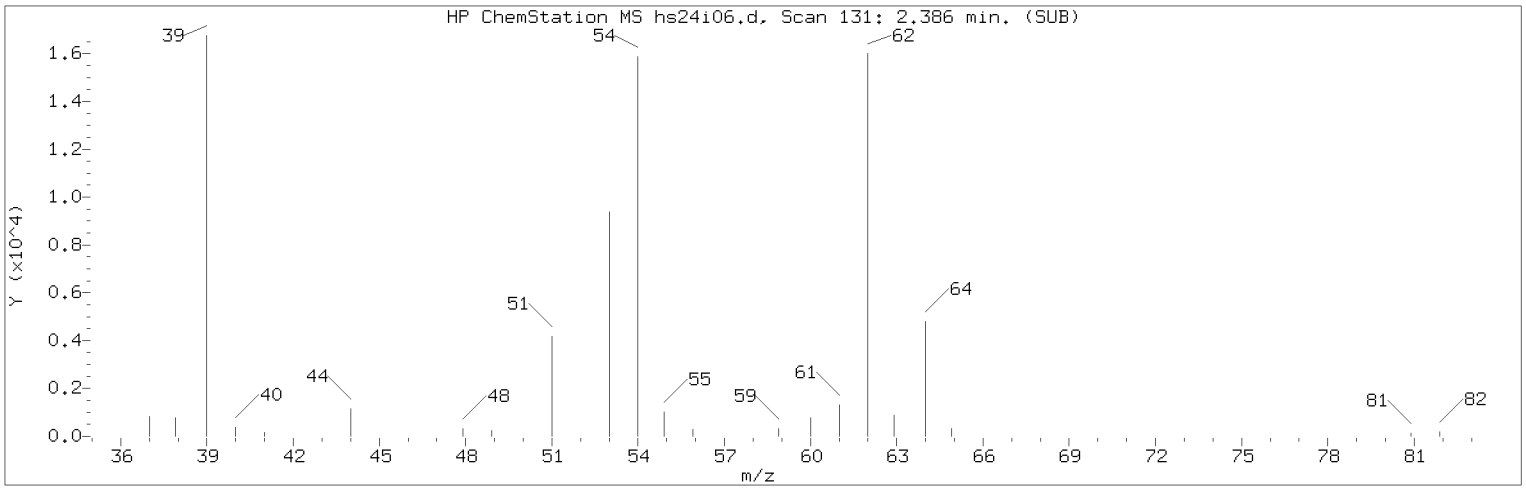
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

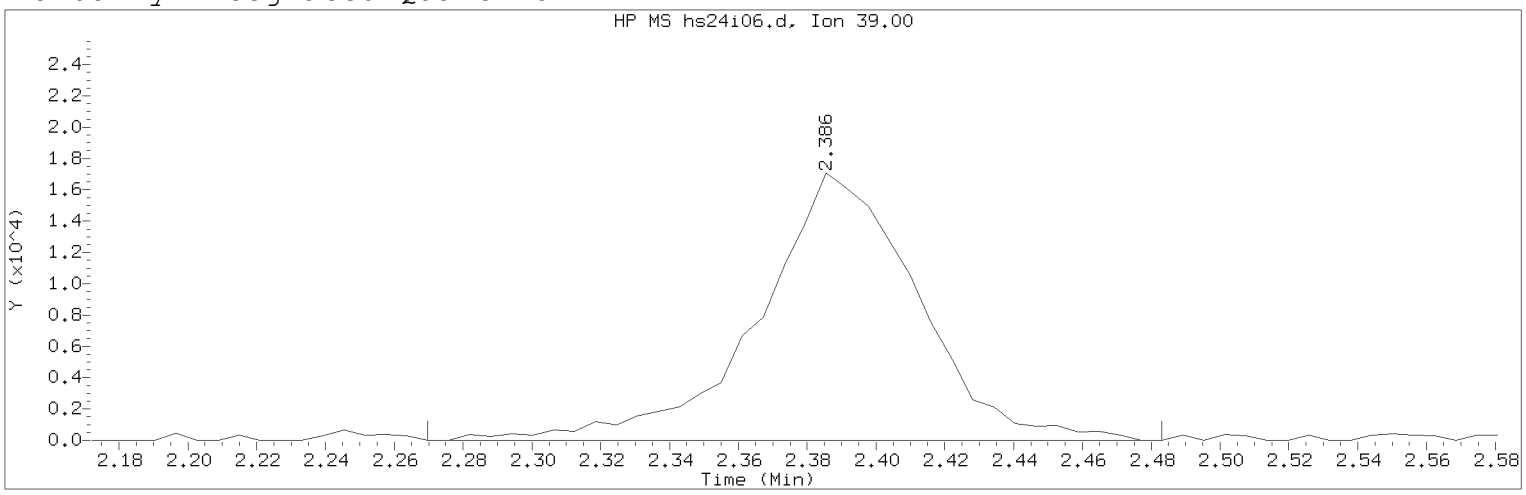
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.700	225	14287	0.465
147) Naphthalene	(4)	14.804	128	57089	0.444
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	31271	0.468

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

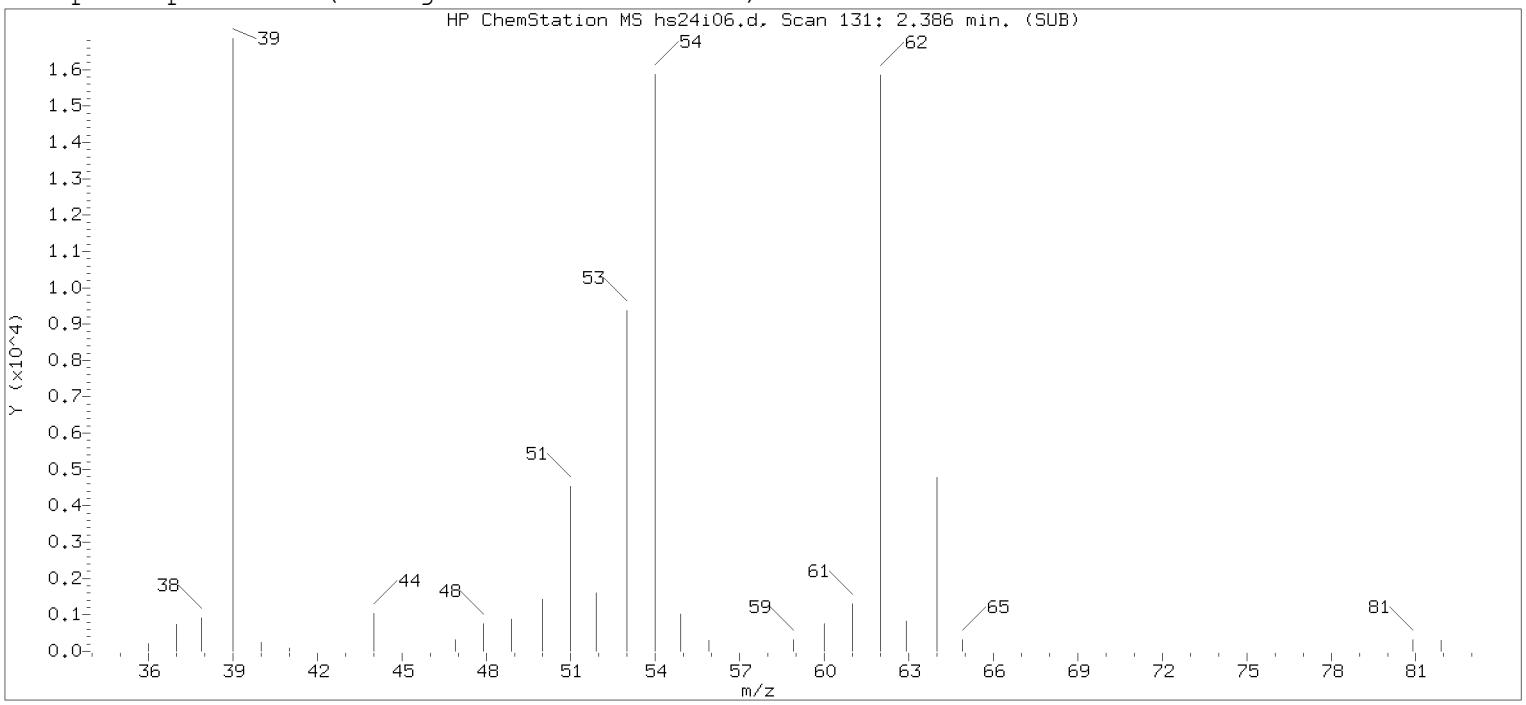
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area (flag) : 54776M
On-Column Amount (ng) : 0.4918
Integration start scan : 111 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

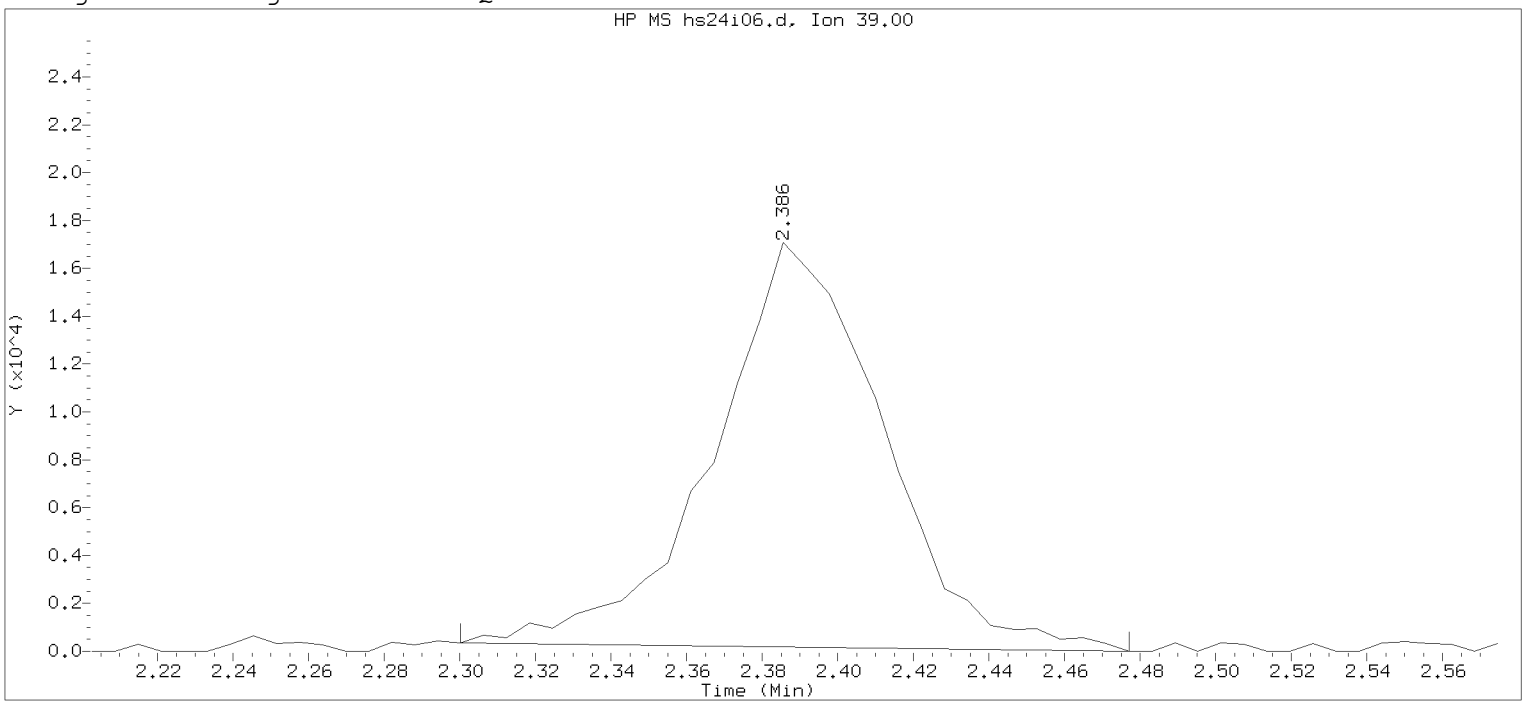
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

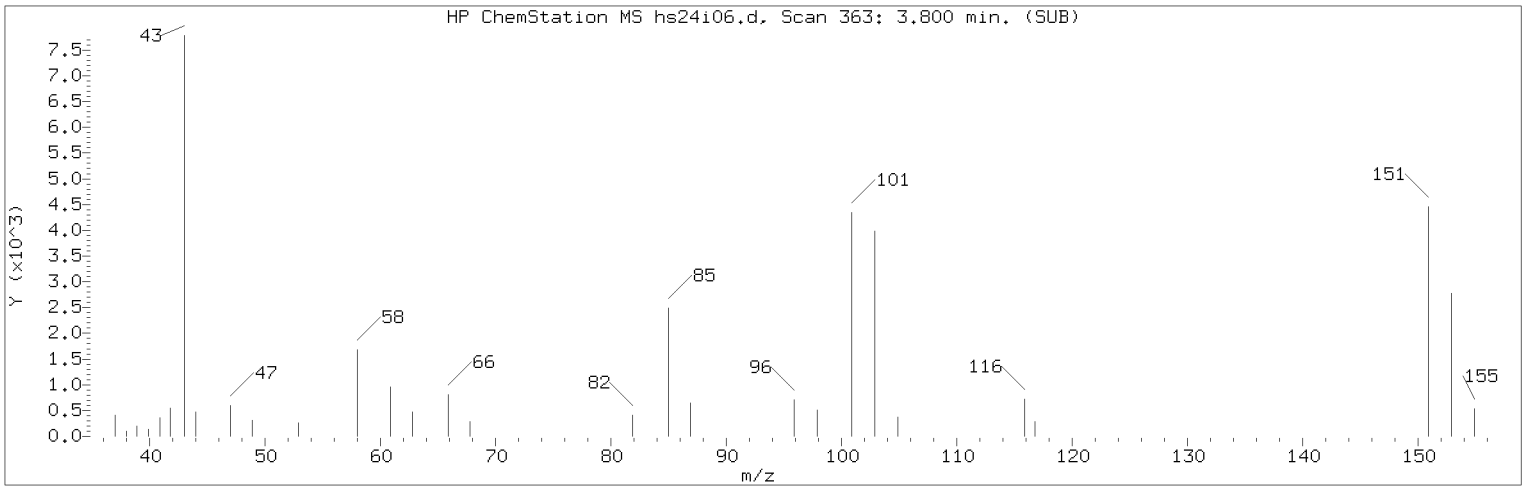
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

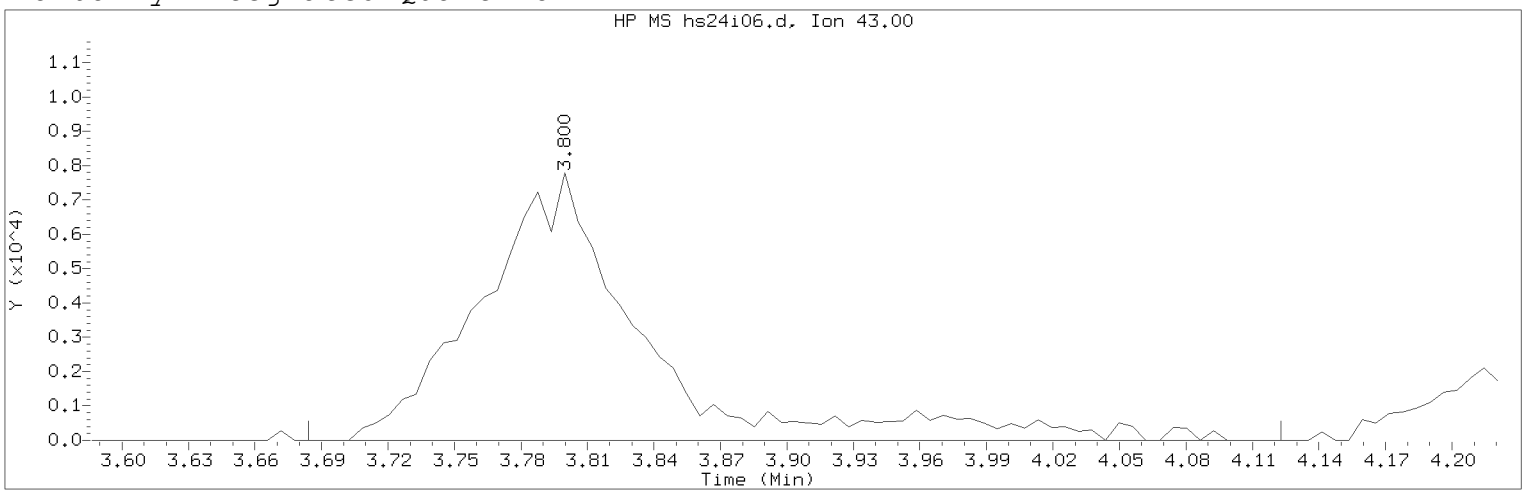
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 131
Retention Time (minutes): 2.386
Quant Ion : 39.00
Area : 52477
On-column Amount (ng) : 0.5033
Integration start scan : 116 Integration stop scan: 145
Y at integration start : 348 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 09/25/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

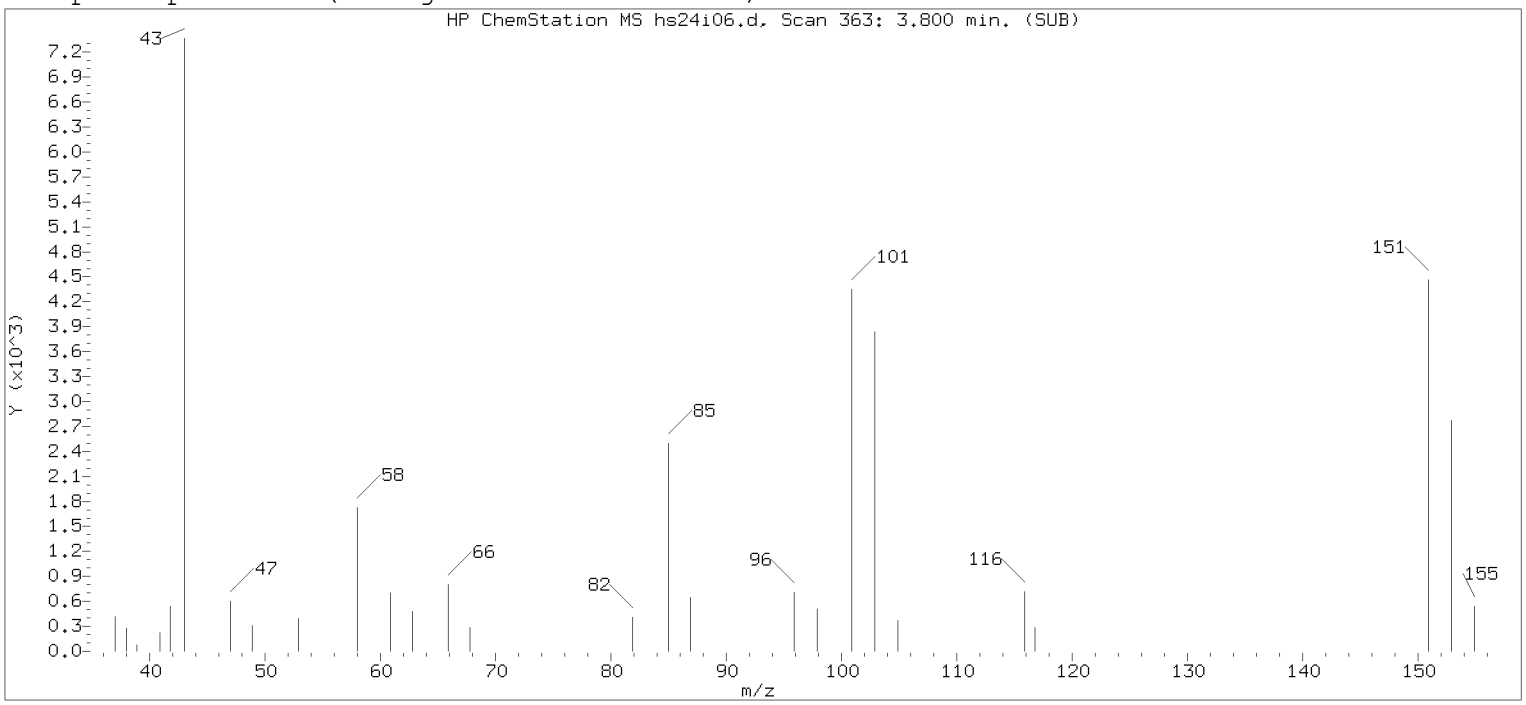
Compound Number : 14
Compound Name : Acetone
Scan Number : 363
Retention Time (minutes): 3.800
Quant Ion : 43.00
Area (flag) : 39805M
On-Column Amount (ng) : 4.7640
Integration start scan : 343 Integration stop scan: 415
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

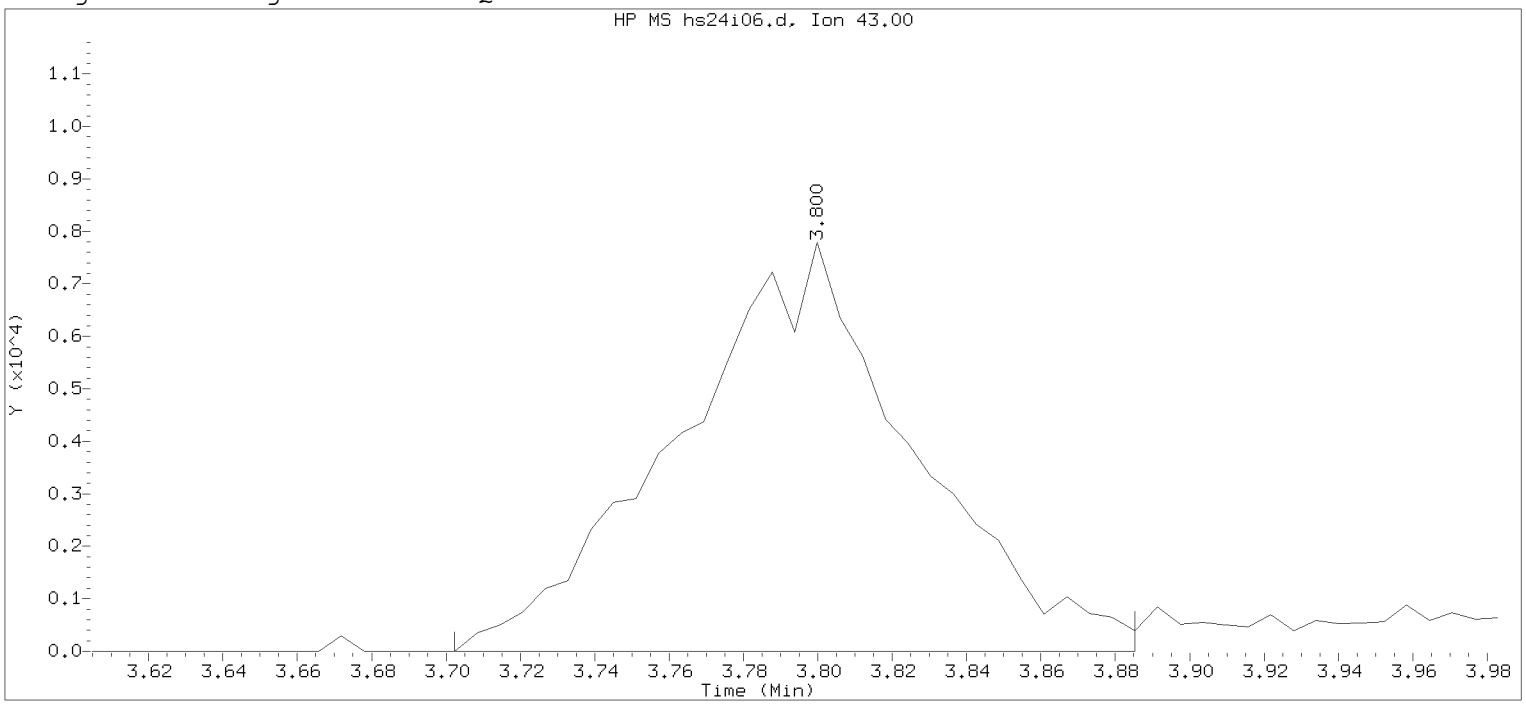
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

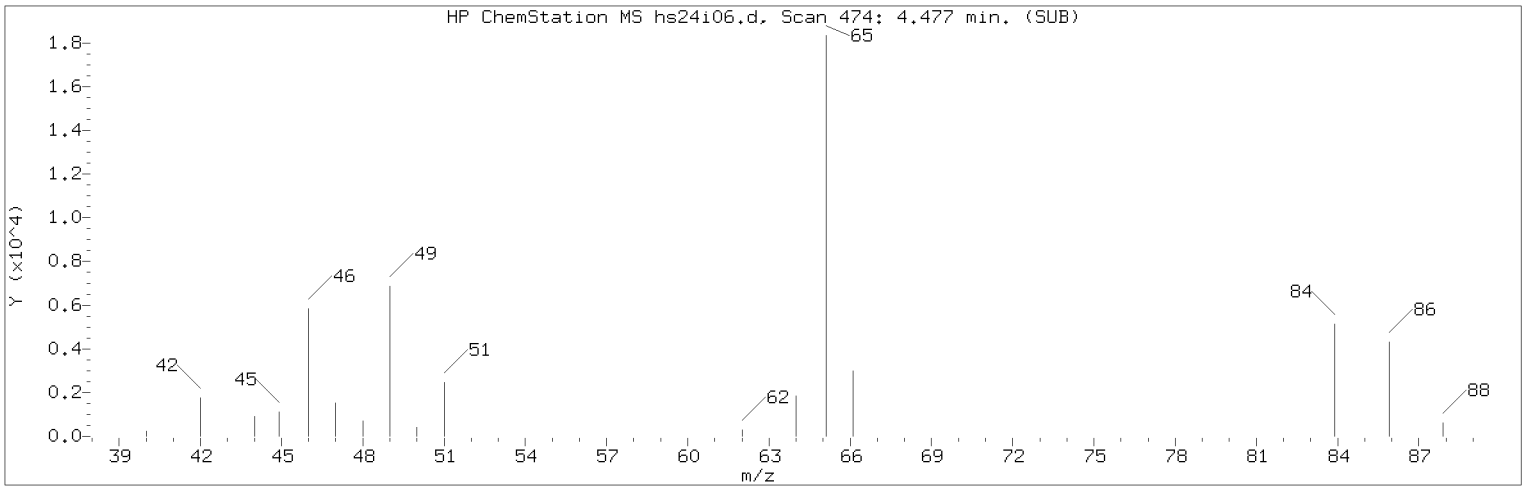
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

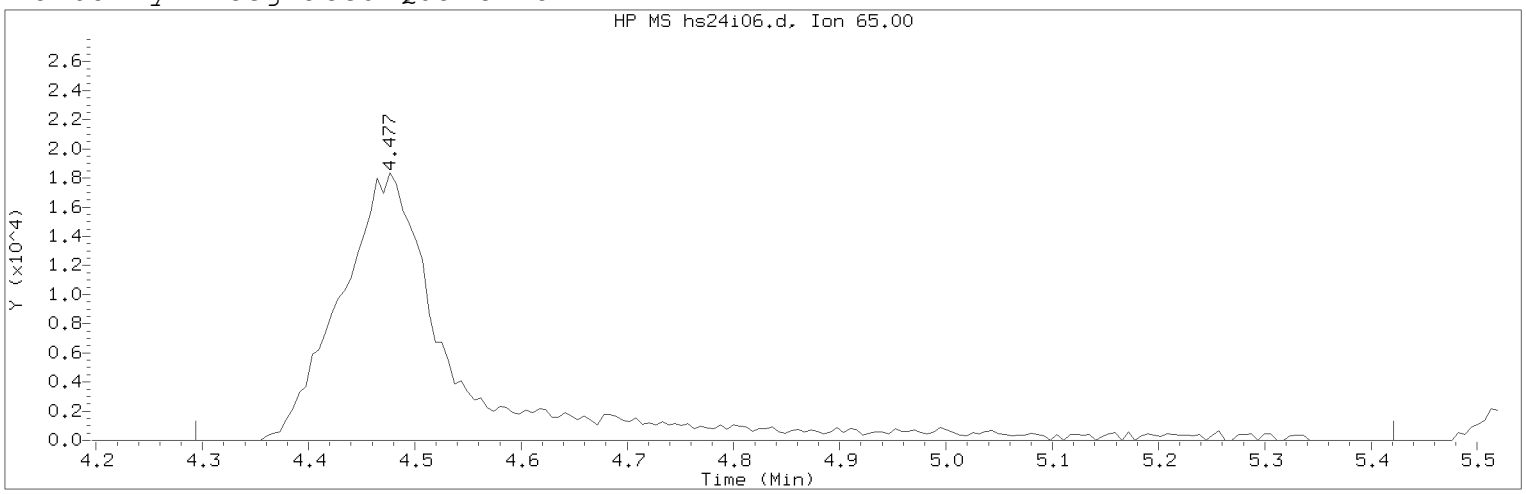
Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 363		
Retention Time (minutes)	: 3.800		
Quant Ion	: 43.00		
Area	: 34206		
On-column Amount (ng)	: 4.4016		
Integration start scan	: 346	Integration stop scan:	376
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 339 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

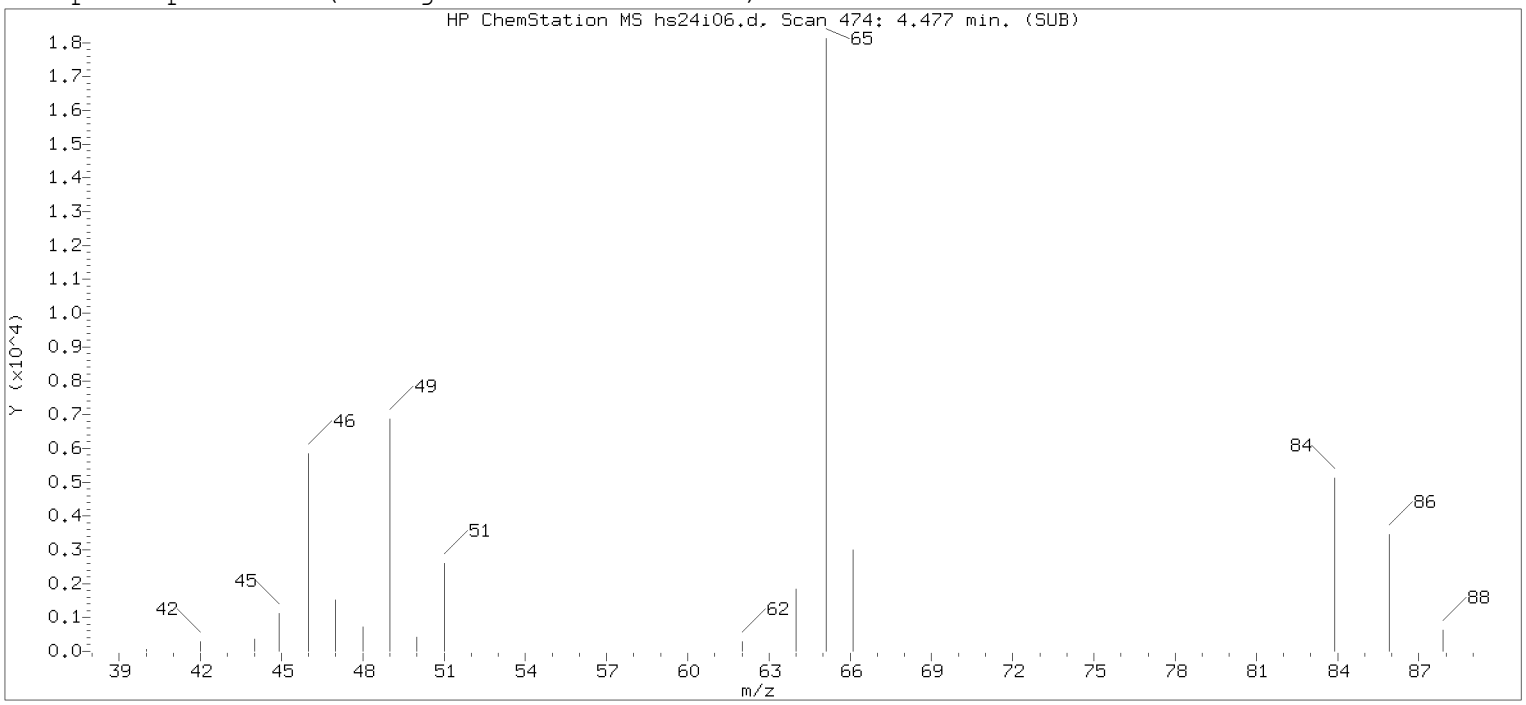
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 140183M
On-Column Amount (ng) : 50.0000
Integration start scan : 443 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

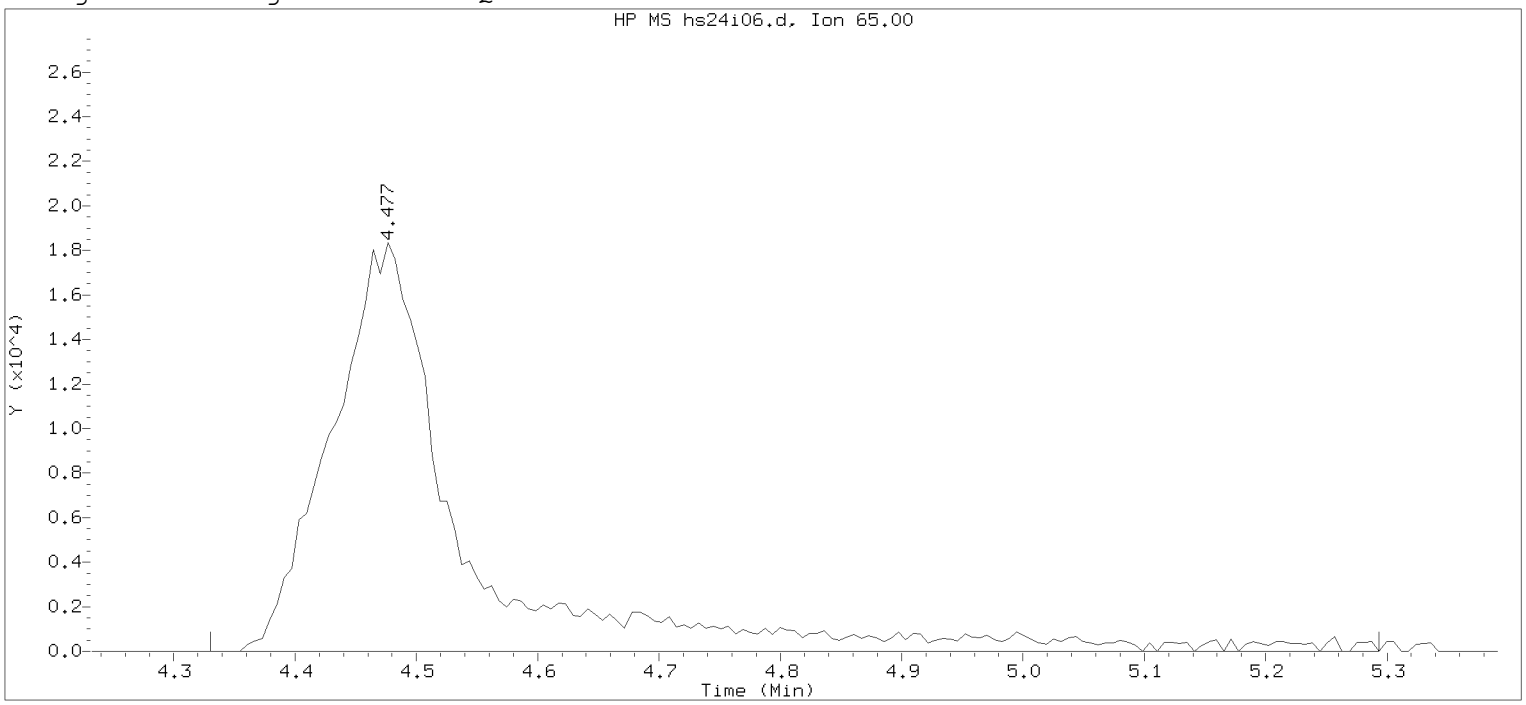
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area : 139492
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 607
Y at integration start : 0 Y at integration end: 0

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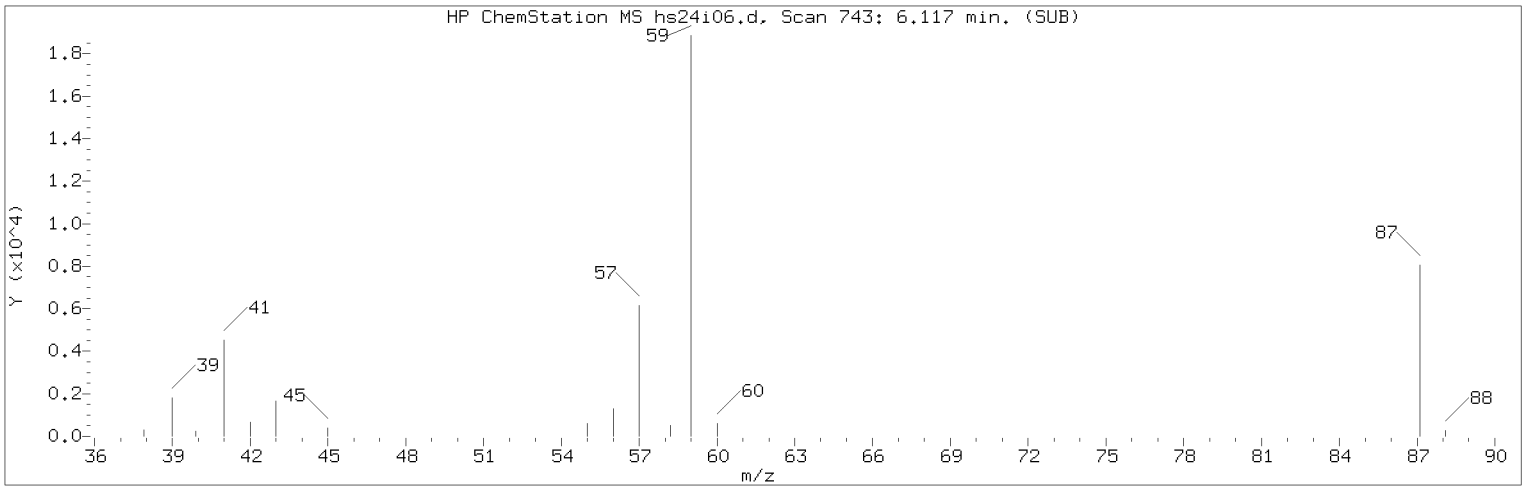
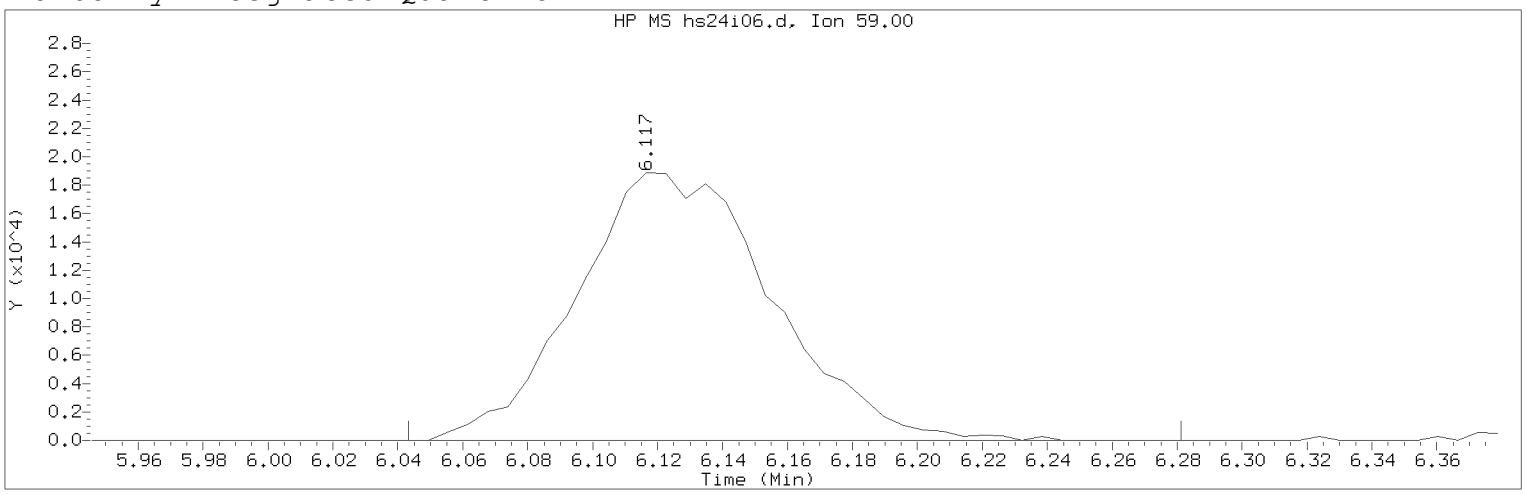
Target 3.5 esignature used. RAF20 Page 341 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

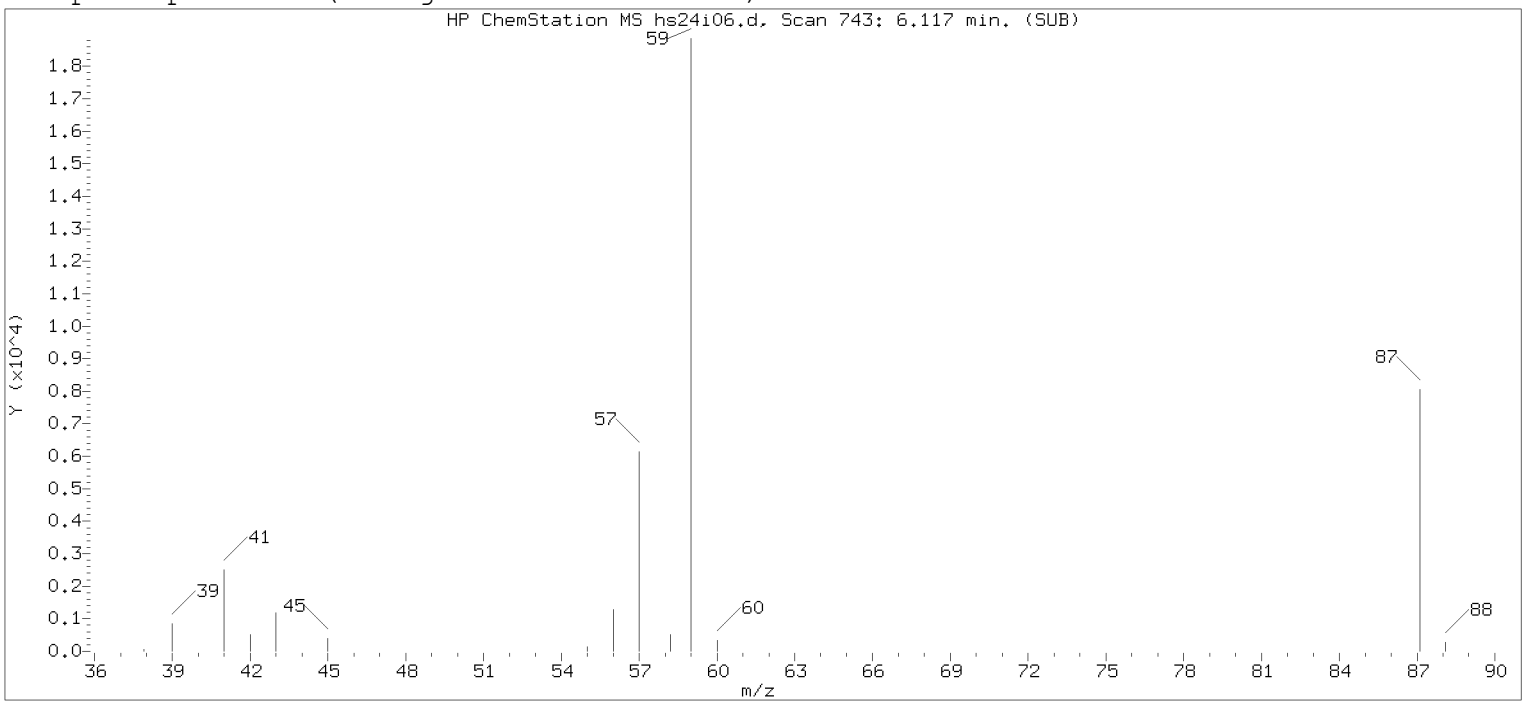
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area (flag) : 79009M
On-Column Amount (ng) : 0.4853
Integration start scan : 730 Integration stop scan: 769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

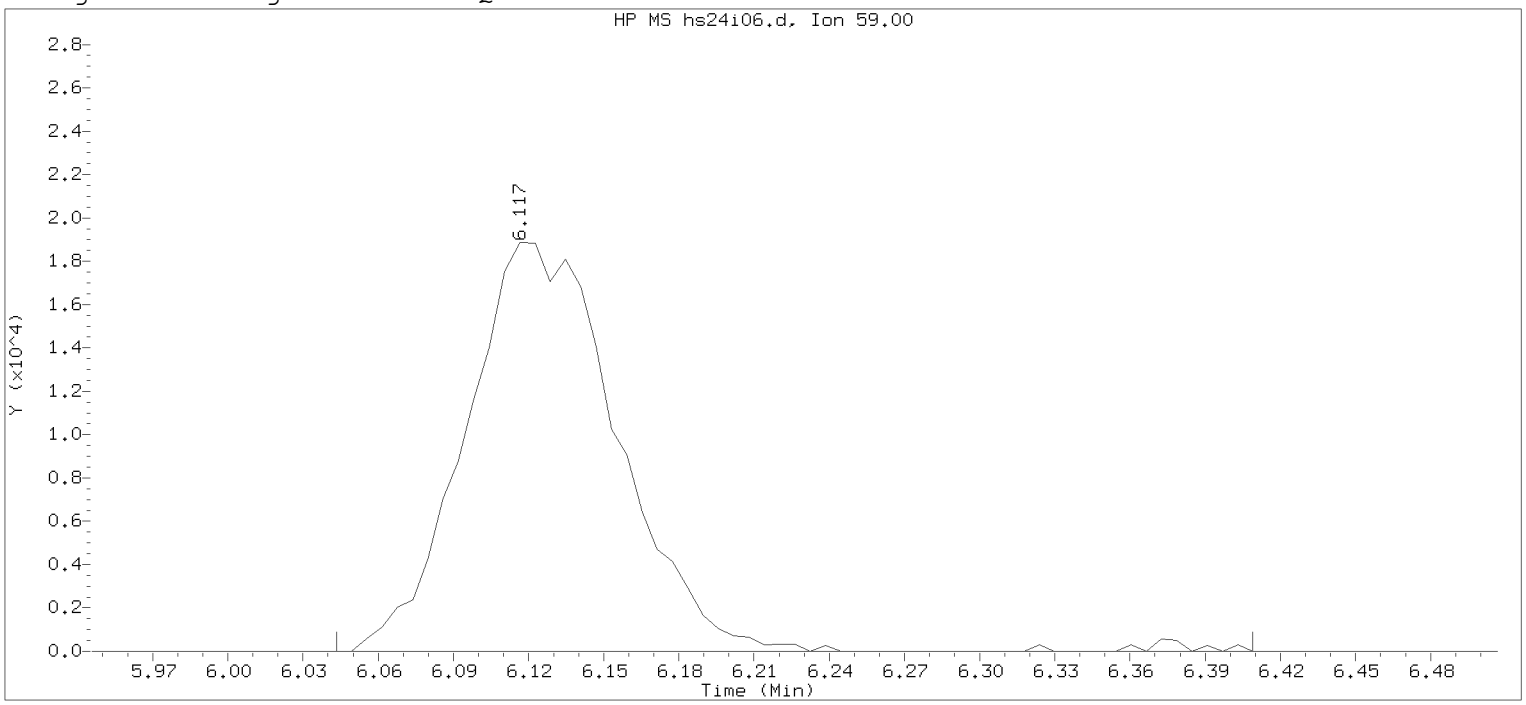
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

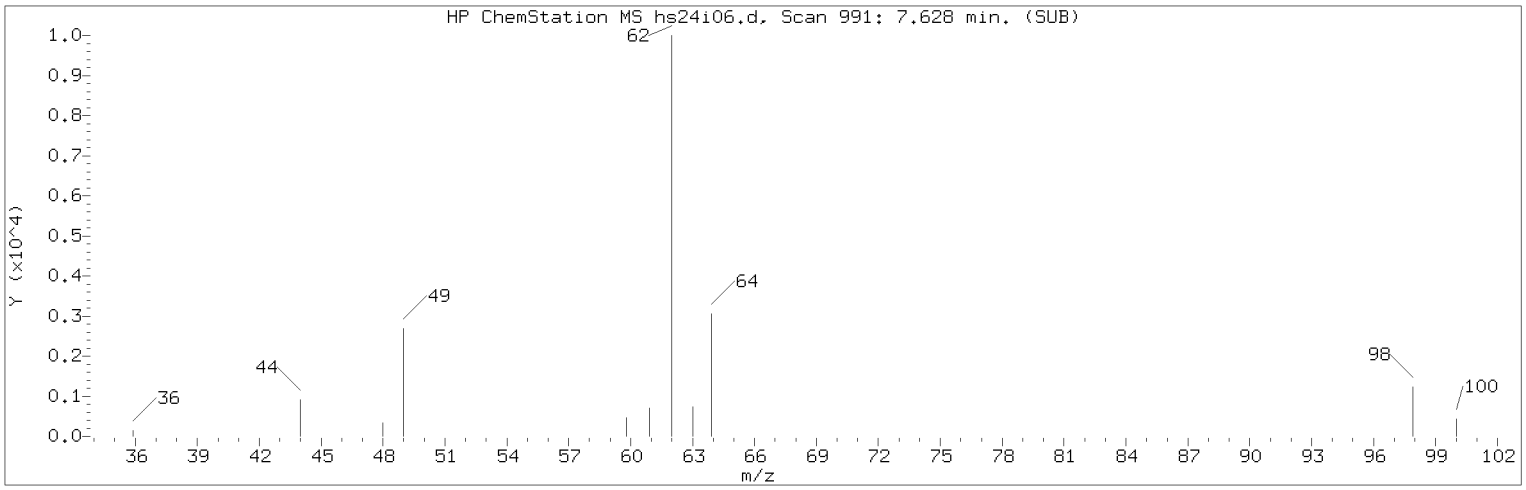
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

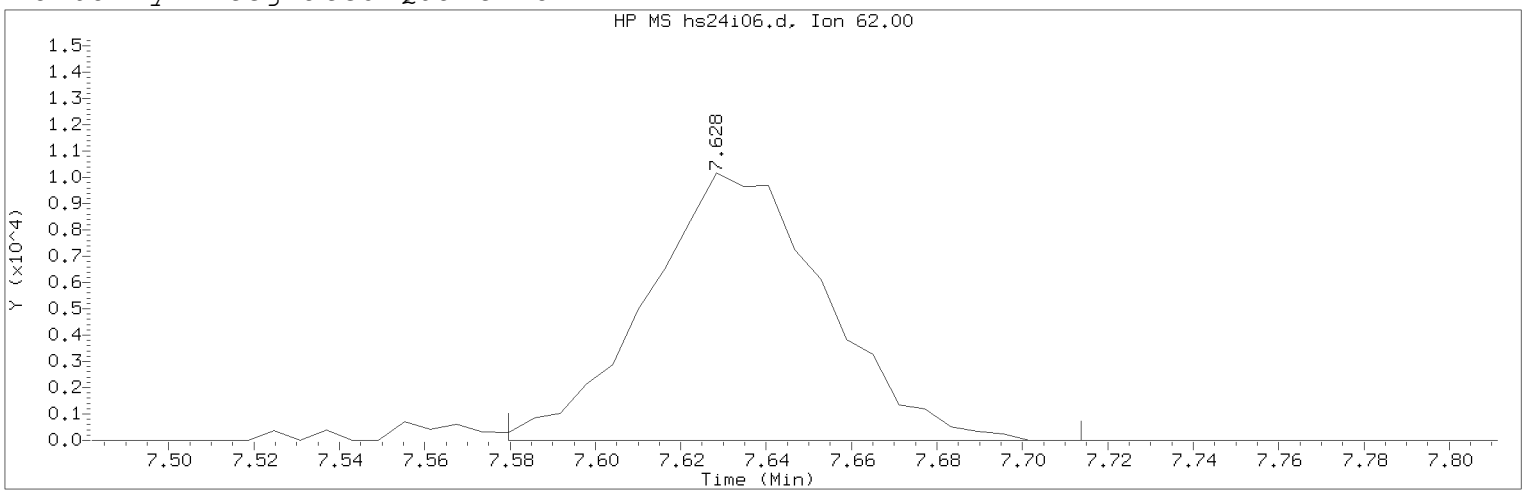
Compound Number : 37
Compound Name : Ethyl t-butyl ether
Scan Number : 743
Retention Time (minutes): 6.117
Quant Ion : 59.00
Area : 79805
On-column Amount (ng) : 0.4787
Integration start scan : 730 Integration stop scan: 790
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

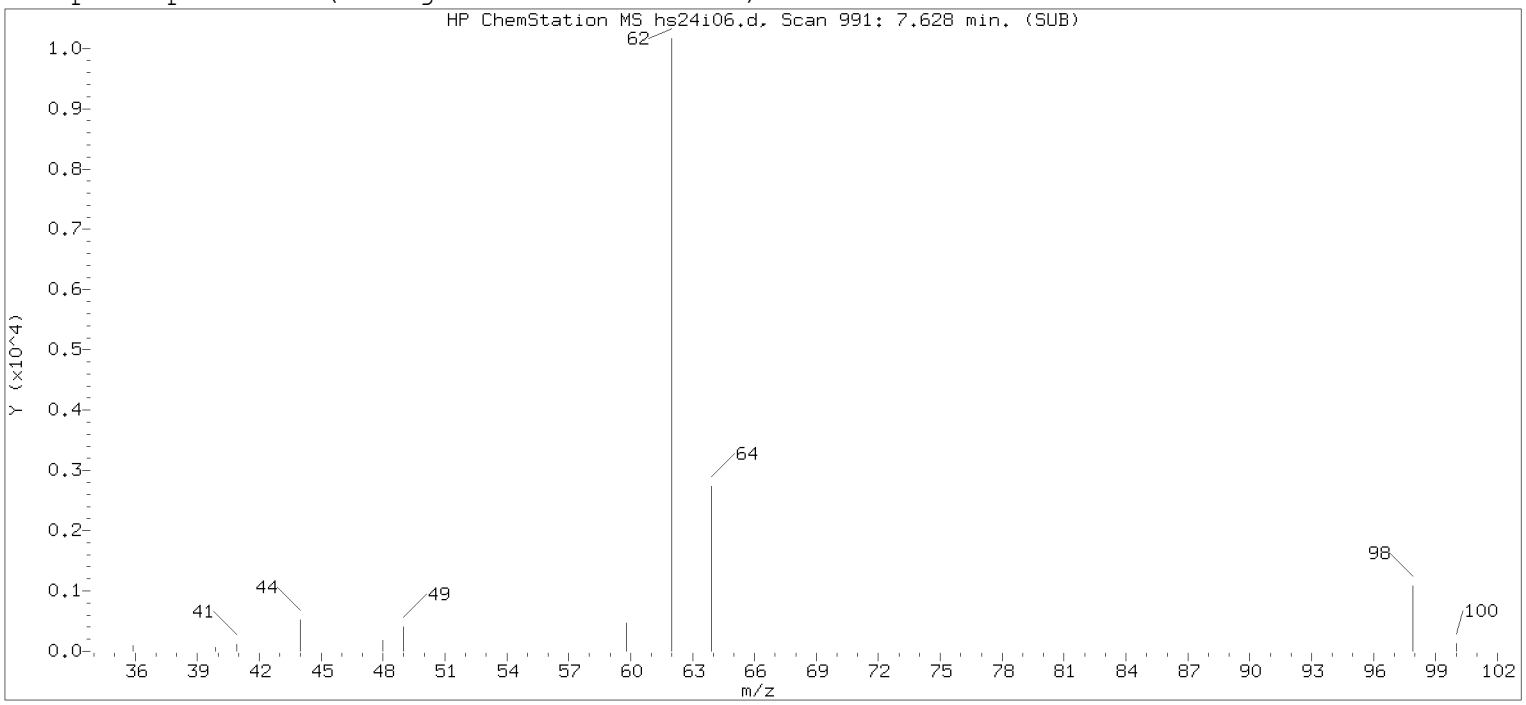
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area (flag) : 29519M
On-Column Amount (ng) : 0.4982
Integration start scan : 982 Integration stop scan: 1004
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

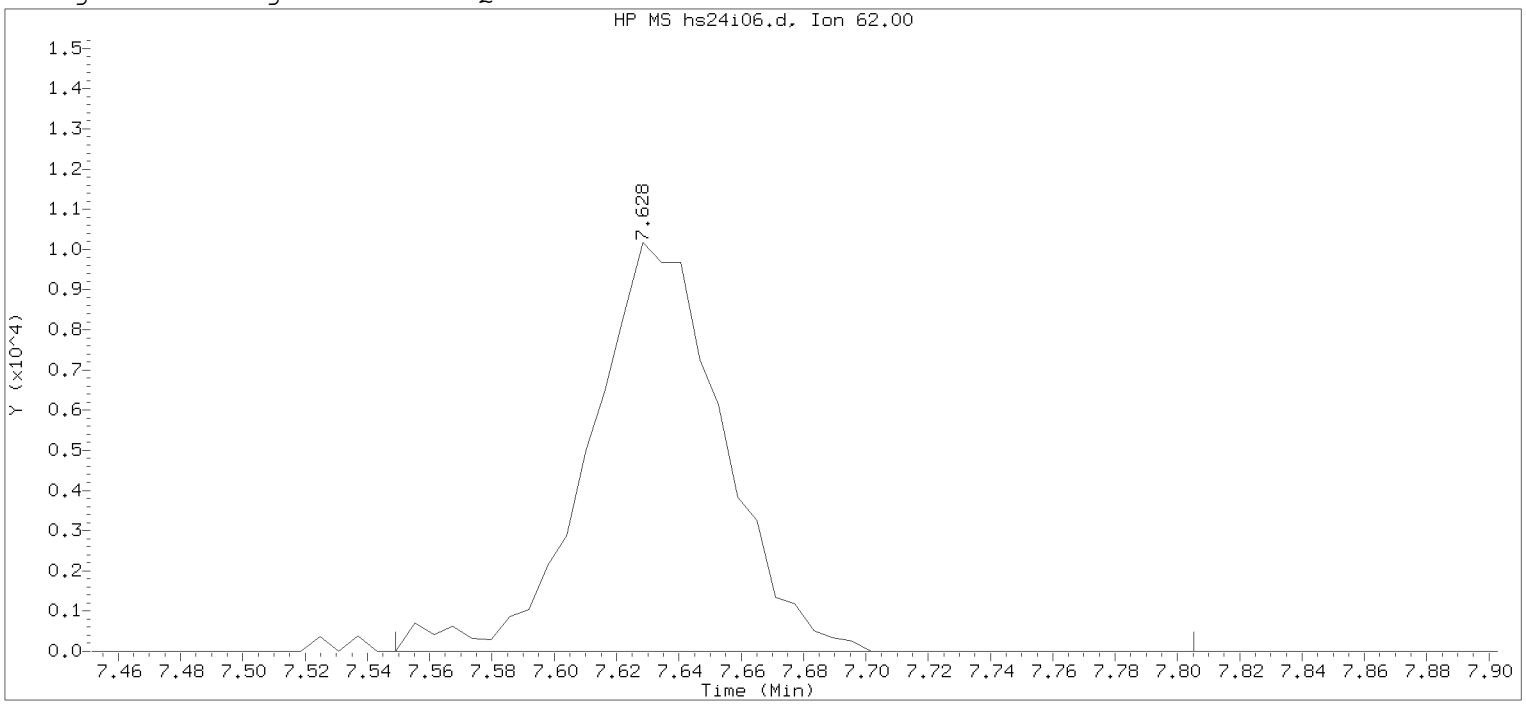
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

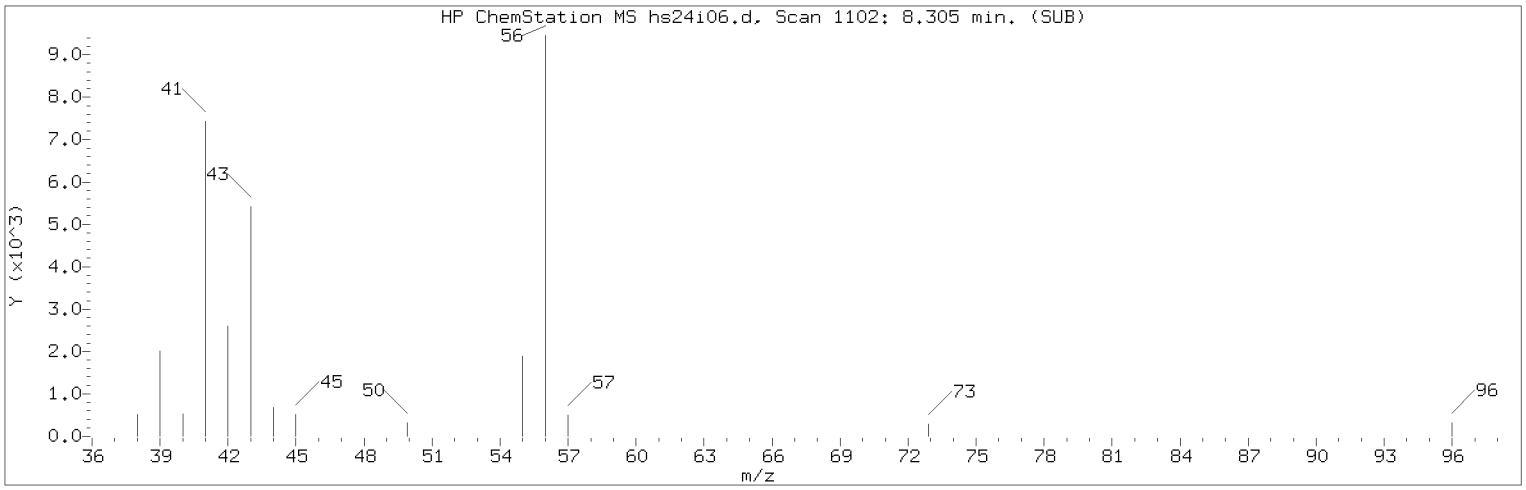
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

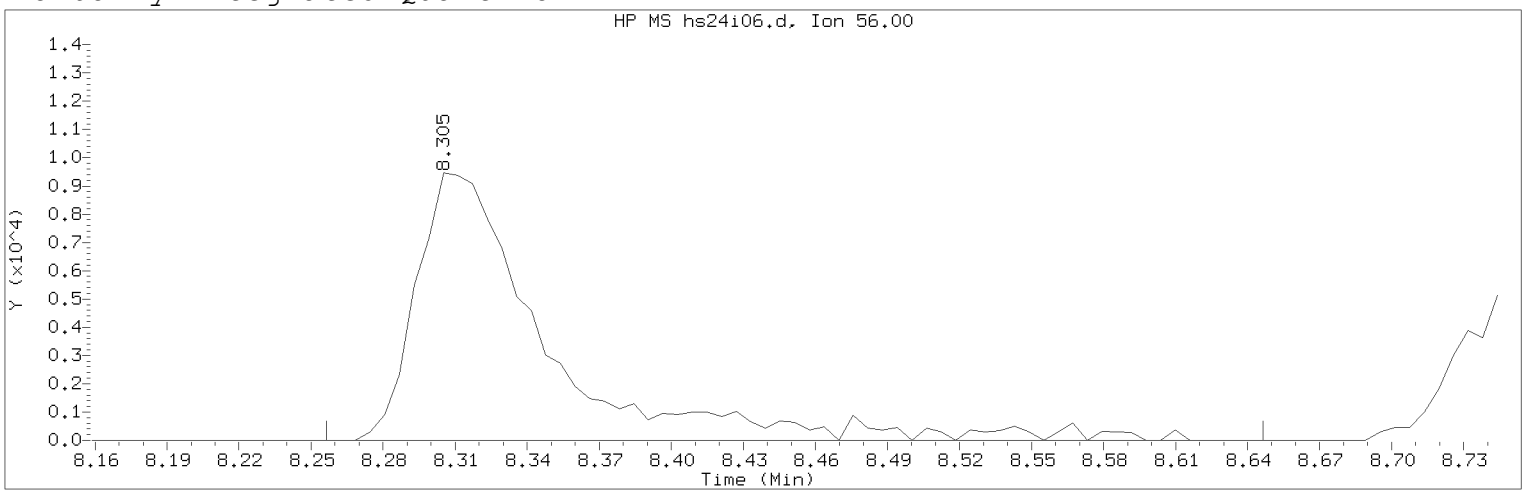
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 991
Retention Time (minutes): 7.628
Quant Ion : 62.00
Area : 30276
On-column Amount (ng) : 0.5128
Integration start scan : 977 Integration stop scan: 1019
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 345 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

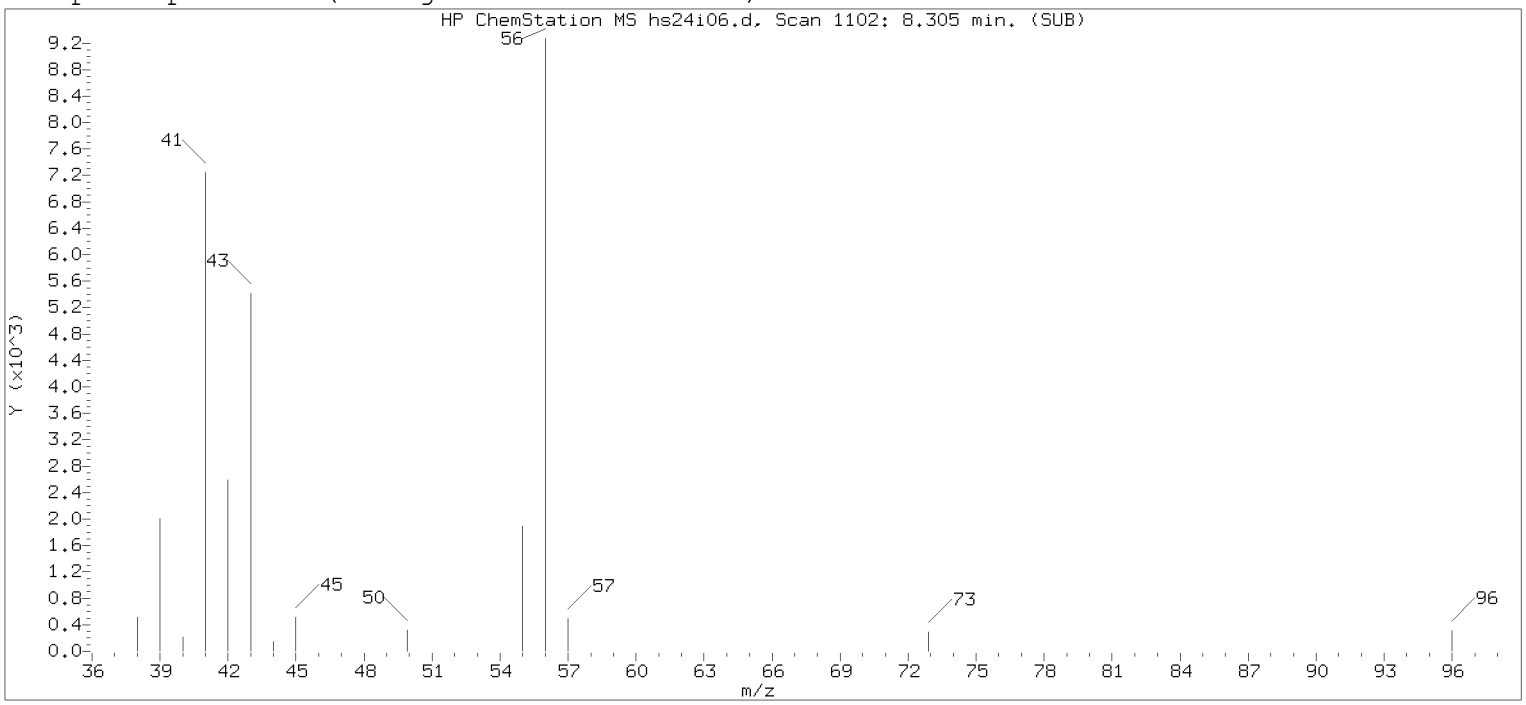
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1102
Retention Time (minutes): 8.305
Quant Ion : 56.00
Area (flag) : 35795M
On-Column Amount (ng) : 45.7637
Integration start scan : 1093 Integration stop scan: 1157
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

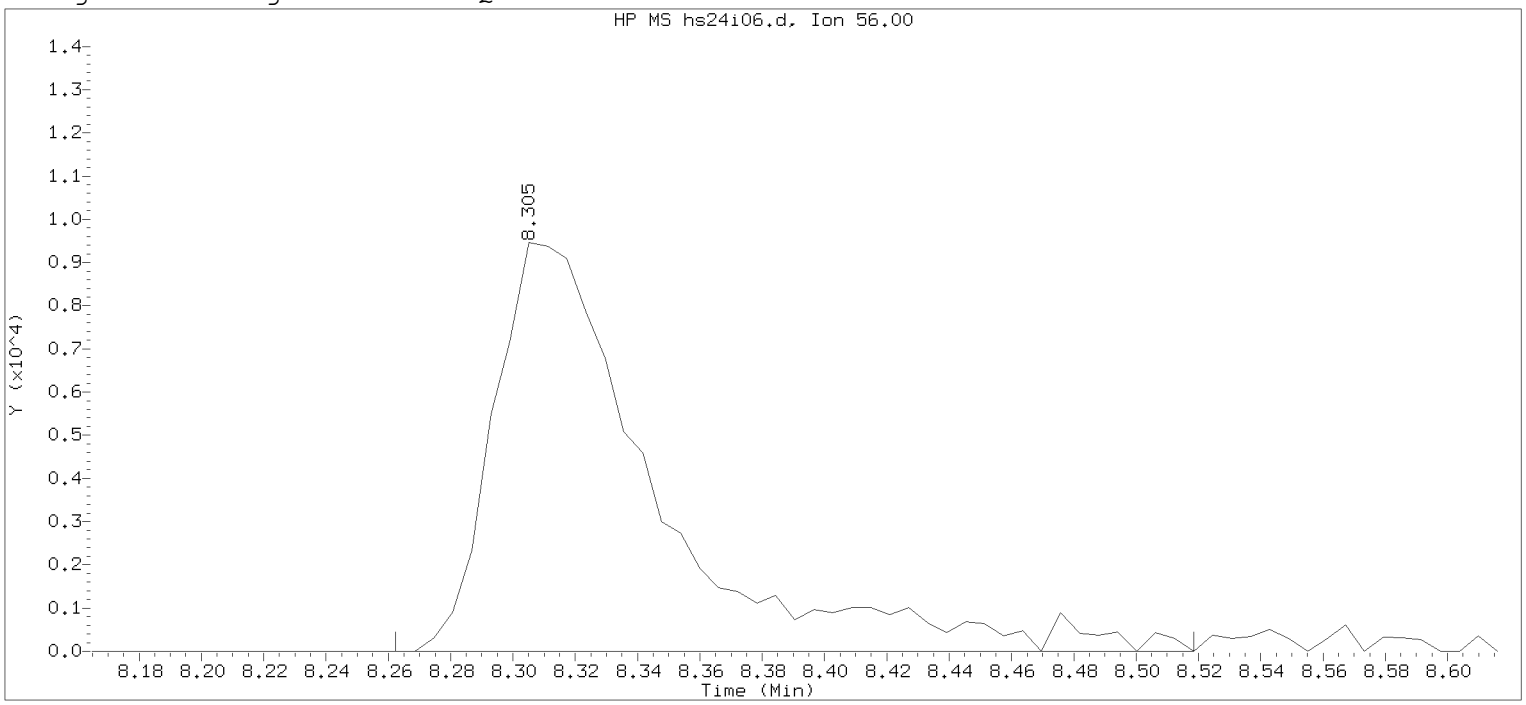
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

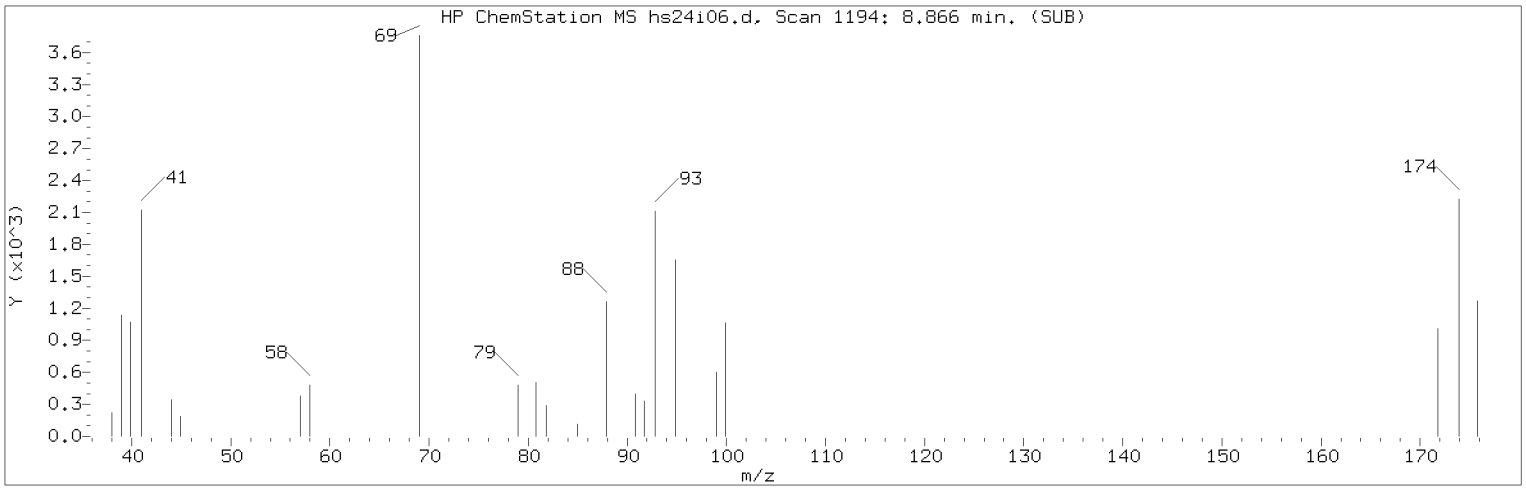
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

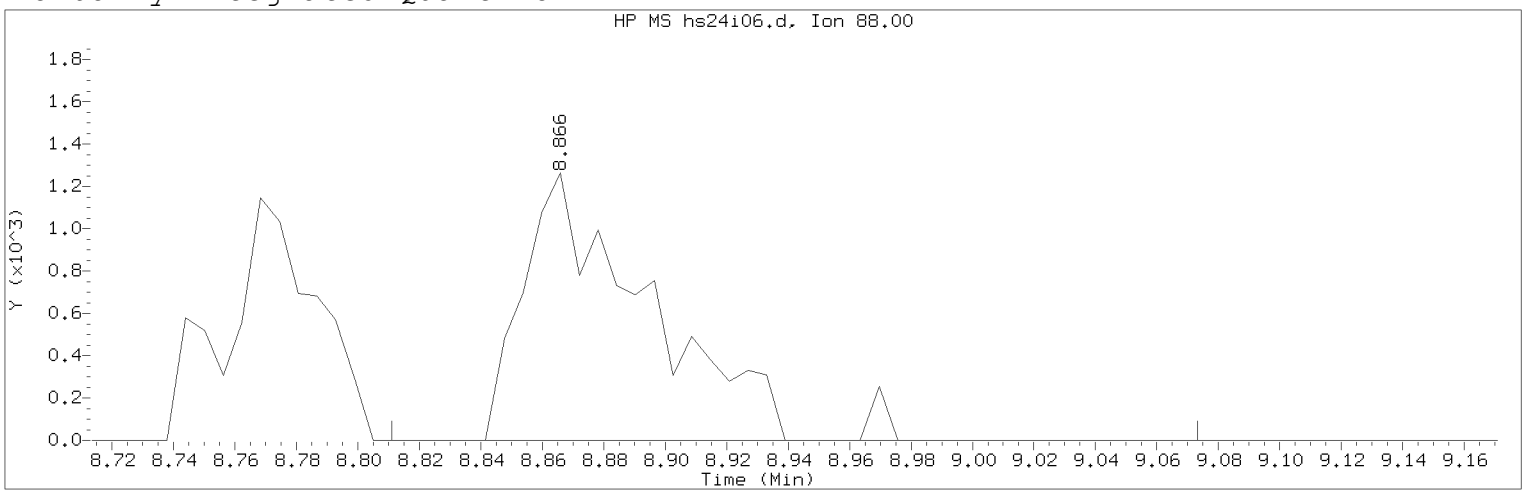
Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1102		
Retention Time (minutes)	: 8.305		
Quant Ion	: 56.00		
Area	: 34344		
On-column Amount (ng)	: 44.3600		
Integration start scan	: 1094	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 347 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

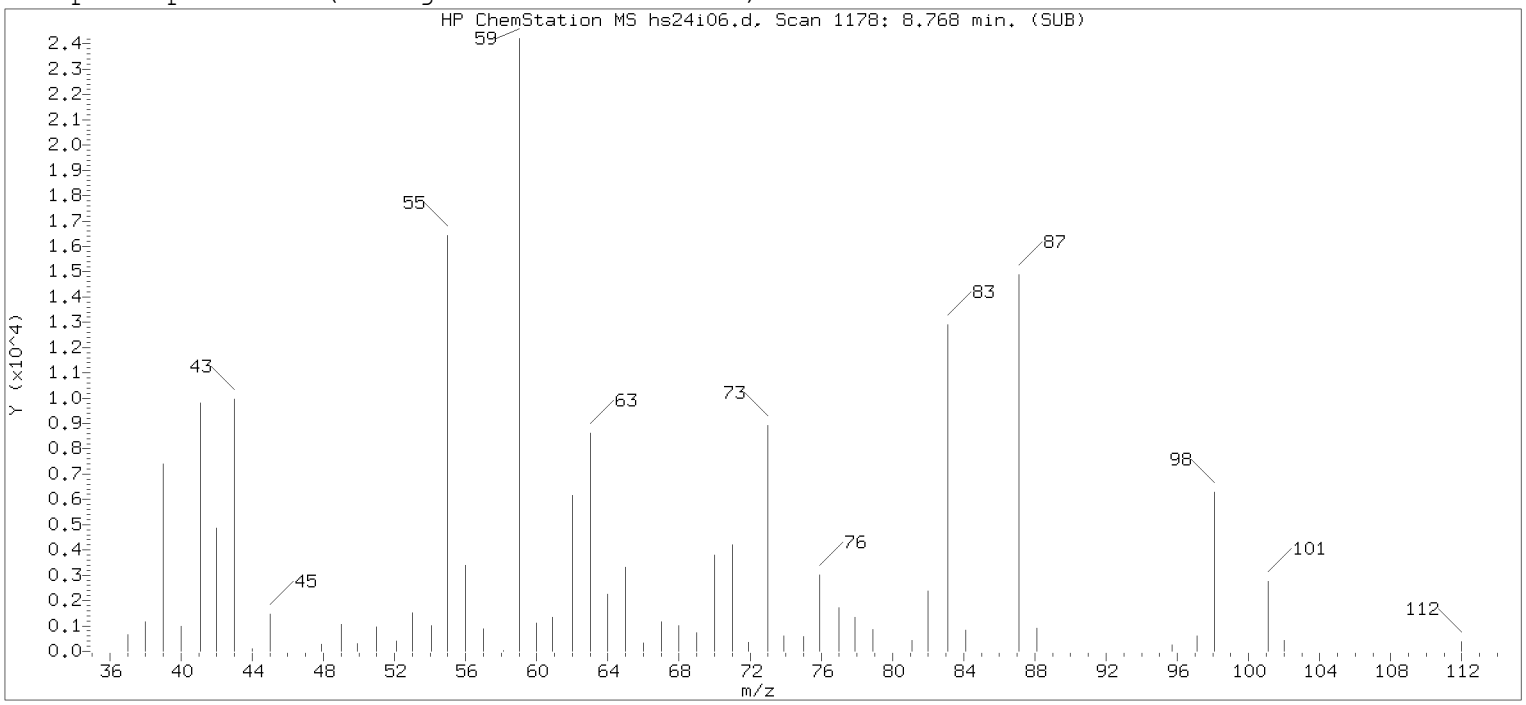
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1194
Retention Time (minutes): 8.866
Quant Ion : 88.00
Area (flag) : 3592M
On-Column Amount (ng) : 19.0735
Integration start scan : 1184 Integration stop scan: 1227
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

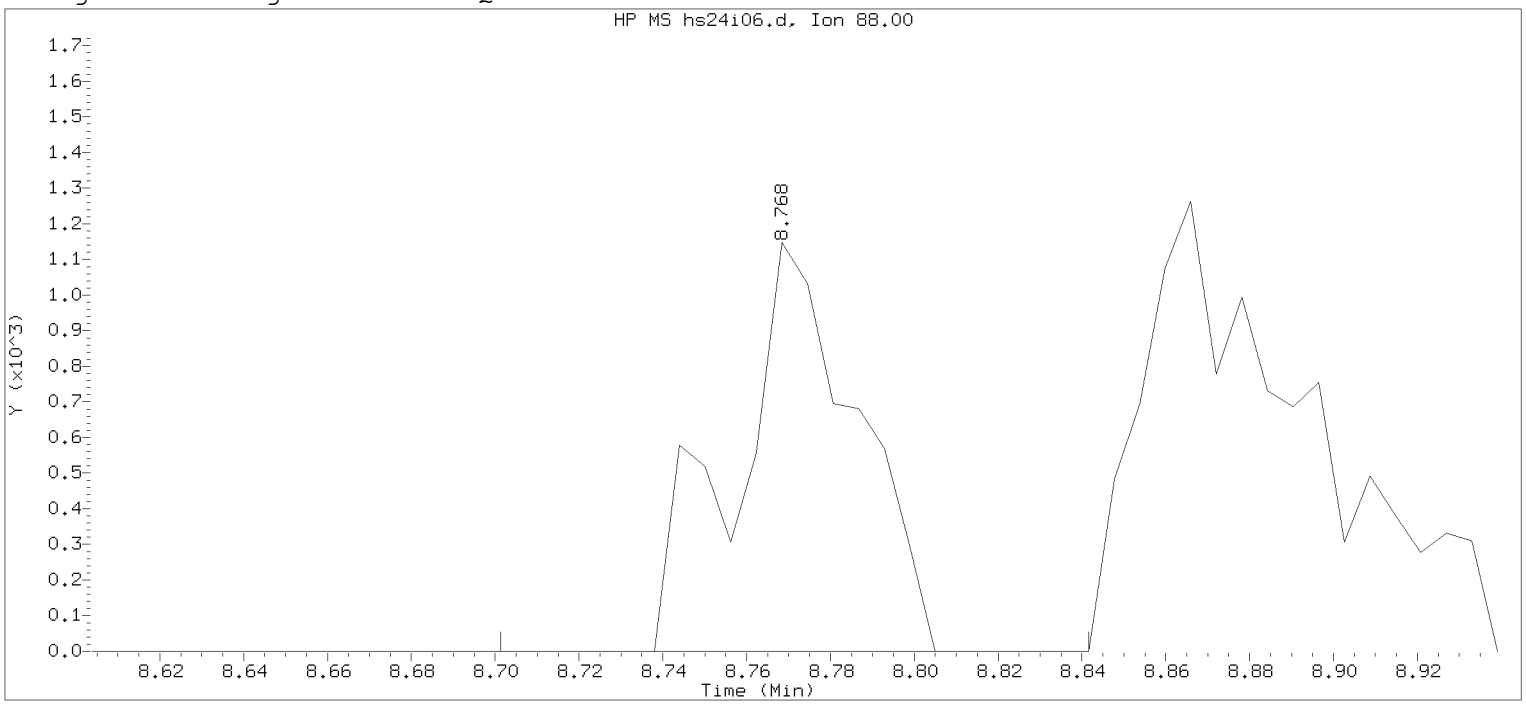
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

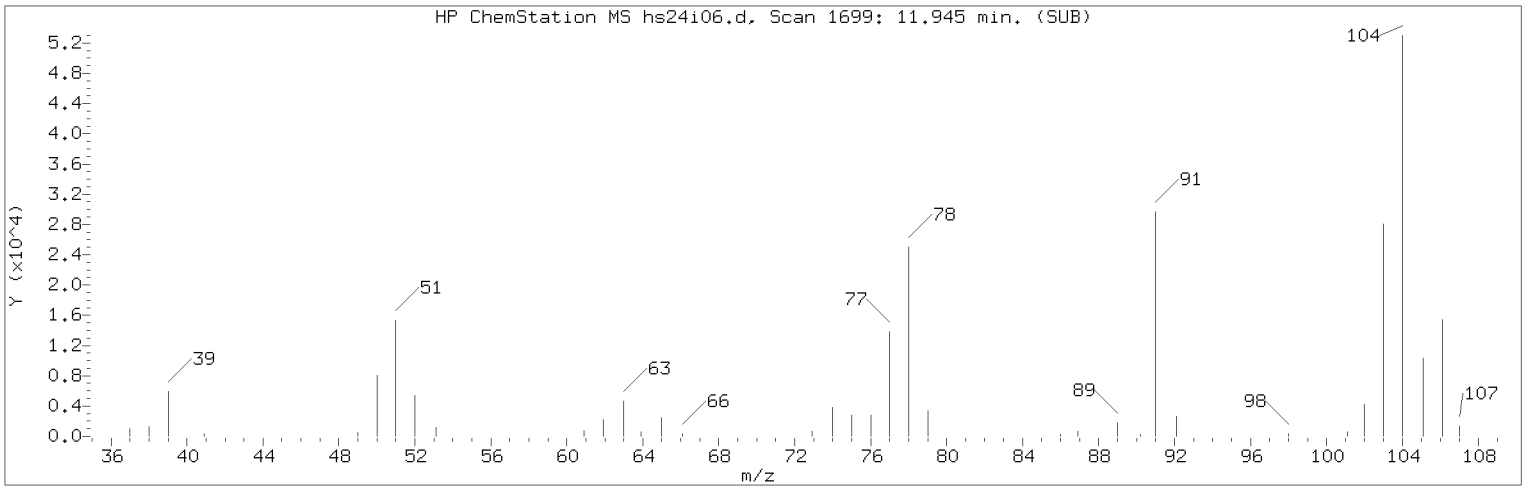
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

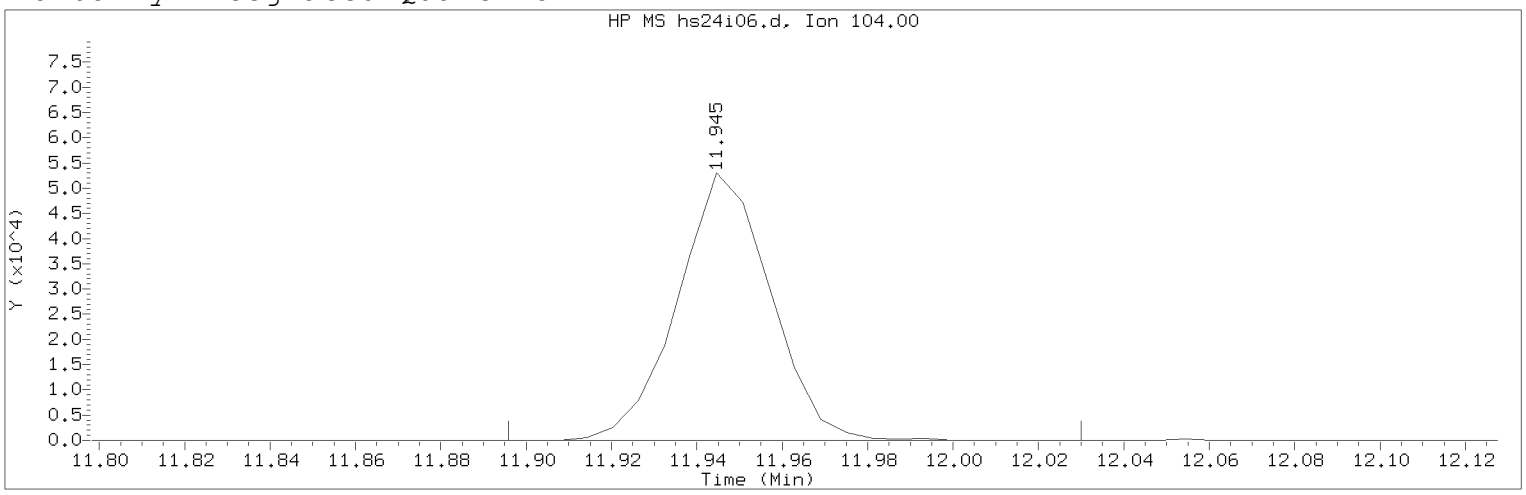
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1178		
Retention Time (minutes)	: 8.768		
Quant Ion	: 88.00		
Area	: 2332		
On-column Amount (ng)	: 19.8680		
Integration start scan	: 1166	Integration stop scan:	1189
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 349 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

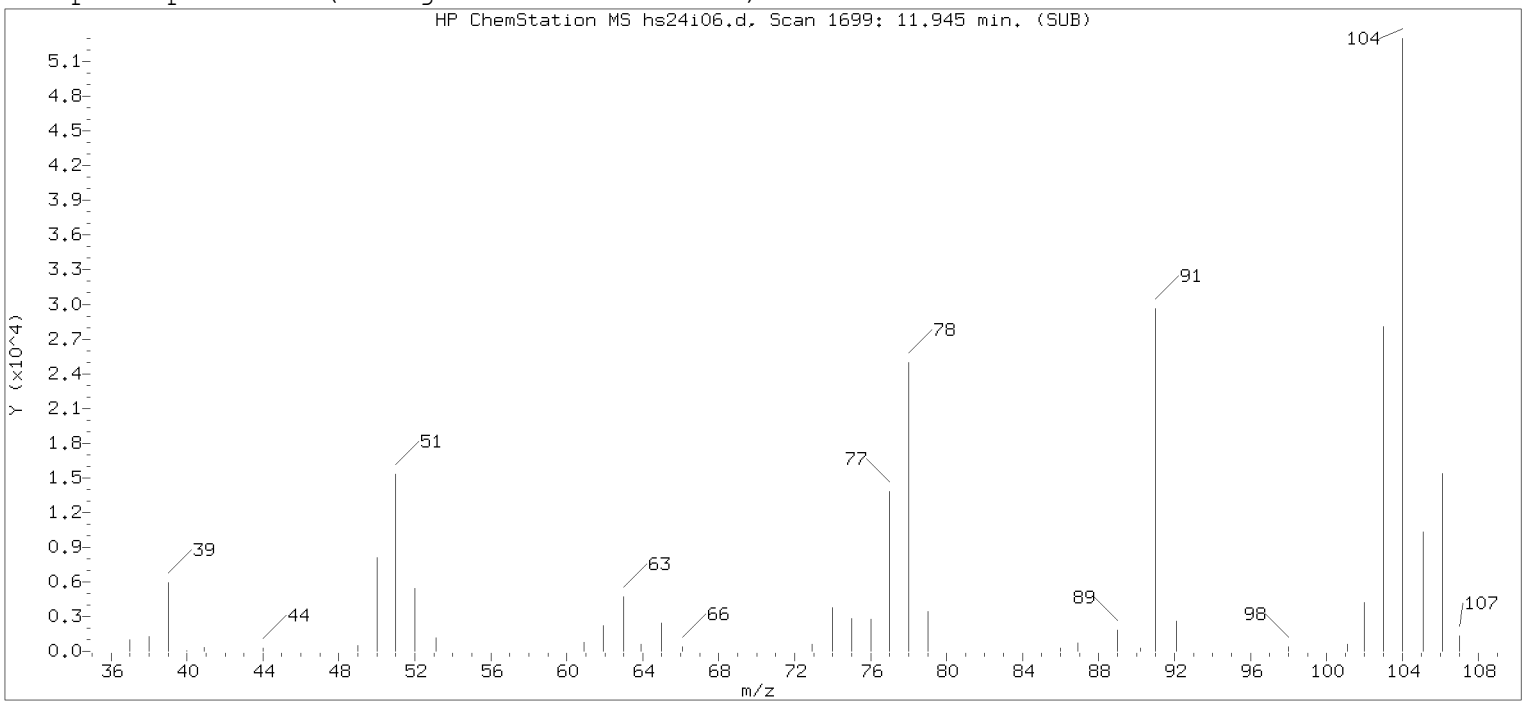
Compound Number : 106
Compound Name : Styrene
Scan Number : 1699
Retention Time (minutes): 11.945
Quant Ion : 104.00
Area (flag) : 80057M
On-Column Amount (ng) : 0.4536
Integration start scan : 1690 Integration stop scan: 1712
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

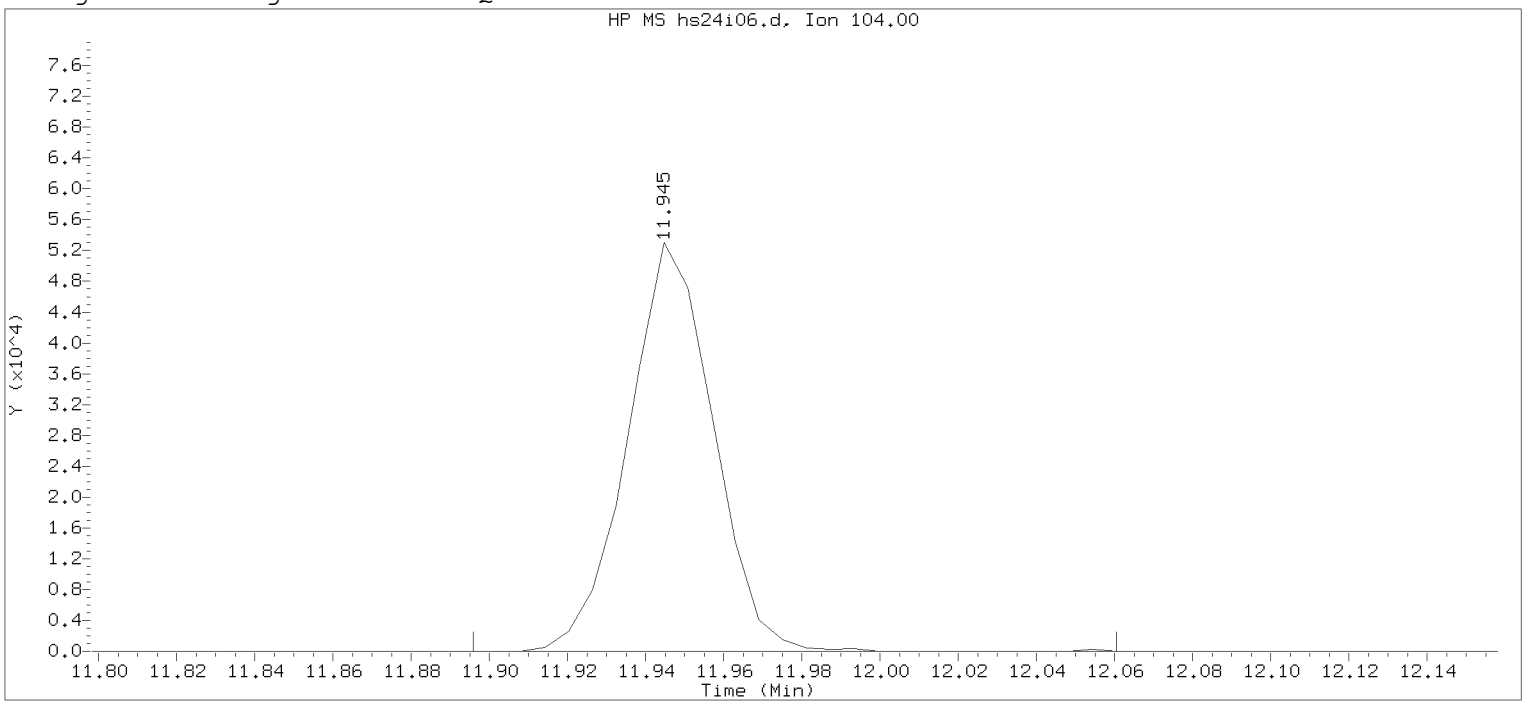
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

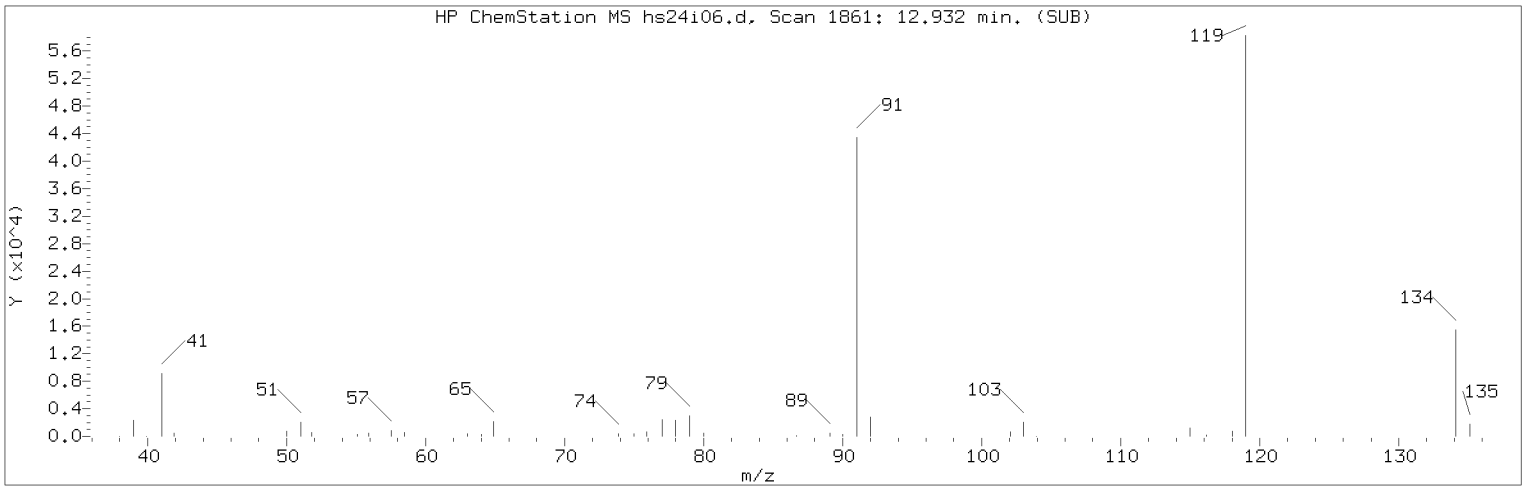
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

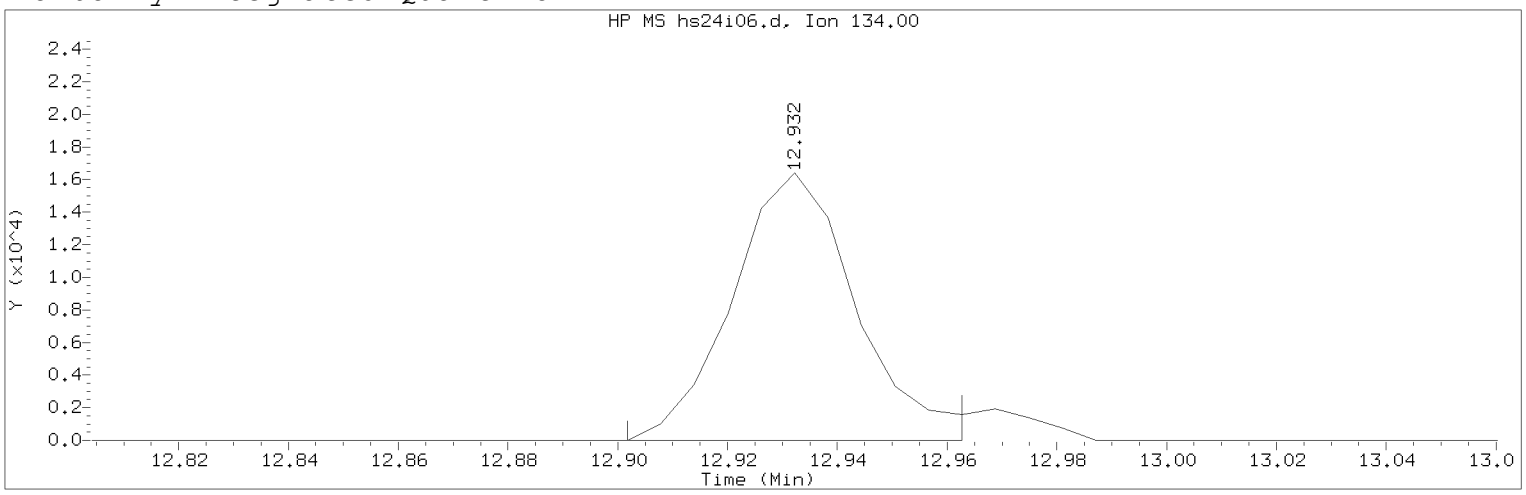
Compound Number	: 106		
Compound Name	: Styrene		
Scan Number	: 1699		
Retention Time (minutes)	: 11.945		
Quant Ion	: 104.00		
Area	: 80151		
On-column Amount (ng)	: 0.4420		
Integration start scan	: 1690	Integration stop scan:	1717
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 09/25/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

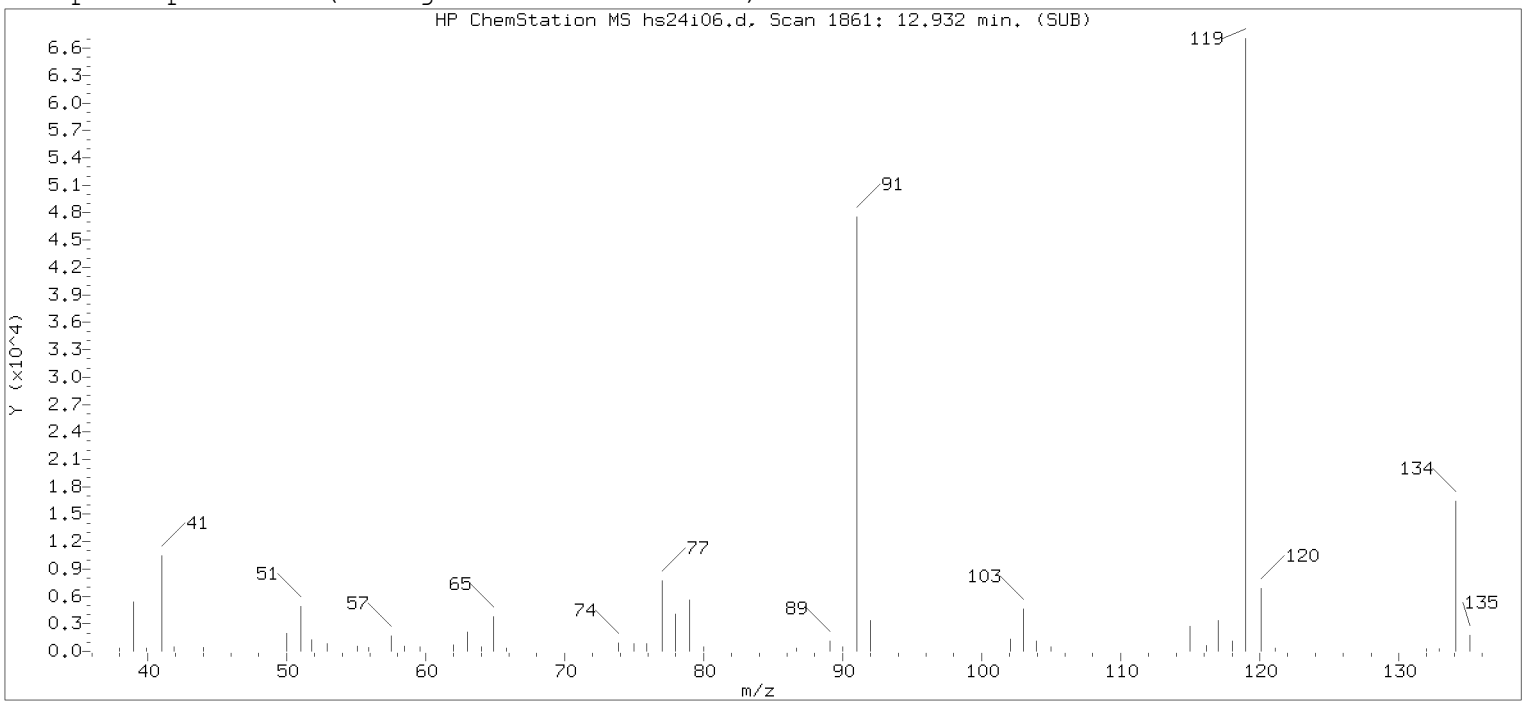
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 25726M
On-Column Amount (ng) : 0.4759
Integration start scan : 1855 Integration stop scan: 1865
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

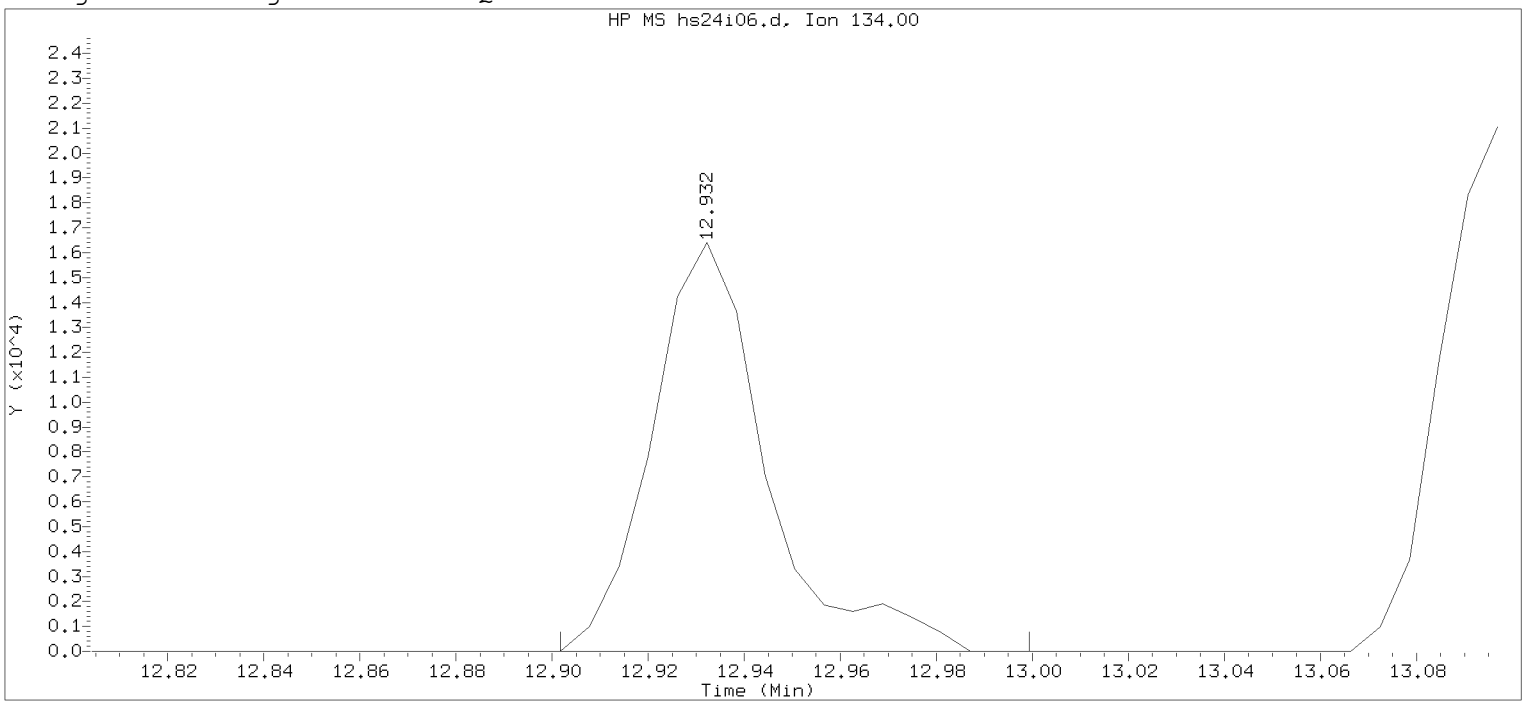
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i06.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:16 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 27202
On-column Amount (ng) : 0.4744
Integration start scan : 1855 Integration stop scan: 1871
Y at integration start : 0 Y at integration end: 0

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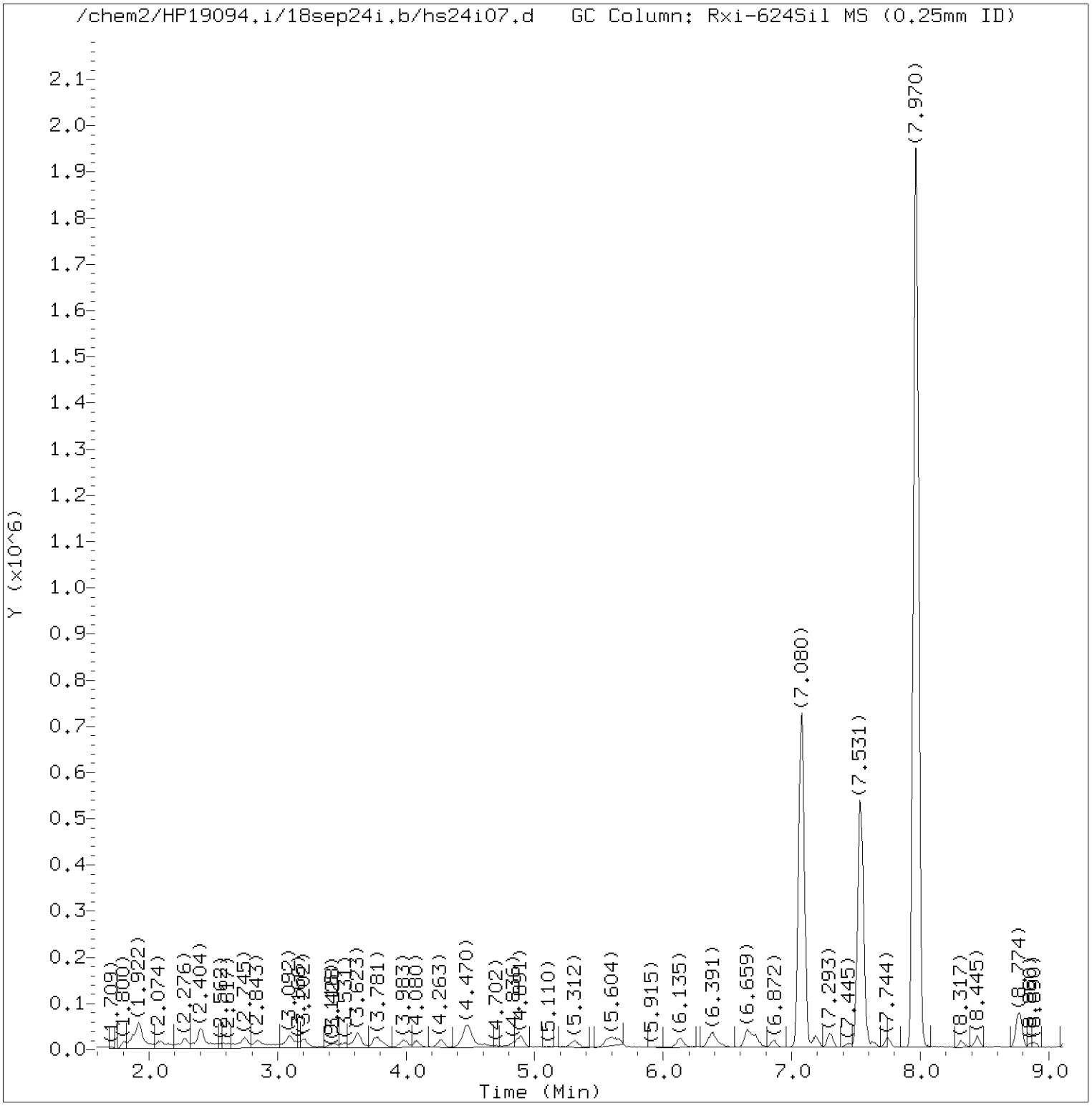
Target 3.5 esignature used. AE20 Page 353 of 1072



Total Ion Chromatogram (TIC)

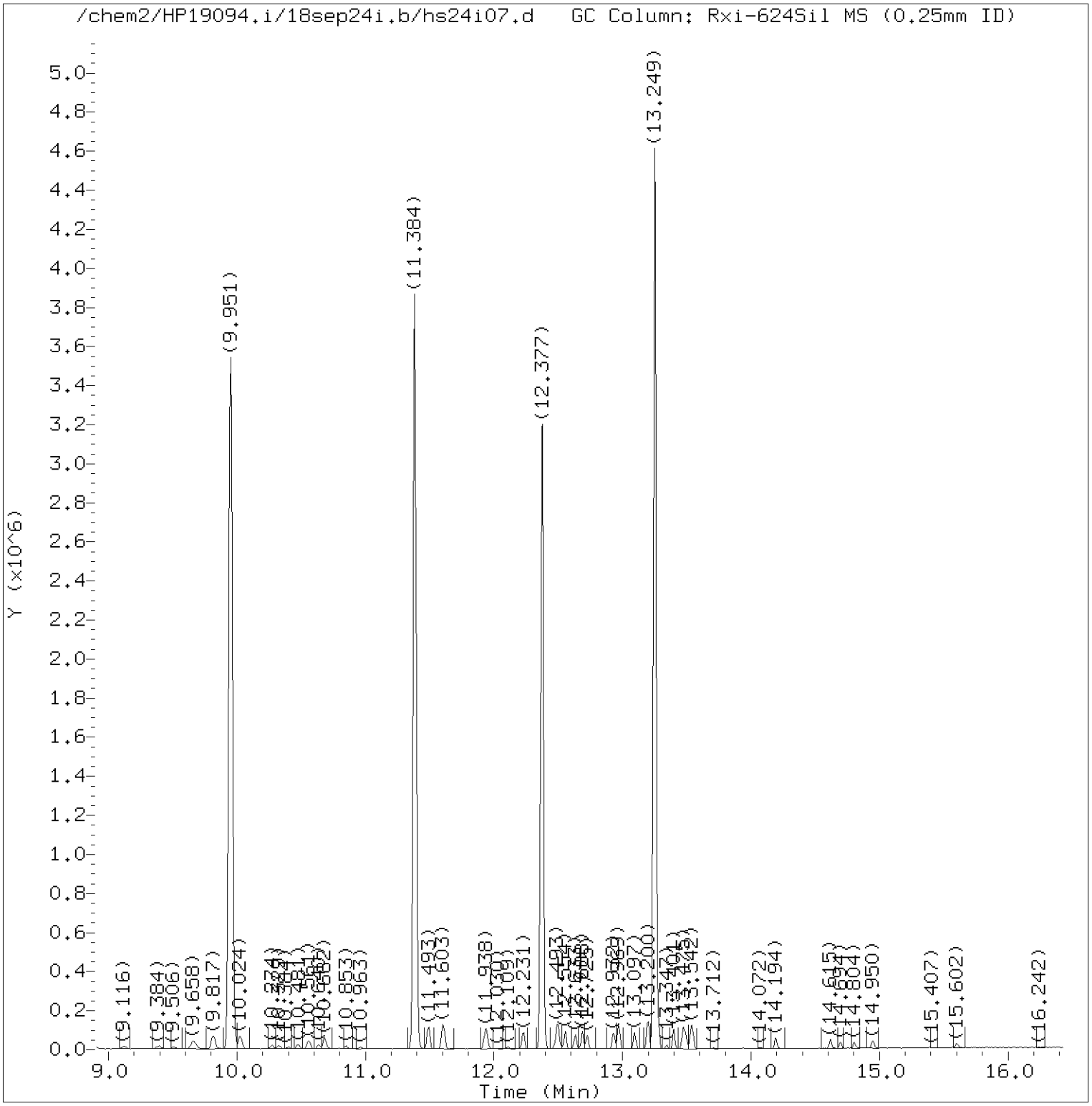
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	18684	0.173
2) Chloromethane	(2)	2.276	50	20265	0.192
6) 1,3-Butadiene	(2)	2.391	39	22506M	0.201
5) Vinyl Chloride	(2)	2.404	62	19000	0.192
7) Bromomethane	(2)	2.745	94	14696	0.191
8) Chloroethane	(2)	2.855	64	11899	0.198
9) Dichlorofluoromethane	(2)	3.092	67	26880	0.188
10) Trichlorofluoromethane	(2)	3.166	101	22332	0.178
11) Ethyl ether	(2)	3.434	59	8413	0.198
12) Freon 123a	(2)	3.513	67	13528	0.171
13) Acrolein	(1)	3.629	56	57860	9.554
15) 1,1-Dichloroethene	(2)	3.769	96	8847	0.163
16) Freon 113	(2)	3.787	101	9804	0.153
14) Acetone	(1)	3.806	43	17774M	2.185
17) Methyl Iodide	(2)	3.970	142	20605	0.182
18) Carbon Disulfide	(2)	4.080	76	32988	0.191
21) Methyl Acetate	(1)	4.251	43	3885	0.170
22) Allyl Chloride	(2)	4.269	41	19586	0.190
23) Methylene Chloride	(2)	4.464	84	14058	0.230
26)*t-Butyl Alcohol-d10	(1)	4.482	65	136477	50.000
28) t-Butyl Alcohol	(1)	4.604	59	8816	3.784
29) Acrylonitrile	(1)	4.836	53	9839	0.937
30) Methyl Tertiary Butyl Ether	(2)	4.885	73	19485	0.175
31) trans-1,2-Dichloroethene	(2)	4.891	96	11360	0.186
32) n-Hexane	(2)	5.305	57	14177	0.146
33) 1,1-Dichloroethane	(2)	5.549	63	20797	0.179
34) di-Isopropyl Ether	(2)	5.604	45	38755	0.187
35) 2-Chloro-1,3-Butadiene	(2)	5.659	53	17187	0.164
40) 1,2-Dichloroethene (Total)	(2)		96	23470	0.365
37) Ethyl t-butyl ether	(2)	6.122	59	29171	0.178
38) 2-Butanone	(1)	6.354	43	25880	1.944
41) 2,2-Dichloropropane	(2)	6.385	77	13983	0.168
39) cis-1,2-Dichloroethene	(2)	6.391	96	12110	0.179
42) Propionitrile	(1)	6.452	54	12829	3.550
45) Methacrylonitrile	(1)	6.659	67	23810	1.827
47) Bromochloromethane	(2)	6.702	128	5661	0.198
48) Tetrahydrofuran	(1)	6.726	71	6748	1.906
49) Chloroform	(2)	6.860	83	18885	0.174

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	694305	9.967
50)$Dibromofluoromethane	(2)	7.080	111	718039	10.014
51) 1,1,1-Trichloroethane	(2)	7.080	97	15708	0.170
52) Cyclohexane	(2)	7.183	56	19182	0.159
52) Cyclohexane	(2)	7.183	84	16106	0.162
52) Cyclohexane	(2)	7.201	69	5648	0.159
55) 1,1-Dichloropropene	(2)	7.299	75	15252	0.174
54) Carbon Tetrachloride	(2)	7.305	117	12817	0.161
56) Isobutyl Alcohol	(1)	7.439	41	7908	8.774
57)$1,2-Dichloroethane-d4	(2)	7.537	102	122128	10.056
57)$1,2-Dichloroethane-d4	(2)	7.531	65	592808	10.092
57)$1,2-Dichloroethane-d4	(2)	7.531	104	77943	10.021
58) Benzene	(2)	7.573	78	48910	0.189
59) 1,2-Dichloroethane	(2)	7.640	62	13176	0.221
60) t-Amyl methyl ether	(2)	7.750	73	24932	0.183
62) n-Heptane	(2)	7.963	43	14806	0.148
63)*Fluorobenzene	(2)	7.970	96	2763999	10.000
65) n-Butanol	(1)	8.317	56	13835M	18.168
67) Trichloroethene	(2)	8.451	95	11889	0.179
69) Methylcyclohexane	(2)	8.750	83	22461	0.179
70) 1,2-Dichloropropane	(2)	8.787	63	12025	0.191
71) Methyl Methacrylate	(1)	8.847	69	4087	0.169
72) 1,4-Dioxane	(1)	8.872	88	1041M	5.678
73) Dibromomethane	(2)	8.884	93	4747	0.182
74) Bromodichloromethane	(2)	9.128	83	13129	0.186
76) 2-Nitropropane	(1)	9.396	41	11979	1.753
80) cis-1,3-Dichloropropene	(2)	9.652	75	14627	0.178
81) 4-Methyl-2-Pentanone	(1)	9.811	43	56901M	1.718
82)$Toluene-d8	(3)	9.951	98	2792286	10.141
82)$Toluene-d8	(3)	9.951	100	1785080	10.044
83) Toluene	(3)	10.024	92	29814	0.188
85) 1,3-Dichloropropene (total)	(3)		75	24597	0.341
84) trans-1,3-Dichloropropene	(3)	10.274	75	9970	0.163
86) Ethyl Methacrylate	(3)	10.329	69	8963	0.171
91) 2-Hexanone	(1)	10.335	43	39960	1.772
88) 1,1,2-Trichloroethane	(3)	10.487	97	7236M	0.198
89) Tetrachloroethene	(3)	10.561	166	12649	0.176
90) 1,3-Dichloropropane	(3)	10.640	76	12143	0.188

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.853	129	8337	0.190
95) 1,2-Dibromoethane	(3)	10.963	107	6295	0.184
96) 1-Chlorohexane	(3)	11.384	91	18987	0.201
97)*Chlorobenzene-d5	(3)	11.384	117	2139400	10.000
98) Chlorobenzene	(3)	11.408	112	31130	0.185
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	9192	0.165
100) Ethylbenzene	(3)	11.493	91	54290	0.175
101) m+p-Xylene	(3)	11.603	106	40662	0.353
105) Xylene (Total)	(3)		106	59182	0.522
104) o-Xylene	(3)	11.932	106	18520	0.168
106) Styrene	(3)	11.944	104	29429	0.167
107) Bromoform	(3)	12.109	173	4117	0.171
108) Isopropylbenzene	(3)	12.231	105	51166	0.170
111)$4-Bromofluorobenzene	(3)	12.377	95	1020584	10.180
111)$4-Bromofluorobenzene	(3)	12.377	174	882233	10.135
113) 1,1,2,2-Tetrachloroethane	(4)	12.475	83	8843	0.197
114) Bromobenzene	(4)	12.493	156	11951	0.175
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	17855M	1.721
116) 1,2,3-Trichloropropane	(4)	12.524	110	2226	0.192
117) n-Propylbenzene	(4)	12.554	91	63816	0.172
119) 2-Chlorotoluene	(4)	12.633	126	12496	0.174
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	41880	0.167
122) 4-Chlorotoluene	(4)	12.725	126	12375	0.172
125) tert-Butylbenzene	(4)	12.932	134	8830M	0.161
126) Pentachloroethane	(4)	12.963	167	7371	0.173
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	42070	0.164
128) sec-Butylbenzene	(4)	13.097	105	52250M	0.160
131) 1,3-Dichlorobenzene	(4)	13.200	146	23099	0.170
132) p-Isopropyltoluene	(4)	13.200	119	42501	0.157
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1132249	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	24681	0.185
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	23113	0.196
136) Benzyl Chloride	(4)	13.341	126	2121	0.131
138) n-Butylbenzene	(4)	13.493	92	21345	0.159
139) 1,2-Dichlorobenzene	(4)	13.529	146	21920	0.183
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	880	0.157
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	17490	0.173
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	14330	0.174

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

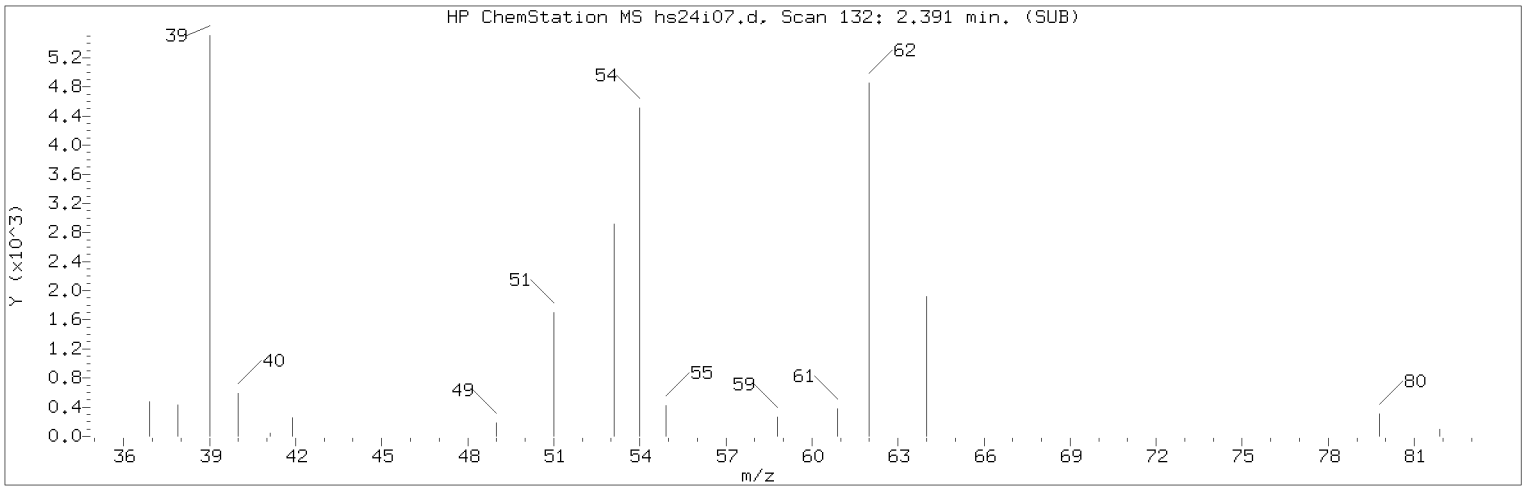
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

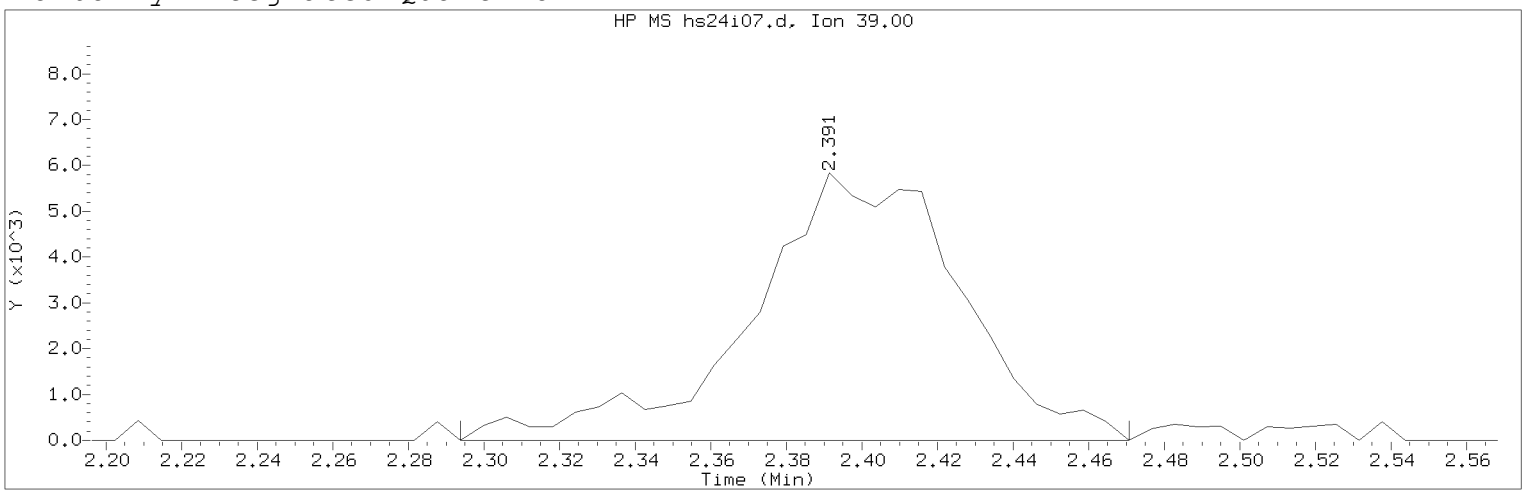
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	5770	0.186
147) Naphthalene	(4)	14.804	128	21320	0.164
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	11734	0.174

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

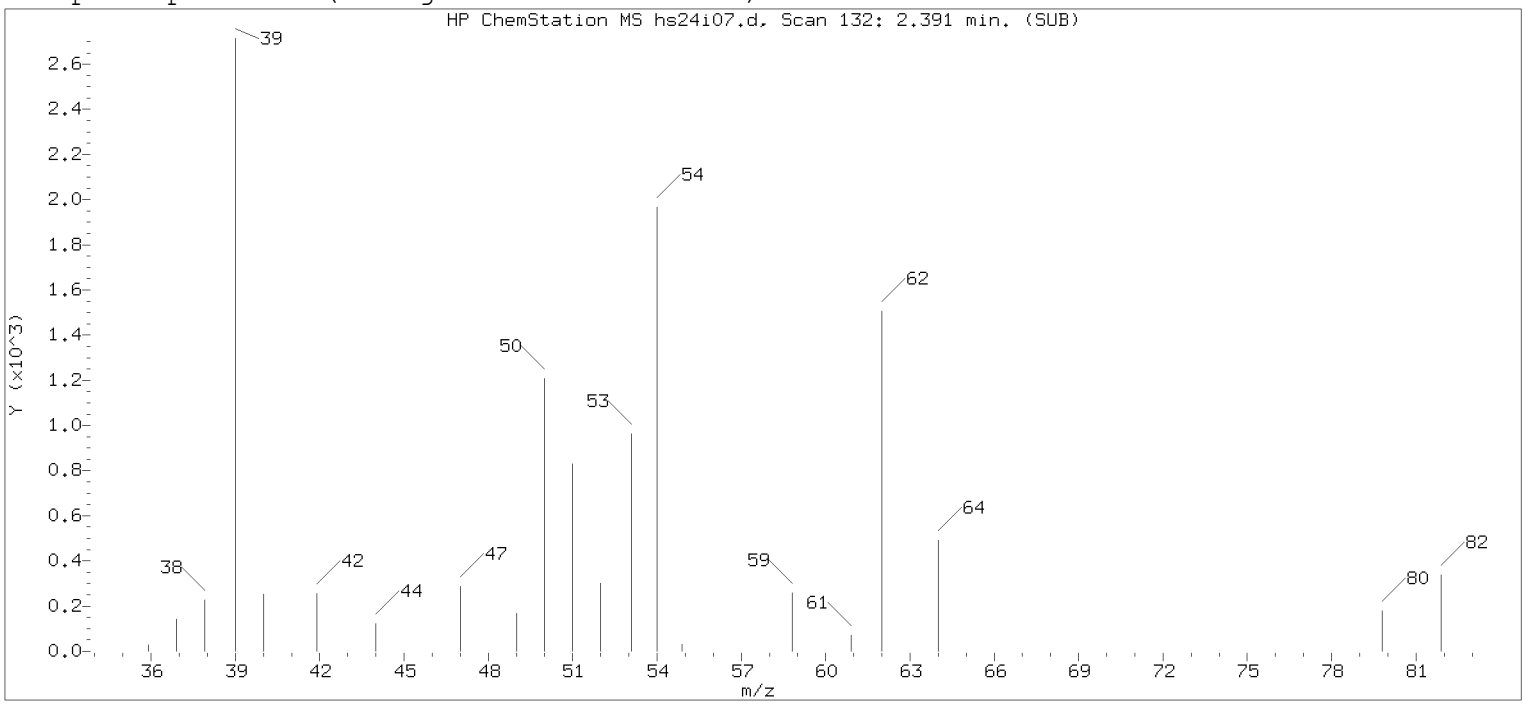
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 22506M
On-Column Amount (ng) : 0.2006
Integration start scan : 115 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

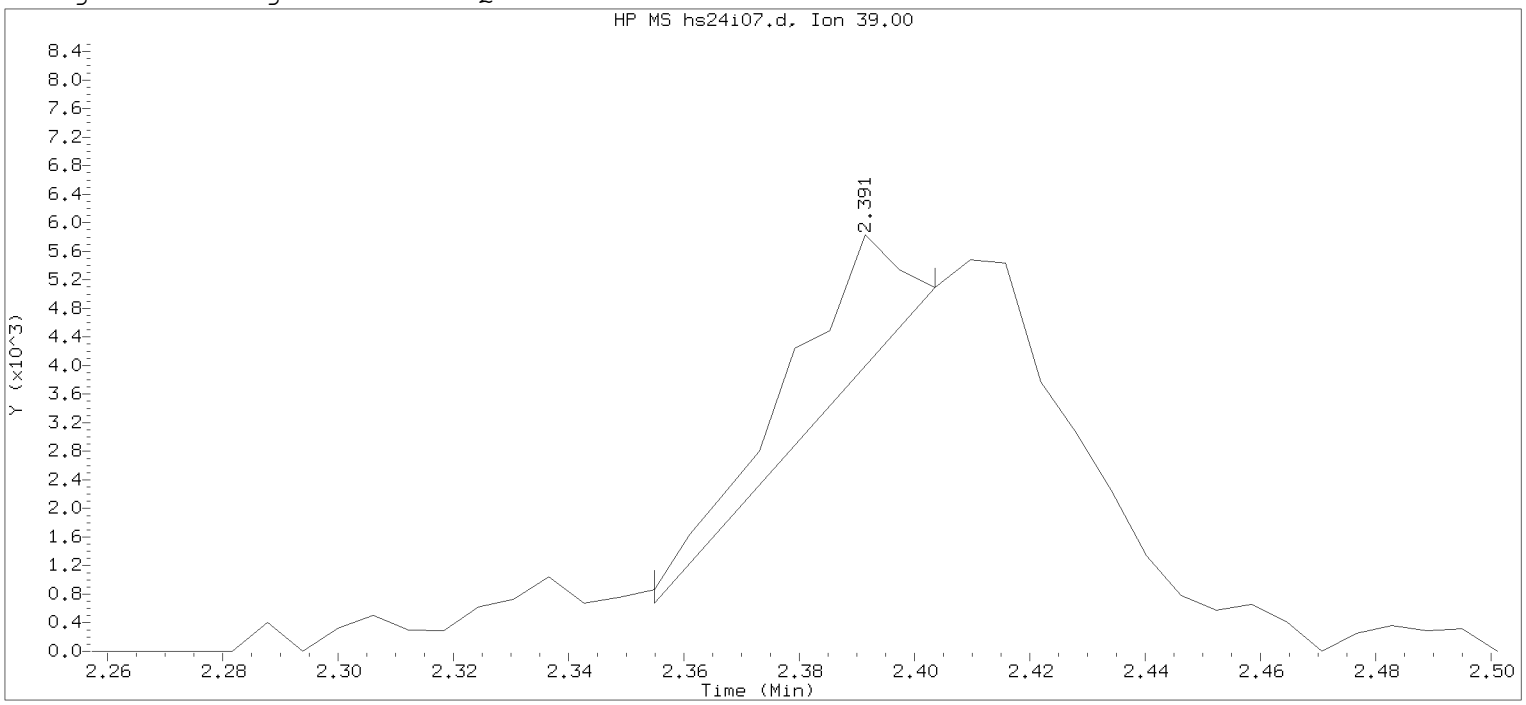
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 6		
Compound Name	: 1,3-Butadiene		
Scan Number	: 132		
Retention Time (minutes)	: 2.391		
Quant Ion	: 39.00		
Area	: 2354		
On-column Amount (ng)	: 0.0257		
Integration start scan	: 125	Integration stop scan:	133
Y at integration start	: 678	Y at integration end:	5096

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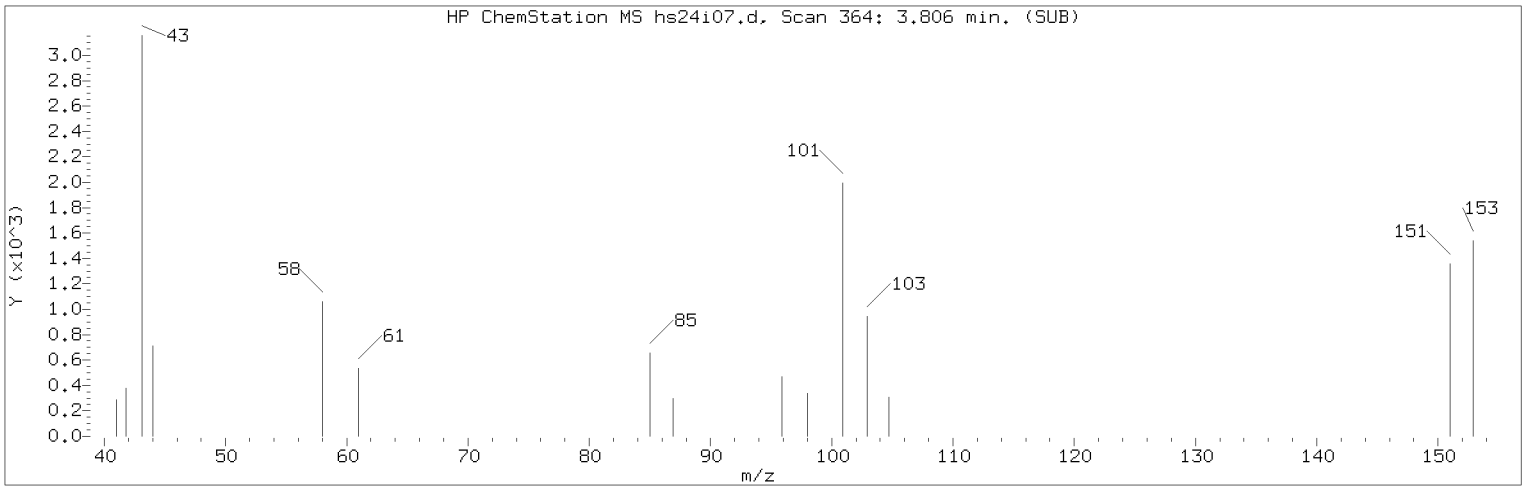
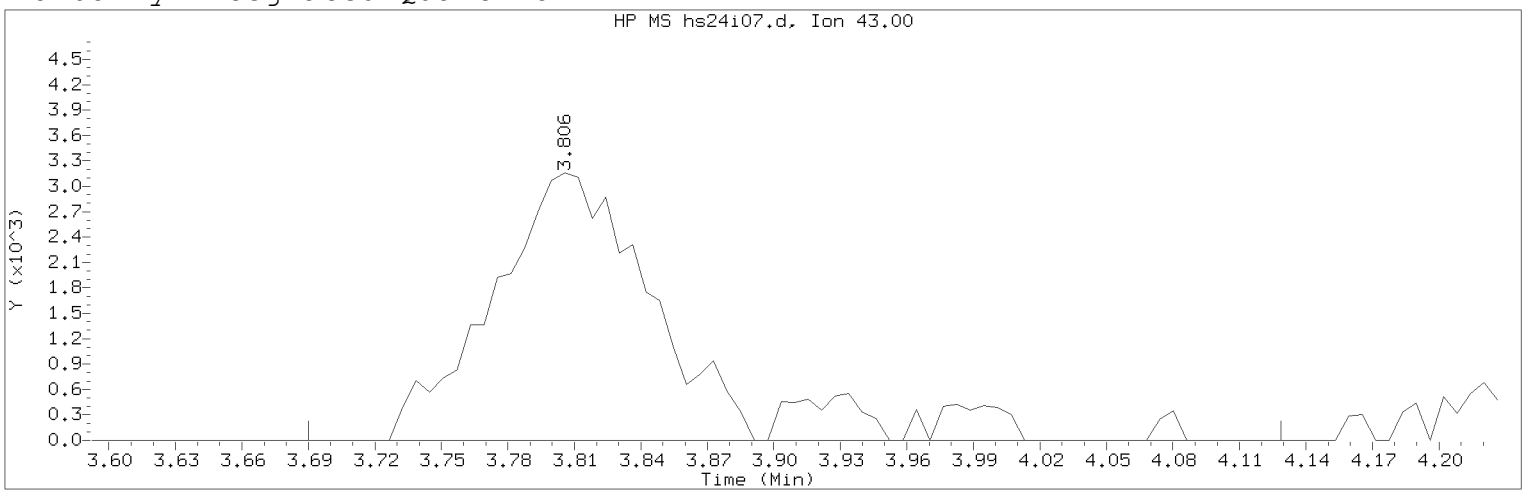
Target 3.5 esignature used. AE20 Page 361 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

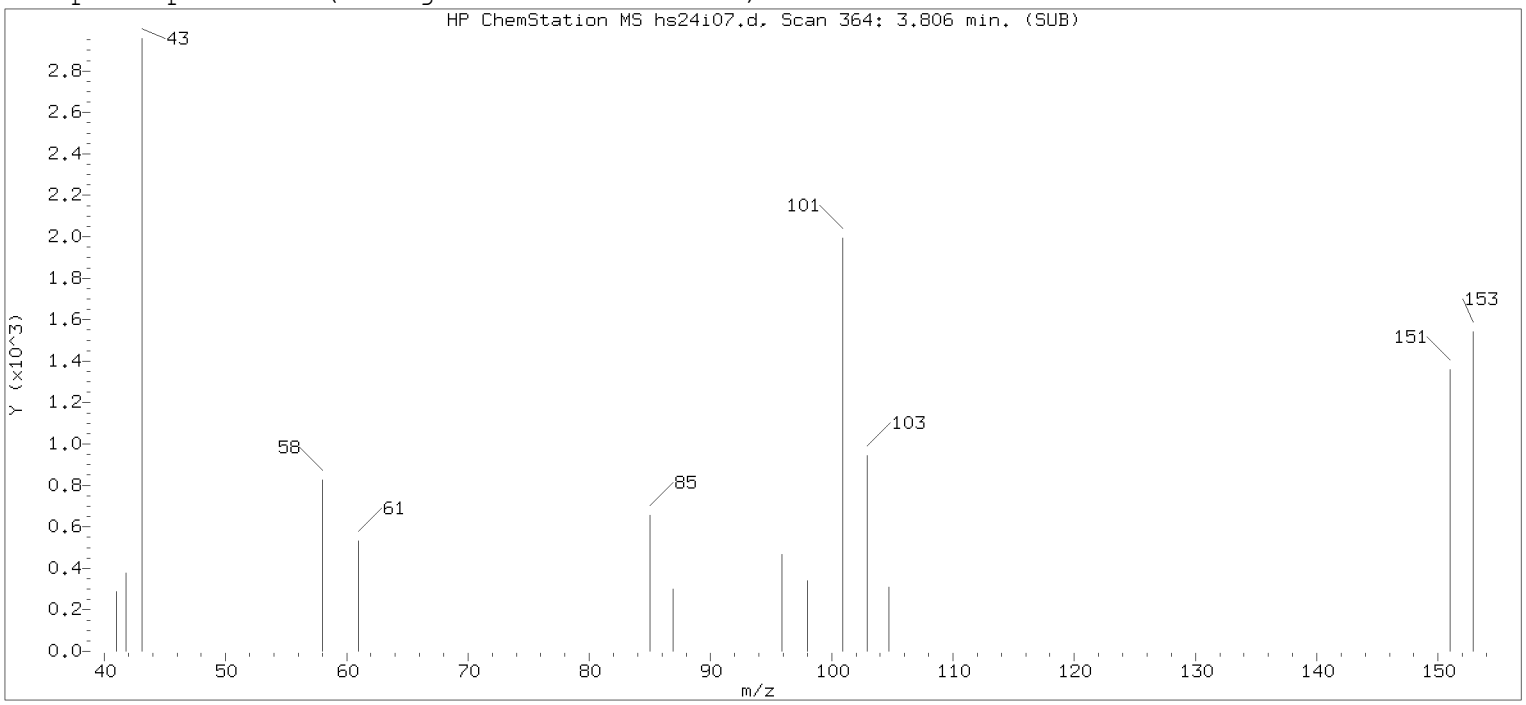
Compound Number : 14
Compound Name : Acetone
Scan Number : 364
Retention Time (minutes): 3.806
Quant Ion : 43.00
Area (flag) : 17774M
On-Column Amount (ng) : 2.1850
Integration start scan : 344 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

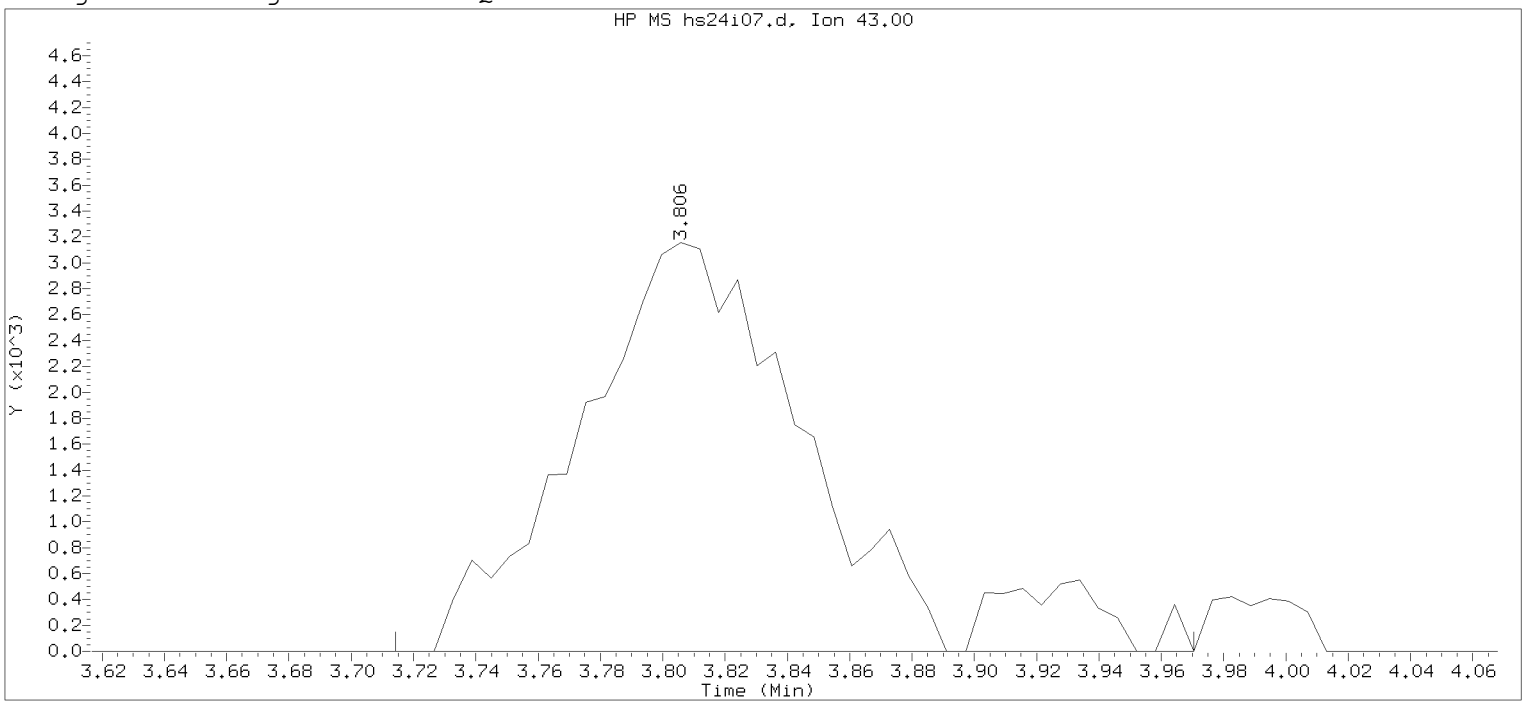
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 14		
Compound Name	: Acetone		
Scan Number	: 364		
Retention Time (minutes)	: 3.806		
Quant Ion	: 43.00		
Area	: 16725		
On-column Amount (ng)	: 2.1688		
Integration start scan	: 348	Integration stop scan:	390
Y at integration start	: 0	Y at integration end:	0

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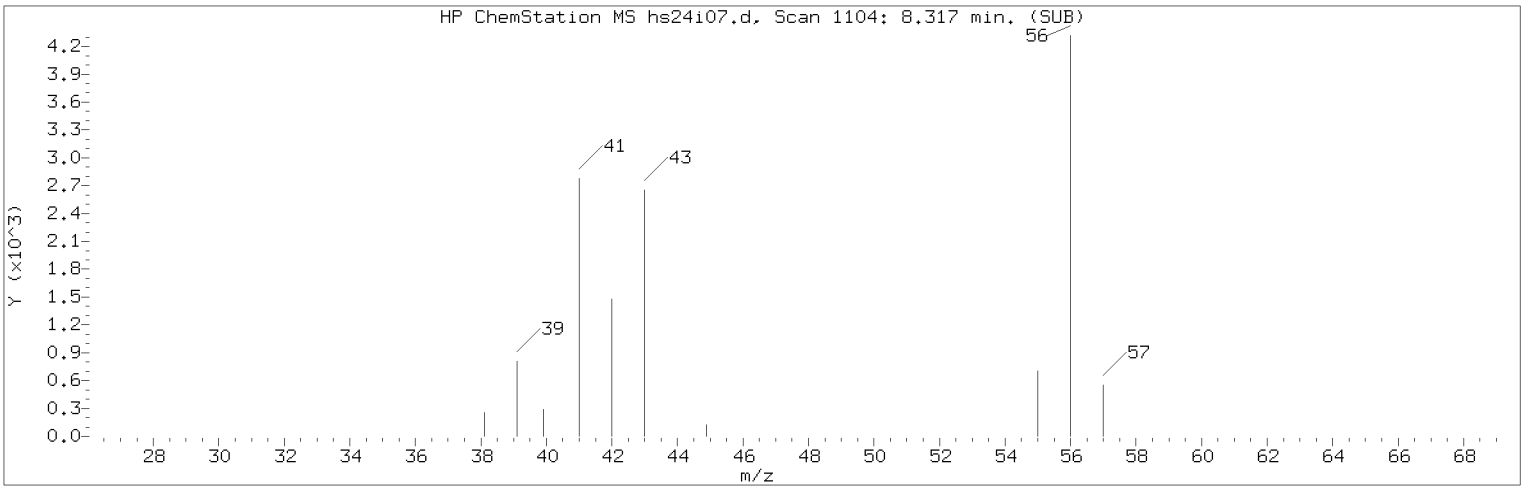
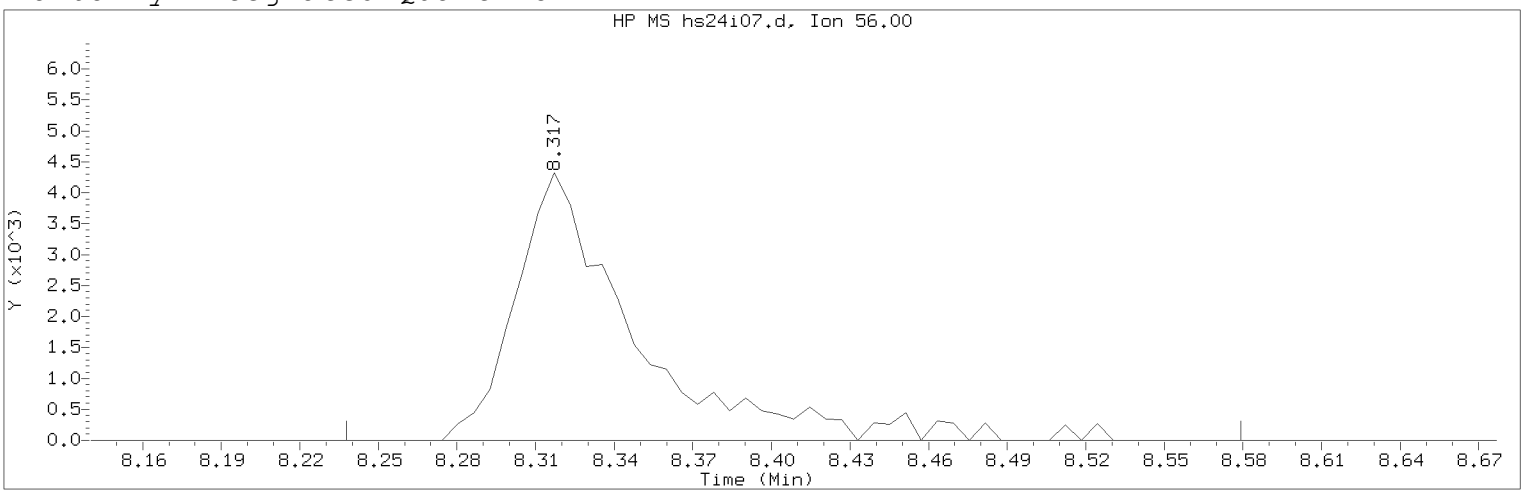
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

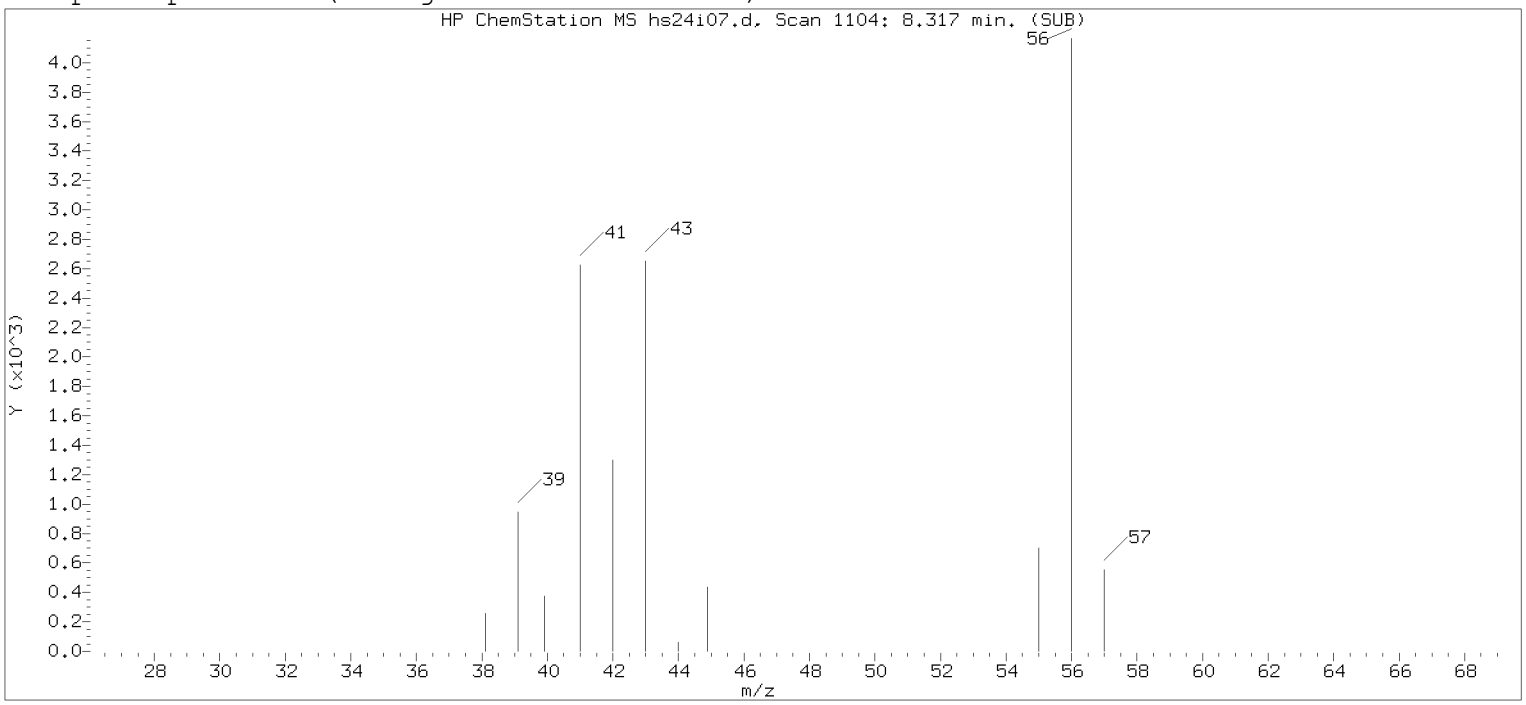
Compound Number : 65
Compound Name : n-Butanol
Scan Number : 1104
Retention Time (minutes): 8.317
Quant Ion : 56.00
Area (flag) : 13835M
On-Column Amount (ng) : 18.1683
Integration start scan : 1090 Integration stop scan: 1146
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

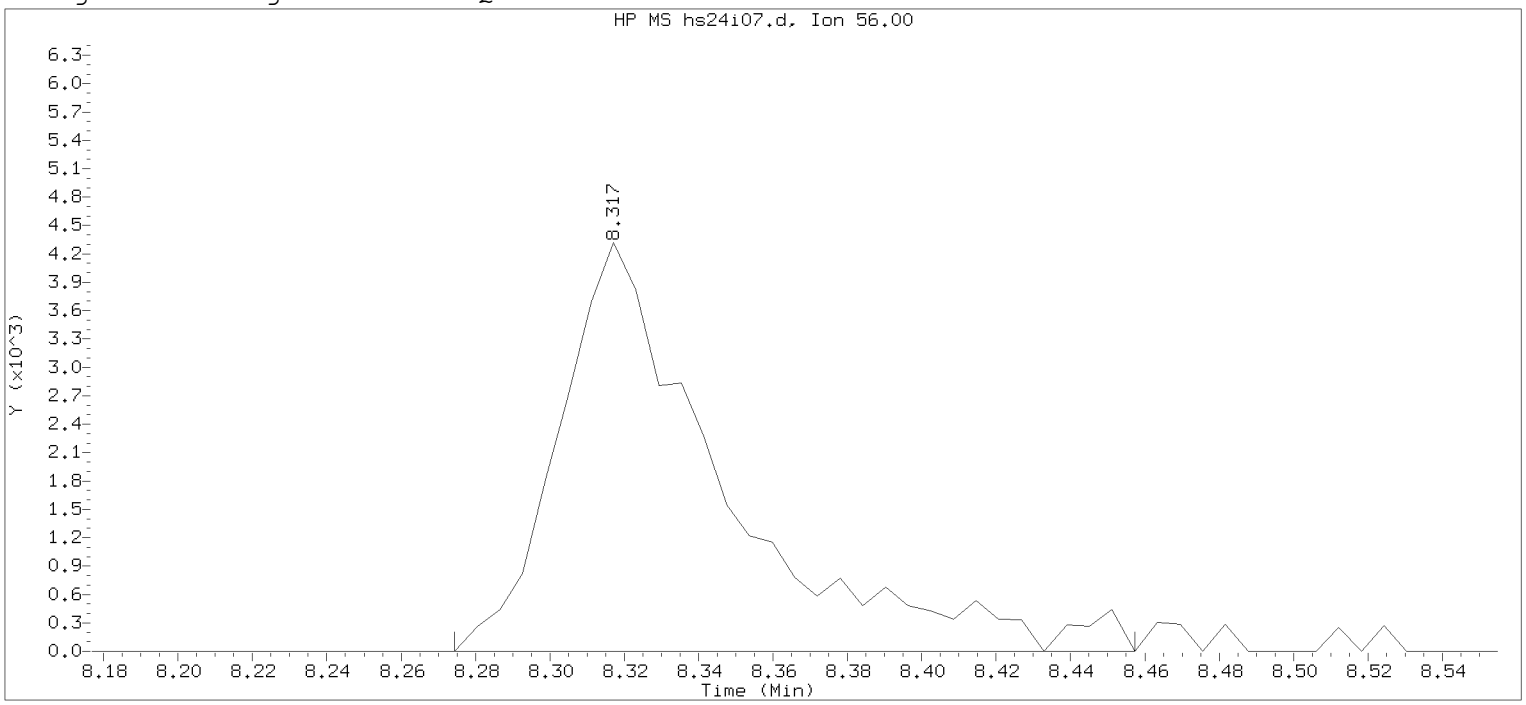
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 65		
Compound Name	: n-Butanol		
Scan Number	: 1104		
Retention Time (minutes)	: 8.317		
Quant Ion	: 56.00		
Area	: 13324		
On-column Amount (ng)	: 17.8982		
Integration start scan	: 1096	Integration stop scan:	1126
Y at integration start	: 0	Y at integration end:	0

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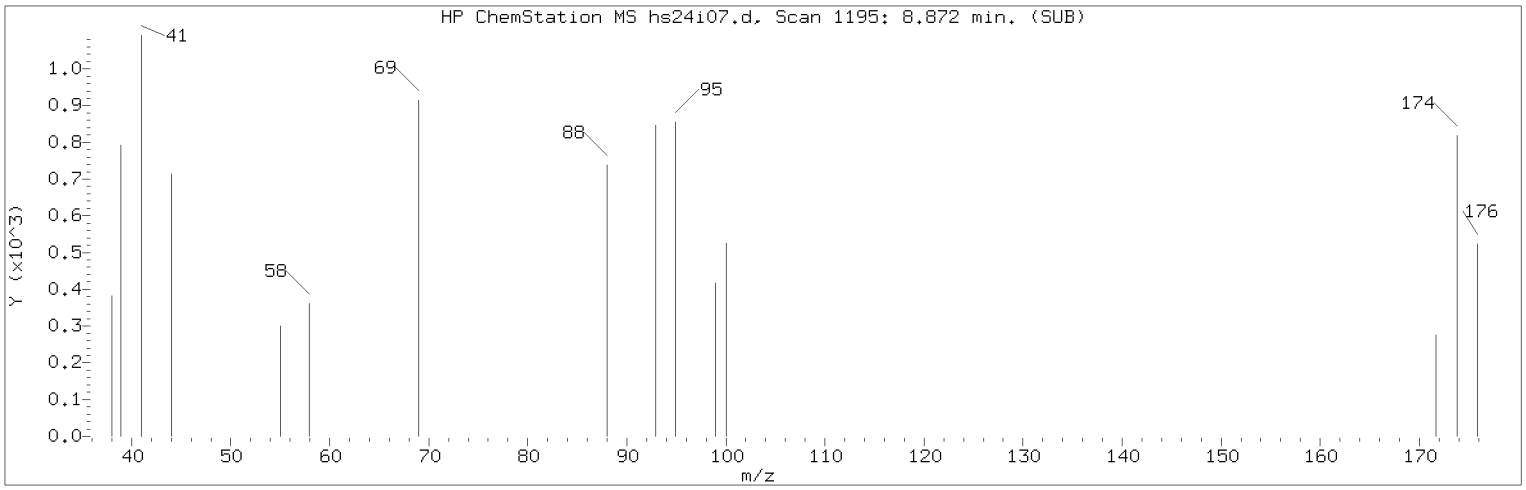
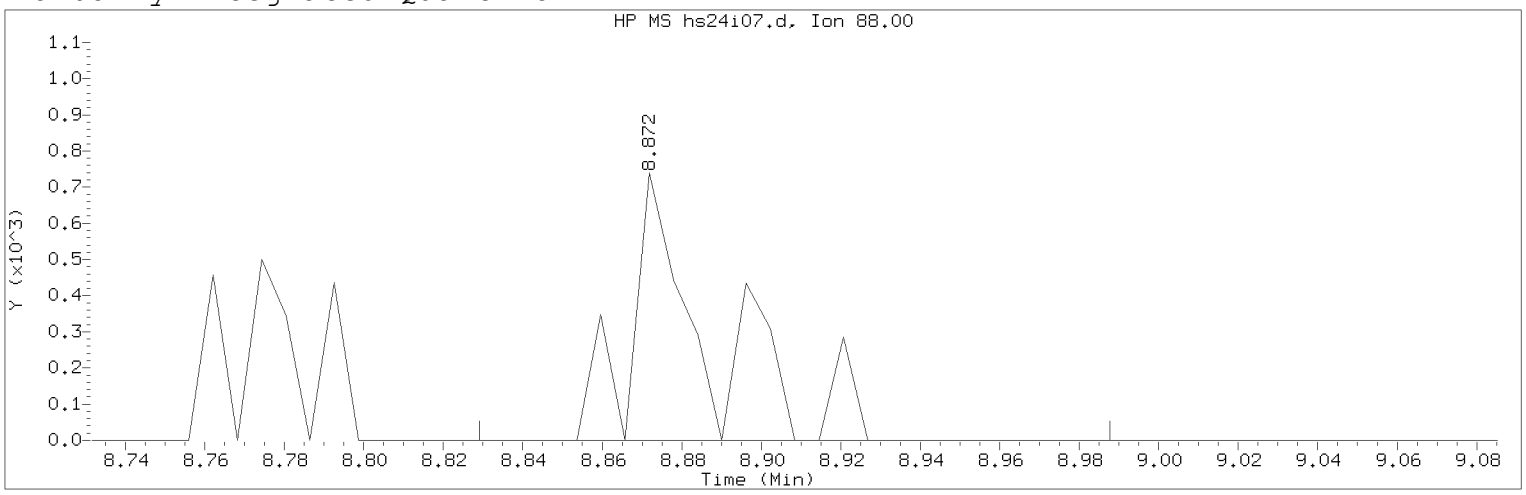
Target 3.5 esignature used. AE20 Page 365 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

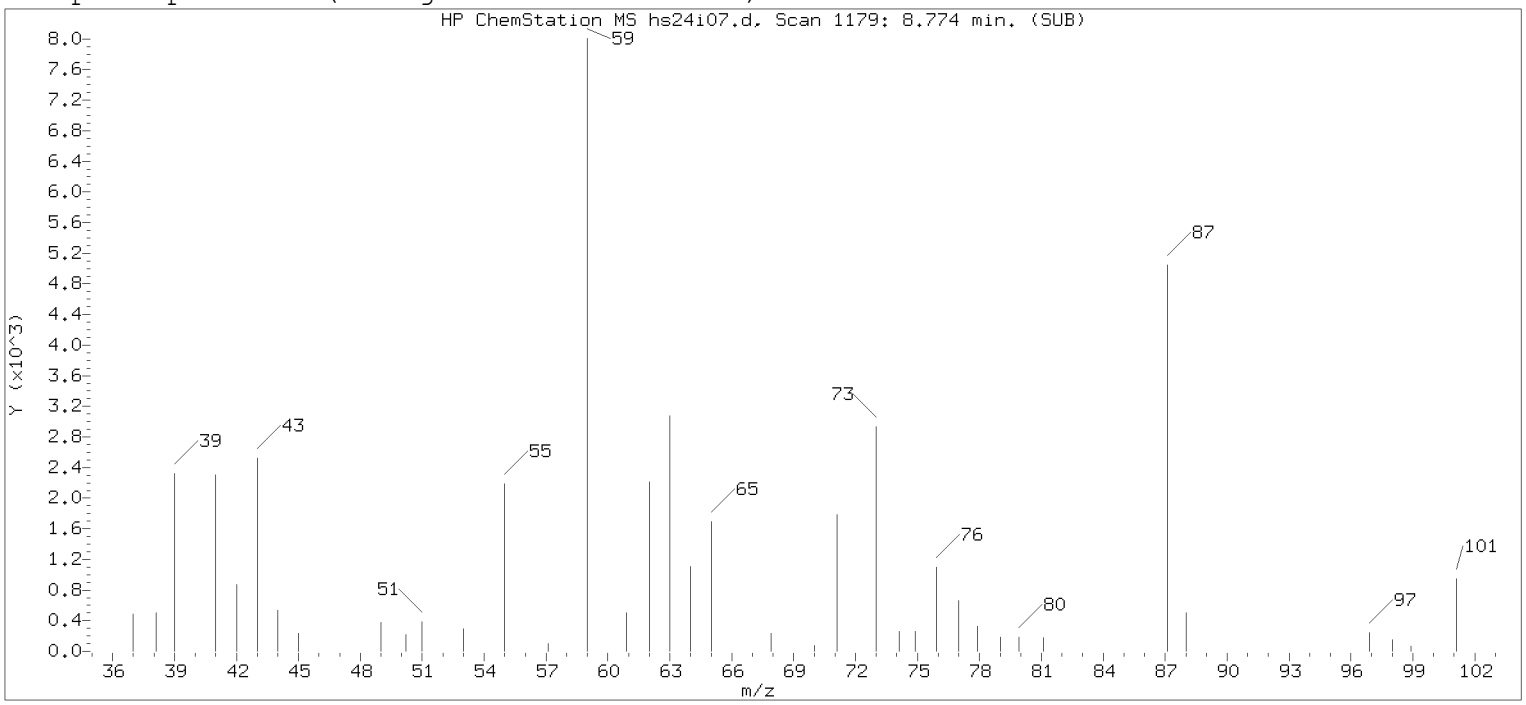
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1195
Retention Time (minutes): 8.872
Quant Ion : 88.00
Area (flag) : 1041M
On-Column Amount (ng) : 5.6778
Integration start scan : 1187 Integration stop scan: 1213
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

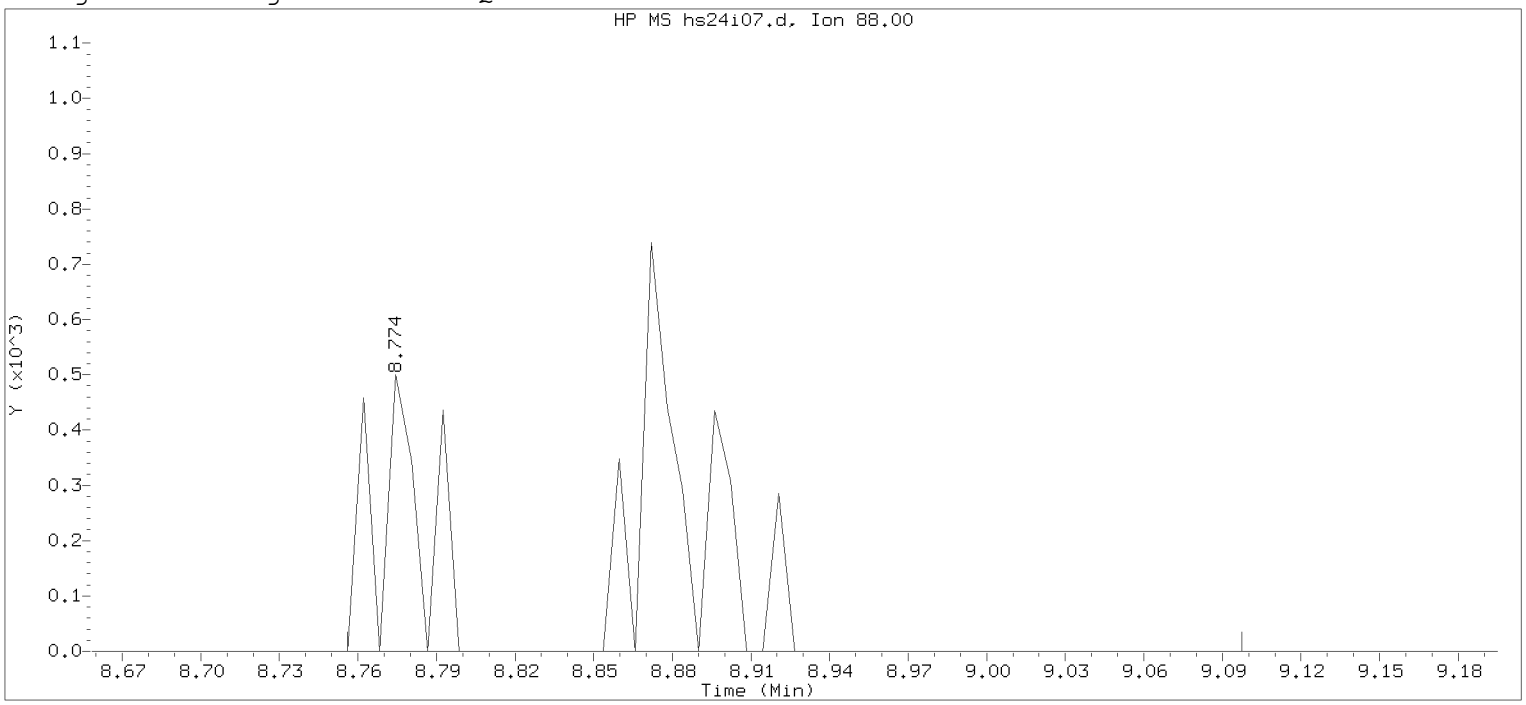
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1179		
Retention Time (minutes)	: 8.774		
Quant Ion	: 88.00		
Area	: 1677		
On-column Amount (ng)	: 13.7029		
Integration start scan	: 1175	Integration stop scan:	1231
Y at integration start	: 0	Y at integration end:	0

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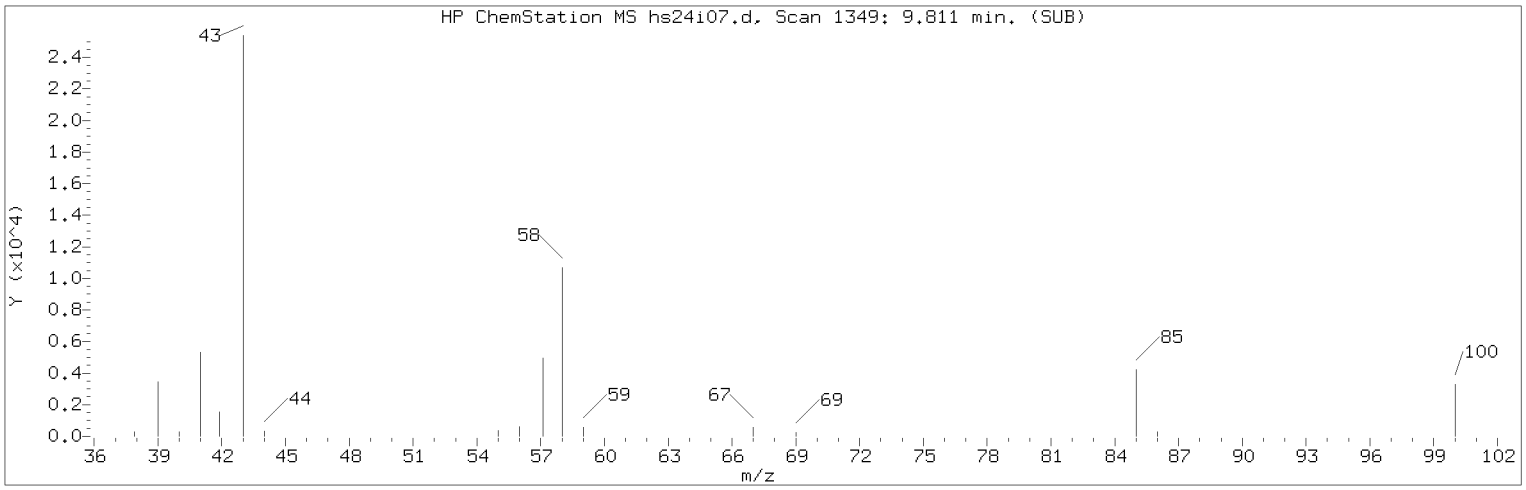
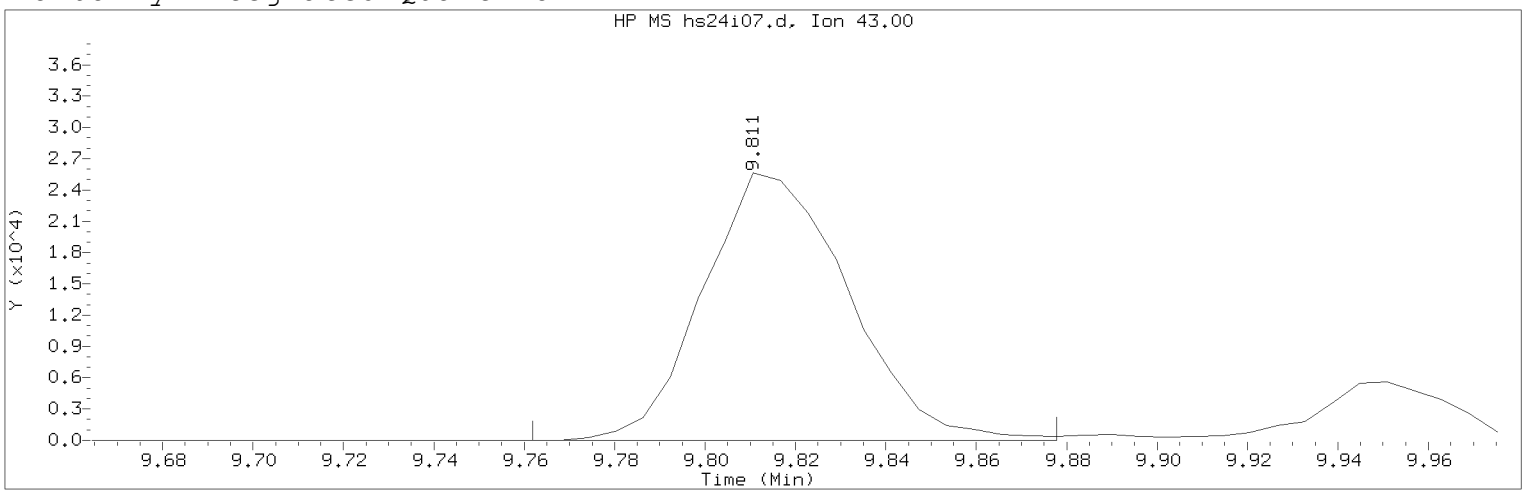
Target 3.5 esignature used. AE20 Page 367

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

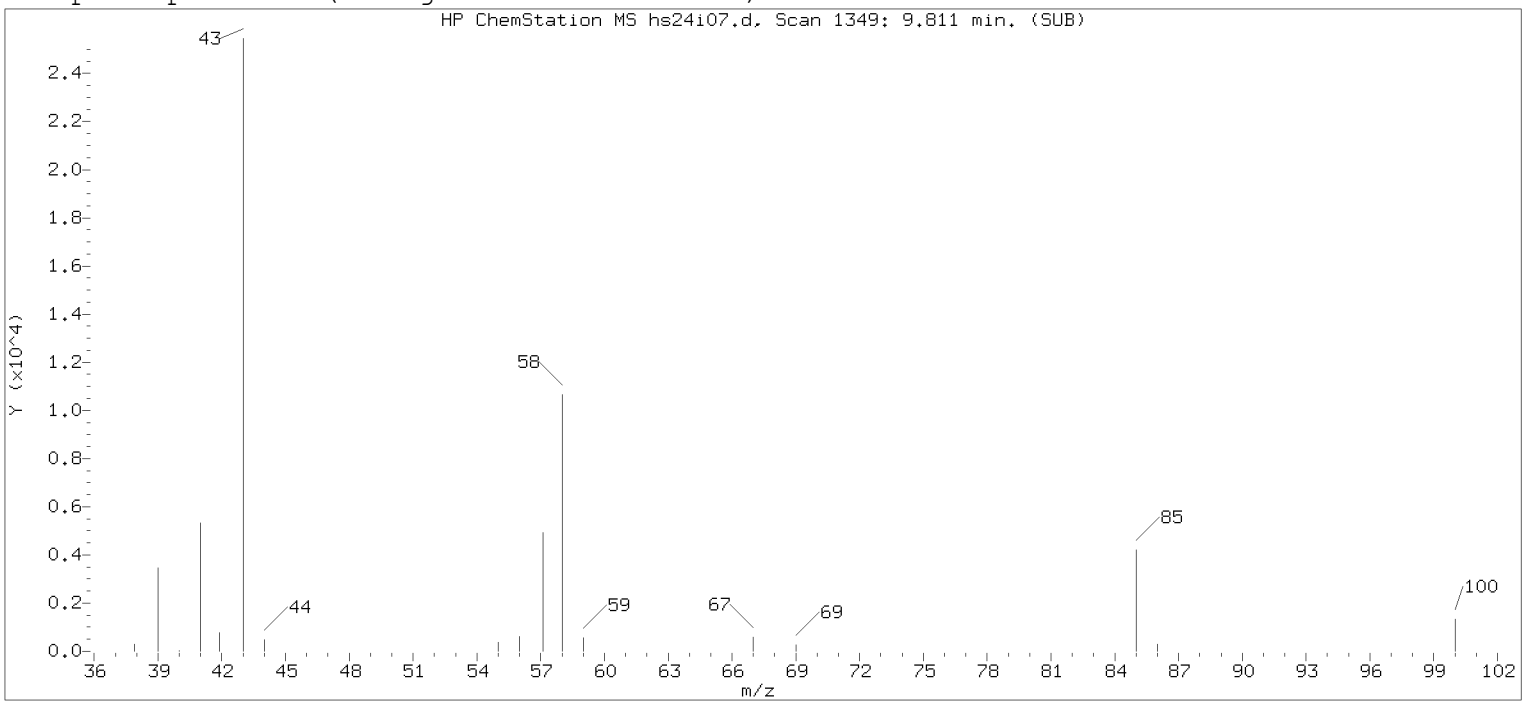
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area (flag) : 56901M
On-Column Amount (ng) : 1.7180
Integration start scan : 1340 Integration stop scan: 1359
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

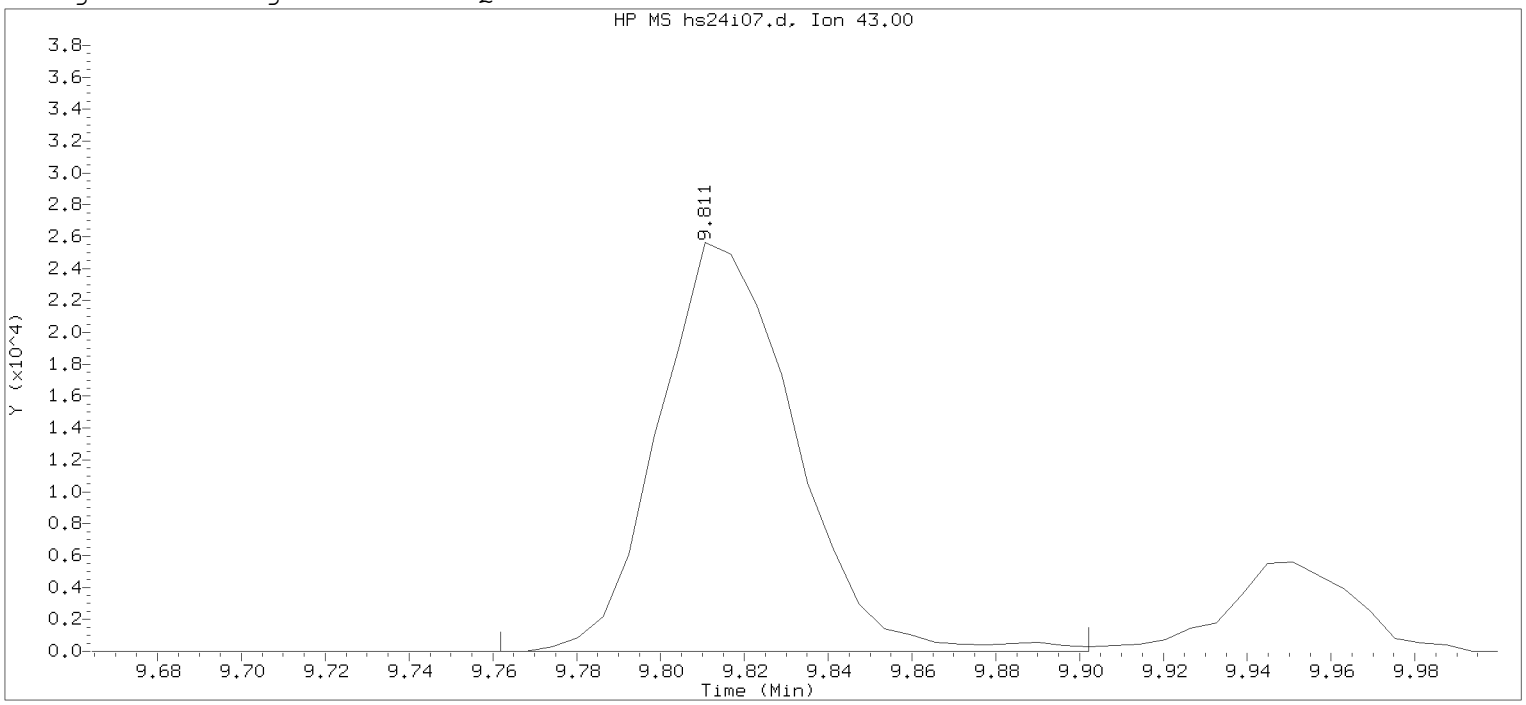
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

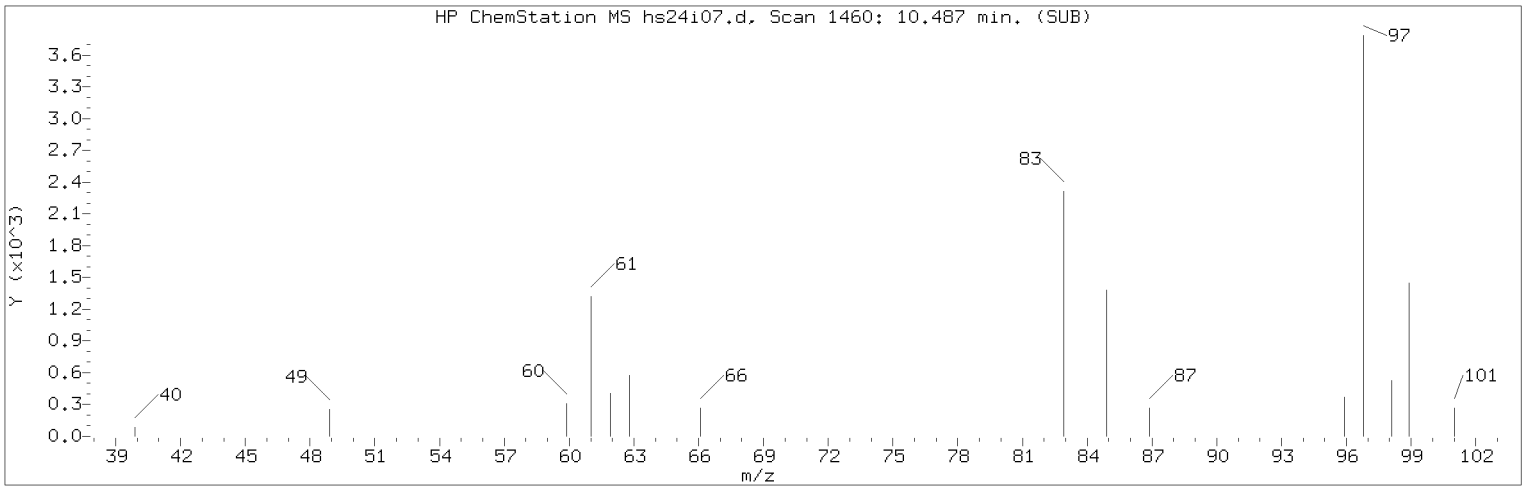
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

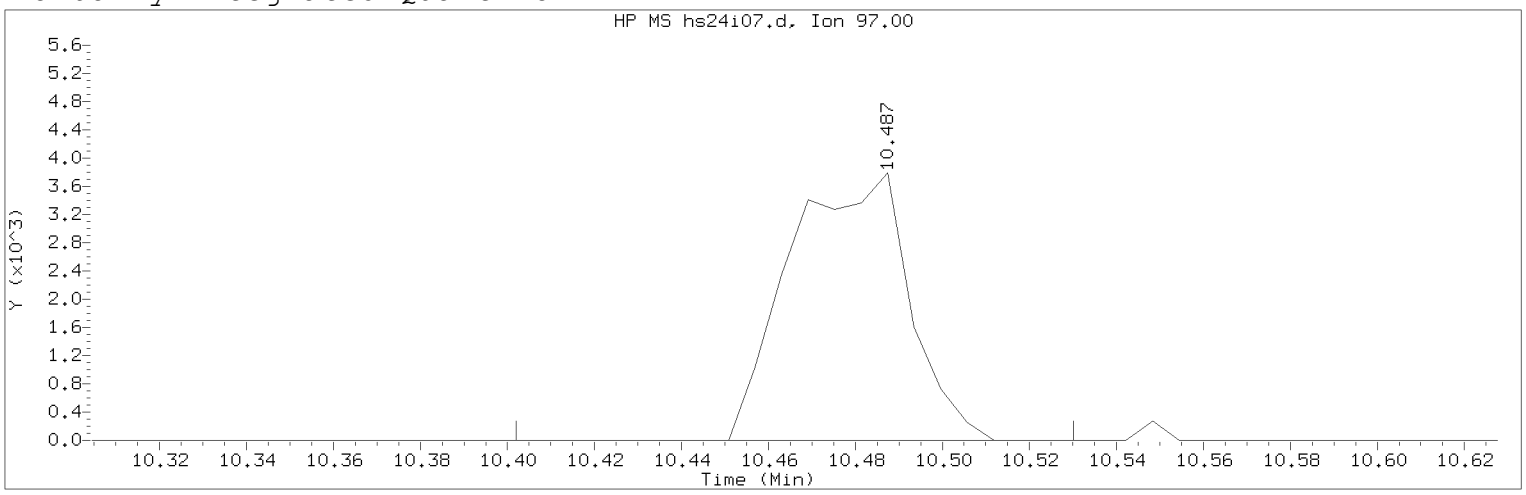
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1349
Retention Time (minutes): 9.811
Quant Ion : 43.00
Area : 57465
On-column Amount (ng) : 1.6906
Integration start scan : 1340 Integration stop scan: 1363
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

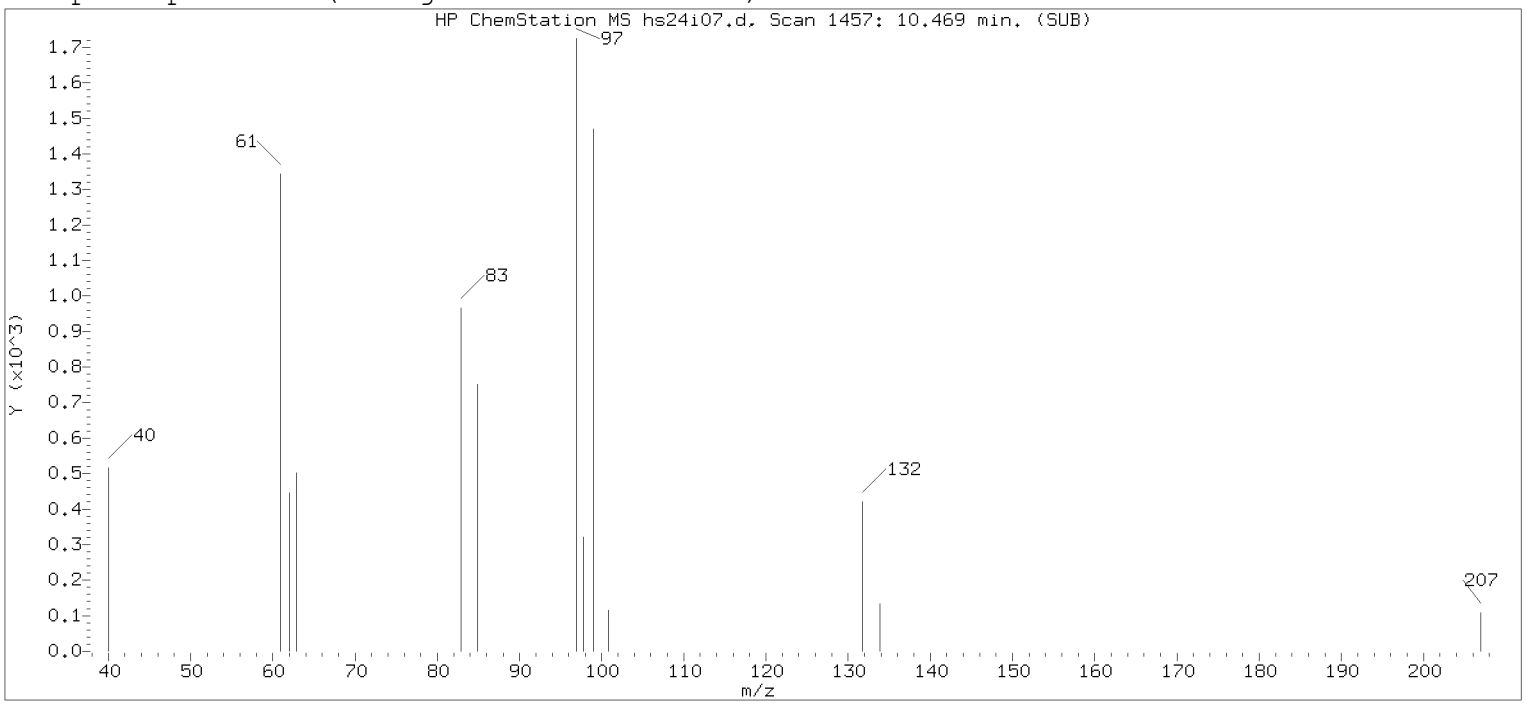
Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1460
Retention Time (minutes): 10.487
Quant Ion : 97.00
Area (flag) : 7236M
On-Column Amount (ng) : 0.1981
Integration start scan : 1445 Integration stop scan: 1466
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

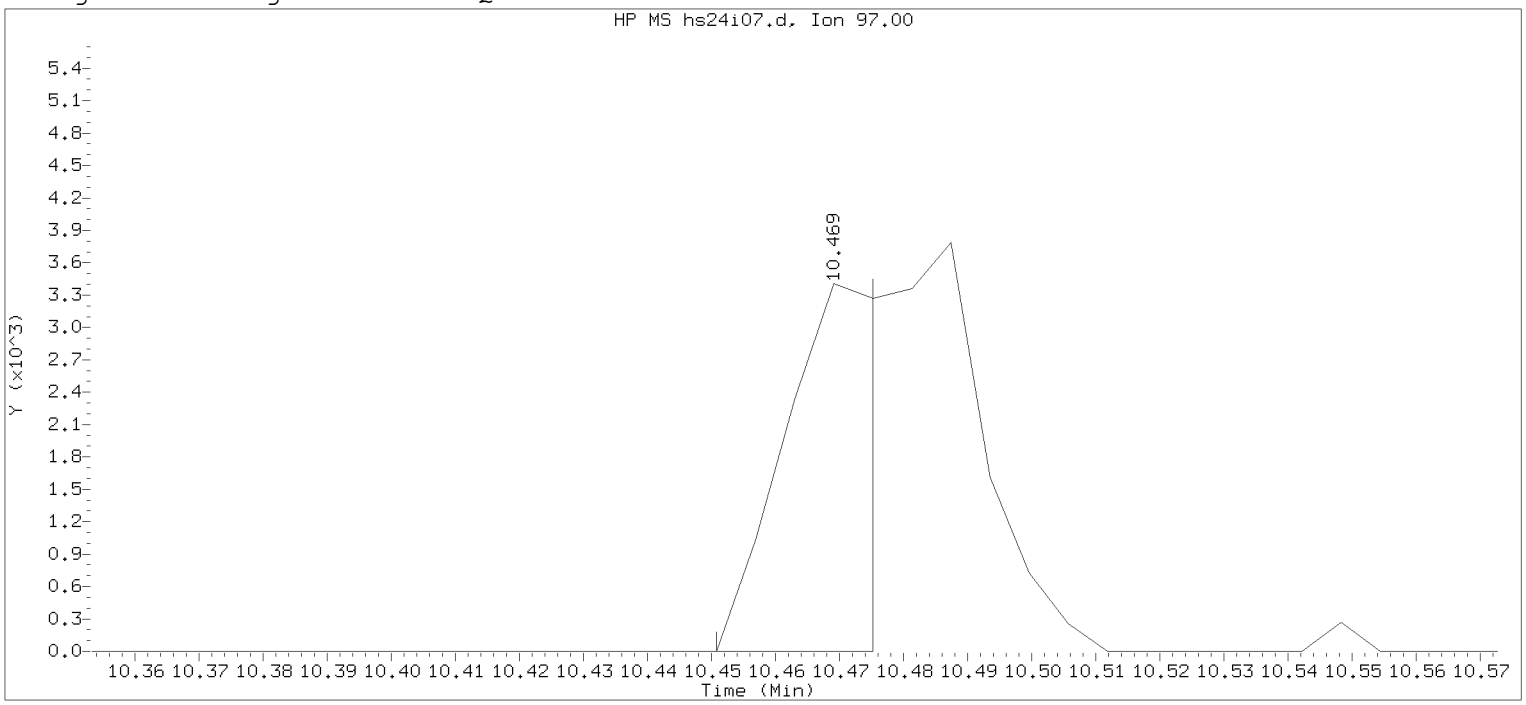
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 88
Compound Name : 1,1,2-Trichloroethane
Scan Number : 1457
Retention Time (minutes): 10.469
Quant Ion : 97.00
Area : 3077
On-column Amount (ng) : 0.0917
Integration start scan : 1453 Integration stop scan: 1457
Y at integration start : 0 Y at integration end: 0

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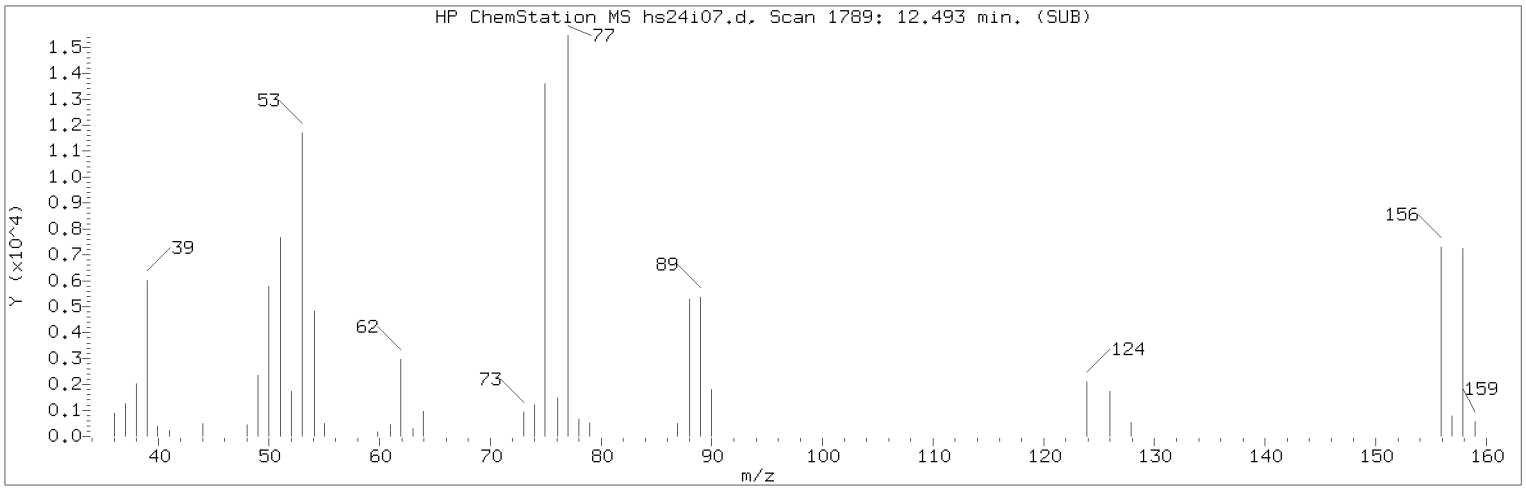
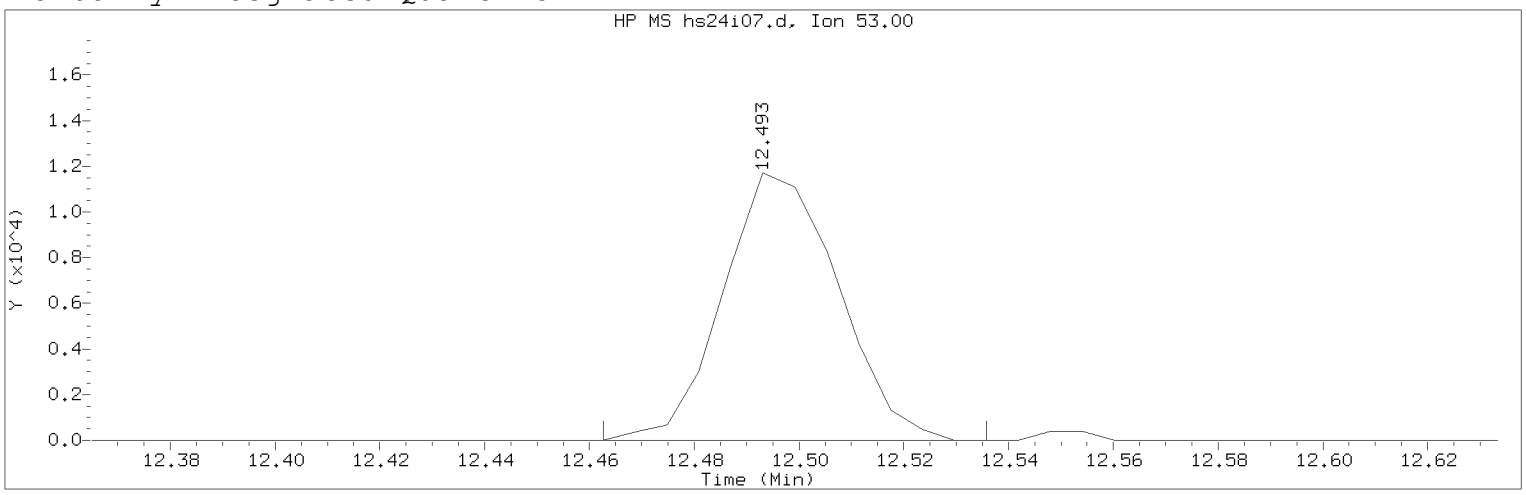
Target 3.5 esignature used. AE20 Page 371

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

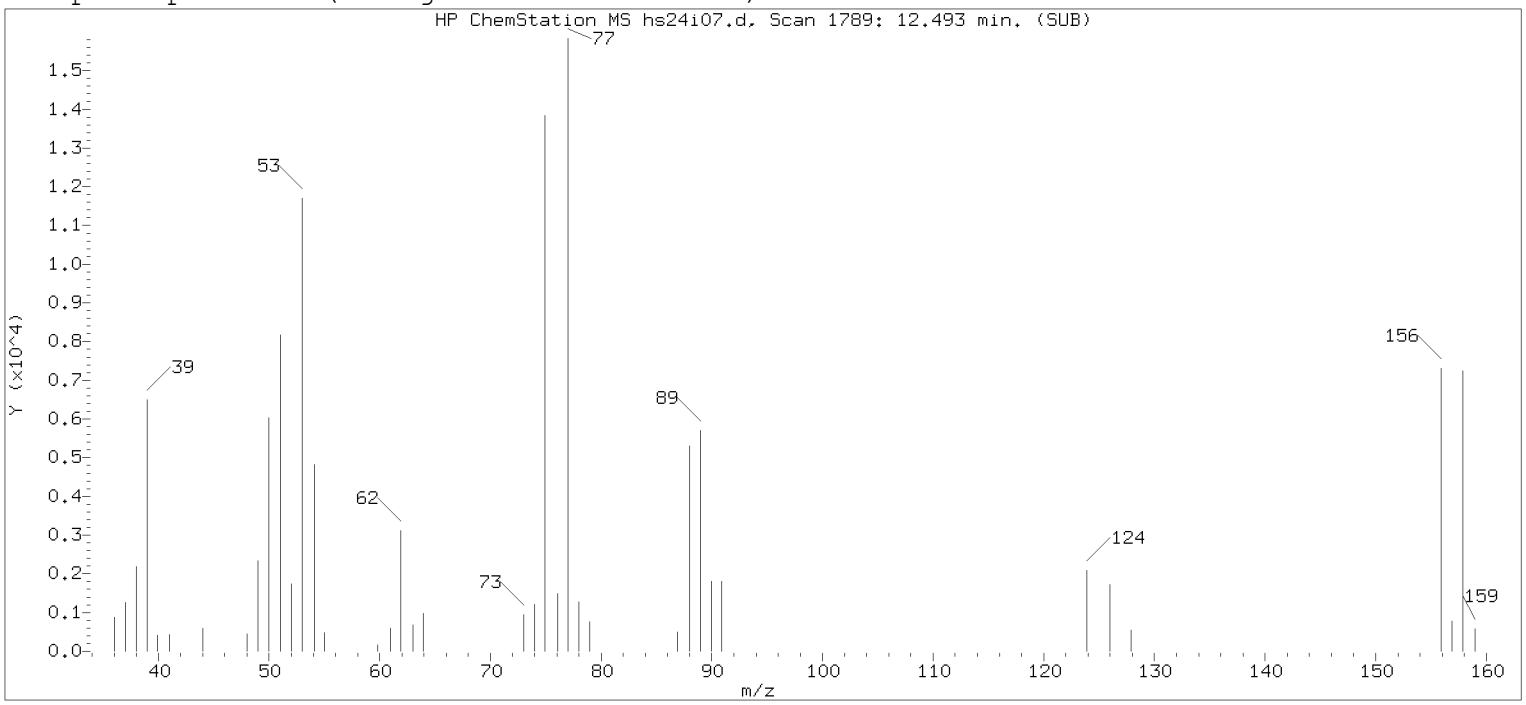
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 17855M
On-Column Amount (ng) : 1.7212
Integration start scan : 1783 Integration stop scan: 1795
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

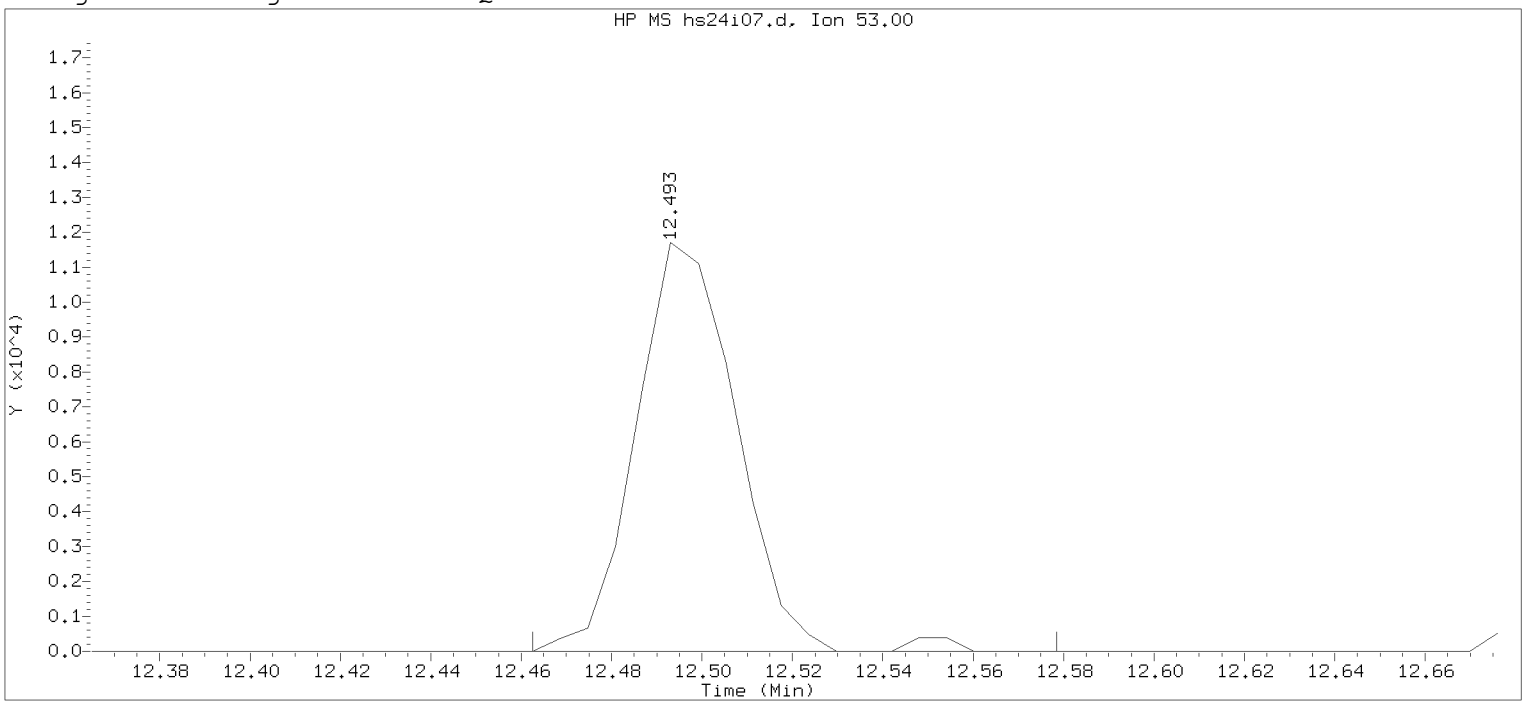
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

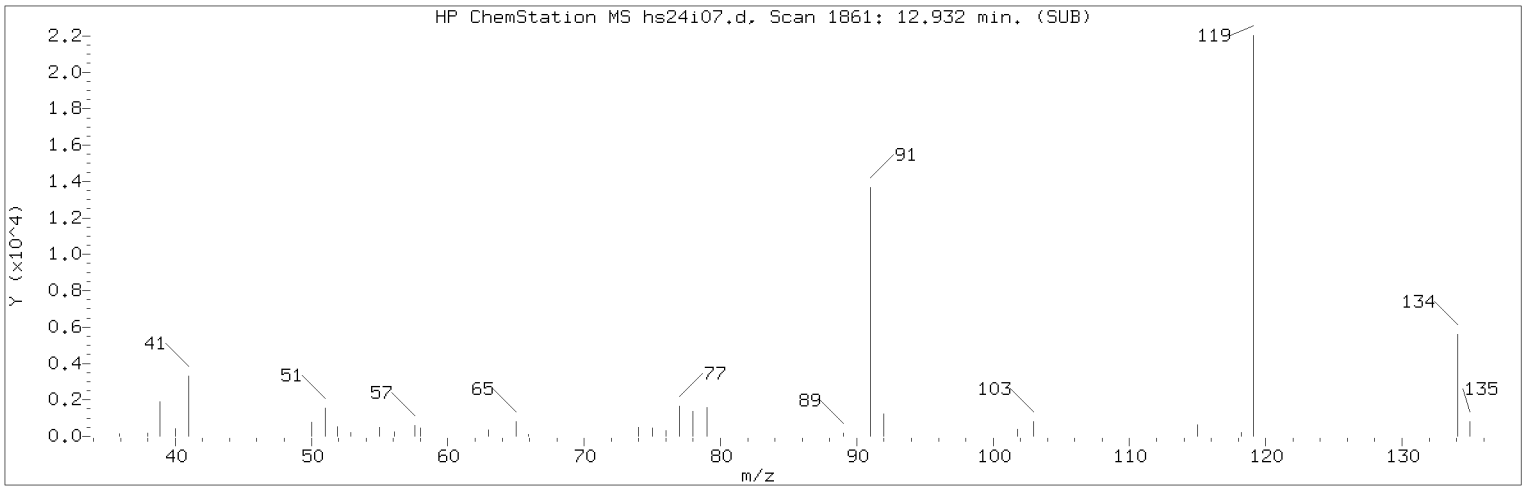
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

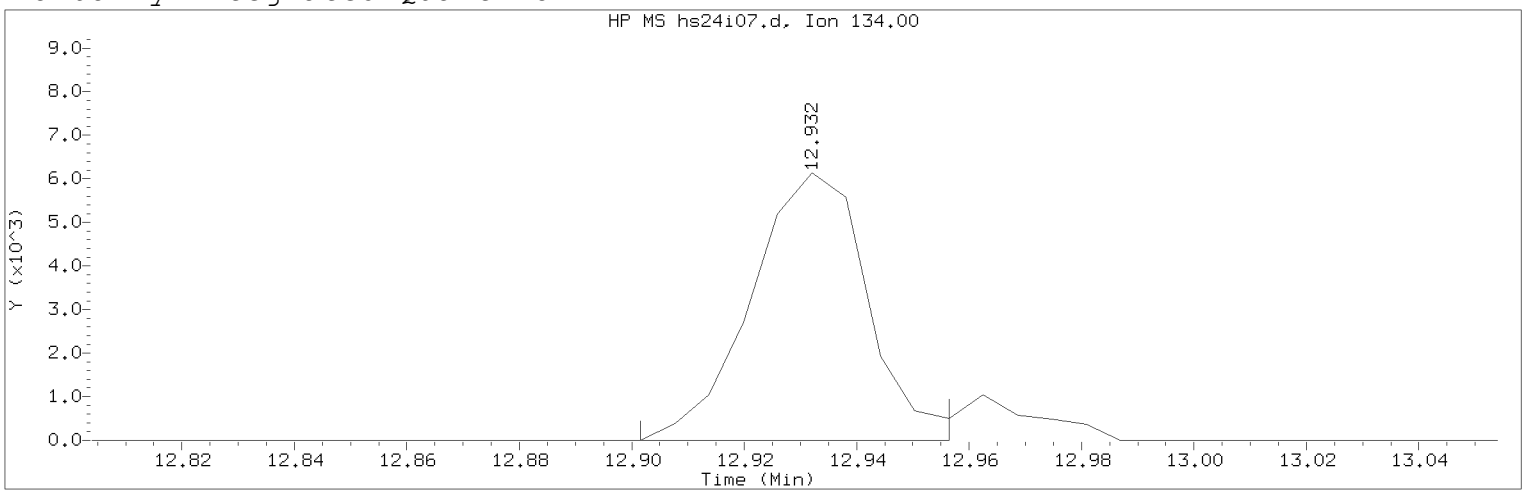
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area : 18137
On-column Amount (ng) : 1.7018
Integration start scan : 1783 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

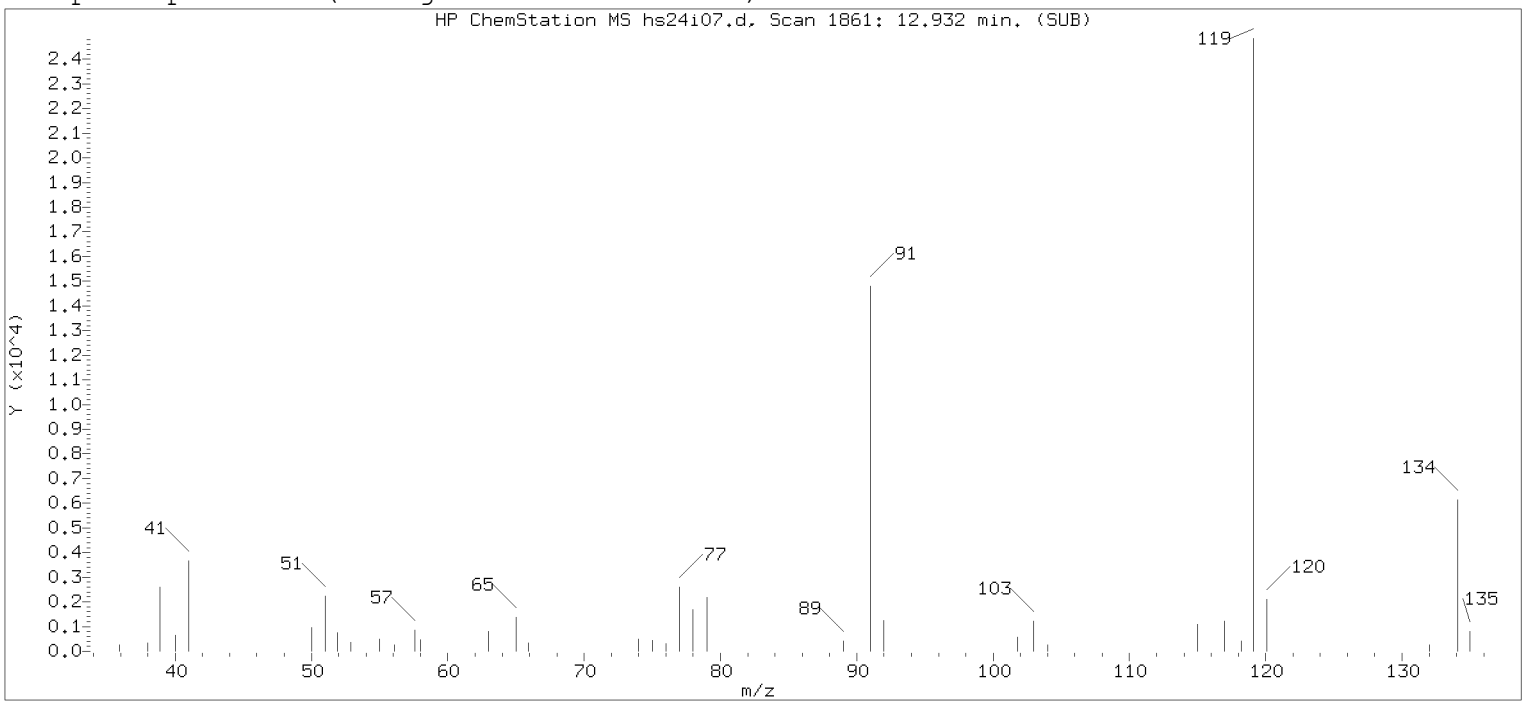
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 8830M
On-Column Amount (ng) : 0.1614
Integration start scan : 1855 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

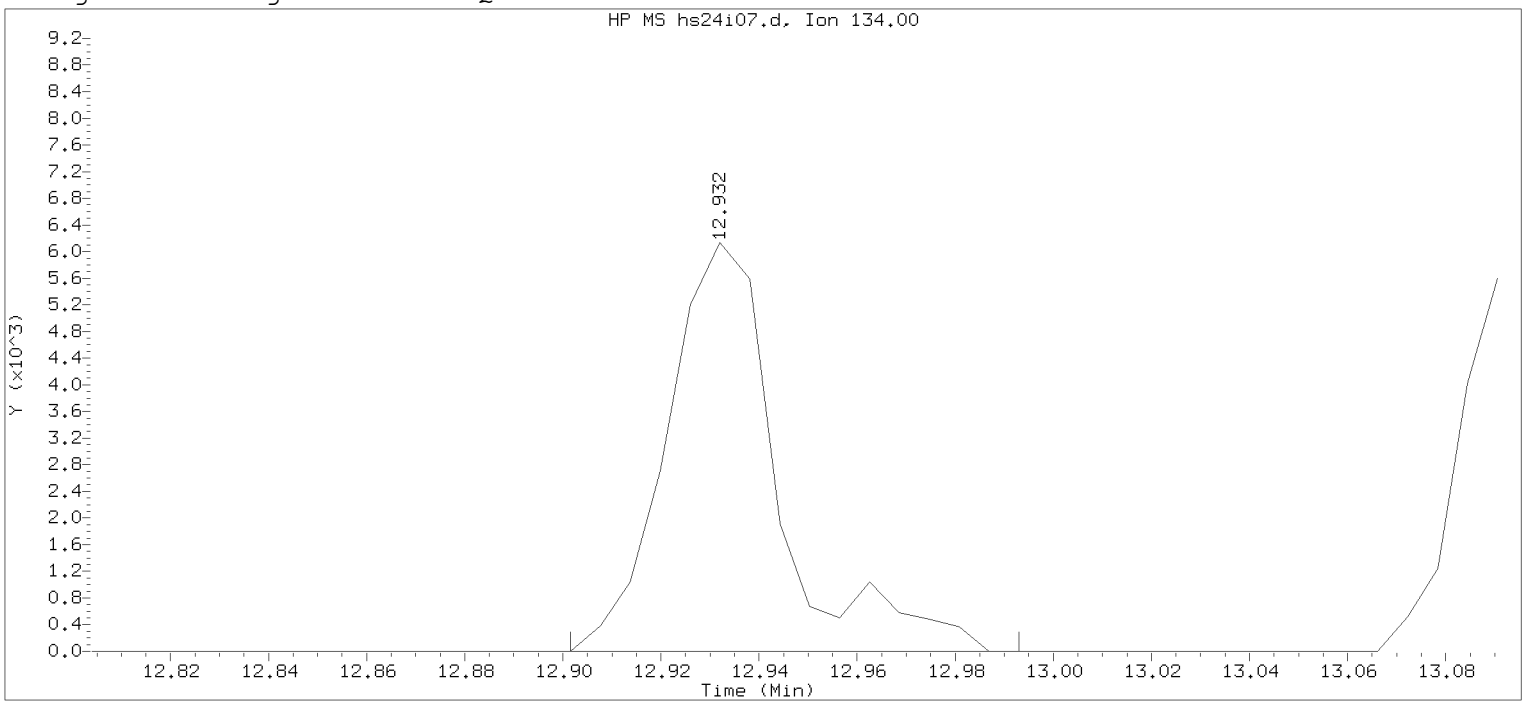
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

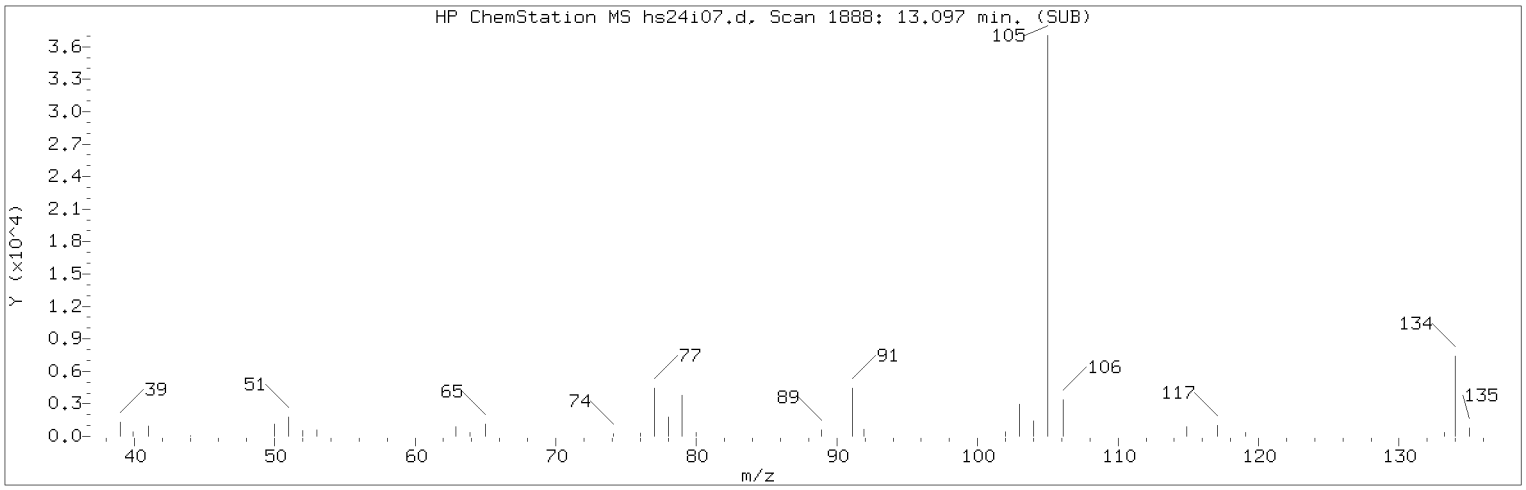
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

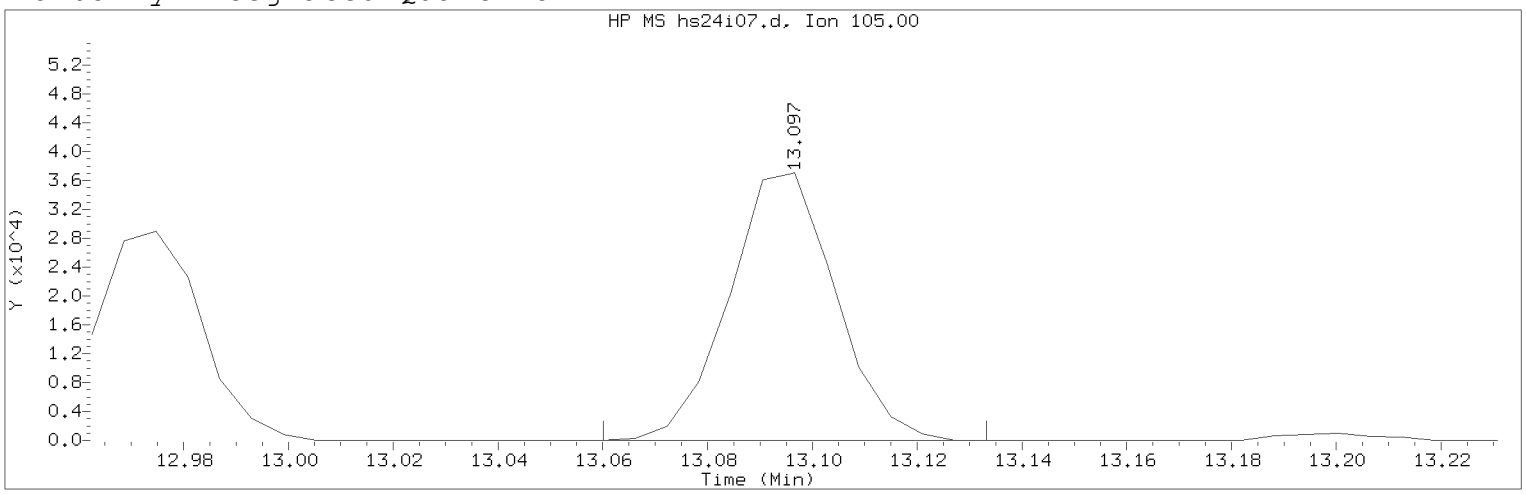
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 9731
On-column Amount (ng) : 0.1717
Integration start scan : 1855 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:26 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

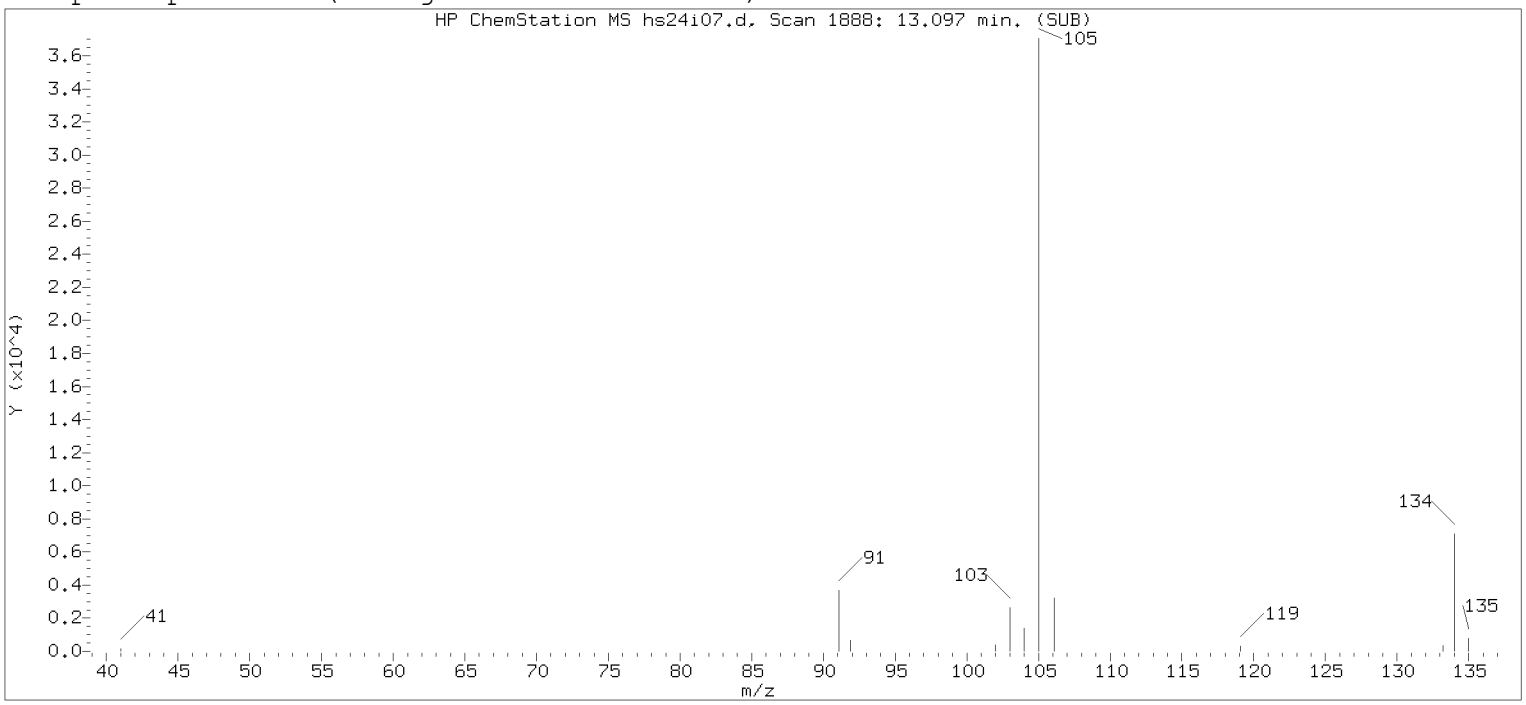
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1888
Retention Time (minutes): 13.097
Quant Ion : 105.00
Area (flag) : 52250M
On-Column Amount (ng) : 0.1603
Integration start scan : 1881 Integration stop scan: 1893
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

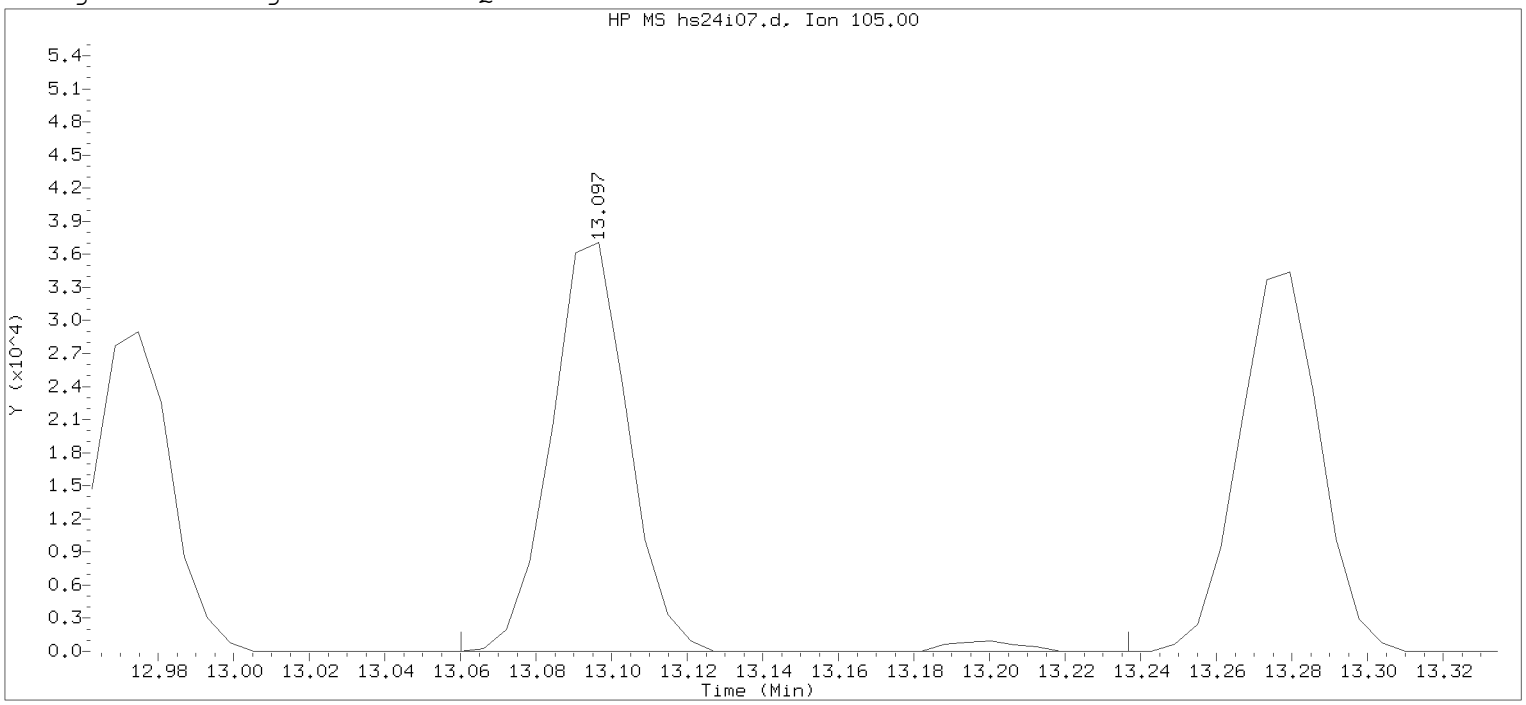
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24i07.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:37 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 06:53
Date, time and analyst ID of latest file update: 25-Sep-2018 06:53 jkh09052

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number	: 128		
Compound Name	: sec-Butylbenzene		
Scan Number	: 1888		
Retention Time (minutes)	: 13.097		
Quant Ion	: 105.00		
Area	: 53494		
On-column Amount (ng)	: 0.1637		
Integration start scan	: 1881	Integration stop scan:	1910
Y at integration start	: 0	Y at integration end:	0

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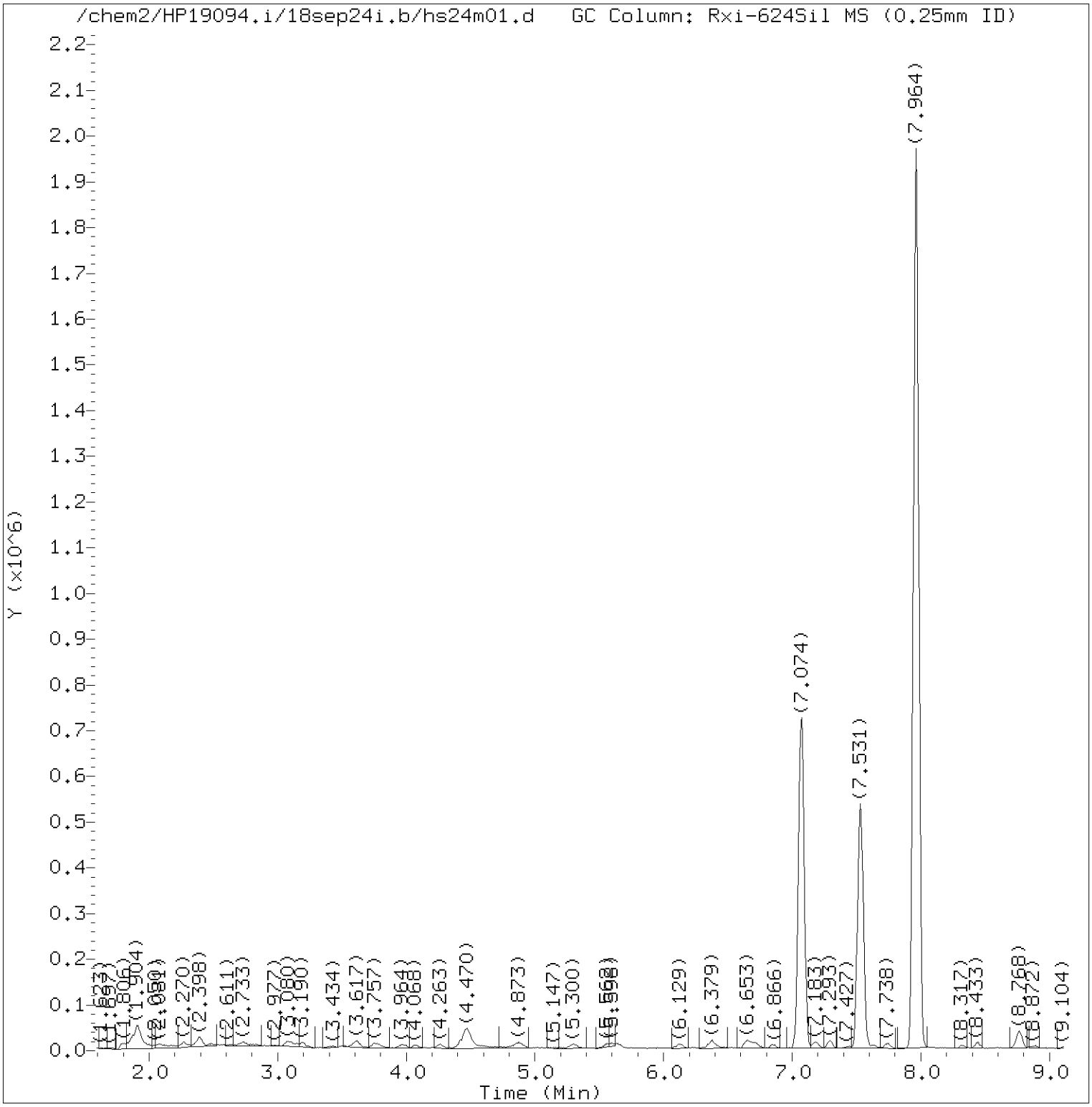
Target 3.5 esignature used. AE20 Page 372



Total Ion Chromatogram (TIC)

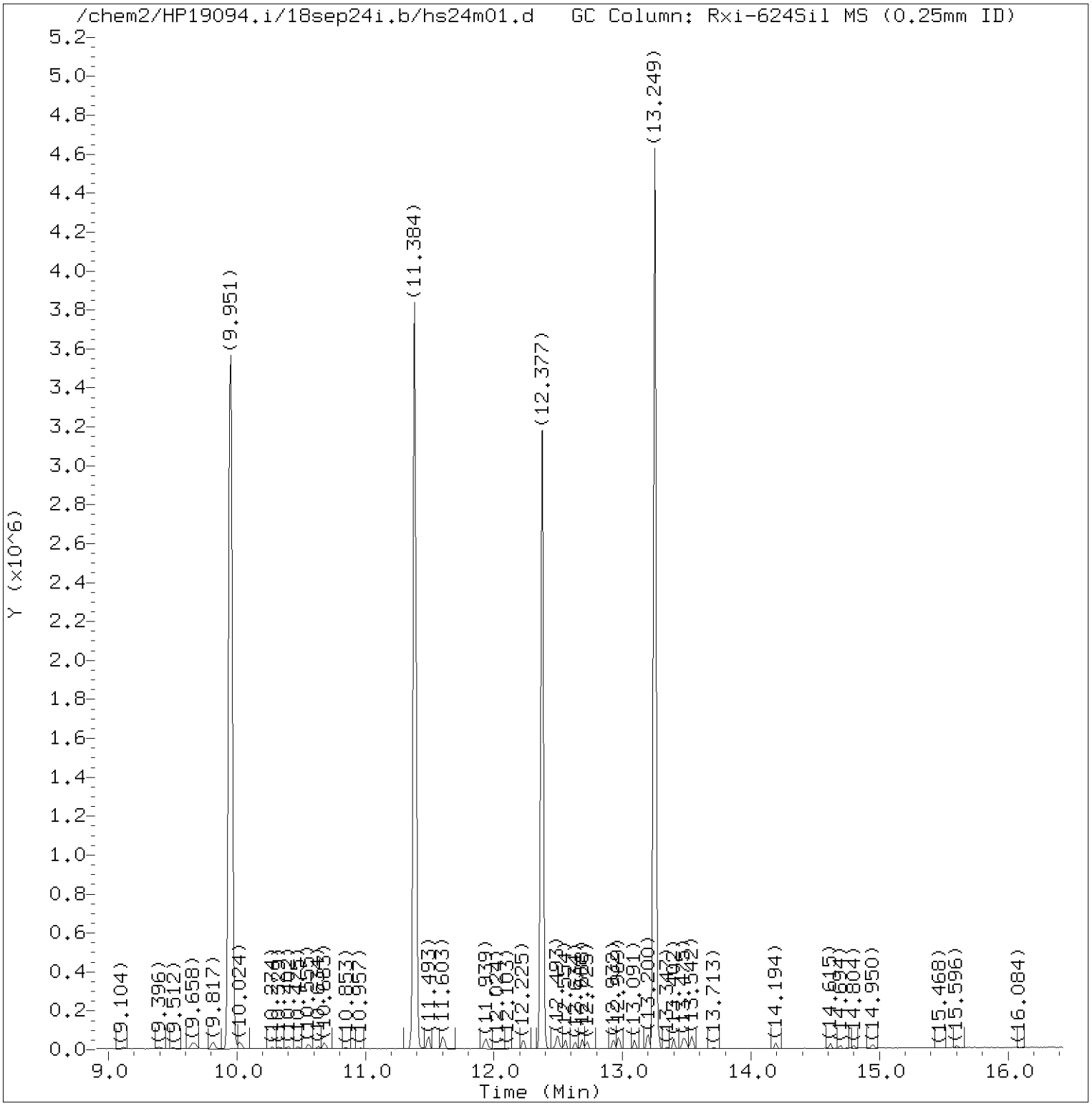
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.062	85	9887	0.091
2) Chloromethane	(2)	2.264	50	11027	0.104
5) Vinyl Chloride	(2)	2.392	62	9705	0.097
6) 1,3-Butadiene	(2)	2.392	39	12302M	0.109
7) Bromomethane	(2)	2.727	94	7190	0.093
8) Chloroethane	(2)	2.837	64	6058	0.100
9) Dichlorofluoromethane	(2)	3.080	67	14390	0.100
10) Trichlorofluoromethane	(2)	3.129	101	12048	0.096
11) Ethyl ether	(2)	3.422	59	3966	0.093
12) Freon 123a	(2)	3.513	67	7745	0.097
13) Acrolein	(1)	3.611	56	30281	4.838
15) 1,1-Dichloroethene	(2)	3.745	96	4892	0.090
16) Freon 113	(2)	3.769	101	5407	0.084
14) Acetone	(1)	3.775	43	9288	1.105
17) Methyl Iodide	(2)	3.964	142	10653	0.094
18) Carbon Disulfide	(2)	4.068	76	16735M	0.096
21) Methyl Acetate	(1)	4.227	43	2044	0.087
22) Allyl Chloride	(2)	4.263	41	9829	0.095
23) Methylene Chloride	(2)	4.452	84	6908	0.112
26)*t-Butyl Alcohol-d10	(1)	4.470	65	141036	50.000
28) t-Butyl Alcohol	(1)	4.605	59	4176	1.735
29) Acrylonitrile	(1)	4.824	53	4124	0.380
30) Methyl Tertiary Butyl Ether	(2)	4.855	73	10117	0.090
31) trans-1,2-Dichloroethene	(2)	4.879	96	5521	0.090
32) n-Hexane	(2)	5.293	57	8152	0.083
33) 1,1-Dichloroethane	(2)	5.556	63	11186	0.095
34) di-Isopropyl Ether	(2)	5.598	45	19224	0.092
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	9694	0.092
40) 1,2-Dichloroethene (Total)	(2)		96	11674	0.180
37) Ethyl t-butyl ether	(2)	6.123	59	14814	0.090
38) 2-Butanone	(1)	6.342	43	12103	0.880
41) 2,2-Dichloropropane	(2)	6.379	77	6559	0.078
39) cis-1,2-Dichloroethene	(2)	6.379	96	6153	0.090
42) Propionitrile	(1)	6.434	54	6324	1.693
45) Methacrylonitrile	(1)	6.659	67	10750	0.798
47) Bromochloromethane	(2)	6.708	128	2451	0.085
48) Tetrahydrofuran	(1)	6.714	71	2784	0.761
49) Chloroform	(2)	6.866	83	10073	0.092

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.068	113	702027	10.009
51) 1,1,1-Trichloroethane	(2)	7.092	97	7736	0.083
52) Cyclohexane	(2)	7.177	56	9614	0.079
54) Carbon Tetrachloride	(2)	7.293	117	6960	0.087
55) 1,1-Dichloropropene	(2)	7.299	75	8159	0.092
56) Isobutyl Alcohol	(1)	7.452	41	3763	4.040
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123366	10.089
58) Benzene	(2)	7.555	78	24986	0.096
59) 1,2-Dichloroethane	(2)	7.628	62	8132	0.135
60) t-Amyl methyl ether	(2)	7.750	73	12517	0.091
63)*Fluorobenzene	(2)	7.964	96	2783023	10.000
62) n-Heptane	(2)	7.976	43	9564	0.095
65) n-Butanol	(1)	8.323	56	6085	7.733
67) Trichloroethene	(2)	8.439	95	6307	0.094
69) Methylcyclohexane	(2)	8.756	83	11396	0.090
70) 1,2-Dichloropropane	(2)	8.775	63	5902	0.093
71) Methyl Methacrylate	(1)	8.848	69	1661M	0.067
72) 1,4-Dioxane	(1)	8.872	88	538	2.839
73) Dibromomethane	(2)	8.890	93	2312	0.088
74) Bromodichloromethane	(2)	9.128	83	6593	0.093
76) 2-Nitropropane	(1)	9.396	41	5792	0.820
80) cis-1,3-Dichloropropene	(2)	9.652	75	7111	0.086
81) 4-Methyl-2-Pentanone	(1)	9.817	43	27891	0.815
82)$Toluene-d8	(3)	9.951	98	2808841	10.086
83) Toluene	(3)	10.024	92	14540	0.091
85) 1,3-Dichloropropene (total)	(3)		75	11931	0.164
84) trans-1,3-Dichloropropene	(3)	10.268	75	4820	0.078
86) Ethyl Methacrylate	(3)	10.323	69	4465	0.084
91) 2-Hexanone	(1)	10.329	43	19024A	0.817
88) 1,1,2-Trichloroethane	(3)	10.482	97	4082	0.110
89) Tetrachloroethene	(3)	10.555	166	7159	0.099
90) 1,3-Dichloropropane	(3)	10.640	76	6776	0.103
93) Dibromochloromethane	(3)	10.841	129	3771	0.085
95) 1,2-Dibromoethane	(3)	10.957	107	2957	0.085
96) 1-Chlorohexane	(3)	11.384	91	11869M	0.124
97)*Chlorobenzene-d5	(3)	11.384	117	2163745	10.000
98) Chlorobenzene	(3)	11.408	112	17130	0.101
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	5306	0.094

M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

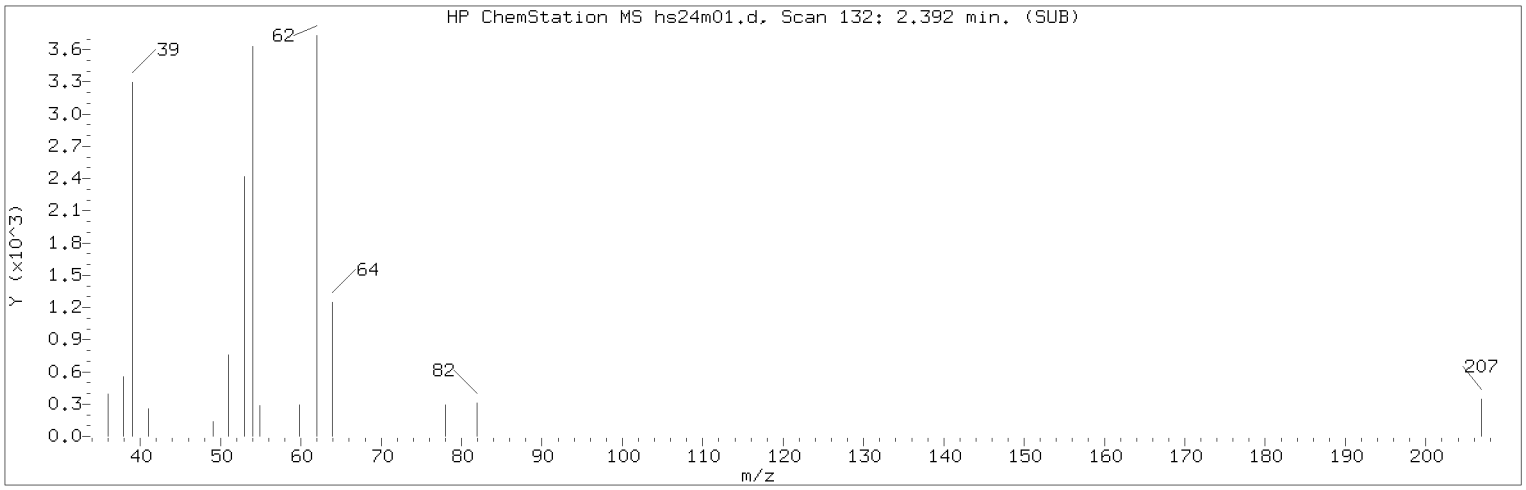
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	27666	0.088
101) m+p-Xylene	(3)	11.603	106	19688	0.169
105) Xylene (Total)	(3)		106	29552	0.258
104) o-Xylene	(3)	11.926	106	9864	0.089
106) Styrene	(3)	11.945	104	14567	0.082
107) Bromoform	(3)	12.103	173	1566	0.064
108) Isopropylbenzene	(3)	12.231	105	26026	0.086
111)$4-Bromofluorobenzene	(3)	12.371	95	1017301	10.033
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	3878	0.086
114) Bromobenzene	(4)	12.487	156	6201	0.091
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	8928	0.833
116) 1,2,3-Trichloropropane	(4)	12.524	110	1112	0.095
117) n-Propylbenzene	(4)	12.554	91	32379	0.087
119) 2-Chlorotoluene	(4)	12.634	126	6163	0.085
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	20930	0.083
122) 4-Chlorotoluene	(4)	12.725	126	6027	0.083
125) tert-Butylbenzene	(4)	12.932	134	4681M	0.085
126) Pentachloroethane	(4)	12.963	167	3547	0.083
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	22024	0.086
128) sec-Butylbenzene	(4)	13.091	105	27687M	0.085
131) 1,3-Dichlorobenzene	(4)	13.200	146	12534	0.092
132) p-Isopropyltoluene	(4)	13.200	119	22266	0.082
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1136004	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	13175	0.099
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	11819M	0.100
136) Benzyl Chloride	(4)	13.341	126	866	0.053
138) n-Butylbenzene	(4)	13.493	92	11478	0.085
139) 1,2-Dichlorobenzene	(4)	13.530	146	10954	0.091
143) 1,2-Dibromo-3-chloropropane	(1)	14.066	155	310M	0.053
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	9149	0.090
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	7379	0.089
146) Hexachlorobutadiene	(4)	14.694	225	2902	0.093
147) Naphthalene	(4)	14.804	128	10099	0.077
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	6064	0.089

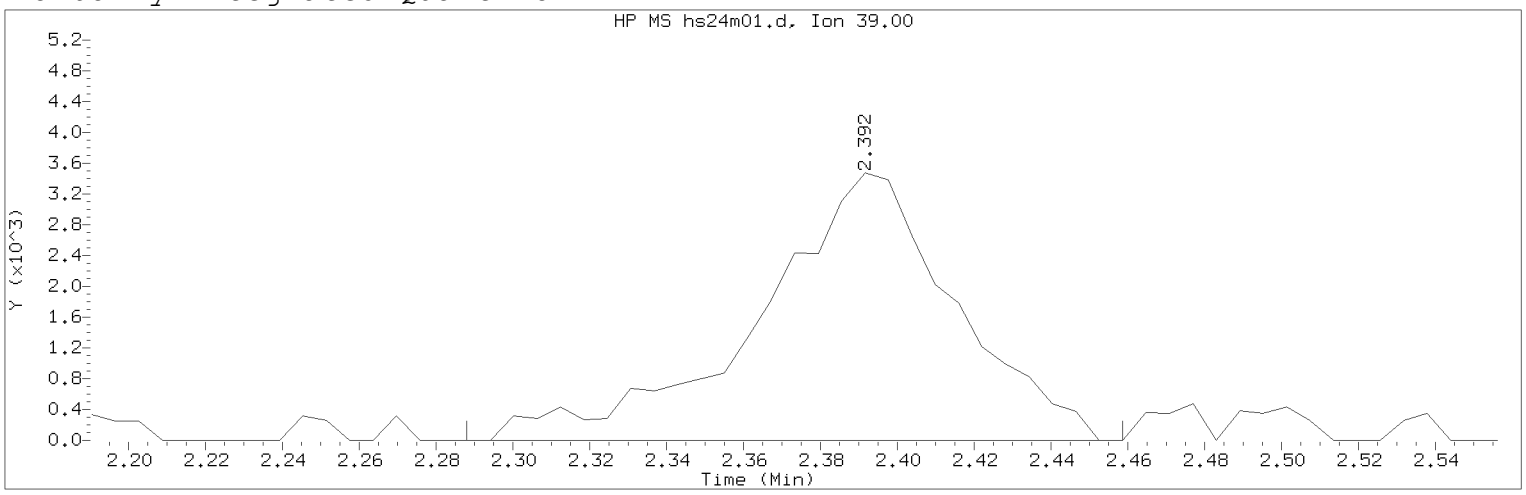
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

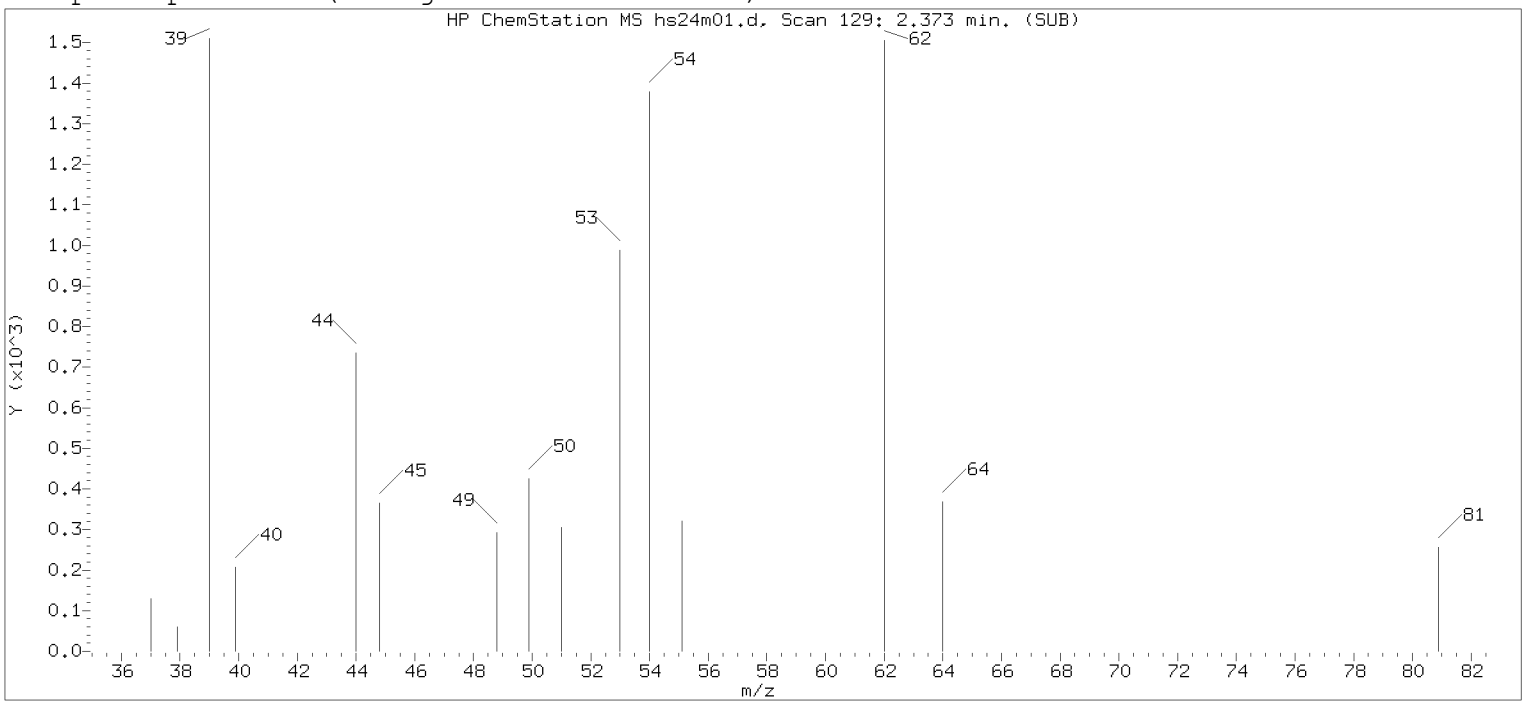
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.392
Quant Ion : 39.00
Area (flag) : 12302M
On-Column Amount (ng) : 0.1089
Integration start scan : 114 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

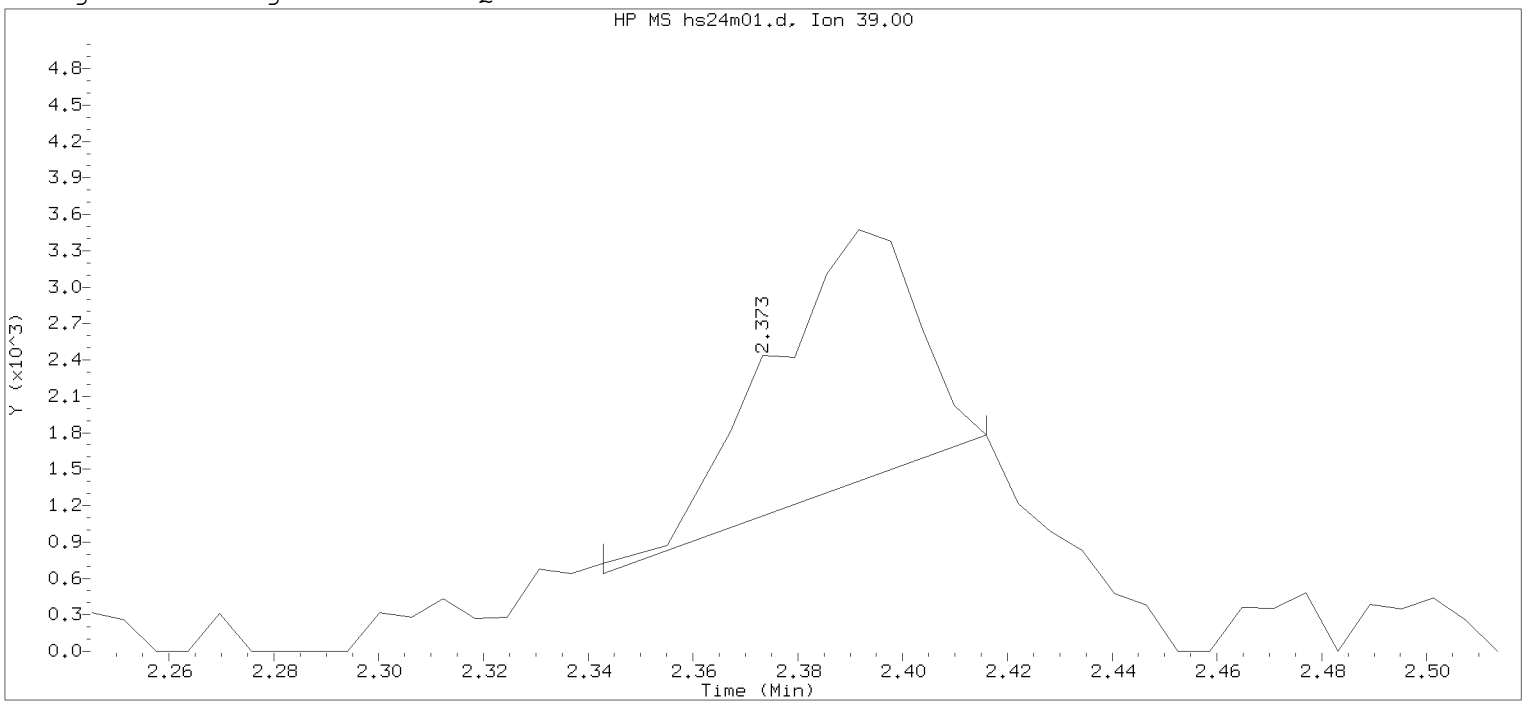
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 129
Retention Time (minutes): 2.373
Quant Ion : 39.00
Area : 4048
On-column Amount (ng) : 0.0438
Integration start scan : 123 Integration stop scan: 135
Y at integration start : 640 Y at integration end: 1780

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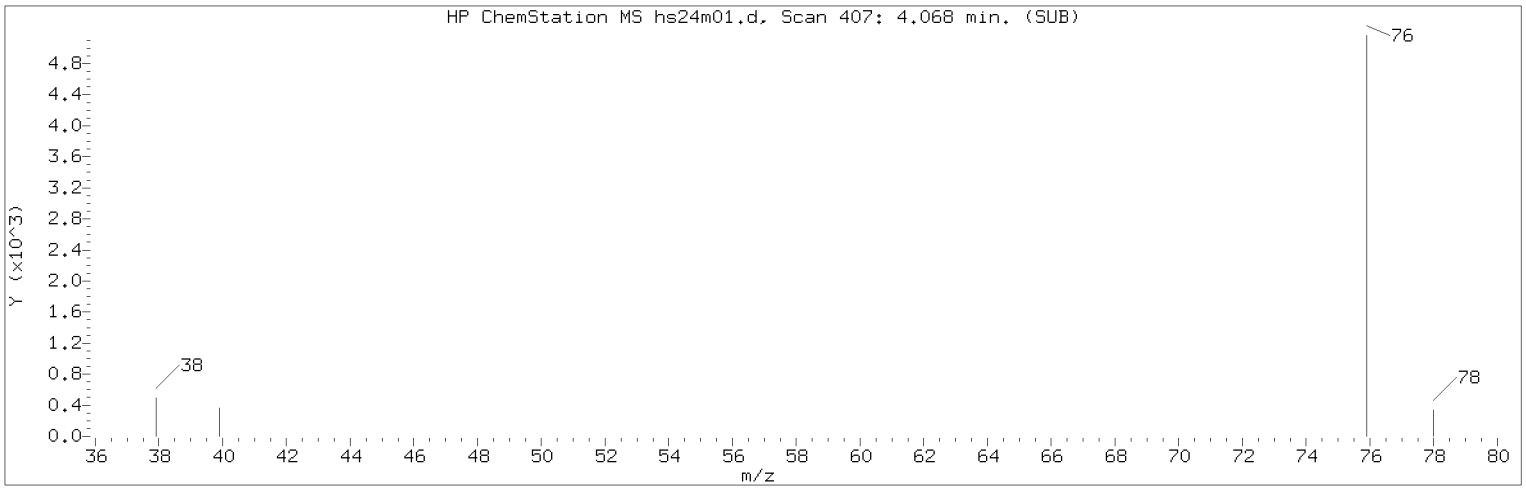
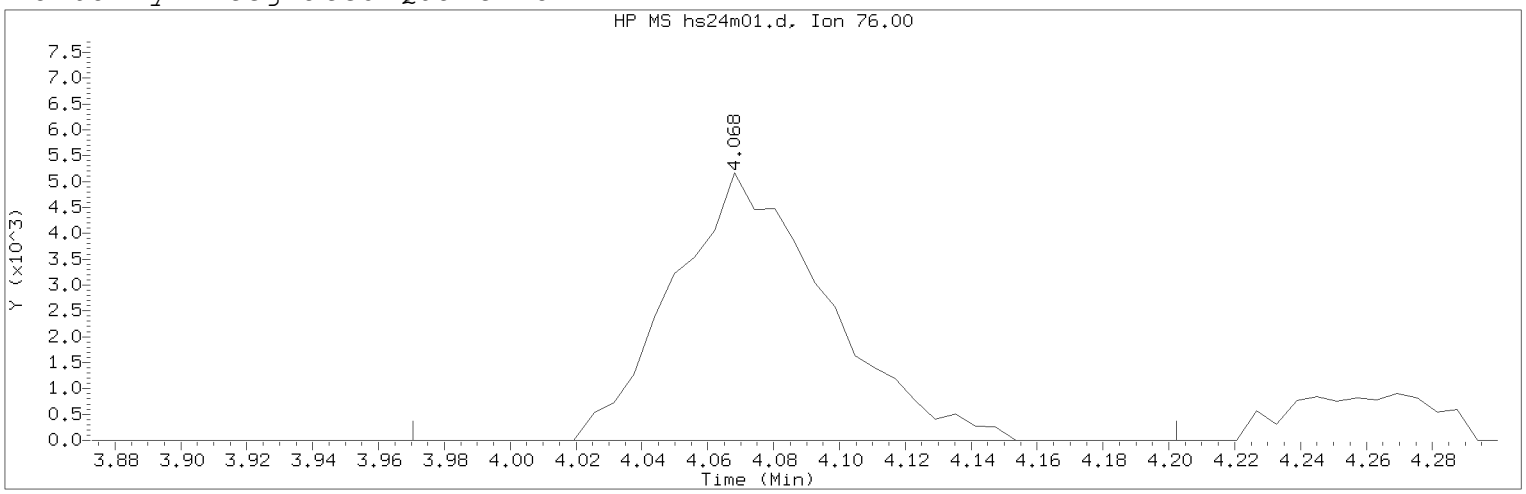
Target 3.5 esignature used. AE20 Page 384 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

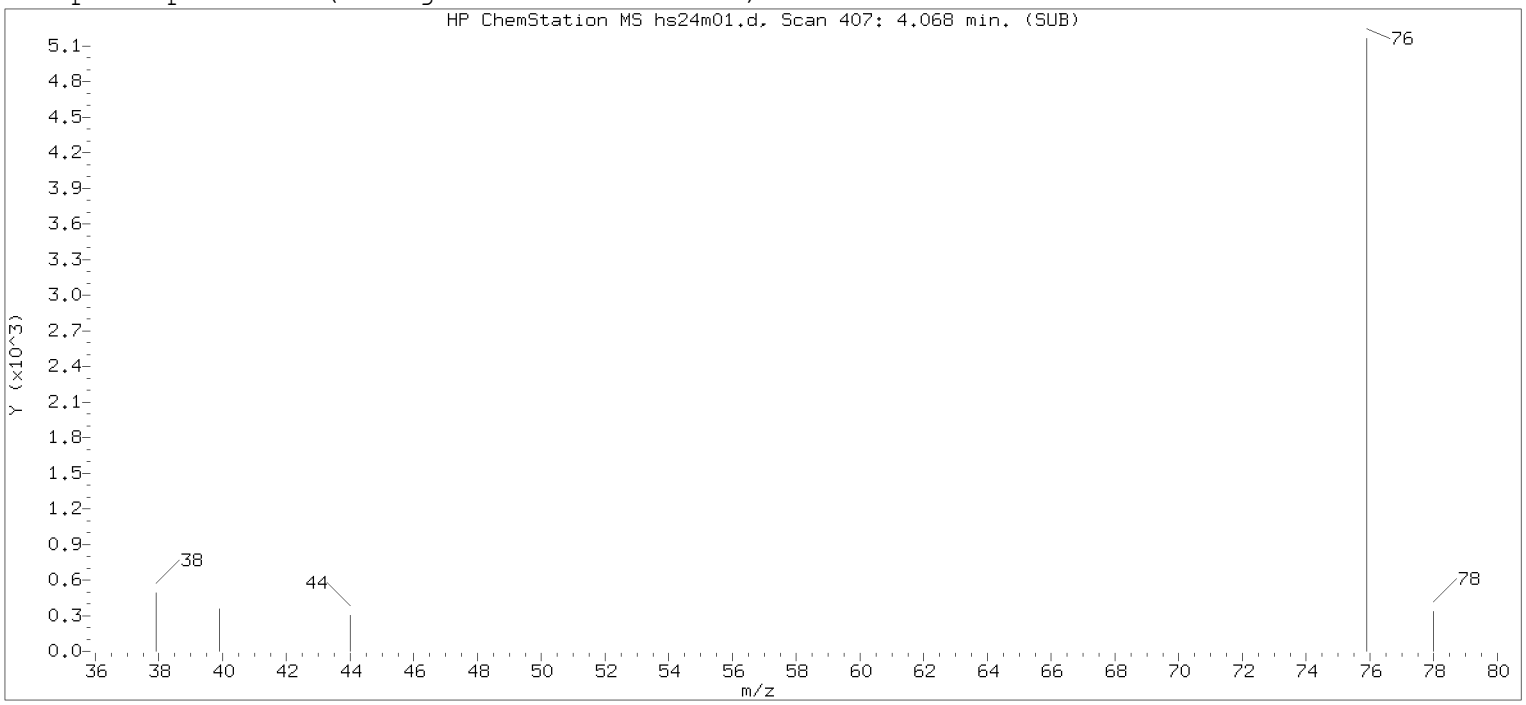
Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area (flag) : 16735M
On-Column Amount (ng) : 0.0964
Integration start scan : 390 Integration stop scan: 428
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

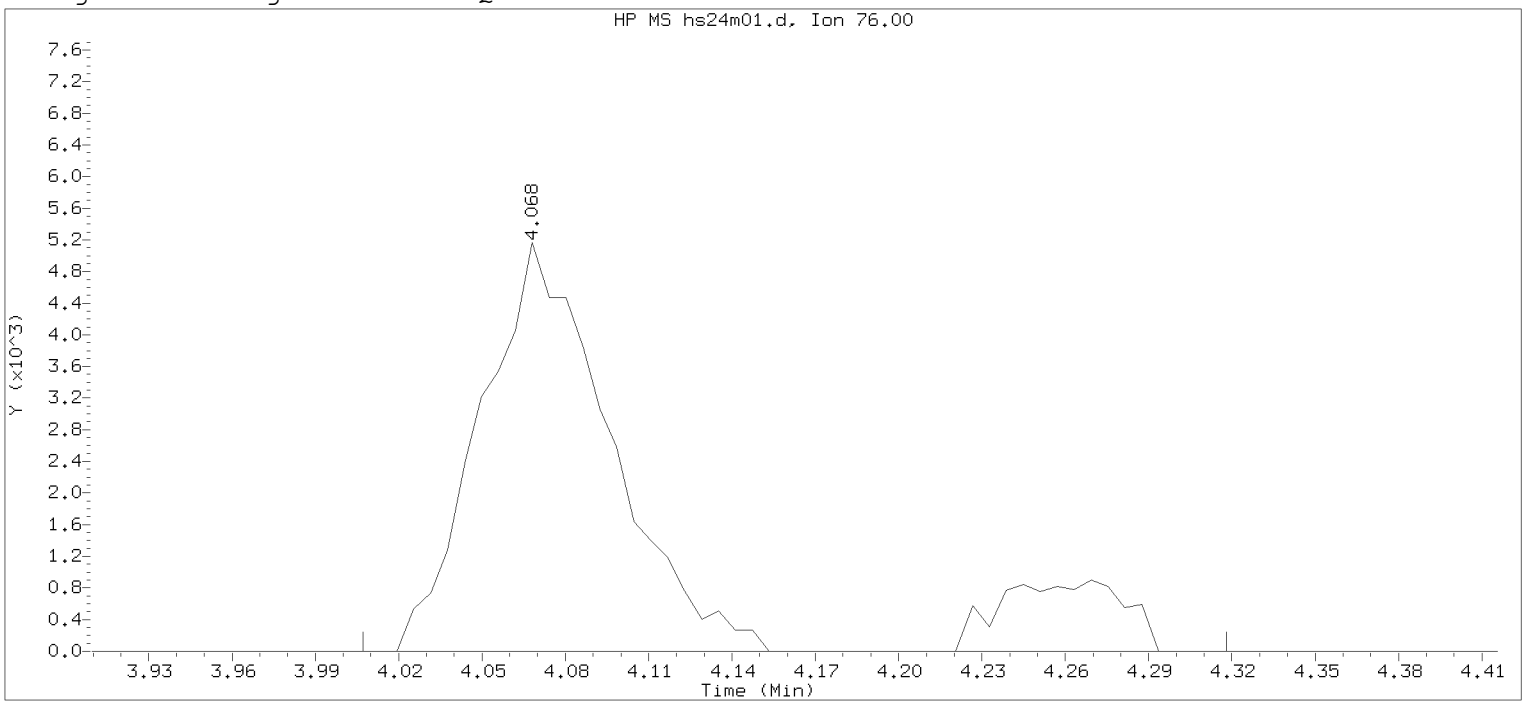
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 18
Compound Name : Carbon Disulfide
Scan Number : 407
Retention Time (minutes): 4.068
Quant Ion : 76.00
Area : 19554
On-column Amount (ng) : 0.1126
Integration start scan : 396 Integration stop scan: 447
Y at integration start : 0 Y at integration end: 0

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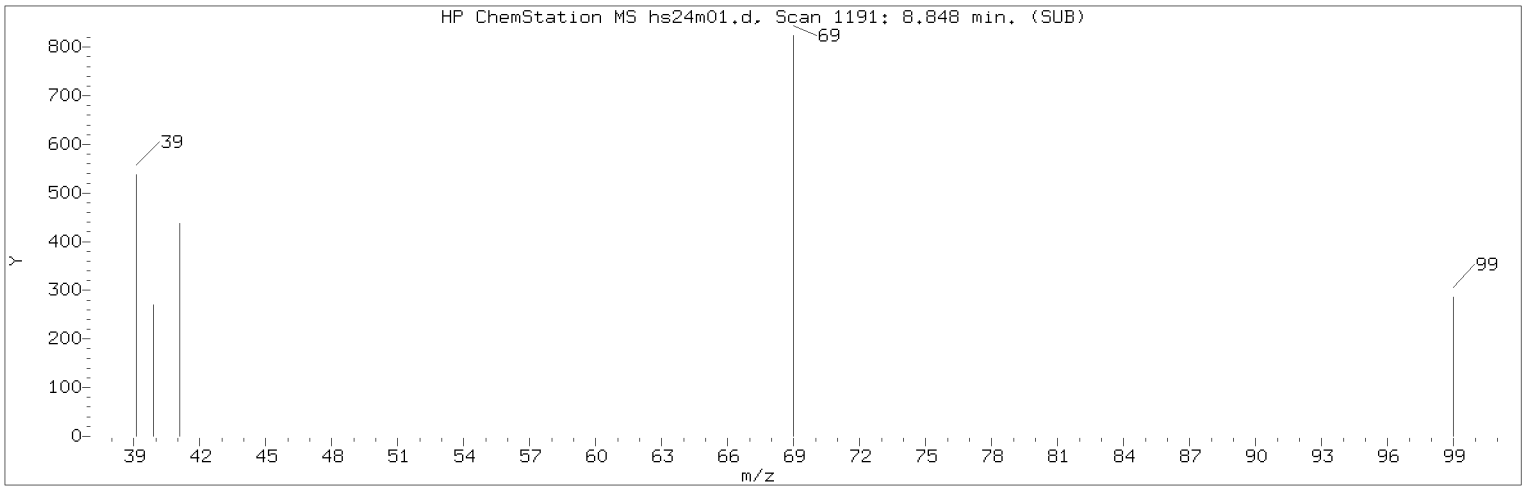
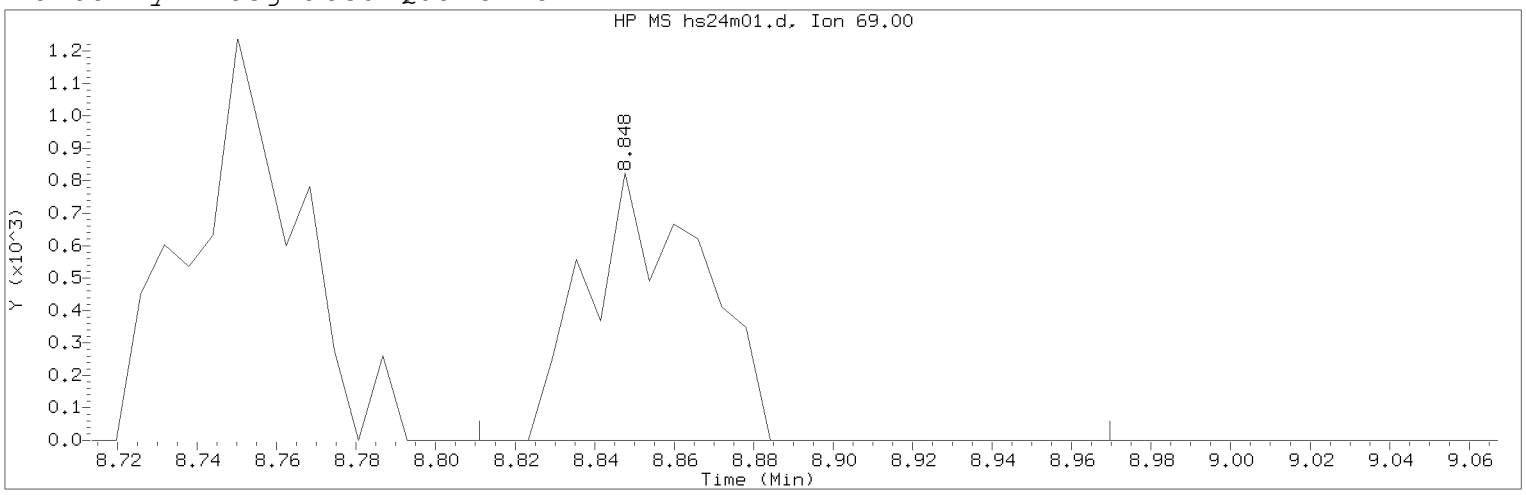
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

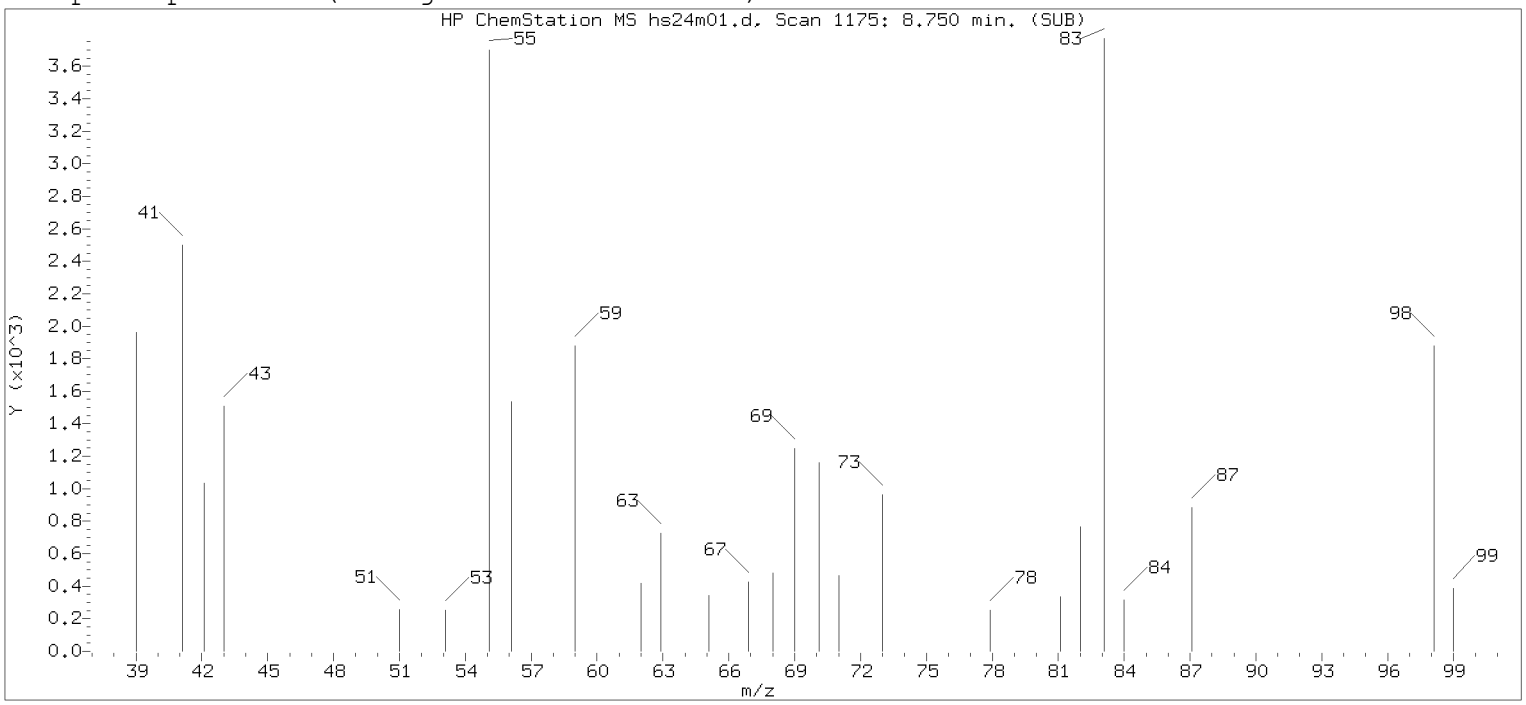
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1191
Retention Time (minutes): 8.848
Quant Ion : 69.00
Area (flag) : 1661M
On-Column Amount (ng) : 0.0666
Integration start scan : 1184 Integration stop scan: 1210
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

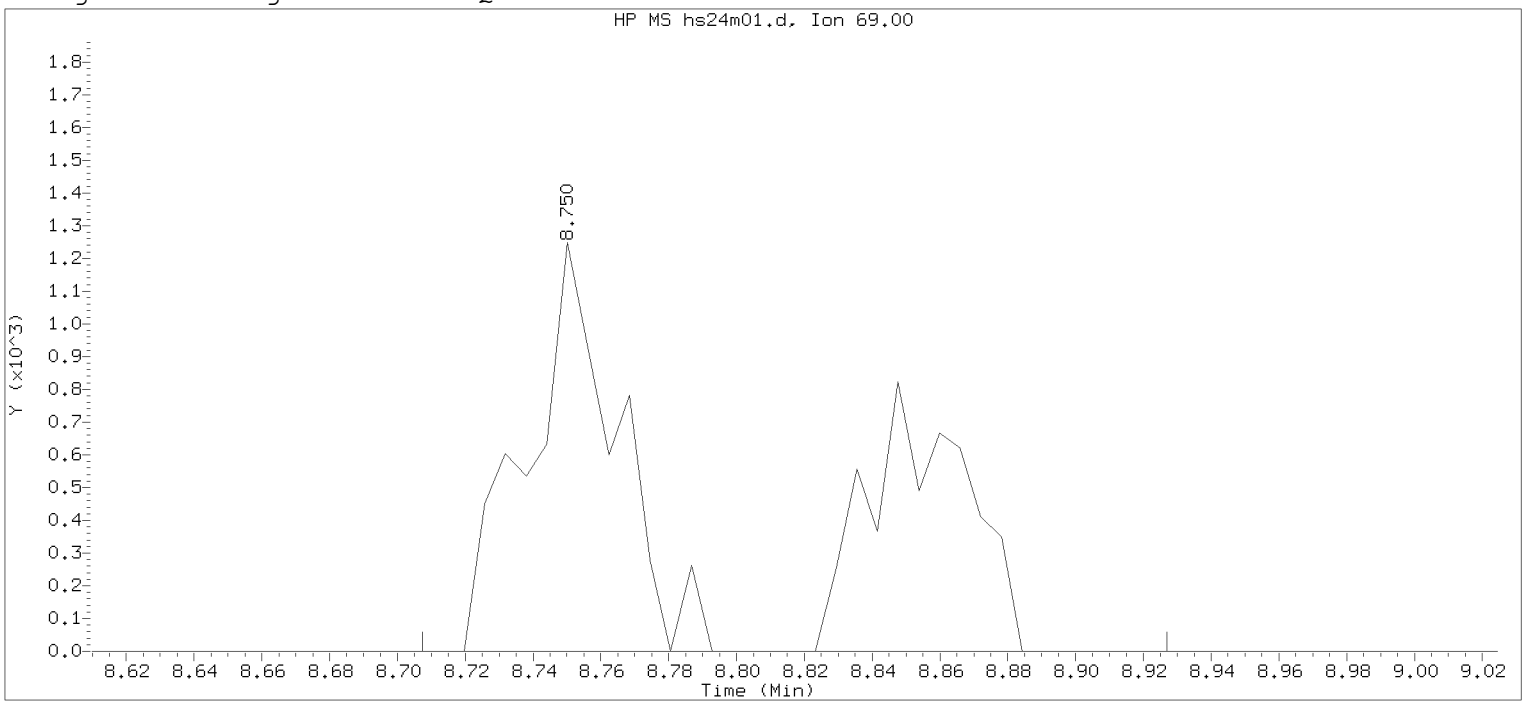
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number	: 71		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1175		
Retention Time (minutes)	: 8.750		
Quant Ion	: 69.00		
Area	: 3973		
On-column Amount (ng)	: 0.1576		
Integration start scan	: 1167	Integration stop scan:	1203
Y at integration start	: 0	Y at integration end:	0

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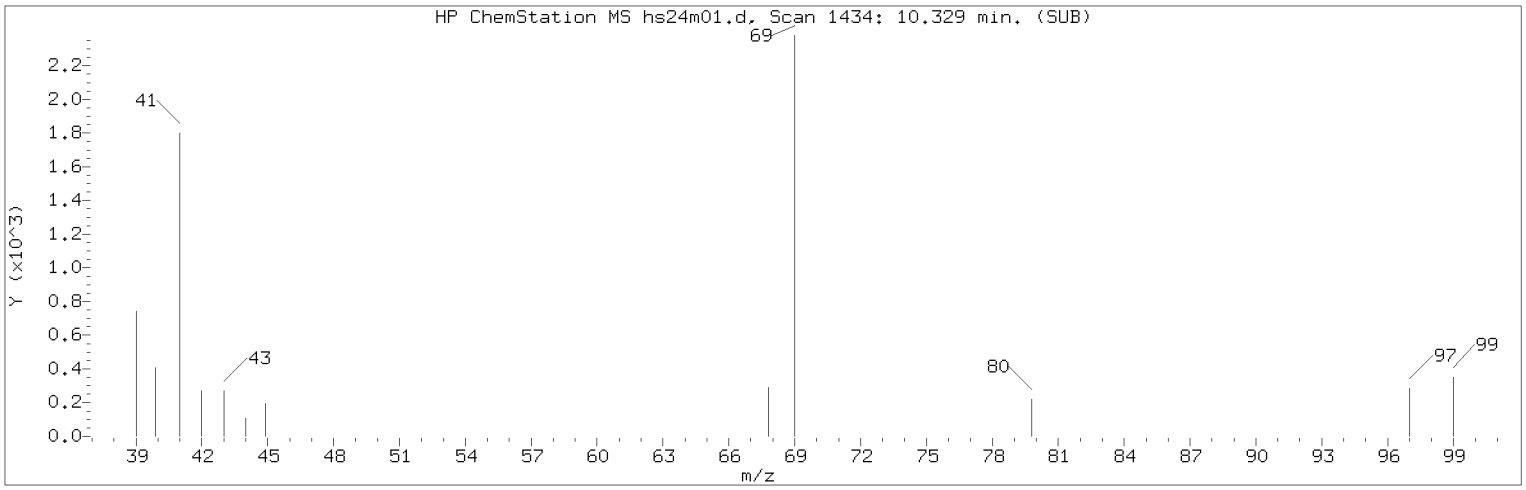
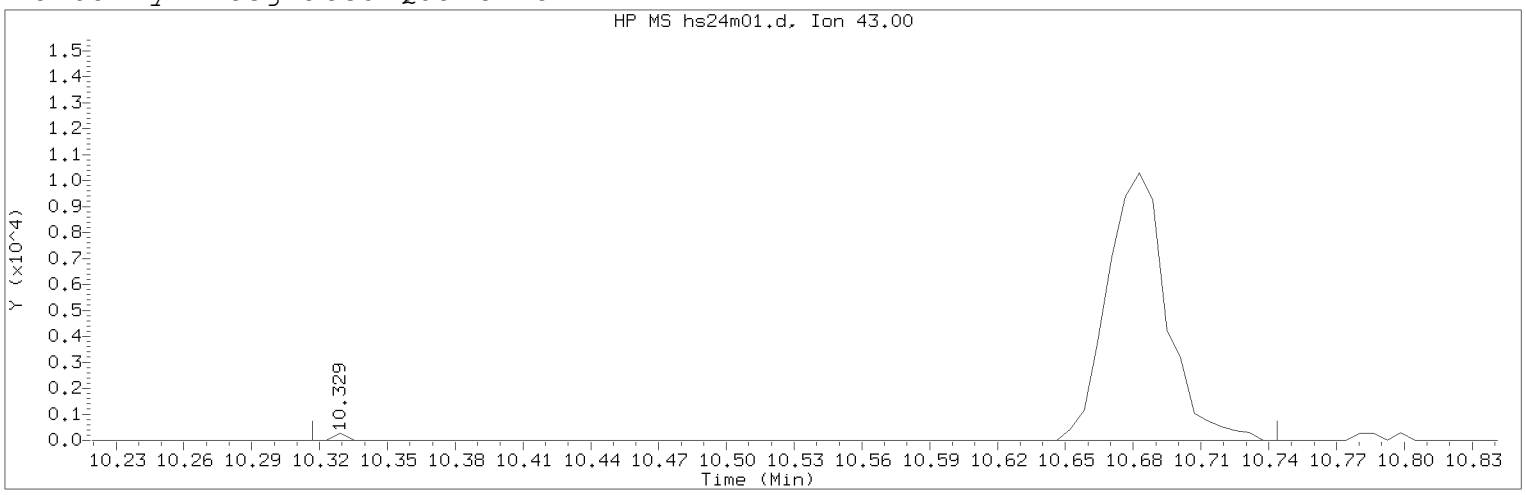
Target 3.5 esignature used. AE20 Page 382 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

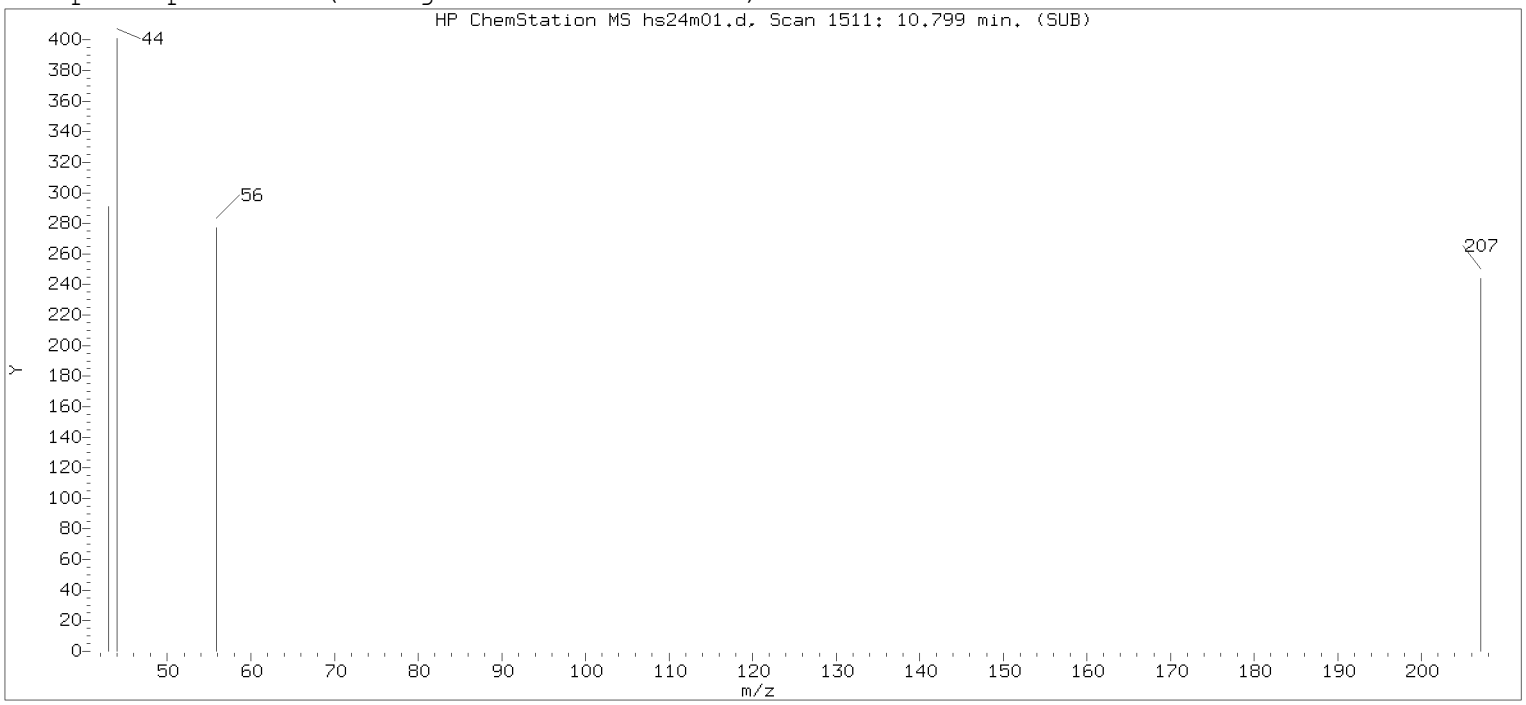
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1434
Retention Time (minutes): 10.329
Quant Ion : 43.00
Area (flag) : 19024A
On-Column Amount (ng) : 0.8165
Integration start scan : 1431 Integration stop scan: 1501
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

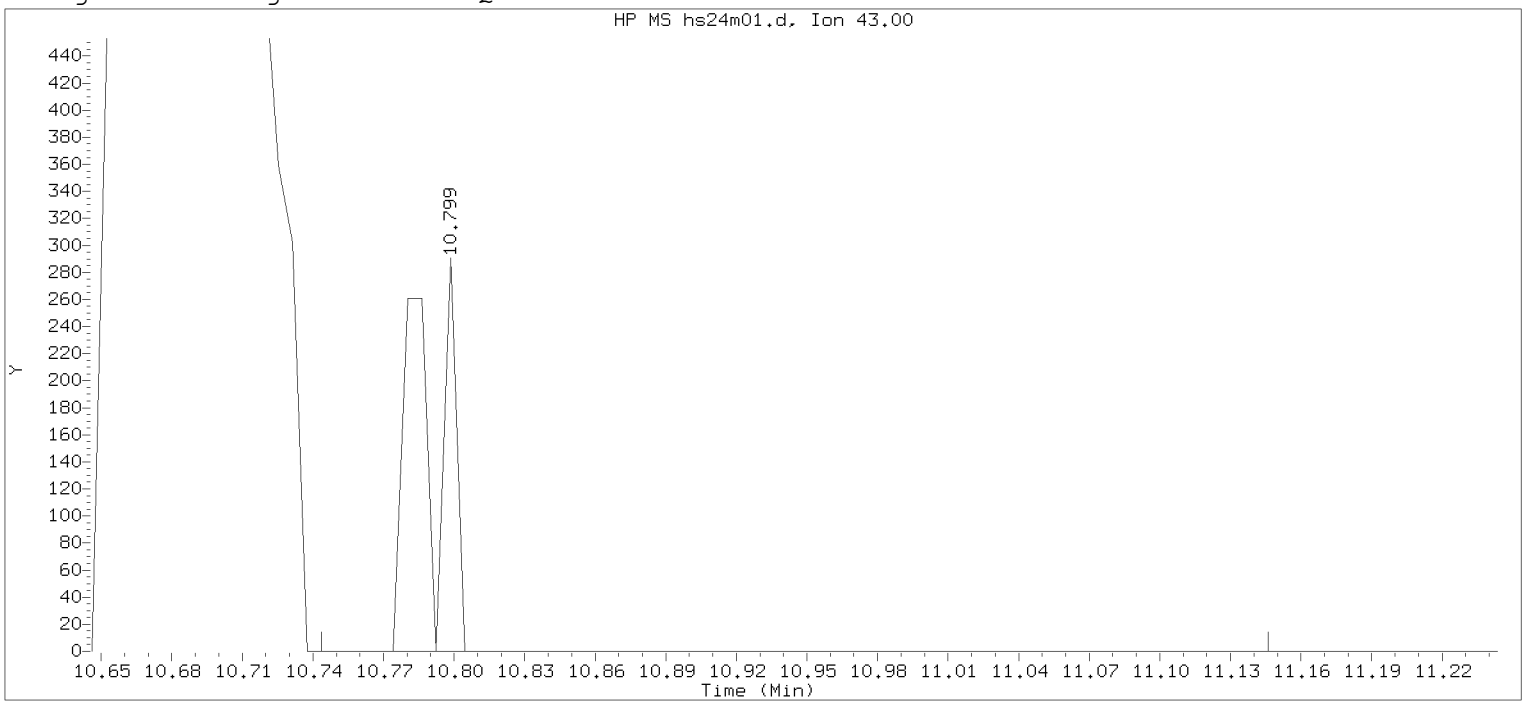
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

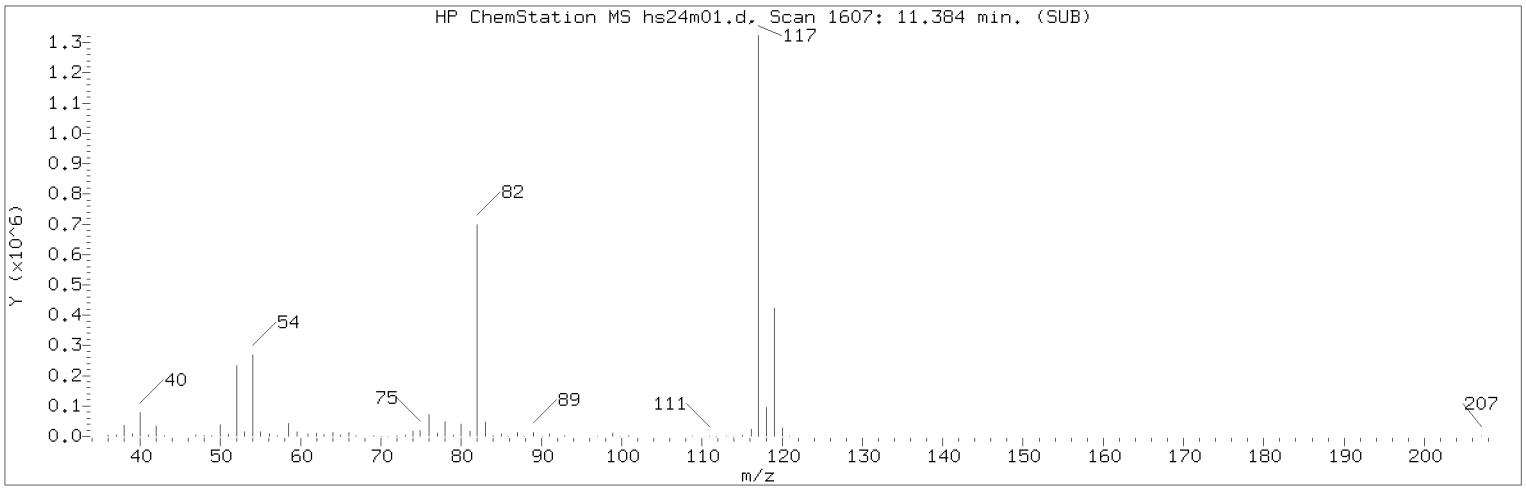
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

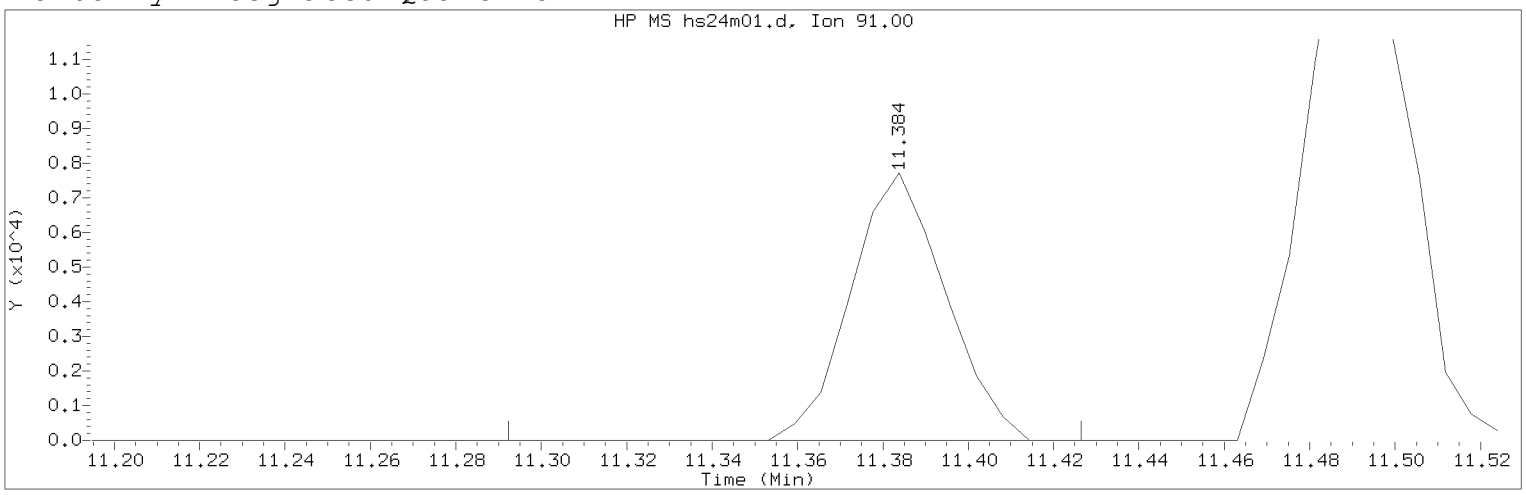
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1511
Retention Time (minutes): 10.799
Quant Ion : 43.00
Area : 297
On-column Amount (ng) : 0.0128
Integration start scan : 1501 Integration stop scan: 1567
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

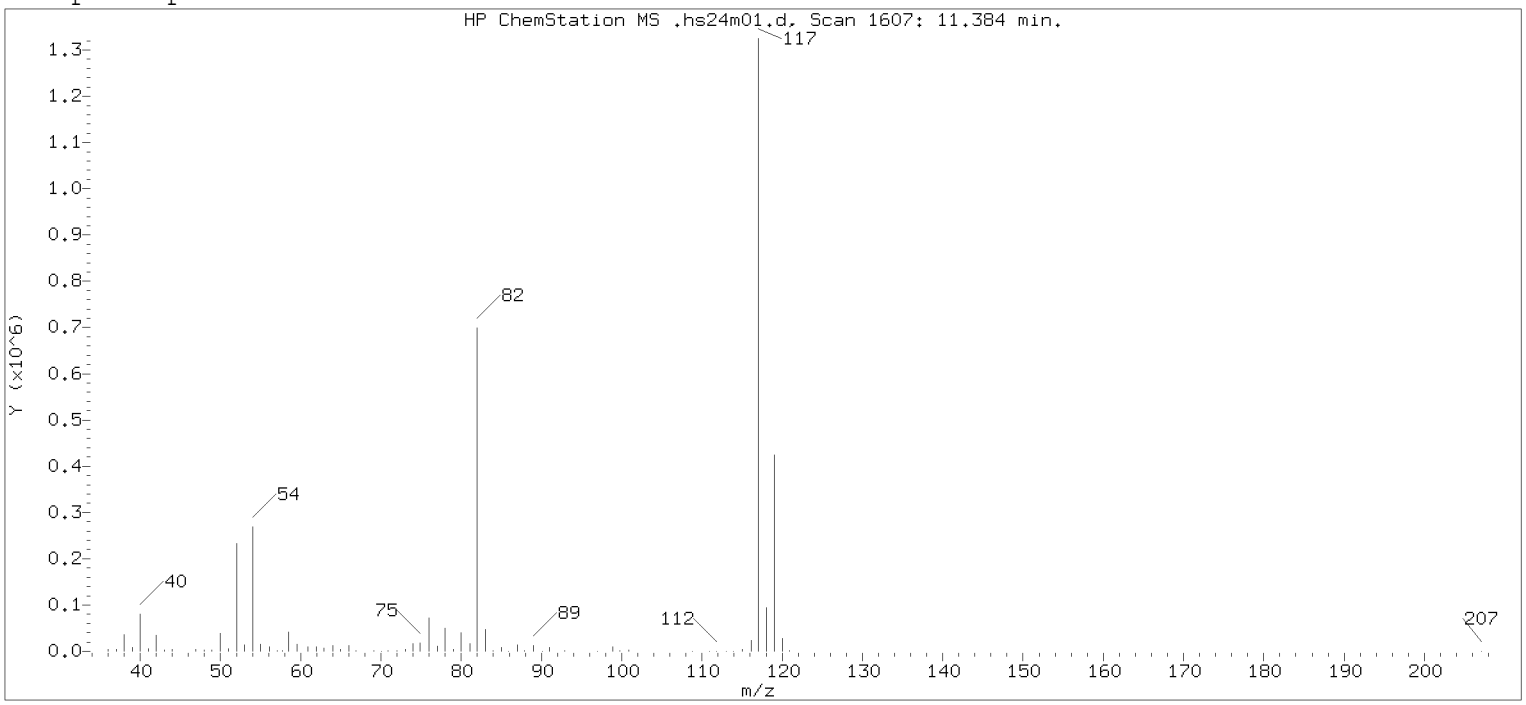
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 11869M
On-Column Amount (ng) : 0.1239
Integration start scan : 1591 Integration stop scan: 1613
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

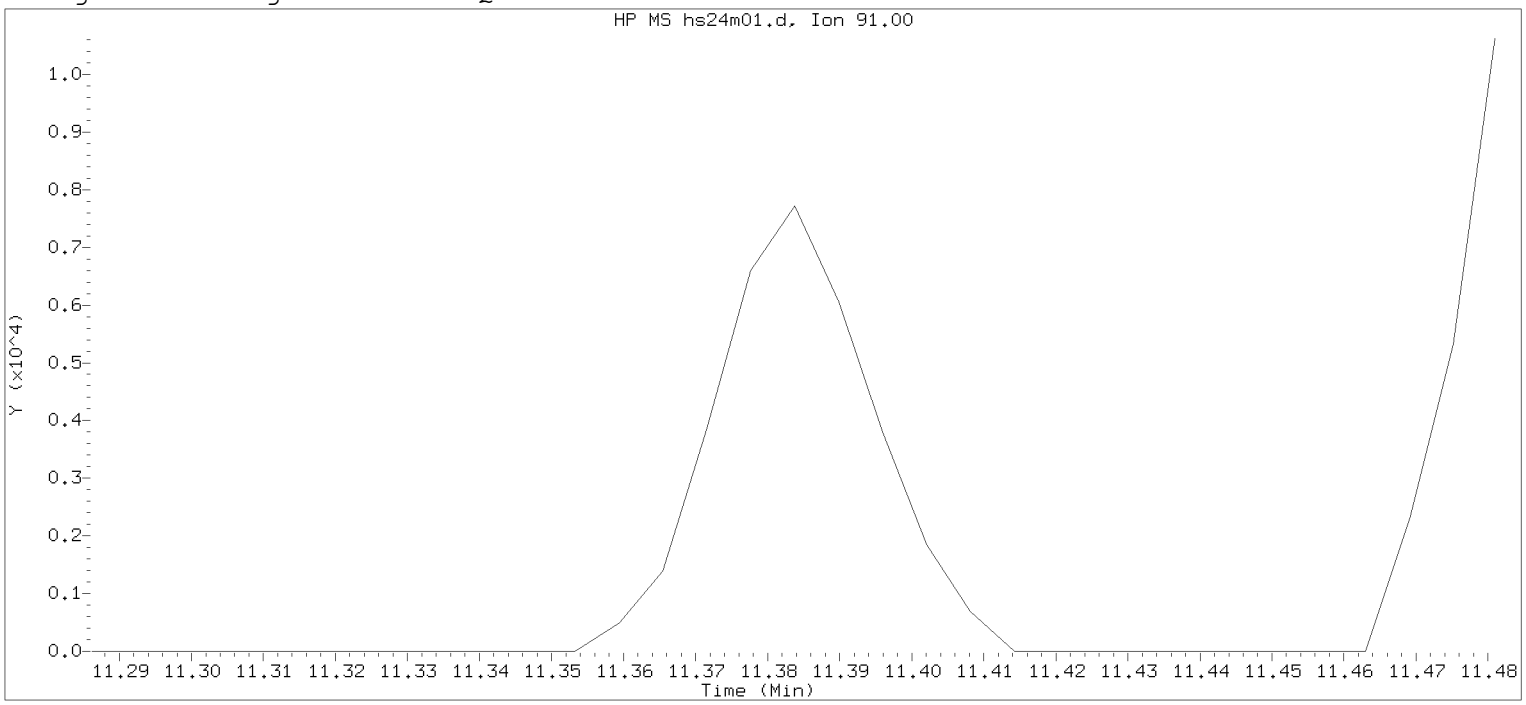
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

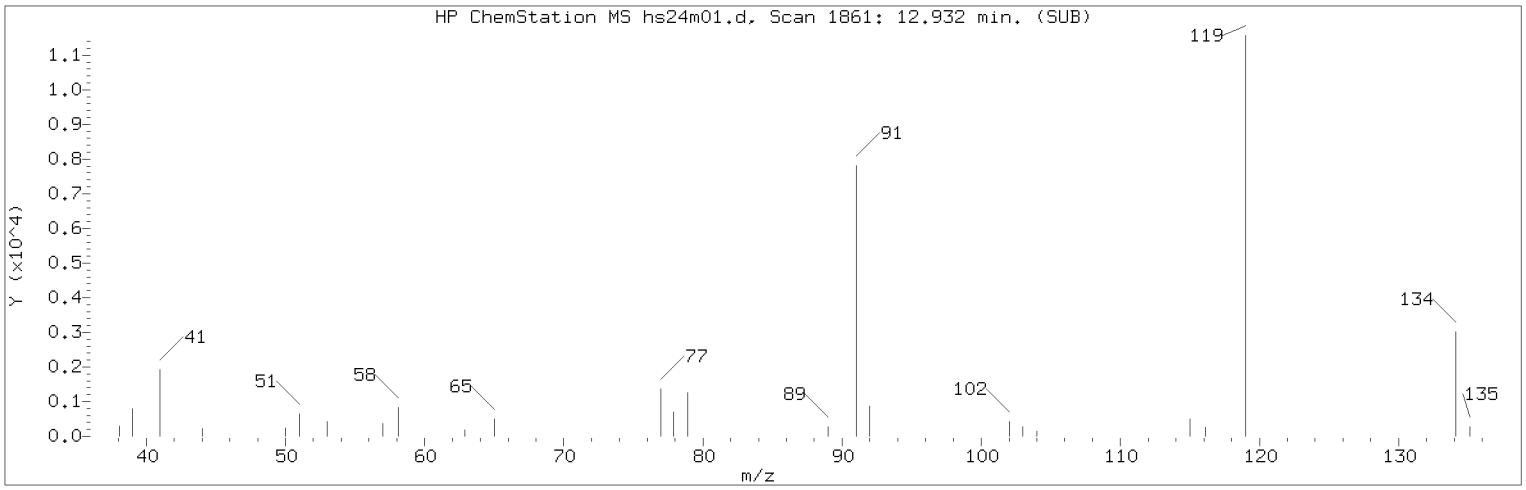
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

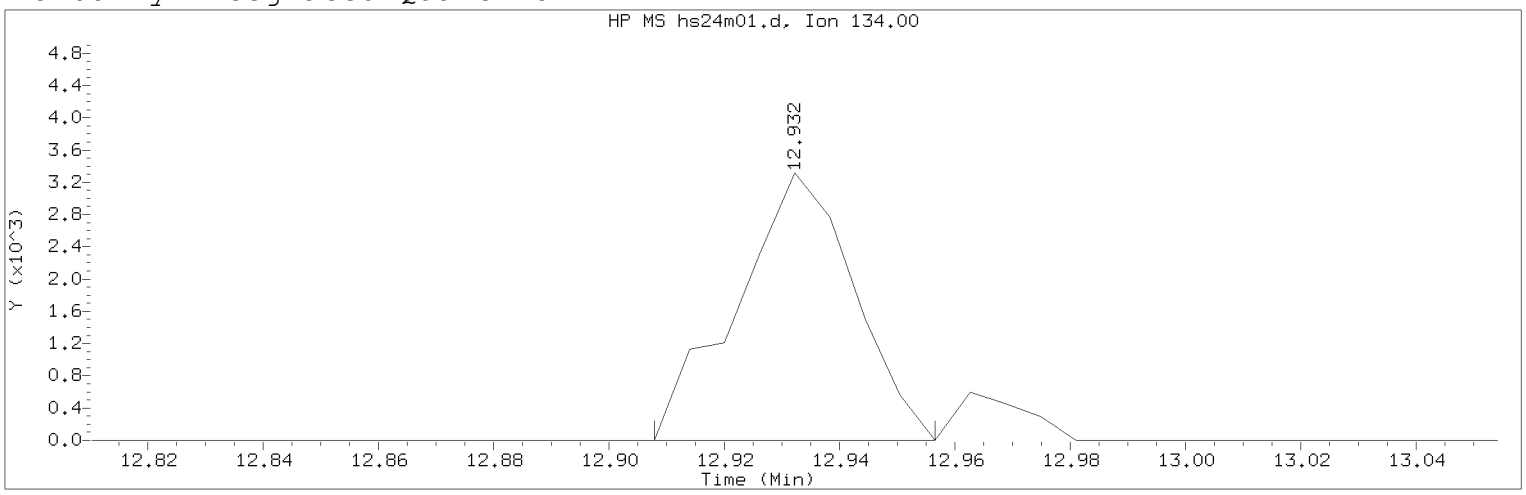
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

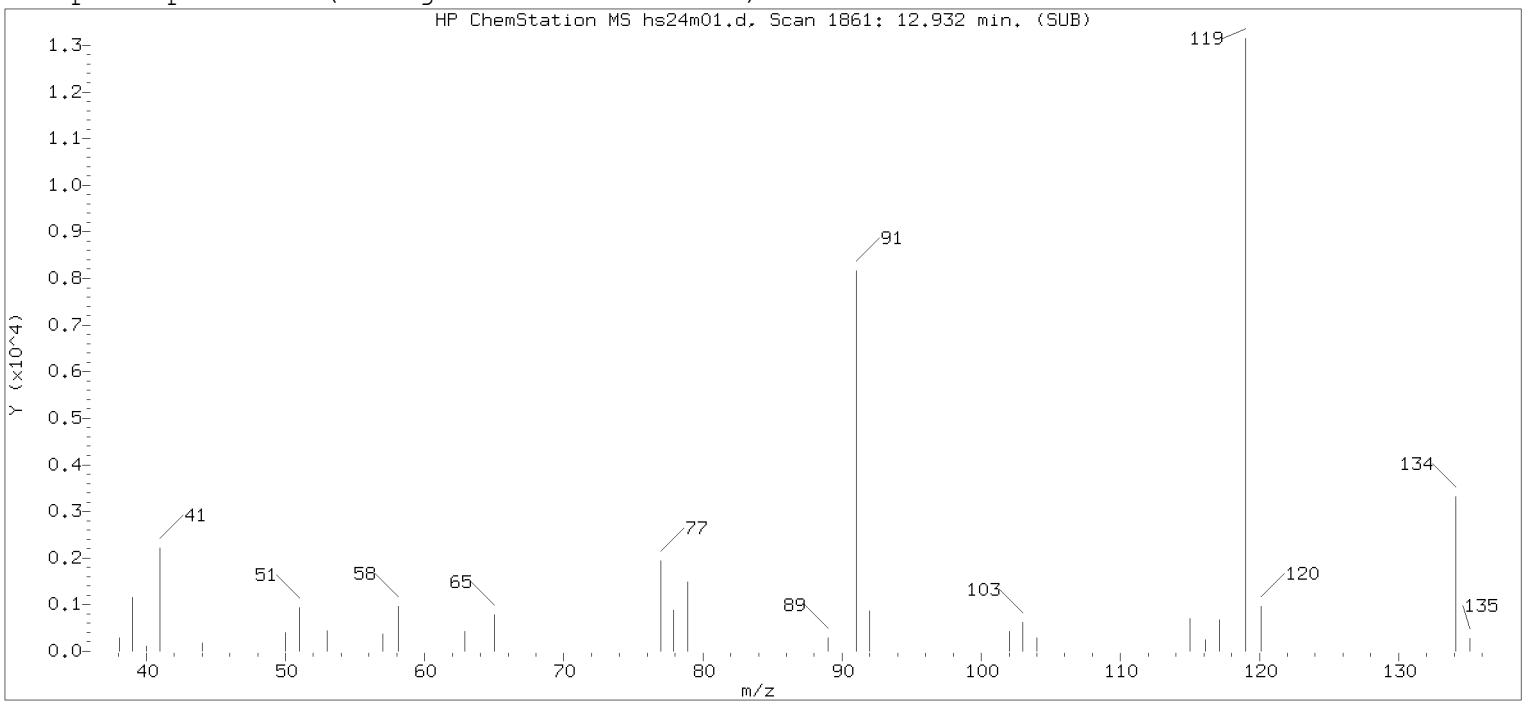
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 4681M
On-Column Amount (ng) : 0.0853
Integration start scan : 1856 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

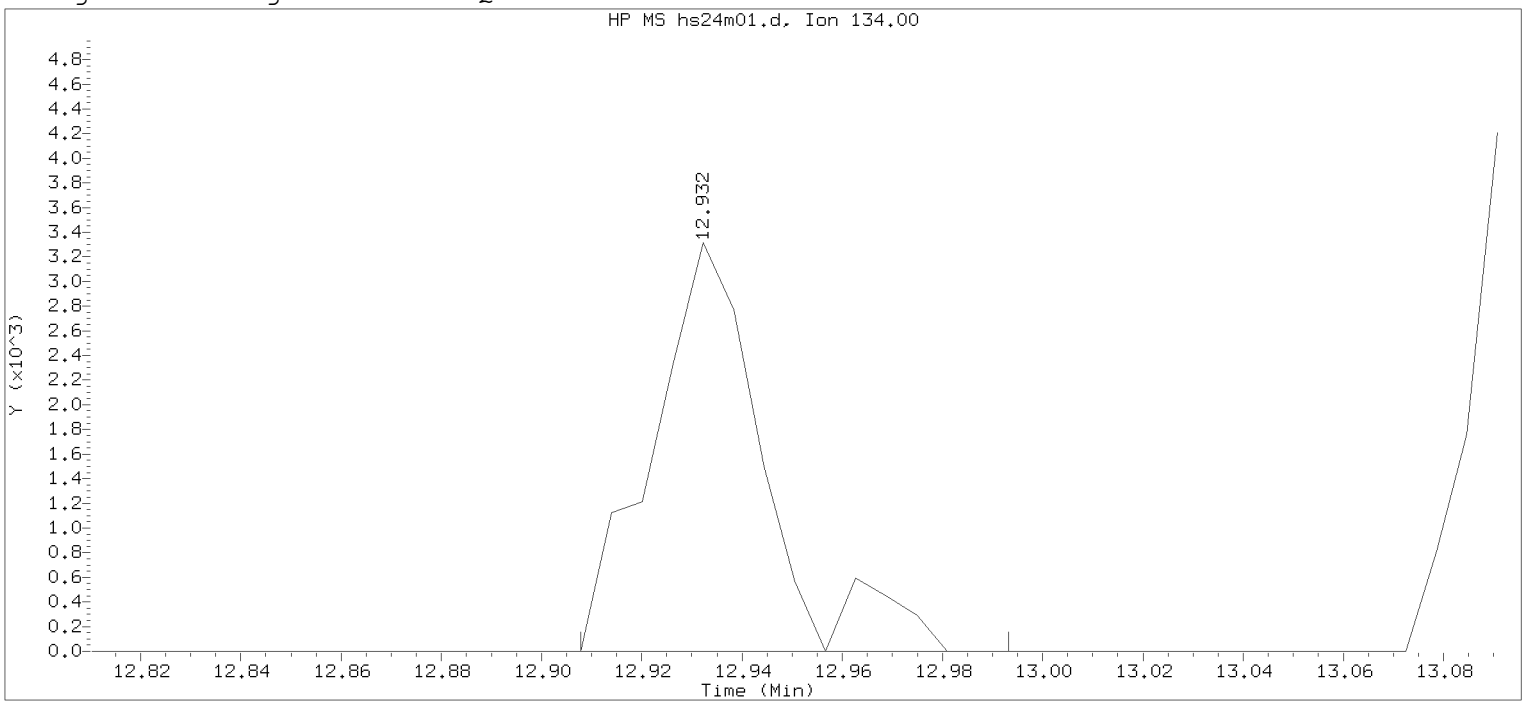
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

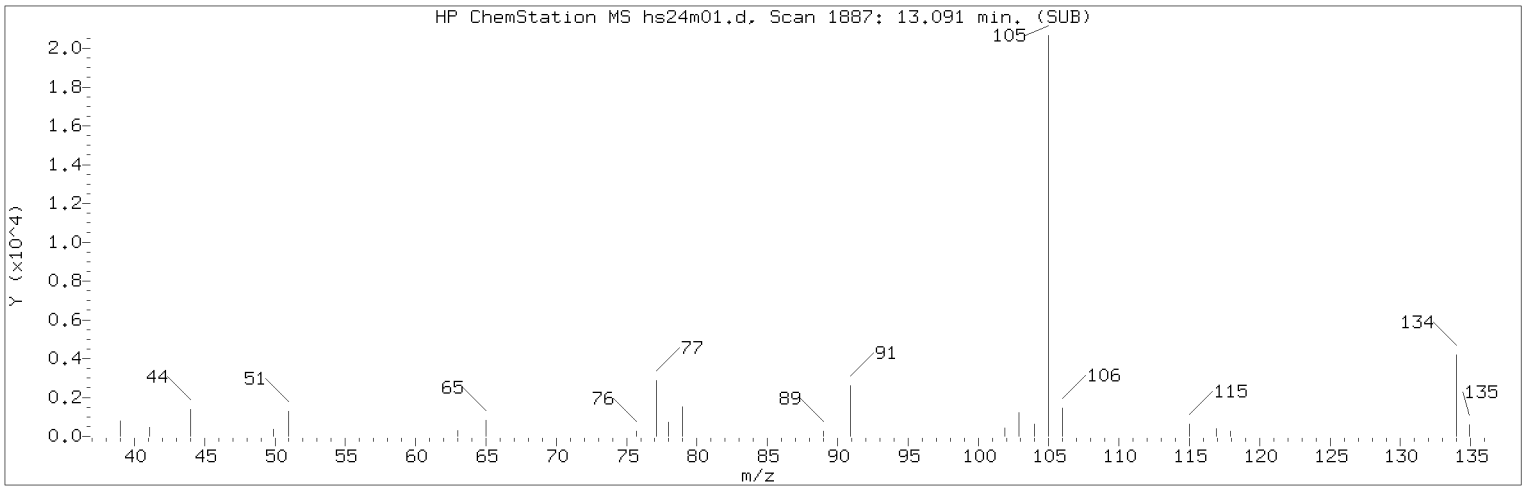
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

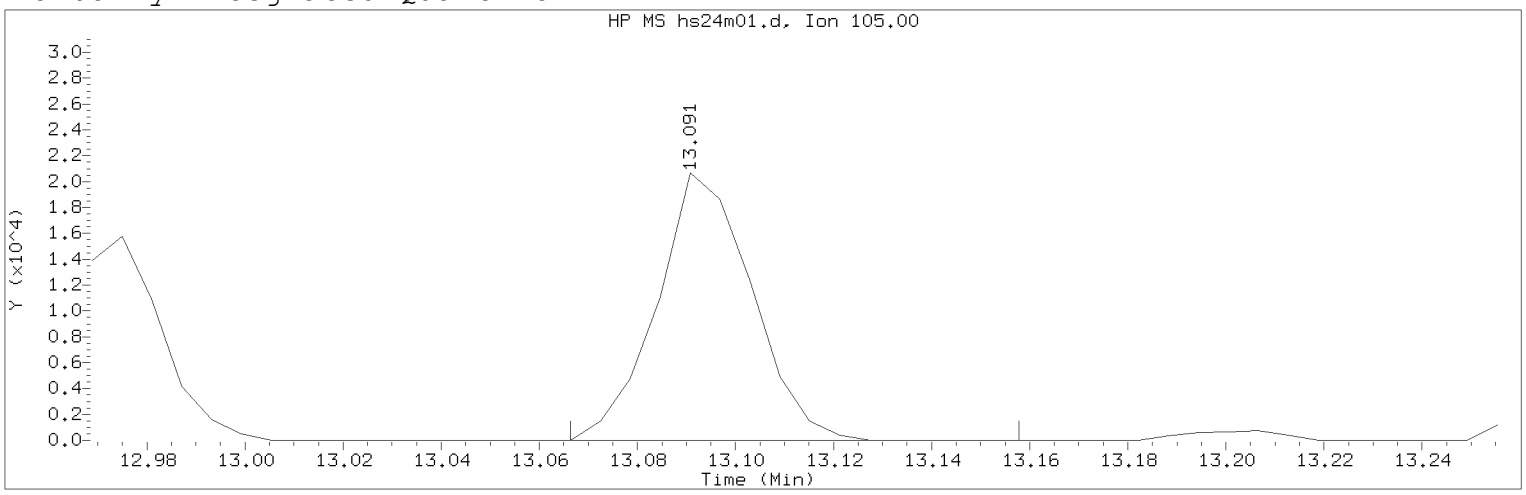
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 5170
On-column Amount (ng) : 0.0909
Integration start scan : 1856 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 394 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

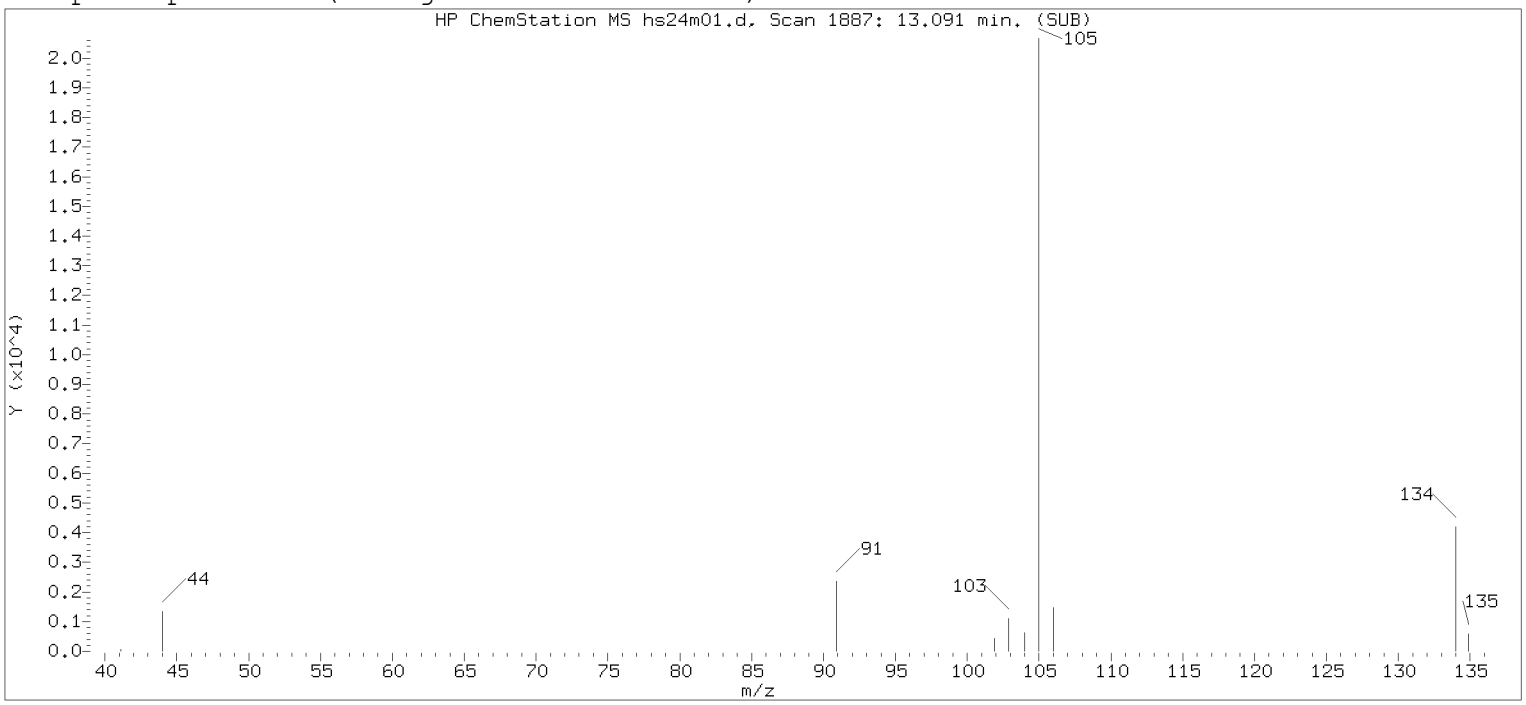
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area (flag) : 27687M
On-Column Amount (ng) : 0.0847
Integration start scan : 1882 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

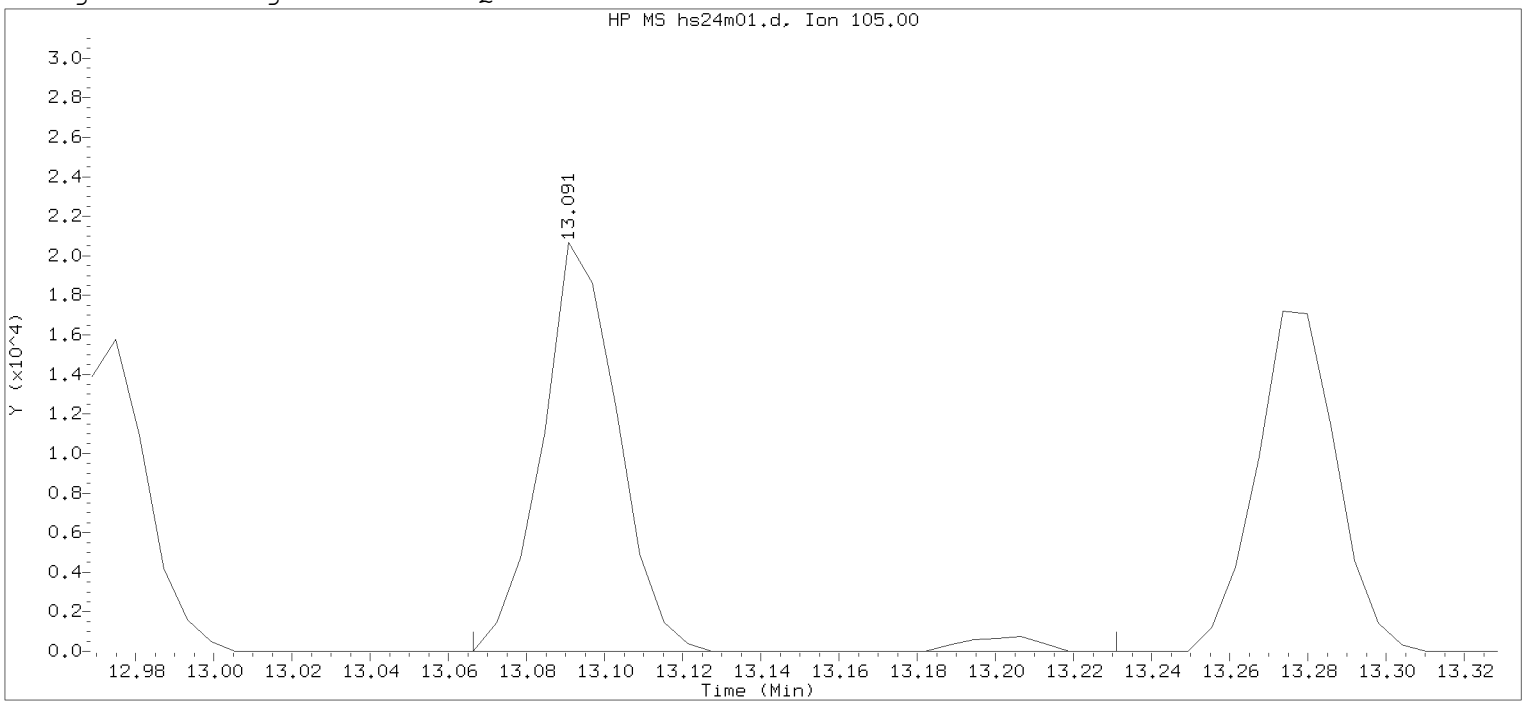
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

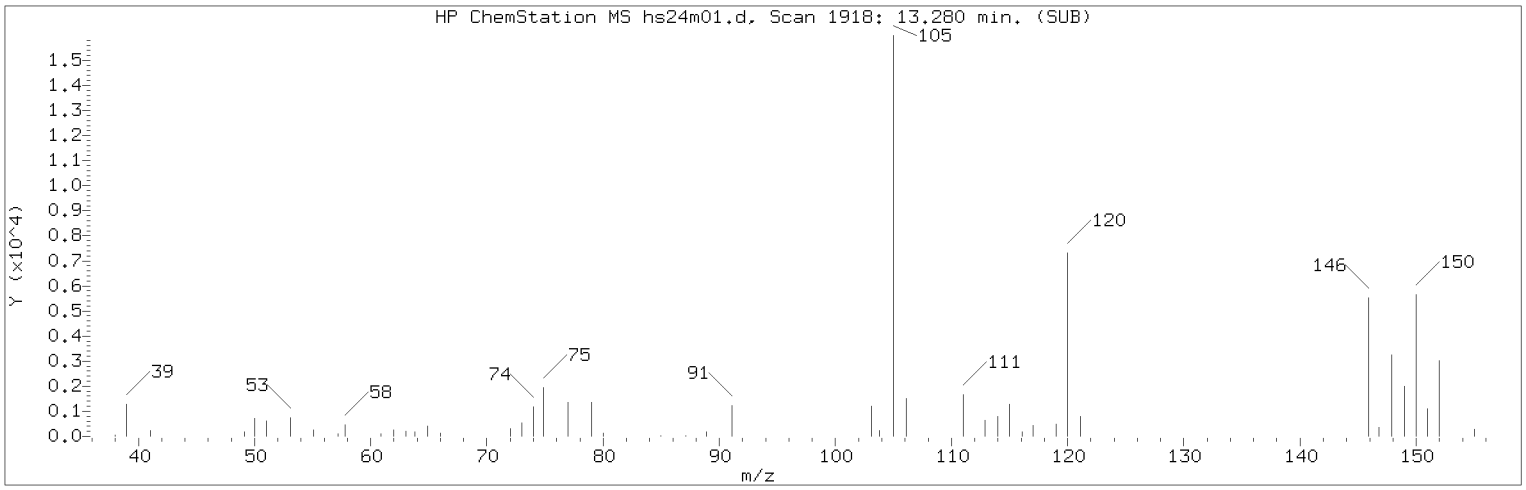
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

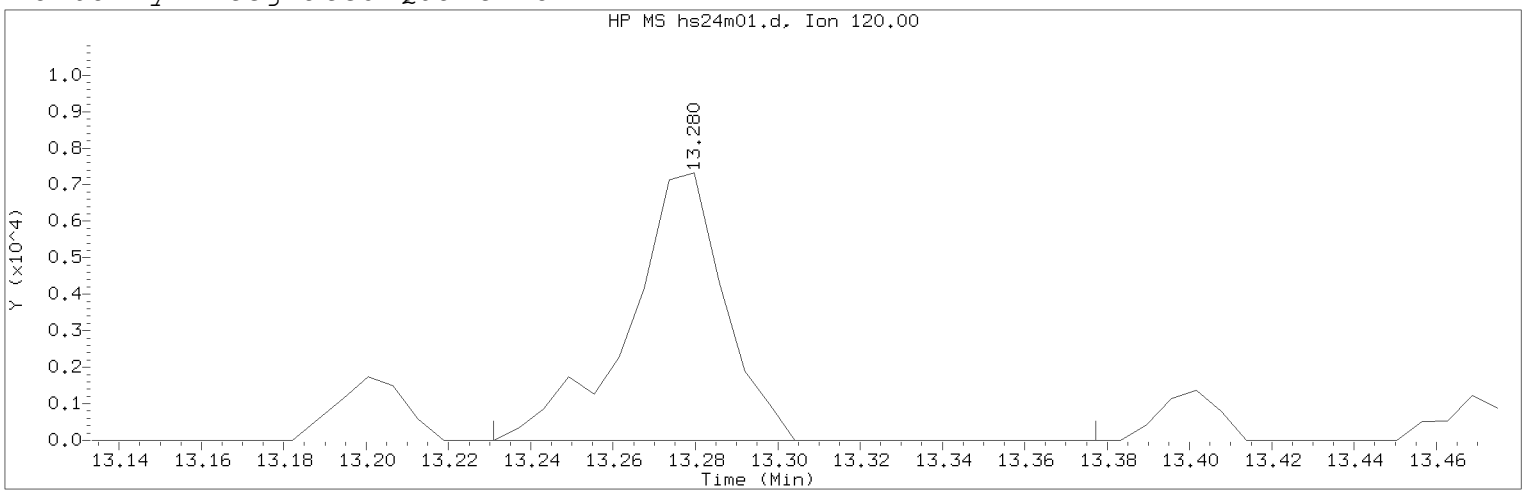
Compound Number : 128
Compound Name : sec-Butylbenzene
Scan Number : 1887
Retention Time (minutes): 13.091
Quant Ion : 105.00
Area : 28686
On-column Amount (ng) : 0.0875
Integration start scan : 1882 Integration stop scan: 1909
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 07:30.
Target 3.5 esignature used. AE20 Page 396 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

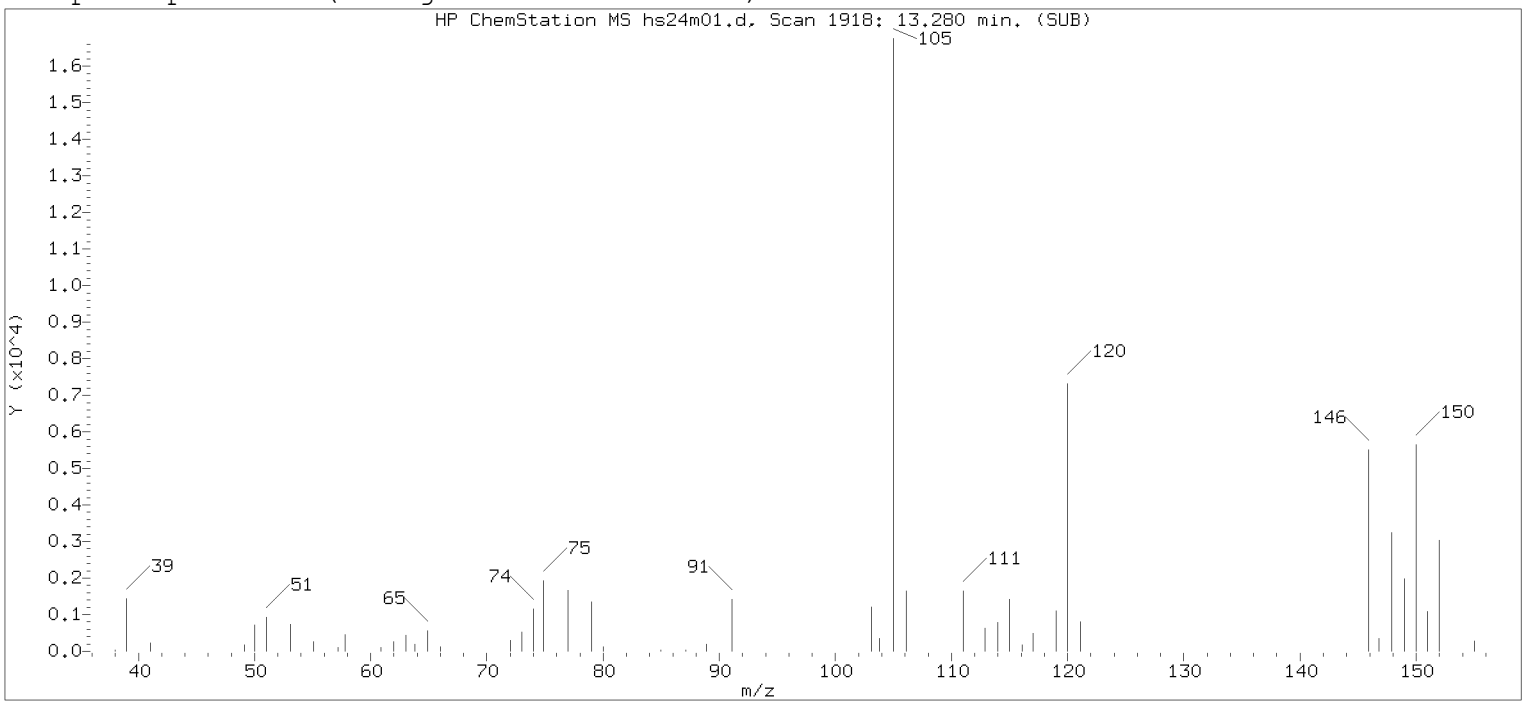
Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area (flag) : 11819M
On-Column Amount (ng) : 0.1001
Integration start scan : 1909 Integration stop scan: 1933
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

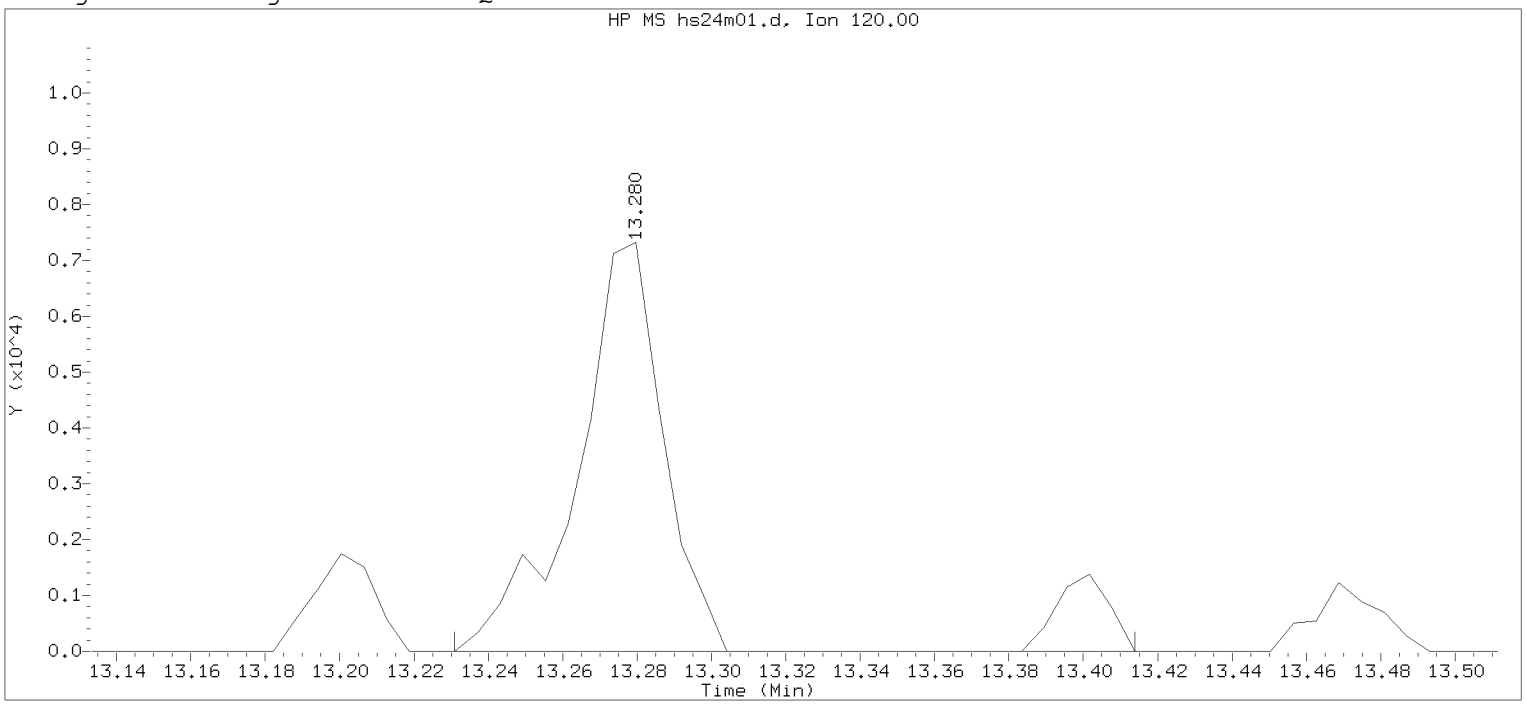
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 135
Compound Name : 1,2,3-Trimethylbenzene
Scan Number : 1918
Retention Time (minutes): 13.280
Quant Ion : 120.00
Area : 13186
On-column Amount (ng) : 0.1095
Integration start scan : 1909 Integration stop scan: 1939
Y at integration start : 0 Y at integration end: 0

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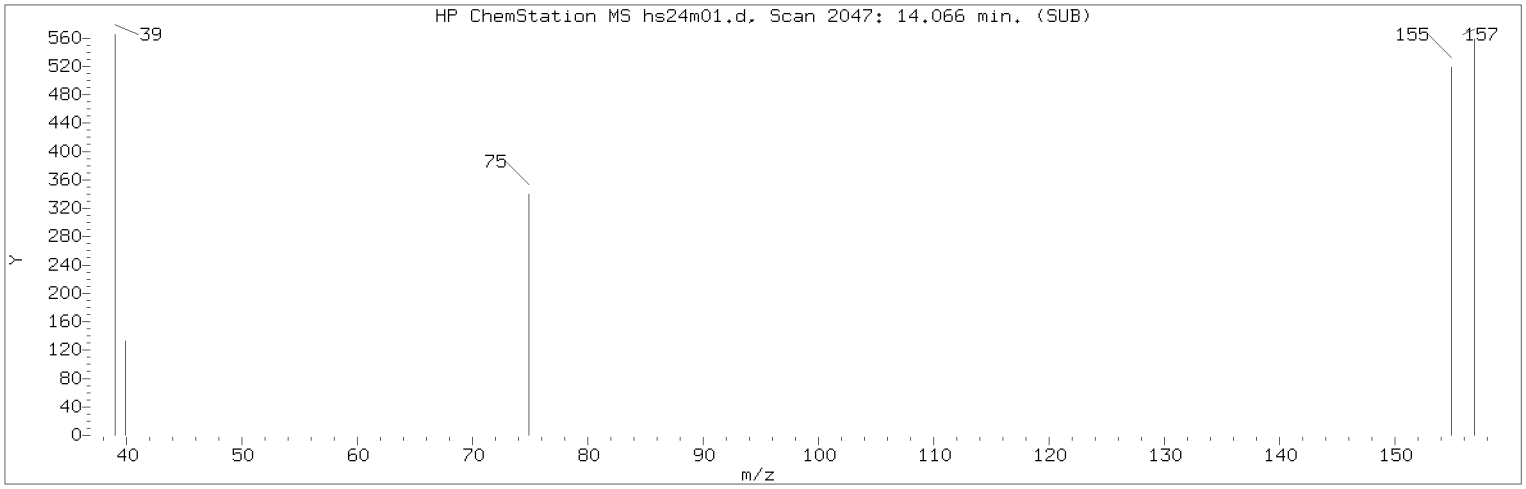
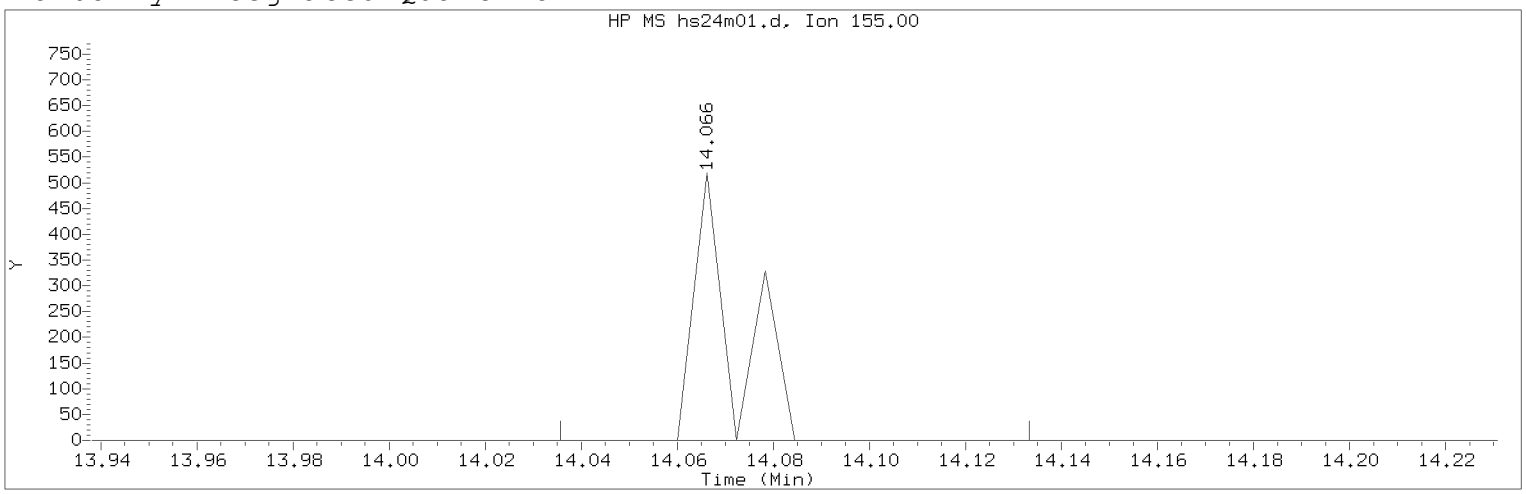
Target 3.5 esignature used. AE20 Page 398 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 07:26
Date, time and analyst ID of latest file update: 25-Sep-2018 07:28 jkh09052

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

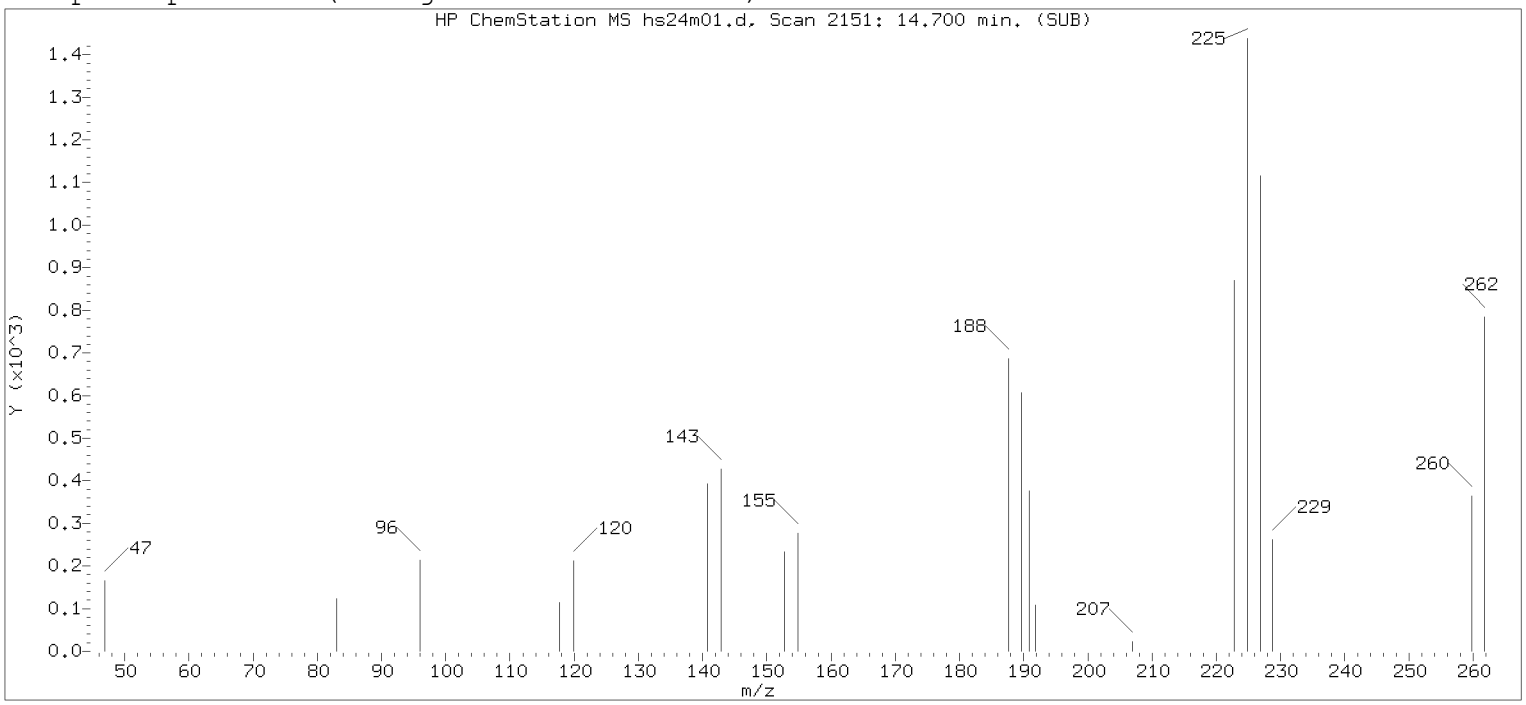
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2047
Retention Time (minutes): 14.066
Quant Ion : 155.00
Area (flag) : 310M
On-Column Amount (ng) : 0.0535
Integration start scan : 2041 Integration stop scan: 2057
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

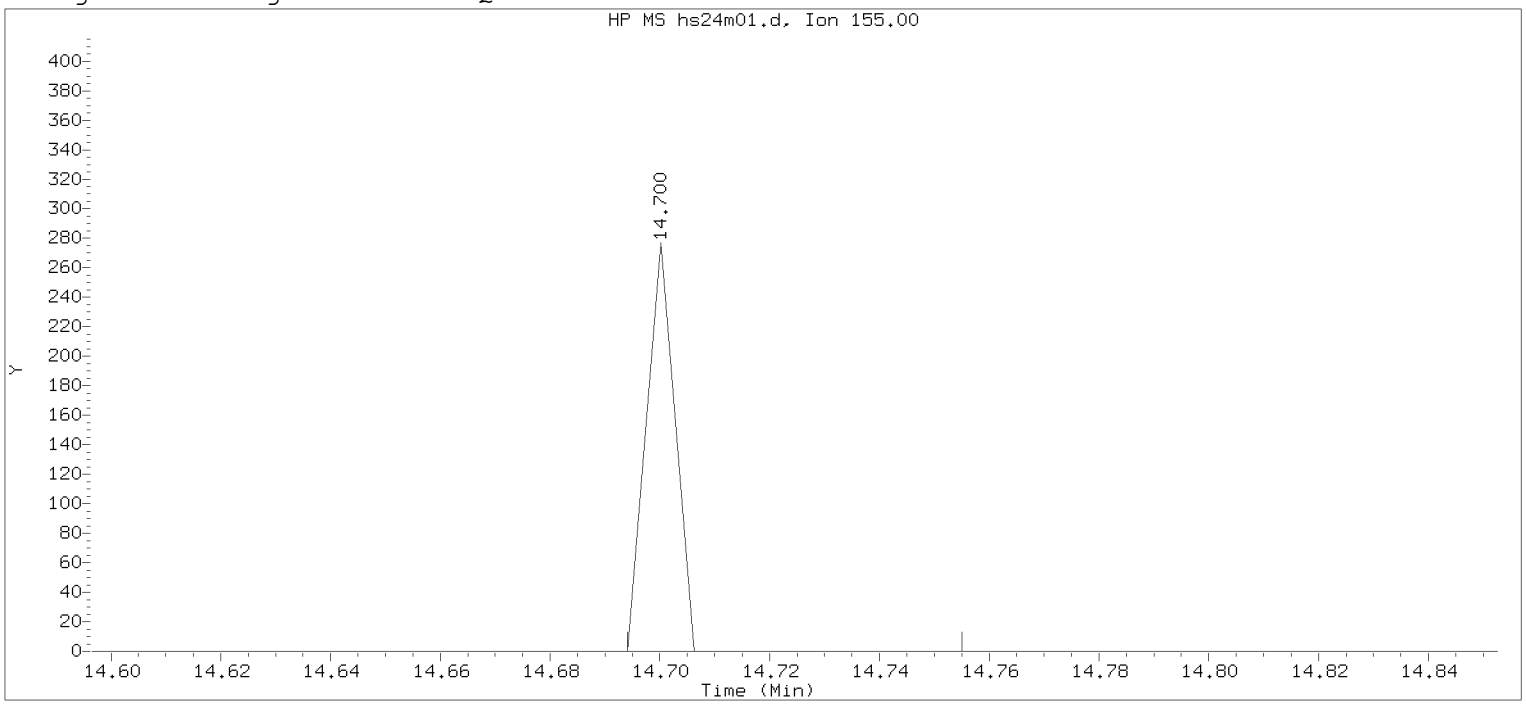
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 07:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24m01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 20:59 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:17 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2151
Retention Time (minutes): 14.700
Quant Ion : 155.00
Area : 101
On-column Amount (ng) : 0.0343
Integration start scan : 2149 Integration stop scan: 2159
Y at integration start : 0 Y at integration end: 0

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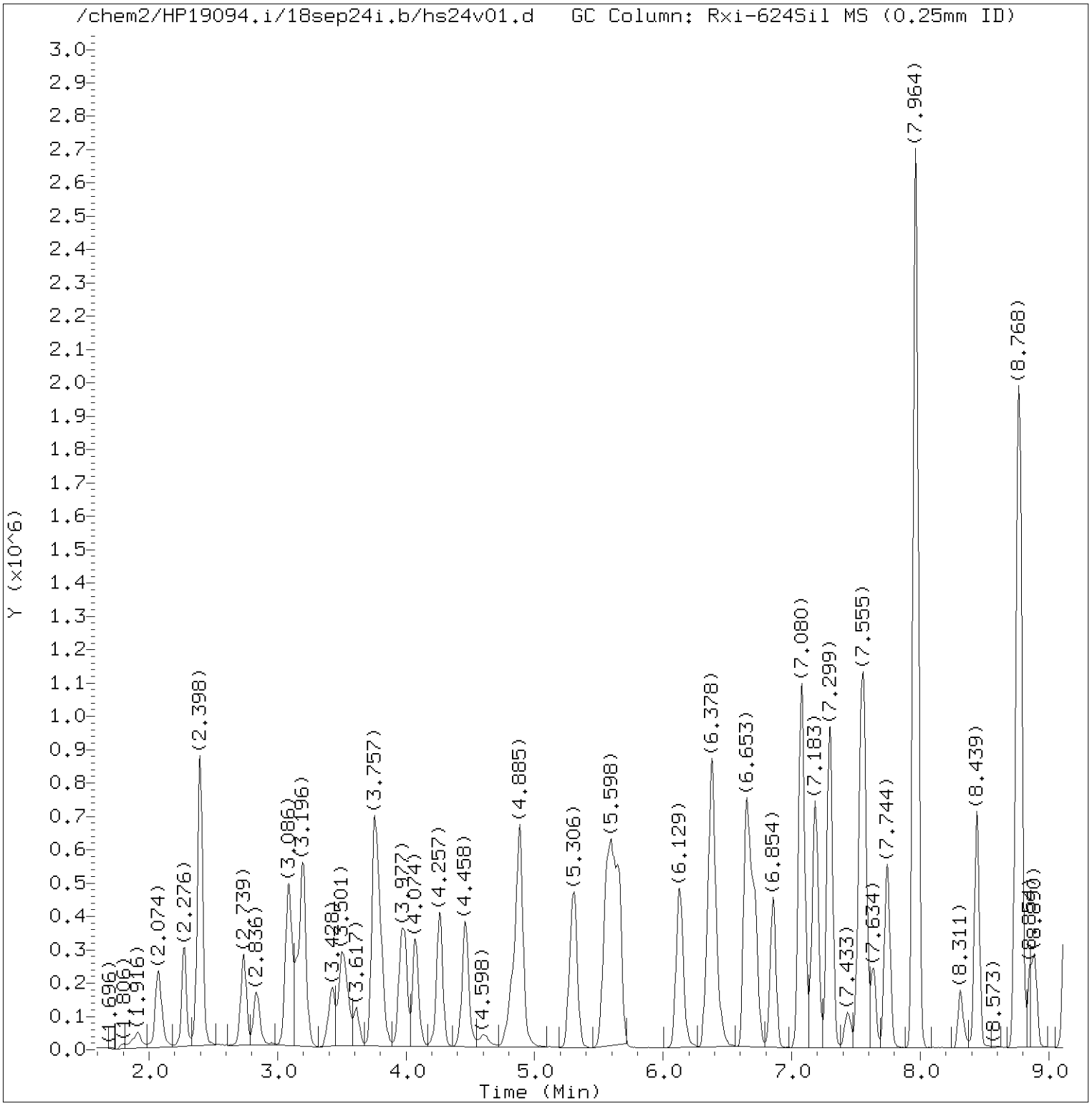
Target 3.5 esignature used. AE20 Page 400 of 1072



Total Ion Chromatogram (TIC)

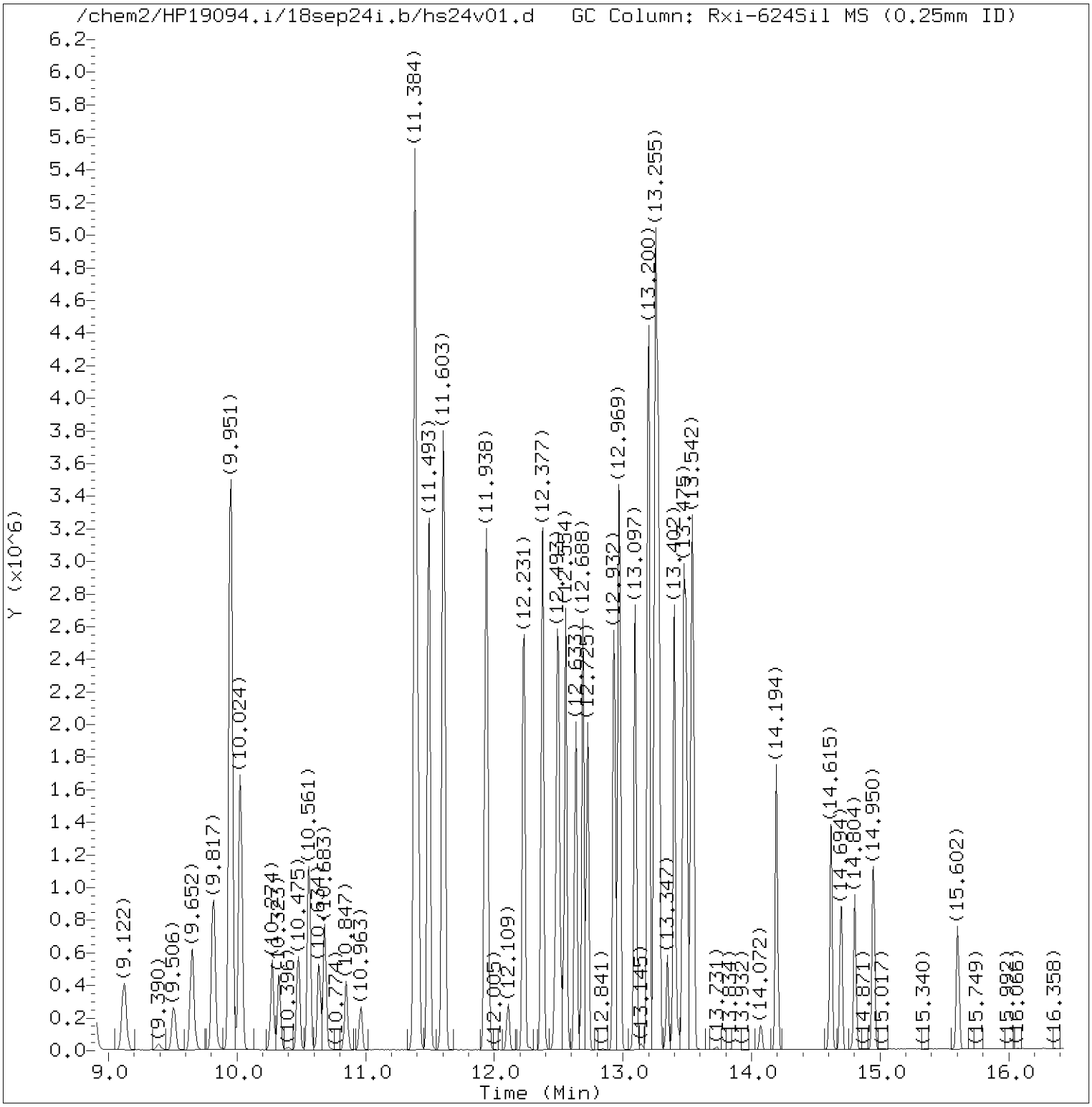
Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	440976	4.058
2) Chloromethane	(2)	2.270	50	486139	4.568
6) 1,3-Butadiene	(2)	2.391	39	470828M	4.171
5) Vinyl Chloride	(2)	2.398	62	471500	4.731
7) Bromomethane	(2)	2.739	94	321337	4.148
8) Chloroethane	(2)	2.836	64	272329	4.506
9) Dichlorofluoromethane	(2)	3.080	67	691996	4.813
10) Trichlorofluoromethane	(2)	3.147	101	560449	4.452
11) Ethyl ether	(2)	3.422	59	196604	4.606
12) Freon 123a	(2)	3.513	67	411851	5.164
13) Acrolein	(1)	3.617	56	199575	31.768
15) 1,1-Dichloroethene	(2)	3.751	96	307467	5.640
16) Freon 113	(2)	3.781	101	338841	5.274
14) Acetone	(1)	3.794	43	273073M	32.363
17) Methyl Iodide	(2)	3.958	142	551496	4.853
18) Carbon Disulfide	(2)	4.068	76	828724	4.777
21) Methyl Acetate	(1)	4.239	43	101587	4.289
22) Allyl Chloride	(2)	4.263	41	468004	4.516
23) Methylene Chloride	(2)	4.458	84	304627	4.953
26)*t-Butyl Alcohol-d10	(1)	4.489	65	141569	50.000
28) t-Butyl Alcohol	(1)	4.598	59	116690	48.290
29) Acrylonitrile	(1)	4.824	53	251882	23.115
30) Methyl Tertiary Butyl Ether	(2)	4.867	73	551498	4.919
31) trans-1,2-Dichloroethene	(2)	4.885	96	329189	5.350
32) n-Hexane	(2)	5.306	57	503625	5.148
33) 1,1-Dichloroethane	(2)	5.549	63	610622	5.212
34) di-Isopropyl Ether	(2)	5.598	45	1043824	5.017
35) 2-Chloro-1,3-Butadiene	(2)	5.653	53	529192	5.020
40) 1,2-Dichloroethene (Total)	(2)		96	691269	10.676
37) Ethyl t-butyl ether	(2)	6.129	59	800829	4.853
38) 2-Butanone	(1)	6.342	43	487401	35.288
39) cis-1,2-Dichloroethene	(2)	6.378	96	362080	5.326
41) 2,2-Dichloropropane	(2)	6.391	77	445489	5.324
42) Propionitrile	(1)	6.446	54	141875	37.842
45) Methacrylonitrile	(1)	6.653	67	482254	35.674
47) Bromochloromethane	(2)	6.708	128	130394	4.540
48) Tetrahydrofuran	(1)	6.714	71	86737	23.621
49) Chloroform	(2)	6.854	83	582593	5.349

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.073	113	703609	10.041
51) 1,1,1-Trichloroethane	(2)	7.086	97	494400	5.307
52) Cyclohexane	(2)	7.183	56	614255	5.051
55) 1,1-Dichloropropene	(2)	7.293	75	459498	5.201
54) Carbon Tetrachloride	(2)	7.299	117	423304	5.290
56) Isobutyl Alcohol	(1)	7.439	41	113054	120.918
57)$1,2-Dichloroethane-d4	(2)	7.531	102	123305	10.093
58) Benzene	(2)	7.561	78	1335484	5.117
59) 1,2-Dichloroethane	(2)	7.634	62	300394	5.002
60) t-Amyl methyl ether	(2)	7.744	73	666761	4.874
62) n-Heptane	(2)	7.964	43	519392	5.149
63)*Fluorobenzene	(2)	7.964	96	2780415	10.000
65) n-Butanol	(1)	8.311	56	183017	231.696
67) Trichloroethene	(2)	8.439	95	348659	5.218
69) Methylcyclohexane	(2)	8.756	83	590929	4.683
70) 1,2-Dichloropropane	(2)	8.780	63	327981	5.180
71) Methyl Methacrylate	(1)	8.854	69	118997	4.756
72) 1,4-Dioxane	(1)	8.878	88	23983M	126.103
73) Dibromomethane	(2)	8.890	93	135470	5.155
74) Bromodichloromethane	(2)	9.122	83	375174	5.270
76) 2-Nitropropane	(1)	9.390	41	29112	4.107
80) cis-1,3-Dichloropropene	(2)	9.652	75	421726	5.089
81) 4-Methyl-2-Pentanone	(1)	9.817	43	797497	23.212
82)$Toluene-d8	(3)	9.951	98	2812308	10.016
83) Toluene	(3)	10.024	92	831326	5.135
85) 1,3-Dichloropropene (total)	(3)		75	738103	10.160
84) trans-1,3-Dichloropropene	(3)	10.274	75	316377	5.072
86) Ethyl Methacrylate	(3)	10.329	69	258646	4.840
88) 1,1,2-Trichloroethane	(3)	10.475	97	194331	5.216
89) Tetrachloroethene	(3)	10.561	166	376715	5.150
90) 1,3-Dichloropropane	(3)	10.634	76	329045	4.984
91) 2-Hexanone	(1)	10.683	43	532351	22.763
93) Dibromochloromethane	(3)	10.847	129	230894	5.171
95) 1,2-Dibromoethane	(3)	10.963	107	179555	5.142
96) 1-Chlorohexane	(3)	11.384	91	476940M	4.939
97)*Chlorobenzene-d5	(3)	11.384	117	2181583	10.000
98) Chlorobenzene	(3)	11.408	112	870508	5.068
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	291823	5.148

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

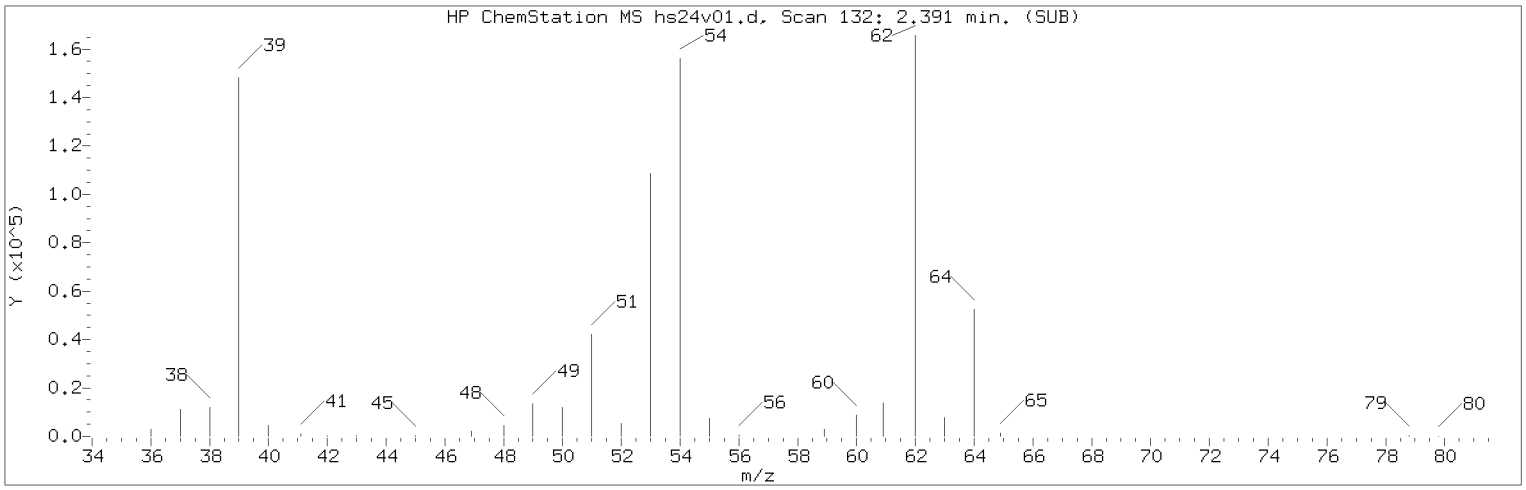
Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
100) Ethylbenzene	(3)	11.493	91	1615822	5.107
101) m+p-Xylene	(3)	11.603	106	1211106	10.320
105) Xylene (Total)	(3)		106	1782147	15.409
104) o-Xylene	(3)	11.932	106	571041	5.089
106) Styrene	(3)	11.944	104	940841	5.241
107) Bromoform	(3)	12.109	173	123890	5.049
108) Isopropylbenzene	(3)	12.231	105	1599849	5.223
111)$4-Bromofluorobenzene	(3)	12.371	95	1014976	9.929
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	224147	4.994
114) Bromobenzene	(4)	12.493	156	351229	5.148
115) trans-1,4-Dichloro-2-butene	(1)	12.499	53	259900	24.153
116) 1,2,3-Trichloropropane	(4)	12.524	110	57126M	4.923
117) n-Propylbenzene	(4)	12.554	91	1935469	5.217
119) 2-Chlorotoluene	(4)	12.633	126	367412	5.106
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	1293562	5.147
122) 4-Chlorotoluene	(4)	12.725	126	368733	5.114
125) tert-Butylbenzene	(4)	12.932	134	278567M	5.097
126) Pentachloroethane	(4)	12.969	167	207735	4.870
127) 1,2,4-Trimethylbenzene	(4)	12.975	105	1301652	5.076
128) sec-Butylbenzene	(4)	13.097	105	1707856	5.244
131) 1,3-Dichlorobenzene	(4)	13.194	146	680593	5.021
132) p-Isopropyltoluene	(4)	13.200	119	1416458	5.251
133)*1,4-Dichlorobenzene-d4	(4)	13.255	152	1131416	10.000
134) 1,4-Dichlorobenzene	(4)	13.267	146	676511	5.084
135) 1,2,3-Trimethylbenzene	(4)	13.280	120	562245	4.779
136) Benzyl Chloride	(4)	13.347	126	76709M	4.728
138) n-Butylbenzene	(4)	13.493	92	700126	5.229
139) 1,2-Dichlorobenzene	(4)	13.530	146	599568	5.013
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	30890M	5.304
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	509846	5.056
145) 1,2,4-Trichlorobenzene	(4)	14.621	180	415513	5.058
146) Hexachlorobutadiene	(4)	14.700	225	160319	5.164
147) Naphthalene	(4)	14.804	128	675168	5.194
148) 1,2,3-Trichlorobenzene	(4)	14.950	180	346080	5.124

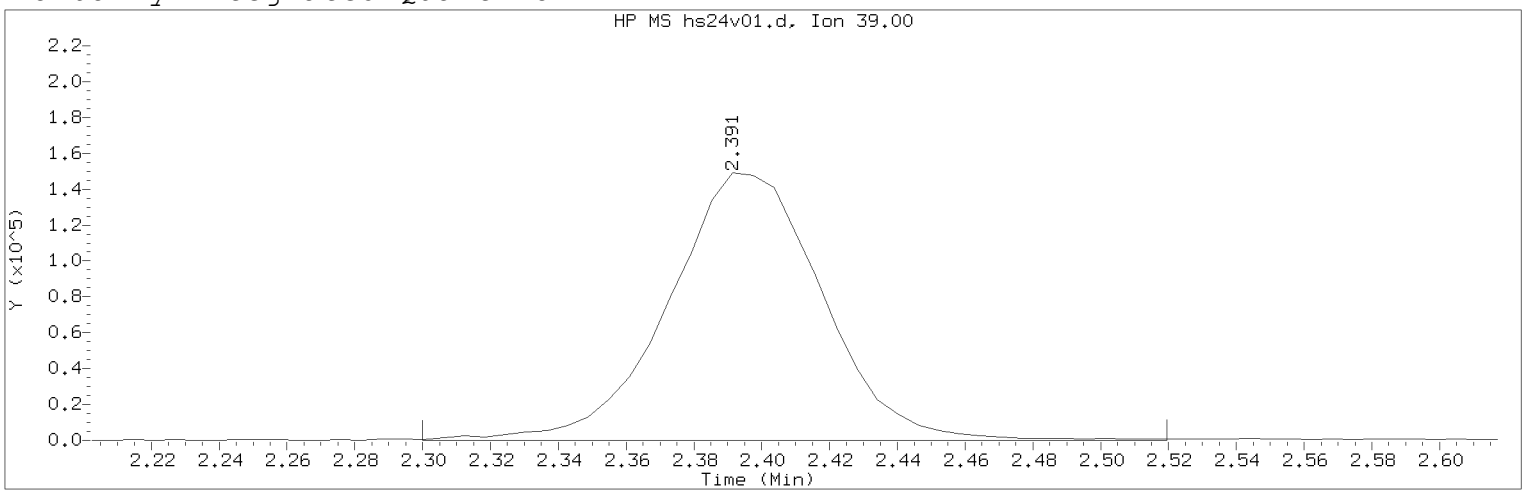
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

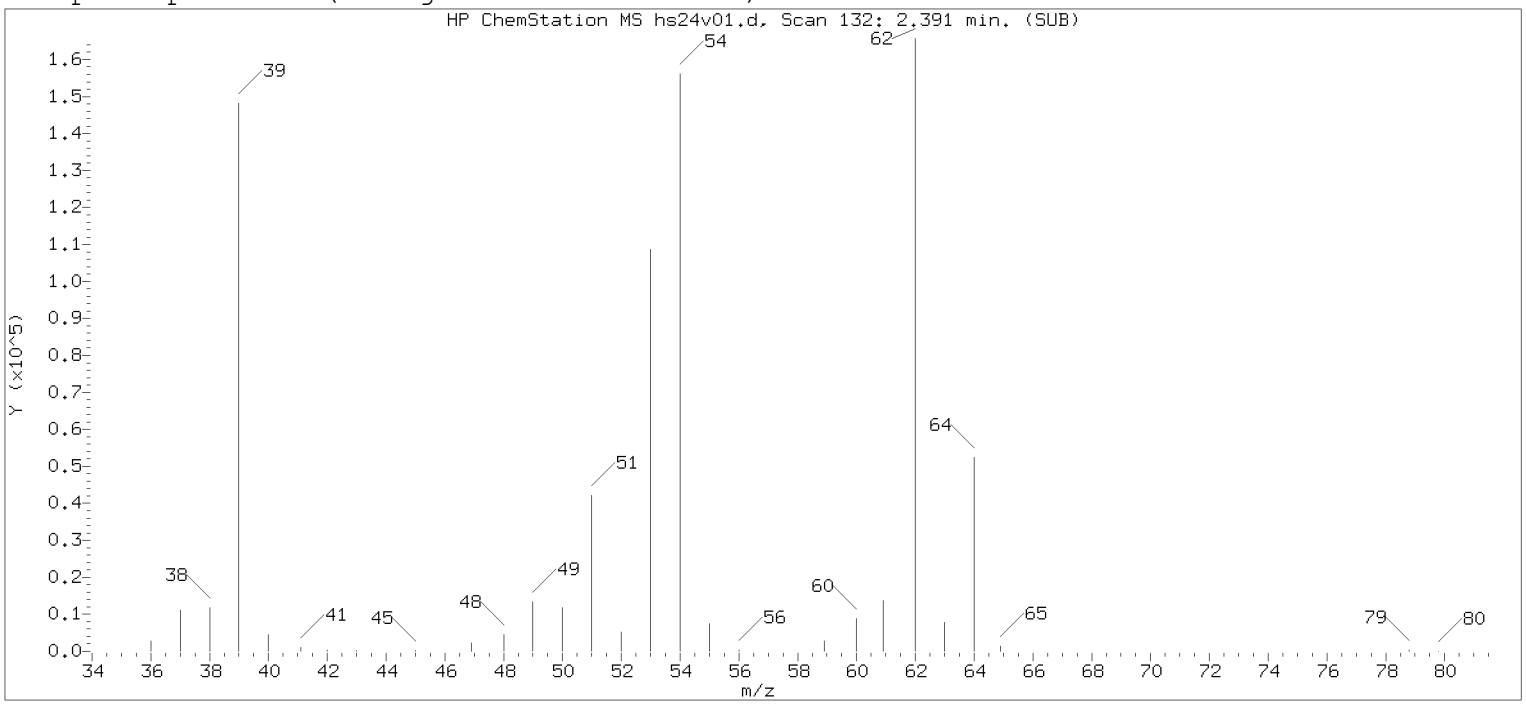
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area (flag) : 470828M
On-Column Amount (ng) : 4.1709
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

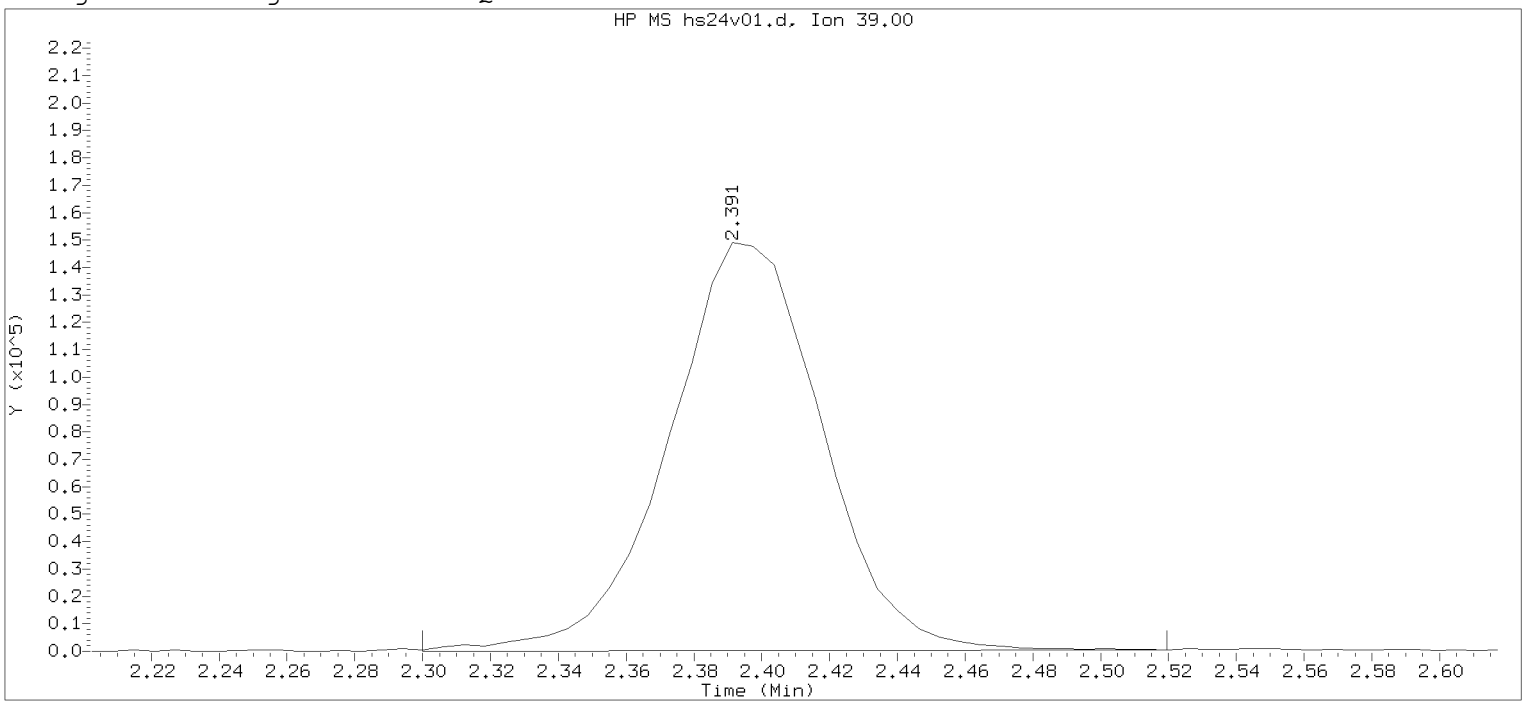
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

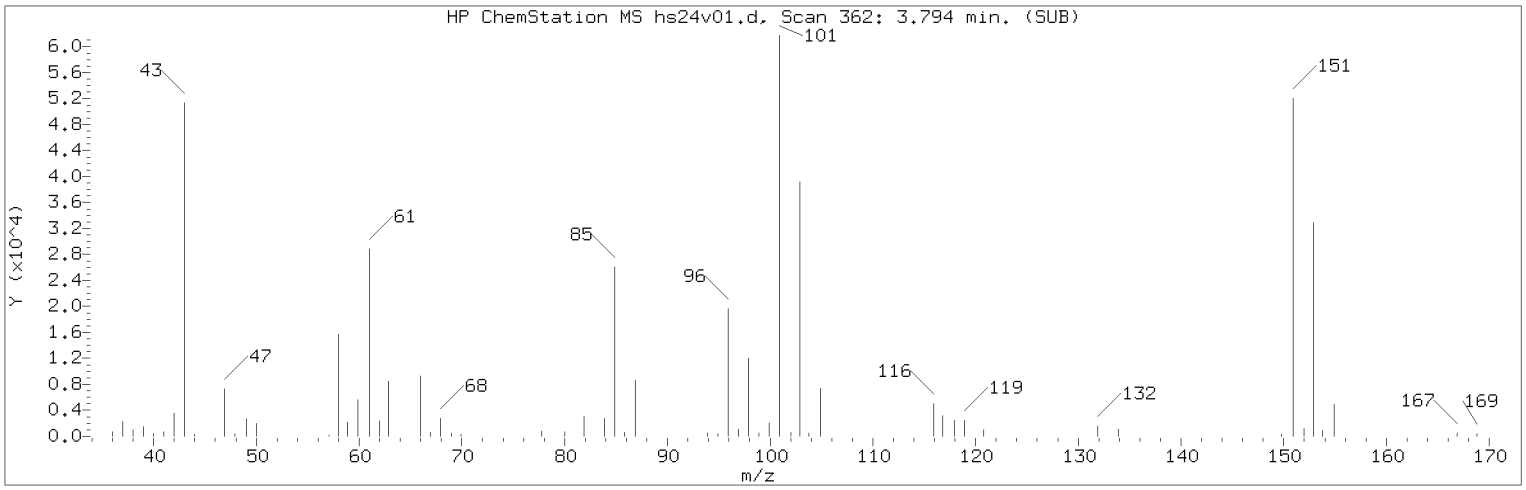
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

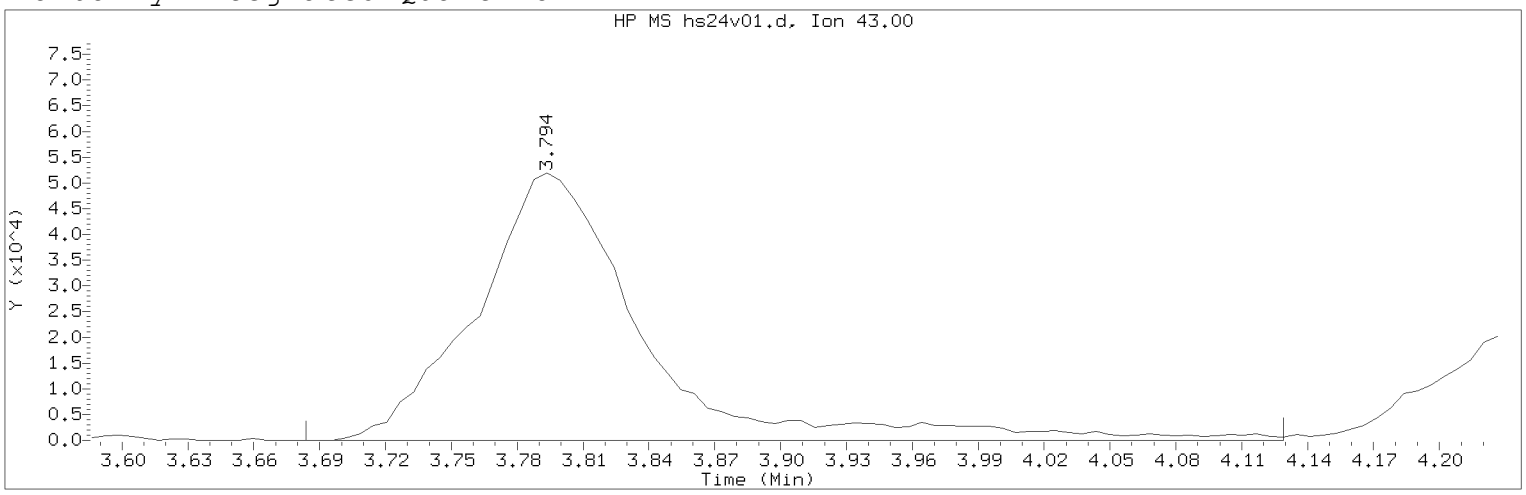
Compound Number : 6
Compound Name : 1,3-Butadiene
Scan Number : 132
Retention Time (minutes): 2.391
Quant Ion : 39.00
Area : 466594
On-column Amount (ng) : 5.0567
Integration start scan : 116 Integration stop scan: 152
Y at integration start : 43 Y at integration end: 572

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used. AE20 Page 407

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

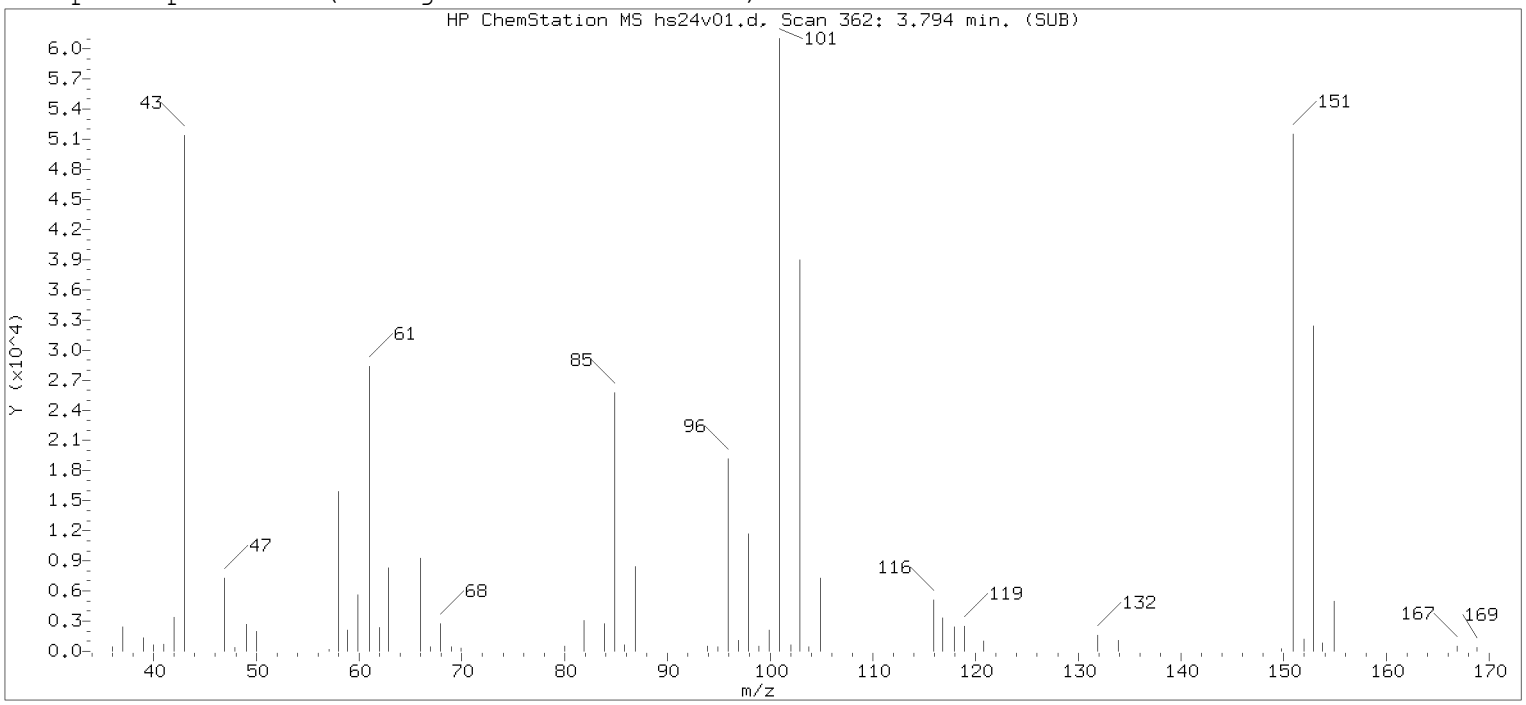
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 273073M
On-Column Amount (ng) : 32.3626
Integration start scan : 343 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

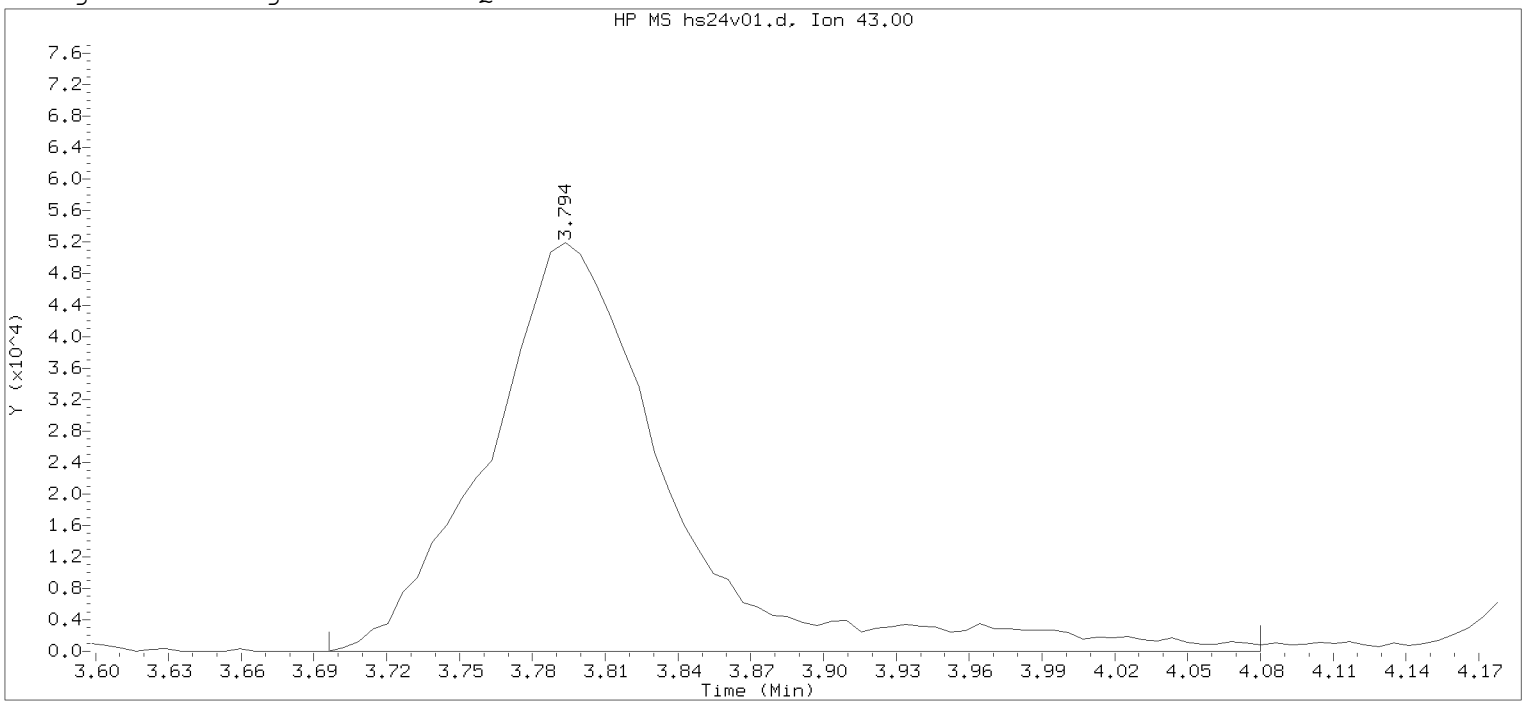
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

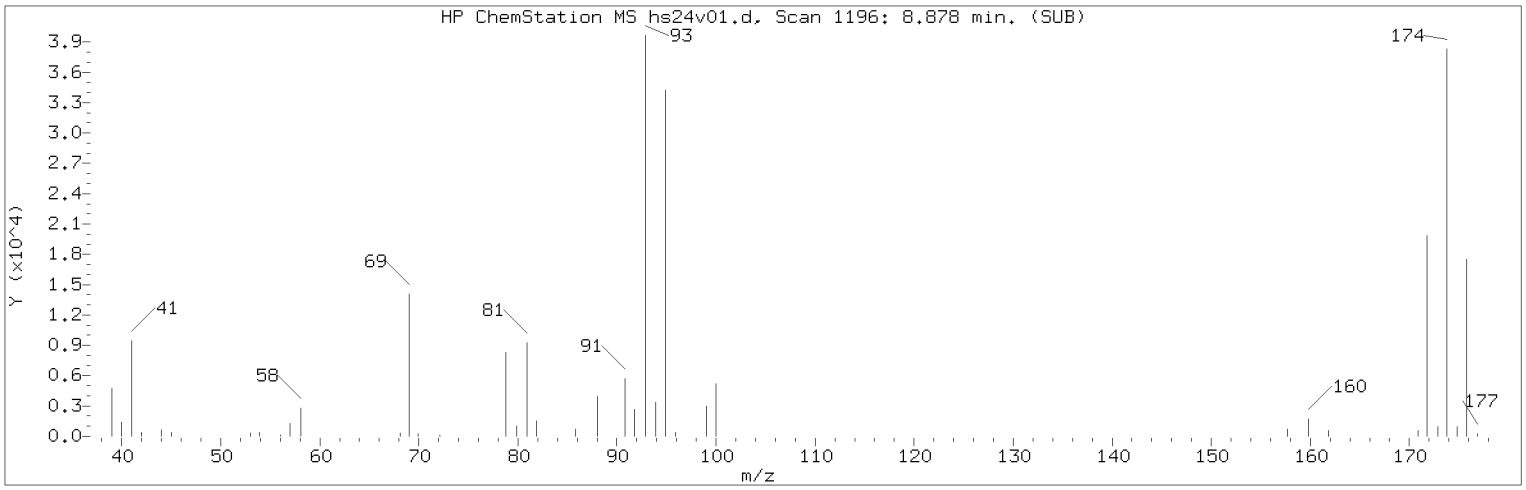
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

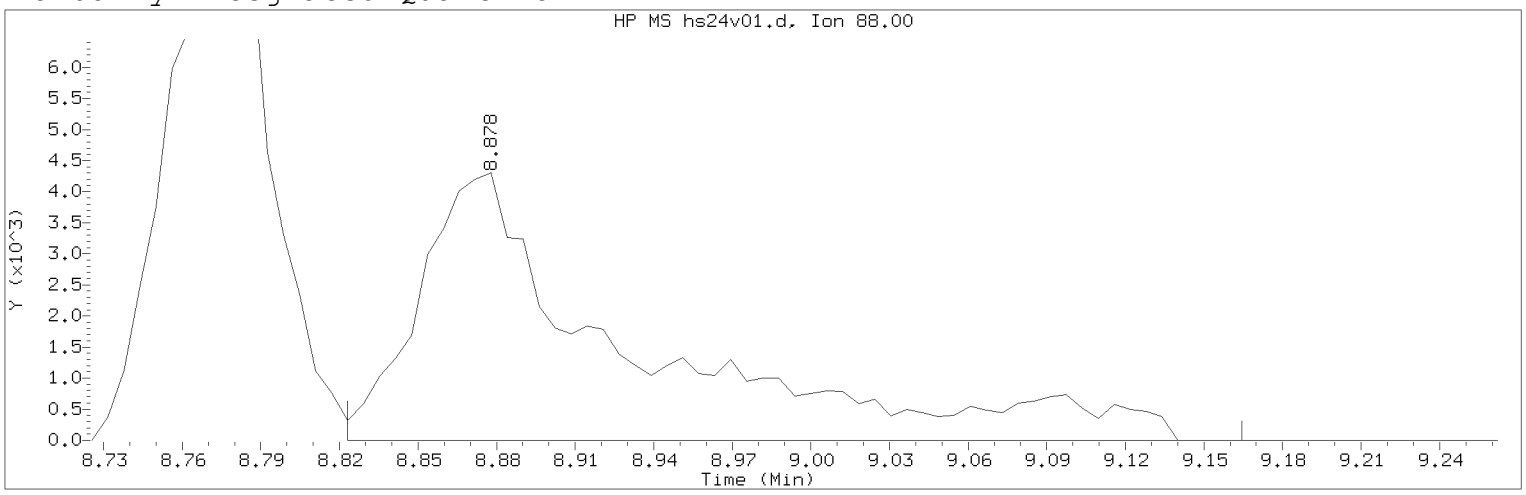
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 270202
On-column Amount (ng) : 34.6600
Integration start scan : 345 Integration stop scan: 408
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

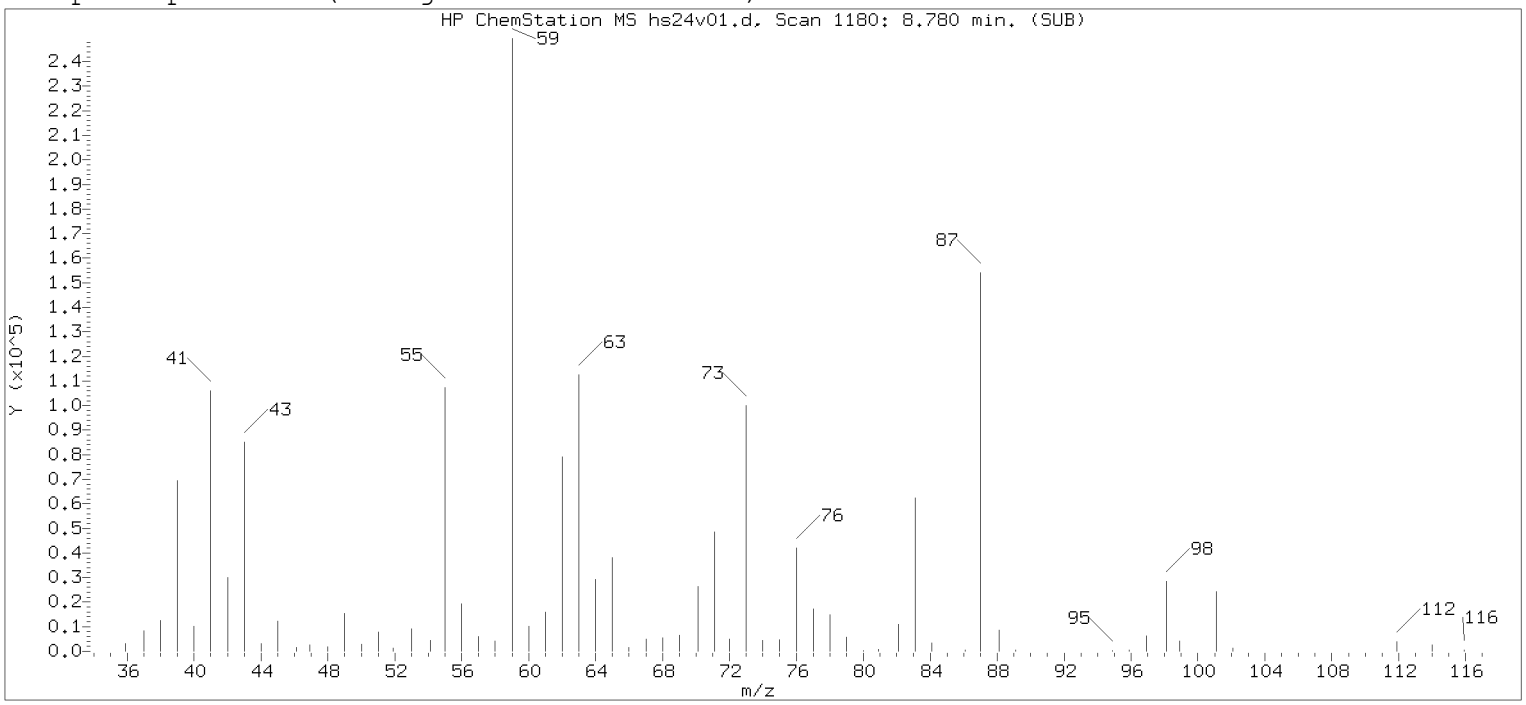
Compound Number : 72
Compound Name : 1,4-Dioxane
Scan Number : 1196
Retention Time (minutes): 8.878
Quant Ion : 88.00
Area (flag) : 23983M
On-Column Amount (ng) : 126.1028
Integration start scan : 1186 Integration stop scan: 1242
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

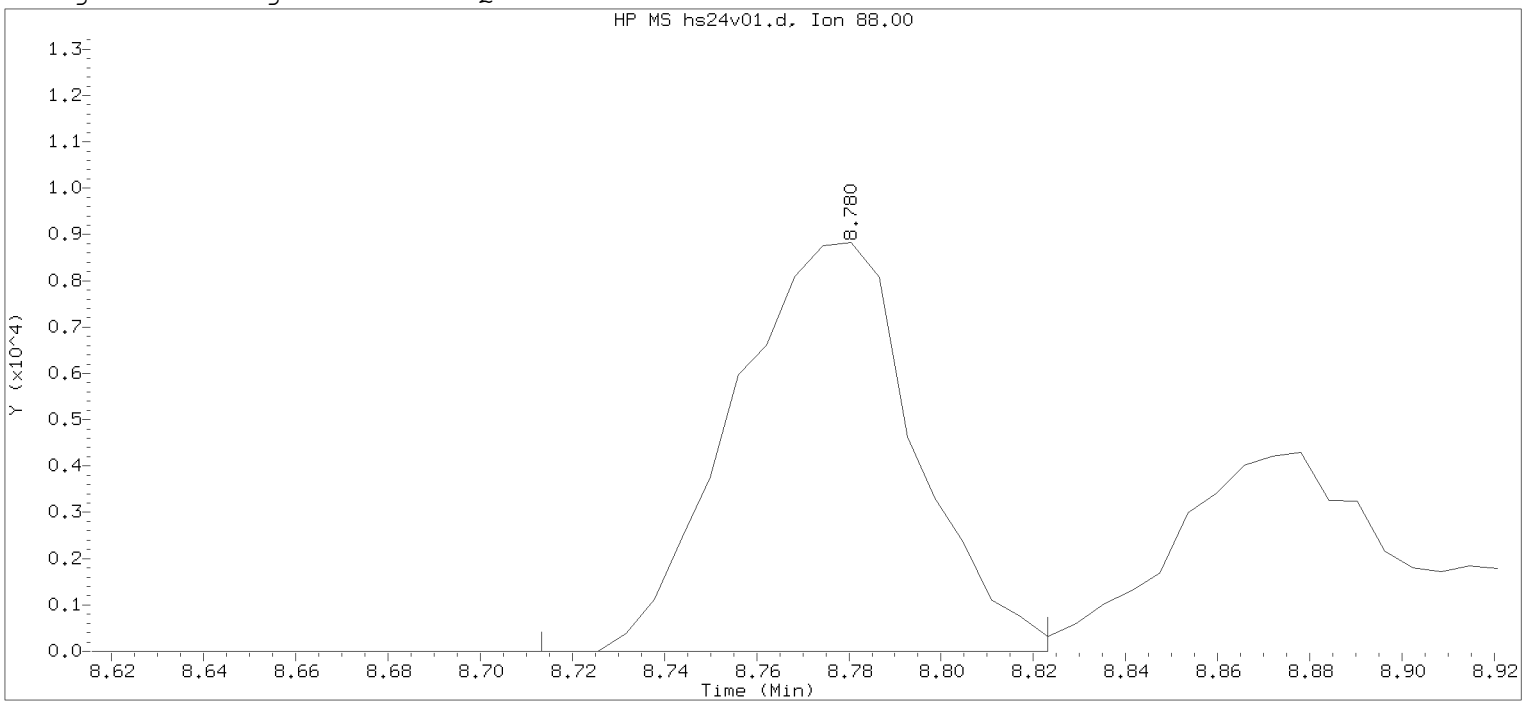
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

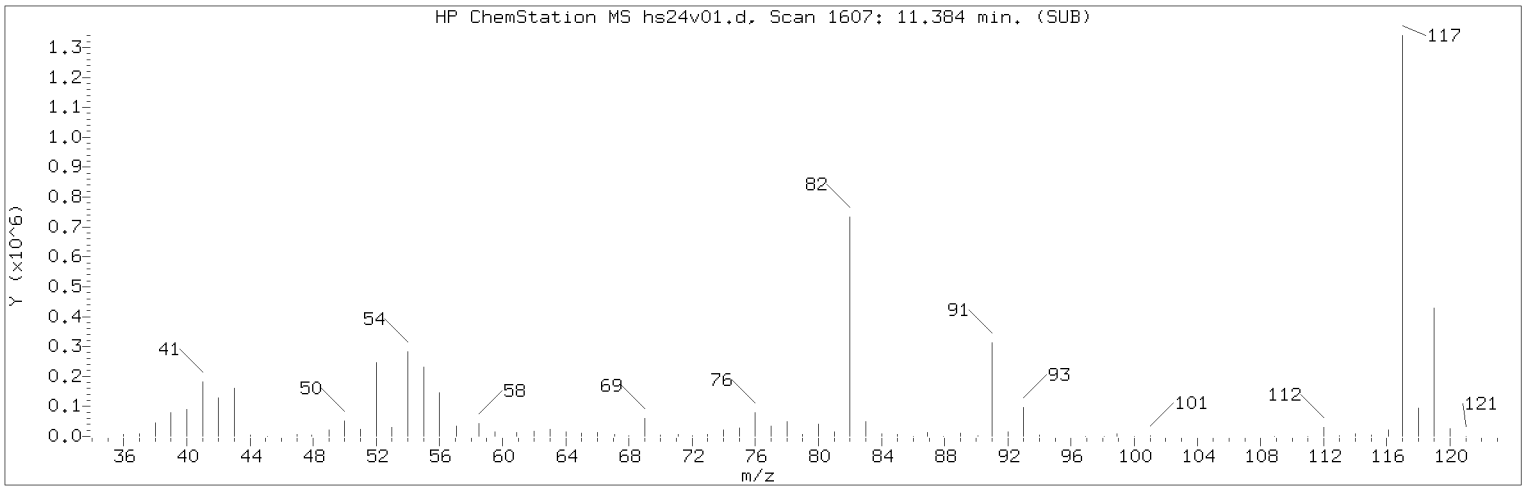
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

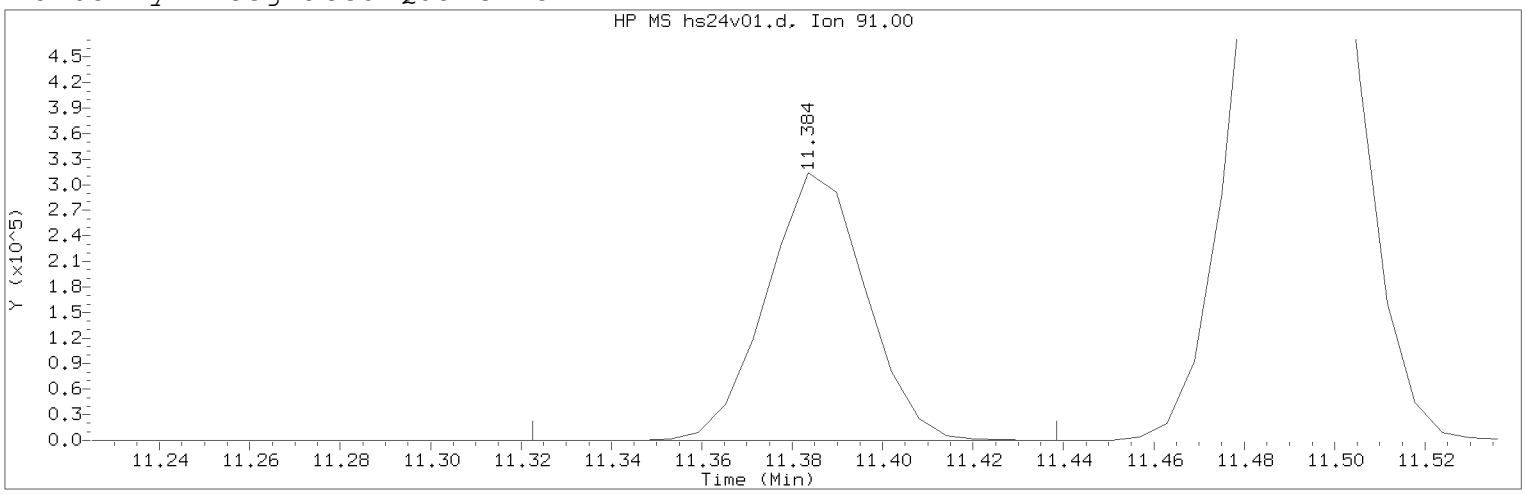
Compound Number	: 72		
Compound Name	: 1,4-Dioxane		
Scan Number	: 1180		
Retention Time (minutes)	: 8.780		
Quant Ion	: 88.00		
Area	: 24295		
On-column Amount (ng)	: 144.0216		
Integration start scan	: 1168	Integration stop scan:	1186
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used. AE20 Page 411

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

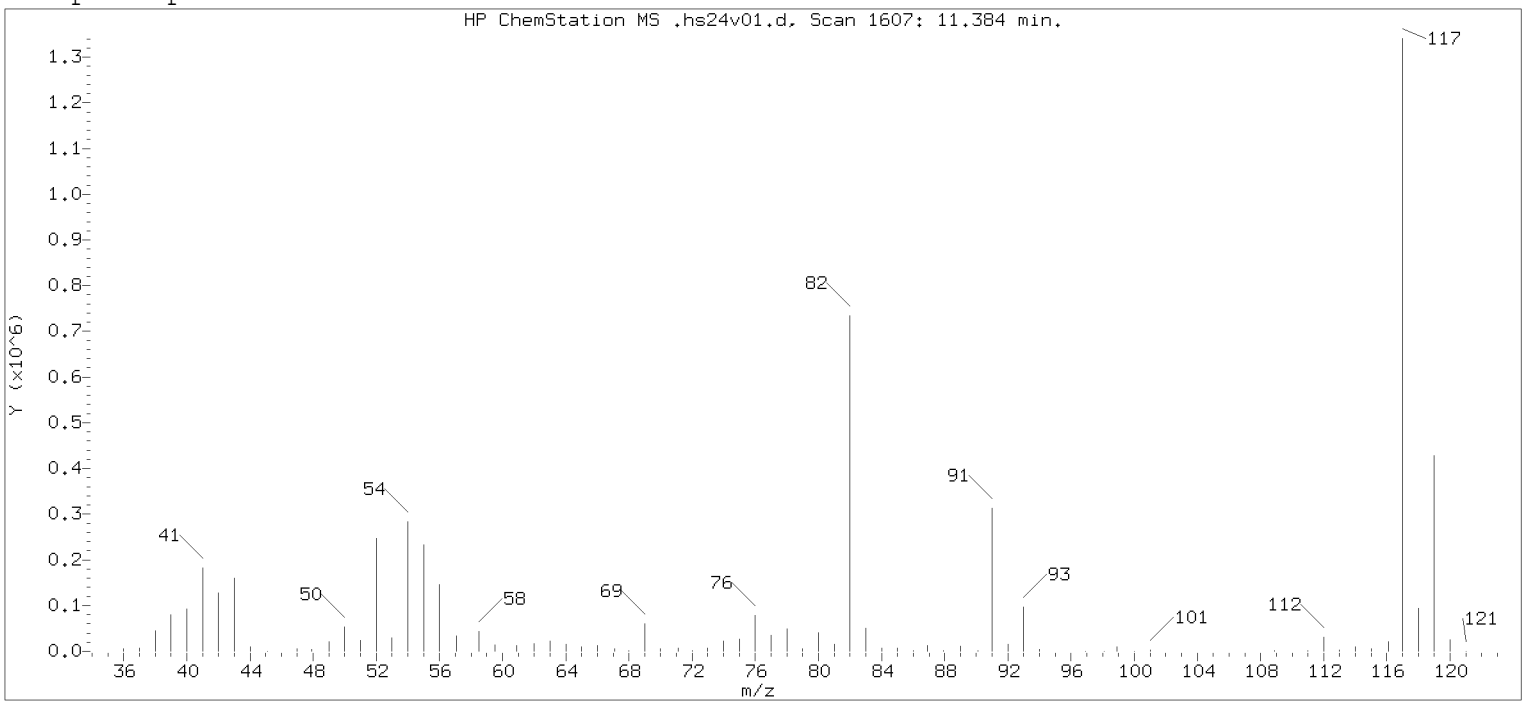
Compound Number : 96
Compound Name : 1-Chlorohexane
Scan Number : 1607
Retention Time (minutes): 11.384
Quant Ion : 91.00
Area (flag) : 476940M
On-Column Amount (ng) : 4.9395
Integration start scan : 1596 Integration stop scan: 1615
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

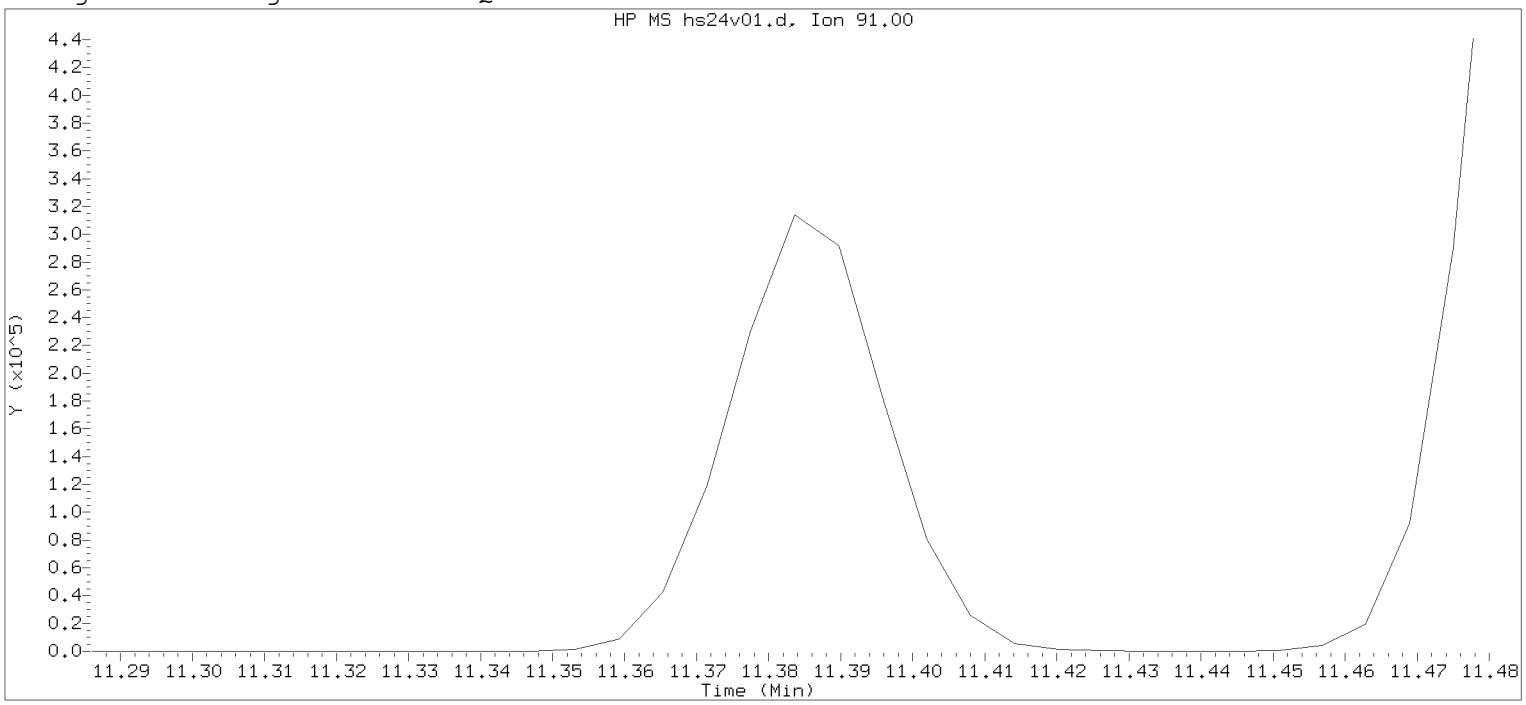
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

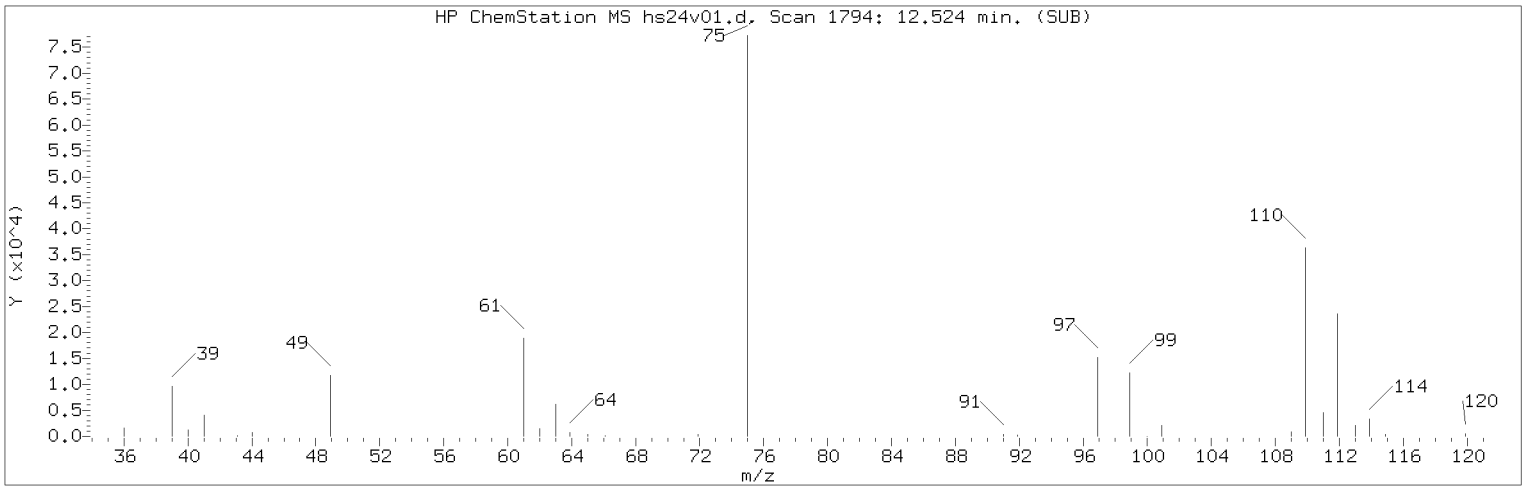
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

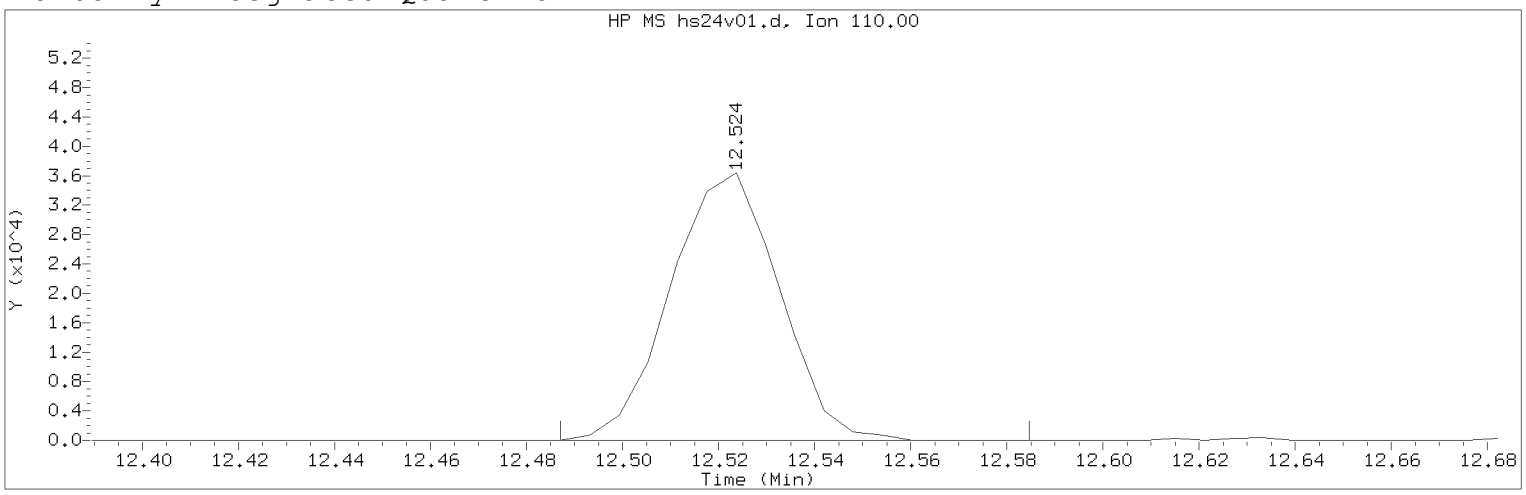
Compound Number : 96
Compound Name : 1-Chlorohexane
Expected RT (minutes) : 11.384
Quant Ion : 91.00

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

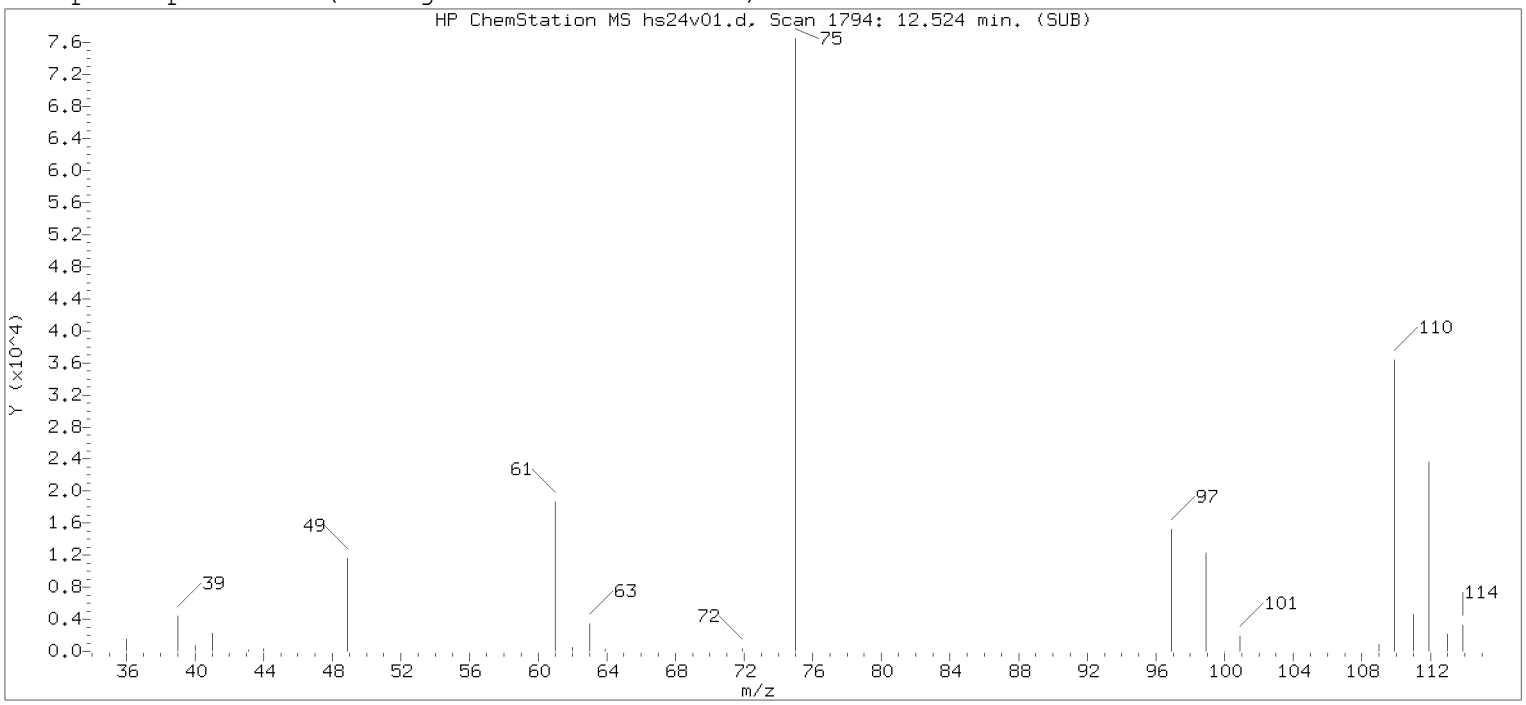
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area (flag) : 57126M
On-Column Amount (ng) : 4.9234
Integration start scan : 1787 Integration stop scan: 1803
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

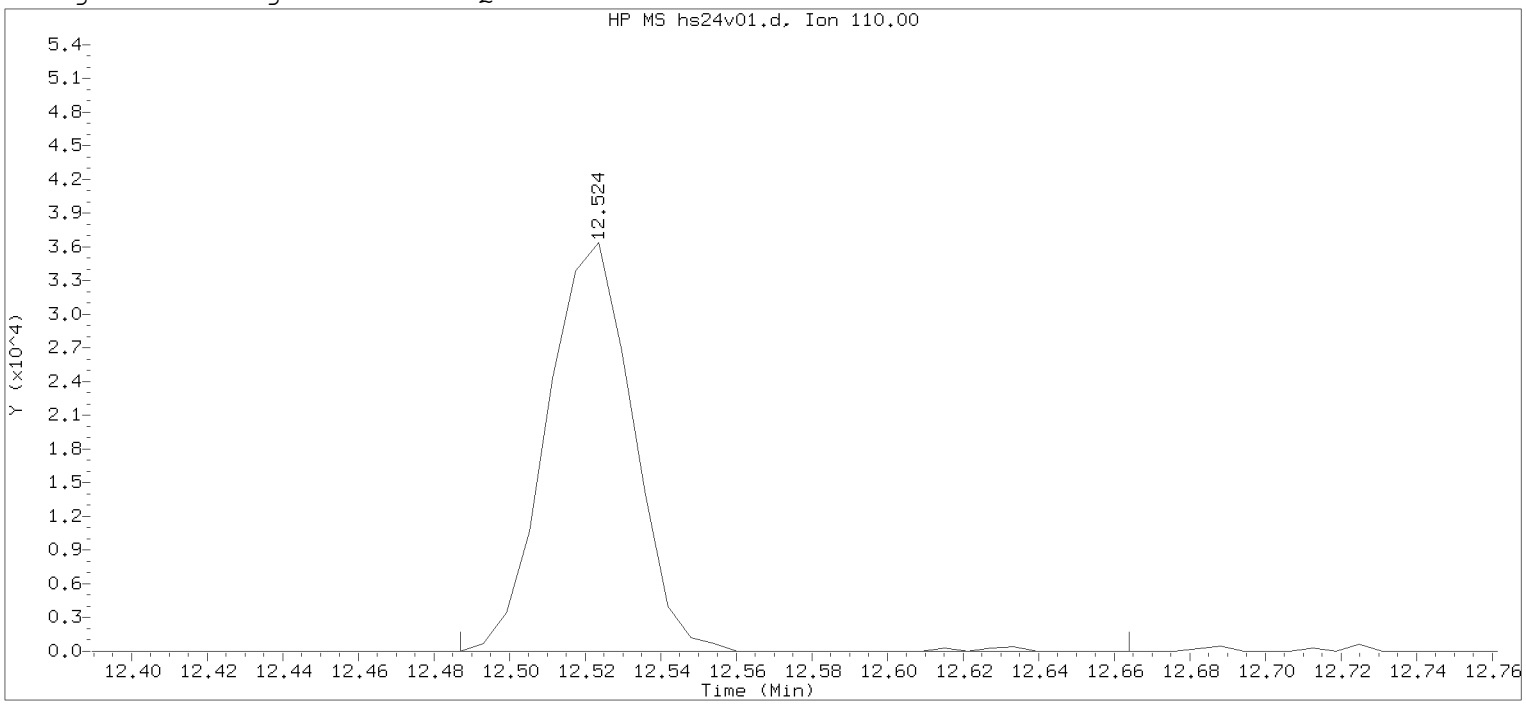
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

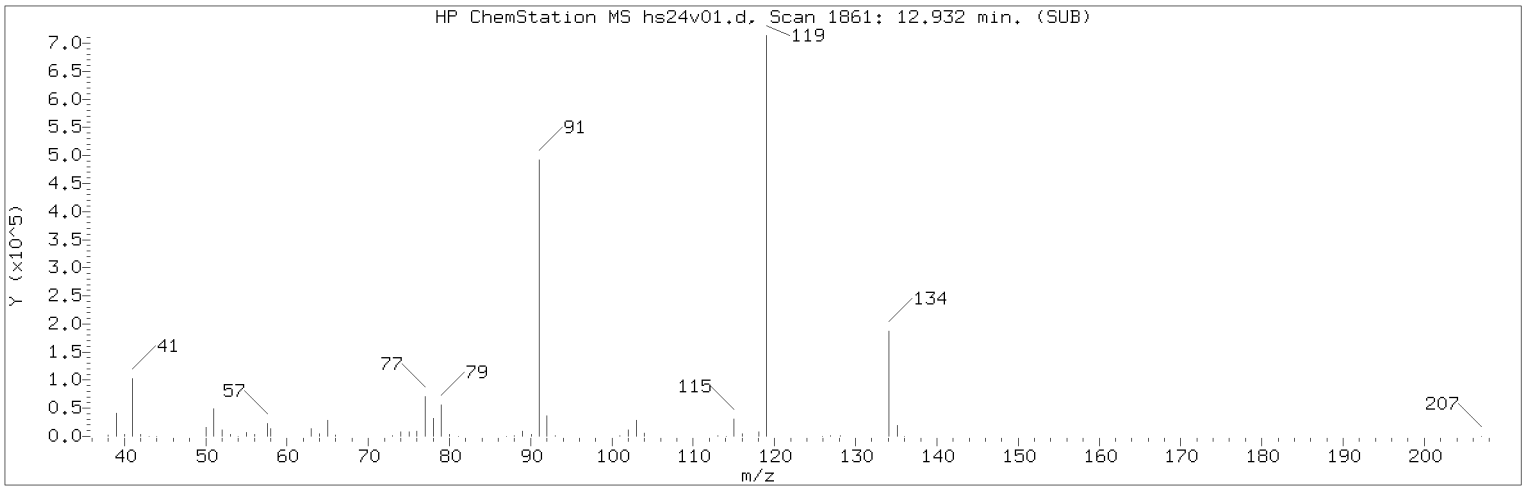
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

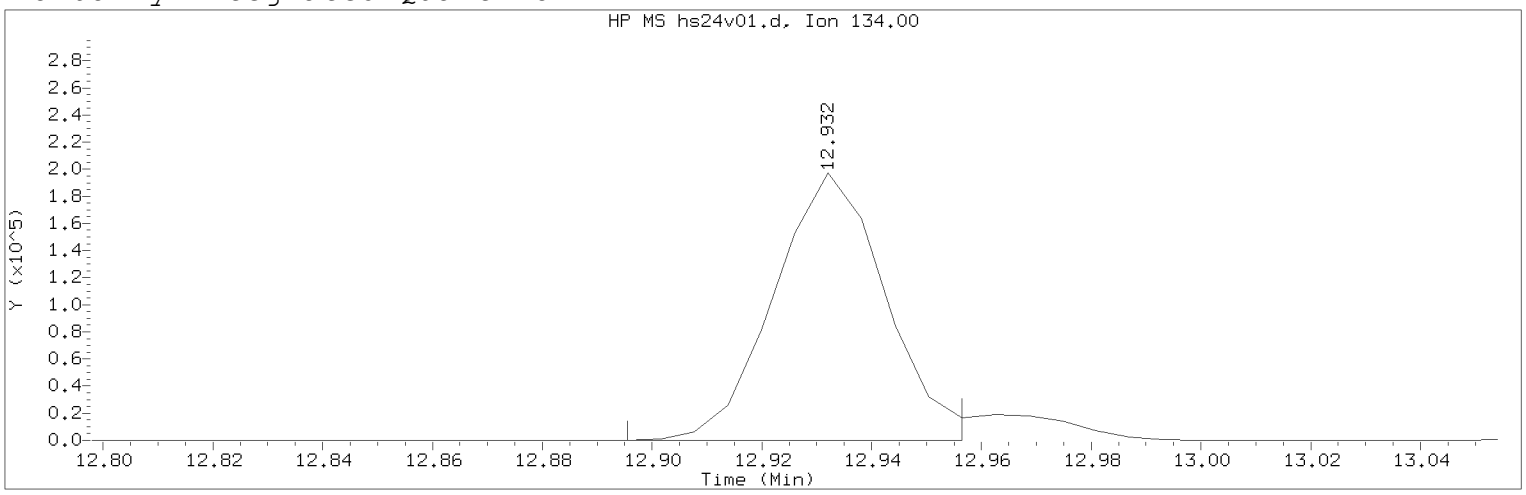
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1794
Retention Time (minutes): 12.524
Quant Ion : 110.00
Area : 57467
On-column Amount (ng) : 4.9421
Integration start scan : 1787 Integration stop scan: 1816
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

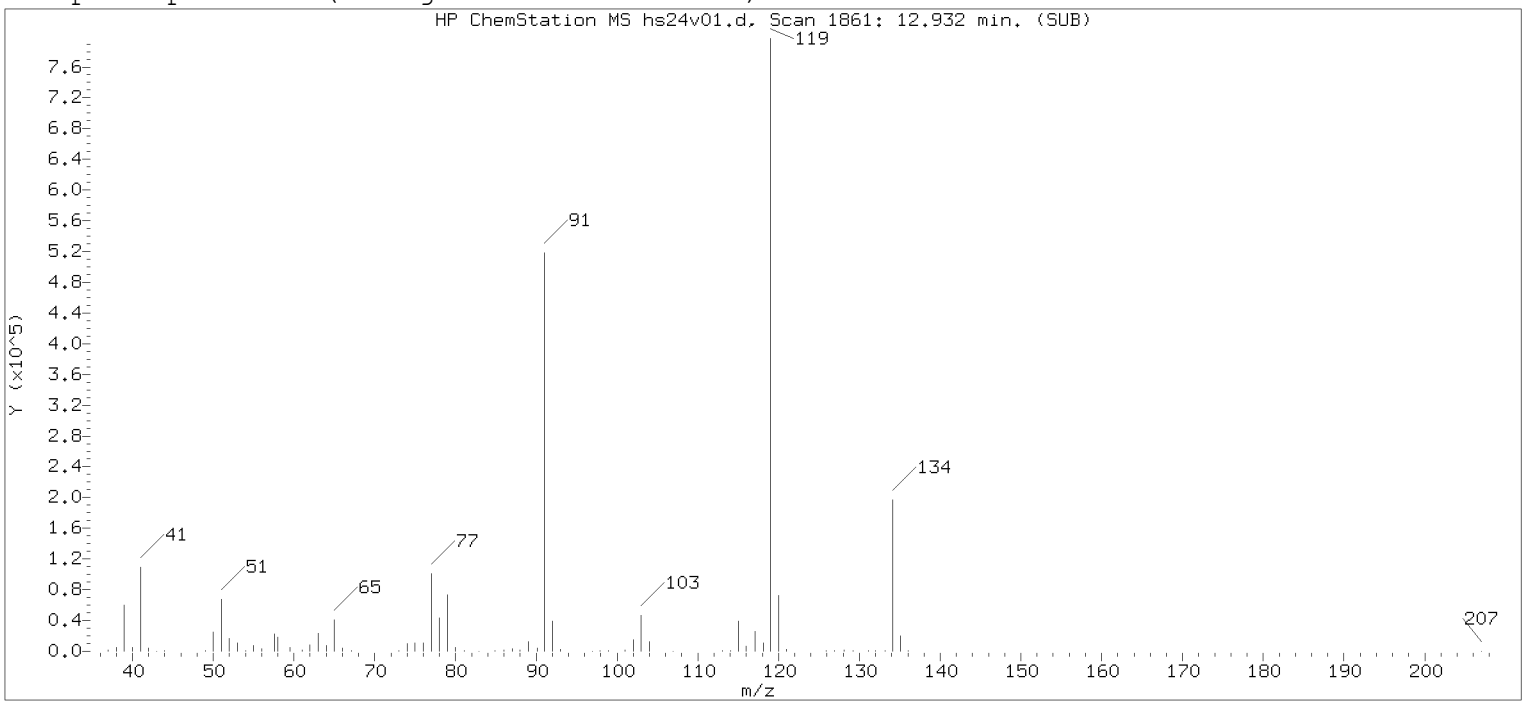
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 278567M
On-Column Amount (ng) : 5.0967
Integration start scan : 1854 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

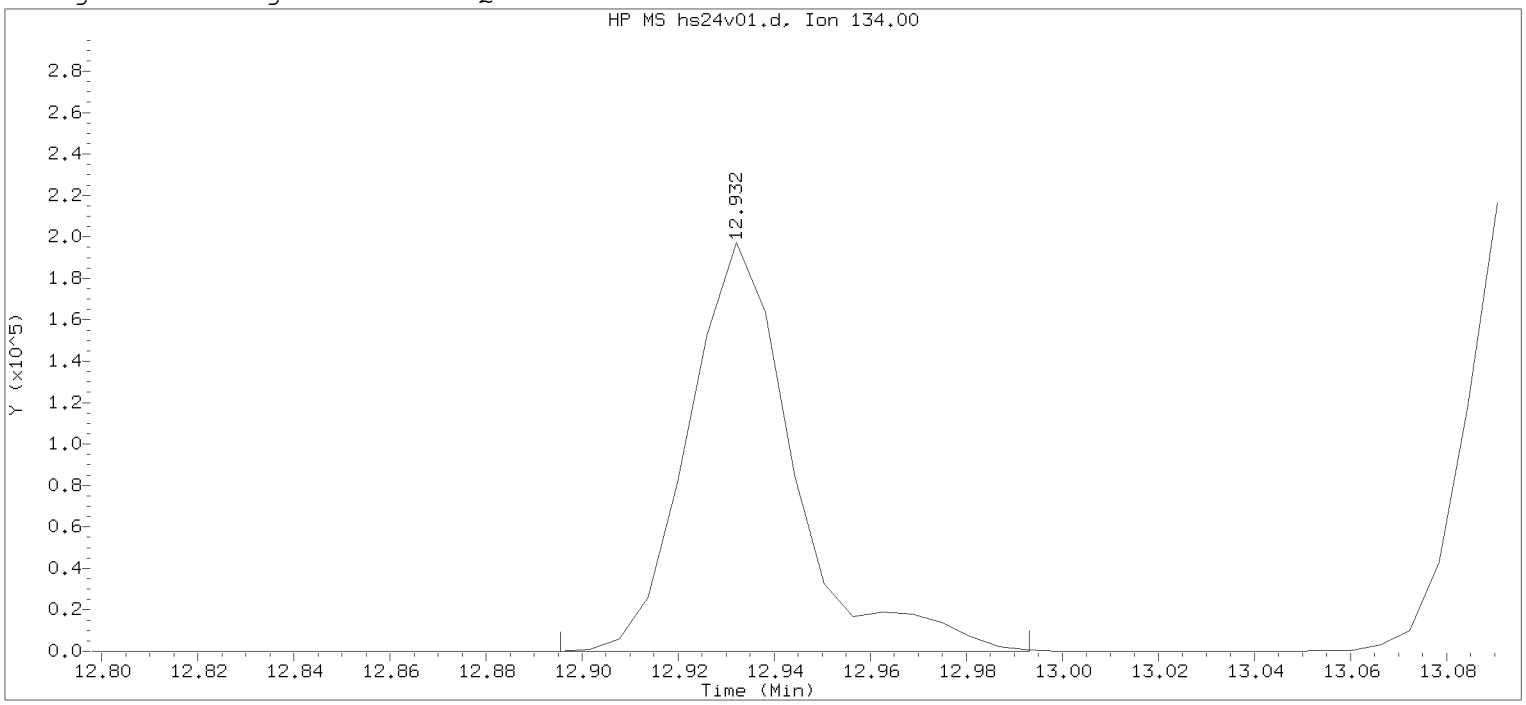
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

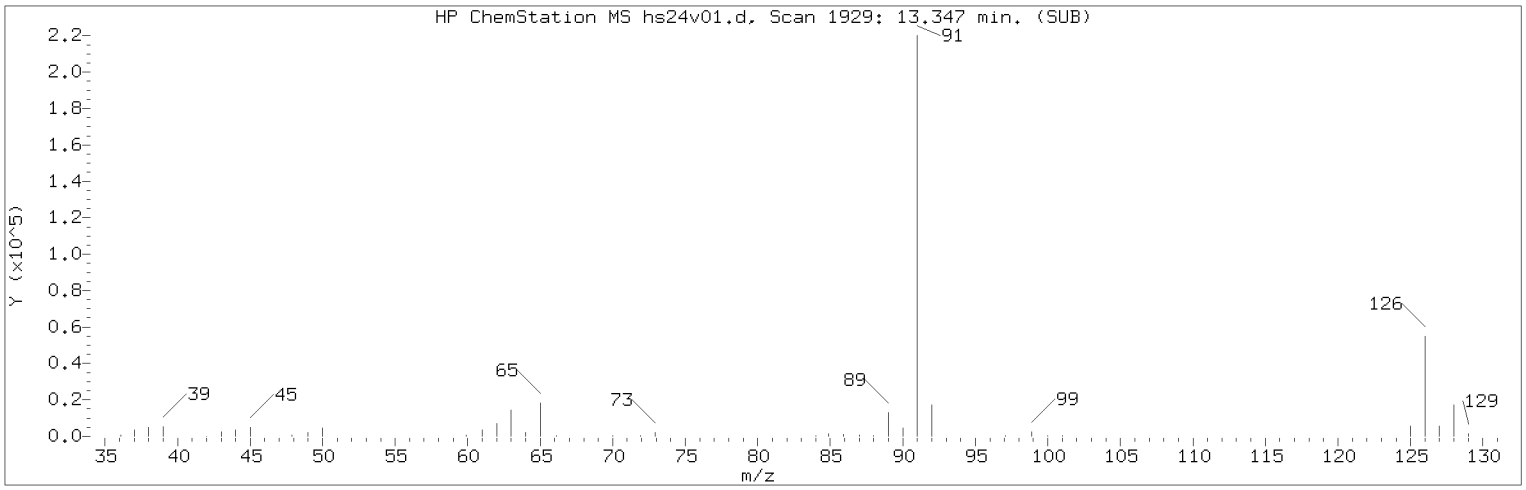
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

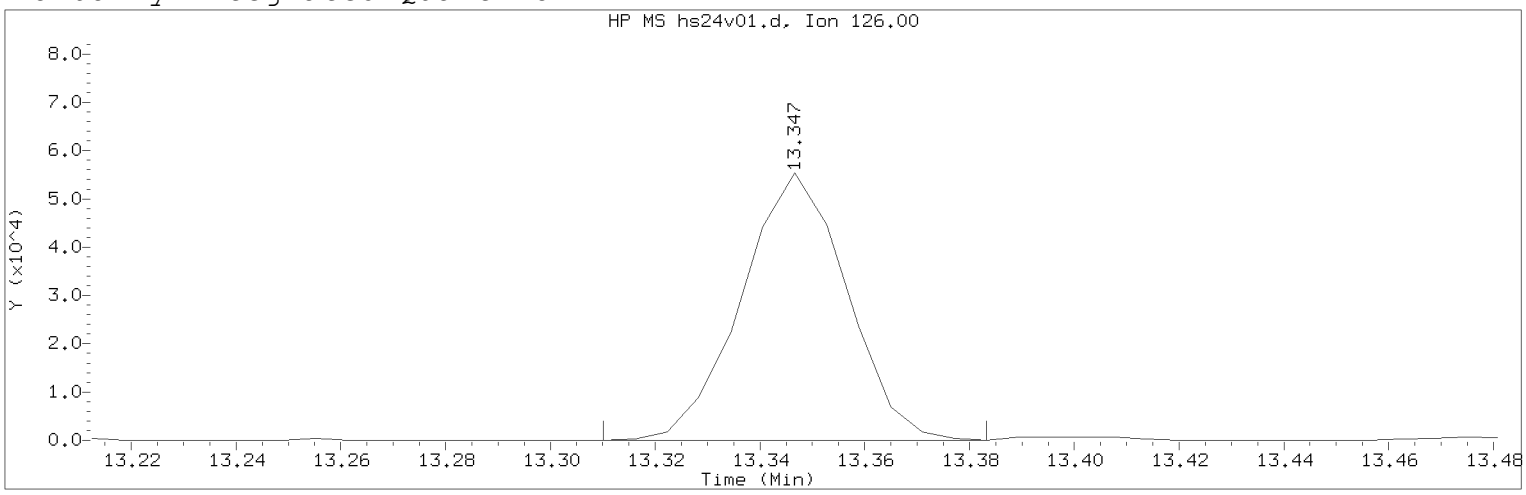
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area : 300676
On-column Amount (ng) : 5.3090
Integration start scan : 1854 Integration stop scan: 1870
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used. AE20 Page 417 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

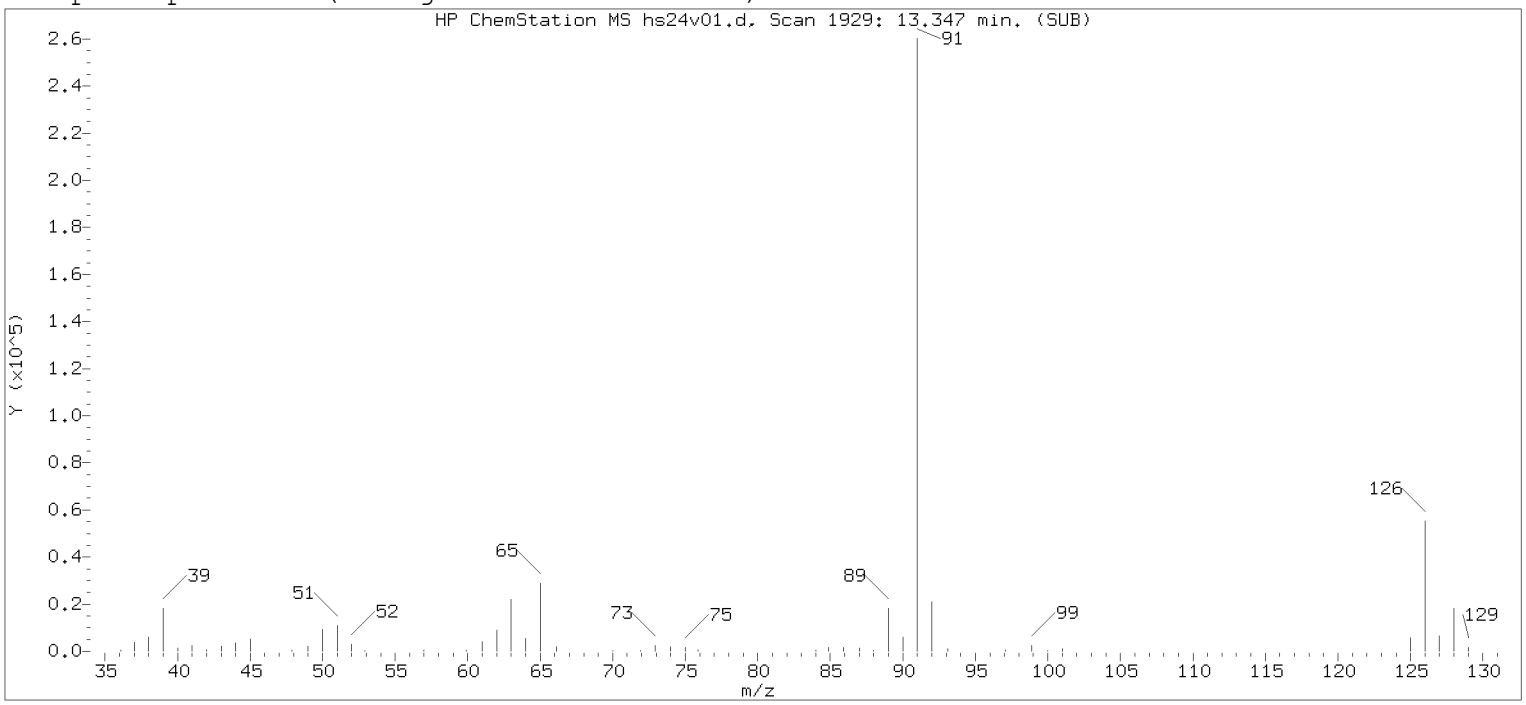
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area (flag) : 76709M
On-Column Amount (ng) : 4.7280
Integration start scan : 1922 Integration stop scan: 1934
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

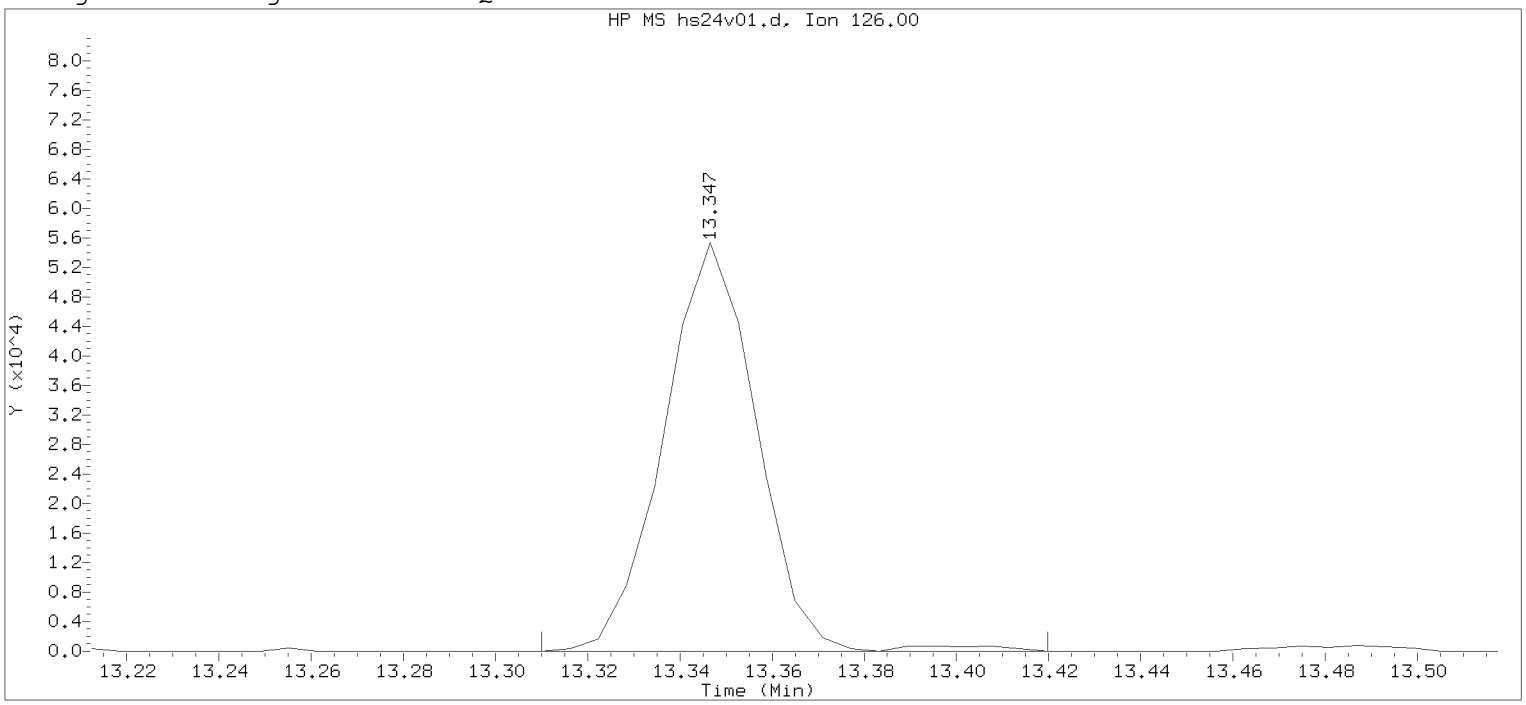
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

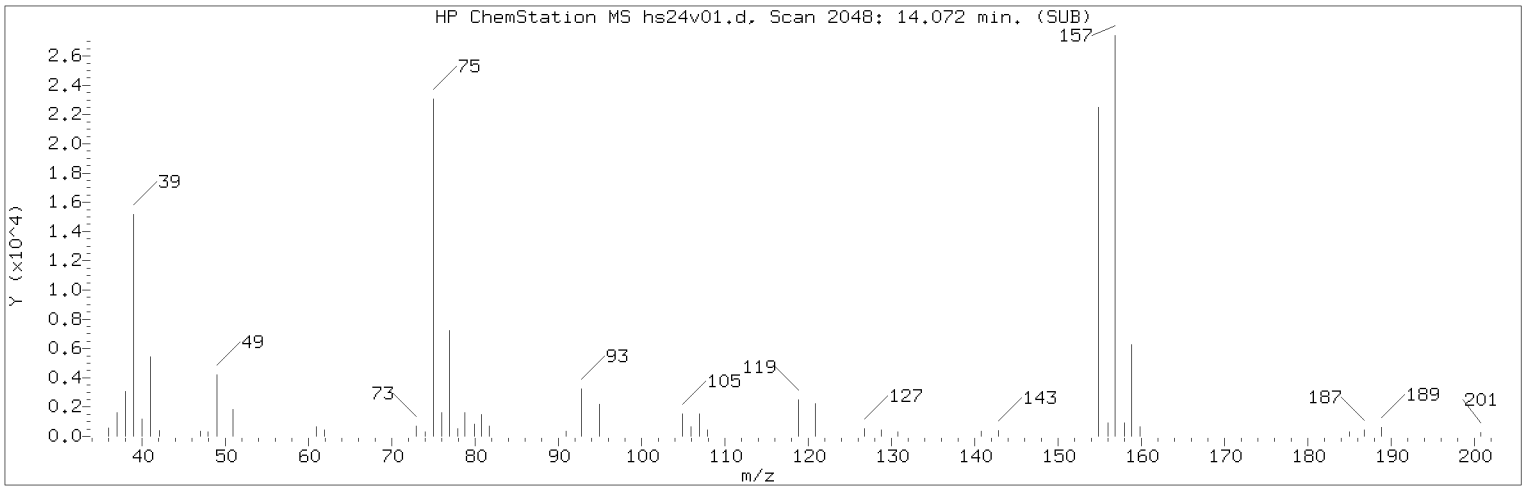
Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

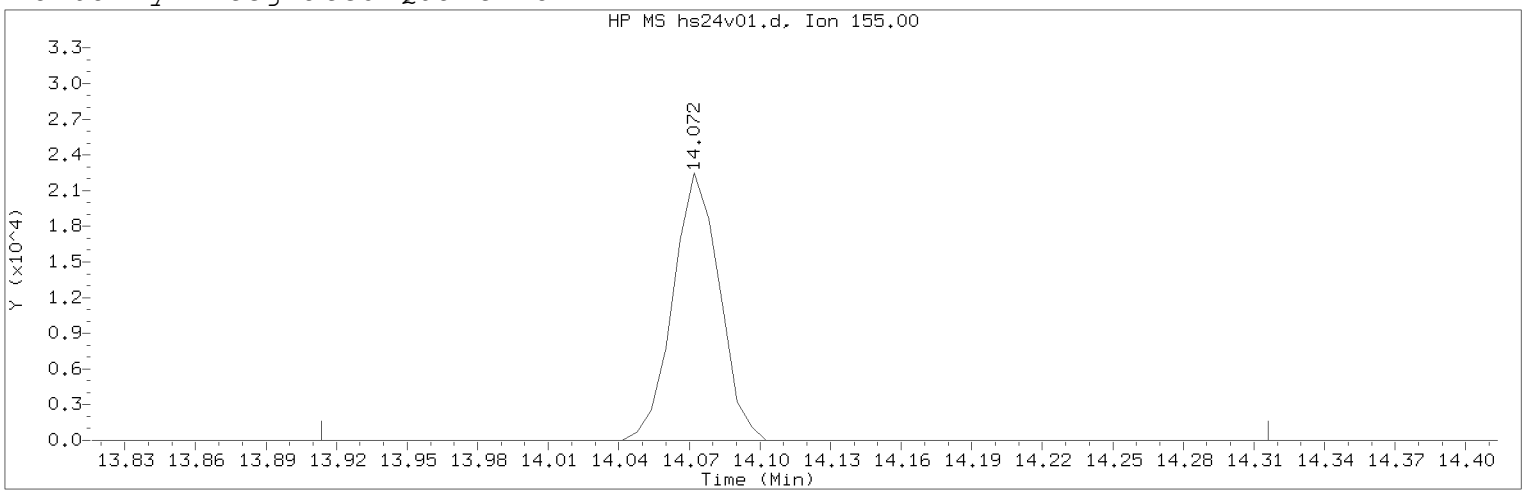
Compound Number : 136
Compound Name : Benzyl Chloride
Scan Number : 1929
Retention Time (minutes): 13.347
Quant Ion : 126.00
Area : 77799
On-column Amount (ng) : 5.0401
Integration start scan : 1922 Integration stop scan: 1940
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used for this report.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 25-SEP-2018 09:09
Date, time and analyst ID of latest file update: 25-Sep-2018 13:21 jkh09052

Sample Name: ICVHLG Lab Sample ID: ICVHLG

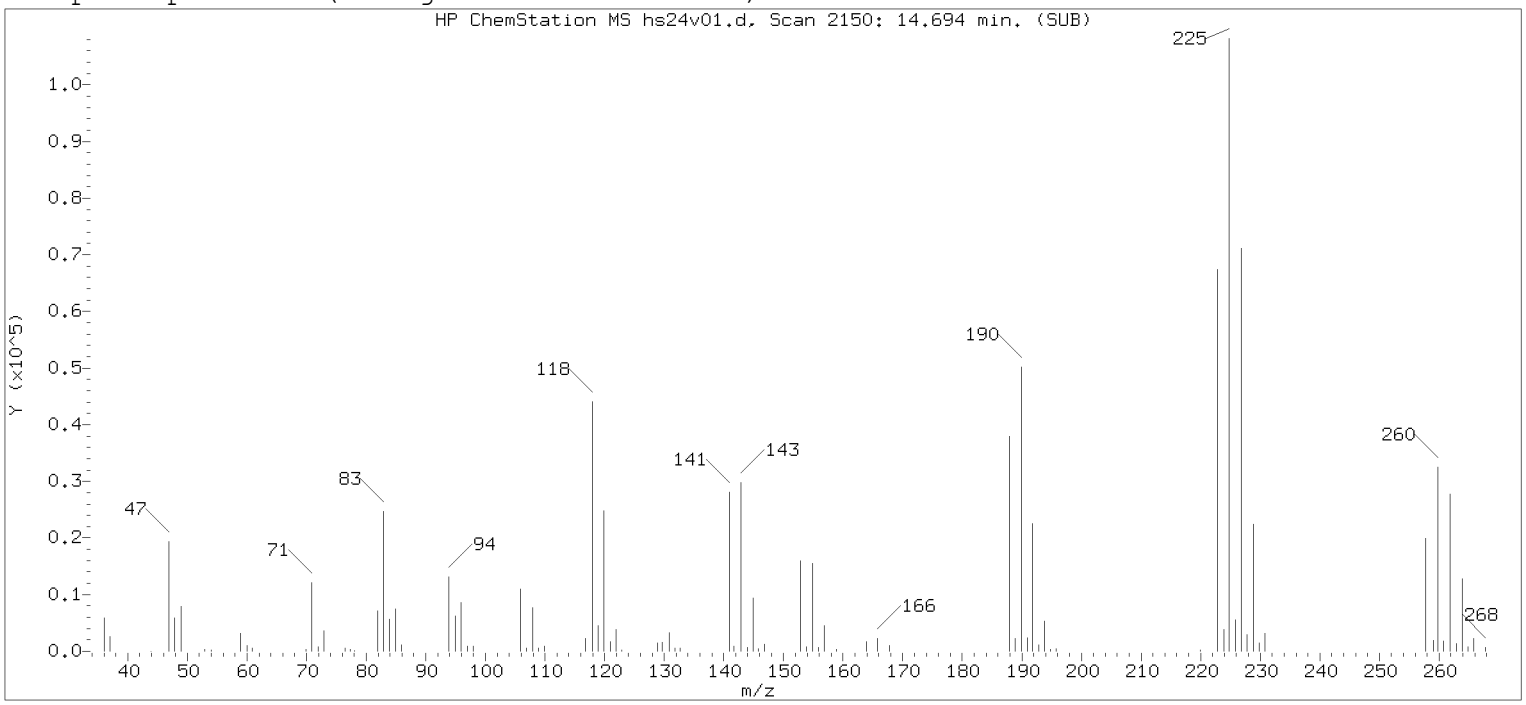
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 30890M
On-Column Amount (ng) : 5.3040
Integration start scan : 2021 Integration stop scan: 2087
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

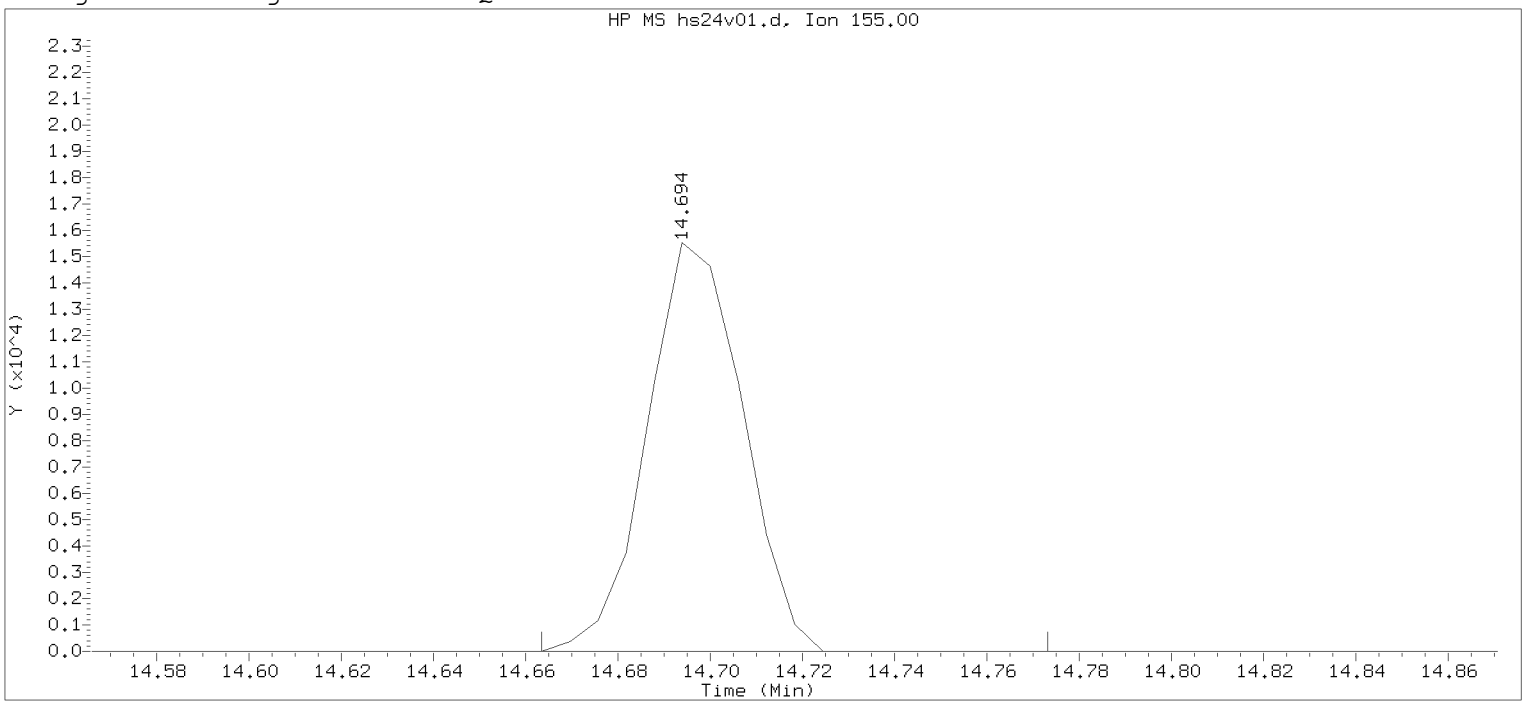
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 09/25/2018 at 13:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chelsea B. Riehl on 09/26/2018 at 16:35.
PARALLAX ID: cbs01947

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18sep24i.b/hs24v01.d Instrument ID: HP19094.i
Injection date and time: 24-SEP-2018 21:20 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18sep24i.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 24-SEP-2018 20:55
Date, time and analyst ID of latest file update: 24-Sep-2018 21:38 Automation

Sample Name: ICVHLG Lab Sample ID: ICVHLG

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 22433
On-column Amount (ng) : 7.5577
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 09/25/2018 at 13:21.
Target 3.5 esignature used. AE20 Page 421

Data File: /chem2/HP19094.i/18oct22a.b/hc22t01.d

Date : 22-OCT-2018 07:43

Client ID: BFB 50ng

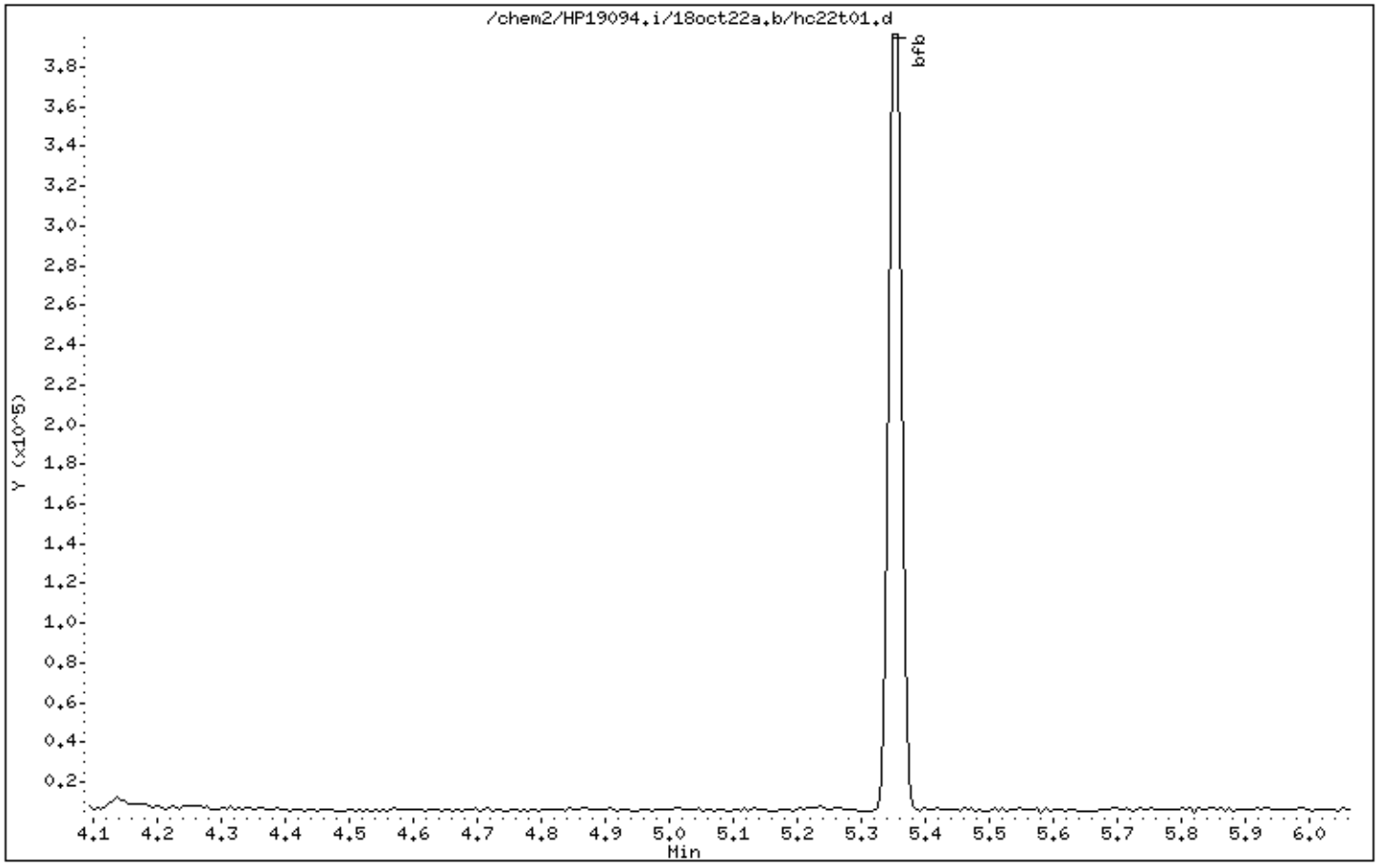
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Jennifer K. Howe on 10/22/2018 at 07:49.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18oct22a.b/hc22t01.d

Date : 22-OCT-2018 07:43

Client ID: BFB 50ng

Instrument: HP19094.i

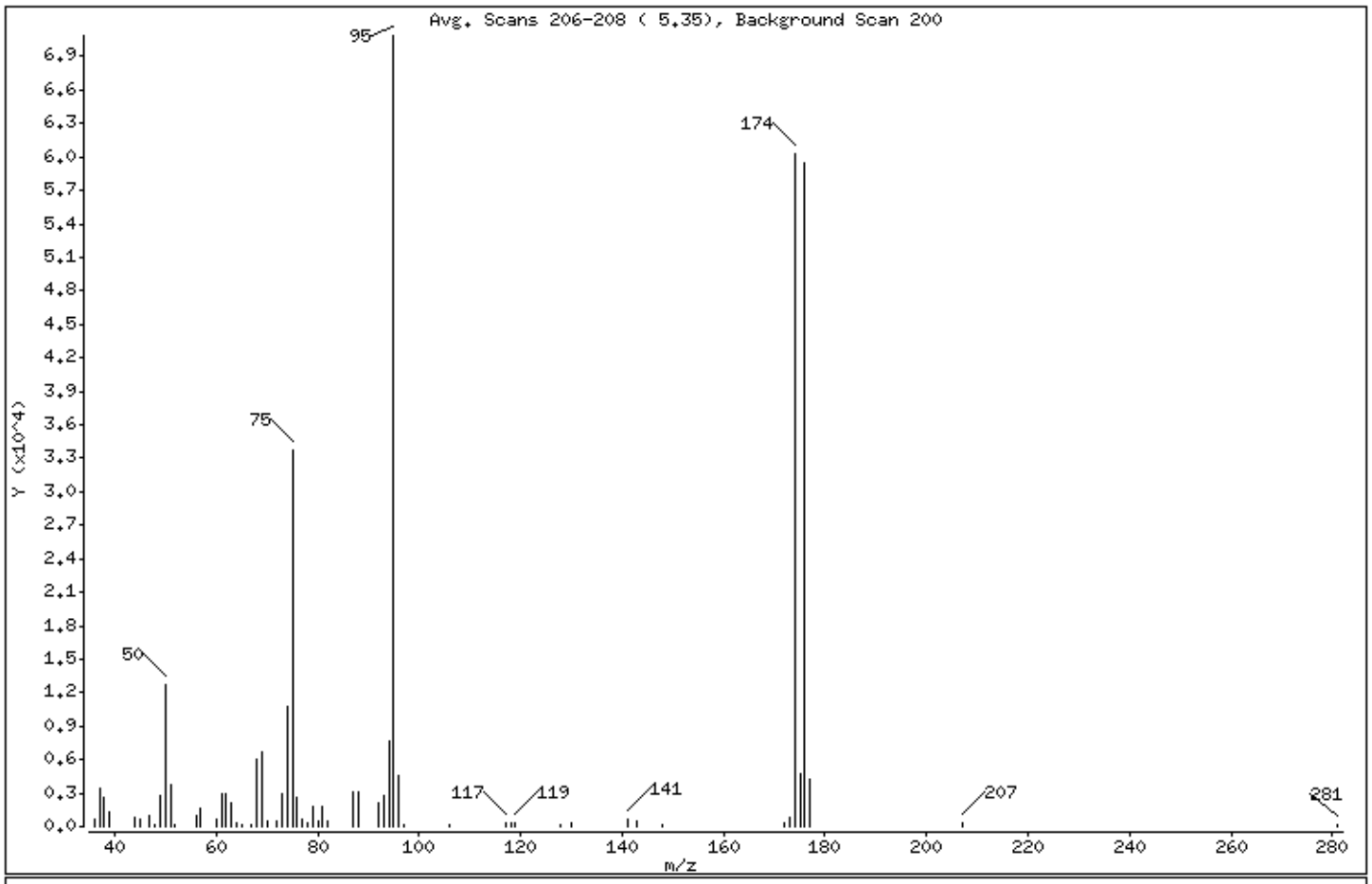
Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	17.84
75	30.00 - 60.00% of mass 95	47.63
96	5.00 - 9.00% of mass 95	6.41
173	Less than 2.00% of mass 174	1.12 (1.32)
174	50.00 - 100.00% of mass 95	85.00
175	5.00 - 9.00% of mass 174	6.61 (7.78)
176	95.00 - 101.00% of mass 174	83.84 (98.64)
177	5.00 - 9.00% of mass 176	5.97 (7.12)

Digitally signed by Jennifer K. Howe on 10/22/2018 at 07:49.
Target 3.5 esignature user ID: jkh09052

Data File: /chem2/HP19094.i/18oct22a.b/hc22t01.d

Date : 22-OCT-2018 07:43

Client ID: BFB 50ng

Instrument: HP19094.i

Sample Info: BFB 50ng;BFB AUG07-18;1;3;;;;;

Operator: JKH09052

Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hc22t01.d
Spectrum: Avg. Scans 206-208 (5.35), Background Scan 200
Location of Maximum: 95.00
Number of points: 60

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	579	62.00	2995	80.00	466	130.00	286
37.00	3369	63.00	2154	81.00	1756	141.00	612
38.00	2526	64.00	265	82.00	467	143.00	569
39.00	1373	65.00	195	87.00	3168	148.00	88
44.00	839	67.00	157	88.00	3101	172.00	339
45.00	601	68.00	6081	92.00	2081	173.00	797
47.00	1034	69.00	6618	93.00	2783	174.00	60240
48.00	111	70.00	468	94.00	7607	175.00	4688
49.00	2780	72.00	519	95.00	70872	176.00	59424
50.00	12646	73.00	3007	96.00	4541	177.00	4232
51.00	3784	74.00	10695	97.00	222	207.00	347
52.00	122	75.00	33752	106.00	140	281.00	101
56.00	902	76.00	2598	117.00	376		
57.00	1674	77.00	601	118.00	256		
60.00	726	78.00	330	119.00	373		
61.00	2980	79.00	1795	128.00	210		

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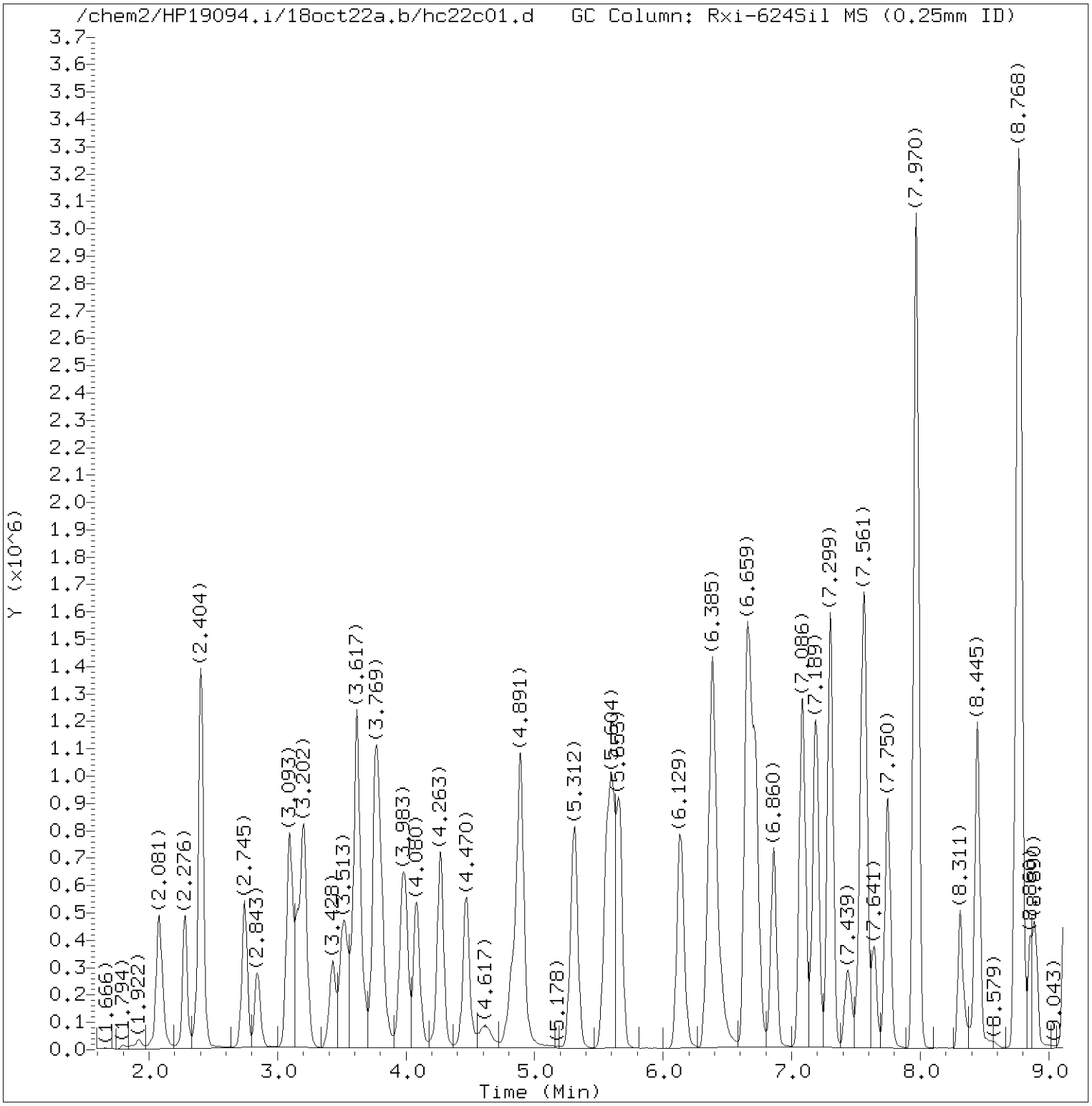
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

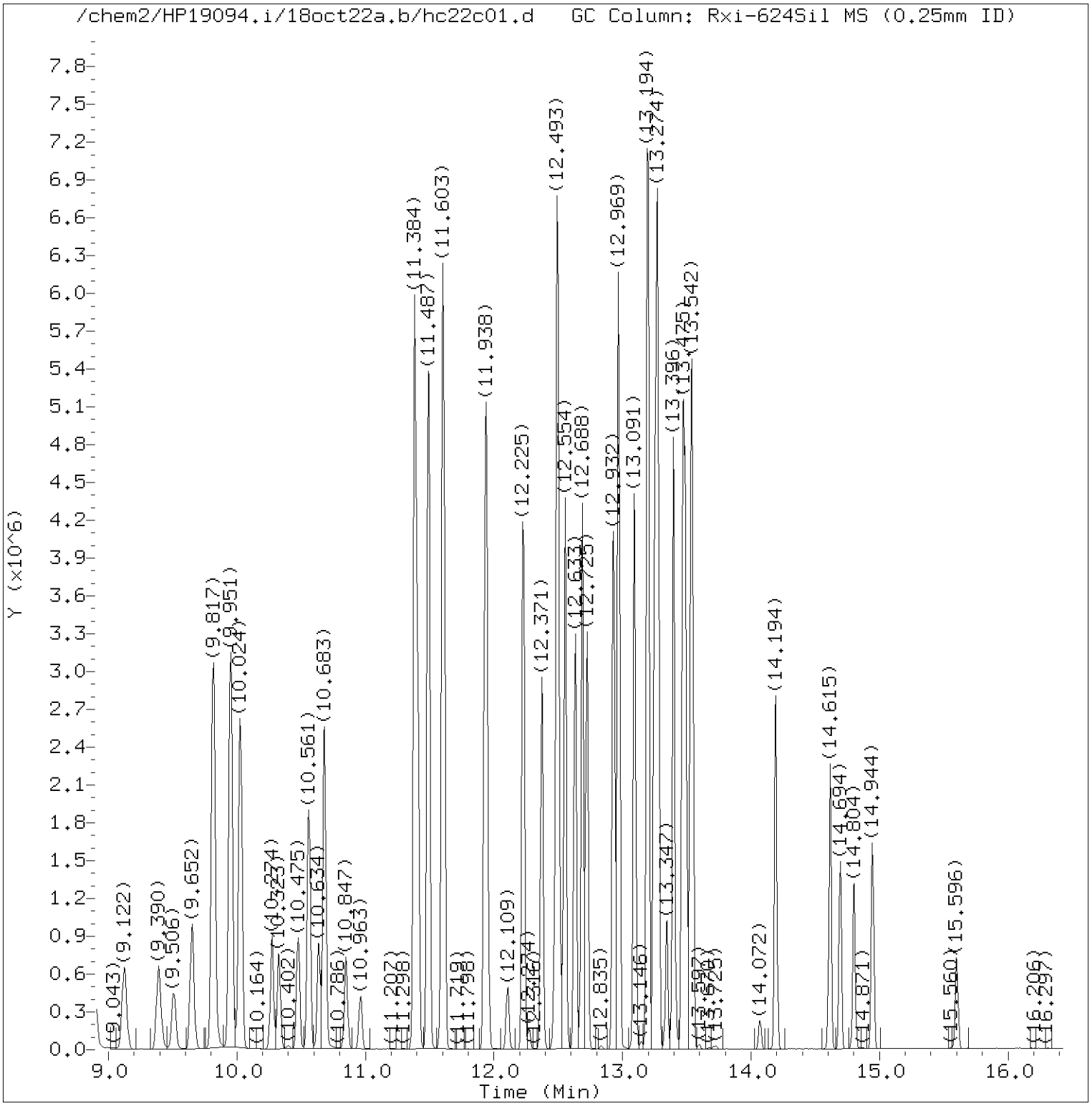
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	939326	9.283
2) Chloromethane	(2)	2.282	50	799424	8.067
5) Vinyl Chloride	(2)	2.404	62	757776	8.166
6) 1,3-Butadiene	(2)	2.404	39	711989	6.773
7) Bromomethane	(2)	2.745	94	603245	8.362
8) Chloroethane	(2)	2.843	64	439706	7.812
9) Dichlorofluoromethane	(2)	3.093	67	1054239	7.874
10) Trichlorofluoromethane	(2)	3.154	101	1043697	8.903
11) Ethyl ether	(2)	3.428	59	334588	8.417
12) Freon 123a	(2)	3.513	67	652532	8.785
13) Acrolein	(1)	3.617	56	2376076	455.332
15) 1,1-Dichloroethene	(2)	3.757	96	468148	9.222
16) Freon 113	(2)	3.788	101	551089	9.210
14) Acetone	(1)	3.794	43	584378M	83.375
17) Methyl Iodide	(2)	3.971	142	984017	9.299
18) Carbon Disulfide	(2)	4.080	76	1387395	8.589
21) Methyl Acetate	(1)	4.245	43	170647	8.673
22) Allyl Chloride	(2)	4.269	41	828352	8.584
23) Methylene Chloride	(2)	4.470	84	486979	8.503
26)*t-Butyl Alcohol-d10	(1)	4.477	65	117595M	50.000
28) t-Butyl Alcohol	(1)	4.617	59	317891	158.372
29) Acrylonitrile	(1)	4.824	53	428938	47.388
30) Methyl Tertiary Butyl Ether	(2)	4.885	73	939305	8.997
31) trans-1,2-Dichloroethene	(2)	4.897	96	518959	9.057
32) n-Hexane	(2)	5.312	57	836241	9.179
33) 1,1-Dichloroethane	(2)	5.556	63	963090	8.828
34) di-Isopropyl Ether	(2)	5.604	45	1647046	8.502
35) 2-Chloro-1,3-Butadiene	(2)	5.665	53	861774	8.779
40) 1,2-Dichloroethene (Total)	(2)		96	1093369	18.131
37) Ethyl t-butyl ether	(2)	6.135	59	1320624	8.595
38) 2-Butanone	(1)	6.348	43	1051203	91.622
39) cis-1,2-Dichloroethene	(2)	6.385	96	574410	9.073
41) 2,2-Dichloropropane	(2)	6.403	77	707810	9.084
42) Propionitrile	(1)	6.446	54	592712	190.324
45) Methacrylonitrile	(1)	6.659	67	1056518	94.087
47) Bromochloromethane	(2)	6.714	128	245228	9.170
48) Tetrahydrofuran	(1)	6.726	71	284785	93.367
49) Chloroform	(2)	6.860	83	905906	8.932

M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50)$Dibromofluoromethane	(2)	7.080	113	647462	9.922
50)$Dibromofluoromethane	(2)	7.074	111	660107	9.828
51) 1,1,1-Trichloroethane	(2)	7.092	97	775479	8.939
52) Cyclohexane	(2)	7.189	56	1000309	8.833
52) Cyclohexane	(2)	7.183	84	844969	9.050
52) Cyclohexane	(2)	7.189	69	301114	9.022
54) Carbon Tetrachloride	(2)	7.299	117	708190	9.505
55) 1,1-Dichloropropene	(2)	7.305	75	737377	8.964
56) Isobutyl Alcohol	(1)	7.439	41	344728	443.875
57)$1,2-Dichloroethane-d4	(2)	7.537	102	115023	10.111
57)$1,2-Dichloroethane-d4	(2)	7.537	65	524281	9.528
57)$1,2-Dichloroethane-d4	(2)	7.537	104	73324	10.064
58) Benzene	(2)	7.567	78	2145007	8.826
59) 1,2-Dichloroethane	(2)	7.641	62	463500M	8.287
60) t-Amyl methyl ether	(2)	7.750	73	1106742	8.687
62) n-Heptane	(2)	7.970	43	848606	9.034
63)*Fluorobenzene	(2)	7.970	96	2589169	10.000
65) n-Butanol	(1)	8.311	56	616870	940.152
67) Trichloroethene	(2)	8.445	95	564463	9.071
69) Methylcyclohexane	(2)	8.756	83	1059935	9.019
70) 1,2-Dichloropropane	(2)	8.787	63	525789	8.917
71) Methyl Methacrylate	(1)	8.854	69	195782M	9.419
72) 1,4-Dioxane	(1)	8.878	88	80021	506.528
73) Dibromomethane	(2)	8.896	93	217964	8.907
74) Bromodichloromethane	(2)	9.122	83	599273	9.040
76) 2-Nitropropane	(1)	9.390	41	574196M	97.525
80) cis-1,3-Dichloropropene	(2)	9.652	75	709326	9.191
81) 4-Methyl-2-Pentanone	(1)	9.817	43	2693607M	94.384
82)$Toluene-d8	(3)	9.951	98	2539049	9.980
82)$Toluene-d8	(3)	9.951	100	1647647	10.034
83) Toluene	(3)	10.024	92	1335985	9.108
85) 1,3-Dichloropropene (total)	(3)		75	1248046	18.722
84) trans-1,3-Dichloropropene	(3)	10.274	75	538720	9.531
86) Ethyl Methacrylate	(3)	10.323	69	434538	8.974
88) 1,1,2-Trichloroethane	(3)	10.475	97	308392	9.136
89) Tetrachloroethene	(3)	10.561	166	649396	9.798
90) 1,3-Dichloropropane	(3)	10.640	76	537458	8.984
91) 2-Hexanone	(1)	10.683	43	1798034M	92.557

M = Compound was manually integrated.
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Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
93) Dibromochloromethane	(3)	10.847	129	398492	9.850
95) 1,2-Dibromoethane	(3)	10.963	107	294120	9.296
96) 1-Chlorohexane	(3)	11.384	91	774863	8.857
97)*Chlorobenzene-d5	(3)	11.384	117	1976724	10.000
98) Chlorobenzene	(3)	11.408	112	1462424	9.397
99) 1,1,1,2-Tetrachloroethane	(3)	11.487	131	510103	9.932
100) Ethylbenzene	(3)	11.493	91	2655535	9.263
101) m+p-Xylene	(3)	11.603	106	2030631	19.096
105) Xylene (Total)	(3)		106	2999013	28.622
104) o-Xylene	(3)	11.932	106	968382	9.525
106) Styrene	(3)	11.945	104	1562174	9.604
107) Bromoform	(3)	12.109	173	227780	10.244
108) Isopropylbenzene	(3)	12.225	105	2632989	9.487
111)$4-Bromofluorobenzene	(3)	12.371	95	898367	9.699
111)$4-Bromofluorobenzene	(3)	12.371	174	825678	10.266
113) 1,1,2,2-Tetrachloroethane	(4)	12.469	83	363730M	8.761
114) Bromobenzene	(4)	12.493	156	596566	9.451
115) trans-1,4-Dichloro-2-butene	(1)	12.493	53	867076M	97.006
116) 1,2,3-Trichloropropane	(4)	12.518	110	93675M	8.727
117) n-Propylbenzene	(4)	12.554	91	3141177	9.153
119) 2-Chlorotoluene	(4)	12.633	126	620201	9.317
121) 1,3,5-Trimethylbenzene	(4)	12.688	105	2156917	9.277
122) 4-Chlorotoluene	(4)	12.725	126	623744	9.351
125) tert-Butylbenzene	(4)	12.932	134	483651M	9.565
126) Pentachloroethane	(4)	12.963	167	405131	10.266
127) 1,2,4-Trimethylbenzene	(4)	12.969	105	2198675	9.267
128) sec-Butylbenzene	(4)	13.091	105	2833934	9.407
131) 1,3-Dichlorobenzene	(4)	13.194	146	1184593	9.446
132) p-Isopropyltoluene	(4)	13.200	119	2412518	9.667
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1046678	10.000
134) 1,4-Dichlorobenzene	(4)	13.268	146	1150868	9.349
135) 1,2,3-Trimethylbenzene	(4)	13.274	120	984294	9.043
136) Benzyl Chloride	(4)	13.347	126	147411	9.821
138) n-Butylbenzene	(4)	13.487	92	1155132	9.326
139) 1,2-Dichlorobenzene	(4)	13.530	146	1008608	9.116
143) 1,2-Dibromo-3-chloropropane	(1)	14.072	155	46672M	9.648
144) 1,3,5-Trichlorobenzene	(4)	14.194	180	870851	9.334
145) 1,2,4-Trichlorobenzene	(4)	14.615	180	666303	8.768

M = Compound was manually integrated.
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Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

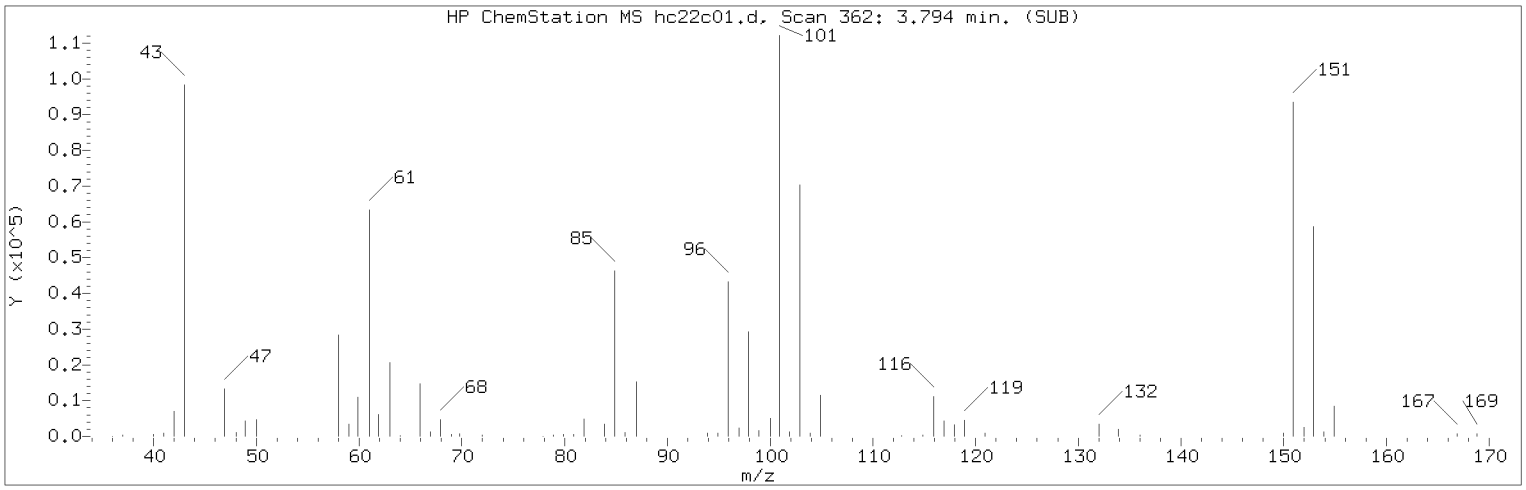
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

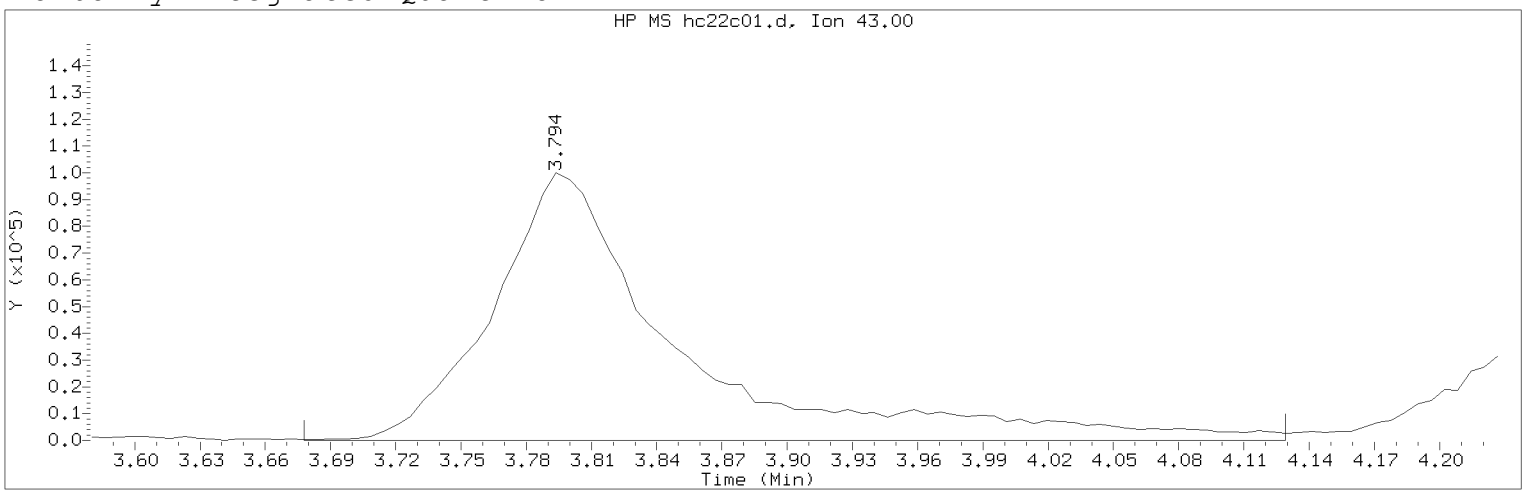
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
146) Hexachlorobutadiene	(4)	14.694	225	269131	9.370
147) Naphthalene	(4)	14.804	128	988055	8.216
148) 1,2,3-Trichlorobenzene	(4)	14.944	180	507710	8.126

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

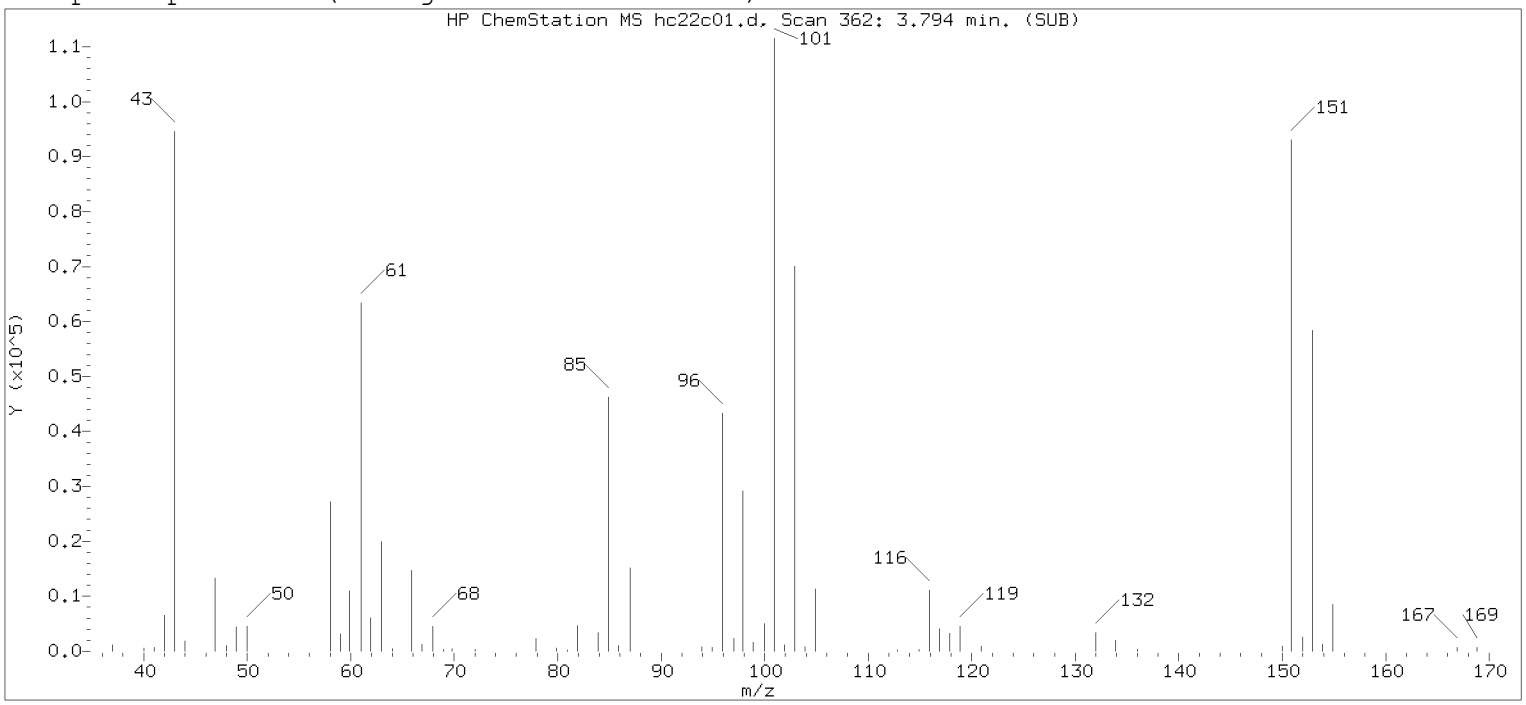
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area (flag) : 584378M
On-Column Amount (ng) : 83.3752
Integration start scan : 342 Integration stop scan: 416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

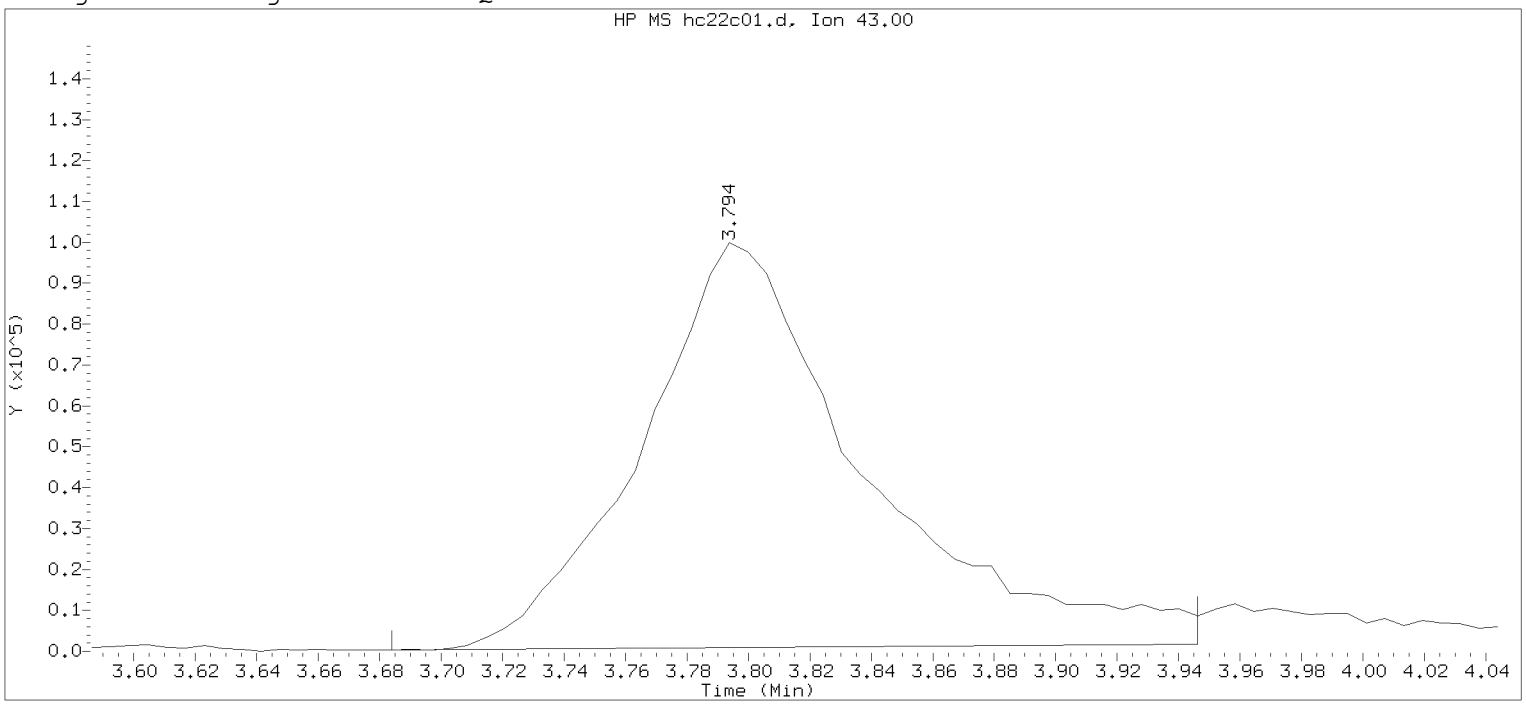
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

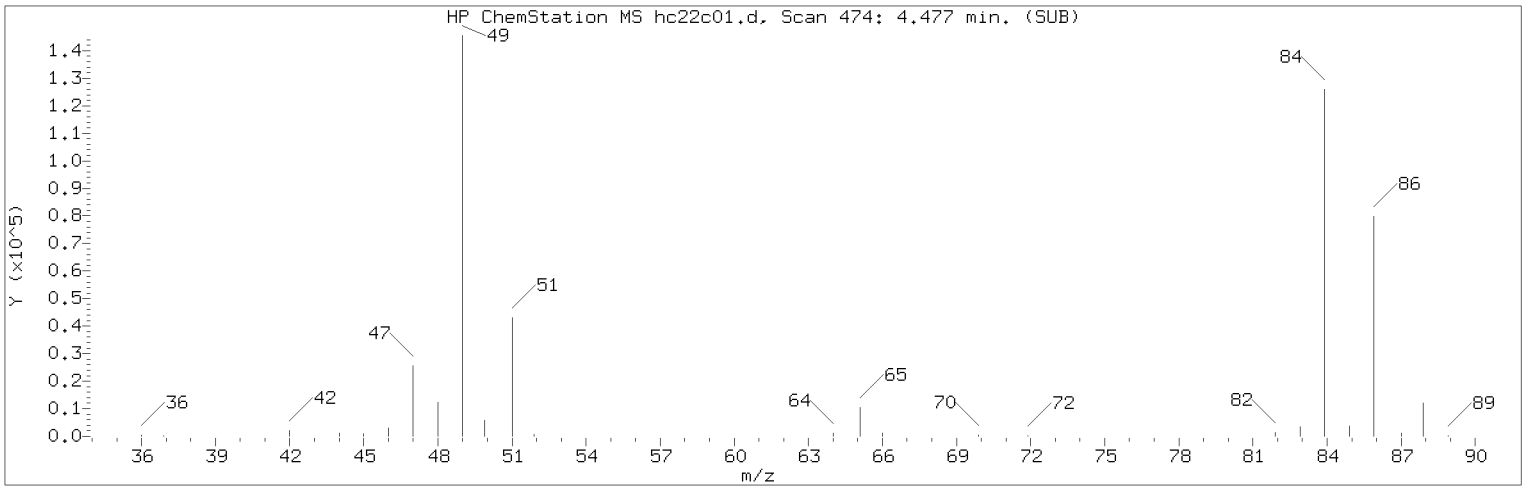
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

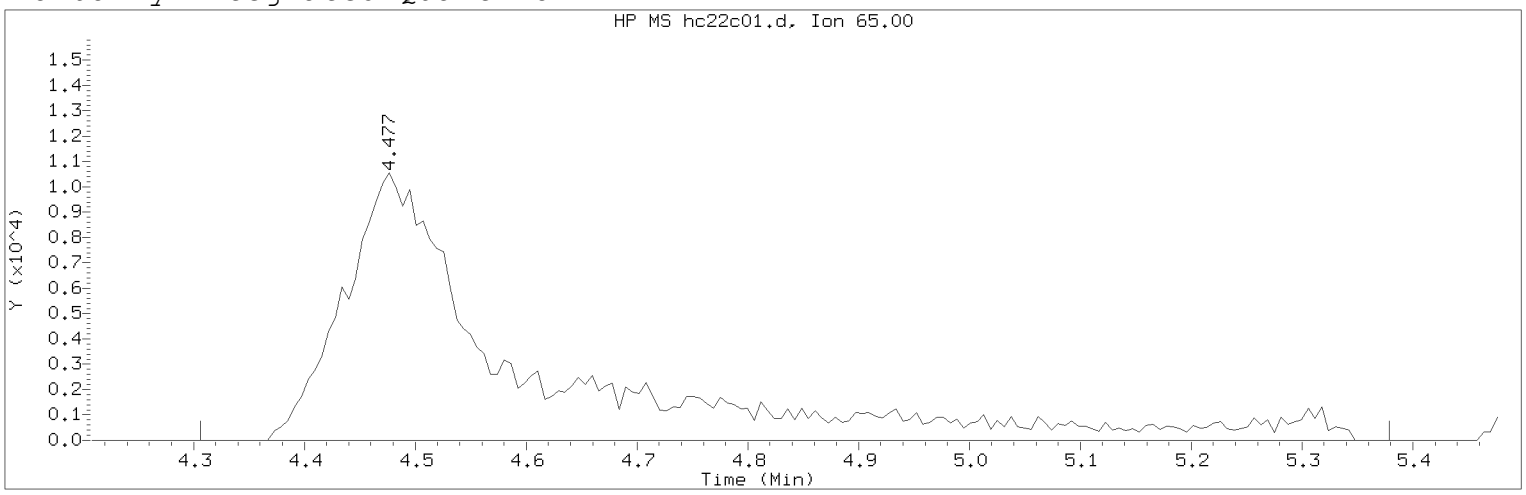
Compound Number : 14
Compound Name : Acetone
Scan Number : 362
Retention Time (minutes): 3.794
Quant Ion : 43.00
Area : 499414
On-column Amount (ng) : 85.1349
Integration start scan : 343 Integration stop scan: 386
Y at integration start : 251 Y at integration end: 1685

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

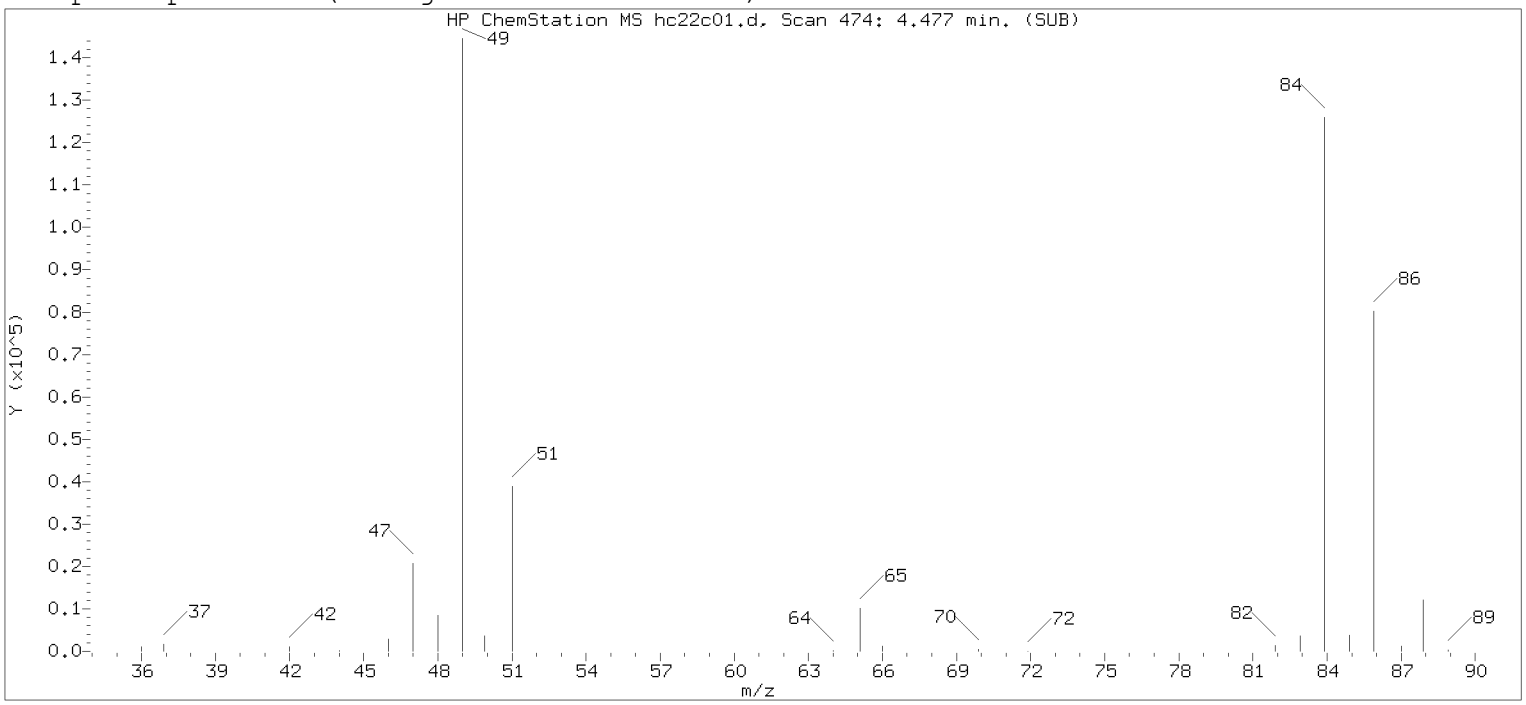
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 474
Retention Time (minutes): 4.477
Quant Ion : 65.00
Area (flag) : 117595M
On-Column Amount (ng) : 50.0000
Integration start scan : 445 Integration stop scan: 621
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

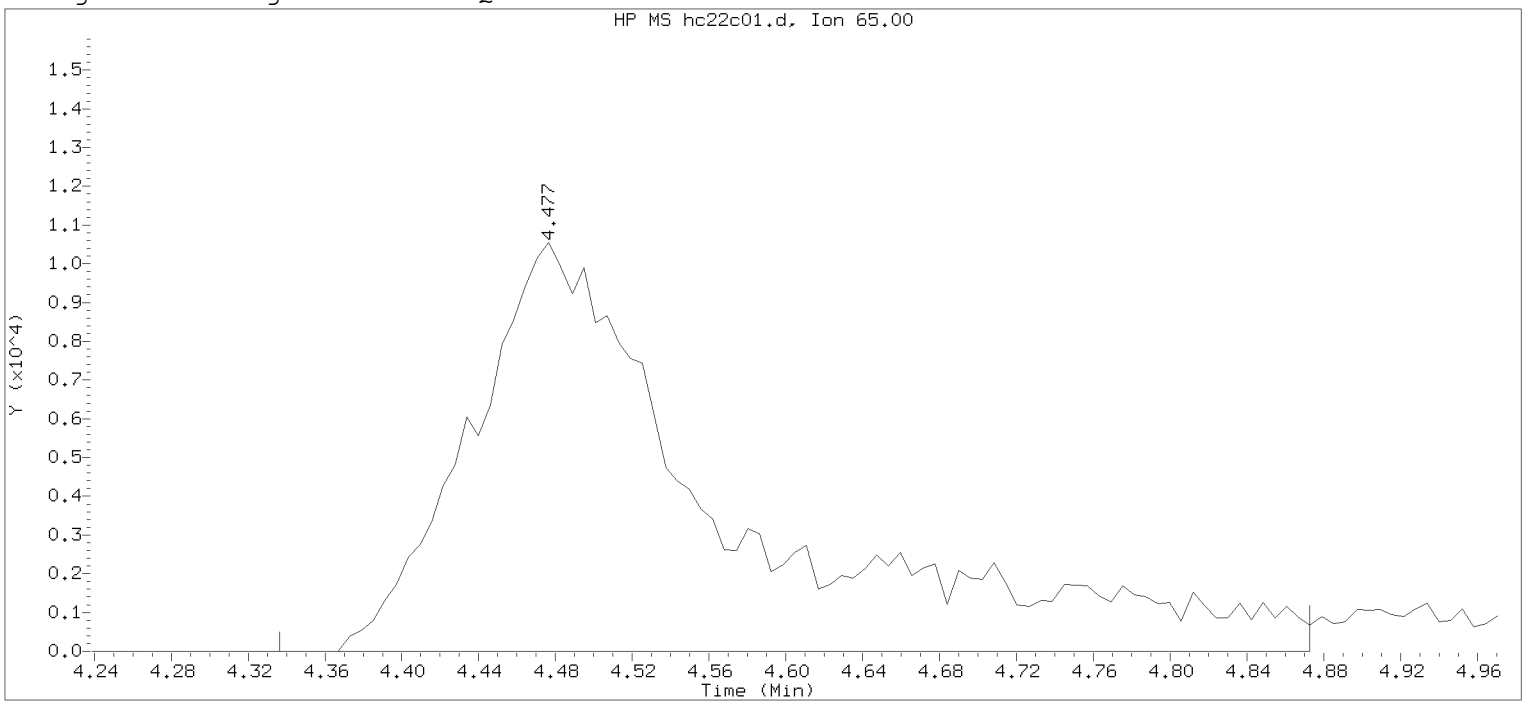
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

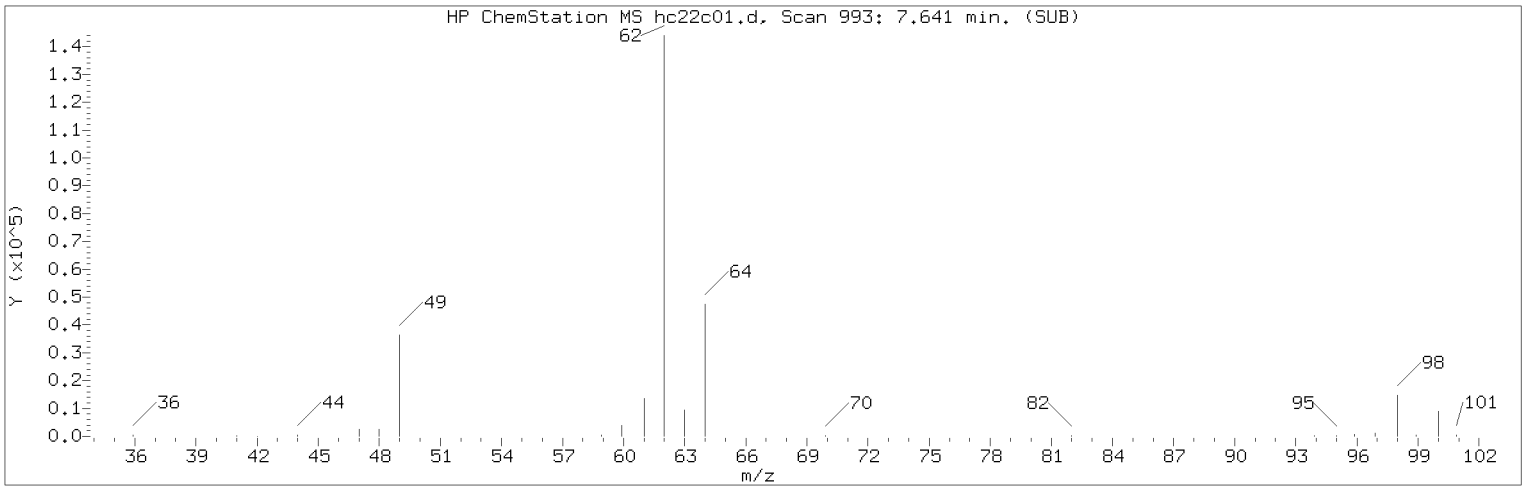
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

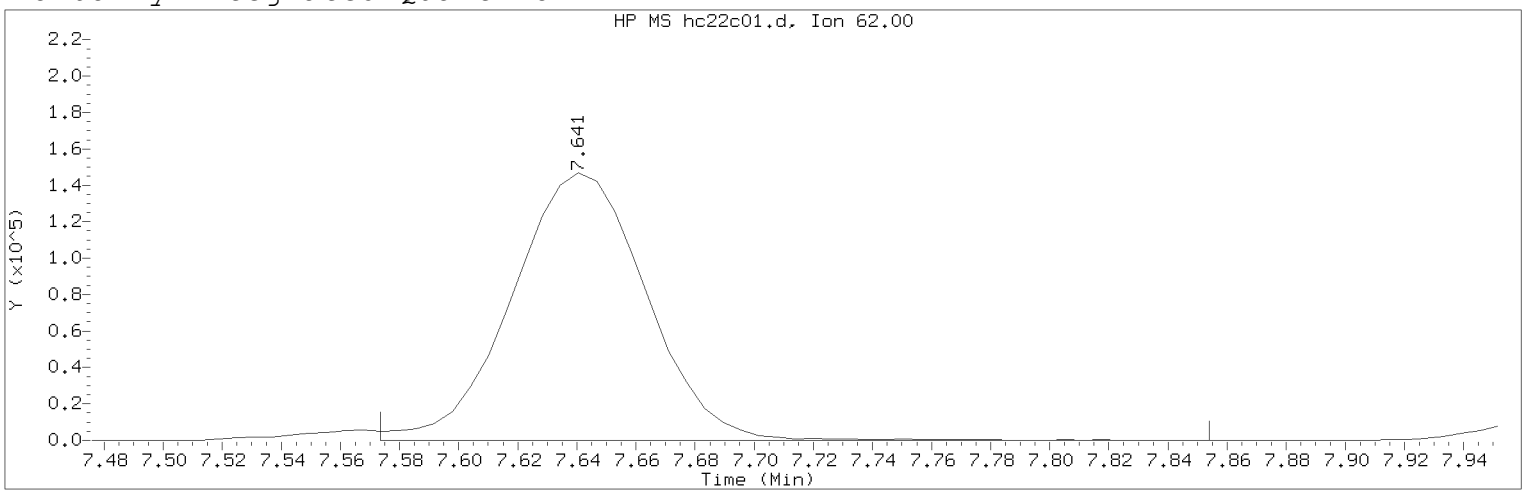
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 474		
Retention Time (minutes)	: 4.477		
Quant Ion	: 65.00		
Area	: 98420		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 450	Integration stop scan:	538
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 434

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

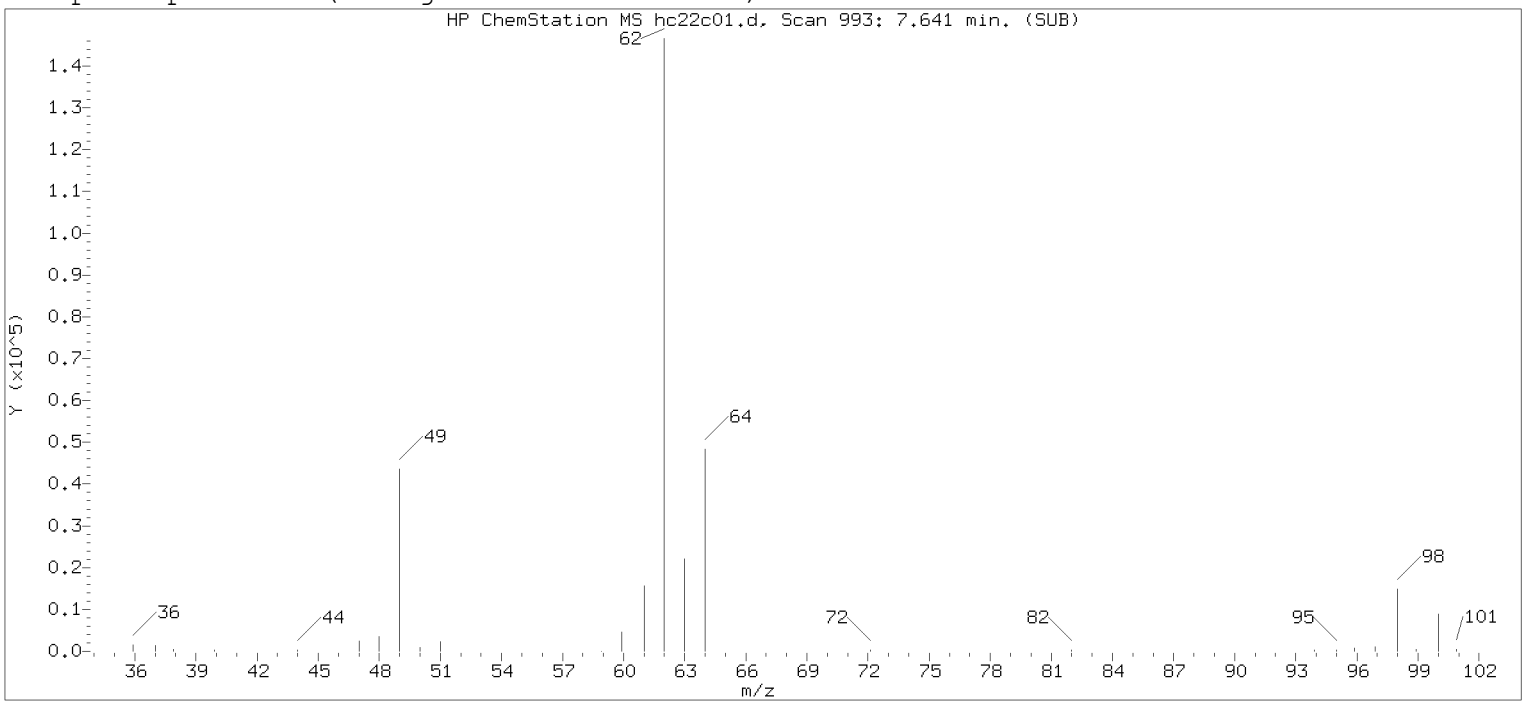
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area (flag) : 463500M
On-Column Amount (ng) : 8.2872
Integration start scan : 981 Integration stop scan: 1027
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

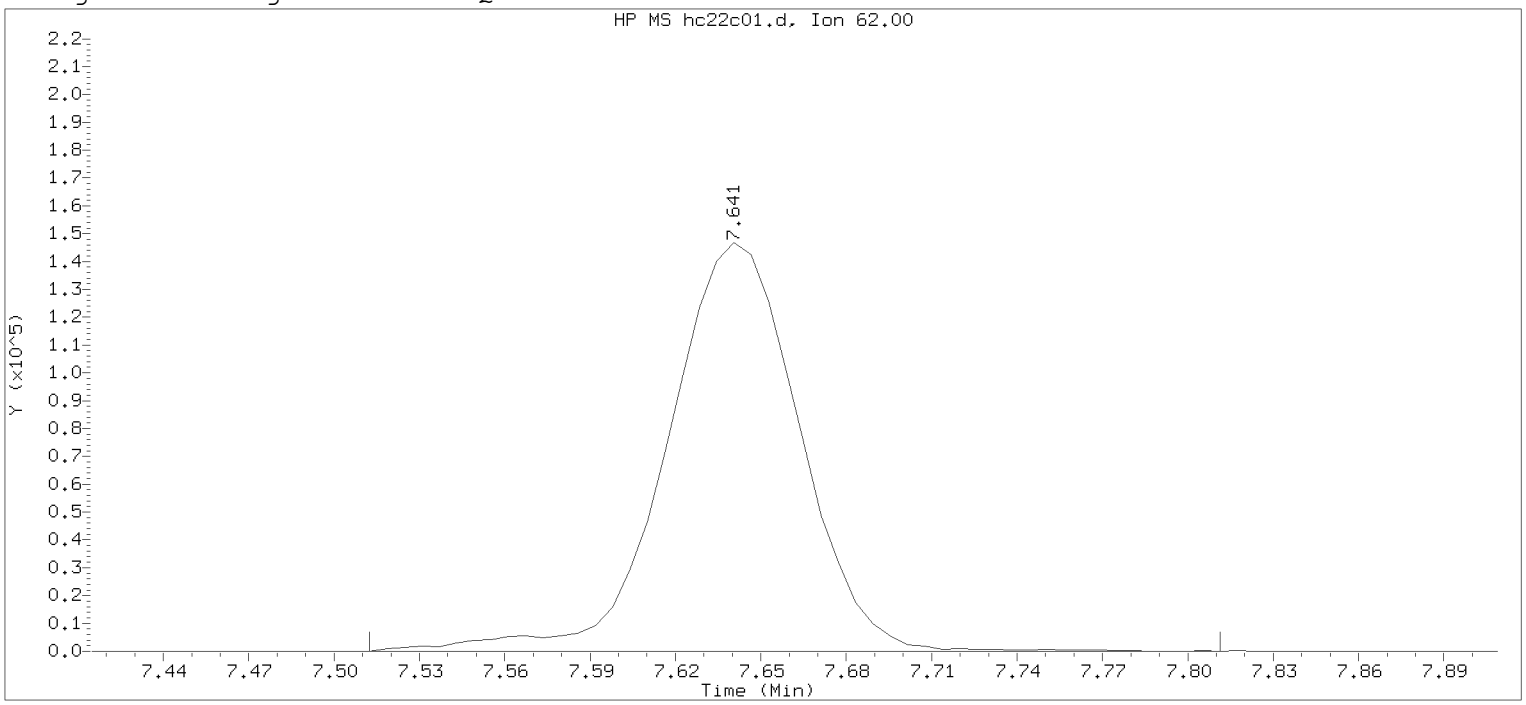
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

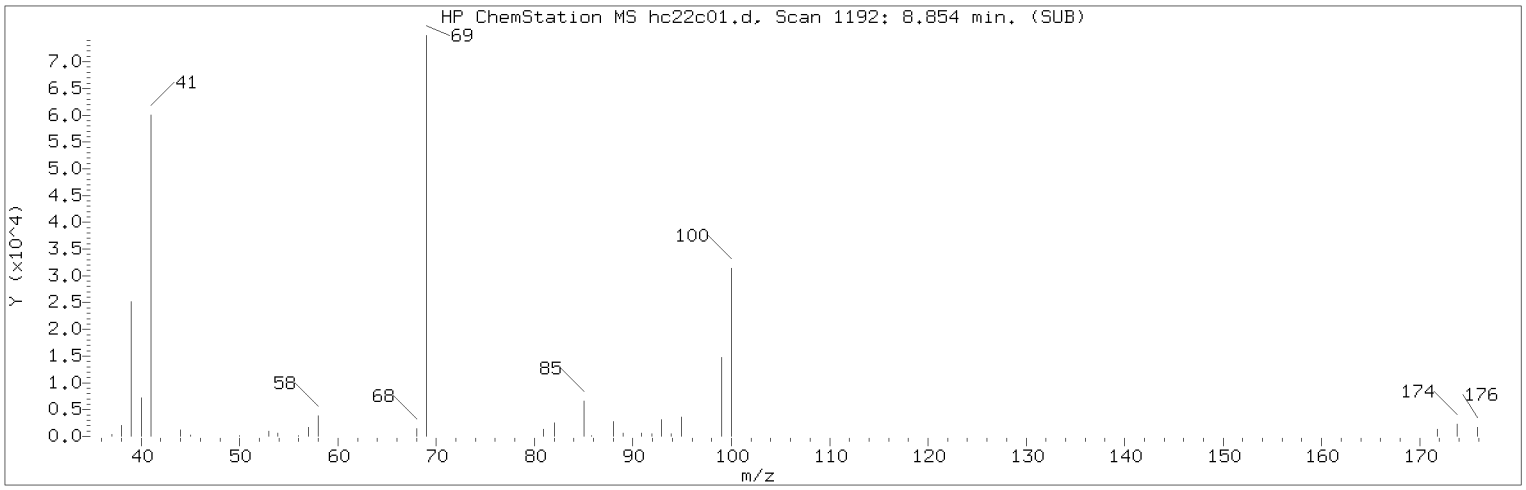
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

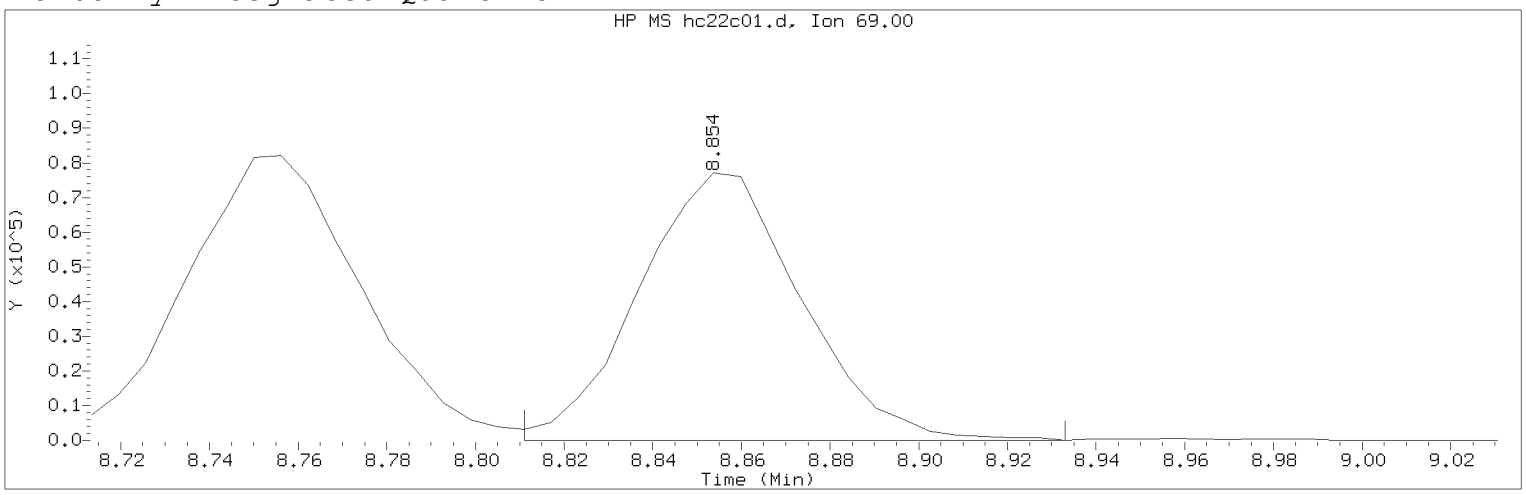
Compound Number : 59
Compound Name : 1,2-Dichloroethane
Scan Number : 993
Retention Time (minutes): 7.641
Quant Ion : 62.00
Area : 473450
On-column Amount (ng) : 8.4651
Integration start scan : 971 Integration stop scan: 1020
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 436 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

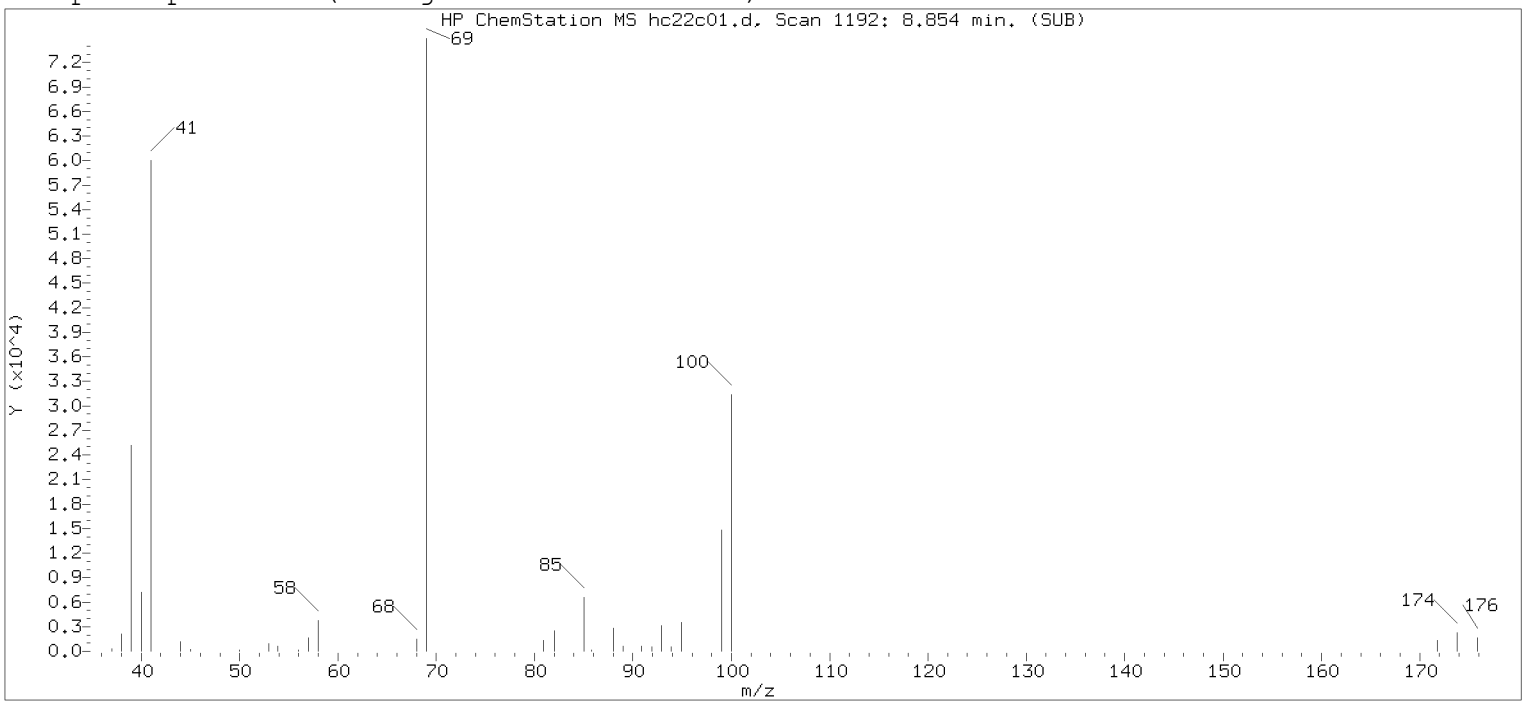
Compound Number : 71
Compound Name : Methyl Methacrylate
Scan Number : 1192
Retention Time (minutes): 8.854
Quant Ion : 69.00
Area (flag) : 195782M
On-Column Amount (ng) : 9.4194
Integration start scan : 1184 Integration stop scan: 1204
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

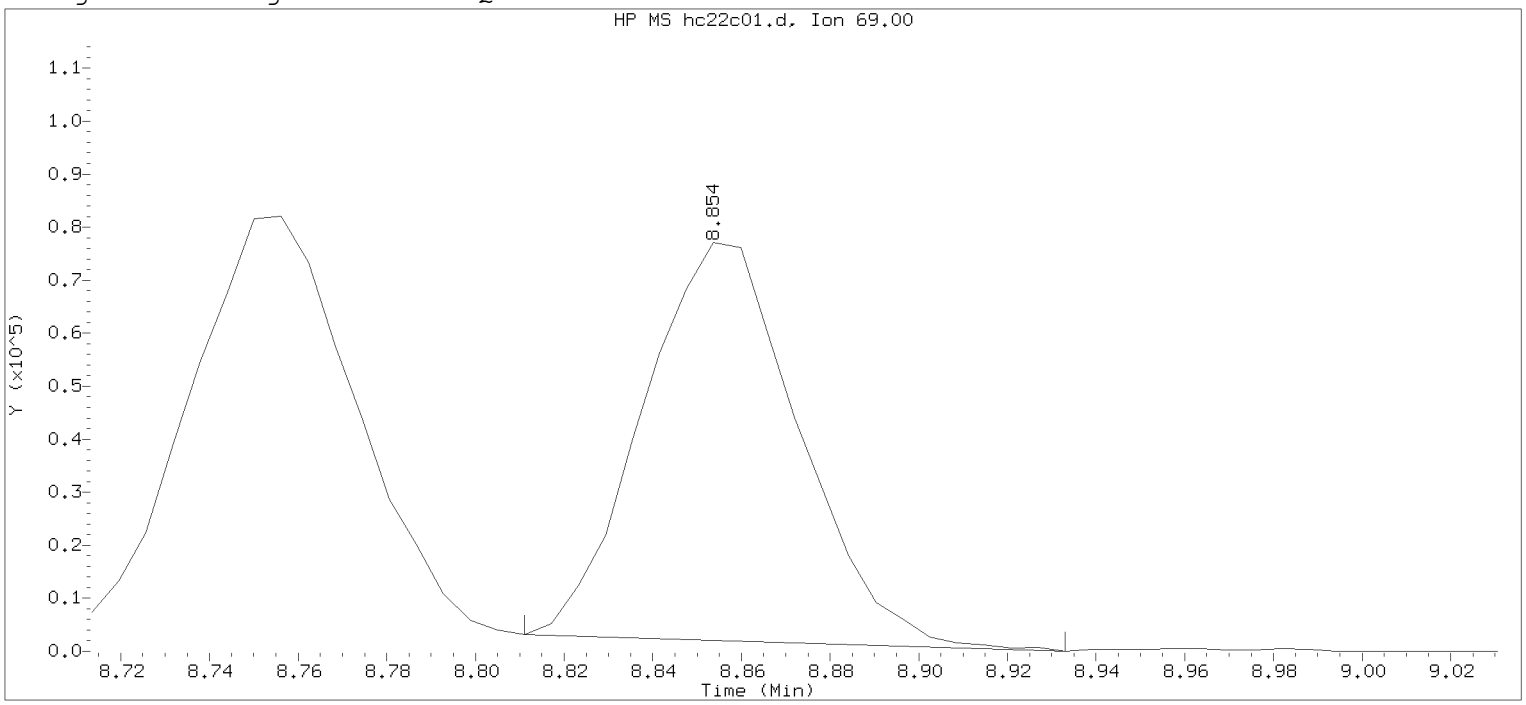
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

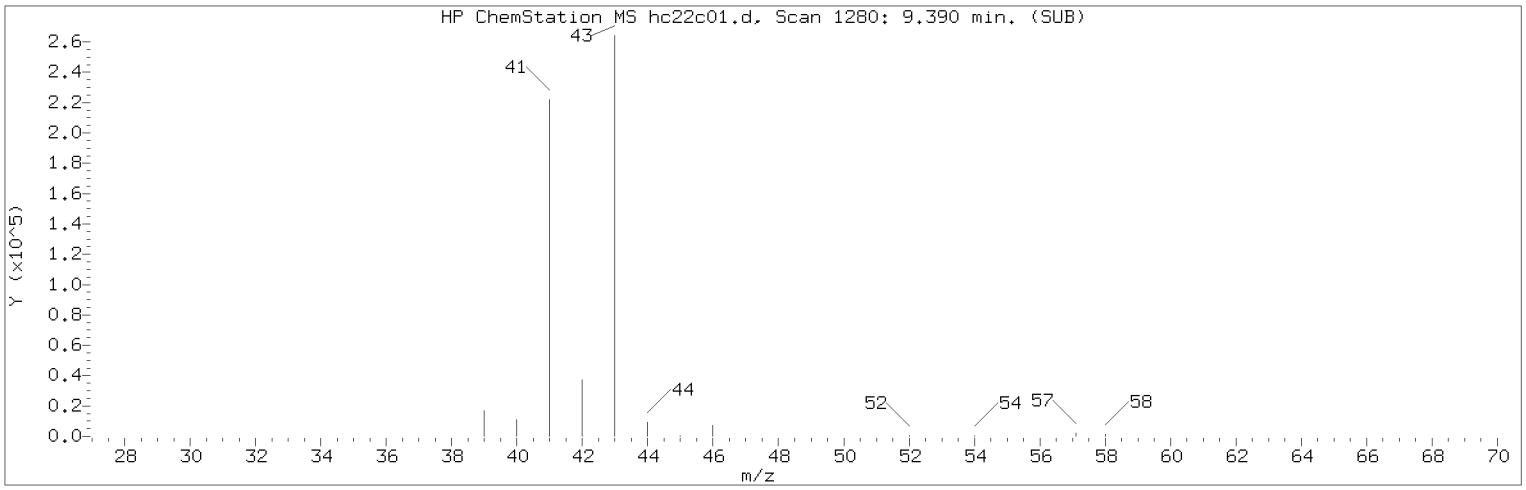
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

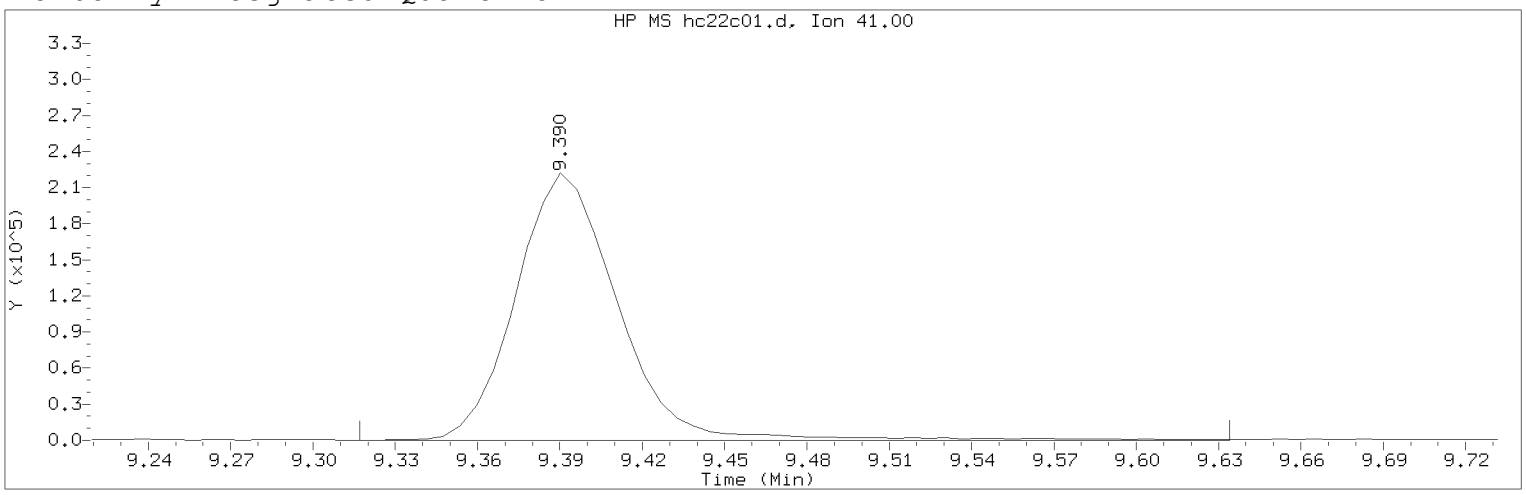
Compound Number	: 71		
Compound Name	: Methyl Methacrylate		
Scan Number	: 1192		
Retention Time (minutes)	: 8.854		
Quant Ion	: 69.00		
Area	: 183745		
On-column Amount (ng)	: 10.5627		
Integration start scan	: 1184	Integration stop scan:	1204
Y at integration start	: 3134	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 438

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

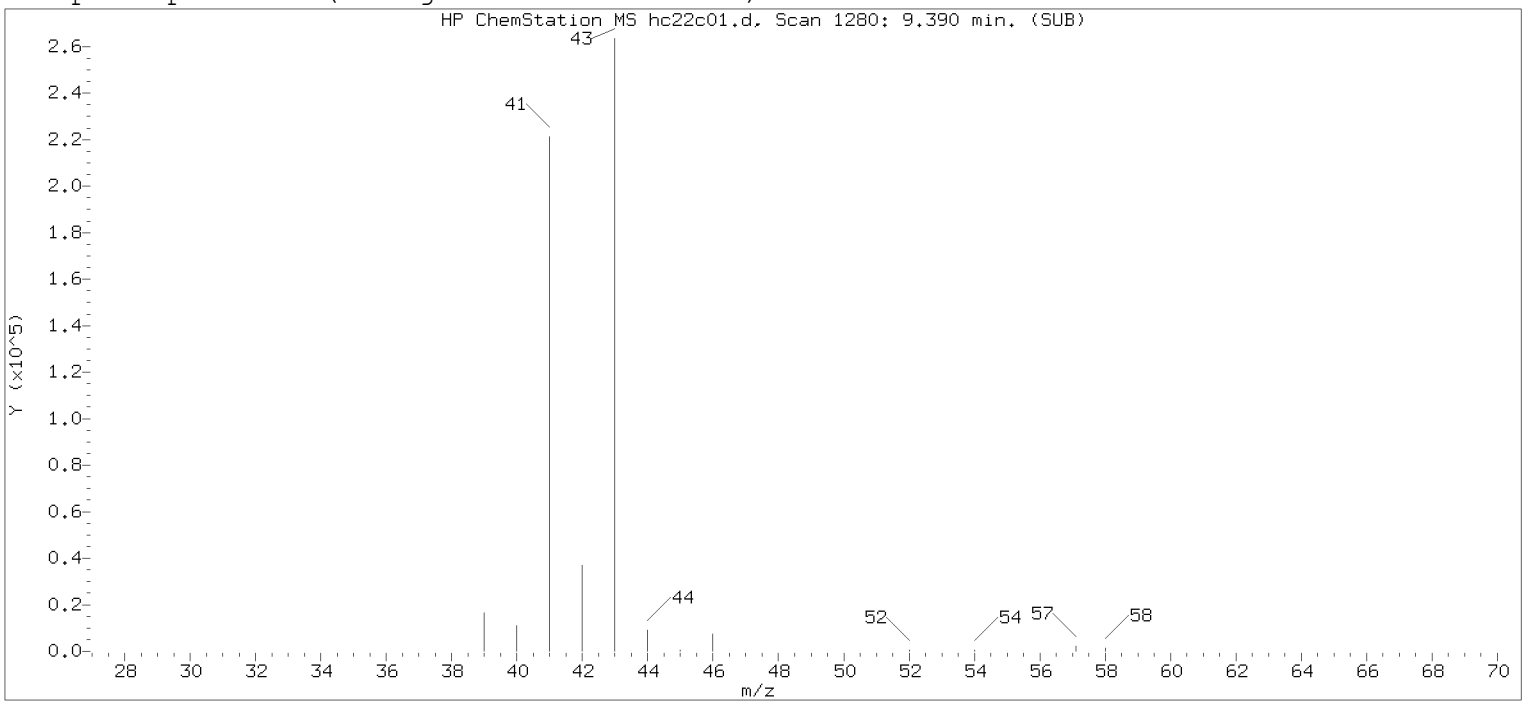
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area (flag) : 574196M
On-Column Amount (ng) : 97.5252
Integration start scan : 1267 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

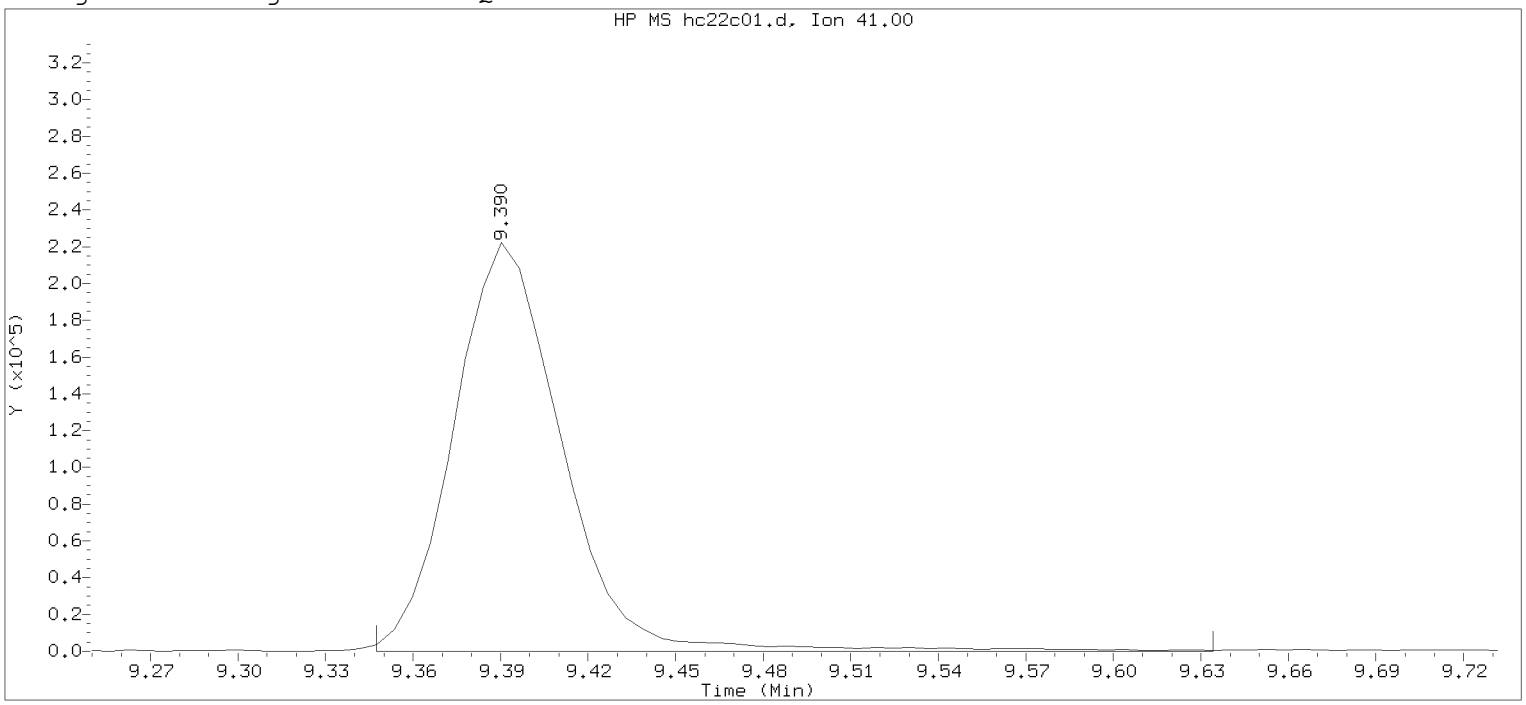
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

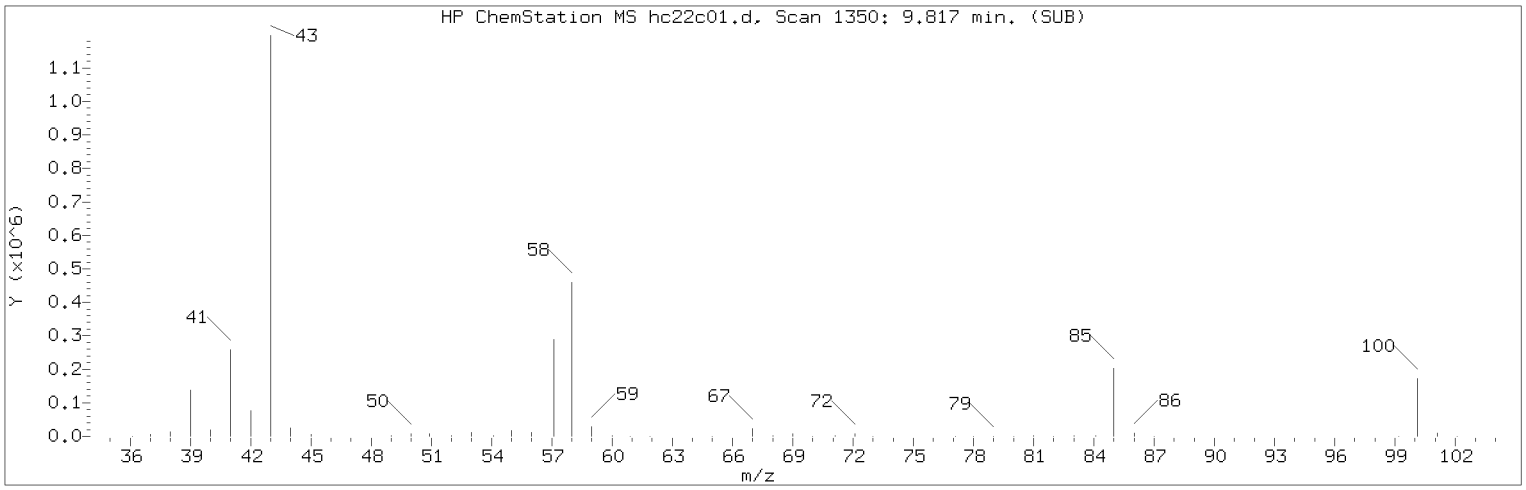
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

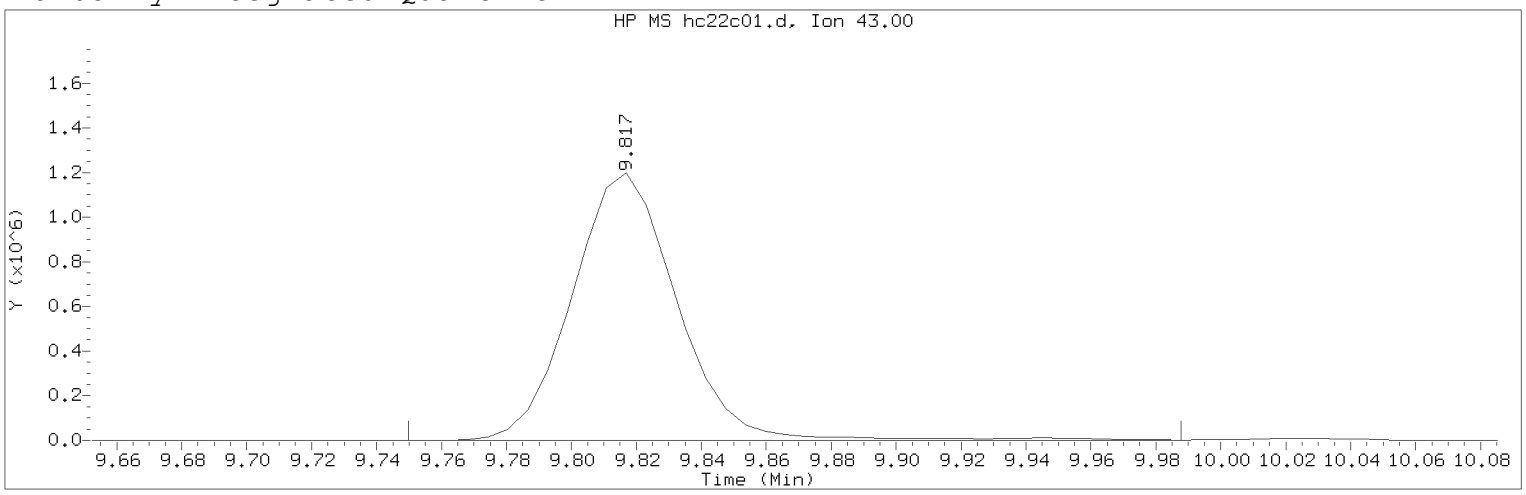
Compound Number : 76
Compound Name : 2-Nitropropane
Scan Number : 1280
Retention Time (minutes): 9.390
Quant Ion : 41.00
Area : 572753
On-column Amount (ng) : 116.2326
Integration start scan : 1272 Integration stop scan: 1319
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

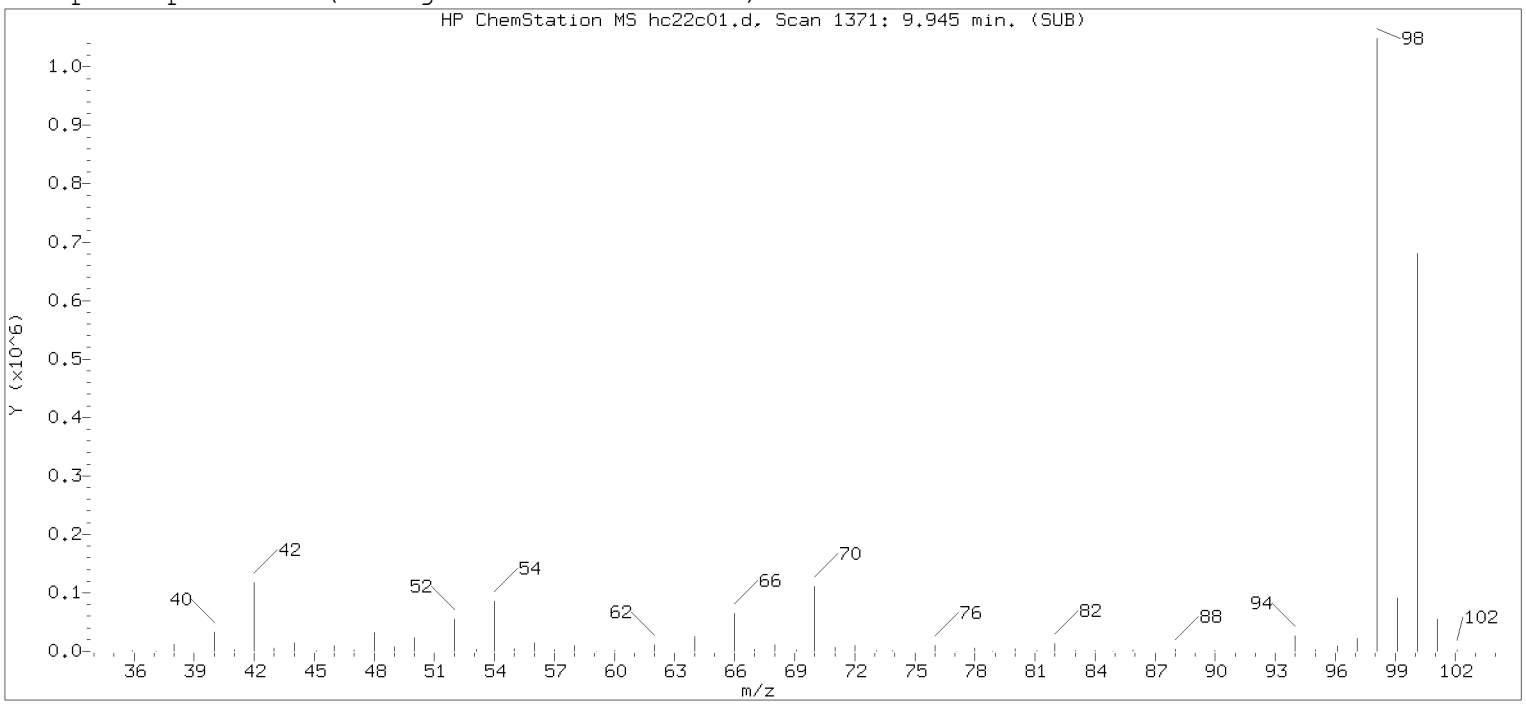
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1350
Retention Time (minutes): 9.817
Quant Ion : 43.00
Area (flag) : 2693607M
On-Column Amount (ng) : 94.3839
Integration start scan : 1338 Integration stop scan: 1377
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

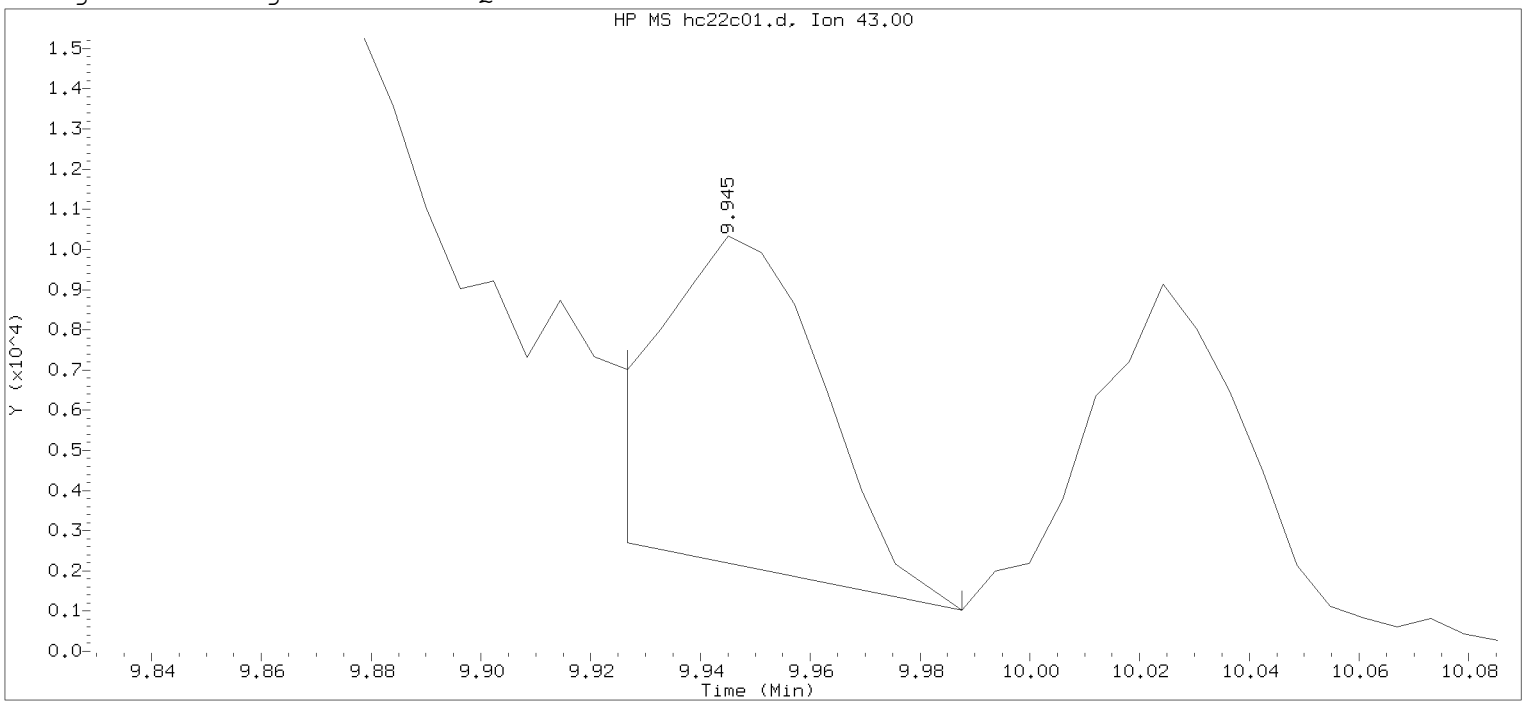
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

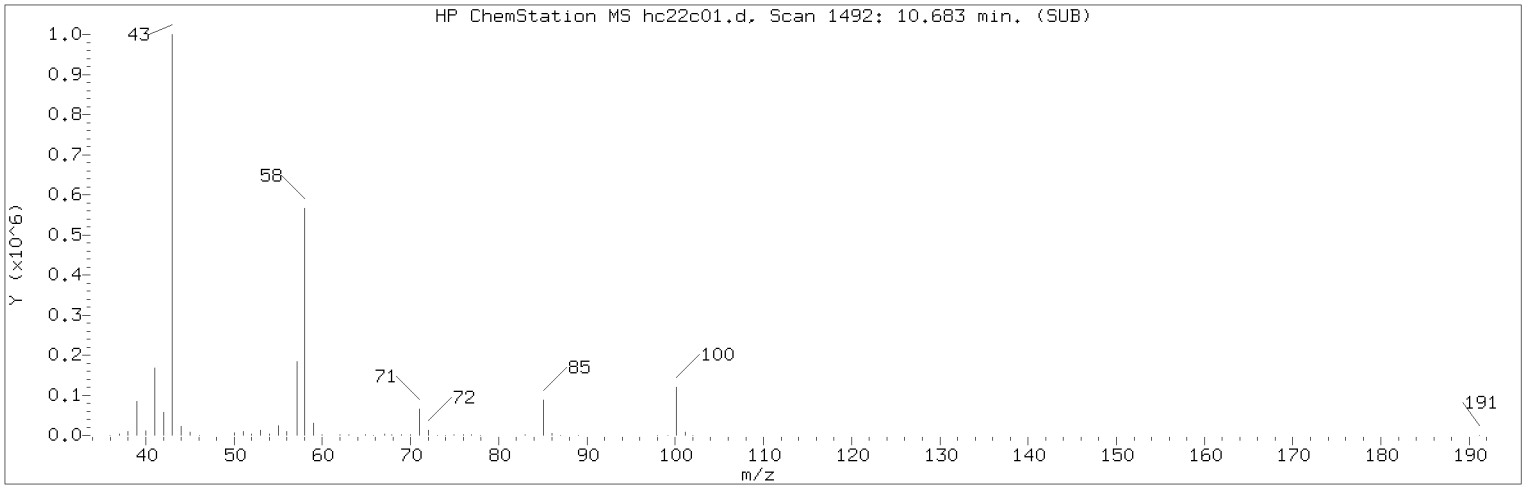
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

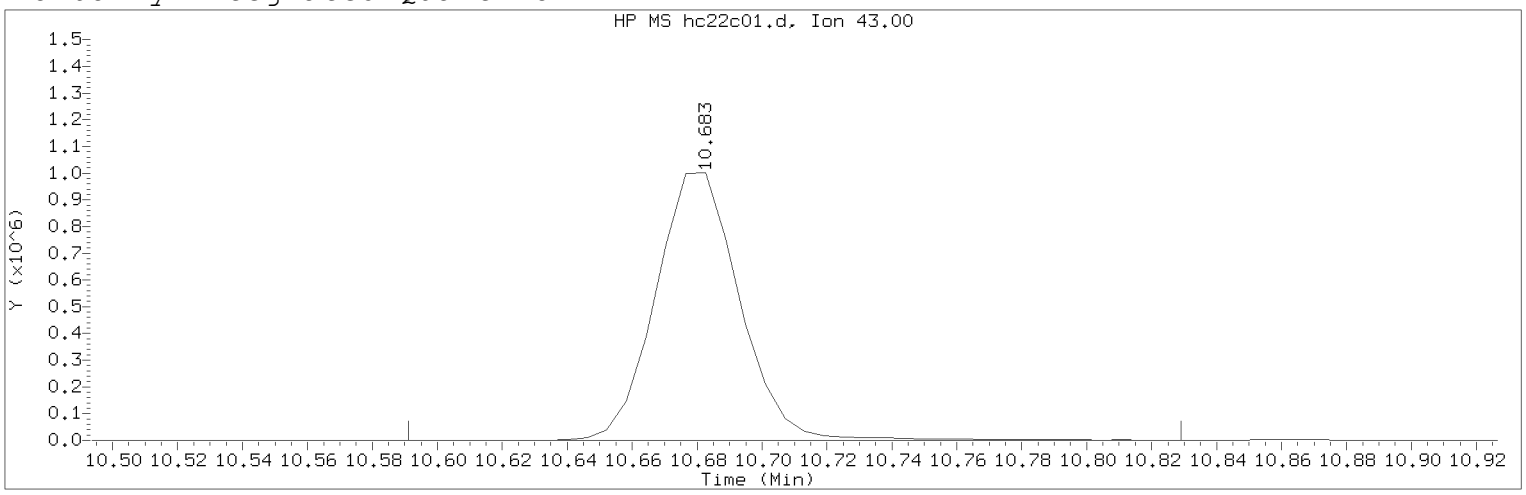
Compound Number : 81
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 1371
Retention Time (minutes): 9.945
Quant Ion : 43.00
Area : 16699
On-column Amount (ng) : 0.6992
Integration start scan : 1367 Integration stop scan: 1377
Y at integration start : 2698 Y at integration end: 1028

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 442 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

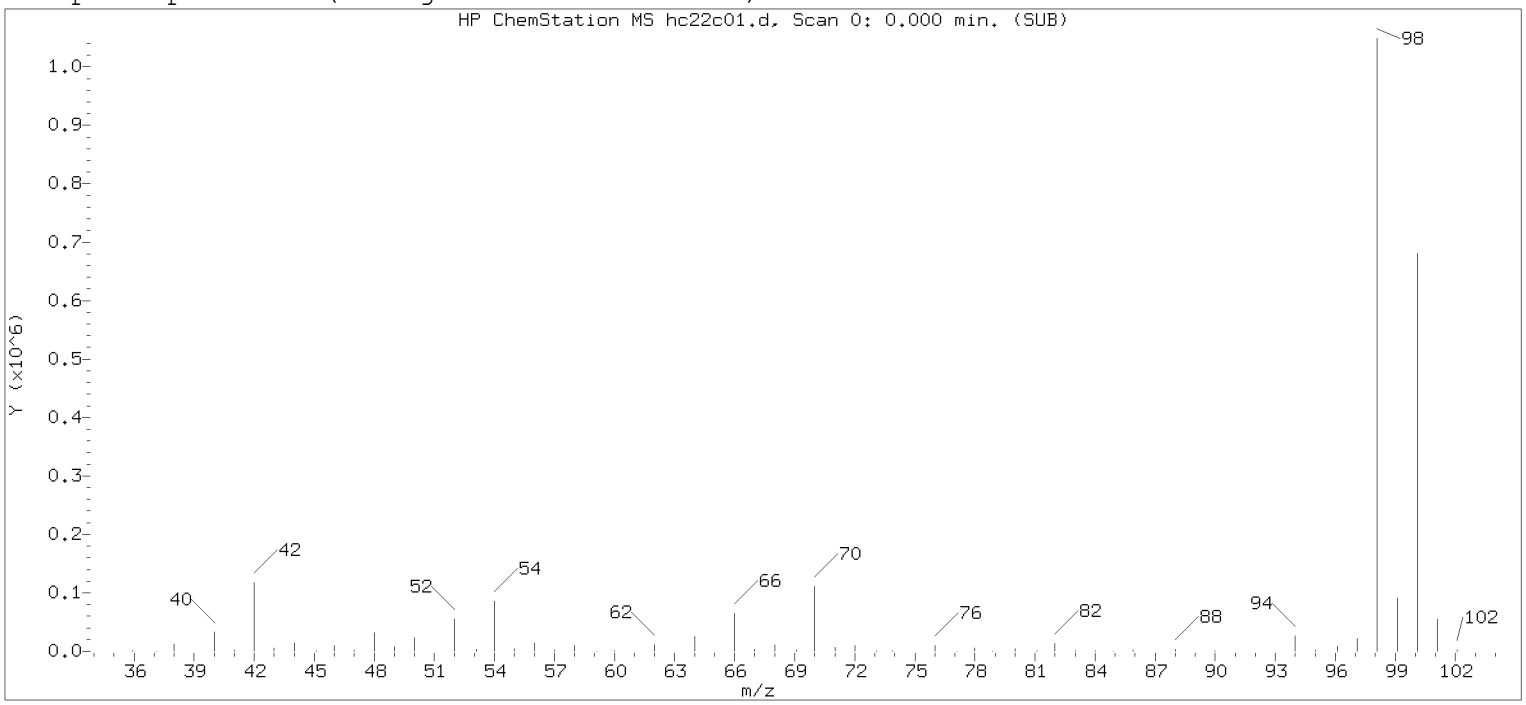
Compound Number : 91
Compound Name : 2-Hexanone
Scan Number : 1492
Retention Time (minutes): 10.683
Quant Ion : 43.00
Area (flag) : 1798034M
On-Column Amount (ng) : 92.5569
Integration start scan : 1476 Integration stop scan: 1515
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

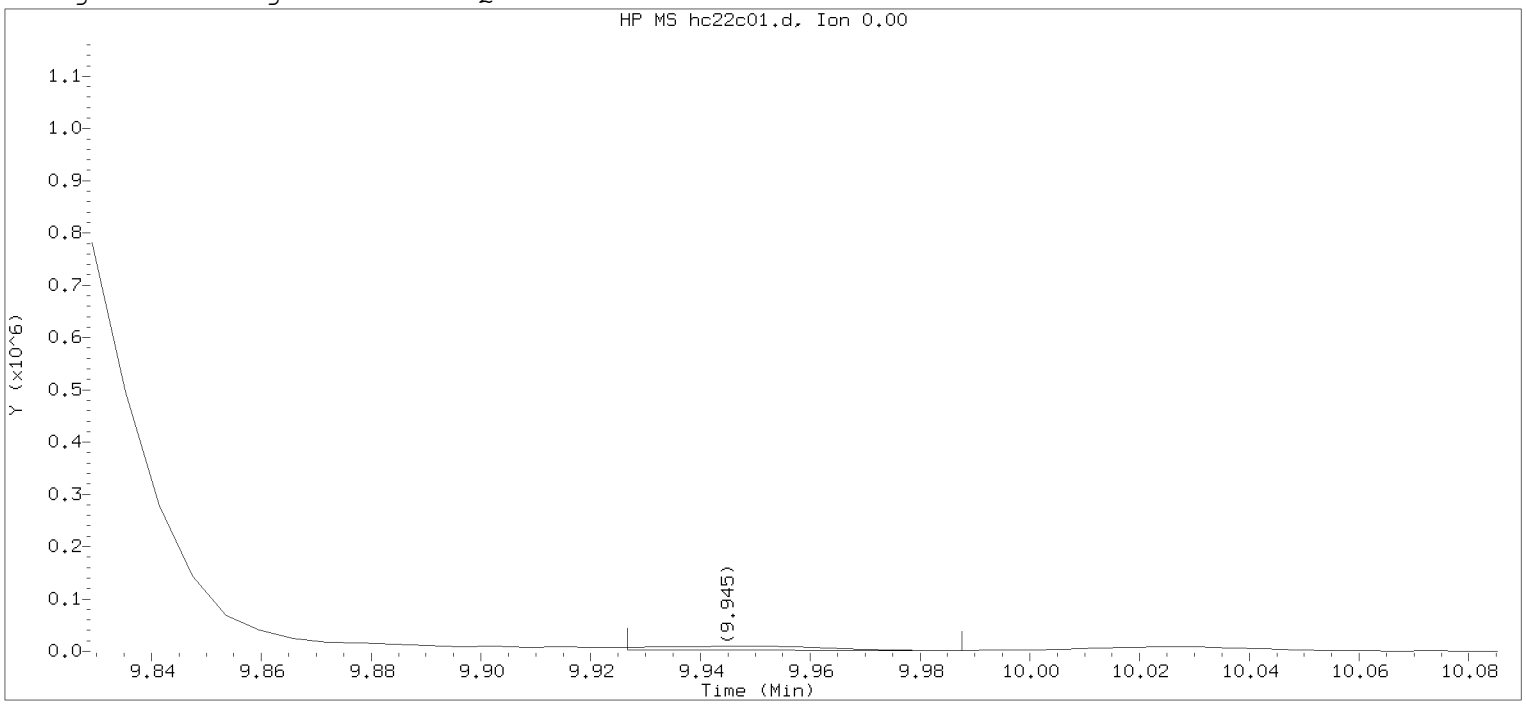
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

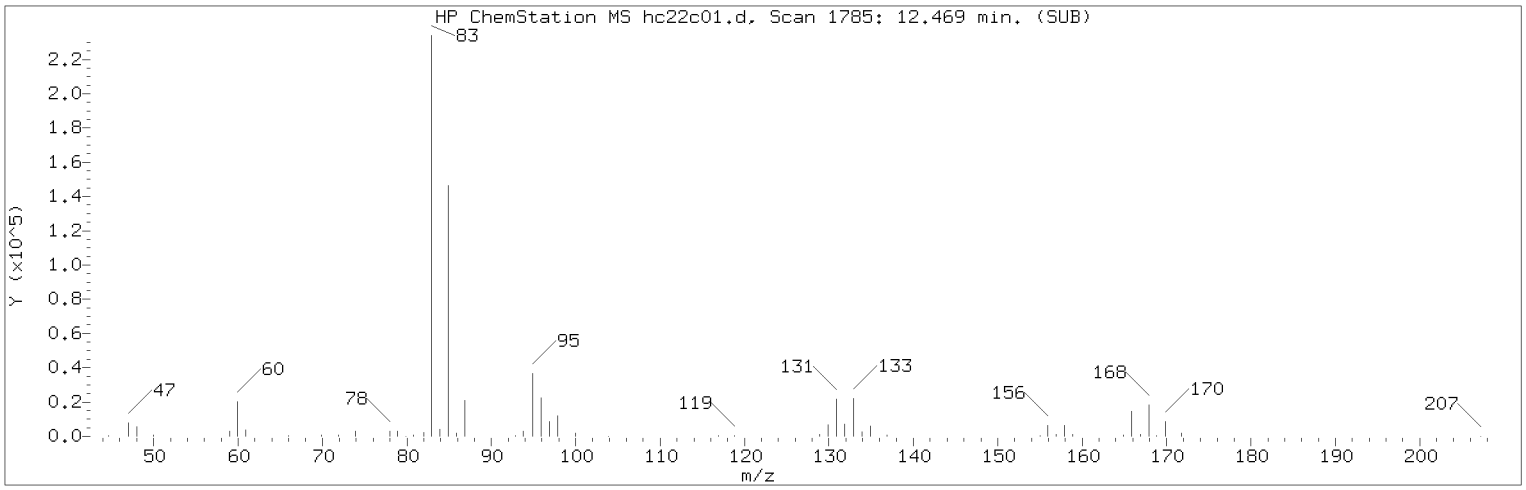
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

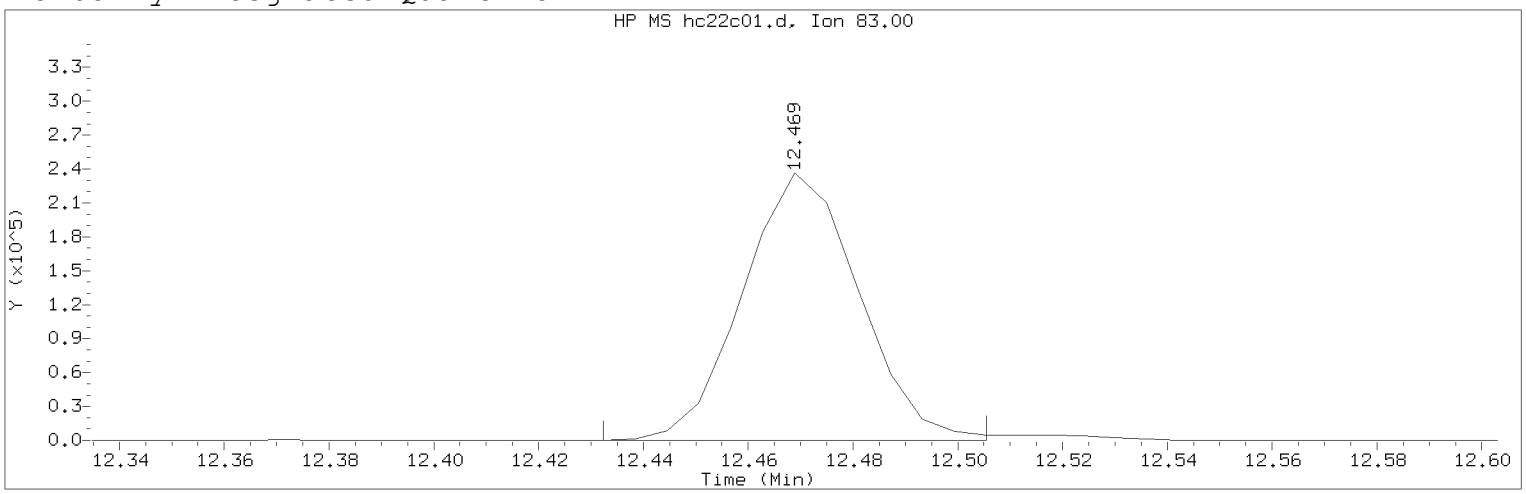
Compound Number : 0
Compound Name : 4-Methyl-2-Pentanone
Scan Number : 0
Retention Time (minutes): 0.000
Quant Ion : 0.00
Area : 0
On-column Amount (ng) : 0.0000
Integration start scan : 0 Integration stop scan: 0
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 442 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

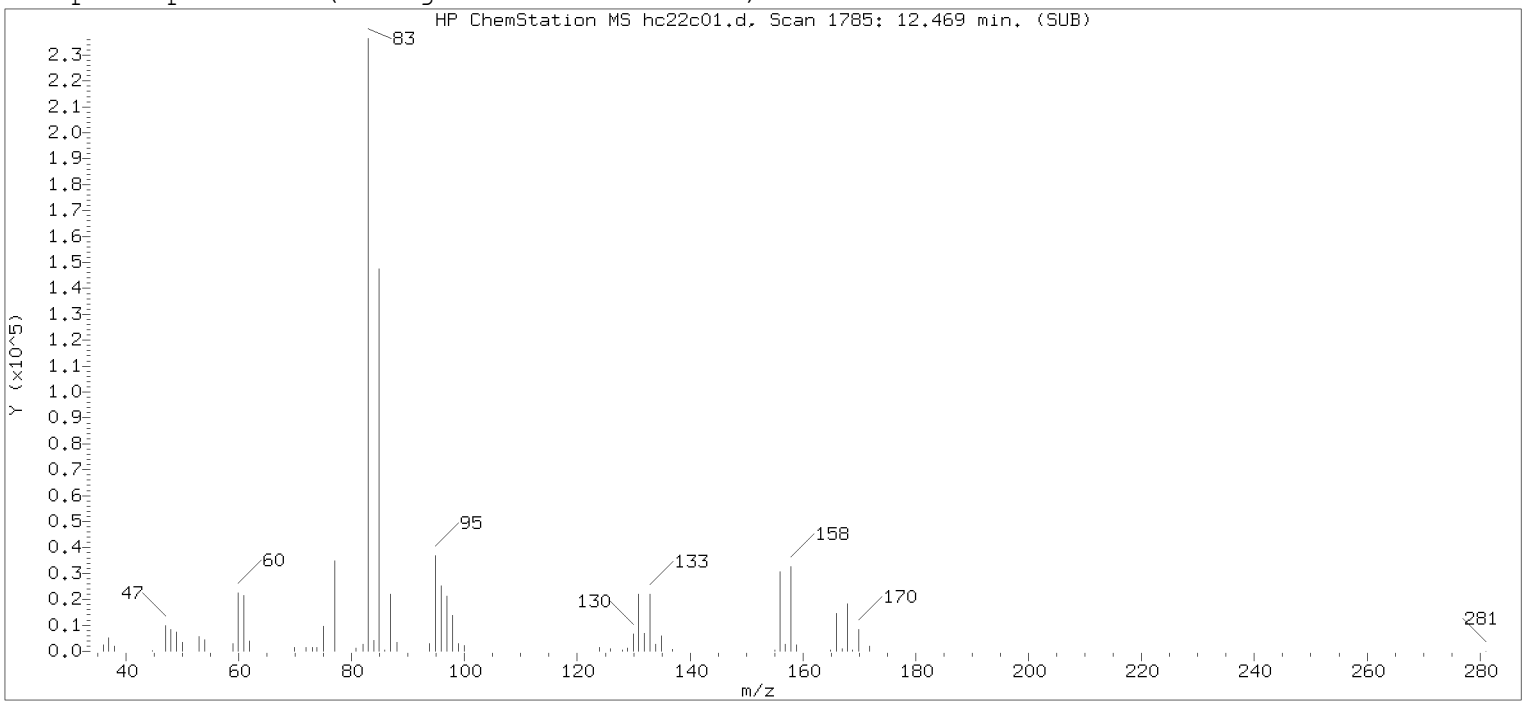
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area (flag) : 363730M
On-Column Amount (ng) : 8.7607
Integration start scan : 1778 Integration stop scan: 1790
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

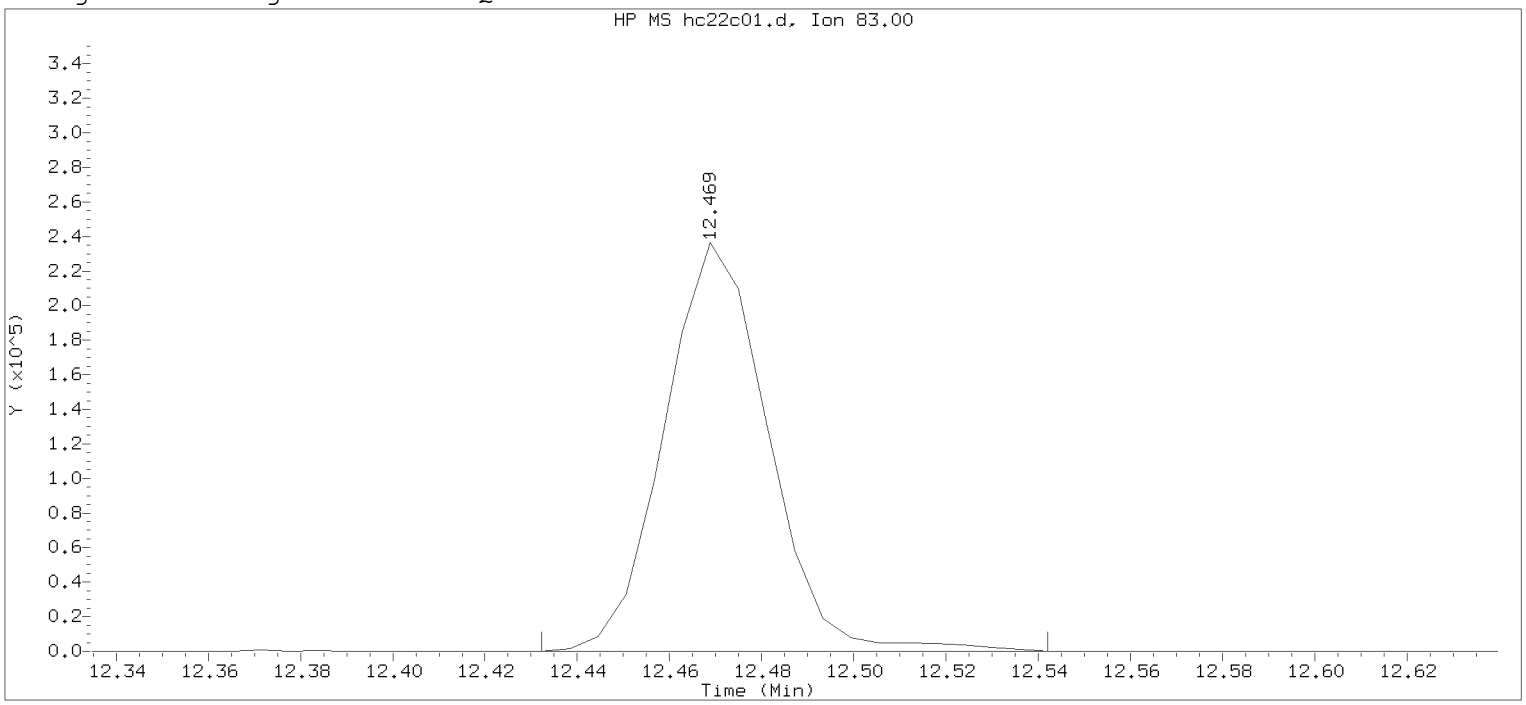
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

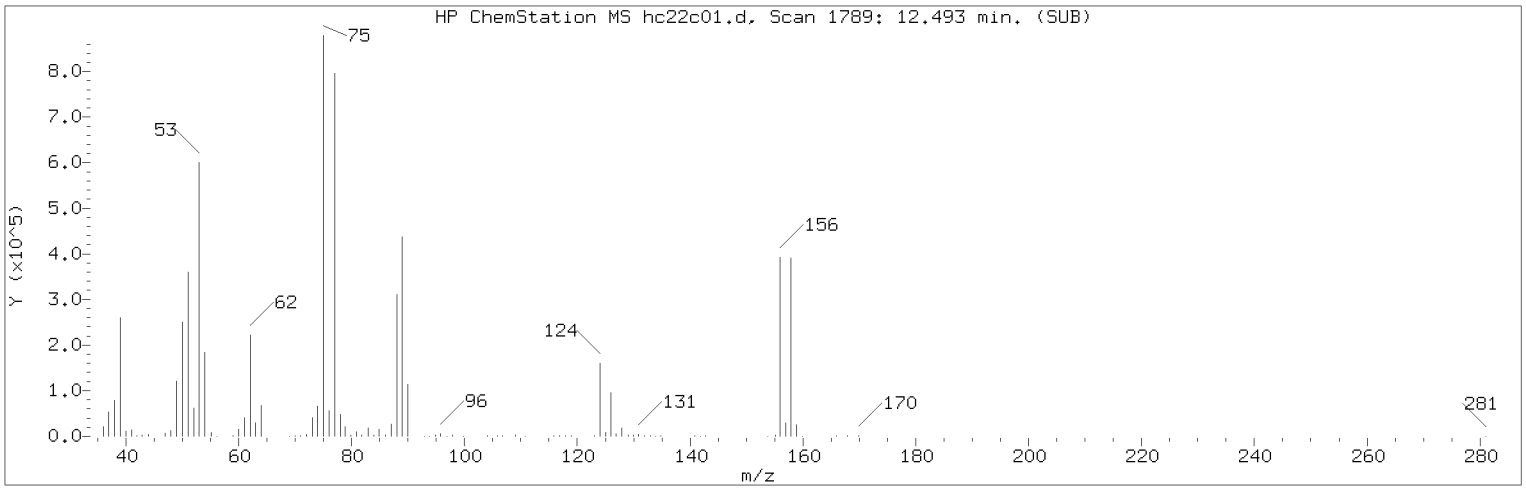
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

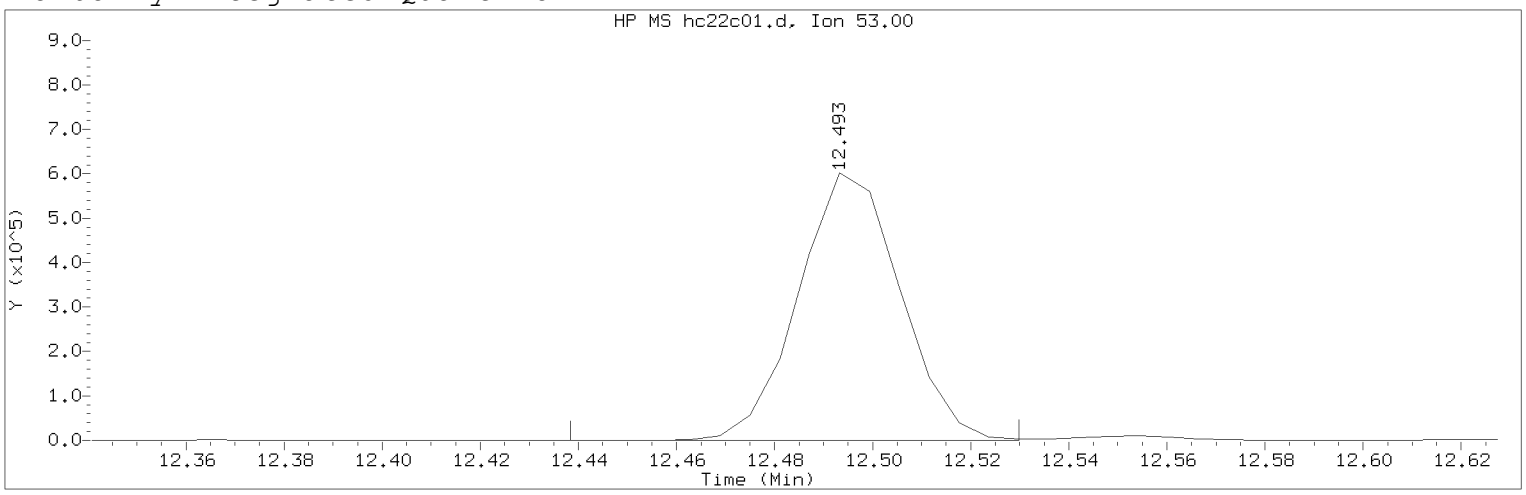
Compound Number : 113
Compound Name : 1,1,2,2-Tetrachloroethane
Scan Number : 1785
Retention Time (minutes): 12.469
Quant Ion : 83.00
Area : 369779
On-column Amount (ng) : 8.9064
Integration start scan : 1778 Integration stop scan: 1796
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 446 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

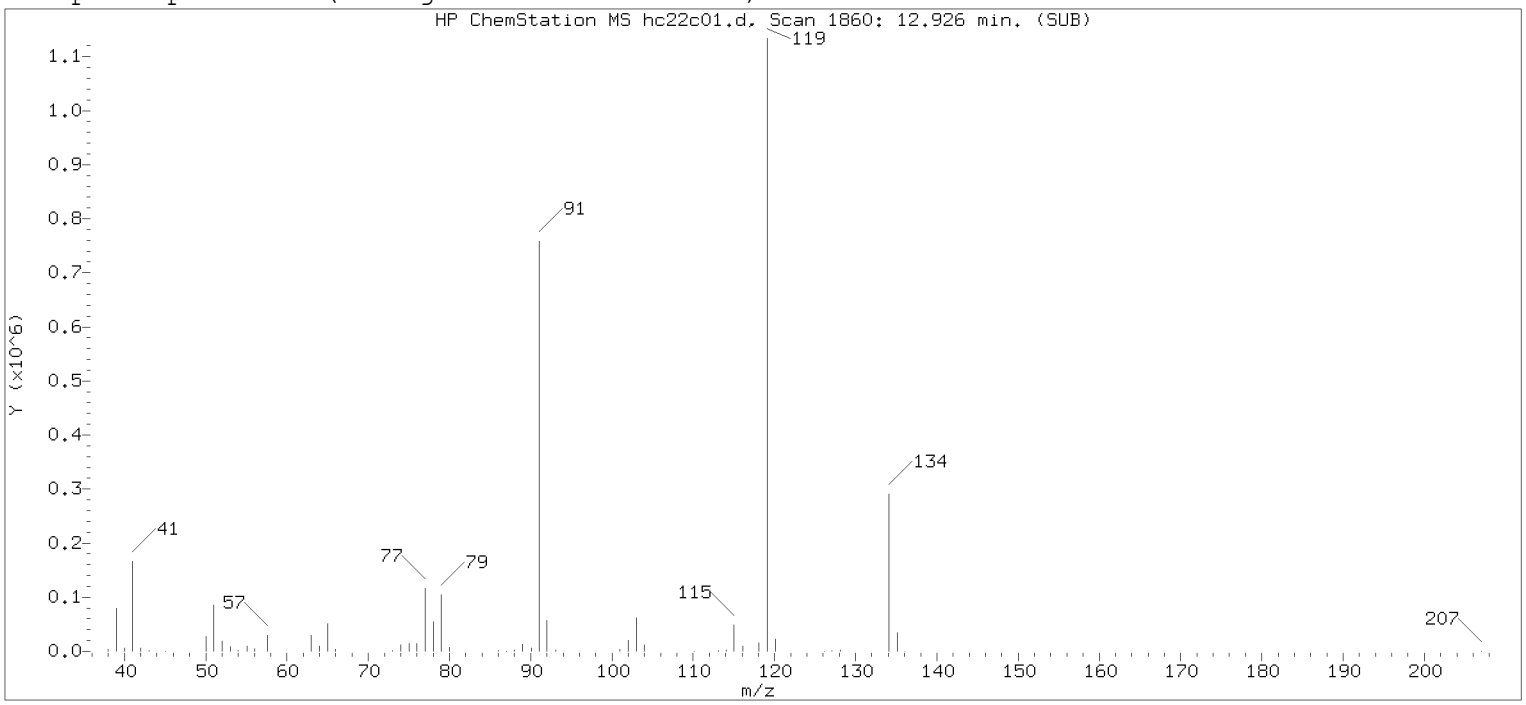
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1789
Retention Time (minutes): 12.493
Quant Ion : 53.00
Area (flag) : 867076M
On-Column Amount (ng) : 97.0055
Integration start scan : 1779 Integration stop scan: 1794
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

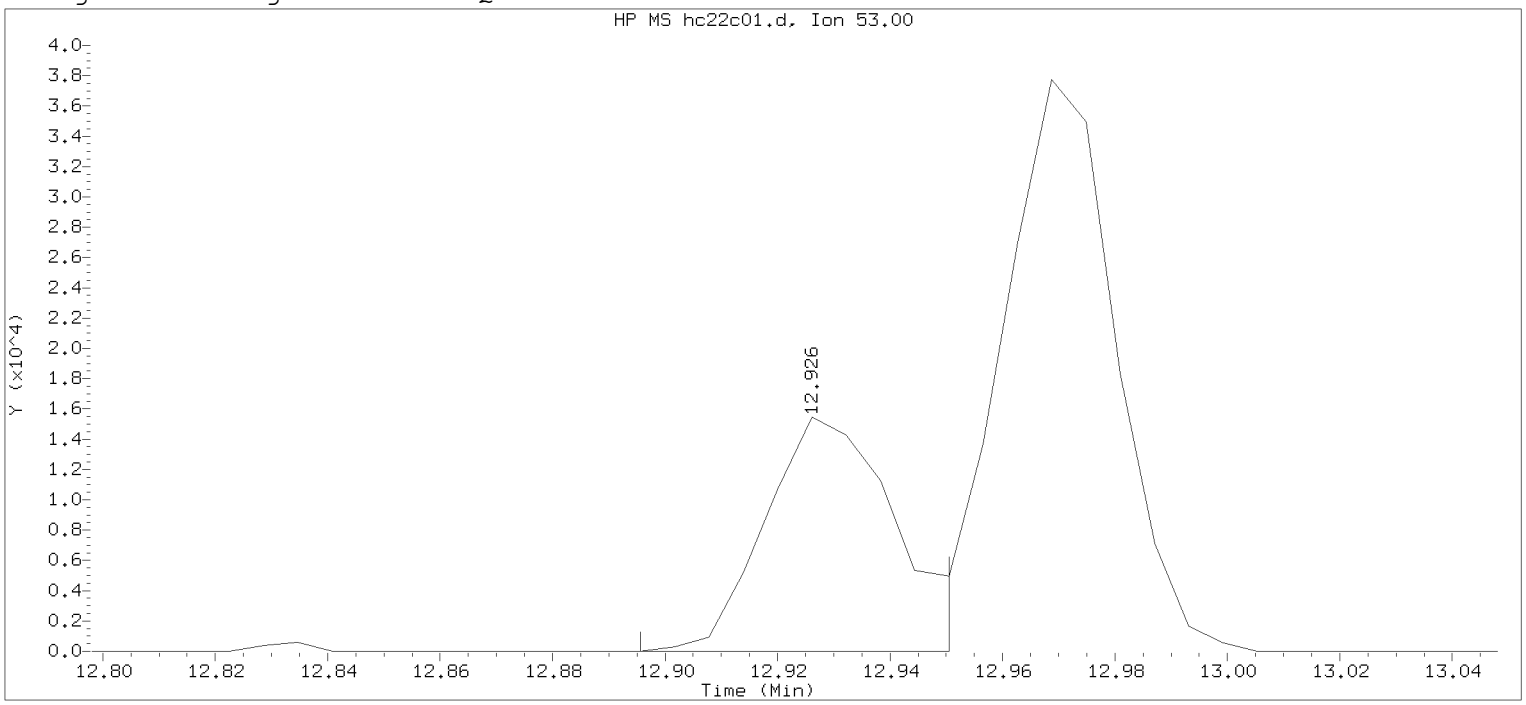
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

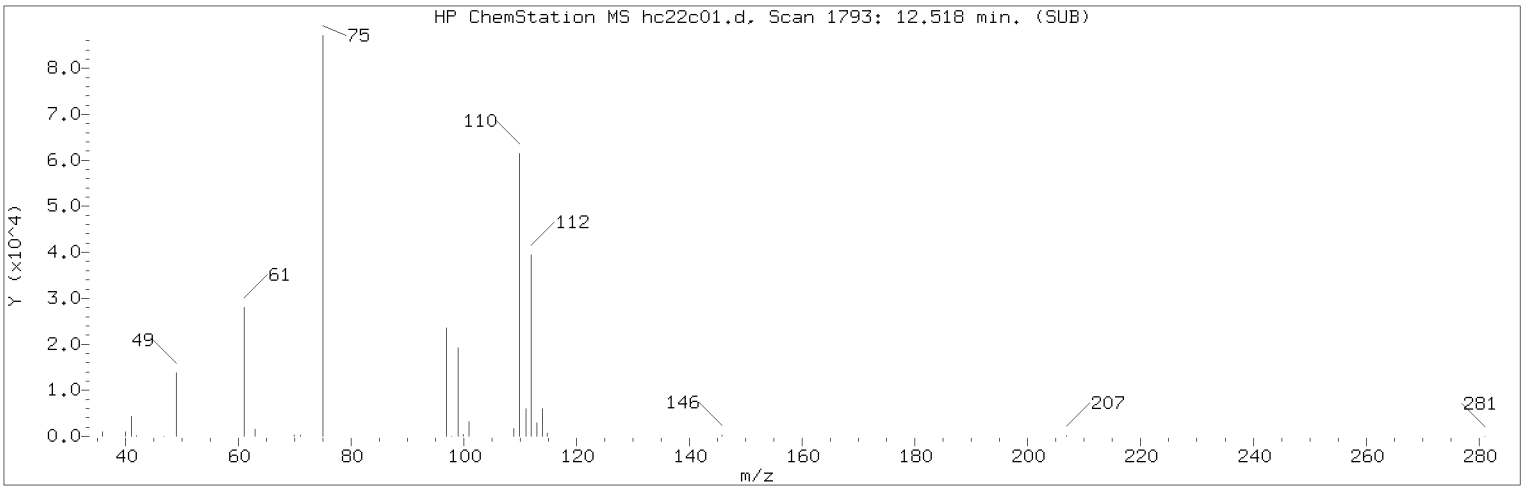
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

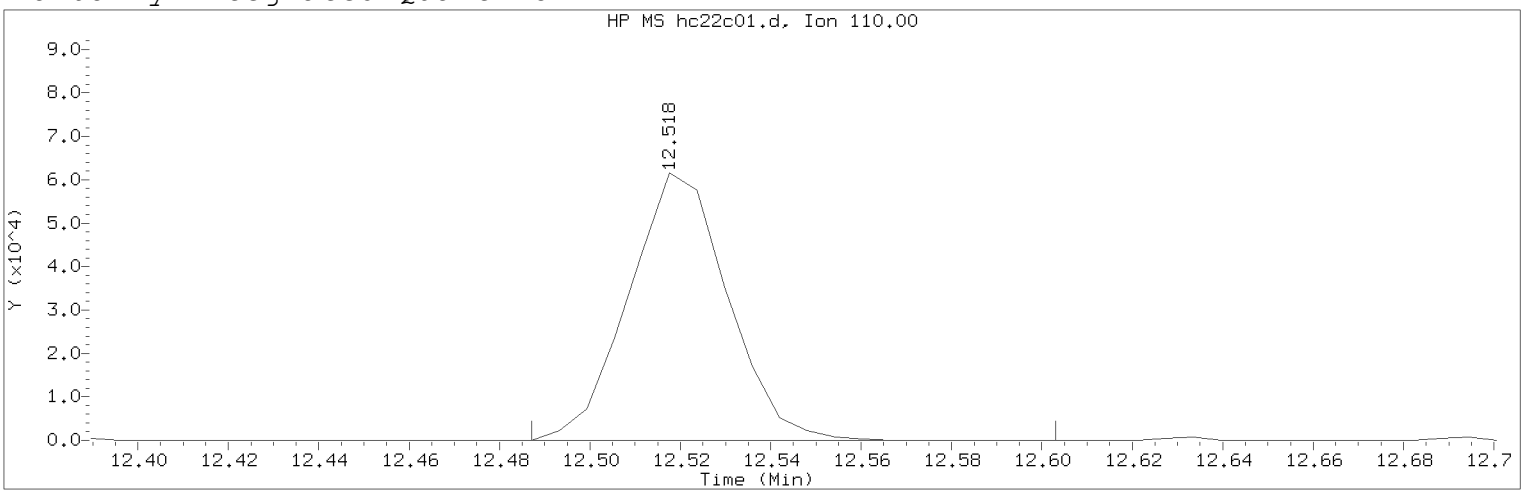
Compound Number : 115
Compound Name : trans-1,4-Dichloro-2-butene
Scan Number : 1860
Retention Time (minutes): 12.926
Quant Ion : 53.00
Area : 24122
On-column Amount (ng) : 3.2245
Integration start scan : 1854 Integration stop scan: 1863
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Jan 2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

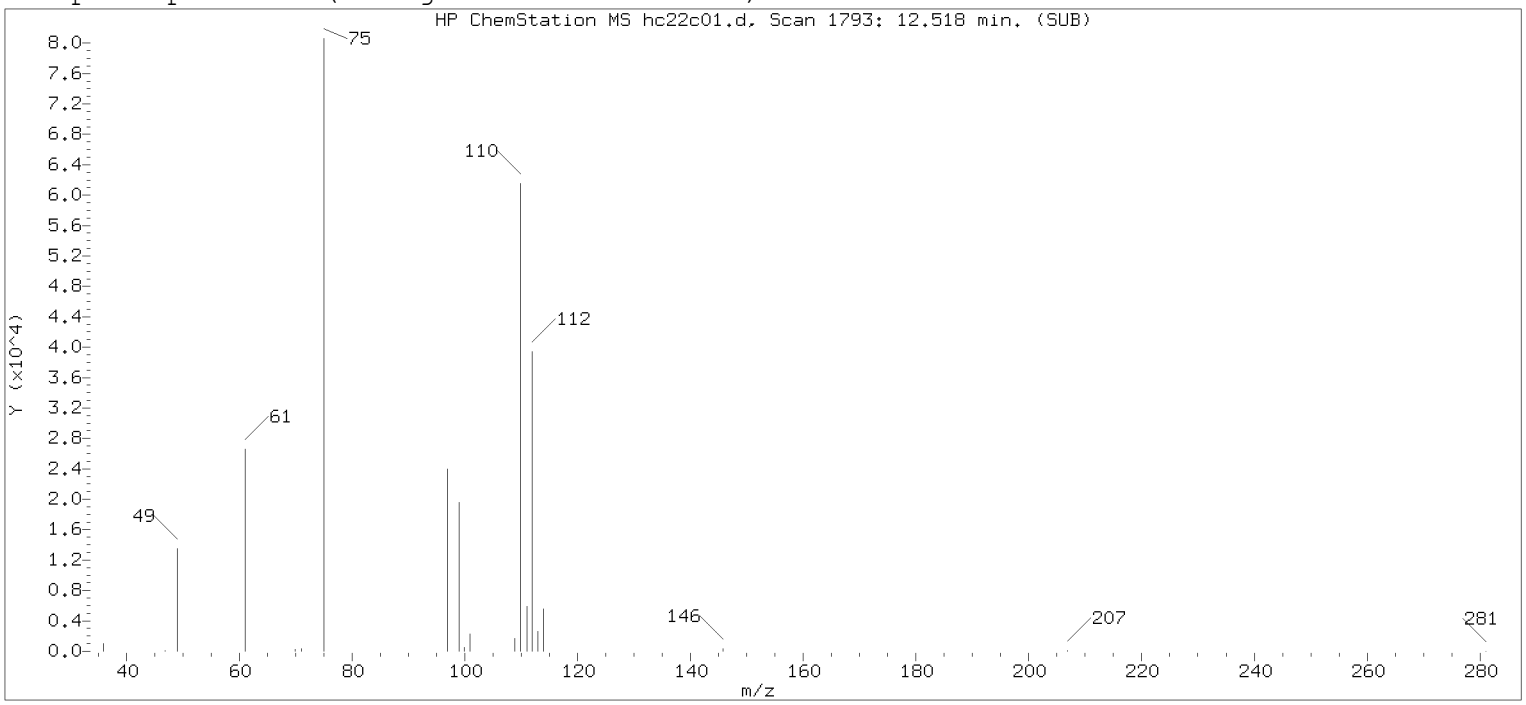
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area (flag) : 93675M
On-Column Amount (ng) : 8.7271
Integration start scan : 1787 Integration stop scan: 1806
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

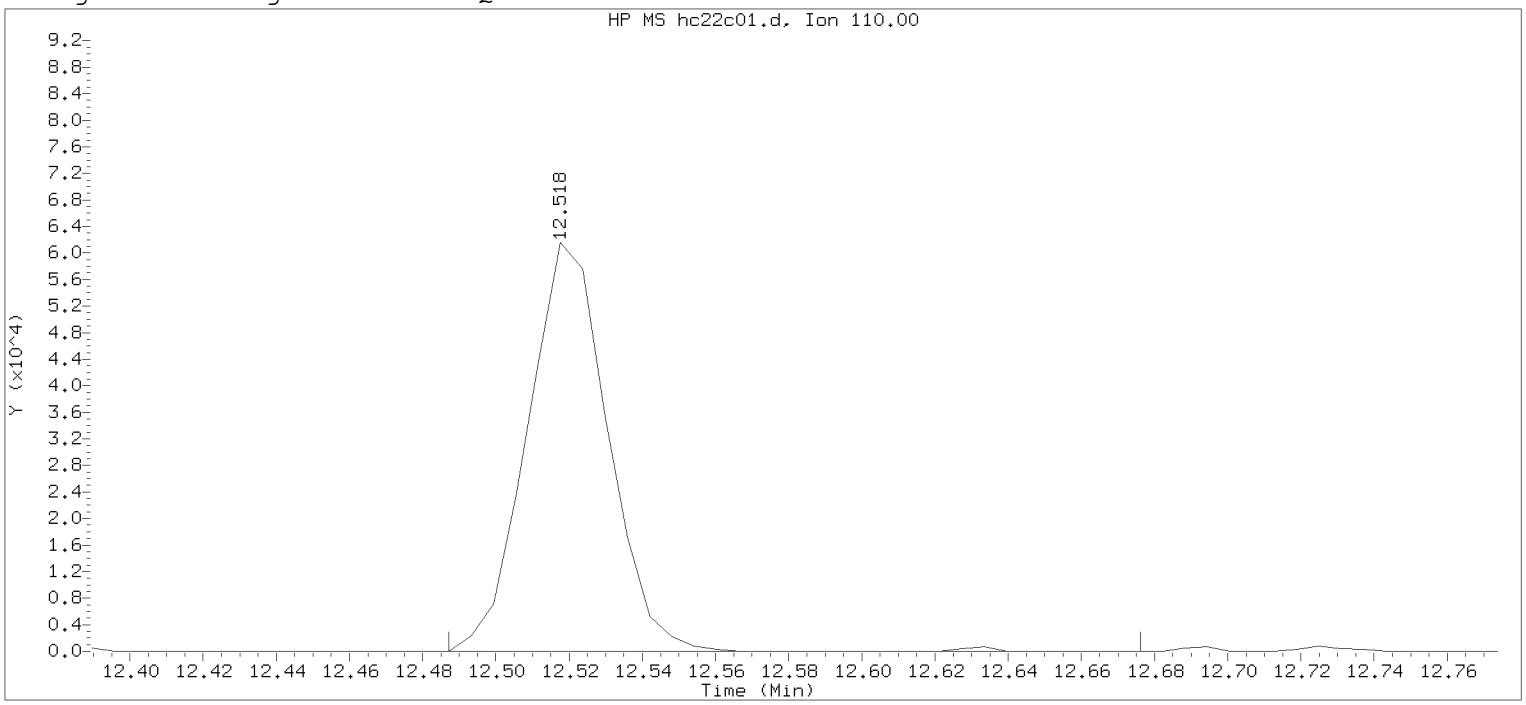
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

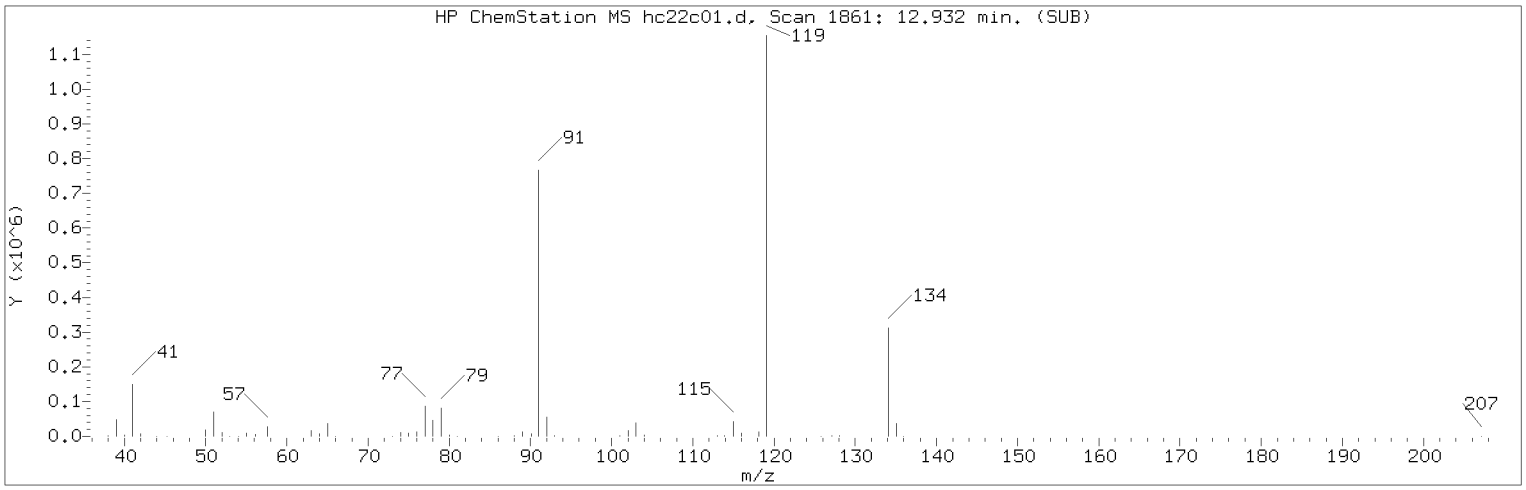
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

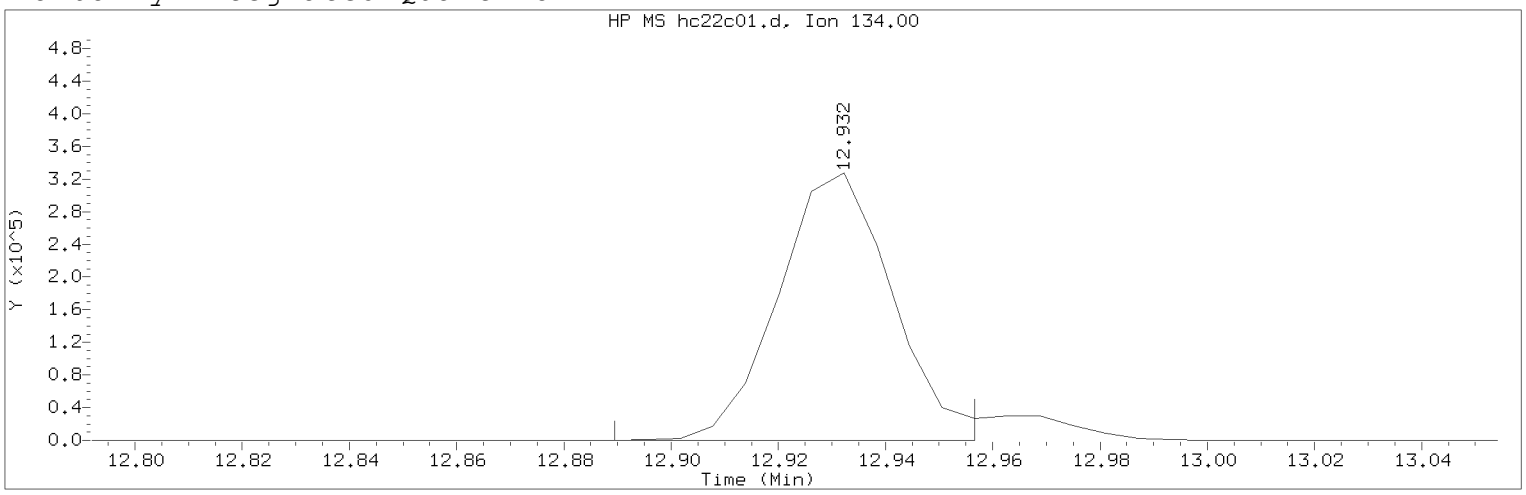
Compound Number : 116
Compound Name : 1,2,3-Trichloropropane
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 110.00
Area : 94074
On-column Amount (ng) : 8.7643
Integration start scan : 1787 Integration stop scan: 1818
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 450 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

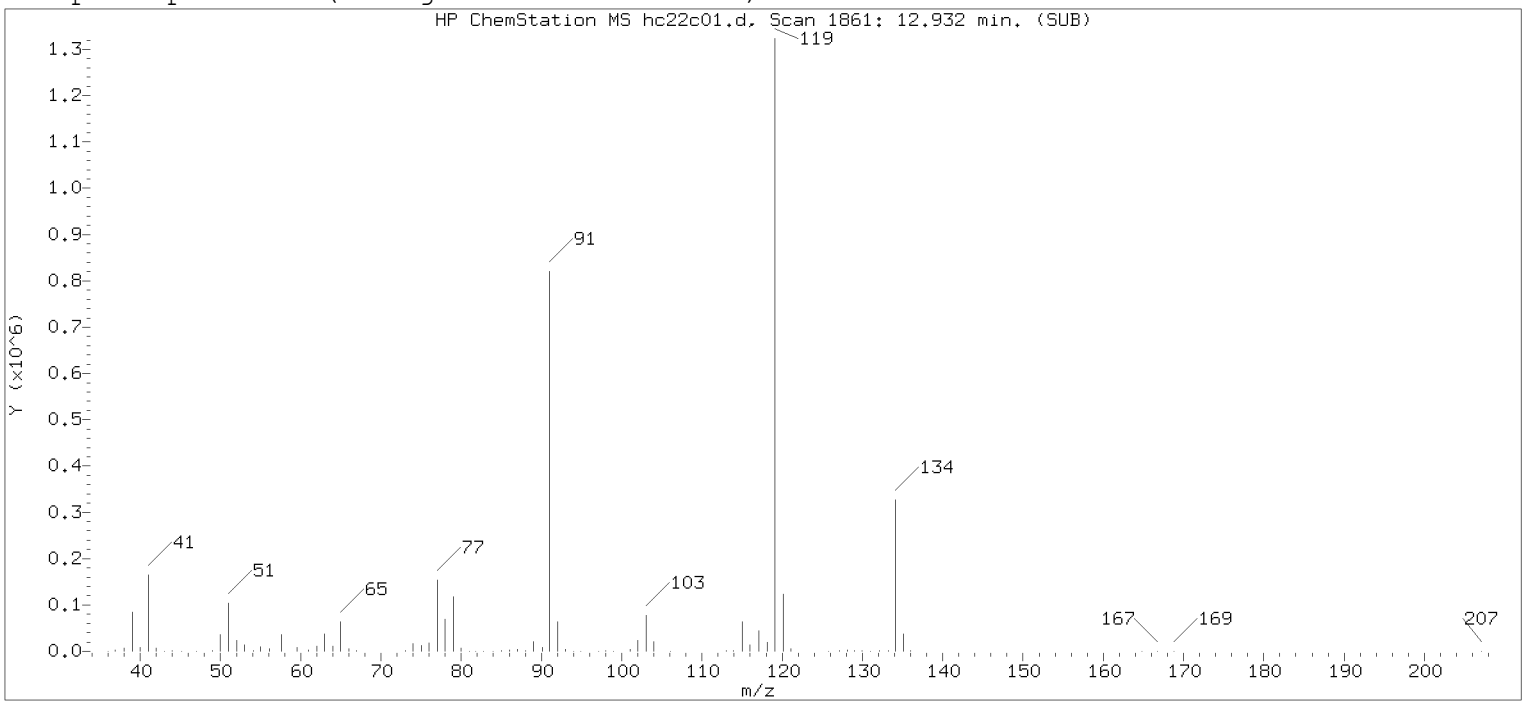
Compound Number : 125
Compound Name : tert-Butylbenzene
Scan Number : 1861
Retention Time (minutes): 12.932
Quant Ion : 134.00
Area (flag) : 483651M
On-Column Amount (ng) : 9.5654
Integration start scan : 1853 Integration stop scan: 1864
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

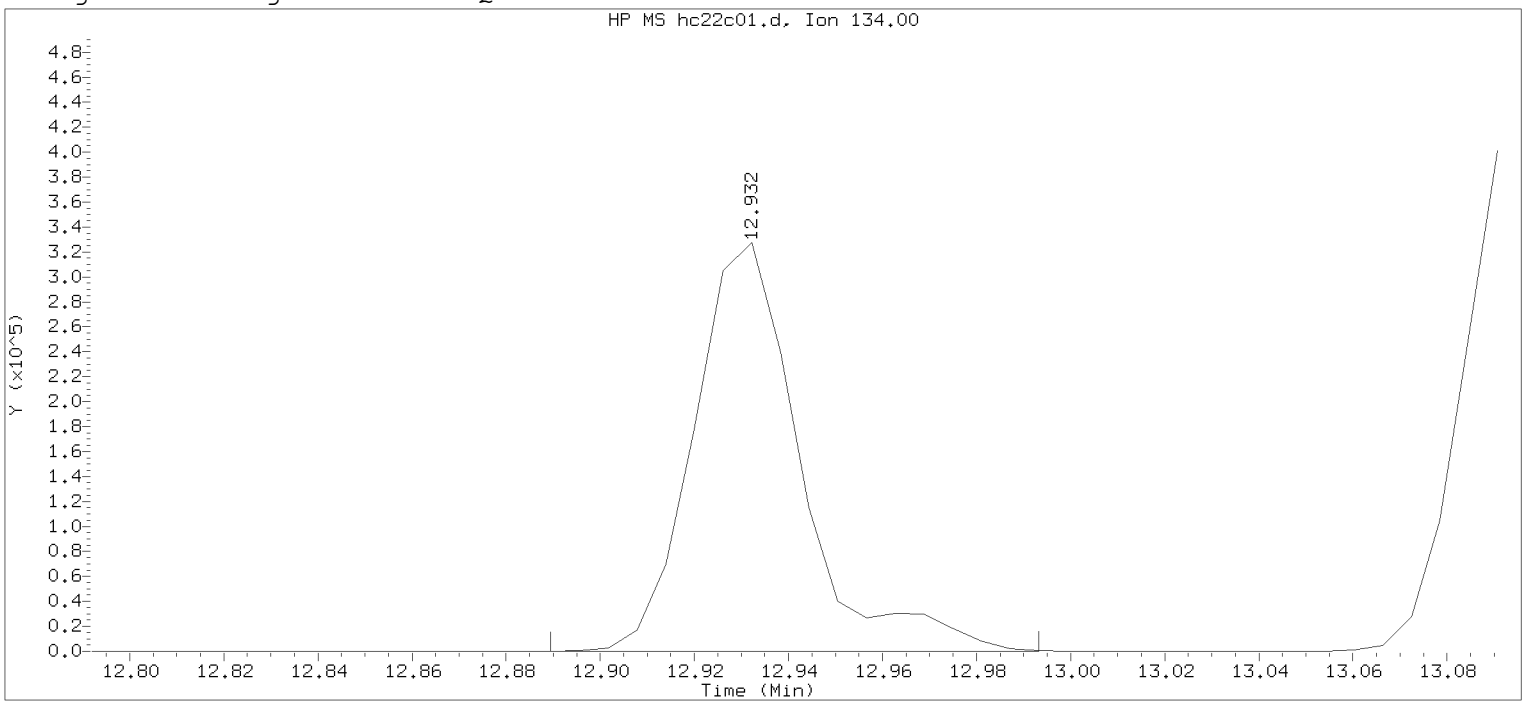
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

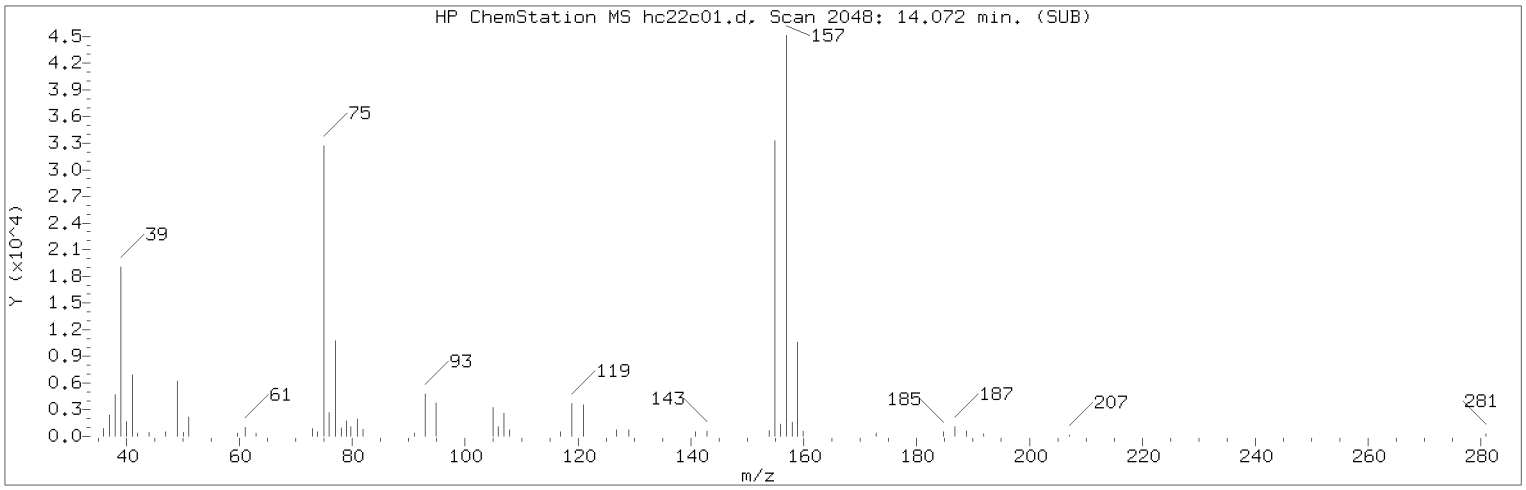
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

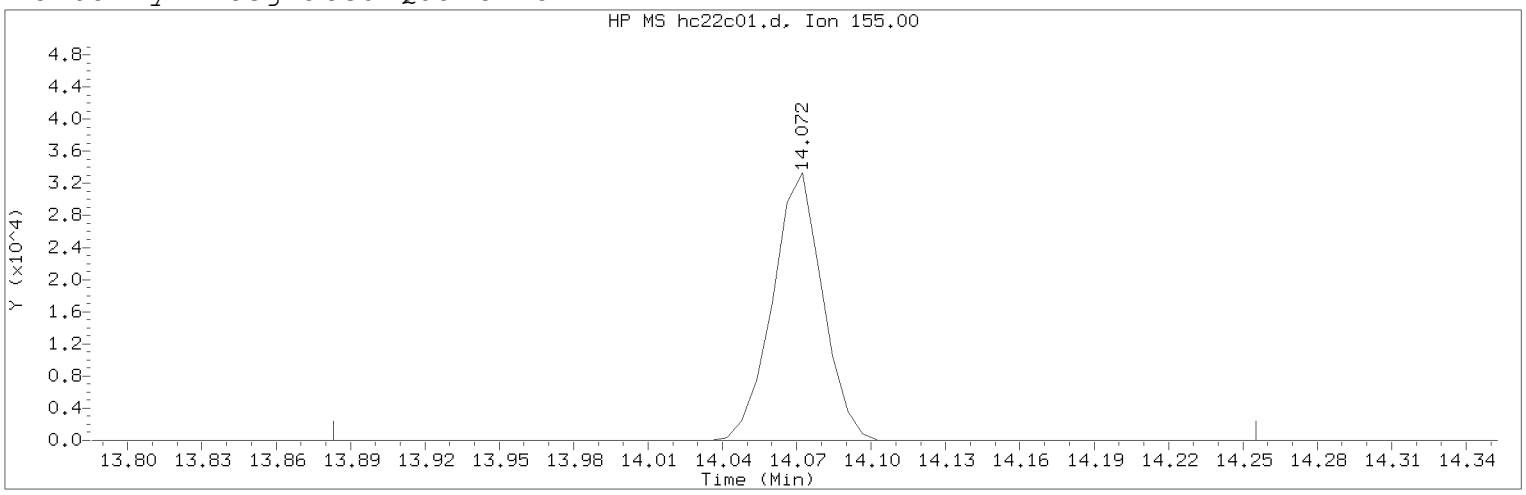
Compound Number	: 125		
Compound Name	: tert-Butylbenzene		
Scan Number	: 1861		
Retention Time (minutes)	: 12.932		
Quant Ion	: 134.00		
Area	: 516296		
On-column Amount (ng)	: 10.2110		
Integration start scan	: 1853	Integration stop scan:	1870
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 452 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:42 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

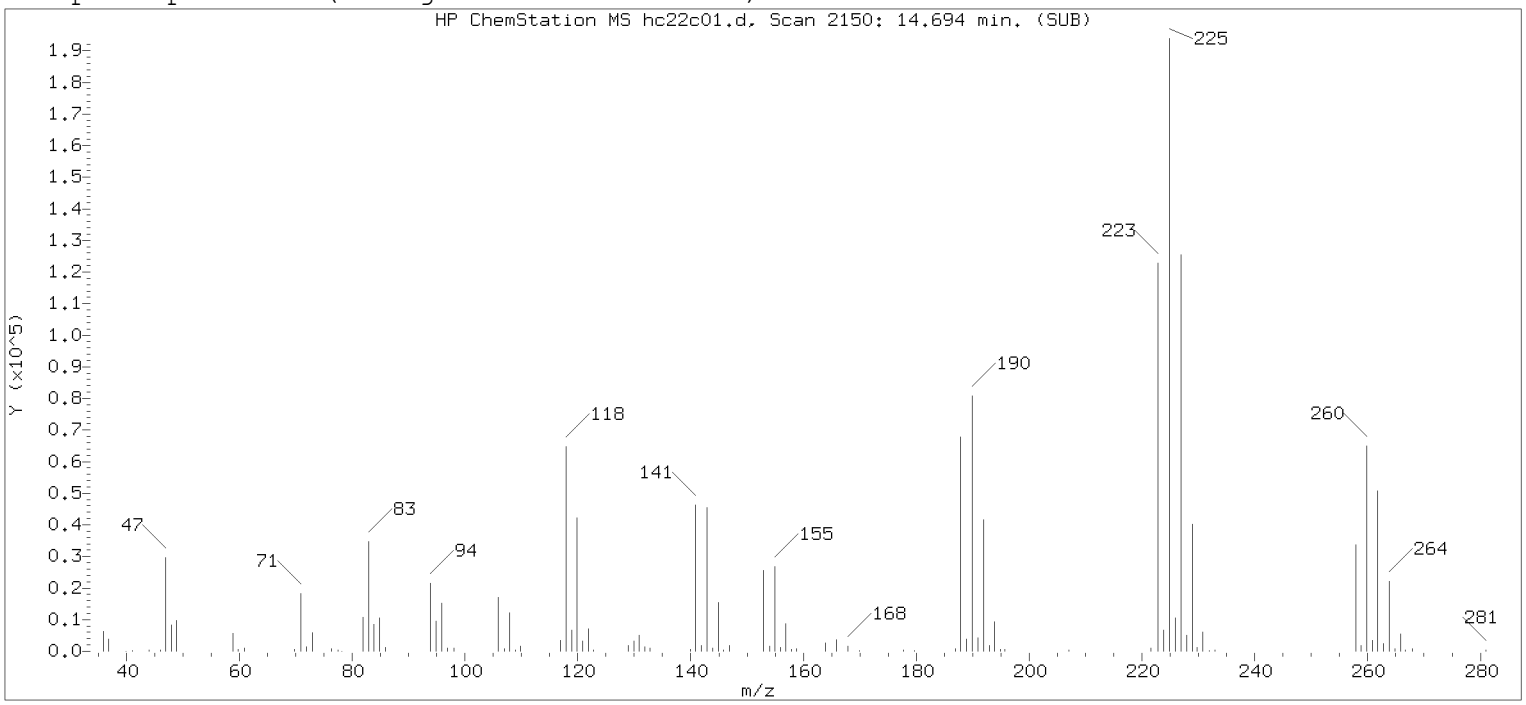
Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2048
Retention Time (minutes): 14.072
Quant Ion : 155.00
Area (flag) : 46672M
On-Column Amount (ng) : 9.6477
Integration start scan : 2016 Integration stop scan: 2077
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

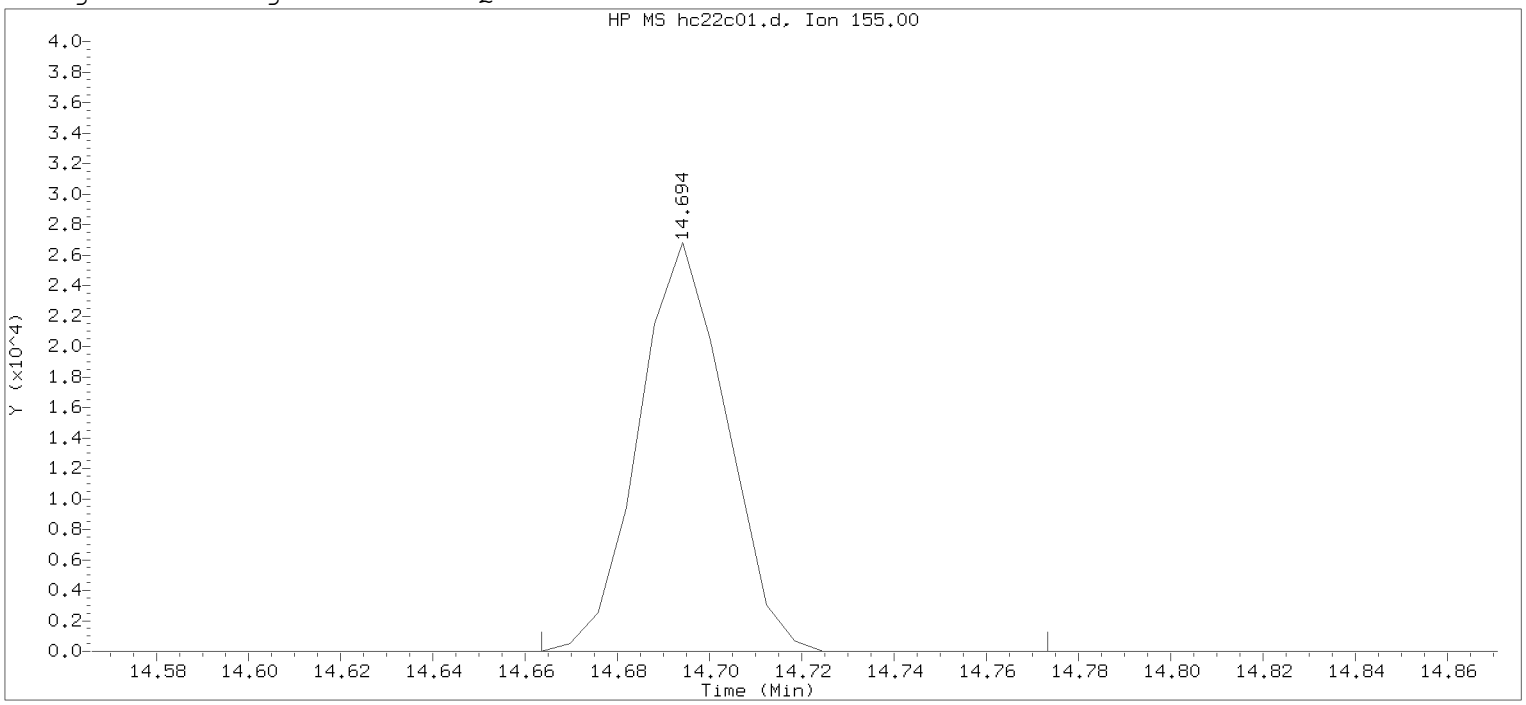
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 08:42.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:11.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:19 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 8260W25
Calibration date and time: 22-OCT-2018 08:37
Date, time and analyst ID of latest file update: 22-Oct-2018 08:37 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 143
Compound Name : 1,2-Dibromo-3-chloropropane
Scan Number : 2150
Retention Time (minutes): 14.694
Quant Ion : 155.00
Area : 35320
On-column Amount (ng) : 8.7235
Integration start scan : 2144 Integration stop scan: 2162
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 08:42.
Target 3.5 esignature used. AE20 Page 454 of 1072

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

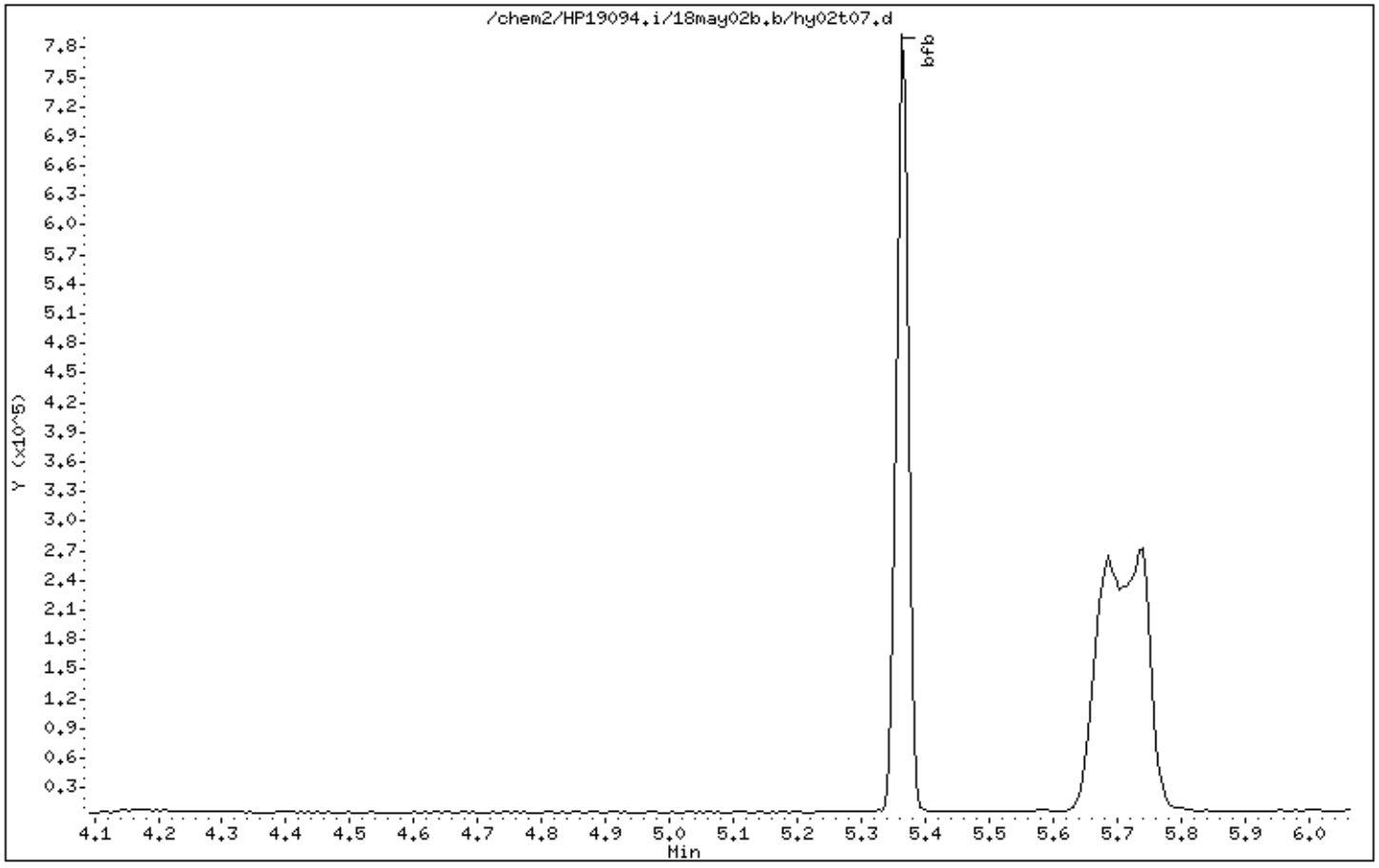
Instrument: HP19094.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25



Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

Instrument: HP19094.i

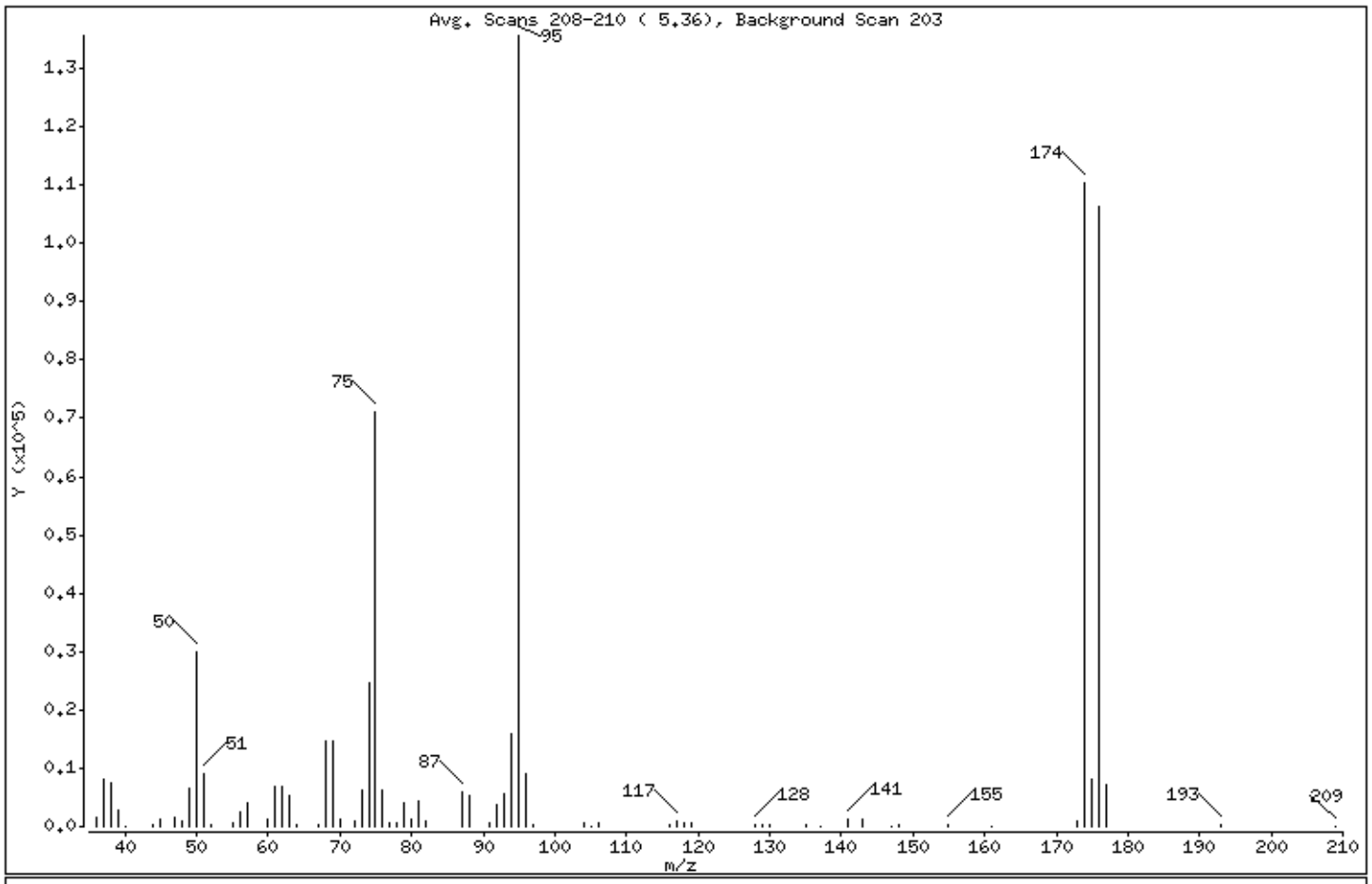
Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

Operator: DVV10203

Column phase: Rxi-624Sil MS

Column diameter: 0.25

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	22.13
75	30.00 - 60.00% of mass 95	52.51
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.74 (0.91)
174	50.00 - 100.00% of mass 95	81.35
175	5.00 - 9.00% of mass 174	6.02 (7.39)
176	95.00 - 101.00% of mass 174	78.44 (96.43)
177	5.00 - 9.00% of mass 176	5.34 (6.81)

Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203

Data File: /chem2/HP19094.i/18may02b.b/hy02t07.d

Date : 02-MAY-2018 18:32

Client ID: BFB 50ng

Instrument: HP19094.i

Sample Info: BFB 50ng;BFB FEB13-18;1;3;;;;;

Operator: DVV10203

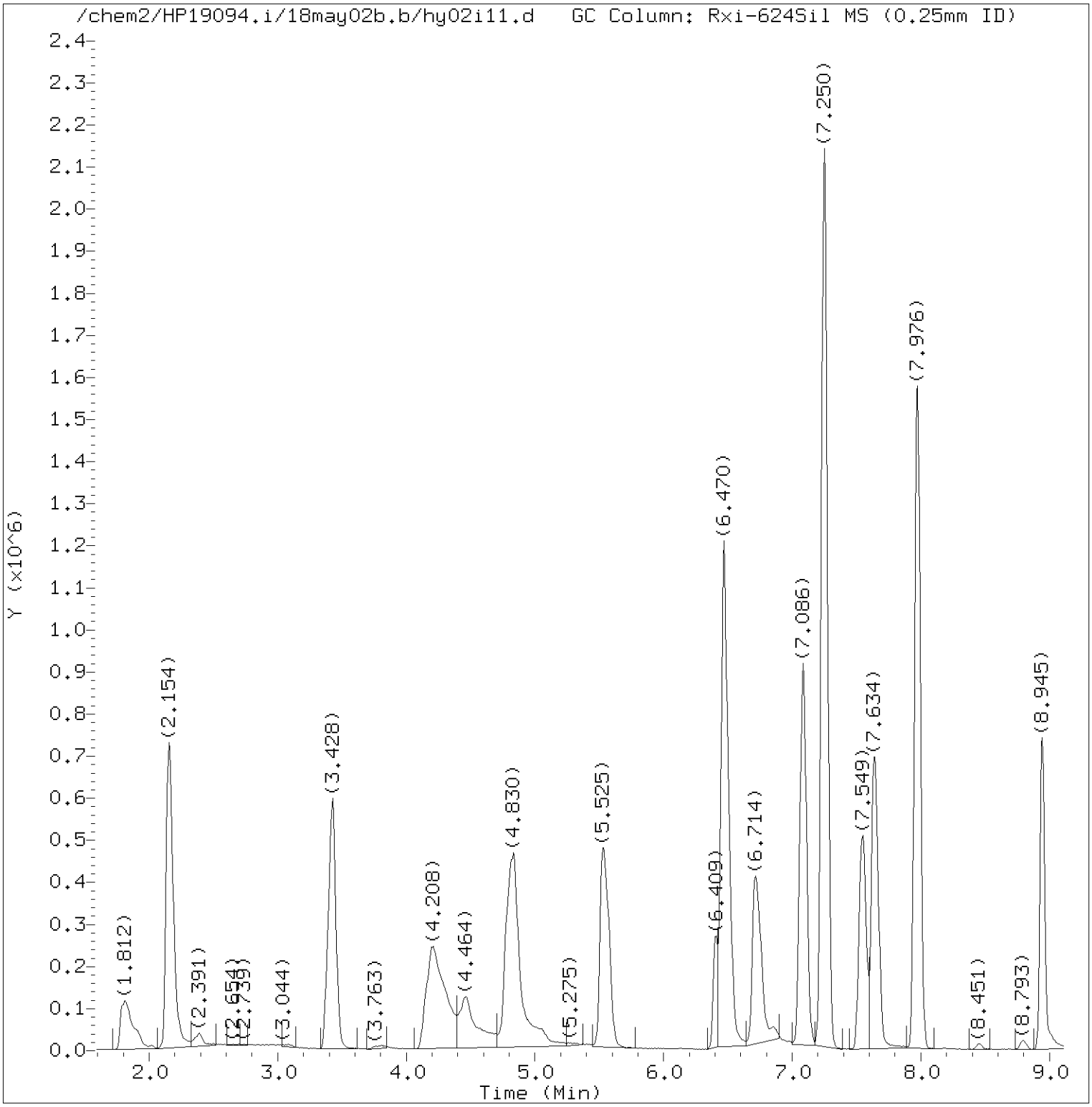
Column phase: Rxi-624Sil MS

Column diameter: 0.25

Data File: hy02t07.d
Spectrum: Avg. Scans 208-210 (5.36), Background Scan 203
Location of Maximum: 95.00
Number of points: 70

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1470	62.00	6734	87.00	5881	130.00	433
37.00	8118	63.00	5366	88.00	5267	135.00	242
38.00	7563	64.00	344	91.00	509	137.00	100
39.00	2730	67.00	437	92.00	3621	141.00	1337
40.00	63	68.00	14675	93.00	5521	143.00	1332
44.00	285	69.00	14780	94.00	15980	147.00	90
45.00	1328	70.00	1336	95.00	135616	148.00	267
47.00	1648	72.00	799	96.00	9072	155.00	234
48.00	966	73.00	6302	97.00	295	161.00	98
49.00	6556	74.00	24648	104.00	568	173.00	1005
50.00	30024	75.00	71232	105.00	133	174.00	110368
51.00	9082	76.00	6135	106.00	520	175.00	8161
52.00	462	77.00	713	116.00	465	176.00	106424
55.00	540	78.00	701	117.00	851	177.00	7246
56.00	2506	79.00	4126	118.00	543	193.00	227
57.00	3993	80.00	1277	119.00	727	209.00	128
60.00	1270	81.00	4251	128.00	453		
61.00	6851	82.00	901	129.00	243		

Digitally signed by Don V. Viray on 05/02/2018 at 18:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

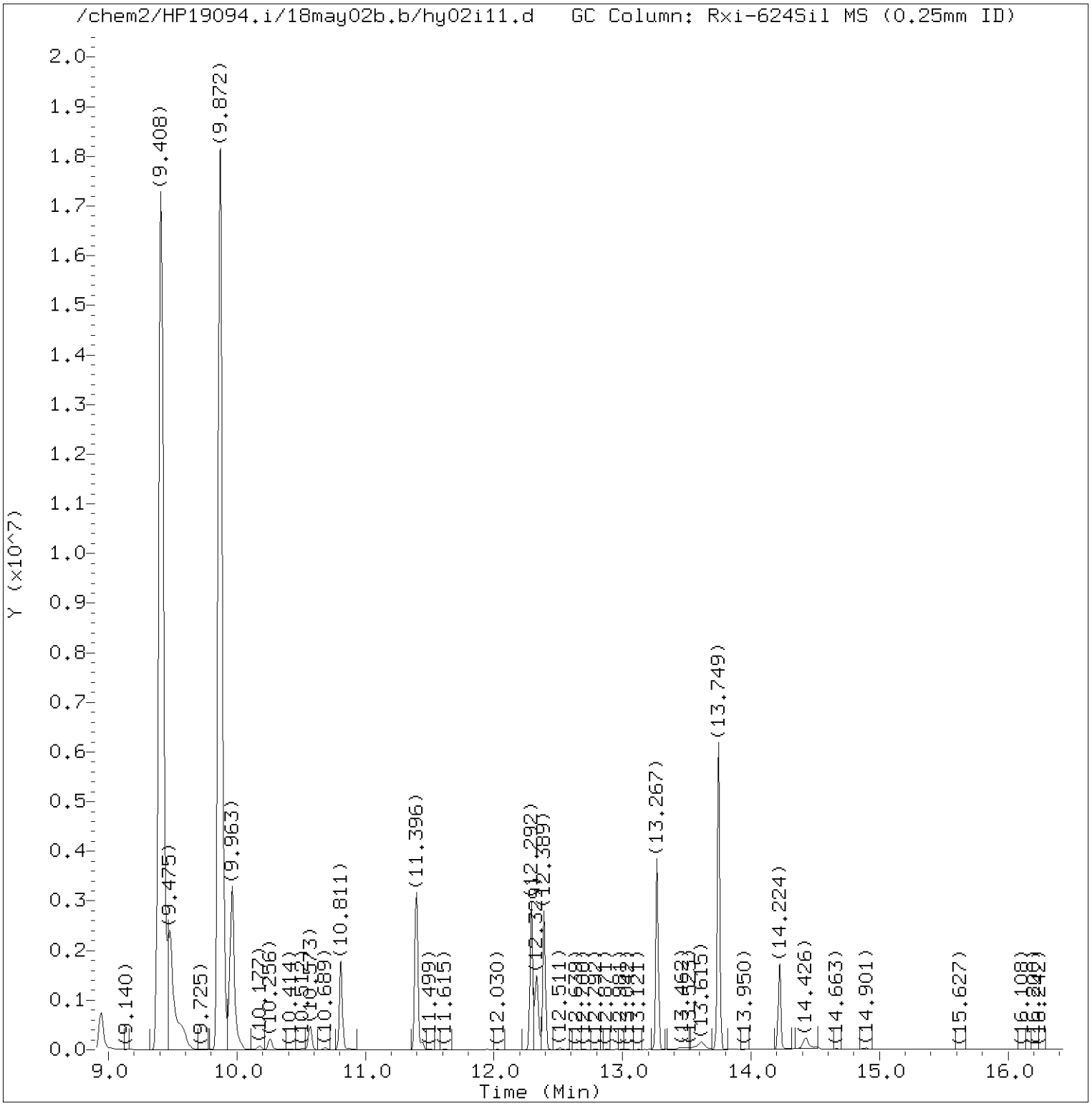
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

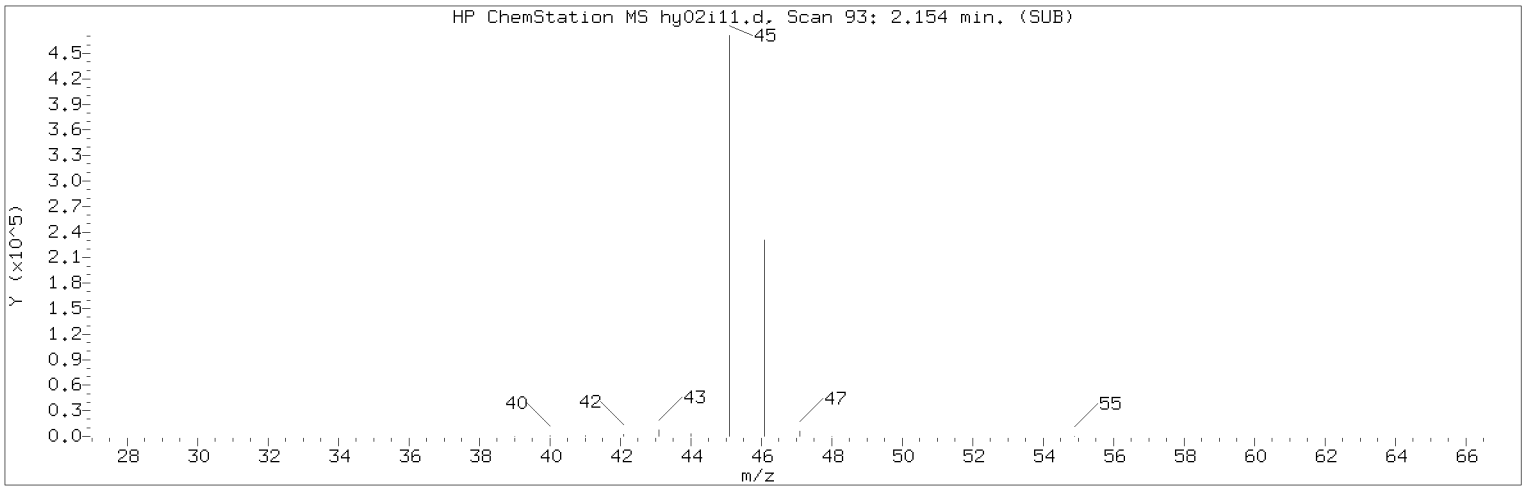
Sample Name: VSTD025 Lab Sample ID: VSTD025

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	1873450M	25.332
25) Acetonitrile	(1)	4.196	41	2114112M	889.435
26)*t-Butyl Alcohol-d10	(1)	4.458	65	98437M	50.000
36) Vinyl Acetate	(2)	5.531	43	1821283	25.848
43) Methyl Acrylate	(2)	6.470	55	2806876	129.110
53) 1-Chlorobutane	(2)	7.250	56	2820529	27.109
63)*Fluorobenzene	(2)	7.970	96	2303816	10.000
77) Chloroacetonitrile	(2)	9.463	75	1310379	1512.419
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	567006	27.220
97)*Chlorobenzene-d5	(3)	11.396	117	1683927	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	653577M	51.268
112) Cyclohexanone	(1)	12.335	55	752493M	1160.656
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	883503	10.000
142) Hexachloroethane	(4)	13.749	117	1117191	30.036

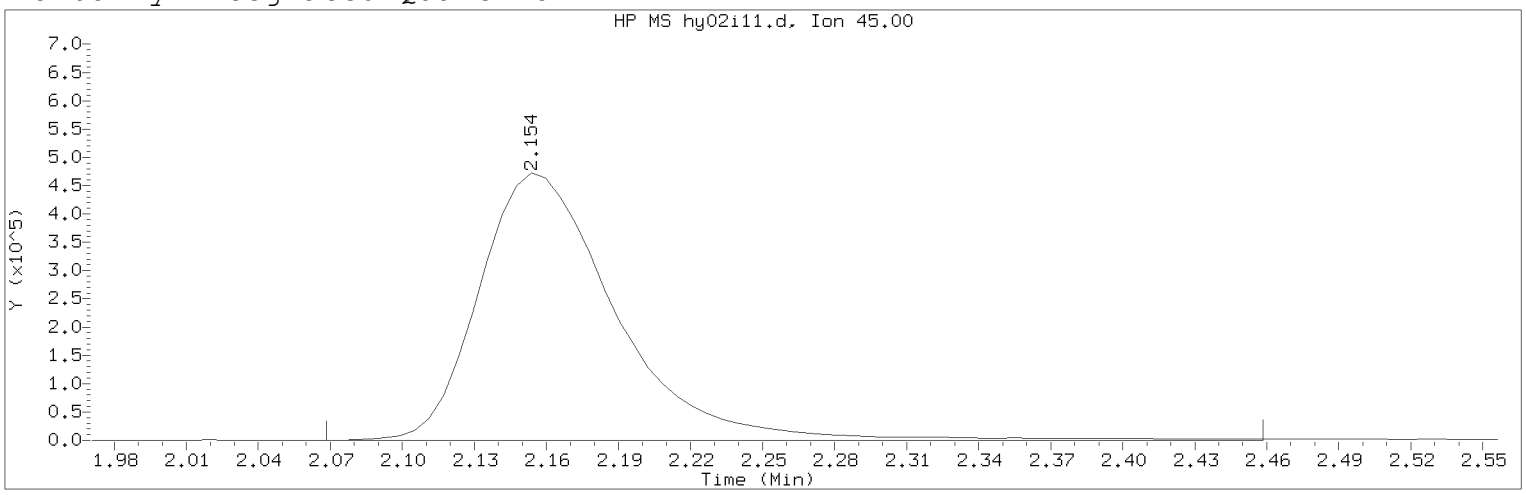
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

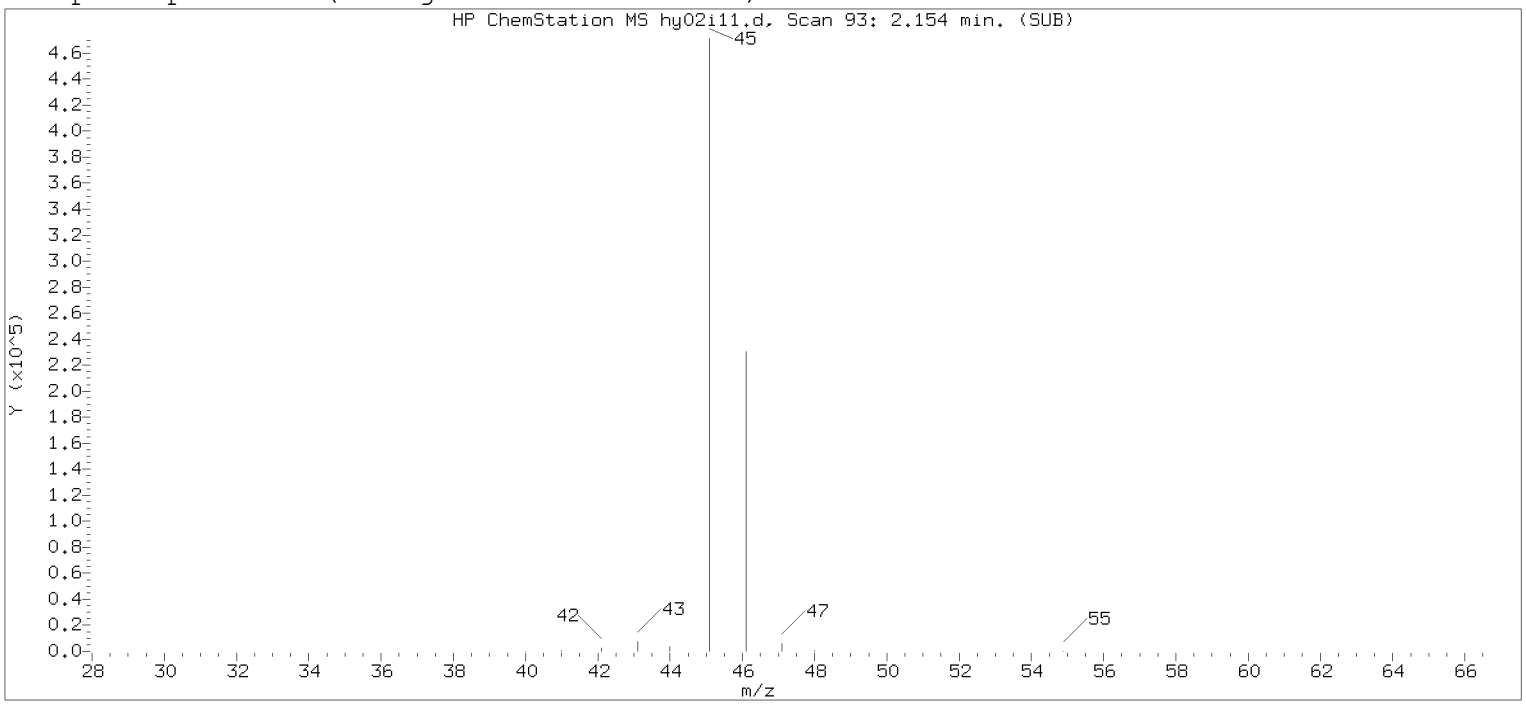
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 1873450M
On-Column Amount (ng) : 25.3318
Integration start scan : 78 Integration stop scan: 142
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

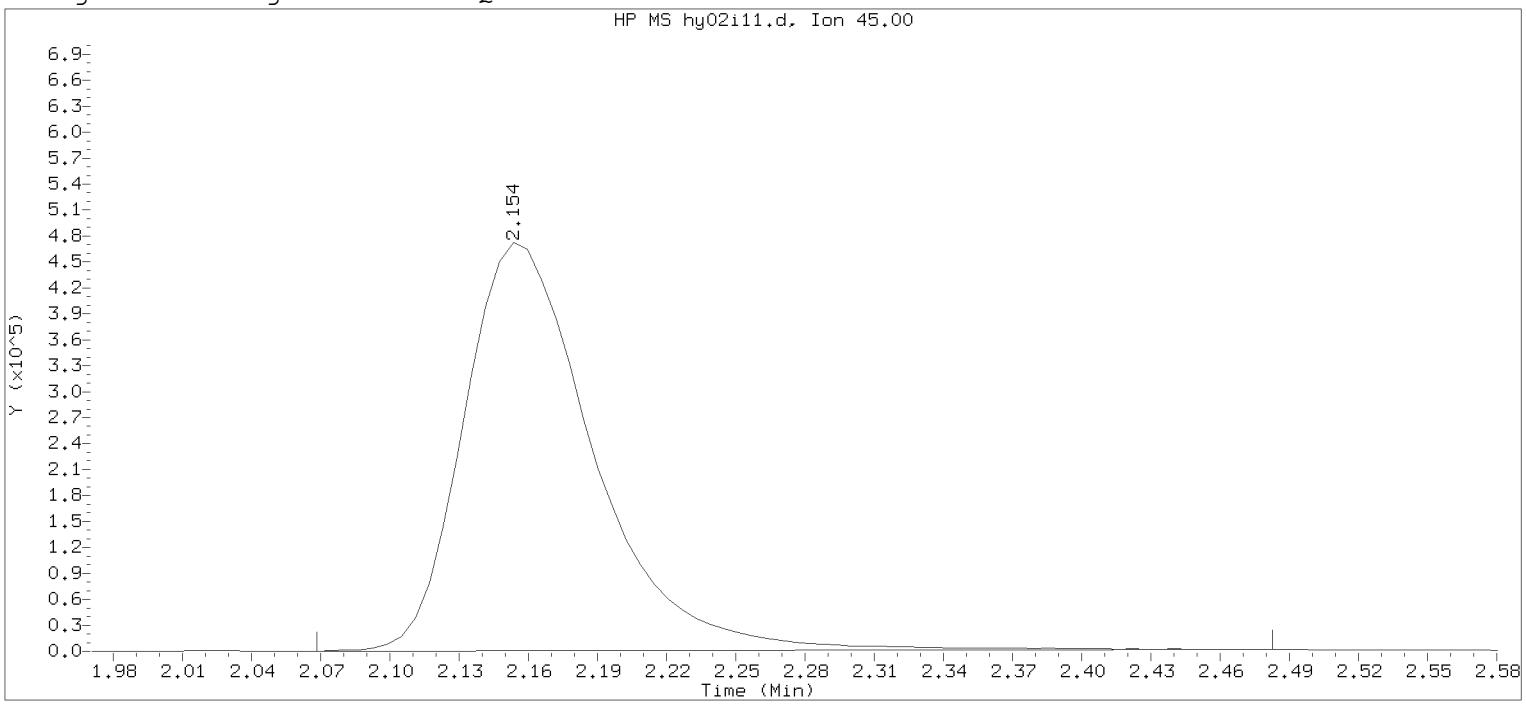
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

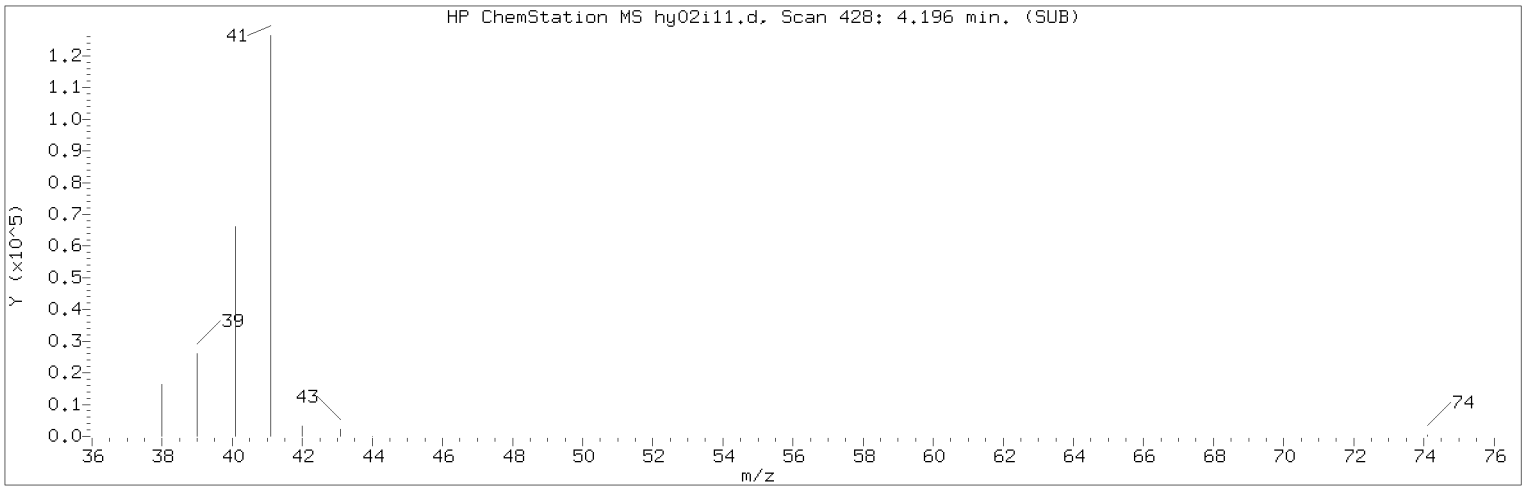
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

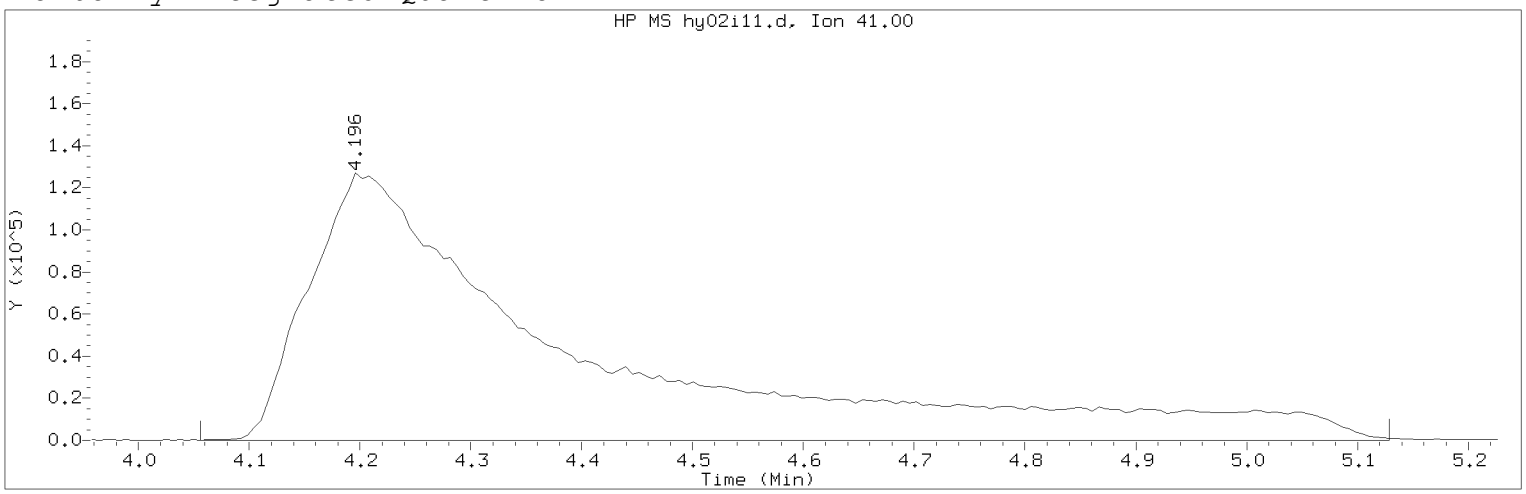
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 1849760
On-column Amount (ng) : 24.0567
Integration start scan : 78 Integration stop scan: 146
Y at integration start : 0 Y at integration end: 2143

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

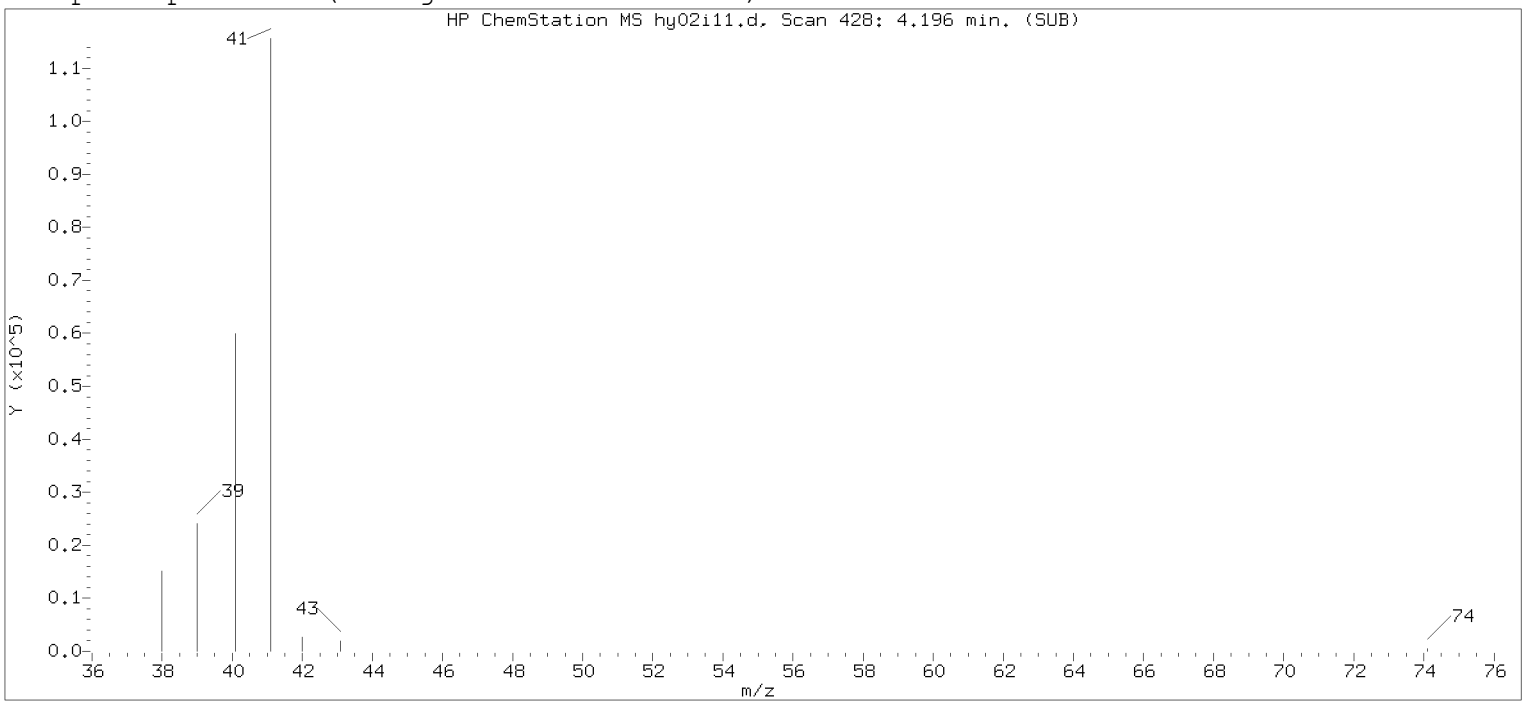
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area (flag) : 2114112M
On-Column Amount (ng) : 889.4345
Integration start scan : 404 Integration stop scan: 580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

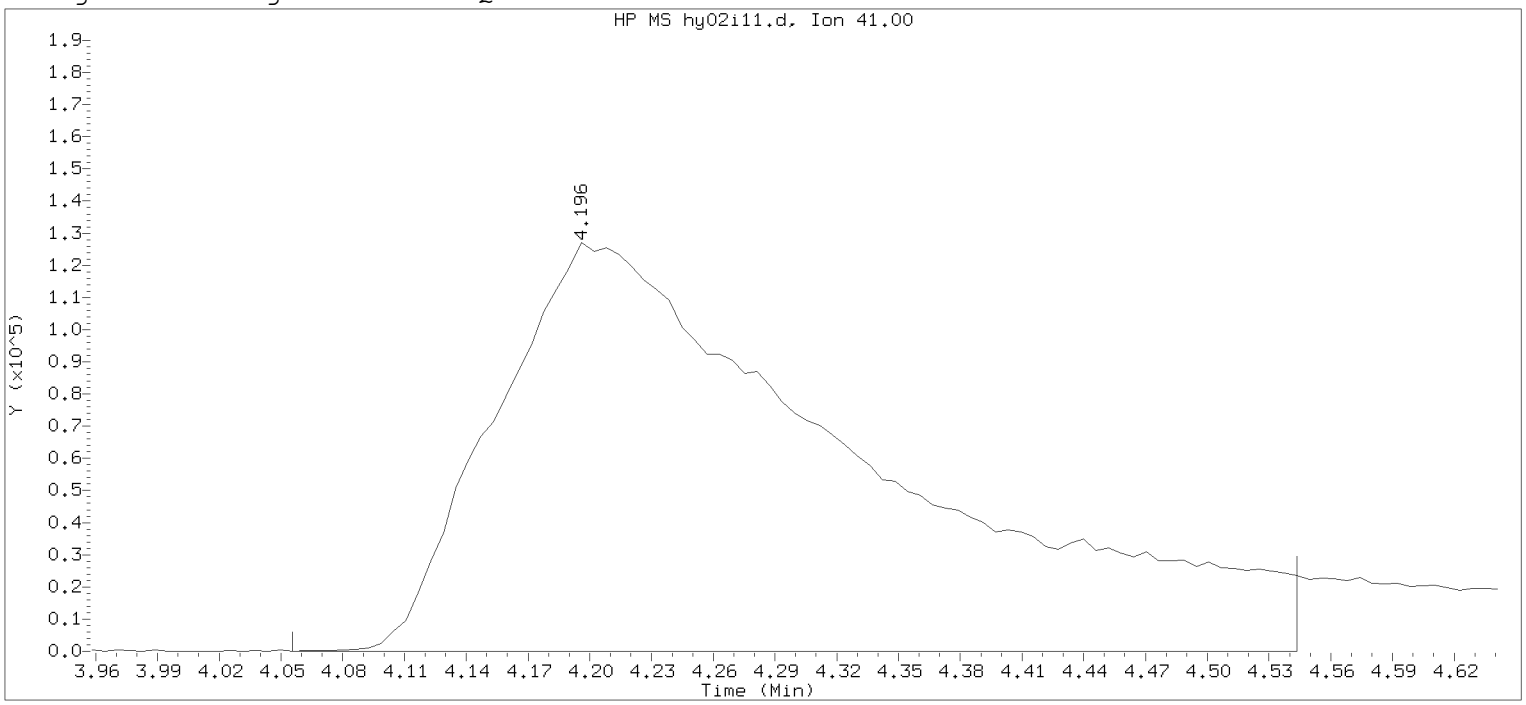
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

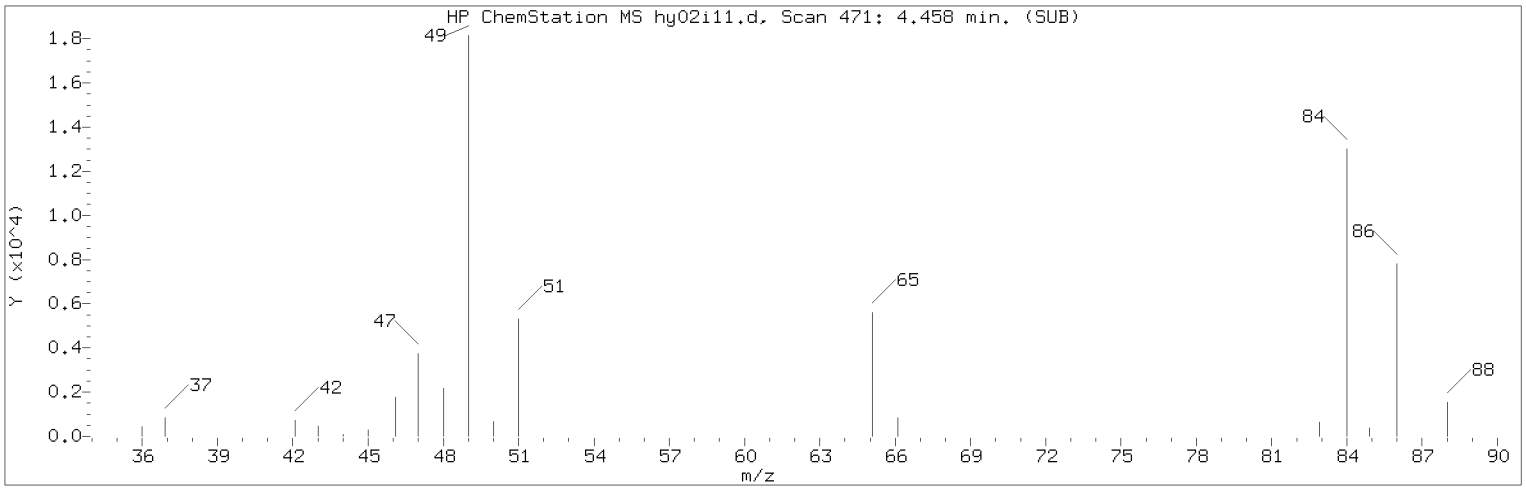
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

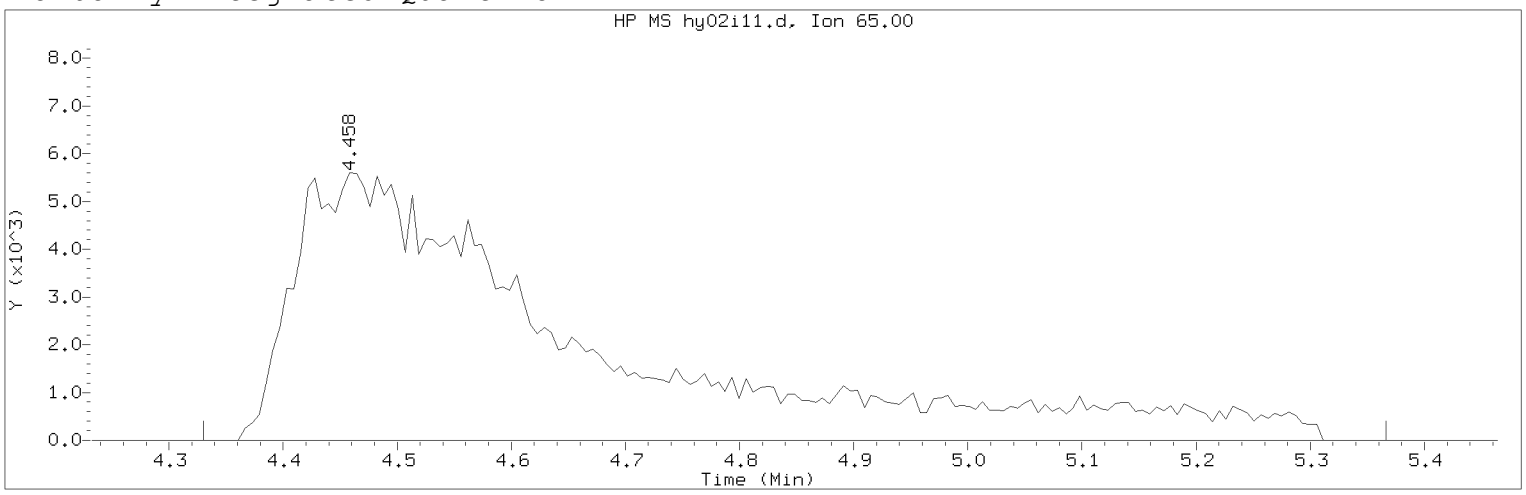
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 428
Retention Time (minutes): 4.196
Quant Ion : 41.00
Area : 1586970
On-column Amount (ng) : 557.8895
Integration start scan : 404 Integration stop scan: 484
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

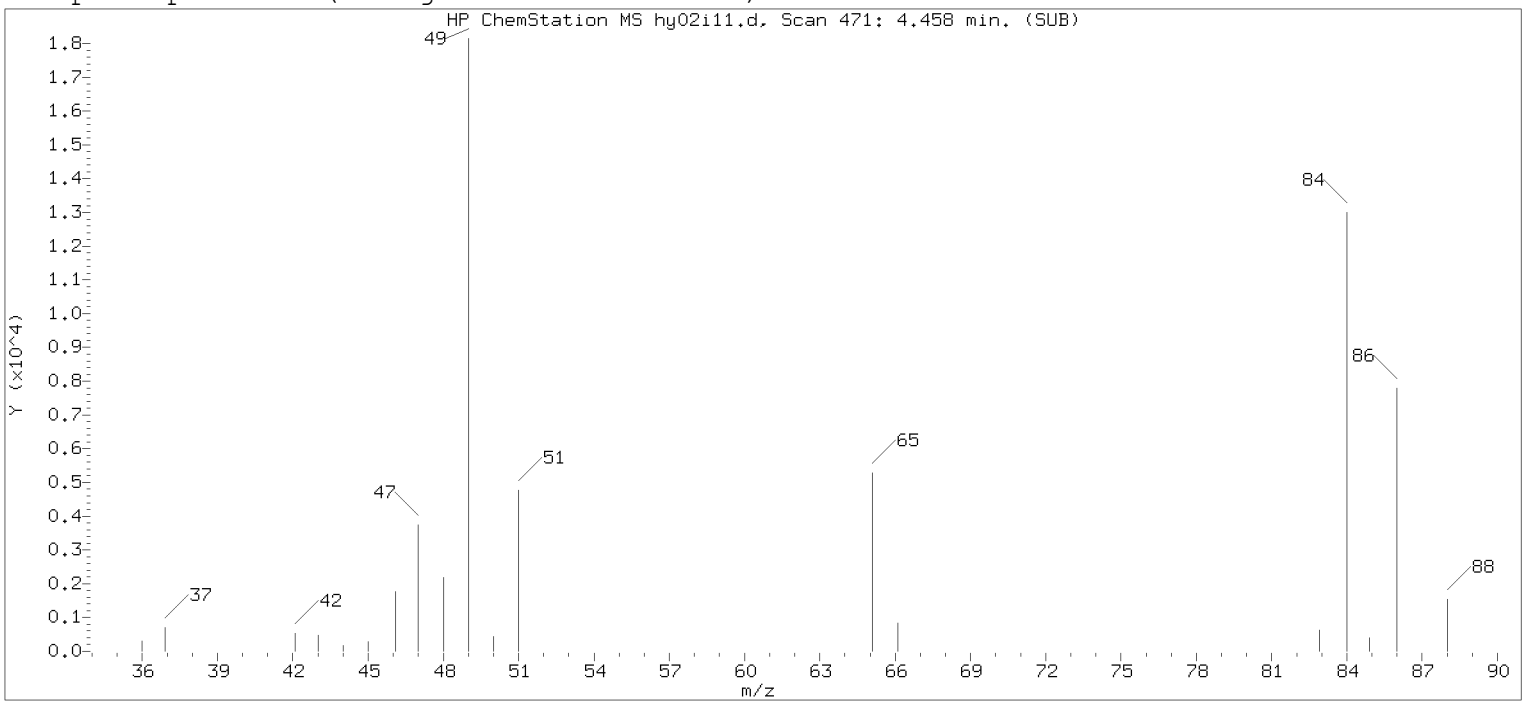
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 98437M
On-Column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

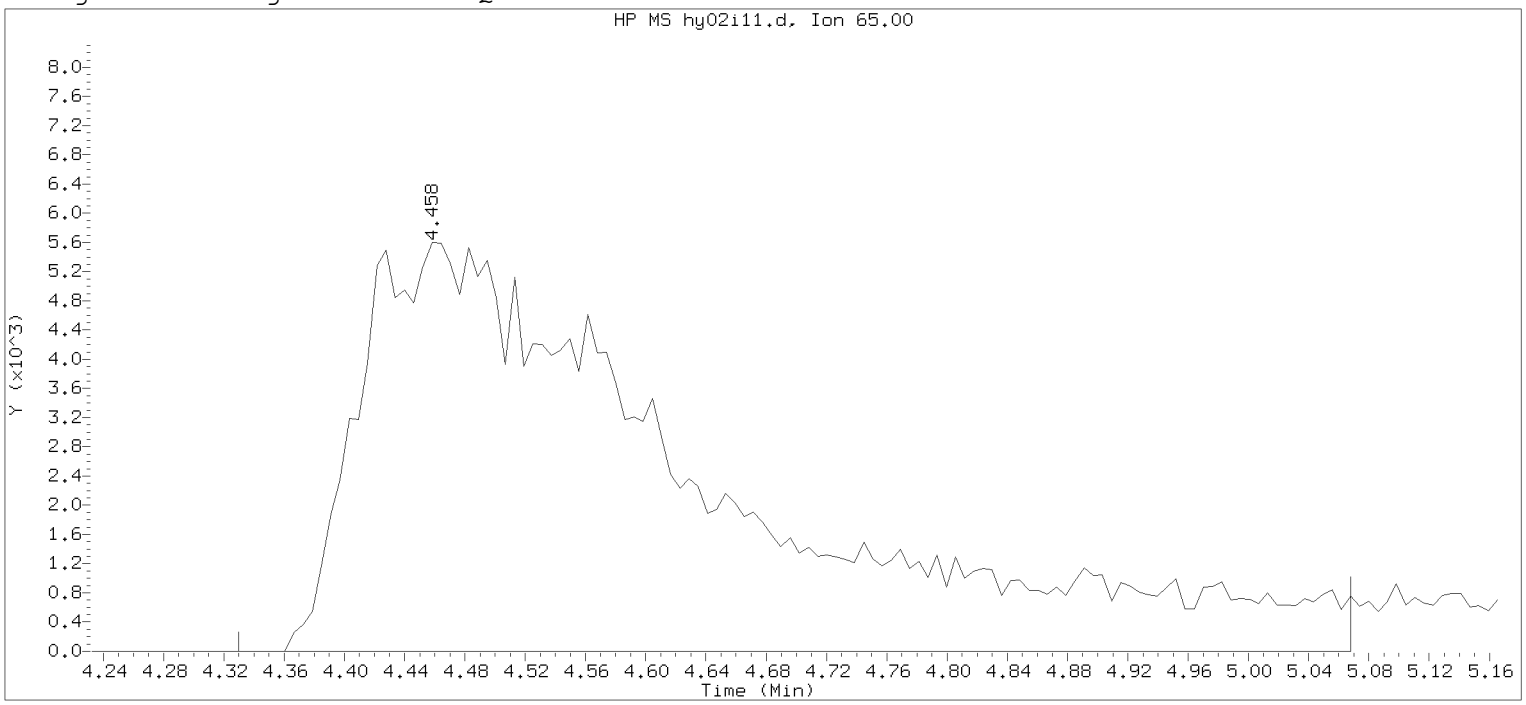
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

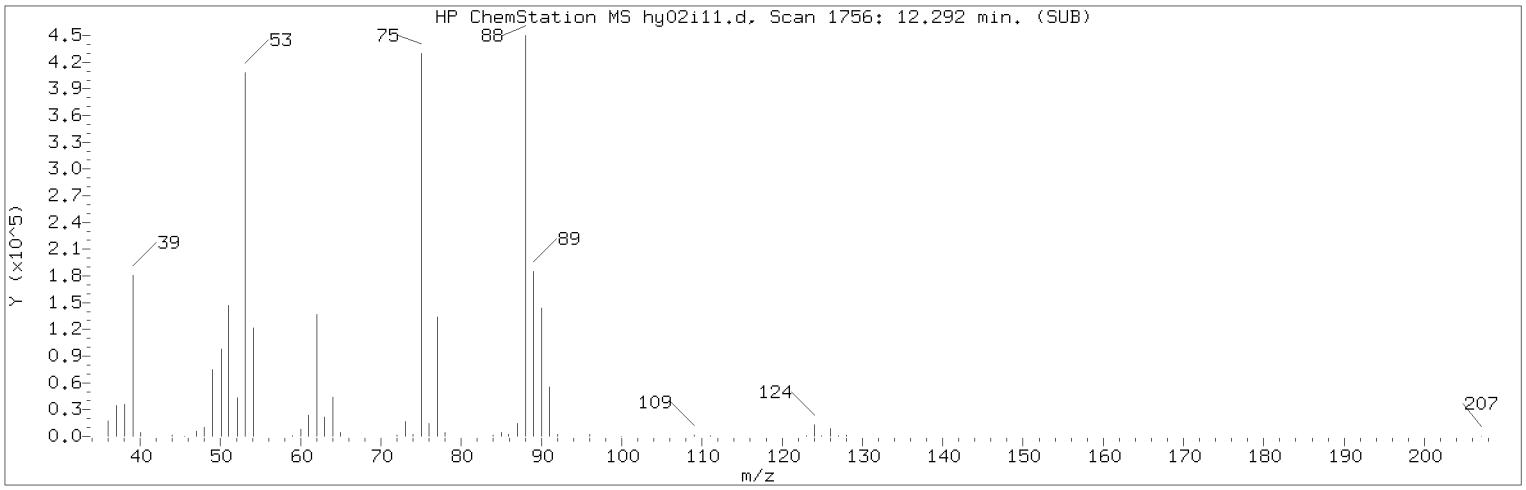
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

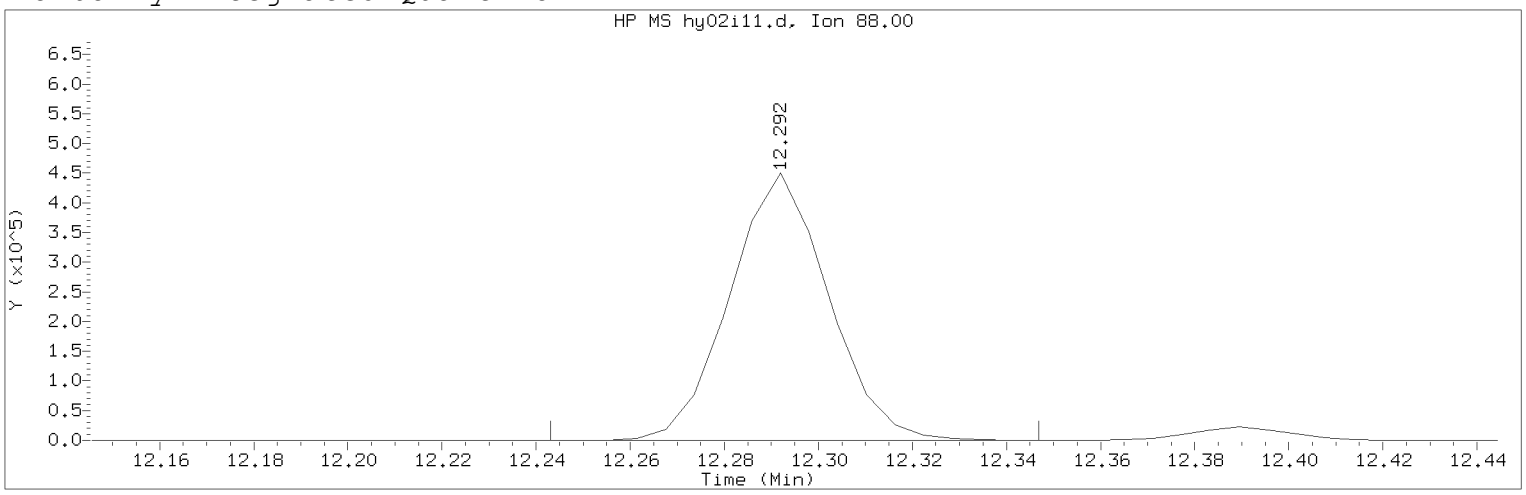
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area : 89717
On-column Amount (ng) : 50.0000
Integration start scan : 449 Integration stop scan: 570
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

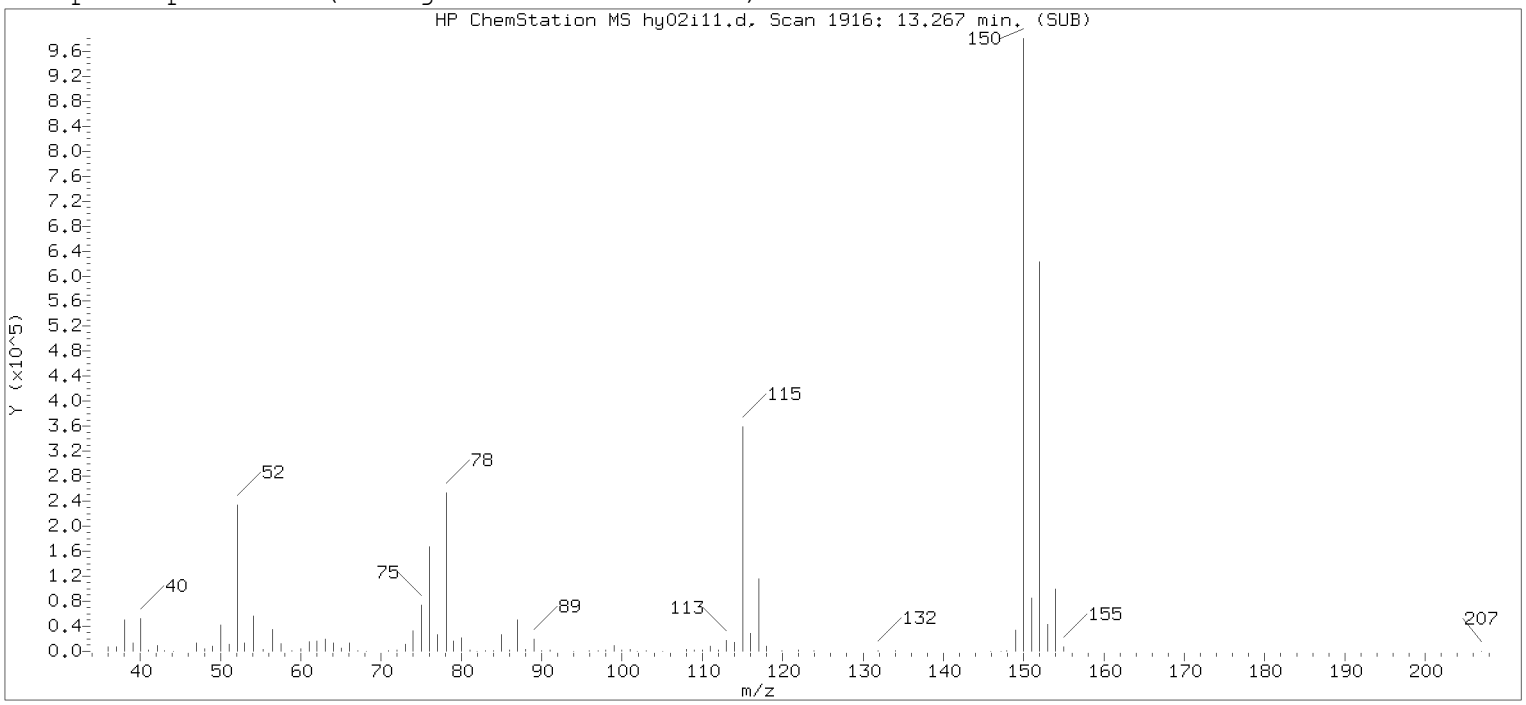
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 653577M
On-Column Amount (ng) : 51.2675
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

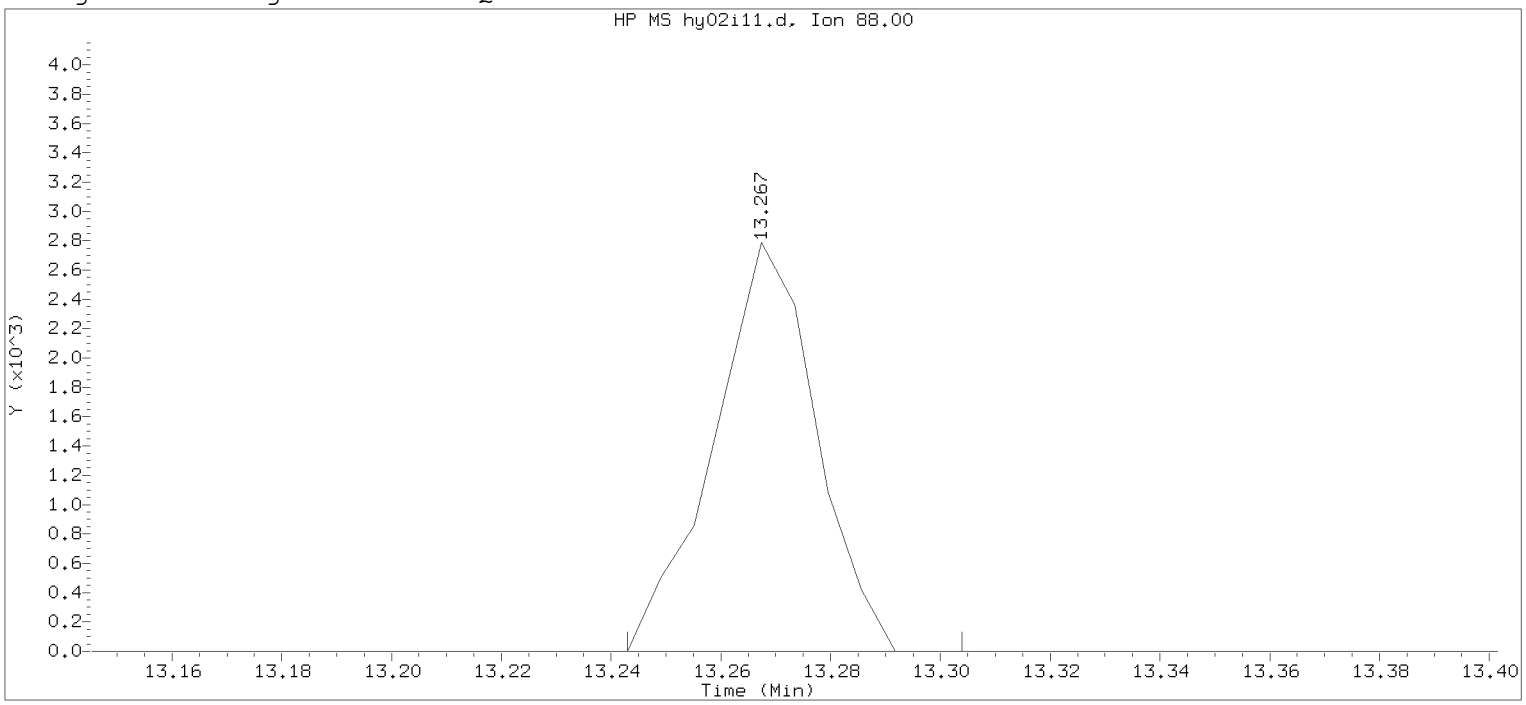
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

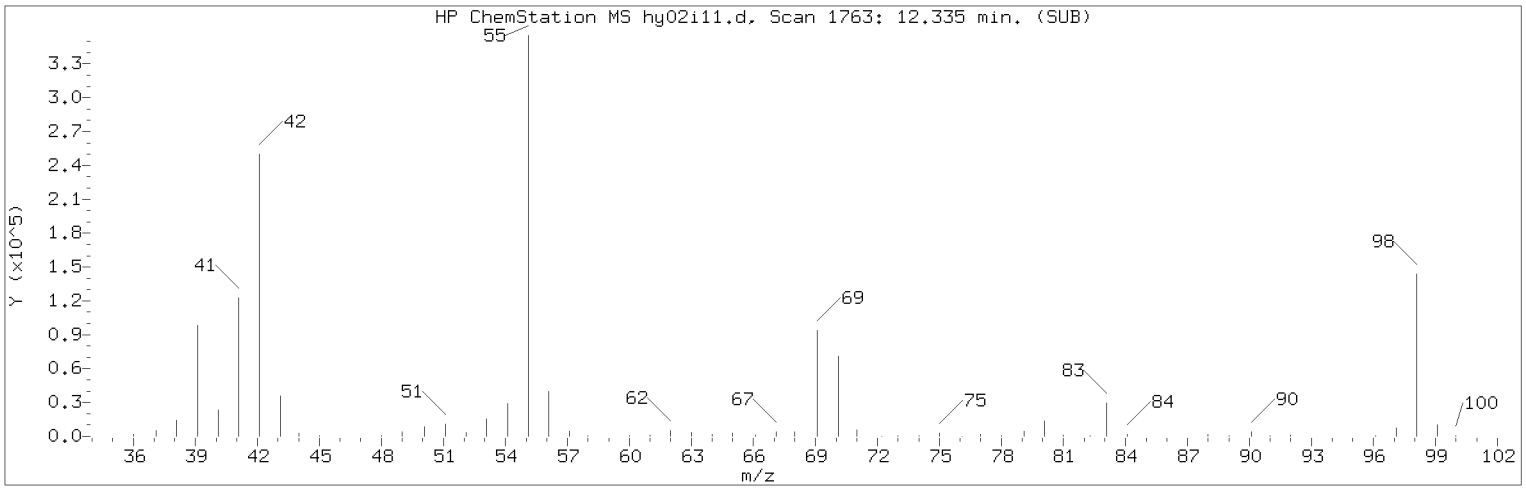
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

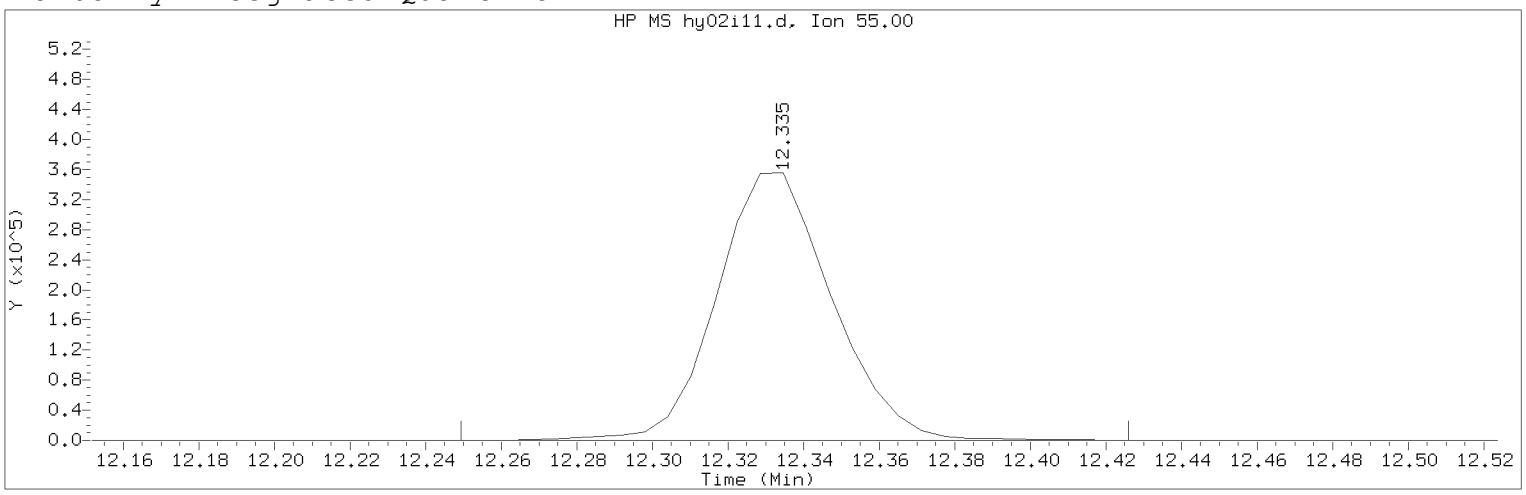
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3604
On-column Amount (ng) : 0.2776
Integration start scan : 1911 Integration stop scan: 1921
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD025 Lab Sample ID: VSTD025

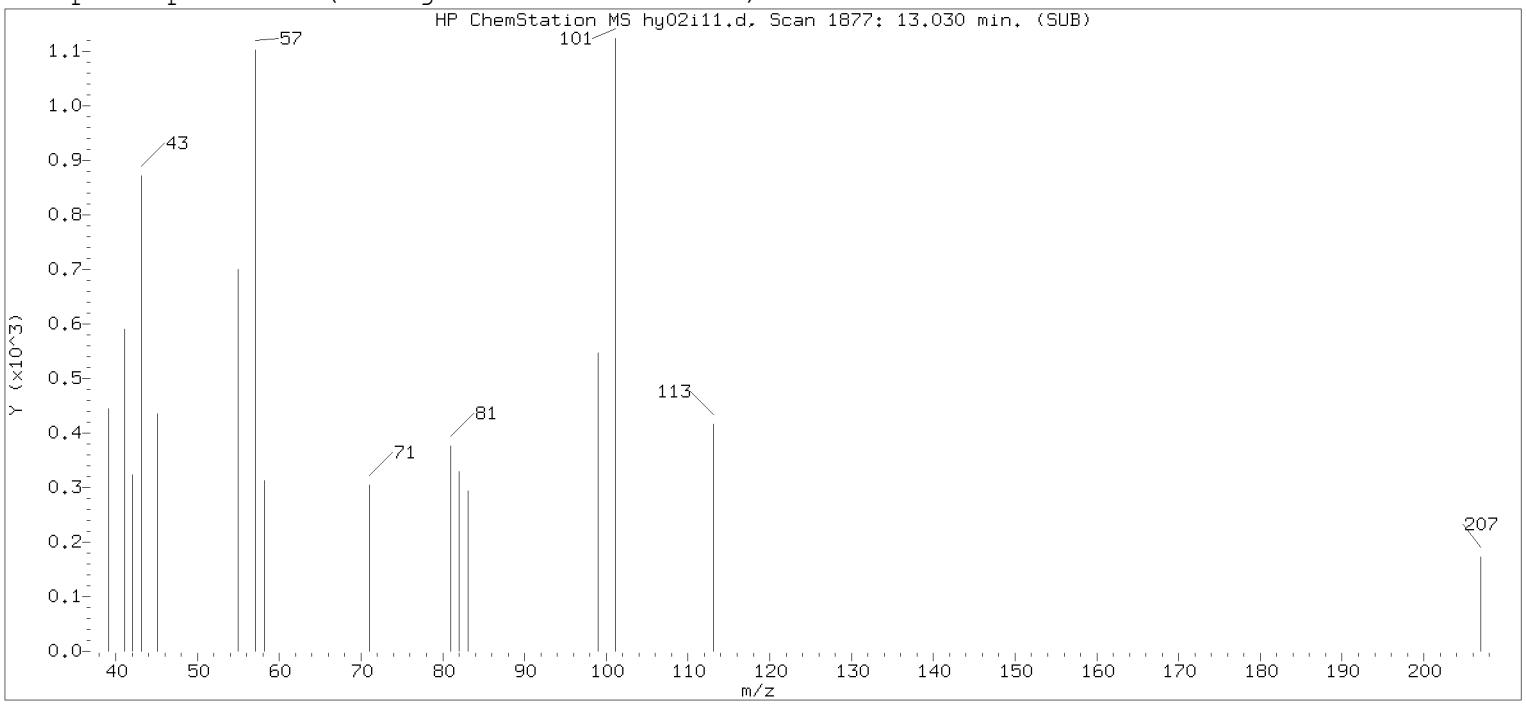
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 752493M
On-Column Amount (ng) : 1160.6564
Integration start scan : 1748 Integration stop scan: 1777
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

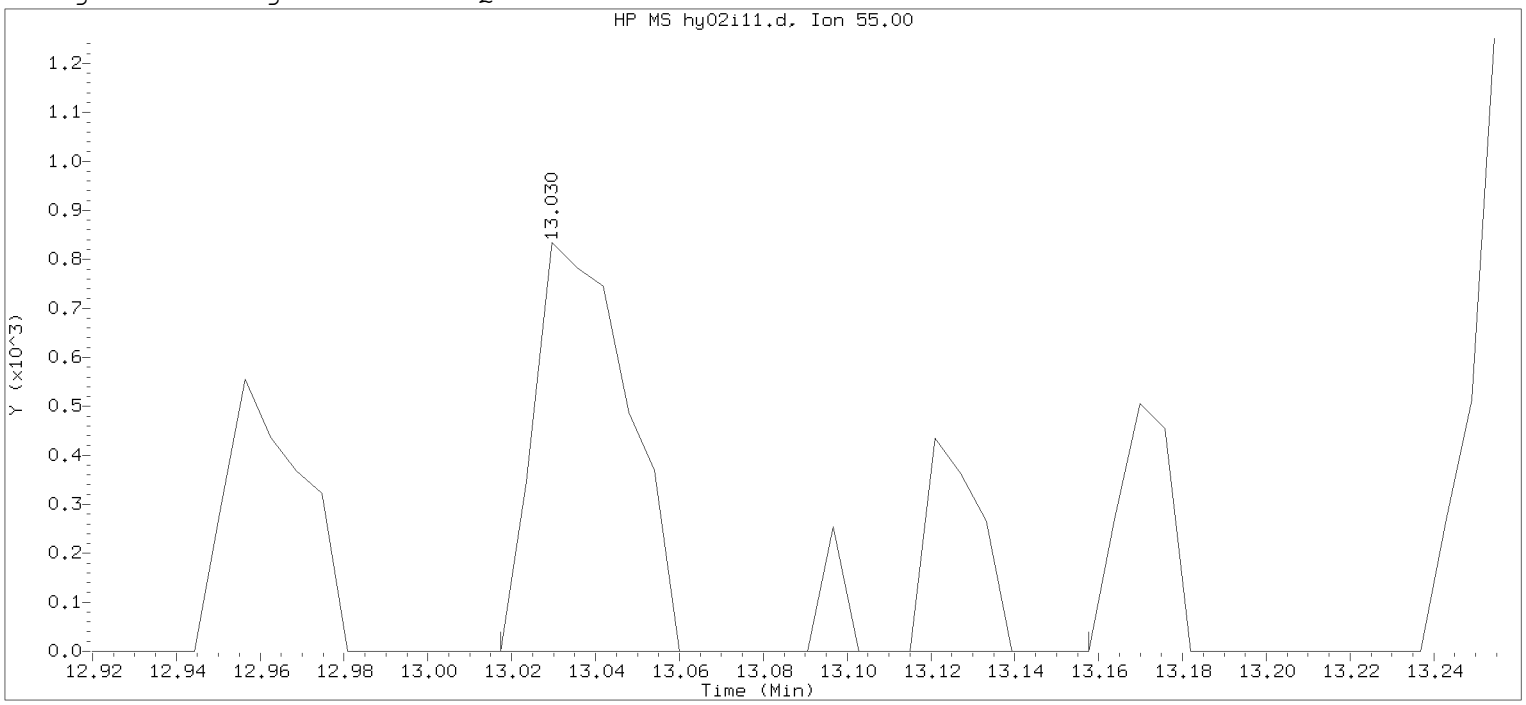
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



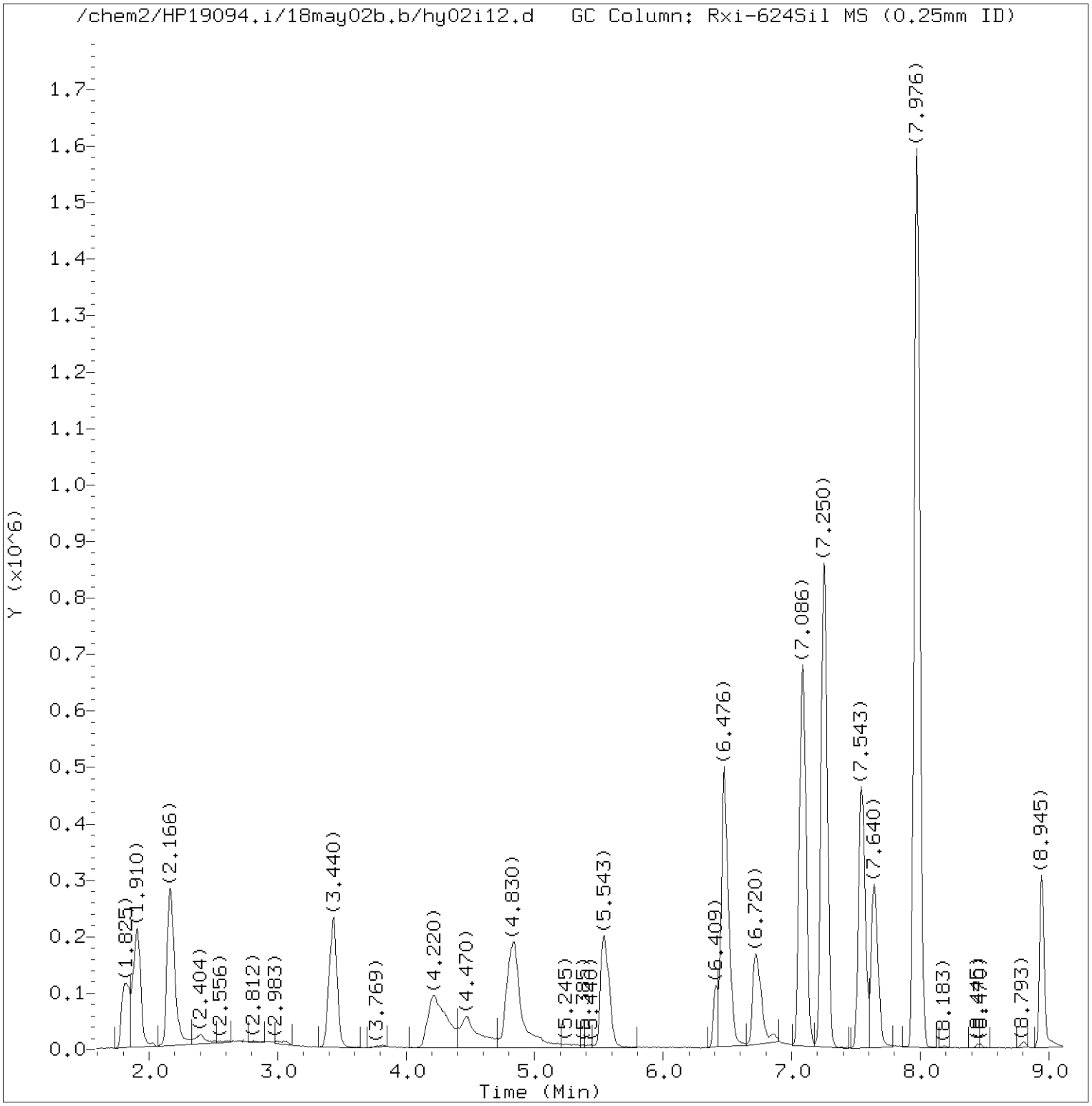
Data File: /chem2/HP19094.i/18may02b.b/hy02i11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:15 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:33
Date, time and analyst ID of latest file update: 02-May-2018 19:33 Automation

Sample Name: VSTD025 Lab Sample ID: VSTD025

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1877
Retention Time (minutes): 13.030
Quant Ion : 55.00
Area : 1786
On-column Amount (ng) : 2.0320
Integration start scan : 1874 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018



Total Ion Chromatogram (TIC)

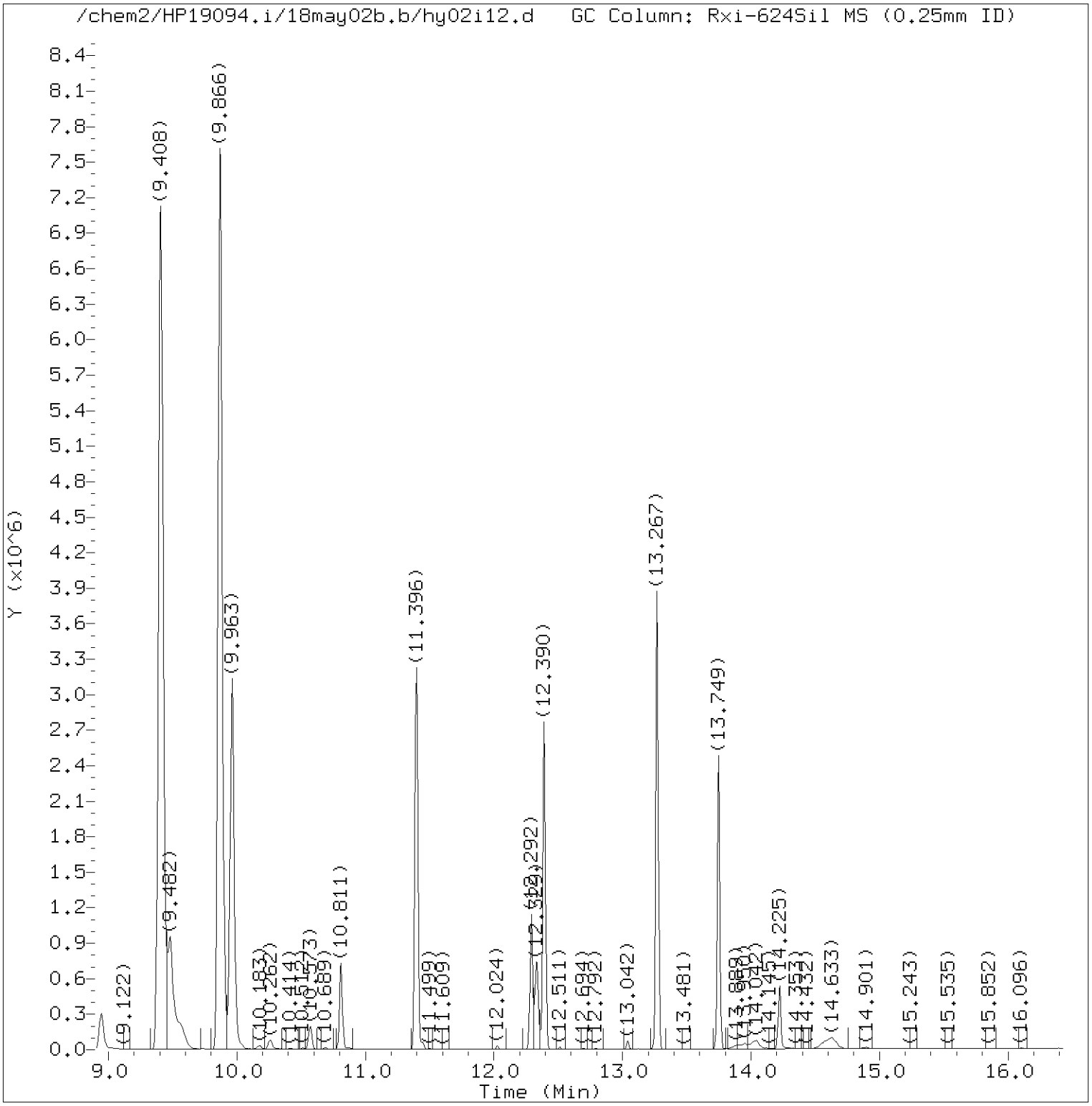
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

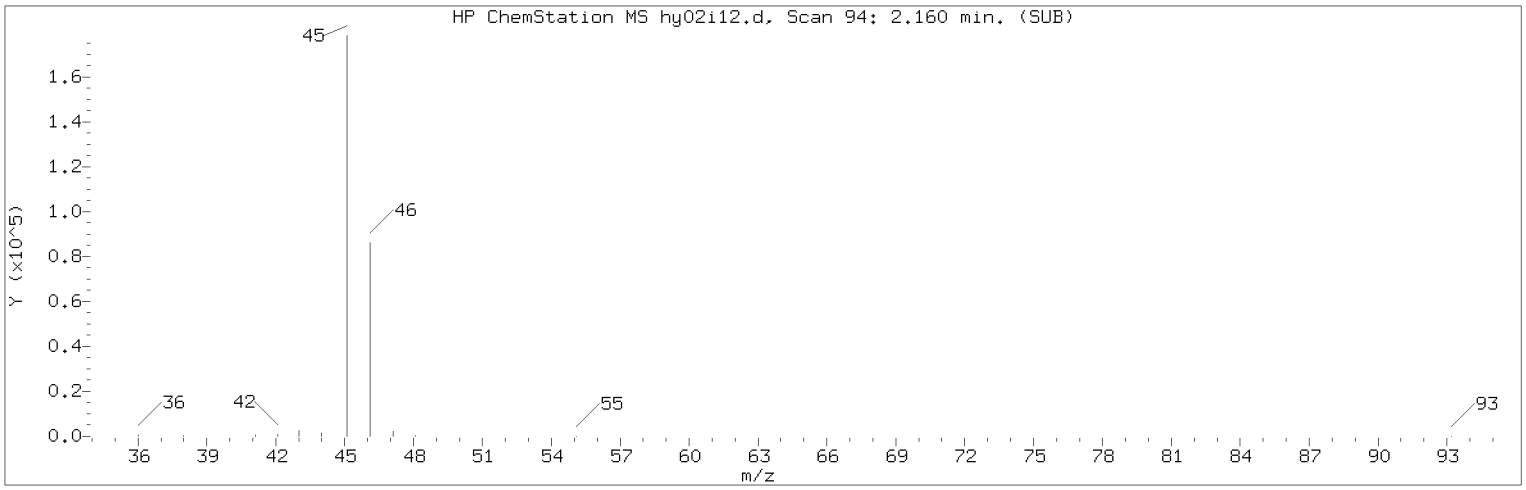
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	730585M	9.805
25) Acetonitrile	(1)	4.208	41	800300M	361.911
26)*t-Butyl Alcohol-d10	(1)	4.489	65	91579M	50.000
36) Vinyl Acetate	(2)	5.543	43	736143A	10.370
43) Methyl Acrylate	(2)	6.476	55	1106987	50.541
53) 1-Chlorobutane	(2)	7.256	56	1150342	10.974
63)*Fluorobenzene	(2)	7.976	96	2321054	10.000
77) Chloroacetonitrile	(2)	9.469	75	480074	549.979
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	226026	10.770
97)*Chlorobenzene-d5	(3)	11.396	117	1697976	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	244920M	20.651
112) Cyclohexanone	(1)	12.335	55	365686M	606.278
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	883093	10.000
142) Hexachloroethane	(4)	13.749	117	434603	11.690

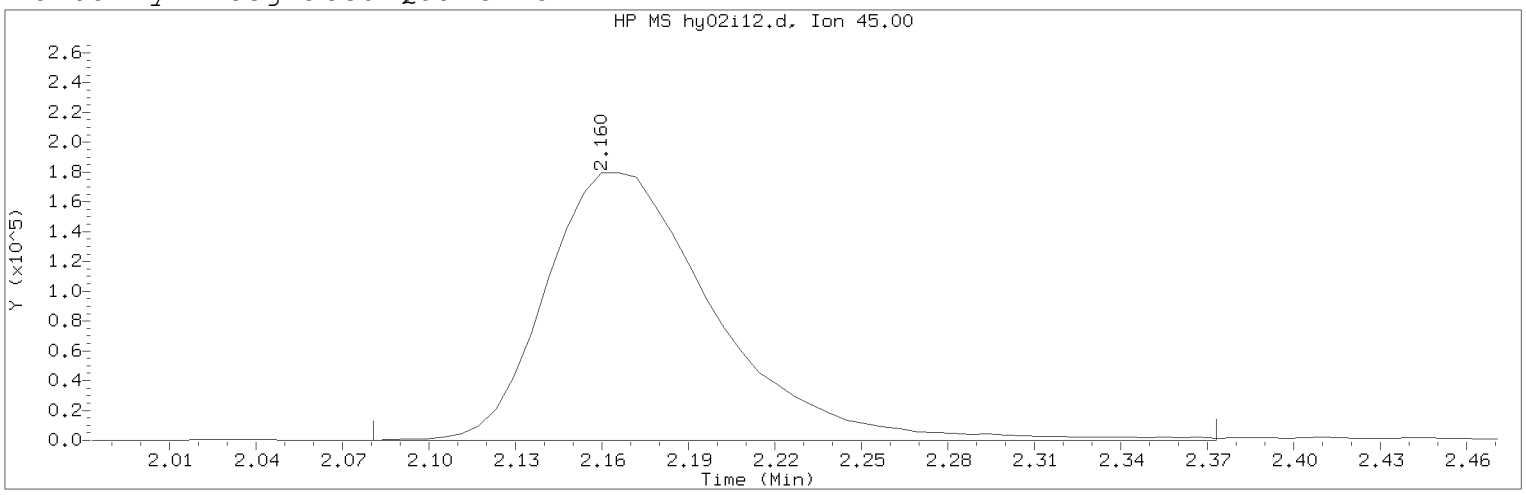
M = Compound was manually integrated.
A = User selected an alternate hit.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

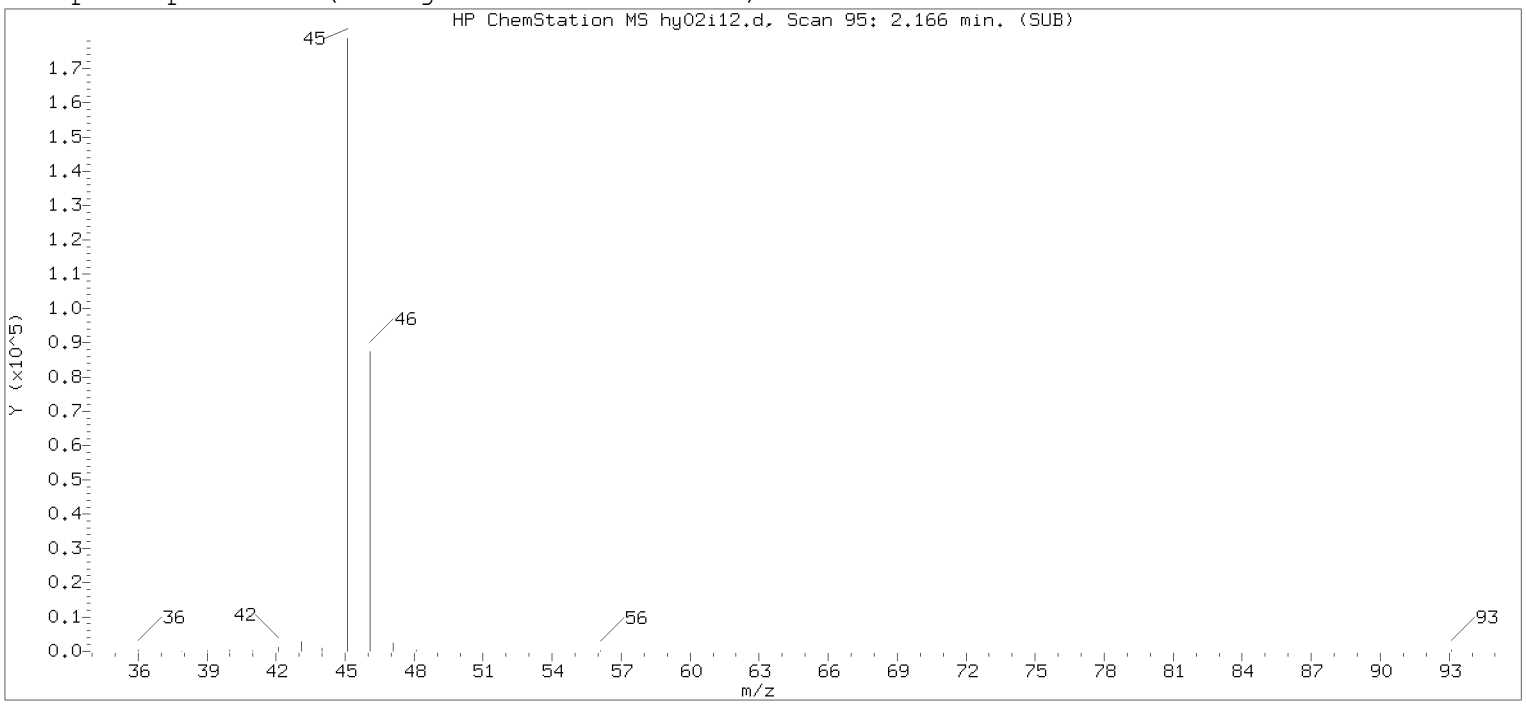
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 730585M
On-Column Amount (ng) : 9.8052
Integration start scan : 80 Integration stop scan: 128
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

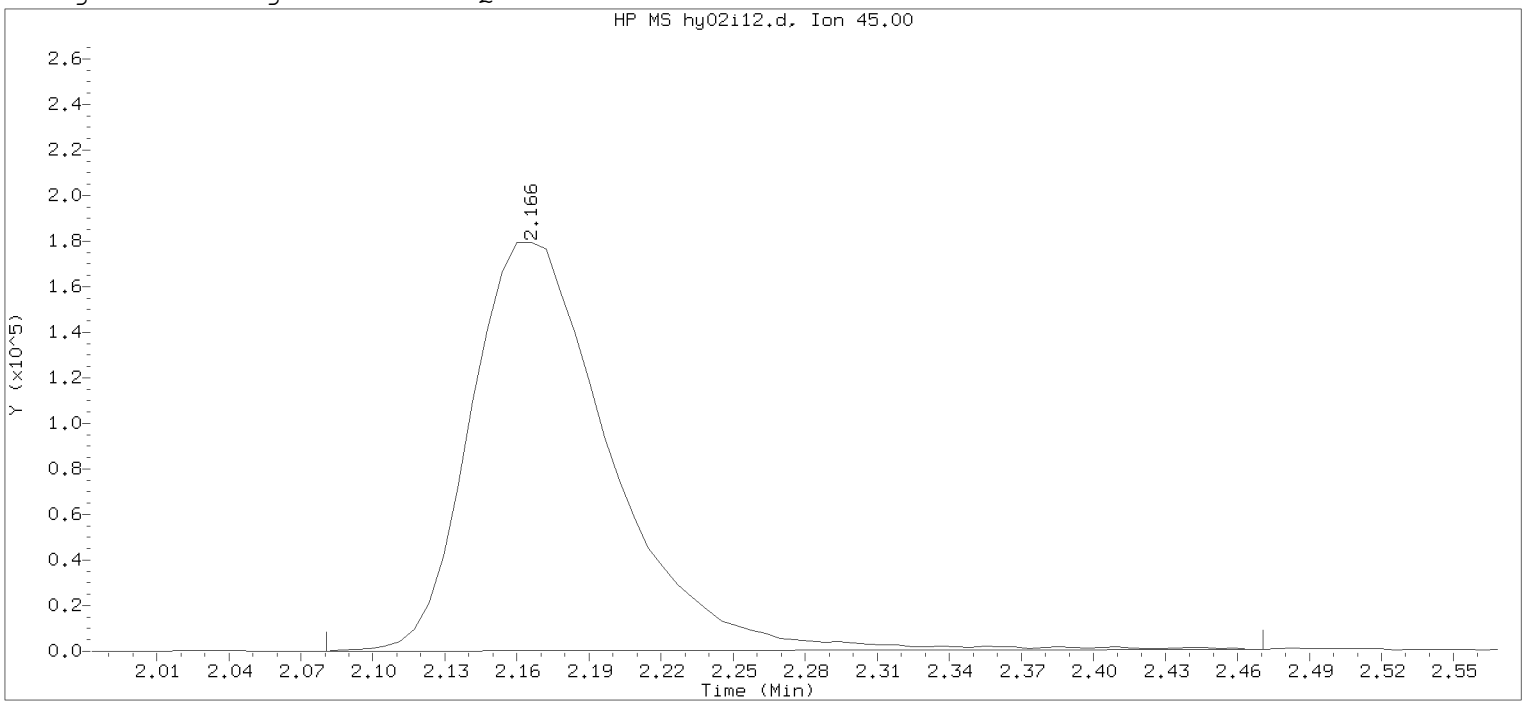
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

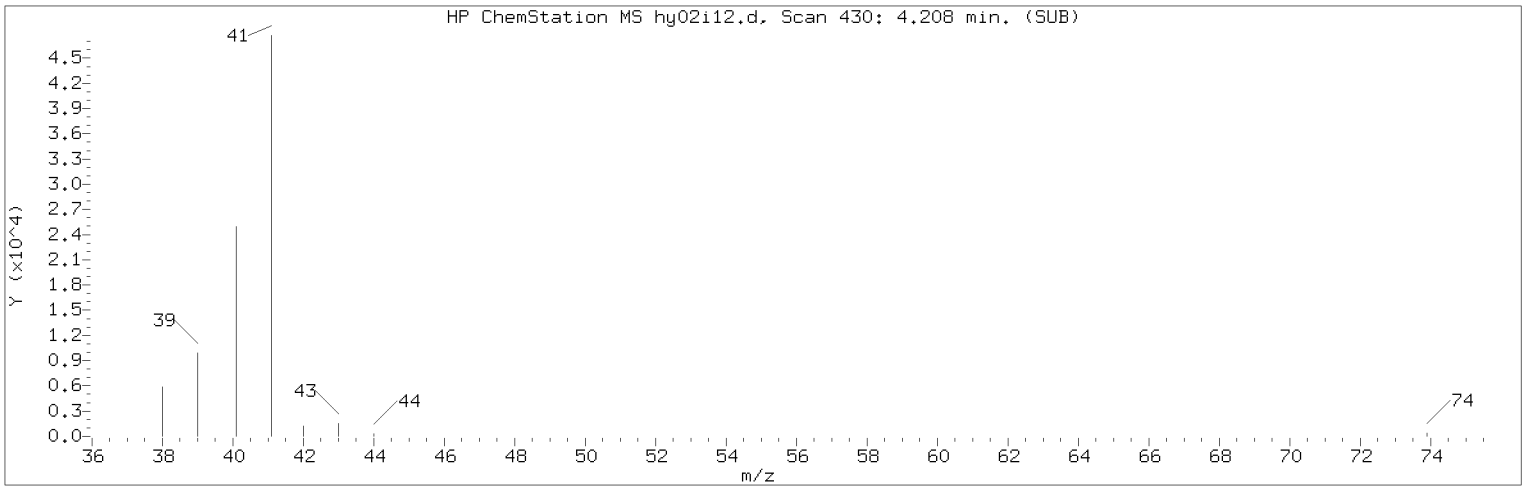
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

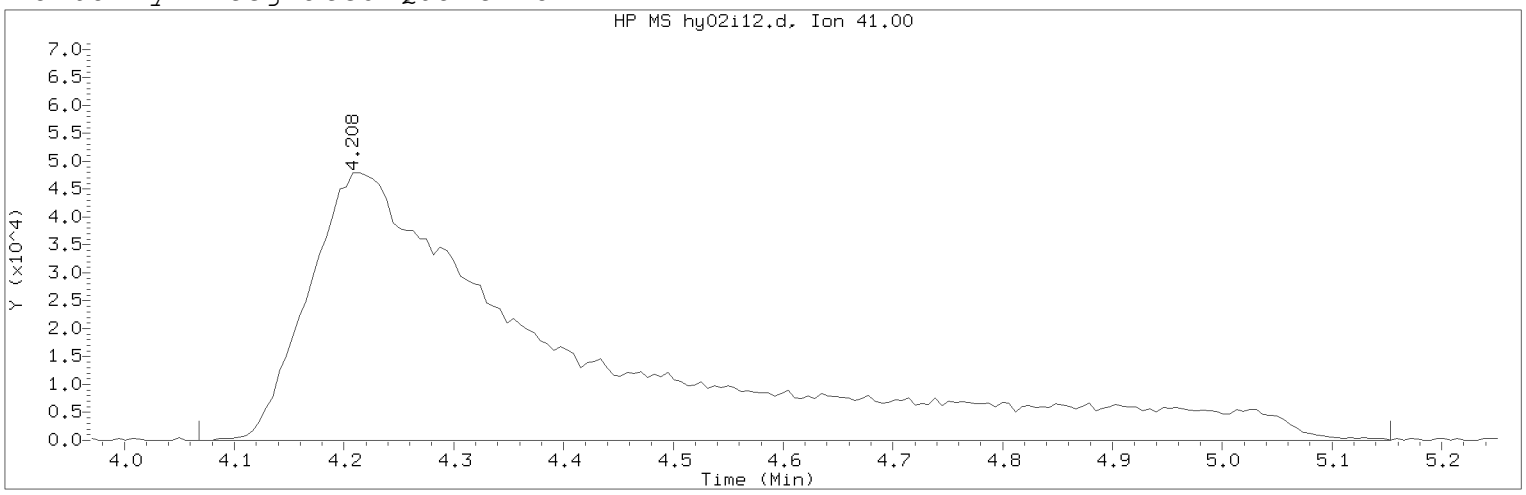
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area : 728833
On-column Amount (ng) : 9.4714
Integration start scan : 80 Integration stop scan: 144
Y at integration start : 0 Y at integration end: 872

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

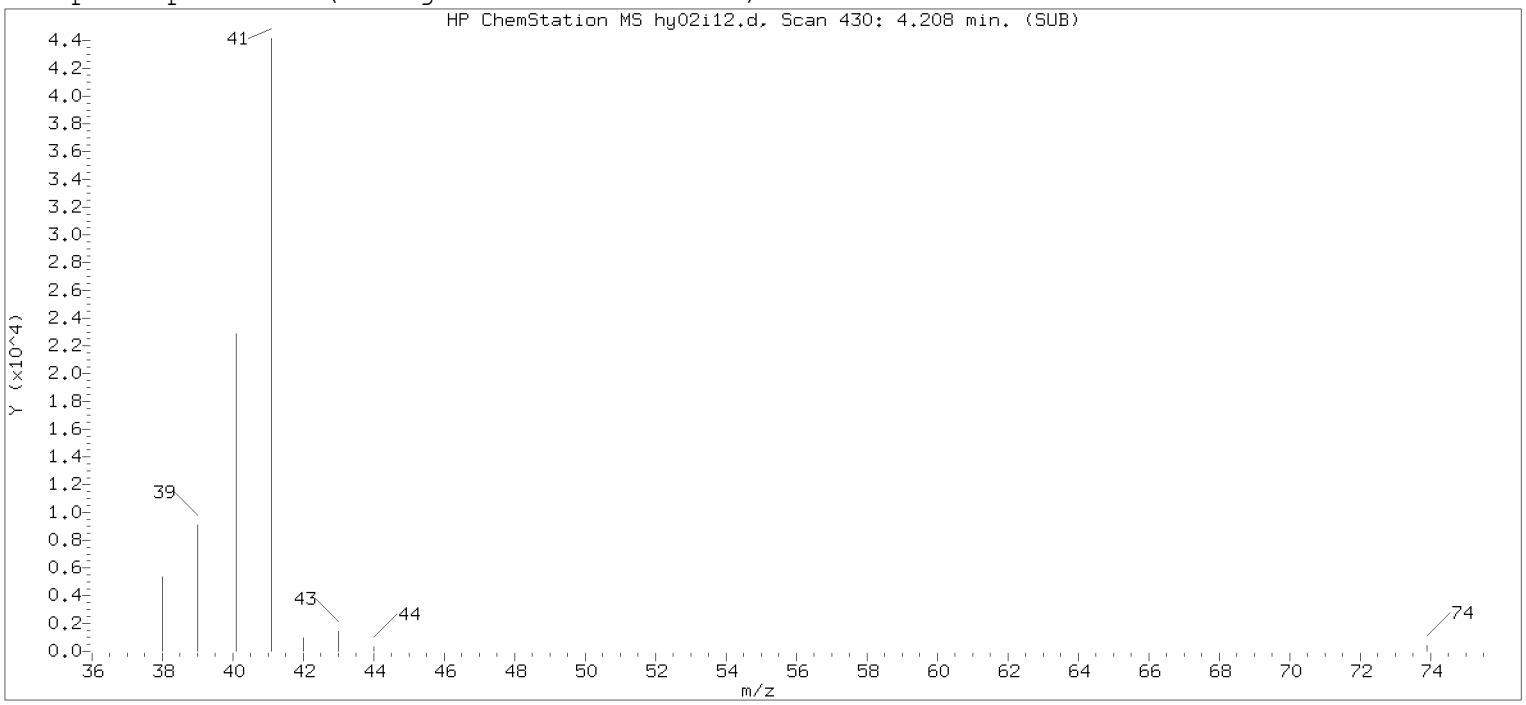
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 800300M
On-Column Amount (ng) : 361.9106
Integration start scan : 406 Integration stop scan: 584
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

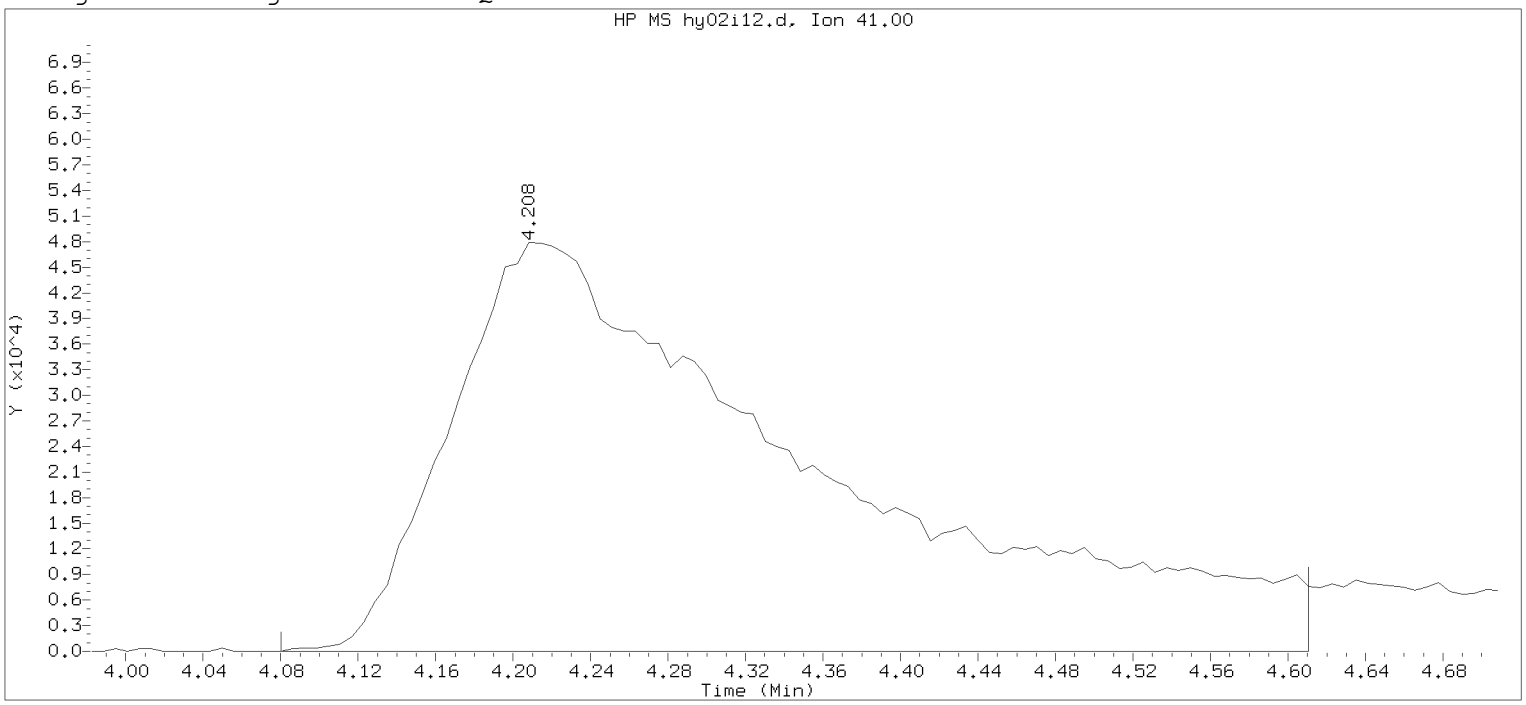
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

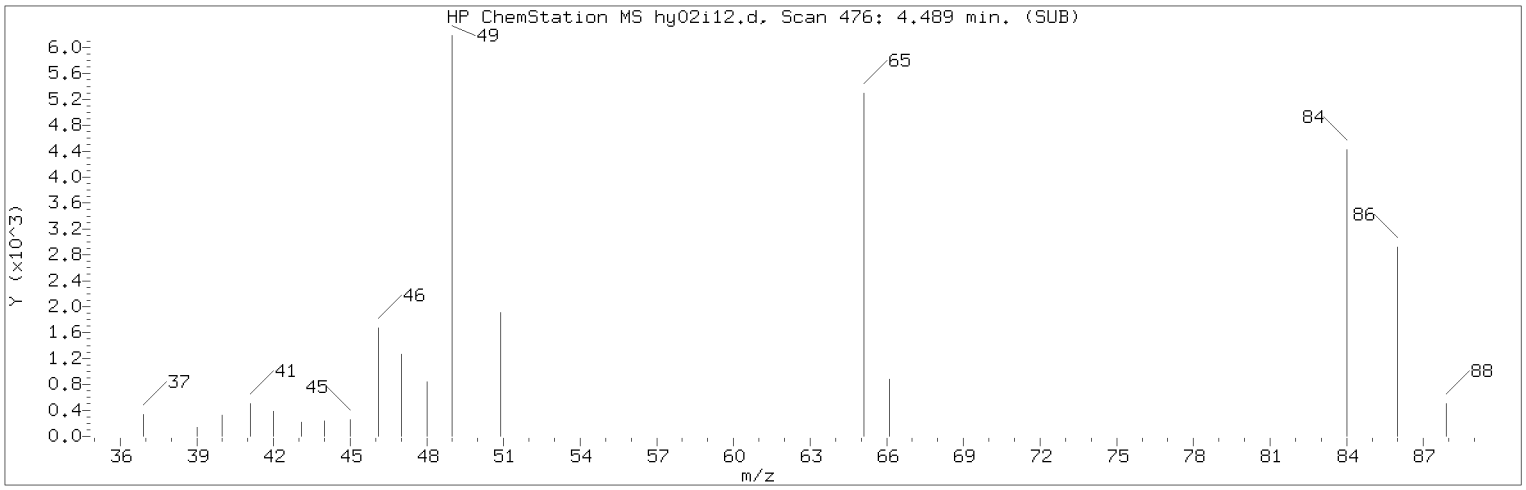
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

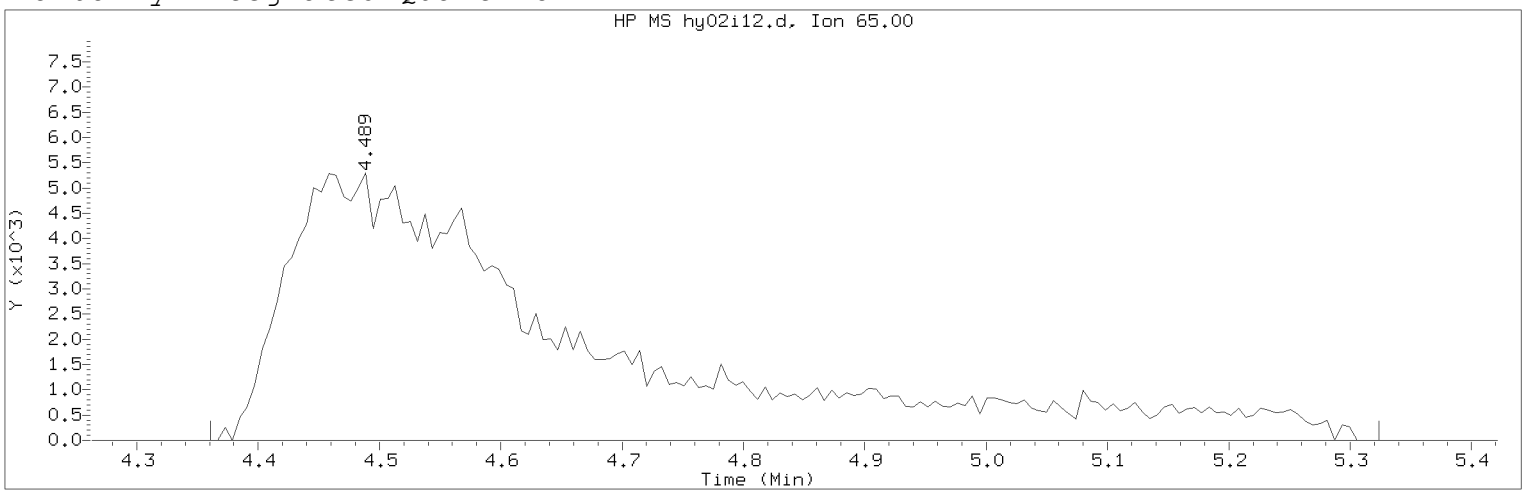
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 430		
Retention Time (minutes)	: 4.208		
Quant Ion	: 41.00		
Area	: 627768		
On-column Amount (ng)	: 250.5418		
Integration start scan	: 408	Integration stop scan:	495
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

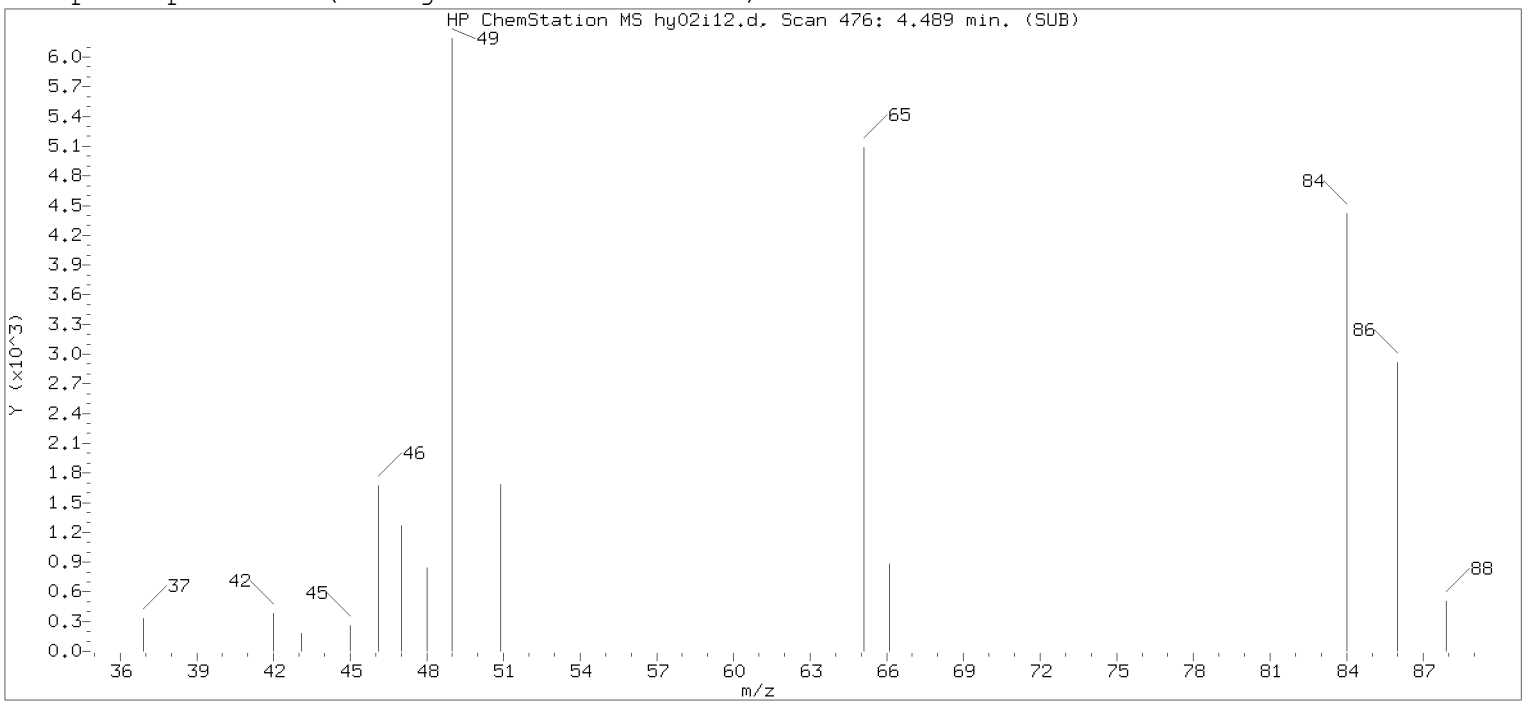
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 476
Retention Time (minutes): 4.489
Quant Ion : 65.00
Area (flag) : 91579M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

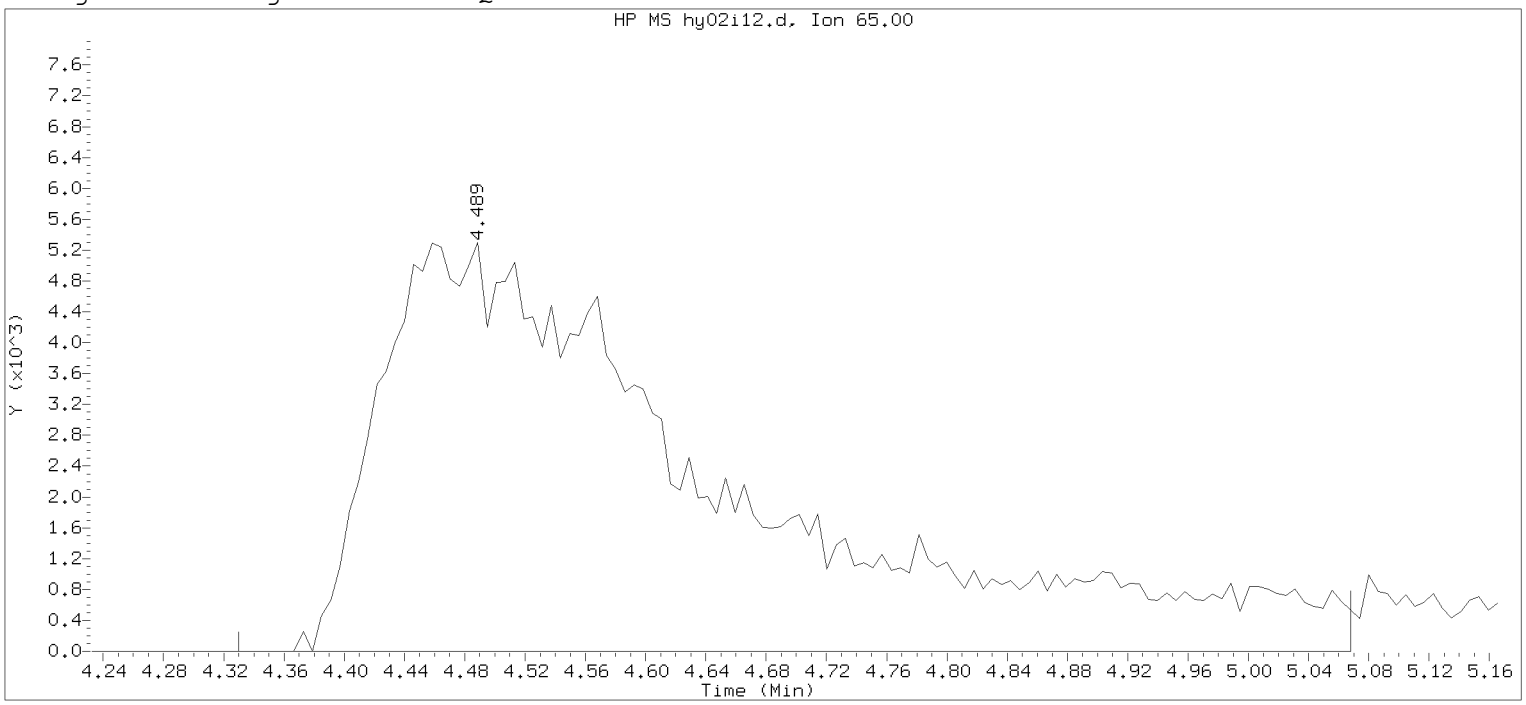
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

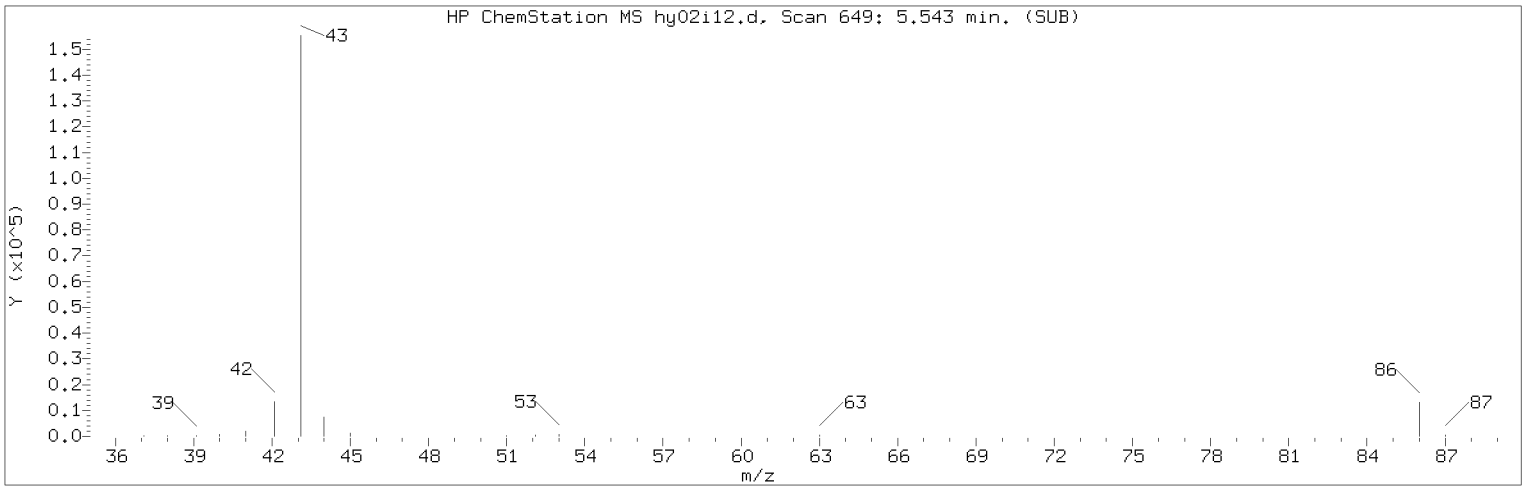
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

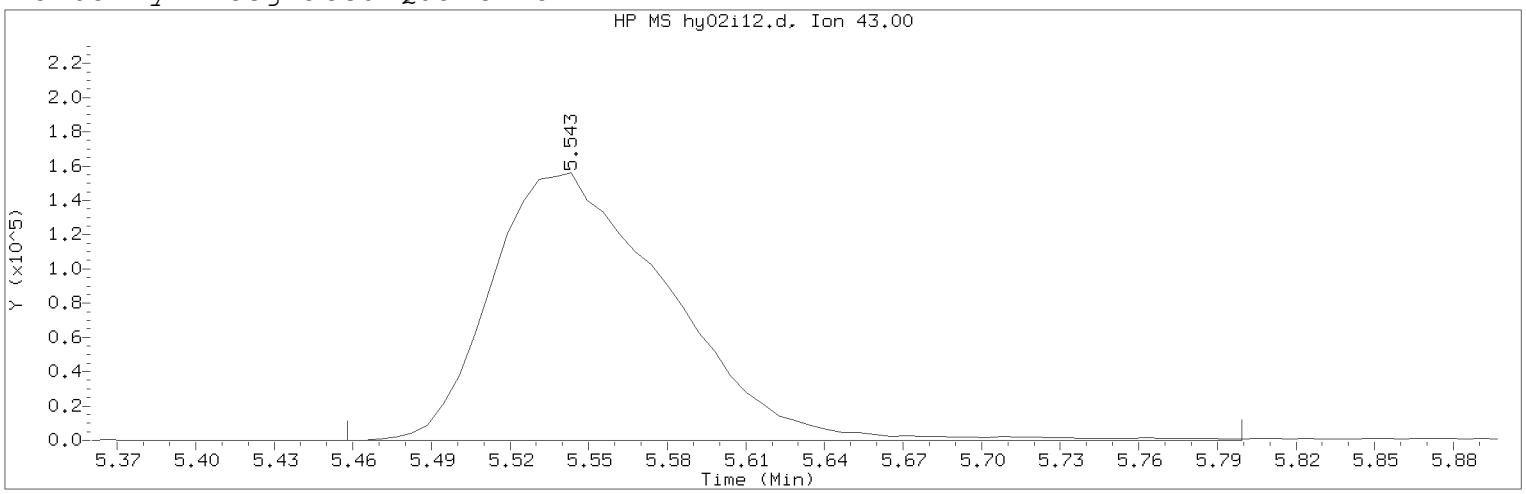
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 476		
Retention Time (minutes)	: 4.489		
Quant Ion	: 65.00		
Area	: 83894		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 449	Integration stop scan:	570
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

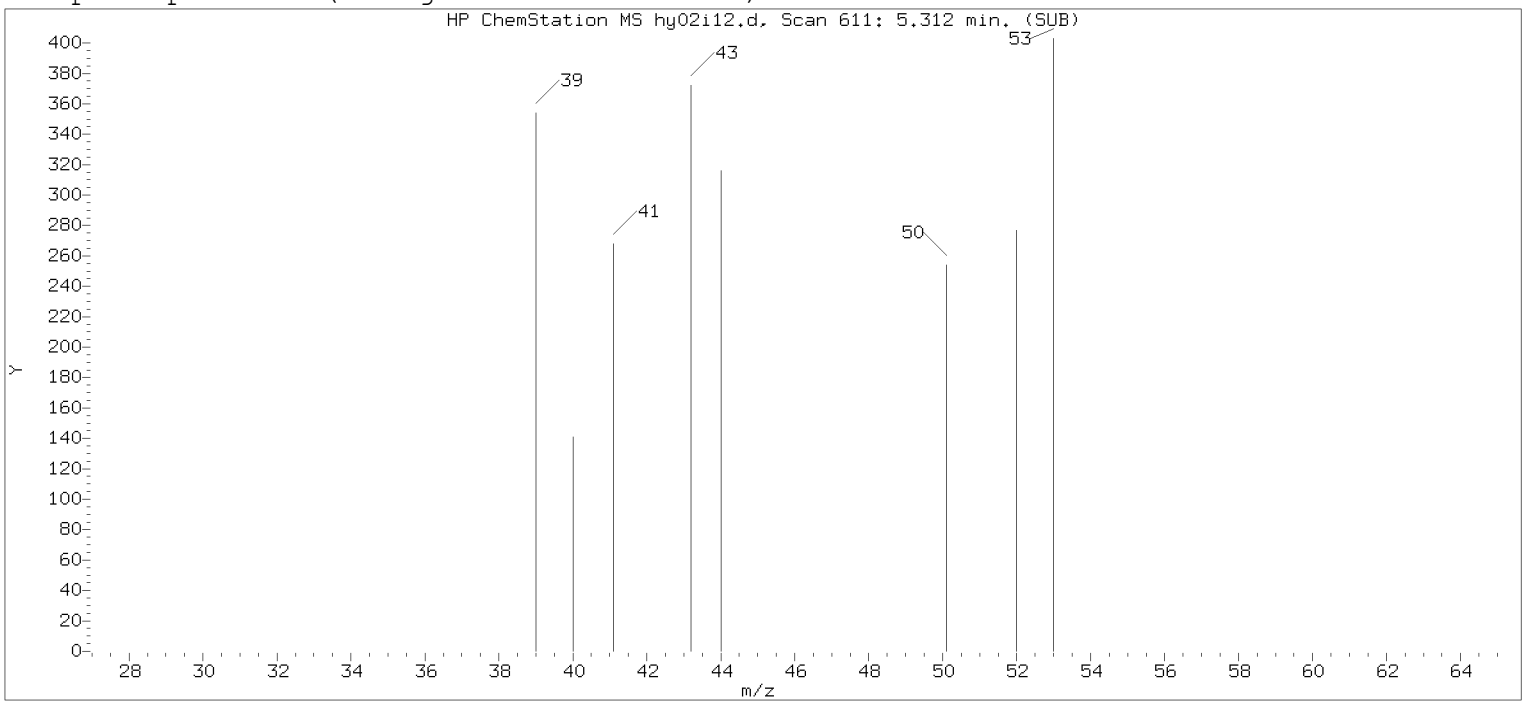
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 649
Retention Time (minutes): 5.543
Quant Ion : 43.00
Area (flag) : 736143A
On-Column Amount (ng) : 10.3701
Integration start scan : 634 Integration stop scan: 690
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

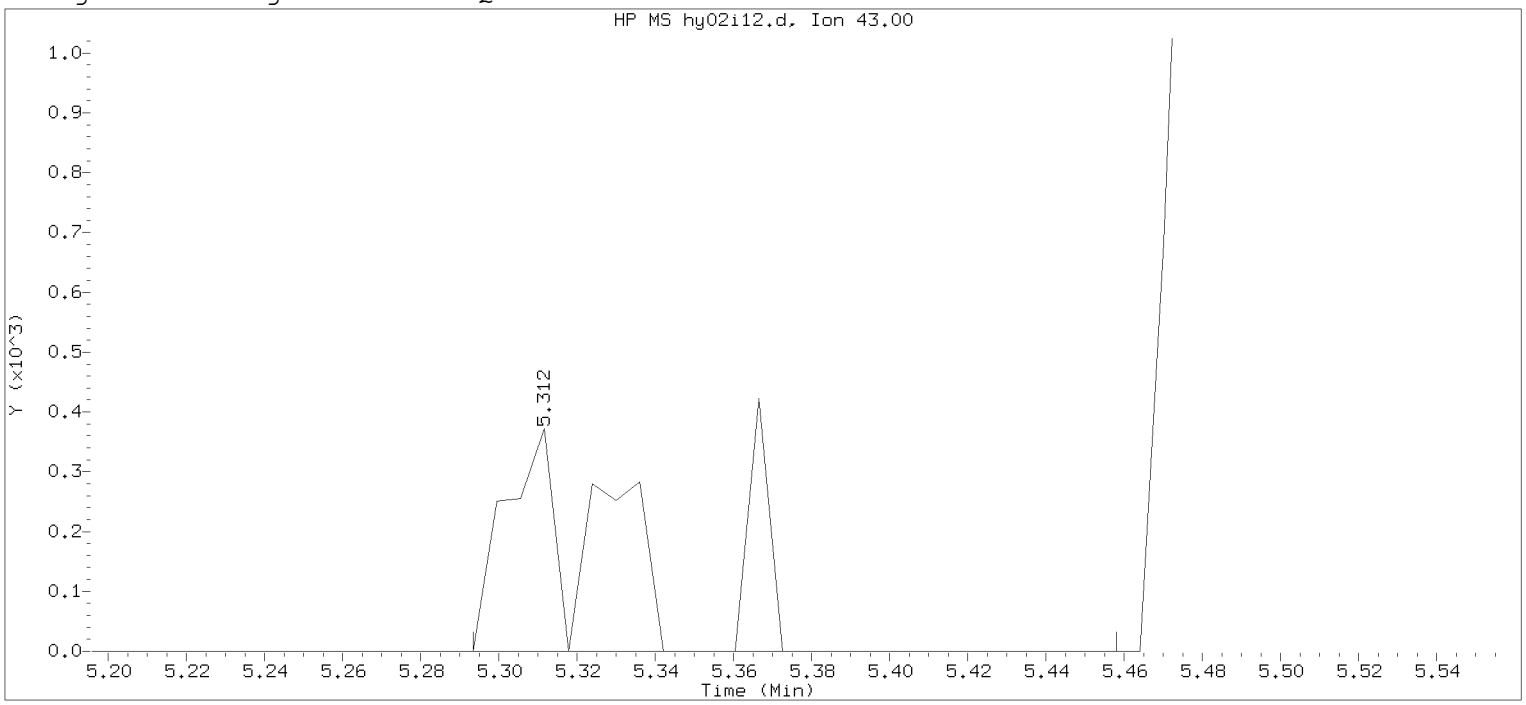
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

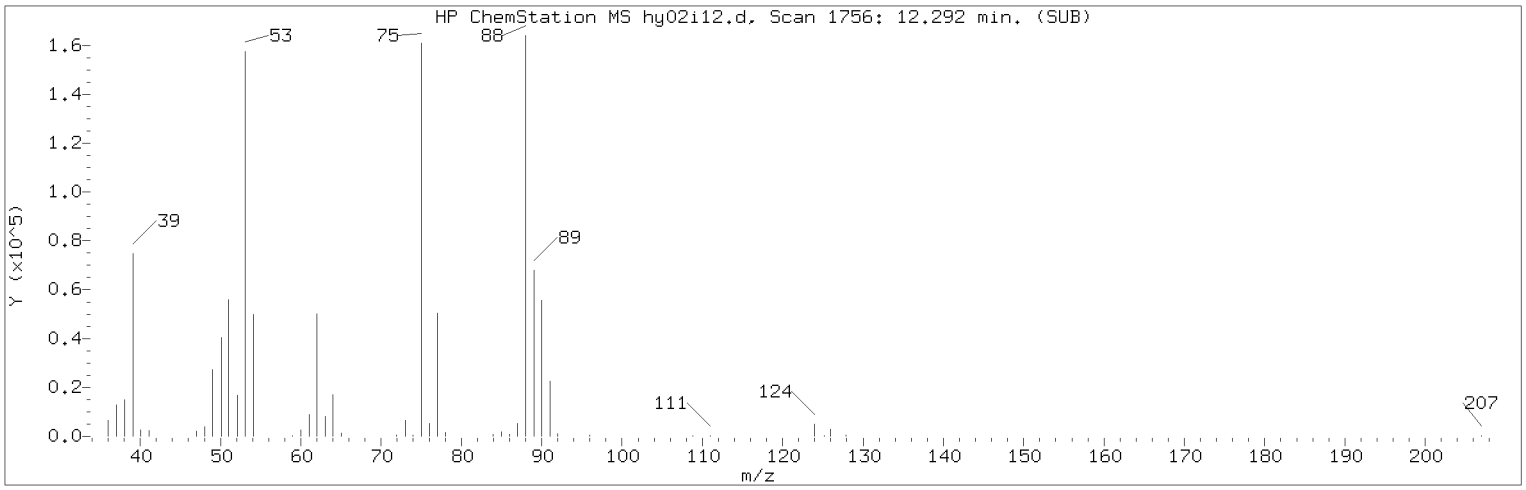
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

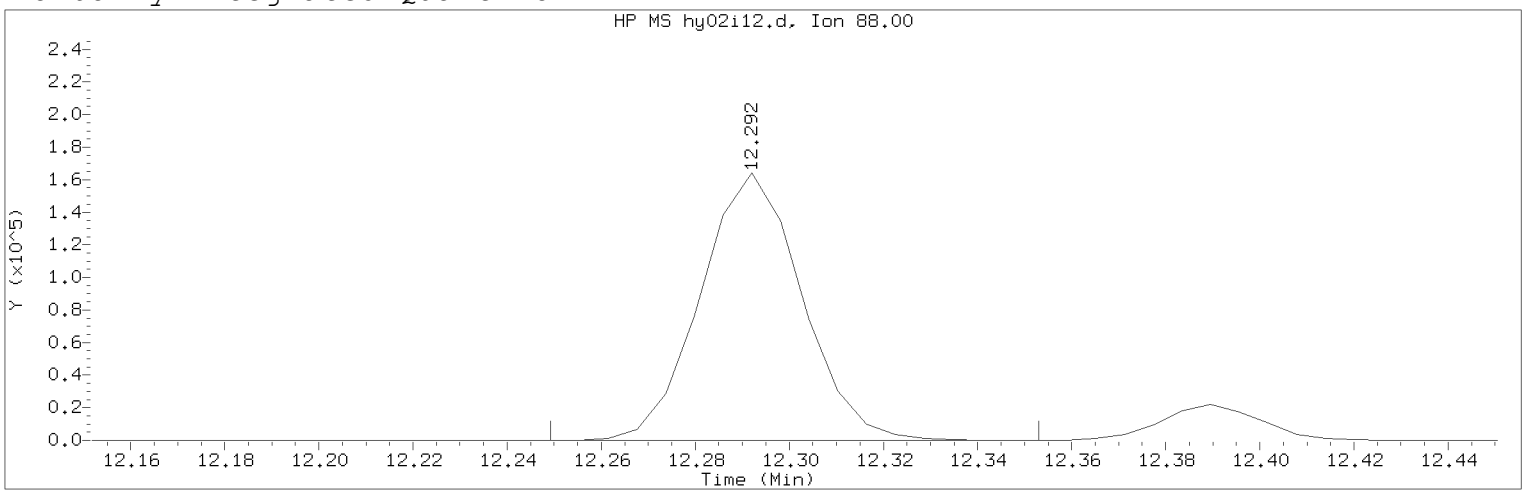
Compound Number : 36
Compound Name : Vinyl Acetate
Scan Number : 611
Retention Time (minutes): 5.312
Quant Ion : 43.00
Area : 774
On-column Amount (ng) : 0.0131
Integration start scan : 607 Integration stop scan: 634
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

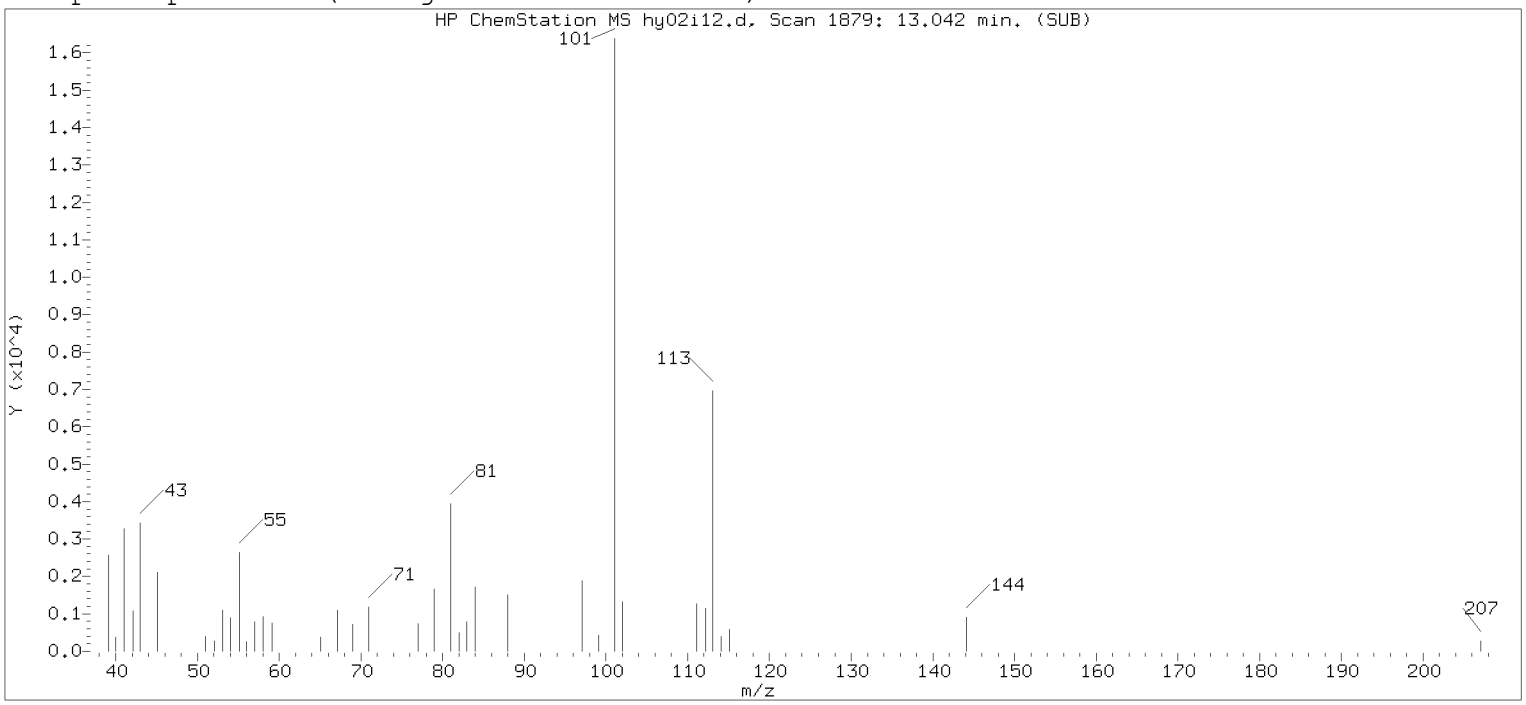
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 244920M
On-Column Amount (ng) : 20.6506
Integration start scan : 1748 Integration stop scan: 1765
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

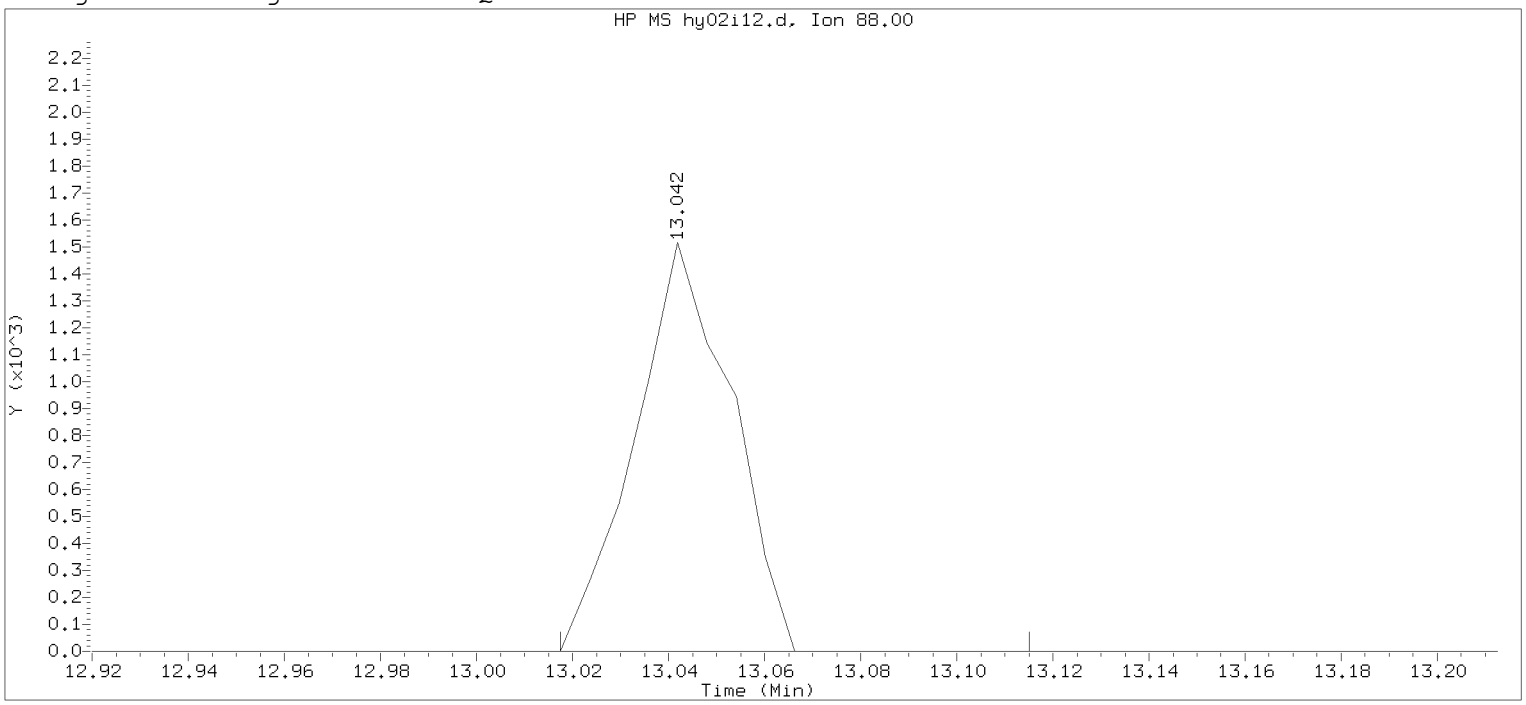
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

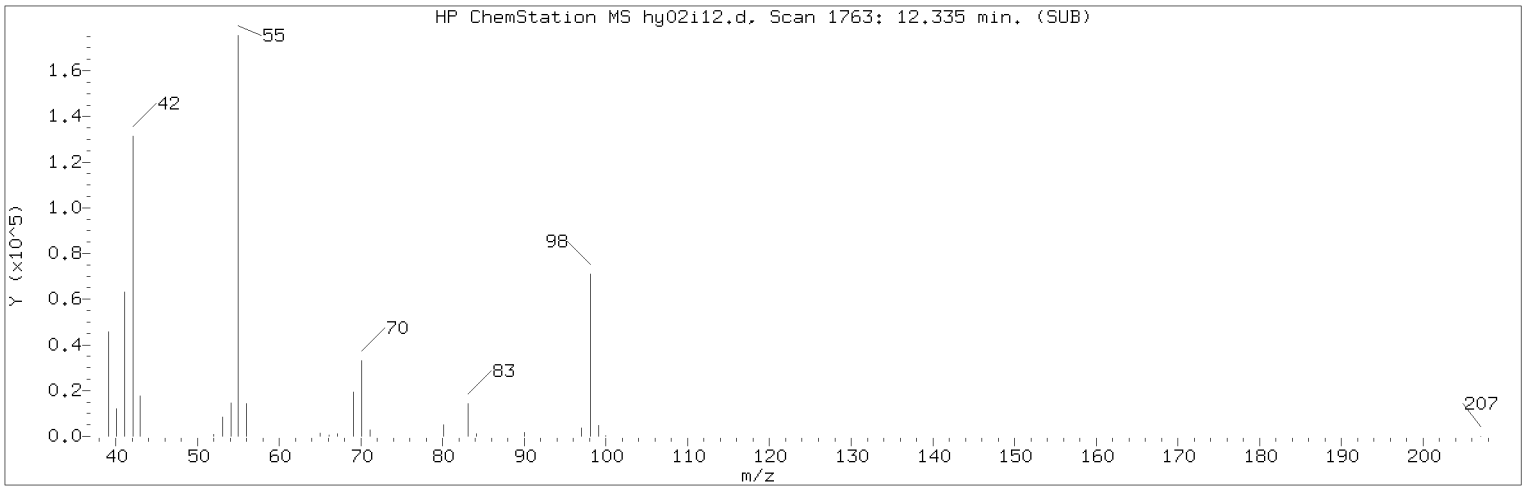
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

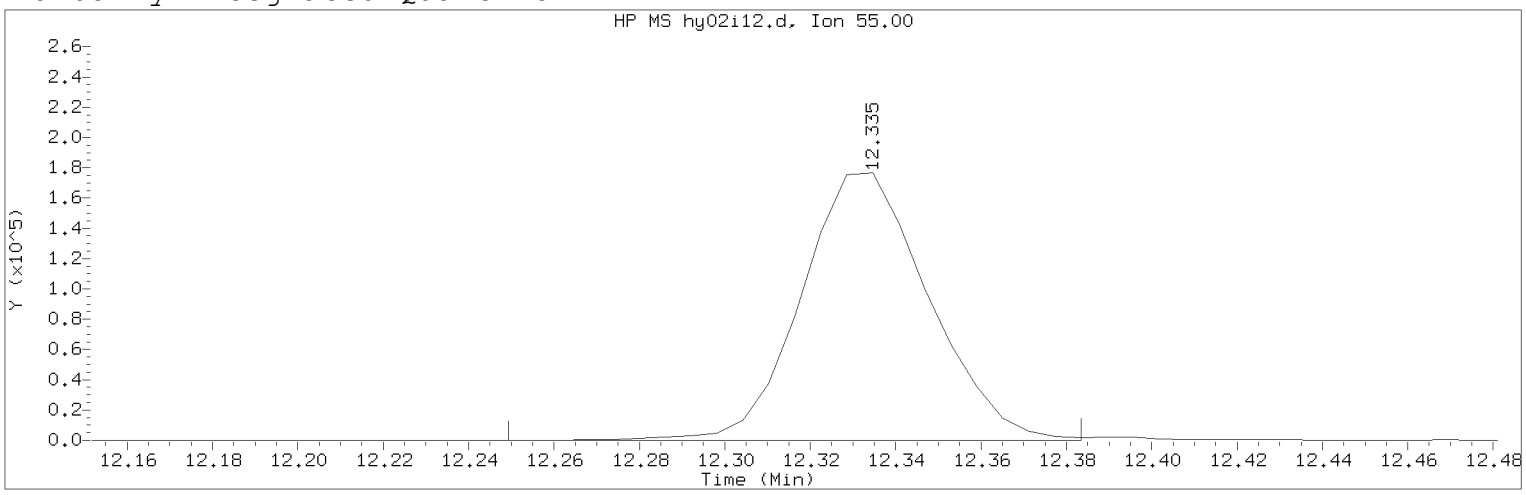
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 2111
On-column Amount (ng) : 0.2156
Integration start scan : 1874 Integration stop scan: 1890
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/04/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD010 Lab Sample ID: VSTD010

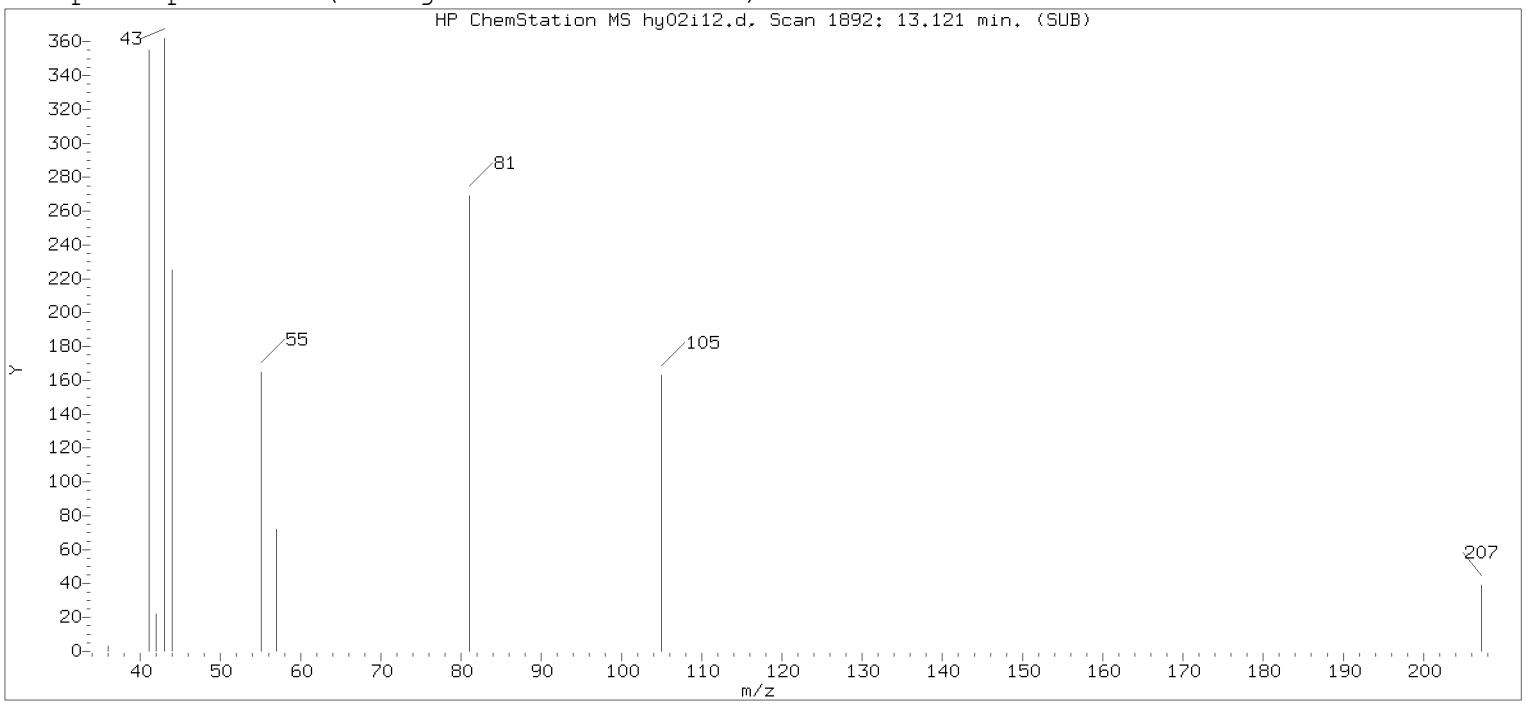
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1763
Retention Time (minutes): 12.335
Quant Ion : 55.00
Area (flag) : 365686M
On-Column Amount (ng) : 606.2783
Integration start scan : 1748 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

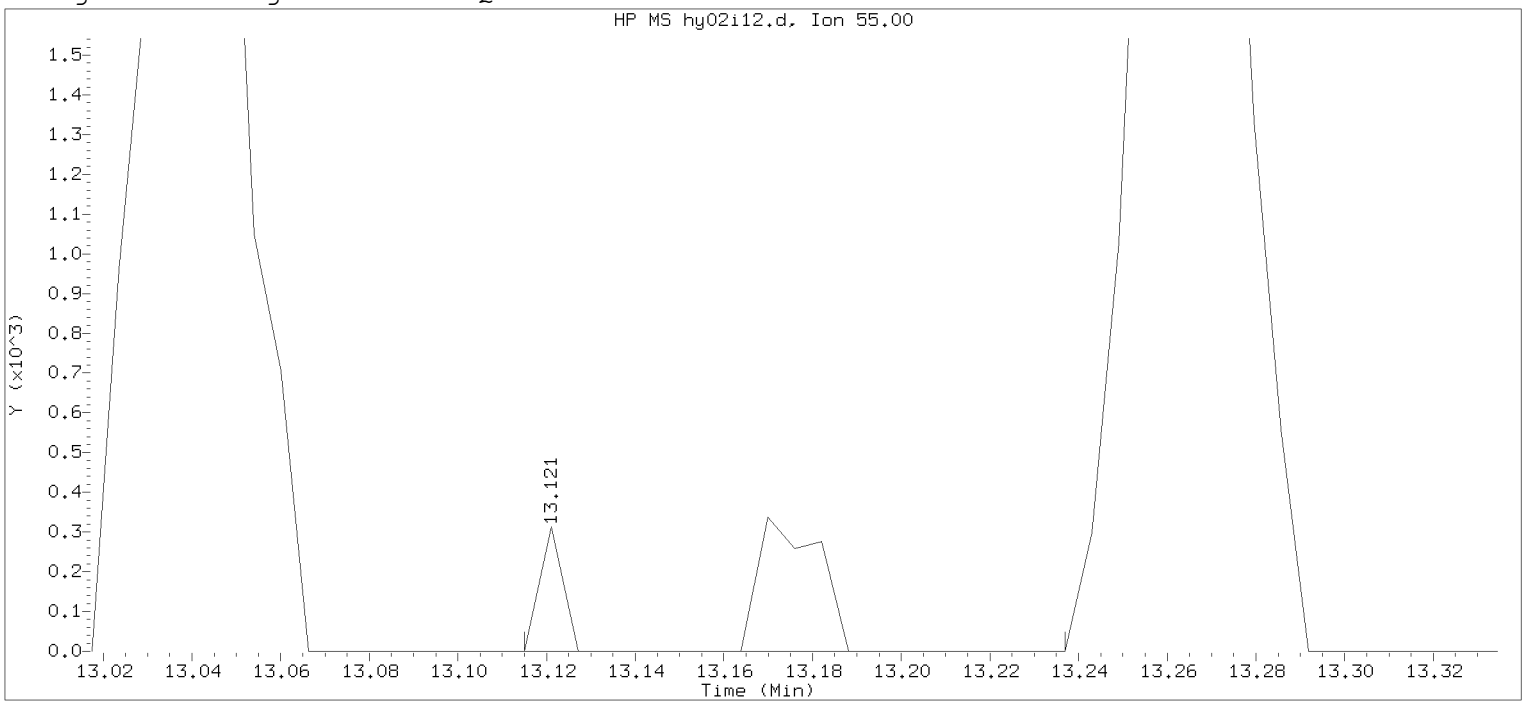
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



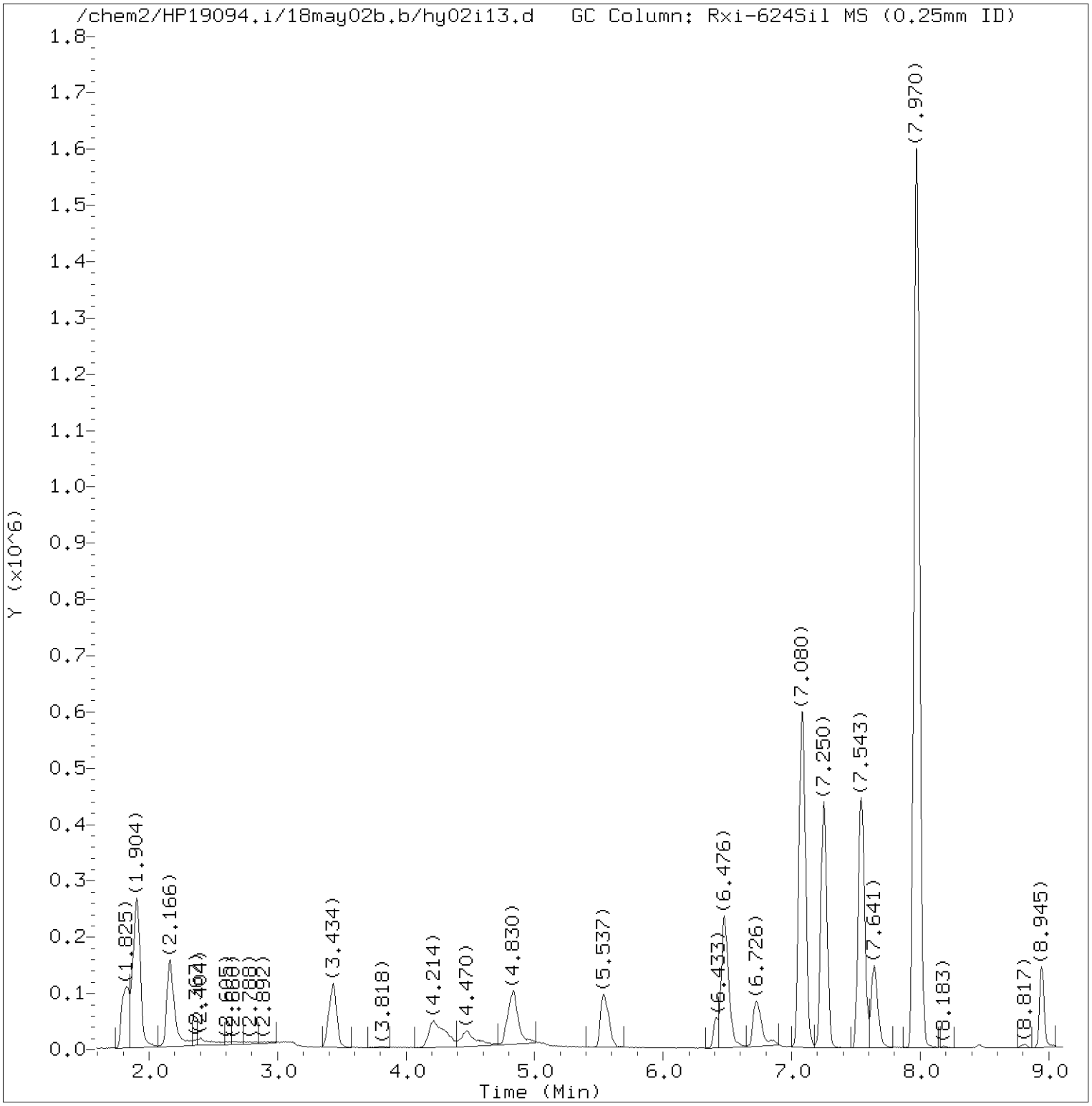
Data File: /chem2/HP19094.i/18may02b.b/hy02i12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:36 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 19:54
Date, time and analyst ID of latest file update: 02-May-2018 19:54 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1892
Retention Time (minutes): 13.121
Quant Ion : 55.00
Area : 434
On-column Amount (ng) : 0.6361
Integration start scan : 1890 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018.



Total Ion Chromatogram (TIC)

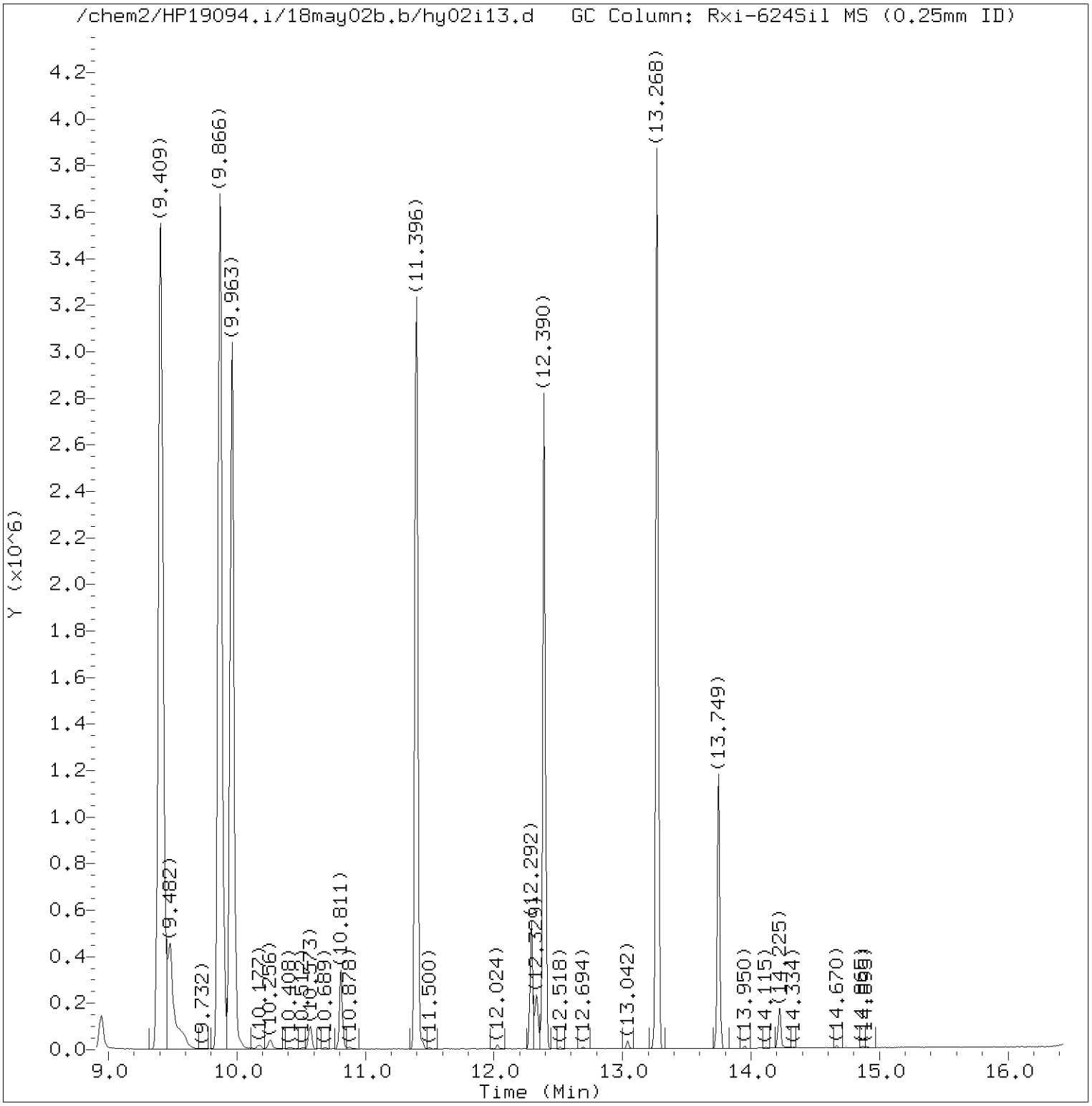
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

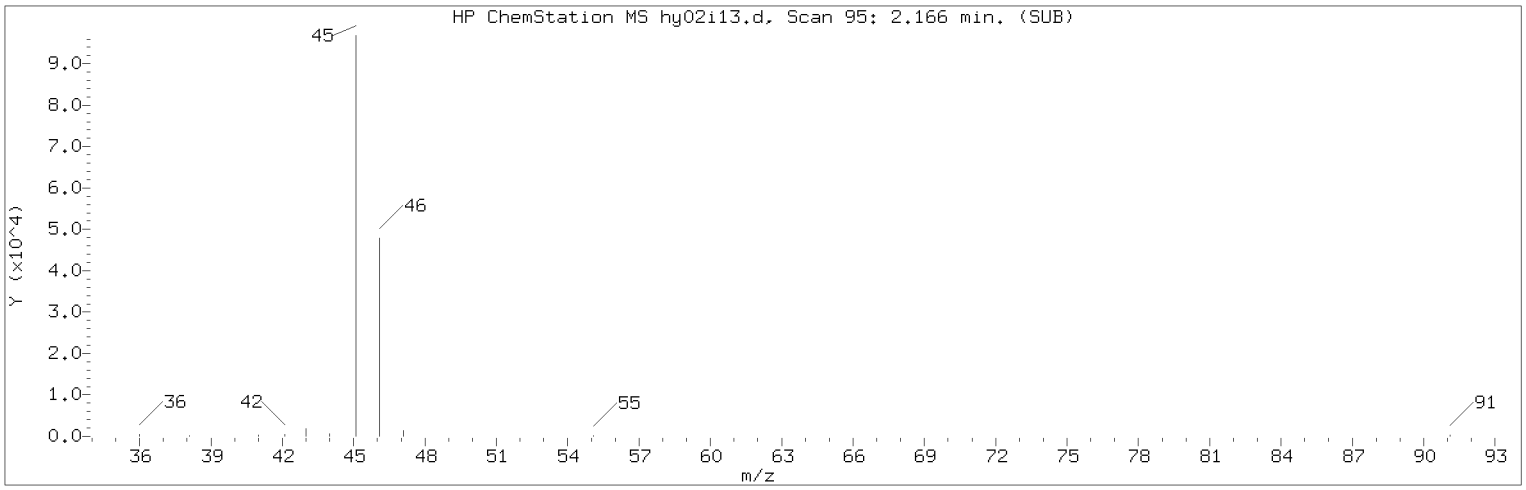
Sample Name: VSTD005 Lab Sample ID: VSTD005

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.166	45	376311M	5.039
25) Acetonitrile	(1)	4.214	41	346001M	192.762
26)*t-Butyl Alcohol-d10	(1)	4.495	65	74336	50.000
36) Vinyl Acetate	(2)	5.537	43	346883	4.875
43) Methyl Acrylate	(2)	6.476	55	550131	25.059
53) 1-Chlorobutane	(2)	7.250	56	571057	5.435
63)*Fluorobenzene	(2)	7.976	96	2326423	10.000
77) Chloroacetonitrile	(2)	9.476	75	181895	207.900
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	110899	5.272
97)*Chlorobenzene-d5	(3)	11.396	117	1698280	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	118032M	12.260
112) Cyclohexanone	(1)	12.329	55	116048M	237.027
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	890934	10.000
142) Hexachloroethane	(4)	13.749	117	203238	5.419

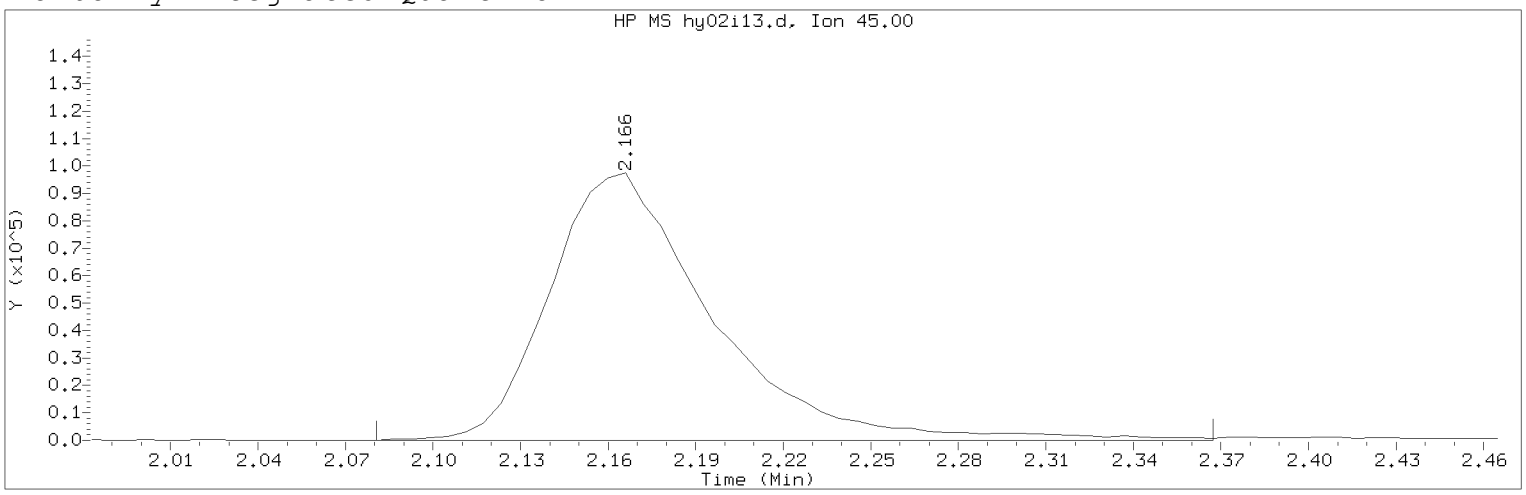
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

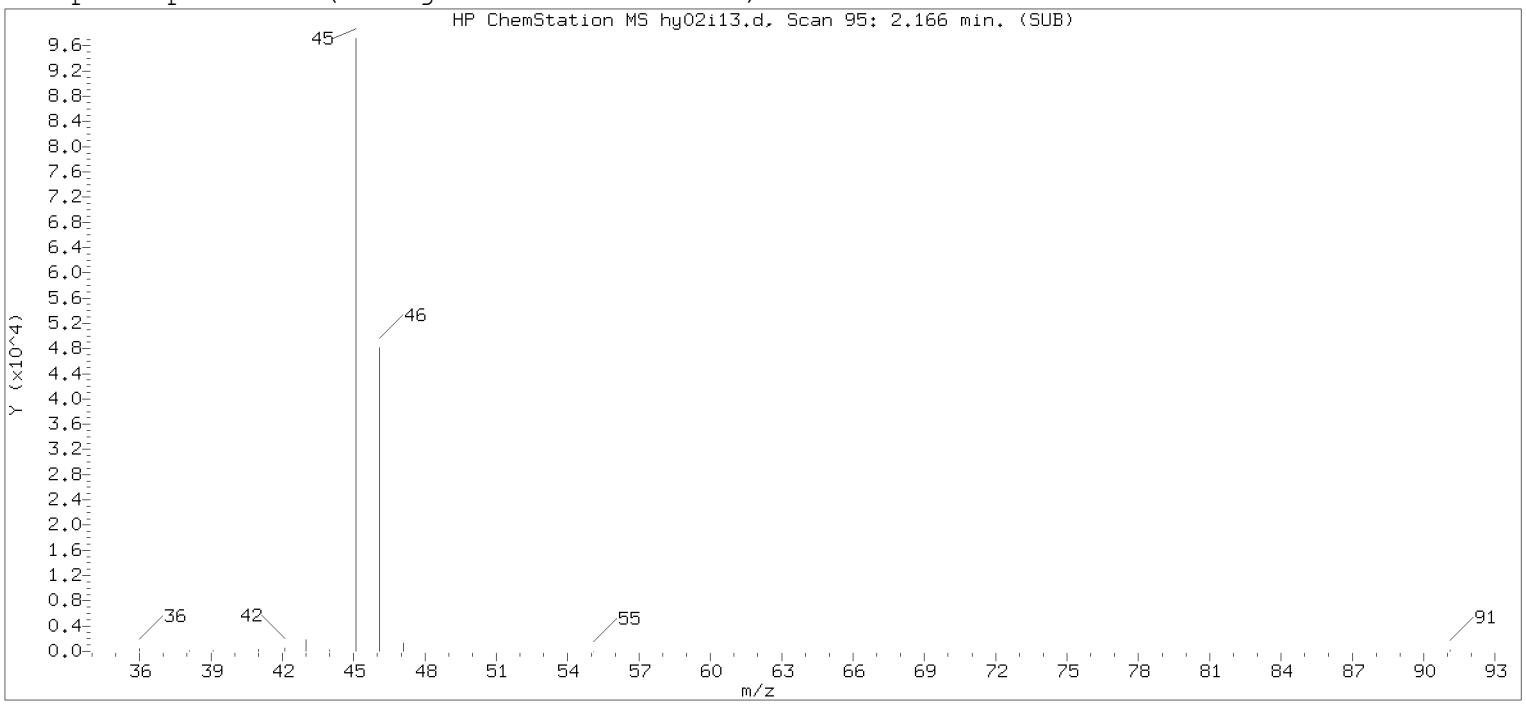
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 376311M
On-Column Amount (ng) : 5.0388
Integration start scan : 80 Integration stop scan: 127
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

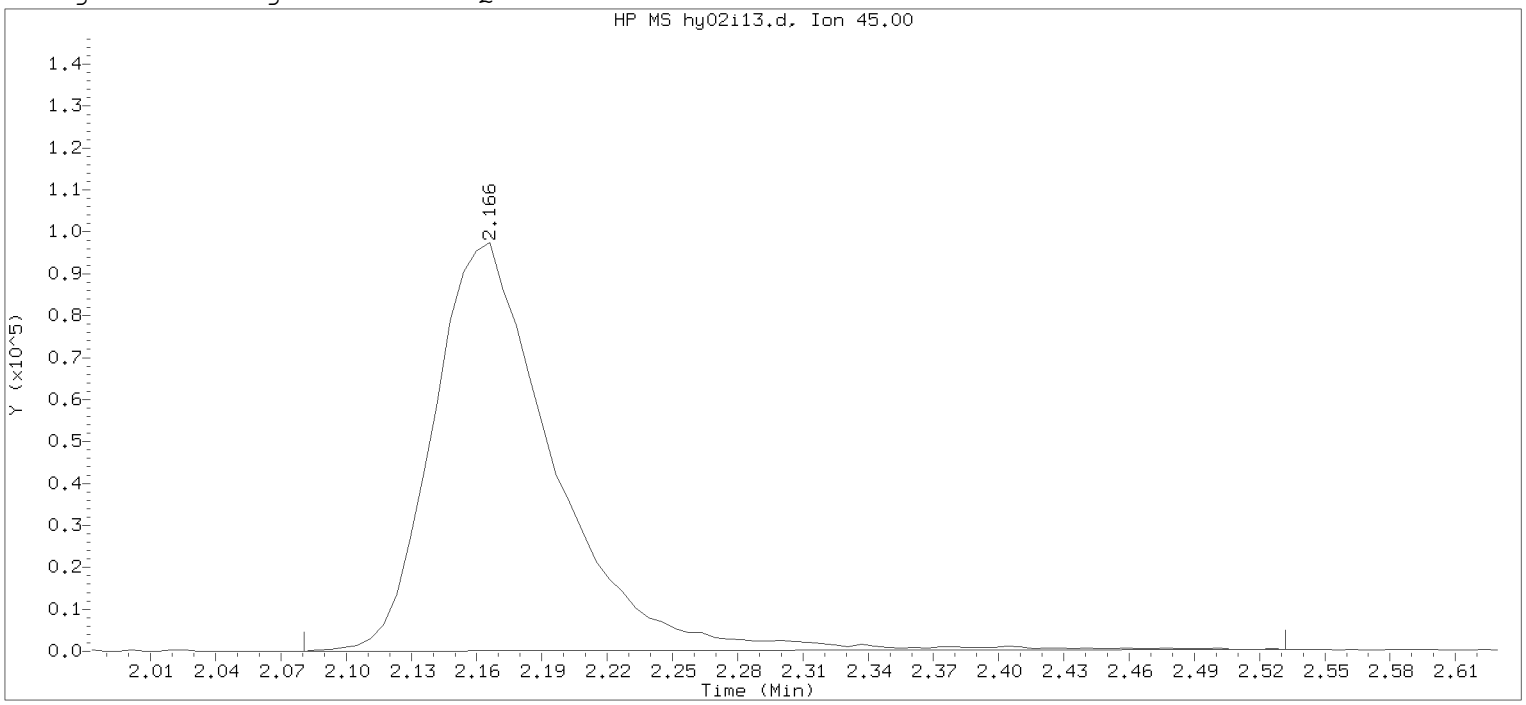
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

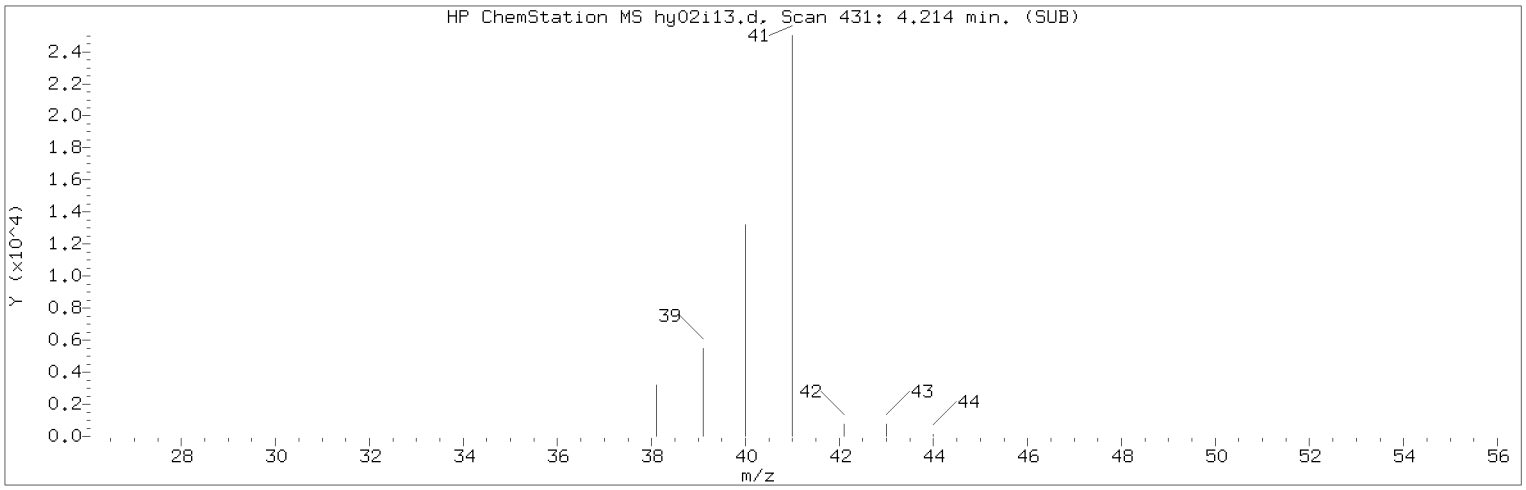
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

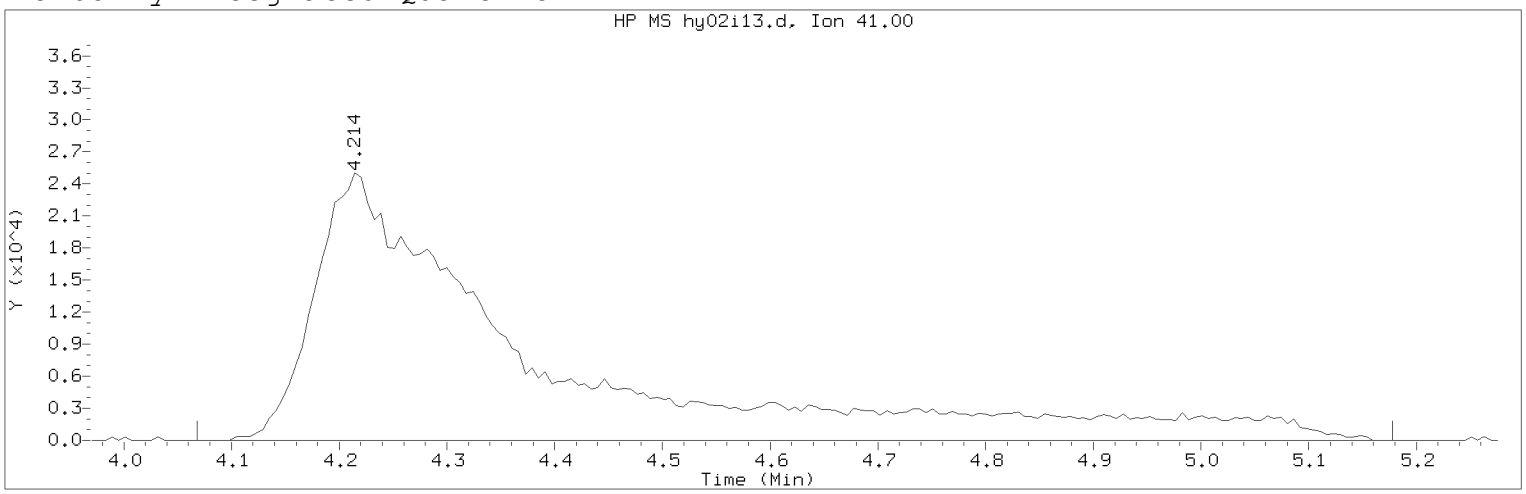
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 95		
Retention Time (minutes)	: 2.166		
Quant Ion	: 45.00		
Area	: 377915		
On-column Amount (ng)	: 4.9207		
Integration start scan	: 80	Integration stop scan:	154
Y at integration start	: 0	Y at integration end:	409

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

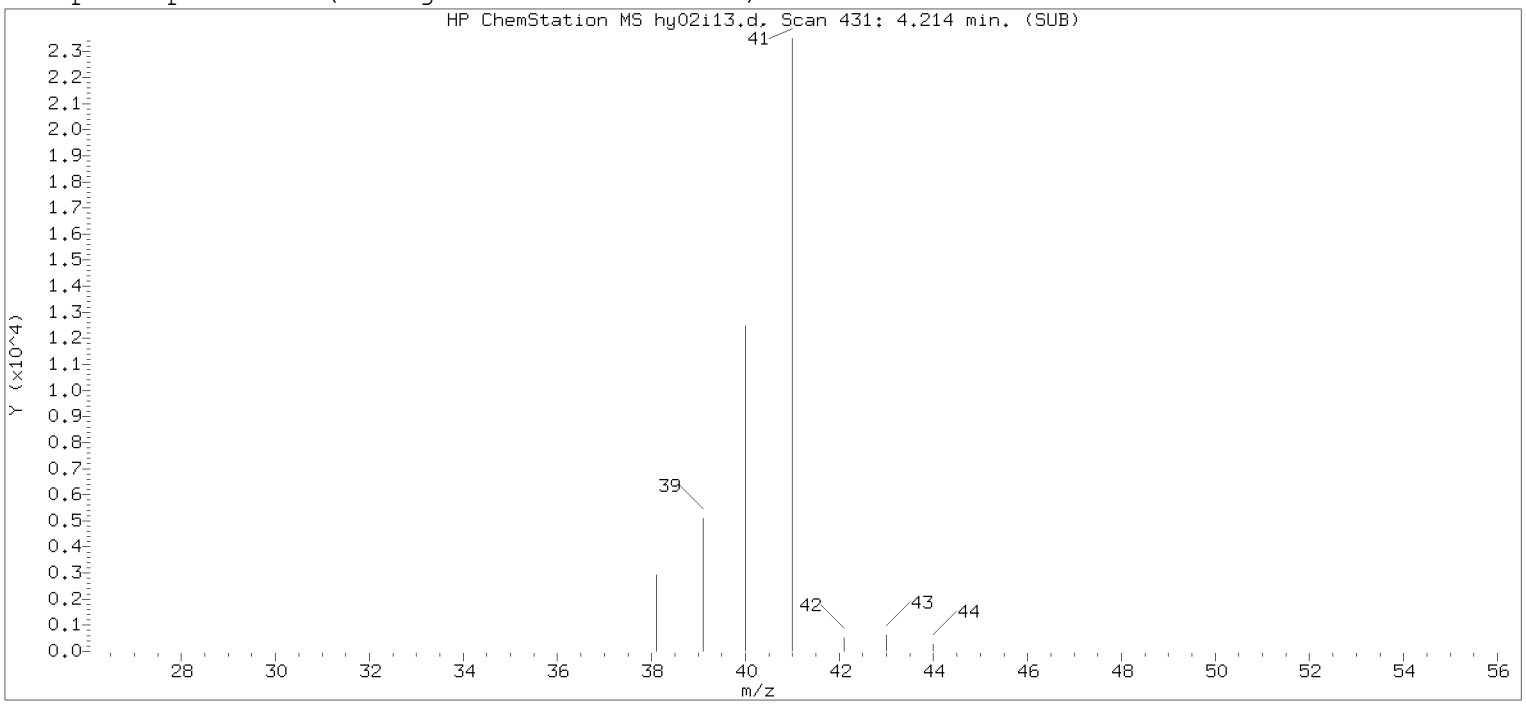
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 346001M
On-Column Amount (ng) : 192.7625
Integration start scan : 406 Integration stop scan: 588
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

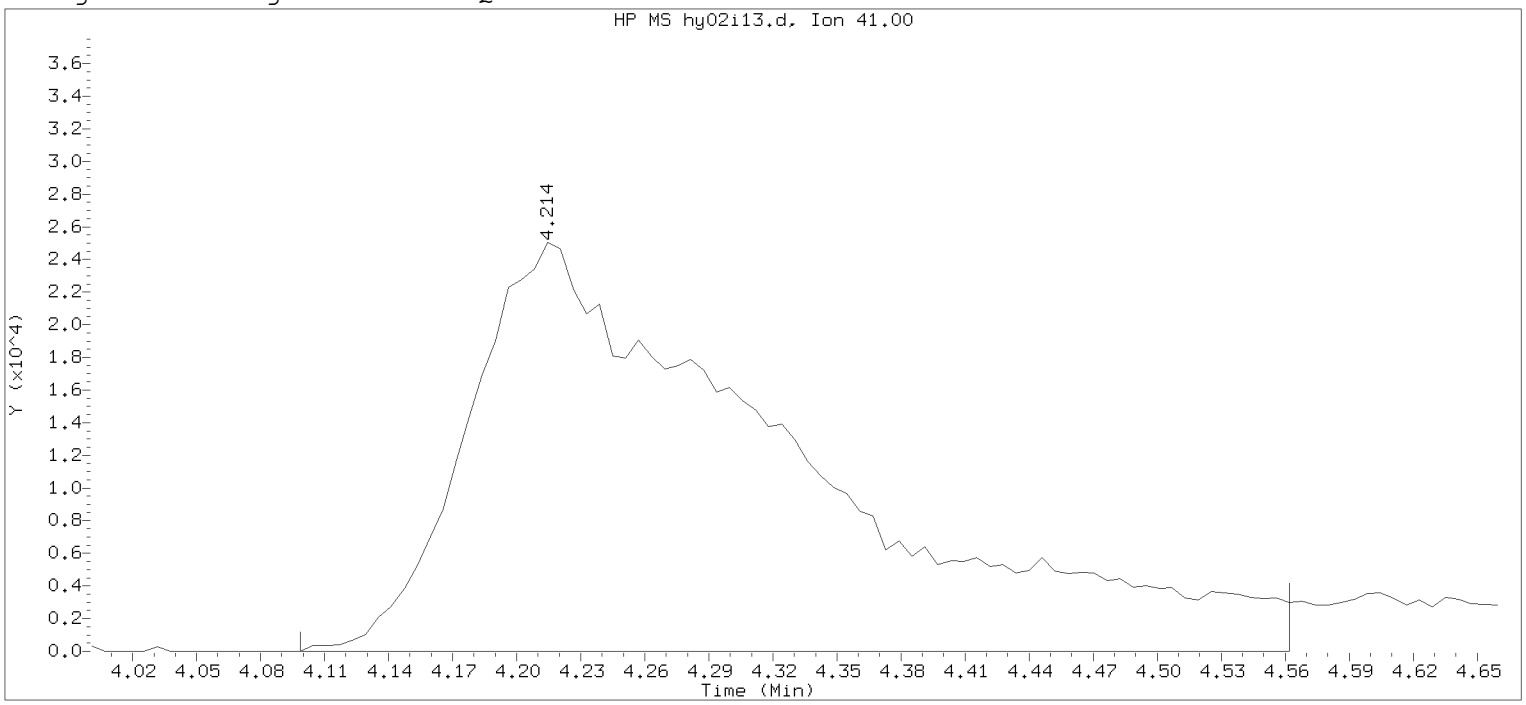
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

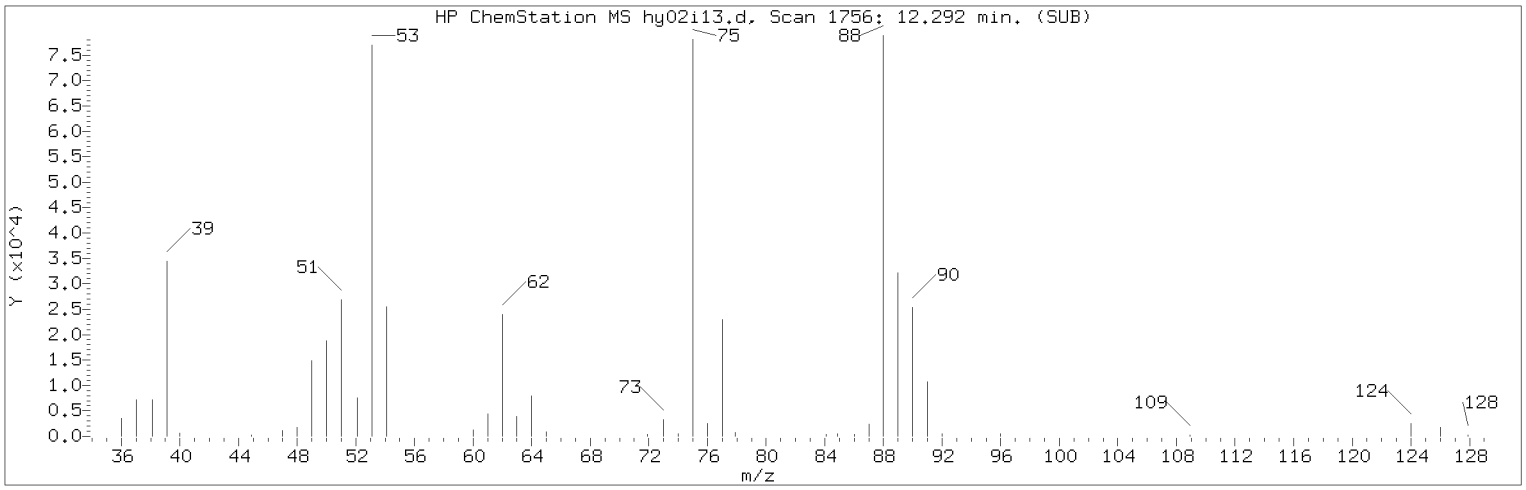
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

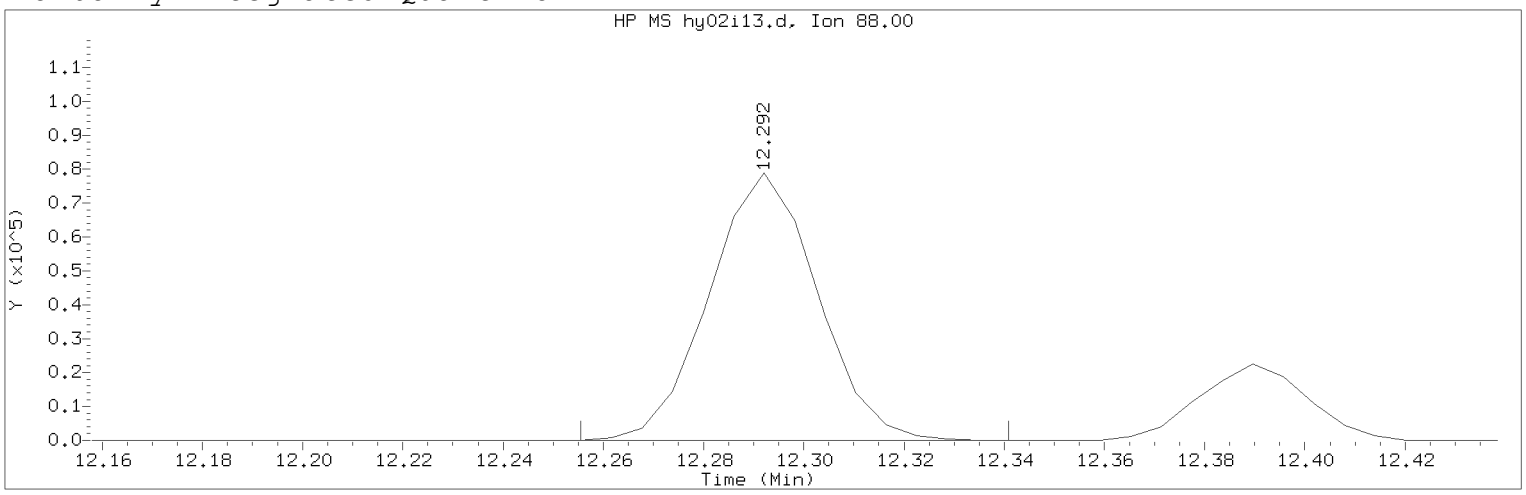
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 431		
Retention Time (minutes)	: 4.214		
Quant Ion	: 41.00		
Area	: 265890		
On-column Amount (ng)	: 127.0548		
Integration start scan	: 411	Integration stop scan:	487
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

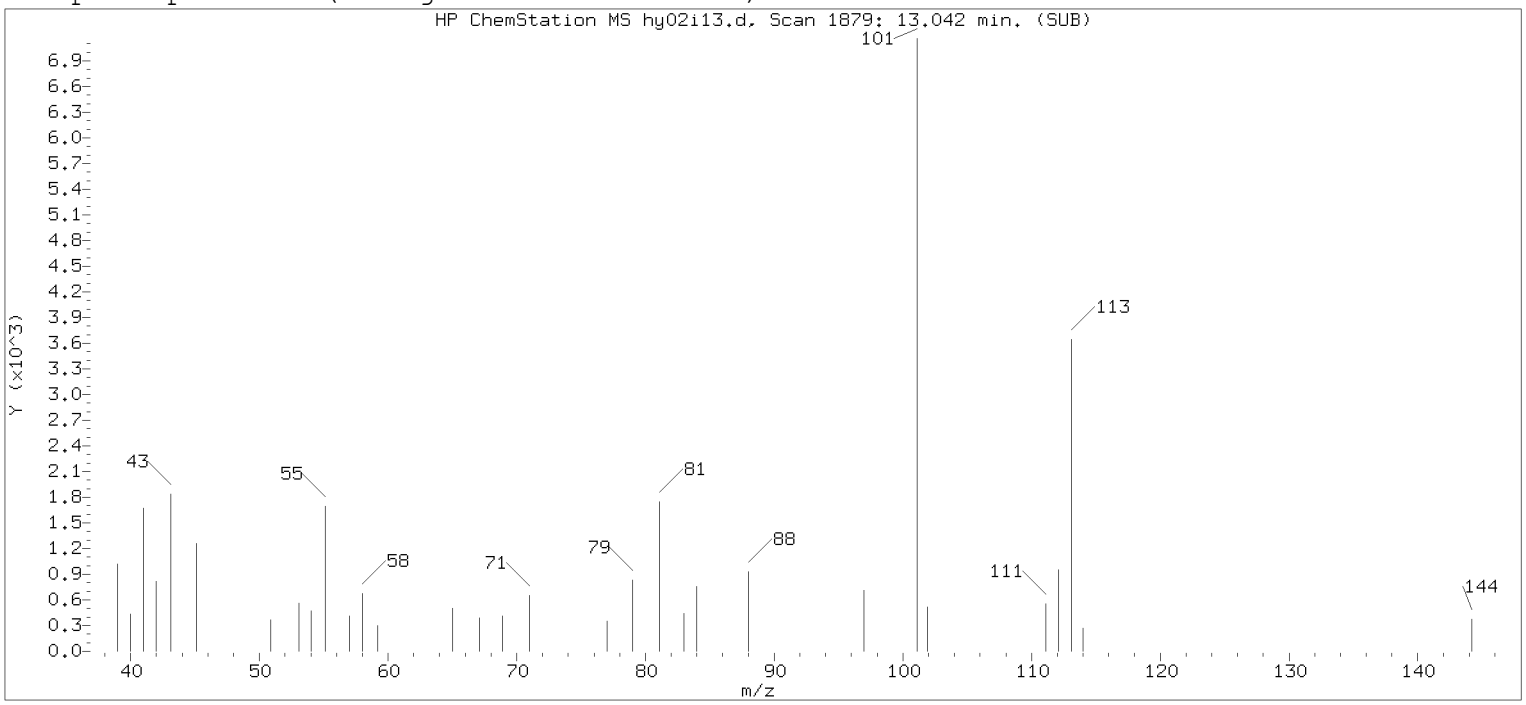
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 118032M
On-Column Amount (ng) : 12.2604
Integration start scan : 1749 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

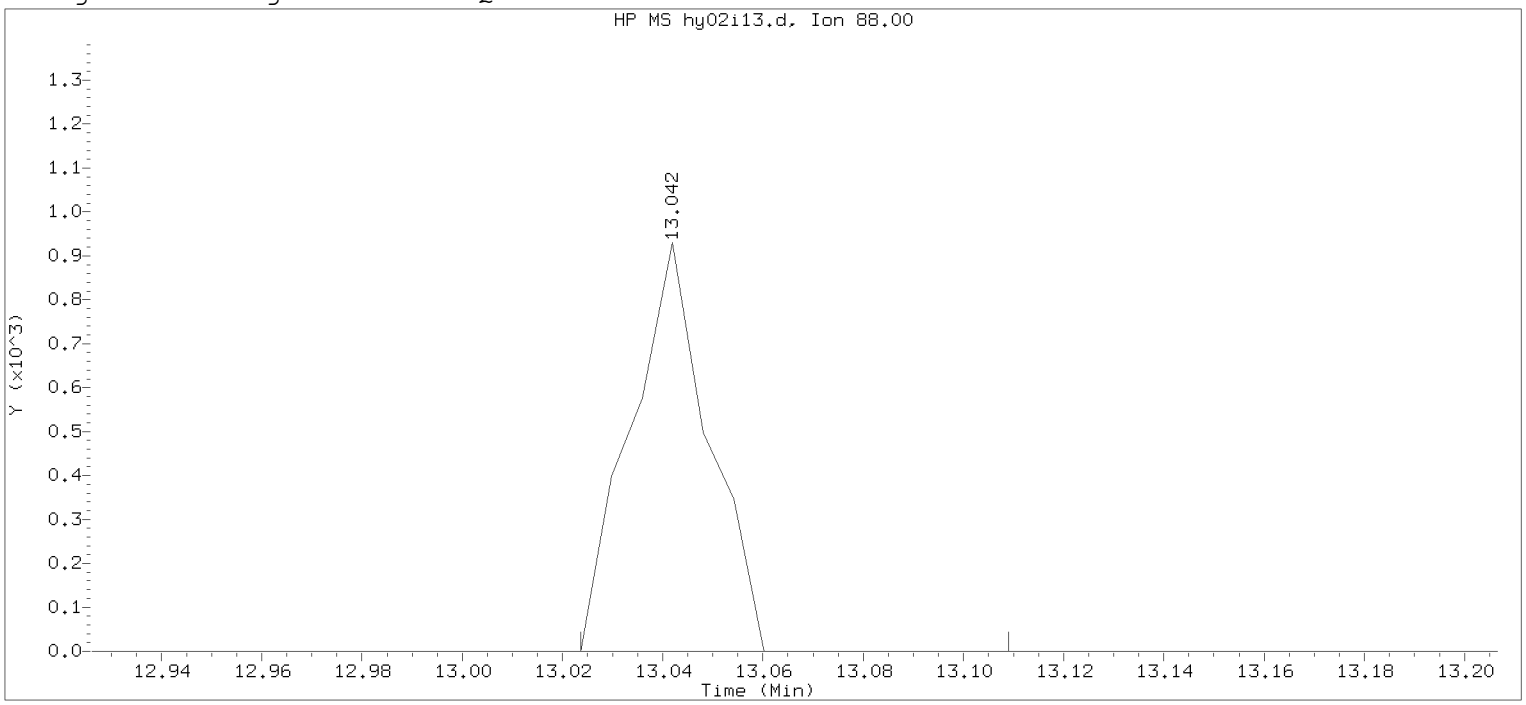
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

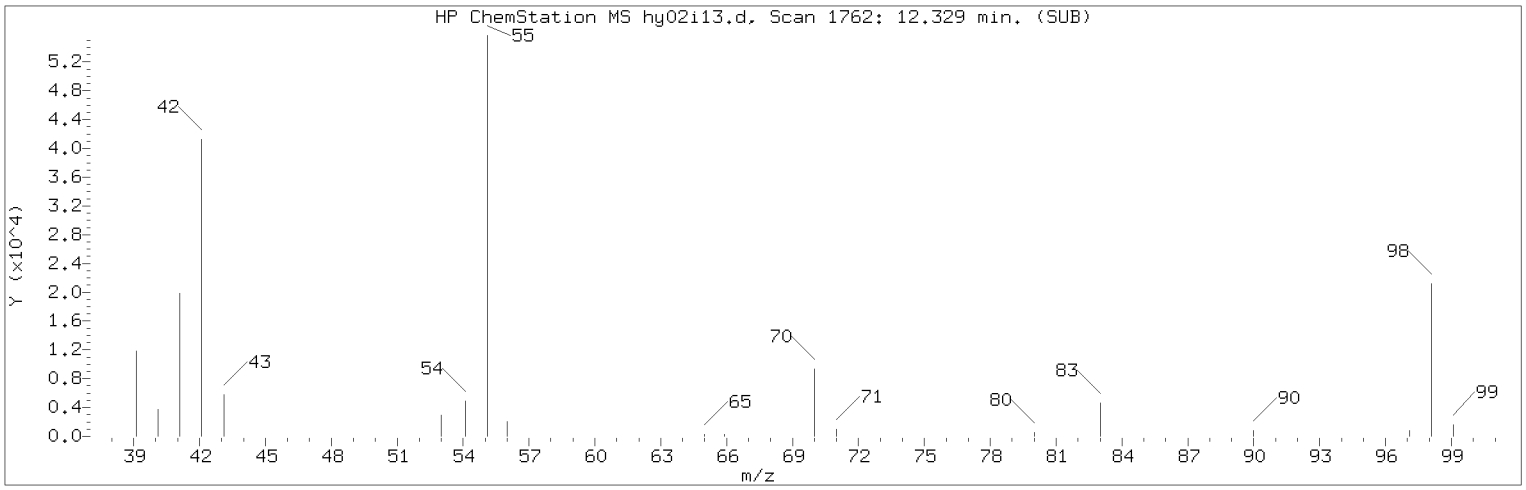
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

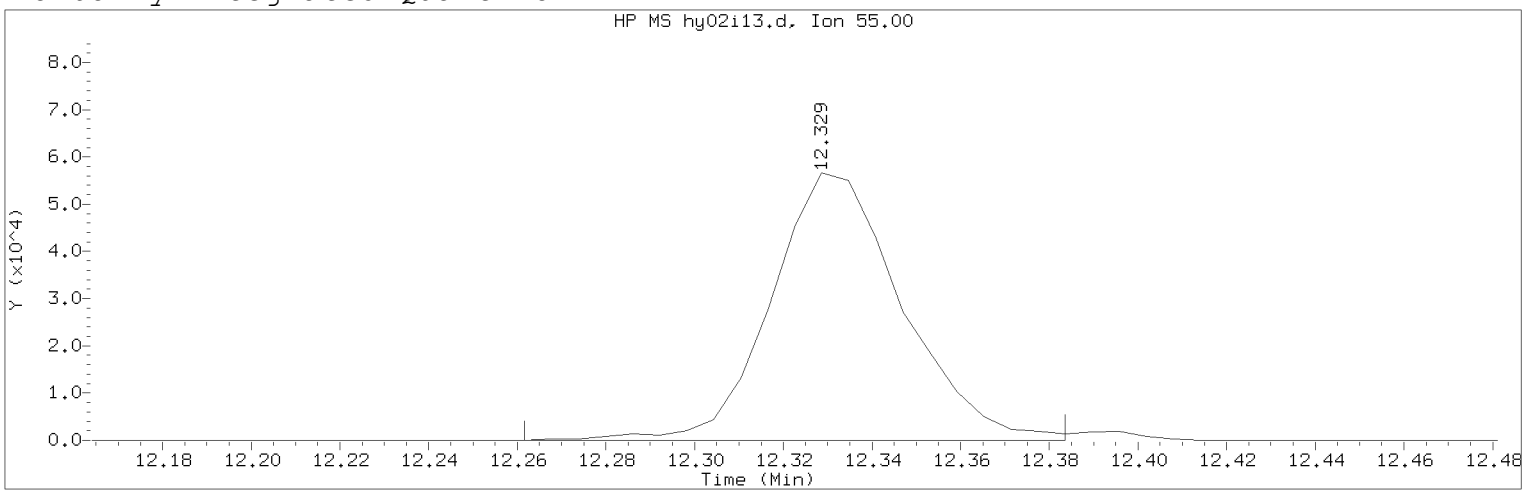
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 88.00
Area : 1005
On-column Amount (ng) : 0.1485
Integration start scan : 1875 Integration stop scan: 1889
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD005 Lab Sample ID: VSTD005

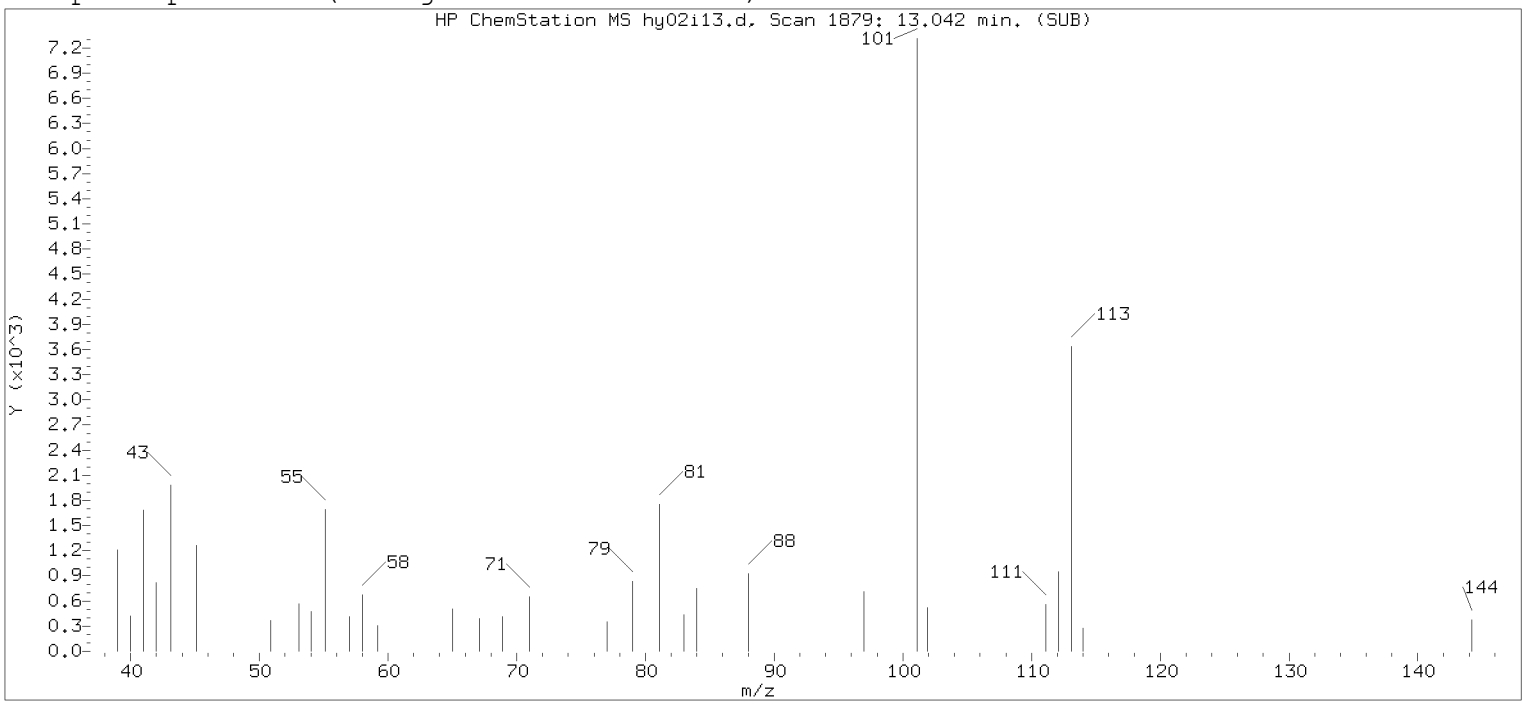
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 116048M
On-Column Amount (ng) : 237.0271
Integration start scan : 1750 Integration stop scan: 1770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

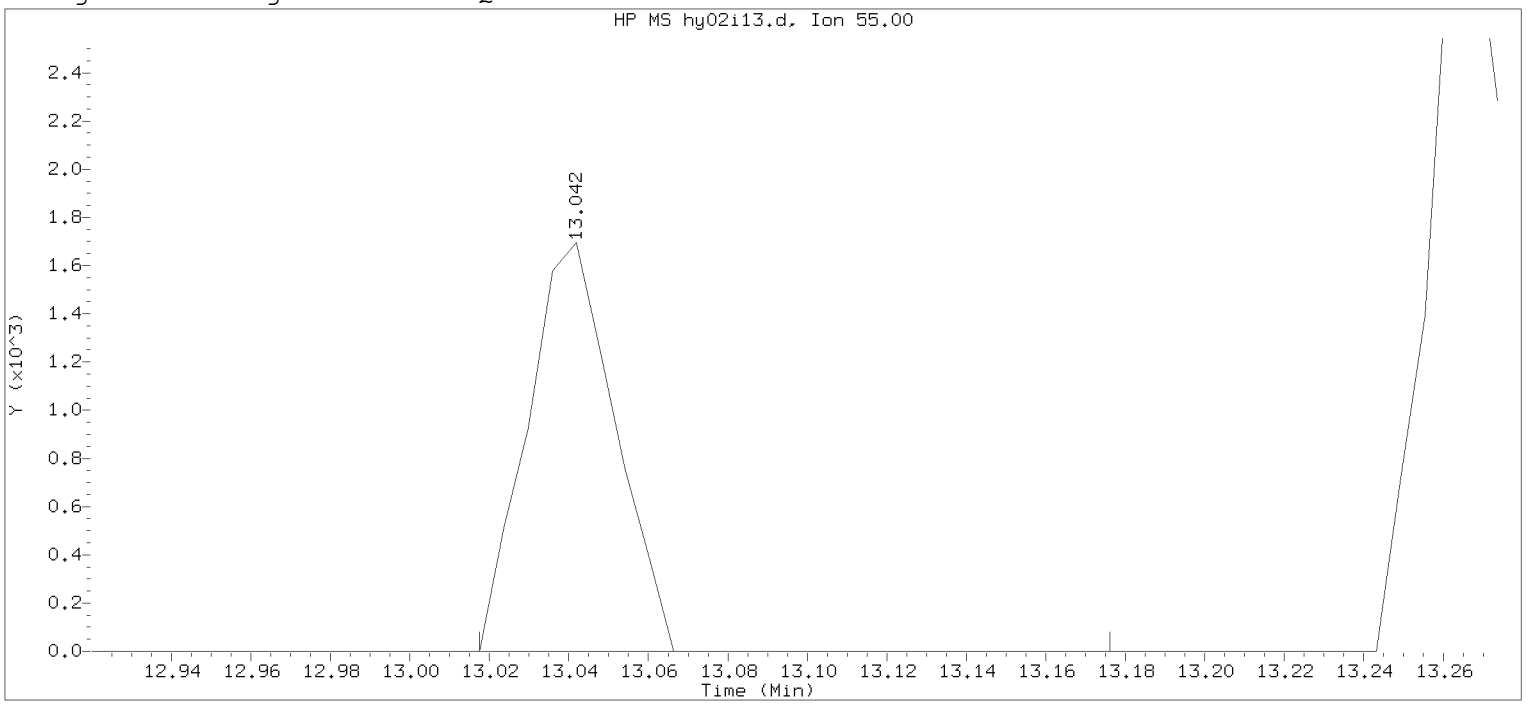
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



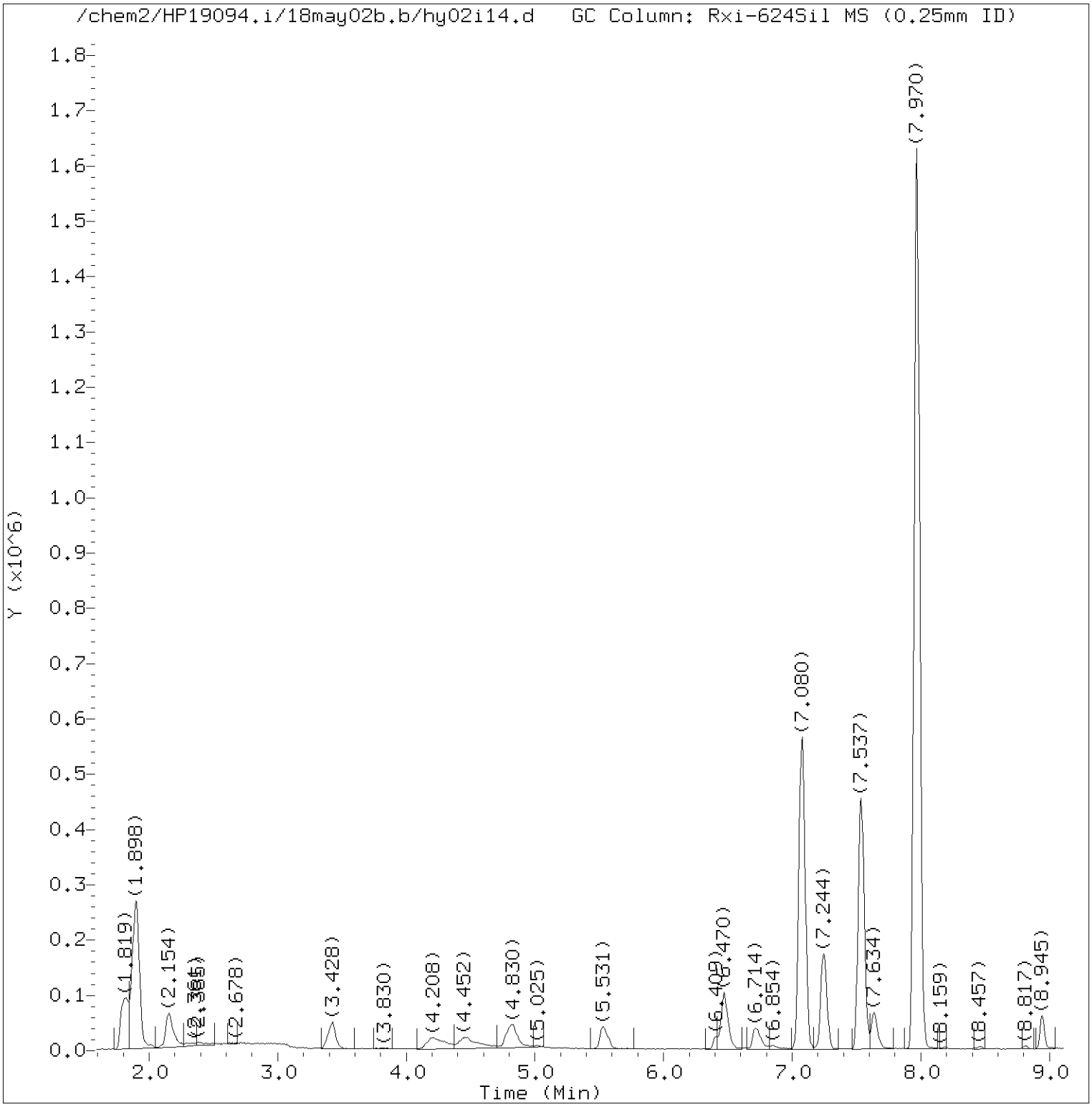
Data File: /chem2/HP19094.i/18may02b.b/hy02i13.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 19:58 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:16
Date, time and analyst ID of latest file update: 02-May-2018 20:16 Automation

Sample Name: VSTD005 Lab Sample ID: VSTD005

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 2596
On-column Amount (ng) : 5.5293
Integration start scan : 1874 Integration stop scan: 1900
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/02/2018



Total Ion Chromatogram (TIC)

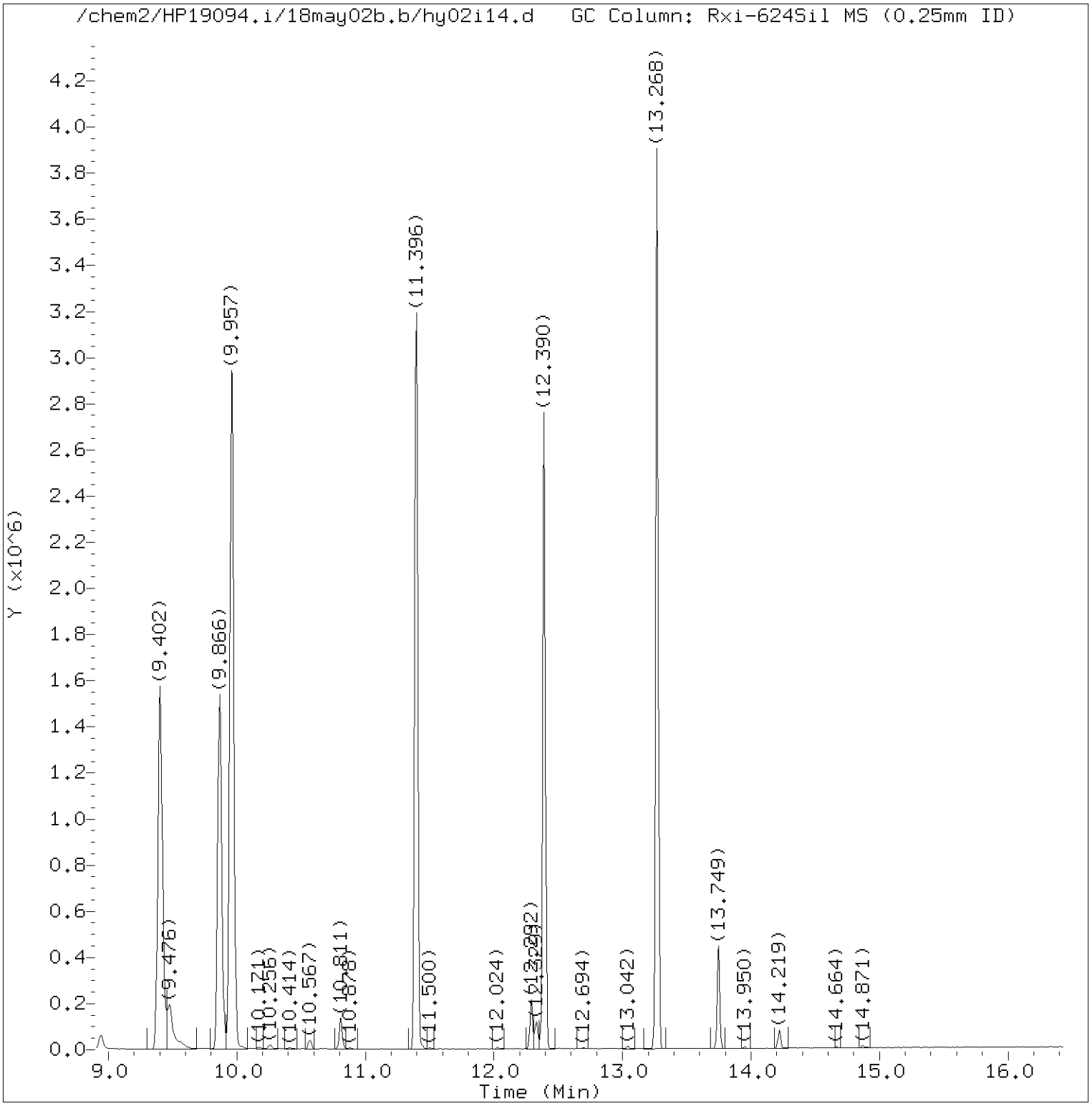
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

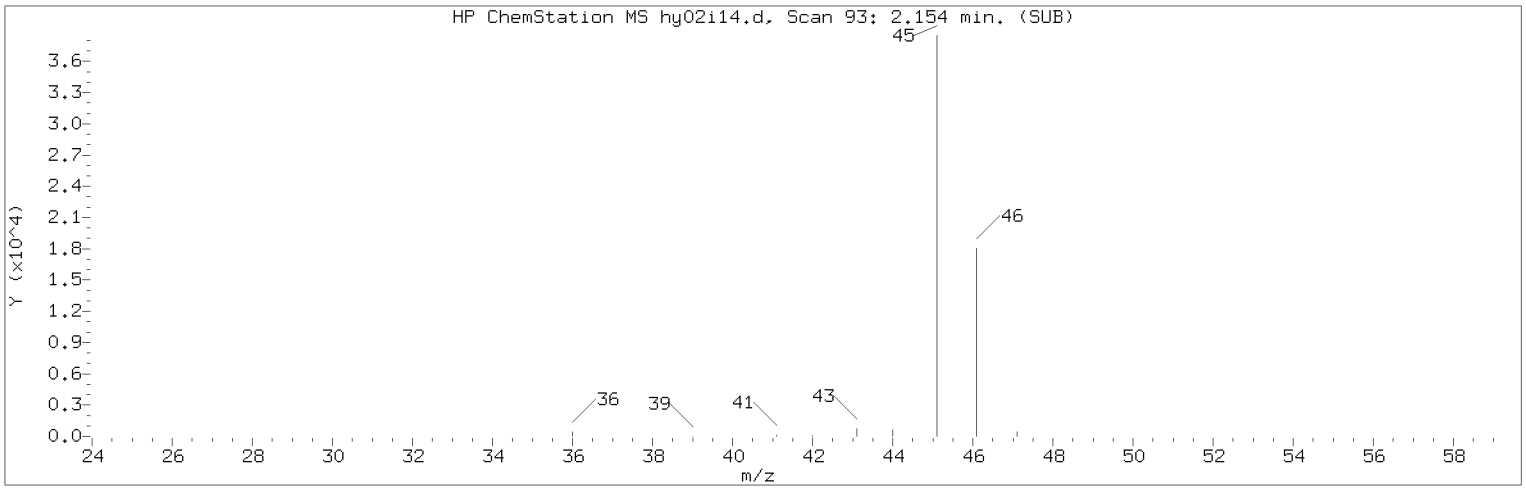
Sample Name: VSTD002 Lab Sample ID: VSTD002

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	145626M	1.971
25) Acetonitrile	(1)	4.208	41	174320M	78.221
26)*t-Butyl Alcohol-d10	(1)	4.470	65	92293M	50.000
36) Vinyl Acetate	(2)	5.531	43	143775	2.043
43) Methyl Acrylate	(2)	6.470	55	214639M	9.882
53) 1-Chlorobutane	(2)	7.244	56	224469	2.160
63)*Fluorobenzene	(2)	7.970	96	2301576	10.000
77) Chloroacetonitrile	(2)	9.463	75	91318	105.500
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	42627	2.048
97)*Chlorobenzene-d5	(3)	11.396	117	1681083	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	45666M	3.821
112) Cyclohexanone	(1)	12.329	55	57098M	93.932
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	885161	10.000
142) Hexachloroethane	(4)	13.749	117	77231	2.073

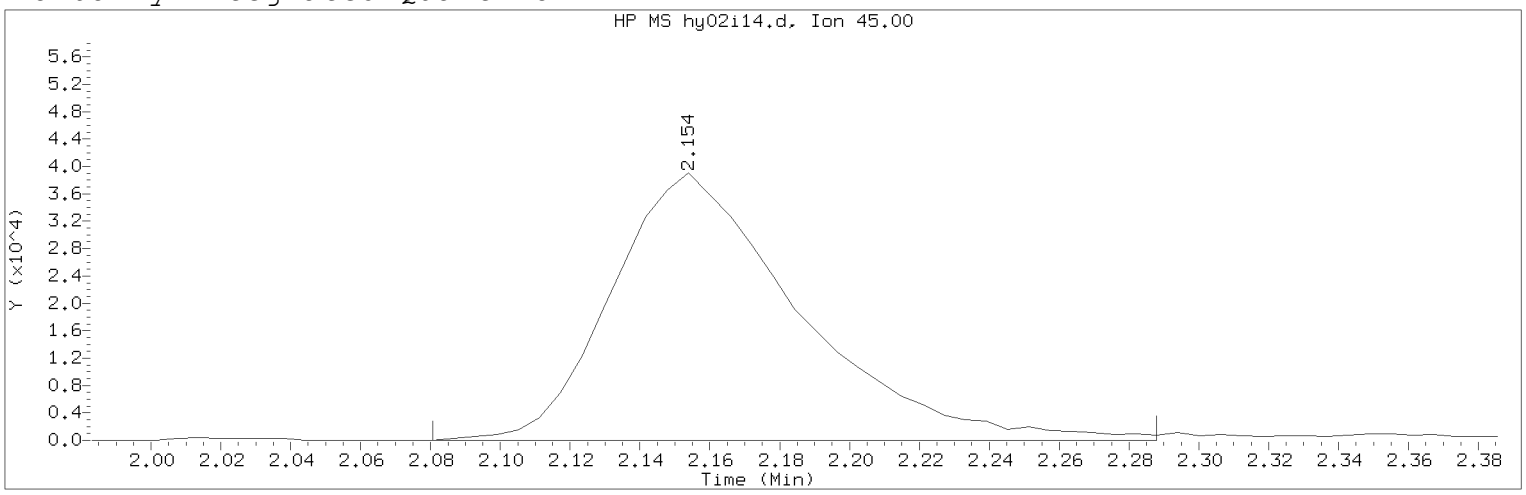
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

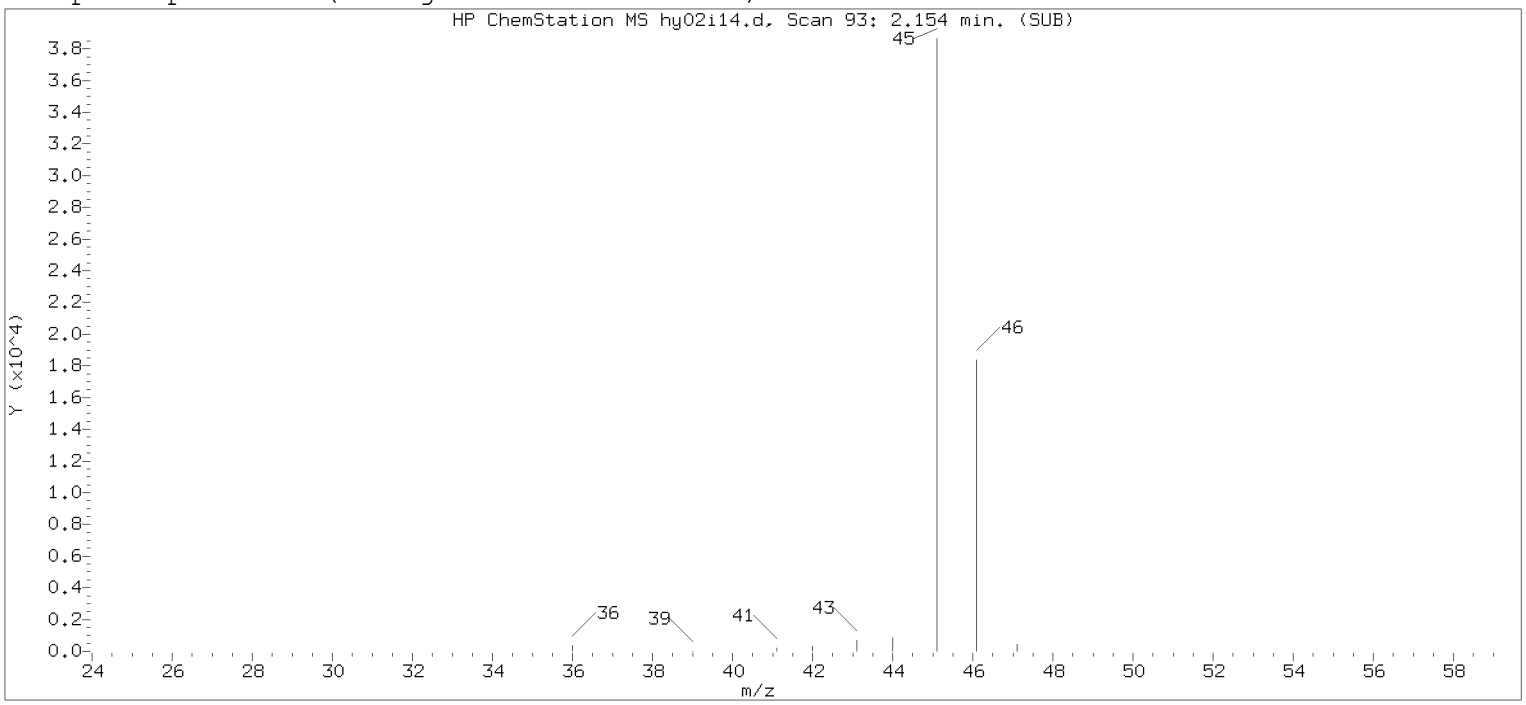
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 145626M
On-Column Amount (ng) : 1.9710
Integration start scan : 80 Integration stop scan: 114
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

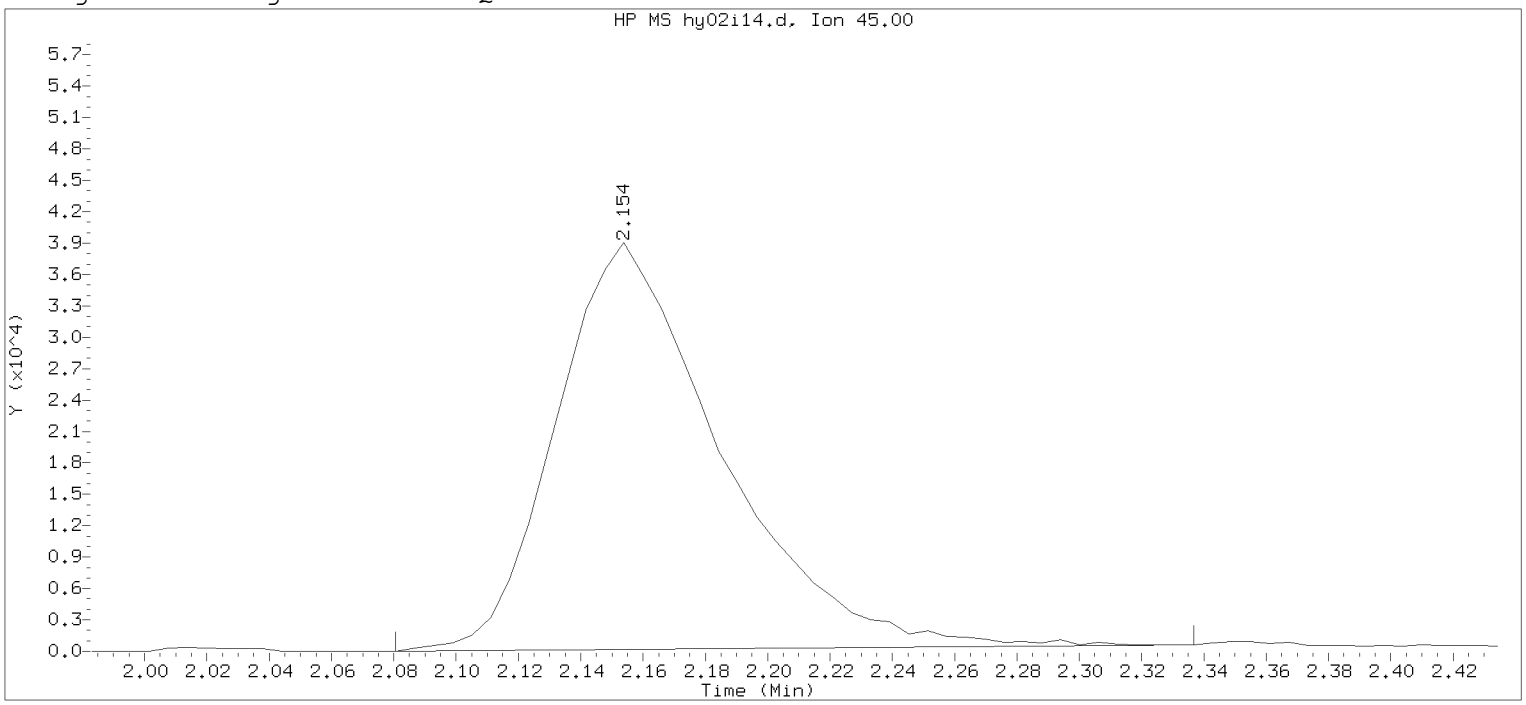
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

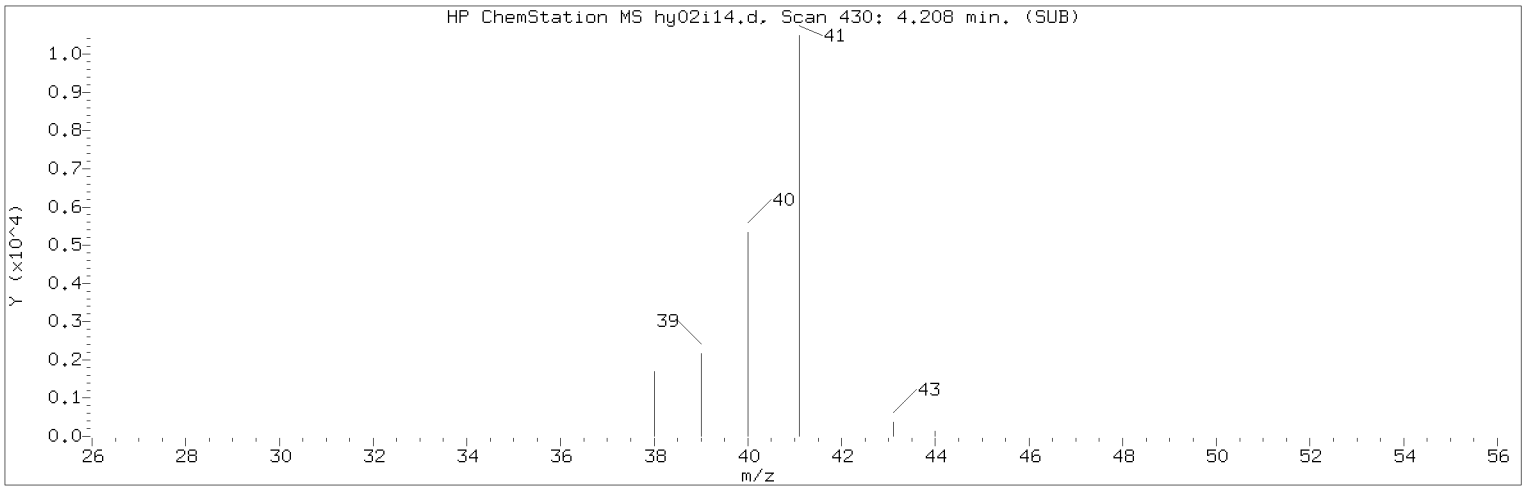
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

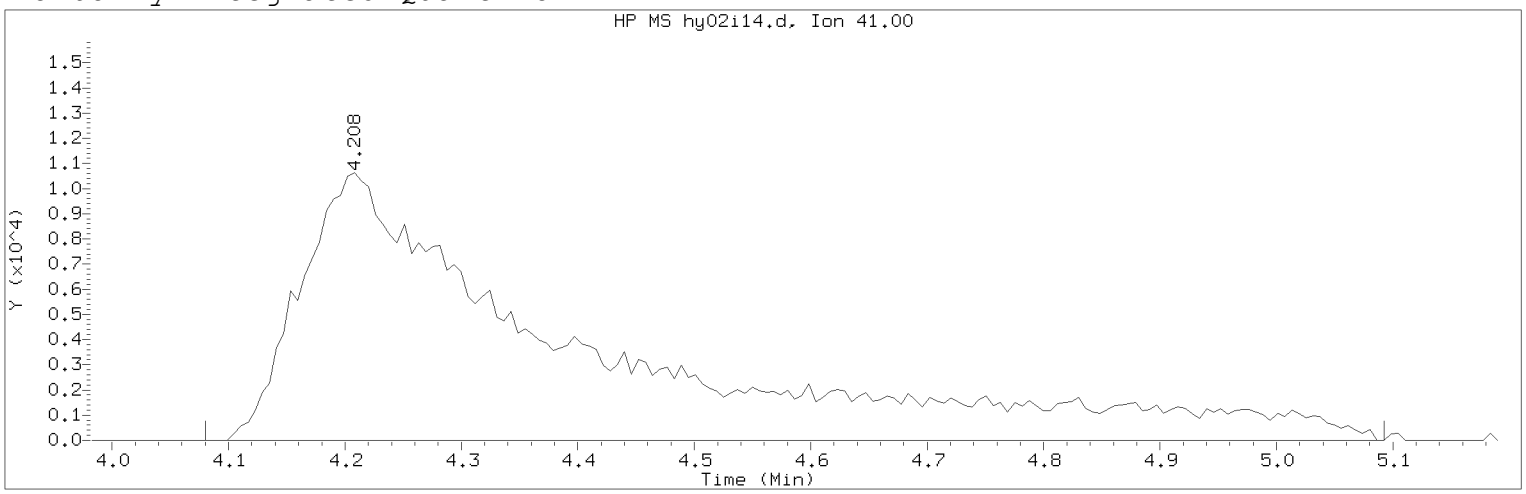
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 143014		
On-column Amount (ng)	: 1.8848		
Integration start scan	: 80	Integration stop scan:	122
Y at integration start	: 0	Y at integration end:	597

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/01/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

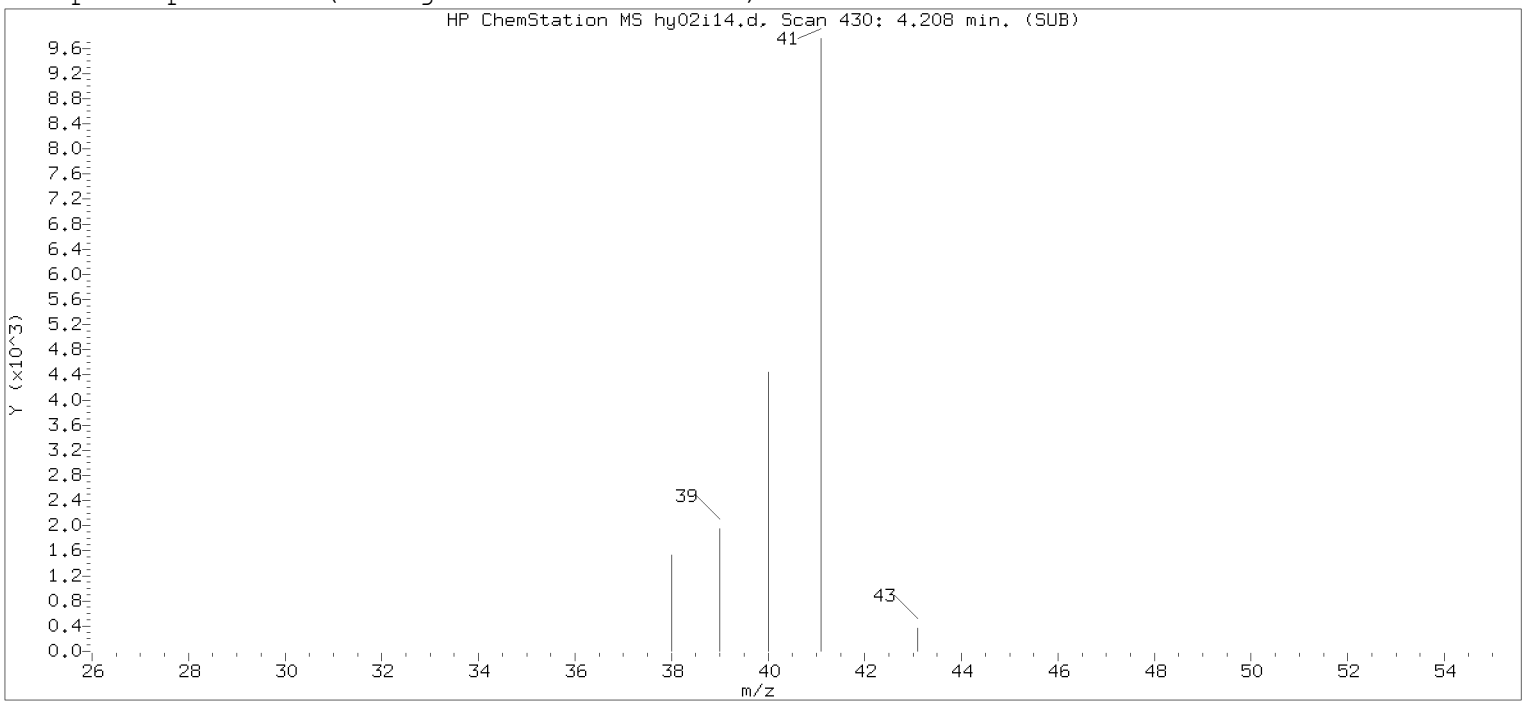
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 174320M
On-Column Amount (ng) : 78.2209
Integration start scan : 408 Integration stop scan: 574
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

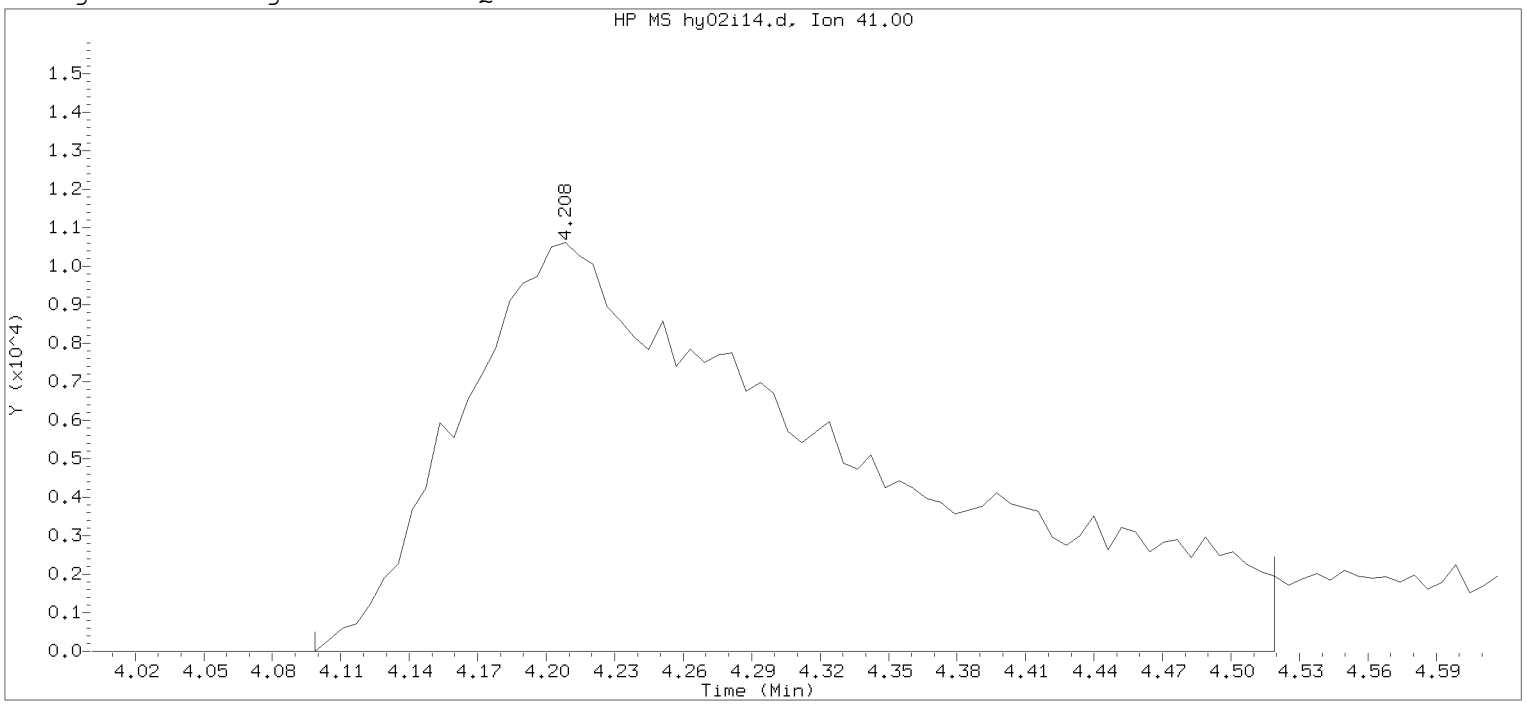
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

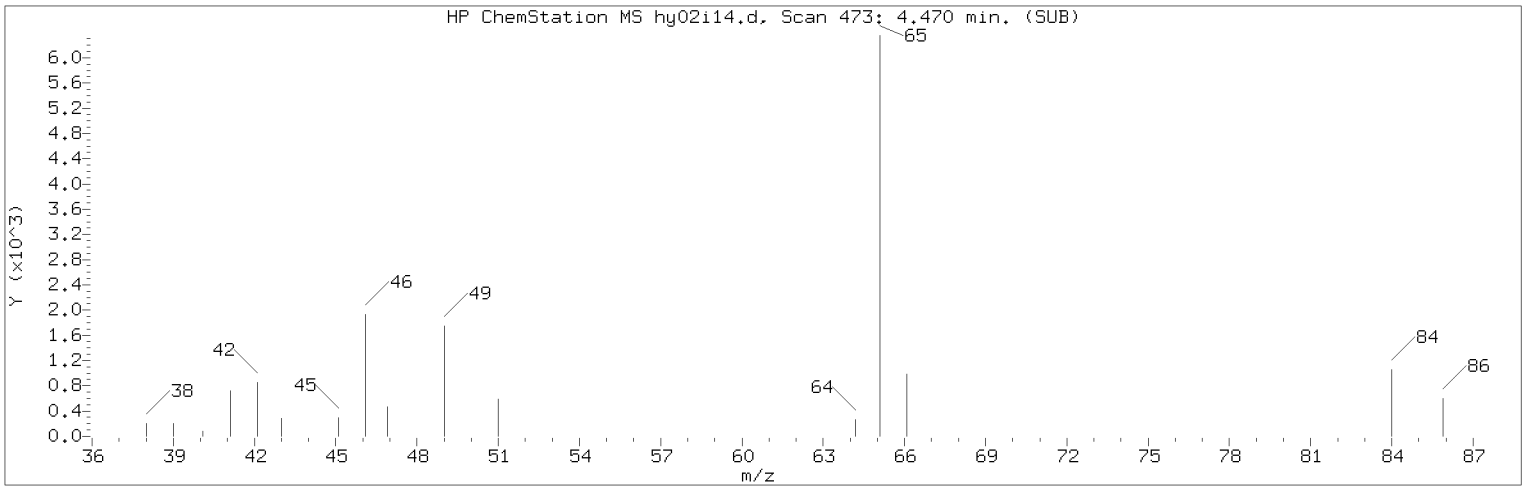
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

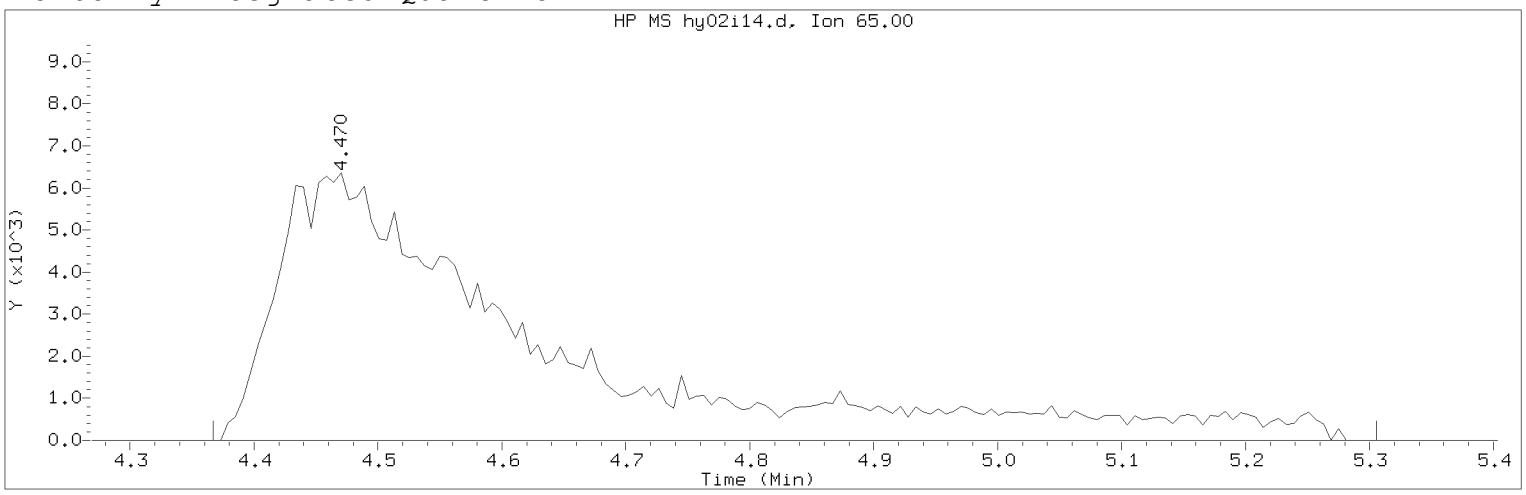
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 127478
On-column Amount (ng) : 55.3756
Integration start scan : 411 Integration stop scan: 480
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

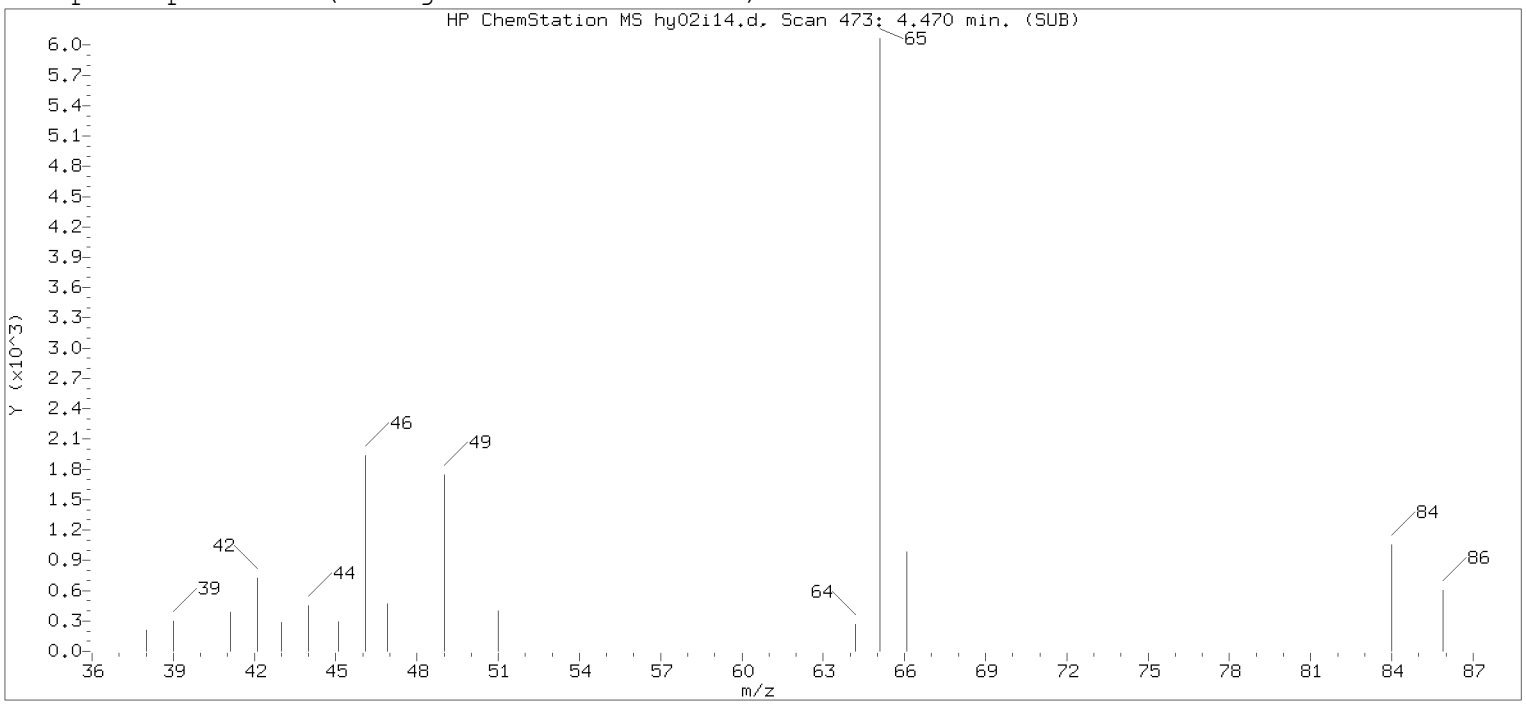
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 92293M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 609
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

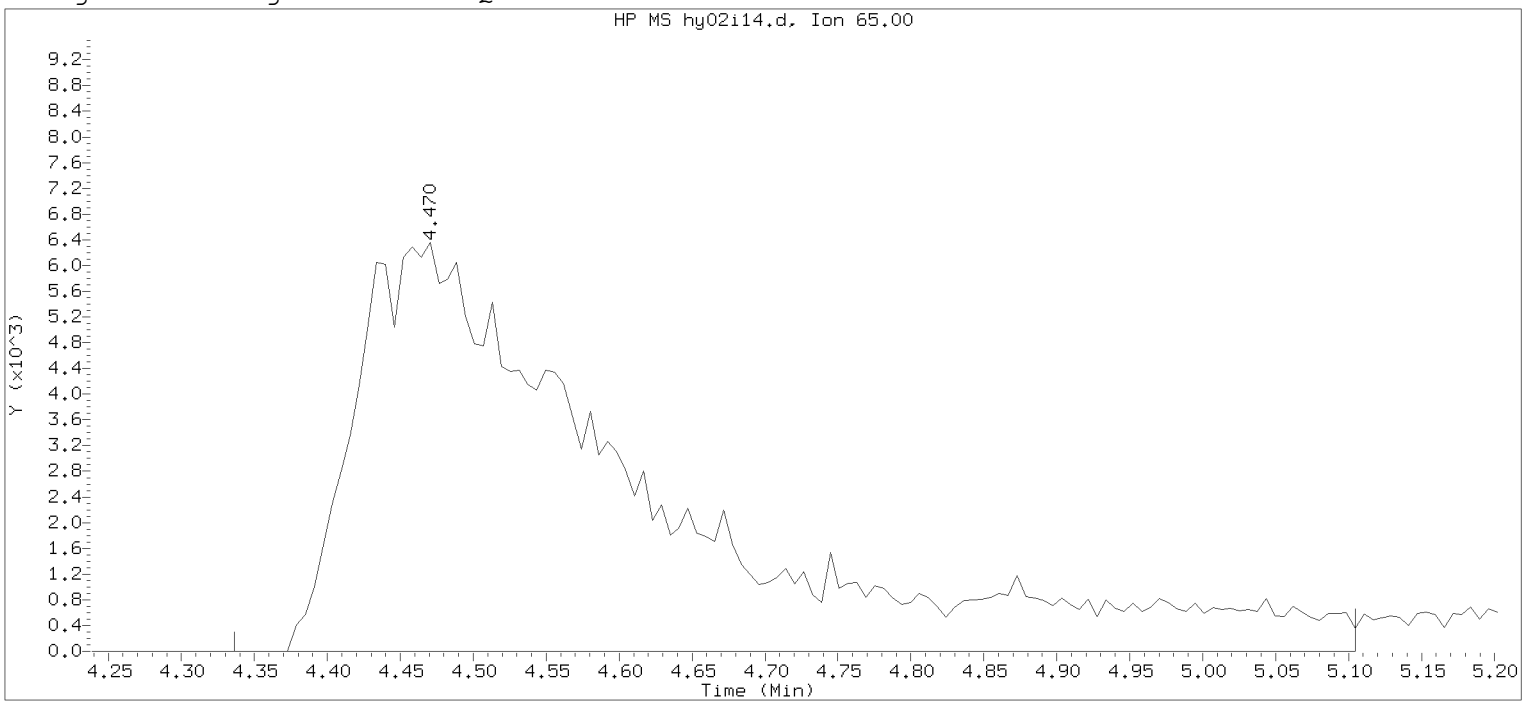
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

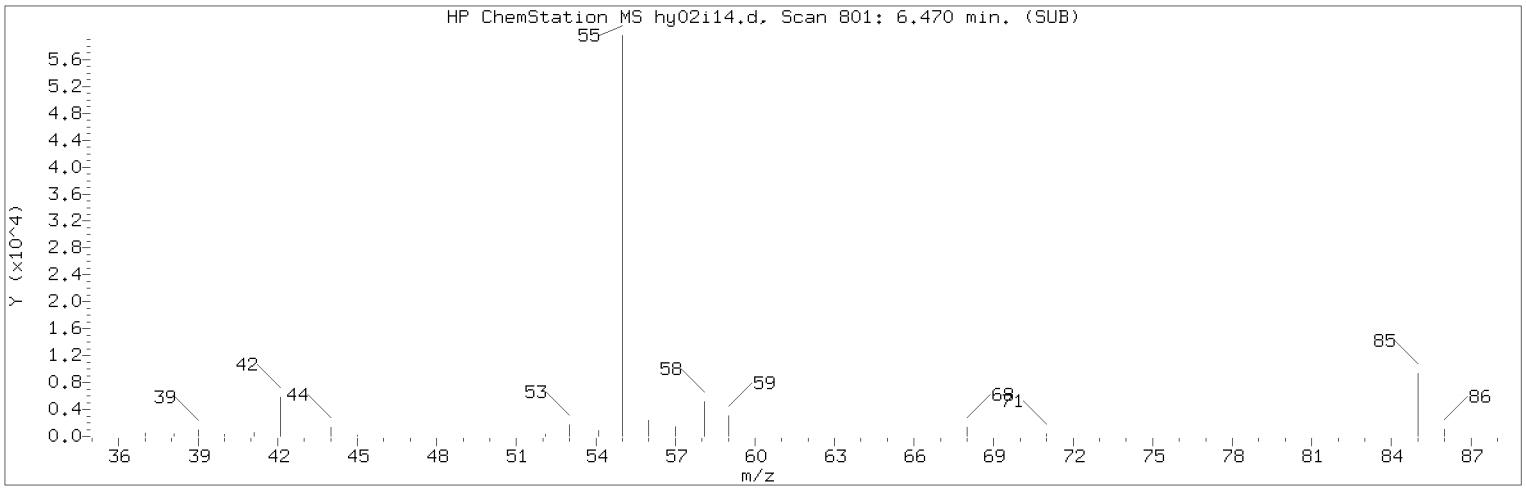
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

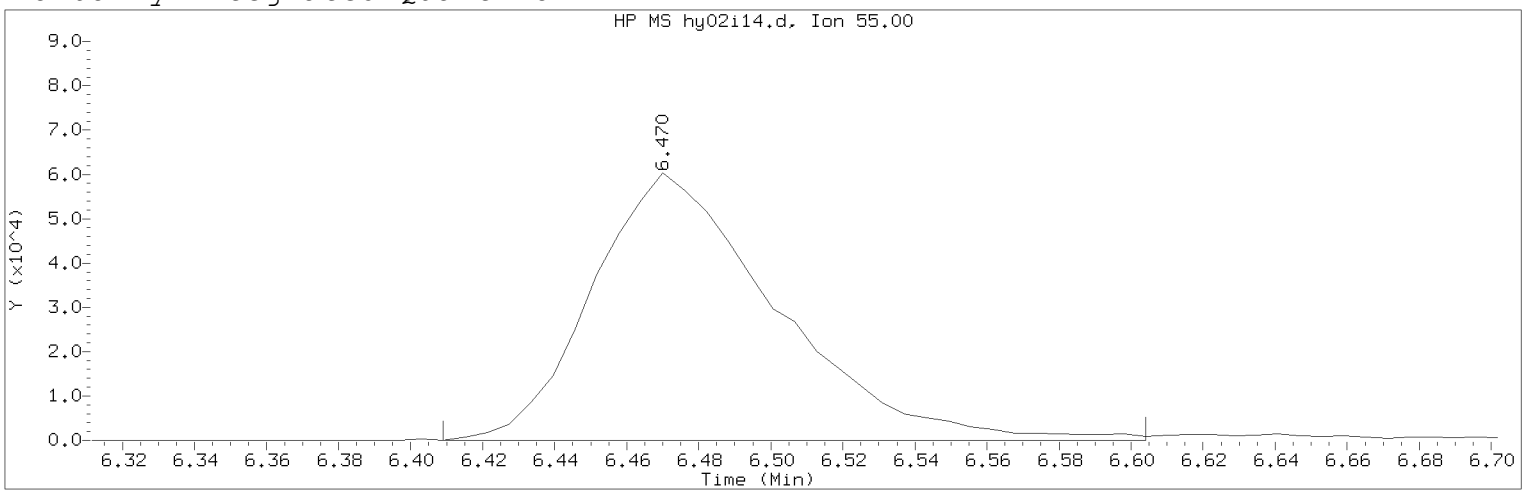
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 473		
Retention Time (minutes)	: 4.470		
Quant Ion	: 65.00		
Area	: 87182		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 450	Integration stop scan:	576
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

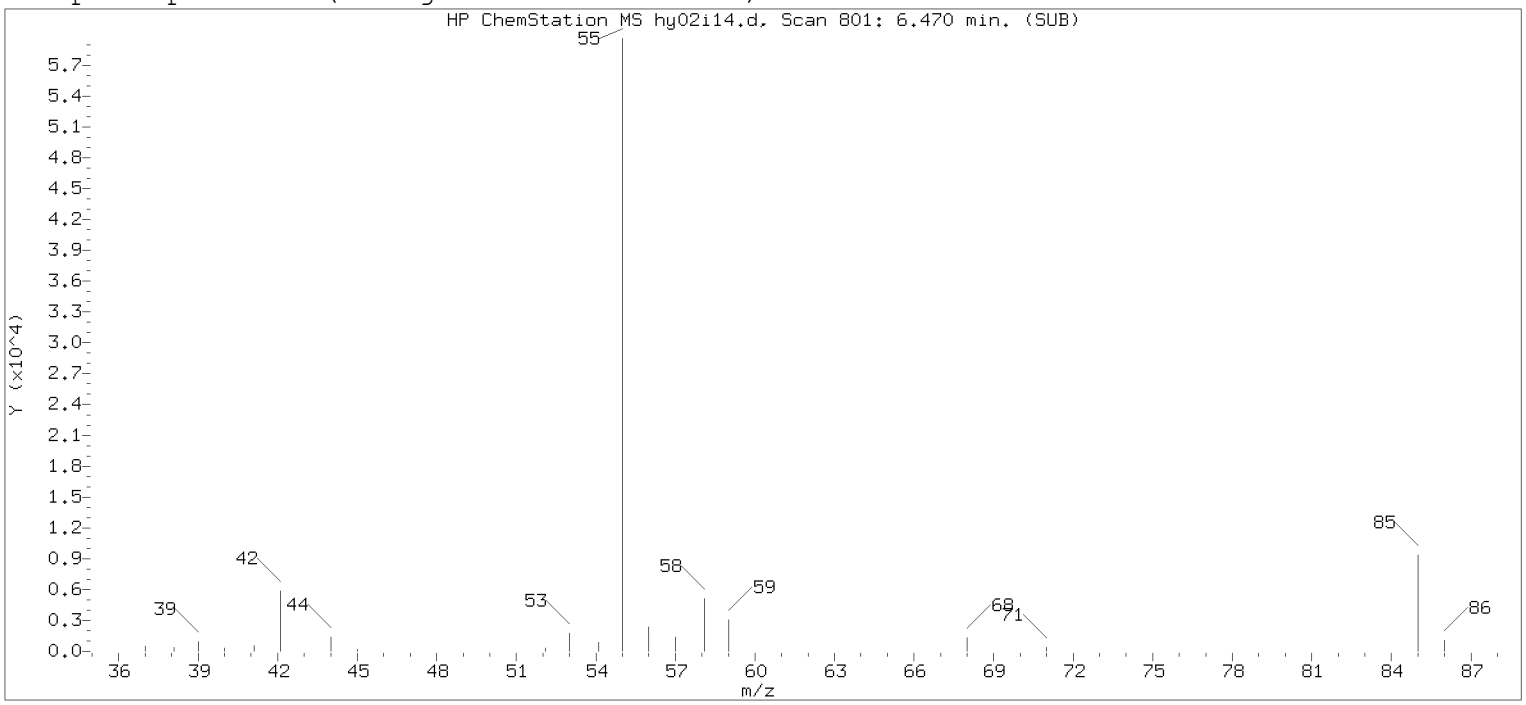
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 801
Retention Time (minutes): 6.470
Quant Ion : 55.00
Area (flag) : 214639M
On-Column Amount (ng) : 9.8825
Integration start scan : 790 Integration stop scan: 822
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

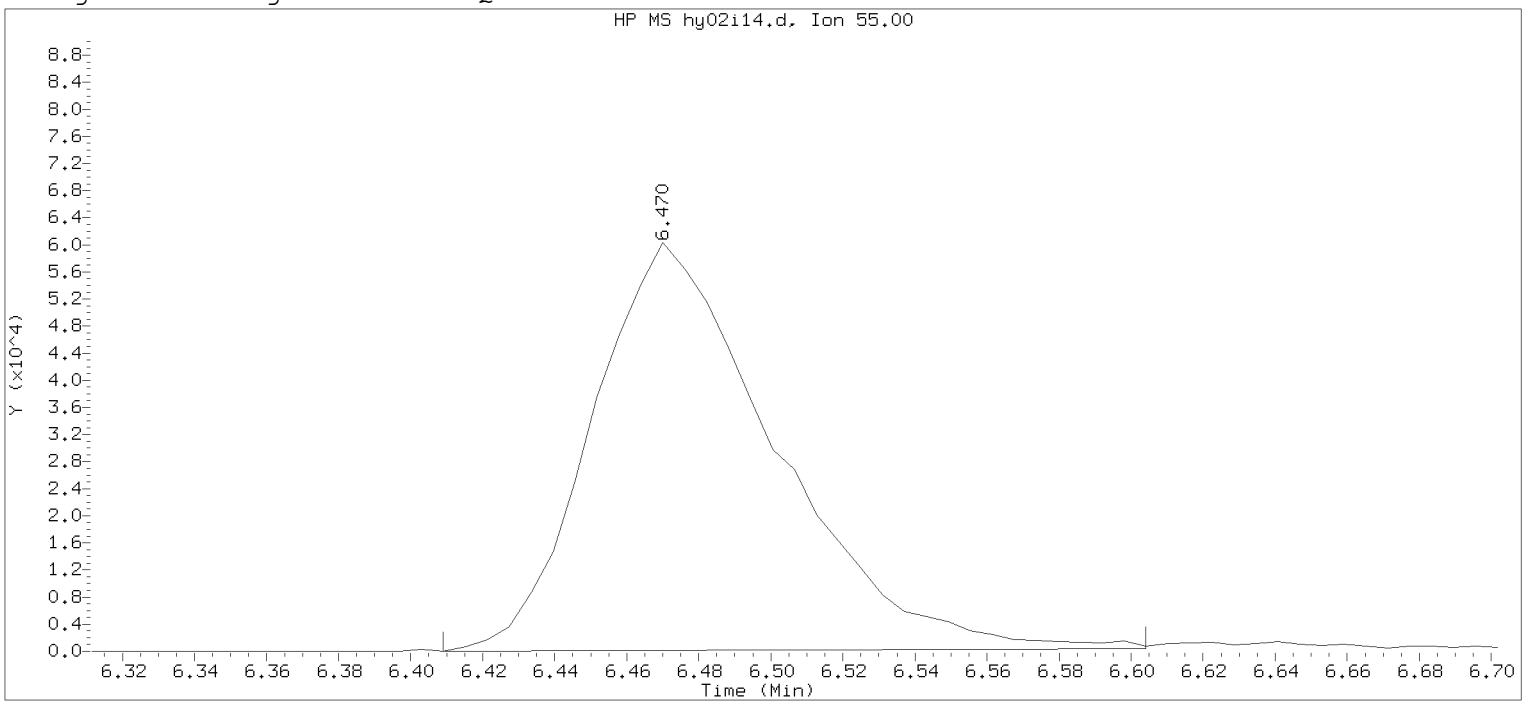
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

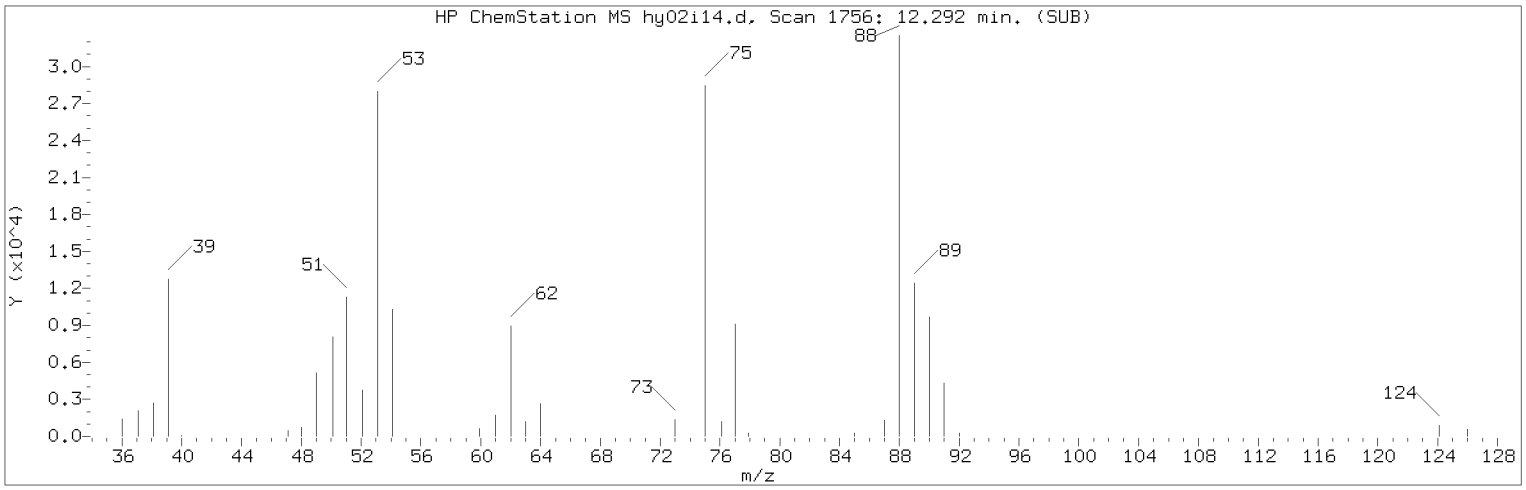
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

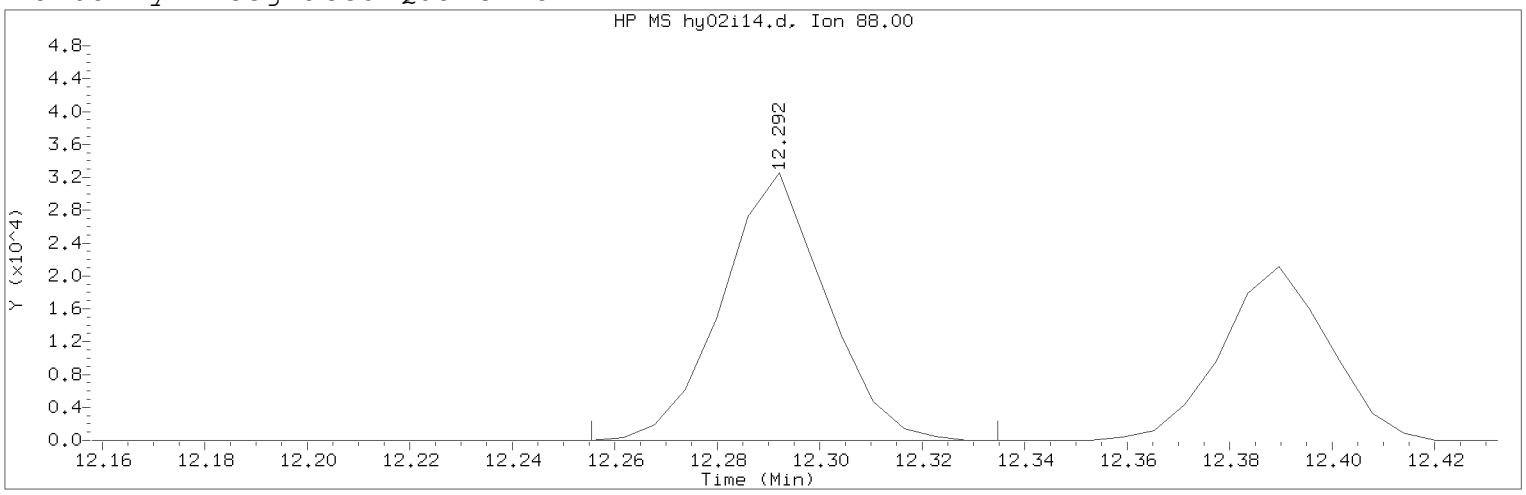
Compound Number	: 43		
Compound Name	: Methyl Acrylate		
Scan Number	: 801		
Retention Time (minutes)	: 6.470		
Quant Ion	: 55.00		
Area	: 212156		
On-column Amount (ng)	: 9.7793		
Integration start scan	: 790	Integration stop scan:	822
Y at integration start	: 0	Y at integration end:	400

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used during 05/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

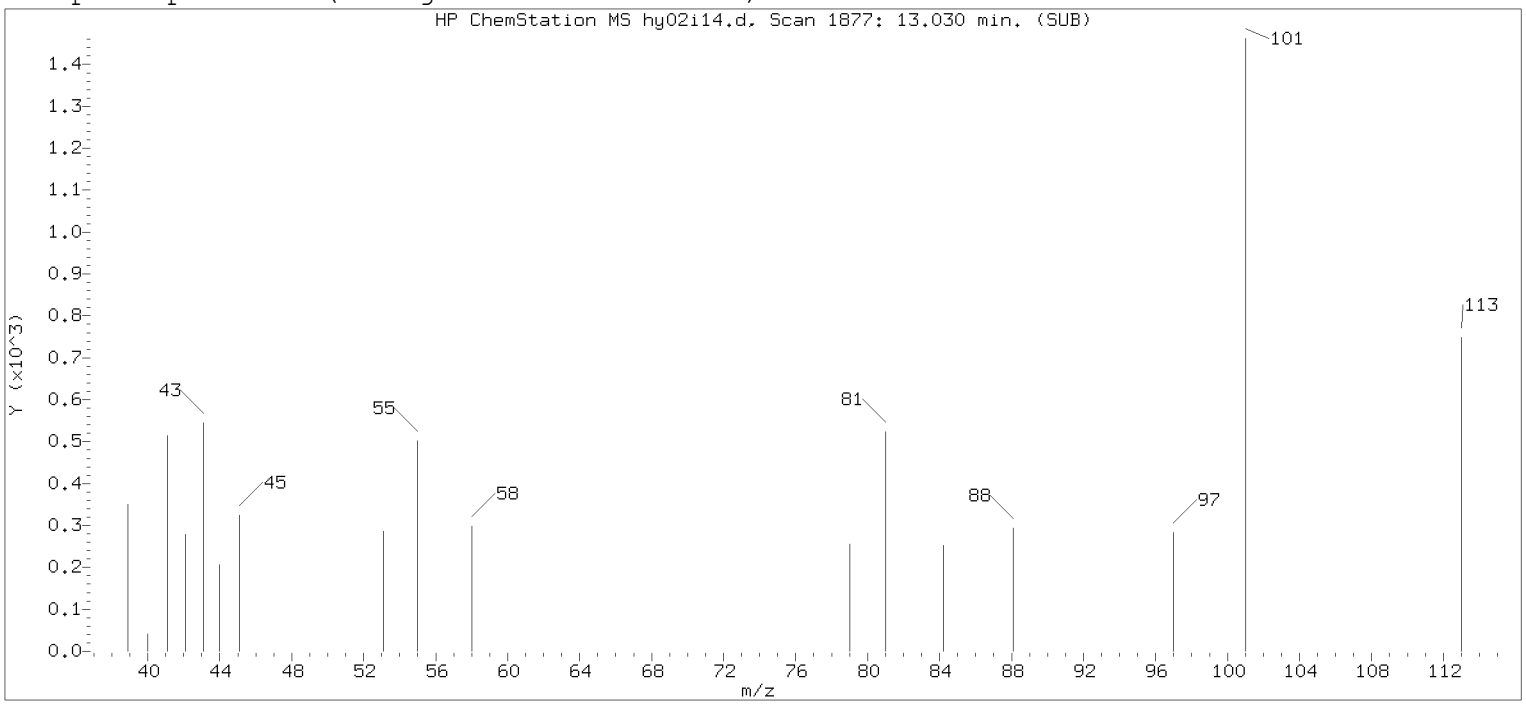
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 45666M
On-Column Amount (ng) : 3.8206
Integration start scan : 1749 Integration stop scan: 1762
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

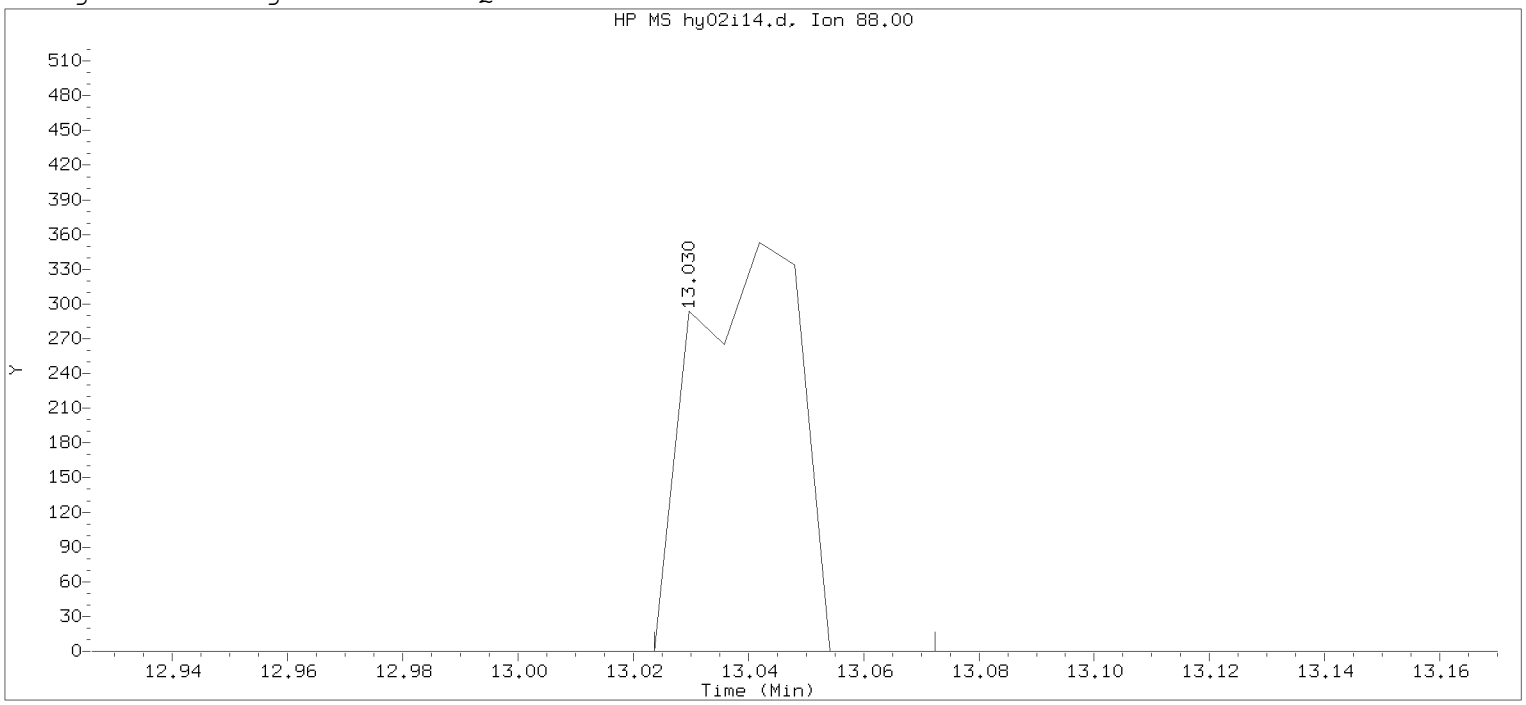
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

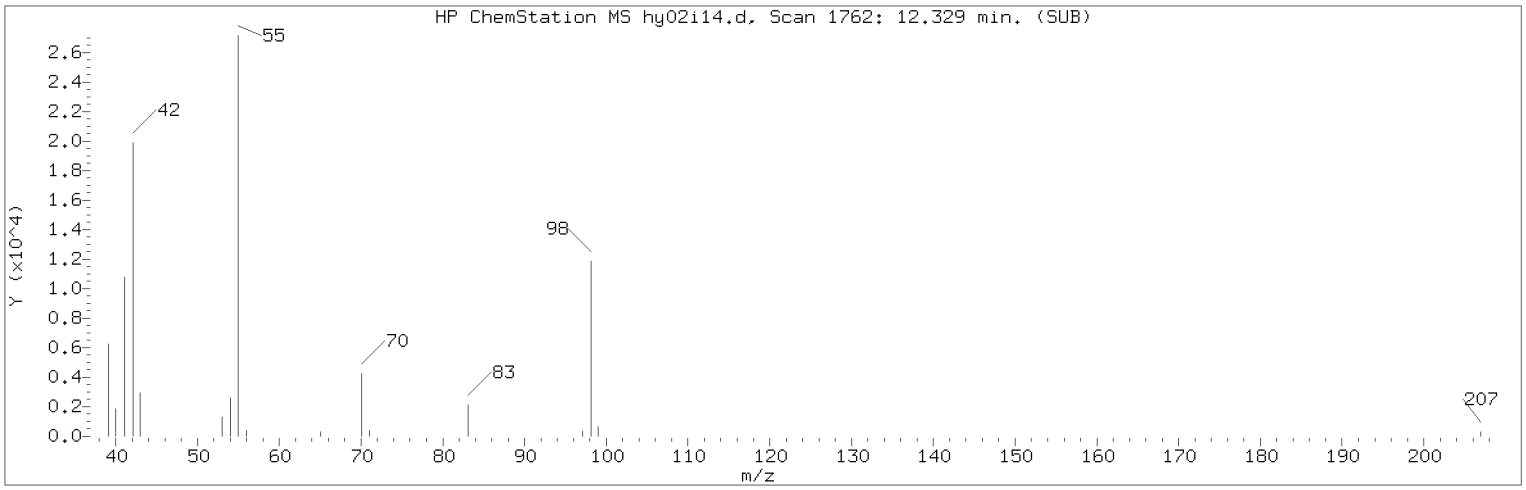
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

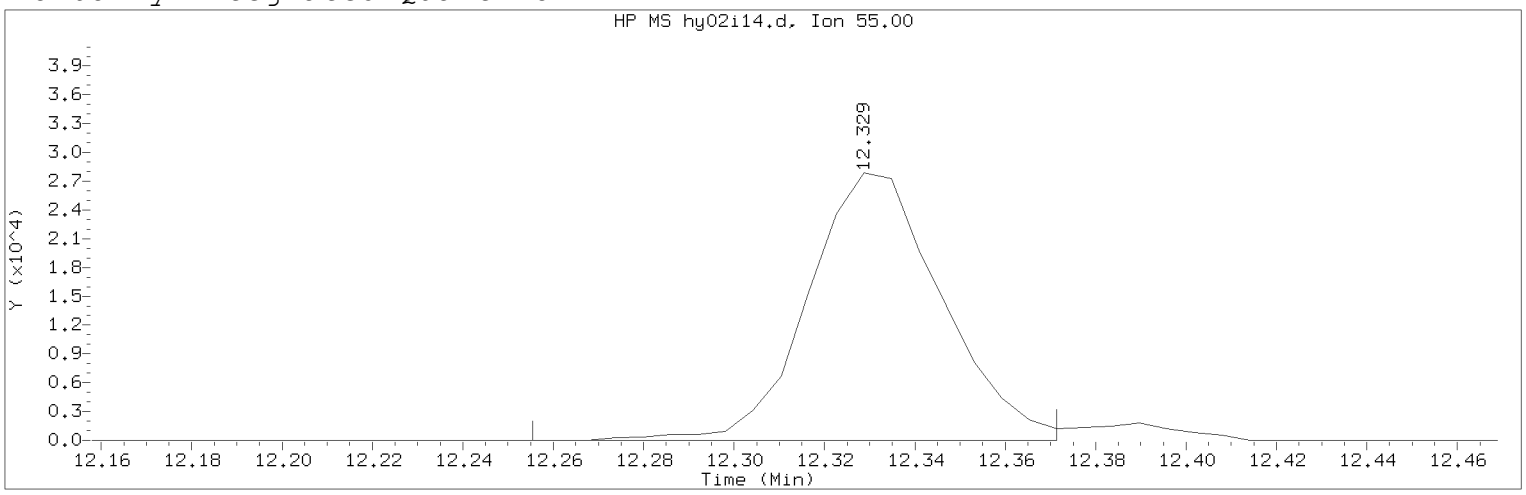
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1877
Retention Time (minutes): 13.030
Quant Ion : 88.00
Area : 455
On-column Amount (ng) : 0.0756
Integration start scan : 1875 Integration stop scan: 1883
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:20
Date, time and analyst ID of latest file update: 02-May-2018 22:20 dvv10203

Sample Name: VSTD002 Lab Sample ID: VSTD002

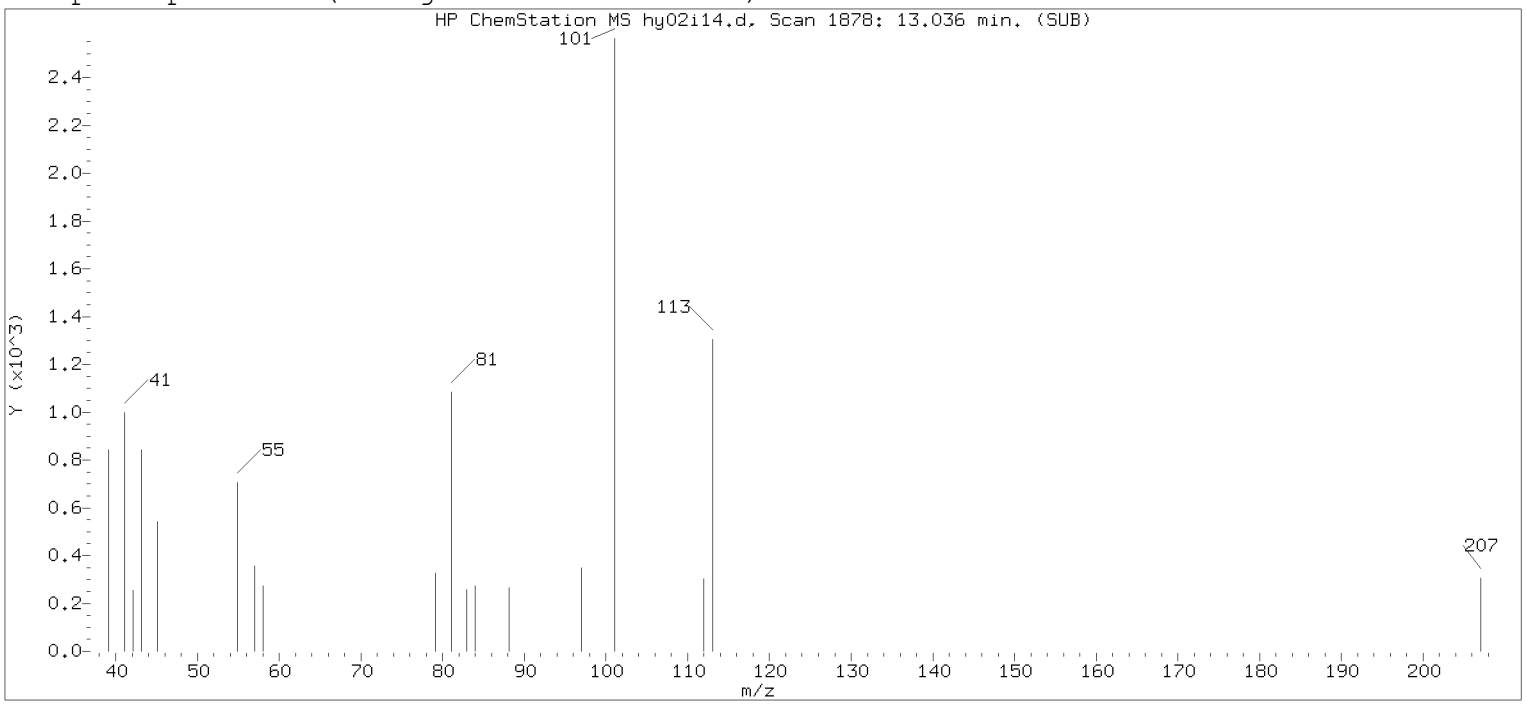
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 57098M
On-Column Amount (ng) : 93.9316
Integration start scan : 1749 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

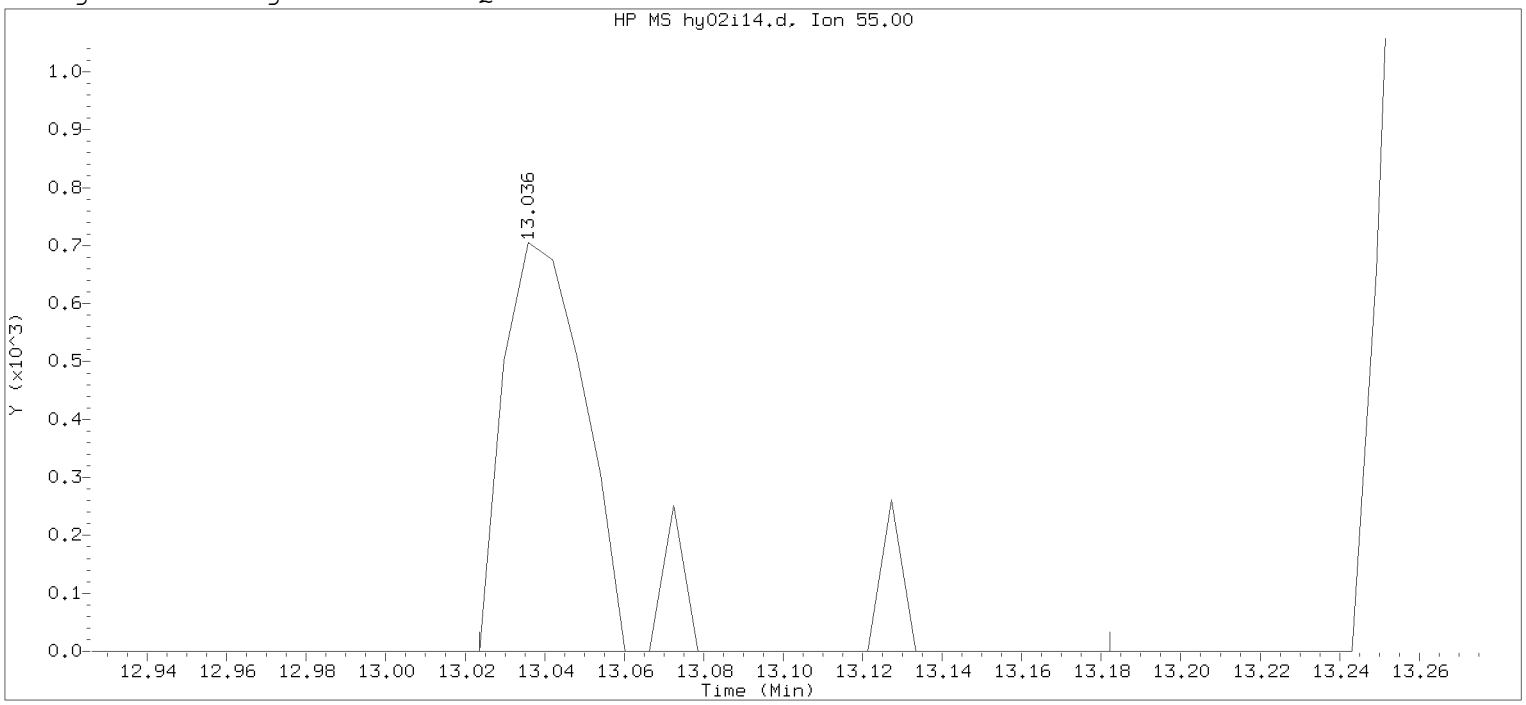
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:21.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



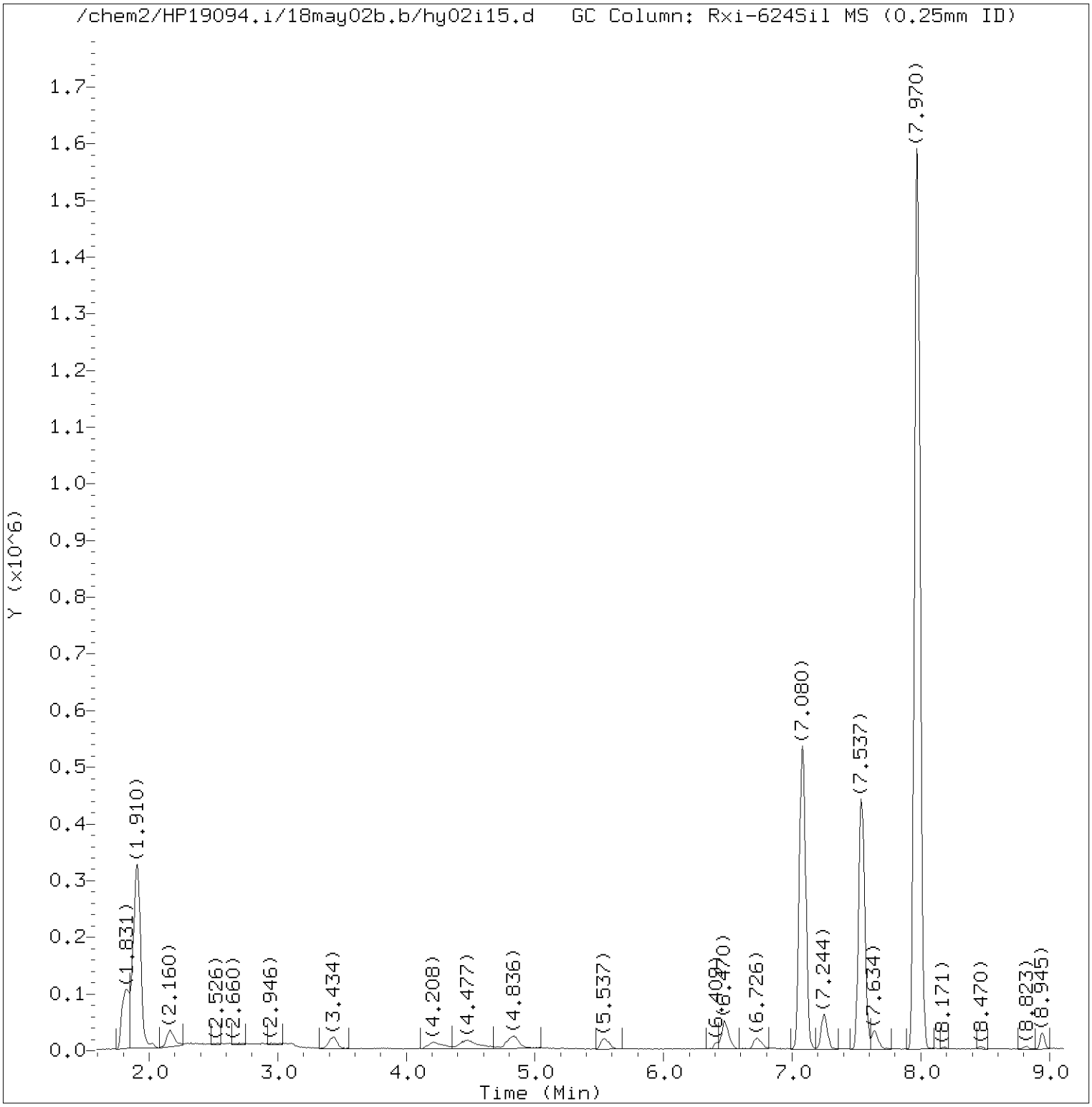
Data File: /chem2/HP19094.i/18may02b.b/hy02i14.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:19 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:37
Date, time and analyst ID of latest file update: 02-May-2018 20:37 Automation

Sample Name: VSTD002 Lab Sample ID: VSTD002

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1878
Retention Time (minutes): 13.036
Quant Ion : 55.00
Area : 1174
On-column Amount (ng) : 3.0474
Integration start scan : 1875 Integration stop scan: 1901
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:21.
Target 3.5 esignature used on 05/01/2018



Total Ion Chromatogram (TIC)

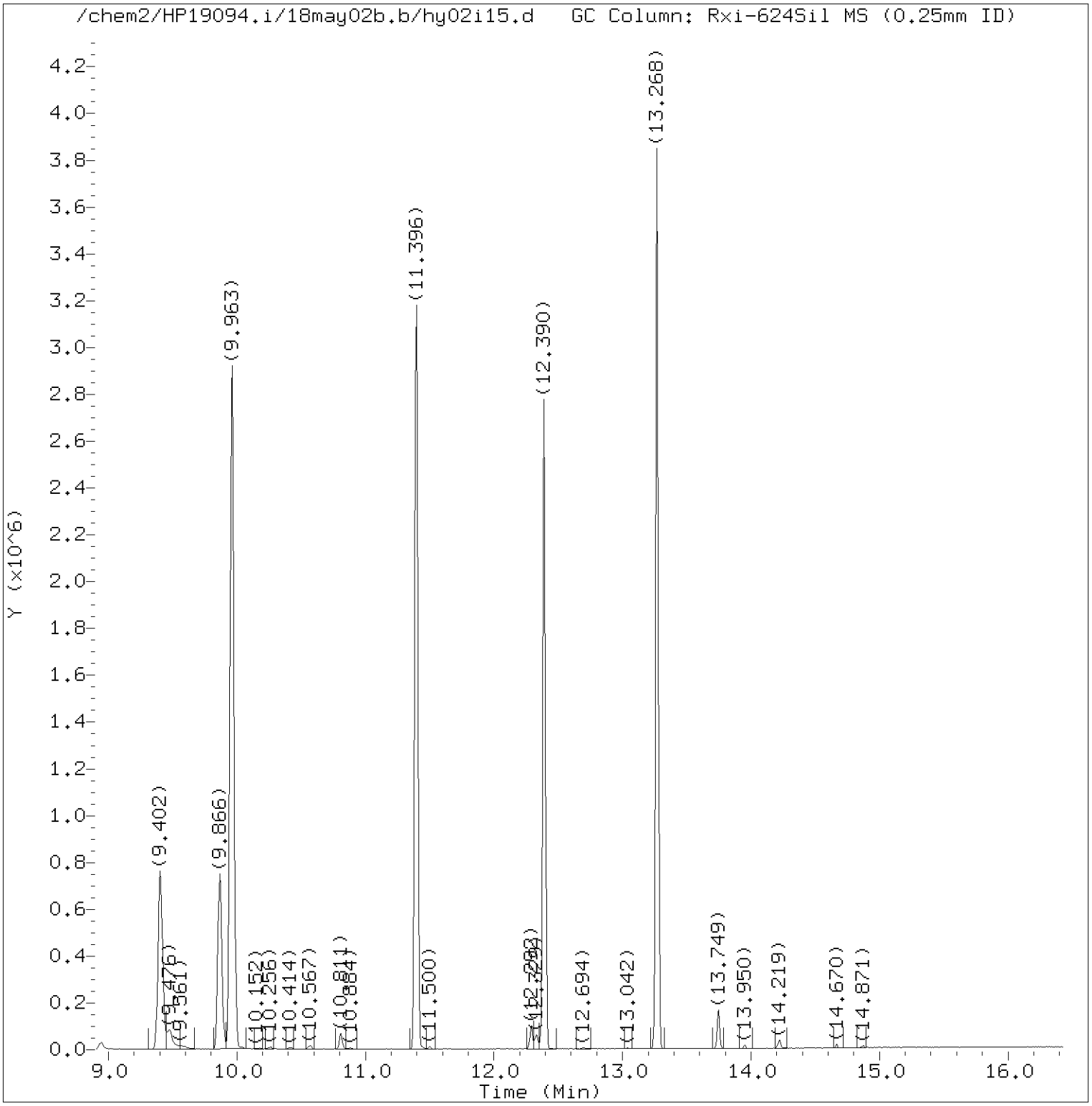
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

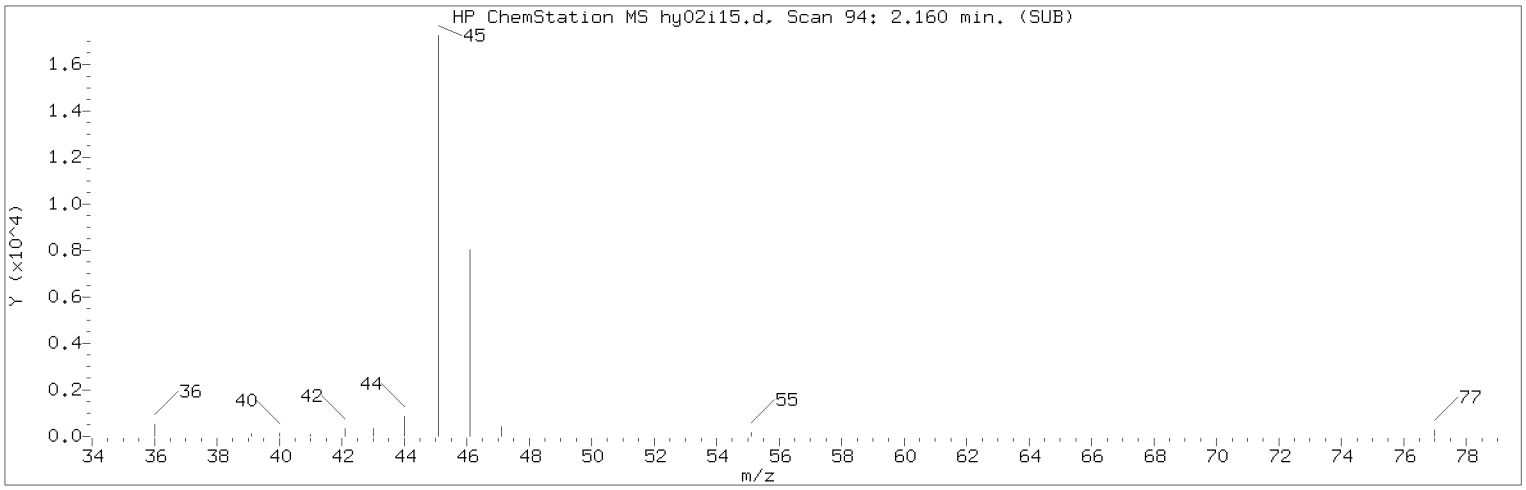
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	66497M	0.914
25) Acetonitrile	(1)	4.239	41	91043M	41.604
26)*t-Butyl Alcohol-d10	(1)	4.483	65	90627M	50.000
36) Vinyl Acetate	(2)	5.525	43	66540	0.960
43) Methyl Acrylate	(2)	6.476	55	109424	5.115
53) 1-Chlorobutane	(2)	7.244	56	80289	0.784
63)*Fluorobenzene	(2)	7.970	96	2267030	10.000
77) Chloroacetonitrile	(2)	9.463	75	44327	51.992
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	19766	0.964
97)*Chlorobenzene-d5	(3)	11.396	117	1663736	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	20531M	1.749
112) Cyclohexanone	(1)	12.329	55	29836M	49.985
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	872428	10.000
142) Hexachloroethane	(4)	13.749	117	28244	0.769

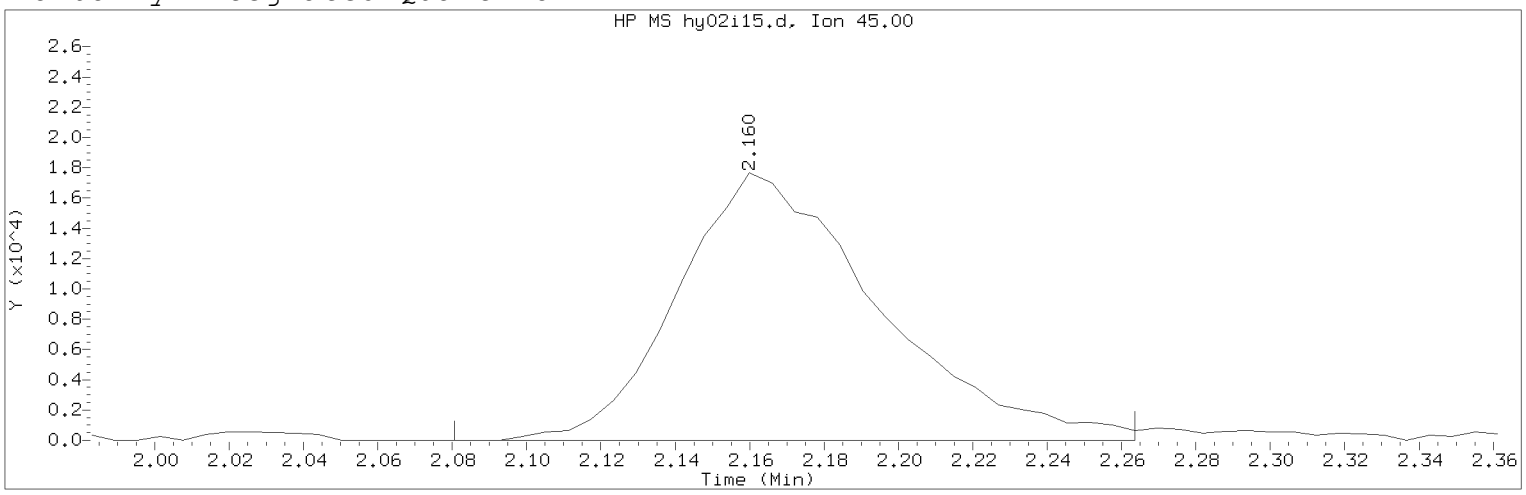
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

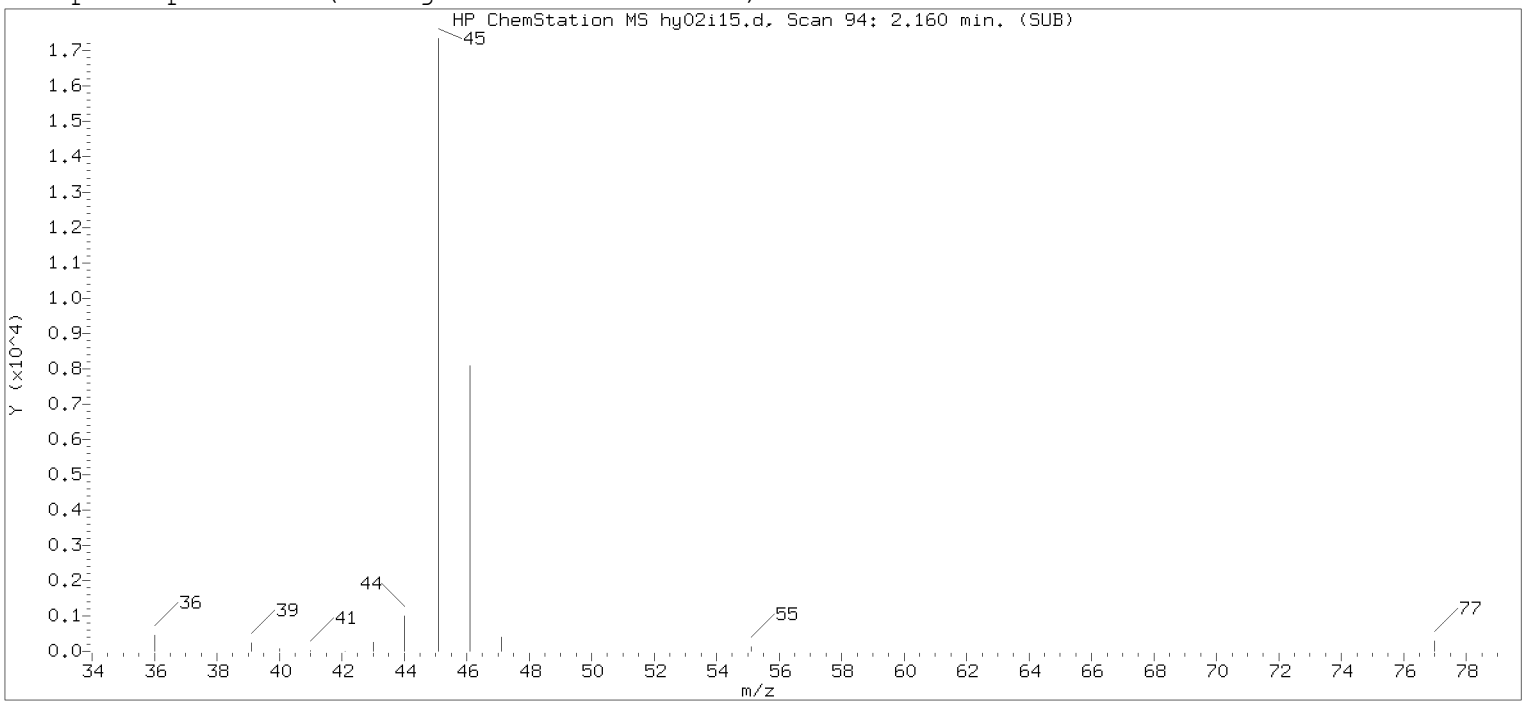
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 66497M
On-Column Amount (ng) : 0.9137
Integration start scan : 80 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

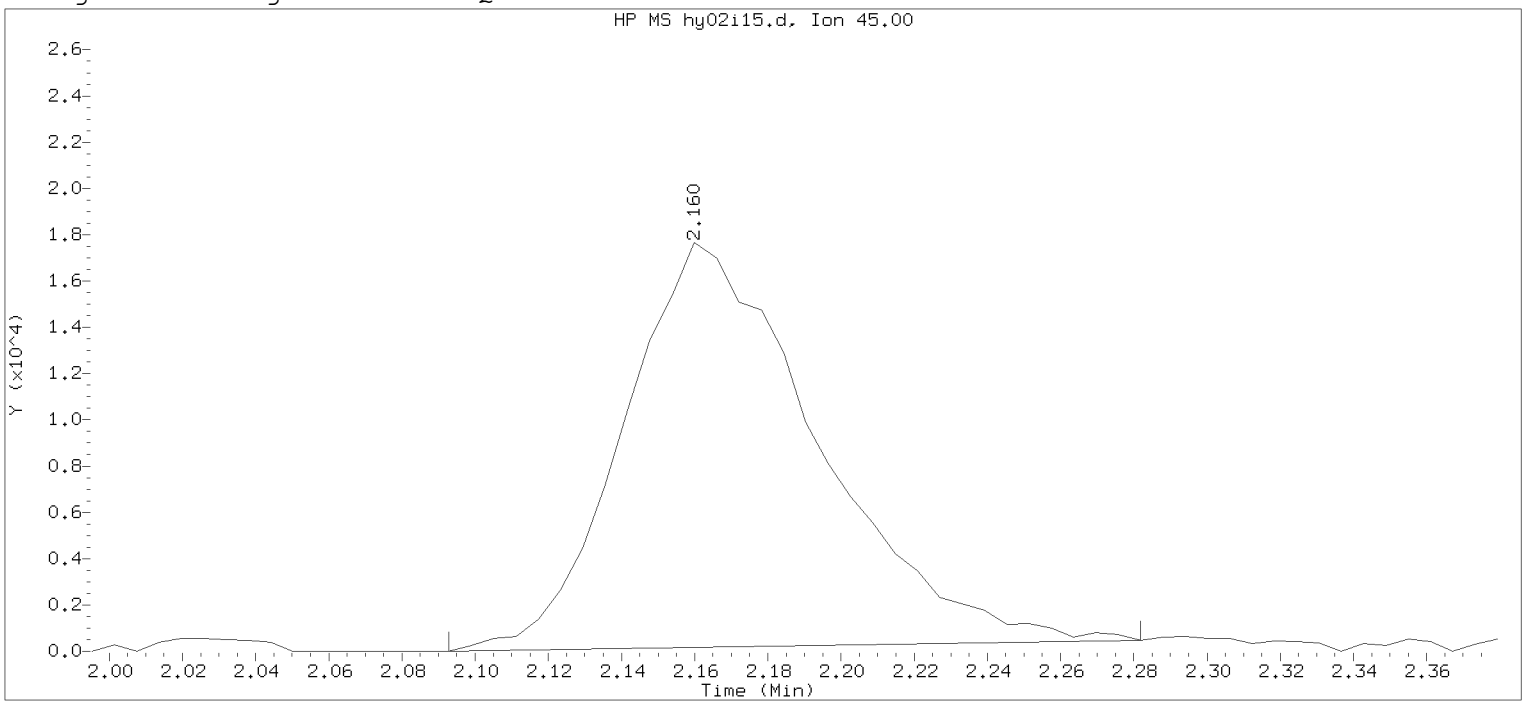
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

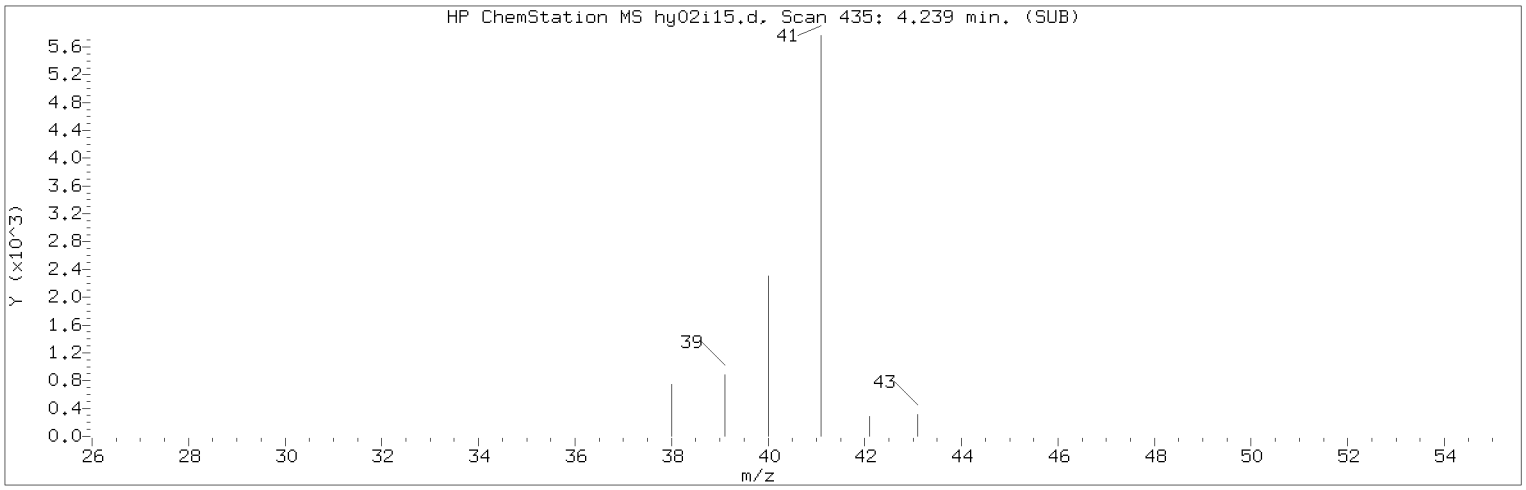
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

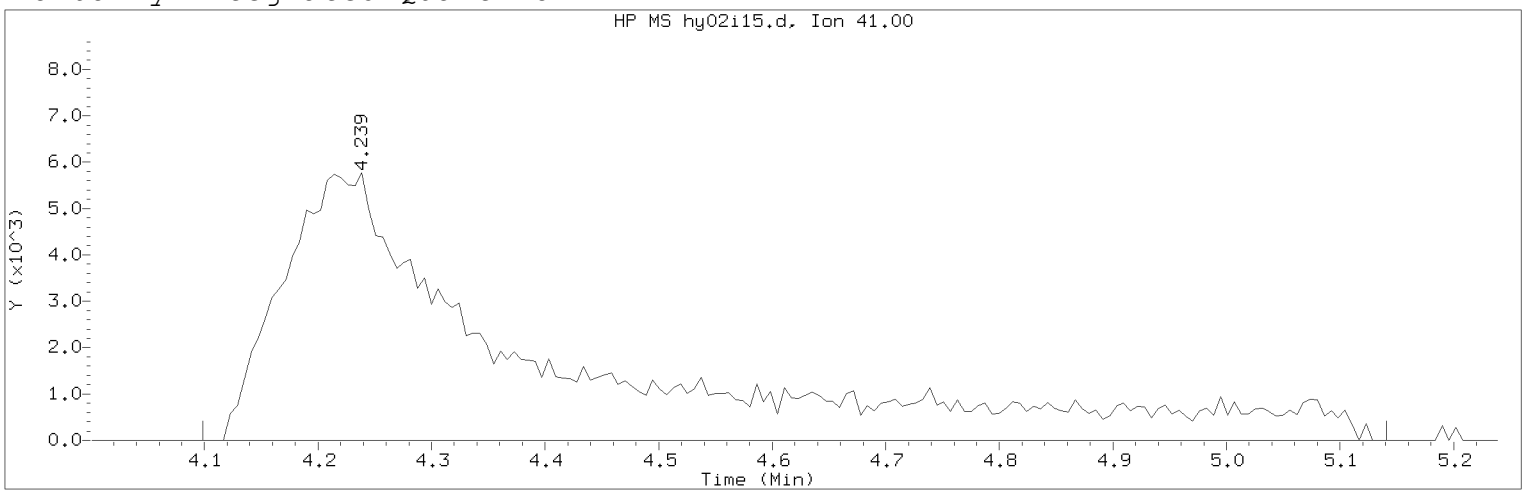
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area : 64528
On-column Amount (ng) : 0.8809
Integration start scan : 82 Integration stop scan: 113
Y at integration start : 0 Y at integration end: 461

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

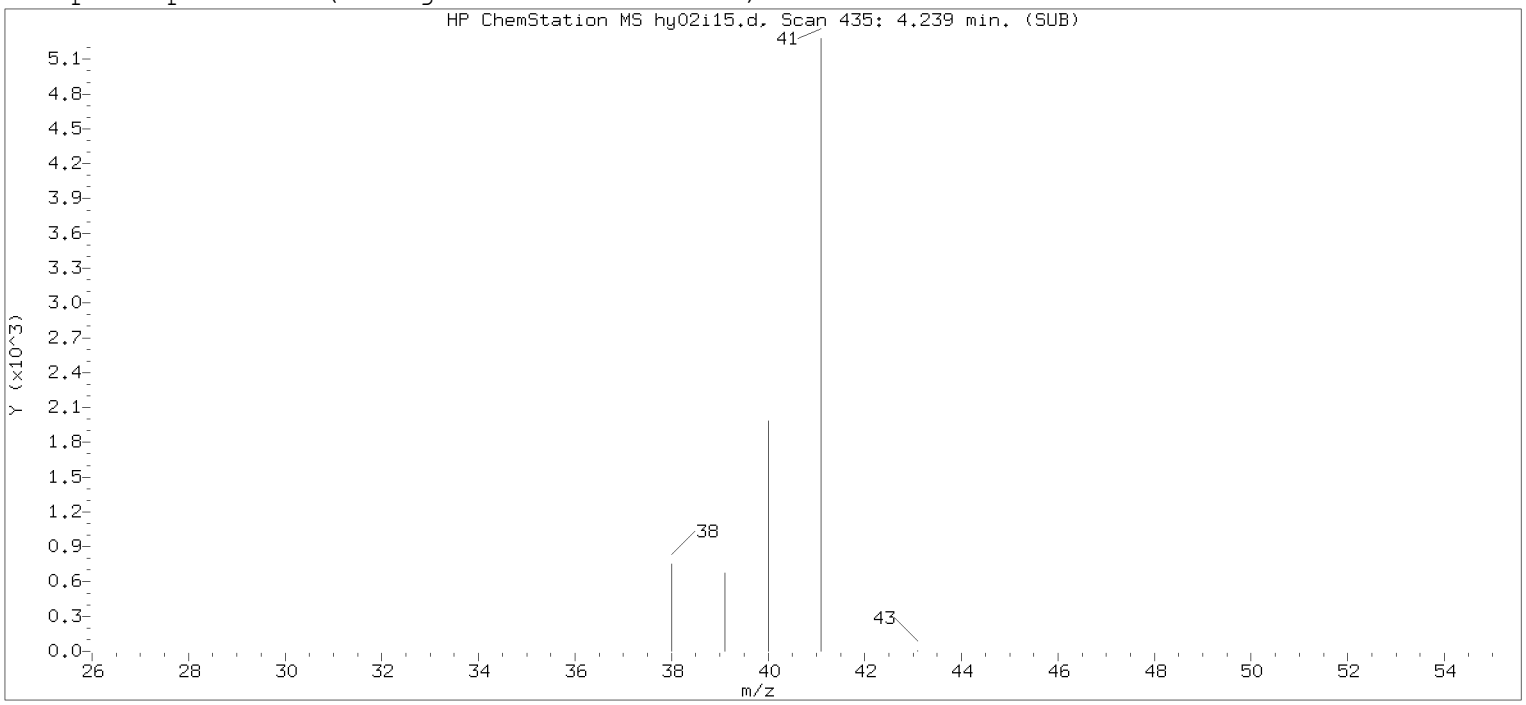
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 435
Retention Time (minutes): 4.239
Quant Ion : 41.00
Area (flag) : 91043M
On-Column Amount (ng) : 41.6038
Integration start scan : 411 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

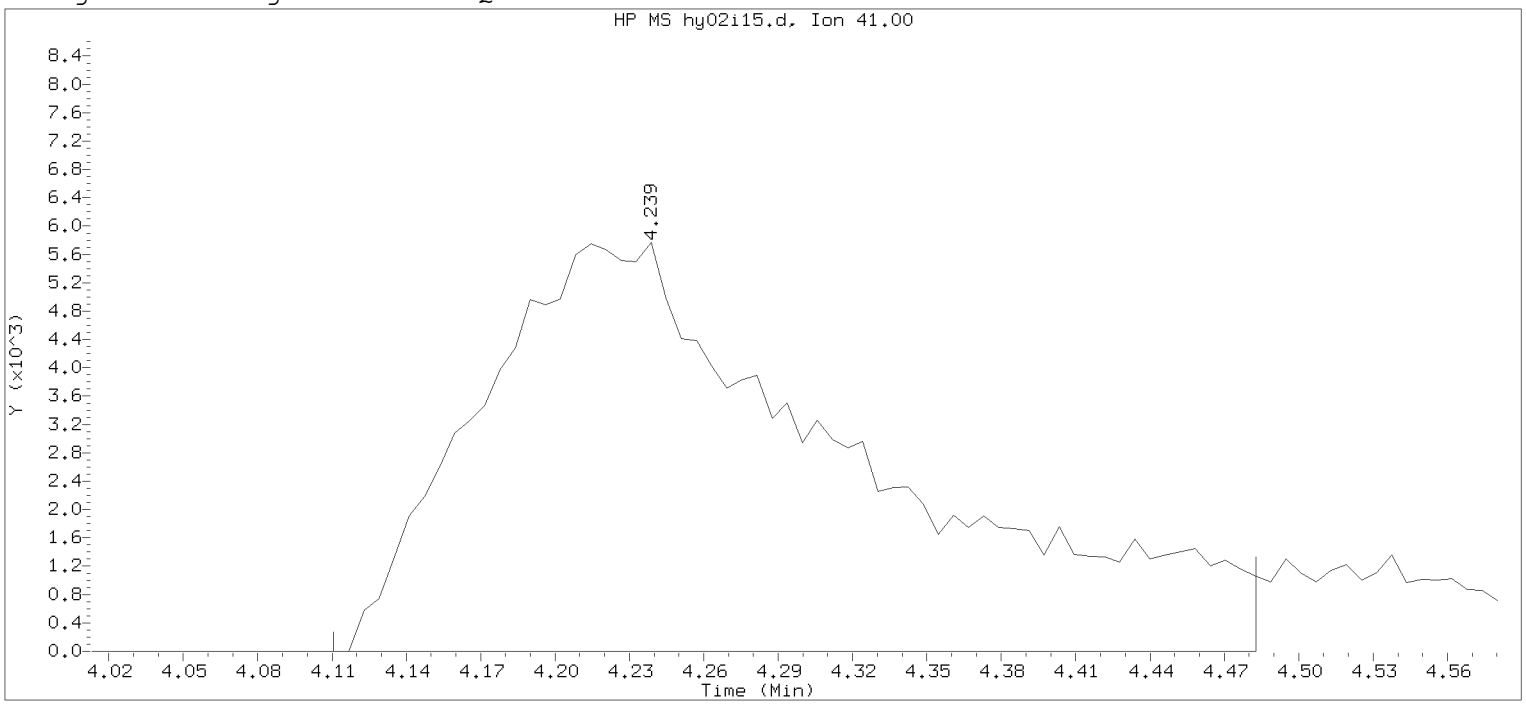
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

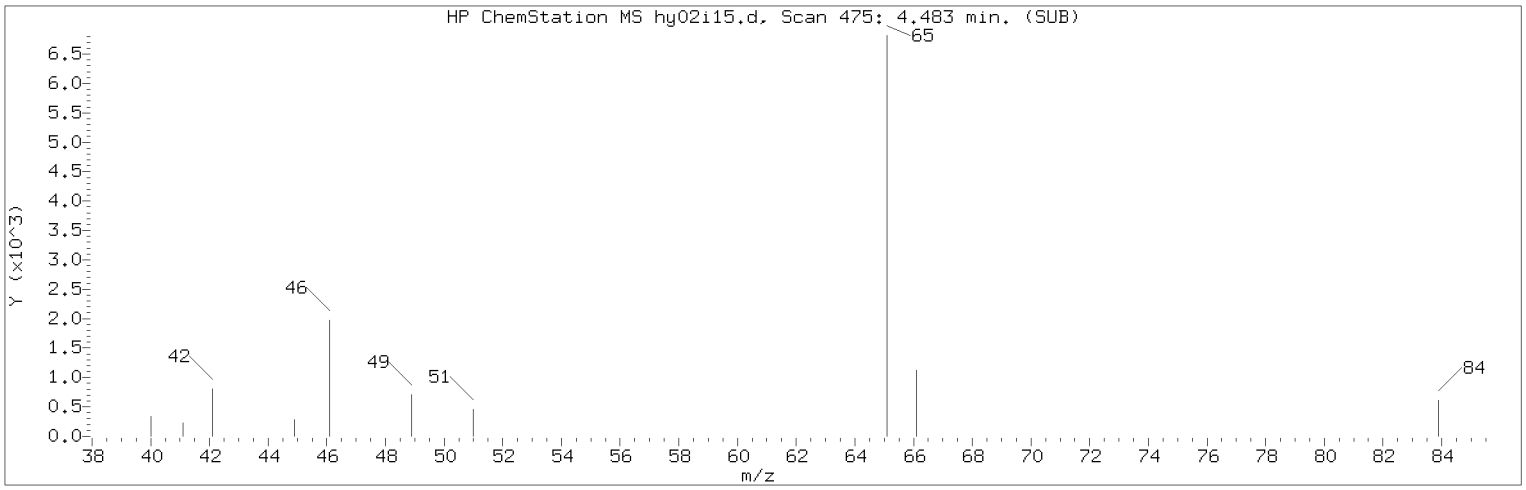
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

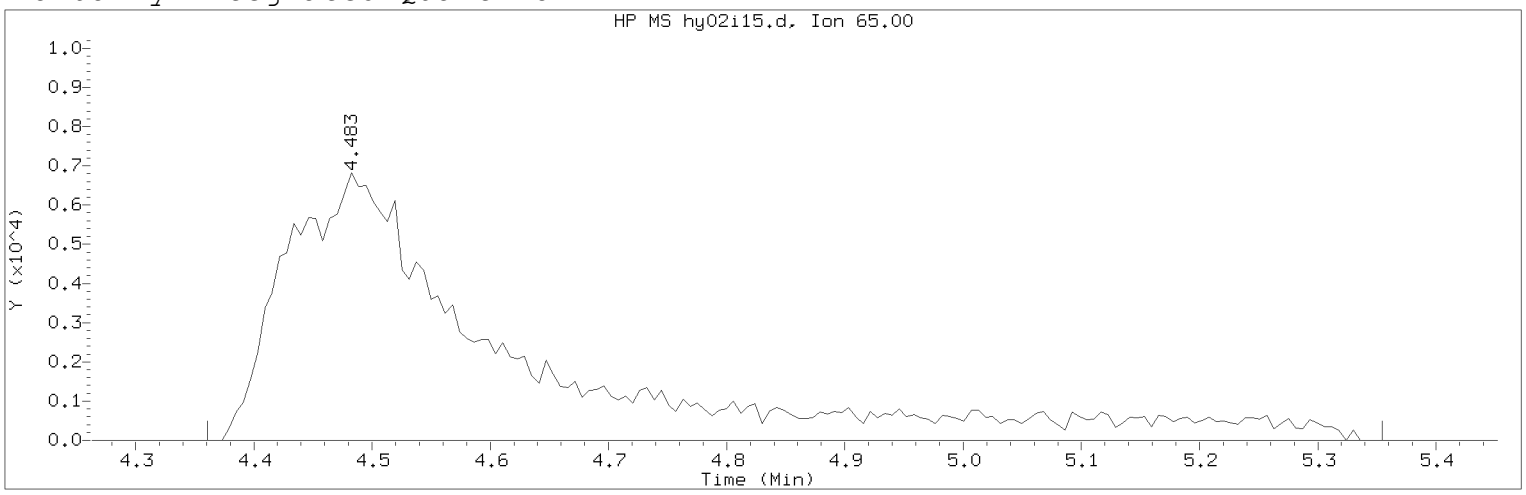
Compound Number	: 25		
Compound Name	: Acetonitrile		
Scan Number	: 435		
Retention Time (minutes)	: 4.239		
Quant Ion	: 41.00		
Area	: 61510		
On-column Amount (ng)	: 30.2073		
Integration start scan	: 413	Integration stop scan:	474
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

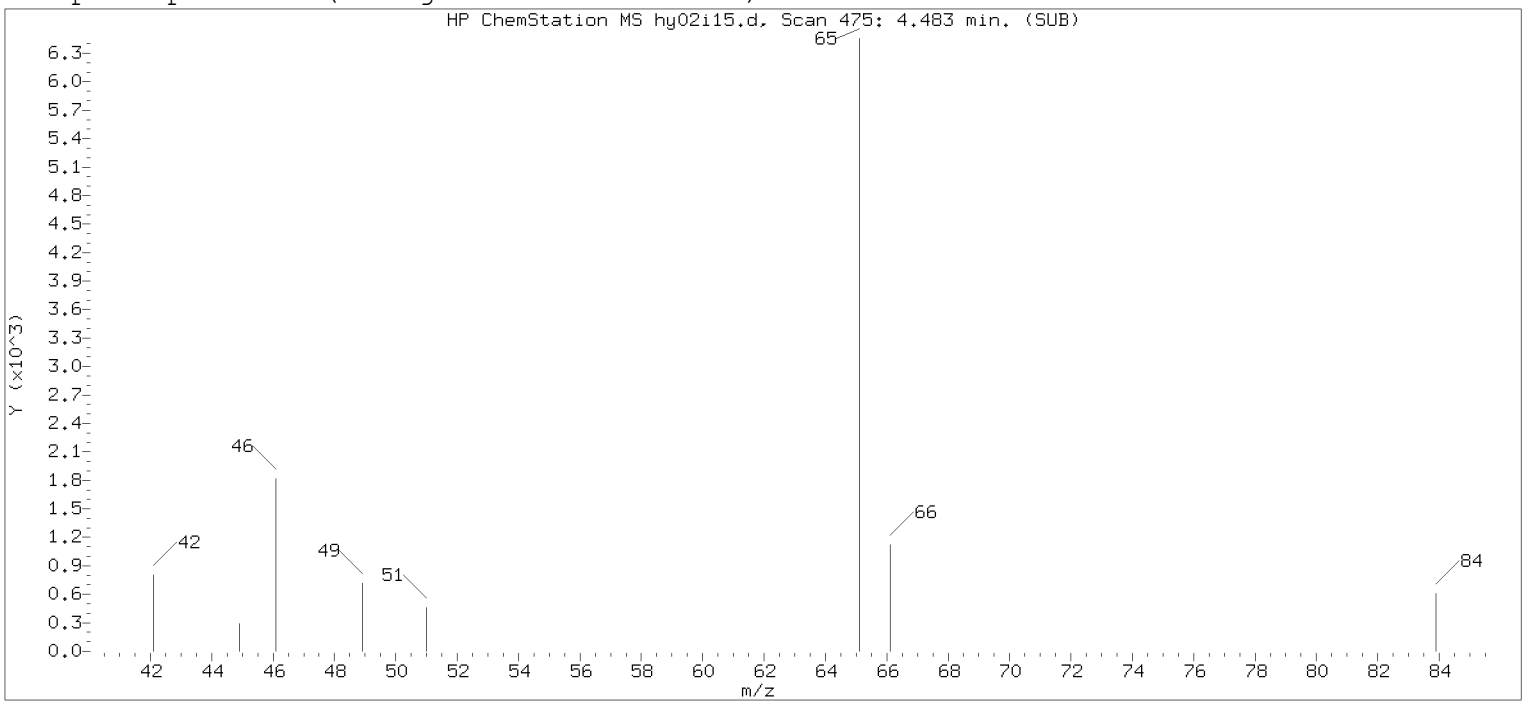
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 475
Retention Time (minutes): 4.483
Quant Ion : 65.00
Area (flag) : 90627M
On-Column Amount (ng) : 50.0000
Integration start scan : 454 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

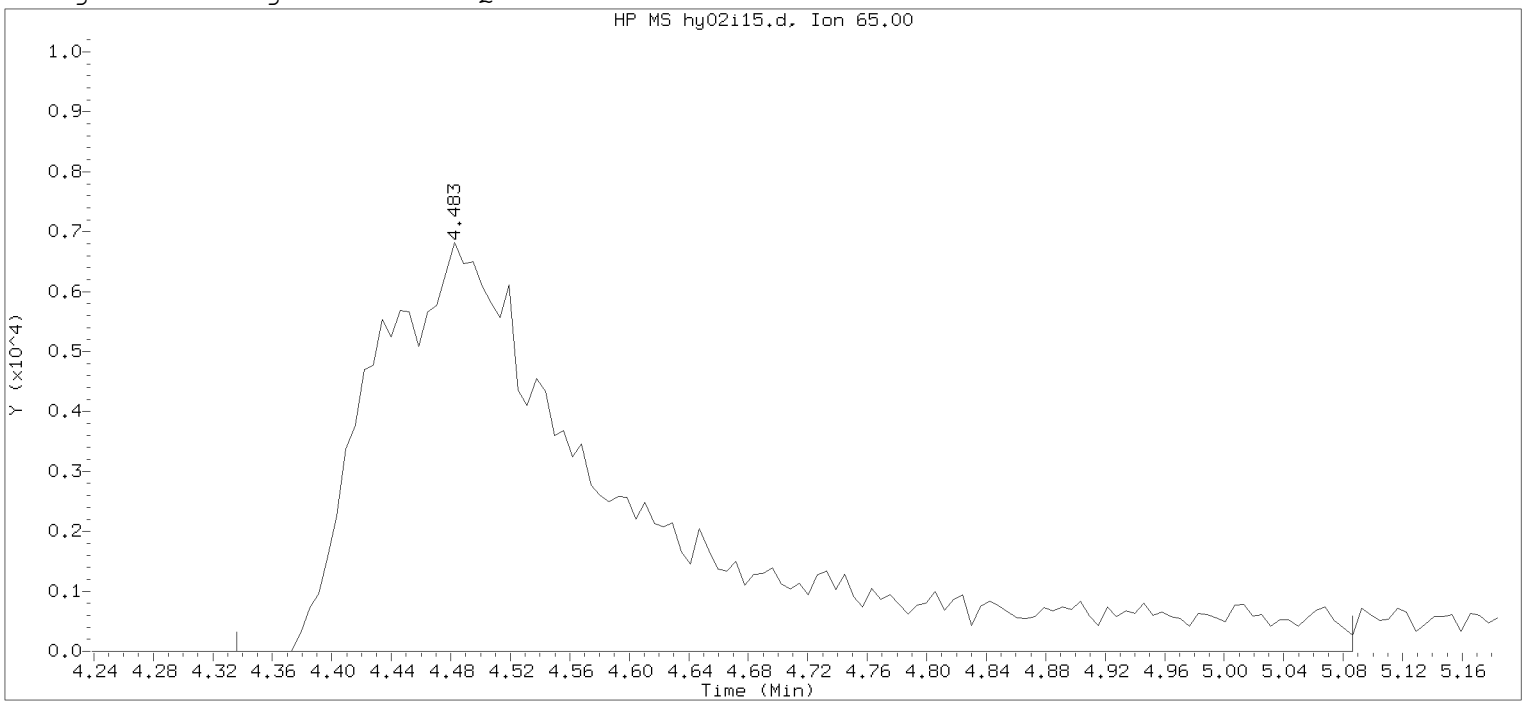
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

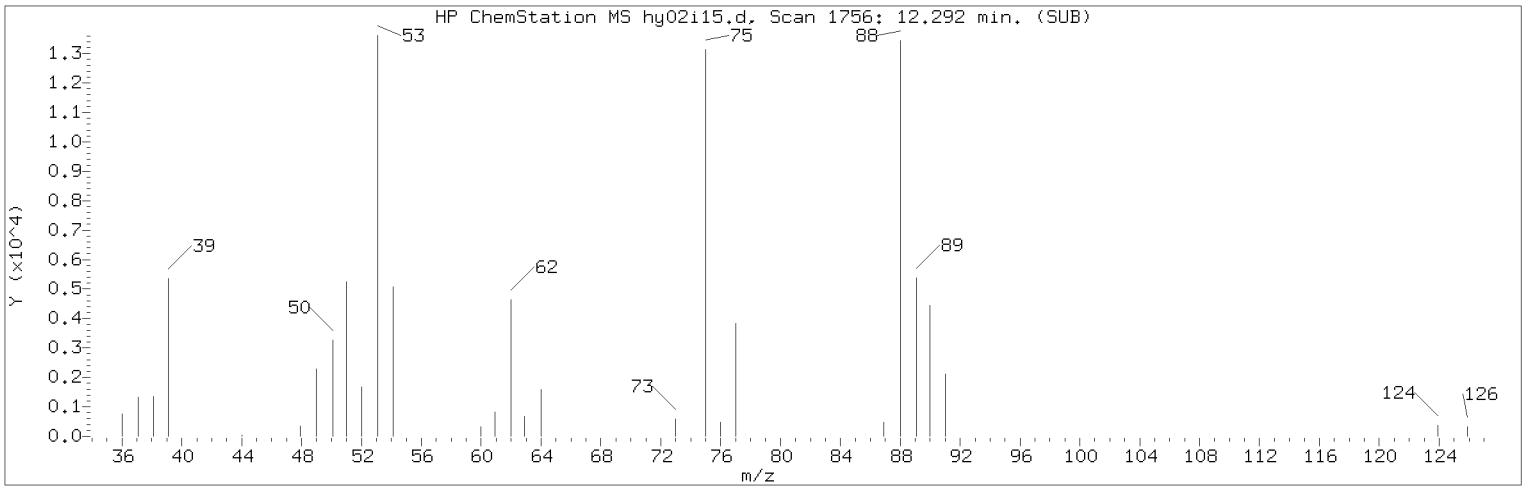
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

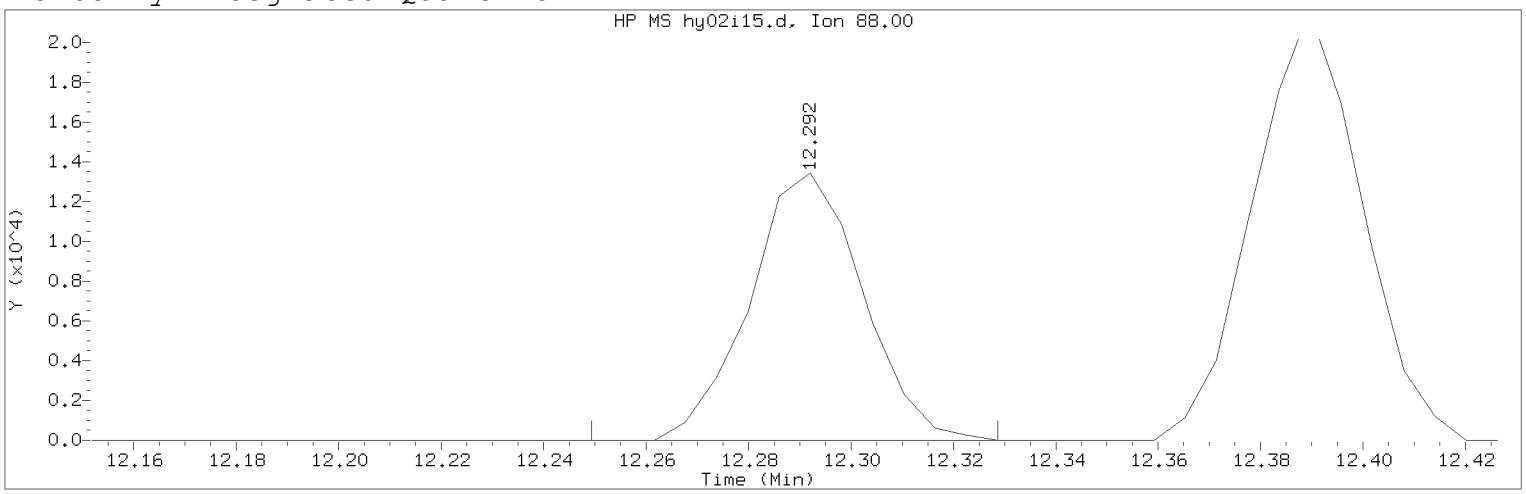
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 475		
Retention Time (minutes)	: 4.483		
Quant Ion	: 65.00		
Area	: 83546		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 450	Integration stop scan:	573
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

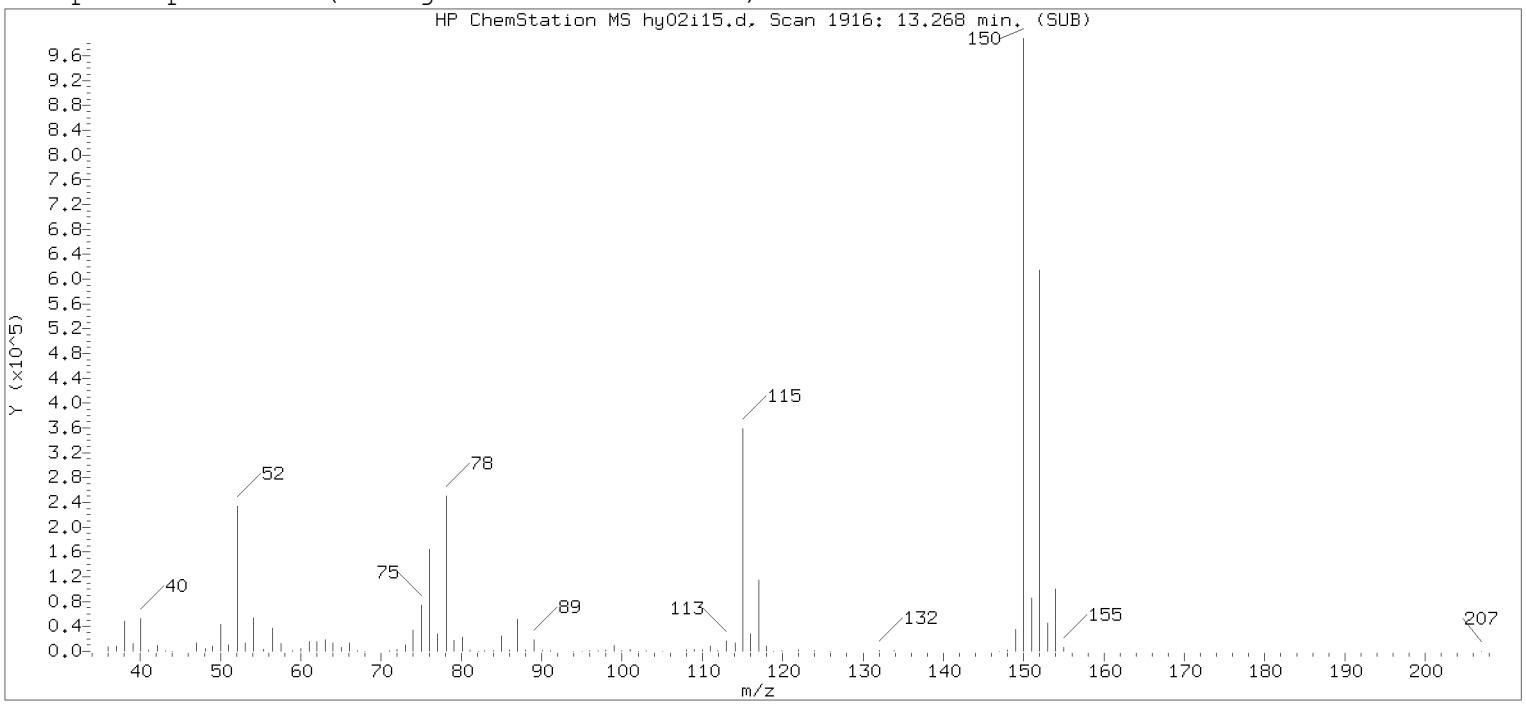
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 20531M
On-Column Amount (ng) : 1.7493
Integration start scan : 1748 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

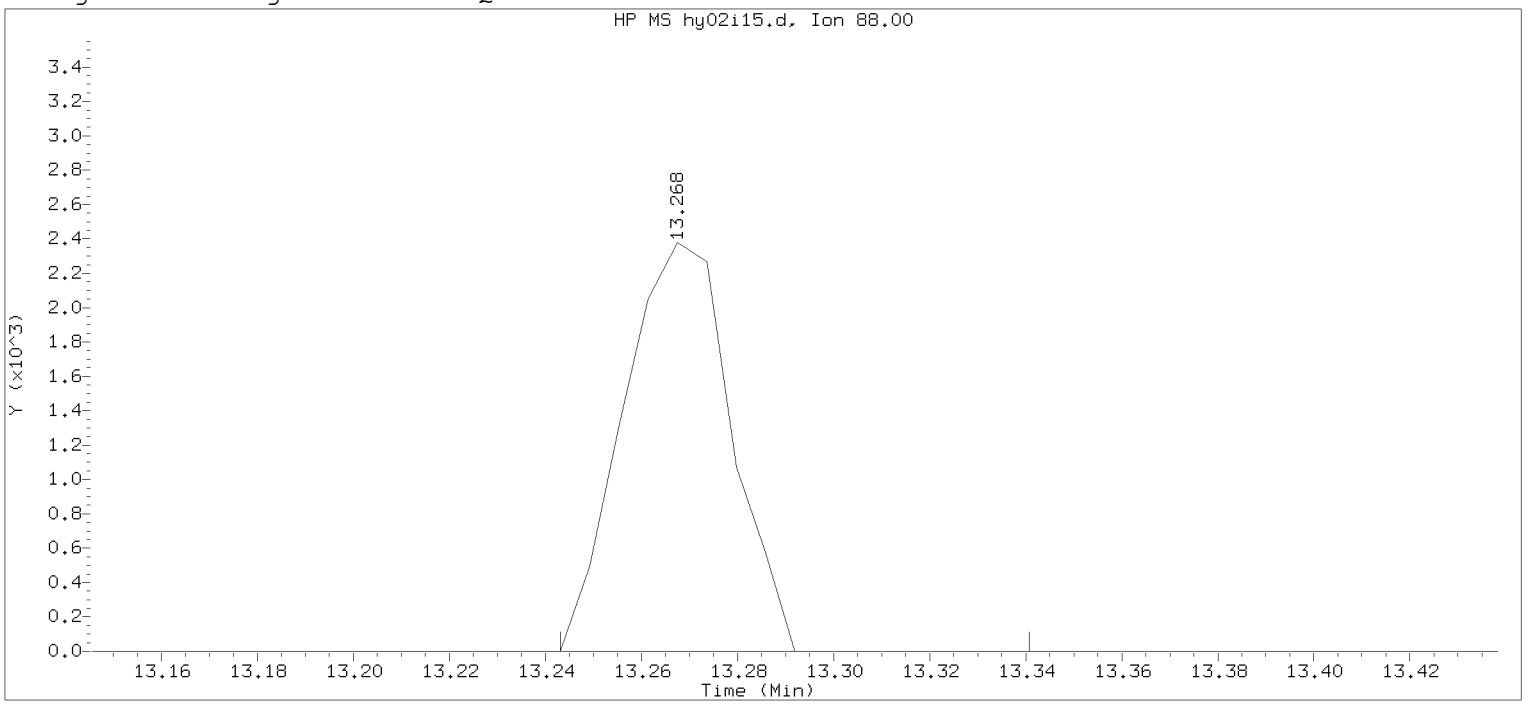
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

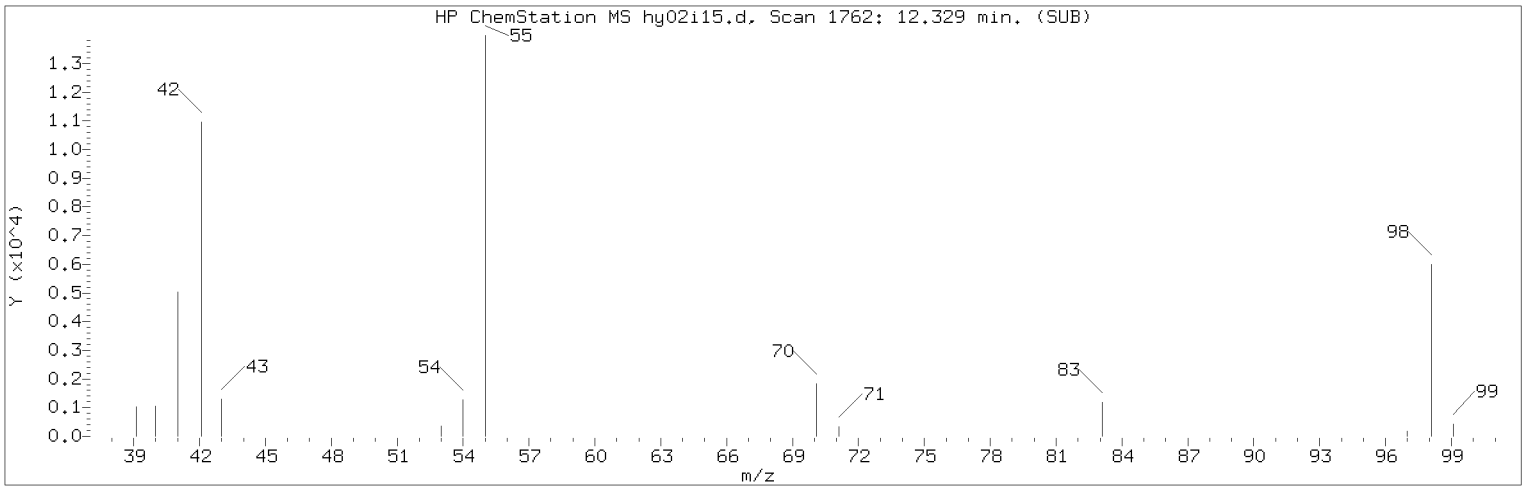
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

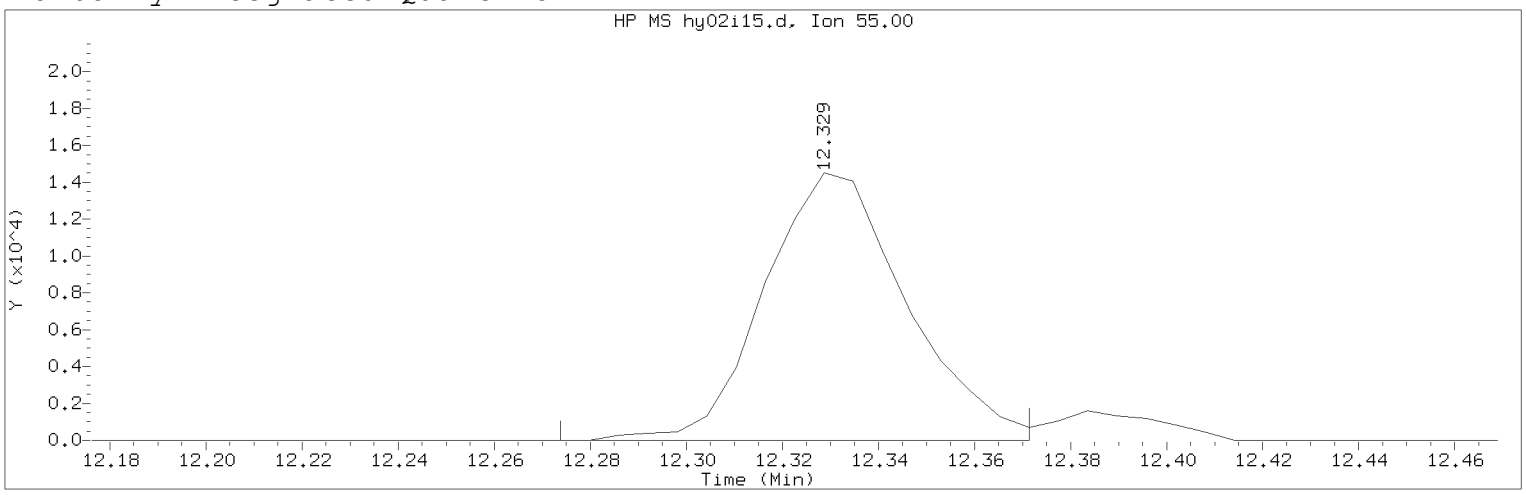
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.268
Quant Ion : 88.00
Area : 3717
On-column Amount (ng) : 0.8719
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD001 Lab Sample ID: VSTD001

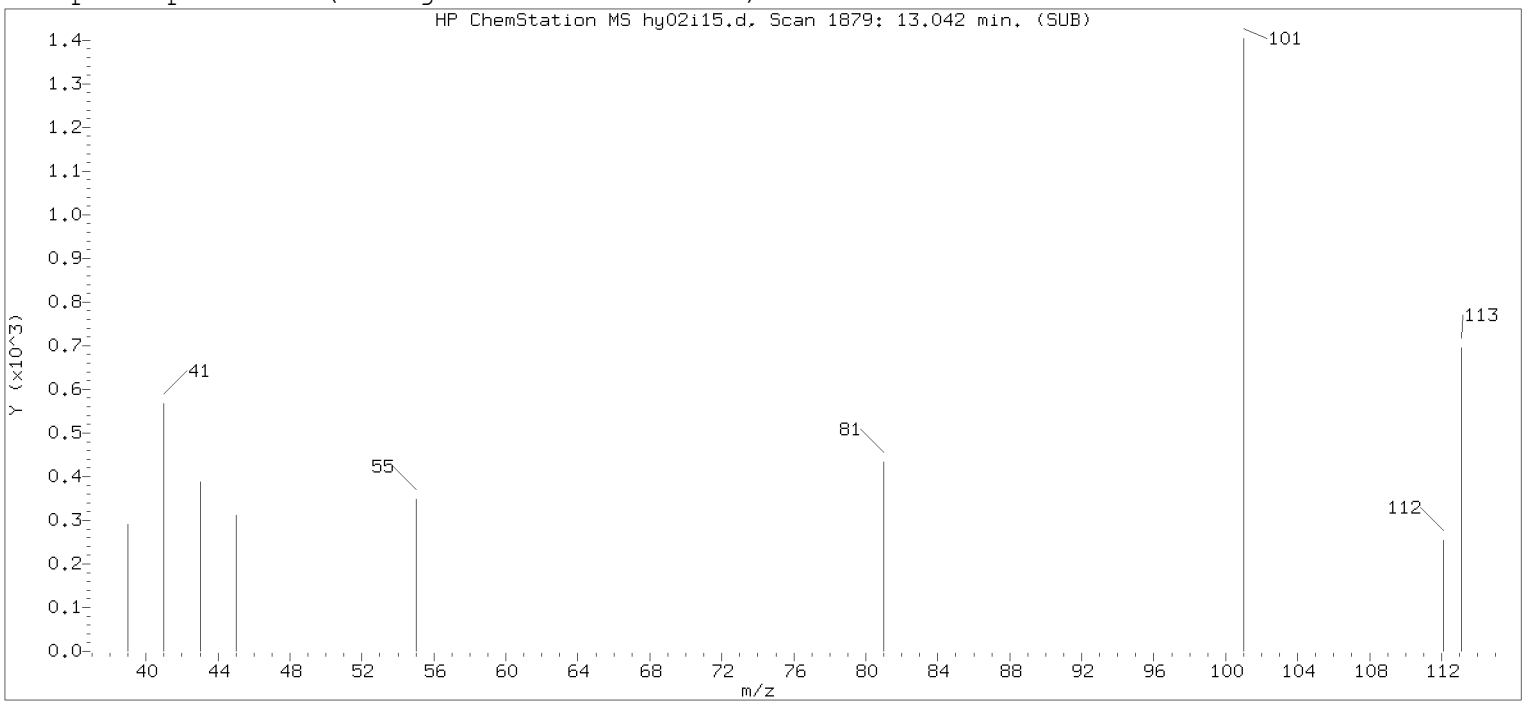
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 29836M
On-Column Amount (ng) : 49.9853
Integration start scan : 1752 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

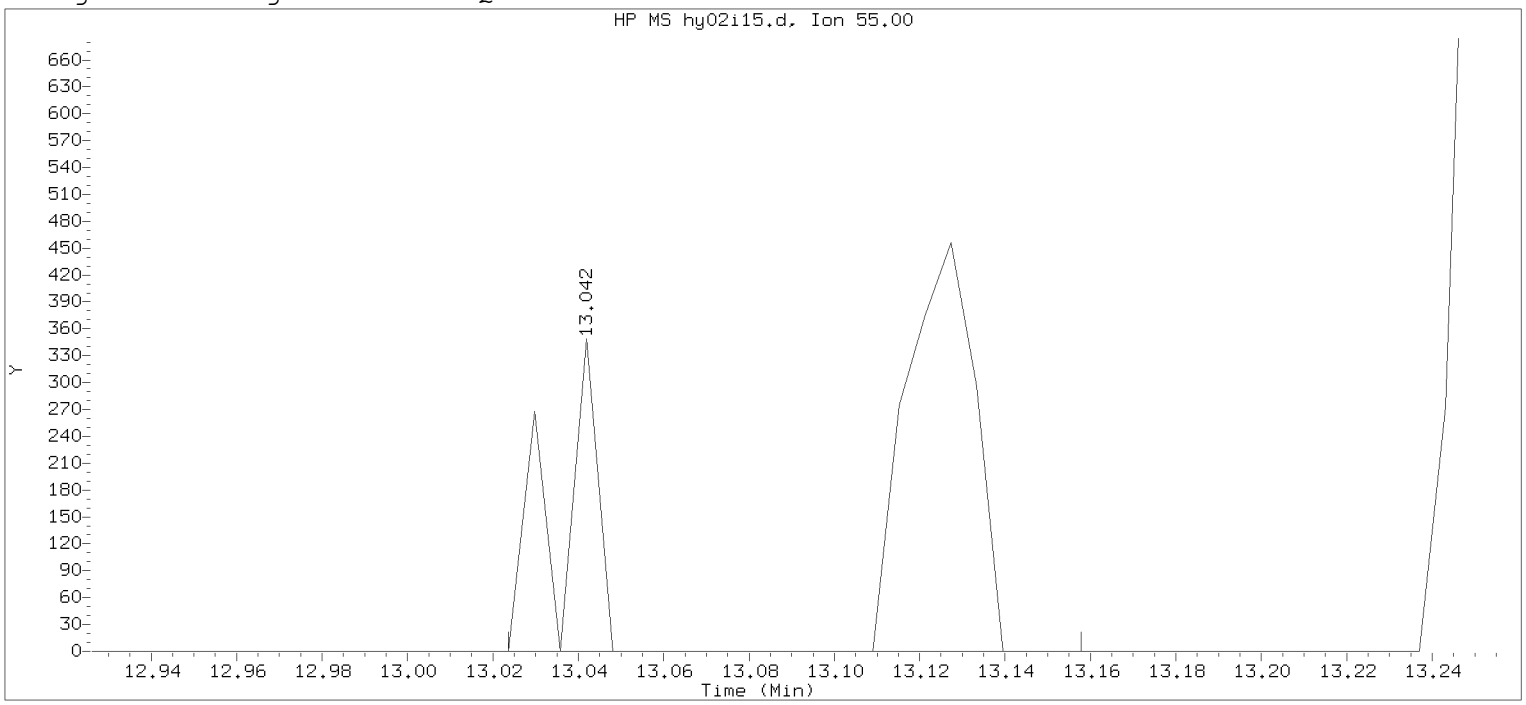
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



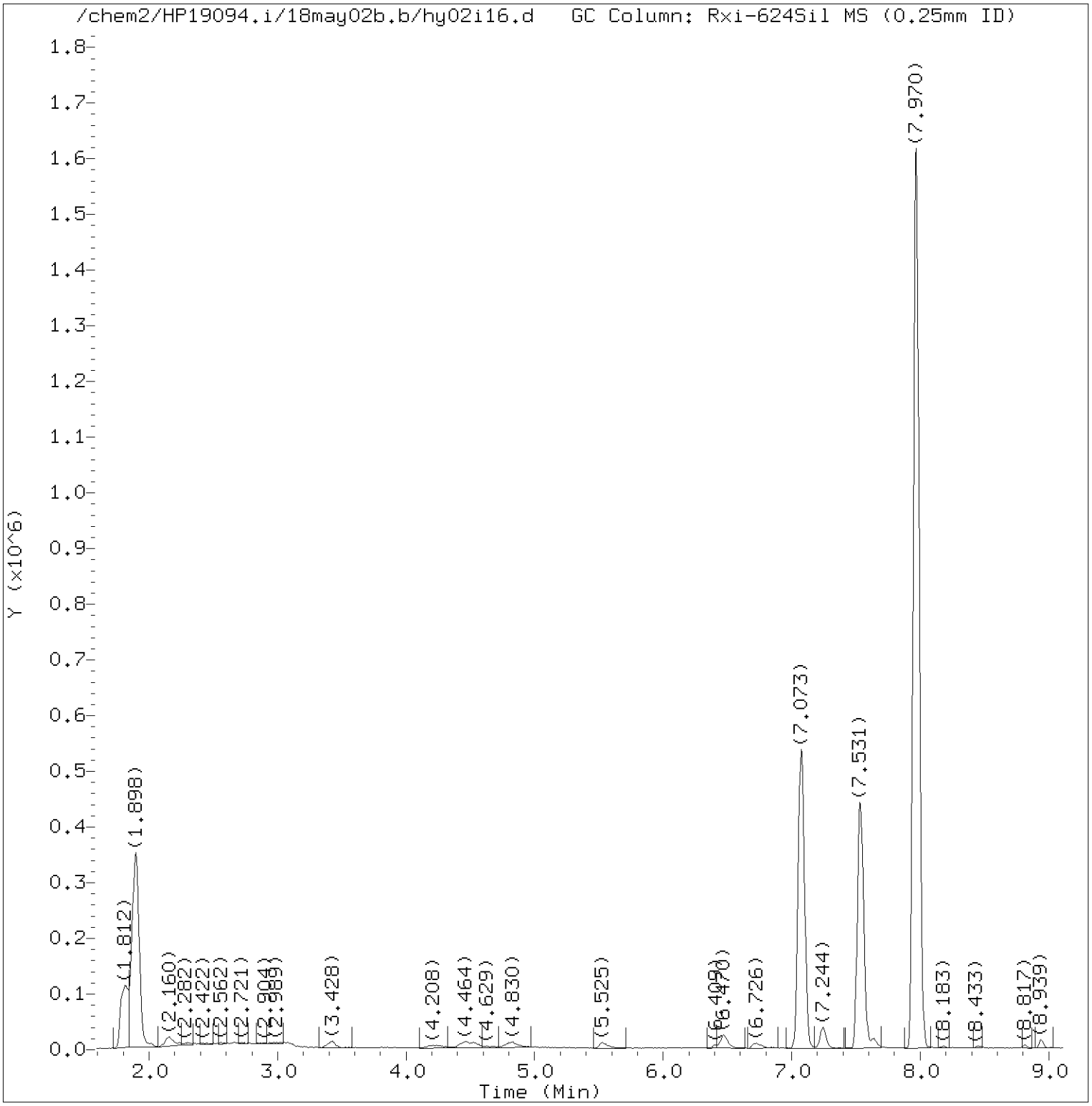
Data File: /chem2/HP19094.i/18may02b.b/hy02i15.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 20:40 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 20:58
Date, time and analyst ID of latest file update: 02-May-2018 20:58 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 737
On-column Amount (ng) : 3.0063
Integration start scan : 1875 Integration stop scan: 1897
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018



Total Ion Chromatogram (TIC)

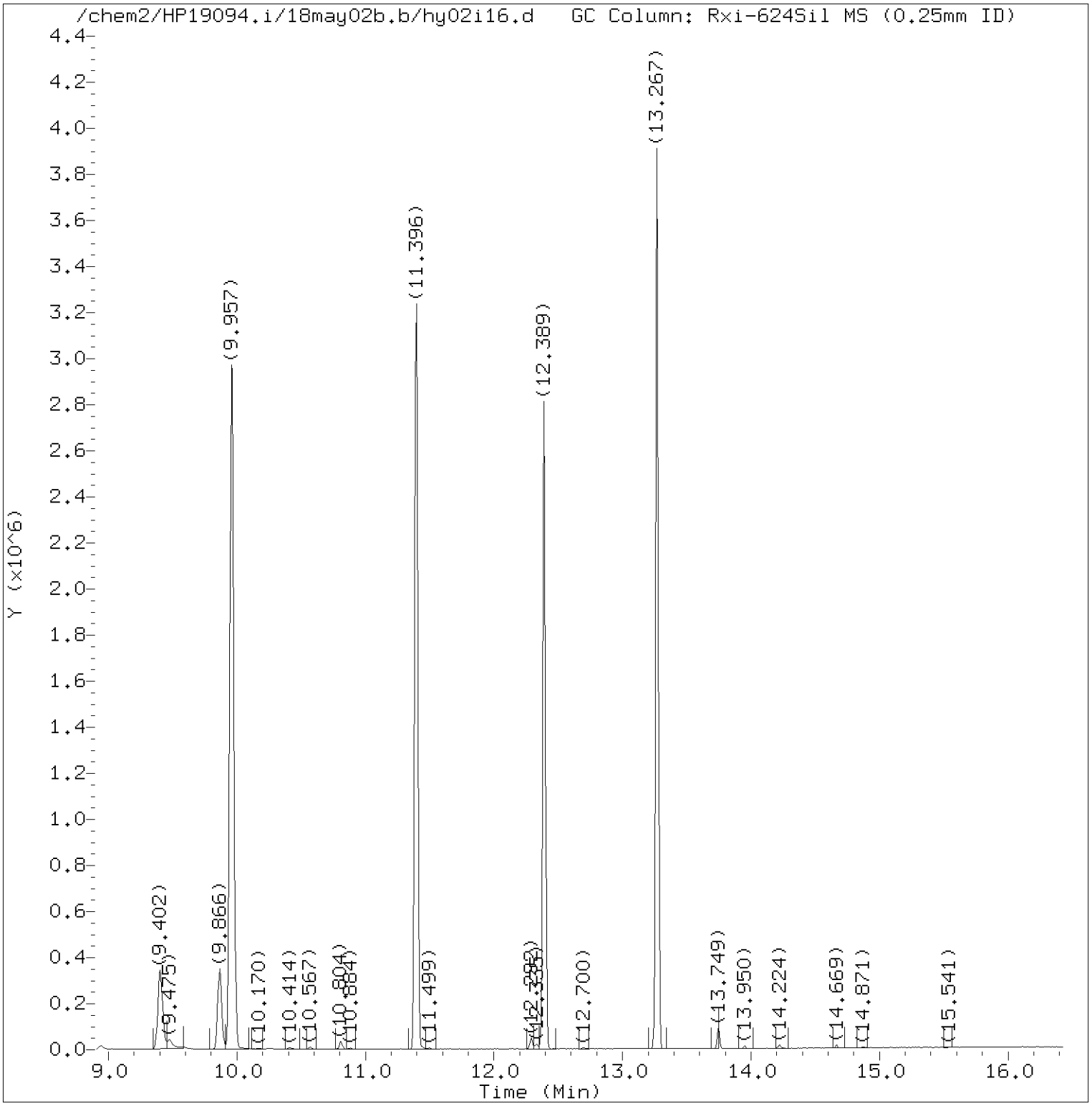
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

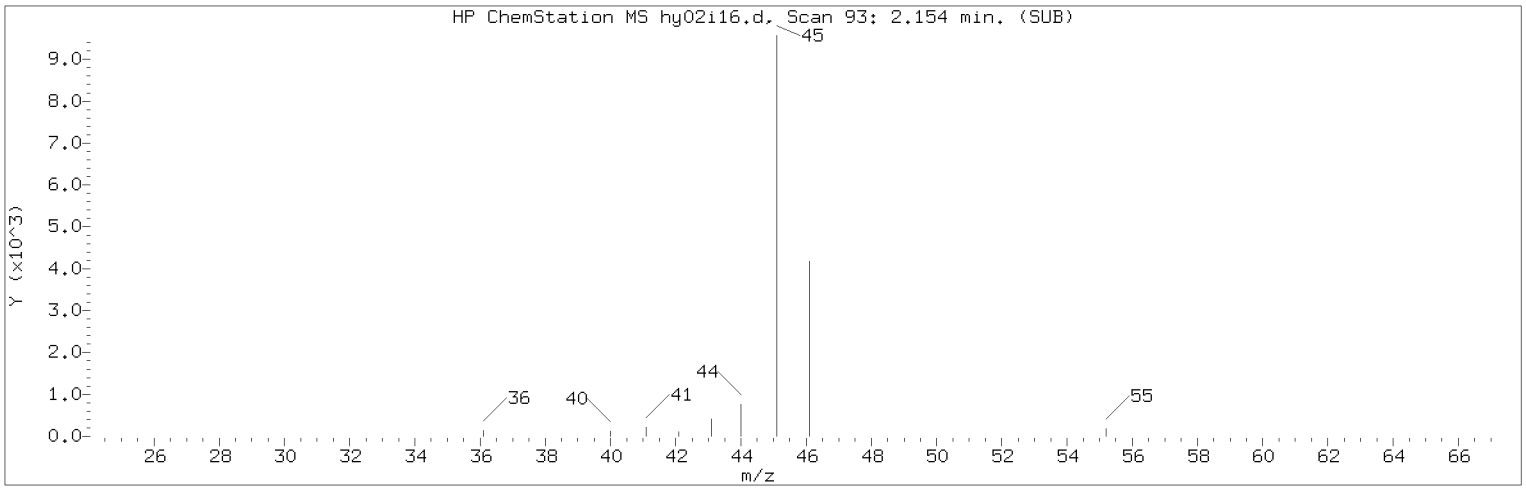
Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	39145M	0.522
25) Acetonitrile	(1)	4.202	41	43595M	22.874
26)*t-Butyl Alcohol-d10	(1)	4.464	65	78931M	50.000
36) Vinyl Acetate	(2)	5.525	43	33612	0.471
43) Methyl Acrylate	(2)	6.470	55	53484	2.427
53) 1-Chlorobutane	(2)	7.238	56	46395	0.440
63)*Fluorobenzene	(2)	7.970	96	2334989	10.000
77) Chloroacetonitrile	(2)	9.469	75	17578	20.017
78) 2-Chloroethyl vinyl ether	(2)	9.481	63	10015	0.474
97)*Chlorobenzene-d5	(3)	11.396	117	1693467	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	10342M	1.012
112) Cyclohexanone	(1)	12.328	55	11242M	21.625
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	891691	10.000
142) Hexachloroethane	(4)	13.749	117	15983	0.426

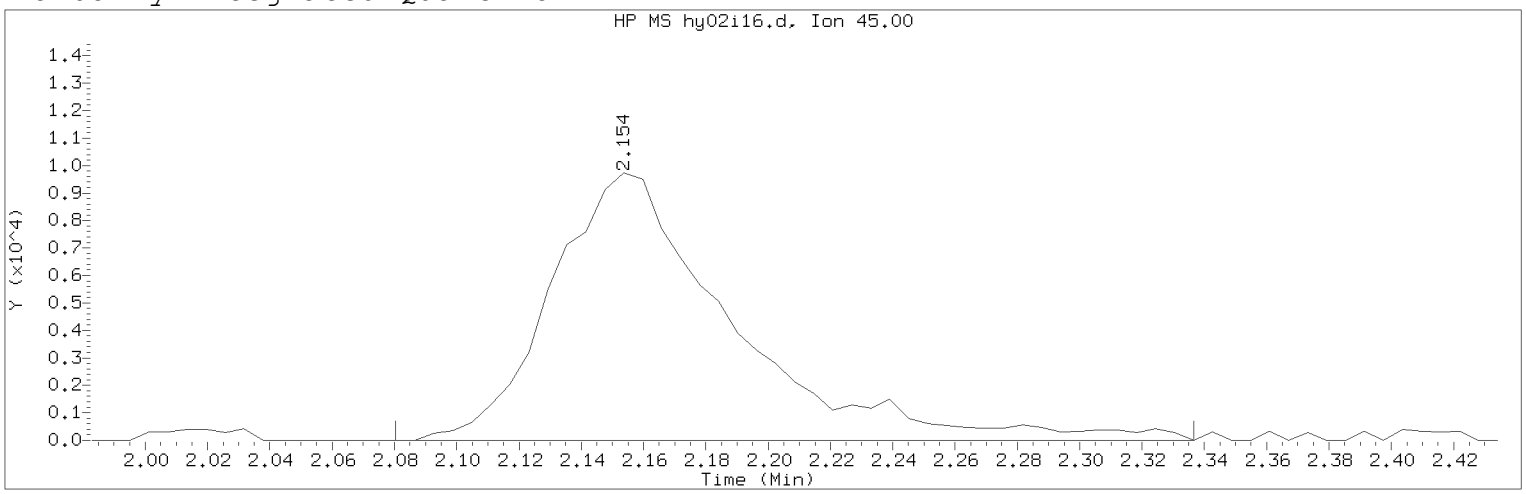
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

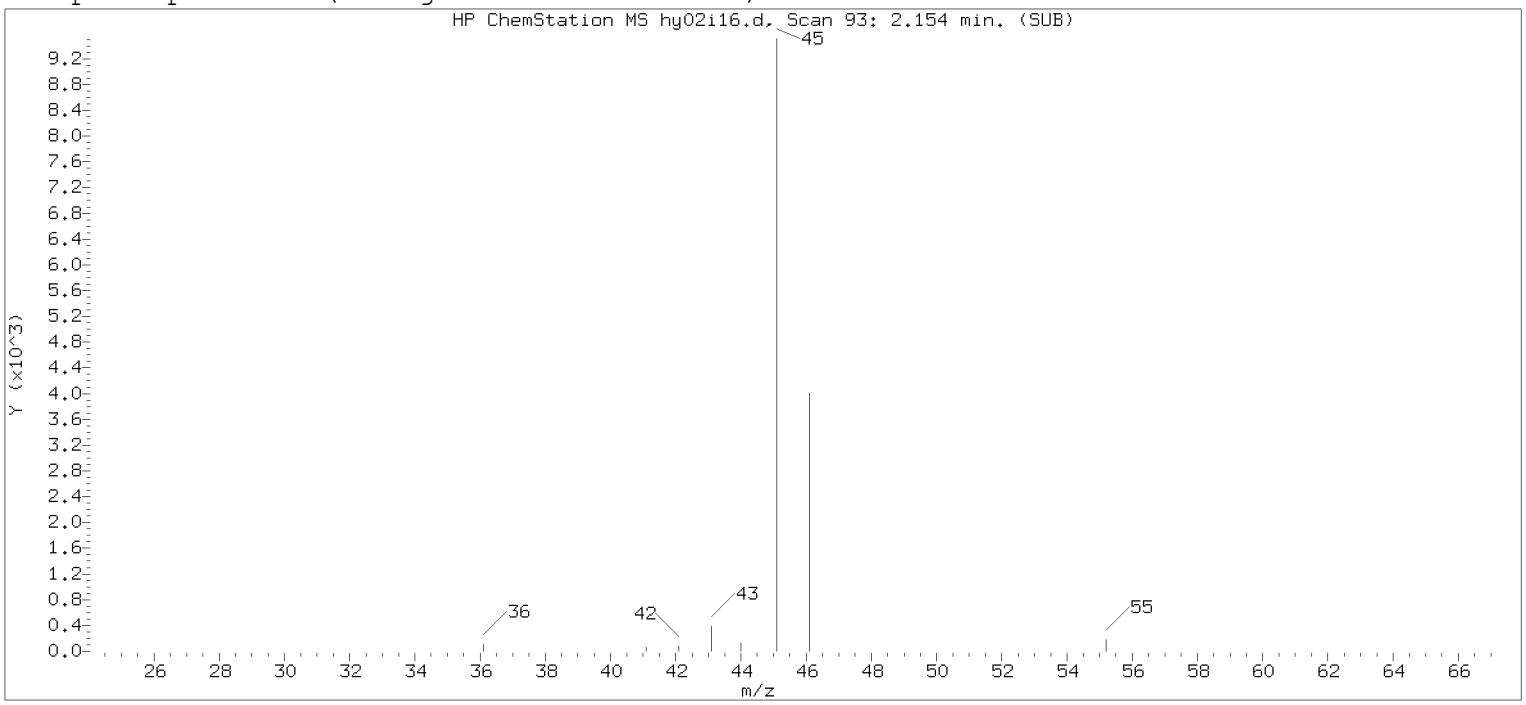
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 39145M
On-Column Amount (ng) : 0.5222
Integration start scan : 80 Integration stop scan: 122
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

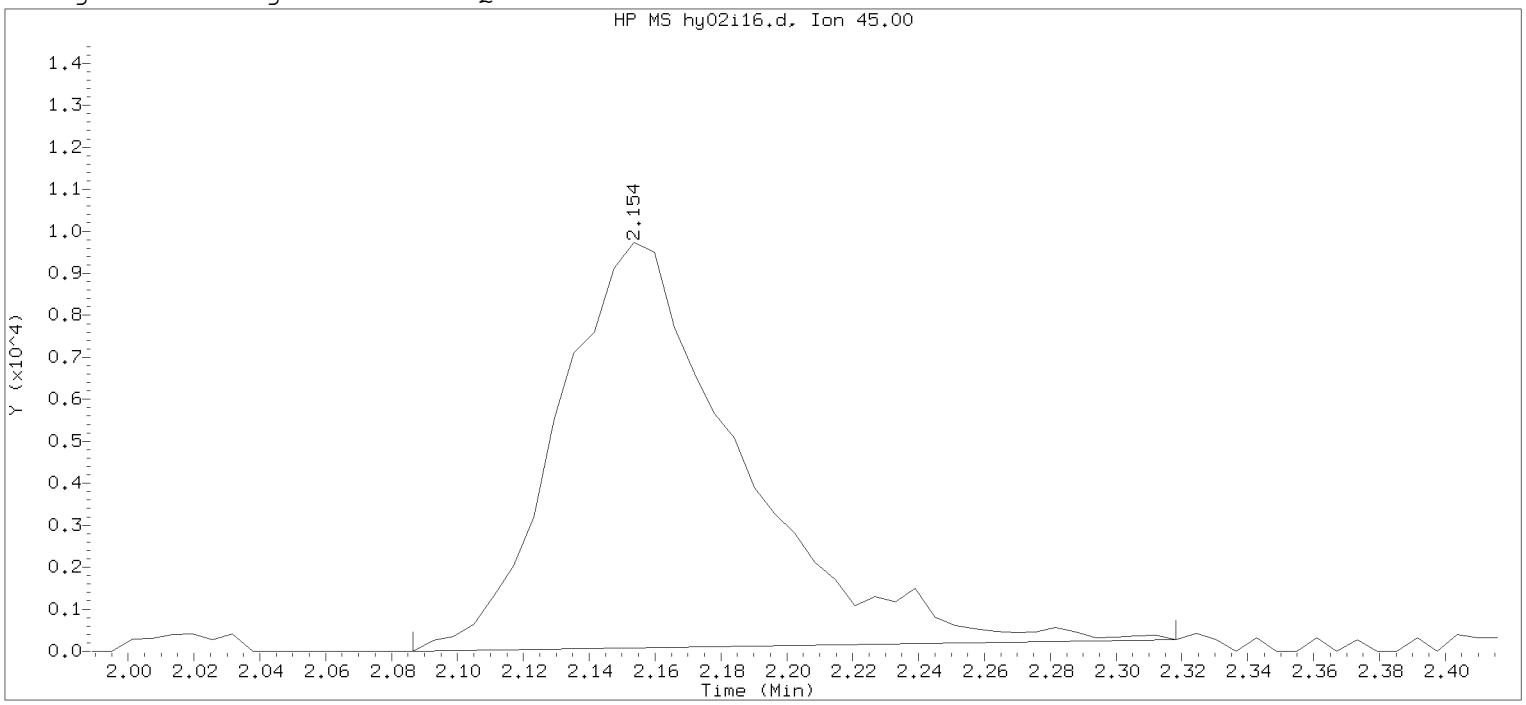
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

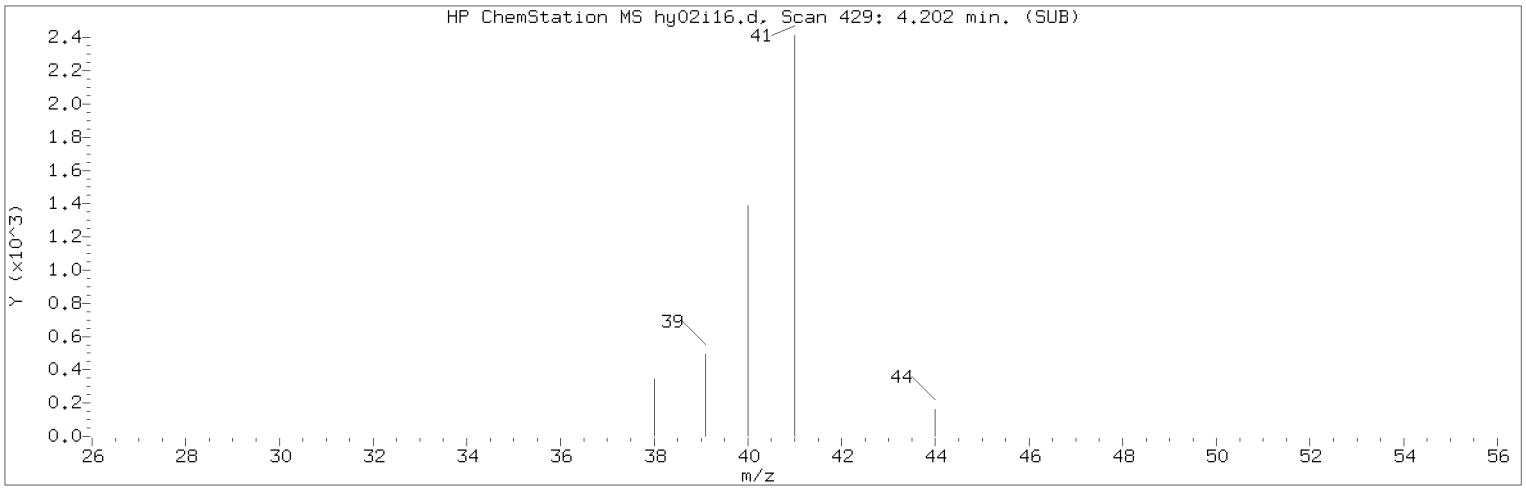
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

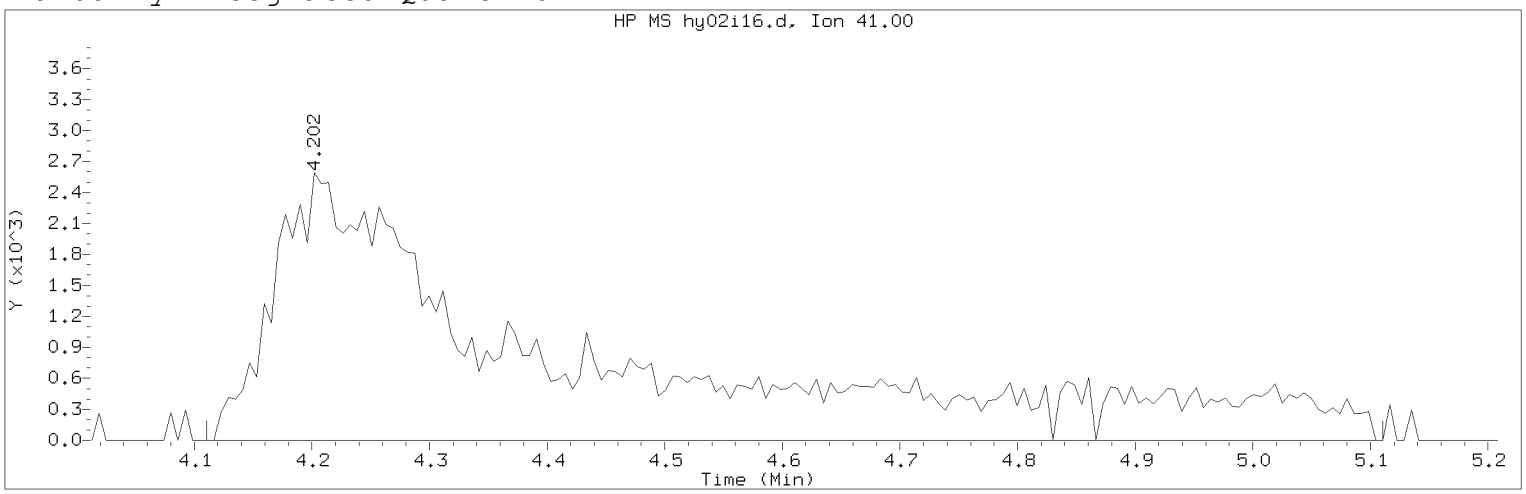
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 36886
On-column Amount (ng) : 0.4905
Integration start scan : 81 Integration stop scan: 119
Y at integration start : 0 Y at integration end: 281

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

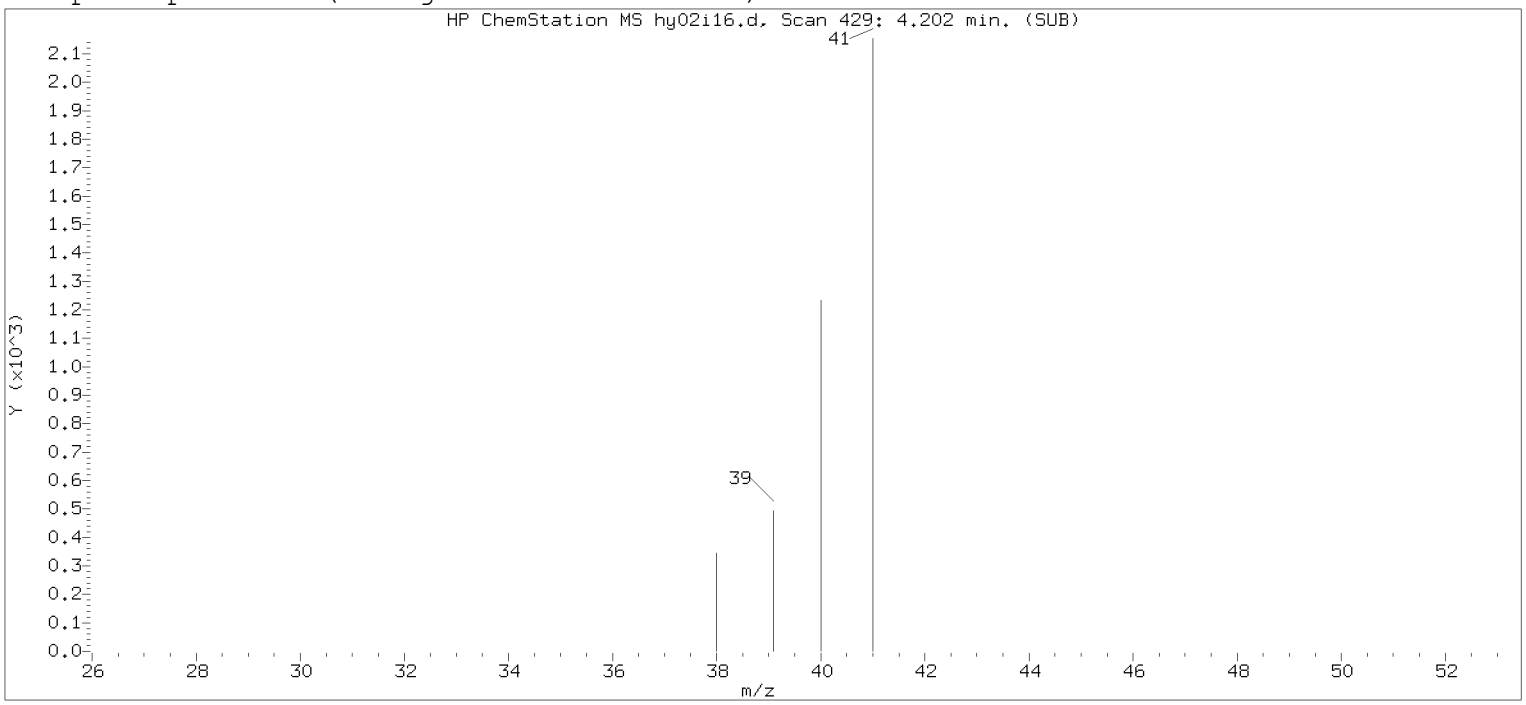
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area (flag) : 43595M
On-Column Amount (ng) : 22.8735
Integration start scan : 413 Integration stop scan: 577
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

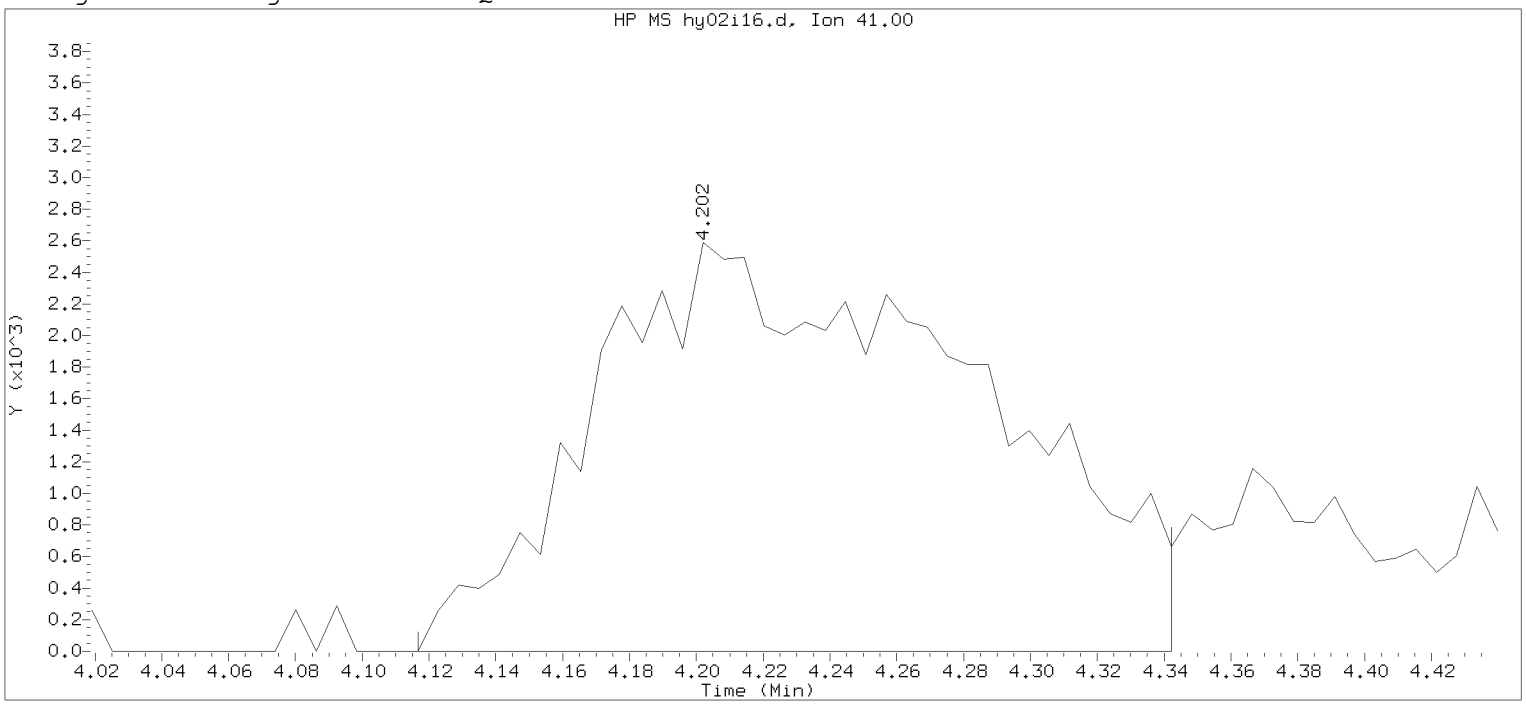
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

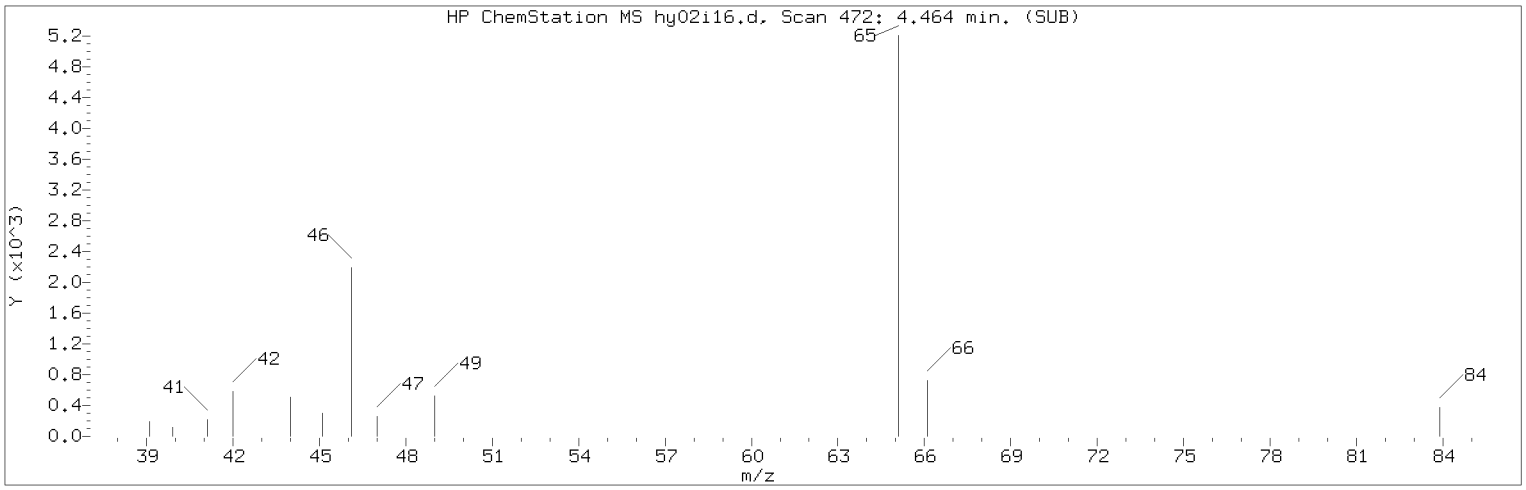
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

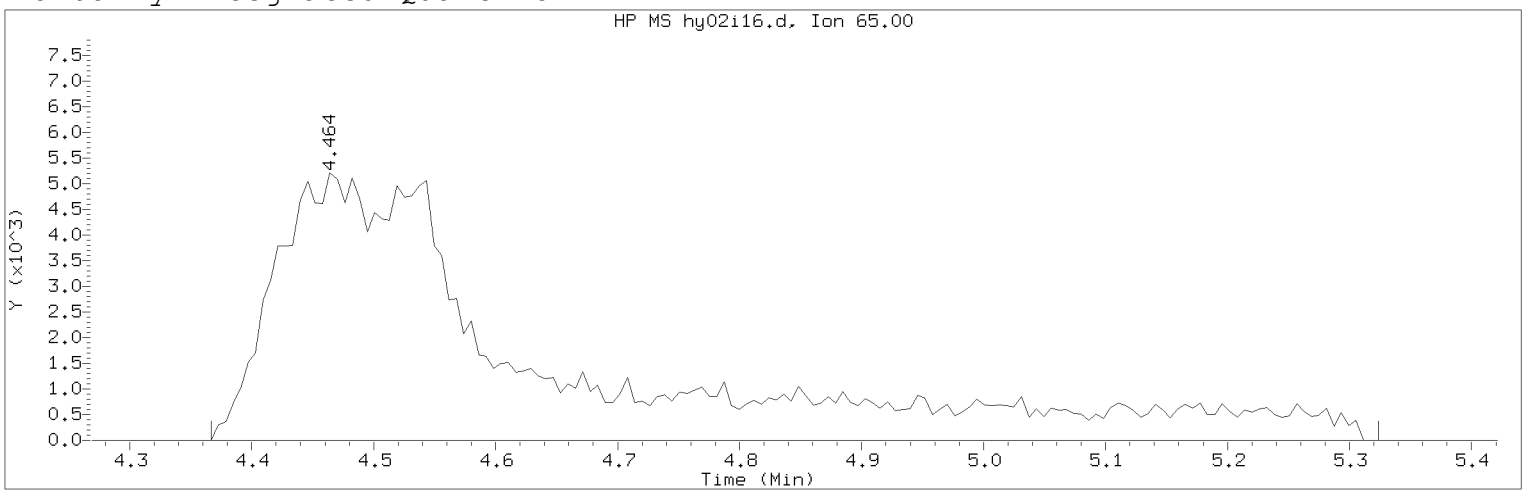
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 429
Retention Time (minutes): 4.202
Quant Ion : 41.00
Area : 20787
On-column Amount (ng) : 11.9110
Integration start scan : 414 Integration stop scan: 451
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/01/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

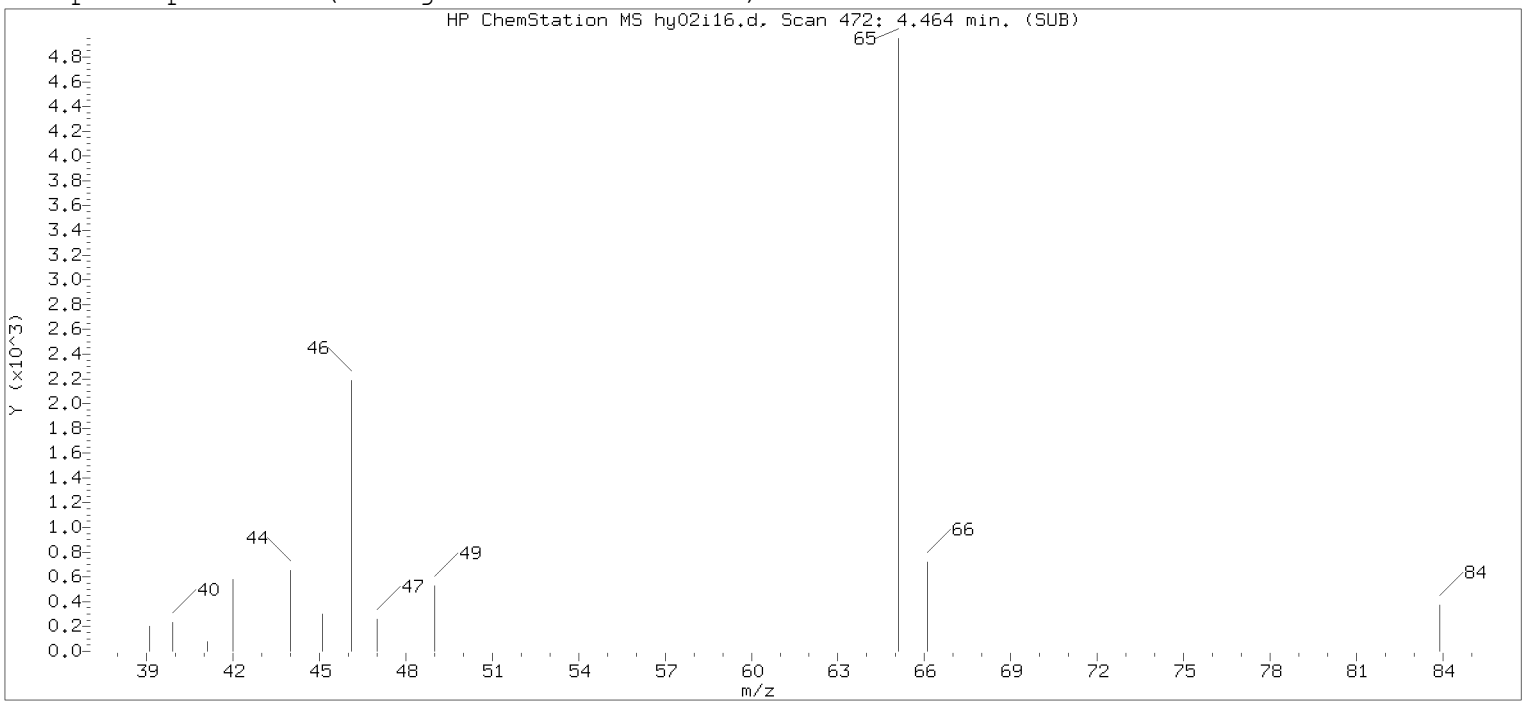
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area (flag) : 78931M
On-Column Amount (ng) : 50.0000
Integration start scan : 455 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

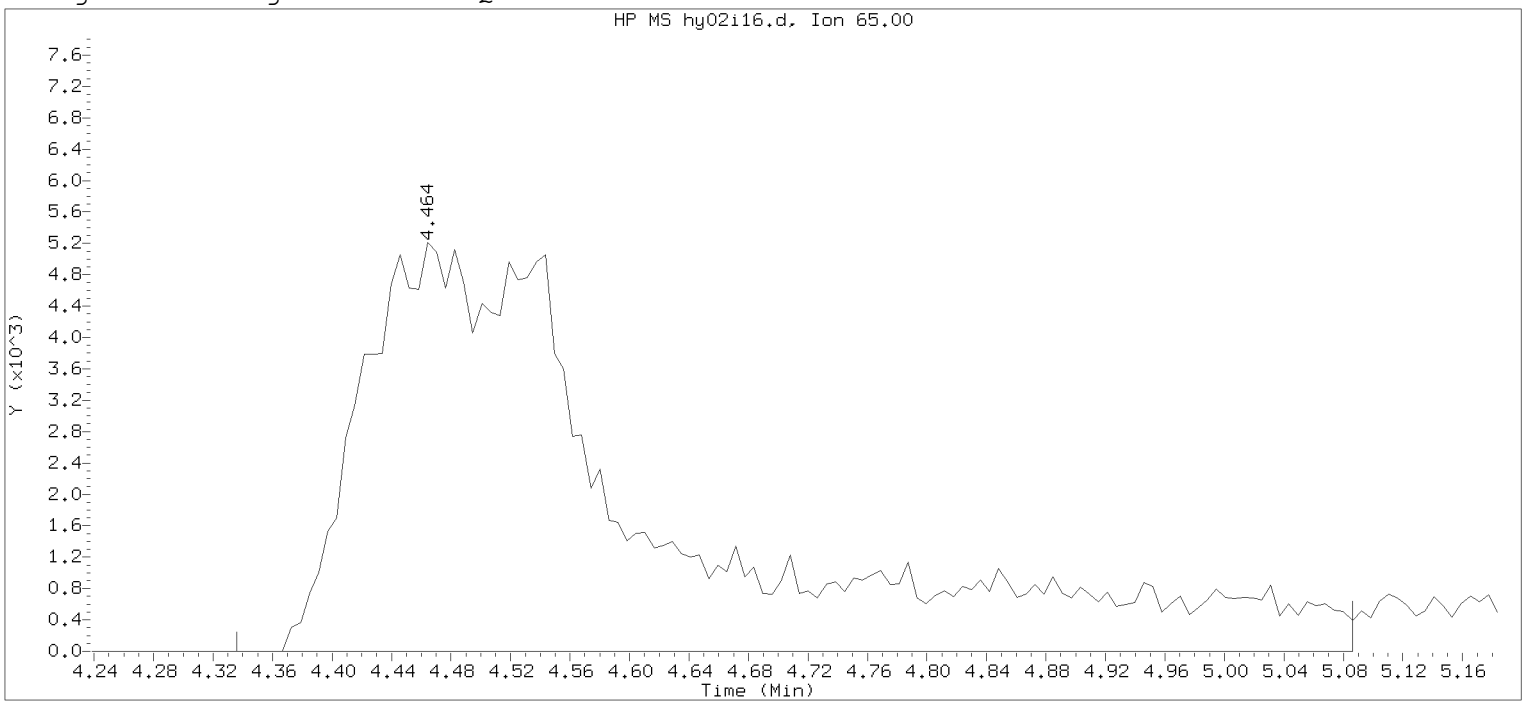
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

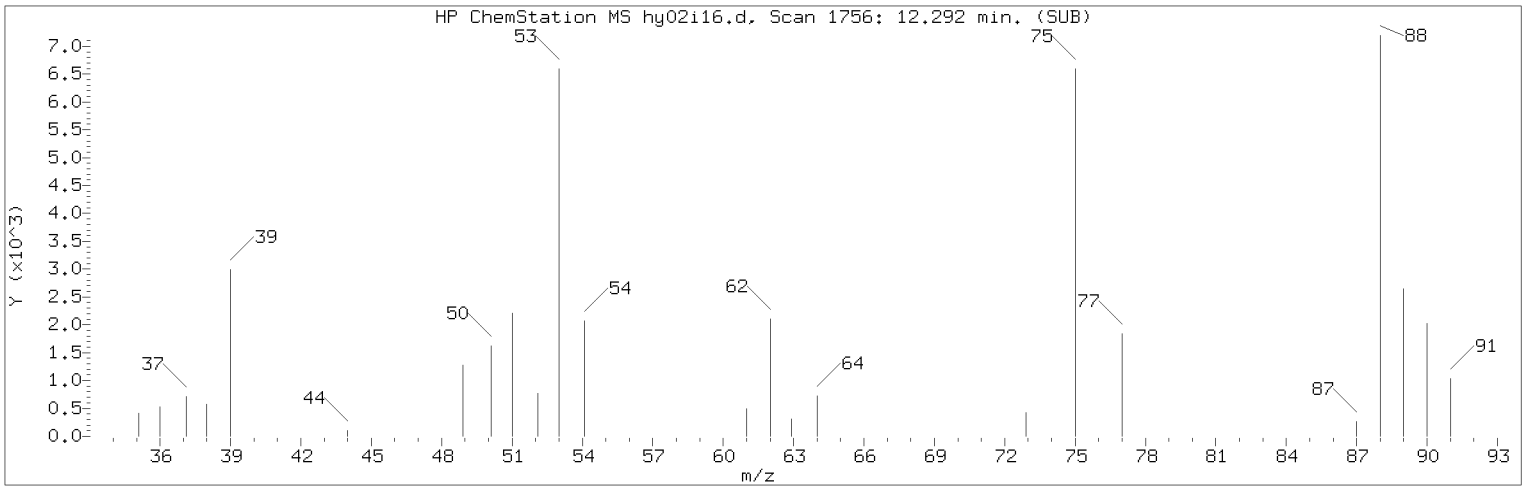
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

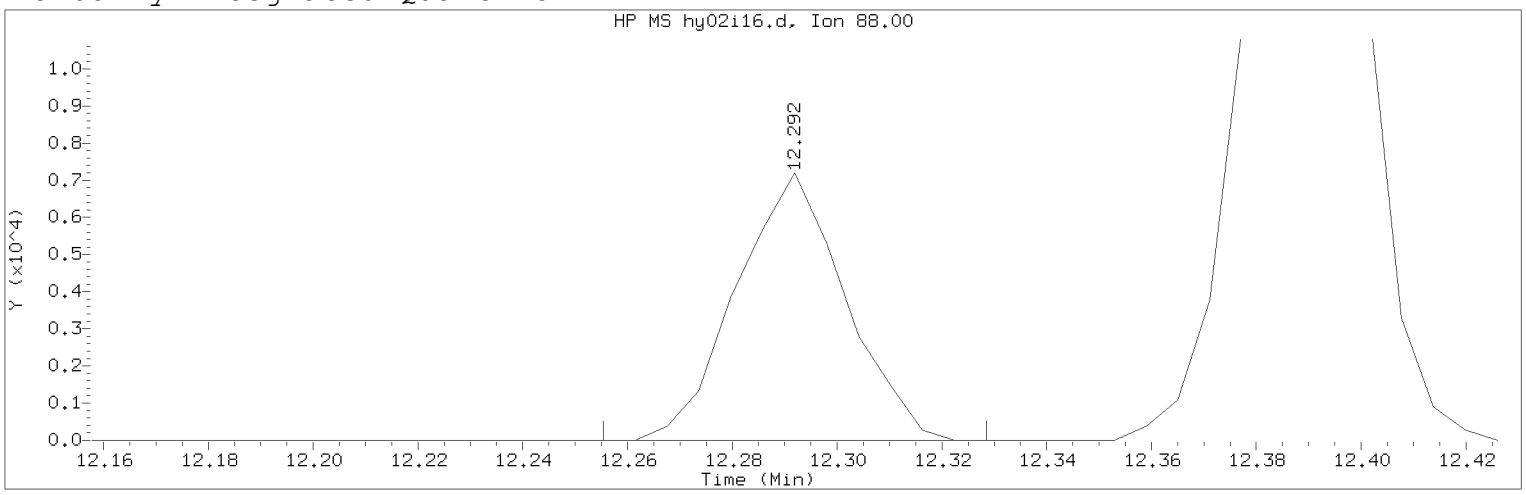
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 472
Retention Time (minutes): 4.464
Quant Ion : 65.00
Area : 71620
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 573
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

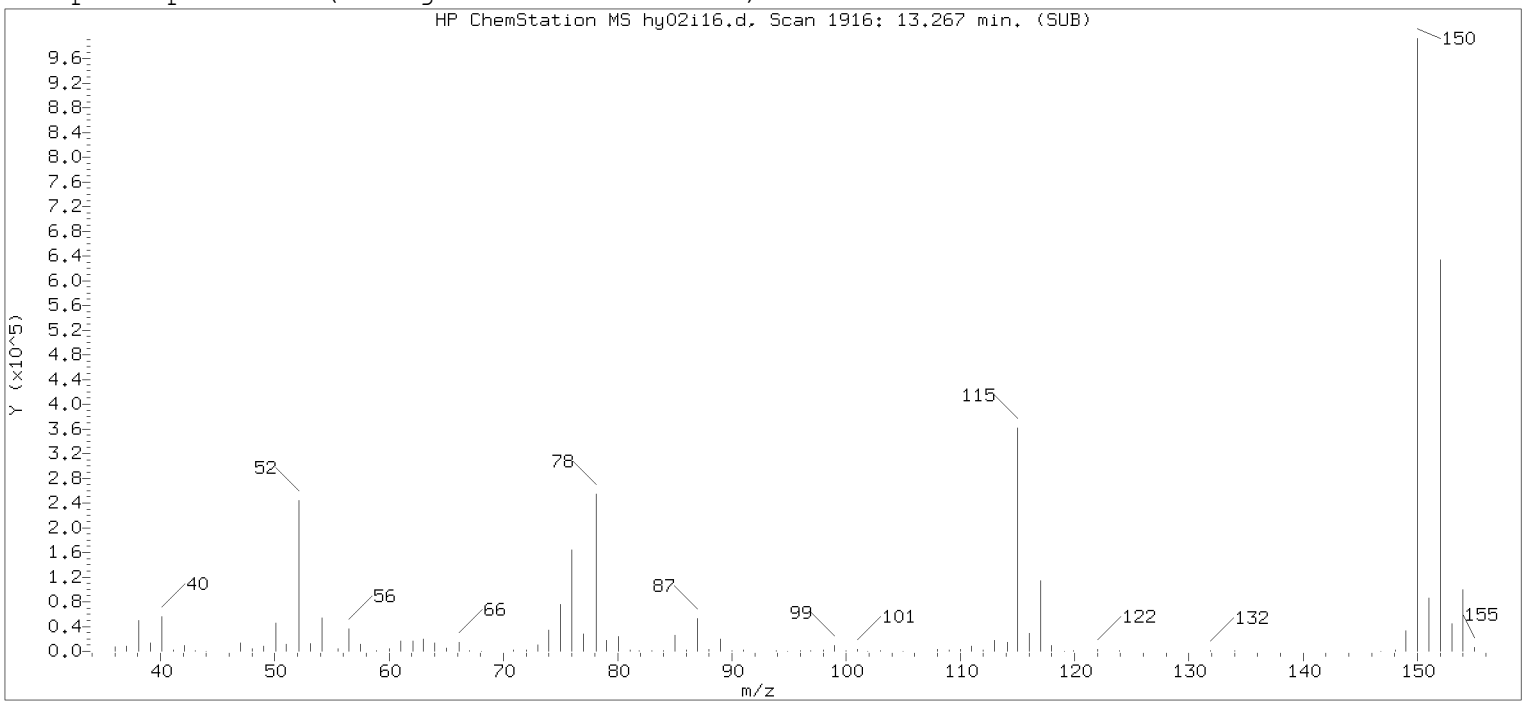
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 10342M
On-Column Amount (ng) : 1.0117
Integration start scan : 1749 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

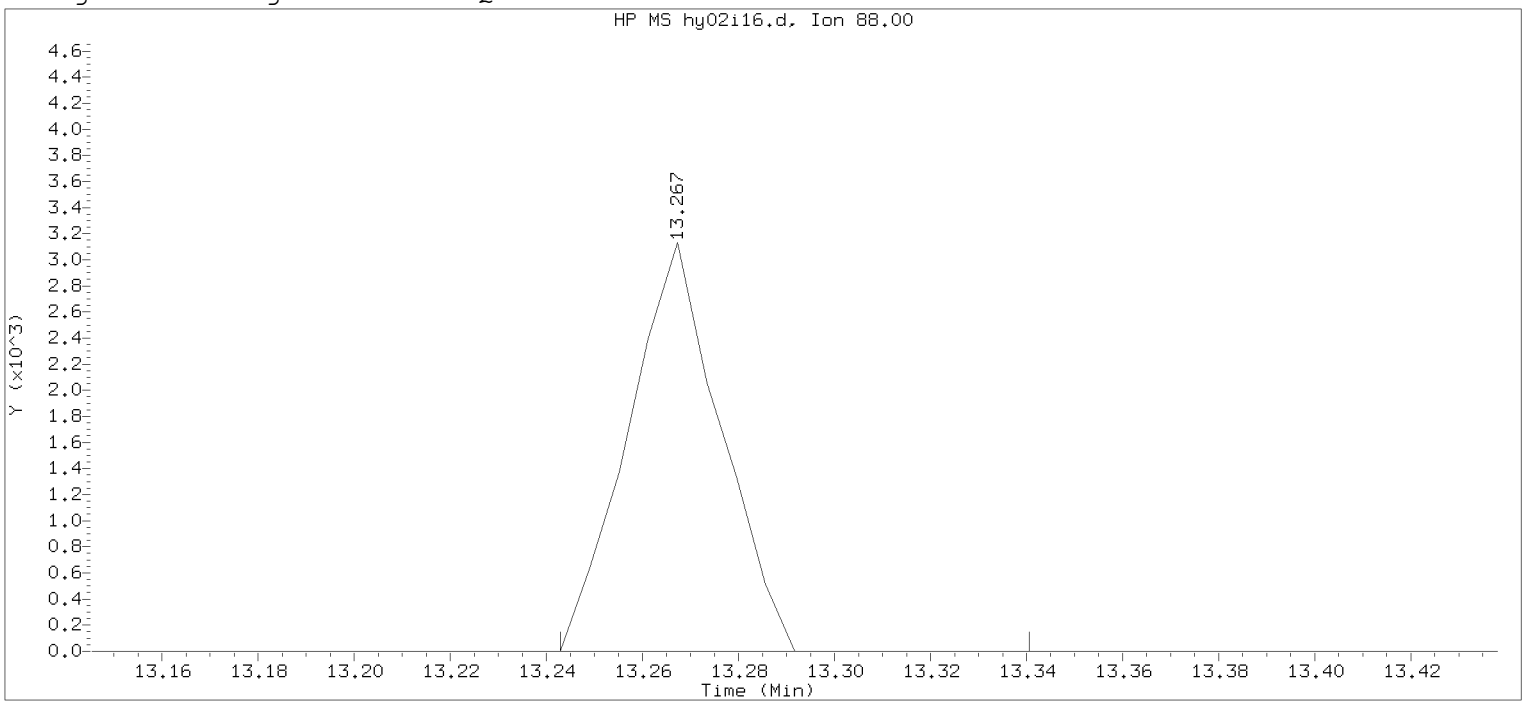
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

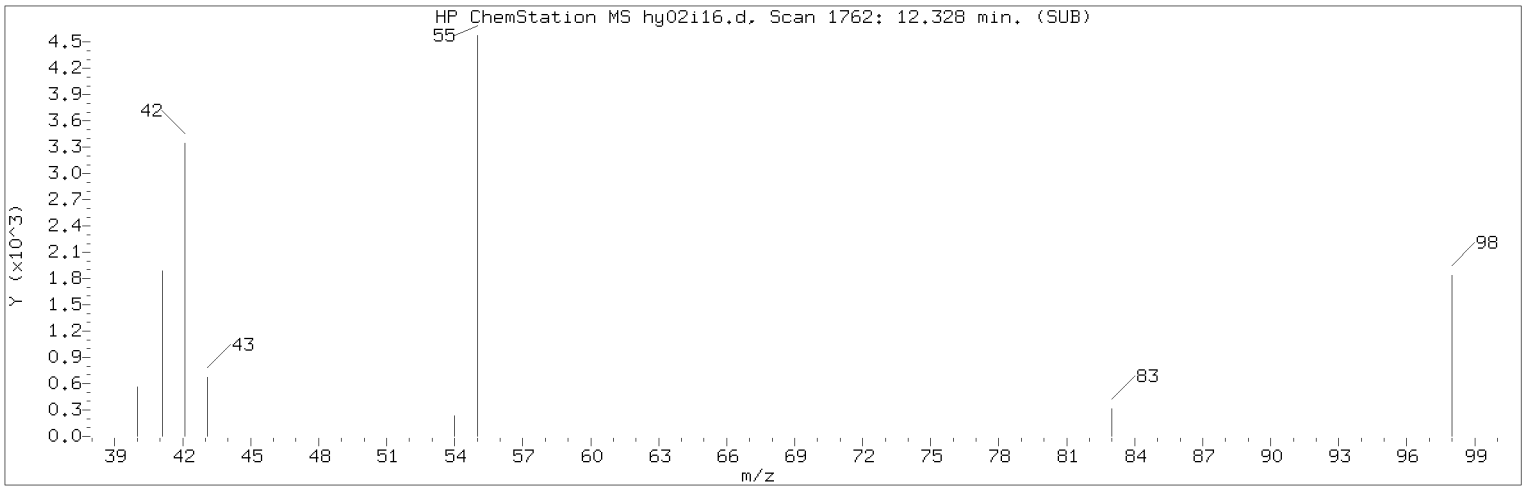
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

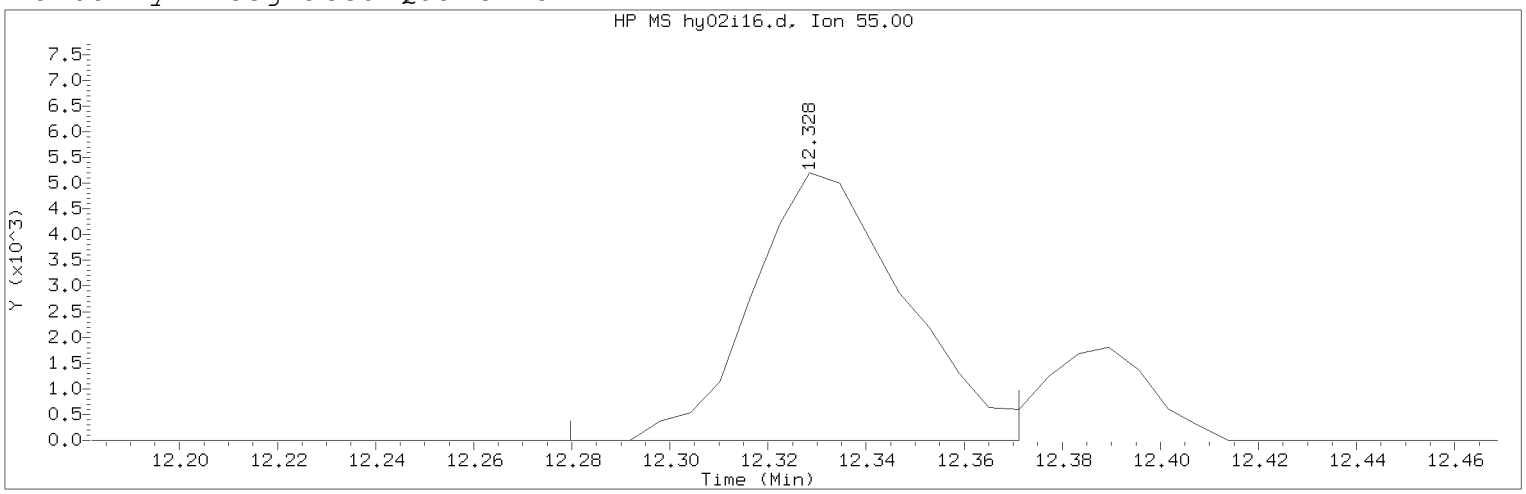
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 4184
On-column Amount (ng) : 0.4845
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

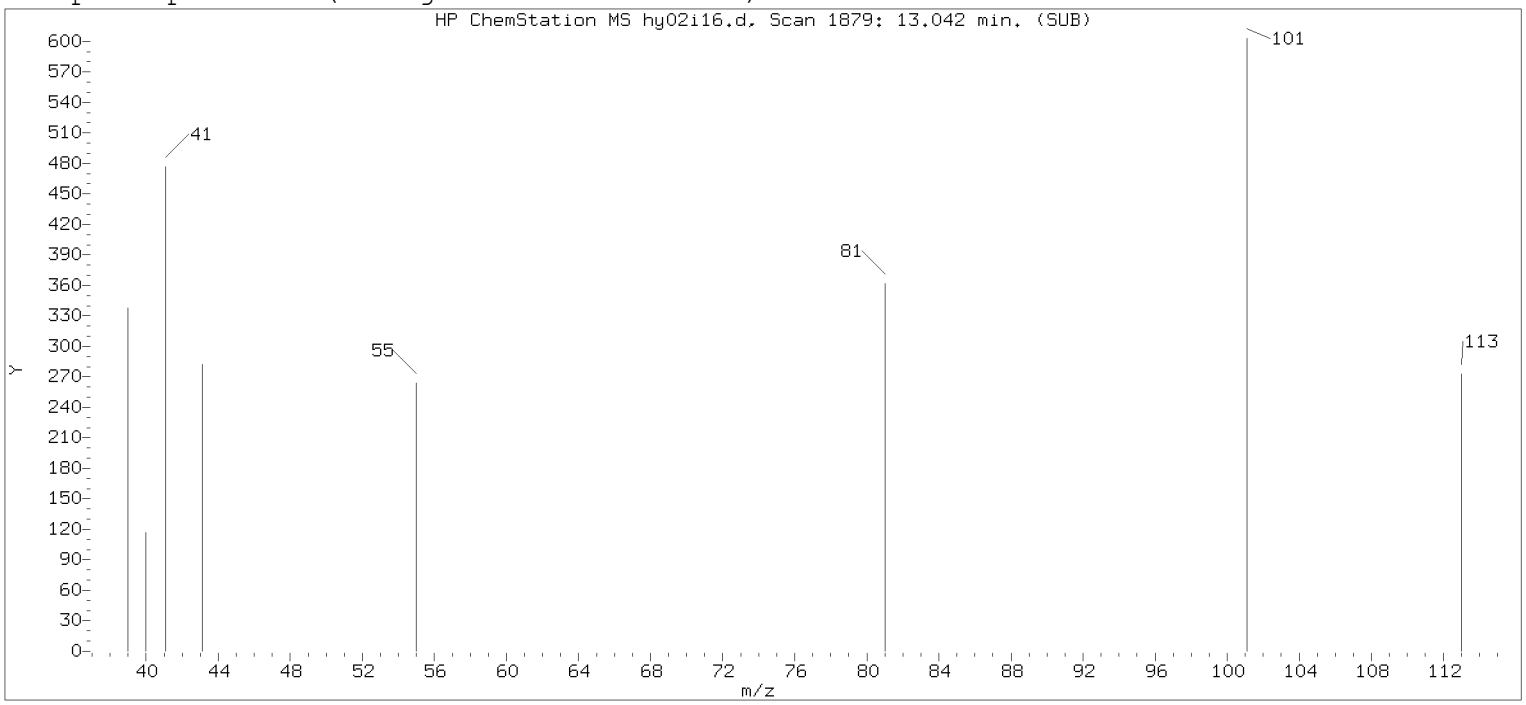
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.328
Quant Ion : 55.00
Area (flag) : 11242M
On-Column Amount (ng) : 21.6250
Integration start scan : 1753 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

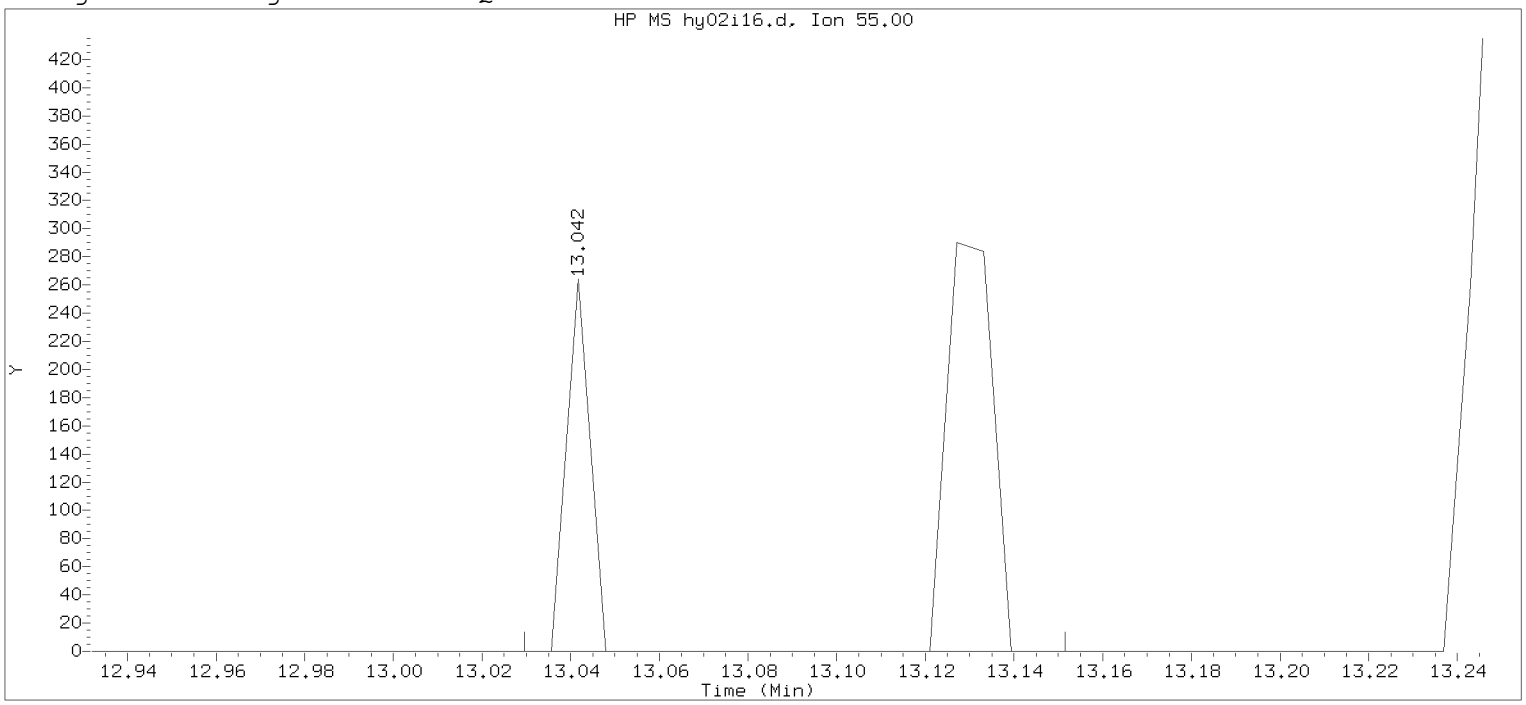
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



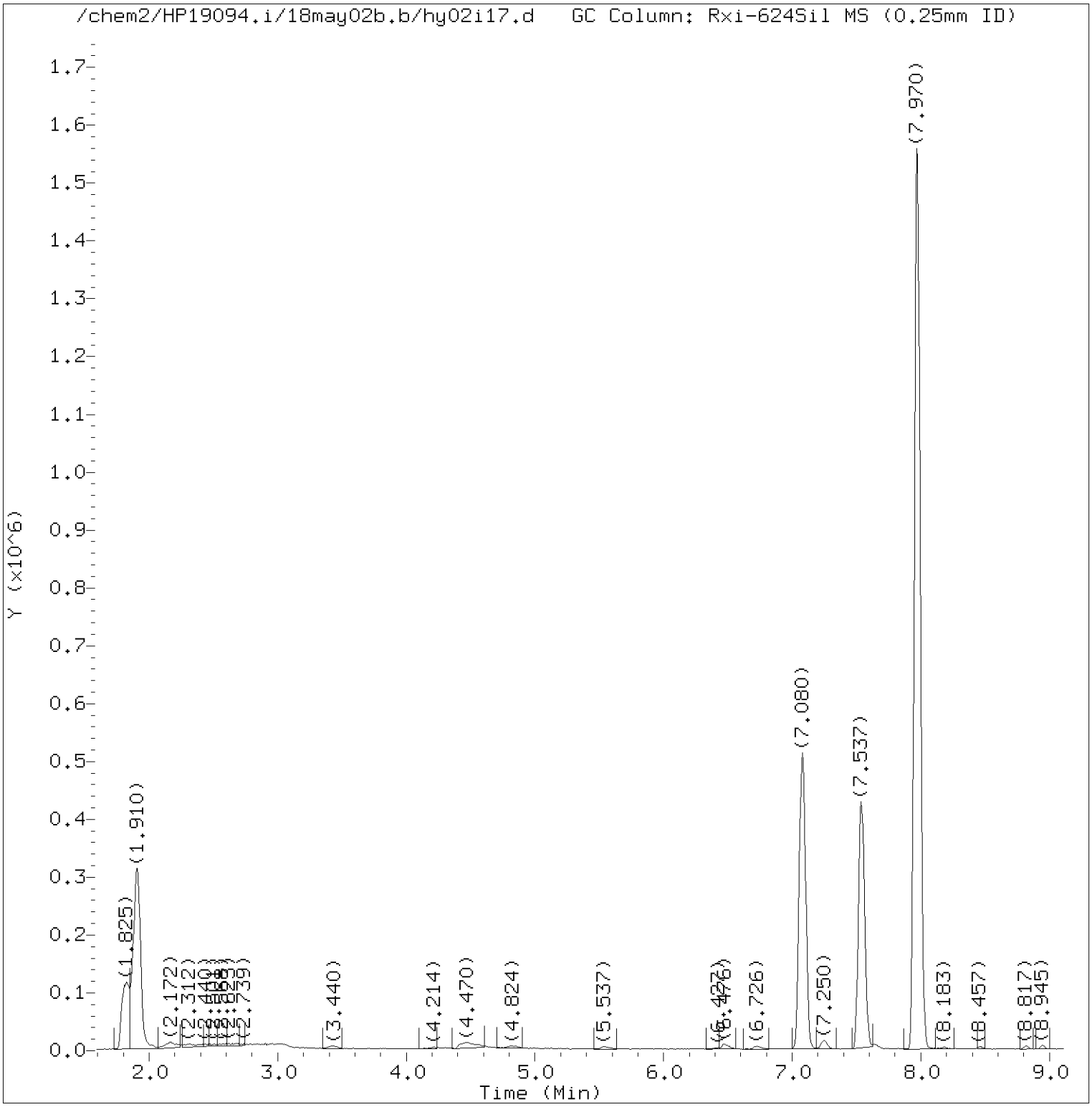
Data File: /chem2/HP19094.i/18may02b.b/hy02i16.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:02 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:20
Date, time and analyst ID of latest file update: 02-May-2018 21:20 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1879		
Retention Time (minutes)	: 13.042		
Quant Ion	: 55.00		
Area	: 306		
On-column Amount (ng)	: 0.6844		
Integration start scan	: 1876	Integration stop scan:	1896
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018



Total Ion Chromatogram (TIC)

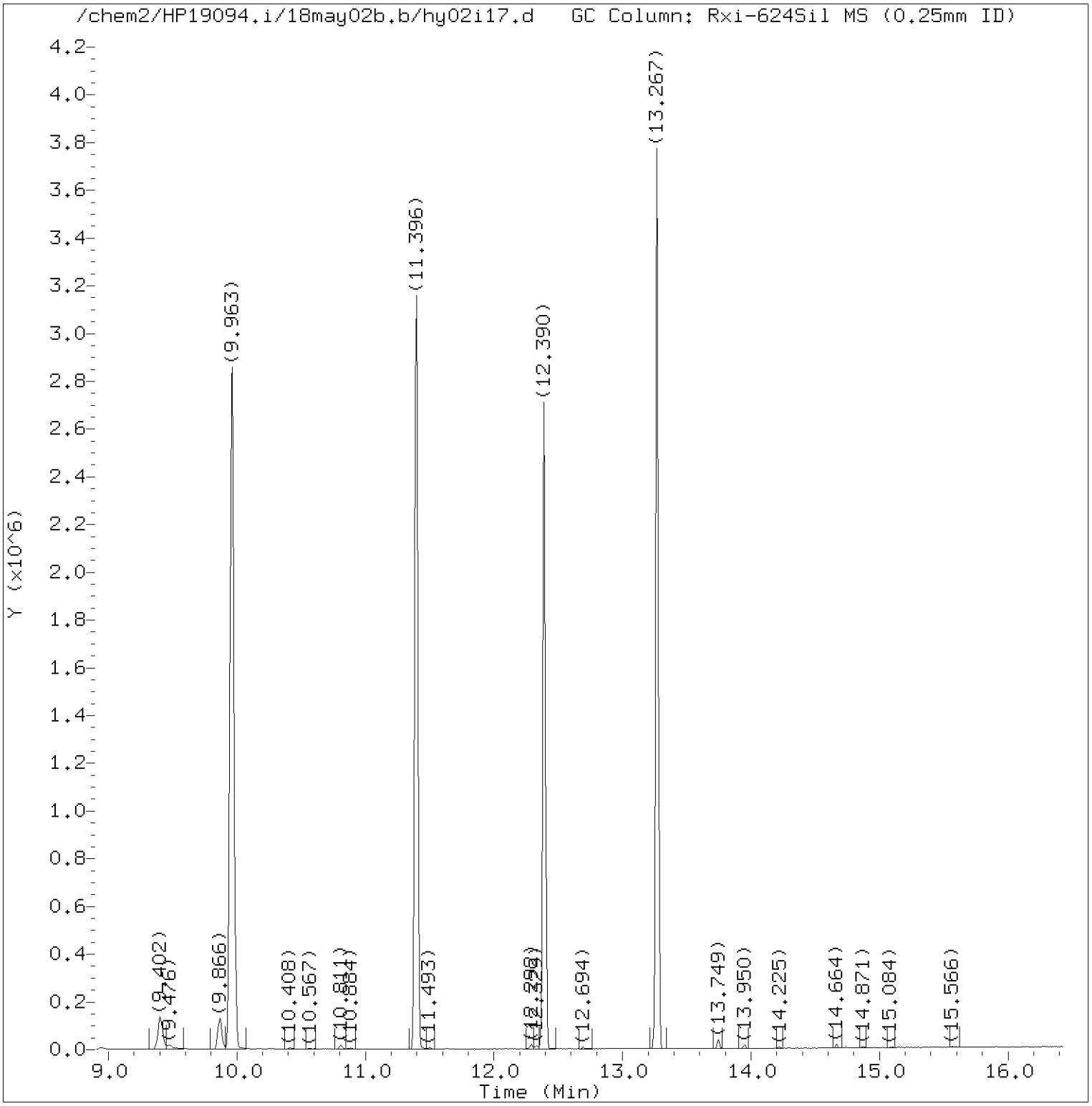
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

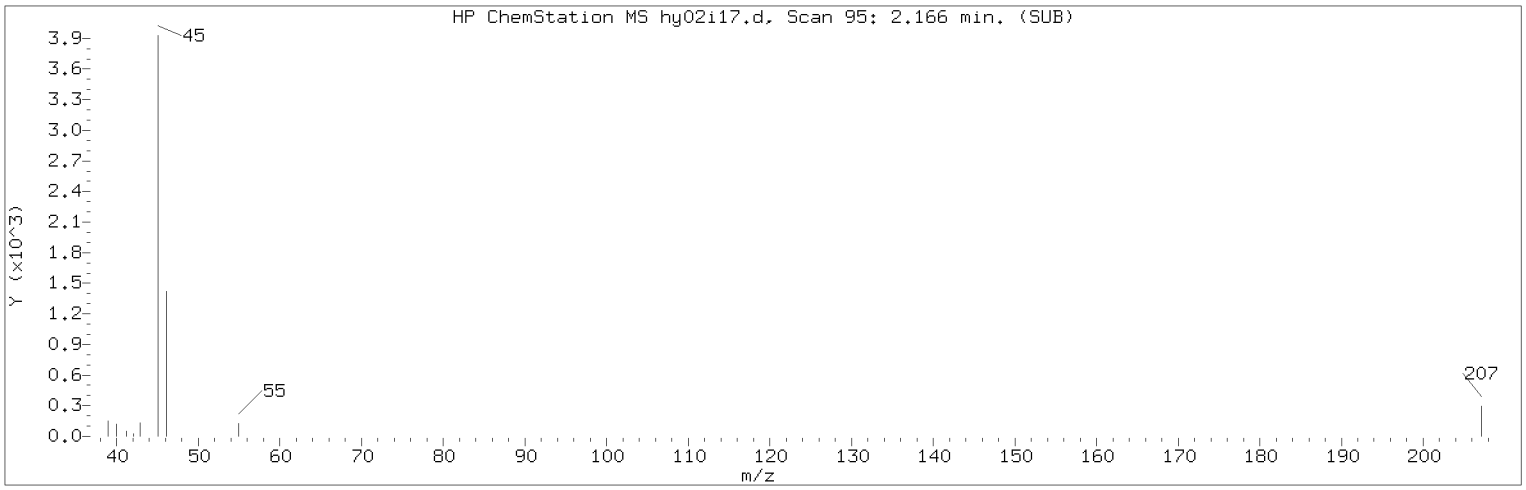
Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.166	45	15219M	0.211
25) Acetonitrile	(1)	4.214	41	18284M	8.644
26)*t-Butyl Alcohol-d10	(1)	4.476	65	87604	50.000
36) Vinyl Acetate	(2)	5.537	43	14183	0.206
43) Methyl Acrylate	(2)	6.476	55	20610	0.972
53) 1-Chlorobutane	(2)	7.256	56	20042	0.197
63)*Fluorobenzene	(2)	7.970	96	2247400	10.000
77) Chloroacetonitrile	(2)	9.476	75	8139	9.630
78) 2-Chloroethyl vinyl ether	(2)	9.476	63	3424	0.169
97)*Chlorobenzene-d5	(3)	11.396	117	1641487	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	3969M	0.350
112) Cyclohexanone	(1)	12.329	55	6386M	11.068
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	866486	10.000
142) Hexachloroethane	(4)	13.749	117	6486	0.178

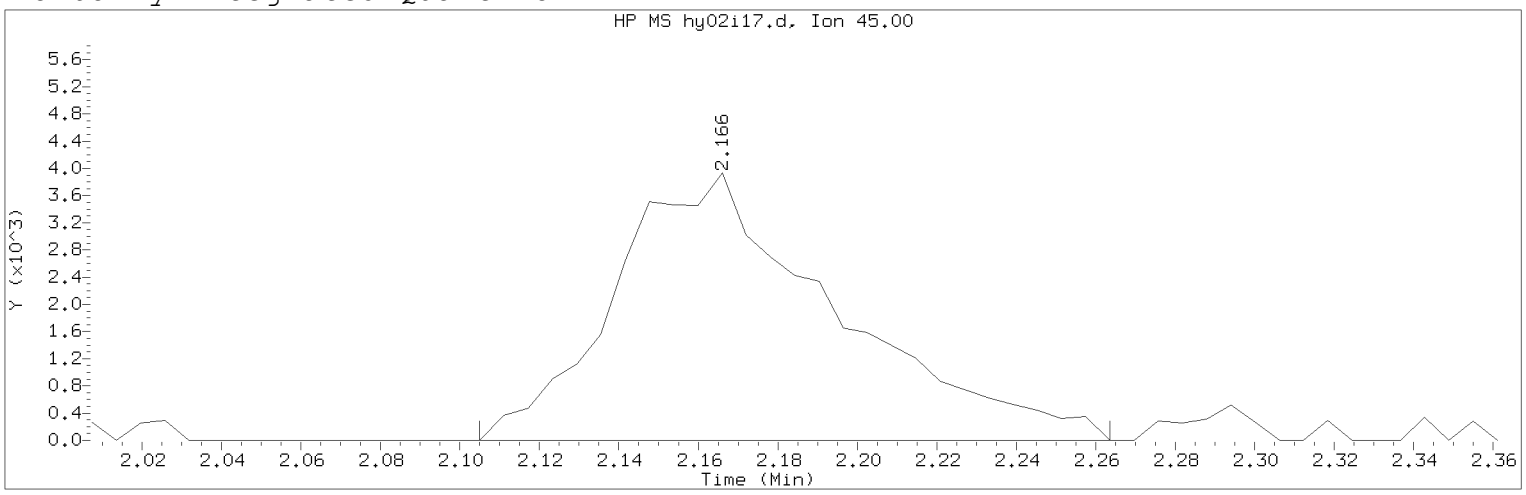
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

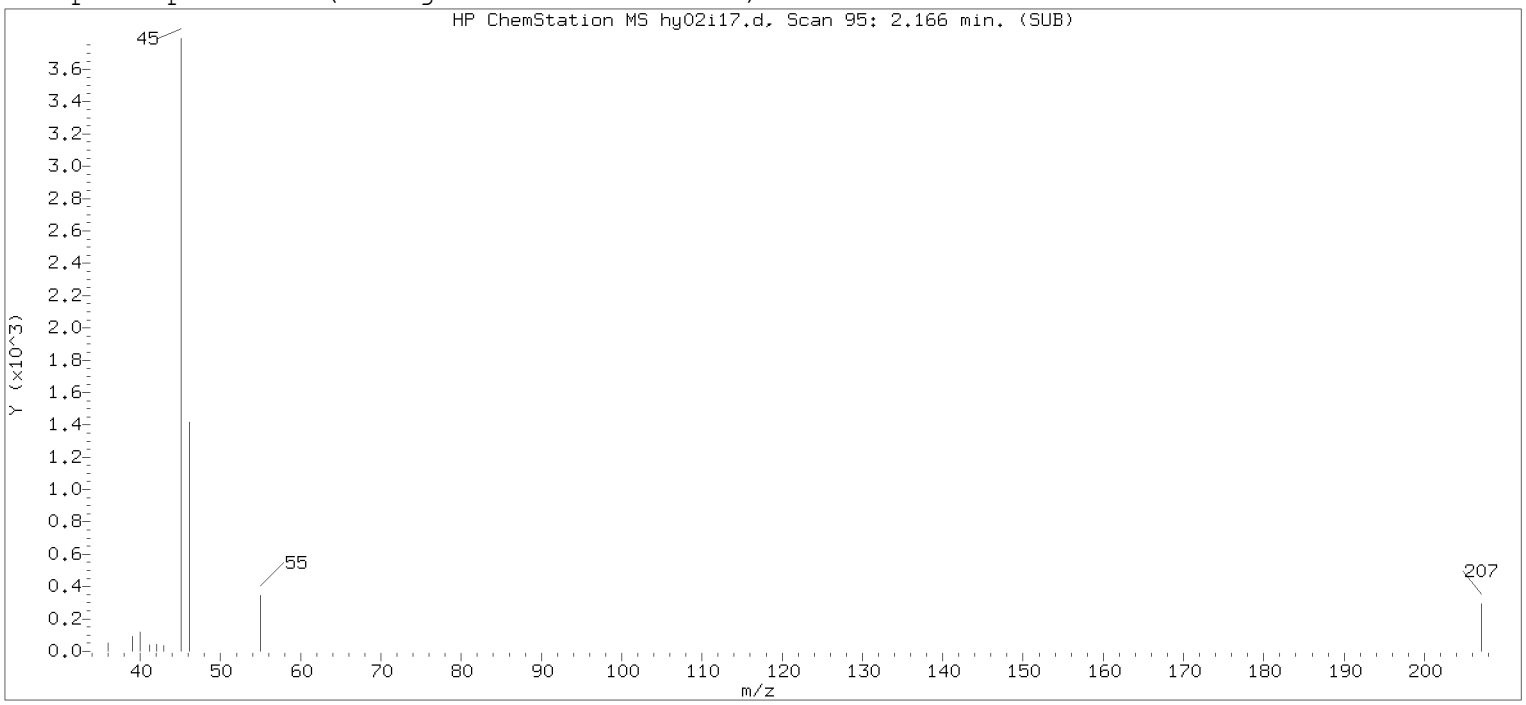
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area (flag) : 15219M
On-Column Amount (ng) : 0.2109
Integration start scan : 84 Integration stop scan: 110
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

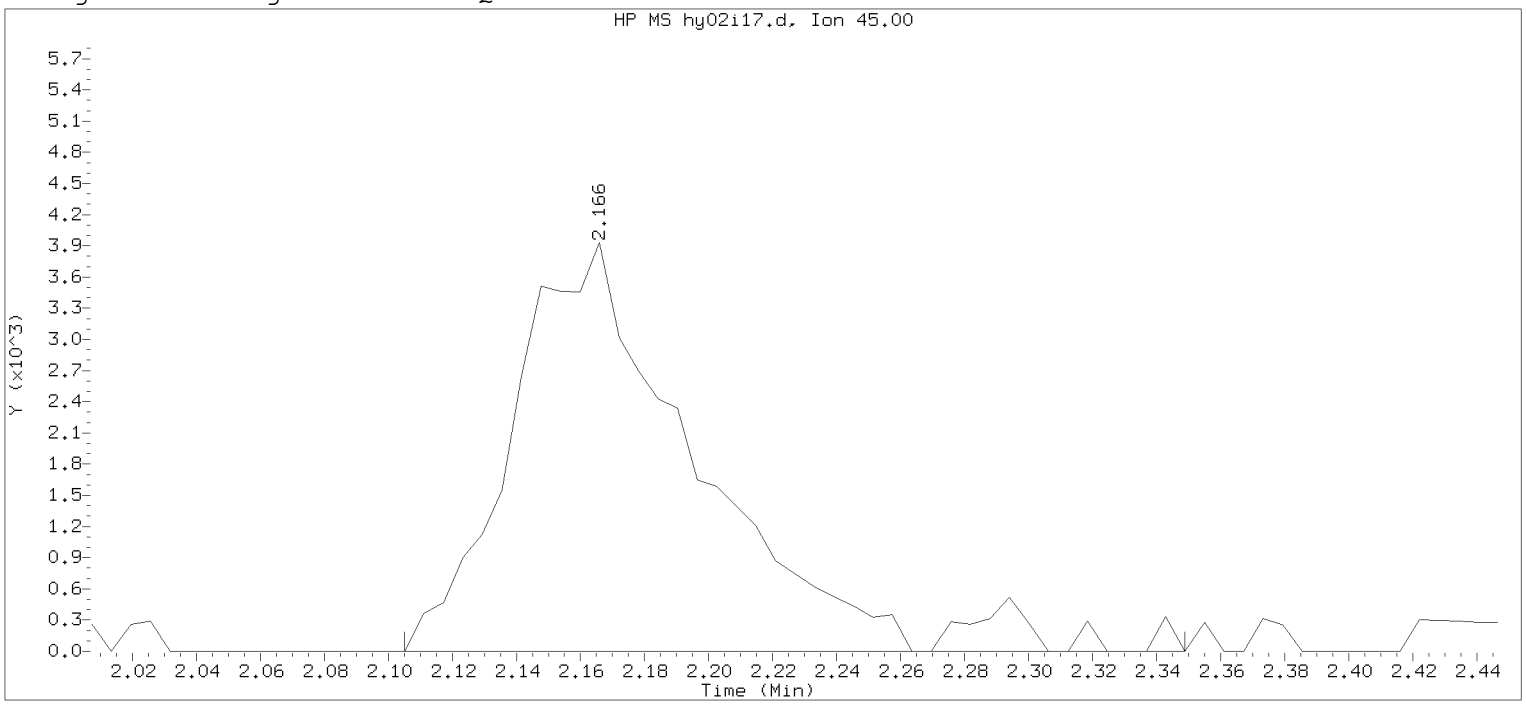
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

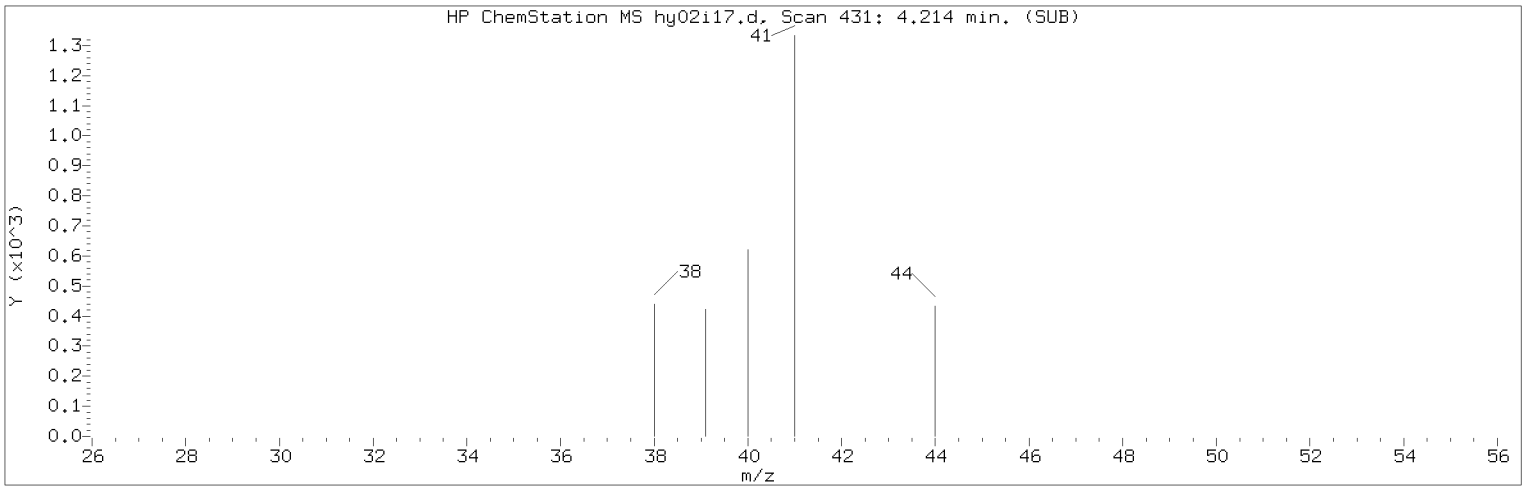
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

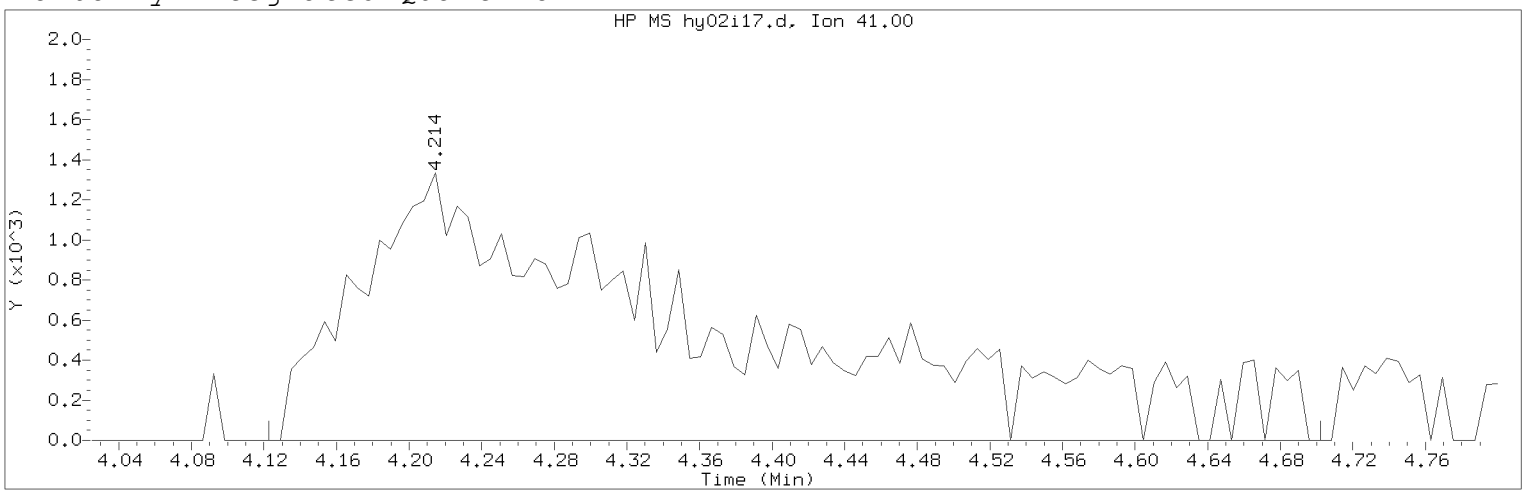
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 95
Retention Time (minutes): 2.166
Quant Ion : 45.00
Area : 16050
On-column Amount (ng) : 0.2226
Integration start scan : 84 Integration stop scan: 124
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

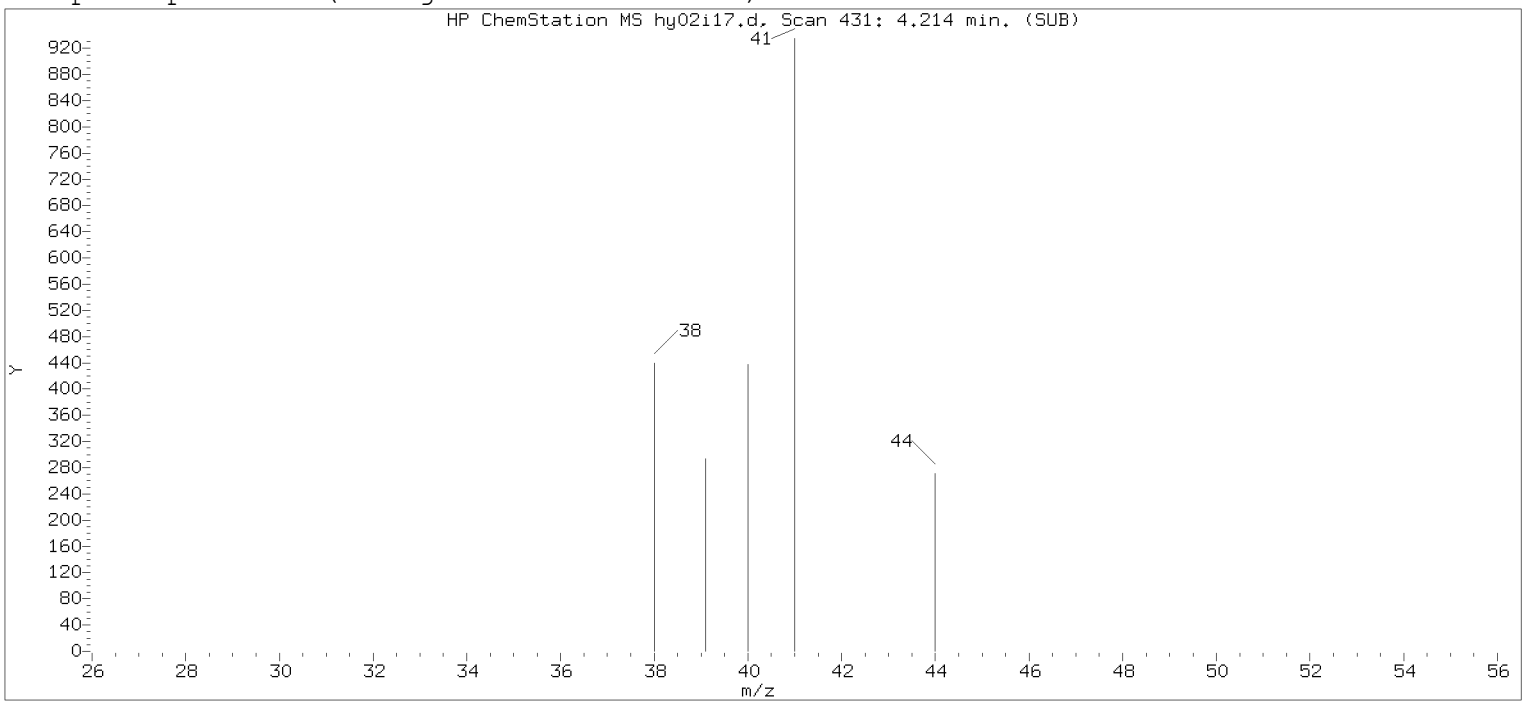
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 18284M
On-Column Amount (ng) : 8.6435
Integration start scan : 415 Integration stop scan: 510
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

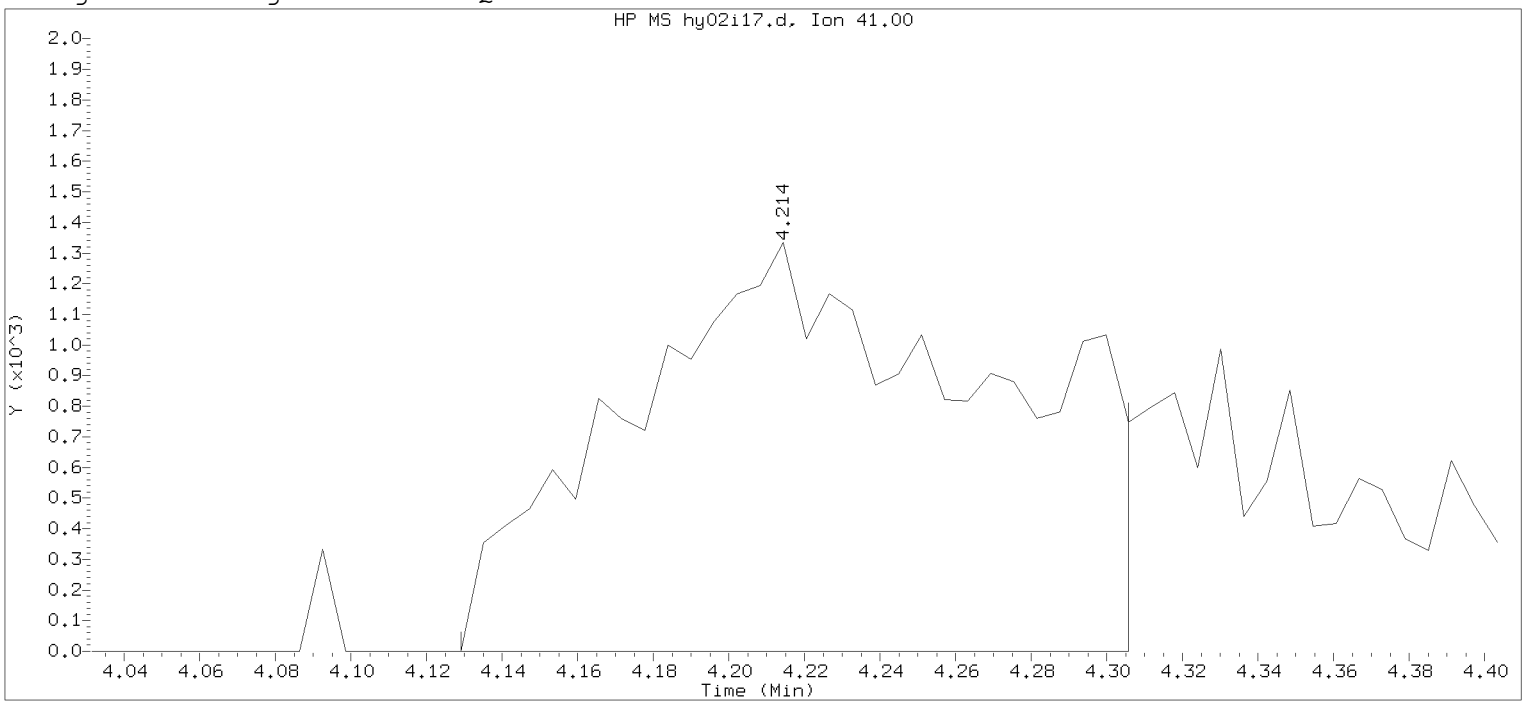
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

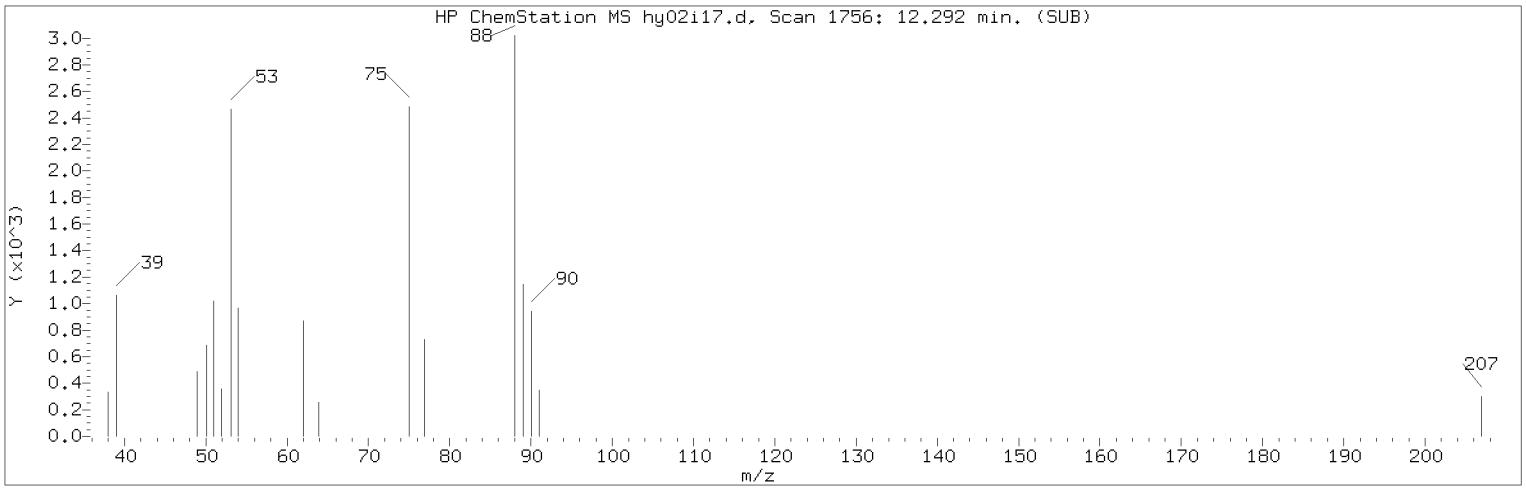
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

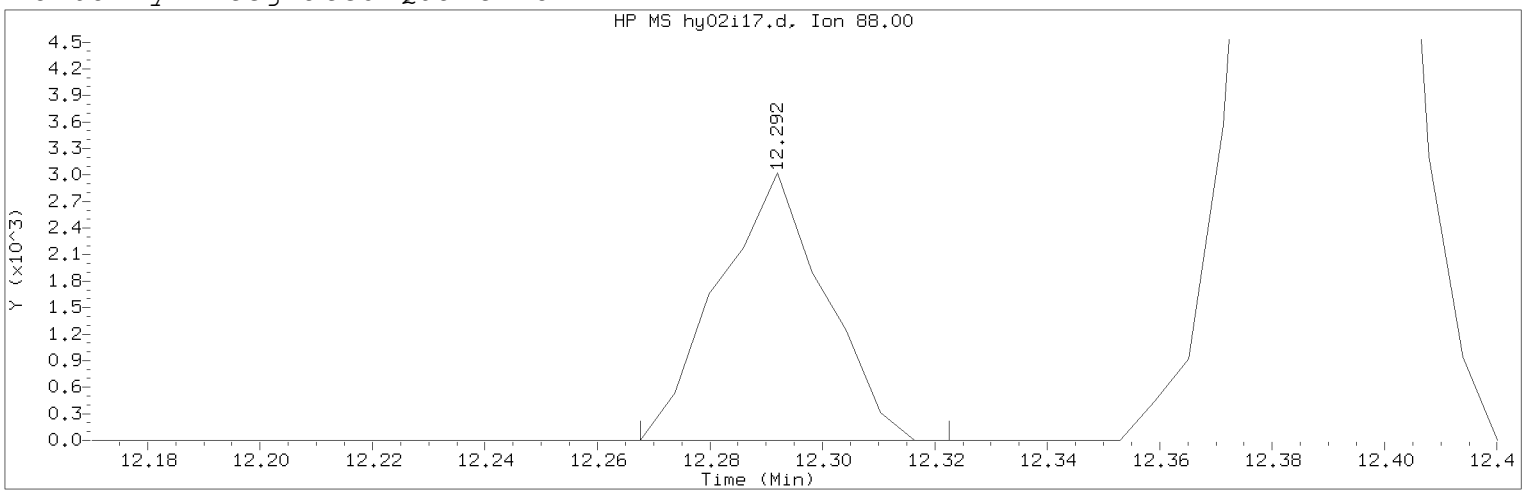
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 9088
On-column Amount (ng) : 5.0856
Integration start scan : 416 Integration stop scan: 445
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

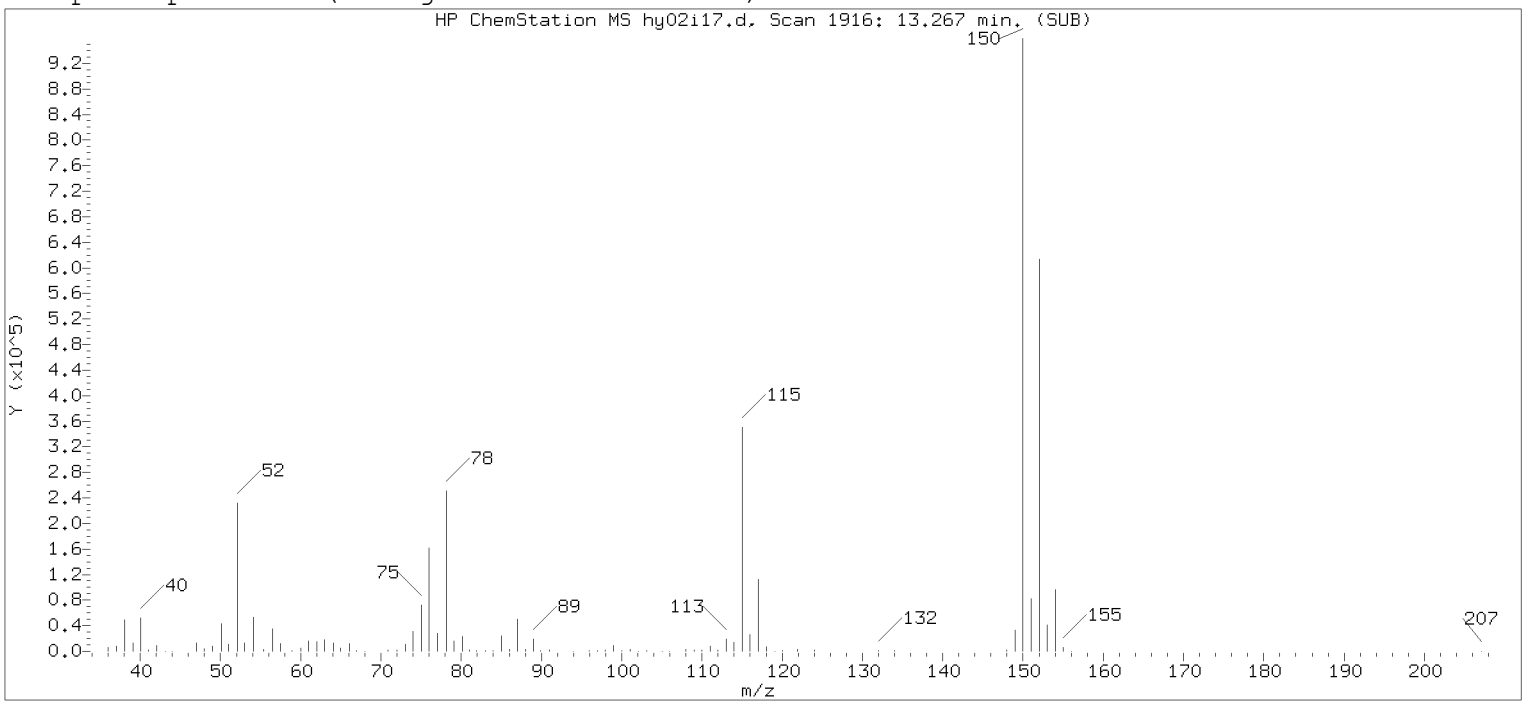
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 3969M
On-Column Amount (ng) : 0.3498
Integration start scan : 1751 Integration stop scan: 1760
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

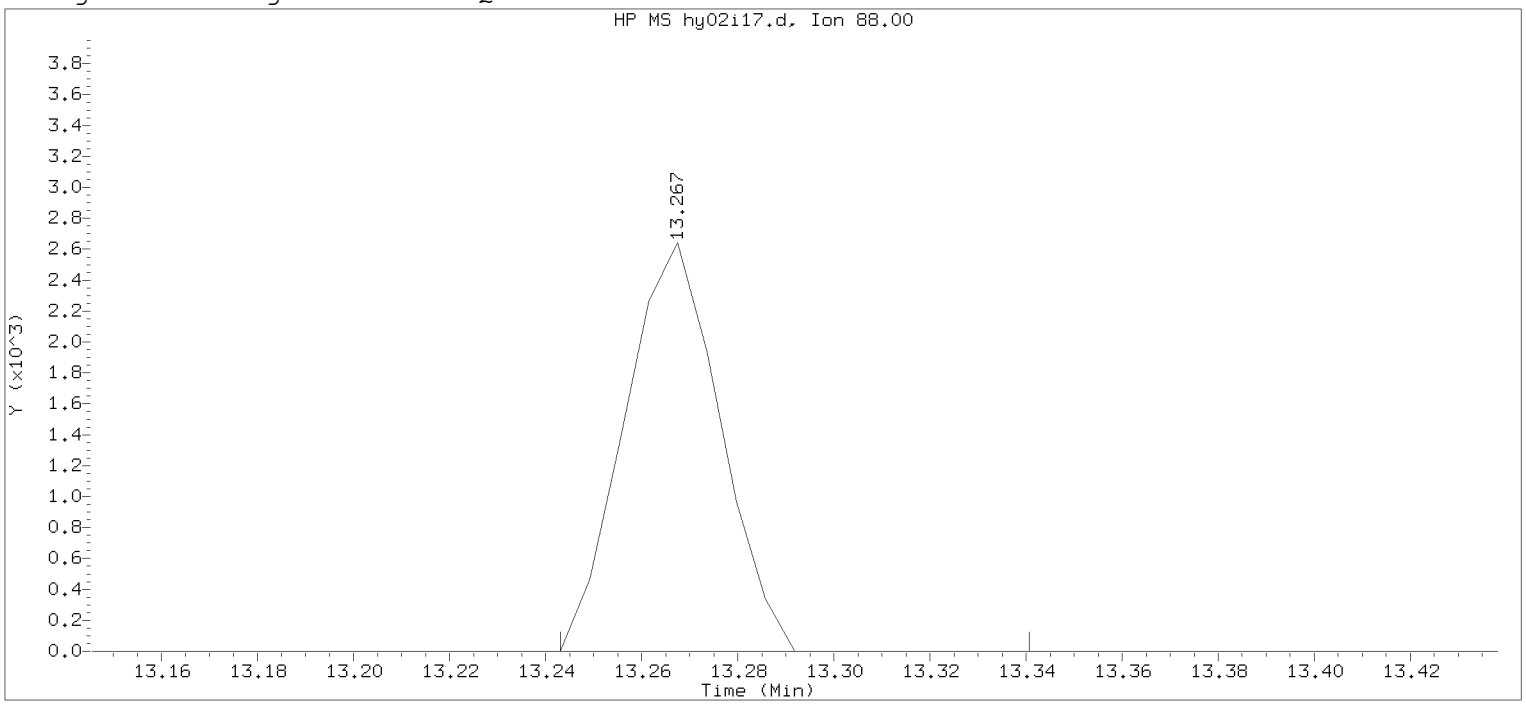
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

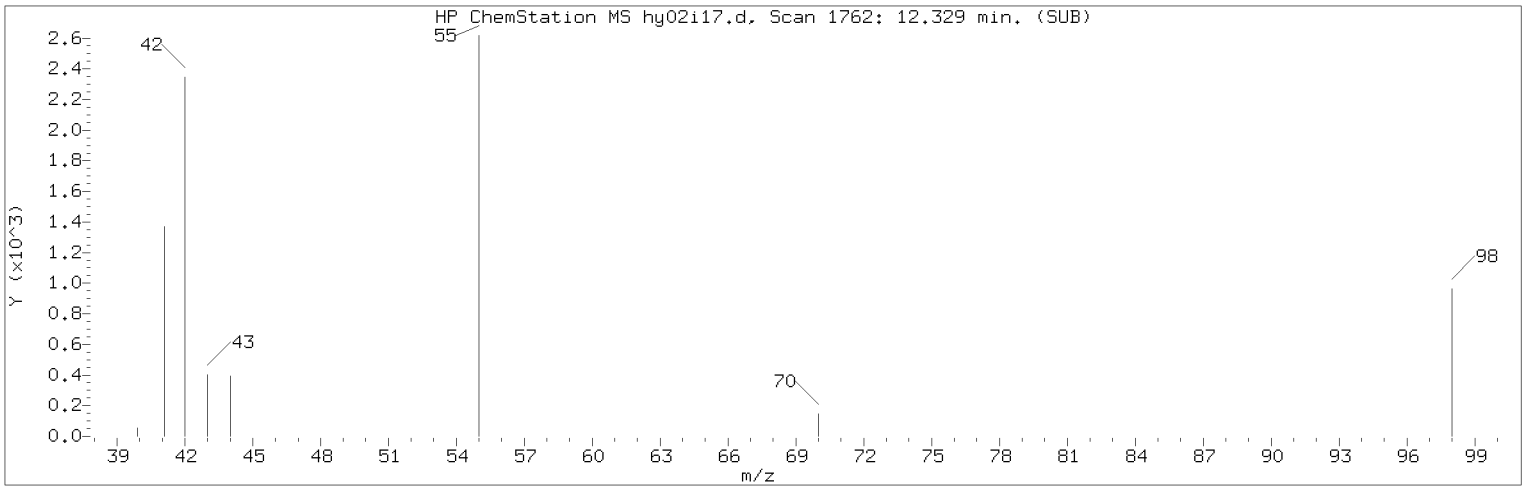
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

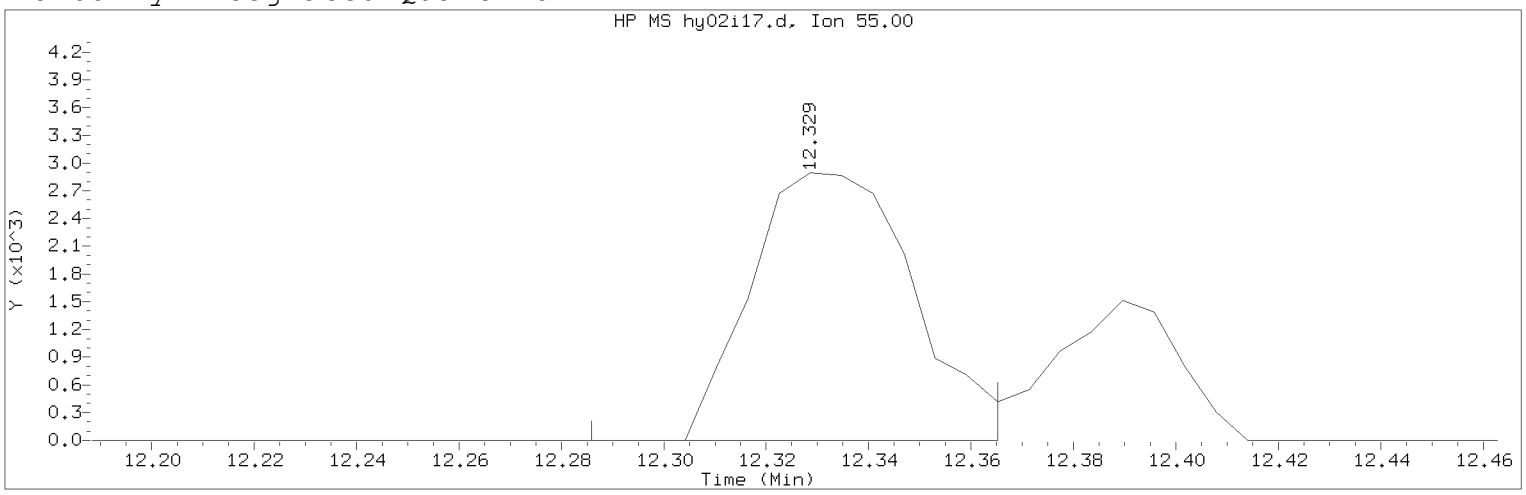
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1916
Retention Time (minutes): 13.267
Quant Ion : 88.00
Area : 3639
On-column Amount (ng) : 0.3604
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used during 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:21 dvv10203

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

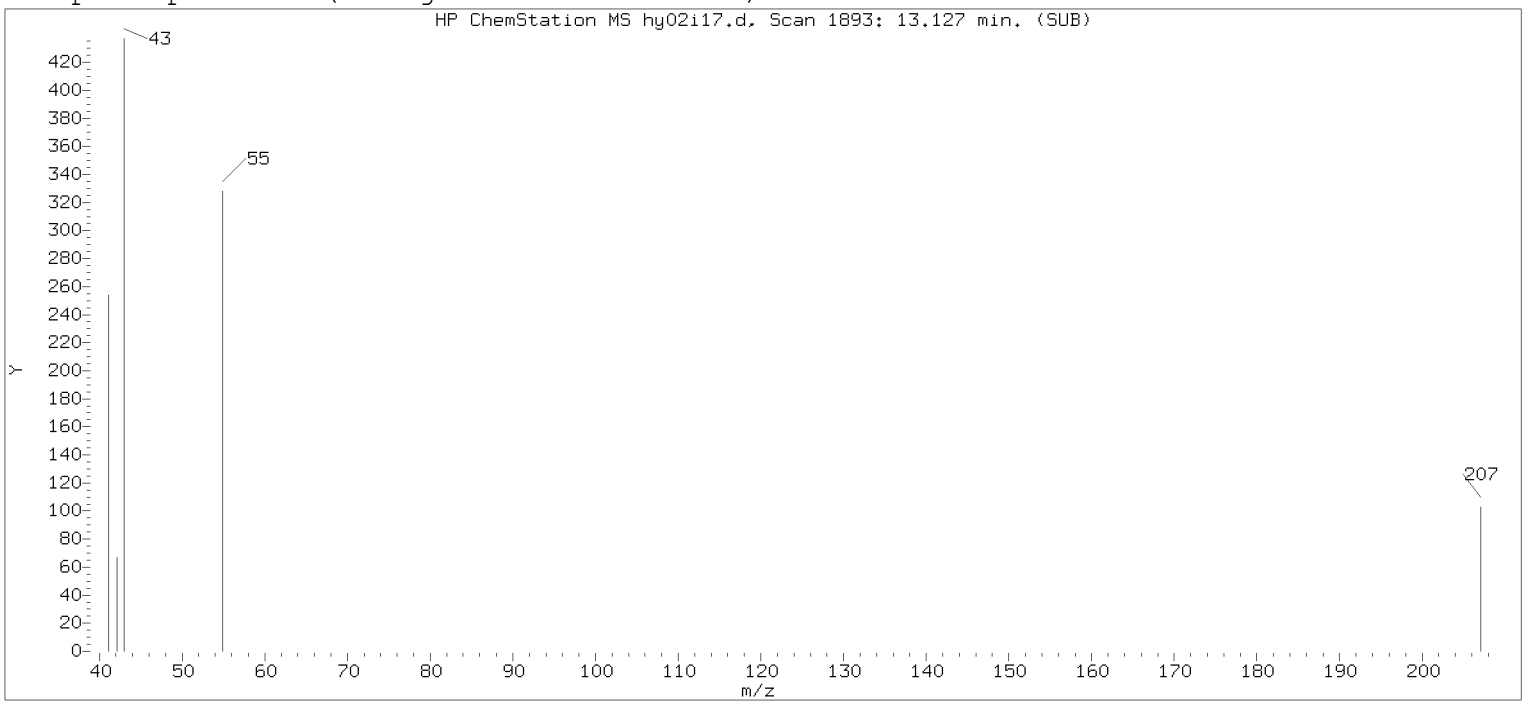
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 6386M
On-Column Amount (ng) : 11.0679
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

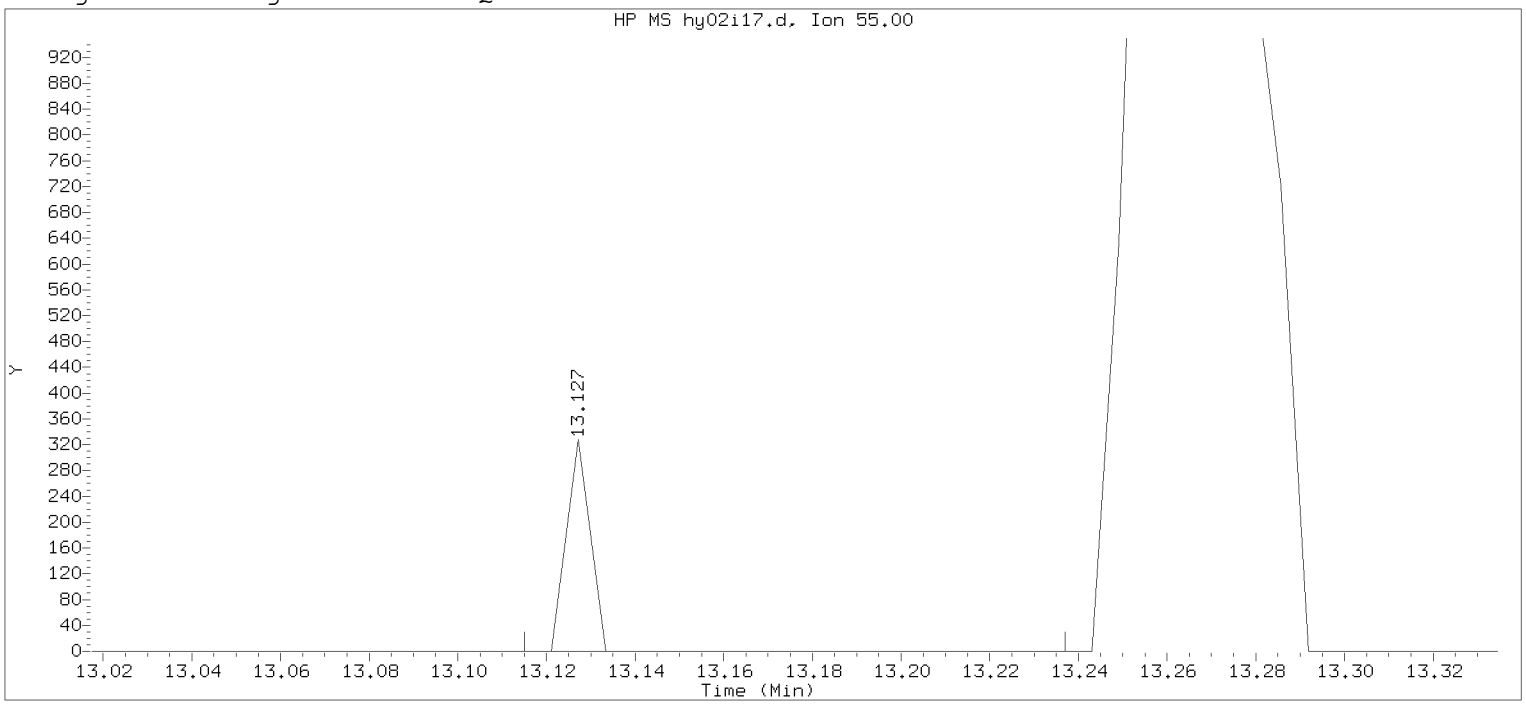
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:22.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



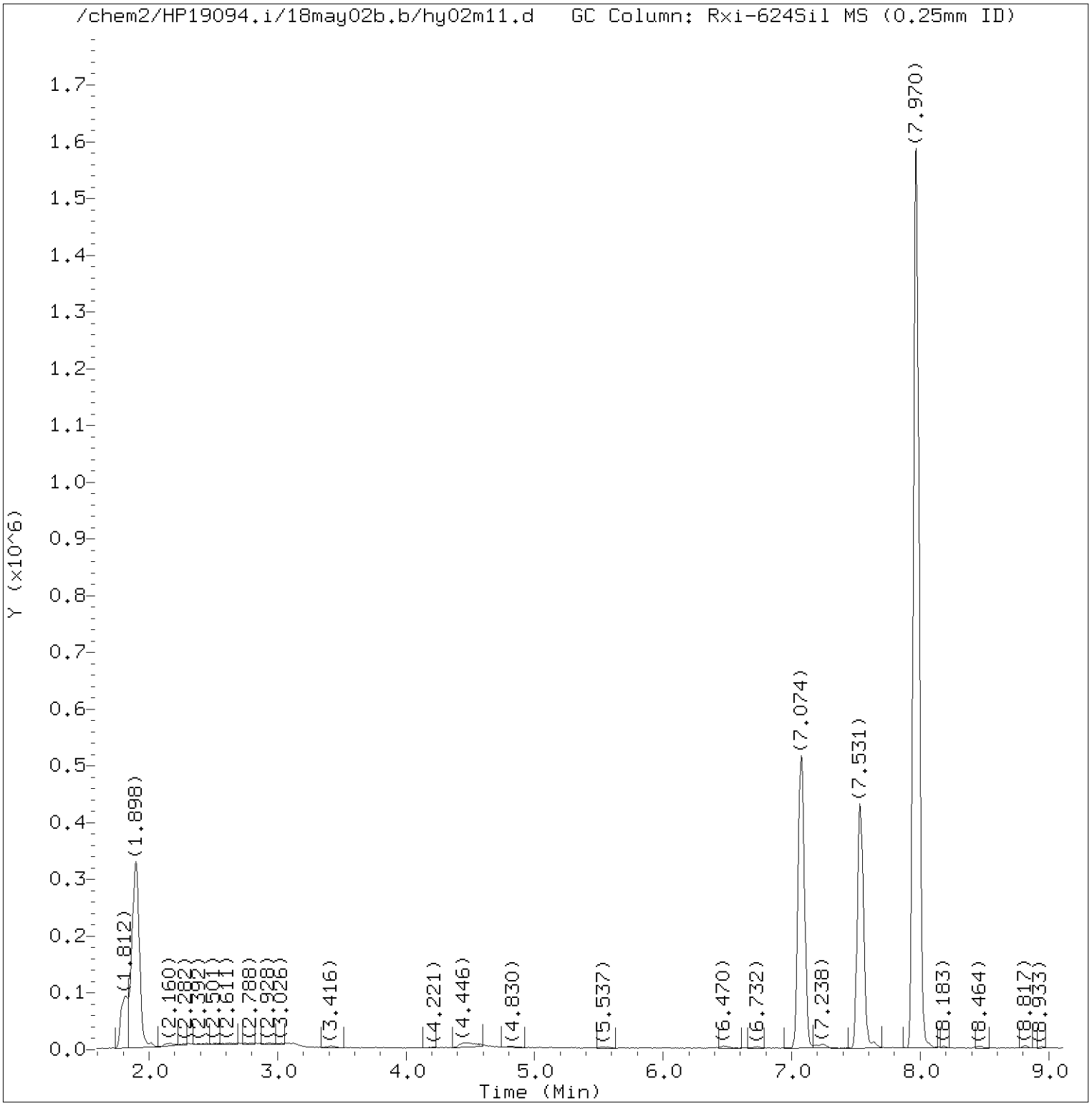
Data File: /chem2/HP19094.i/18may02b.b/hy02i17.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:23 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 02-MAY-2018 21:41
Date, time and analyst ID of latest file update: 02-May-2018 21:41 Automation

Sample Name: VSTD0.2 Lab Sample ID: VSTD0.2

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1893
Retention Time (minutes): 13.127
Quant Ion : 55.00
Area : 119
On-column Amount (ng) : 0.2868
Integration start scan : 1890 Integration stop scan: 1910
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:22.
Target 3.5 esignature used on 05/02/2018



Total Ion Chromatogram (TIC)

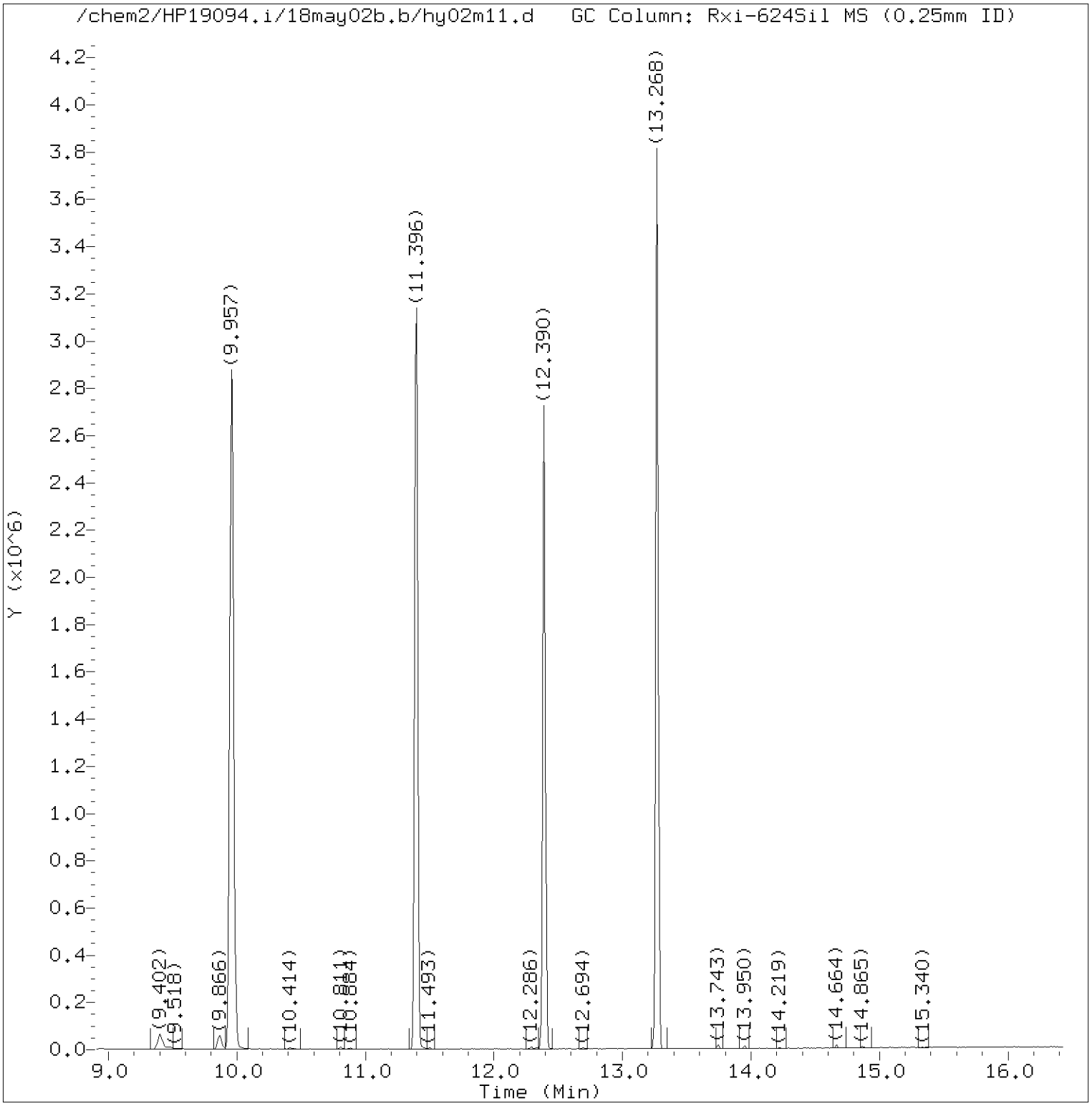
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

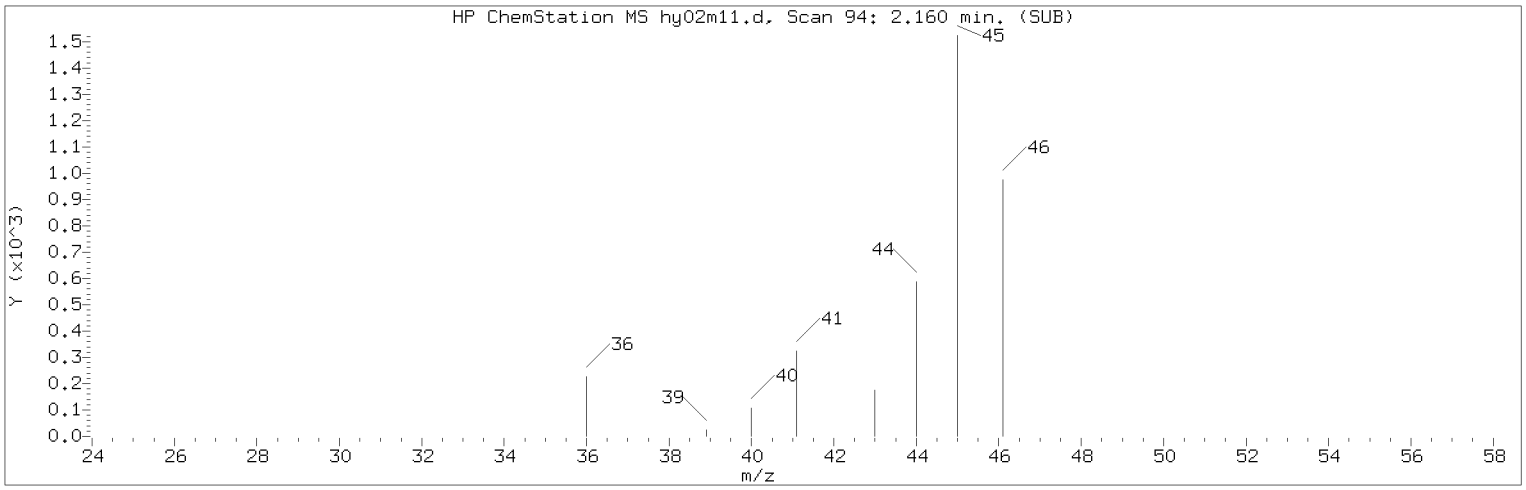
Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	7839M	0.107
25) Acetonitrile	(1)	4.208	41	8867M	4.300
26)*t-Butyl Alcohol-d10	(1)	4.458	65	85408M	50.000
36) Vinyl Acetate	(2)	5.525	43	6614	0.095
43) Methyl Acrylate	(2)	6.476	55	9556M	0.444
50)$Dibromofluoromethane	(2)	7.074	113	541631	9.601
53) 1-Chlorobutane	(2)	7.238	56	8275	0.080
57)$1,2-Dichloroethane-d4	(2)	7.537	102	99600	10.012
63)*Fluorobenzene	(2)	7.970	96	2283251	10.000
77) Chloroacetonitrile	(2)	9.476	75	2884	3.359
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	1644	0.080
82)$Toluene-d8	(3)	9.957	98	2300054	10.082
97)*Chlorobenzene-d5	(3)	11.396	117	1651612	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	1506M	0.136
112) Cyclohexanone	(1)	12.341	55	2470M	4.391
111)$4-Bromofluorobenzene	(3)	12.390	95	809970	10.008
133)*1,4-Dichlorobenzene-d4	(4)	13.268	152	873882	10.000
142) Hexachloroethane	(4)	13.749	117	2414	0.066

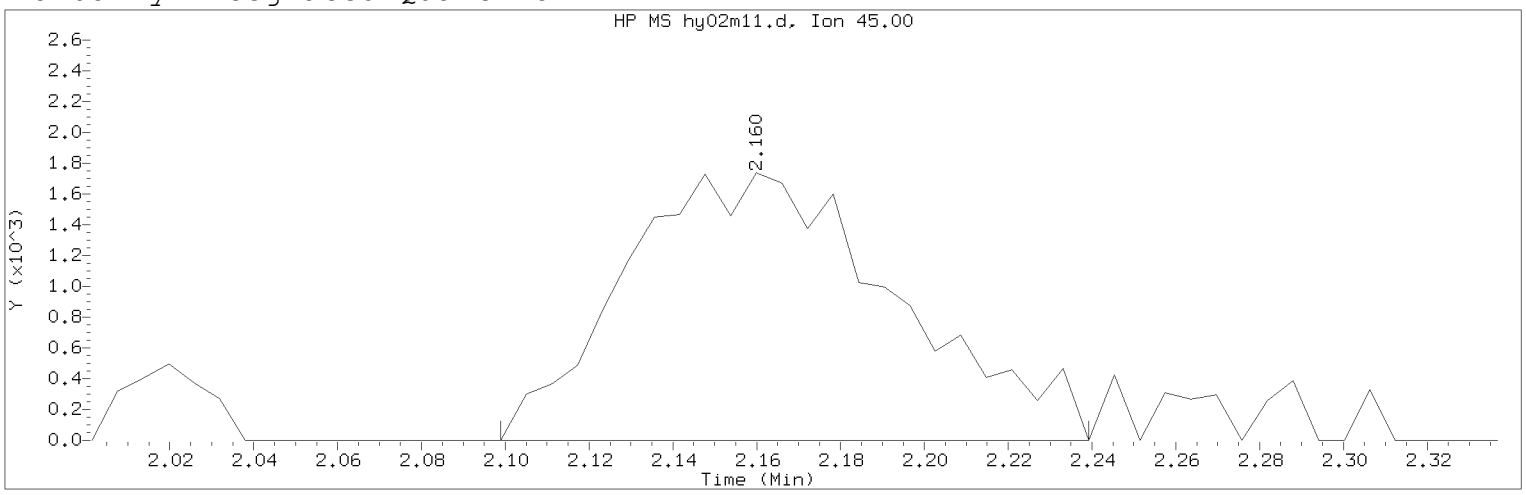
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

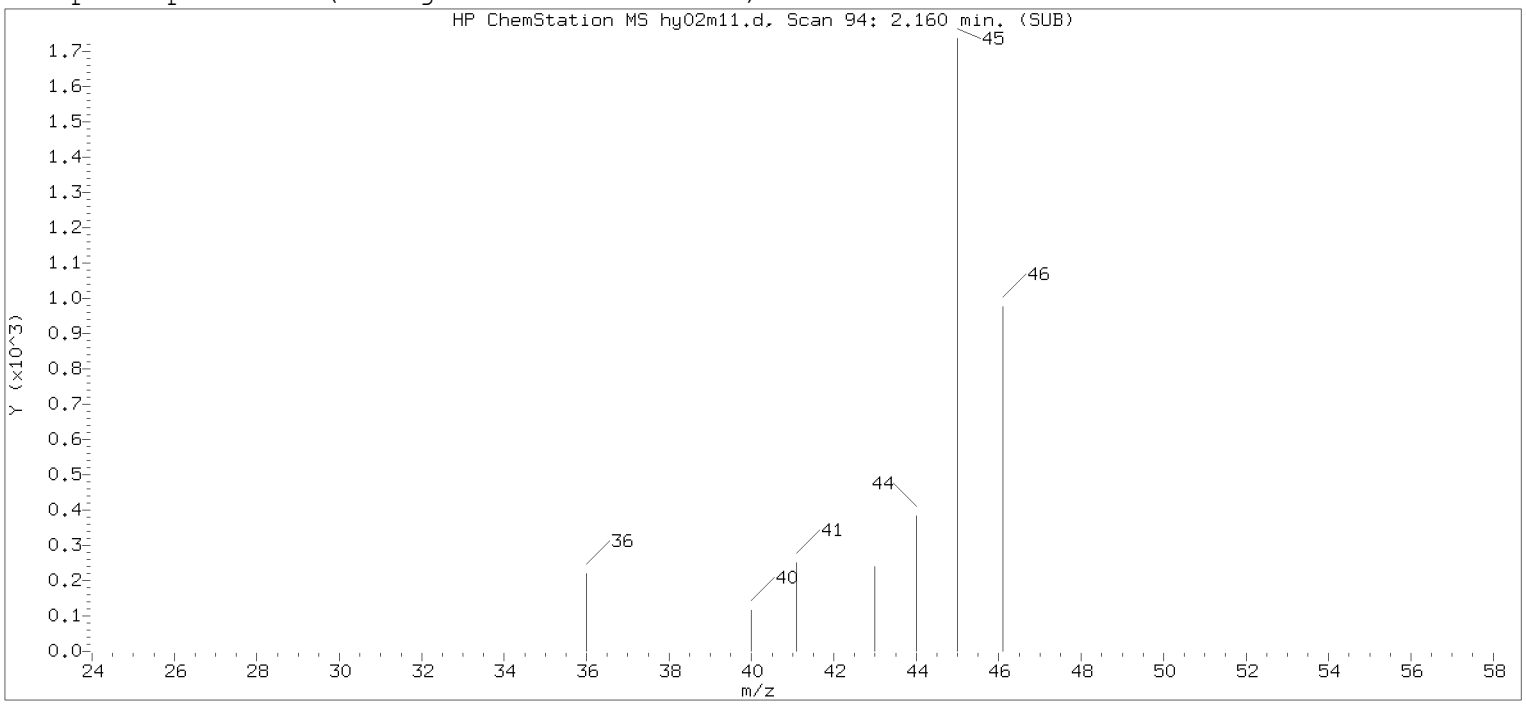
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 7839M
On-Column Amount (ng) : 0.1069
Integration start scan : 83 Integration stop scan: 106
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

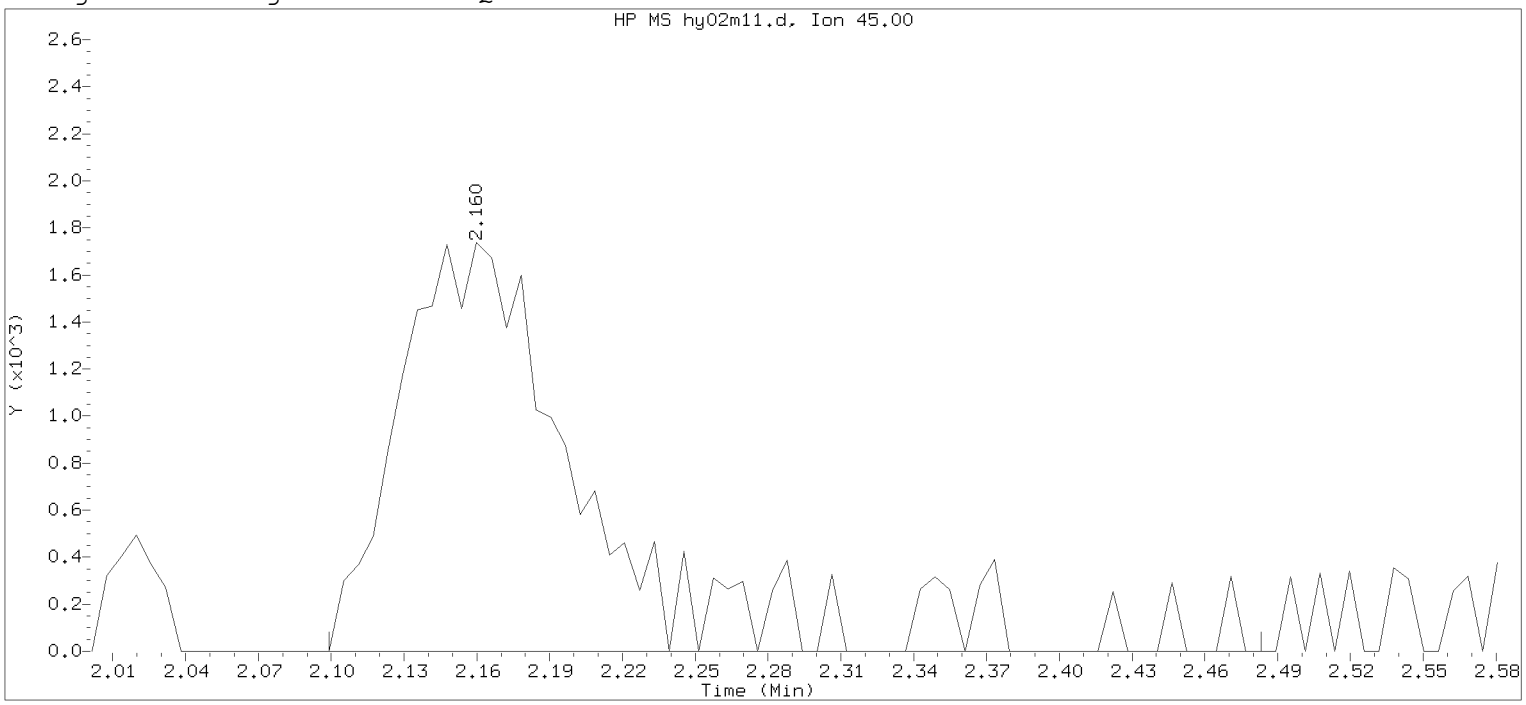
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

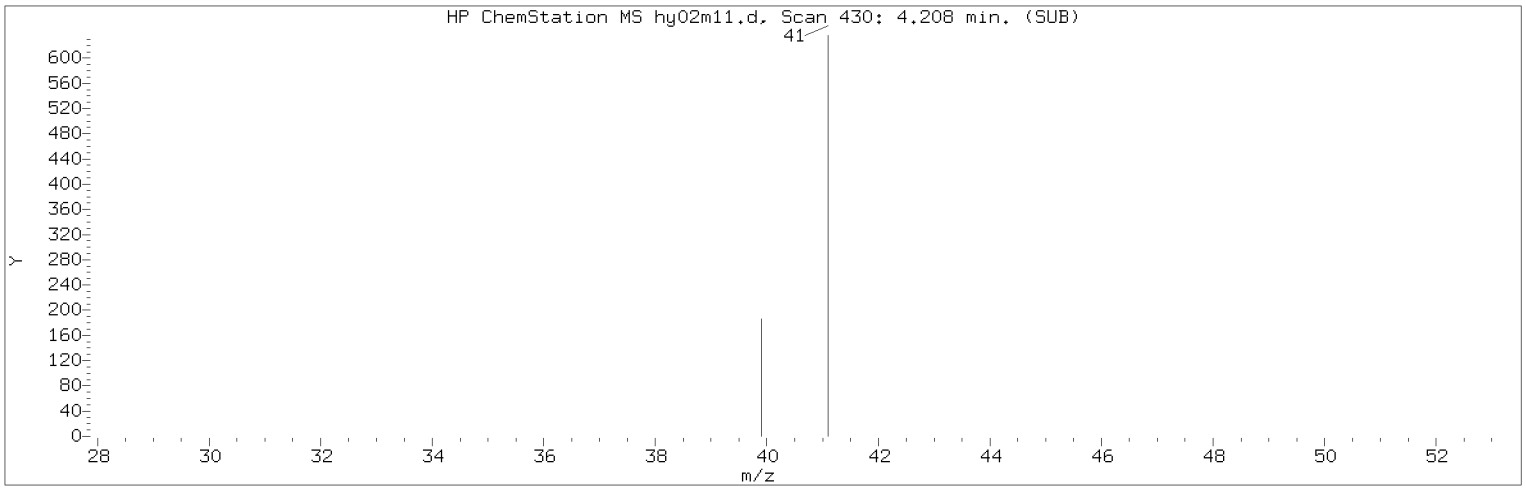
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

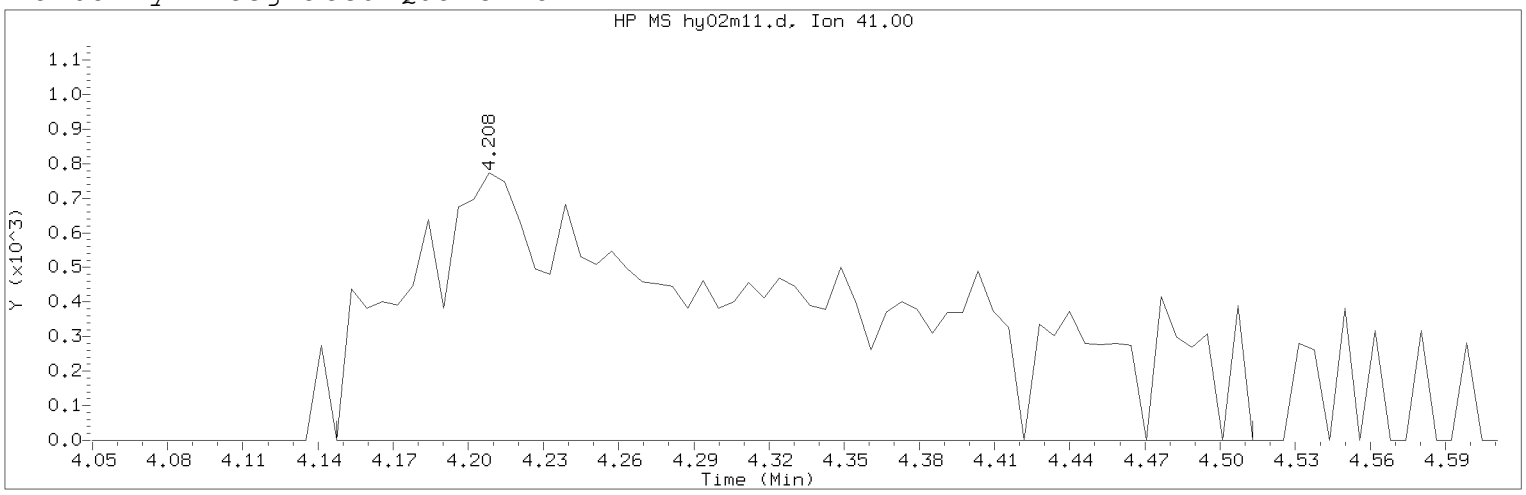
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 94		
Retention Time (minutes)	: 2.160		
Quant Ion	: 45.00		
Area	: 9539		
On-column Amount (ng)	: 0.1302		
Integration start scan	: 83	Integration stop scan:	146
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

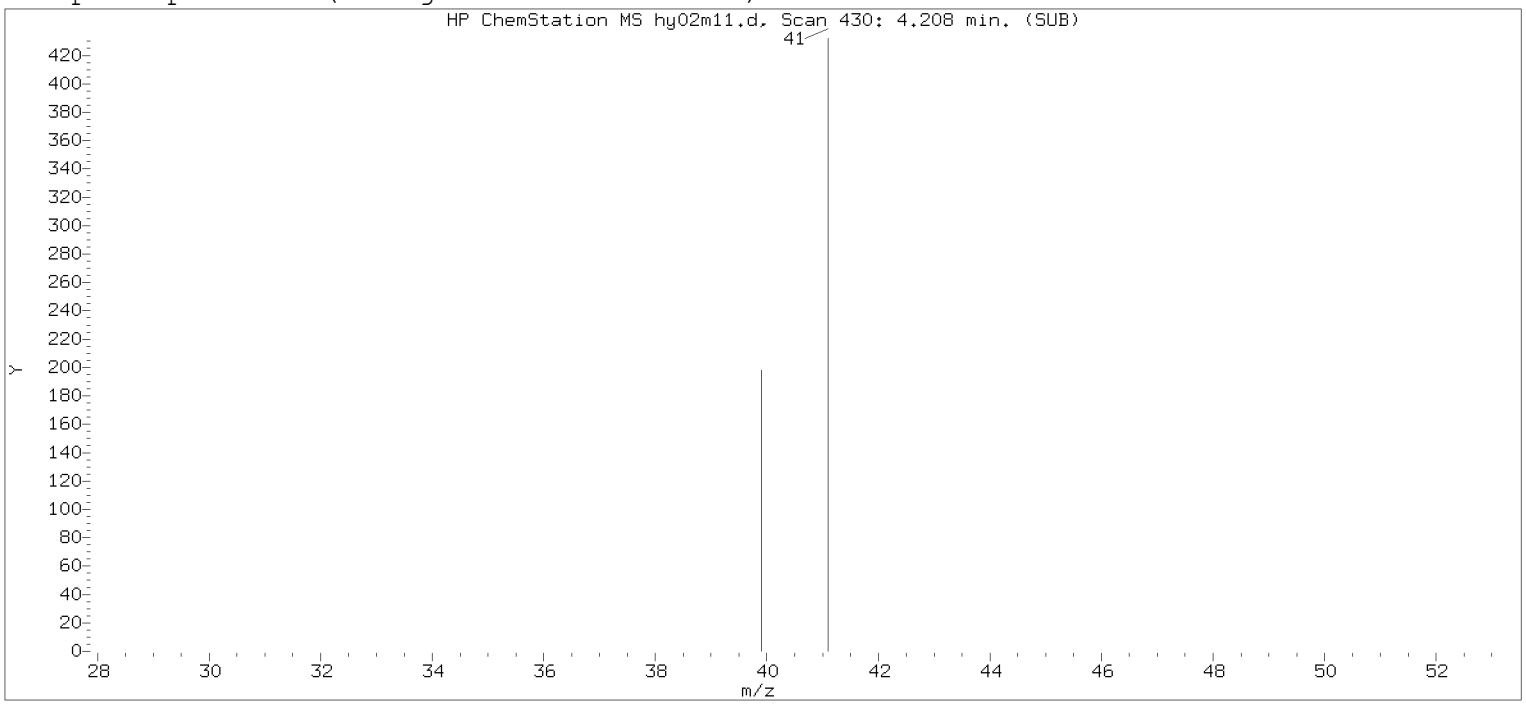
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 8867M
On-Column Amount (ng) : 4.2995
Integration start scan : 419 Integration stop scan: 479
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

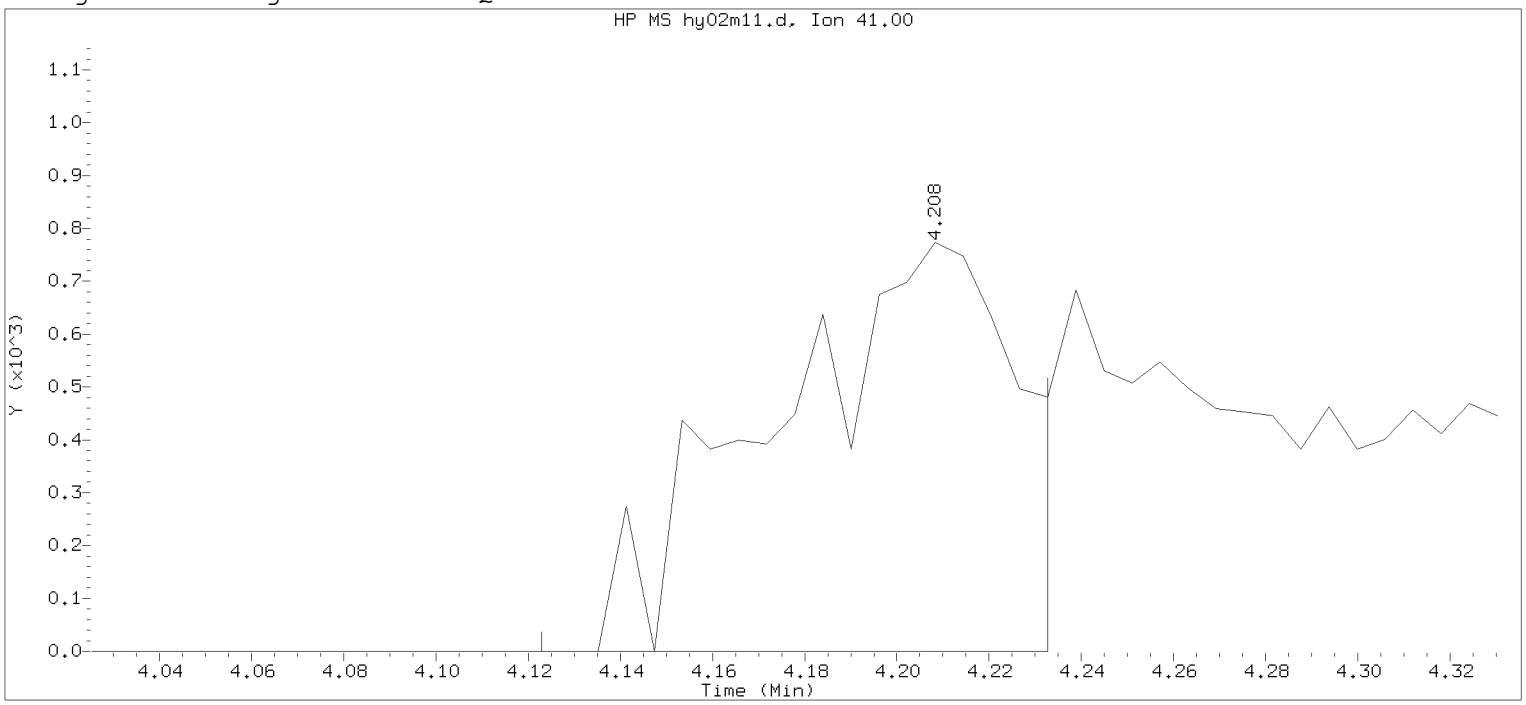
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

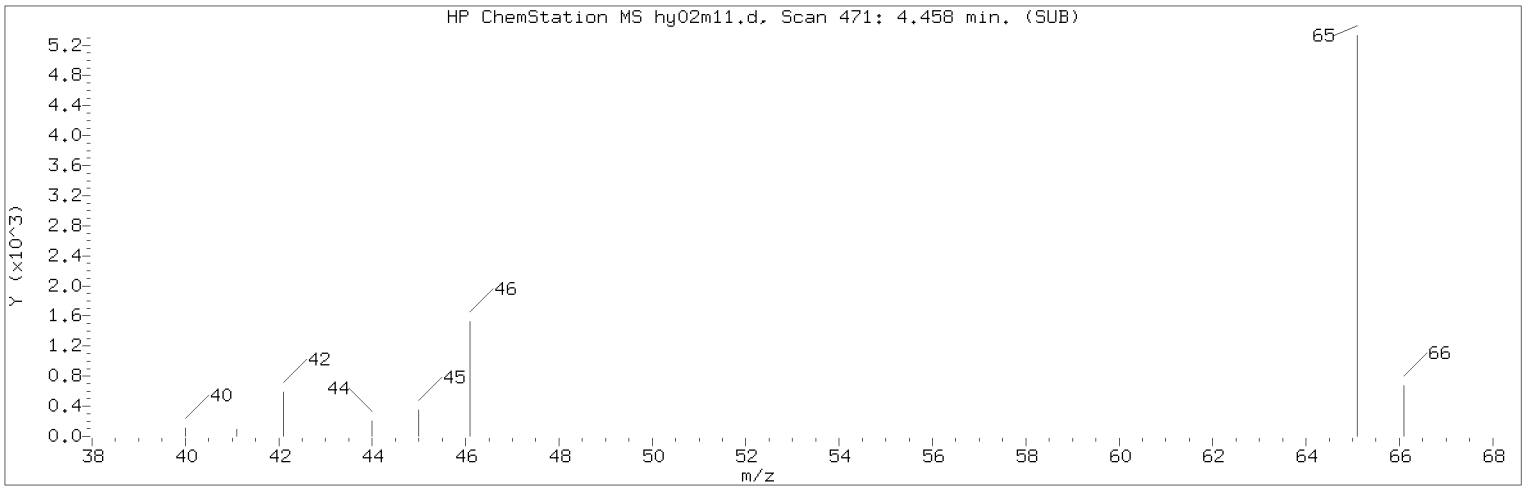
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

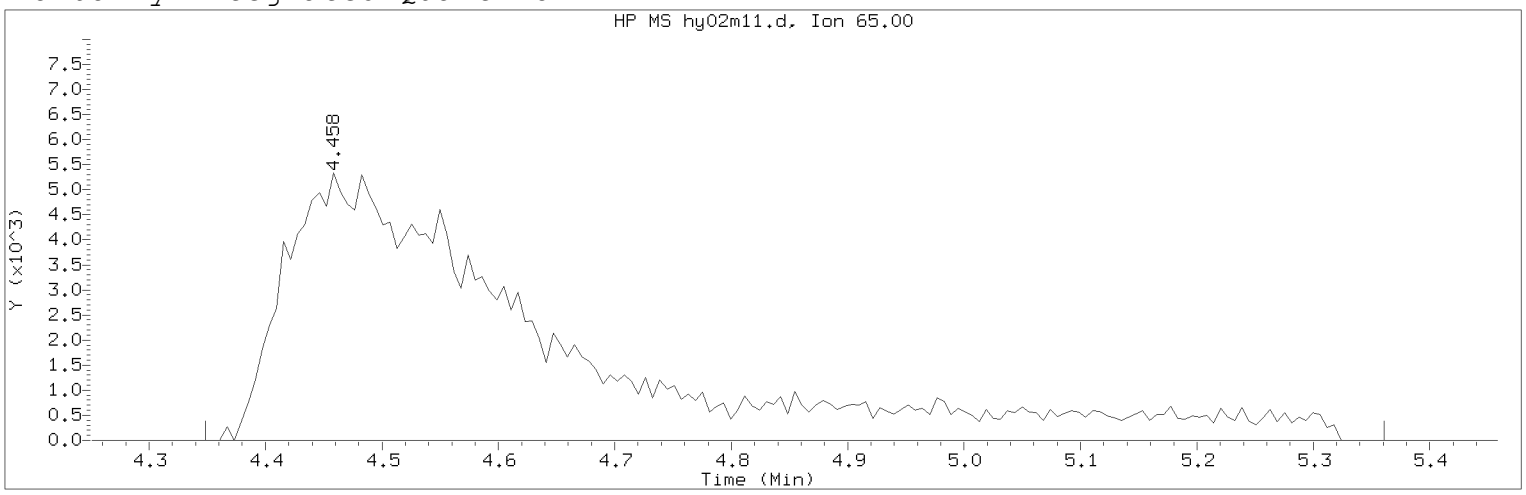
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 2786
On-column Amount (ng) : 1.5113
Integration start scan : 415 Integration stop scan: 433
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

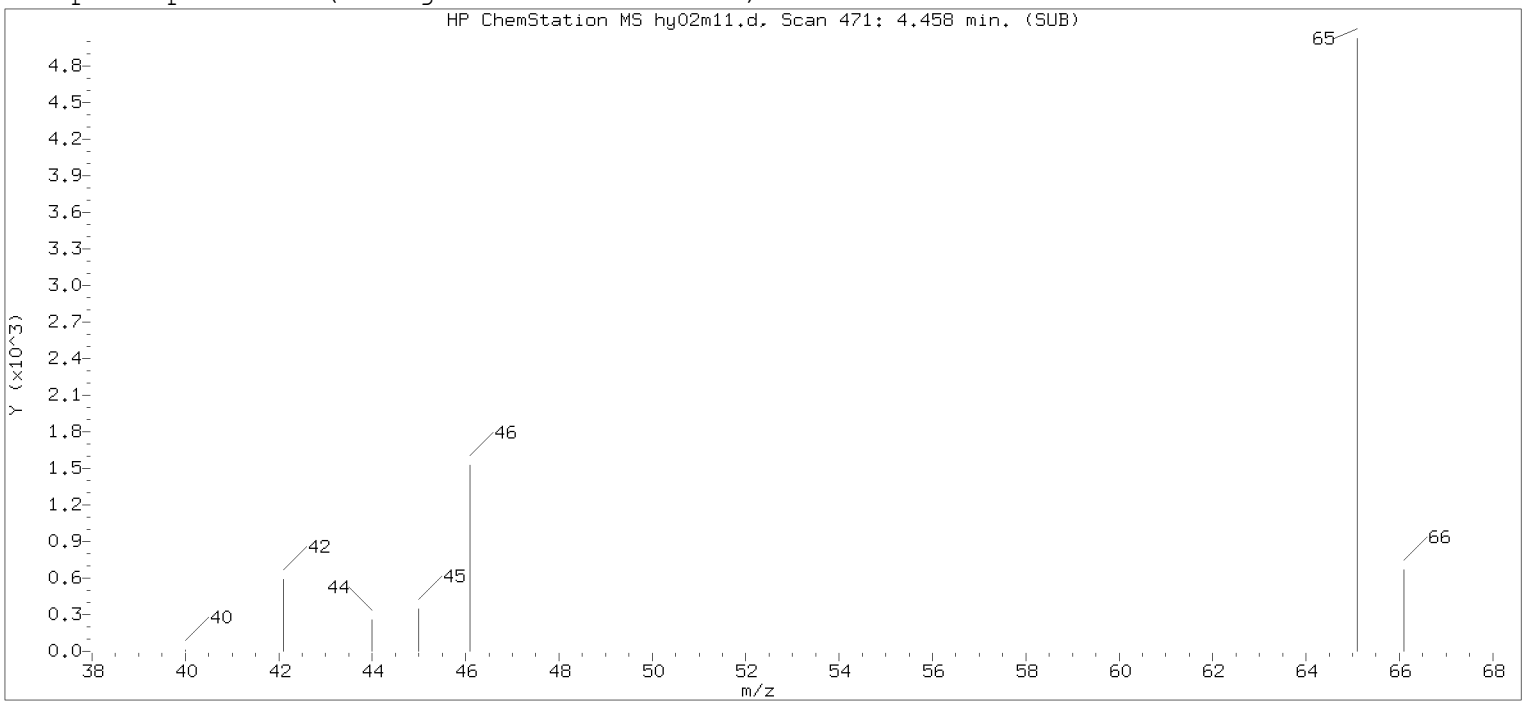
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 471
Retention Time (minutes): 4.458
Quant Ion : 65.00
Area (flag) : 85408M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 618
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

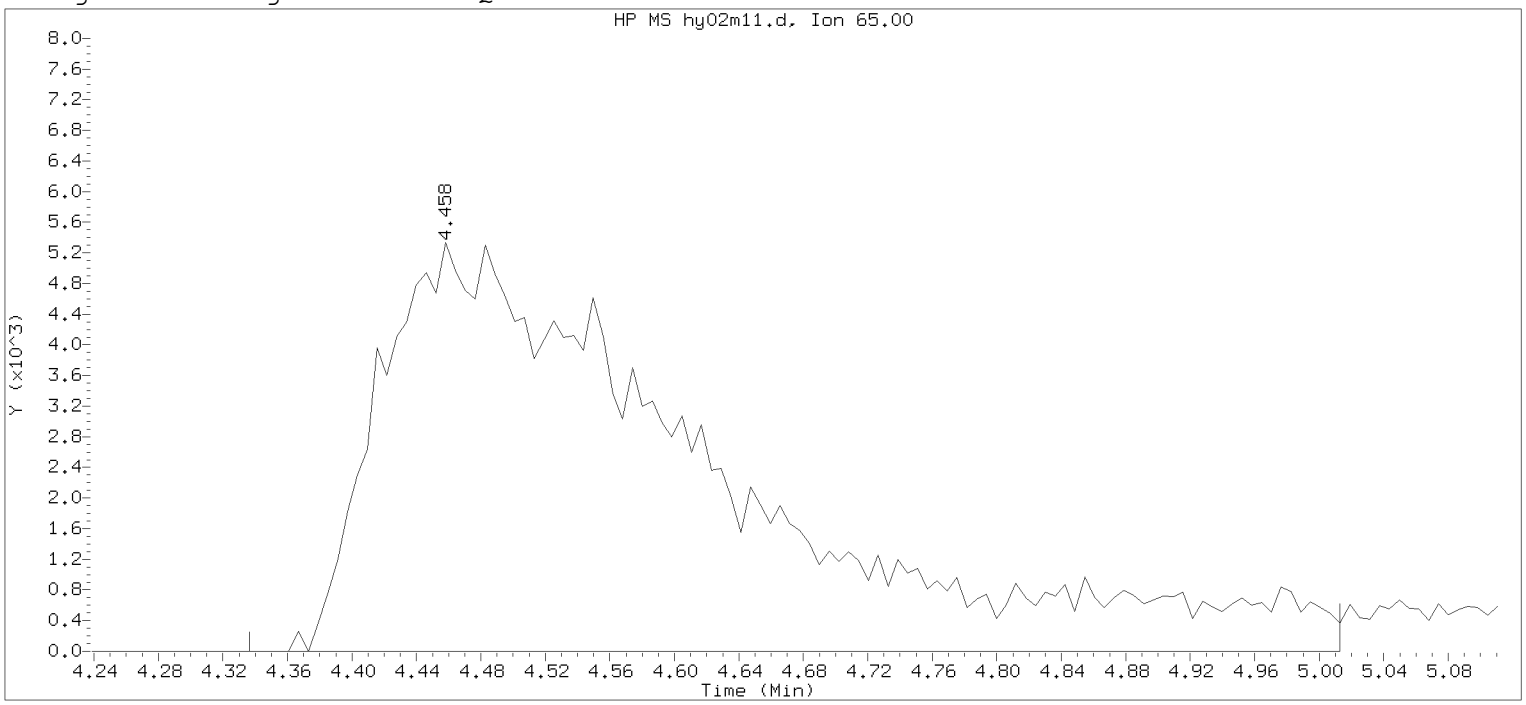
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

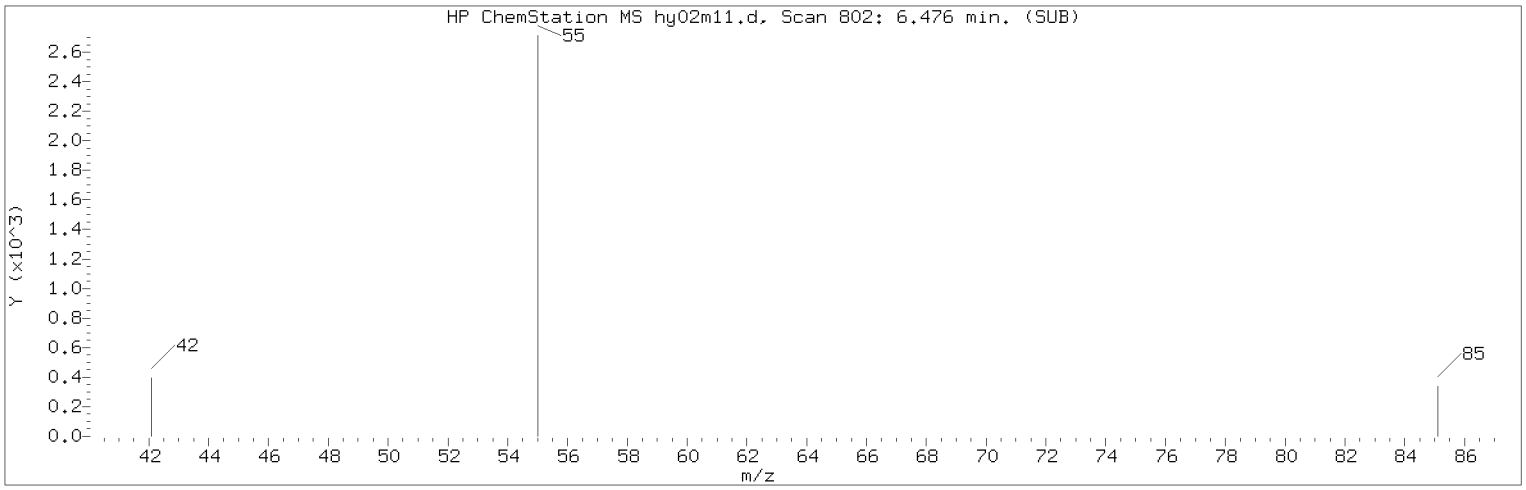
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

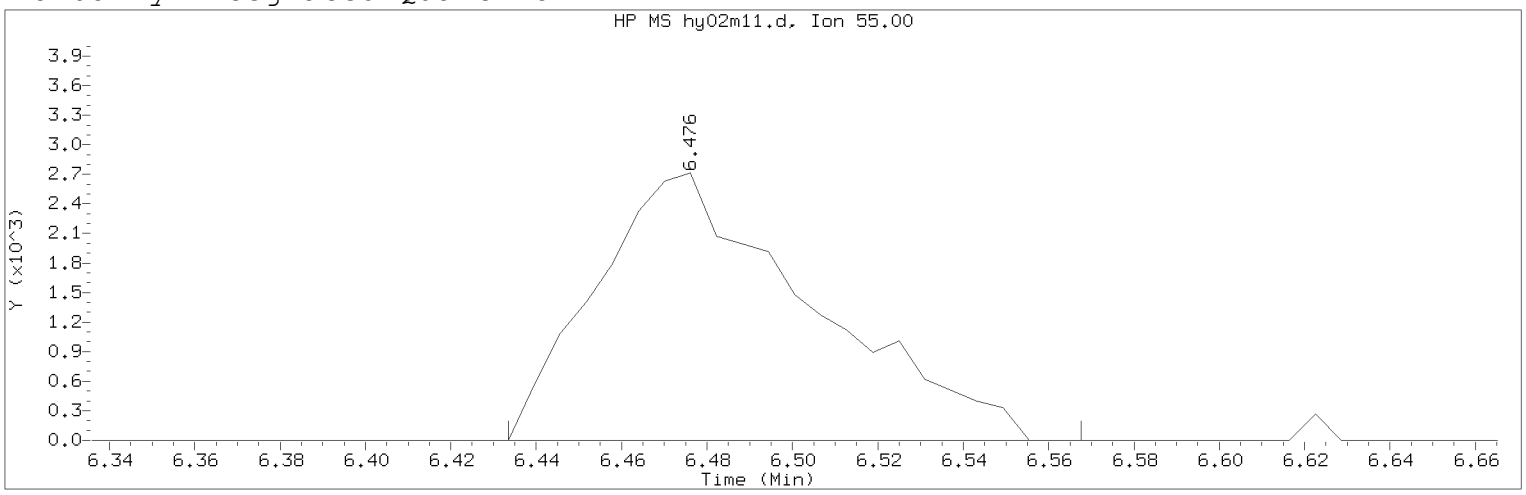
Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 471		
Retention Time (minutes)	: 4.458		
Quant Ion	: 65.00		
Area	: 76364		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 450	Integration stop scan:	561
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used on 05/02/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

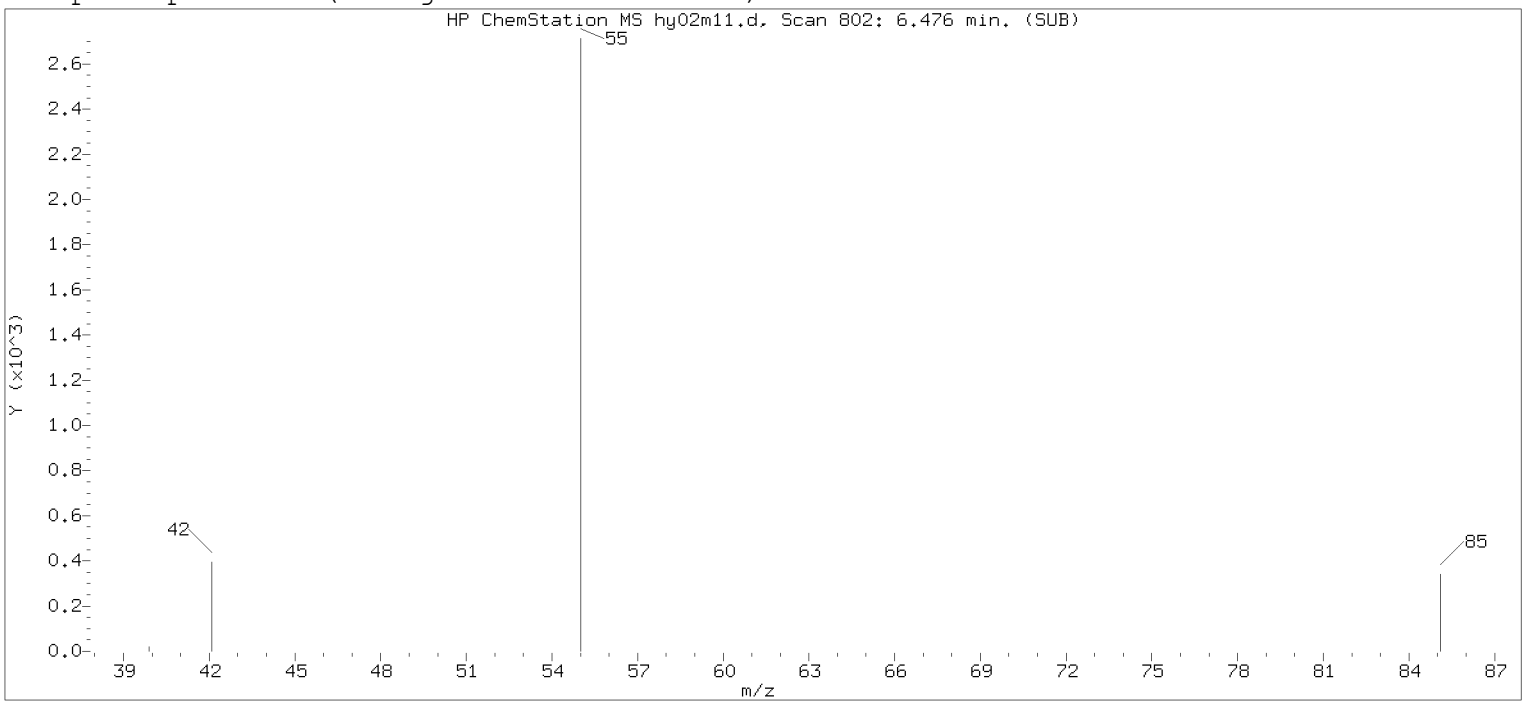
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area (flag) : 9556M
On-Column Amount (ng) : 0.4435
Integration start scan : 794 Integration stop scan: 816
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

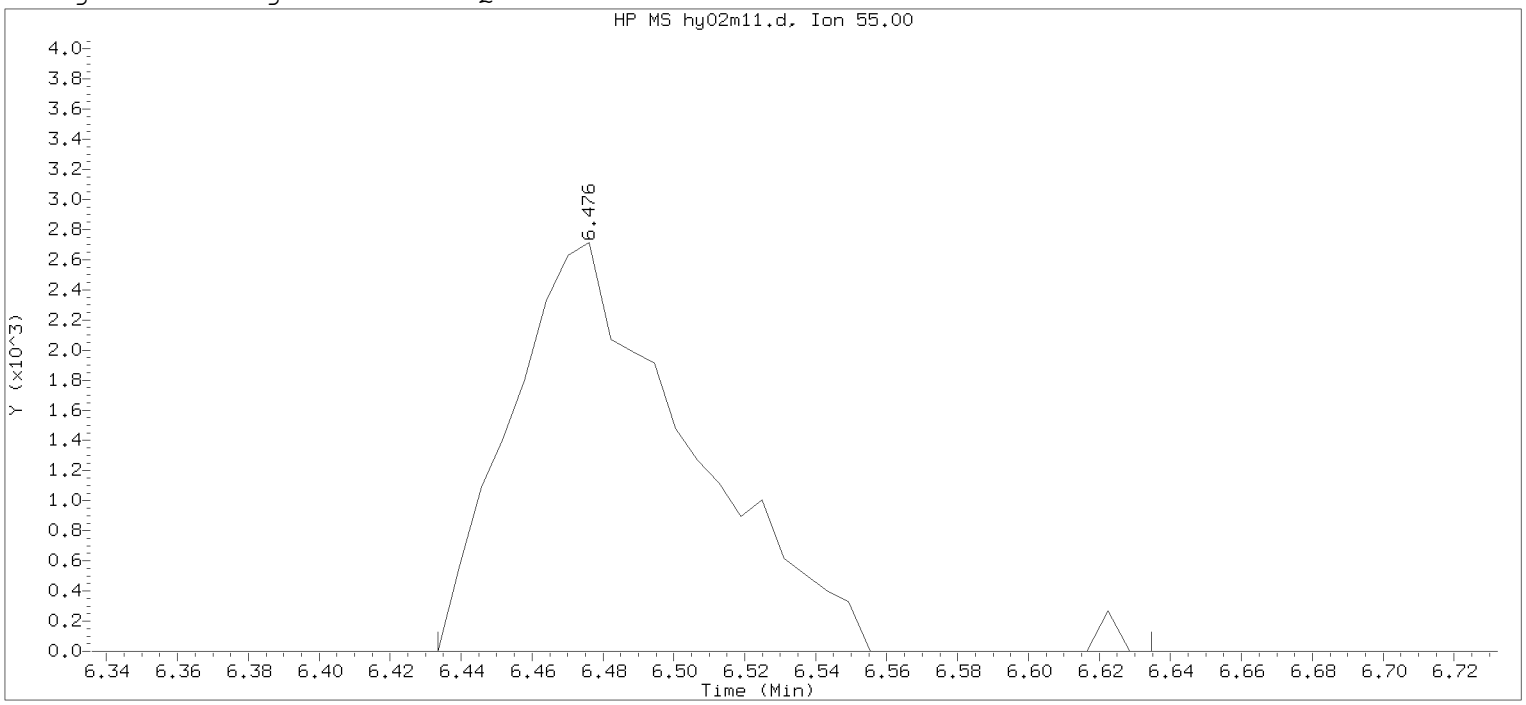
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

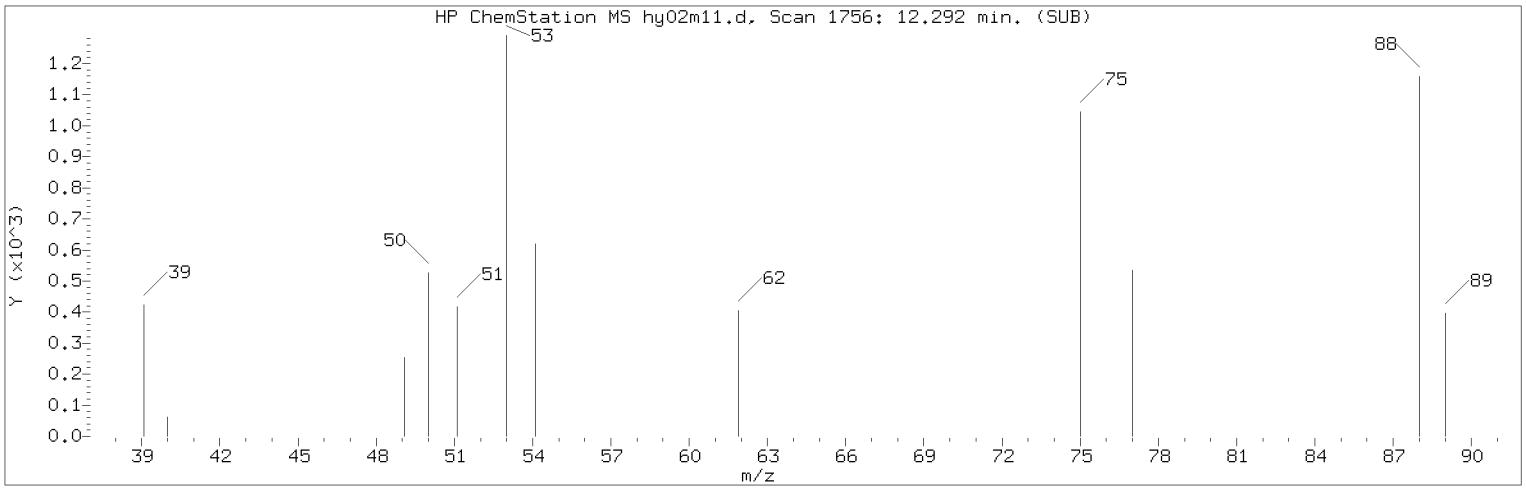
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

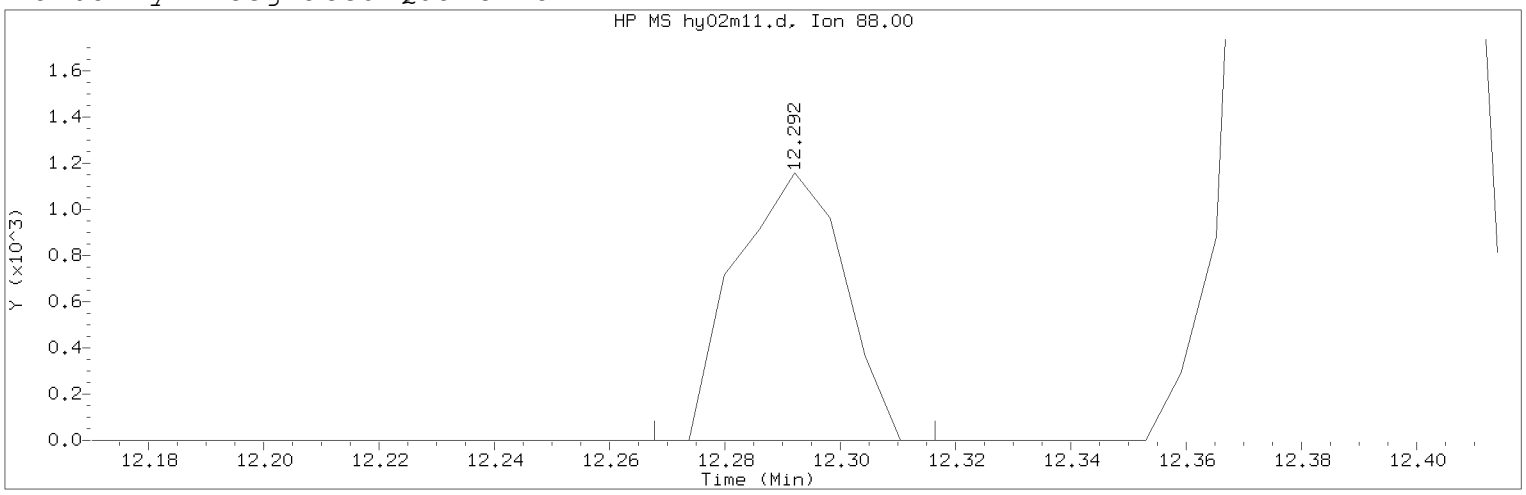
Compound Number : 43
Compound Name : Methyl Acrylate
Scan Number : 802
Retention Time (minutes): 6.476
Quant Ion : 55.00
Area : 9654
On-column Amount (ng) : 0.4481
Integration start scan : 794 Integration stop scan: 827
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

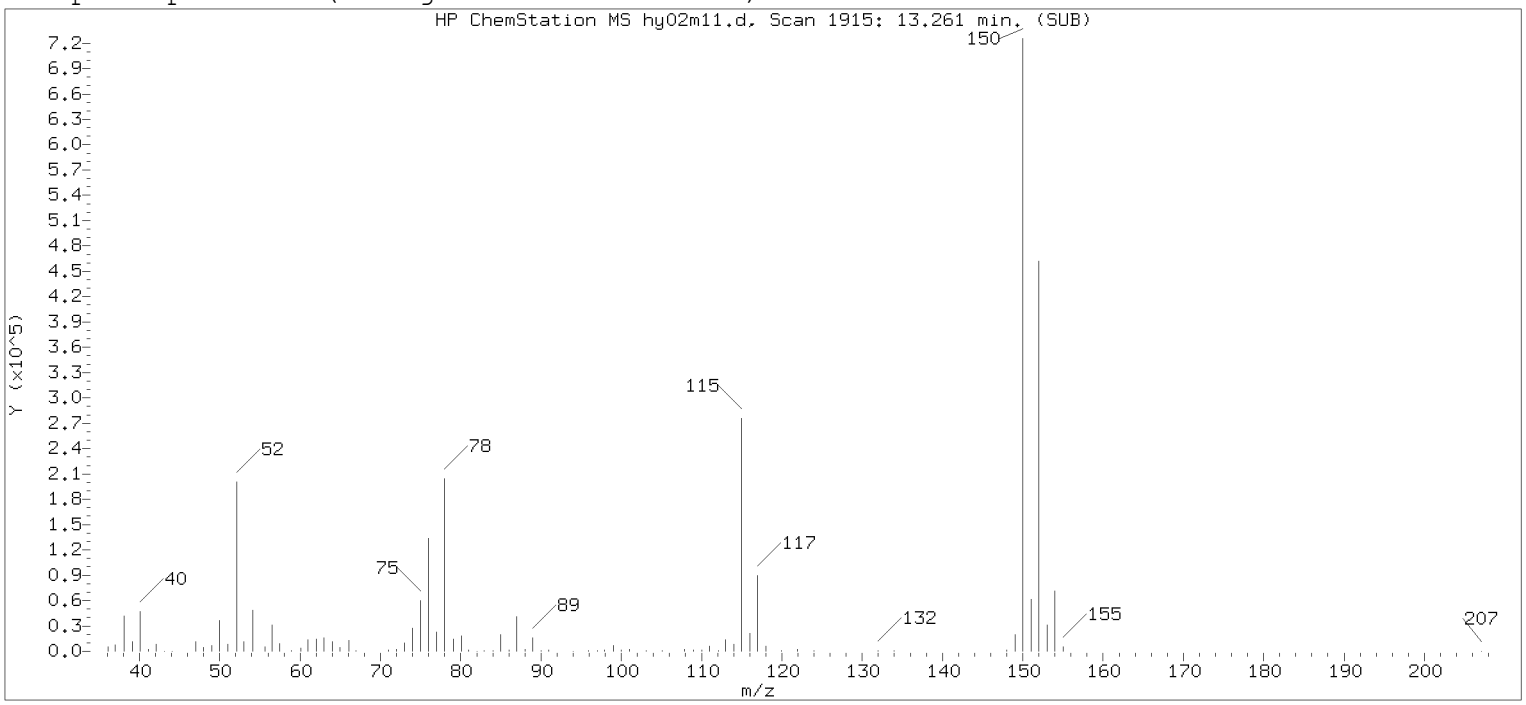
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 1506M
On-Column Amount (ng) : 0.1362
Integration start scan : 1751 Integration stop scan: 1759
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

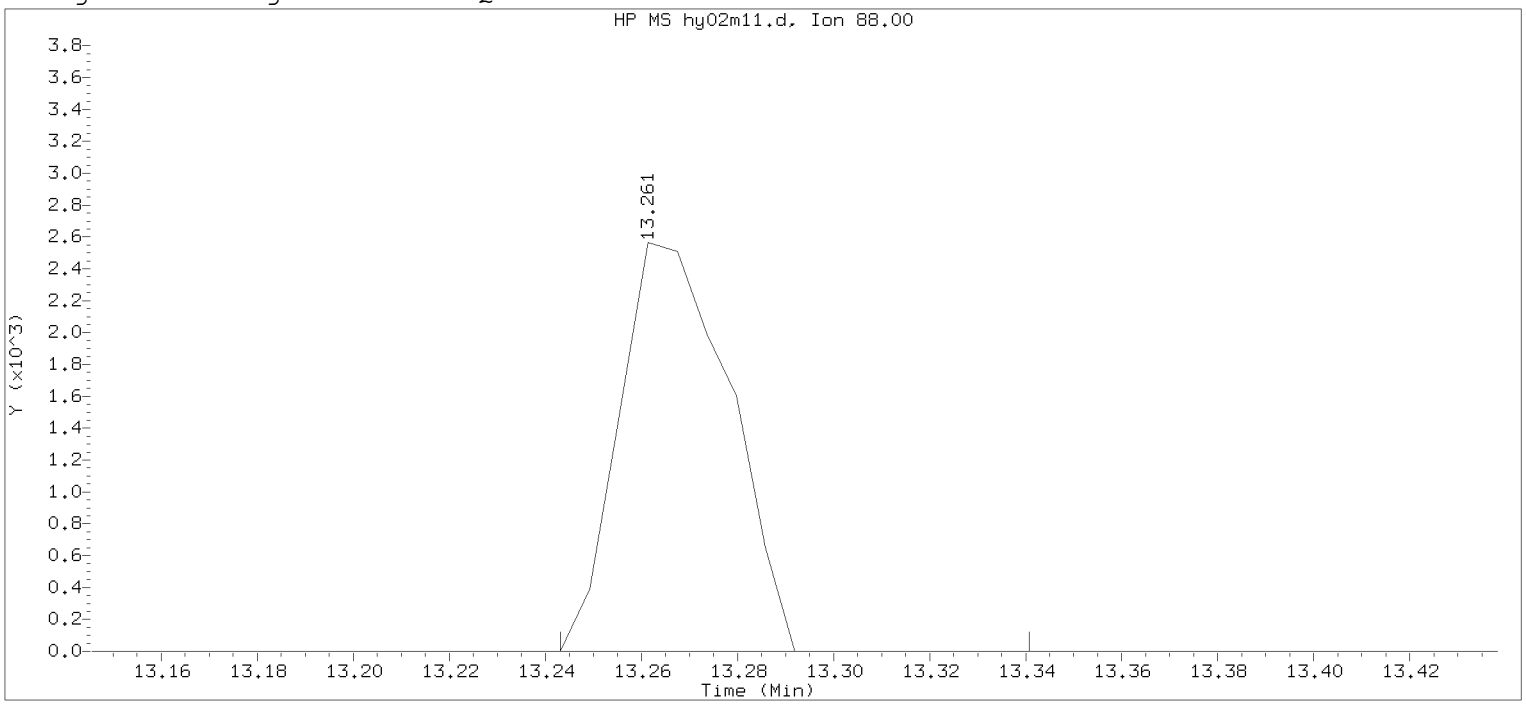
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

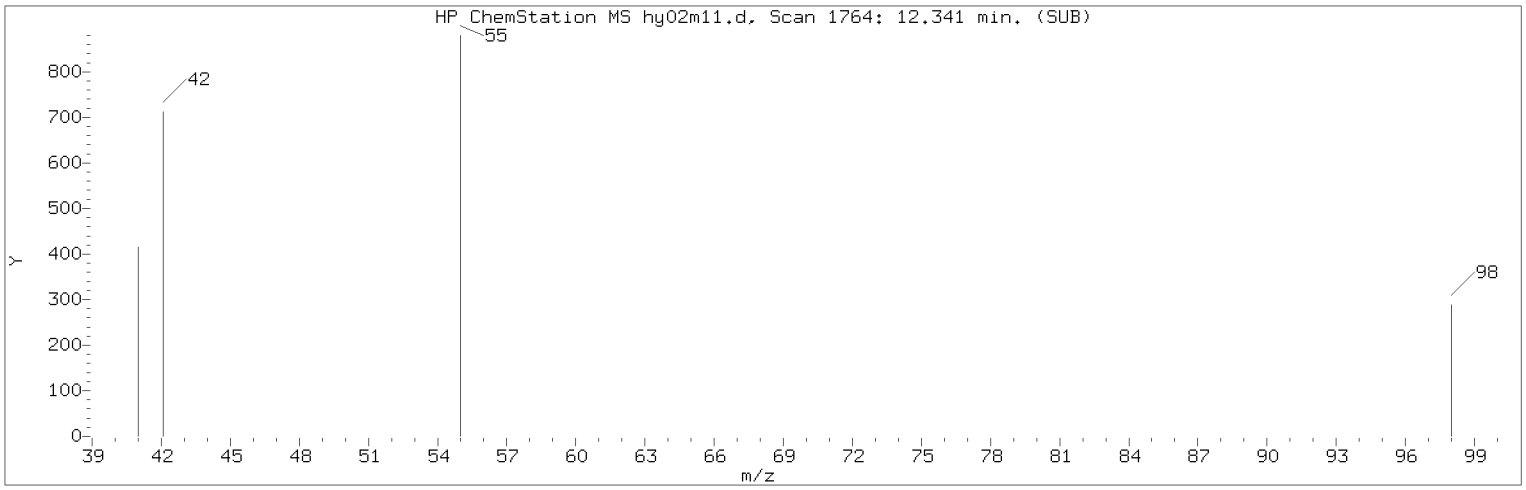
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

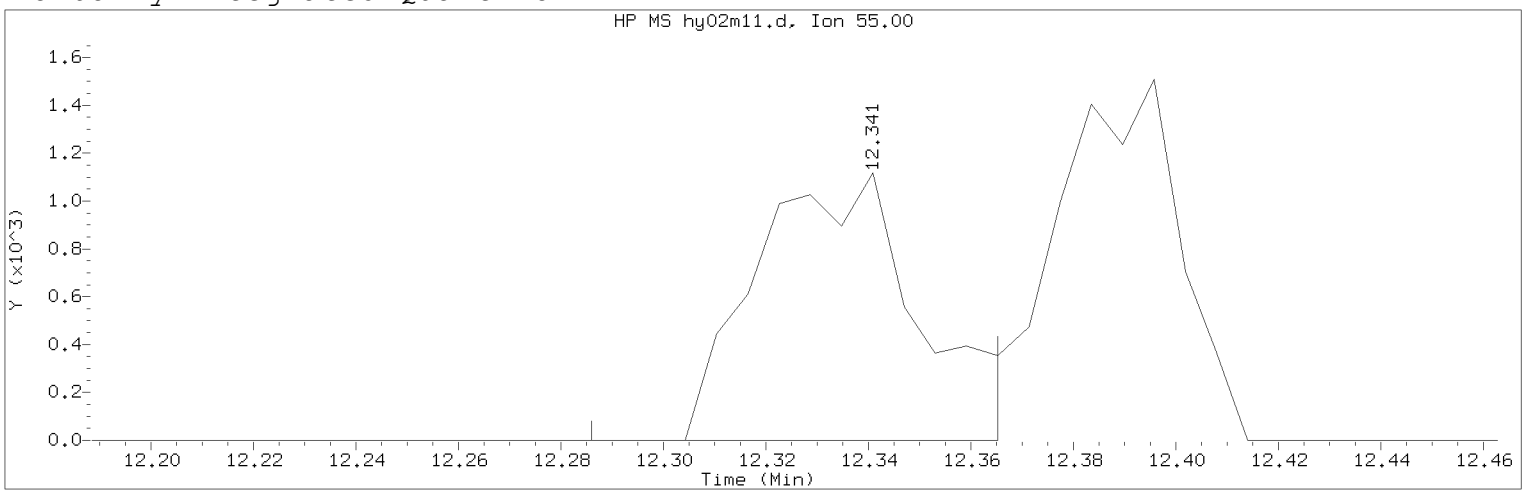
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1915
Retention Time (minutes): 13.261
Quant Ion : 88.00
Area : 4090
On-column Amount (ng) : 0.4136
Integration start scan : 1911 Integration stop scan: 1927
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:37 dvv10203

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

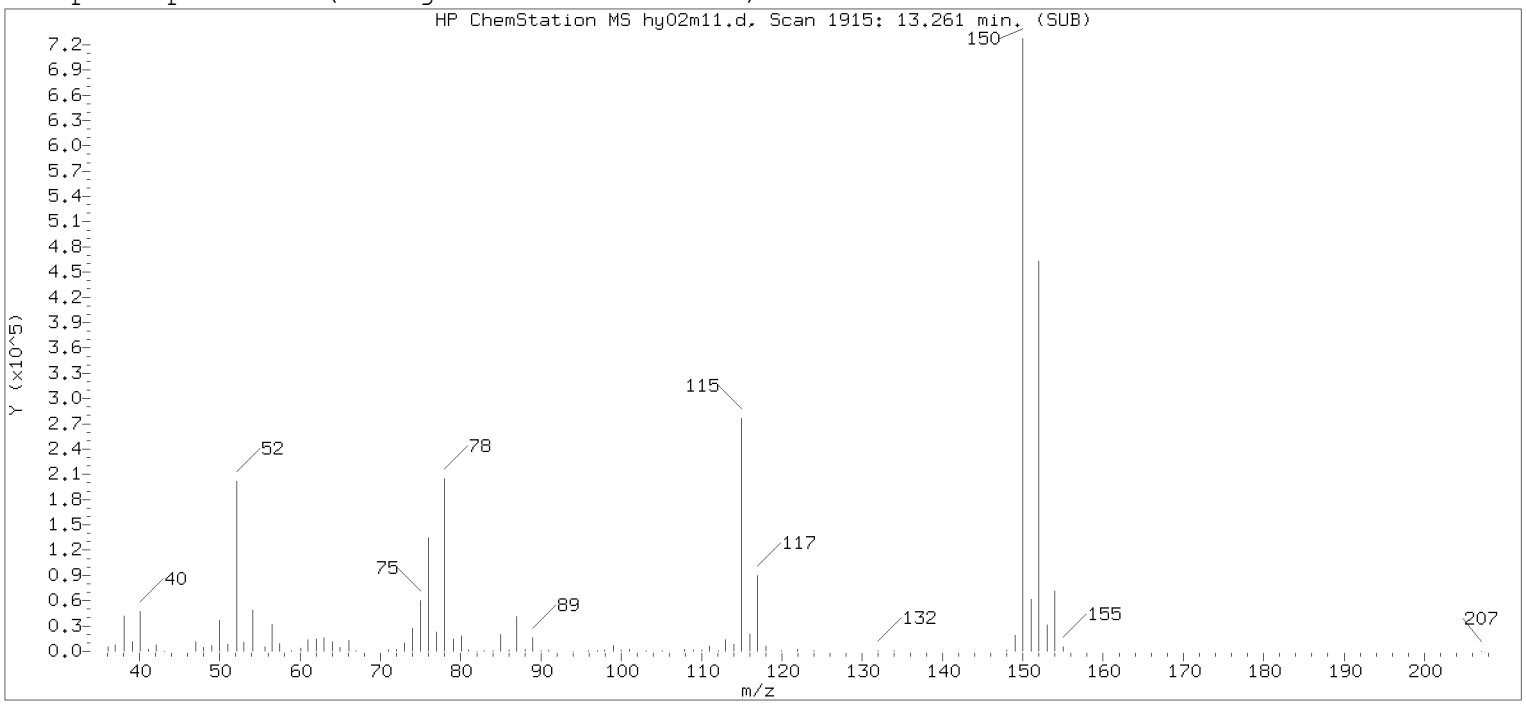
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1764
Retention Time (minutes): 12.341
Quant Ion : 55.00
Area (flag) : 2470M
On-Column Amount (ng) : 4.3909
Integration start scan : 1754 Integration stop scan: 1767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

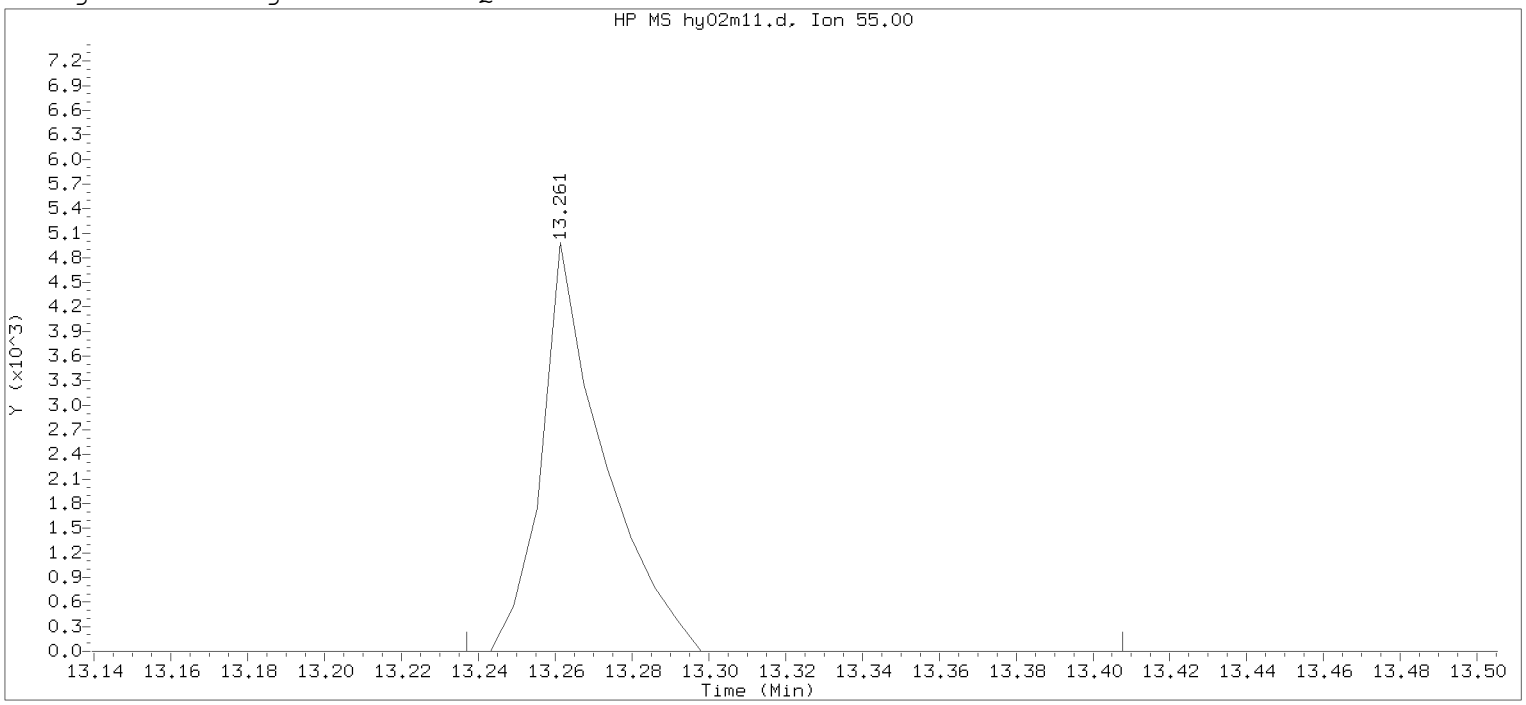
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/02/2018 at 22:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



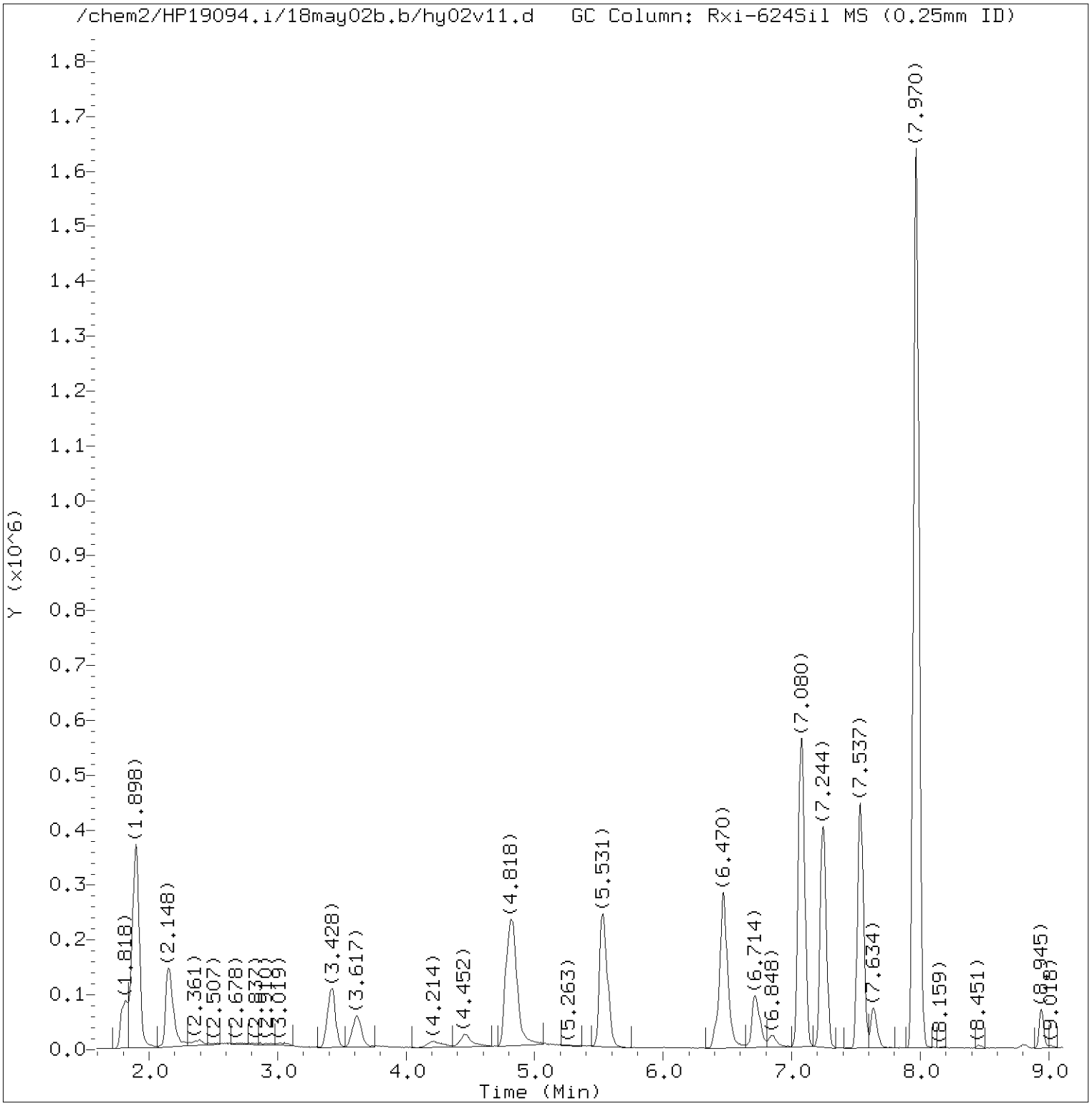
Data File: /chem2/HP19094.i/18may02b.b/hy02m11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 21:45 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 21:49
Date, time and analyst ID of latest file update: 02-May-2018 22:03 Automation

Sample Name: MDL0.1 Lab Sample ID: MDL0.1

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1915
Retention Time (minutes): 13.261
Quant Ion : 55.00
Area : 5604
On-column Amount (ng) : 11.1430
Integration start scan : 1910 Integration stop scan: 1938
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/02/2018 at 22:39.
Target 3.5 esignature used during data review.



Total Ion Chromatogram (TIC)

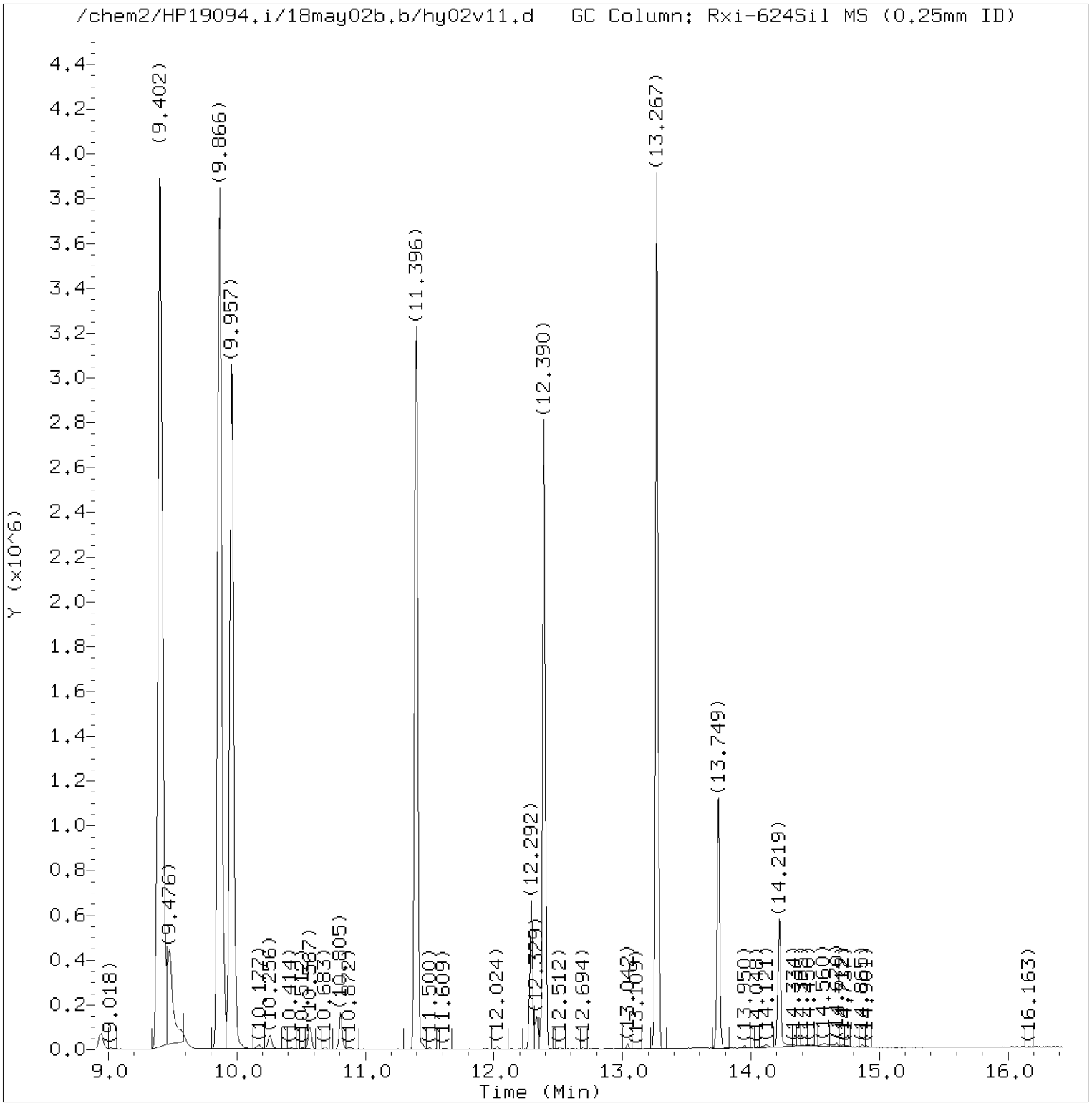
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

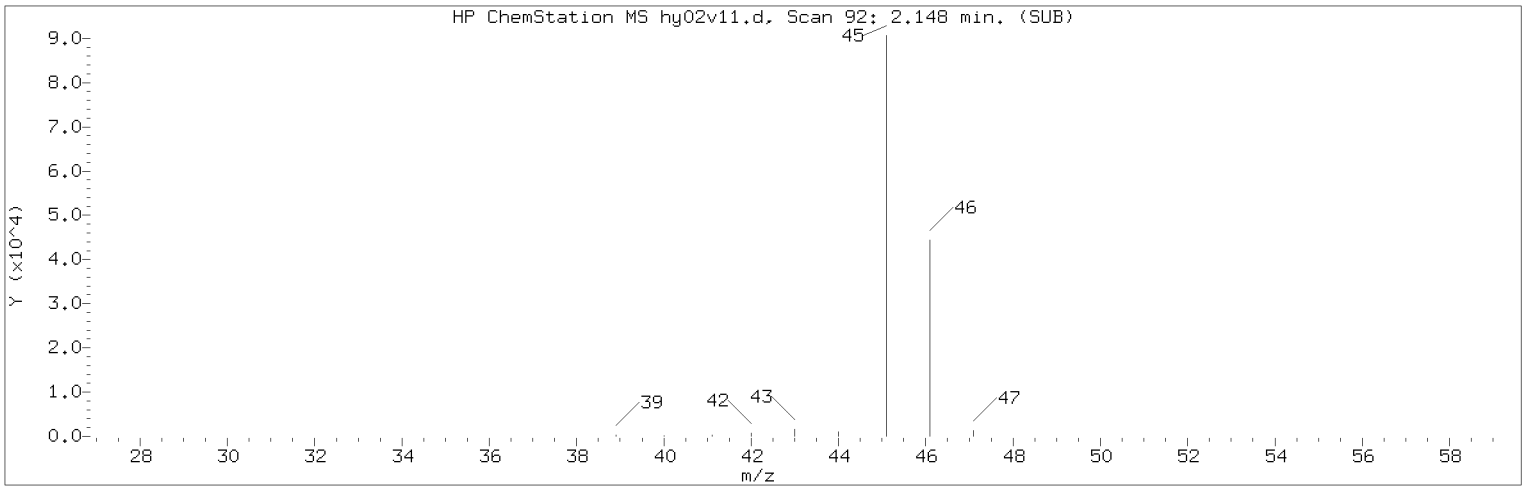
Sample Name: LCSH88 Lab Sample ID: LCSH88

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.148	45	368555M	4.907
25) Acetonitrile	(1)	4.214	41	82341M	40.799
26)*t-Butyl Alcohol-d10	(1)	4.470	65	83582M	50.000
36) Vinyl Acetate	(2)	5.531	43	844654	11.805
43) Methyl Acrylate	(2)	6.470	55	584105	26.458
50)$Dibromofluoromethane	(2)	7.074	113	565872	9.789
53) 1-Chlorobutane	(2)	7.244	56	535230	5.066
57)$1,2-Dichloroethane-d4	(2)	7.531	102	101751	9.983
63)*Fluorobenzene	(2)	7.970	96	2339478	10.000
77) Chloroacetonitrile	(2)	9.463	75	217752	247.495
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	107445	5.079
82)$Toluene-d8	(3)	9.957	98	2378040	10.120
97)*Chlorobenzene-d5	(3)	11.396	117	1701187	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	141422M	13.065
112) Cyclohexanone	(1)	12.329	55	72992M	132.593
111)$4-Bromofluorobenzene	(3)	12.390	95	830464	9.962
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	891015	10.000
142) Hexachloroethane	(4)	13.743	117	197454	5.264

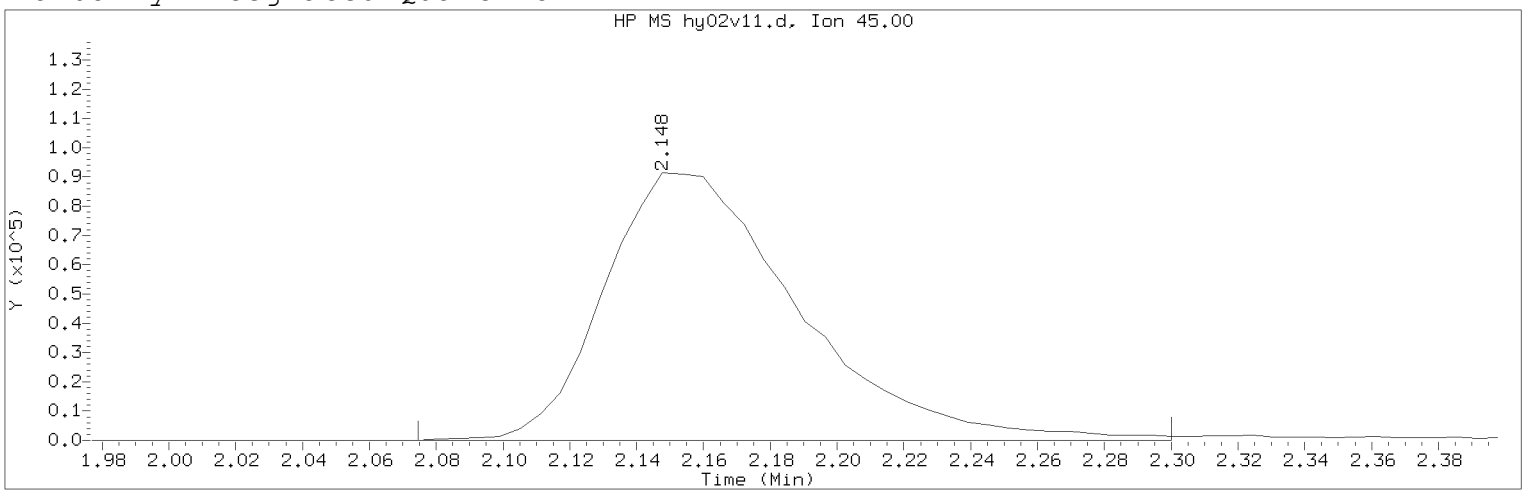
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

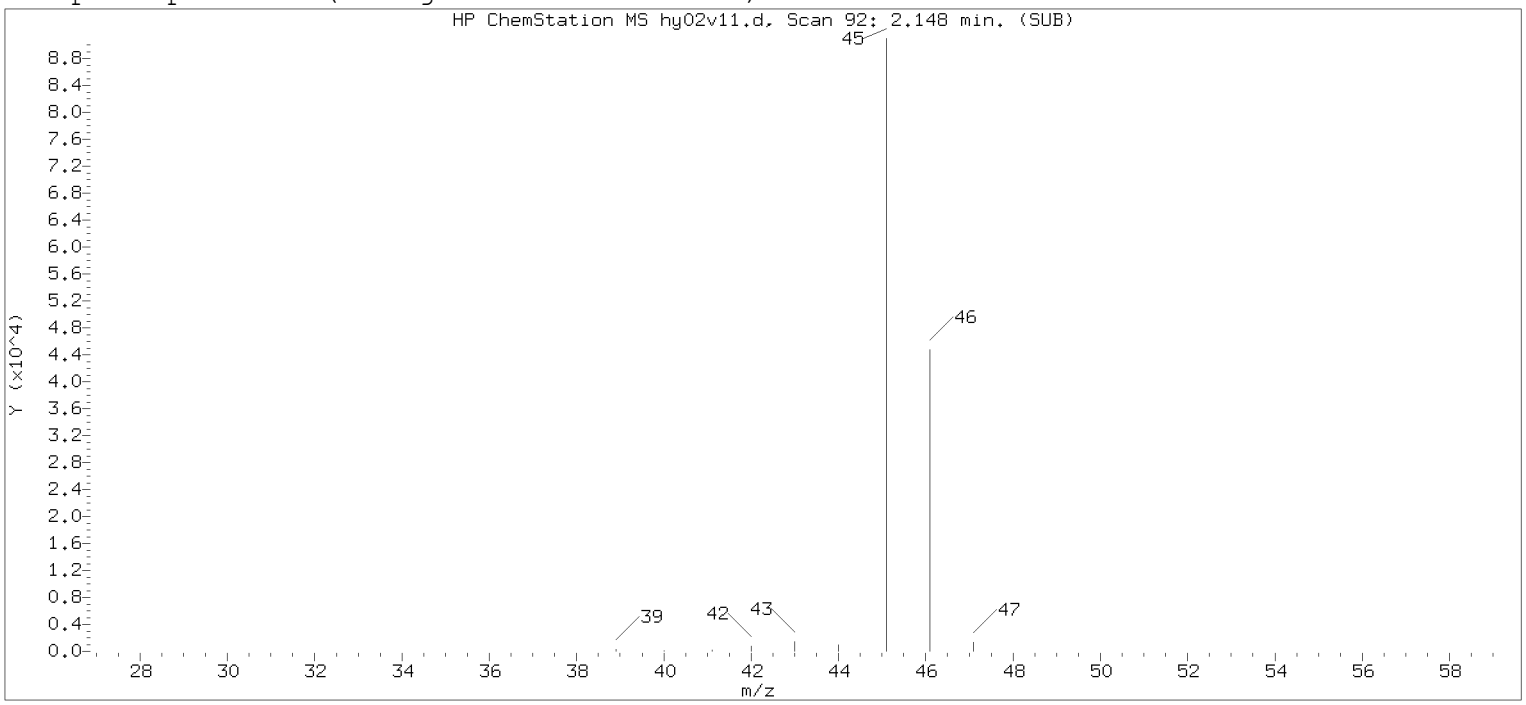
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 368555M
On-Column Amount (ng) : 4.9074
Integration start scan : 79 Integration stop scan: 116
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

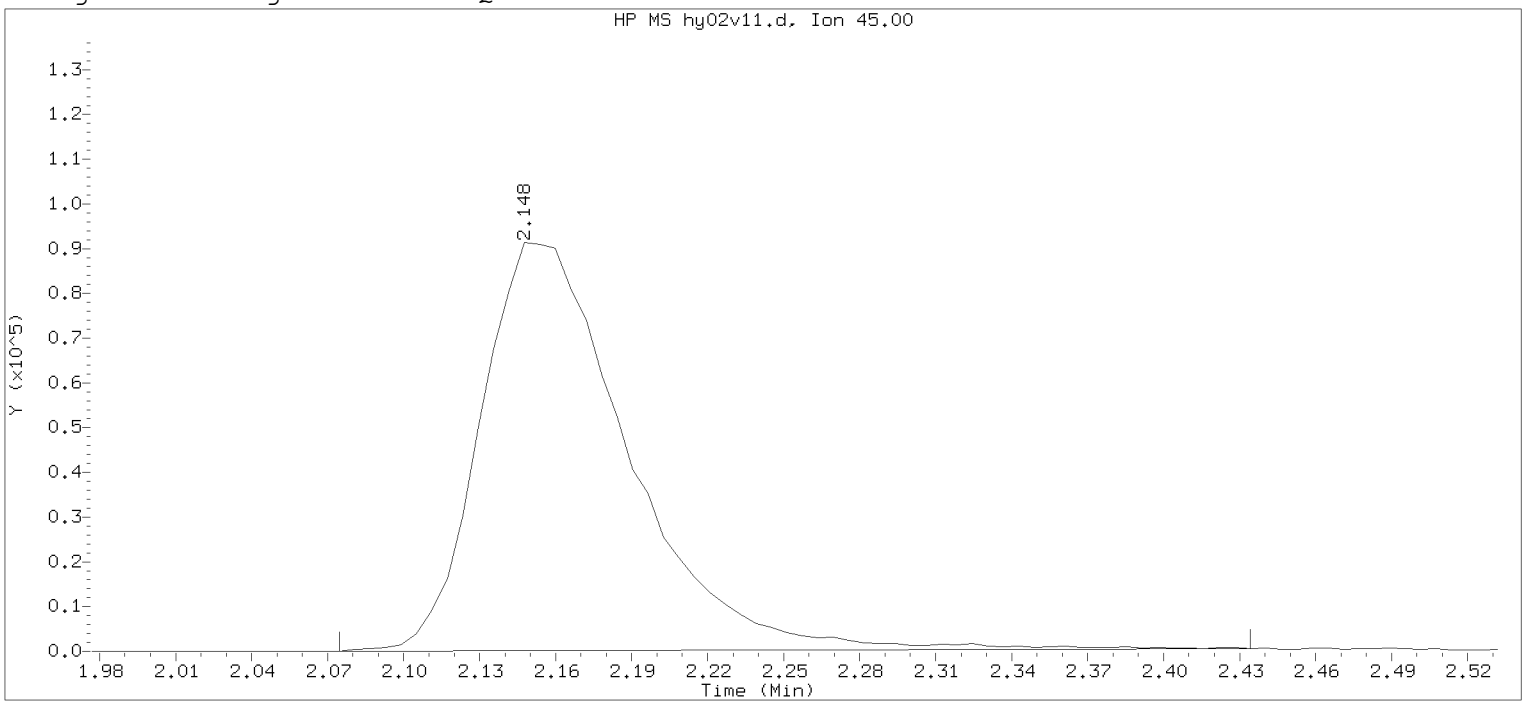
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

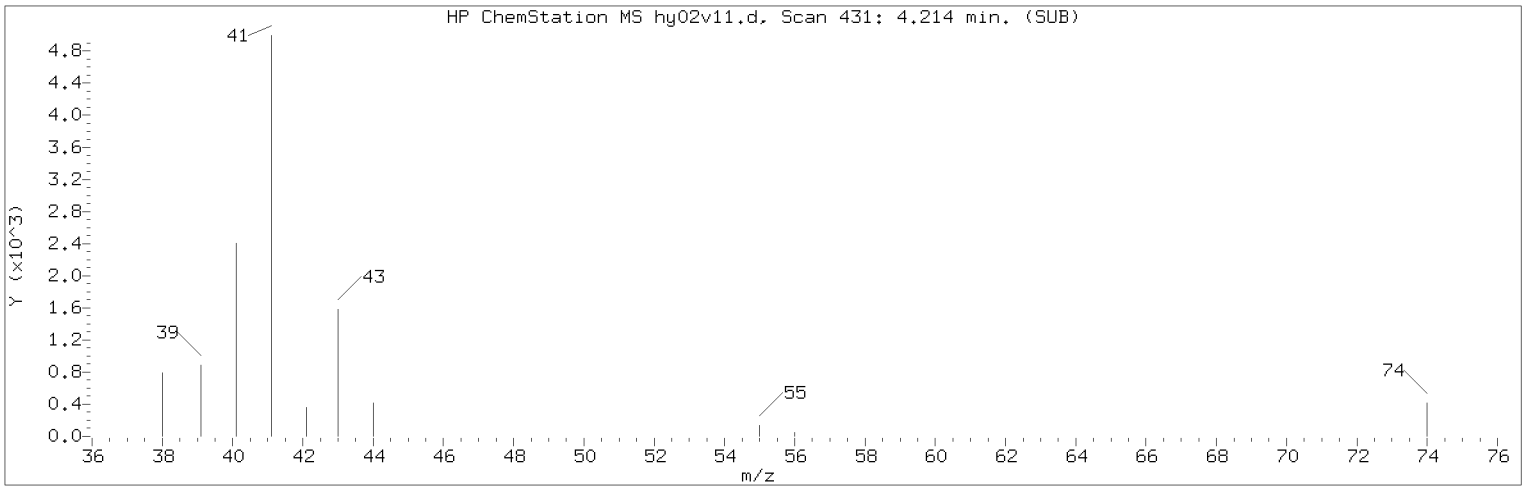
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

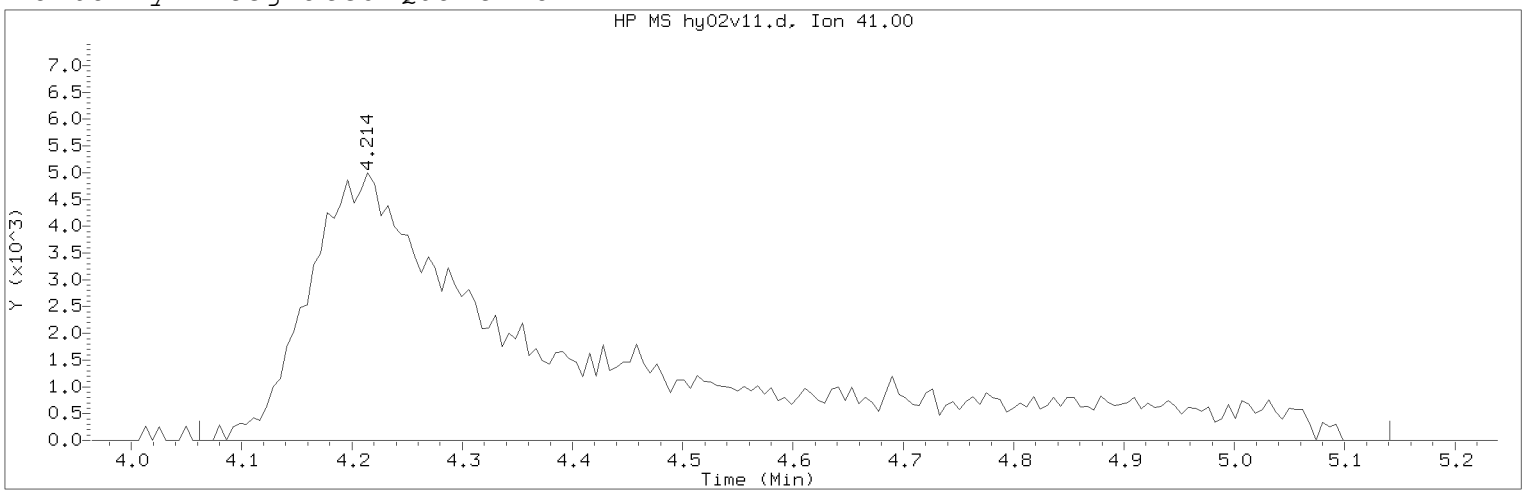
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 92		
Retention Time (minutes)	: 2.148		
Quant Ion	: 45.00		
Area	: 369928		
On-column Amount (ng)	: 4.9257		
Integration start scan	: 79	Integration stop scan:	138
Y at integration start	: 0	Y at integration end:	605

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

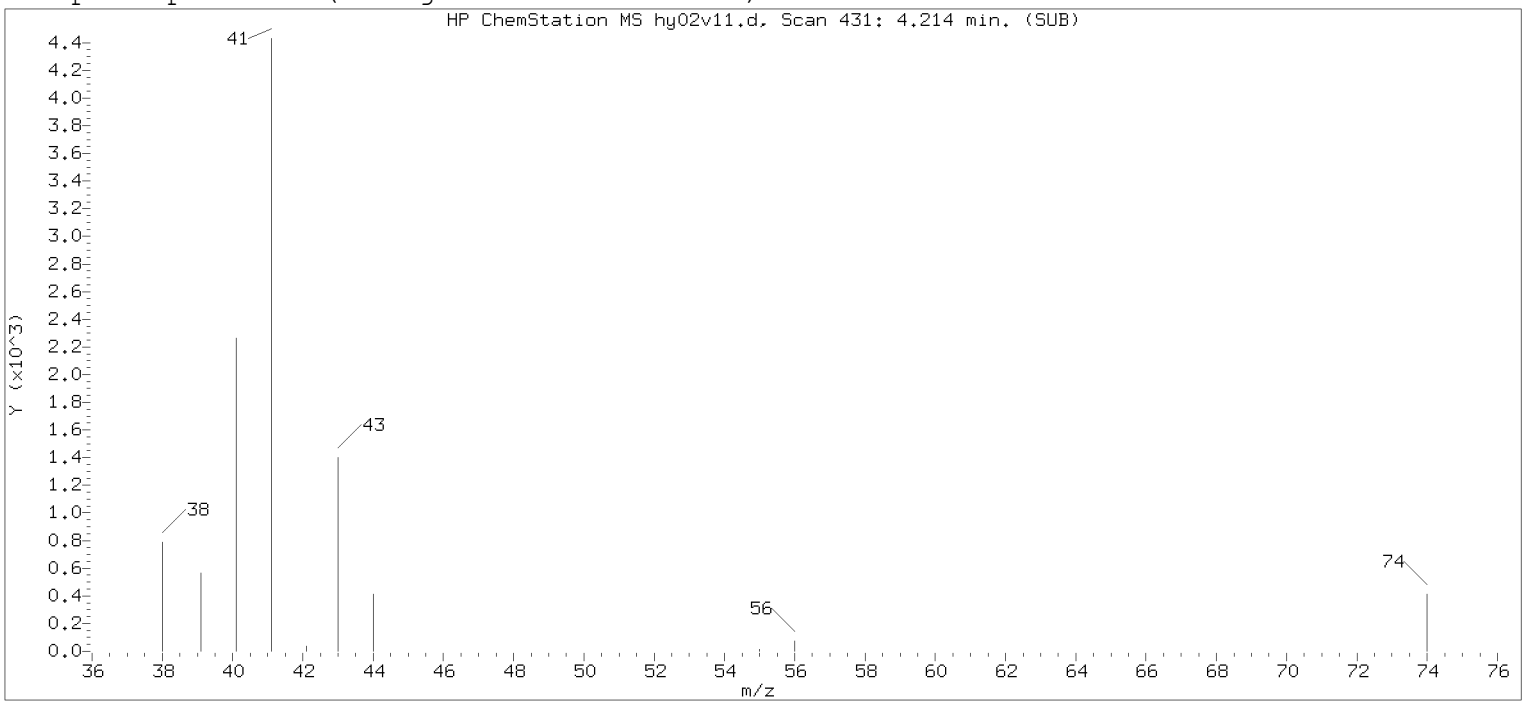
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area (flag) : 82341M
On-Column Amount (ng) : 40.7988
Integration start scan : 405 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

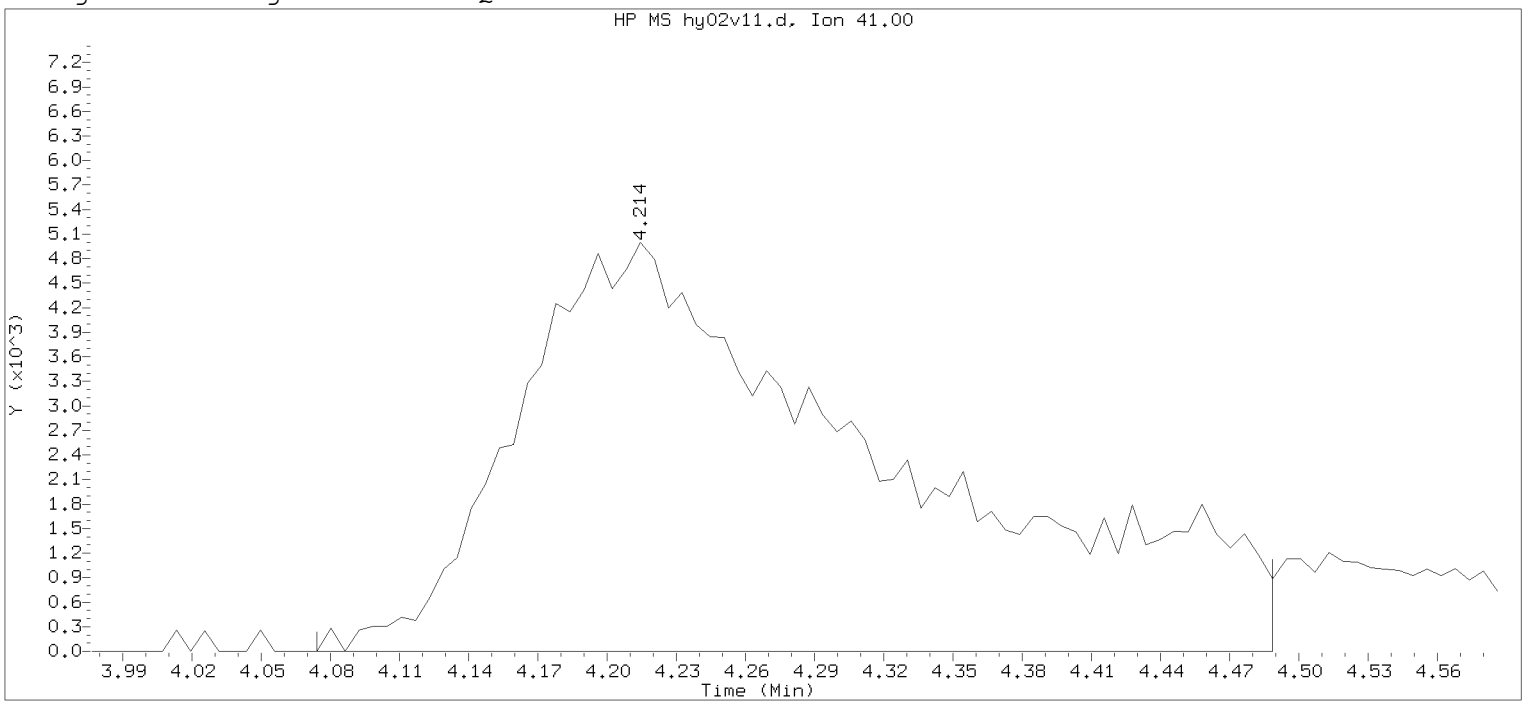
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

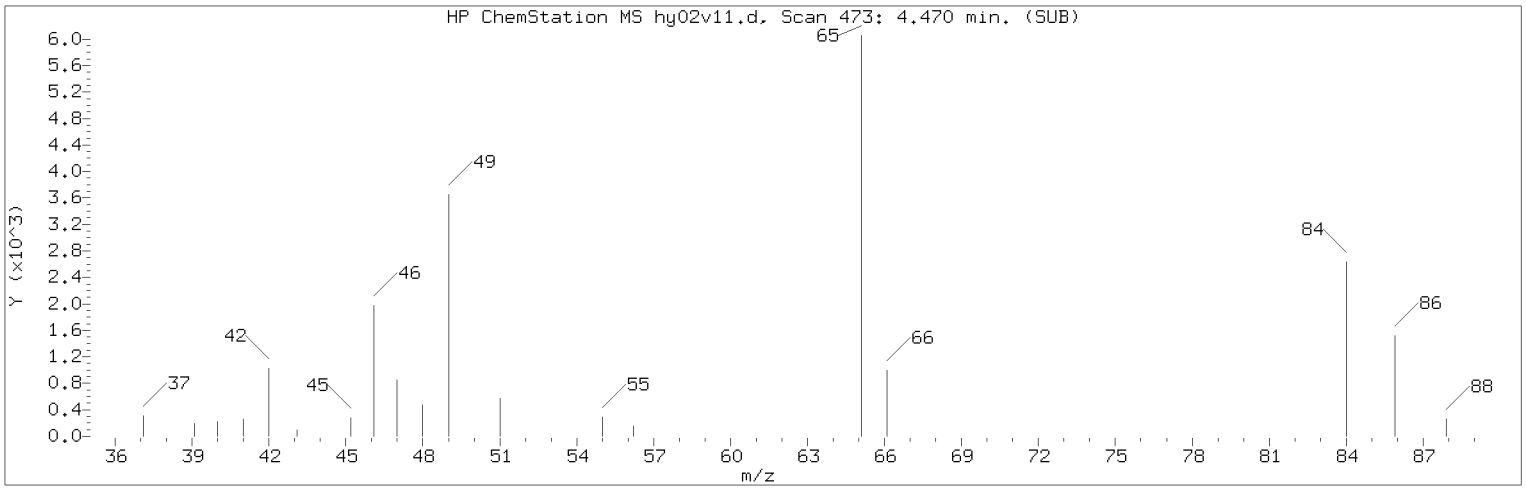
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

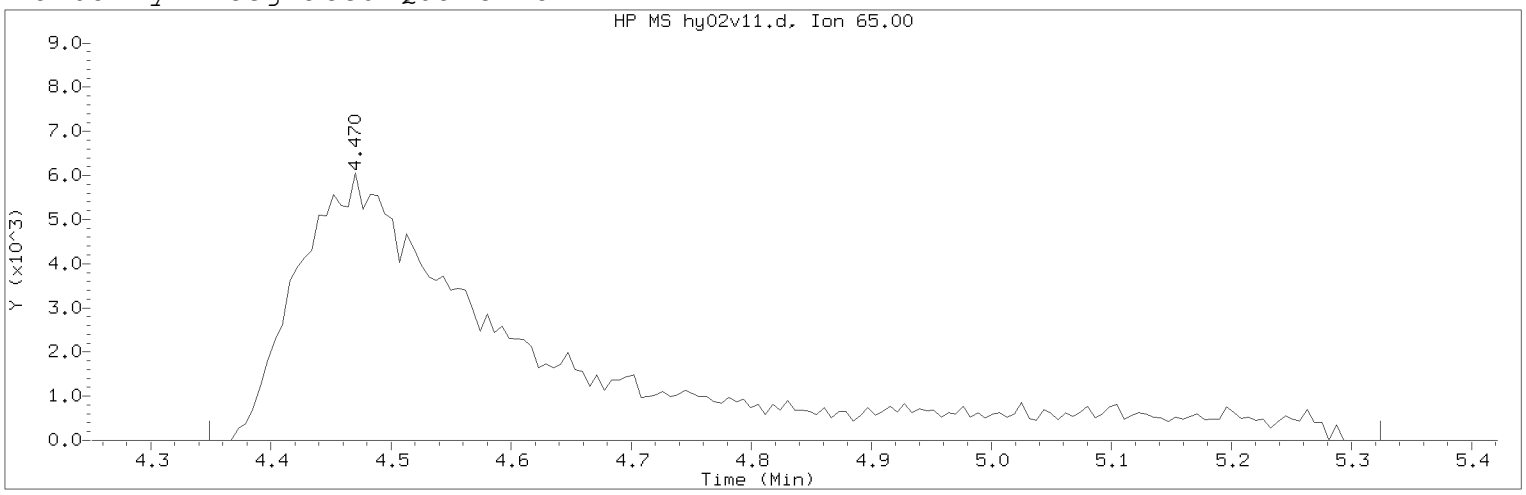
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 431
Retention Time (minutes): 4.214
Quant Ion : 41.00
Area : 56012
On-column Amount (ng) : 28.2326
Integration start scan : 407 Integration stop scan: 475
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

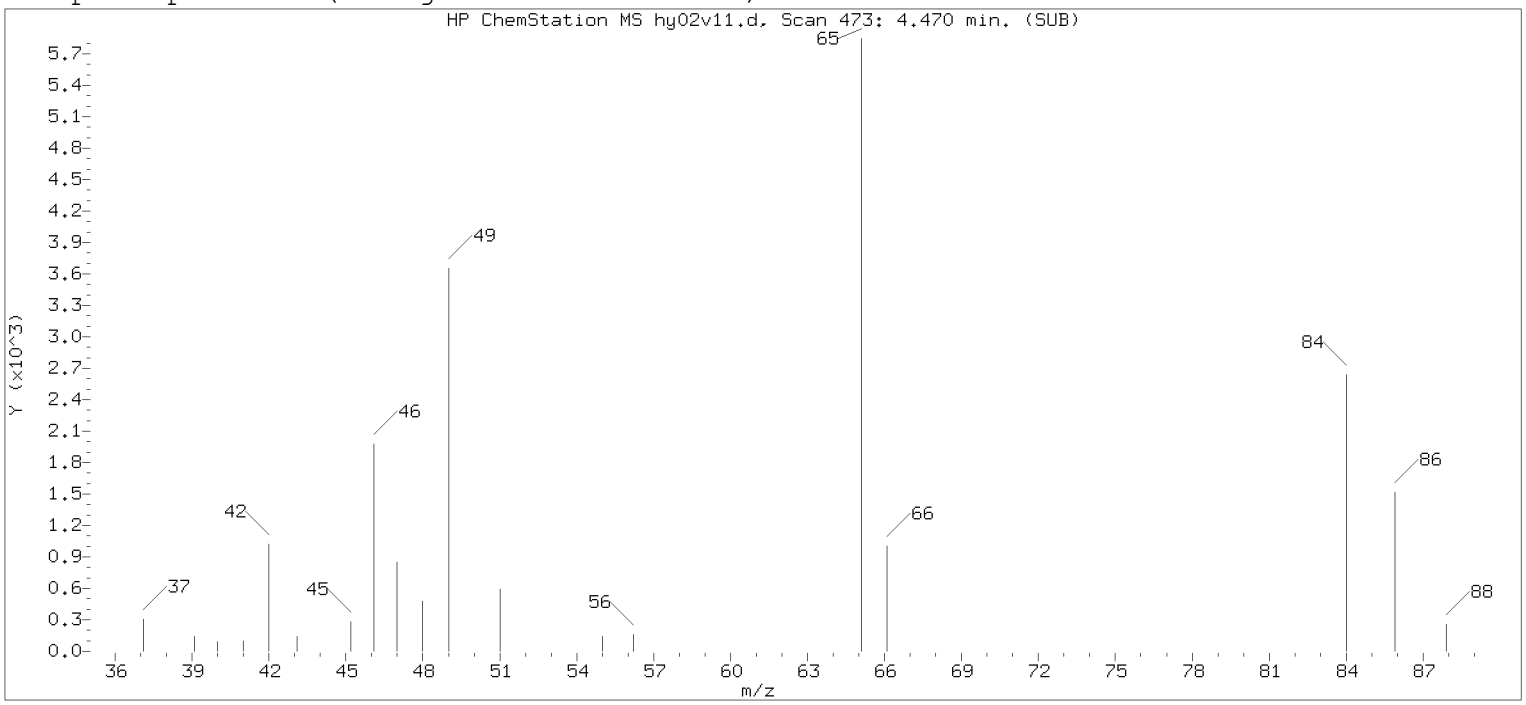
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 83582M
On-Column Amount (ng) : 50.0000
Integration start scan : 452 Integration stop scan: 612
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

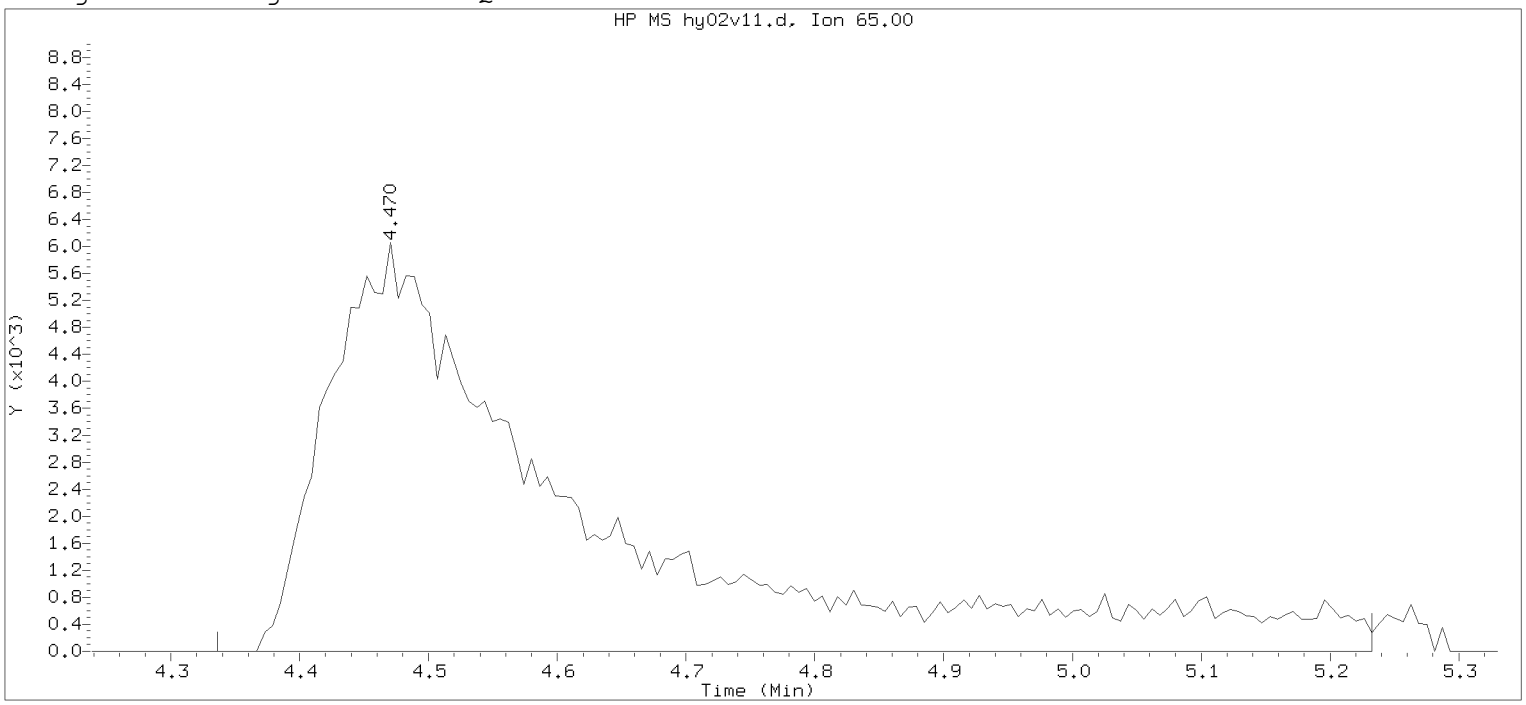
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

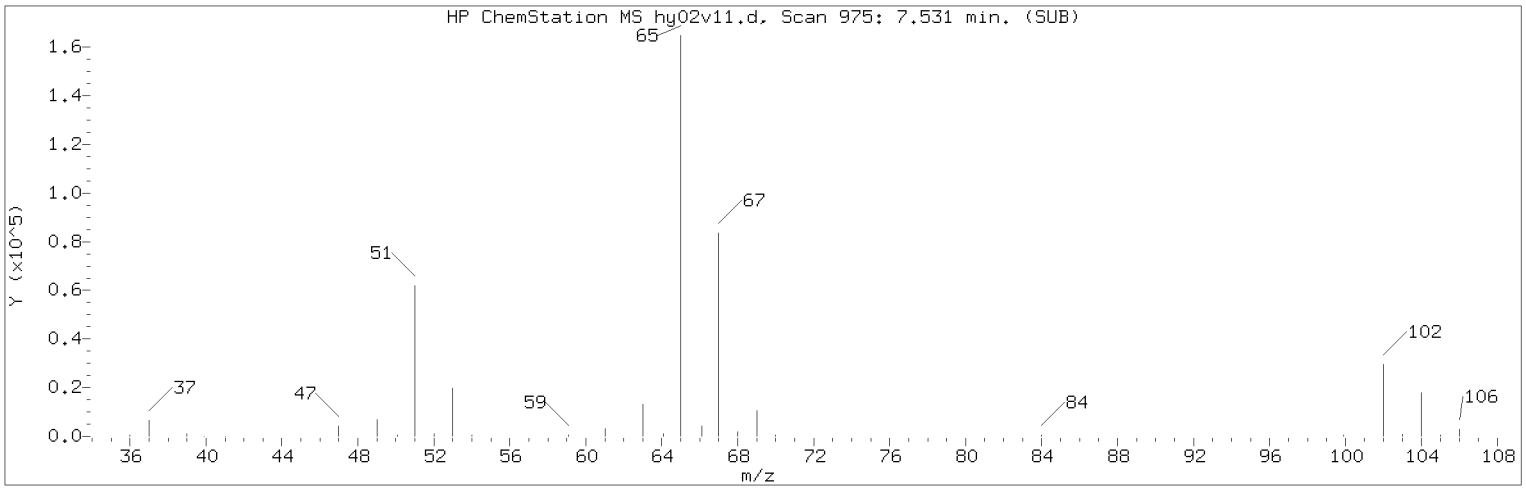
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

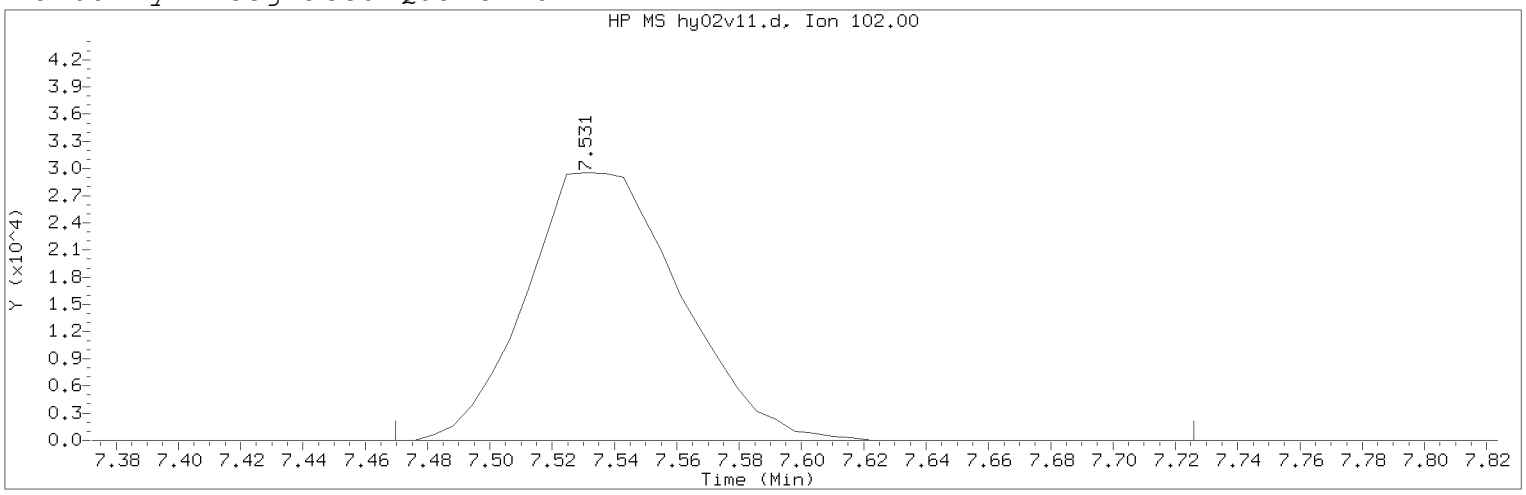
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 82163
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 597
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

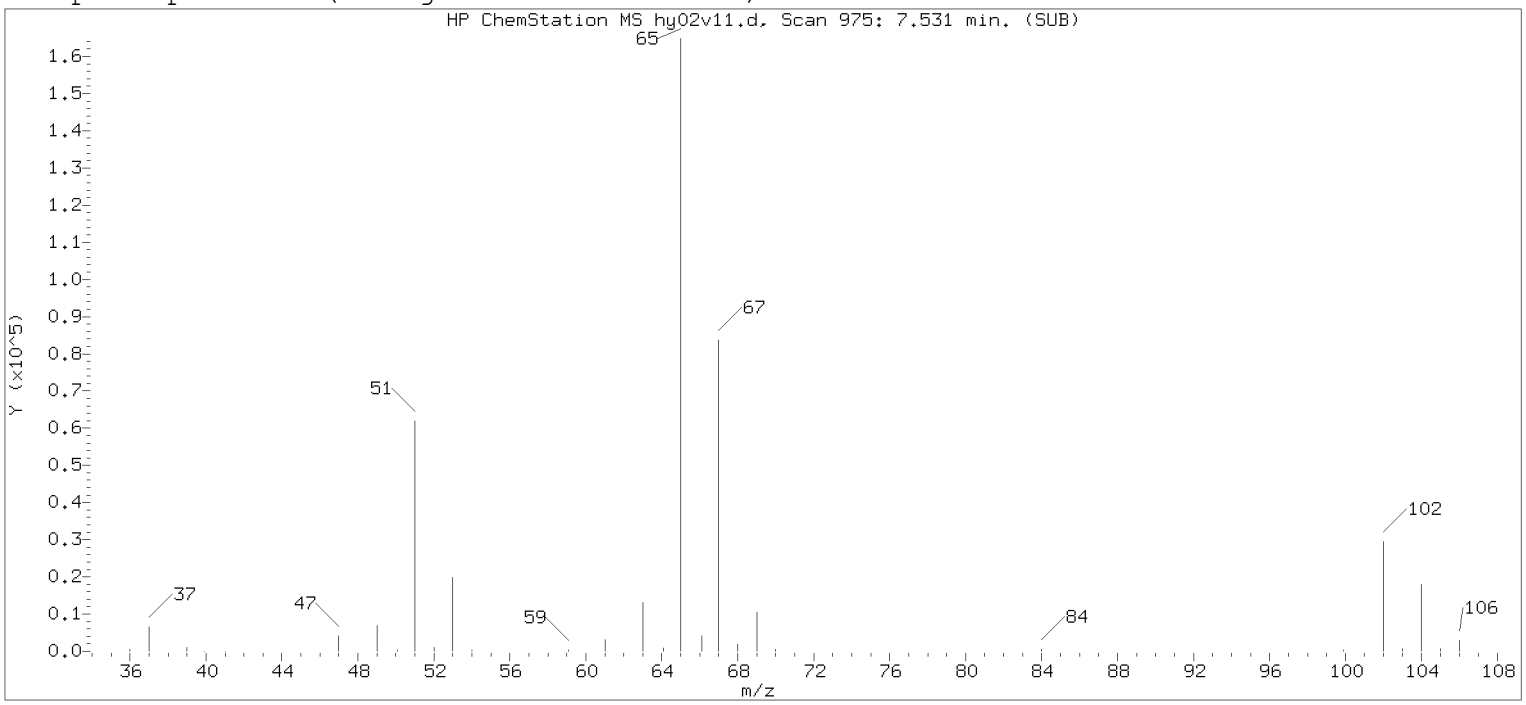
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area (flag) : 101751M
On-Column Amount (ng) : 9.9826
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

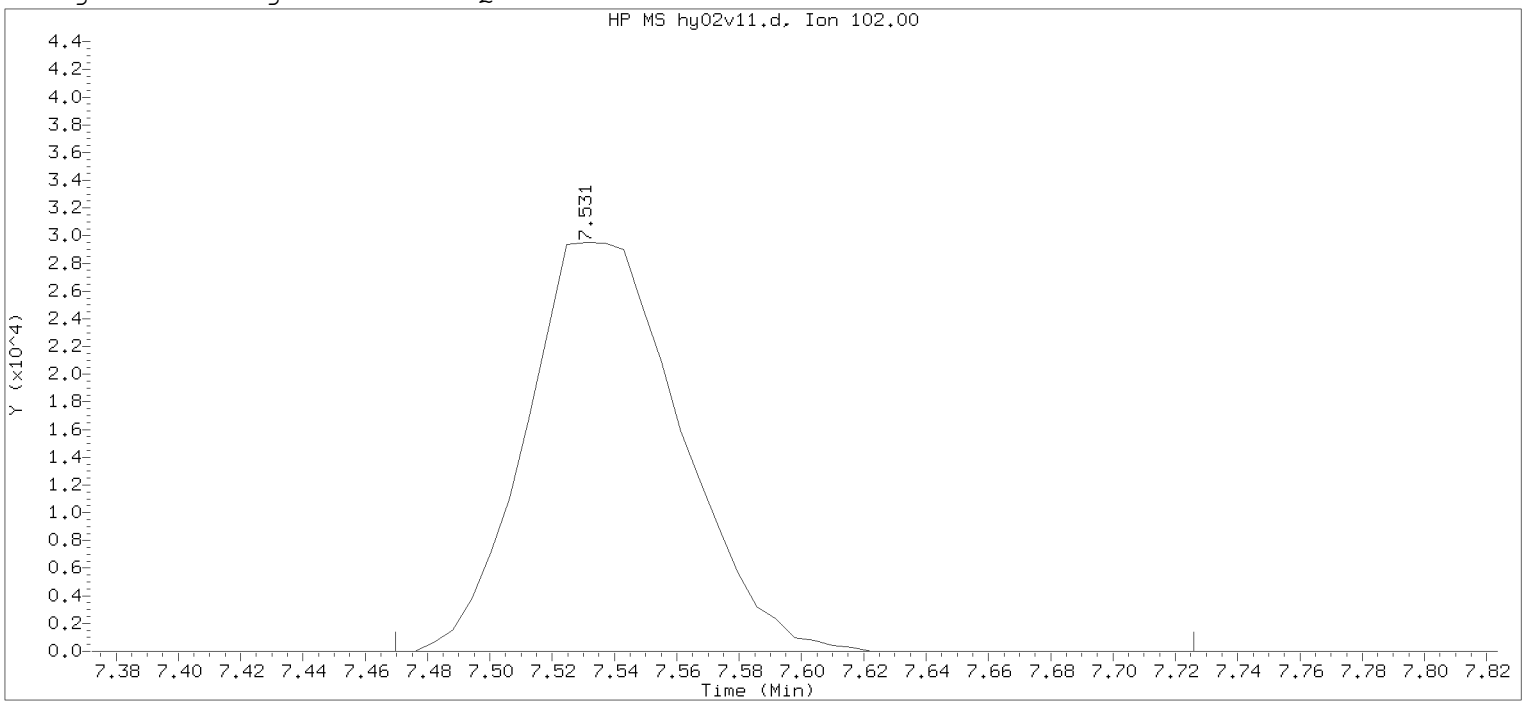
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

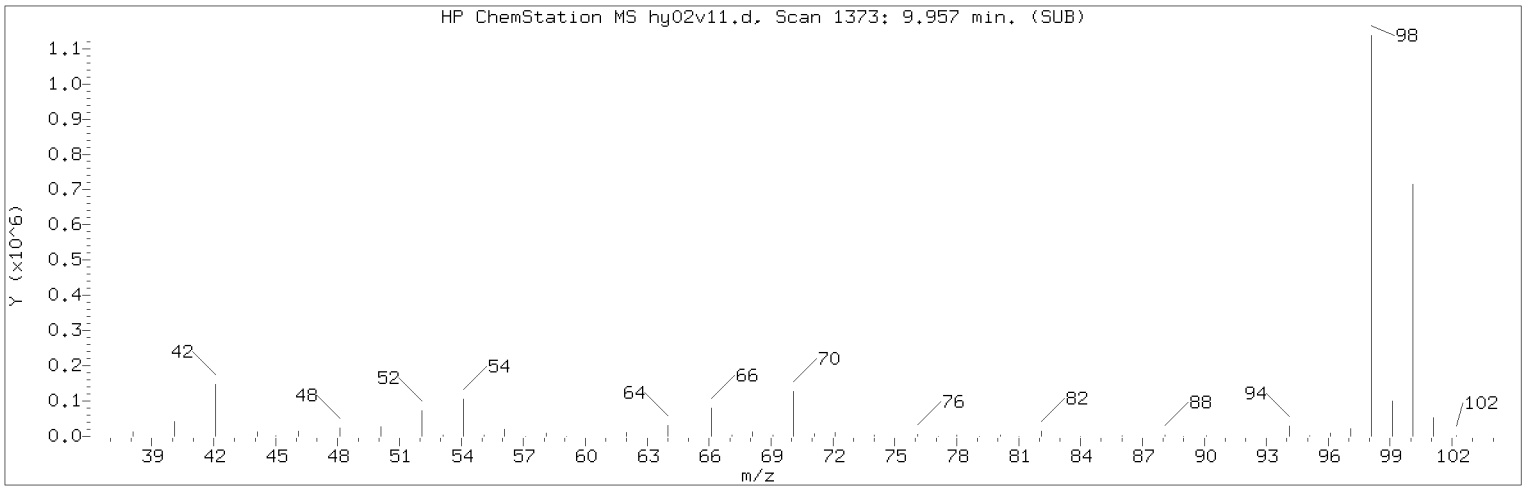
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

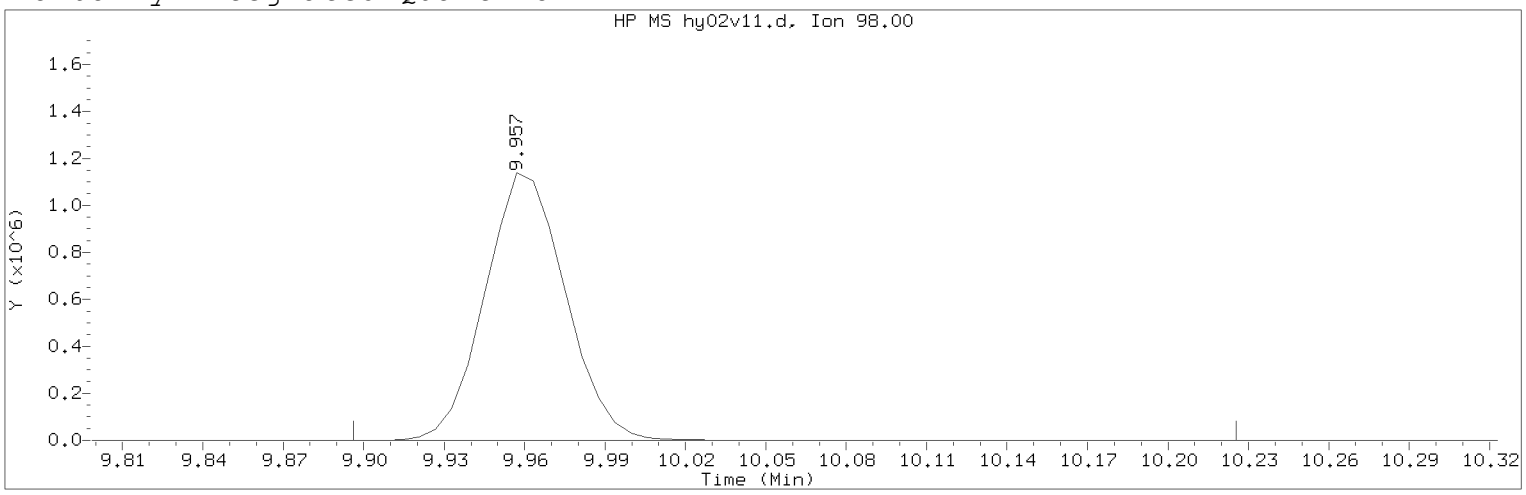
Compound Number : 57
Compound Name : 1,2-Dichloroethane-d4
Scan Number : 975
Retention Time (minutes): 7.531
Quant Ion : 102.00
Area : 101751
On-column Amount (ng) : 0.0000
Integration start scan : 964 Integration stop scan: 1006
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

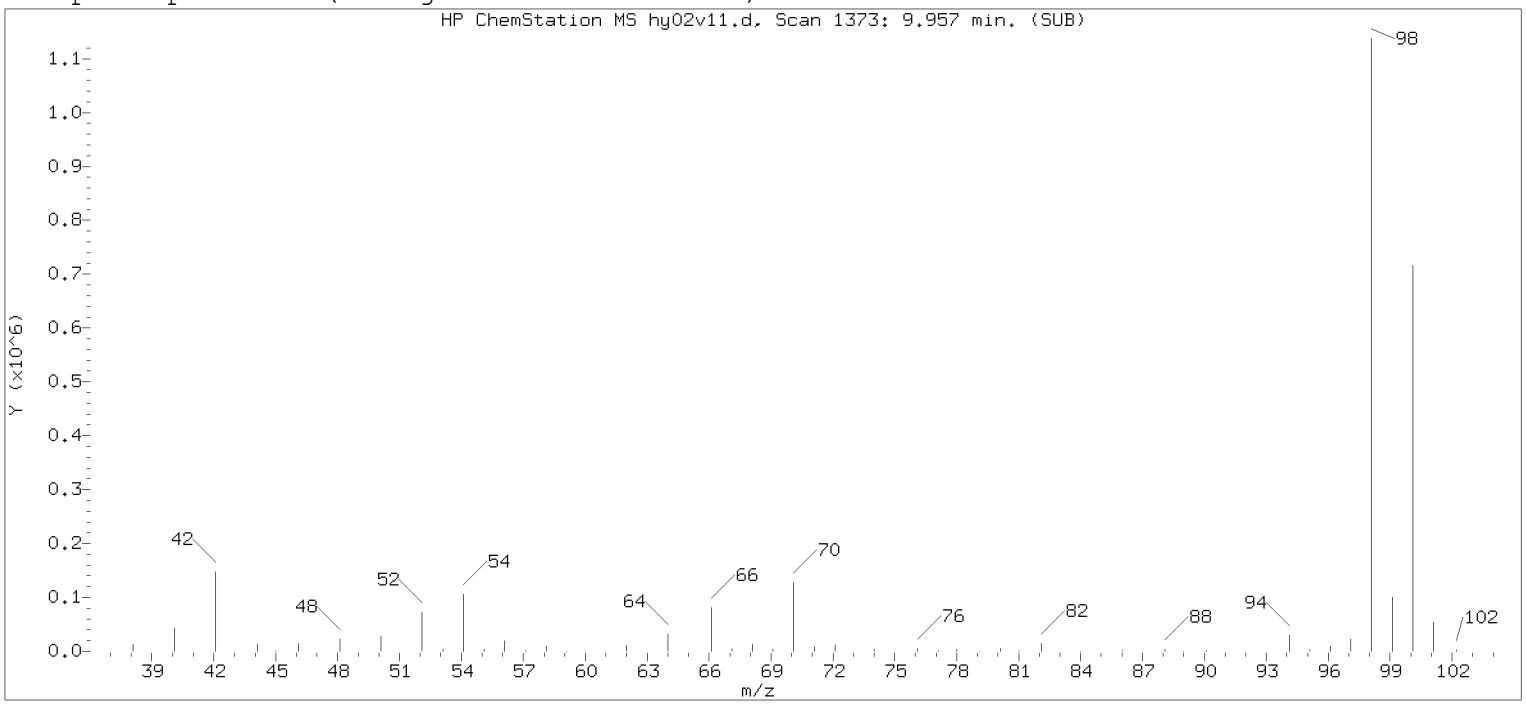
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area (flag) : 2378040M
On-Column Amount (ng) : 10.1199
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

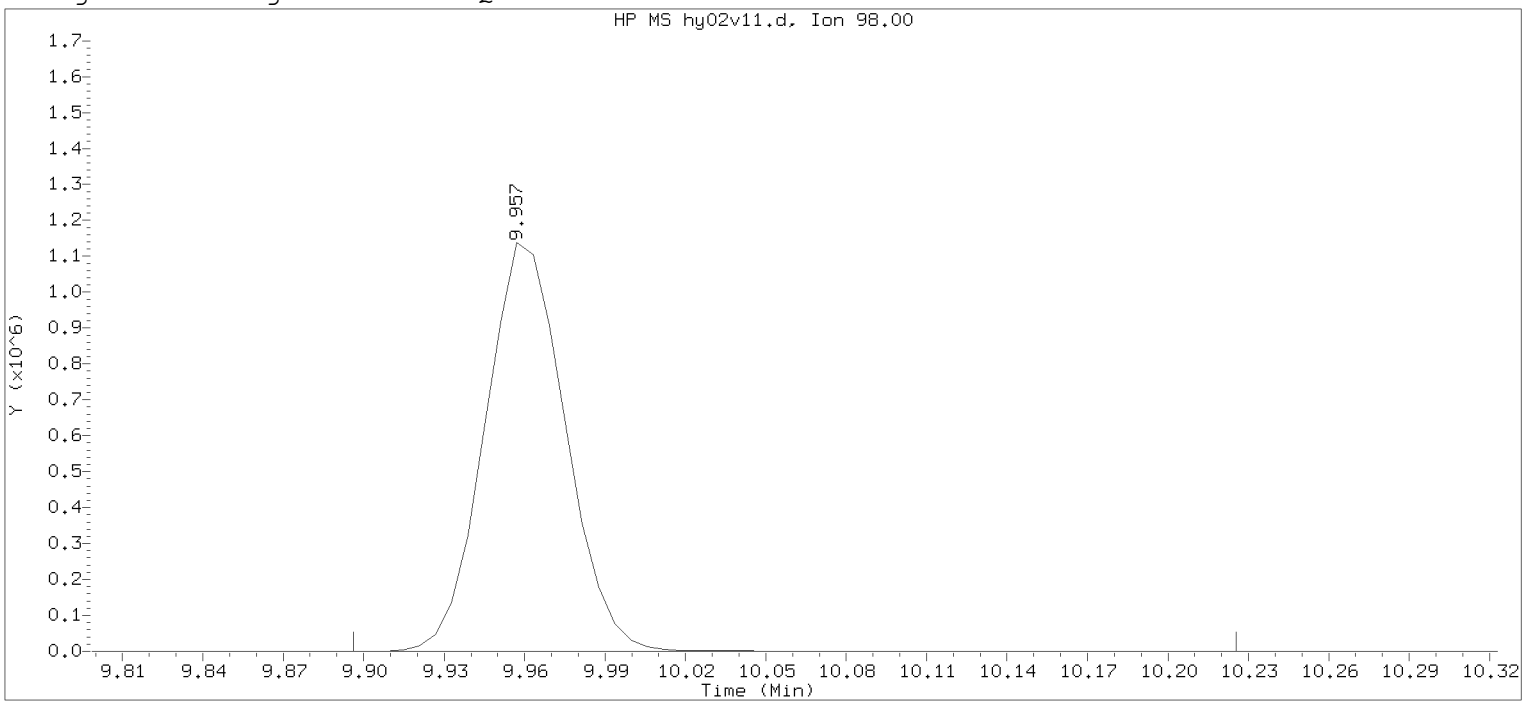
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

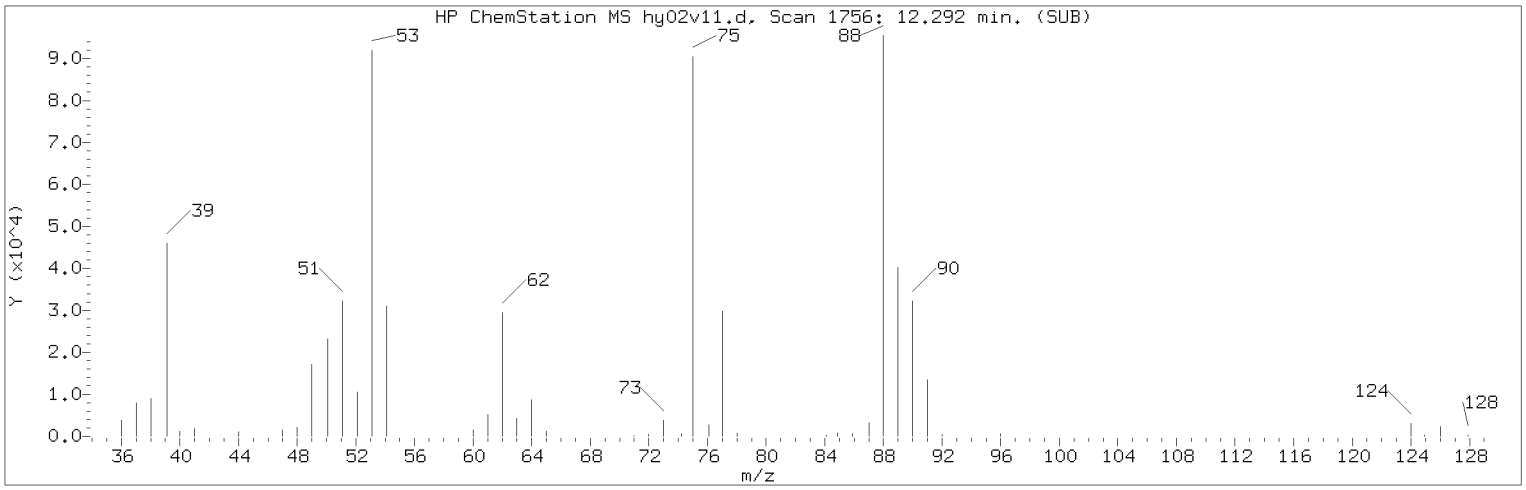
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

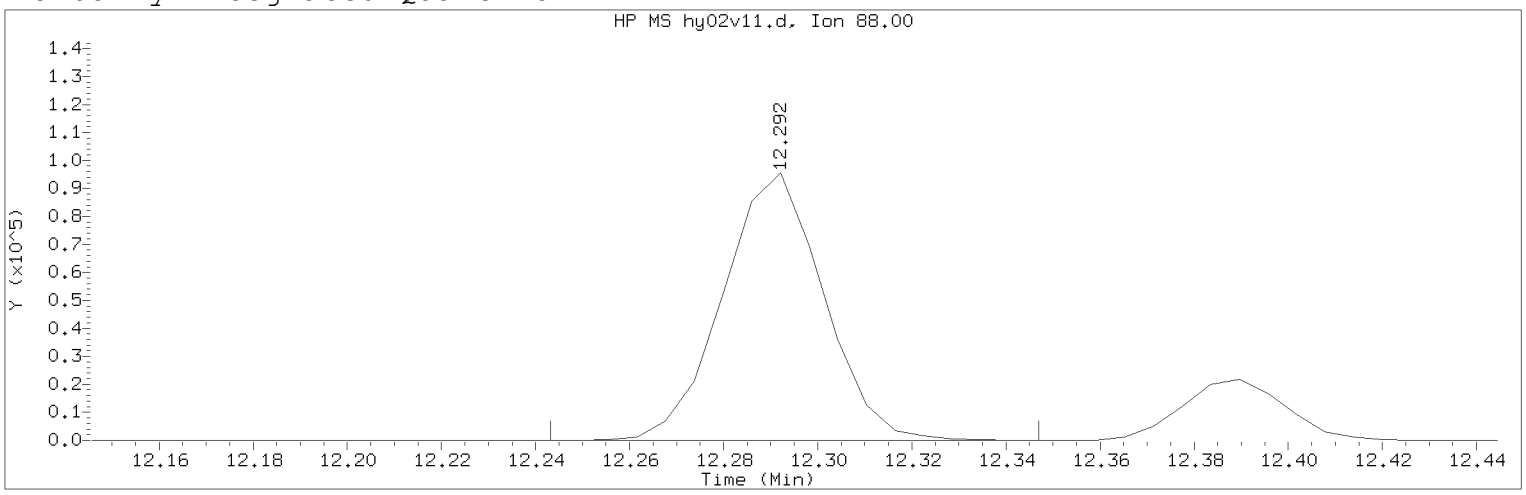
Compound Number : 82
Compound Name : Toluene-d8
Scan Number : 1373
Retention Time (minutes): 9.957
Quant Ion : 98.00
Area : 2378040
On-column Amount (ng) : 0.0000
Integration start scan : 1362 Integration stop scan: 1416
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used during data review.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

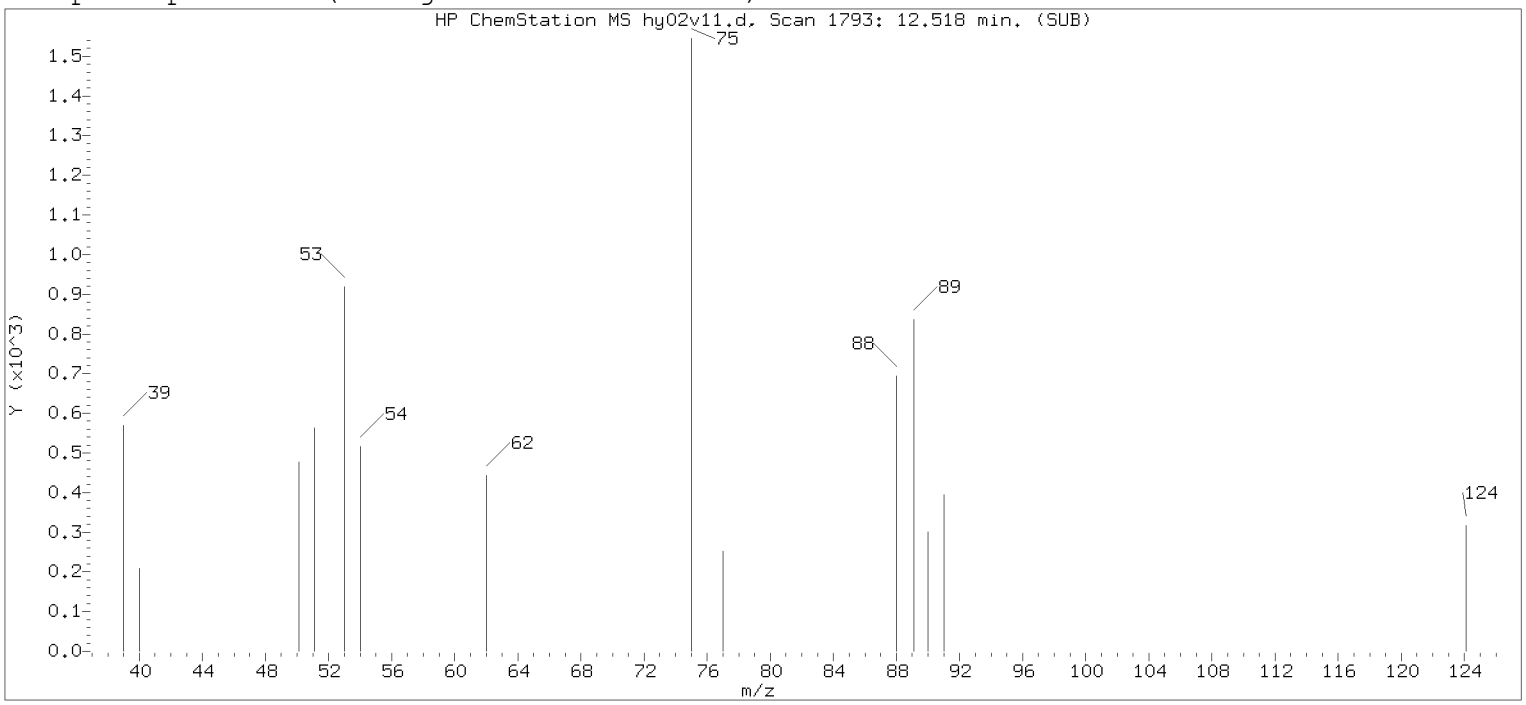
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141422M
On-Column Amount (ng) : 13.0650
Integration start scan : 1747 Integration stop scan: 1764
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

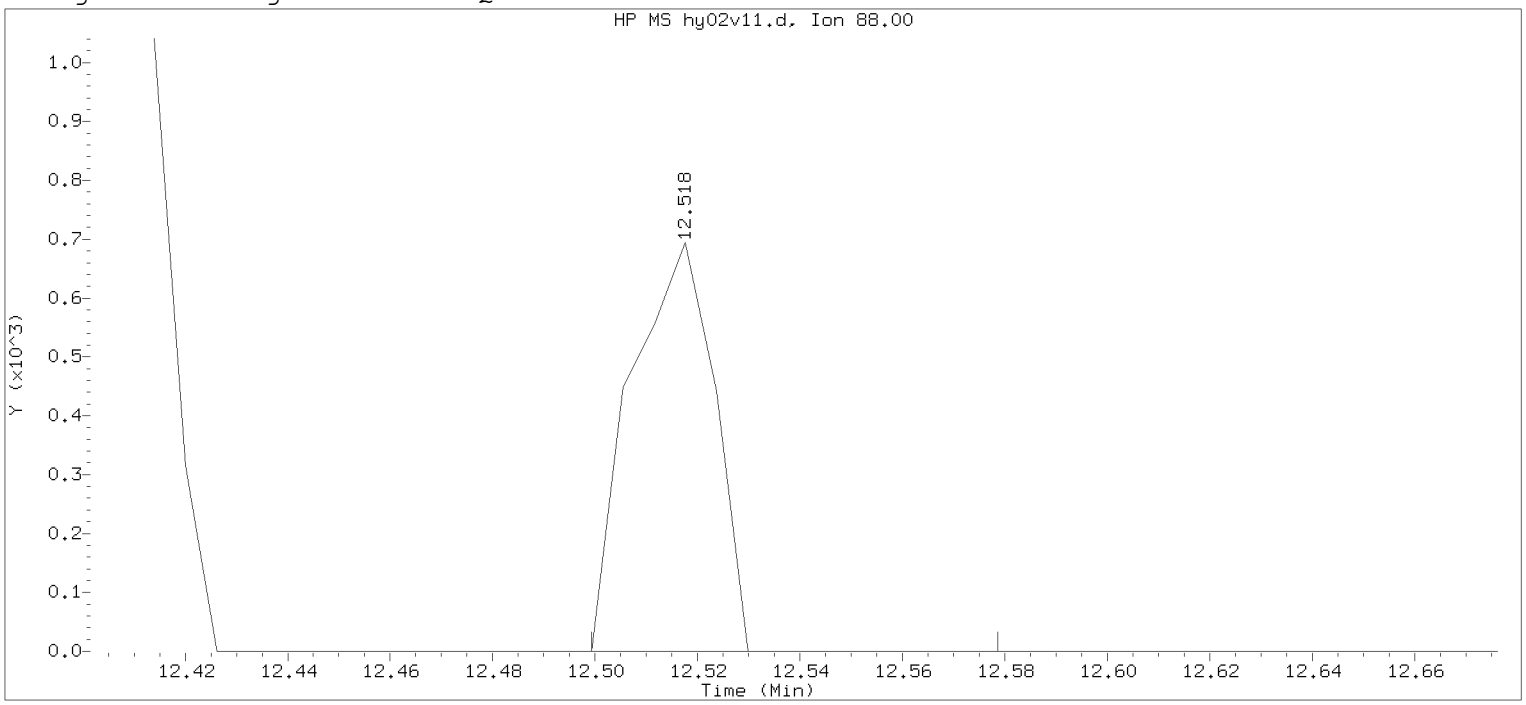
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

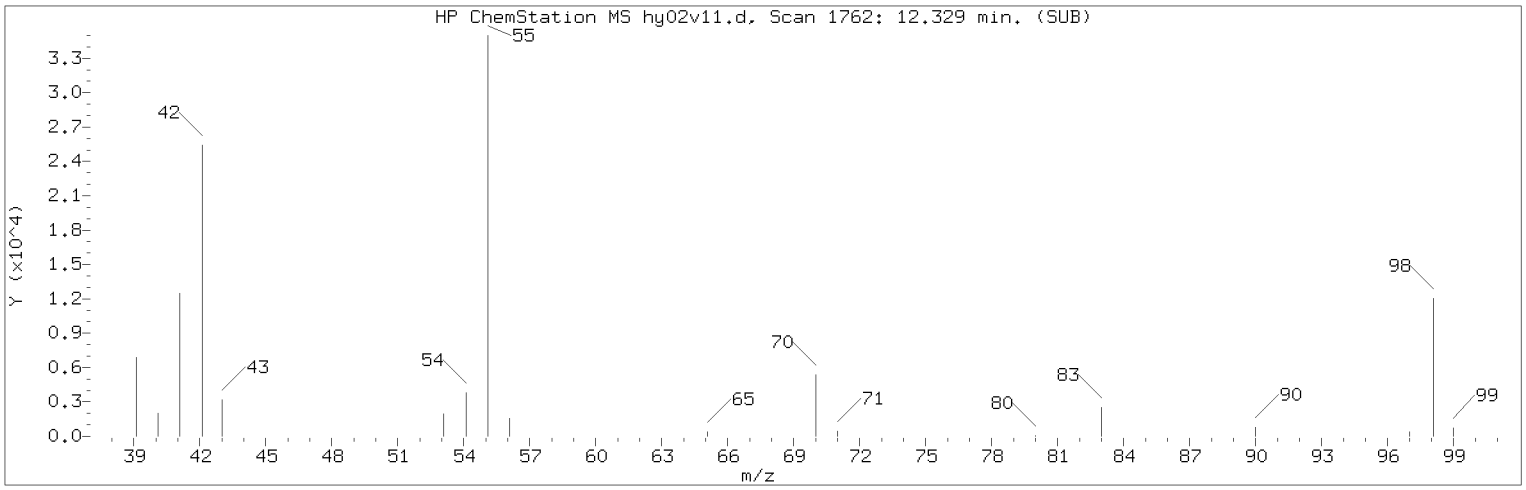
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

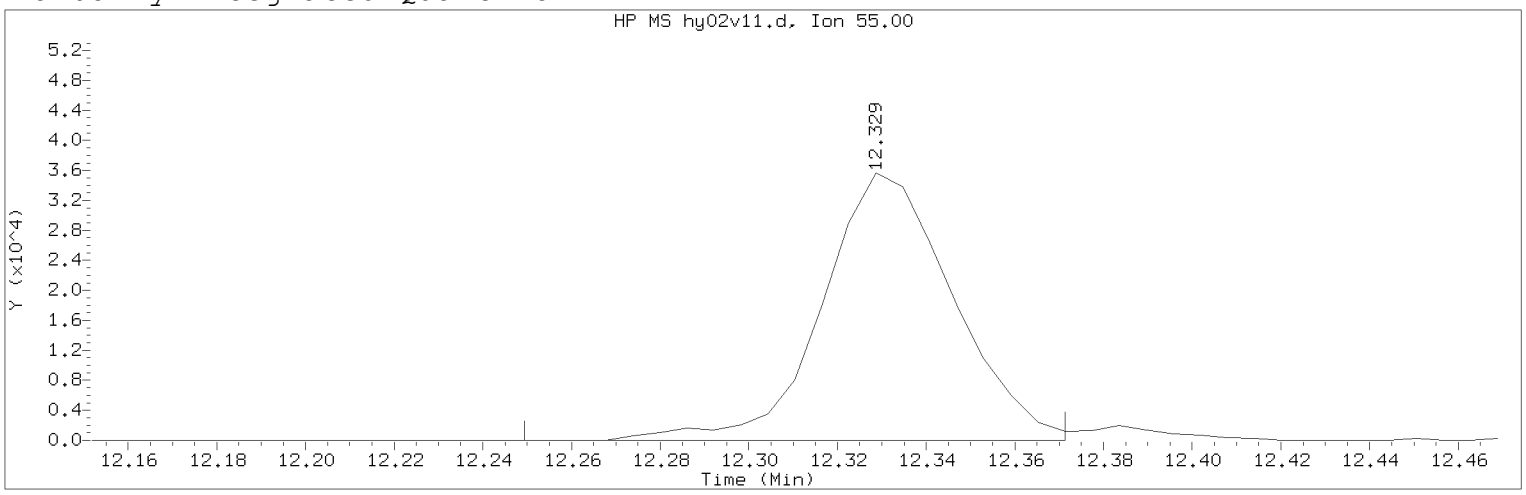
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1793
Retention Time (minutes): 12.518
Quant Ion : 88.00
Area : 782
On-column Amount (ng) : 0.0735
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCSH88 Lab Sample ID: LCSH88

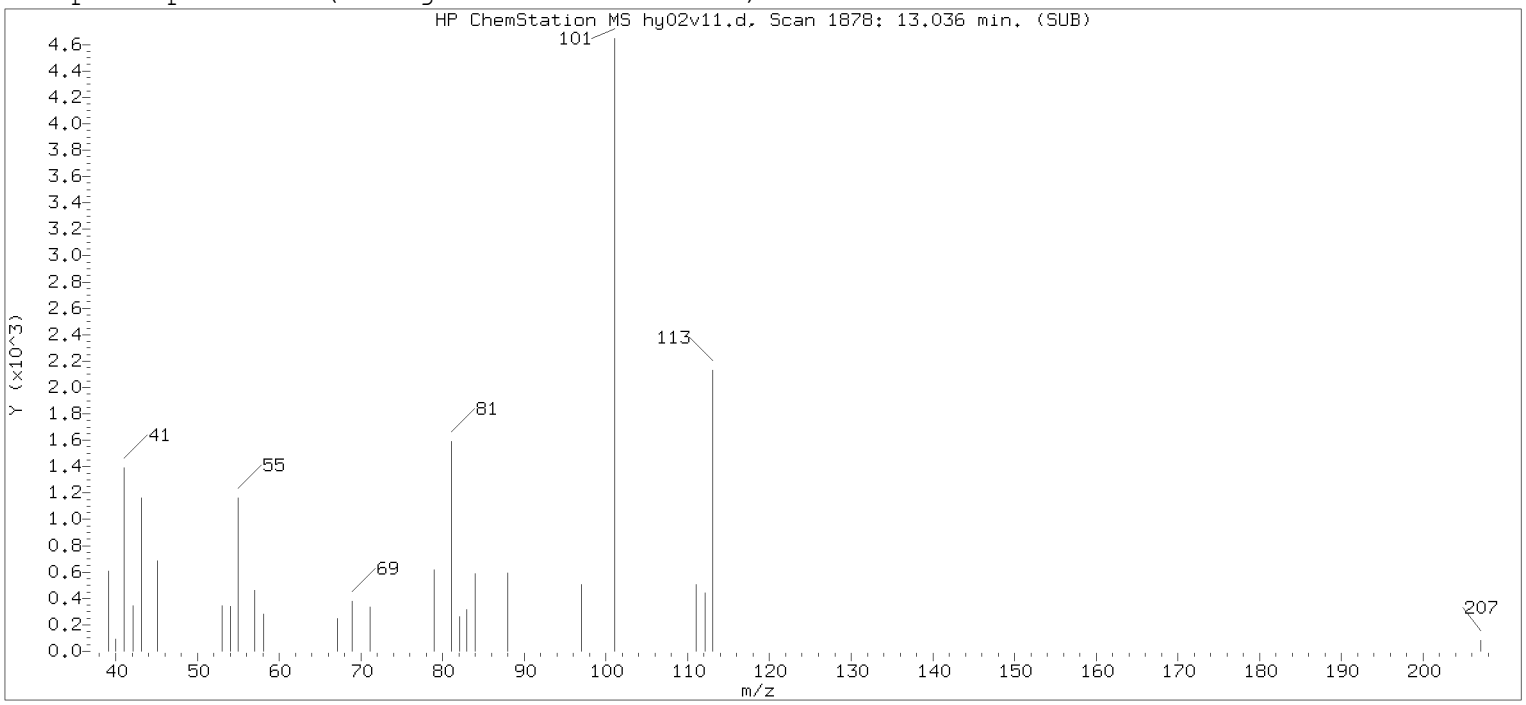
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 72992M
On-Column Amount (ng) : 132.5935
Integration start scan : 1748 Integration stop scan: 1768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

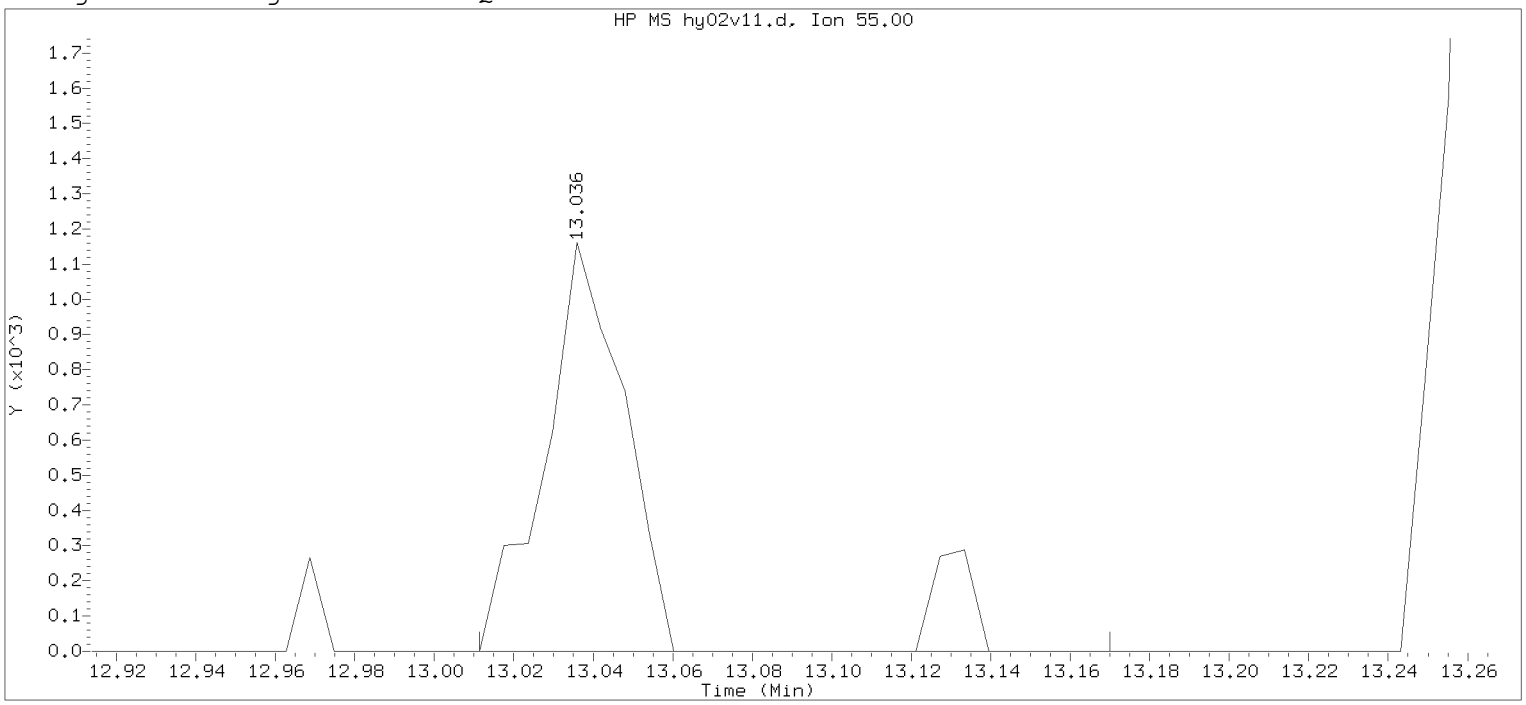
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:38.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Paul R. Cormier on 05/03/2018 at 10:09.
PARALLAX ID: prc00685

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



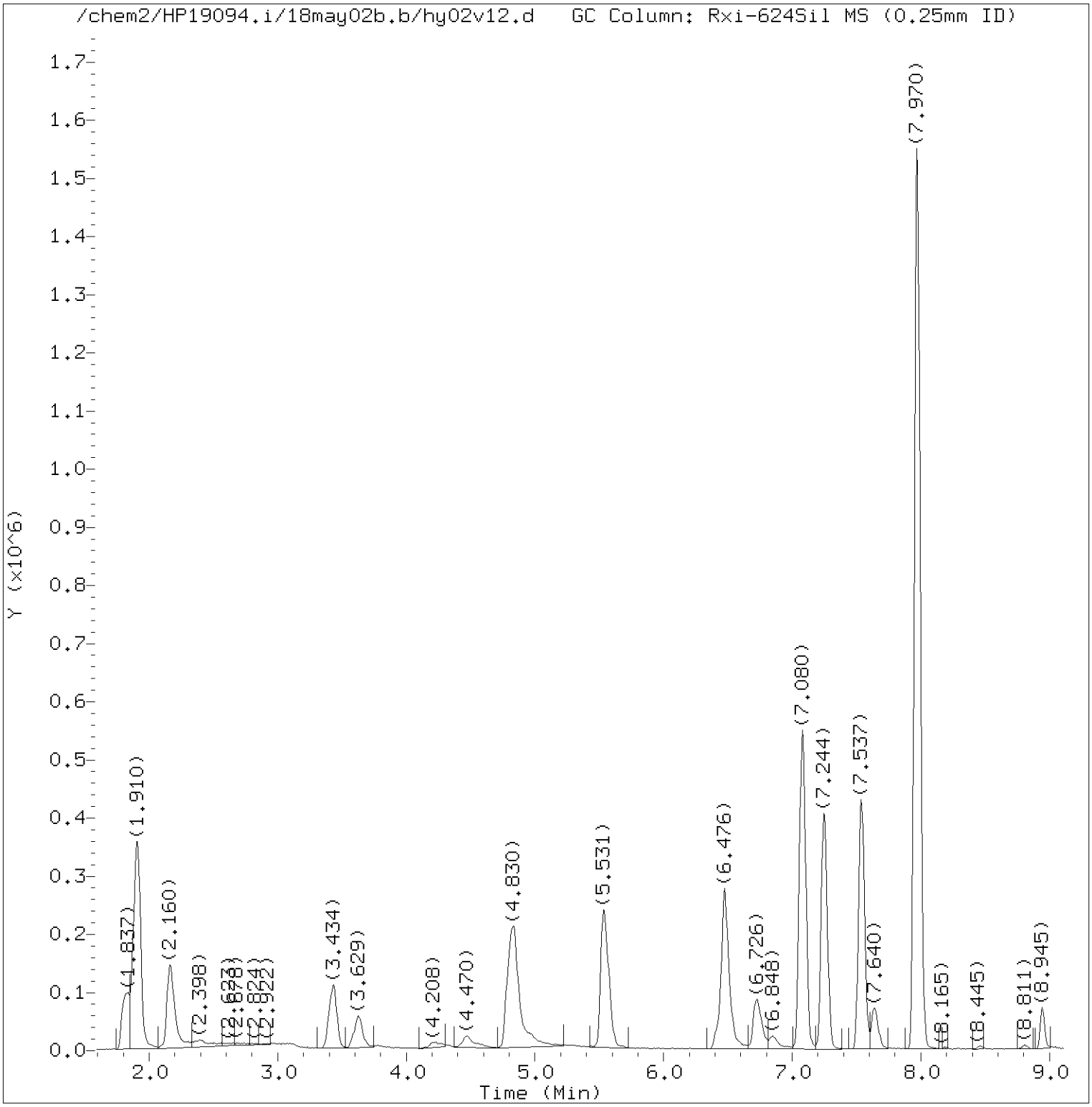
Data File: /chem2/HP19094.i/18may02b.b/hy02v11.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:07 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:21
Date, time and analyst ID of latest file update: 02-May-2018 22:24 Automation

Sample Name: LCSH88 Lab Sample ID: LCSH88

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1878
Retention Time (minutes): 13.036
Quant Ion : 55.00
Area : 1809
On-column Amount (ng) : 3.3432
Integration start scan : 1873 Integration stop scan: 1899
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:38.
Target 3.5 esignature used on 05/03/2018



Total Ion Chromatogram (TIC)

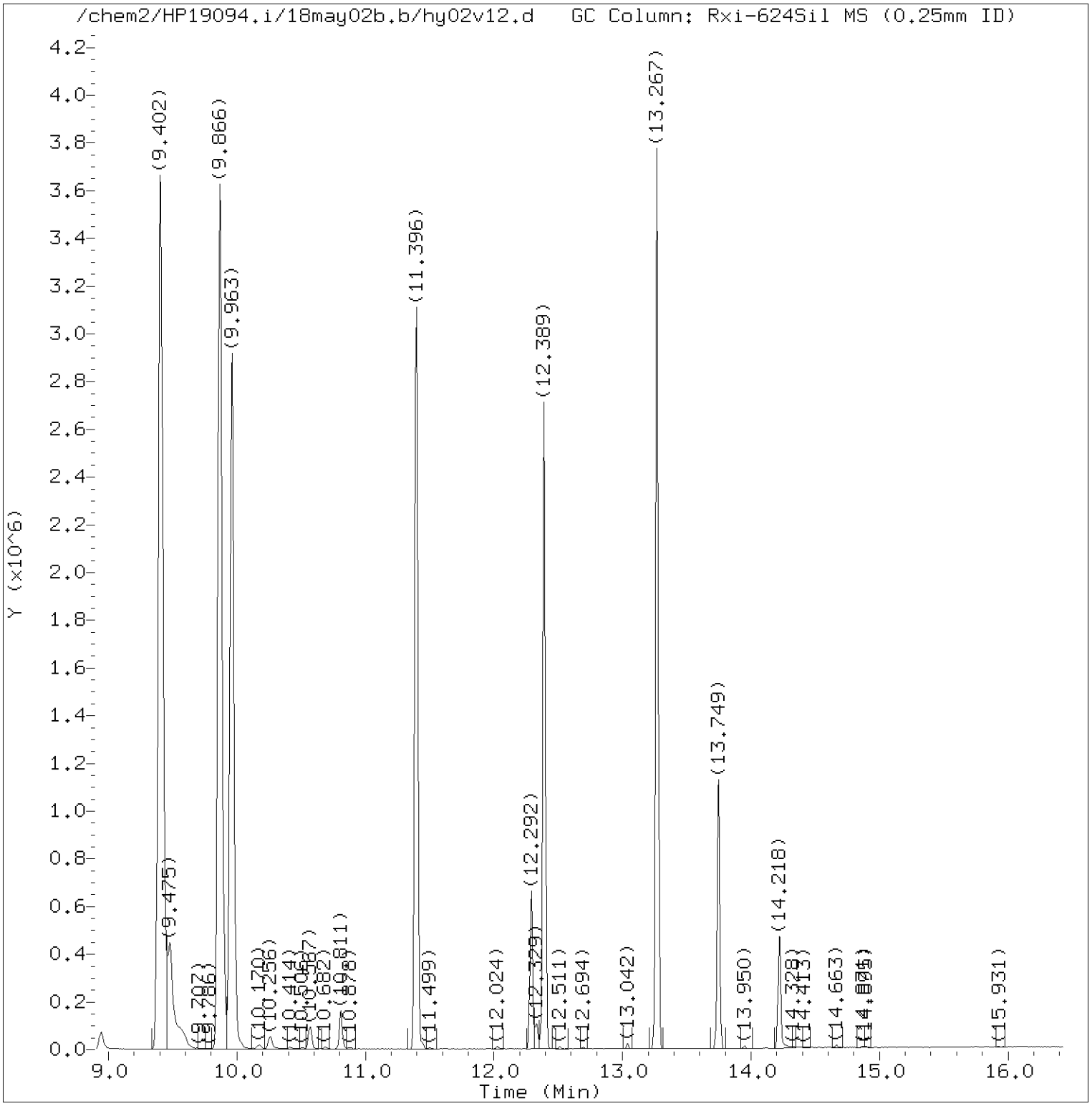
Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

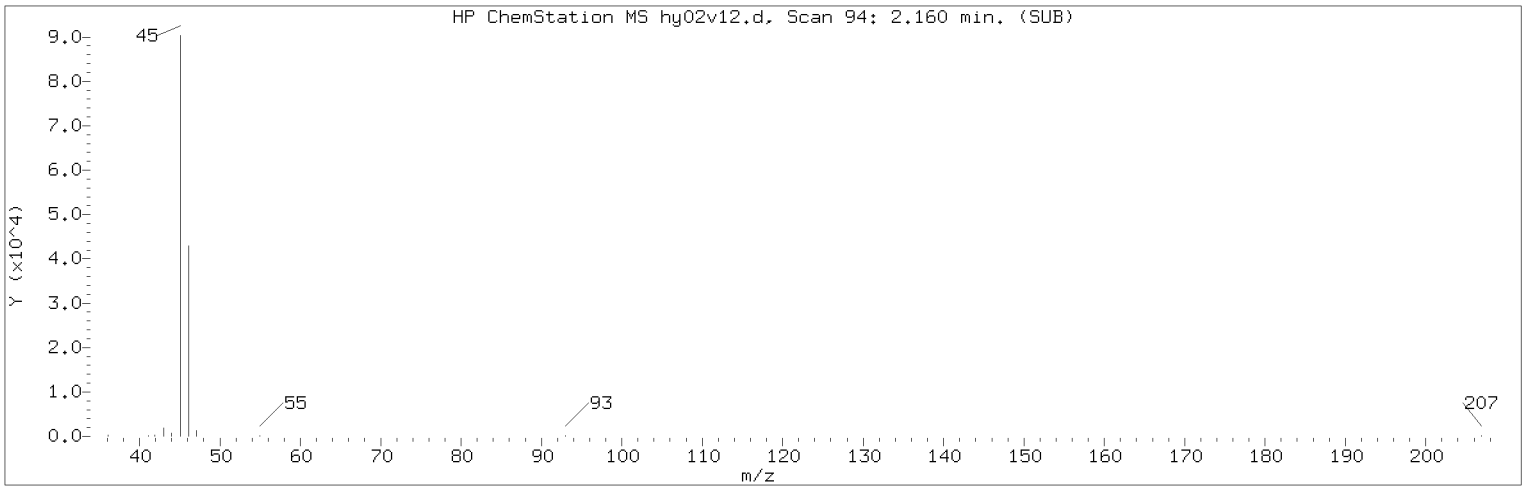
Sample Name: LCDH88 Lab Sample ID: LCDH88

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	367108M	5.115
25) Acetonitrile	(1)	4.208	41	76036M	44.742
26)*t-Butyl Alcohol-d10	(1)	4.470	65	70380M	50.000
36) Vinyl Acetate	(2)	5.531	43	844612	12.351
43) Methyl Acrylate	(2)	6.476	55	568762	26.957
50)$Dibromofluoromethane	(2)	7.080	113	548216	9.924
53) 1-Chlorobutane	(2)	7.244	56	532521	5.274
57)$1,2-Dichloroethane-d4	(2)	7.543	102	99061	10.169
63)*Fluorobenzene	(2)	7.970	96	2235850	10.000
77) Chloroacetonitrile	(2)	9.475	75	176428	209.820
78) 2-Chloroethyl vinyl ether	(2)	9.482	63	106420	5.264
82)$Toluene-d8	(3)	9.963	98	2273416	10.021
97)*Chlorobenzene-d5	(3)	11.396	117	1642381	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.292	88	141379M	15.511
112) Cyclohexanone	(1)	12.329	55	53752M	115.959
111)$4-Bromofluorobenzene	(3)	12.389	95	800571	9.947
133)*1,4-Dichlorobenzene-d4	(4)	13.267	152	870448	10.000
142) Hexachloroethane	(4)	13.749	117	200862	5.481

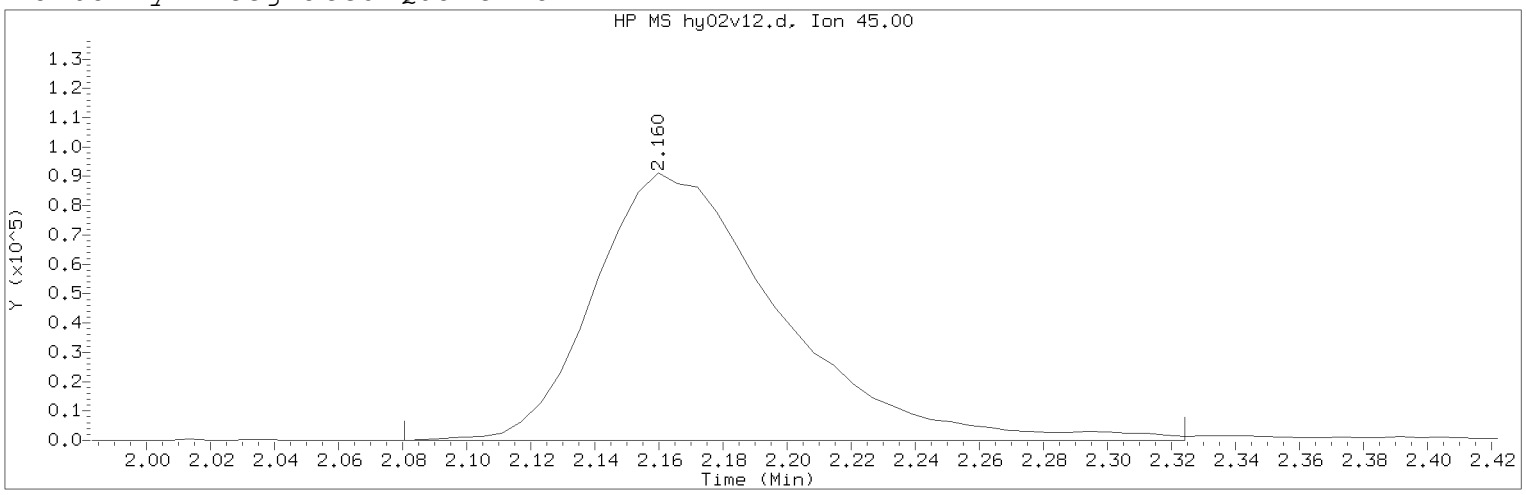
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

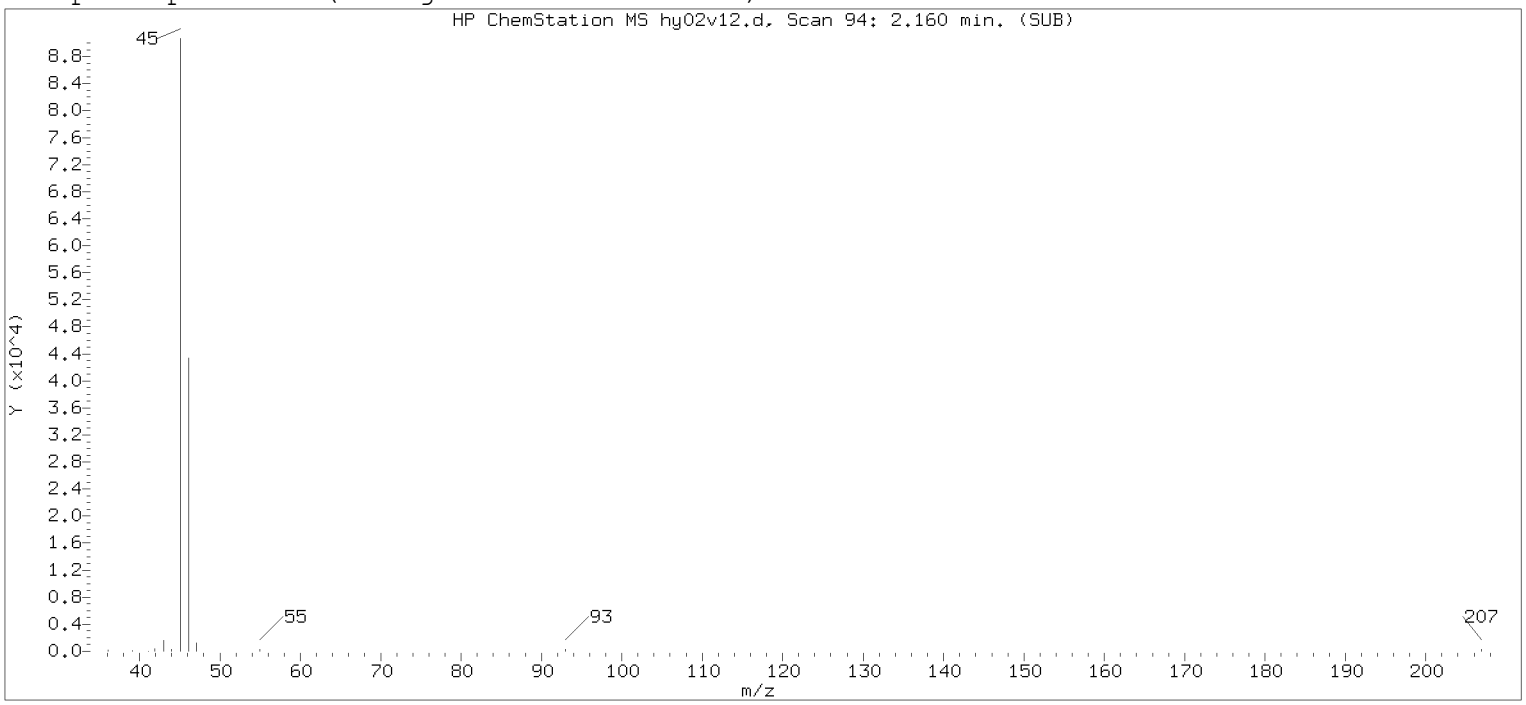
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 367108M
On-Column Amount (ng) : 5.1147
Integration start scan : 80 Integration stop scan: 120
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

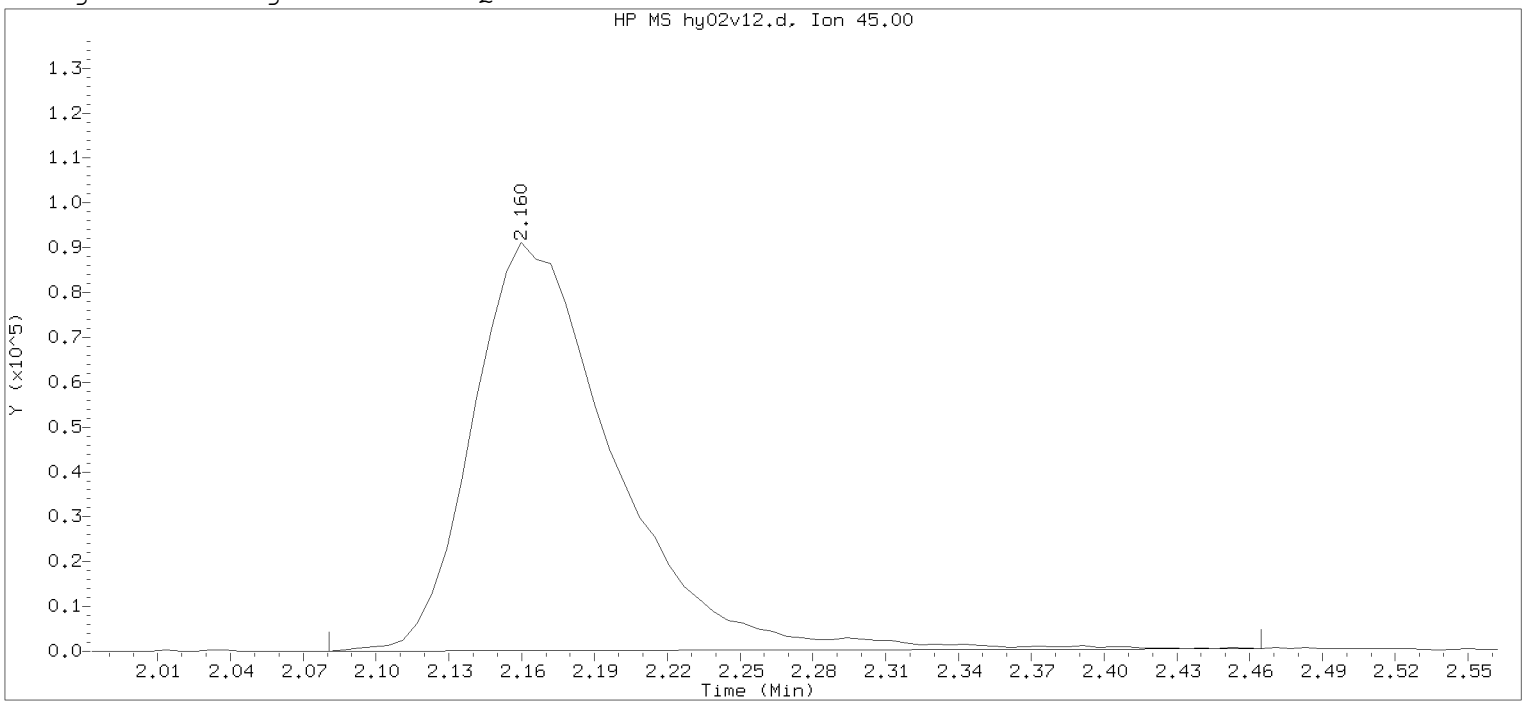
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

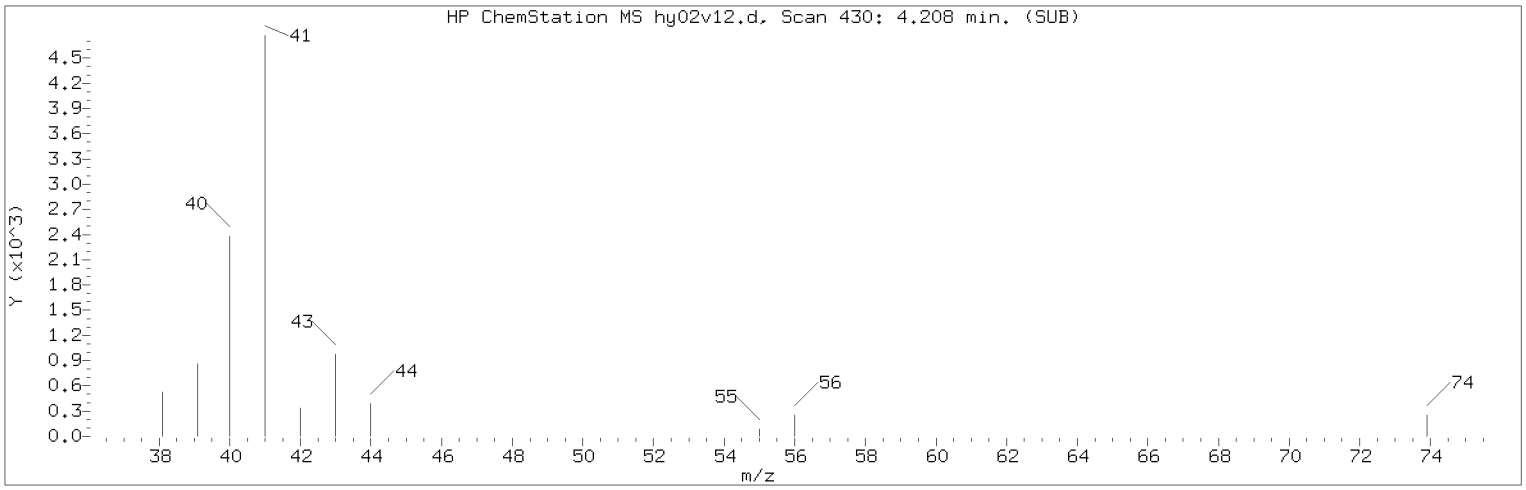
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

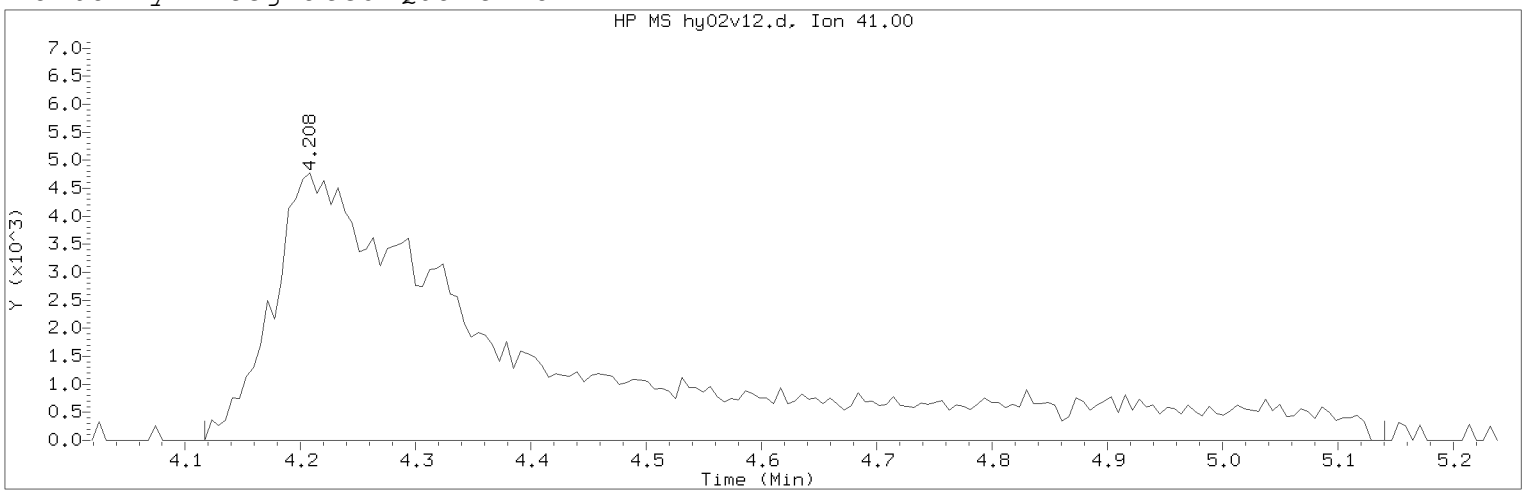
Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 94		
Retention Time (minutes)	: 2.160		
Quant Ion	: 45.00		
Area	: 368442		
On-column Amount (ng)	: 5.1333		
Integration start scan	: 80	Integration stop scan:	143
Y at integration start	: 0	Y at integration end:	584

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

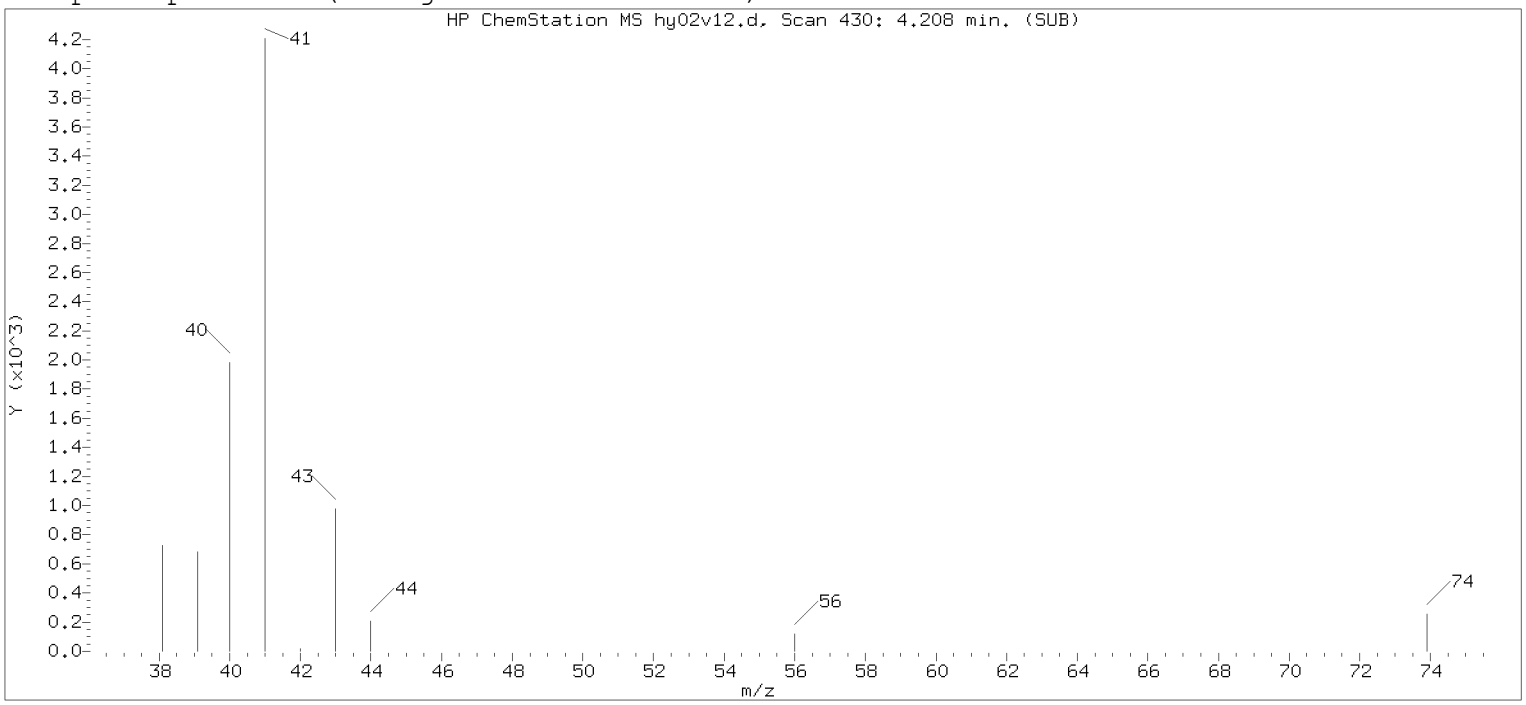
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area (flag) : 76036M
On-Column Amount (ng) : 44.7419
Integration start scan : 414 Integration stop scan: 582
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

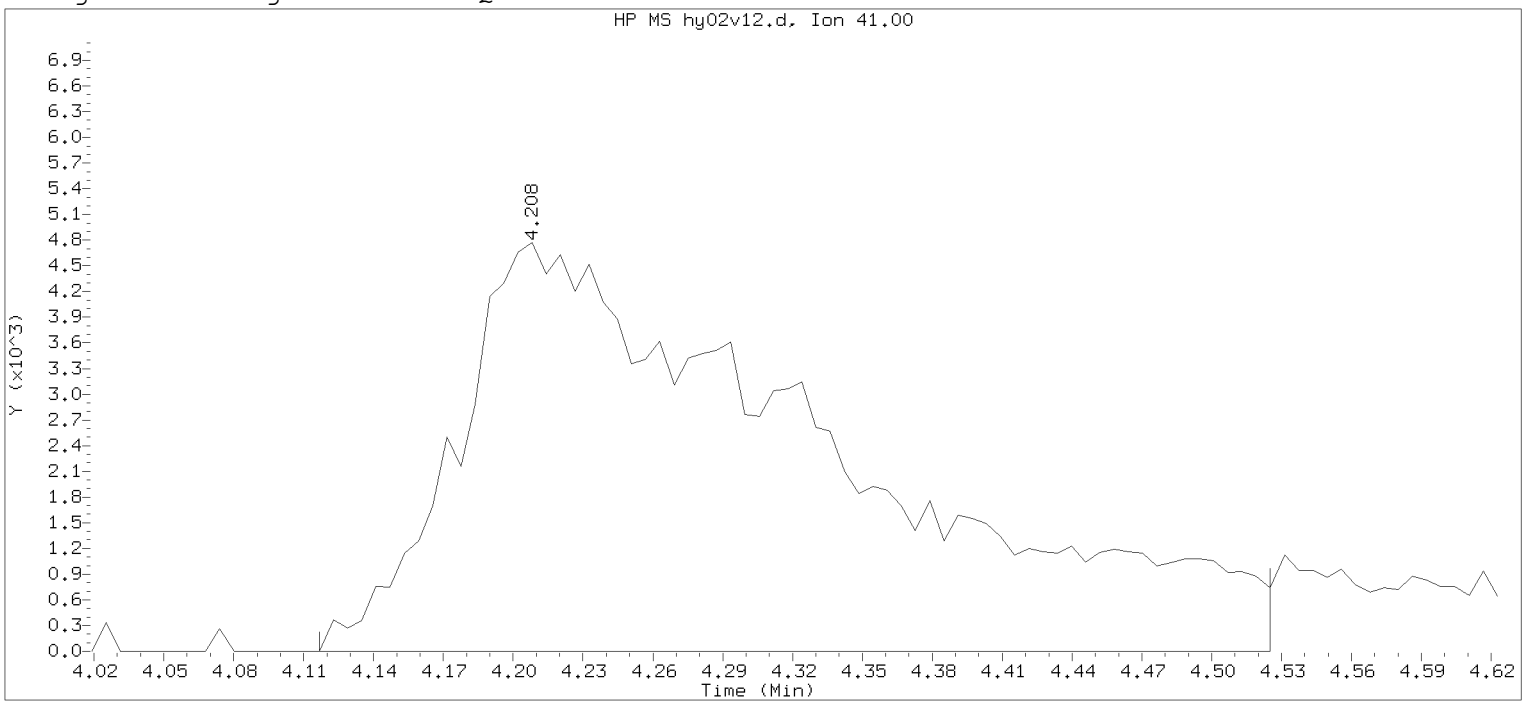
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

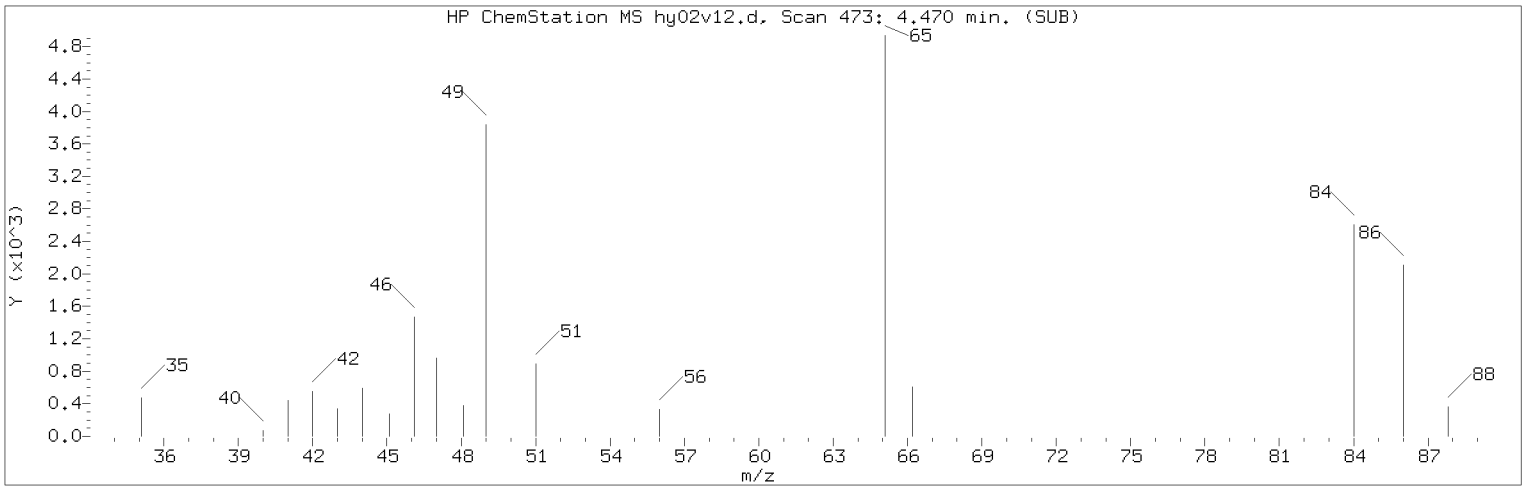
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

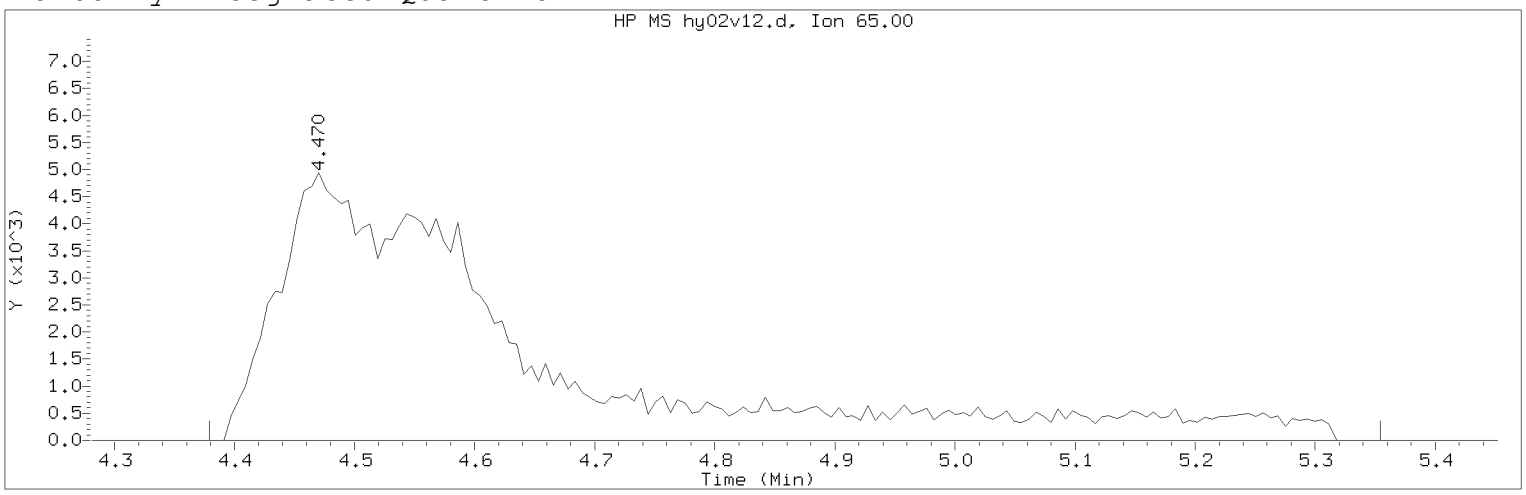
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 430
Retention Time (minutes): 4.208
Quant Ion : 41.00
Area : 53034
On-column Amount (ng) : 31.5863
Integration start scan : 414 Integration stop scan: 481
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

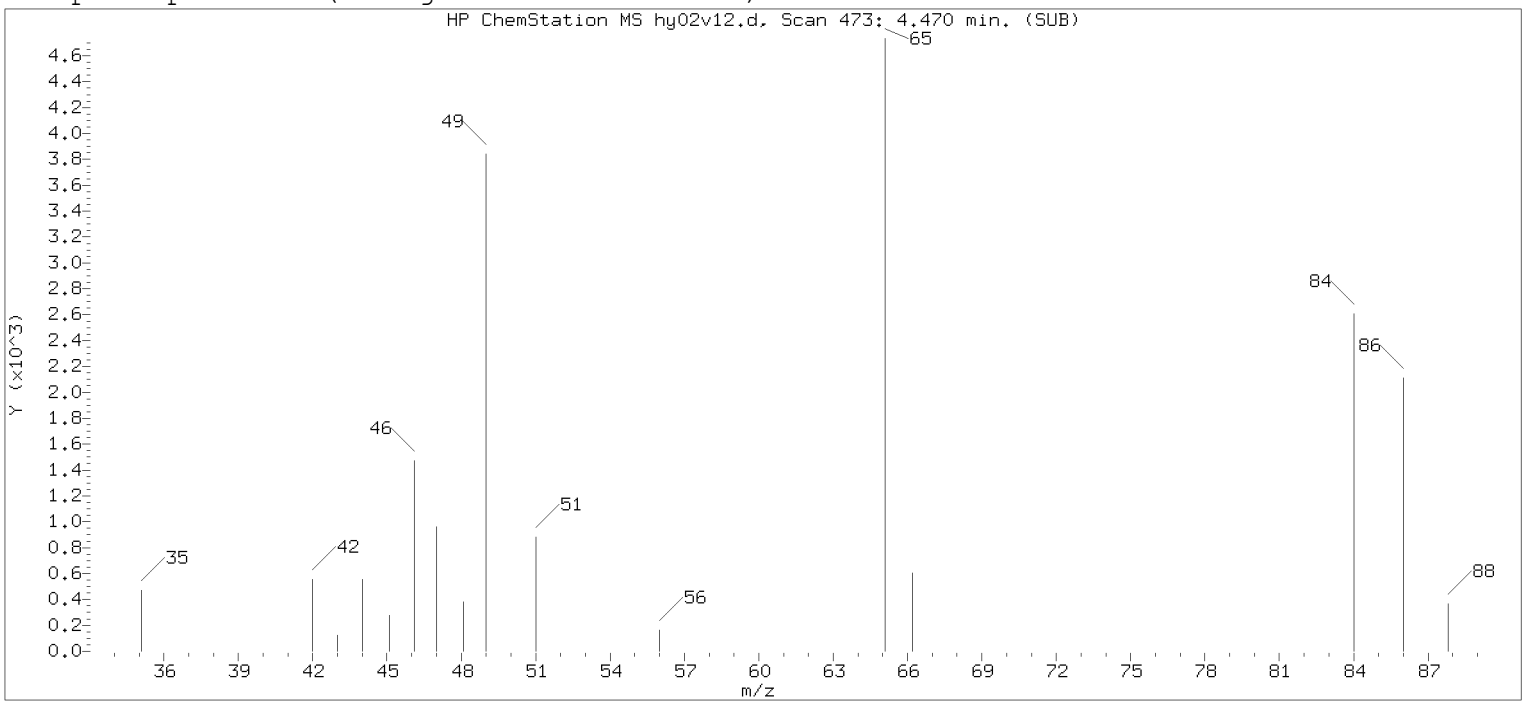
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area (flag) : 70380M
On-Column Amount (ng) : 50.0000
Integration start scan : 457 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

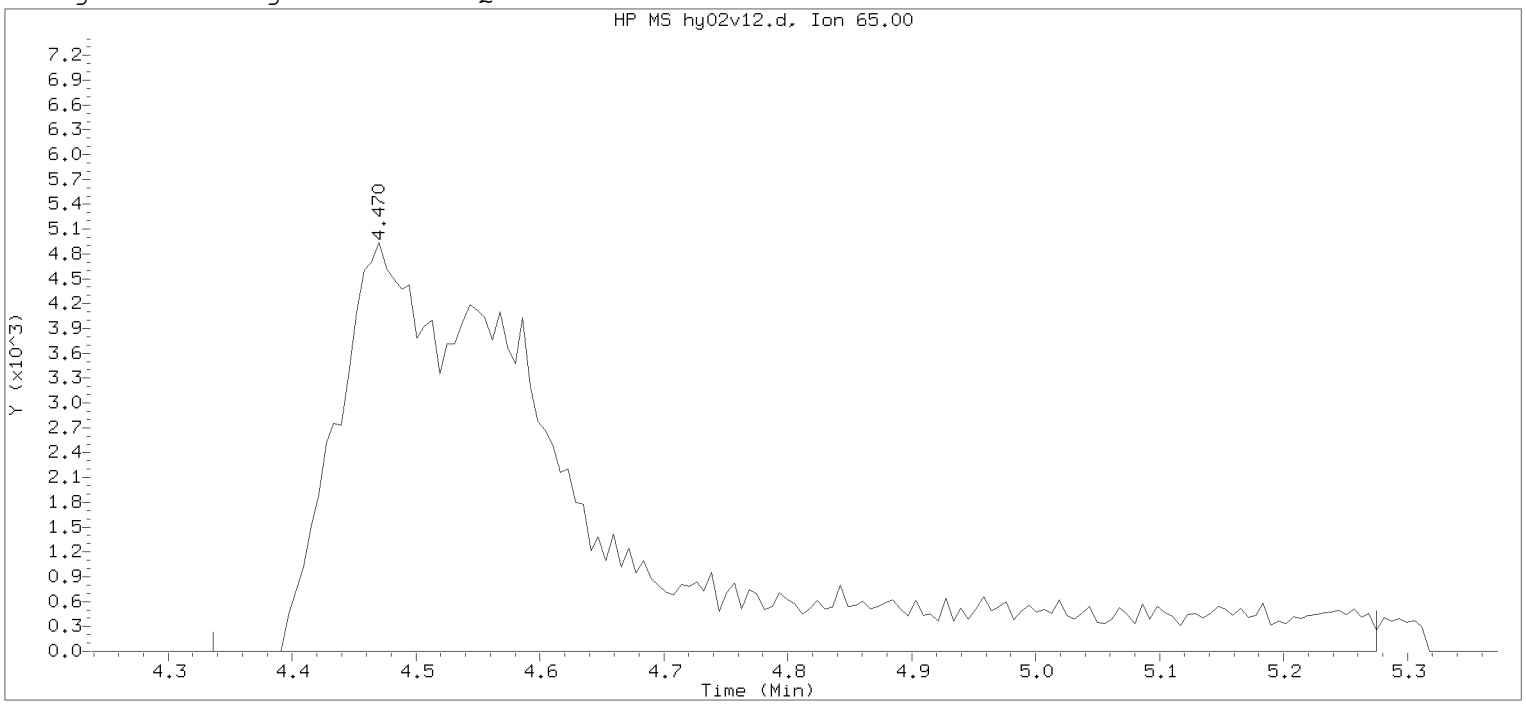
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

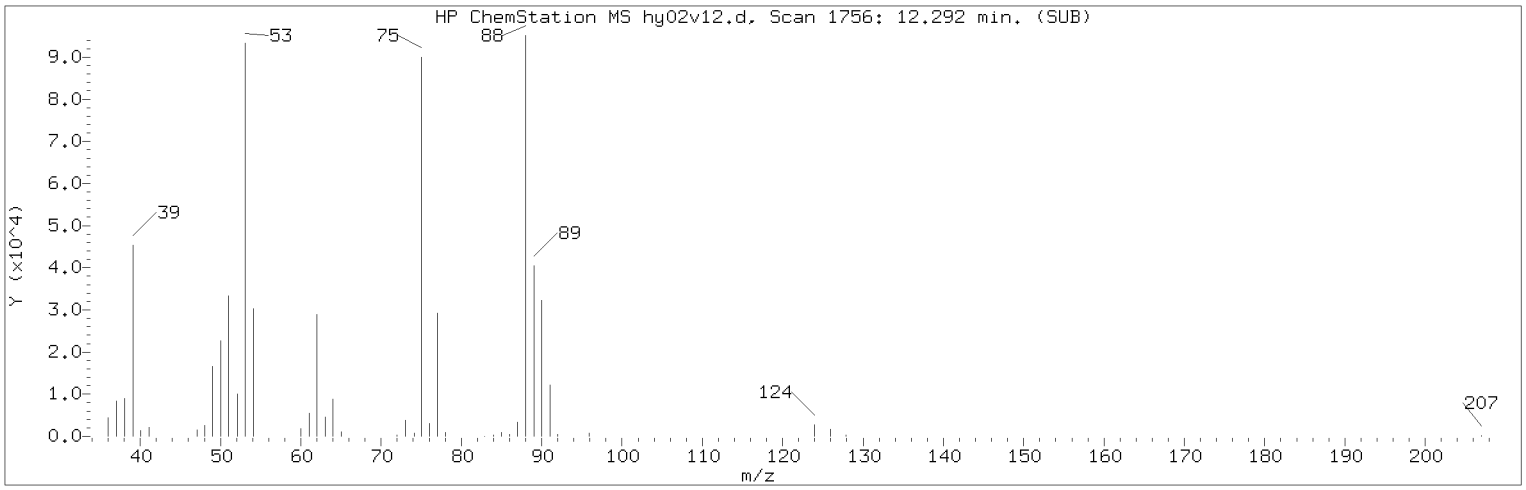
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

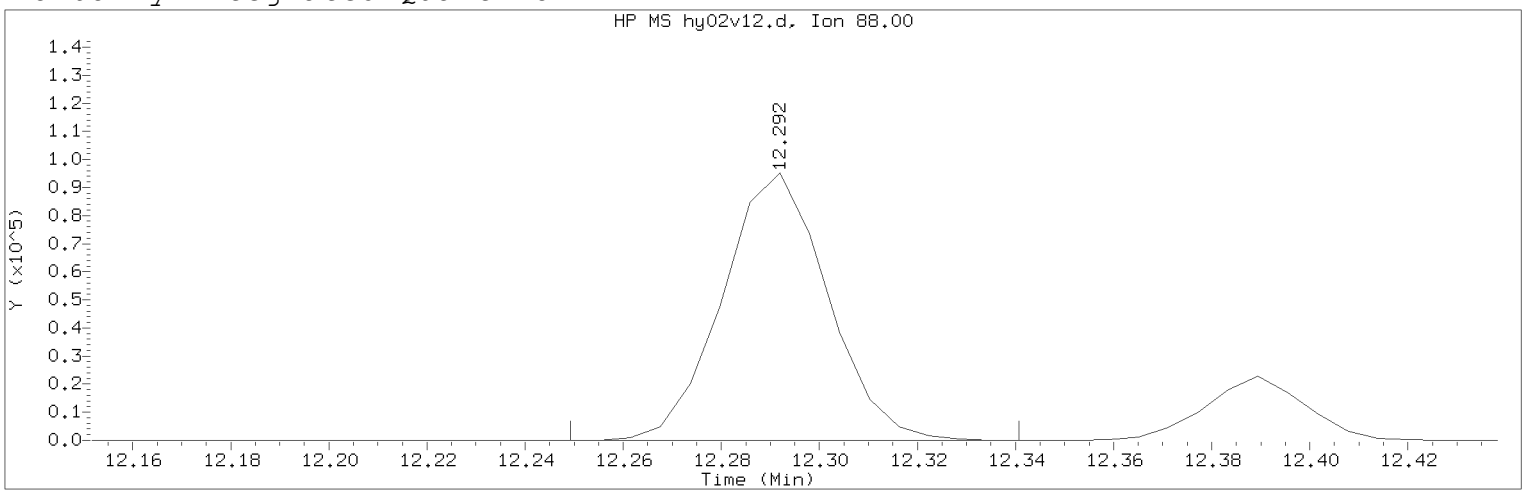
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 473
Retention Time (minutes): 4.470
Quant Ion : 65.00
Area : 69535
On-column Amount (ng) : 50.0000
Integration start scan : 450 Integration stop scan: 604
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature used on 05/03/2018.

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

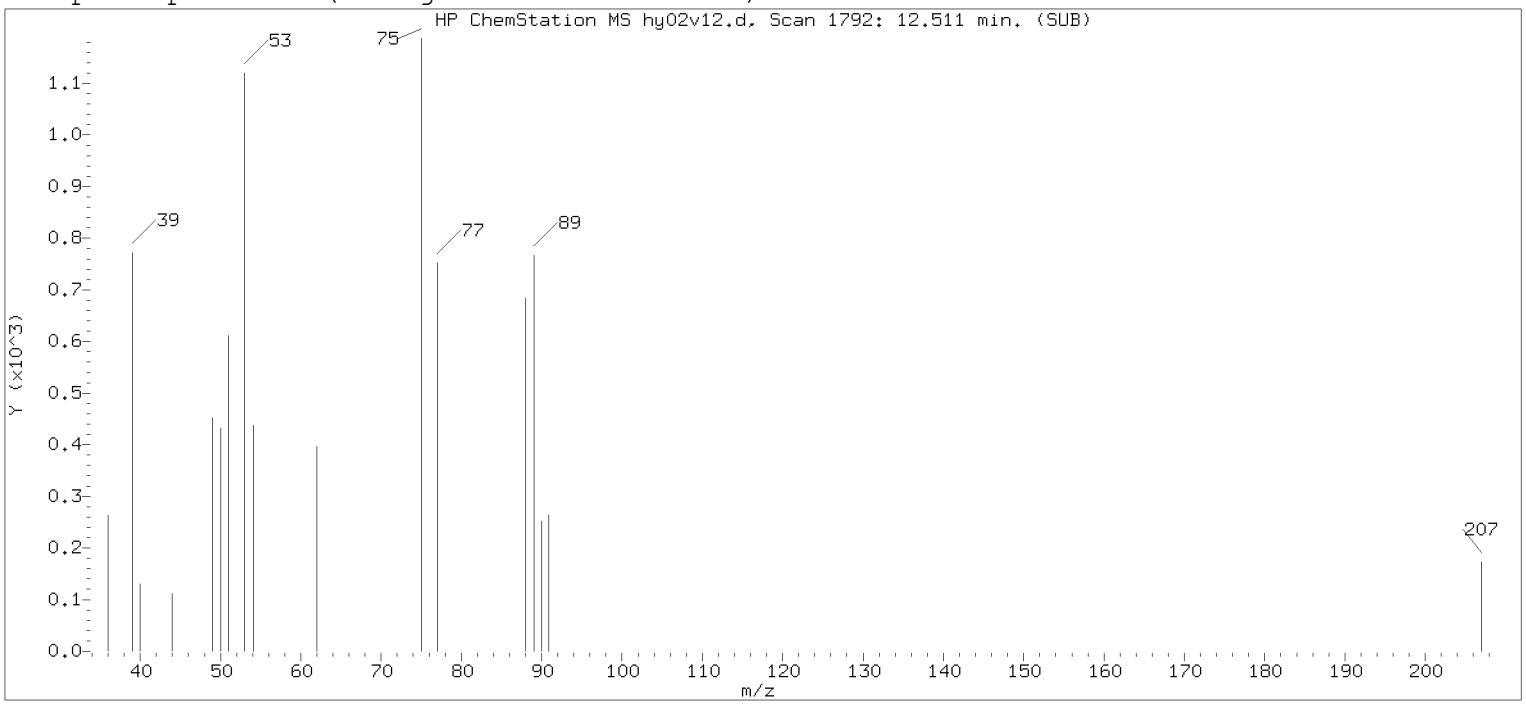
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1756
Retention Time (minutes): 12.292
Quant Ion : 88.00
Area (flag) : 141379M
On-Column Amount (ng) : 15.5110
Integration start scan : 1748 Integration stop scan: 1763
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

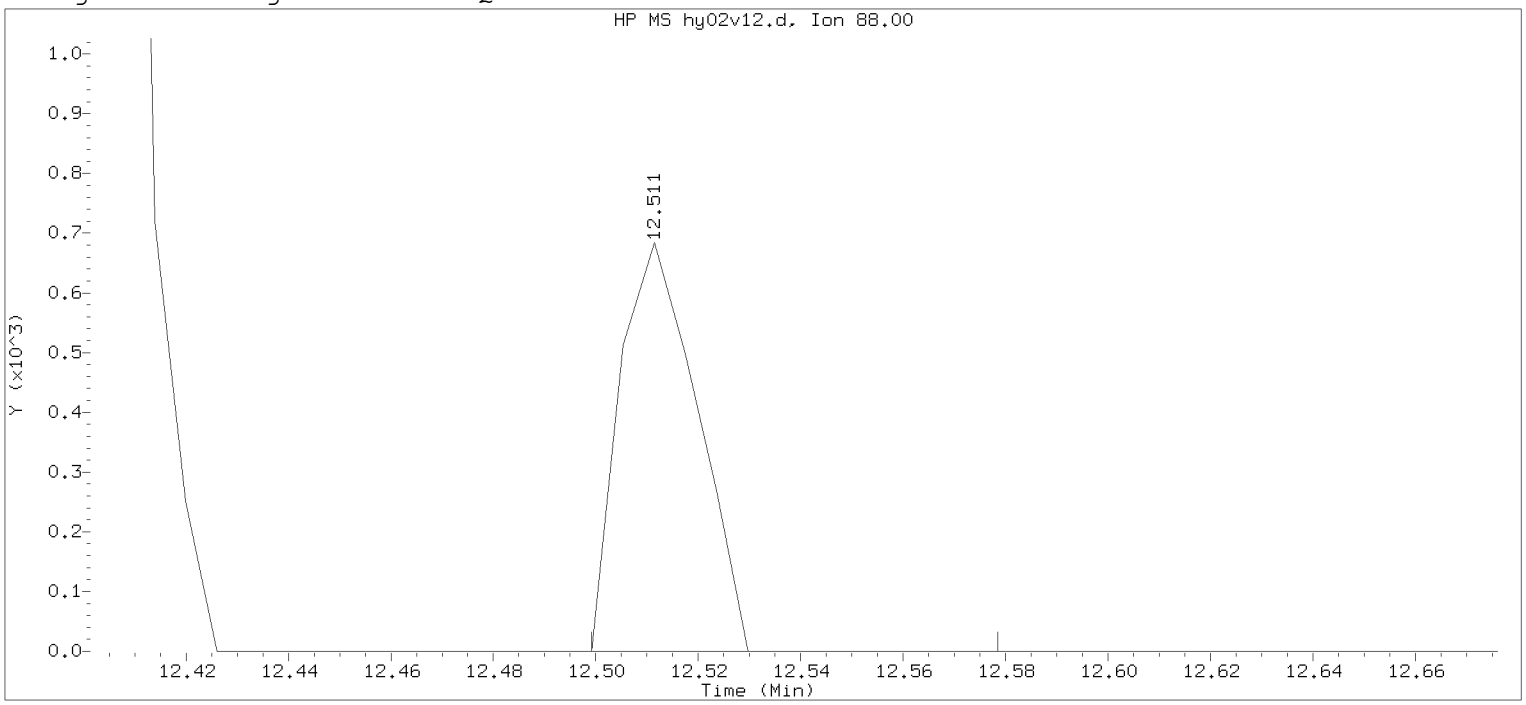
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

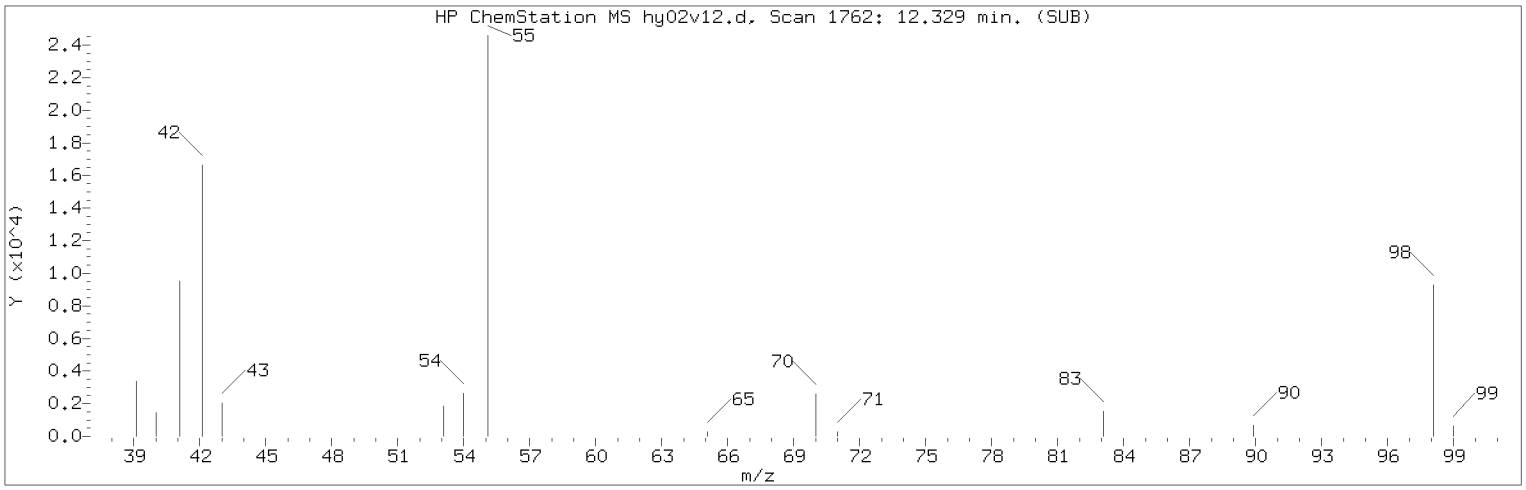
Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

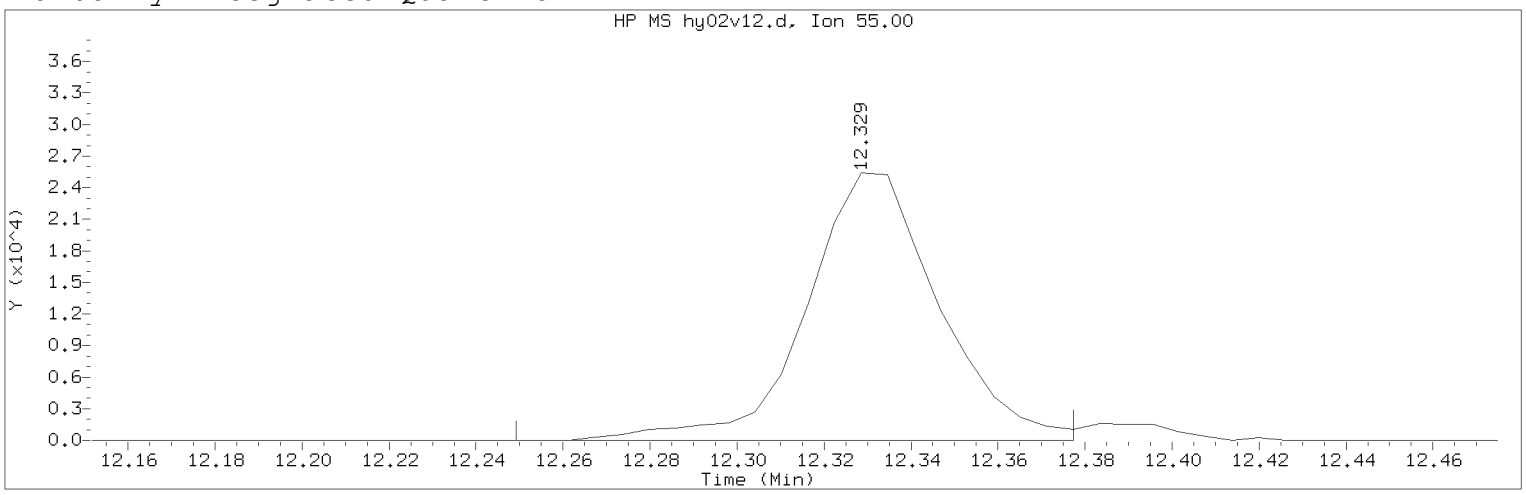
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1792
Retention Time (minutes): 12.511
Quant Ion : 88.00
Area : 718
On-column Amount (ng) : 0.0798
Integration start scan : 1789 Integration stop scan: 1802
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature used on 05/03/2018

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 23:07
Date, time and analyst ID of latest file update: 03-May-2018 00:35 dvv10203

Sample Name: LCDH88 Lab Sample ID: LCDH88

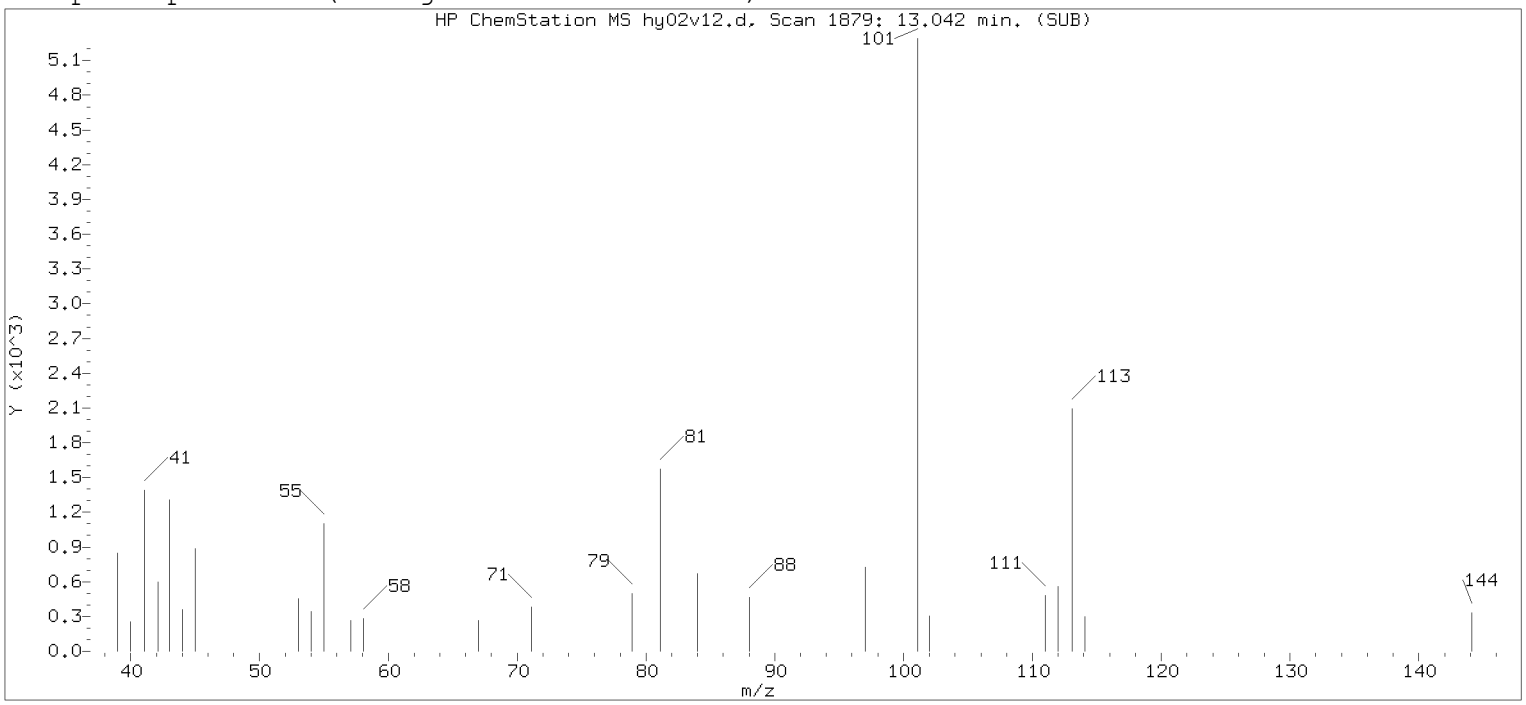
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1762
Retention Time (minutes): 12.329
Quant Ion : 55.00
Area (flag) : 53752M
On-Column Amount (ng) : 115.9591
Integration start scan : 1748 Integration stop scan: 1769
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

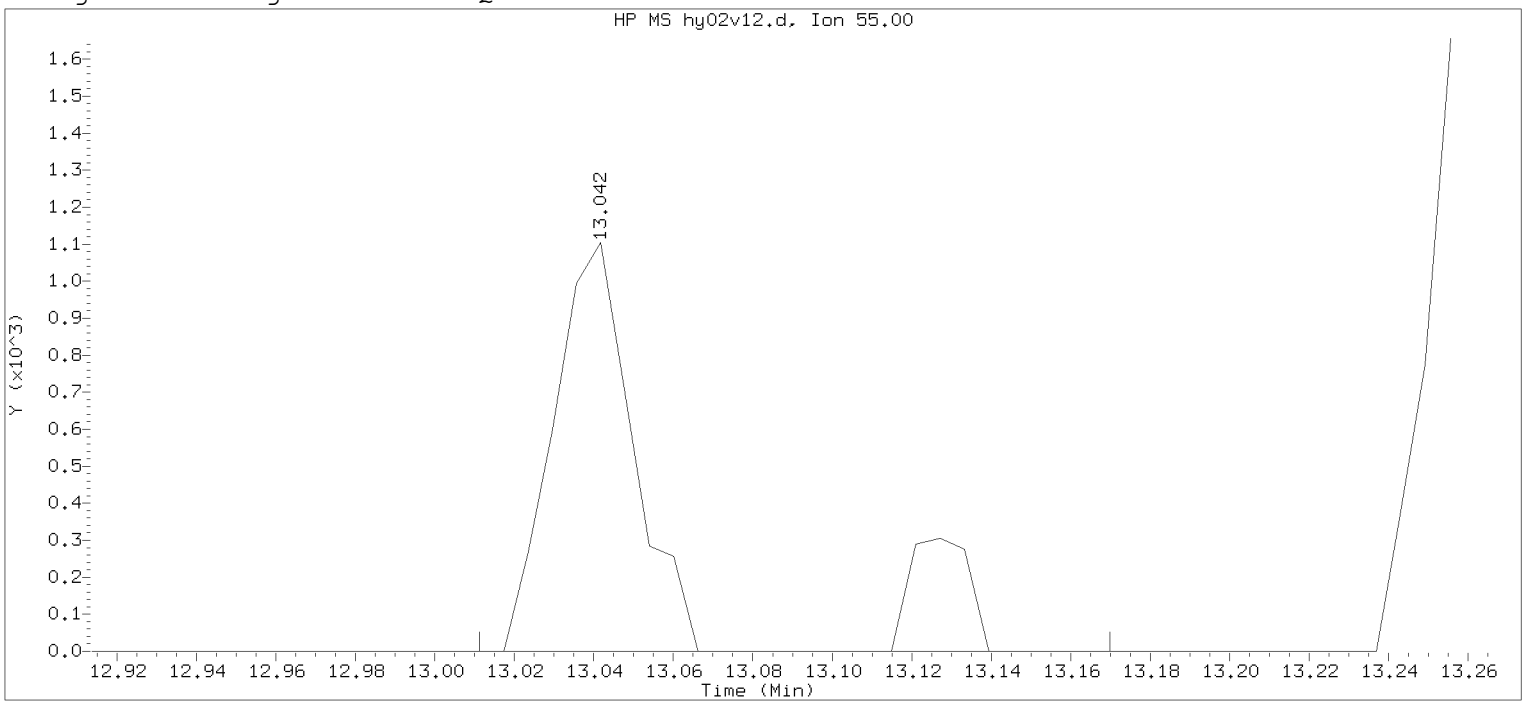
Analyst responsible for change: Digitally signed by Don V. Viray
on 05/03/2018 at 00:39.
Target 3.5 esignature user ID: dvv10203

Secondary review performed and digitally signed by Joshua E. Berrios on 05/03/2018 at 16:36.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



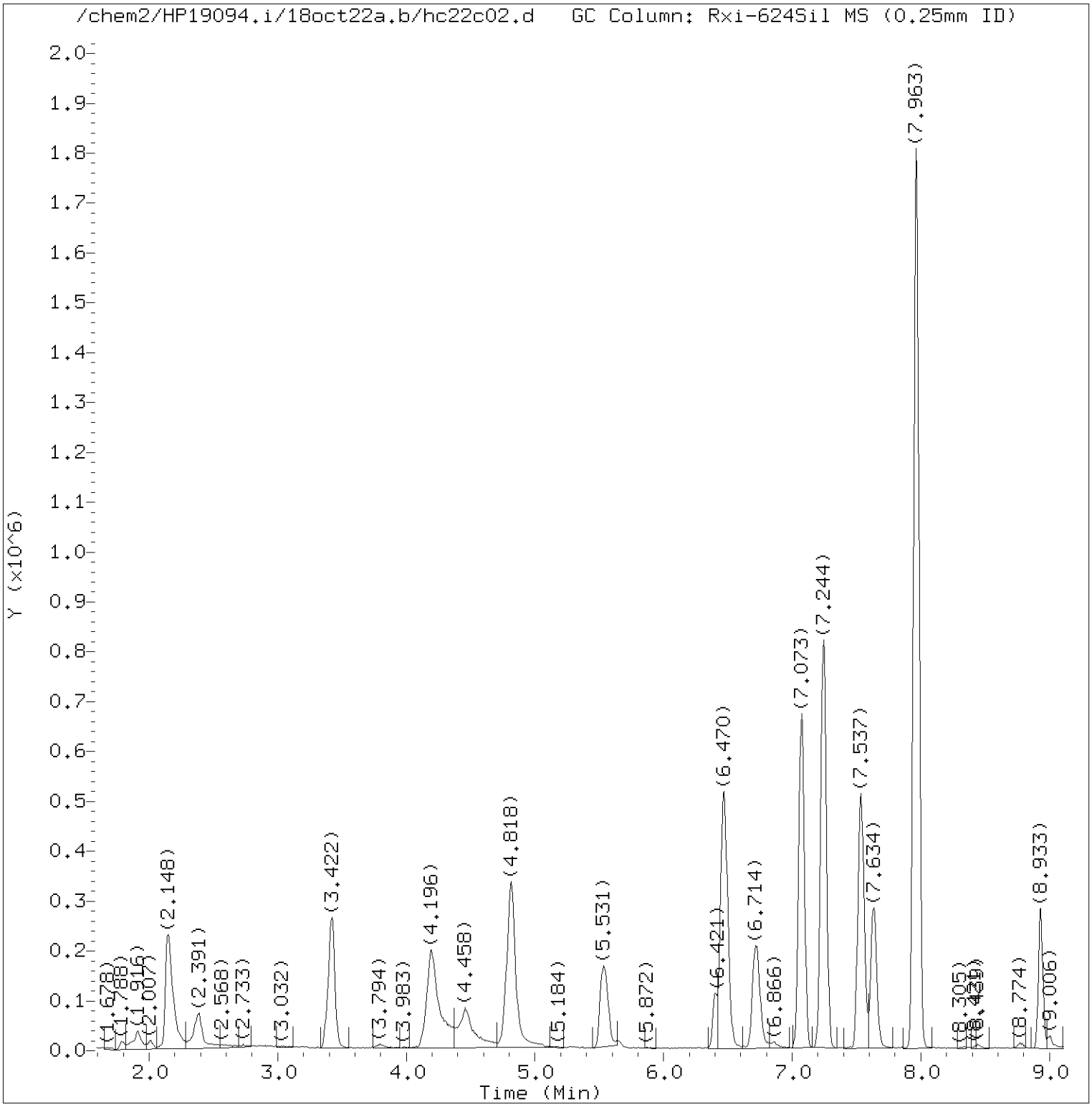
Data File: /chem2/HP19094.i/18may02b.b/hy02v12.d Instrument ID: HP19094.i
Injection date and time: 02-MAY-2018 22:28 Analyst ID: DVV10203

Method used: /chem2/HP19094.i/18may02b.b/m8260c25.m Sublist used: SMQC
Calibration date and time: 02-MAY-2018 22:37
Date, time and analyst ID of latest file update: 02-May-2018 22:46 Automation

Sample Name: LCDH88 Lab Sample ID: LCDH88

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1879
Retention Time (minutes): 13.042
Quant Ion : 55.00
Area : 1857
On-column Amount (ng) : 4.0549
Integration start scan : 1873 Integration stop scan: 1899
Y at integration start : 0 Y at integration end: 0

Digitally signed by Don V. Viray on 05/03/2018 at 00:39.
Target 3.5 esignature used on 05/03/2018



Total Ion Chromatogram (TIC)

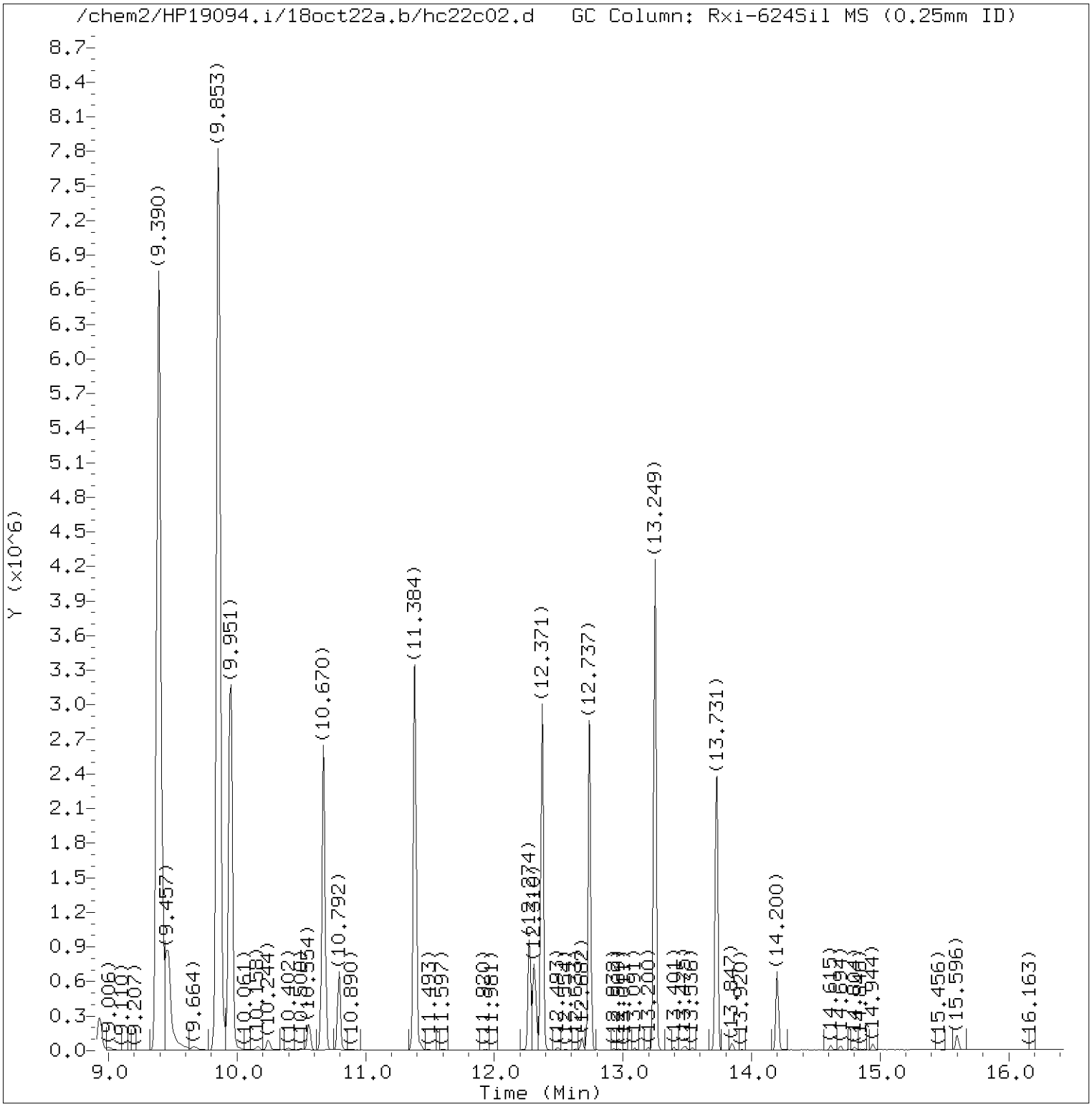
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

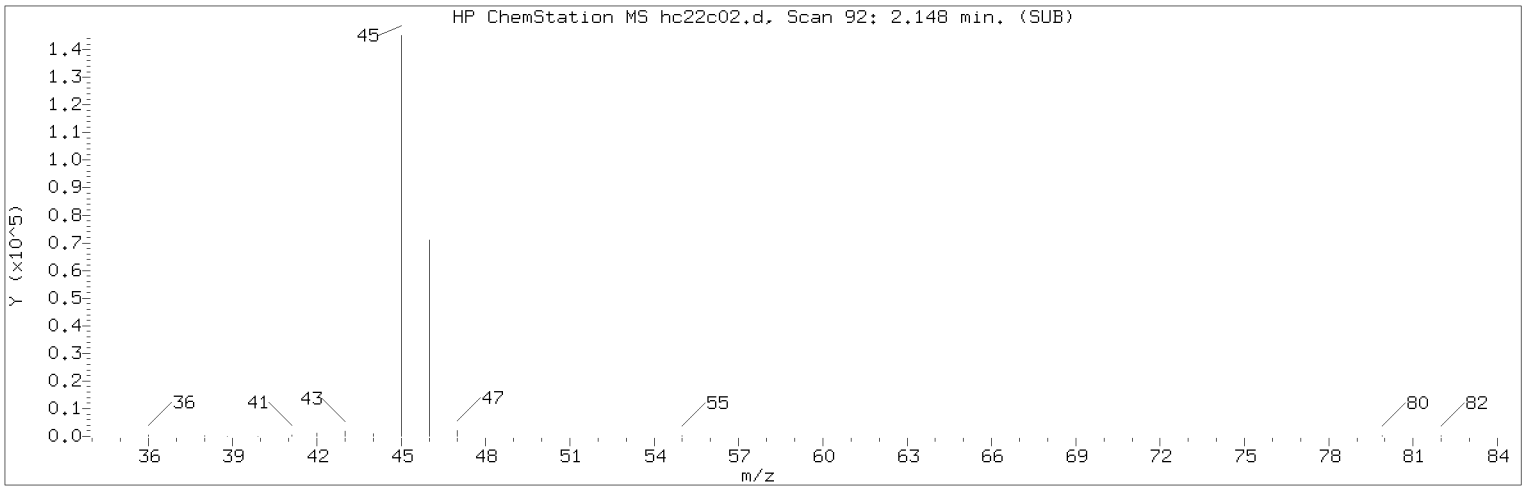
Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.148	45	628341M	7.440
25) Acetonitrile	(1)	4.190	41	1002837M	373.110
26)*t-Butyl Alcohol-d10	(1)	4.489	65	111311	50.000
36) Vinyl Acetate	(2)	5.531	43	582825	7.243
43) Methyl Acrylate	(2)	6.470	55	1163957	46.884
53) 1-Chlorobutane	(2)	7.244	56	1056913	8.896
63)*Fluorobenzene	(2)	7.963	96	2630845	10.000
77) Chloroacetonitrile	(2)	9.451	75	631320	638.083
78) 2-Chloroethyl vinyl ether	(2)	9.469	63	207525	8.724
97)*Chlorobenzene-d5	(3)	11.384	117	1984744	10.000
109) cis-1,4-Dichloro-2-butene	(1)	12.274	88	202833M	14.070
112) Cyclohexanone	(1)	12.310	55	363772M	496.194
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1047465	10.000
142) Hexachloroethane	(4)	13.725	117	442686	10.039

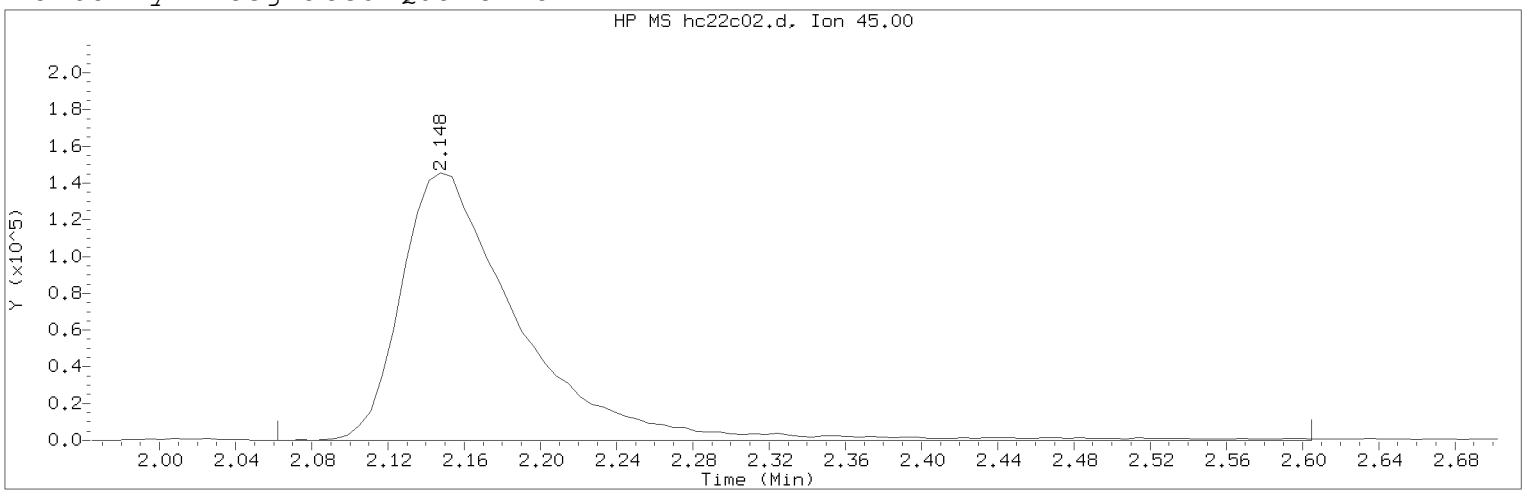
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

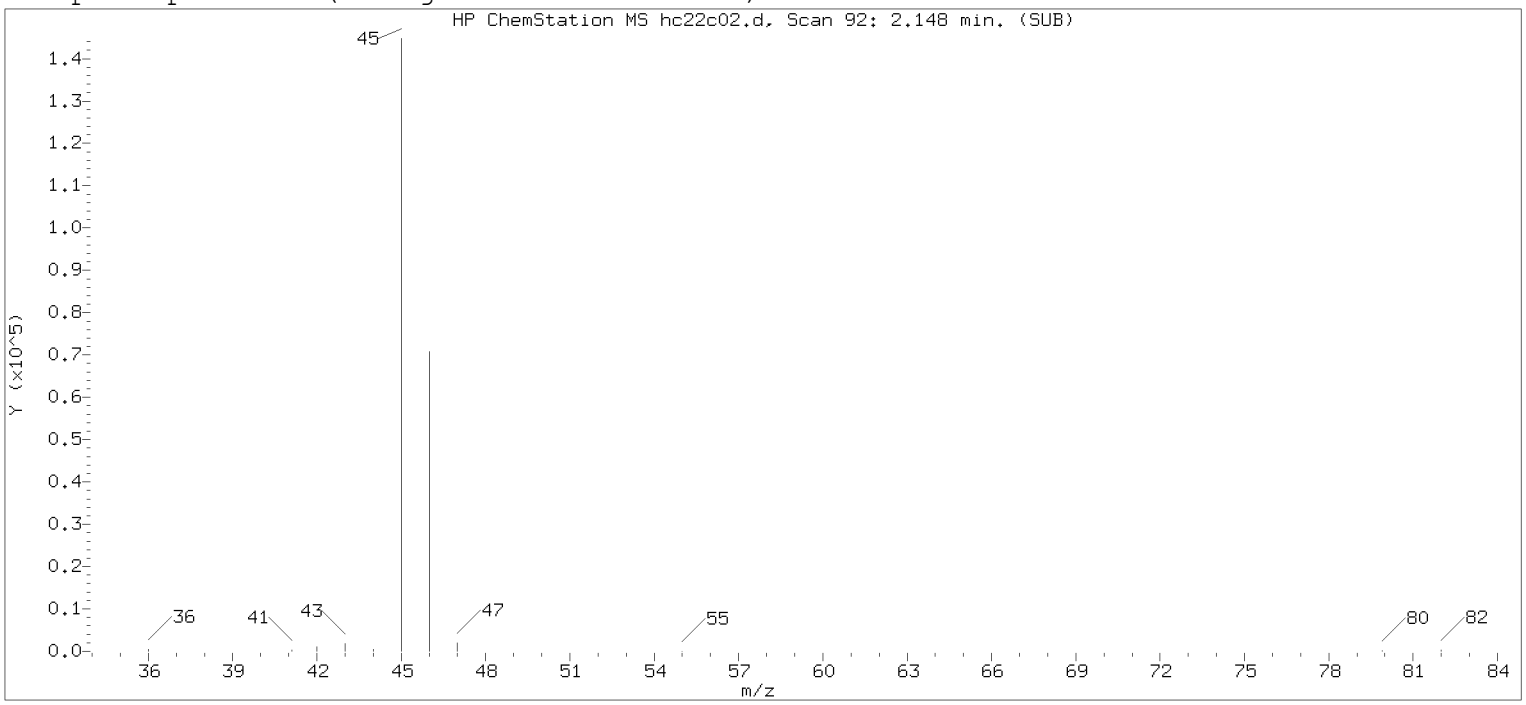
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area (flag) : 628341M
On-Column Amount (ng) : 7.4400
Integration start scan : 77 Integration stop scan: 166
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

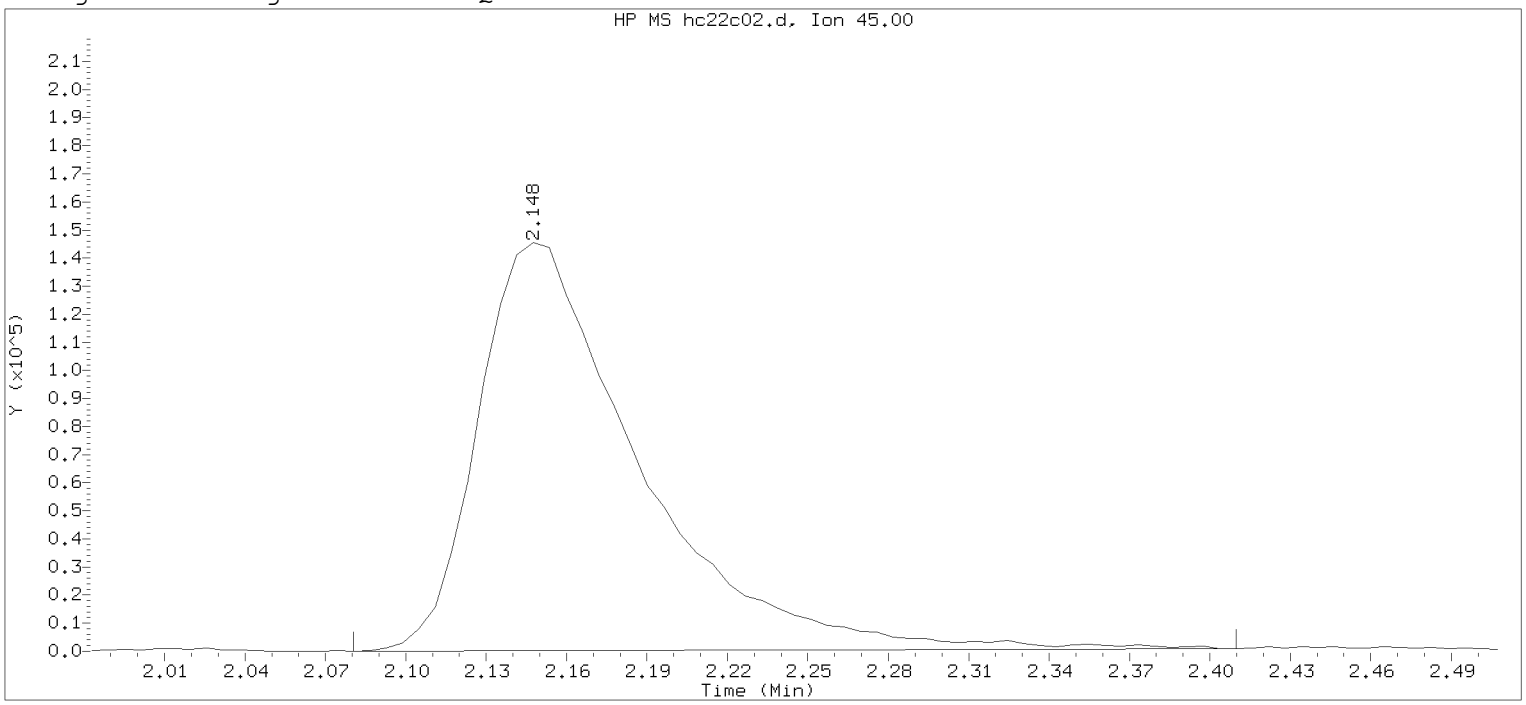
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

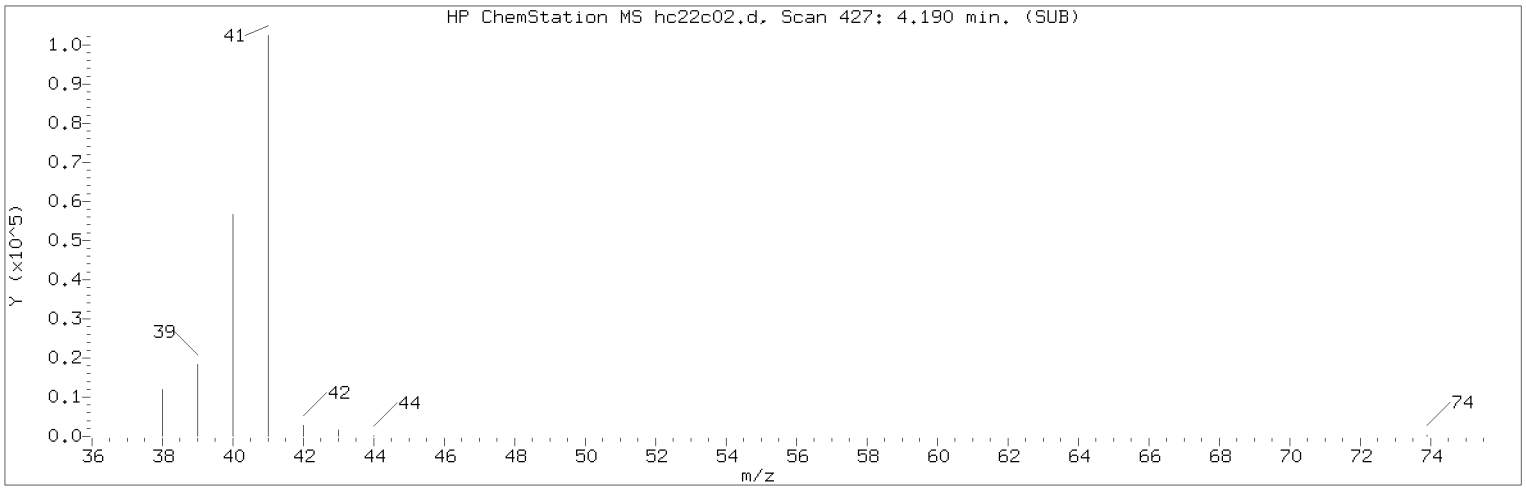
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 08:58 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

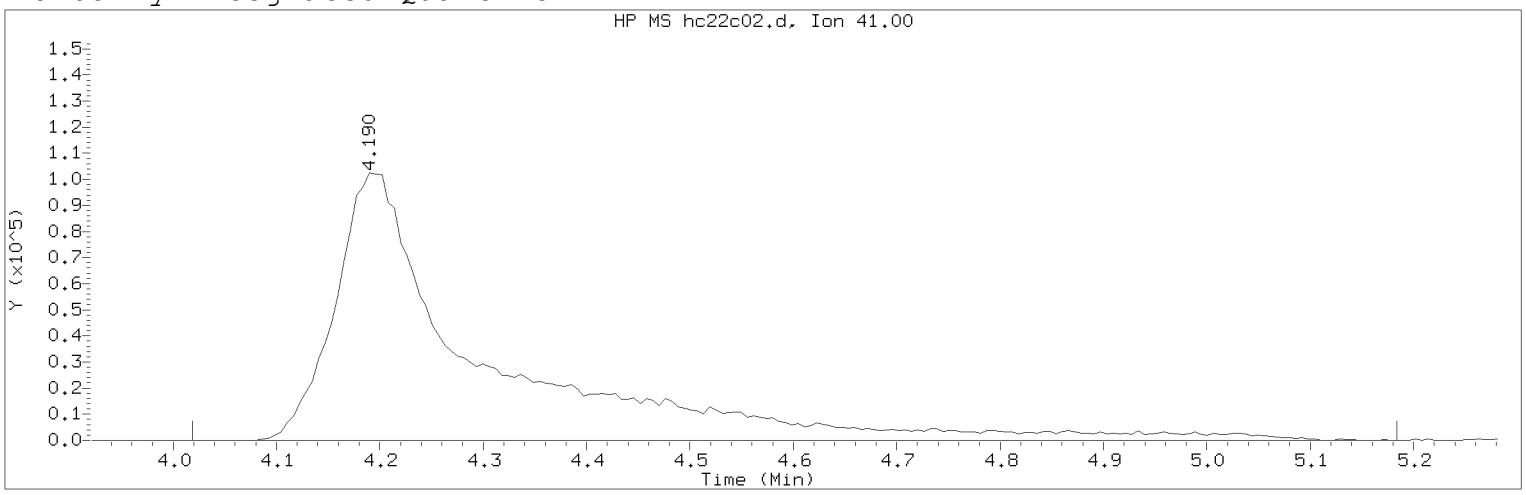
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 92
Retention Time (minutes): 2.148
Quant Ion : 45.00
Area : 606599
On-column Amount (ng) : 7.1826
Integration start scan : 80 Integration stop scan: 134
Y at integration start : 0 Y at integration end: 921

Digitally signed by Jennifer K. Howe on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: JKH09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

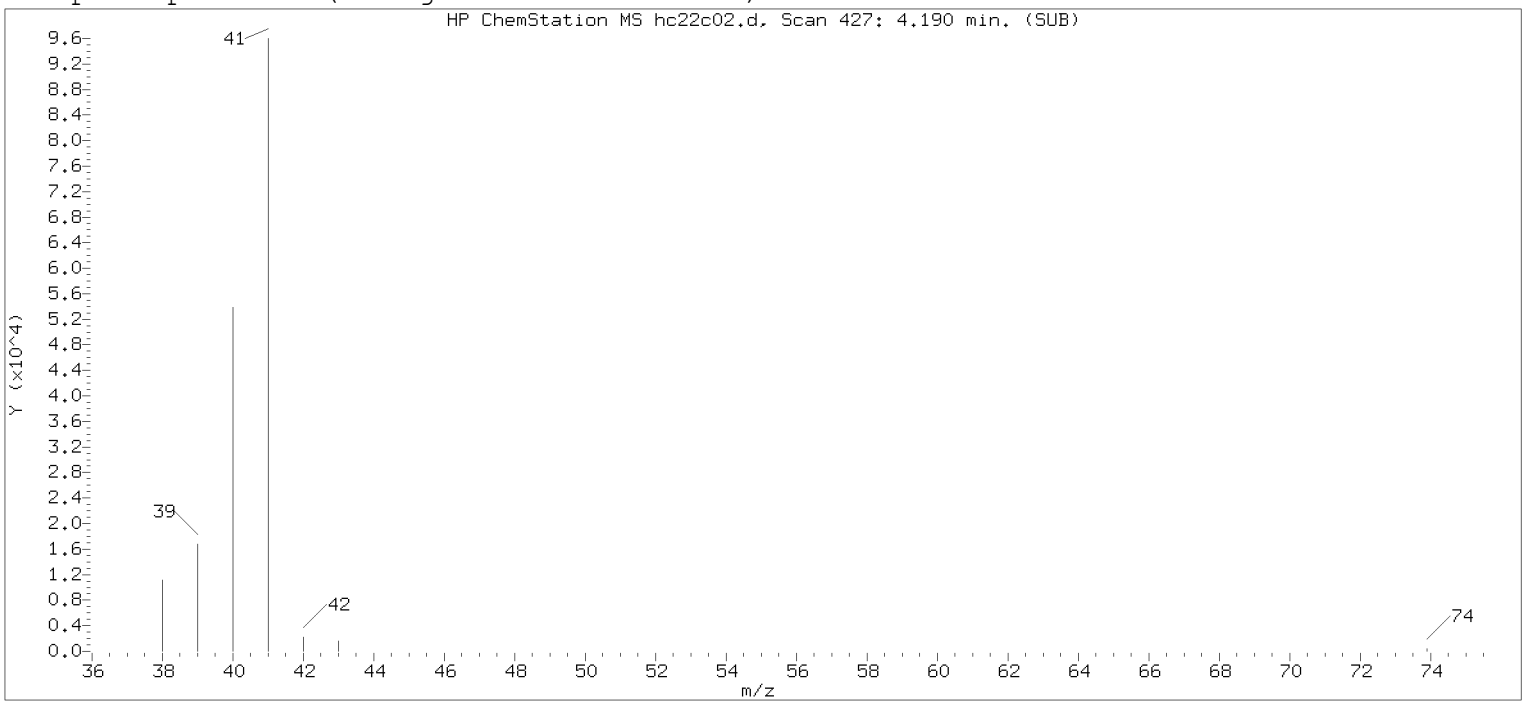
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 427
Retention Time (minutes): 4.190
Quant Ion : 41.00
Area (flag) : 1002837M
On-Column Amount (ng) : 373.1099
Integration start scan : 398 Integration stop scan: 589
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

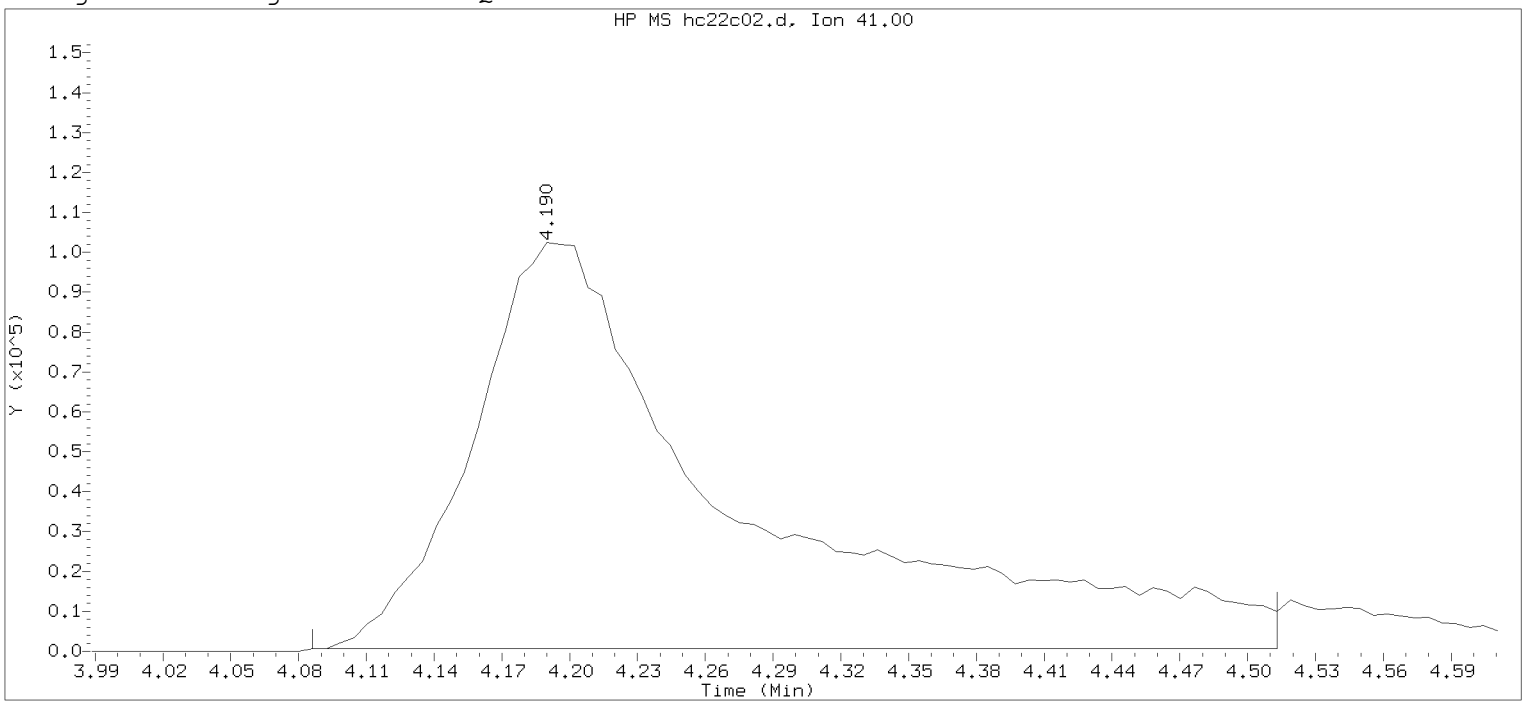
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

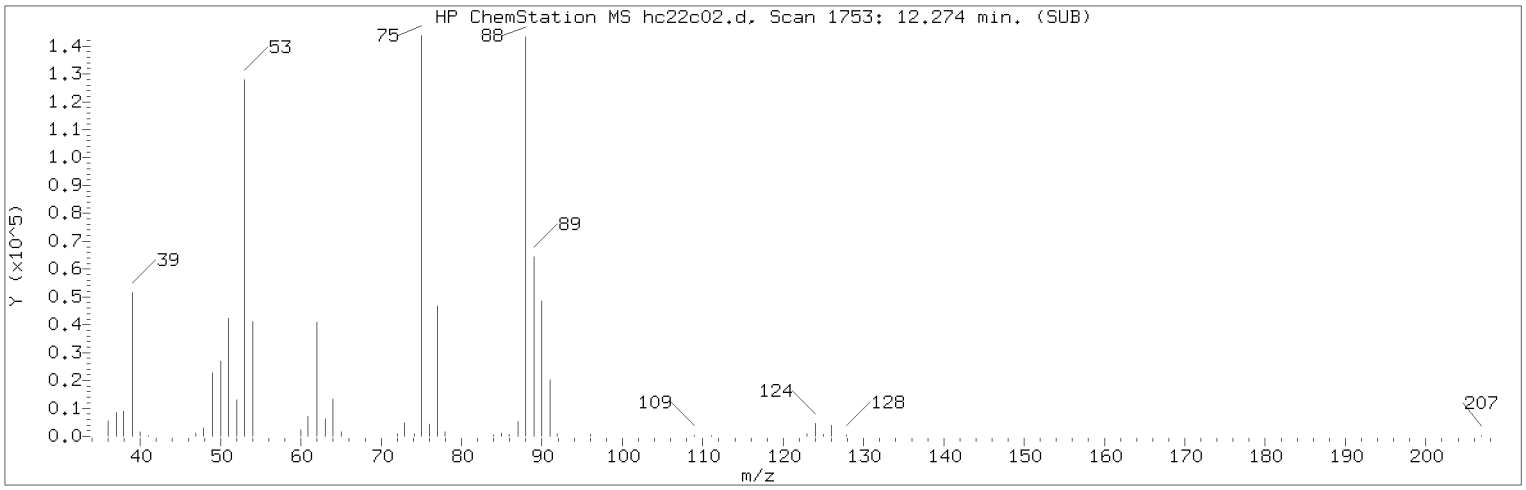
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 08:58 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

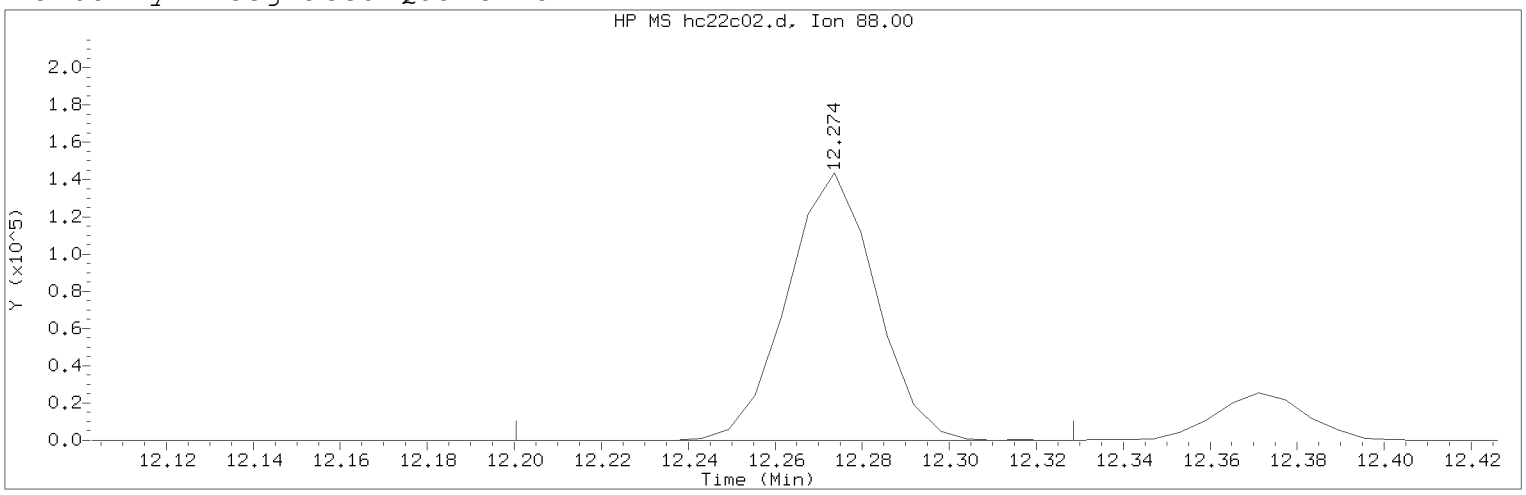
Compound Number : 25
Compound Name : Acetonitrile
Scan Number : 427
Retention Time (minutes): 4.190
Quant Ion : 41.00
Area : 842345
On-column Amount (ng) : 313.3956
Integration start scan : 409 Integration stop scan: 479
Y at integration start : 581 Y at integration end: 581

Digitally signed by Jennifer K. Howe on 10/22/2018 at 09:21.
Target 3.5 esignature user [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

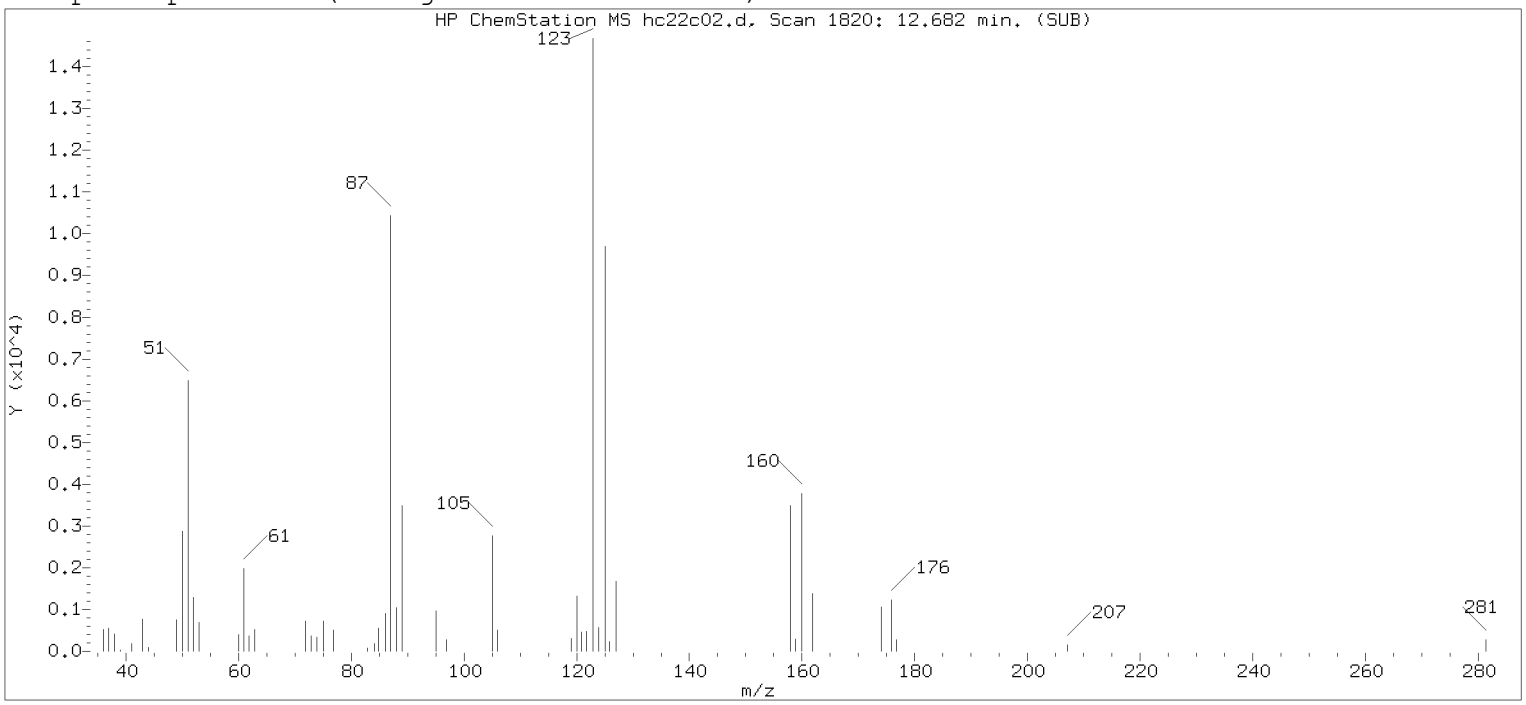
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1753
Retention Time (minutes): 12.274
Quant Ion : 88.00
Area (flag) : 202833M
On-Column Amount (ng) : 14.0704
Integration start scan : 1740 Integration stop scan: 1761
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

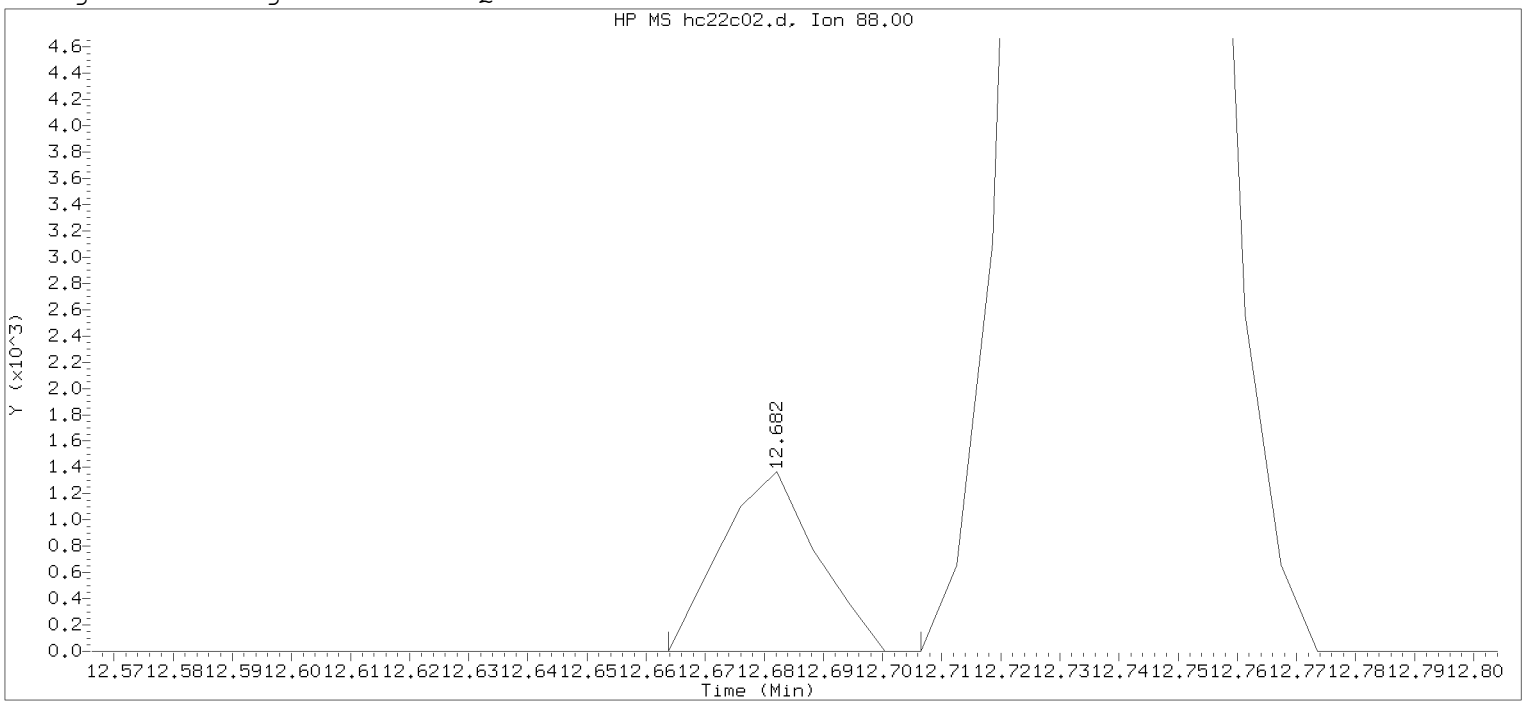
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

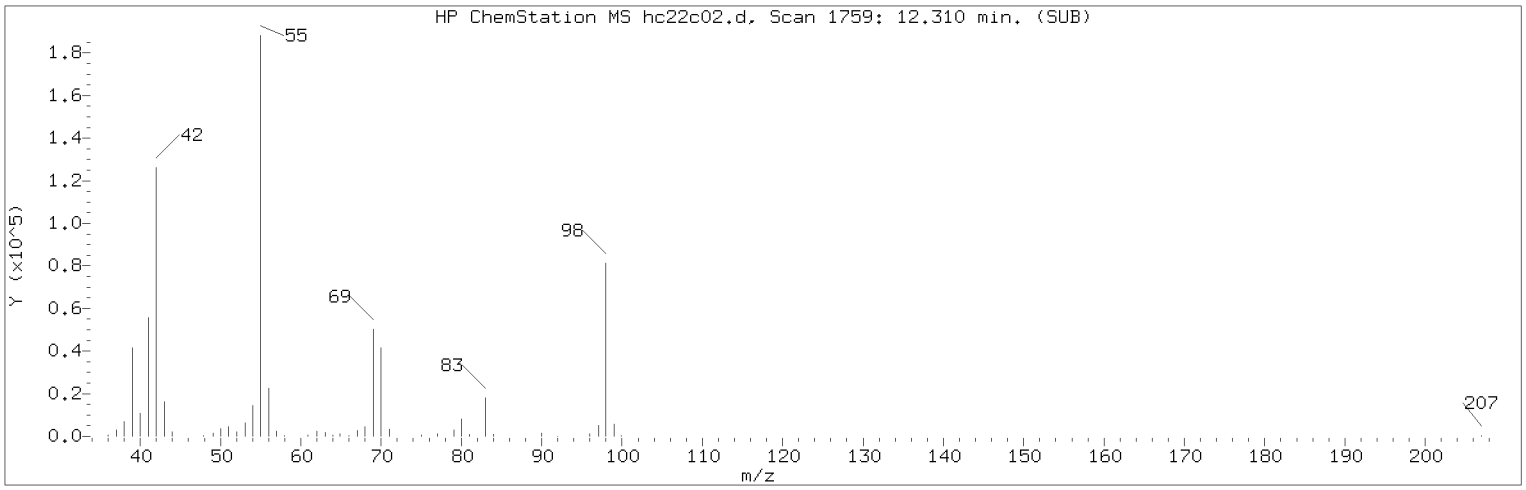
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 08:58 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

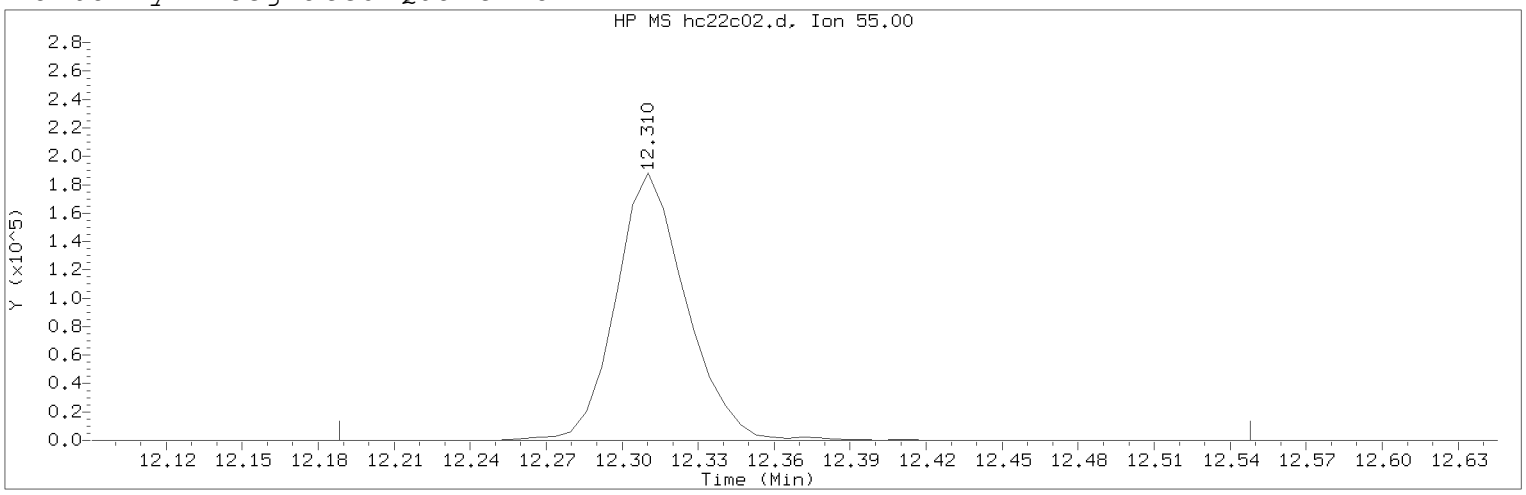
Compound Number : 109
Compound Name : cis-1,4-Dichloro-2-butene
Scan Number : 1820
Retention Time (minutes): 12.682
Quant Ion : 88.00
Area : 1527
On-column Amount (ng) : 0.1060
Integration start scan : 1816 Integration stop scan: 1823
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 09:21.
Target 3.5 esignature user

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 09:21 jkh09052

Sample Name: VSTD010 Lab Sample ID: VSTD010

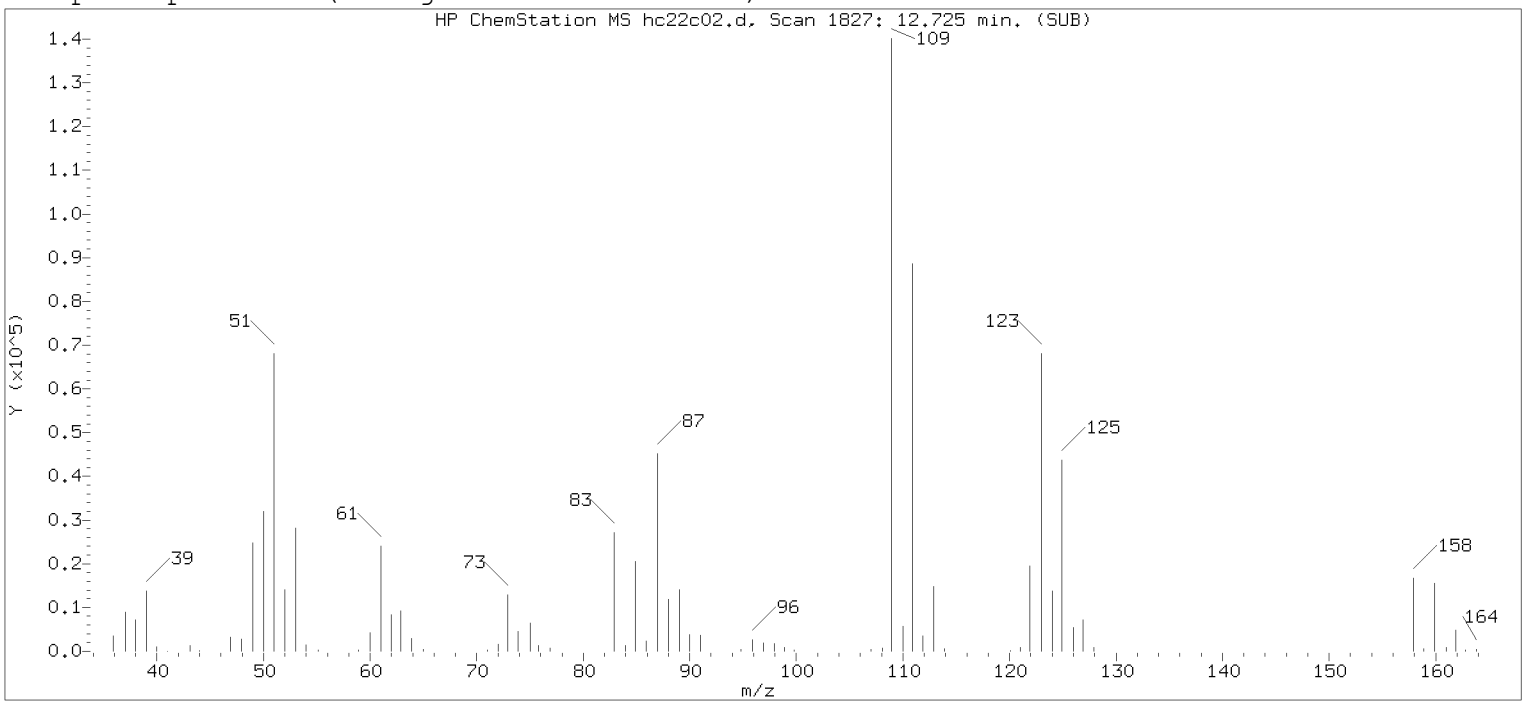
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 1759
Retention Time (minutes): 12.310
Quant Ion : 55.00
Area (flag) : 363772M
On-Column Amount (ng) : 496.1938
Integration start scan : 1738 Integration stop scan: 1797
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

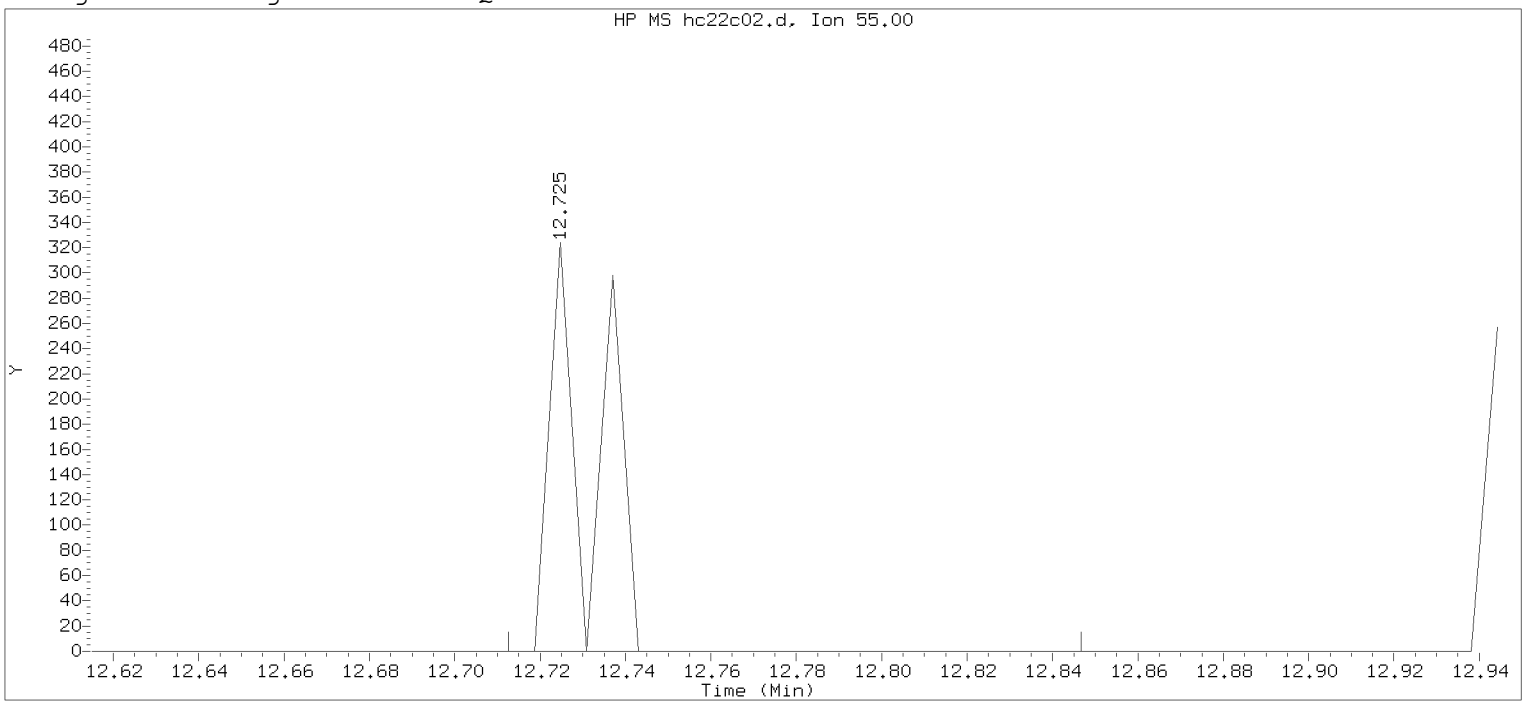
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 09:21.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22c02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 08:40 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: SMICAL
Calibration date and time: 22-OCT-2018 08:58
Date, time and analyst ID of latest file update: 22-Oct-2018 08:58 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number	: 112		
Compound Name	: Cyclohexanone		
Scan Number	: 1827		
Retention Time (minutes)	: 12.725		
Quant Ion	: 55.00		
Area	: 227		
On-column Amount (ng)	: 0.3103		
Integration start scan	: 1824	Integration stop scan:	1846
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 09:21.
Target 3.5 esignature used [illegible]

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKH44

Data file: /chem2/HP19094.i/18oct22a.b/hc22b01.d Injection date and time: **22-OCT-2018 11:10**
Data file Sample Info. Line: VBLKH44;VBLKH44;1;3;;;DRAPERLOQ;;; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:29 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	126340	(7)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2637888	(2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	2003910	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1069069	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	662156	9.960	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	122304	10.552	106%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2597643	10.072	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	905649	9.645	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit	LOQ (in sample)
1) Dichlorodifluoromethane	(2)				Not Detected					0.05	1
4) Dimethyl ether	(2)				Not Detected					0.04	13
2) Chloromethane	(2)				Not Detected					0.06	1
8) Chloroethane	(2)				Not Detected					0.07	1
10) Trichlorofluoromethane	(2)				Not Detected					0.05	1
11) Ethyl ether	(2)				Not Detected					0.05	13
15) 1,1-Dichloroethene	(2)				Not Detected					0.06	1
16) Freon 113	(2)				Not Detected					0.06	1
23) Methylene Chloride	(2)				Not Detected					0.07	1
33) 1,1-Dichloroethane	(2)				Not Detected					0.07	1
38) 2-Butanone	(1)				Not Detected					0.6	10
48) Tetrahydrofuran	(1)				Not Detected					0.8	25
51) 1,1,1-Trichloroethane	(2)				Not Detected					0.06	1
54) Carbon Tetrachloride	(2)				Not Detected					0.07	1
58) Benzene	(2)				Not Detected					0.05	1
67) Trichloroethene	(2)				Not Detected					0.06	1
83) Toluene	(3)				Not Detected					0.07	1
89) Tetrachloroethene	(3)				Not Detected					0.06	1
100) Ethylbenzene	(3)				Not Detected					0.06	1
101) m+p-Xylene	(3)				Not Detected					0.1	0.5
104) o-Xylene	(3)				Not Detected					0.05	0.5
105) Xylene (Total)	(3)				Not Detected					0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:30. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct22a.b/hc22b01.d Injection date and time: **22-OCT-2018 11:10**
Data file Sample Info. Line: VBLKH44;VBLKH44;1;3;;;DRAPERLOQ;;; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:29 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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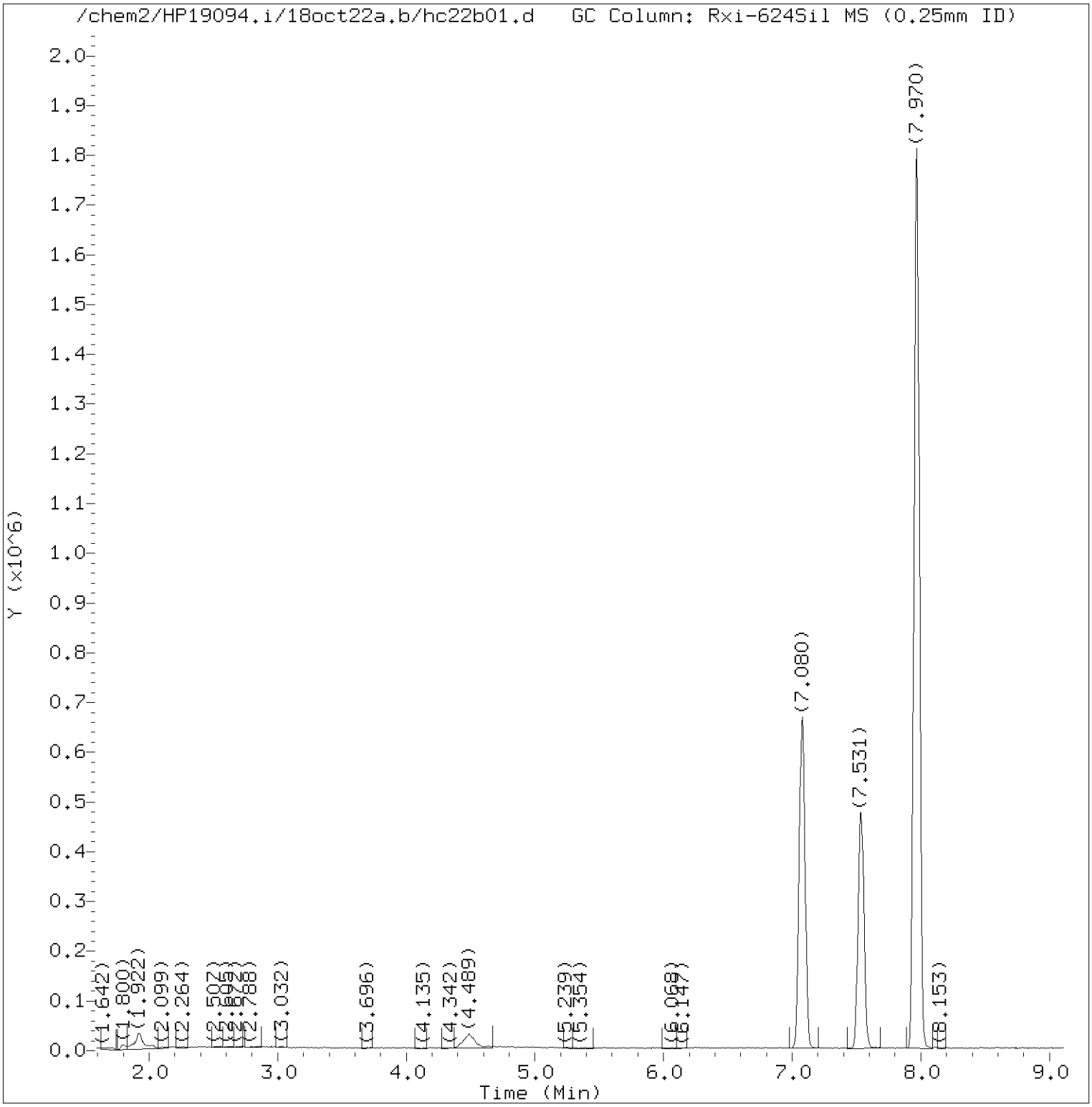
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 22

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

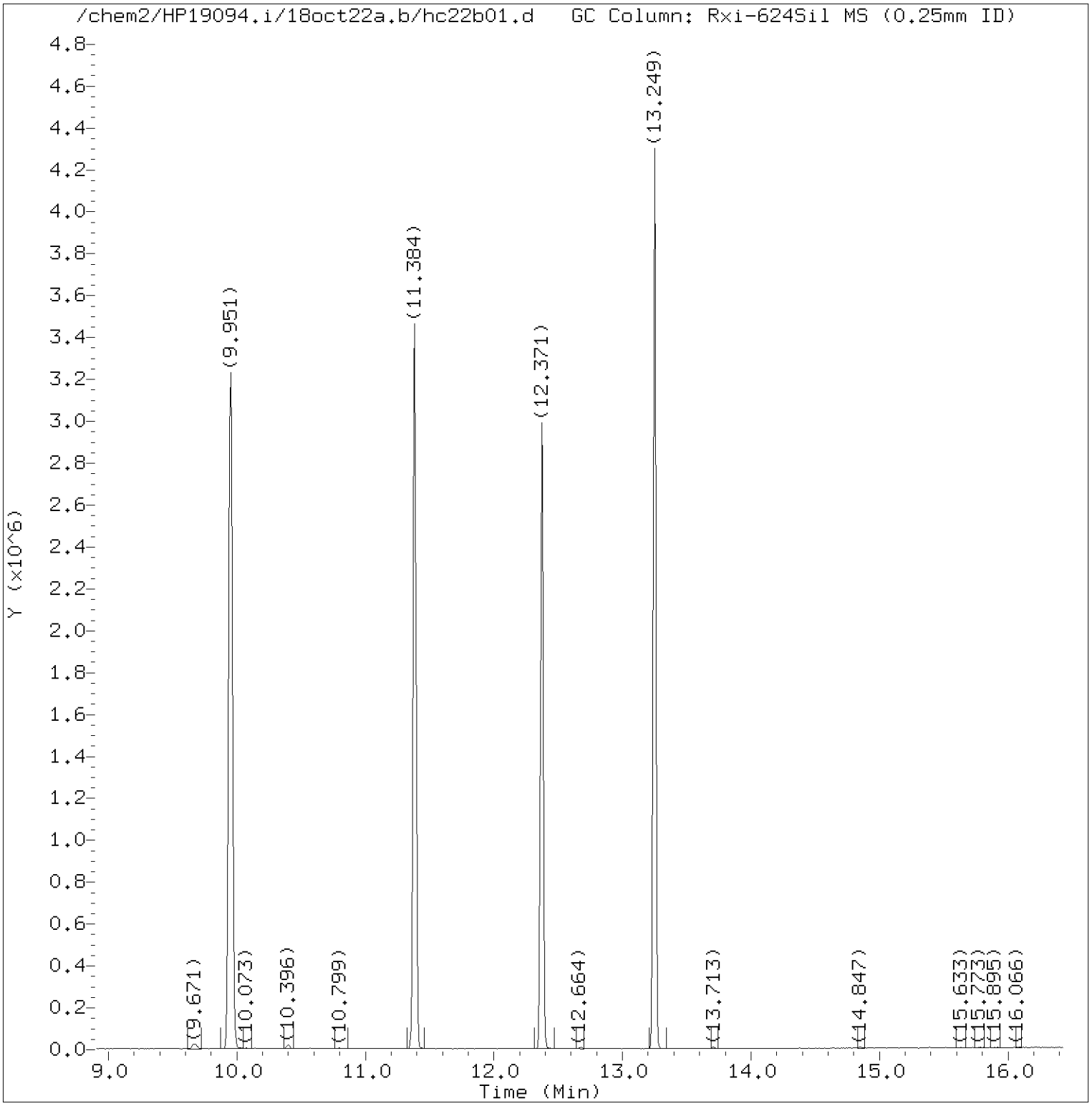
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22b01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:10 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:29 jkh09052

Sample Name: VBLKH44 Lab Sample ID: VBLKH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22b01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:10 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:29 jkh09052

Sample Name: VBLKH44 Lab Sample ID: VBLKH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22b01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 11:10 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:29 jkh09052

Sample Name: VBLKH44 Lab Sample ID: VBLKH44

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
26)*t-Butyl Alcohol-d10	(1)	4.489	65	126340	50.000
50)$Dibromofluoromethane	(2)	7.080	113	662156	9.960
57)$1,2-Dichloroethane-d4	(2)	7.537	102	122304	10.552
63)*Fluorobenzene	(2)	7.970	96	2637888	10.000
82)$Toluene-d8	(3)	9.951	98	2597643	10.072
97)*Chlorobenzene-d5	(3)	11.384	117	2003910	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	905649	9.645
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1069069	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:30.
Target 3.5 esignature user ID: jkh09052

94283MSMS1 Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850253MS

Data file: /chem2/HP19094.i/18oct22a.b/hc22s13.d Injection date and time: **22-OCT-2018 15:28**
Data file Sample Info. Line: 94283MSMS1;9850253MS;1;3;MS;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182**
Date, time and analyst ID of latest file update: 22-Oct-2018 15:46 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.476	(0.000)	474	65	128553	(9)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2548779	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1969901	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1055635	(1)	10.00	

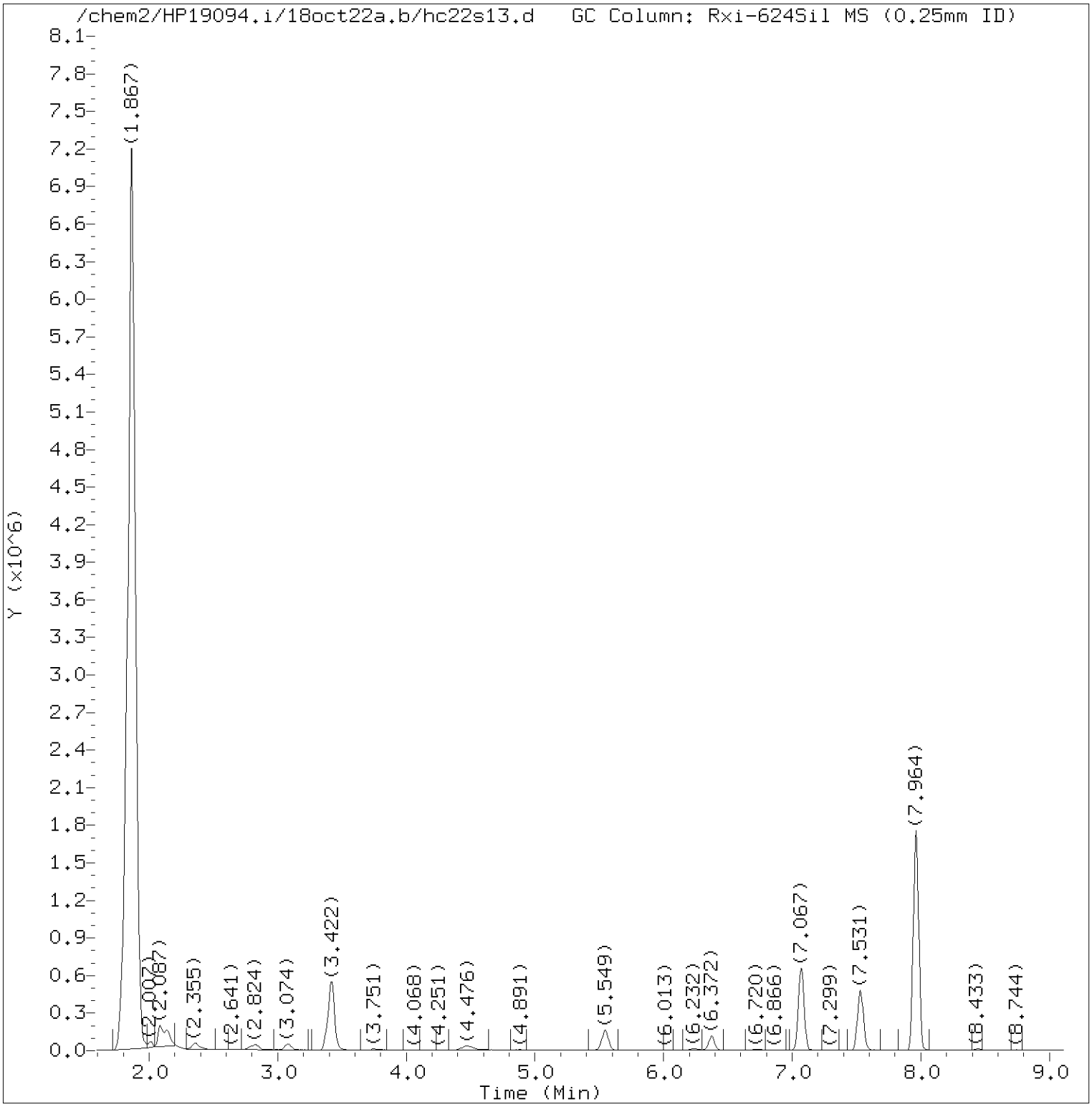
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.067	(0.001)	113	640819	9.976	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	114432	10.218	102%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2520830	9.943	99%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	890773	9.650	96%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.148	(-0.000)	45	353599	4.322	4.32		J	0.04	13

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

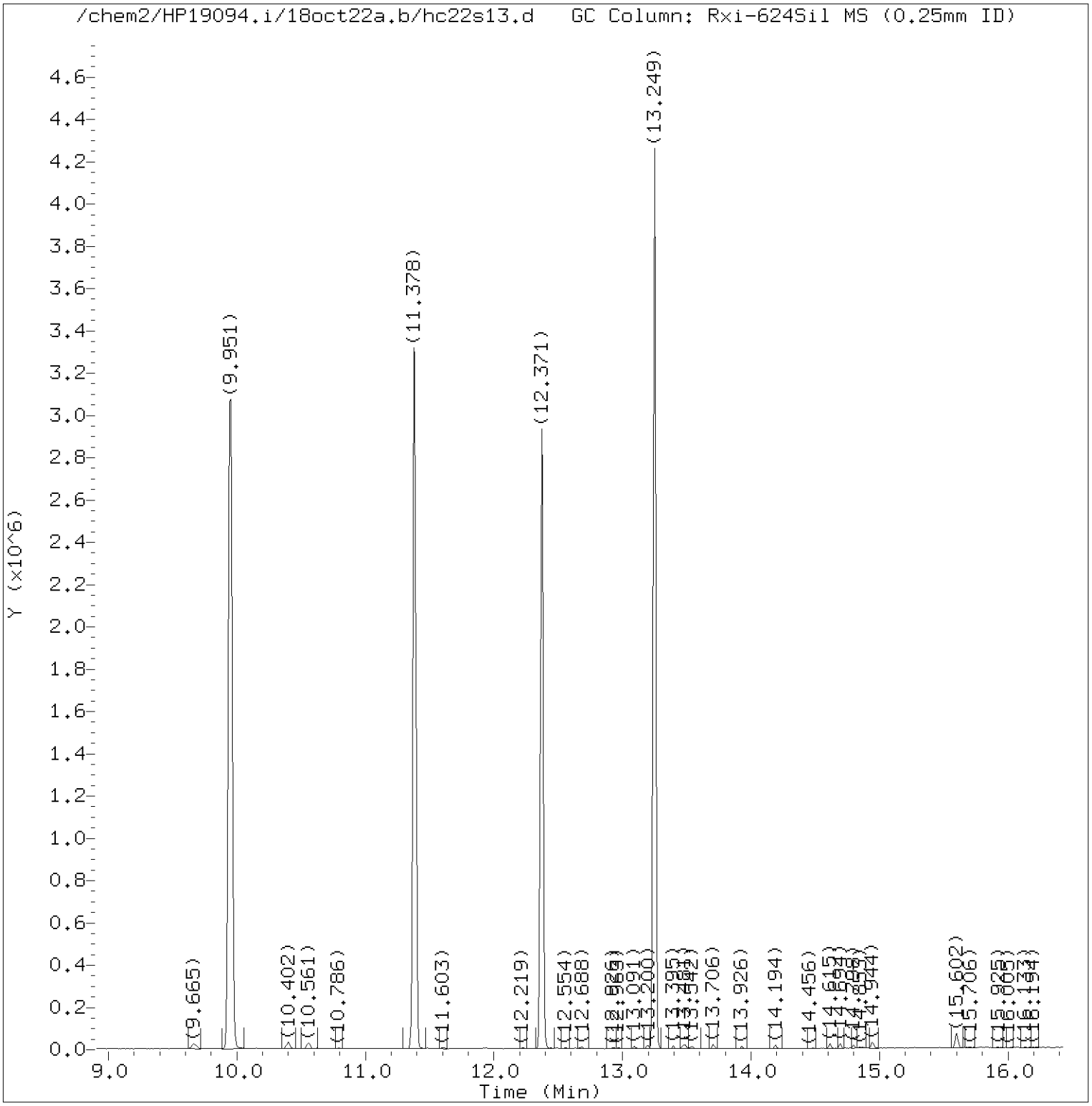
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:28 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:46 Automation

Sample Name: 94283MSMS1 Lab Sample ID: 9850253MS

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:28 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:46 Automation

Sample Name: 94283MSMS1 Lab Sample ID: 9850253MS

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s13.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:28 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:46 Automation

Sample Name: 94283MSMS1 Lab Sample ID: 9850253MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.148	45	353599	4.322
26)*t-Butyl Alcohol-d10	(1)	4.476	65	128553	50.000
50)$Dibromofluoromethane	(2)	7.067	113	640819	9.976
57)$1,2-Dichloroethane-d4	(2)	7.531	102	114432	10.218
63)*Fluorobenzene	(2)	7.964	96	2548779	10.000
82)$Toluene-d8	(3)	9.951	98	2520830	9.943
97)*Chlorobenzene-d5	(3)	11.384	117	1969901	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	890773	9.650
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1055635	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s14.d Injection date and time: **22-OCT-2018 15:50**
Data file Sample Info. Line: 94283MSDMS;9850254MSD;1;3;MSD;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H1**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:28 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038B** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495	(-0.018)	477	65	125384	(7)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2551674	(-1)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1969985	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1056648	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.074	(0.000)	113	645642	10.039	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	118338	10.555	106%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2528591	9.973	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	896698	9.714	97%		80 - 120

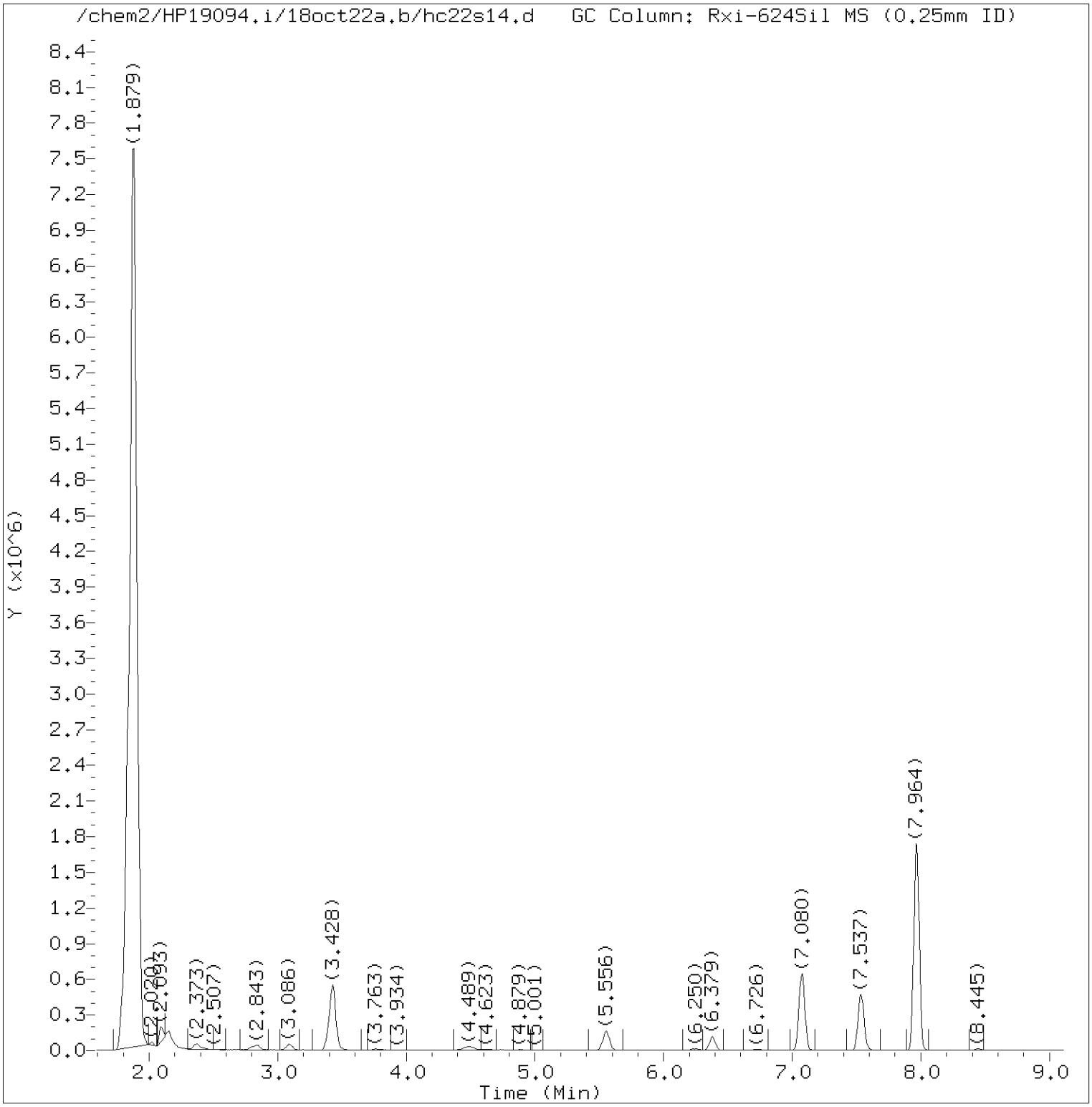
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.154	(-0.000)	45	356482M	4.352	4.35		J	0.04	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

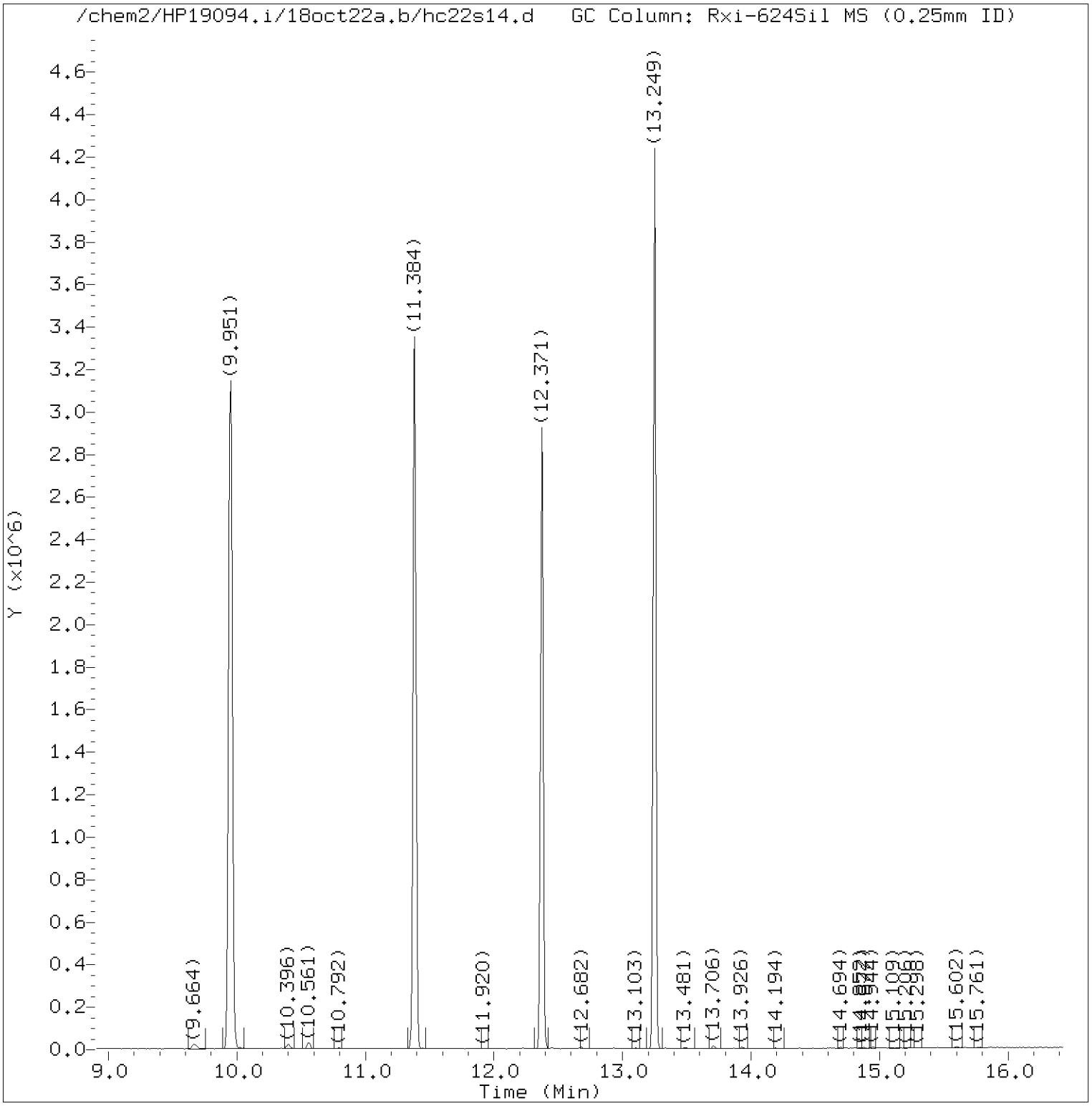
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:28 jkh09052

Sample Name: 94283MSDMS Lab Sample ID: 9850254MSD

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:28 jkh09052

Sample Name: 94283MSDMS Lab Sample ID: 9850254MSD

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:28 jkh09052

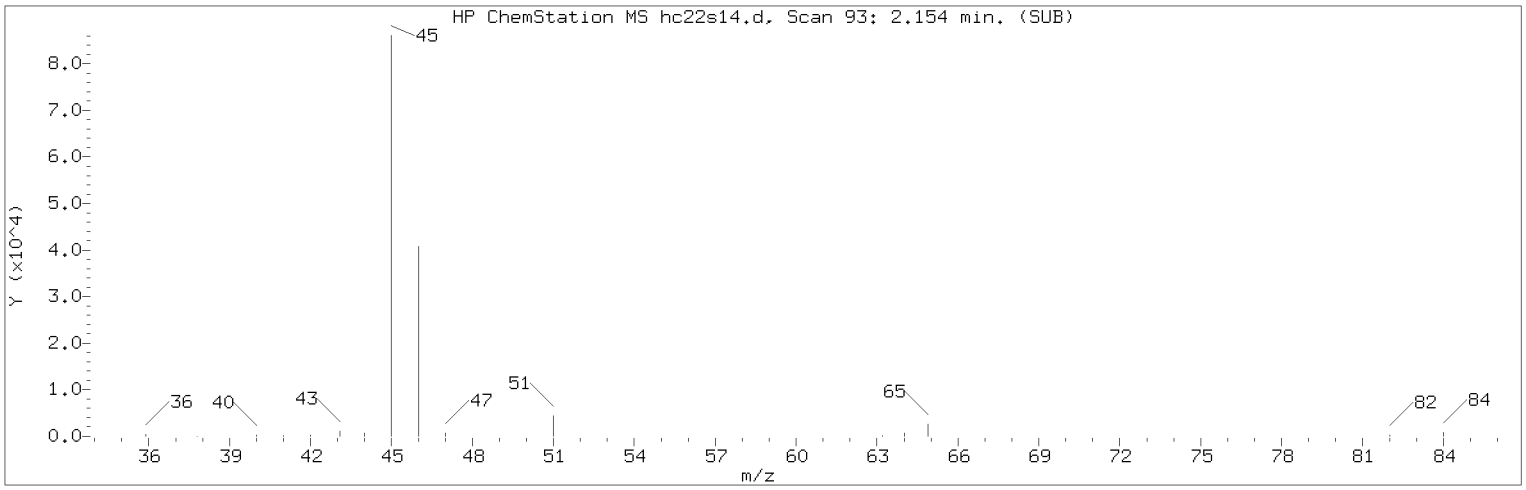
Sample Name: 94283MSDMS Lab Sample ID: 9850254MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	356482M	4.352
26)*t-Butyl Alcohol-d10	(1)	4.495	65	125384	50.000
50)$Dibromofluoromethane	(2)	7.074	113	645642	10.039
57)$1,2-Dichloroethane-d4	(2)	7.531	102	118338	10.555
63)*Fluorobenzene	(2)	7.964	96	2551674	10.000
82)$Toluene-d8	(3)	9.951	98	2528591	9.973
97)*Chlorobenzene-d5	(3)	11.384	117	1969985	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	896698	9.714
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1056648	10.000

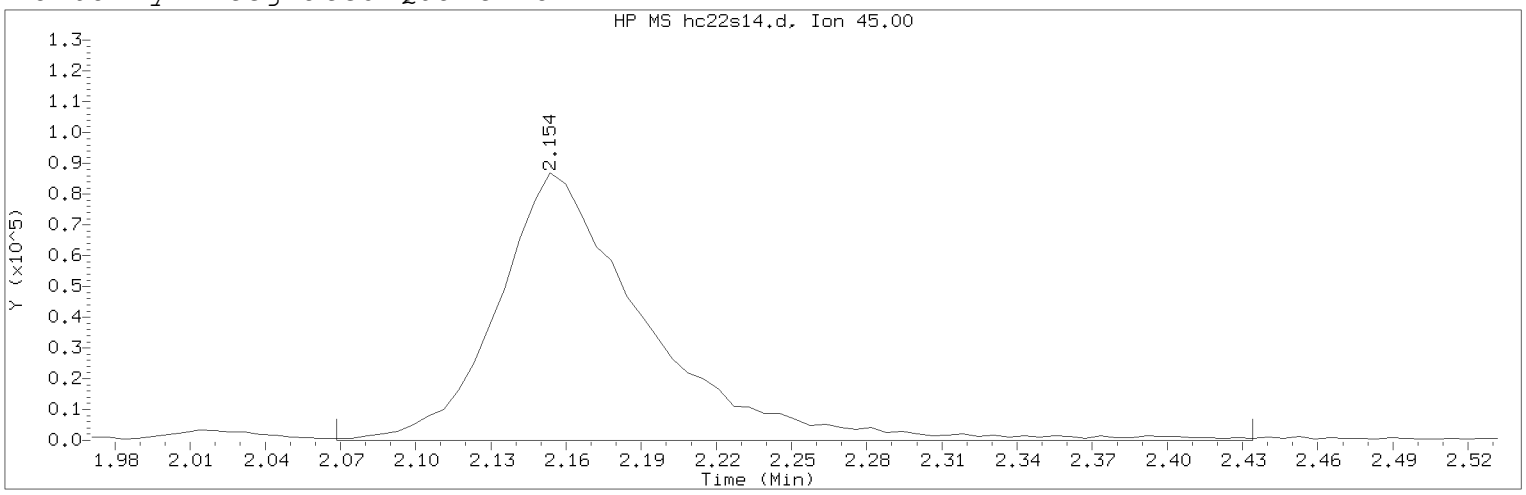
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:28 jkh09052

Sample Name: 94283MSDMS Lab Sample ID: 9850254MSD

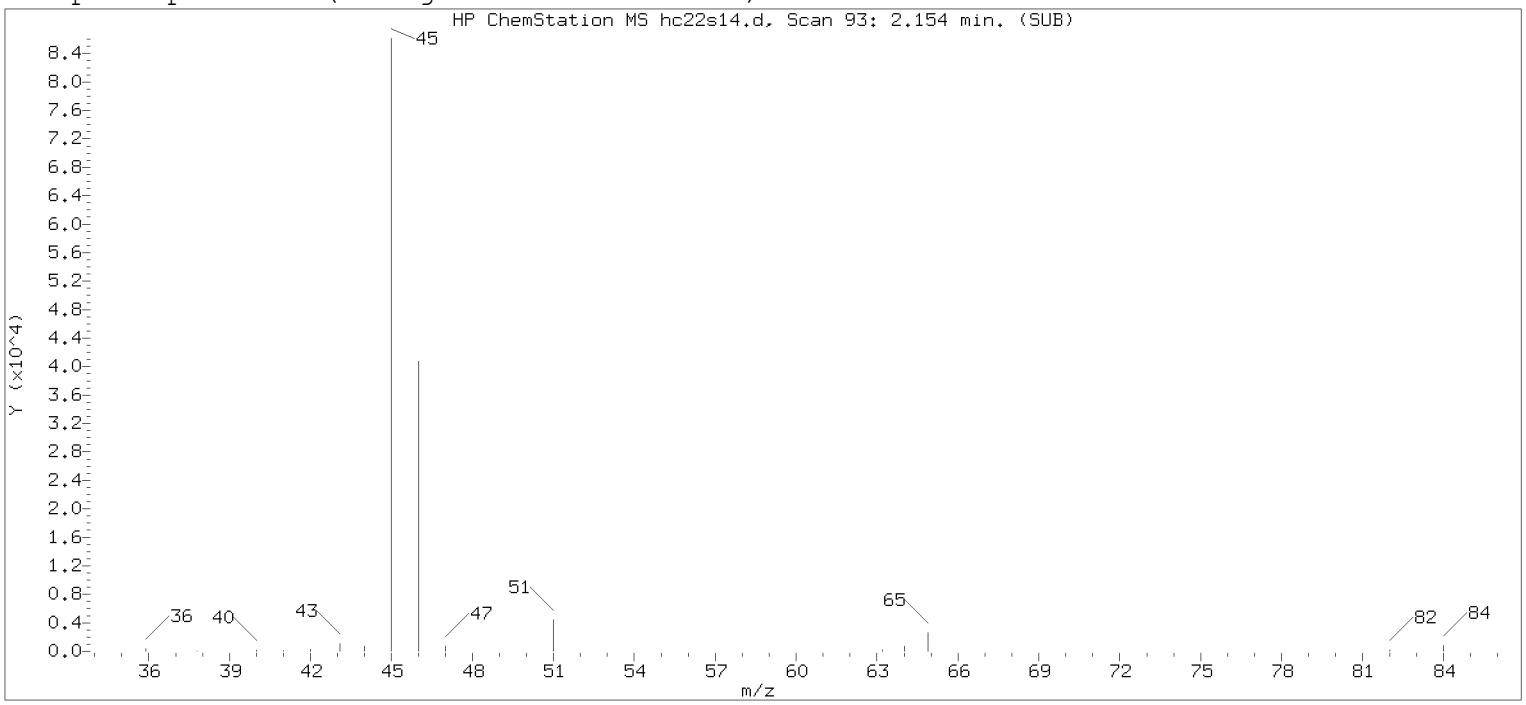
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 356482M
On-Column Amount (ng) : 4.3520
Integration start scan : 78 Integration stop scan: 138
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

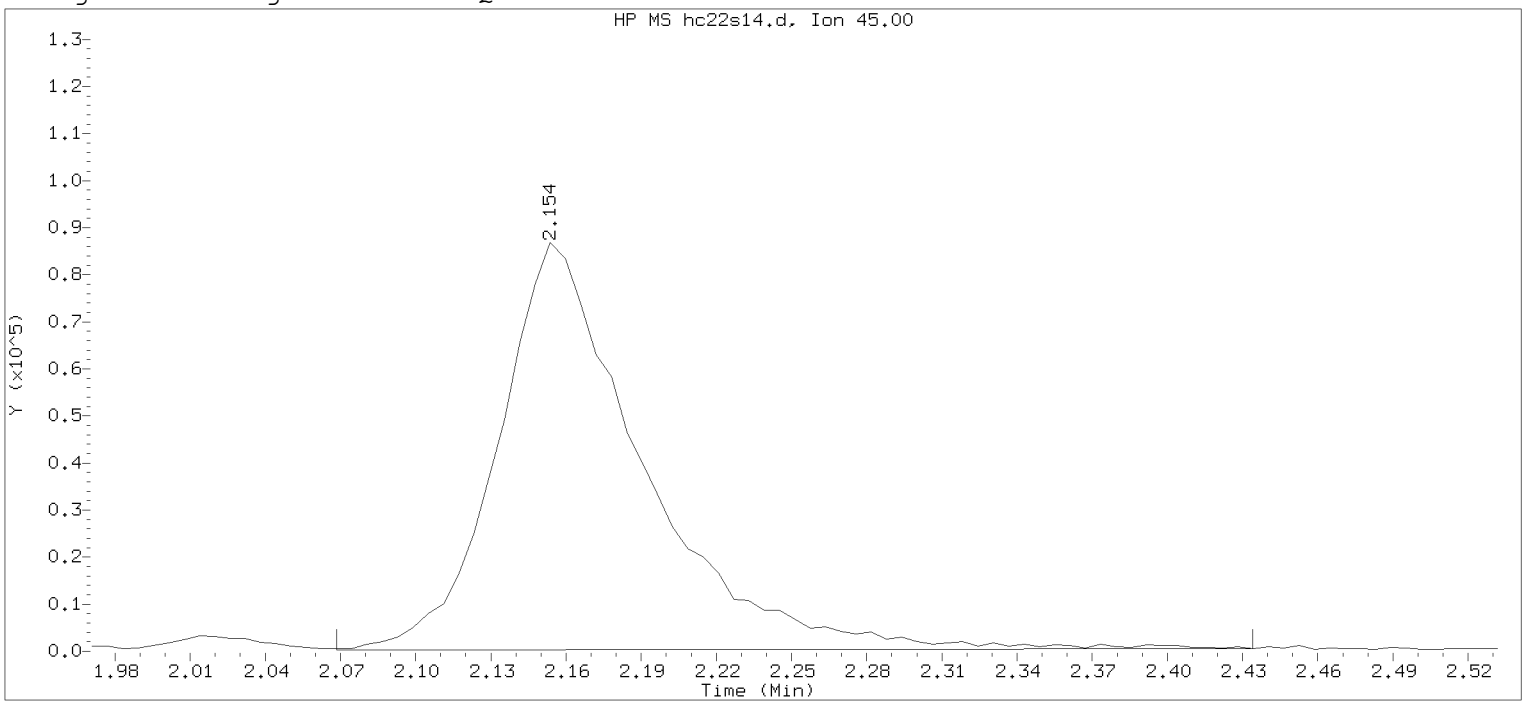
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s14.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:50 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:08 Automation

Sample Name: 94283MSDMS Lab Sample ID: 9850254MSD

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 93		
Retention Time (minutes)	: 2.154		
Quant Ion	: 45.00		
Area	: 346808		
On-column Amount (ng)	: 4.2339		
Integration start scan	: 78	Integration stop scan:	138
Y at integration start	: 273	Y at integration end:	590

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature used. AE20 Page 620

94283MS Lancaster Laboratories Analysis Summary for GC/MS Volatiles 9850253MS

Data file: /chem2/HP19094.i/18oct22a.b/hc22s11.d Injection date and time: **22-OCT-2018 14:46**
Data file Sample Info. Line: 94283MS;9850253MS;1;3;MS;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489	(-0.012)	476	65	117521	(0)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2589815	(0)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1990724	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1063612	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(-0.001)	113	648167	9.930	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	115006	10.107	101%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2565221	10.012	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	906935	9.722	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.075	(-0.000)	85	389455M	3.848	3.85			0.05	1
2) Chloromethane	(2)	2.270	(0.001)	50	386688	3.901	3.90			0.06	1
8) Chloroethane	(2)	2.837	(0.000)	64	269103	4.780	4.78			0.07	1
10) Trichlorofluoromethane	(2)	3.148	(0.000)	101	497451	4.242	4.24			0.05	1
11) Ethyl ether	(2)	3.428	(-0.000)	59	803687	20.213	20.21			0.05	13
15) 1,1-Dichloroethene	(2)	3.751	(0.000)	96	294999	5.809	5.81			0.06	1
16) Freon 113	(2)	3.794	(-0.001)	101	324072	5.415	5.41			0.06	1
23) Methylene Chloride	(2)	4.464	(0.000)	84	284280	4.962	4.96			0.07	1
33) 1,1-Dichloroethane	(2)	5.550	(0.000)	63	836851	7.669	7.67			0.07	1
38) 2-Butanone	(1)	6.342	(0.005)	43	380257	33.164	33.16			0.6	10
48) Tetrahydrofuran	(1)	6.714	(0.006)	71	71511	23.460	23.46		J	0.8	25
51) 1,1,1-Trichloroethane	(2)	7.086	(0.000)	97	462464M	5.329	5.33			0.06	1
54) Carbon Tetrachloride	(2)	7.299	(-0.000)	117	425932	5.715	5.72			0.07	1
58) Benzene	(2)	7.561	(0.000)	78	1269391	5.222	5.22			0.05	1
67) Trichloroethene	(2)	8.439	(-0.000)	95	331802	5.331	5.33			0.06	1
83) Toluene	(3)	10.024	(-0.000)	92	767464	5.195	5.20			0.07	1
89) Tetrachloroethene	(3)	10.561	(-0.000)	166	392310	5.878	5.88			0.06	1
100) Ethylbenzene	(3)	11.494	(0.000)	91	1472440	5.100	5.10			0.06	1
101) m+p-Xylene	(3)	11.603	(-0.000)	106	1153500	10.771	10.77			0.1	0.5
104) o-Xylene	(3)	11.932	(-0.000)	106	537790	5.253	5.25			0.05	0.5
105) Xylene (Total)	(3)			106	1691290	16.024	16.02			0.1	3

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s11.d Injection date and time: **22-OCT-2018 14:46**
Data file Sample Info. Line: 94283MS;9850253MS;1;3;MS;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H18295**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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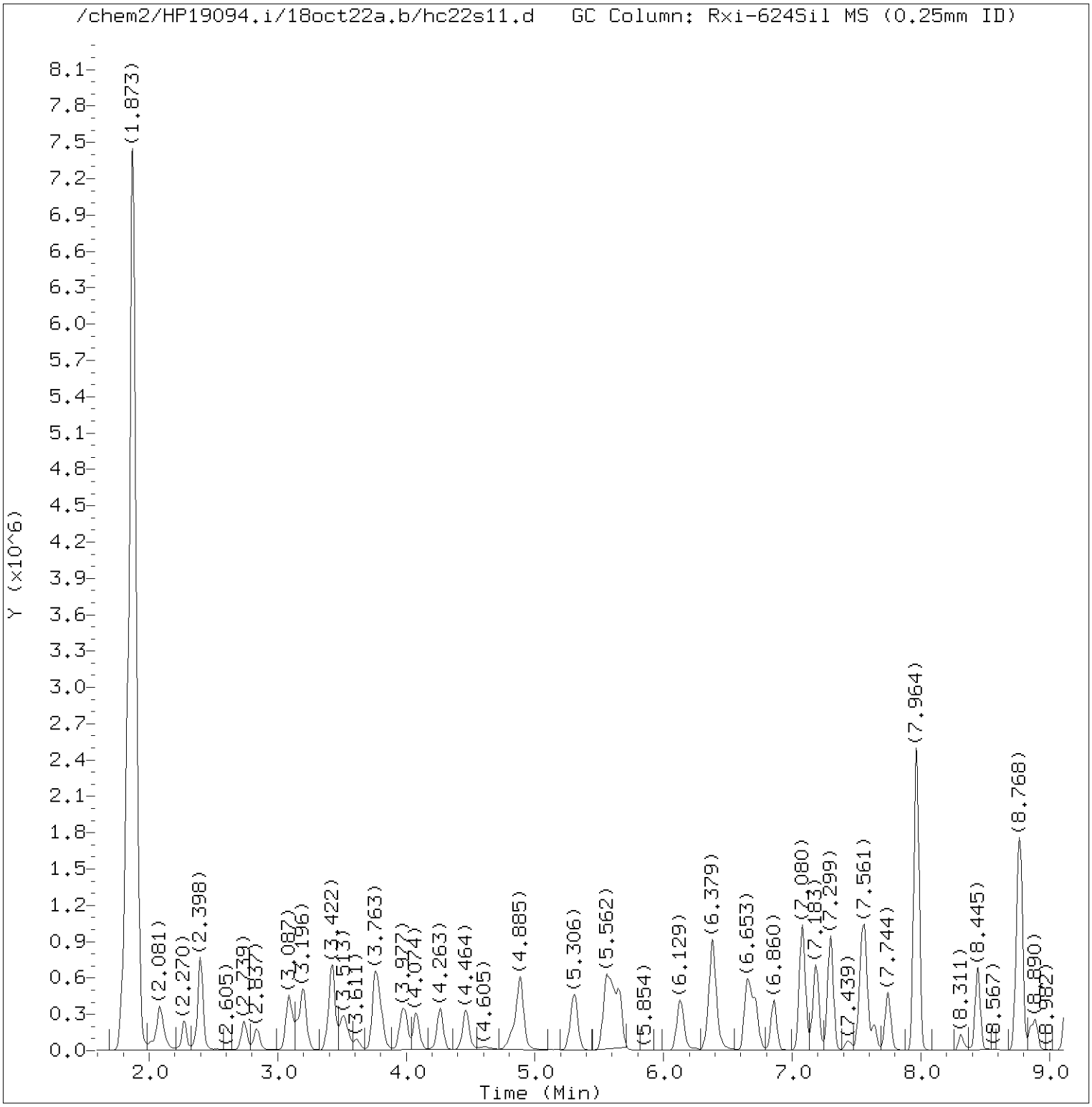
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

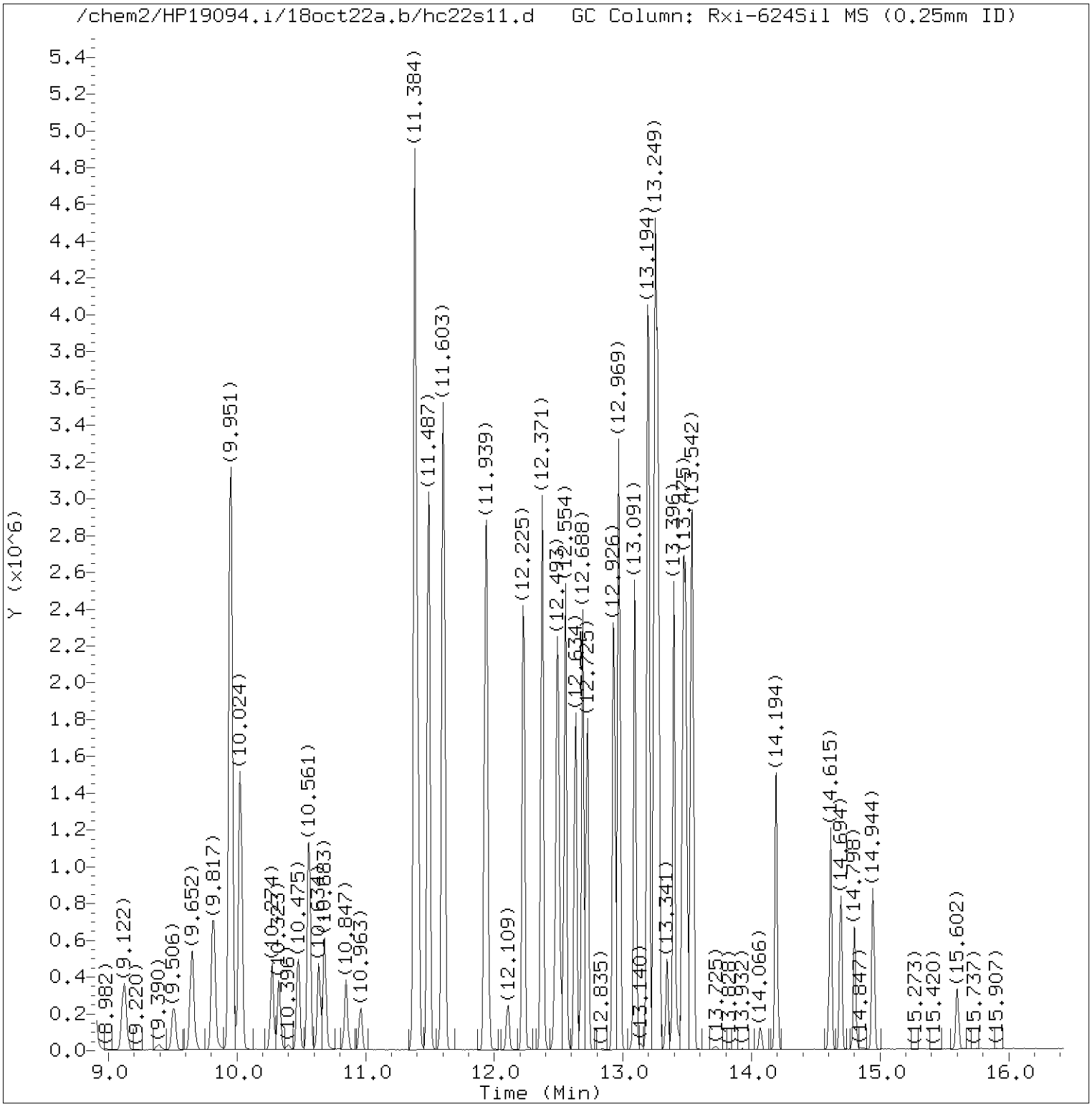
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Sample Name: 94283MS Lab Sample ID: 9850253MS

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Sample Name: 94283MS Lab Sample ID: 9850253MS

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

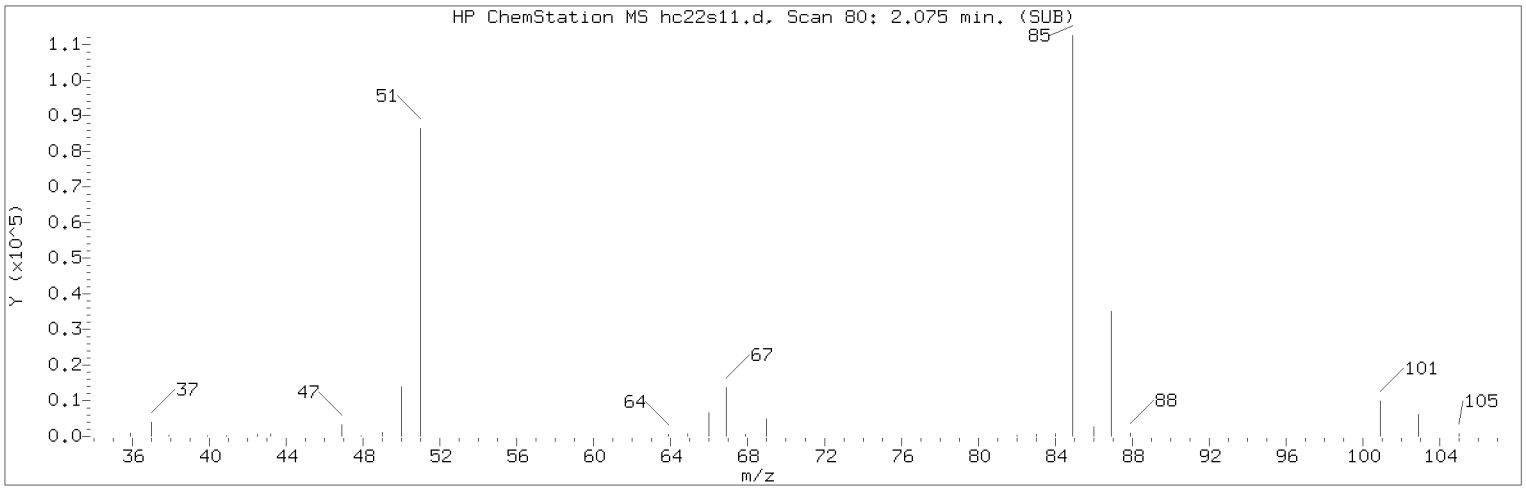
Sample Name: 94283MS Lab Sample ID: 9850253MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	389455M	3.848
2) Chloromethane	(2)	2.270	50	386688	3.901
8) Chloroethane	(2)	2.837	64	269103	4.780
10) Trichlorofluoromethane	(2)	3.148	101	497451	4.242
11) Ethyl ether	(2)	3.428	59	803687	20.213
15) 1,1-Dichloroethene	(2)	3.751	96	294999	5.809
16) Freon 113	(2)	3.794	101	324072	5.415
23) Methylene Chloride	(2)	4.464	84	284280	4.962
26)*t-Butyl Alcohol-d10	(1)	4.489	65	117521	50.000
33) 1,1-Dichloroethane	(2)	5.550	63	836851	7.669
38) 2-Butanone	(1)	6.342	43	380257	33.164
48) Tetrahydrofuran	(1)	6.714	71	71511	23.460
50)$Dibromofluoromethane	(2)	7.080	113	648167	9.930
51) 1,1,1-Trichloroethane	(2)	7.086	97	462464M	5.329
54) Carbon Tetrachloride	(2)	7.299	117	425932	5.715
57)$1,2-Dichloroethane-d4	(2)	7.531	102	115006	10.107
58) Benzene	(2)	7.561	78	1269391	5.222
63)*Fluorobenzene	(2)	7.964	96	2589815	10.000
67) Trichloroethene	(2)	8.439	95	331802	5.331
82)$Toluene-d8	(3)	9.951	98	2565221	10.012
83) Toluene	(3)	10.024	92	767464	5.195
89) Tetrachloroethene	(3)	10.561	166	392310	5.878
97)*Chlorobenzene-d5	(3)	11.384	117	1990724	10.000
100) Ethylbenzene	(3)	11.493	91	1472440	5.100
101) m+p-Xylene	(3)	11.603	106	1153500	10.771
105) Xylene (Total)	(3)		106	1691290	16.024
104) o-Xylene	(3)	11.932	106	537790	5.253
111)$4-Bromofluorobenzene	(3)	12.371	95	906935	9.722
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1063612	10.000

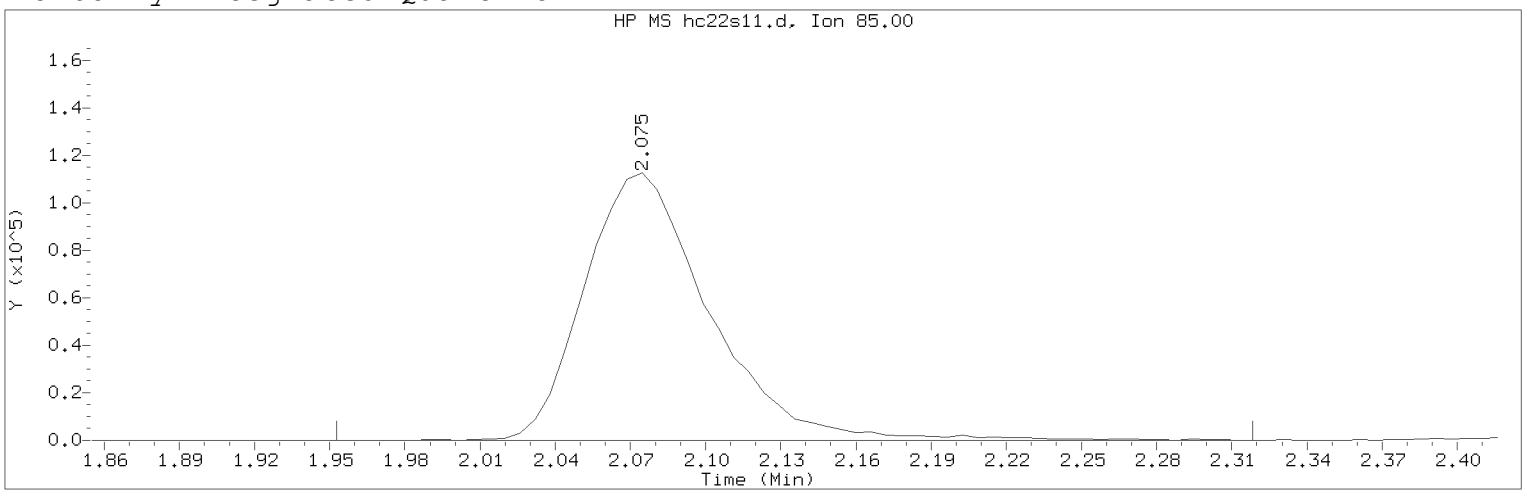
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Sample Name: 94283MS Lab Sample ID: 9850253MS

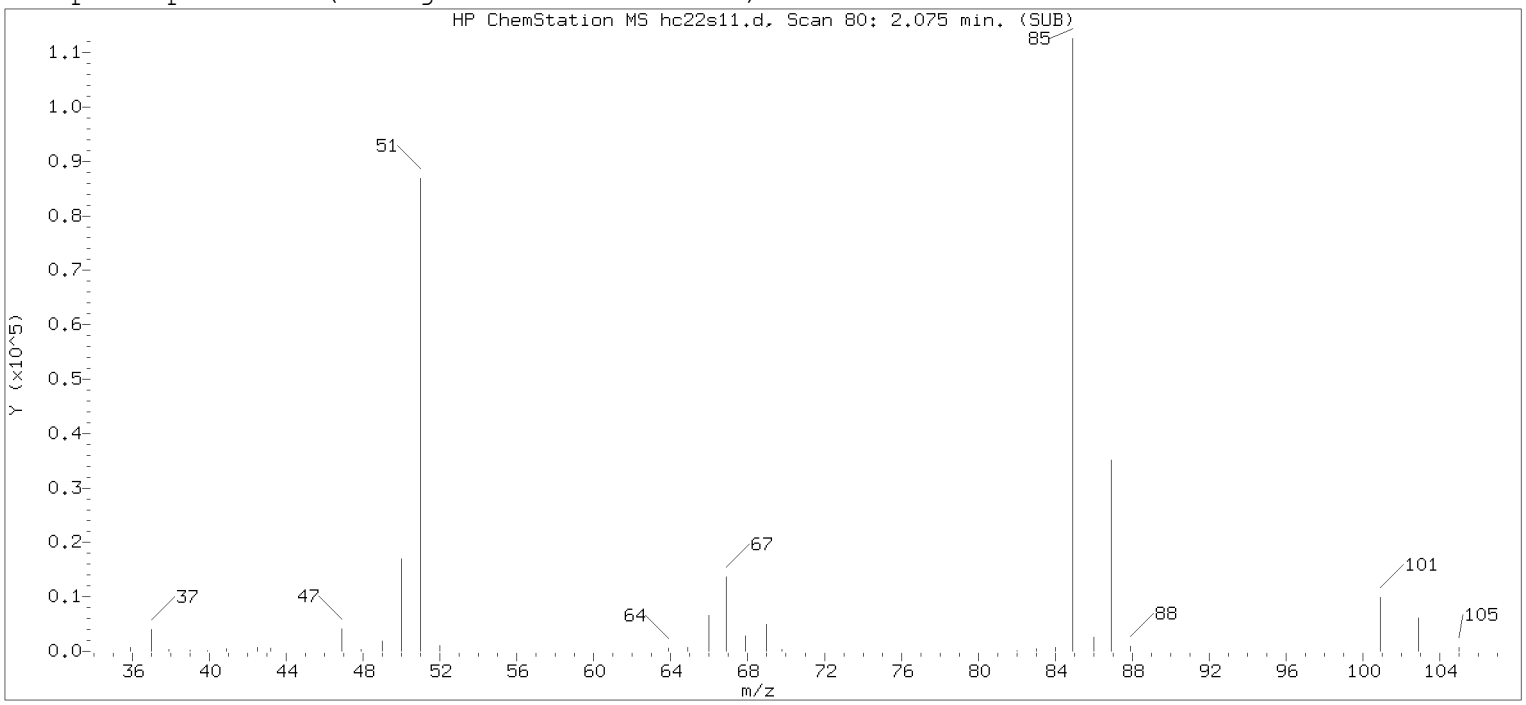
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area (flag) : 389455M
On-Column Amount (ng) : 3.8479
Integration start scan : 59 Integration stop scan: 119
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

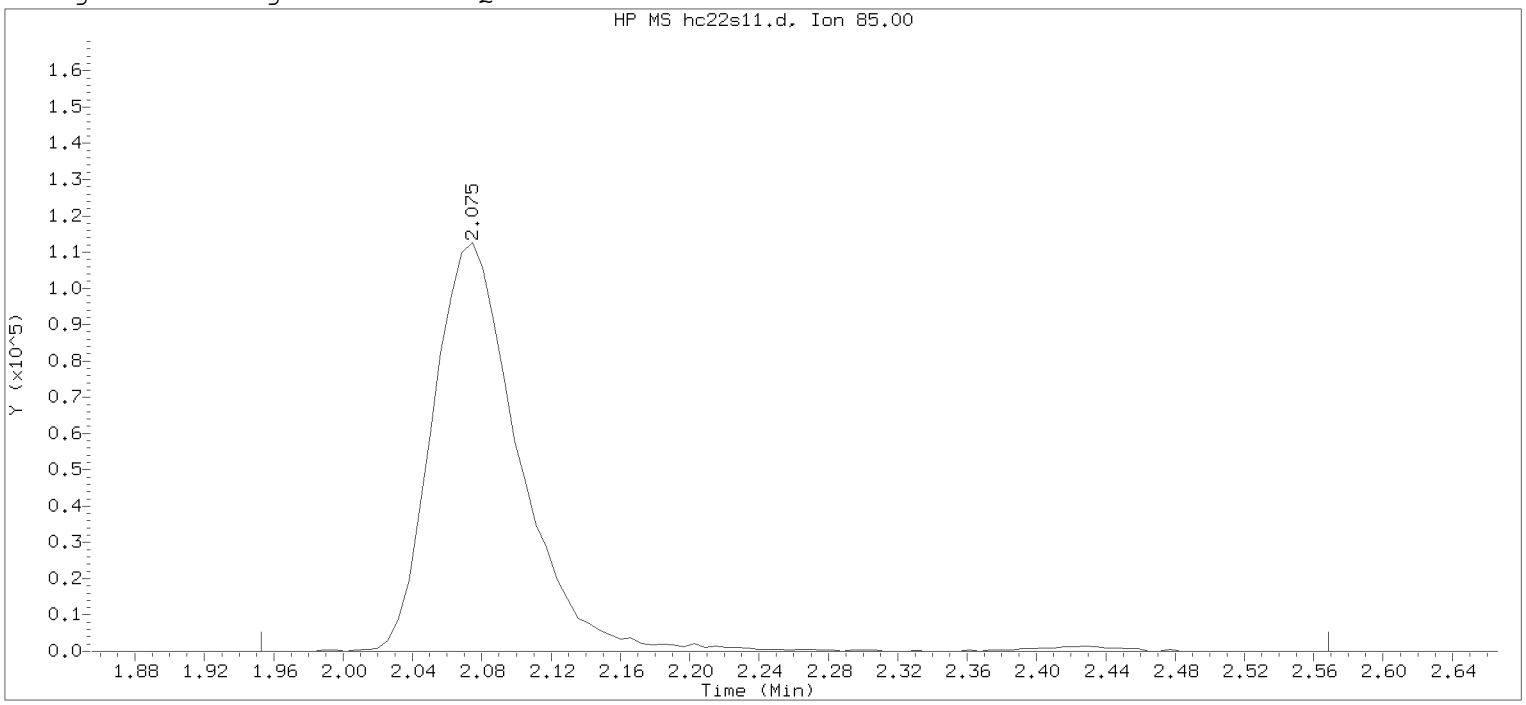
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

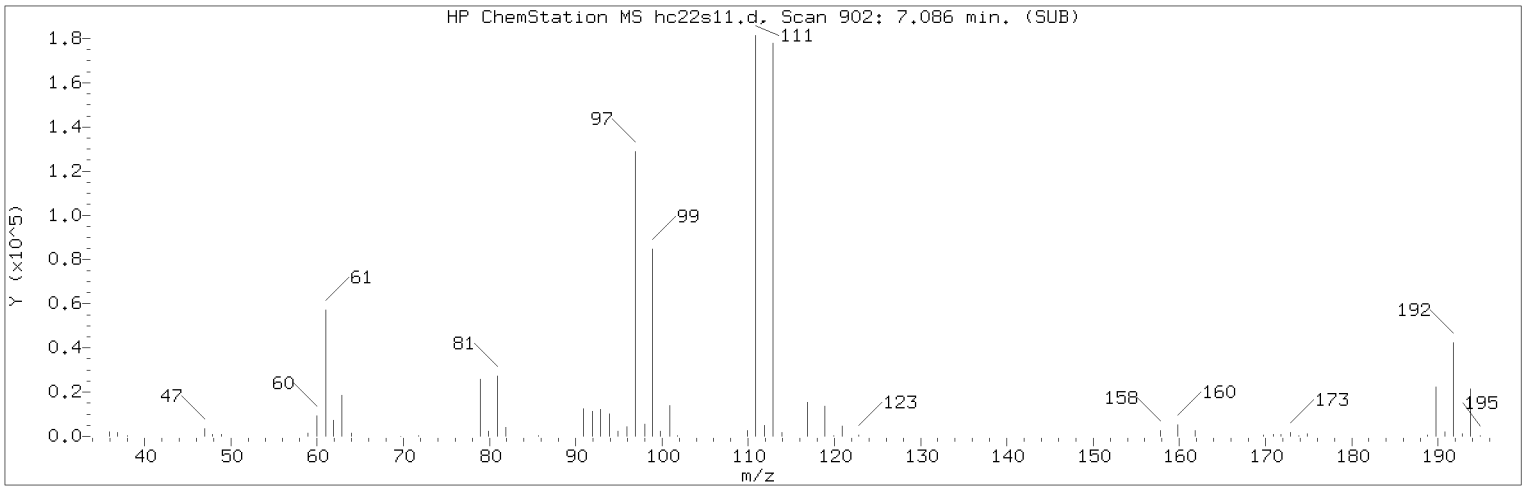
Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:03 Automation

Sample Name: 94283MS Lab Sample ID: 9850253MS

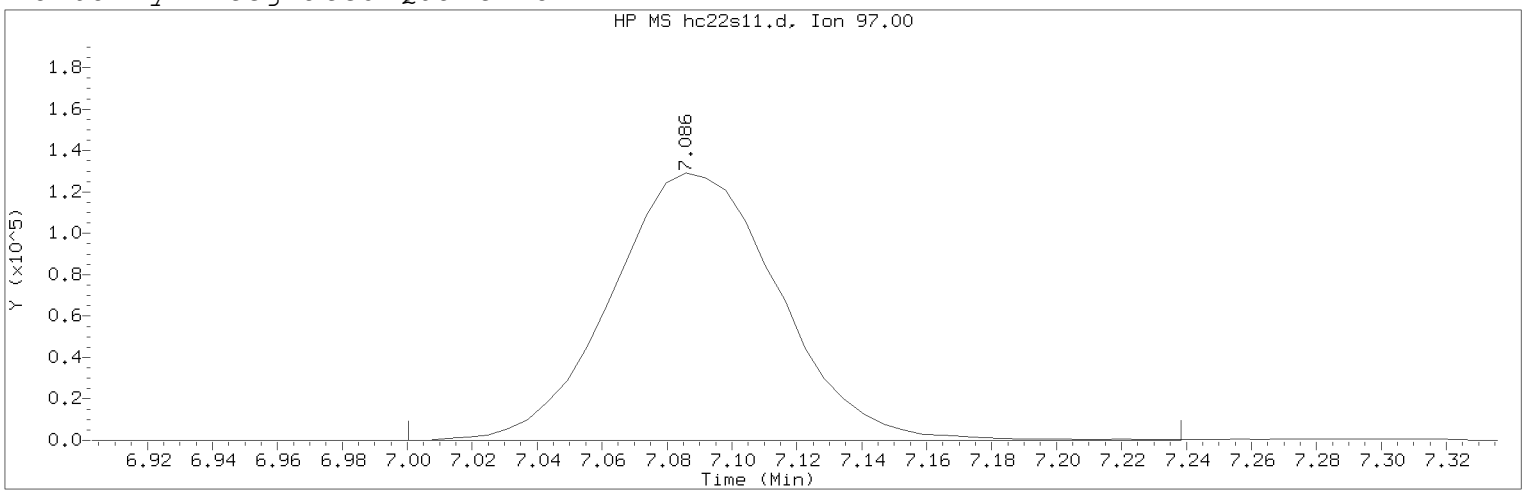
Compound Number : 1
Compound Name : Dichlorodifluoromethane
Scan Number : 80
Retention Time (minutes): 2.075
Quant Ion : 85.00
Area : 394397
On-column Amount (ng) : 3.8967
Integration start scan : 59 Integration stop scan: 160
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature used. AE20 Page 627

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 16:27 jkh09052

Sample Name: 94283MS Lab Sample ID: 9850253MS

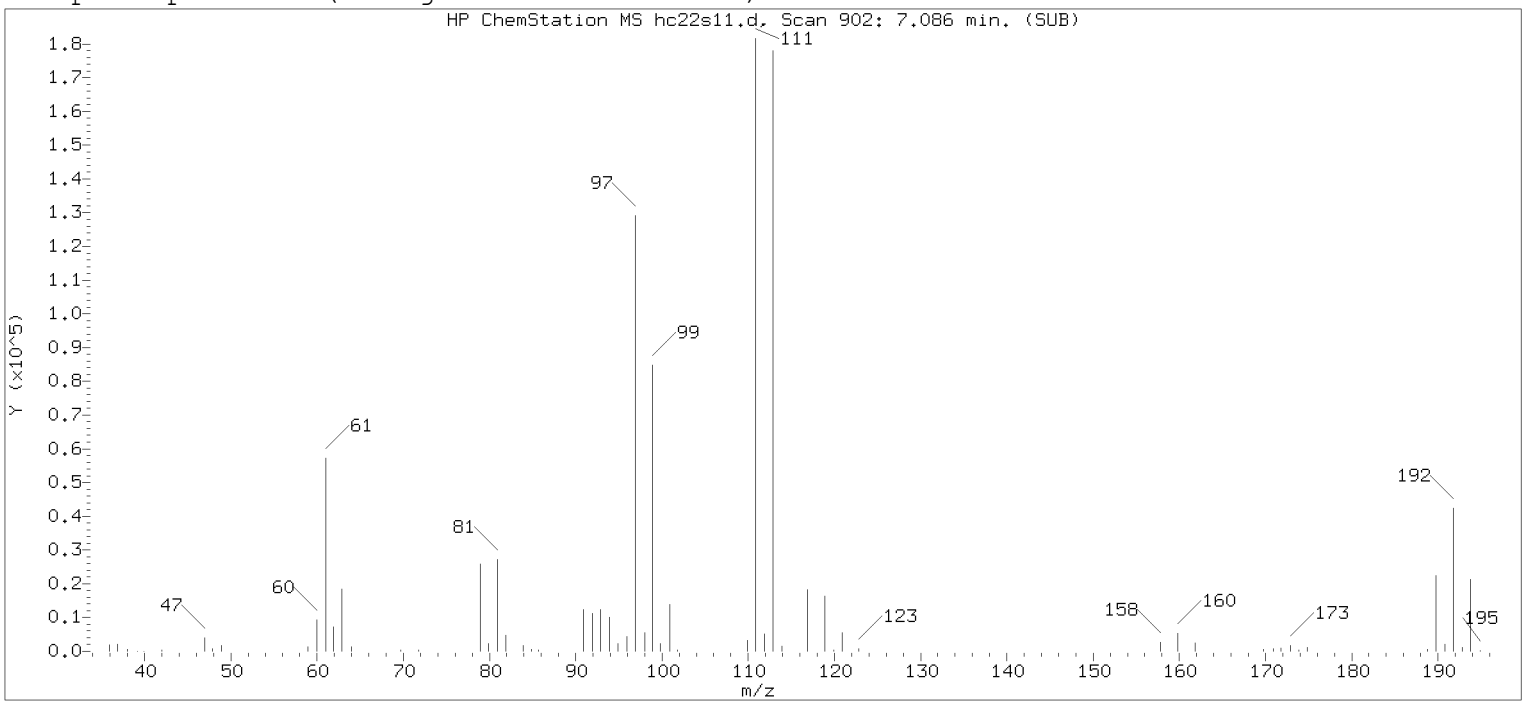
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Quant Ion : 97.00
Area (flag) : 462464M
On-Column Amount (ng) : 5.3295
Integration start scan : 887 Integration stop scan: 926
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

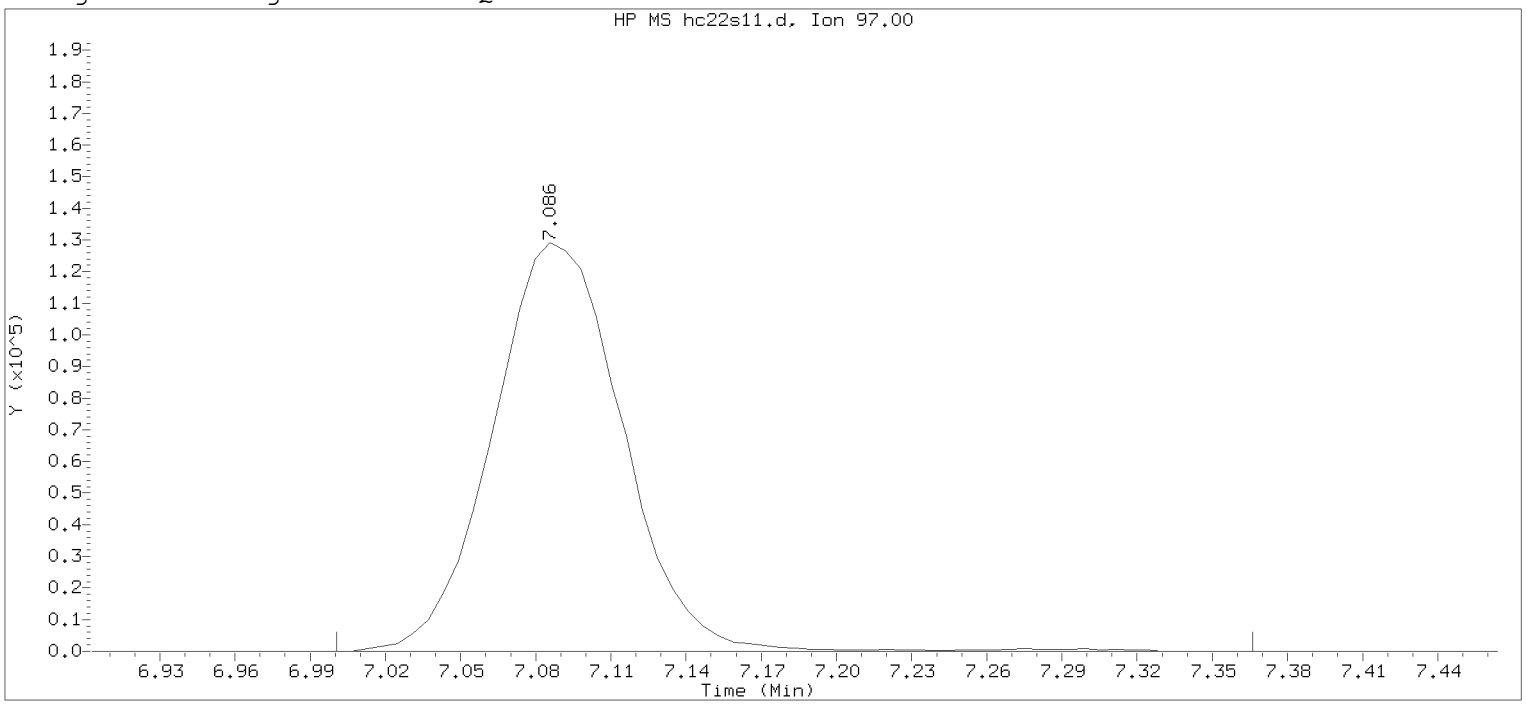
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22s11.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 14:46 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:03 Automation

Sample Name: 94283MS Lab Sample ID: 9850253MS

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 902
Retention Time (minutes): 7.086
Quant Ion : 97.00
Area : 465147
On-column Amount (ng) : 5.3604
Integration start scan : 887 Integration stop scan: 947
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30.
Target 3.5 esignature used [illegible]

94283MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9850254MSD

Data file: /chem2/HP19094.i/18oct22a.b/hc22s12.d Injection date and time: **22-OCT-2018 15:07**
Data file Sample Info. Line: 94283MSD;9850254MSD;1;3;MSD;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182**
Date, time and analyst ID of latest file update: 22-Oct-2018 15:25 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:9274;9145

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.476	(0.000)	474	65	114705	(-2)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2545587	(-2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1968210	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1058933	(1)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	638991	9.960	100%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.537	(0.000)	102	114215	10.212	102%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2534362	10.005	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	898134	9.738	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.080	(-0.000)	85	399285	4.014	4.01			0.05	1
2) Chloromethane	(2)	2.282	(0.000)	50	389441	3.997	4.00			0.06	1
8) Chloroethane	(2)	2.849	(-0.000)	64	270364	4.886	4.89			0.07	1
10) Trichlorofluoromethane	(2)	3.154	(0.000)	101	504808	4.380	4.38			0.05	1
11) Ethyl ether	(2)	3.434	(-0.000)	59	797519	20.406	20.41			0.05	13
15) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	296727	5.945	5.95			0.06	1
16) Freon 113	(2)	3.781	(0.000)	101	324528	5.517	5.52			0.06	1
23) Methylene Chloride	(2)	4.470	(0.000)	84	284276	5.049	5.05			0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(0.000)	63	846173	7.889	7.89			0.07	1
38) 2-Butanone	(1)	6.348	(-0.000)	43	395636	35.352	35.35			0.6	10
48) Tetrahydrofuran	(1)	6.726	(-0.000)	71	75875	25.502	25.50			0.8	25
51) 1,1,1-Trichloroethane	(2)	7.098	(-0.000)	97	470428	5.515	5.52			0.06	1
54) Carbon Tetrachloride	(2)	7.299	(0.000)	117	431242	5.887	5.89			0.07	1
58) Benzene	(2)	7.567	(-0.000)	78	1271605	5.322	5.32			0.05	1
67) Trichloroethene	(2)	8.445	(-0.000)	95	339648	5.552	5.55			0.06	1
83) Toluene	(3)	10.024	(-0.000)	92	770609	5.276	5.28			0.07	1
89) Tetrachloroethene	(3)	10.561	(-0.000)	166	391404	5.931	5.93			0.06	1
100) Ethylbenzene	(3)	11.493	(-0.000)	91	1508826	5.286	5.29			0.06	1
101) m+p-Xylene	(3)	11.603	(-0.000)	106	1153708	10.896	10.90			0.1	0.5
104) o-Xylene	(3)	11.932	(-0.000)	106	549347	5.427	5.43			0.05	0.5
105) Xylene (Total)	(3)			106	1703055	16.323	16.32			0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22s12.d Injection date and time: **22-OCT-2018 15:07**
Data file Sample Info. Line: 94283MSD;9850254MSD;1;3;MSD;RAF20;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182**
Date, time and analyst ID of latest file update: 22-Oct-2018 15:25 Automation

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: **038A** Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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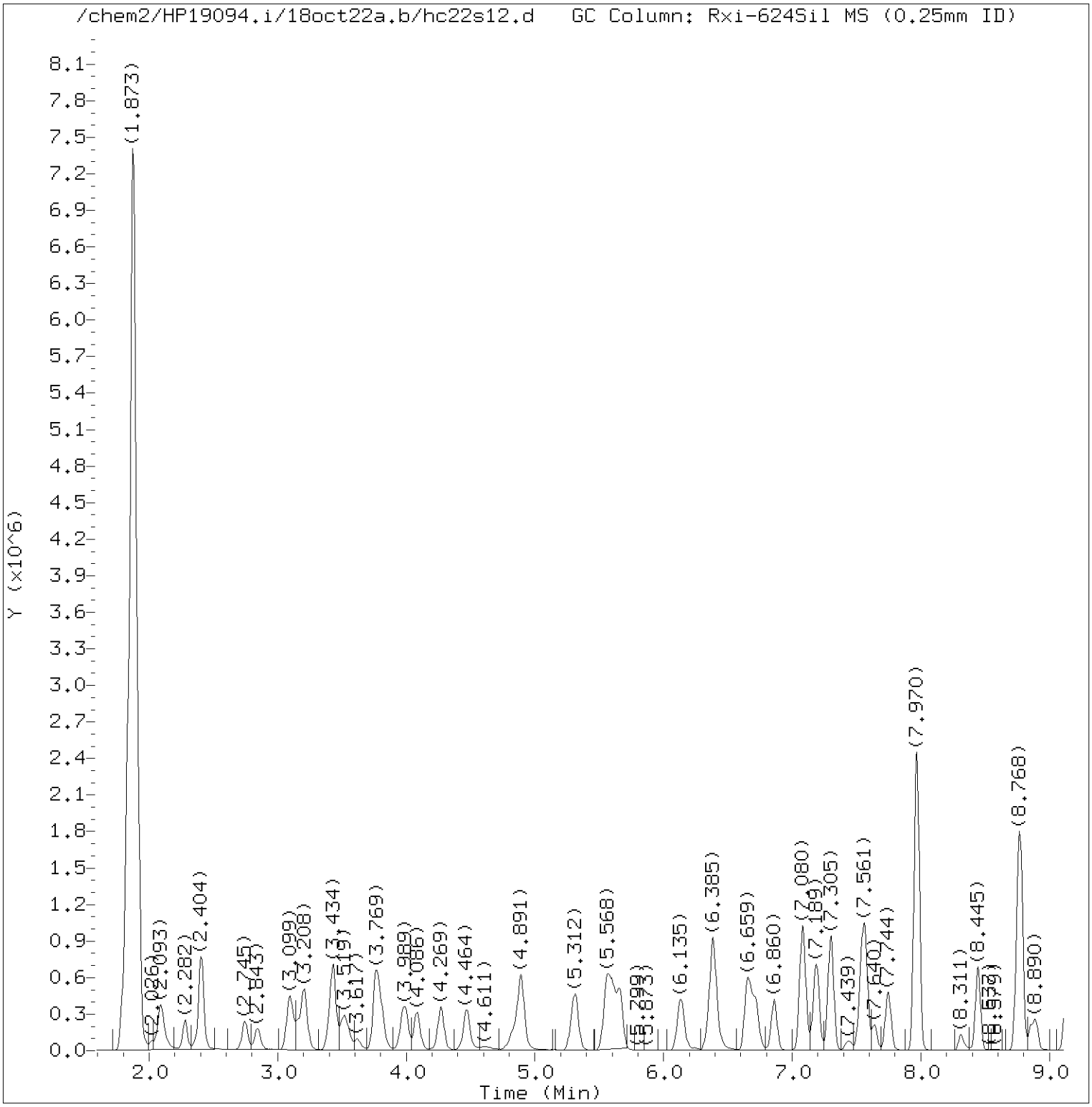
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Jennifer K. Howe on 10/22/2018 at 16:30. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

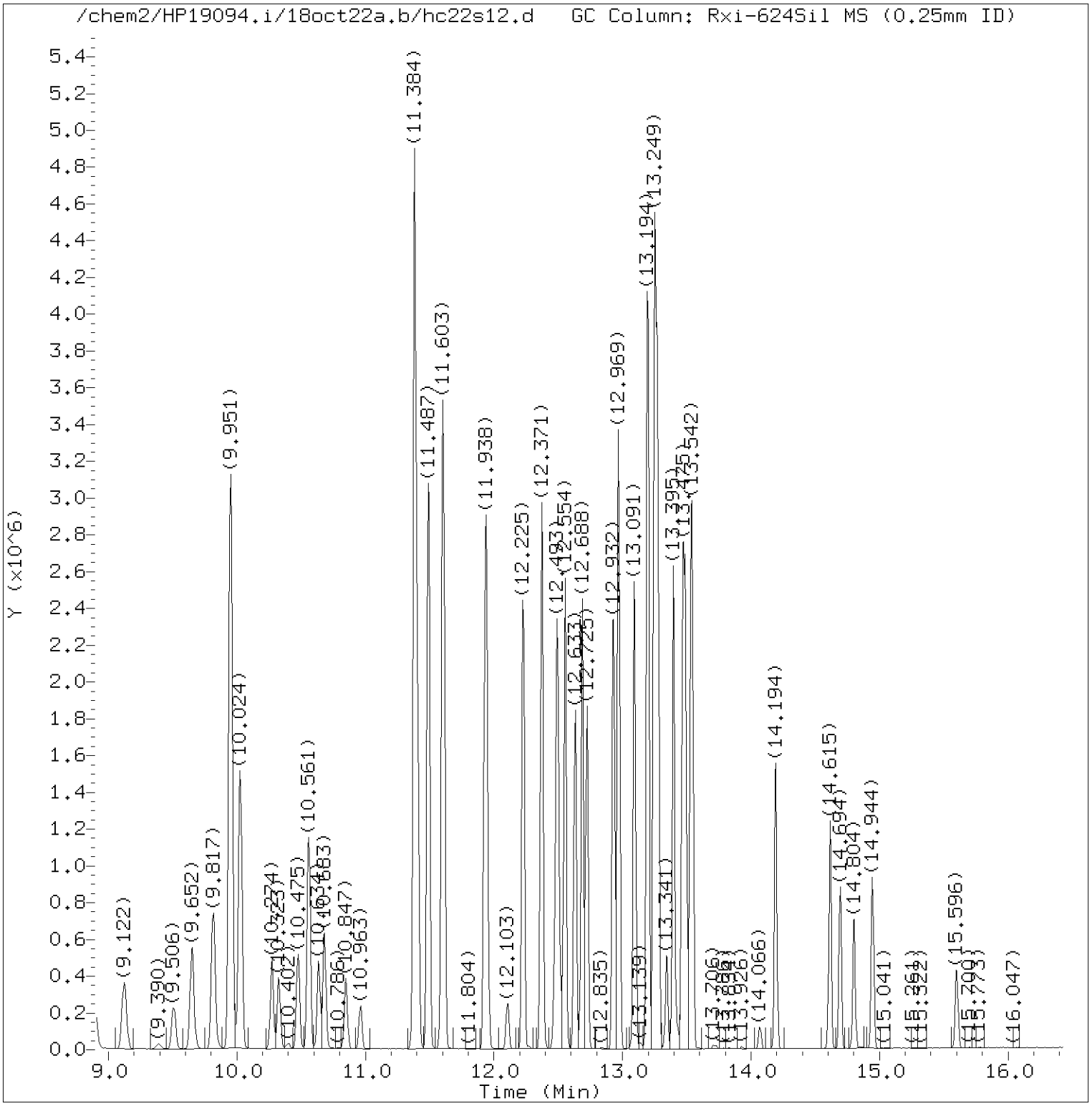
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s12.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:25 Automation

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s12.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:25 Automation

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22s12.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 15:07 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 15:25 Automation

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.081	85	399285	4.014
2) Chloromethane	(2)	2.282	50	389441	3.997
8) Chloroethane	(2)	2.849	64	270364	4.886
10) Trichlorofluoromethane	(2)	3.154	101	504808	4.380
11) Ethyl ether	(2)	3.434	59	797519	20.406
15) 1,1-Dichloroethene	(2)	3.763	96	296727	5.945
16) Freon 113	(2)	3.781	101	324528	5.517
23) Methylene Chloride	(2)	4.470	84	284276	5.049
26)*t-Butyl Alcohol-d10	(1)	4.476	65	114705	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	846173	7.889
38) 2-Butanone	(1)	6.348	43	395636	35.352
48) Tetrahydrofuran	(1)	6.726	71	75875	25.502
50)$Dibromofluoromethane	(2)	7.080	113	638991	9.960
51) 1,1,1-Trichloroethane	(2)	7.098	97	470428	5.515
54) Carbon Tetrachloride	(2)	7.299	117	431242	5.887
57)$1,2-Dichloroethane-d4	(2)	7.537	102	114215	10.212
58) Benzene	(2)	7.567	78	1271605	5.322
63)*Fluorobenzene	(2)	7.970	96	2545587	10.000
67) Trichloroethene	(2)	8.445	95	339648	5.552
82)$Toluene-d8	(3)	9.951	98	2534362	10.005
83) Toluene	(3)	10.024	92	770609	5.276
89) Tetrachloroethene	(3)	10.561	166	391404	5.931
97)*Chlorobenzene-d5	(3)	11.384	117	1968210	10.000
100) Ethylbenzene	(3)	11.493	91	1508826	5.286
101) m+p-Xylene	(3)	11.603	106	1153708	10.896
105) Xylene (Total)	(3)		106	1703055	16.323
104) o-Xylene	(3)	11.932	106	549347	5.427
111)$4-Bromofluorobenzene	(3)	12.371	95	898134	9.738
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1058933	10.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 16:30.
Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22l03.d Injection date and time: **22-OCT-2018 09:44**
Data file Sample Info. Line: LCSH45;LCSH45;1;3;LCS;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.483	(-0.006)	475	65	102213	(-13)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2654371	(3)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1999318	(1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1065641	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	654347	9.781	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	120394	10.323	103%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2599517	10.102	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	912088	9.735	97%		80 - 120

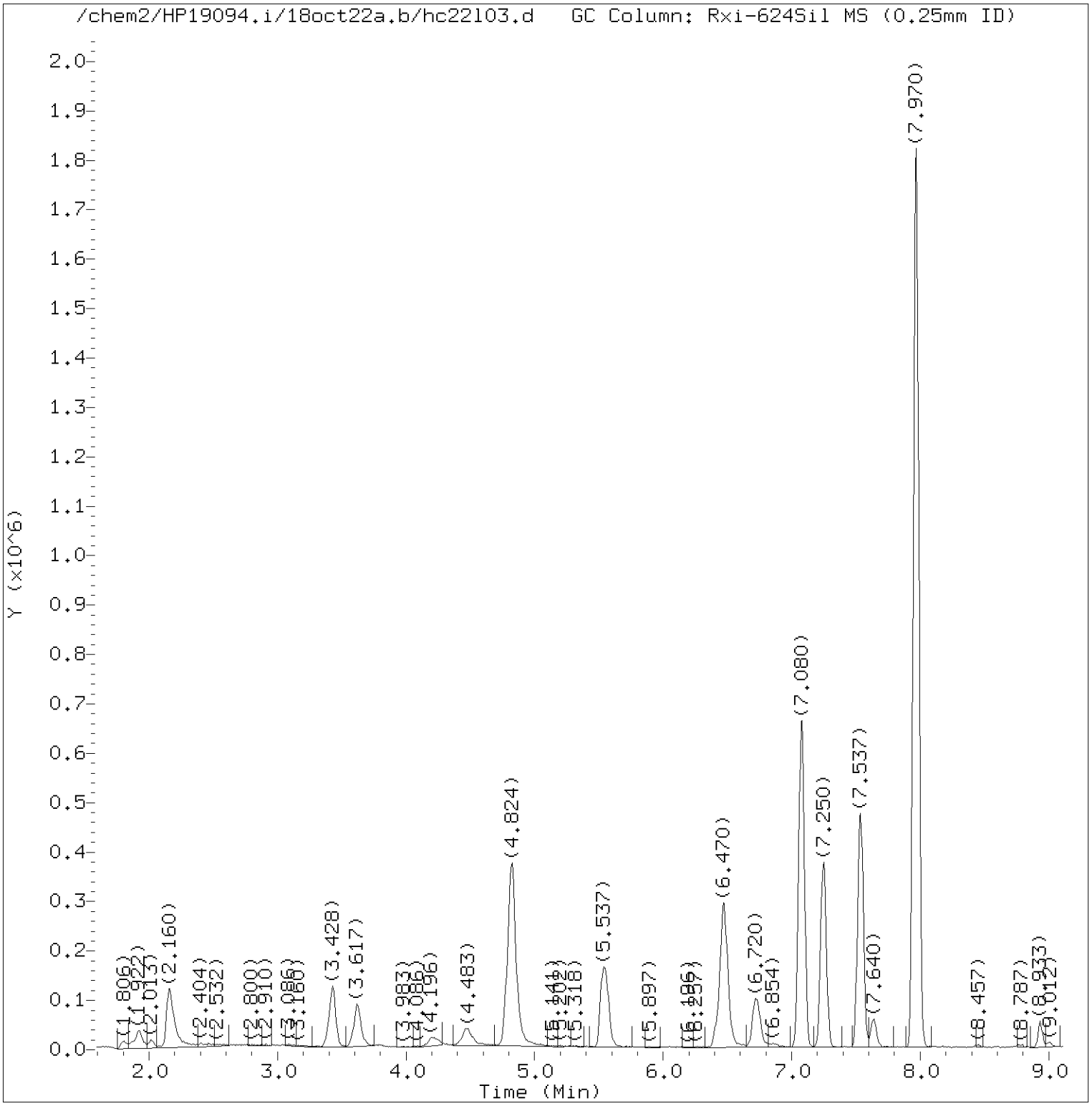
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.160	(-0.001)	45	317303M	3.724	3.72		J	0.04	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

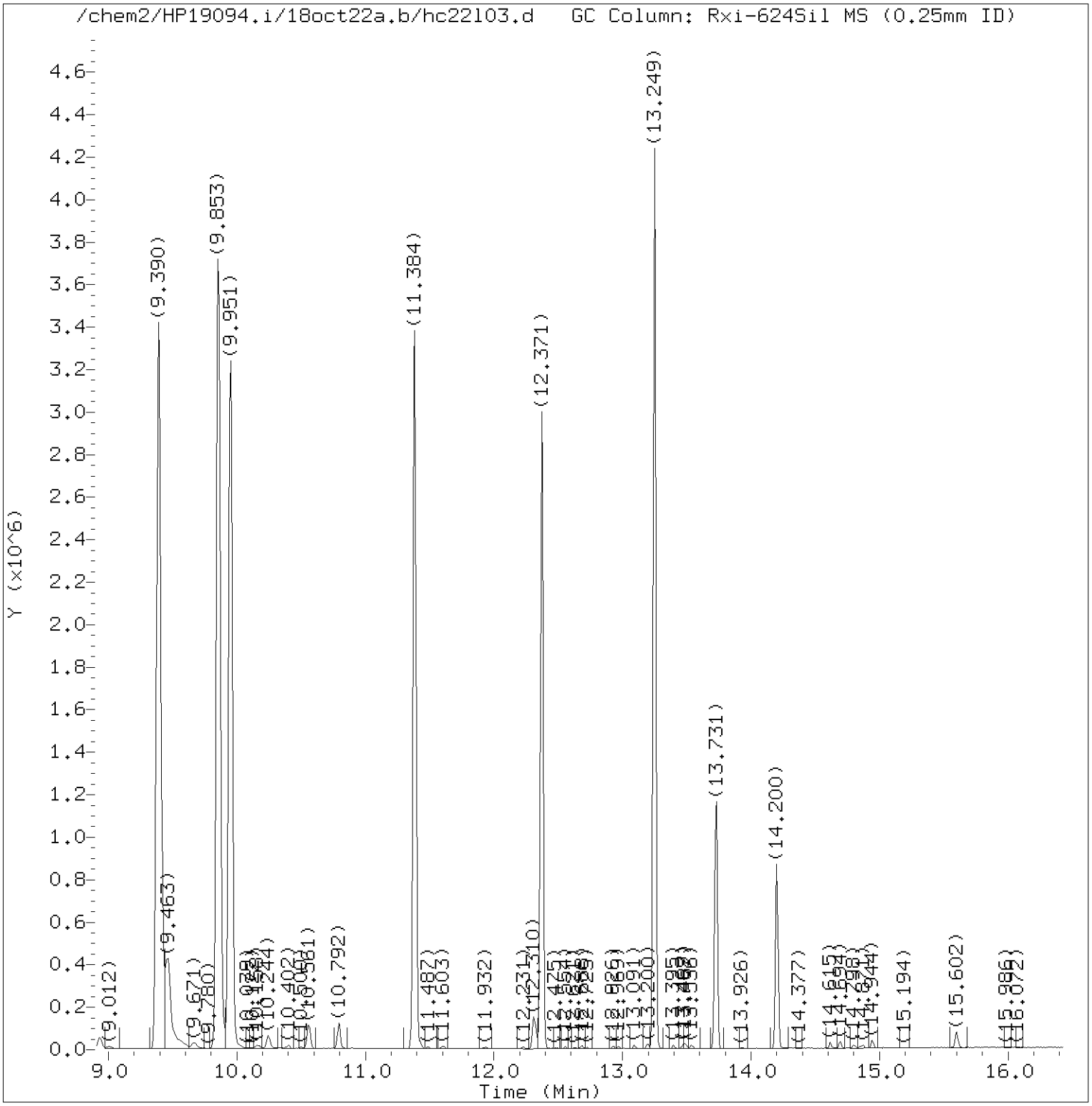
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH45 Lab Sample ID: LCSH45

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH45 Lab Sample ID: LCSH45

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

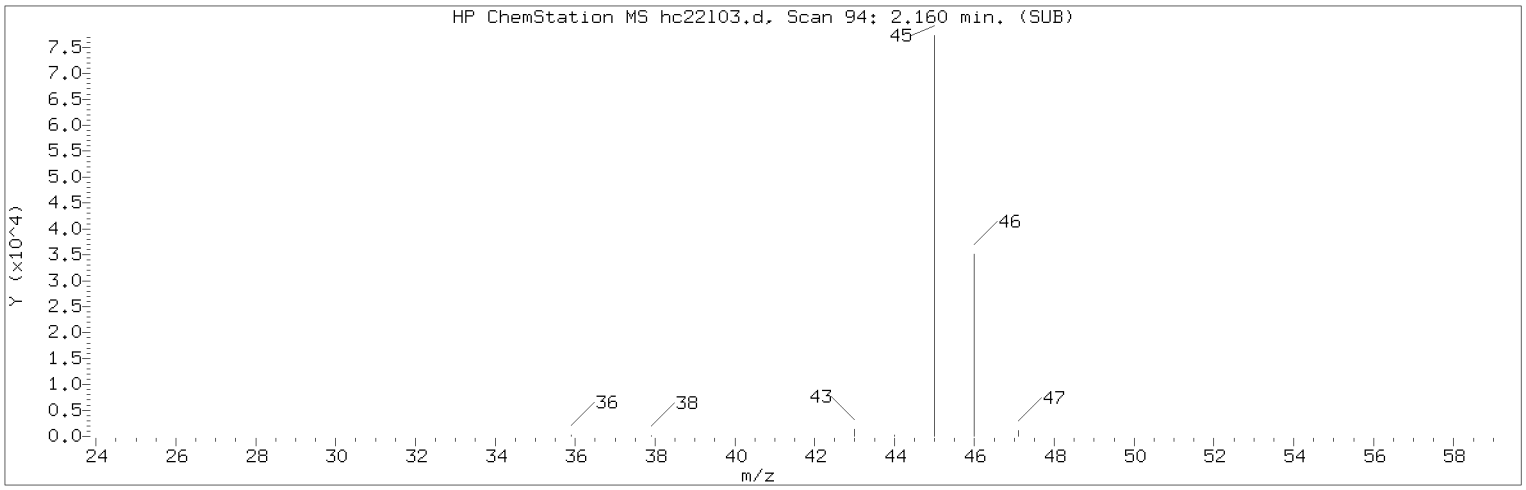
Sample Name: LCSH45 Lab Sample ID: LCSH45

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.160	45	317303M	3.724
26)*t-Butyl Alcohol-d10	(1)	4.483	65	102213	50.000
50)$Dibromofluoromethane	(2)	7.080	113	654347	9.781
57)$1,2-Dichloroethane-d4	(2)	7.531	102	120394	10.323
63)*Fluorobenzene	(2)	7.970	96	2654371	10.000
82)$Toluene-d8	(3)	9.951	98	2599517	10.102
97)*Chlorobenzene-d5	(3)	11.384	117	1999318	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	912088	9.735
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1065641	10.000

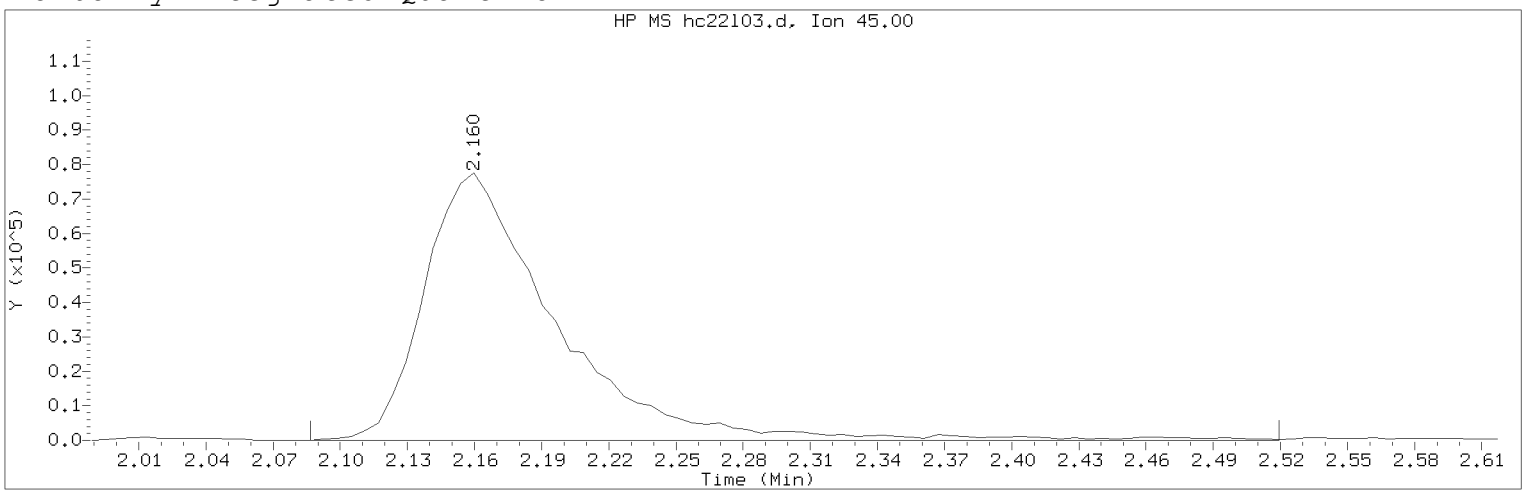
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22103.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH45 Lab Sample ID: LCSH45

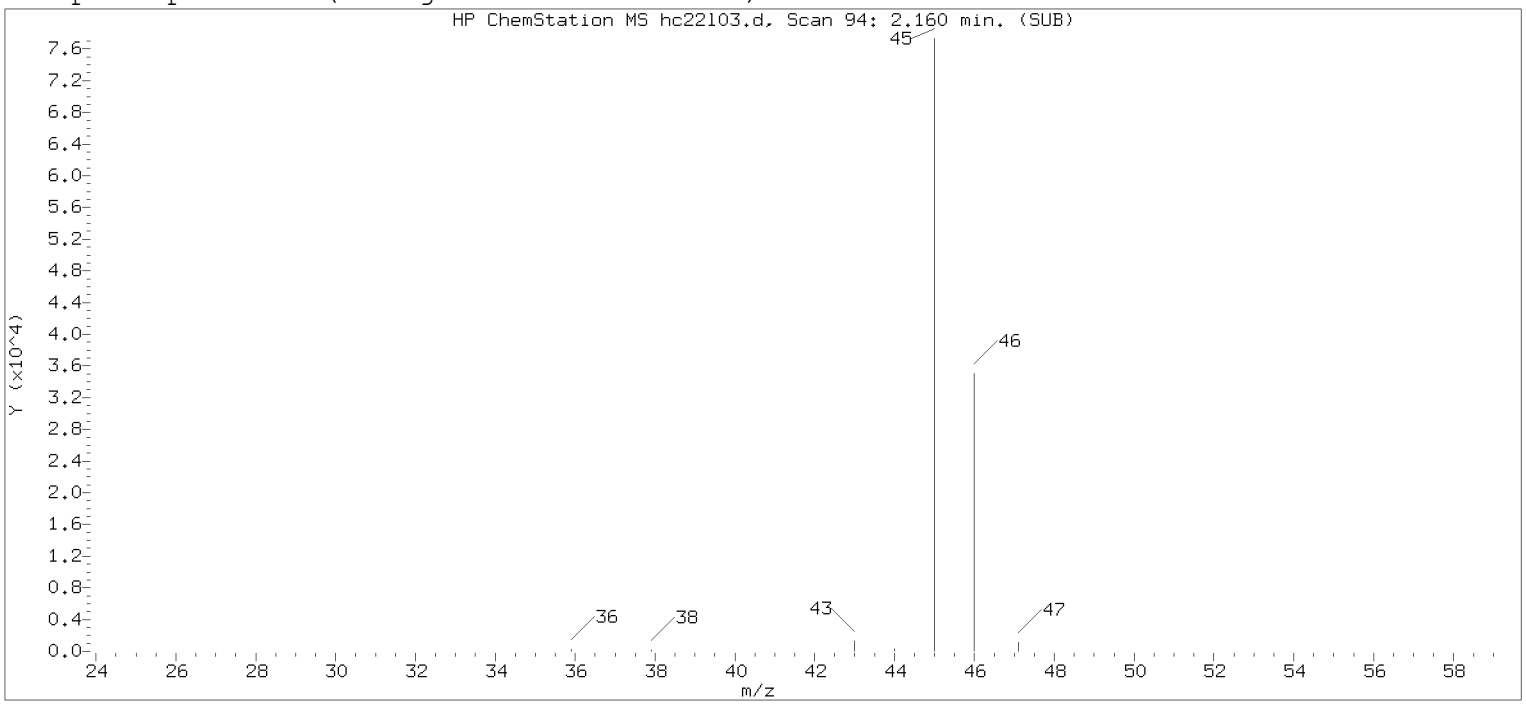
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 94
Retention Time (minutes): 2.160
Quant Ion : 45.00
Area (flag) : 317303M
On-Column Amount (ng) : 3.7238
Integration start scan : 81 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

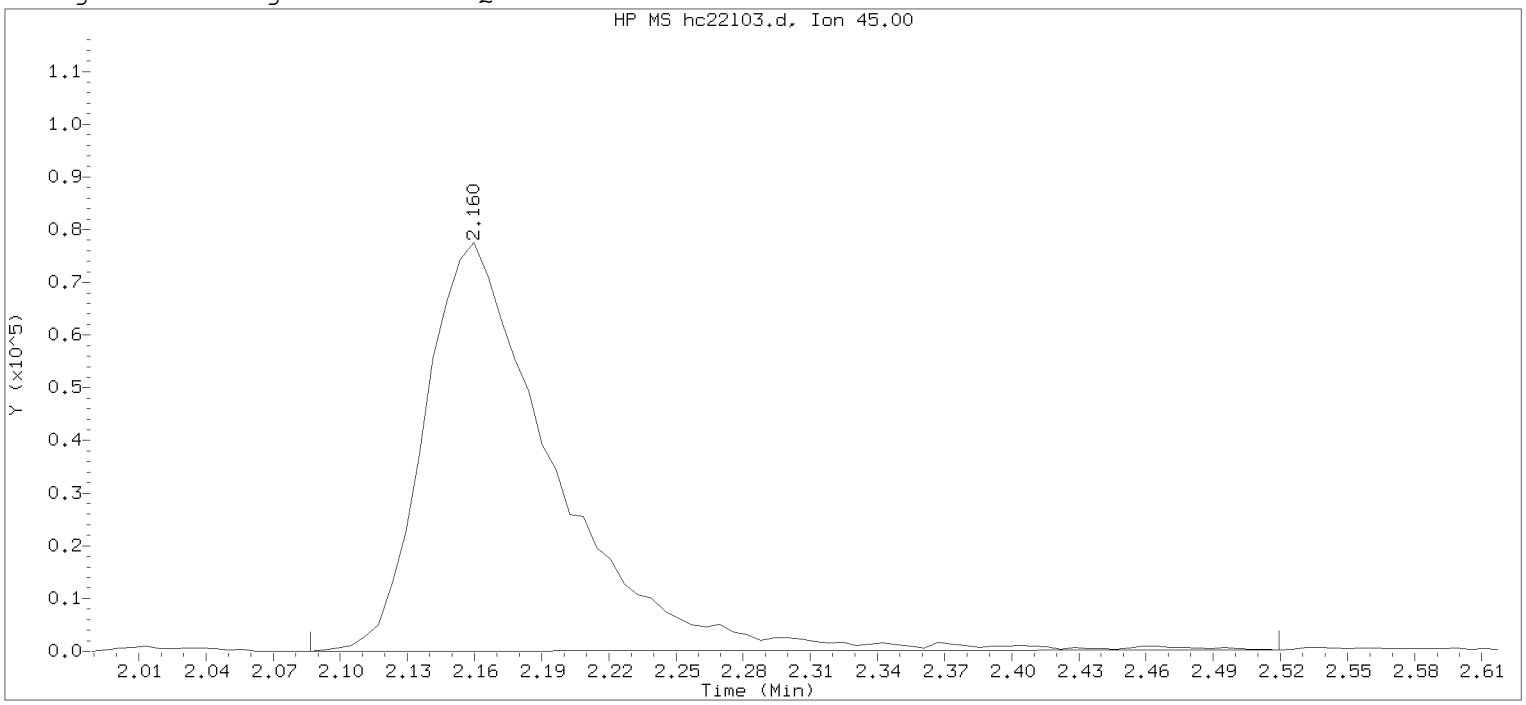
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22l03.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:44 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 10:02 Automation

Sample Name: LCSH45 Lab Sample ID: LCSH45

Compound Number	: 4		
Compound Name	: Dimethyl ether		
Scan Number	: 94		
Retention Time (minutes)	: 2.160		
Quant Ion	: 45.00		
Area	: 313776		
On-column Amount (ng)	: 3.6824		
Integration start scan	: 81	Integration stop scan:	152
Y at integration start	: 0	Y at integration end:	268

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: JKH09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct22a.b/hc22l04.d Injection date and time: **22-OCT-2018 10:06**
Data file Sample Info. Line: LCDH45;LCDH45;1;3;LCSD;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.470	(0.006)	473	65	127956	(9)	50.00	
63) Fluorobenzene	7.964	(0.006)	1046	96	2678986	(3)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	2021643	(2)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1071682	(2)	10.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.073	(0.000)	113	669265	9.912	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.000)	102	122646	10.419	104%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2638722	10.141	101%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	930433	9.822	98%		80 - 120

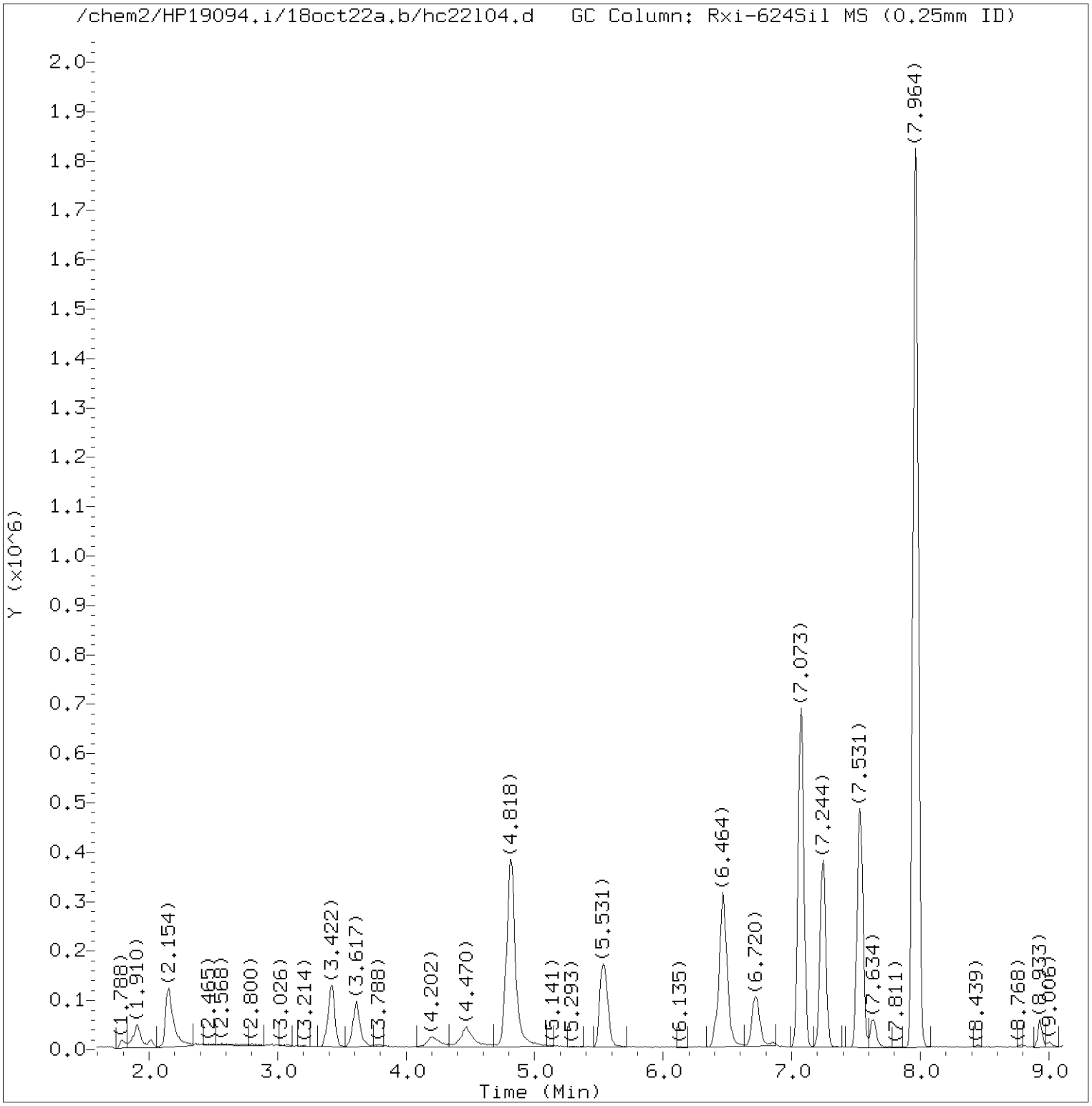
Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Dimethyl ether	(2)	2.154	(-0.000)	45	319601M	3.716	3.72		J	0.04	13

M = Compound was manually integrated.

Total number of targets = 1

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

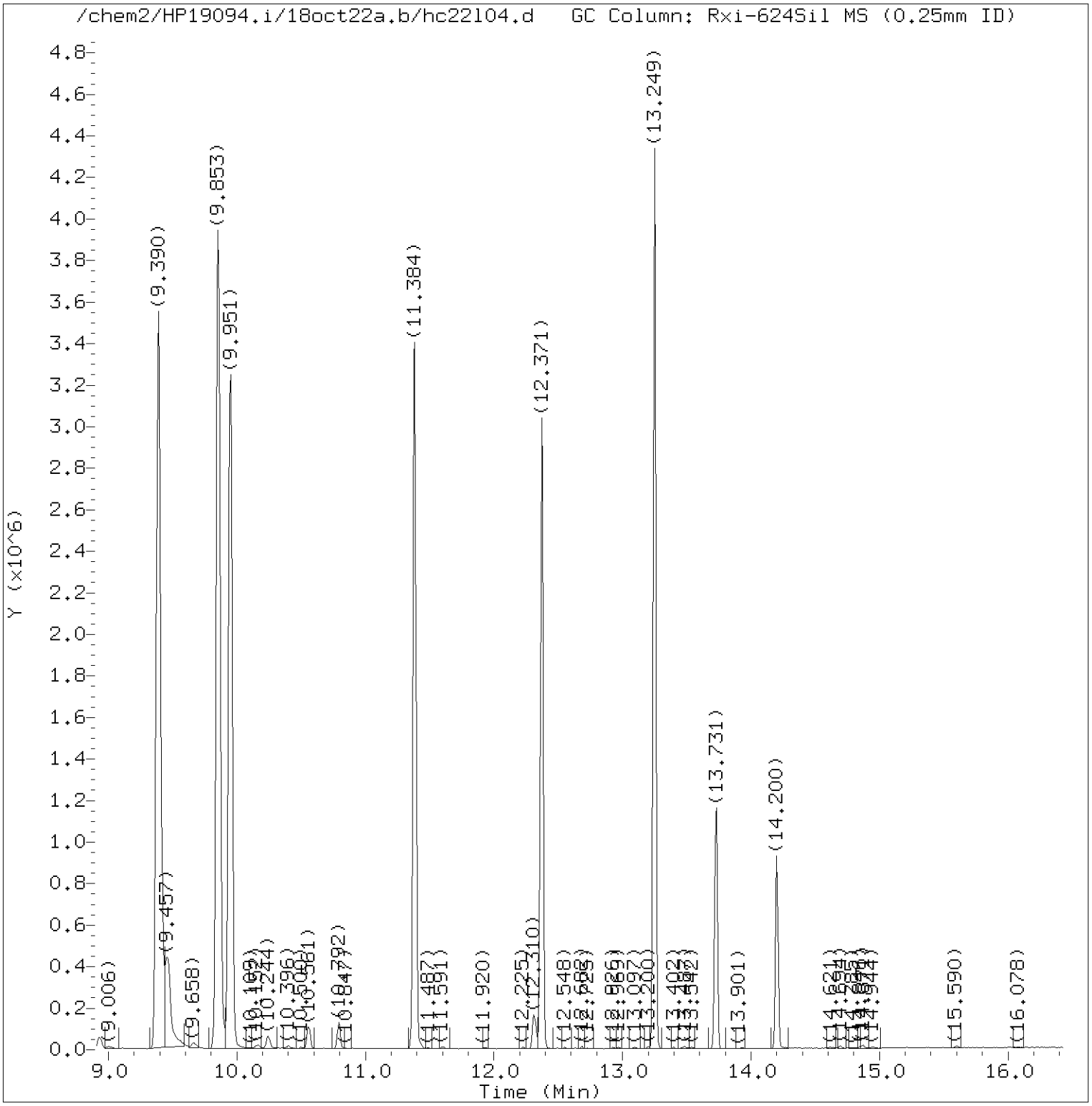
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 10:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH45 Lab Sample ID: LCDH45

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 10:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH45 Lab Sample ID: LCDH45

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 10:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

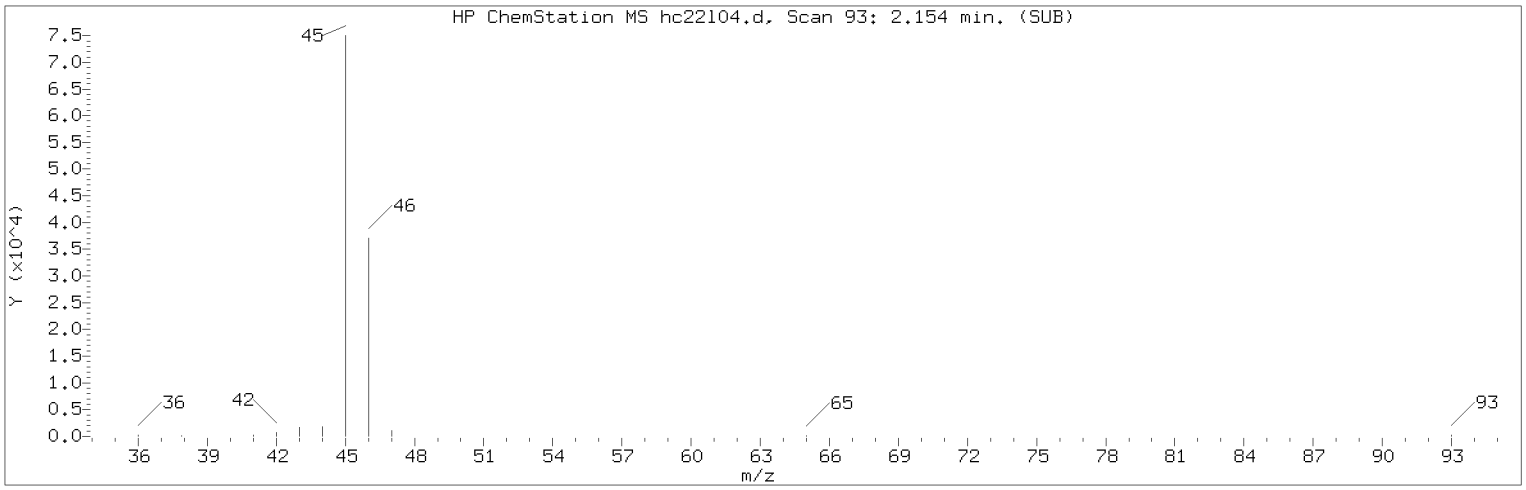
Sample Name: LCDH45 Lab Sample ID: LCDH45

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Dimethyl ether	(2)	2.154	45	319601M	3.716
26)*t-Butyl Alcohol-d10	(1)	4.470	65	127956	50.000
50)$Dibromofluoromethane	(2)	7.073	113	669265	9.912
57)$1,2-Dichloroethane-d4	(2)	7.531	102	122646	10.419
63)*Fluorobenzene	(2)	7.964	96	2678986	10.000
82)$Toluene-d8	(3)	9.951	98	2638722	10.141
97)*Chlorobenzene-d5	(3)	11.384	117	2021643	10.000
111)$4-Bromofluorobenzene	(3)	12.371	95	930433	9.822
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1071682	10.000

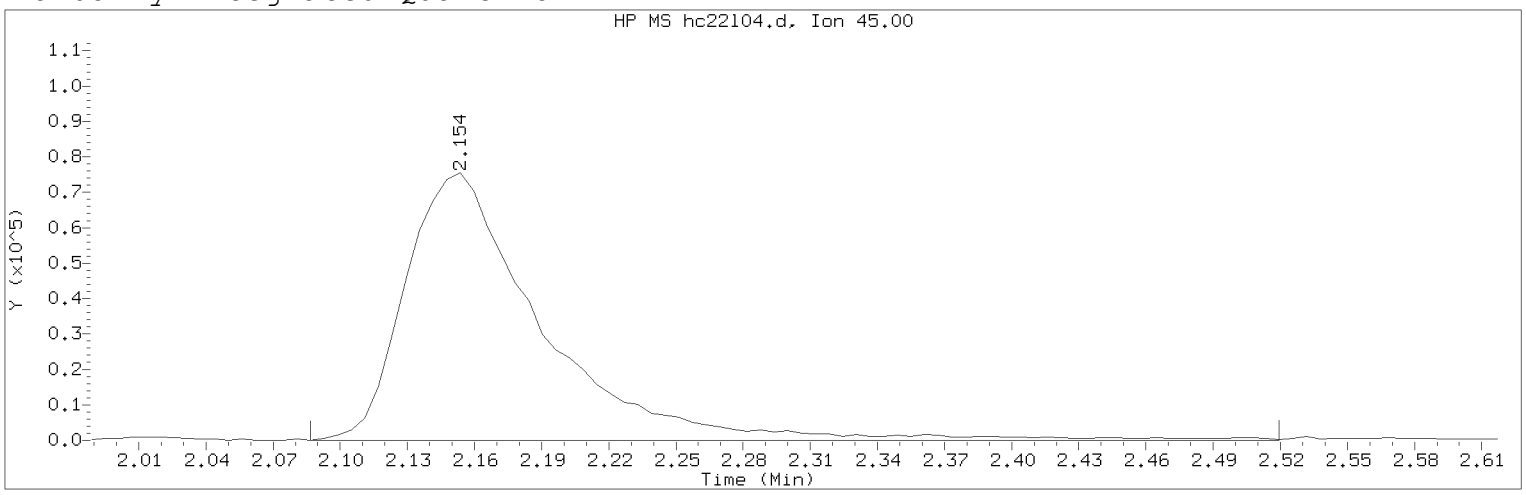
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22104.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 10:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH45 Lab Sample ID: LCDH45

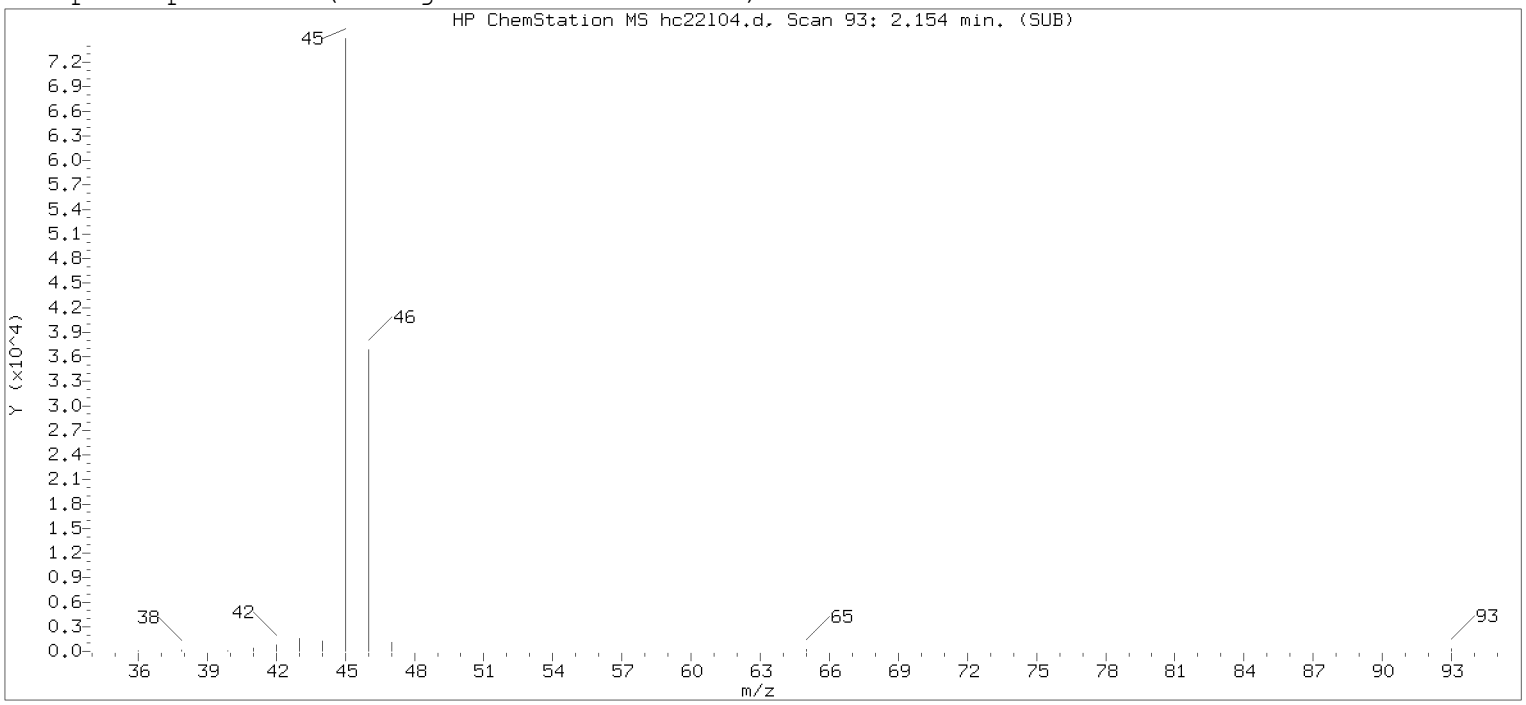
Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area (flag) : 319601M
On-Column Amount (ng) : 3.7163
Integration start scan : 81 Integration stop scan: 152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

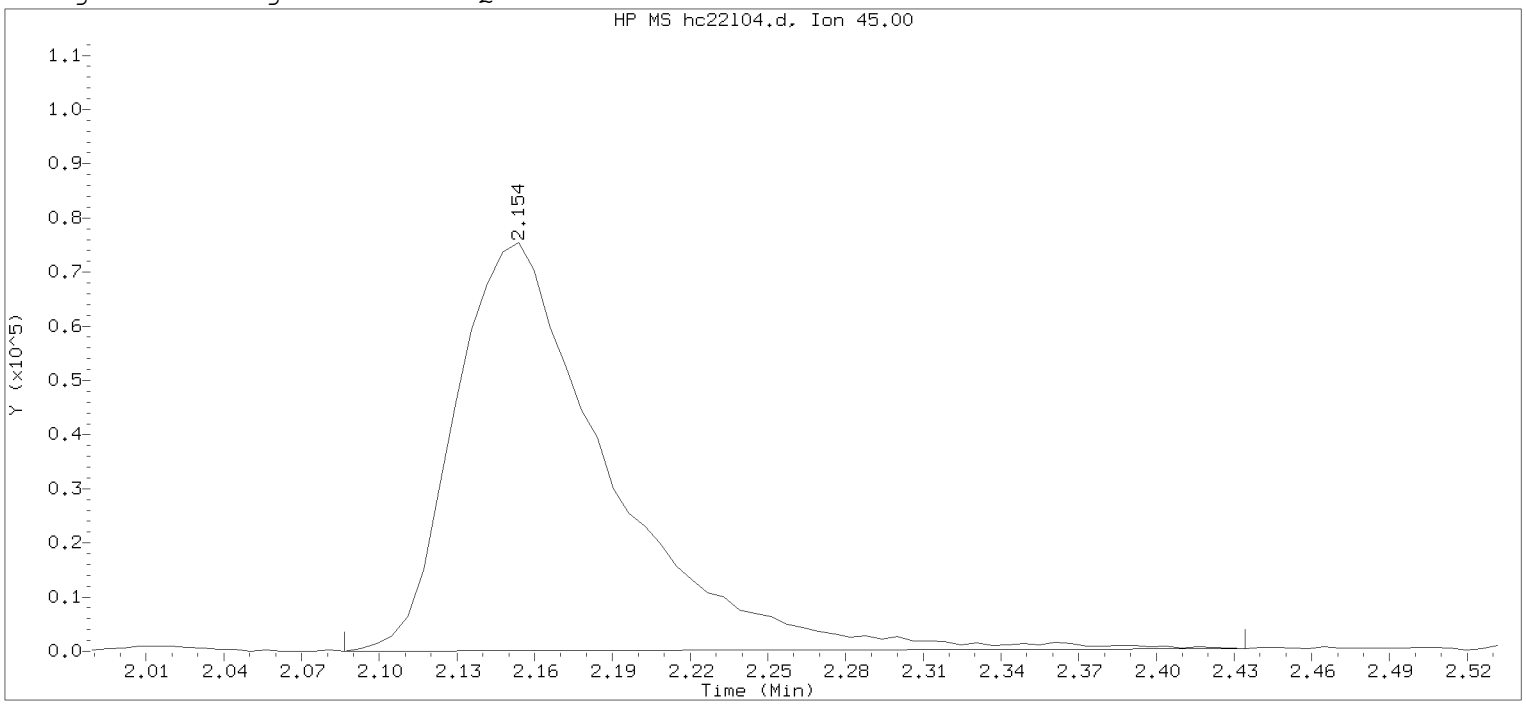
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22l04.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 10:06 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 10:24 Automation

Sample Name: LCDH45 Lab Sample ID: LCDH45

Compound Number : 4
Compound Name : Dimethyl ether
Scan Number : 93
Retention Time (minutes): 2.154
Quant Ion : 45.00
Area : 311649
On-column Amount (ng) : 3.6238
Integration start scan : 81 Integration stop scan: 138
Y at integration start : 0 Y at integration end: 460

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50.
Target 3.5 esignature used [illegible]

Data file: /chem2/HP19094.i/18oct22a.b/hc22l01.d Injection date and time: **22-OCT-2018 09:01**
Data file Sample Info. Line: LCSH44;LCSH44;1;3;LCS;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.495	(-0.018)	477	65	118963M	(1)	50.00	
63) Fluorobenzene	7.970	(0.000)	1047	96	2637183	(2)	10.00	
97) Chlorobenzene-d5	11.384	(0.000)	1607	117	1981549	(0)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249	(0.000)	1913	152	1046118	(0)	10.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080	(0.000)	113	650544	9.787	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531	(0.001)	102	117739	10.161	102%		80 - 120
82) Toluene-d8	(3)	9.951	(0.000)	98	2591200	10.160	102%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371	(0.000)	95	901912	9.713	97%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.074	(0.000)	85	348651	3.383	3.38			0.05	1
2) Chloromethane	(2)	2.276	(0.000)	50	365018	3.616	3.62			0.06	1
8) Chloroethane	(2)	2.837	(0.000)	64	204169	3.561	3.56			0.07	1
10) Trichlorofluoromethane	(2)	3.154	(0.000)	101	442691	3.707	3.71			0.05	1
11) Ethyl ether	(2)	3.428	(0.000)	59	158046	3.904	3.90		J	0.05	13
15) 1,1-Dichloroethene	(2)	3.763	(-0.000)	96	251234	4.859	4.86			0.06	1
16) Freon 113	(2)	3.788	(0.000)	101	270015	4.431	4.43			0.06	1
23) Methylene Chloride	(2)	4.464	(0.000)	84	262050	4.492	4.49			0.07	1
33) 1,1-Dichloroethane	(2)	5.556	(0.000)	63	506806	4.561	4.56			0.07	1
38) 2-Butanone	(1)	6.348	(0.005)	43	378053	32.572	32.57			0.6	10
48) Tetrahydrofuran	(1)	6.720	(0.007)	71	68332	22.145	22.15		J	0.8	25
51) 1,1,1-Trichloroethane	(2)	7.092	(0.000)	97	412399	4.667	4.67			0.06	1
54) Carbon Tetrachloride	(2)	7.299	(0.000)	117	372363	4.907	4.91			0.07	1
58) Benzene	(2)	7.567	(0.000)	78	1121548	4.531	4.53			0.05	1
67) Trichloroethene	(2)	8.445	(-0.000)	95	295875	4.668	4.67			0.06	1
83) Toluene	(3)	10.024	(-0.000)	92	703238	4.782	4.78			0.07	1
89) Tetrachloroethene	(3)	10.561	(0.000)	166	339622	5.112	5.11			0.06	1
100) Ethylbenzene	(3)	11.487	(0.000)	91	1366137	4.754	4.75			0.06	1
101) m+p-Xylene	(3)	11.603	(-0.000)	106	1060347	9.947	9.95			0.1	0.5
104) o-Xylene	(3)	11.932	(-0.000)	106	503256	4.938	4.94			0.05	0.5
105) Xylene (Total)	(3)			106	1563603	14.885	14.89			0.1	3

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct22a.b/hc22101.d Injection date and time: **22-OCT-2018 09:01**
Data file Sample Info. Line: LCSH44;LCSH44;1;3;LCS;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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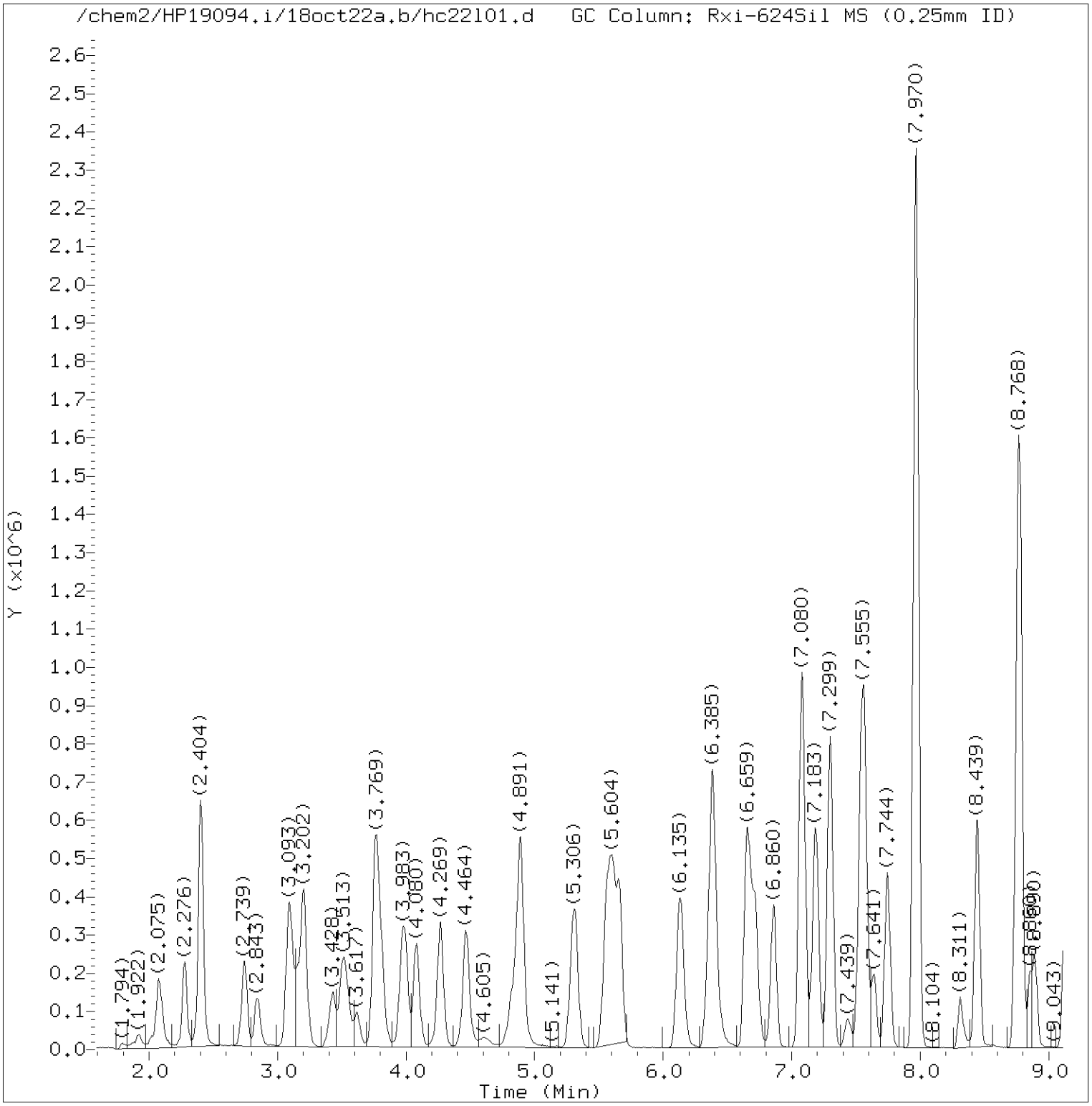
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

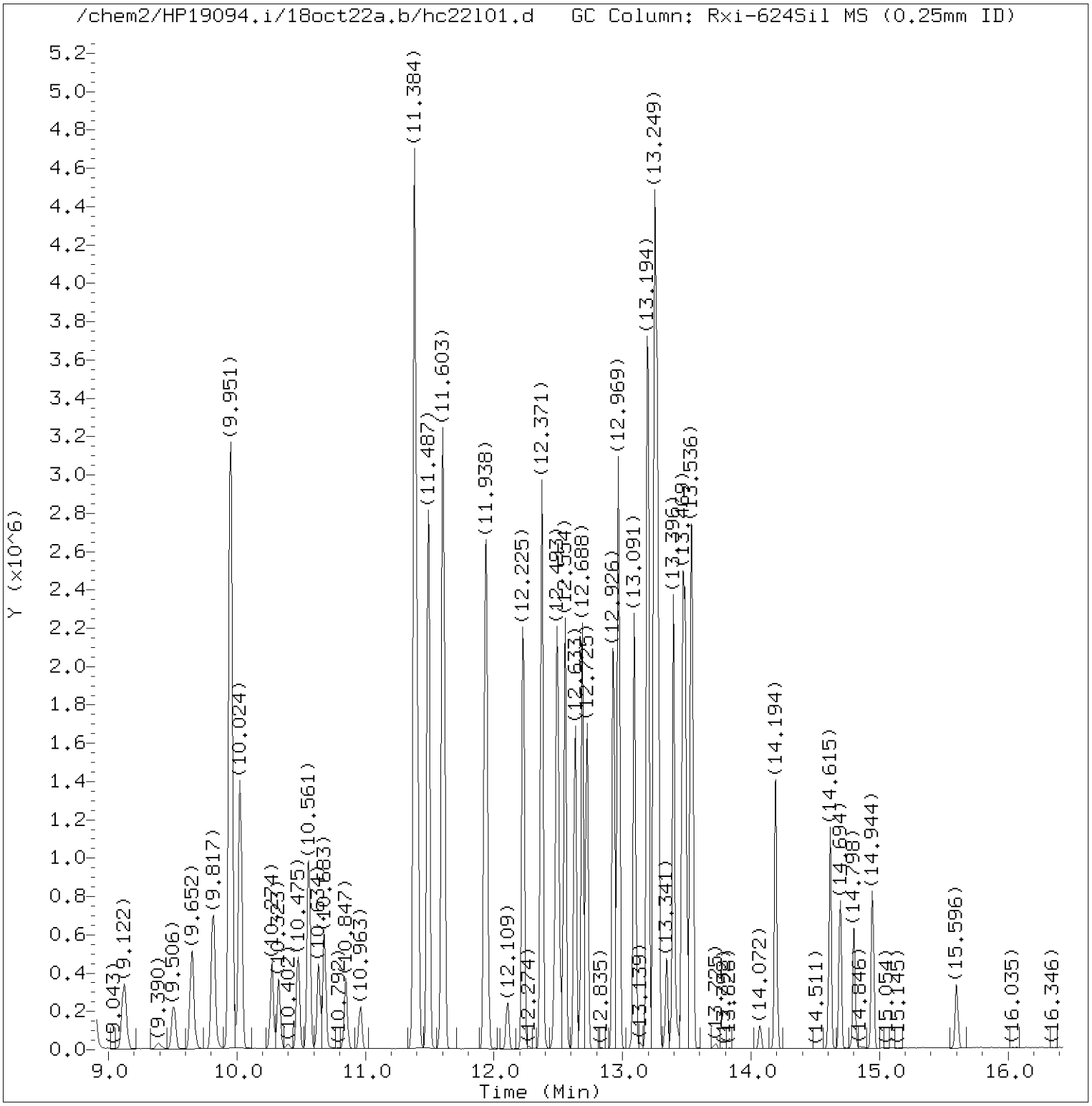
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH44 Lab Sample ID: LCSH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH44 Lab Sample ID: LCSH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

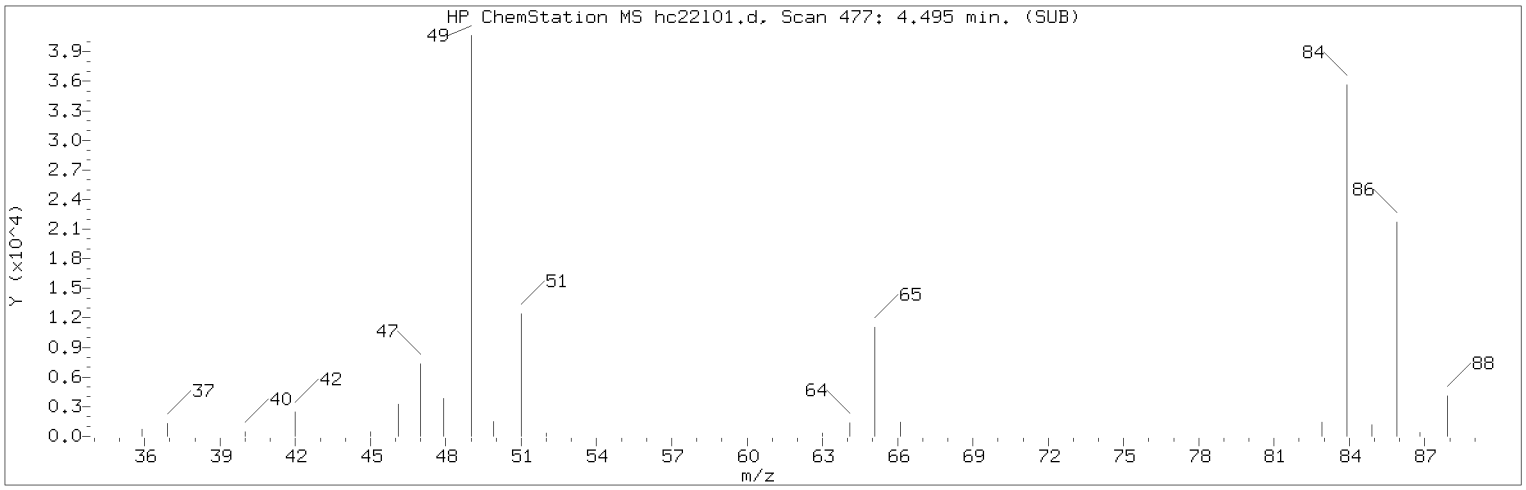
Sample Name: LCSH44 Lab Sample ID: LCSH44

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.075	85	348651	3.383
2) Chloromethane	(2)	2.276	50	365018	3.616
8) Chloroethane	(2)	2.837	64	204169	3.561
10) Trichlorofluoromethane	(2)	3.154	101	442691	3.707
11) Ethyl ether	(2)	3.428	59	158046	3.904
15) 1,1-Dichloroethene	(2)	3.763	96	251234	4.859
16) Freon 113	(2)	3.788	101	270015	4.431
23) Methylene Chloride	(2)	4.464	84	262050	4.492
26)*t-Butyl Alcohol-d10	(1)	4.495	65	118963M	50.000
33) 1,1-Dichloroethane	(2)	5.556	63	506806	4.561
38) 2-Butanone	(1)	6.348	43	378053	32.572
48) Tetrahydrofuran	(1)	6.720	71	68332	22.145
50)$Dibromofluoromethane	(2)	7.080	113	650544	9.787
51) 1,1,1-Trichloroethane	(2)	7.092	97	412399	4.667
54) Carbon Tetrachloride	(2)	7.299	117	372363	4.907
57)$1,2-Dichloroethane-d4	(2)	7.531	102	117739	10.161
58) Benzene	(2)	7.567	78	1121548	4.531
63)*Fluorobenzene	(2)	7.970	96	2637183	10.000
67) Trichloroethene	(2)	8.445	95	295875	4.668
82)$Toluene-d8	(3)	9.951	98	2591200	10.160
83) Toluene	(3)	10.024	92	703238	4.782
89) Tetrachloroethene	(3)	10.561	166	339622	5.112
97)*Chlorobenzene-d5	(3)	11.384	117	1981549	10.000
100) Ethylbenzene	(3)	11.487	91	1366137	4.754
101) m+p-Xylene	(3)	11.603	106	1060347	9.947
105) Xylene (Total)	(3)		106	1563603	14.885
104) o-Xylene	(3)	11.932	106	503256	4.938
111)$4-Bromofluorobenzene	(3)	12.371	95	901912	9.713
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1046118	10.000

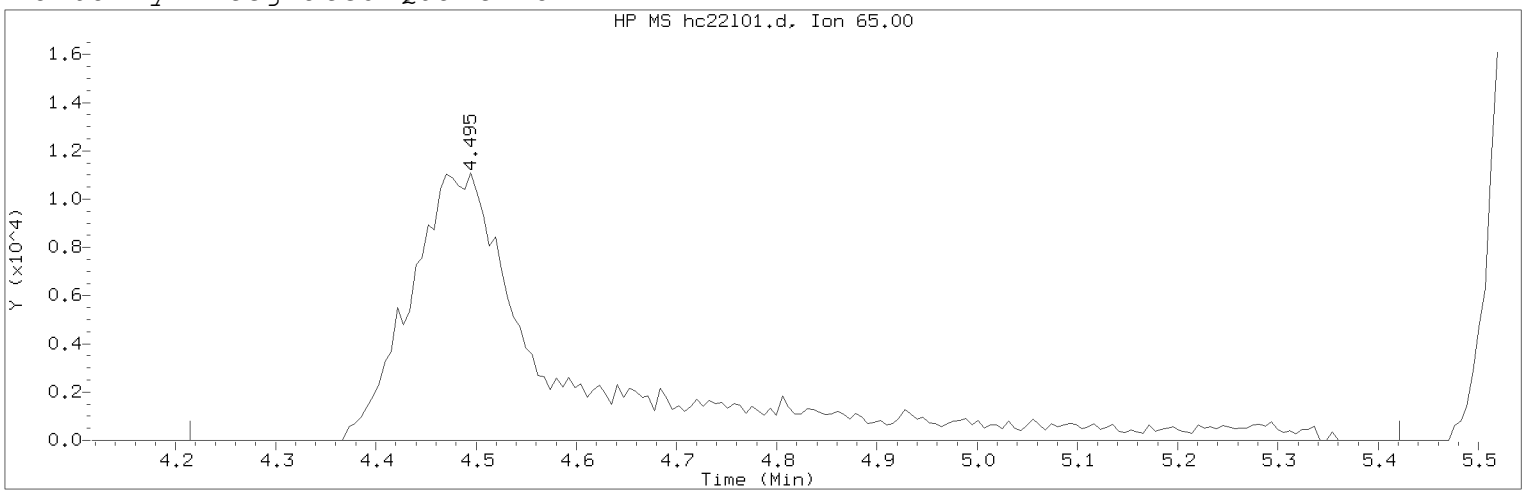
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22l01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCSH44 Lab Sample ID: LCSH44

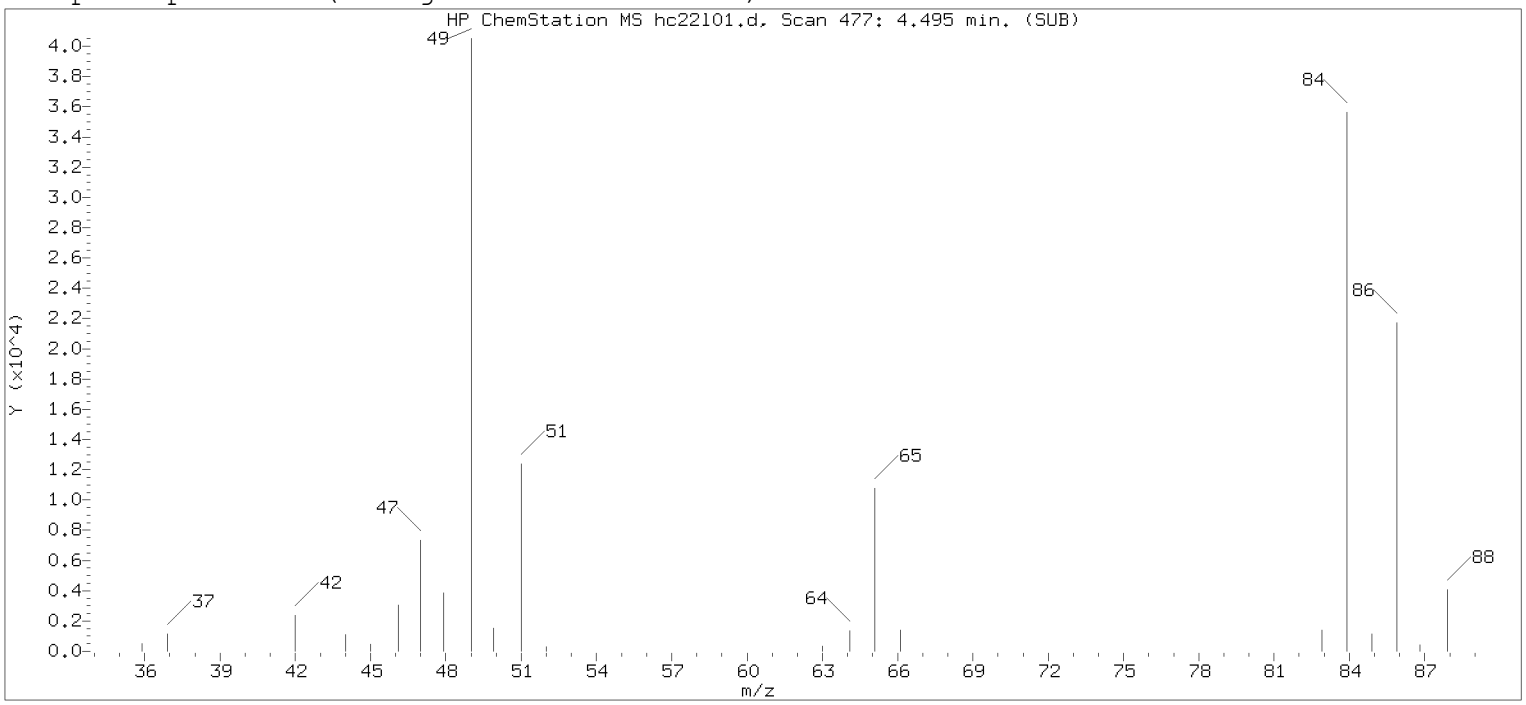
Compound Number : 26
Compound Name : t-Butyl Alcohol-d10
Scan Number : 477
Retention Time (minutes): 4.495
Quant Ion : 65.00
Area (flag) : 118963M
On-Column Amount (ng) : 50.0000
Integration start scan : 430 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

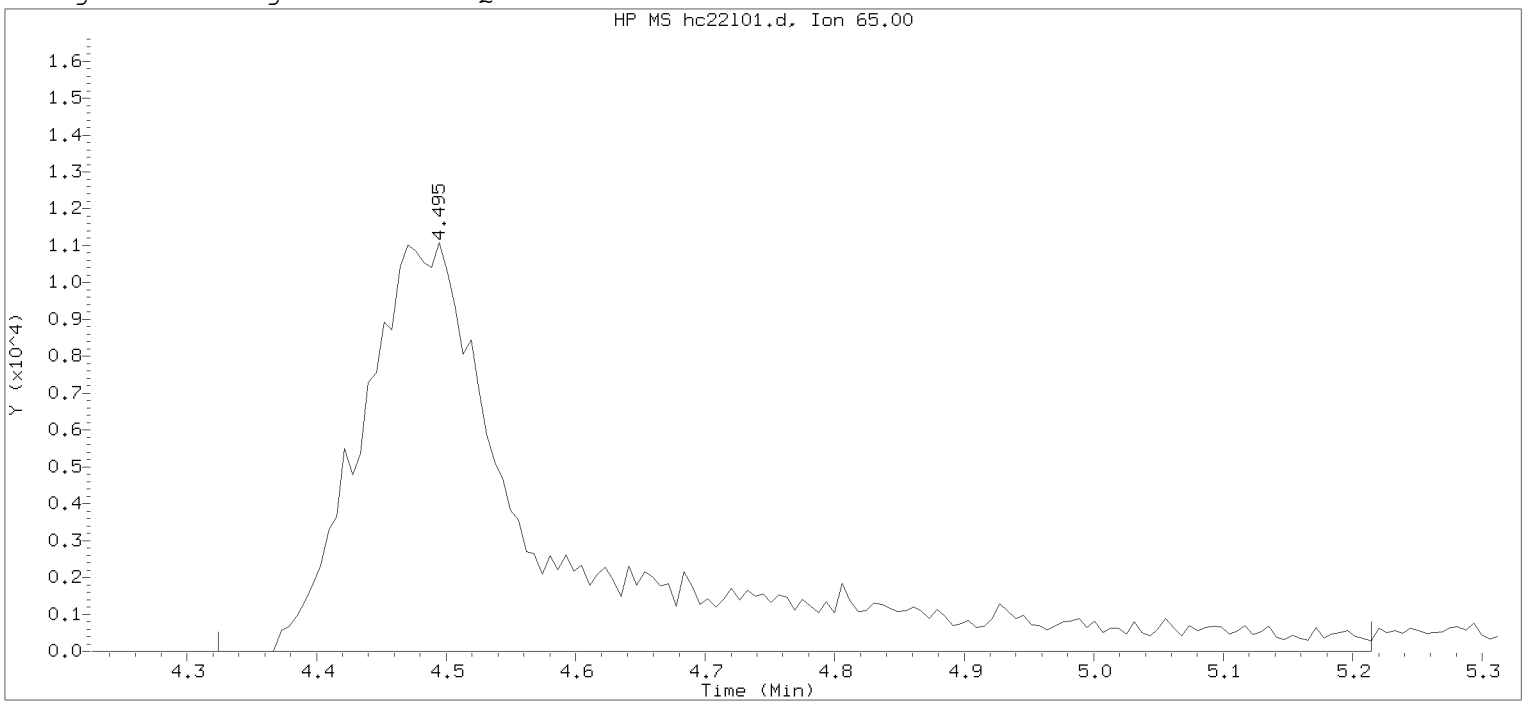
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22l01.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:01 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 09:23 jkh09052

Sample Name: LCSH44 Lab Sample ID: LCSH44

Compound Number	: 26		
Compound Name	: t-Butyl Alcohol-d10		
Scan Number	: 477		
Retention Time (minutes)	: 4.495		
Quant Ion	: 65.00		
Area	: 114975		
On-column Amount (ng)	: 50.0000		
Integration start scan	: 448	Integration stop scan:	594
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50.
Target 3.5 esignature used. AE20 Page 653 of 1072

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP19094.i/18oct22a.b/hc22l02.d Injection date and time: **22-OCT-2018 09:23**
Data file Sample Info. Line: LCDH44;LCDH44;1;3;LCSD;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
26) t-Butyl Alcohol-d10	4.489(-0.012)	476	65	133371 (13)	50.00	
63) Fluorobenzene	7.970(0.000)	1047	96	2625631 (1)	10.00	
97) Chlorobenzene-d5	11.384(0.000)	1607	117	2002470 (1)	10.00	
133) 1,4-Dichlorobenzene-d4	13.249(0.000)	1913	152	1066788 (2)	10.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
50) Dibromofluoromethane	(2)	7.080(0.000)	113	656699	9.924	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	7.531(0.001)	102	118286	10.253	103%		80 - 120
82) Toluene-d8	(3)	9.951(0.000)	98	2590119	10.050	100%		80 - 120
111) 4-Bromofluorobenzene	(3)	12.371(0.000)	95	912657	9.726	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
1) Dichlorodifluoromethane	(2)	2.074(0.000)	85	343070	3.343	3.34			0.05	1
2) Chloromethane	(2)	2.276(0.000)	50	362580	3.608	3.61			0.06	1
8) Chloroethane	(2)	2.849(-0.000)	64	200816	3.518	3.52			0.07	1
10) Trichlorofluoromethane	(2)	3.153(0.000)	101	428347	3.603	3.60			0.05	1
11) Ethyl ether	(2)	3.428(0.000)	59	157124	3.898	3.90		J	0.05	13
15) 1,1-Dichloroethene	(2)	3.763(-0.000)	96	242503	4.710	4.71			0.06	1
16) Freon 113	(2)	3.794(-0.000)	101	265433	4.375	4.37			0.06	1
23) Methylene Chloride	(2)	4.464(0.000)	84	258314	4.448	4.45			0.07	1
33) 1,1-Dichloroethane	(2)	5.555(0.000)	63	500493	4.524	4.52			0.07	1
38) 2-Butanone	(1)	6.348(0.003)	43	393491	30.240	30.24			0.6	10
48) Tetrahydrofuran	(1)	6.726(0.004)	71	69776	20.170	20.17		J	0.8	25
51) 1,1,1-Trichloroethane	(2)	7.092(0.000)	97	407294M	4.630	4.63			0.06	1
54) Carbon Tetrachloride	(2)	7.299(0.000)	117	363668	4.813	4.81			0.07	1
58) Benzene	(2)	7.567(0.000)	78	1102457	4.473	4.47			0.05	1
67) Trichloroethene	(2)	8.439(0.000)	95	296678	4.702	4.70			0.06	1
83) Toluene	(3)	10.024(0.000)	92	701361	4.720	4.72			0.07	1
89) Tetrachloroethene	(3)	10.560(0.000)	166	336730	5.015	5.02			0.06	1
100) Ethylbenzene	(3)	11.493(-0.000)	91	1349891	4.648	4.65			0.06	1
101) m+p-Xylene	(3)	11.603(-0.000)	106	1053716	9.782	9.78			0.1	0.5
104) o-Xylene	(3)	11.932(-0.000)	106	499843	4.853	4.85			0.05	0.5
105) Xylene (Total)	(3)		106	1553559	14.635	14.63			0.1	3

M = Compound was manually integrated.

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Data file: /chem2/HP19094.i/18oct22a.b/hc22102.d Injection date and time: **22-OCT-2018 09:23**
Data file Sample Info. Line: LCDH44;LCDH44;1;3;LCSD;;DRAPERLOQ;;hc22b01; Instrument ID: **HP19094.i** Batch: **H182951AA**
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Blank Data file reference: **/chem2/HP19094.i/18oct22a.b/hc22b01.d**

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: **22469-SM**
Calibration date and time (Last Method Edit): 22-OCT-2018 09:23
Mid Level Daily Calibration Standard Reference: **/chem2/HP19094.i/18oct22a.b/hc22c01.d**

Bottle Code: Matrix: WATER Level: Low

On-Column Amount units: ng In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * (Vt/Vo) VOA Prep Factor: **1.00**

Volume Purged (Vt): 25 ml Sample Volume (Vo): 25 ml

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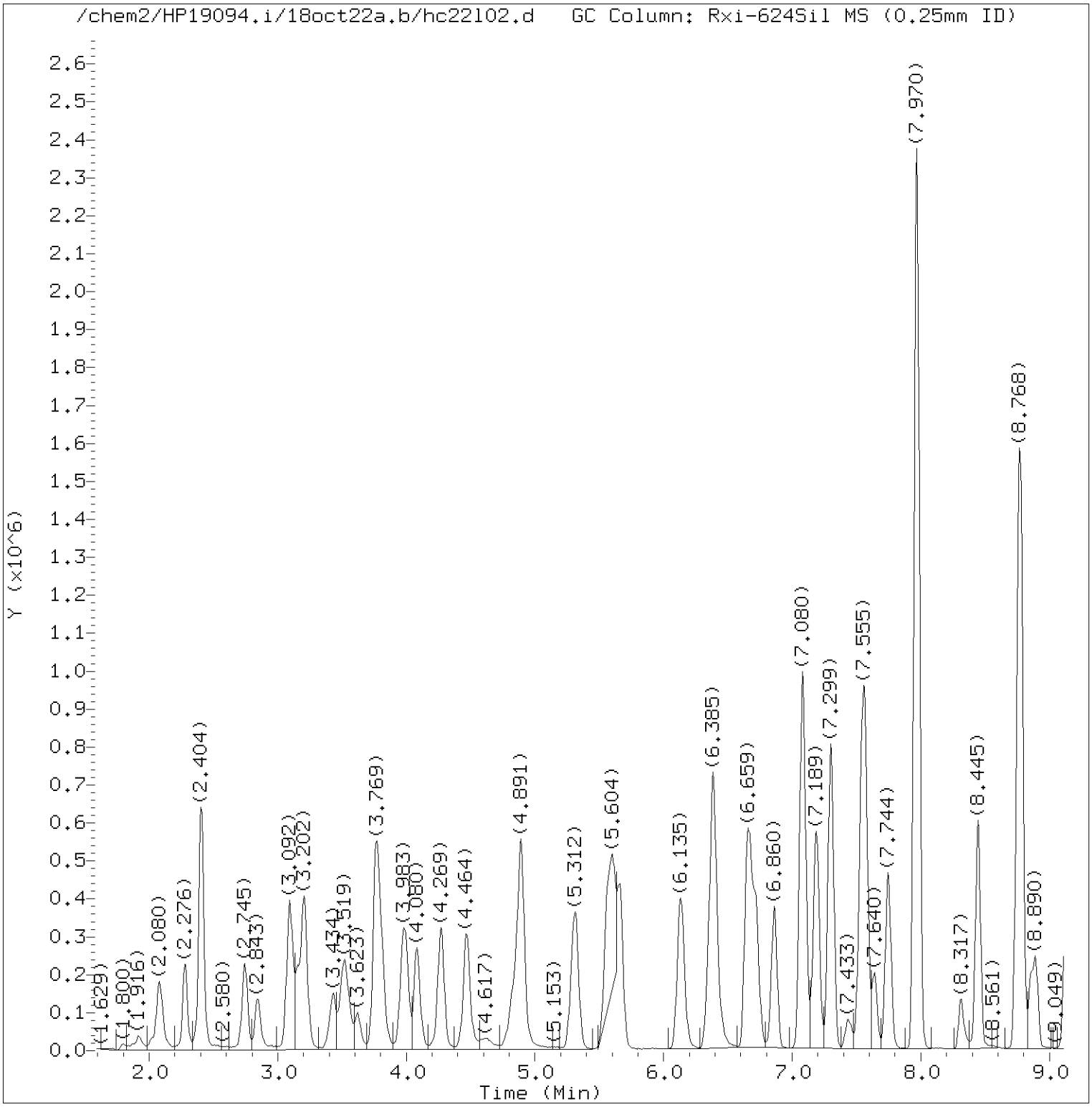
WAS LEFT
BLANK INTENTIONALLY

Total number of targets = 21

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50. Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47. PARALLAX ID: cam01237



Total Ion Chromatogram (TIC)

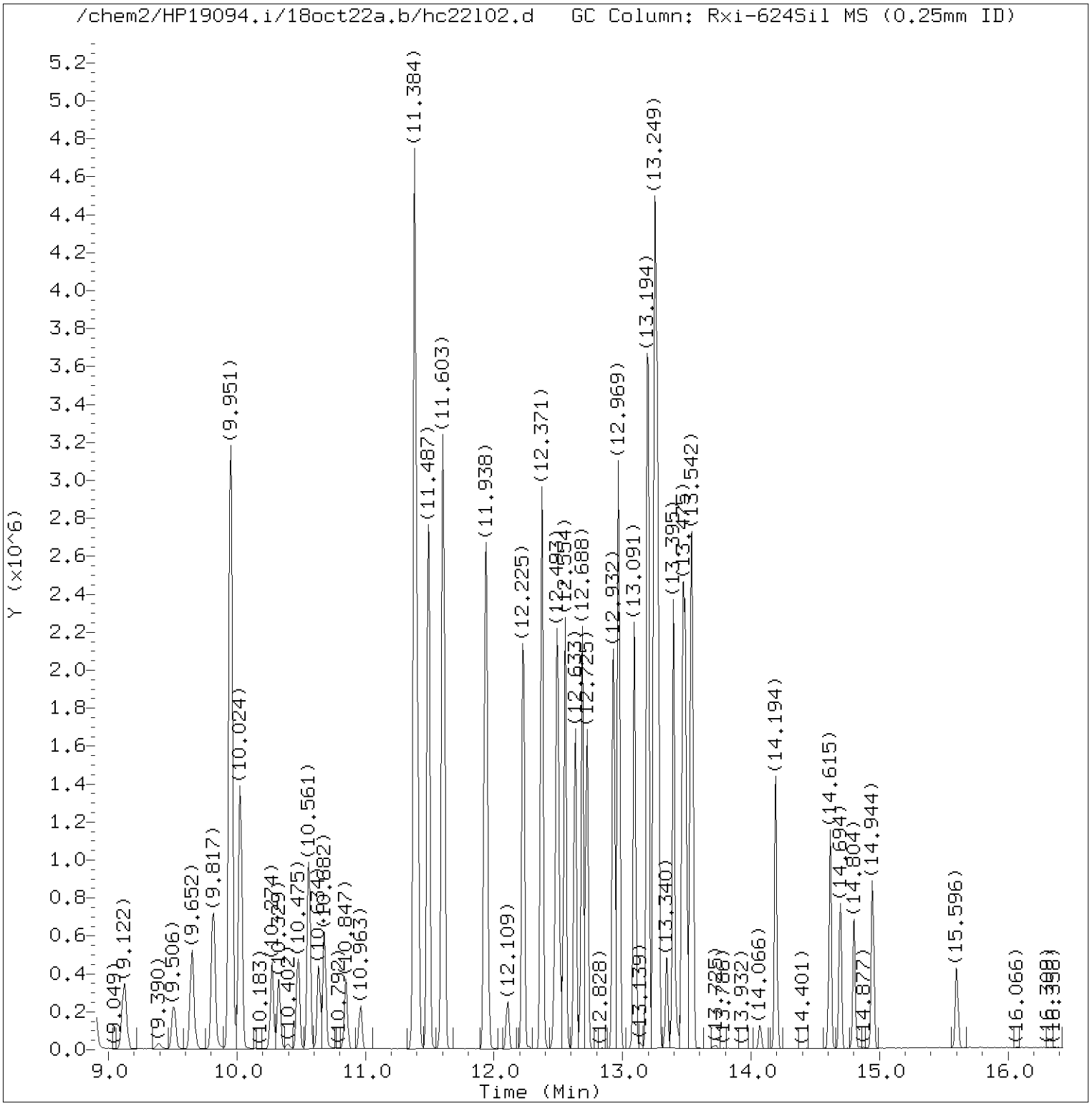
Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH44 Lab Sample ID: LCDH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH44 Lab Sample ID: LCDH44

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Quant Report

Target Revision 3.5

Data File: /chem2/HP19094.i/18oct22a.b/hc22l02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

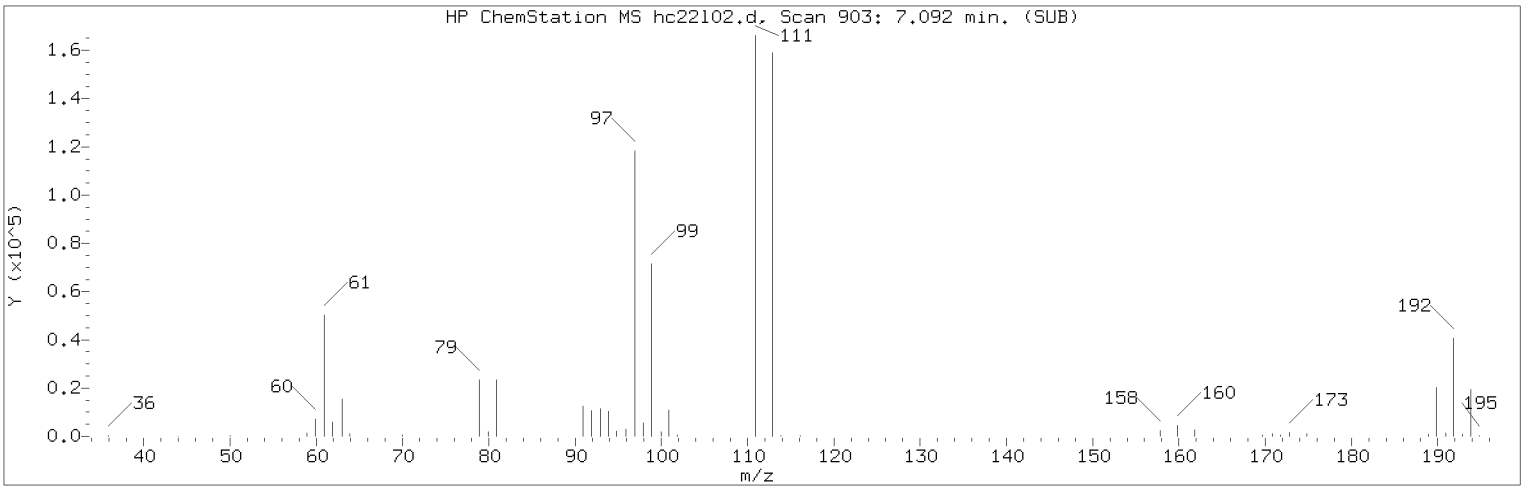
Sample Name: LCDH44 Lab Sample ID: LCDH44

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
1) Dichlorodifluoromethane	(2)	2.074	85	343070	3.343
2) Chloromethane	(2)	2.276	50	362580	3.608
8) Chloroethane	(2)	2.849	64	200816	3.518
10) Trichlorofluoromethane	(2)	3.153	101	428347	3.603
11) Ethyl ether	(2)	3.428	59	157124	3.898
15) 1,1-Dichloroethene	(2)	3.763	96	242503	4.710
16) Freon 113	(2)	3.794	101	265433	4.375
23) Methylene Chloride	(2)	4.464	84	258314	4.448
26)*t-Butyl Alcohol-d10	(1)	4.489	65	133371	50.000
33) 1,1-Dichloroethane	(2)	5.555	63	500493	4.524
38) 2-Butanone	(1)	6.348	43	393491	30.240
48) Tetrahydrofuran	(1)	6.726	71	69776	20.170
50)$Dibromofluoromethane	(2)	7.080	113	656699	9.924
51) 1,1,1-Trichloroethane	(2)	7.092	97	407294M	4.630
54) Carbon Tetrachloride	(2)	7.299	117	363668	4.813
57)$1,2-Dichloroethane-d4	(2)	7.531	102	118286	10.253
58) Benzene	(2)	7.567	78	1102457	4.473
63)*Fluorobenzene	(2)	7.970	96	2625631	10.000
67) Trichloroethene	(2)	8.439	95	296678	4.702
82)$Toluene-d8	(3)	9.951	98	2590119	10.050
83) Toluene	(3)	10.024	92	701361	4.720
89) Tetrachloroethene	(3)	10.561	166	336730	5.015
97)*Chlorobenzene-d5	(3)	11.384	117	2002470	10.000
100) Ethylbenzene	(3)	11.493	91	1349891	4.648
101) m+p-Xylene	(3)	11.603	106	1053716	9.782
105) Xylene (Total)	(3)		106	1553559	14.635
104) o-Xylene	(3)	11.932	106	499843	4.853
111)$4-Bromofluorobenzene	(3)	12.371	95	912657	9.726
133)*1,4-Dichlorobenzene-d4	(4)	13.249	152	1066788	10.000

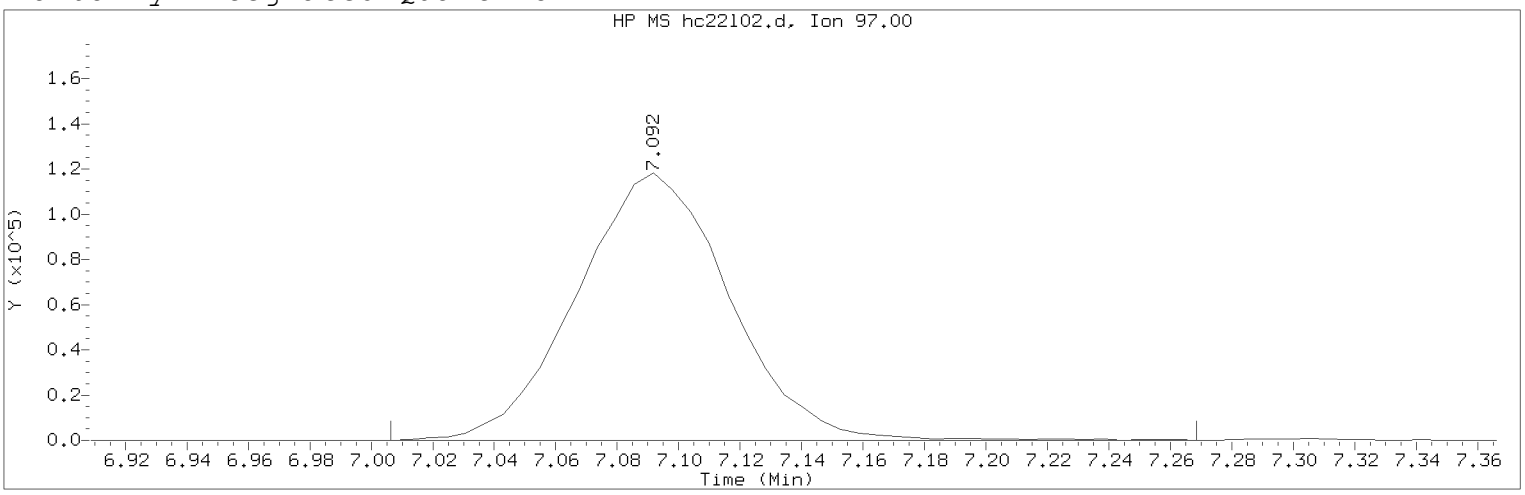
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22l02.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 11:30 jkh09052

Sample Name: LCDH44 Lab Sample ID: LCDH44

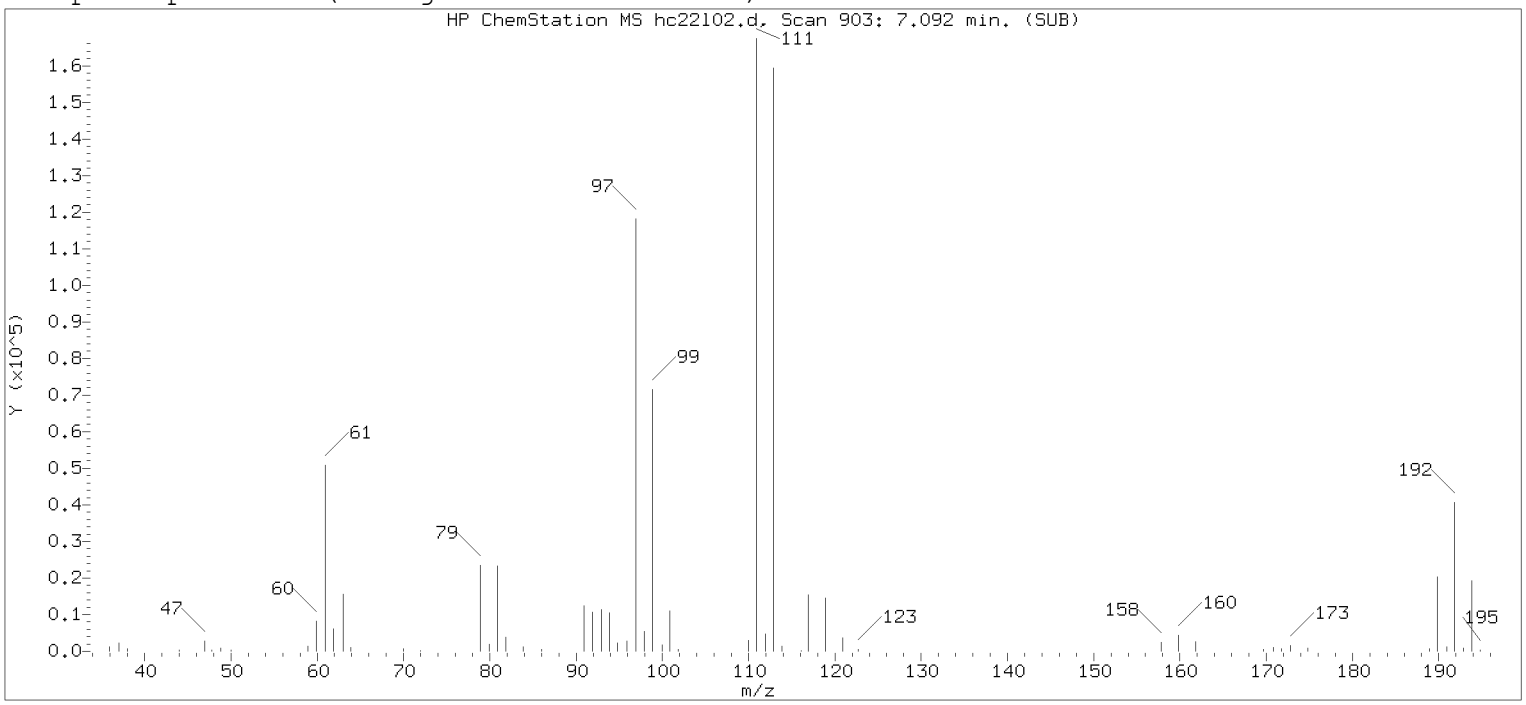
Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area (flag) : 407294M
On-Column Amount (ng) : 4.6297
Integration start scan : 888 Integration stop scan: 931
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

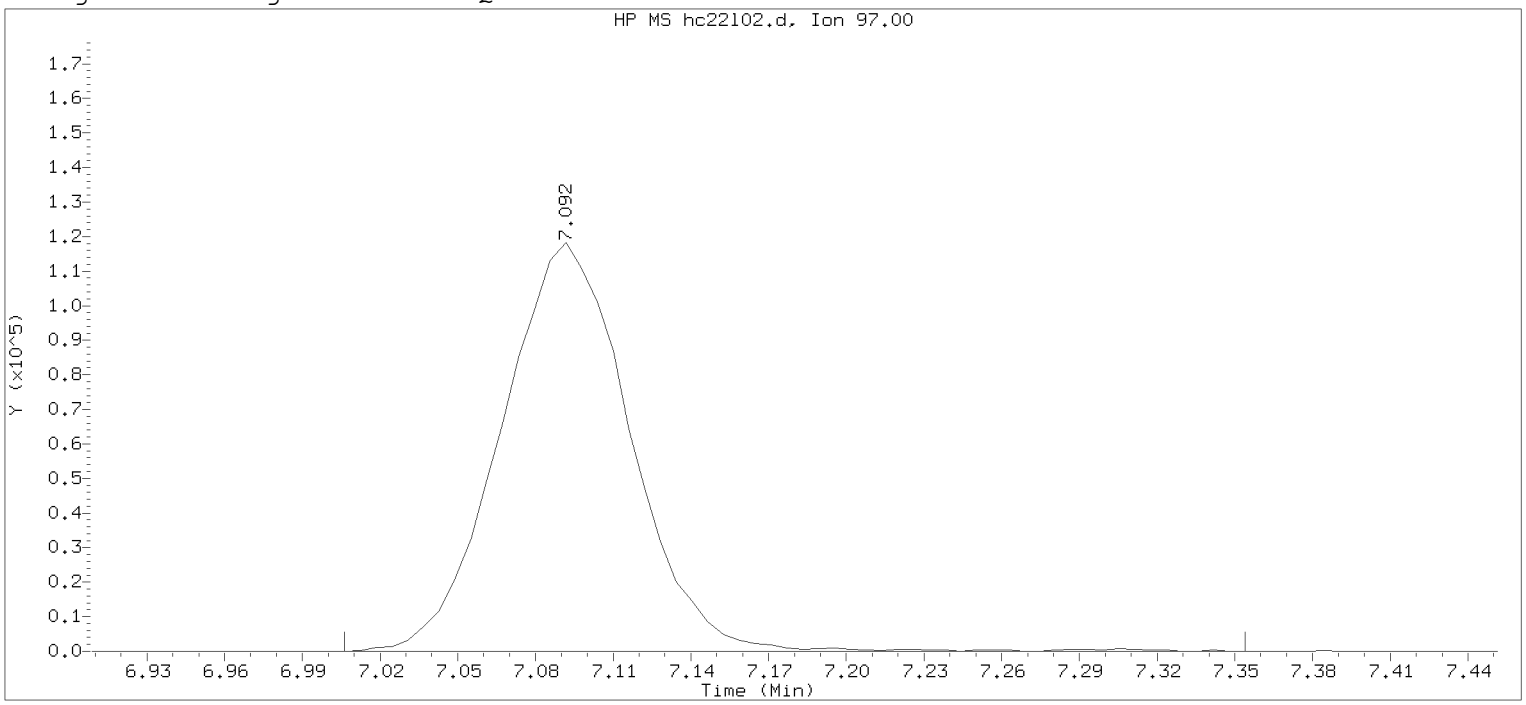
Analyst responsible for change: Digitally signed by Jennifer K. Howe
on 10/22/2018 at 11:50.
Target 3.5 esignature user ID: jkh09052

Secondary review performed and digitally signed by Chad A. Moline on 10/26/2018 at 10:47.
PARALLAX ID: cam01237

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP19094.i/18oct22a.b/hc22102.d Instrument ID: HP19094.i
Injection date and time: 22-OCT-2018 09:23 Analyst ID: JKH09052

Method used: /chem2/HP19094.i/18oct22a.b/m8260c25.m Sublist used: 22469-SM
Calibration date and time: 22-OCT-2018 09:23
Date, time and analyst ID of latest file update: 22-Oct-2018 09:41 Automation

Sample Name: LCDH44 Lab Sample ID: LCDH44

Compound Number : 51
Compound Name : 1,1,1-Trichloroethane
Scan Number : 903
Retention Time (minutes): 7.092
Quant Ion : 97.00
Area : 408852
On-column Amount (ng) : 4.6474
Integration start scan : 888 Integration stop scan: 945
Y at integration start : 0 Y at integration end: 0

Digitally signed by Jennifer K. Howe on 10/22/2018 at 11:50.
Target 3.5 esignature used. AE20 Page 660 of 1072

Semivolatiles by GC/MS Data

Case Narrative/Conformance Summary

Semivolatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9850249	16C1	X		1	
9850250	16MW8	X		1	
9850251	16MW9	X		1	
9850252	16WC1A	X		1	Unspiked
9850253	16WC1A MS	X		1	Matrix Spike
9850254	16WC1A MSD	X		1	Matrix Spike Duplicate
9850255	16WDUP	X		1	Field Duplicate Sample
9850256	16WC1B	X		1	
9850257	16-2	X		1	
9850258	16-3	X		1	
9850259	16-5	X		1	
9850260	16WC2B	X		1	
9850261	16SPRING	X		1	

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

LCS/LCSD

Batch#: 18292WAF026
The relative percent difference(s) for the following analyte(s) in the LCS/LCSD is outside the acceptance window: 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Diethylphthalate

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Case Narrative/Conformance Summary

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

The recovery(ies) for the following analyte(s) in the LCS were below the acceptance window: 2,4-Dinitrotoluene, 2,6-Dinitrotoluene, Diethylphthalate

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

Batch#: 18292WAF026
The recovery(ies) for the following surrogate(s) were below the acceptance window: 2-Fluorobiphenyl (292WFLCS), Nitrobenzene-d5 (292WFLCS), Terphenyl-d14 (292WFLCS)

Batch#: 18288WAT026 (Sample number(s): 9850249-9850261, UNSPK: 9850252)
The recovery(ies) for the following surrogate(s) exceeded the acceptance window: Terphenyl-d14 (9850251)

The recovery(ies) for the following surrogate(s) were below the acceptance window: 2-Fluorobiphenyl (9850252 UNSPK), Nitrobenzene-d5 (9850252 UNSPK), Terphenyl-d14 (9850252 UNSPK)

(Sample number(s): 9850252: Analysis: 14241)
The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:
The sample was re-extracted outside the method required holding time and the QC is compliant. All results are reported from the first trial.

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

Quality Control and Calibration Summary Forms

Semivolatiles by GC/MS

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Quality Control Reference List
GC/MS Semivolatiles

CLIENT: Draper Aden Associates, Inc.
SDG: RAF20

Fraction: Semivolatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
3 SVOCs 8270D	18288WAT026	SBLKWT288	10/17/2018 23:07
		288WTLCS	10/17/2018 23:35
		9850249	10/18/2018 15:56
		9850250	10/18/2018 16:25
		9850251	10/18/2018 16:53
		9850252 UNSPK	10/18/2018 13:04
		9850253 MS	10/18/2018 13:33
		9850254 MSD	10/18/2018 14:01
		9850255	10/18/2018 17:22
		9850256	10/18/2018 17:51
		9850257	10/18/2018 18:19
		9850258	10/18/2018 23:37
		9850259	10/19/2018 00:06
		9850260	10/19/2018 00:34
		9850261	10/19/2018 01:03
3 SVOCs 8270D	18292WAF026	SBLKWF292	10/20/2018 14:55
		292WFLCSD	10/20/2018 15:50
		292WFLCS	10/20/2018 16:18
		9850252RE	10/20/2018 17:13

Quality Control Summary
Method Blank
GC/MS Semivolatiles
SDG: RAF20
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18288WAT026 / SBLKWT288 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	10/17/18	N.D.	ug/l	0.5	10
2,4-Dinitrotoluene	10/17/18	N.D.	ug/l	1	10
Diethylphthalate	10/17/18	N.D.	ug/l	2	5

18292WAF026 / SBLKWF292 Analyte	Analysis Date	Blank Results	Units	MDL	LOQ
2,6-Dinitrotoluene	10/20/18	N.D.	ug/l	0.5	2
2,4-Dinitrotoluene	10/20/18	N.D.	ug/l	1	5
Diethylphthalate	10/20/18	N.D.	ug/l	2	5

Quality Control Summary
Surrogates
GC/MS Semivolatiles
SDG: RAF20
Matrix: LIQUID

Fraction: Semivolatiles by GC/MS

18288WAT026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWT288	60	39 - 105	60	30 - 111	103	27 - 126
288WTLCS	69	39 - 105	65	30 - 111	94	27 - 126
9850249	62	39 - 105	58	30 - 111	95	27 - 126
9850250	62	39 - 105	60	30 - 111	56	27 - 126
9850251	96	39 - 105	96	30 - 111	128 *	27 - 126
9850252 UNSPK	17 *	39 - 105	15 *	30 - 111	22 *	27 - 126
9850253 MS	79	39 - 105	83	30 - 111	91	27 - 126
9850254 MSD	80	39 - 105	80	30 - 111	92	27 - 126
9850255	70	39 - 105	66	30 - 111	77	27 - 126
9850256	65	39 - 105	63	30 - 111	67	27 - 126
9850257	66	39 - 105	65	30 - 111	97	27 - 126
9850258	65	39 - 105	65	30 - 111	89	27 - 126
9850259	65	39 - 105	66	30 - 111	94	27 - 126
9850260	58	39 - 105	57	30 - 111	90	27 - 126
9850261	66	39 - 105	69	30 - 111	91	27 - 126

18292WAF026	2-Fluorobiphenyl		Nitrobenzene-d5		Terphenyl-d14	
	Spike Added	100 ug/l	Spike Added	100 ug/l	Spike Added	100 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
SBLKWF292	71	39 - 105	67	30 - 111	90	27 - 126
292WFLCSD	78	39 - 105	74	30 - 111	89	27 - 126
292WFLCS	2 *	39 - 105	2 *	30 - 111	2 *	27 - 126
9850252RE	68	39 - 105	67	30 - 111	76	27 - 126

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

UNSPK: 9850252 MS: 9850253 MSD: 9850254 **Analyte**	Batch: **18288WAT026** (Sample number(s): 9850249-9850261)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	N.D.	43.03	42.16	86	84	69-122	2	30
2,4-Dinitrotoluene	50	N.D.	42.95	43.83	86	88	69-117	2	30
Diethylphthalate	50	N.D.	39.77	41.1	80	82	61-111	3	30

Comments:
(2) The unspiked sample result is greater than four times the spike added.
* = Out of Specification

Results are being reported on an as received basis.

Quality Control Summary
Laboratory Control Standard (LCS)
Laboratory Control Standard Duplicate(LCSD)

SDG: RAF20
Matrix: LIQUID

GC/MS Semivolatiles

Fraction: Semivolatiles by GC/MS

LCS: 288WTLCS	Batch: **18288WAT026** (Sample number(s): 9850249-9850261)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	40.26	NA	81	NA	69-122	NA	NA
2,4-Dinitrotoluene	50	41.38	NA	83	NA	69-117	NA	NA
Diethylphthalate	50	38.34	NA	77	NA	61-111	NA	NA

LCS: 292WFLCS LCSD: 292WFLCSD	Batch: **18292WAF026** (Sample number(s): 9850252)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
2,6-Dinitrotoluene	50	N.D	45.22	0 *	90	69-122	200 *	30
2,4-Dinitrotoluene	50	N.D	43.44	0 *	87	69-117	200 *	30
Diethylphthalate	50	N.D	42	0 *	84	61-111	200 *	30

Fraction: Semivolatiles by GC/MS

14241: 3 SVOCs 8270D Analyte Name	Default MDL	Default LOQ	Units
2,6-Dinitrotoluene	0.5	10	ug/l
2,4-Dinitrotoluene	1	10	ug/l
Diethylphthalate	2	5	ug/l

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Lab File ID: di1300a.d DFTPP Injection Date: 09/21/18

Instrument ID: HP19760 DFTPP Injection Time: 17:04

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	37.2
68	Less than 2.0% of mass 69	0.78 (1.81)1
69	Mass 69 relative abundance	43.1
70	Less than 2.0% of mass 69	0.28 (0.65)1
127	10.0 - 80.00% of mass 198	45.0
197	Less than 2.0% of mass 198	1.49
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.78
275	10.0 - 60.0% of mass 198	22.1
365	Greater than 1.00% of mass 198	2.46
441	Present, and less than mass 443	8.57
442	Greater than 50.00% of mass 198	58.7
443	15.00 - 24.00% of mass 442	11.8 (20.1)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	rvSTD2648 - SSTD7.5	di1301.d	09/21/18	17:33
02	rvSTD2648 - SSTD.125	di1302.d	09/21/18	18:19
03	rvSTD2648 - SSTD30	di1303.d	09/21/18	18:47
04	rvSTD2648 - SSTD20	di1304.d	09/21/18	19:16
05	rvSTD2648 - SSTD12.5	di1305.d	09/21/18	19:45
06	rvSTD2648 - SSTD3.75	di1306.d	09/21/18	20:13
07	rvSTD2648 - SSTD1.25	di1307.d	09/21/18	20:42
08	rvSTD2648 - SSTD.25	di1308.d	09/21/18	21:11
09	rvMDL2648 - SSTD0.125	di1309.d	09/21/18	21:39
10	PAHMDL2648 - SSTD0.025	di1310.d	09/21/18	22:08
11	rvICV2628 - SSTD12.5	di1311.d	09/21/18	22:37
12	rvBASICV2578 - SSTD12.5	di1312.d	09/21/18	23:05
13	rv4ABPICV2258 - SSTD12.5	di1314.d	09/22/18	00:03
14	rvICV2608 - SSTD12.5	di1315.d	09/22/18	00:31

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dj1800.d DFTPP Injection Date: 10/20/18

Instrument ID: HP19760 DFTPP Injection Time: 09:21

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.4
68	Less than 2.0% of mass 69	0.85 (1.53)1
69	Mass 69 relative abundance	55.1
70	Less than 2.0% of mass 69	0.31 (0.56)1
127	10.0 - 80.00% of mass 198	54.7
197	Less than 2.0% of mass 198	1.28
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.47
275	10.0 - 60.0% of mass 198	21.9
365	Greater than 1.00% of mass 198	2.43
441	Present, and less than mass 443	9.44
442	Greater than 50.00% of mass 198	64.3
443	15.00 - 24.00% of mass 442	12.1 (18.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD7.5	dj1801.d	10/20/18	09:37
02	RVAMIN2758 - SSTD125	dj1802.d	10/20/18	10:21
03	RVABC2368 - SSTD125	dj1803.d	10/20/18	10:48
04	RVAAAP2538 - SSTD12.5	dj1804.d	10/20/18	11:15
05	RVPDA2278 - SSTD12.5	dj1805.d	10/20/18	12:38
06	RVPDA2278 - SSTD30	dj1806.d	10/20/18	13:06
07	RVPDA2278 - SSTD20	dj1807.d	10/20/18	13:33
08	RVPDA2278 - SSTD7.5	dj1808.d	10/20/18	14:00
09	RVPDA2278 - SSTD3.75	dj1809.d	10/20/18	14:28
10	SBLKWF292	dj1810.d	10/20/18	14:55
11	292WFLCS1	dj1811.d	10/20/18	15:23
12	292WFLCSD	dj1812.d	10/20/18	15:50
13	292WFLCS	dj1813.d	10/20/18	16:18
14	292WFLCSD1	dj1814.d	10/20/18	16:45
15	9850252RE	dj1815.d	10/20/18	17:13
16	9858584	dj1817.d	10/20/18	18:08
17	9853777	dj1819.d	10/20/18	19:03
18	9850984	dj1820.d	10/20/18	19:30

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: dj1800.d DFTPP Injection Date: 10/20/18

Instrument ID: HP19760 DFTPP Injection Time: 09:21

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	48.4
68	Less than 2.0% of mass 69	0.85 (1.53)1
69	Mass 69 relative abundance	55.1
70	Less than 2.0% of mass 69	0.31 (0.56)1
127	10.0 - 80.00% of mass 198	54.7
197	Less than 2.0% of mass 198	1.28
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	6.47
275	10.0 - 60.0% of mass 198	21.9
365	Greater than 1.00% of mass 198	2.43
441	Present, and less than mass 443	9.44
442	Greater than 50.00% of mass 198	64.3
443	15.00 - 24.00% of mass 442	12.1 (18.8)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9850985	dj1821.d	10/20/18	19:57
20	9850986	dj1822.d	10/20/18	20:25
21	9850987	dj1823.d	10/20/18	20:52
22	9850988	dj1824.d	10/20/18	21:19

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: li1410.d DFTPP Injection Date: 09/24/18

Instrument ID: HP20296 DFTPP Injection Time: 18:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.7
68	Less than 2.0% of mass 69	0.86 (1.46)1
69	Mass 69 relative abundance	59.1
70	Less than 2.0% of mass 69	0.29 (0.48)1
127	10.0 - 80.00% of mass 198	50.8
197	Less than 2.0% of mass 198	1.36
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.23
275	10.0 - 60.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	2.38
441	Present, and less than mass 443	11.5
442	Greater than 50.00% of mass 198	70.4
443	15.00 - 24.00% of mass 442	13.7 (19.4)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD7.5	li1411.d	09/24/18	19:02
02	RVSTD2648 - SSTD.125	li1412.d	09/24/18	19:47
03	RVSTD2648 - SSTD30	li1413.d	09/24/18	20:15
04	RVSTD2648 - SSTD20	li1414.d	09/24/18	20:44
05	RVSTD2648 - SSTD12.5	li1415.d	09/24/18	21:13
06	RVSTD2648 - SSTD3.75	li1416.d	09/24/18	21:42
07	RVSTD2648 - SSTD1.25	li1417.d	09/24/18	22:11
08	RVSTD2648 - SSTD.25	li1418.d	09/24/18	22:39
09	RVSTD2648 - SSTD0.125	li1419.d	09/24/18	23:08
10	PAHMDL2648 - SSTD0.025	li1420.d	09/24/18	23:37
11	RVICV2628 - SSTD12.5	li1421.d	09/25/18	00:05
12	BASICV2578 - SSTD12.5	li1423.d	09/25/18	01:03

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1100b.d DFTPP Injection Date: 10/17/18

Instrument ID: HP20296 DFTPP Injection Time: 20:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.6
68	Less than 2.0% of mass 69	1.07 (1.75)1
69	Mass 69 relative abundance	61.2
70	Less than 2.0% of mass 69	0.39 (0.64)1
127	10.0 - 80.00% of mass 198	50.9
197	Less than 2.0% of mass 198	1.39
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.0
275	10.0 - 60.0% of mass 198	21.2
365	Greater than 1.00% of mass 198	2.84
441	Present, and less than mass 443	11.8
442	Greater than 50.00% of mass 198	75.1
443	15.00 - 24.00% of mass 442	15.0 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD125	lj1101.d	10/17/18	20:27
02	RVABC2398 - SSTD125	lj1102.d	10/17/18	21:24
03	RVPDA2278 - SSTD125	lj1103.d	10/17/18	21:52
04	SBLKWT288	lj1104.d	10/17/18	23:07
05	SBLKWZ288	lj1104z.d	10/17/18	23:07
06	288WTLCS	lj1105.d	10/17/18	23:35
07	288WZLCS	lj1105z.d	10/17/18	23:35
08	288WZLCS1	lj1106z.d	10/18/18	00:04
09	288WZLCSD1	lj1107z.d	10/18/18	00:33
10	9843834	lj1108.d	10/18/18	01:02
11	9843835	lj1109.d	10/18/18	01:30
12	9843836	lj1110.d	10/18/18	01:59
13	9843837	lj1111.d	10/18/18	02:28
14	9843845	lj1112.d	10/18/18	02:56
15	9843846	lj1113.d	10/18/18	03:25
16	9843847	lj1114.d	10/18/18	03:54
17	9844527	lj1115.d	10/18/18	04:23
18	9851156	lj1116.d	10/18/18	04:51

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1100b.d DFTPP Injection Date: 10/17/18

Instrument ID: HP20296 DFTPP Injection Time: 20:13

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.6
68	Less than 2.0% of mass 69	1.07 (1.75)1
69	Mass 69 relative abundance	61.2
70	Less than 2.0% of mass 69	0.39 (0.64)1
127	10.0 - 80.00% of mass 198	50.9
197	Less than 2.0% of mass 198	1.39
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.0
275	10.0 - 60.0% of mass 198	21.2
365	Greater than 1.00% of mass 198	2.84
441	Present, and less than mass 443	11.8
442	Greater than 50.00% of mass 198	75.1
443	15.00 - 24.00% of mass 442	15.0 (20.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9851157	lj1117.d	10/18/18	05:20

FORM V SV

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SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1140.d DFTPP Injection Date: 10/18/18

Instrument ID: HP20296 DFTPP Injection Time: 06:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	38.0
68	Less than 2.0% of mass 69	0.95 (1.67)1
69	Mass 69 relative abundance	56.6
70	Less than 2.0% of mass 69	0.32 (0.57)1
127	10.0 - 80.00% of mass 198	48.4
197	Less than 2.0% of mass 198	0.45
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.18
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.73
441	Present, and less than mass 443	10.9
442	Greater than 50.00% of mass 198	72.1
443	15.00 - 24.00% of mass 442	13.0 (18.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD125	lj1141.d	10/18/18	07:04
02	rvABC2398 - SSTD125	lj1142.d	10/18/18	08:45
03	rvPDA2278 - SSTD125	lj1143.d	10/18/18	09:14
04	SBLKWD290	lj1144.d	10/18/18	10:09
05	290WDLCS	lj1145.d	10/18/18	10:38
06	9839062RE	lj1146.d	10/18/18	11:07
07	9839063RE	lj1147.d	10/18/18	11:37
08	9839064MSDSD	lj1148.d	10/18/18	12:06
09	9843845DL	lj1149.d	10/18/18	12:35
10	9850252	lj1150.d	10/18/18	13:04
11	288WZUS	lj1150z.d	10/18/18	13:04
12	9850253MS	lj1151.d	10/18/18	13:33
13	288WZMSMS	lj1151z.d	10/18/18	13:33
14	9850254MSD	lj1152.d	10/18/18	14:01
15	288WZMSDMSD	lj1152z.d	10/18/18	14:01
16	9848058	lj1153.d	10/18/18	14:30
17	9848557	lj1154.d	10/18/18	14:59
18	9850249	lj1155.d	10/18/18	15:56

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1140.d DFTPP Injection Date: 10/18/18

Instrument ID: HP20296 DFTPP Injection Time: 06:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	38.0
68	Less than 2.0% of mass 69	0.95 (1.67)1
69	Mass 69 relative abundance	56.6
70	Less than 2.0% of mass 69	0.32 (0.57)1
127	10.0 - 80.00% of mass 198	48.4
197	Less than 2.0% of mass 198	0.45
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.18
275	10.0 - 60.0% of mass 198	21.1
365	Greater than 1.00% of mass 198	2.73
441	Present, and less than mass 443	10.9
442	Greater than 50.00% of mass 198	72.1
443	15.00 - 24.00% of mass 442	13.0 (18.0)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9850250	lj1156.d	10/18/18	16:25
20	9850251	lj1157.d	10/18/18	16:53
21	9850255	lj1158.d	10/18/18	17:22
22	9850256	lj1159.d	10/18/18	17:51
23	9850257	lj1160.d	10/18/18	18:19

FORM V SV

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1170a.d DFTPP Injection Date: 10/18/18

Instrument ID: HP20296 DFTPP Injection Time: 21:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	42.0
68	Less than 2.0% of mass 69	1.13 (1.92)1
69	Mass 69 relative abundance	58.9
70	Less than 2.0% of mass 69	0.37 (0.62)1
127	10.0 - 80.00% of mass 198	48.0
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	5.9
275	10.0 - 60.0% of mass 198	21.6
365	Greater than 1.00% of mass 198	2.86
441	Present, and less than mass 443	11.2
442	Greater than 50.00% of mass 198	72.9
443	15.00 - 24.00% of mass 442	12.9 (17.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD125	lj1171.d	10/18/18	21:26
02	SBLKWF290	lj1172.d	10/18/18	22:40
03	290WFLCS	lj1173.d	10/18/18	23:08
04	9850258	lj1174.d	10/18/18	23:37
05	9850259	lj1175.d	10/19/18	00:06
06	9850260	lj1176.d	10/19/18	00:34
07	9850261	lj1177.d	10/19/18	01:03
08	9848557DL	lj1178.d	10/19/18	01:32
09	9851714	lj1179.d	10/19/18	02:00
10	9852472	lj1180.d	10/19/18	02:29
11	9852726	lj1181.d	10/19/18	02:58
12	9852727	lj1182.d	10/19/18	03:26
13	9852728	lj1183.d	10/19/18	03:55
14	9852729	lj1184.d	10/19/18	04:24
15	9852790	lj1185.d	10/19/18	04:52
16	9852793	lj1186.d	10/19/18	05:21
17	9854805	lj1187.d	10/19/18	05:50
18	9854806MS	lj1188.d	10/19/18	06:19

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: lj1170a.d DFTPP Injection Date: 10/18/18

Instrument ID: HP20296 DFTPP Injection Time: 21:11

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	42.0
68	Less than 2.0% of mass 69	1.13 (1.92)1
69	Mass 69 relative abundance	58.9
70	Less than 2.0% of mass 69	0.37 (0.62)1
127	10.0 - 80.00% of mass 198	48.0
197	Less than 2.0% of mass 198	0.0
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	5.9
275	10.0 - 60.0% of mass 198	21.6
365	Greater than 1.00% of mass 198	2.86
441	Present, and less than mass 443	11.2
442	Greater than 50.00% of mass 198	72.9
443	15.00 - 24.00% of mass 442	12.9 (17.7)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
19	9854807MSD	lj1189.d	10/19/18	06:47
20	9854809	lj1190.d	10/19/18	07:16
21	9854813	lj1191.d	10/19/18	07:45
22	9854814	lj1192.d	10/19/18	08:13

6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 09/21/18 09/21/18

Calibration Times: 17:33 21:11

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = di1302.d RRF0.25 = di1308.d RRF1.25 = di1307.d RRF3.75 = di1306.d
RRF7.5 = di1301.d RRF12.5 = di1305.d RRF20 = di1304.d RRF30 = di1303.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.818	0.770	0.835	0.764	0.782	0.801	0.795	4	AVG
N-Nitrosodimethylamine			0.993	1.044	1.175	1.119	1.151	1.149	1.105	6	AVG
Pyridine			1.838	1.784	2.136	1.855	1.941	1.995	1.925	7	AVG
2-Picoline			1.854	1.910	2.039	1.947	1.990	1.977	1.953	3	AVG
N-Nitrosomethylethylamine			0.845	0.847	0.871	0.854	0.873	0.857	0.858	1	AVG
Methyl methanesulfonate			0.879	0.896	0.970	0.944	0.945	0.933	0.928	4	AVG
N-Nitrosodiethylamine		0.648	0.737	0.792	0.822	0.836	0.850	0.826	0.787	9	AVG
Ethyl methanesulfonate		0.722	0.739	0.760	0.800	0.794	0.817	0.785	0.774	4	AVG
Benzaldehyde			1.291	1.386	1.433	1.418	1.415	1.370	1.386	4	AVG
Phenol		2.136	2.253	2.327	2.455	2.392	2.421	2.375	2.337	5	AVG
Aniline		2.693	2.606	2.743	2.844	2.831	2.868	2.793	2.768	3	AVG
a-methylstyrene			0.151	0.147	0.160	0.159	0.161	0.155	0.155	4	AVG
bis(2-Chloroethyl)ether		1.676	1.719	1.678	1.815	1.761	1.771	1.729	1.735	3	AVG
2-Chlorophenol		1.323	1.359	1.432	1.508	1.523	1.538	1.494	1.454	6	AVG
1,3-Dichlorobenzene		1.598	1.590	1.634	1.720	1.673	1.682	1.657	1.651	3	AVG
1,4-Dichlorobenzene		1.747	1.617	1.654	1.733	1.675	1.692	1.668	1.684	3	AVG
Benzyl alcohol			0.883	0.903	1.015	1.065	1.060	1.025	0.992	8	AVG
1,2-Dichlorobenzene		1.616	1.504	1.548	1.632	1.594	1.611	1.569	1.582	3	AVG
Indene			1.544	1.525	1.697	1.711	1.701	1.666	1.641	5	AVG
2-Methylphenol		1.180	1.322	1.440	1.539	1.538	1.568	1.517	1.444	10	AVG
2,2'-oxybis(1-Chloropropane)		1.886	1.951	1.939	2.163	2.052	2.052	2.015	2.008	5	AVG
bis(2-Chloroisopropyl)ether		1.886	1.951	1.939	2.163	2.052	2.052	2.015	2.008	5	AVG
N-Nitrosopyrrolidine		0.671	0.738	0.809	0.846	0.905	0.930	0.884	0.826	11	AVG
Acetophenone		1.755	1.917	2.082	2.106	2.189	2.173	2.112	2.048	8	AVG
4-Methylphenol		1.558	1.558	1.630	1.729	1.758	1.759	1.678	1.667	5	AVG
Total Cresols		1.369	1.440	1.535	1.634	1.648	1.664	1.598	1.555	7	AVG
N-Nitroso-di-n-propylamine		1.127	1.112	1.159	1.285	1.281	1.292	1.249	1.215	7	AVG
N-Nitrosomorpholine			0.857	0.894	0.973	0.952	0.951	0.918	0.924	5	AVG
o-Toluidine		2.234	2.450	2.535	2.658	2.669	2.687	2.573	2.544	6	AVG
Hexachloroethane			0.655	0.671	0.697	0.694	0.699	0.681	0.683	3	AVG
Nitrobenzene		0.451	0.452	0.483	0.513	0.499	0.499	0.495	0.484	5	AVG
N-Nitrosopiperidine		0.169	0.184	0.196	0.200	0.213	0.215	0.209	0.198	8	AVG
Isophorone		0.674	0.714	0.792	0.838	0.880	0.892	0.875	0.809	11	AVG
2-Nitrophenol			0.144	0.182	0.185	0.201	0.207	0.201	0.186	12	AVG
2,4-Dimethylphenol		0.342	0.387	0.411	0.433	0.444	0.447	0.439	0.415	9	AVG
O,O,O-Triethylphosphorothioat			0.167	0.174	0.178	0.188	0.187	0.182	0.179	4	AVG
bis(2-Chloroethoxy)methane		0.496	0.515	0.526	0.554	0.544	0.563	0.497	0.528	5	AVG
Benzoic acid			0.153	0.195	0.216	0.254	0.266	0.259	0.224	20	AVG +
2,4-Dichlorophenol		0.253	0.282	0.308	0.313	0.326	0.327	0.327	0.305	9	AVG
1,2,4-Trichlorobenzene		0.317	0.336	0.341	0.345	0.345	0.345	0.342	0.339	3	AVG
Naphthalene	1.169	1.128	1.140	1.158	1.170	1.187	1.186	1.167	1.163	2	AVG
4-Chloroaniline		0.383	0.401	0.435	0.444	0.469	0.470	0.460	0.437	8	AVG
2,6-Dichlorophenol		0.236	0.275	0.300	0.308	0.322	0.321	0.312	0.296	10	AVG
Hexachloropropene			0.201	0.210	0.215	0.220	0.224	0.220	0.215	4	AVG
Hexachlorobutadiene		0.182	0.193	0.188	0.193	0.194	0.194	0.191	0.191	2	AVG
Quinoline			0.616	0.638	0.648	0.700	0.711	0.699	0.669	6	AVG
Caprolactam			0.086	0.105	0.113	0.131	0.133	0.131	0.117	16	AVG
N-Nitrosodi-n-butylamine			0.245	0.276	0.291	0.317	0.396	0.389	0.319	19	AVG
4-Chloro-3-methylphenol		0.255	0.291	0.326	0.346	0.375	0.381	0.376	0.336	14	AVG
Safrole			0.248	0.274	0.288	0.304	0.304	0.298	0.286	8	AVG
2-Methylnaphthalene	0.677	0.655	0.692	0.722	0.742	0.765	0.761	0.747	0.720	6	AVG
1-Methylnaphthalene	0.615	0.651	0.660	0.688	0.706	0.730	0.731	0.721	0.688	6	AVG

+ %RSD is less than or equal to 20%; however, value rounds to 20.

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 09/21/18 09/21/18

Calibration Times: 17:33 21:11

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = di1302.d RRF0.25 = di1308.d RRF1.25 = di1307.d RRF3.75 = di1306.d
RRF7.5 = di1301.d RRF12.5 = di1305.d RRF20 = di1304.d RRF30 = di1303.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.373	0.411	0.429	0.432	0.433	0.424	0.417	5	AVG
1,2,4,5-Tetrachlorobenzene		0.657	0.682	0.692	0.693	0.670	0.670	0.647	0.673	3	AVG
cis-Isosafrole			0.558	0.580	0.603	0.632	0.627	0.614	0.602	5	AVG
2,4,6-Trichlorophenol		0.304	0.348	0.400	0.416	0.434	0.441	0.445	0.398	13	AVG
2,4,5-Trichlorophenol		0.306	0.386	0.432	0.453	0.472	0.482	0.443	0.425	14	AVG
trans-Isosafrole			0.595	0.637	0.652	0.666	0.680	0.685	0.653	5	AVG
Isosafrole			0.589	0.628	0.644	0.660	0.671	0.673	0.644	5	AVG
1,1'-Biphenyl		1.617	1.695	1.811	1.774	1.793	1.751	1.682	1.732	4	AVG
2-Chloronaphthalene		1.336	1.414	1.444	1.489	1.453	1.375	1.439	1.421	4	AVG
1-Chloronaphthalene		1.366	1.310	1.366	1.340	1.308	1.353	1.177	1.317	5	AVG
Diphenyl ether		0.929	0.952	0.979	0.992	0.984	0.975	0.945	0.965	2	AVG
2-Nitroaniline		0.270	0.345	0.401	0.429	0.473	0.482	0.458	0.408	19	AVG
1,4-Naphthoquinone			0.399	0.467	0.502	0.559	0.563	0.532	0.503	12	AVG
1,4-Dinitrobenzene			0.170	0.197	0.215	0.237	0.243	0.235	0.216	13	AVG
Dimethylphthalate			1.428	1.462	1.537	1.557	1.557	1.458	1.500	4	AVG
1,3-Dinitrobenzene			0.187	0.234	0.260	0.273	0.281	0.266	0.250	14	AVG
2,6-Dinitrotoluene		0.260	0.289	0.347	0.357	0.370	0.372	0.353	0.335	13	AVG
Acenaphthylene	1.618	1.596	1.804	1.948	2.004	2.053	2.051	1.987	1.883	10	AVG
3-Nitroaniline		0.256	0.307	0.356	0.375	0.408	0.421	0.412	0.362	17	AVG
Acenaphthene	1.466	1.366	1.370	1.386	1.450	1.435	1.440	1.357	1.409	3	AVG
2,4-Dinitrophenol				0.141	0.159	0.184	0.205	0.201	0.178	16	AVG
4-Nitrophenol				0.220	0.237	0.255	0.261	0.261	0.247	7	AVG
Pentachlorobenzene		0.527	0.544	0.549	0.564	0.568	0.557	0.539	0.550	3	AVG
2,4-Dinitrotoluene			0.359	0.424	0.451	0.486	0.506	0.489	0.452	12	AVG
2,4_2,6-Dinitrotoluenes		0.283	0.324	0.386	0.404	0.428	0.439	0.421	0.384	15	AVG
Dibenzofuran		1.934	1.911	1.941	1.987	1.981	1.968	1.863	1.941	2	AVG
1-Naphthylamine				1.399	1.484	1.510	1.550	1.497	1.488	4	AVG
2,3,4,6-Tetrachlorophenol			0.278	0.308	0.326	0.351	0.372	0.353	0.331	10	AVG
2-Naphthylamine				1.423	1.484	1.539	1.560	1.511	1.503	4	AVG
Diethylphthalate			1.211	1.331	1.409	1.524	1.547	1.485	1.418	9	AVG
Thionazin			0.243	0.272	0.303	0.320	0.320	0.311	0.295	11	AVG
Fluorene	1.338	1.363	1.415	1.497	1.583	1.577	1.577	1.492	1.480	7	AVG
4-Chlorophenyl-phenylether		0.682	0.717	0.726	0.754	0.746	0.743	0.700	0.724	4	AVG
5-Nitro-o-toluidine		0.288	0.385	0.418	0.451	0.469	0.483	0.473	0.424	16	AVG
4-Nitroaniline		0.253	0.357	0.417	0.434	0.443	0.446	0.445	0.399	18	AVG
4,6-Dinitro-2-methylphenol				0.108	0.121	0.141	0.148	0.149	0.133	14	AVG
N-Nitrosodiphenylamine (1)		0.598	0.641	0.682	0.713	0.690	0.702	0.676	0.672	6	AVG
NDPA as diphenylamine		0.598	0.641	0.682	0.713	0.690	0.702	0.676	0.672	6	AVG
1,2-Diphenylhydrazine		0.811	0.908	0.980	1.038	1.007	0.990	0.968	0.957	8	AVG
Tetraethyldithiopyrophosphate			0.129	0.137	0.151	0.156	0.155	0.151	0.147	7	AVG
1,3,5-Trinitrobenzene				0.070	0.081	0.095	0.103	0.106	0.091	17	AVG
Diallate (peak 1)			0.397	0.447	0.483	0.480	0.475	0.464	0.458	7	AVG
Phorate		0.429	0.485	0.543	0.596	0.605	0.593	0.591	0.549	12	AVG
Phenacetin			0.323	0.413	0.447	0.458	0.463	0.479	0.430	13	AVG
4-Bromophenyl-phenylether		0.212	0.213	0.231	0.228	0.228	0.225	0.217	0.222	4	AVG
Diallate (peak 2)			0.357	0.363	0.370	0.369	0.375	0.367	0.367	2	AVG
Diallate trans/cis			0.390	0.433	0.464	0.461	0.458	0.447	0.442	6	AVG
Hexachlorobenzene	0.254	0.225	0.228	0.225	0.228	0.225	0.224	0.214	0.228	5	AVG
Dimethoate			0.272	0.345	0.374	0.381	0.381	0.391	0.357	13	AVG
Atrazine			0.193	0.213	0.220	0.216	0.210	0.208	0.210	5	AVG
Pentachlorophenol			0.096	0.121	0.134	0.147	0.152	0.153	0.134	17	AVG
4-Aminobiphenyl		0.411	0.506	0.572	0.604	0.621	0.618	0.613	0.564	14	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date(s): 09/21/18 09/21/18

Calibration Times: 17:33 21:11

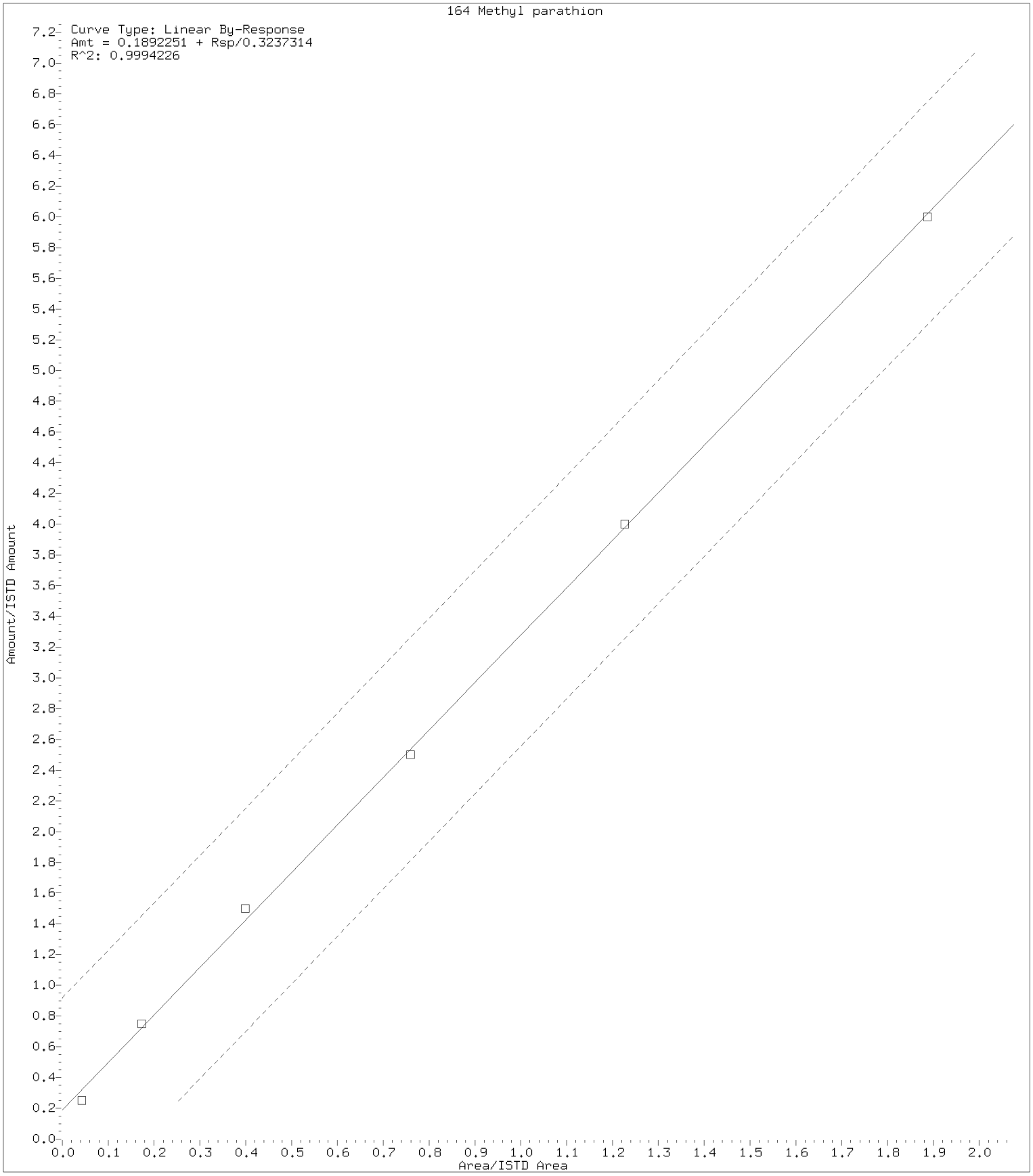
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = di1302.d RRF0.25 = di1308.d RRF1.25 = di1307.d RRF3.75 = di1306.d
RRF7.5 = di1301.d RRF12.5 = di1305.d RRF20 = di1304.d RRF30 = di1303.d

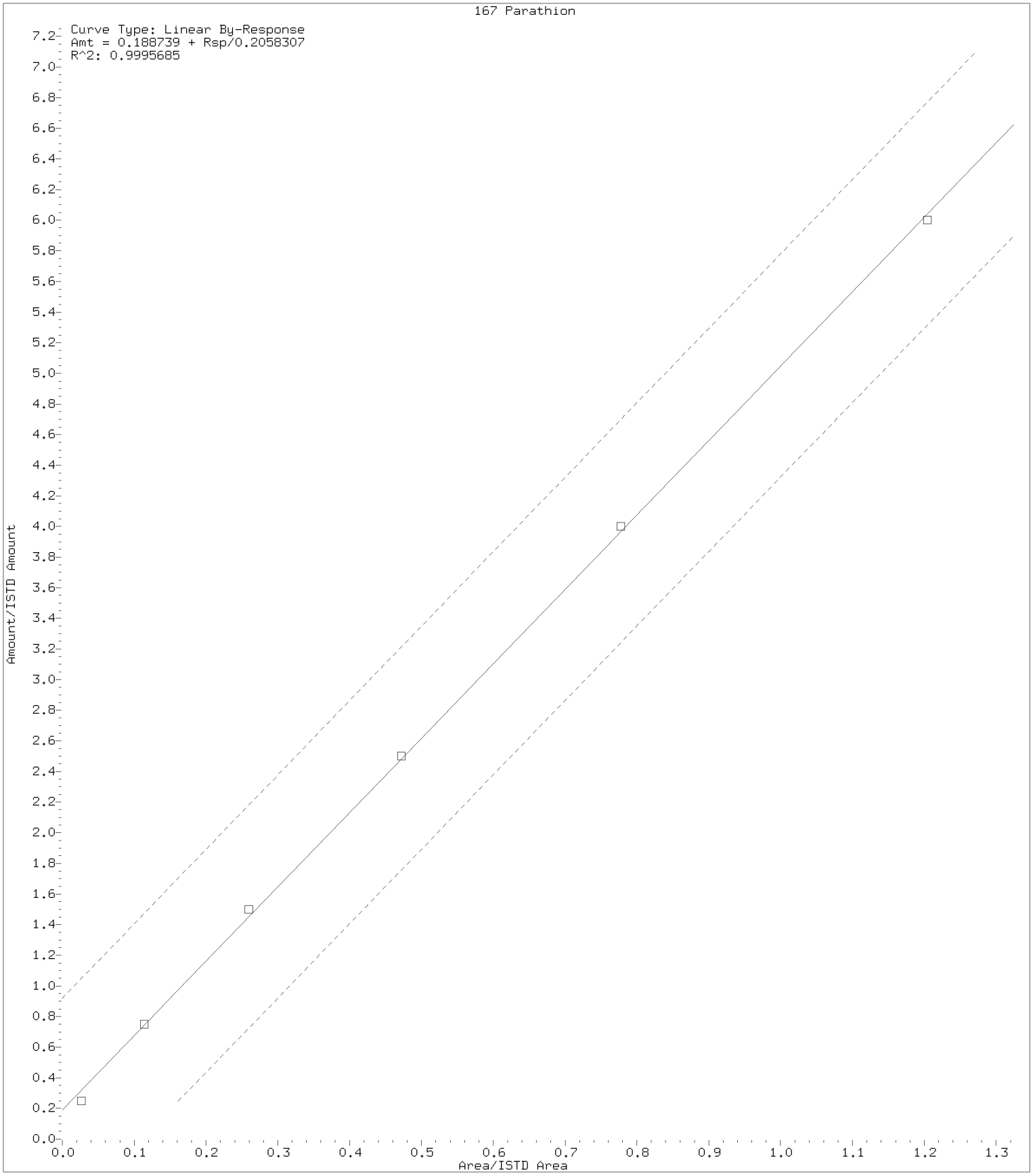
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Pentachloronitrobenzene			0.084	0.095	0.099	0.105	0.105	0.103	0.098	8	AVG
Pronamide			0.263	0.315	0.349	0.369	0.372	0.375	0.341	13	AVG
Dinoseb				0.142	0.170	0.202	0.217	0.219	0.190	17	AVG
Phenanthrene	1.291	1.265	1.236	1.251	1.281	1.254	1.242	1.247	1.258	2	AVG
Anthracene	1.104	1.049	1.134	1.236	1.280	1.268	1.273	1.272	1.202	8	AVG
Carbazole		0.882	1.018	1.124	1.174	1.166	1.162	1.193	1.103	10	AVG
Methyl parathion			0.172	0.231	0.266	0.304	0.307	0.314	0.266	21	1STDEG
Di-n-butylphthalate			1.026	1.216	1.348	1.414	1.426	1.456	1.314	13	AVG
Parathion			0.107	0.152	0.173	0.189	0.194	0.201	0.169	21	1STDEG
4-Nitroquinoline-1-oxide				0.083	0.104	0.128	0.141	0.158	0.123	24	1STDEG
Octachlorostyrene			0.079	0.079	0.087	0.090	0.089	0.089	0.086	6	AVG
Isodrin		0.138	0.131	0.138	0.142	0.145	0.144	0.147	0.141	4	AVG
Fluoranthene	1.098	1.011	1.156	1.250	1.364	1.356	1.358	1.417	1.251	12	AVG
Benzidine				0.896	0.975	0.936	0.944	0.925	0.935	3	AVG
Pyrene	1.474	1.382	1.308	1.344	1.372	1.370	1.393	1.354	1.375	4	AVG
p-Dimethylaminoazobenzene			0.146	0.193	0.218	0.233	0.249	0.251	0.215	19	AVG
Chlorobenzilate			0.267	0.337	0.385	0.399	0.413	0.408	0.368	15	AVG
3,3'-Dimethylbenzidine			0.598	0.793	0.873	0.868	0.869	0.919	0.820	14	AVG
Butylbenzylphthalate			0.442	0.562	0.625	0.612	0.617	0.630	0.581	12	AVG
2-Acetylaminofluorene				0.393	0.442	0.430	0.479	0.519	0.452	11	AVG
3,3'-Dichlorobenzidine			0.372	0.450	0.488	0.454	0.466	0.491	0.454	10	AVG
4,4'-Methylenebis(2-chloroani				0.246	0.270	0.249	0.252	0.262	0.256	4	AVG
Benzo(a)anthracene	0.828	0.922	1.045	1.236	1.308	1.241	1.235	1.254	1.134	16	AVG
Chrysene	0.986	1.065	1.184	1.286	1.314	1.201	1.191	1.208	1.179	9	AVG
bis(2-Ethylhexyl)phthalate			0.557	0.751	0.843	0.786	0.822	0.864	0.771	15	AVG
6-Methylchrysene			0.708	0.813	0.870	0.792	0.814	0.857	0.809	7	AVG
Di-n-octylphthalate			0.824	1.139	1.312	1.500	1.592	1.612	1.330	23	1STDEG
Benzo(b)fluoranthene	0.918	0.978	1.092	1.218	1.270	1.342	1.380	1.361	1.195	15	AVG
7,12-Dimethylbenz[a]anthracen			0.475	0.549	0.606	0.648	0.653	0.639	0.595	12	AVG
Benzo(k)fluoranthene	1.031	1.063	1.208	1.265	1.349	1.350	1.338	1.300	1.238	10	AVG
Benzo(a)pyrene	0.828	0.835	1.037	1.153	1.172	1.246	1.278	1.259	1.101	17	AVG
3-Methylcholanthrene		0.391	0.453	0.526	0.558	0.584	0.609	0.603	0.532	15	AVG
Dibenz(a,h)acridine			0.764	0.851	0.888	0.933	0.966	0.952	0.892	9	AVG
Dibenz(a,j)acridine			0.895	0.944	0.983	1.026	1.049	1.021	0.986	6	AVG
Indeno(1,2,3-cd)pyrene	0.868	0.871	0.993	1.028	1.085	1.096	1.133	1.107	1.023	10	AVG
Dibenz(a,h)anthracene	0.977	0.993	1.098	1.113	1.182	1.193	1.202	1.175	1.117	8	AVG
Benzo(g,h,i)perylene	1.113	1.094	1.152	1.155	1.187	1.188	1.200	1.157	1.156	3	AVG
Total PAHs	1.080	1.052	1.083	1.097	1.133	1.270	1.278	1.184	1.147	8	AVG
2-Fluorophenol		1.345	1.441	1.488	1.585	1.546	1.572	1.562	1.505	6	AVG
Phenol-d6		1.789	1.904	2.033	2.169	2.116	2.179	2.110	2.043	7	AVG
Nitrobenzene-d5		0.428	0.449	0.471	0.488	0.494	0.495	0.489	0.474	5	AVG
2-Fluorobiphenyl		1.521	1.593	1.627	1.652	1.626	1.616	1.545	1.597	3	AVG
2,4,6-Tribromophenol		0.116	0.137	0.164	0.176	0.187	0.191	0.186	0.165	17	AVG
Terphenyl-d14		0.785	0.787	0.816	0.860	0.867	0.865	0.843	0.832	4	AVG

Average %RSD 9

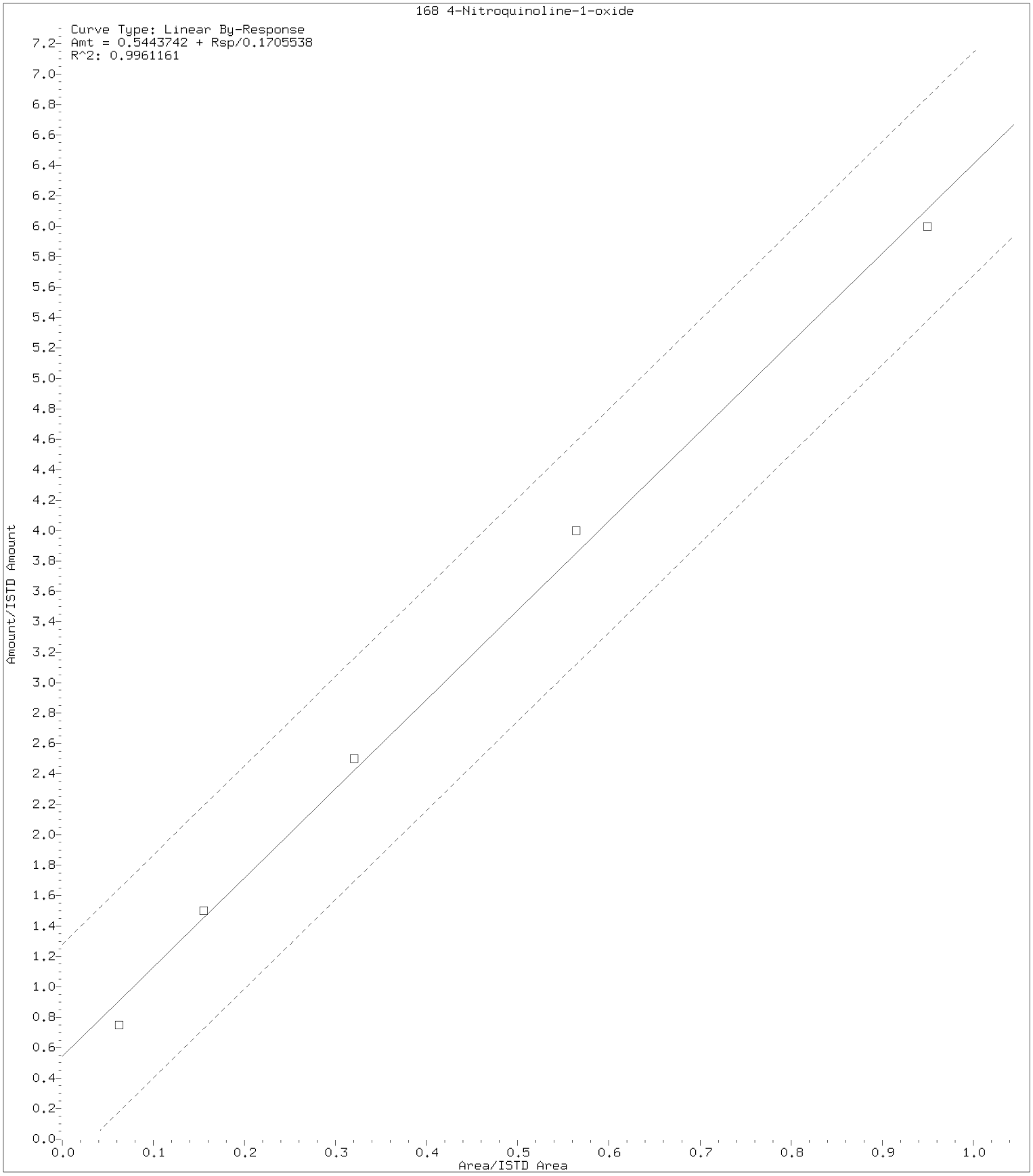
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



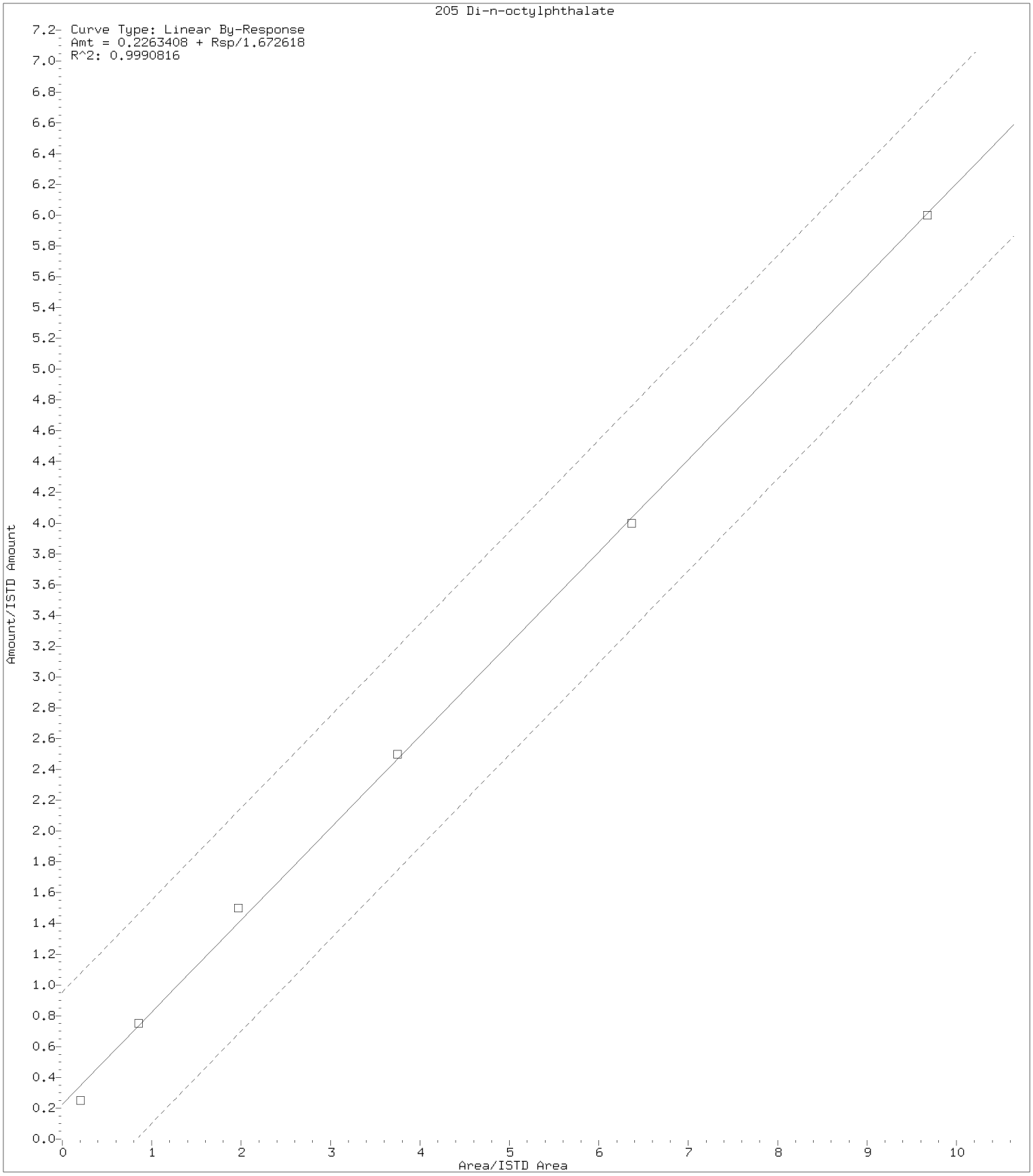
Digitally signed by Edward Monborne on 09/25/2018 at 08:19.
Target 3.5 esignature user ID: em10340



Digitally signed by Edward Monborne on 09/25/2018 at 08:19.
Target 3.5 esignature user ID: em10340



Digitally signed by Edward Monborne on 09/25/2018 at 08:19.
Target 3.5 esignature user ID: em10340



Digitally signed by Edward Monborne on 09/25/2018 at 08:19.
Target 3.5 esignature user ID: em10340

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/18sep21.b/di1301.d SSTD7.5
/chem/HP19760.i/18sep21.b/di1302.d SSTD0.125
/chem/HP19760.i/18sep21.b/di1303.d SSTD30
/chem/HP19760.i/18sep21.b/di1304.d SSTD20
/chem/HP19760.i/18sep21.b/di1305.d SSTD12.5
/chem/HP19760.i/18sep21.b/di1306.d SSTD3.75
/chem/HP19760.i/18sep21.b/di1307.d SSTD1.25
/chem/HP19760.i/18sep21.b/di1308.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	di1301.d	di1302.d	di1303.d	di1304.d	di1305.d	di1306.d	di1307.d	di1308.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	181644	191968	193821	207858	205984	199584	193342	189046	195406	4	Yes
Naphthalene-d8	678309	706468	712147	784074	771931	725140	704134	702663	723108	5	Yes
Acenaphthene-d10	318311	318852	360283	391720	386217	335922	323345	325875	345066	9	Yes
Phenanthrene-d10	573202	521787	673033	740347	719914	587436	567264	576849	619979	13	Yes
Pyrene-d10	595163	504273	700816	724414	717962	603838	573058	566795	623290	13	Yes
Perylene-d12	608816	483590	640506	628287	618703	625557	562340	530080	587235	10	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	di1301.d	di1302.d	di1303.d	di1304.d	di1305.d	di1306.d	di1307.d	di1308.d	Avg. RT
1,4-Dichlorobenzene-d4	6.801	6.801	6.801	6.801	6.801	6.801	6.801	6.801	6.801
Naphthalene-d8	8.736	8.736	8.736	8.736	8.736	8.737	8.736	8.736	8.736
Acenaphthene-d10	11.528	11.523	11.528	11.528	11.528	11.523	11.523	11.522	11.525
Phenanthrene-d10	13.411	13.411	13.417	13.411	13.411	13.411	13.411	13.411	13.412
Pyrene-d10	15.381	15.375	15.381	15.381	15.375	15.375	15.375	15.375	15.377
Perylene-d12	19.852	19.852	19.858	19.857	19.852	19.852	19.852	19.852	19.853

Comments:_____

_____

Report generated on 09/23/2018 at 07:49

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP19760

Method: SW-846 8270D MINI | File ID: di1311.d

ICV SAMPLE ID: rvICV2628 | BATCH: 18SEP21026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	11.43	-9	30	YES
N-Nitrosodimethylamine	12.50	14.09	13	30	YES
Pyridine	12.50	12.89	3	30	YES
2-Picoline	12.50	13.53	8	30	YES
N-Nitrosomethylethylamine	12.50	11.85	-5	30	YES
Methyl methanesulfonate	12.50	12.82	3	30	YES
N-Nitrosodiethylamine	12.50	12.55	0	30	YES
Ethyl methanesulfonate	12.50	12.42	-1	30	YES
Phenol	12.50	13.55	8	30	YES
Aniline	12.50	12.91	3	30	YES
bis(2-Chloroethyl)ether	12.50	13.64	9	30	YES
2-Chlorophenol	12.50	14.03	12	30	YES
1,3-Dichlorobenzene	12.50	13.60	9	30	YES
1,4-Dichlorobenzene	12.50	13.77	10	30	YES
Benzyl alcohol	12.50	14.90	19	30	YES
1,2-Dichlorobenzene	12.50	13.83	11	30	YES
Indene	12.50	20.32	63	30	NO*
2-Methylphenol	12.50	14.19	14	30	YES
2,2'-oxybis(1-Chloropropane	12.50	13.57	9	30	YES
bis(2-Chloroisopropyl)ether	12.50	13.57	9	30	YES
N-Nitrosopyrrolidine	12.50	12.98	4	30	YES
Acetophenone	12.50	14.96	20	30	YES
4-Methylphenol	12.50	14.32	15	30	YES
N-Nitroso-di-n-propylamine	12.50	14.72	18	30	YES
N-Nitrosomorpholine	12.50	12.87	3	30	YES
o-Toluidine	12.50	13.97	12	30	YES
Total Cresols	25.00	28.51	14	30	YES
Hexachloroethane	12.50	13.39	7	30	YES
Nitrobenzene	12.50	13.31	6	30	YES
N-Nitrosopiperidine	12.50	12.15	-3	30	YES
Isophorone	12.50	14.63	17	30	YES
2-Nitrophenol	12.50	13.37	7	30	YES
2,4-Dimethylphenol	12.50	11.48	-8	30	YES
bis(2-Chloroethoxy)methane	12.50	13.83	11	30	YES
Benzoic acid	25.00	24.44	-2	30	YES
O,O,O-Triethylphosphorothio	12.50	12.60	1	30	YES
2,4-Dichlorophenol	12.50	14.09	13	30	YES

NC = Could not calculate

Comments: ____*Run hits under valid ICV - ECM10340 9/23/18_____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: di1311.d

ICV SAMPLE ID: rvICV2628 BATCH: 18SEP21026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.43	7	30	YES
Naphthalene	12.50	13.40	7	30	YES
4-Chloroaniline	12.50	14.63	17	30	YES
2,6-Dichlorophenol	12.50	12.42	-1	30	YES
Hexachloropropene	12.50	13.22	6	30	YES
Hexachlorobutadiene	12.50	13.46	8	30	YES
Quinoline	12.50	12.75	2	30	YES
N-Nitrosodi-n-butylamine	12.50	11.32	-9	30	YES
4-Chloro-3-methylphenol	12.50	14.63	17	30	YES
Safrole	12.50	12.25	-2	30	YES
2-Methylnaphthalene	12.50	14.18	13	30	YES
1-Methylnaphthalene	12.50	13.72	10	30	YES
Hexachlorocyclopentadiene	25.00	25.99	4	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	13.19	6	30	YES
cis-Isosafrole	1.50	1.52	2	30	YES
2,4,6-Trichlorophenol	12.50	14.30	14	30	YES
2,4,5-Trichlorophenol	12.50	14.88	19	30	YES
trans-Isosafrole	11.00	11.19	2	30	YES
1,1'-Biphenyl	12.50	14.16	13	30	YES
2-Chloronaphthalene	12.50	13.52	8	30	YES
Isosafrole	12.50	12.76	2	30	YES
1-Chloronaphthalene	12.50	11.73	-6	30	YES
Diphenyl ether	12.50	11.88	-5	30	YES
2-Nitroaniline	12.50	15.02	20	30	YES
1,4-Naphthoquinone	15.63	16.50	6	30	YES
1,4-Dinitrobenzene	12.50	14.24	14	30	YES
Dimethylphthalate	12.50	13.59	9	30	YES
1,3-Dinitrobenzene	12.50	14.50	16	30	YES
2,6-Dinitrotoluene	12.50	14.58	17	30	YES
Acenaphthylene	12.50	15.82	27	30	YES
3-Nitroaniline	12.50	14.95	20	30	YES
Acenaphthene	12.50	13.72	10	30	YES
2,4-Dinitrophenol	25.00	29.57	18	30	YES
4-Nitrophenol	12.50	13.50	8	30	YES
Pentachlorobenzene	12.50	12.23	-2	30	YES
2,4-Dinitrotoluene	12.50	14.20	14	30	YES
Dibenzofuran	12.50	13.76	10	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: di1311.d

ICV SAMPLE ID: rvICV2628 BATCH: 18SEP21026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	29.51	18	30	YES
1-Naphthylamine	25.00	25.53	2	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.39	7	30	YES
2-Naphthylamine	25.00	24.71	-1	30	YES
Diethylphthalate	12.50	14.26	14	30	YES
Thionazin	12.50	13.60	9	30	YES
Fluorene	12.50	14.36	15	30	YES
4-Chlorophenyl-phenylether	12.50	13.54	8	30	YES
5-Nitro-o-toluidine	12.50	13.01	4	30	YES
4-Nitroaniline	12.50	14.40	15	30	YES
4,6-Dinitro-2-methylphenol	12.50	14.37	15	30	YES
N-Nitrosodiphenylamine	12.50	14.92	19	30	YES
NDPA as diphenylamine	12.50	14.92	19	30	YES
1,2-Diphenylhydrazine	12.50	14.82	19	30	YES
Tetraethyldithiopyrophospha	12.50	13.13	5	30	YES
1,3,5-Trinitrobenzene	12.50	12.64	1	30	YES
Diallate (peak 1)	9.38	9.08	-3	30	YES
Phorate	12.50	13.99	12	30	YES
Phenacetin	12.50	12.30	-2	30	YES
4-Bromophenyl-phenylether	12.50	13.67	9	30	YES
Diallate (peak 2)	3.13	3.49	12	30	YES
Hexachlorobenzene	12.50	13.17	5	30	YES
Diallate trans/cis	12.50	12.29	-2	30	YES
Dimethoate	12.50	13.56	9	30	YES
Pentachlorophenol	12.50	15.67	25	30	YES
Pentachloronitrobenzene	12.50	12.91	3	30	YES
Pronamide	12.50	12.56	0	30	YES
Dinoseb	12.50	12.14	-3	30	YES
Phenanthrene	12.50	13.74	10	30	YES
Anthracene	12.50	14.52	16	30	YES
Carbazole	12.50	14.88	19	30	YES
Methyl parathion	12.50	13.14	5	30	YES
Di-n-butylphthalate	12.50	14.72	18	30	YES
Parathion	12.50	13.47	8	30	YES
4-Nitroquinoline-1-oxide	150.00	154.87	3	30	YES
Isodrin	12.50	12.92	3	30	YES
Fluoranthene	12.50	14.72	18	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: di1311.d

ICV SAMPLE ID: rvICV2628 BATCH: 18SEP21026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzidine	62.50	53.01	-15	30	YES
Pyrene	12.50	13.51	8	30	YES
p-Dimethylaminoazobenzene	12.50	14.97	20	30	YES
Chlorobenzilate	12.50	13.64	9	30	YES
3,3'-Dimethylbenzidine	25.00	23.30	-7	30	YES
Butylbenzylphthalate	12.50	14.07	13	30	YES
2-Acetylaminofluorene	12.50	10.96	-12	30	YES
3,3'-Dichlorobenzidine	12.50	11.67	-7	30	YES
Benzo(a)anthracene	12.50	14.21	14	30	YES
Chrysene	12.50	13.46	8	30	YES
4,4'-Methylenebis(2-chloroa	12.50	11.38	-9	30	YES
bis(2-Ethylhexyl)phthalate	12.50	13.82	11	30	YES
6-Methylchrysene	12.50	11.52	-8	30	YES
Di-n-octylphthalate	12.50	13.00	4	30	YES
Benzo(b)fluoranthene	12.50	14.97	20	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	14.46	16	30	YES
Benzo(k)fluoranthene	12.50	14.68	17	30	YES
Benzo(a)pyrene	12.50	15.18	21	30	YES
3-Methylcholanthrene	12.50	14.66	17	30	YES
Dibenz(a,h)acridine	12.50	12.28	-2	30	YES
Dibenz(a,j)acridine	12.50	12.32	-1	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.85	11	30	YES
Dibenz(a,h)anthracene	12.50	14.42	15	30	YES
Benzo(g,h,i)perylene	12.50	13.31	7	30	YES
Total PAHs	225.00	267.51	19	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: di1312.d

ICV SAMPLE ID: rvBASICV2578 BATCH: 18SEP21026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	1.25	1.18	-6	30	YES
Atrazine	1.25	1.03	-17	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP19760

Method: SW-846 8270D MINI File ID: di1314.d

ICV SAMPLE ID: rv4ABPICV2258 BATCH: 18SEP21026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
4-Aminobiphenyl	12.50	17.30	38	30	NO*

NC = Could not calculate

Comments: ____*Run hits under valid ICV - ECM10340 9/23/18_____

^

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS | LAB CODE: LANCAS | INSTRUMENT: HP19760

Method: SW-846 8270D MINI | File ID: di1315.d

ICV SAMPLE ID: rvICV2608 | BATCH: 18SEP21026 | Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Caprolactam	12.50	11.02	-12	30	YES

NC = Could not calculate

Comments: _____

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6B

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 09/24/18 09/24/18

Calibration Times: 19:02 22:39

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = li1412.d RRF0.25 = li1418.d RRF1.25 = li1417.d RRF3.75 = li1416.d
RRF7.5 = li1411.d RRF12.5 = li1415.d RRF20 = li1414.d RRF30 = li1413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
1,4-Dioxane			0.696	0.756	0.801	0.769	0.793	0.824	0.773	6	AVG
N-Nitrosodimethylamine			1.142	1.142	1.138	1.222	1.224	1.237	1.184	4	AVG
Pyridine			1.900	2.035	2.137	2.175	2.166	2.217	2.105	6	AVG
2-Picoline			1.814	2.047	2.139	2.146	2.121	2.216	2.080	7	AVG
N-Nitrosomethylethylamine			0.848	0.865	0.847	0.862	0.883	0.887	0.865	2	AVG
Methyl methanesulfonate			1.029	1.078	1.075	1.116	1.104	1.131	1.089	3	AVG
N-Nitrosodiethylamine		0.796	0.792	0.815	0.796	0.831	0.838	0.842	0.816	3	AVG
Ethyl methanesulfonate		0.785	0.791	0.862	0.862	0.884	0.869	0.886	0.848	5	AVG
Benzaldehyde			1.525	1.667	1.641	1.674	1.581	1.519	1.601	4	AVG
Phenol		2.448	2.445	2.614	2.576	2.607	2.577	2.613	2.554	3	AVG
Aniline		2.926	2.826	3.031	3.034	3.072	3.059	3.083	3.005	3	AVG
a-methylstyrene			0.177	0.165	0.165	0.178	0.166	0.169	0.170	4	AVG
bis(2-Chloroethyl)ether		1.941	1.977	1.992	1.967	1.996	1.987	1.994	1.979	1	AVG
2-Chlorophenol		1.351	1.408	1.471	1.508	1.544	1.534	1.536	1.479	5	AVG
1,3-Dichlorobenzene		1.547	1.635	1.657	1.660	1.656	1.635	1.639	1.633	2	AVG
1,4-Dichlorobenzene		1.687	1.628	1.664	1.682	1.672	1.626	1.662	1.660	1	AVG
Benzyl alcohol			1.000	1.003	1.088	1.118	1.090	1.105	1.067	5	AVG
1,2-Dichlorobenzene		1.628	1.545	1.608	1.580	1.598	1.561	1.566	1.584	2	AVG
Indene			1.810	1.769	1.859	1.885	1.839	1.863	1.838	2	AVG
2-Methylphenol		1.326	1.478	1.581	1.602	1.603	1.598	1.597	1.541	7	AVG
2,2'-oxybis(1-Chloropropane)		2.108	2.004	2.109	2.158	2.107	2.059	2.129	2.096	2	AVG
bis(2-Chloroisopropyl)ether		2.108	2.004	2.109	2.158	2.107	2.059	2.129	2.096	2	AVG
N-Nitrosopyrrolidine		0.794	0.720	0.838	0.851	0.871	0.882	0.894	0.836	7	AVG
Acetophenone		2.177	2.330	2.480	2.414	2.499	2.440	2.471	2.402	5	AVG
4-Methylphenol		1.595	1.669	1.825	1.658	1.803	1.782	1.783	1.731	5	AVG
Total Cresols		1.461	1.573	1.703	1.630	1.703	1.690	1.690	1.636	6	AVG
N-Nitroso-di-n-propylamine		1.219	1.328	1.454	1.439	1.462	1.428	1.441	1.396	6	AVG
N-Nitrosomorpholine			0.871	0.957	0.975	0.948	0.940	0.960	0.942	4	AVG
o-Toluidine		2.698	2.734	2.882	2.874	2.883	2.856	2.880	2.829	3	AVG
Hexachloroethane			0.682	0.755	0.791	0.768	0.780	0.794	0.762	5	AVG
Nitrobenzene		0.496	0.554	0.566	0.579	0.584	0.592	0.581	0.564	6	AVG
N-Nitrosopiperidine		0.177	0.201	0.209	0.216	0.220	0.219	0.218	0.208	7	AVG
Isophorone		0.778	0.899	0.962	0.969	0.998	1.011	1.001	0.945	9	AVG
2-Nitrophenol		0.136	0.157	0.177	0.178	0.198	0.200	0.196	0.177	13	AVG
2,4-Dimethylphenol		0.441	0.421	0.461	0.469	0.481	0.481	0.474	0.461	5	AVG
O,O,O-Triethylphosphorothioat			0.178	0.179	0.188	0.187	0.186	0.185	0.184	2	AVG
bis(2-Chloroethoxy)methane		0.594	0.630	0.645	0.665	0.678	0.649	0.628	0.641	4	AVG
Benzoic acid			0.097	0.154	0.170	0.212	0.218		0.170	29	1STDEG
2,4-Dichlorophenol		0.246	0.283	0.315	0.324	0.331	0.328	0.324	0.307	10	AVG
1,2,4-Trichlorobenzene		0.317	0.343	0.347	0.353	0.357	0.353	0.351	0.346	4	AVG
Naphthalene	1.265	1.148	1.114	1.137	1.161	1.168	1.155	1.137	1.161	4	AVG
4-Chloroaniline		0.418	0.445	0.449	0.454	0.467	0.470	0.459	0.452	4	AVG
2,6-Dichlorophenol		0.294	0.292	0.302	0.312	0.320	0.314	0.310	0.306	3	AVG
Hexachloropropene			0.189	0.211	0.212	0.224	0.227	0.225	0.215	7	AVG
Hexachlorobutadiene		0.203	0.200	0.196	0.203	0.204	0.206	0.197	0.201	2	AVG
Quinoline			0.617	0.648	0.664	0.674	0.676	0.665	0.657	3	AVG
Caprolactam			0.092	0.104	0.101	0.109	0.109		0.103	7	1STDEG
N-Nitrosodi-n-butylamine			0.314	0.346	0.357	0.366	0.453	0.446	0.380	15	AVG
4-Chloro-3-methylphenol		0.287	0.348	0.386	0.398	0.404	0.404	0.401	0.375	12	AVG
Safrole			0.254	0.273	0.275	0.282	0.281	0.281	0.274	4	AVG
2-Methylnaphthalene	0.671	0.700	0.697	0.724	0.742	0.744	0.744	0.735	0.720	4	AVG
1-Methylnaphthalene	0.656	0.652	0.671	0.706	0.713	0.723	0.719	0.705	0.693	4	AVG

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 09/24/18 09/24/18

Calibration Times: 19:02 22:39

Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = li1412.d RRF0.25 = li1418.d RRF1.25 = li1417.d RRF3.75 = li1416.d
RRF7.5 = li1411.d RRF12.5 = li1415.d RRF20 = li1414.d RRF30 = li1413.d

COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	$\overline{RRF}$	% RSD	CAL. METHOD
Hexachlorocyclopentadiene			0.367	0.404	0.426	0.436	0.450	0.440	0.420	7	AVG
1,2,4,5-Tetrachlorobenzene		0.701	0.704	0.741	0.743	0.754	0.745	0.729	0.731	3	AVG
cis-Isosafrole			0.625	0.607	0.647	0.654	0.678		0.642	4	AVG
2,4,6-Trichlorophenol		0.330	0.390	0.441	0.463	0.479	0.495	0.486	0.440	14	AVG
2,4,5-Trichlorophenol		0.342	0.433	0.463	0.505	0.494	0.520	0.492	0.464	13	AVG
trans-Isosafrole			0.590	0.635	0.652	0.678	0.697		0.650	6	AVG
Isosafrole			0.596	0.630	0.651	0.674	0.694		0.649	6	AVG
1,1'-Biphenyl		1.742	1.716	1.829	1.786	1.848	1.832	1.761	1.788	3	AVG
2-Chloronaphthalene		1.561	1.411	1.500	1.507	1.476	1.559	1.563	1.511	4	AVG
1-Chloronaphthalene		1.419	1.337	1.302	1.392	1.376	1.321	1.242	1.341	4	AVG
Diphenyl ether		0.931	0.991	0.972	1.003	1.007	0.998	0.973	0.982	3	AVG
2-Nitroaniline		0.337	0.359	0.429	0.443	0.454	0.468	0.462	0.422	12	AVG
1,4-Naphthoquinone			0.462	0.548	0.550	0.587	0.596	0.575	0.553	9	AVG
1,4-Dinitrobenzene			0.181	0.212	0.217	0.233	0.240	0.236	0.220	10	AVG
Dimethylphthalate			1.520	1.589	1.560	1.591	1.543	1.517	1.553	2	AVG
1,3-Dinitrobenzene			0.209	0.234	0.241	0.246	0.267	0.260	0.243	8	AVG
2,6-Dinitrotoluene		0.310	0.310	0.362	0.362	0.355	0.371	0.360	0.347	7	AVG
Acenaphthylene	1.765	1.764	1.882	1.992	2.085	2.105	2.132	2.079	1.975	8	AVG
3-Nitroaniline		0.250	0.347	0.369	0.380	0.396	0.404	0.396	0.363	15	AVG
Acenaphthene	1.539	1.445	1.454	1.493	1.533	1.537	1.543	1.514	1.507	3	AVG
2,4-Dinitrophenol				0.142	0.154	0.179	0.203	0.197	0.175	15	AVG
4-Nitrophenol				0.250	0.274	0.291	0.344	0.336	0.299	14	AVG
Pentachlorobenzene		0.596	0.562	0.560	0.583	0.593	0.592	0.574	0.580	3	AVG
2,4-Dinitrotoluene			0.378	0.441	0.458	0.479	0.486	0.469	0.452	9	AVG
2,4_2,6-Dinitrotoluenes		0.320	0.344	0.402	0.410	0.417	0.429	0.414	0.391	11	AVG
Dibenzofuran		1.878	2.002	1.998	1.995	1.999	2.010	1.939	1.974	2	AVG
1-Naphthylamine				1.422	1.433	1.494	1.532	1.520	1.480	3	AVG
2,3,4,6-Tetrachlorophenol		0.239	0.317	0.342	0.364	0.386	0.396	0.391	0.348	16	AVG
2-Naphthylamine				1.321	1.343	1.405	1.491	1.483	1.408	6	AVG
Diethylphthalate			1.549	1.516	1.588	1.593	1.584	1.554	1.564	2	AVG
Thionazin			0.338	0.334	0.338	0.339	0.342	0.338	0.338	1	AVG
Fluorene	1.527	1.528	1.489	1.539	1.589	1.586	1.579	1.557	1.549	2	AVG
4-Chlorophenyl-phenylether		0.736	0.731	0.744	0.759	0.742	0.764	0.730	0.744	2	AVG
5-Nitro-o-toluidine		0.373	0.403	0.424	0.430	0.447	0.463	0.445	0.426	7	AVG
4-Nitroaniline		0.269	0.348	0.388	0.421	0.397	0.399	0.396	0.374	14	AVG
4,6-Dinitro-2-methylphenol				0.112	0.114	0.134	0.133	0.135	0.126	9	AVG
N-Nitrosodiphenylamine (1)		0.653	0.657	0.669	0.674	0.681	0.678	0.662	0.668	2	AVG
NDPA as diphenylamine		0.653	0.657	0.669	0.674	0.681	0.678	0.662	0.668	2	AVG
1,2-Diphenylhydrazine		1.089	1.145	1.219	1.222	1.235	1.251	1.223	1.198	5	AVG
Tetraethyldithiopyrophosphate			0.175	0.197	0.198	0.199	0.194	0.192	0.192	5	AVG
1,3,5-Trinitrobenzene				0.068	0.074	0.085	0.086	0.088	0.080	11	AVG
Diallate (peak 1)			0.477	0.511	0.521	0.511	0.496	0.499	0.502	3	AVG
Phorate		0.644	0.644	0.730	0.733	0.733	0.727	0.726	0.705	6	AVG
Phenacetin		0.346	0.422	0.501	0.496	0.525	0.534	0.533	0.480	15	AVG
4-Bromophenyl-phenylether		0.225	0.203	0.210	0.209	0.215	0.220	0.219	0.214	3	AVG
Diallate (peak 2)			0.380	0.417	0.416	0.416	0.435	0.423	0.414	4	AVG
Diallate trans/cis			0.460	0.495	0.503	0.495	0.486	0.486	0.487	3	AVG
Hexachlorobenzene	0.307	0.205	0.235	0.222	0.225	0.223	0.223	0.222	0.233	13	AVG
Dimethoate			0.358	0.433	0.437	0.455	0.464	0.452	0.433	9	AVG
Atrazine			0.198	0.222	0.222	0.220	0.215	0.205	0.214	5	AVG
Pentachlorophenol			0.098	0.134	0.134	0.145	0.149	0.149	0.135	14	AVG
4-Aminobiphenyl		0.472	0.542	0.553	0.575	0.595	0.601	0.589	0.561	8	AVG

(1) Cannot be separated from Diphenylamine
4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.

6C

SEMIVOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date(s): 09/24/18 09/24/18

Calibration Times: 19:02 22:39

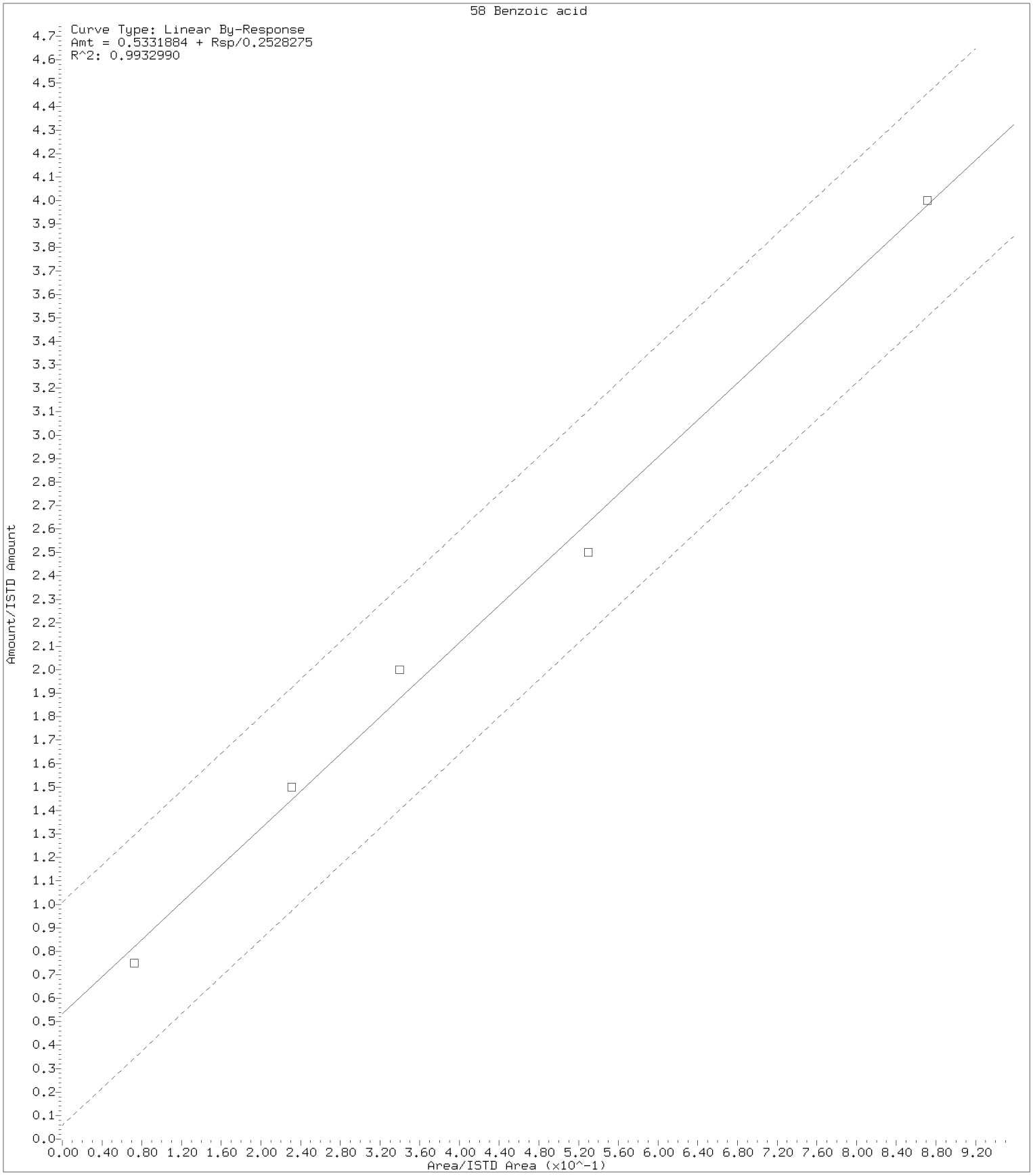
Min $\overline{RRF}$ for SPCC(#) = 0.050 Max %RSD for CCC(*) = 30%

LAB FILE ID:RRF0.125 = li1412.d RRF0.25 = li1418.d RRF1.25 = li1417.d RRF3.75 = li1416.d
RRF7.5 = li1411.d RRF12.5 = li1415.d RRF20 = li1414.d RRF30 = li1413.d

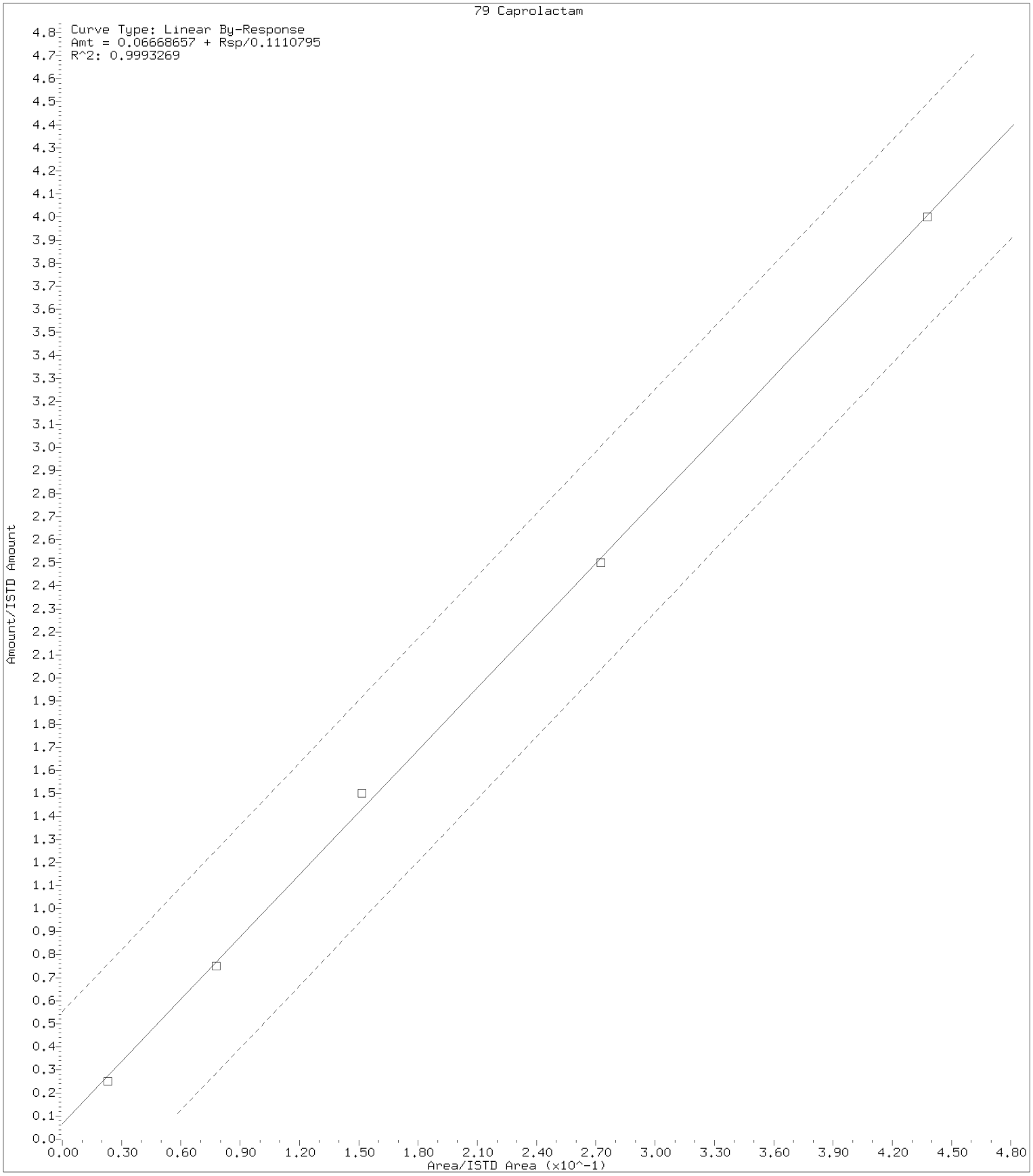
COMPOUND	RRF0.125	RRF0.25	RRF1.25	RRF3.75	RRF7.5	RRF12.5	RRF20	RRF30	RRF	% RSD	CAL. METHOD
Pentachloronitrobenzene			0.086	0.105	0.107	0.113	0.114	0.114	0.106	10	AVG
Pronamide		0.278	0.332	0.378	0.383	0.400	0.405	0.401	0.368	13	AVG
Dinoseb				0.170	0.180	0.207	0.210	0.212	0.196	10	AVG
Phenanthrene	1.265	1.270	1.215	1.219	1.230	1.248	1.240	1.239	1.241	2	AVG
Anthracene	1.101	1.104	1.176	1.247	1.247	1.263	1.267	1.240	1.206	6	AVG
Carbazole		1.059	1.010	1.078	1.103	1.126	1.133	1.123	1.090	4	AVG
Methyl parathion			0.263	0.318	0.336	0.358	0.367	0.361	0.334	12	AVG
Di-n-butylphthalate			1.258	1.392	1.425	1.468	1.490	1.473	1.418	6	AVG
Parathion			0.142	0.197	0.206	0.231	0.235	0.234	0.207	17	AVG
4-Nitroquinoline-1-oxide				0.092	0.099	0.125	0.138	0.138	0.118	18	AVG
Octachlorostyrene			0.076	0.083	0.084	0.087	0.084	0.086	0.083	5	AVG
Isodrin		0.142	0.130	0.145	0.144	0.147	0.151	0.147	0.144	5	AVG
Fluoranthene	1.120	1.165	1.251	1.323	1.324	1.370	1.394	1.371	1.290	8	AVG
Benzidine			0.696	0.813	0.858	0.867	0.875	0.842	0.825	8	AVG
Pyrene	1.479	1.393	1.321	1.369	1.381	1.356	1.380	1.351	1.379	3	AVG
p-Dimethylaminoazobenzene			0.152	0.192	0.198	0.213	0.220	0.220	0.199	13	AVG
Chlorobenzilate			0.357	0.419	0.432	0.449	0.451	0.445	0.426	8	AVG
3,3'-Dimethylbenzidine			0.602	0.731	0.801	0.839	0.883	0.870	0.788	13	AVG
Butylbenzylphthalate			0.545	0.603	0.648	0.661	0.684	0.665	0.634	8	AVG
2-Acetylaminofluorene			0.340	0.421	0.469	0.518	0.548	0.557	0.475	18	AVG
3,3'-Dichlorobenzidine			0.337	0.394	0.424	0.445	0.461	0.456	0.420	11	AVG
4,4'-Methylenebis(2-chloroani			0.190	0.224	0.244	0.254	0.257	0.258	0.238	11	AVG
Benzo(a)anthracene	0.939	0.971	1.144	1.213	1.242	1.260	1.272	1.248	1.161	11	AVG
Chrysene	1.073	1.043	1.123	1.171	1.210	1.215	1.226	1.208	1.159	6	AVG
bis(2-Ethylhexyl)phthalate			0.715	0.824	0.897	0.949	0.979	0.969	0.889	12	AVG
6-Methylchrysene			0.695	0.737	0.786	0.787	0.817	0.810	0.772	6	AVG
Di-n-octylphthalate			1.256	1.607	1.695	1.866	1.875	1.831	1.688	14	AVG
Benzo(b)fluoranthene	1.065	1.143	1.252	1.290	1.309	1.350	1.332	1.318	1.258	8	AVG
7,12-Dimethylbenz[a]anthracen		0.406	0.464	0.536	0.562	0.592	0.593	0.576	0.533	13	AVG
Benzo(k)fluoranthene	1.041	1.057	1.210	1.310	1.320	1.324	1.325	1.268	1.232	10	AVG
Benzo(a)pyrene	1.092	0.982	1.102	1.194	1.200	1.260	1.282	1.255	1.171	9	AVG
3-Methylcholanthrene		0.409	0.450	0.511	0.536	0.570	0.577	0.572	0.518	13	AVG
Dibenz(a,h)acridine			0.858	0.928	0.936	1.005	1.007	0.988	0.953	6	AVG
Dibenz(a,j)acridine			0.921	0.963	1.008	1.059	1.046	1.022	1.003	5	AVG
Indeno(1,2,3-cd)pyrene	1.027	1.050	1.047	1.120	1.147	1.219	1.240	1.217	1.133	8	AVG
Dibenz(a,h)anthracene	1.013	1.003	1.132	1.184	1.207	1.254	1.236	1.211	1.155	8	AVG
Benzo(g,h,i)perylene	1.060	1.023	1.140	1.189	1.225	1.254	1.241	1.198	1.167	7	AVG
Total PAHs	1.196	1.143	1.194	1.236	1.240	1.256	1.222	1.179	1.208	3	AVG
2-Fluorophenol		1.447	1.528	1.631	1.627	1.674	1.645	1.674	1.604	5	AVG
Phenol-d6		1.997	2.052	2.262	2.265	2.278	2.278	2.296	2.204	6	AVG
Nitrobenzene-d5		0.514	0.531	0.554	0.571	0.575	0.578	0.569	0.556	4	AVG
2-Fluorobiphenyl		1.774	1.641	1.675	1.709	1.699	1.724	1.677	1.700	2	AVG
2,4,6-Tribromophenol		0.140	0.162	0.167	0.176	0.186	0.194	0.194	0.174	11	AVG
Terphenyl-d14		0.732	0.762	0.788	0.792	0.777	0.795	0.783	0.775	3	AVG

Average %RSD 7

4,6-Dinitro-2-methylphenol and 4-Nitrophenol are at 10 ng/ul in the 5 standard.
Benzidine Levels in the 5,15,30,50,80,120 standards are 15,45,90,150,240,360 ng/ul, respectively.
Benzoic acid and 2,4-Dinitrophenol are at 15 ng/ul, 30 ng/ul,40 ng/ul in the 5,15,30 standards.



Digitally signed by Matthew E. Barton on 09/26/2018 at 07:57.
Target 3.5 esignature user ID: reb00745



Digitally signed by Matthew E. Barton on 09/26/2018 at 07:57.
Target 3.5 esignature user ID: reb00745

Internal Standard
Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18sep24a.b/li1411.d SSTD7.5
/chem/HP20296.i/18sep24a.b/li1412.d SSTD0.125
/chem/HP20296.i/18sep24a.b/li1413.d SSTD30
/chem/HP20296.i/18sep24a.b/li1414.d SSTD20
/chem/HP20296.i/18sep24a.b/li1415.d SSTD12.5
/chem/HP20296.i/18sep24a.b/li1416.d SSTD3.75
/chem/HP20296.i/18sep24a.b/li1417.d SSTD1.25
/chem/HP20296.i/18sep24a.b/li1418.d SSTD0.25

Area Summary

File ID:

Internal Standard Name	li1411.d	li1412.d	li1413.d	li1414.d	li1415.d	li1416.d	li1417.d	li1418.d	Avg. Area	%RSD	In Spec
1,4-Dichlorobenzene-d4	104542	107276	104174	107837	105907	104677	105034	106114	105695	1	Yes
Naphthalene-d8	390672	402657	392964	395686	394469	400222	396293	398588	396444	1	Yes
Acenaphthene-d10	183697	185098	183269	183905	185891	191742	188569	186185	186044	2	Yes
Phenanthrene-d10	350191	343352	350212	353249	354105	351342	353316	348964	350591	1	Yes
Pyrene-d10	348756	335950	361093	362318	362594	359634	354932	345654	353866	3	Yes
Perylene-d12	311681	282713	340199	333521	319299	312288	304733	299756	313024	6	Yes

%RSD of internal standard area is flagged out of spec if greater than 30.

RT Summary

File ID:

Internal Standard Name	li1411.d	li1412.d	li1413.d	li1414.d	li1415.d	li1416.d	li1417.d	li1418.d	Avg. RT
1,4-Dichlorobenzene-d4	6.974	6.974	6.979	6.980	6.979	6.974	6.974	6.974	6.976
Naphthalene-d8	8.958	8.958	8.964	8.959	8.958	8.958	8.953	8.953	8.958
Acenaphthene-d10	11.782	11.782	11.788	11.788	11.782	11.782	11.782	11.782	11.784
Phenanthrene-d10	13.708	13.703	13.713	13.708	13.708	13.703	13.703	13.702	13.706
Pyrene-d10	15.751	15.751	15.756	15.751	15.751	15.746	15.746	15.746	15.750
Perylene-d12	20.324	20.324	20.330	20.324	20.324	20.324	20.324	20.319	20.324

Comments:_____

_____

Report generated on 09/25/2018 at 09:13

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: li1421.d

ICV SAMPLE ID: RVICV2628 BATCH: 18SEP24A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,4-Dioxane	12.50	11.61	-7	30	YES
N-Nitrosodimethylamine	12.50	13.50	8	30	YES
Pyridine	12.50	12.98	4	30	YES
2-Picoline	12.50	13.36	7	30	YES
N-Nitrosomethylethylamine	12.50	11.35	-9	30	YES
Methyl methanesulfonate	12.50	12.32	-1	30	YES
N-Nitrosodiethylamine	12.50	11.53	-8	30	YES
Ethyl methanesulfonate	12.50	11.65	-7	30	YES
Phenol	12.50	12.92	3	30	YES
Aniline	12.50	12.20	-2	30	YES
bis(2-Chloroethyl)ether	12.50	12.85	3	30	YES
2-Chlorophenol	12.50	13.08	5	30	YES
1,3-Dichlorobenzene	12.50	13.02	4	30	YES
1,4-Dichlorobenzene	12.50	13.04	4	30	YES
Benzyl alcohol	12.50	14.06	12	30	YES
1,2-Dichlorobenzene	12.50	12.99	4	30	YES
Indene	12.50	18.92	51	30	**NO
2-Methylphenol	12.50	13.13	5	30	YES
2,2'-oxybis(1-Chloropropane	12.50	12.61	1	30	YES
bis(2-Chloroisopropyl)ether	12.50	12.61	1	30	YES
N-Nitrosopyrrolidine	12.50	11.79	-6	30	YES
Acetophenone	12.50	13.81	10	30	YES
4-Methylphenol	12.50	13.51	8	30	YES
N-Nitroso-di-n-propylamine	12.50	13.56	8	30	YES
N-Nitrosomorpholine	12.50	11.81	-5	30	YES
o-Toluidine	12.50	12.76	2	30	YES
Total Cresols	25.00	26.64	7	30	YES
Hexachloroethane	12.50	13.29	6	30	YES
Nitrobenzene	12.50	13.51	8	30	YES
N-Nitrosopiperidine	12.50	11.86	-5	30	YES
Isophorone	12.50	14.18	13	30	YES
2-Nitrophenol	12.50	14.38	15	30	YES
2,4-Dimethylphenol	12.50	11.13	-11	30	YES
bis(2-Chloroethoxy)methane	12.50	13.98	12	30	YES
Benzoic acid	25.00	24.99	0	30	YES
O,O,O-Triethylphosphorothio	12.50	11.95	-4	30	YES
2,4-Dichlorophenol	12.50	14.03	12	30	YES

NC = Could not calculate

Comments: **if hits in samples, re-run under valid ICV

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: li1421.d

ICV SAMPLE ID: RVICV2628 BATCH: 18SEP24A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
1,2,4-Trichlorobenzene	12.50	13.65	9	30	YES
Naphthalene	12.50	13.22	6	30	YES
4-Chloroaniline	12.50	14.10	13	30	YES
2,6-Dichlorophenol	12.50	12.21	-2	30	YES
Hexachloropropene	12.50	13.45	8	30	YES
Hexachlorobutadiene	12.50	13.52	8	30	YES
Quinoline	12.50	12.72	2	30	YES
N-Nitrosodi-n-butylamine	12.50	10.92	-13	30	YES
4-Chloro-3-methylphenol	12.50	14.11	13	30	YES
Safrole	12.50	12.10	-3	30	YES
2-Methylnaphthalene	12.50	13.80	10	30	YES
1-Methylnaphthalene	12.50	13.16	5	30	YES
Hexachlorocyclopentadiene	25.00	25.67	3	30	YES
1,2,4,5-Tetrachlorobenzene	12.50	13.39	7	30	YES
cis-Isosafrole	1.50	1.48	-1	30	YES
2,4,6-Trichlorophenol	12.50	14.63	17	30	YES
2,4,5-Trichlorophenol	12.50	14.68	17	30	YES
trans-Isosafrole	11.00	11.51	5	30	YES
1,1'-Biphenyl	12.50	14.24	14	30	YES
2-Chloronaphthalene	12.50	12.78	2	30	YES
Isosafrole	12.50	12.99	4	30	YES
1-Chloronaphthalene	12.50	12.28	-2	30	YES
Diphenyl ether	12.50	11.69	-6	30	YES
2-Nitroaniline	12.50	14.64	17	30	YES
1,4-Naphthoquinone	15.63	16.06	3	30	YES
1,4-Dinitrobenzene	12.50	13.76	10	30	YES
Dimethylphthalate	12.50	13.62	9	30	YES
1,3-Dinitrobenzene	12.50	13.92	11	30	YES
2,6-Dinitrotoluene	12.50	13.77	10	30	YES
Acenaphthylene	12.50	15.48	24	30	YES
3-Nitroaniline	12.50	14.44	16	30	YES
Acenaphthene	12.50	14.09	13	30	YES
2,4-Dinitrophenol	25.00	28.06	12	30	YES
4-Nitrophenol	12.50	14.43	15	30	YES
Pentachlorobenzene	12.50	12.12	-3	30	YES
2,4-Dinitrotoluene	12.50	13.76	10	30	YES
Dibenzofuran	12.50	13.57	9	30	YES

NC = Could not calculate

Comments: _____

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: li1421.d

ICV SAMPLE ID: RVICV2628 BATCH: 18SEP24A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
2,4_2,6-Dinitrotoluenes	25.00	27.53	10	30	YES
1-Naphthylamine	25.00	25.18	1	30	YES
2,3,4,6-Tetrachlorophenol	12.50	13.40	7	30	YES
2-Naphthylamine	25.00	24.75	-1	30	YES
Diethylphthalate	12.50	13.37	7	30	YES
Thionazin	12.50	12.66	1	30	YES
Fluorene	12.50	13.68	9	30	YES
4-Chlorophenyl-phenylether	12.50	13.18	5	30	YES
5-Nitro-o-toluidine	12.50	12.69	2	30	YES
4-Nitroaniline	12.50	13.81	10	30	YES
4,6-Dinitro-2-methylphenol	12.50	14.12	13	30	YES
N-Nitrosodiphenylamine	12.50	14.47	16	30	YES
NDPA as diphenylamine	12.50	14.47	16	30	YES
1,2-Diphenylhydrazine	12.50	14.46	16	30	YES
Tetraethyldithiopyrophospha	12.50	12.31	-1	30	YES
1,3,5-Trinitrobenzene	12.50	12.42	-1	30	YES
Diallate (peak 1)	9.38	8.84	-6	30	YES
Phorate	12.50	13.13	5	30	YES
Phenacetin	12.50	12.82	3	30	YES
4-Bromophenyl-phenylether	12.50	13.31	6	30	YES
Diallate (peak 2)	3.13	3.37	8	30	YES
Hexachlorobenzene	12.50	12.65	1	30	YES
Diallate trans/cis	12.50	12.21	-2	30	YES
Dimethoate	12.50	13.12	5	30	YES
Pentachlorophenol	12.50	14.74	18	30	YES
4-Aminobiphenyl	12.50	18.64	49	30	**NO
Pentachloronitrobenzene	12.50	12.69	2	30	YES
Pronamide	12.50	12.96	4	30	YES
Dinoseb	12.50	11.29	-10	30	YES
Phenanthrene	12.50	13.32	7	30	YES
Anthracene	12.50	14.15	13	30	YES
Carbazole	12.50	14.33	15	30	YES
Methyl parathion	12.50	13.96	12	30	YES
Di-n-butylphthalate	12.50	13.99	12	30	YES
Parathion	12.50	14.75	18	30	YES
4-Nitroquinoline-1-oxide	150.00	186.84	25	30	YES
Isodrin	12.50	12.64	1	30	YES

NC = Could not calculate

Comments: **if hits in samples, re-run under valid ICV

Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: li1421.d

ICV SAMPLE ID: RVICV2628 BATCH: 18SEP24A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Fluoranthene	12.50	14.03	12	30	YES
Benzidine	62.50	55.71	-11	30	YES
Pyrene	12.50	13.49	8	30	YES
p-Dimethylaminoazobenzene	12.50	14.33	15	30	YES
Chlorobenzilate	12.50	13.39	7	30	YES
3,3'-Dimethylbenzidine	25.00	24.33	-3	30	YES
Butylbenzylphthalate	12.50	14.55	16	30	YES
2-Acetylaminofluorene	12.50	13.24	6	30	YES
3,3'-Dichlorobenzidine	12.50	12.87	3	30	YES
Benzo(a)anthracene	12.50	14.43	15	30	YES
Chrysene	12.50	14.06	13	30	YES
4,4'-Methylenebis(2-chloroa	12.50	12.75	2	30	YES
bis(2-Ethylhexyl)phthalate	12.50	14.64	17	30	YES
6-Methylchrysene	12.50	12.37	-1	30	YES
Di-n-octylphthalate	12.50	15.07	21	30	YES
Benzo(b)fluoranthene	12.50	14.12	13	30	YES
7,12-Dimethylbenz[a]anthrac	12.50	14.68	17	30	YES
Benzo(k)fluoranthene	12.50	14.70	18	30	YES
Benzo(a)pyrene	12.50	14.65	17	30	YES
3-Methylcholanthrene	12.50	14.67	17	30	YES
Dibenz(a,h)acridine	12.50	12.56	0	30	YES
Dibenz(a,j)acridine	12.50	12.62	1	30	YES
Indeno(1,2,3-cd)pyrene	12.50	13.92	11	30	YES
Dibenz(a,h)anthracene	12.50	14.83	19	30	YES
Benzo(g,h,i)perylene	12.50	14.07	13	30	YES
Total PAHs	225.00	253.21	13	30	YES

NC = Could not calculate

Comments: _____

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Lancaster Laboratories, Inc.
Semi Volatile Initial Calibration Verification

LAB NAME: LANCASTER LABS LAB CODE: LANCAS INSTRUMENT: HP20296

Method: SW-846 8270D MINI File ID: li1423.d

ICV SAMPLE ID: BASICV2578 BATCH: 18SEP24A026 Sample Name: SSTD12.5

COMPOUND NAME	TRUE CONC.	ACTUAL CONC.	% DRIFT	%D window	INSPEC
Benzaldehyde	1.25	1.14	-8	30	YES
Atrazine	1.25	1.08	-14	30	YES

NC = Could not calculate

Comments: _____

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7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 10/20/18 Time: 09:37

Lab File ID: dj1801.d Init. Calib. Date(s): 09/21/18 09/21/18

Init. Calib. Times(s): 17:33 21:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.795	0.742	6.990	7.5	-7
N-Nitrosodimethylamine	1.105	1.118	7.590	7.5	1
Pyridine	1.925	1.840	7.170	7.5	-4
2-Picoline	1.953	1.909	7.330	7.5	-2
N-Nitrosomethylethylamine	0.858	0.843	7.360	7.5	-2
Methyl methanesulfonate	0.928	0.923	7.460	7.5	-1
N-Nitrosodiethylamine	0.787	0.816	7.770	7.5	4
Ethyl methanesulfonate	0.774	0.812	7.870	7.5	5
Benzaldehyde	1.386	1.365	7.390	7.5	-1
Phenol	2.337	2.435	7.810	7.5	4
Aniline	2.768	2.778	7.530	7.5	0
a-methylstyrene	0.155	0.141	6.790	7.5	-9
bis(2-Chloroethyl)ether	1.735	1.781	7.700	7.5	3
2-Chlorophenol	1.454	1.545	7.970	7.5	6
1,3-Dichlorobenzene	1.651	1.625	7.380	7.5	-2
1,4-Dichlorobenzene	1.684	1.601	7.130	7.5	-5
Benzyl alcohol	0.992	0.944	7.140	7.5	-5
1,2-Dichlorobenzene	1.582	1.528	7.240	7.5	-3
Indene	1.641	1.645	7.520	7.5	0
2-Methylphenol	1.444	1.502	7.800	7.5	4
2,2'-oxybis(1-Chloropropane)	2.009	2.120	7.920	7.5	6
bis(2-Chloroisopropyl)ether	2.009	2.120	7.920	7.5	6
N-Nitrosopyrrolidine	0.826	0.849	7.710	7.5	3
Acetophenone	2.048	2.103	7.700	7.5	3
4-Methylphenol	1.667	1.645	7.400	7.5	-1
Total Cresols	1.555	1.573	15.170	15.0	1
N-Nitroso-di-n-propylamine	1.215	1.258	7.770	7.5	4
N-Nitrosomorpholine	0.924	0.949	7.700	7.5	3
o-Toluidine	2.544	2.592	7.640	7.5	2
Hexachloroethane	0.683	0.677	7.440	7.5	-1
Nitrobenzene	0.484	0.467	7.220	7.5	-4
N-Nitrosopiperidine	0.198	0.210	7.940	7.5	6
Isophorone	0.809	0.846	7.840	7.5	4
2-Nitrophenol	0.186	0.203	8.170	7.5	9
2,4-Dimethylphenol	0.415	0.416	7.520	7.5	0
O,O,O-Triethylphosphorothioate	0.179	0.167	6.990	7.5	-7

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 10/20/18 Time: 09:37

Lab File ID: dj1801.d Init. Calib. Date(s): 09/21/18 09/21/18

Init. Calib. Times(s): 17:33 21:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.528	0.528	7.500	7.5	0
Benzoic acid	0.224	0.290	12.980	10.0	30
2,4-Dichlorophenol	0.305	0.303	7.450	7.5	-1
1,2,4-Trichlorobenzene	0.339	0.314	6.950	7.5	-7
Naphthalene	1.163	1.144	7.380	7.5	-2
4-Chloroaniline	0.437	0.459	7.870	7.5	5
2,6-Dichlorophenol	0.296	0.291	7.370	7.5	-2
Hexachloropropene	0.215	0.189	6.580	7.5	-12
Hexachlorobutadiene	0.191	0.168	6.590	7.5	-12
Quinoline	0.669	0.690	7.740	7.5	3
Caprolactam	0.117	0.129	8.300	7.5	11
N-Nitrosodi-n-butylamine	0.319	0.304	7.150	7.5	-5
4-Chloro-3-methylphenol	0.336	0.358	7.990	7.5	7
Safrole	0.286	0.274	7.170	7.5	-4
2-Methylnaphthalene	0.720	0.735	7.660	7.5	2
1-Methylnaphthalene	0.688	0.704	7.670	7.5	2
Hexachlorocyclopentadiene	0.417	0.360	6.480	7.5	-14
1,2,4,5-Tetrachlorobenzene	0.673	0.650	7.240	7.5	-3
cis-Isosafrole	0.602	0.608	1.290	1.3	1
2,4,6-Trichlorophenol	0.398	0.440	8.280	7.5	10
2,4,5-Trichlorophenol	0.425	0.455	8.030	7.5	7
trans-Isosafrole	0.653	0.670	6.390	6.2	3
Isosafrole	0.644	0.659	7.680	7.5	2
1,1'-Biphenyl	1.732	1.796	7.780	7.5	4
2-Chloronaphthalene	1.421	1.368	7.220	7.5	-4
1-Chloronaphthalene	1.317	1.297	7.390	7.5	-2
Diphenyl ether	0.965	0.981	7.630	7.5	2
2-Nitroaniline	0.408	0.476	8.740	7.5	17
1,4-Naphthoquinone	0.503	0.535	7.980	7.5	6
1,4-Dinitrobenzene	0.216	0.247	8.560	7.5	14
Dimethylphthalate	1.500	1.565	7.830	7.5	4
1,3-Dinitrobenzene	0.250	0.290	8.670	7.5	16
2,6-Dinitrotoluene	0.335	0.373	8.330	7.5	11
Acenaphthylene	1.883	2.050	8.170	7.5	9
3-Nitroaniline	0.362	0.429	8.870	7.5	18
Acenaphthene	1.409	1.469	7.820	7.5	4

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 10/20/18 Time: 09:37

Lab File ID: dj1801.d Init. Calib. Date(s): 09/21/18 09/21/18

Init. Calib. Times(s): 17:33 21:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.178	0.213	11.990	10.0	20
4-Nitrophenol	0.247	0.227	6.910	7.5	-8
Pentachlorobenzene	0.550	0.532	7.260	7.5	-3
2,4-Dinitrotoluene	0.452	0.481	7.980	7.5	6
2,4_2,6-Dinitrotoluenes	0.384	0.427	16.700	15.0	11
Dibenzofuran	1.941	2.025	7.830	7.5	4
1-Naphthylamine	1.488	1.574	7.940	7.5	6
2,3,4,6-Tetrachlorophenol	0.331	0.356	8.070	7.5	8
2-Naphthylamine	1.503	1.566	7.810	7.5	4
Diethylphthalate	1.418	1.547	8.180	7.5	9
Thionazin	0.295	0.317	8.070	7.5	8
Fluorene	1.480	1.630	8.260	7.5	10
4-Chlorophenyl-phenylether	0.724	0.750	7.770	7.5	4
5-Nitro-o-toluidine	0.424	0.470	8.320	7.5	11
4-Nitroaniline	0.399	0.442	8.290	7.5	11
4,6-Dinitro-2-methylphenol	0.133	0.147	8.240	7.5	10
N-Nitrosodiphenylamine (1)	0.672	0.720	8.040	7.5	7
NDPA as diphenylamine	0.672	0.720	8.040	7.5	7
1,2-Diphenylhydrazine	0.957	1.022	8.010	7.5	7
Tetraethyldithiopyrophosphate	0.147	0.150	7.700	7.5	3
1,3,5-Trinitrobenzene	0.091	0.090	7.410	7.5	-1
Diallate (peak 1)	0.458	0.496	6.750	6.2	8
Phorate	0.549	0.619	8.460	7.5	13
Phenacetin	0.430	0.450	7.850	7.5	5
4-Bromophenyl-phenylether	0.222	0.221	7.460	7.5	-1
Diallate (peak 2)	0.367	0.375	1.300	1.3	2
Diallate trans/cis	0.442	0.476	8.070	7.5	8
Hexachlorobenzene	0.228	0.209	6.890	7.5	-8
Dimethoate	0.357	0.404	8.480	7.5	13
Atrazine	0.210	0.217	7.760	7.5	3
Pentachlorophenol	0.134	0.142	7.950	7.5	6
4-Aminobiphenyl	0.564	0.631	8.390	7.5	12
Pentachloronitrobenzene	0.098	0.097	7.370	7.5	-2
Pronamide	0.341	0.360	7.920	7.5	6
Dinoseb	0.190	0.202	7.990	7.5	7
Phenanthrene	1.258	1.221	7.280	7.5	-3

(1) Cannot be Separated from Diphenylamine

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 10/20/18 Time: 09:37

Lab File ID: dj1801.d Init. Calib. Date(s): 09/21/18 09/21/18

Init. Calib. Times(s): 17:33 21:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.202	1.252	7.810	7.5	4
Carbazole	1.103	1.166	7.930	7.5	6
Methyl parathion	0.266	0.308	8.090	7.5	8
Di-n-butylphthalate	1.314	1.424	8.120	7.5	8
Parathion	0.169	0.195	8.040	7.5	7
4-Nitroquinoline-1-oxide	0.123	0.094	6.870	7.5	-8
Octachlorostyrene	0.086	0.077	6.730	7.5	-10
Isodrin	0.141	0.142	7.540	7.5	1
Fluoranthene	1.251	1.342	8.040	7.5	7
Benzidine	0.935	0.933	22.440	22.5	0
Pyrene	1.375	1.409	7.690	7.5	2
p-Dimethylaminoazobenzene	0.215	0.219	7.630	7.5	2
Chlorobenzilate	0.368	0.411	8.370	7.5	12
3,3'-Dimethylbenzidine	0.820	0.791	7.240	7.5	-4
Butylbenzylphthalate	0.581	0.647	8.350	7.5	11
2-Acetylaminofluorene	0.452	0.473	7.840	7.5	5
3,3'-Dichlorobenzidine	0.454	0.437	7.230	7.5	-4
4,4'-Methylenebis(2-chloroanil	0.256	0.238	6.980	7.5	-7
Benzo(a)anthracene	1.133	1.188	7.860	7.5	5
Chrysene	1.179	1.221	7.760	7.5	4
bis(2-Ethylhexyl)phthalate	0.771	0.832	8.090	7.5	8
6-Methylchrysene	0.809	0.778	7.210	7.5	-4
Di-n-octylphthalate	1.330	1.618	8.390	7.5	12
Benzo(b)fluoranthene	1.195	1.334	8.370	7.5	12
7,12-Dimethylbenz[a]anthracene	0.595	0.605	7.620	7.5	2
Benzo(k)fluoranthene	1.238	1.364	8.260	7.5	10
Benzo(a)pyrene	1.101	1.240	8.440	7.5	13
3-Methylcholanthrene	0.532	0.548	7.720	7.5	3
Dibenz(a,h)acridine	0.892	0.850	7.140	7.5	-5
Dibenz(a,j)acridine	0.986	0.903	6.860	7.5	-8
Indeno(1,2,3-cd)pyrene	1.023	1.001	7.340	7.5	-2
Dibenz(a,h)anthracene	1.117	1.058	7.100	7.5	-5
Benzo(g,h,i)perylene	1.156	1.060	6.880	7.5	-8
Total PAHs	1.147	1.284	151.070	135.0	12
2-Fluorophenol	1.505	1.532	15.260	15.0	2

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP19760 Calibration Date: 10/20/18 Time: 09:37

Lab File ID: dj1801.d Init. Calib. Date(s): 09/21/18 09/21/18

Init. Calib. Times(s): 17:33 21:11

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF7.5	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.043	2.156	15.830	15.0	6
Nitrobenzene-d5	0.474	0.468	14.820	15.0	-1
2-Fluorobiphenyl	1.597	1.617	15.180	15.0	1
2,4,6-Tribromophenol	0.165	0.180	16.360	15.0	9
Terphenyl-d14	0.832	0.842	15.190	15.0	1
			Average %Drift:		6

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP19760.i/18sep21.b/di1301.d **
/chem/HP19760.i/18sep21.b/di1302.d
/chem/HP19760.i/18sep21.b/di1303.d
/chem/HP19760.i/18sep21.b/di1304.d
/chem/HP19760.i/18sep21.b/di1305.d
/chem/HP19760.i/18sep21.b/di1306.d
/chem/HP19760.i/18sep21.b/di1307.d
/chem/HP19760.i/18sep21.b/di1308.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP19760.i/18oct20.b/dj1801.d

Area Summary

File ID:

Internal Standard Name	dj1801.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	297126	181644	90822	363288	Yes
Naphthalene-d8	1128182	678309	339154	1356618	Yes
Acenaphthene-d10	536209	318311	159156	636622	Yes
Phenanthrene-d10	991776	573202	286601	1146404	Yes
Pyrene-d10	967029	595163	297582	1190326	Yes
Perylene-d12	819312	608816	304408	1217632	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	dj1801.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.170	6.801	No
Naphthalene-d8	8.111	8.736	No
Acenaphthene-d10	10.891	11.528	No
Phenanthrene-d10	12.861	13.411	No
Pyrene-d10	14.703	15.381	No
Perylene-d12	19.045	19.852	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

7B
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/17/18 Time: 20:27

Lab File ID: lj1101.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.773	0.830	13.430	12.5	7
N-Nitrosodimethylamine	1.184	1.252	13.210	12.5	6
Pyridine	2.105	2.148	12.760	12.5	2
2-Picoline	2.080	2.135	12.830	12.5	3
N-Nitrosomethylethylamine	0.865	0.861	12.430	12.5	-1
Methyl methanesulfonate	1.089	1.066	12.240	12.5	-2
N-Nitrosodiethylamine	0.816	0.808	12.380	12.5	-1
Ethyl methanesulfonate	0.848	0.836	12.320	12.5	-1
Benzaldehyde	1.601	1.484	11.580	12.5	-7
Phenol	2.554	2.458	12.030	12.5	-4
Aniline	3.005	2.975	12.380	12.5	-1
a-methylstyrene	0.170	0.159	11.710	12.5	-6
bis(2-Chloroethyl)ether	1.979	2.009	12.690	12.5	2
2-Chlorophenol	1.479	1.493	12.620	12.5	1
1,3-Dichlorobenzene	1.633	1.644	12.590	12.5	1
1,4-Dichlorobenzene	1.660	1.649	12.420	12.5	-1
Benzyl alcohol	1.067	1.065	12.480	12.5	0
1,2-Dichlorobenzene	1.584	1.576	12.440	12.5	0
Indene	1.838	1.853	12.600	12.5	1
2-Methylphenol	1.541	1.588	12.880	12.5	3
2,2'-oxybis(1-Chloropropane)	2.096	1.998	11.910	12.5	-5
bis(2-Chloroisopropyl)ether	2.096	1.998	11.910	12.5	-5
N-Nitrosopyrrolidine	0.836	0.859	12.850	12.5	3
Acetophenone	2.402	2.343	12.200	12.5	-2
4-Methylphenol	1.731	1.736	12.530	12.5	0
Total Cresols	1.636	1.662	25.420	25.0	2
N-Nitroso-di-n-propylamine	1.396	1.405	12.580	12.5	1
N-Nitrosomorpholine	0.942	0.921	12.230	12.5	-2
o-Toluidine	2.829	2.733	12.070	12.5	-3
Hexachloroethane	0.762	0.782	12.830	12.5	3
Nitrobenzene	0.564	0.598	13.240	12.5	6
N-Nitrosopiperidine	0.208	0.215	12.880	12.5	3
Isophorone	0.945	0.958	12.670	12.5	1
2-Nitrophenol	0.177	0.197	13.850	12.5	11
2,4-Dimethylphenol	0.461	0.473	12.820	12.5	3
O,O,O-Triethylphosphorothioate	0.184	0.182	12.400	12.5	-1

7C

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/17/18 Time: 20:27

Lab File ID: lj1101.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.641	0.670	13.050	12.5	4
Benzoic acid	0.170	0.235	14.300	12.5	14
2,4-Dichlorophenol	0.307	0.336	13.670	12.5	9
1,2,4-Trichlorobenzene	0.346	0.370	13.360	12.5	7
Naphthalene	1.161	1.160	12.490	12.5	0
4-Chloroaniline	0.452	0.453	12.550	12.5	0
2,6-Dichlorophenol	0.306	0.318	12.980	12.5	4
Hexachloropropene	0.215	0.256	14.920	12.5	19
Hexachlorobutadiene	0.201	0.218	13.530	12.5	8
Quinoline	0.657	0.648	12.320	12.5	-1
Caprolactam	0.103	0.101	12.280	12.5	-2
N-Nitrosodi-n-butylamine	0.380	0.353	11.620	12.5	-7
4-Chloro-3-methylphenol	0.375	0.389	12.970	12.5	4
Safrole	0.274	0.280	12.750	12.5	2
2-Methylnaphthalene	0.720	0.734	12.760	12.5	2
1-Methylnaphthalene	0.693	0.704	12.700	12.5	2
Hexachlorocyclopentadiene	0.420	0.461	13.700	12.5	10
1,2,4,5-Tetrachlorobenzene	0.731	0.771	13.180	12.5	5
cis-Isosafrole	0.642	0.632	2.090	2.1	-2
2,4,6-Trichlorophenol	0.440	0.485	13.750	12.5	10
2,4,5-Trichlorophenol	0.464	0.513	13.820	12.5	11
trans-Isosafrole	0.650	0.654	10.430	10.4	1
Isosafrole	0.649	0.650	12.520	12.5	0
1,1'-Biphenyl	1.788	1.782	12.460	12.5	0
2-Chloronaphthalene	1.511	1.544	12.770	12.5	2
1-Chloronaphthalene	1.341	1.269	11.820	12.5	-5
Diphenyl ether	0.982	0.999	12.720	12.5	2
2-Nitroaniline	0.422	0.453	13.430	12.5	7
1,4-Naphthoquinone	0.553	0.545	12.320	12.5	-1
1,4-Dinitrobenzene	0.220	0.226	12.850	12.5	3
Dimethylphthalate	1.553	1.544	12.420	12.5	-1
1,3-Dinitrobenzene	0.243	0.247	12.710	12.5	2
2,6-Dinitrotoluene	0.347	0.355	12.770	12.5	2
Acenaphthylene	1.975	2.024	12.800	12.5	2
3-Nitroaniline	0.363	0.391	13.480	12.5	8
Acenaphthene	1.507	1.513	12.550	12.5	0

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/17/18 Time: 20:27

Lab File ID: lj1101.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.175	0.163	11.620	12.5	-7
4-Nitrophenol	0.299	0.284	11.860	12.5	-5
Pentachlorobenzene	0.580	0.597	12.870	12.5	3
2,4-Dinitrotoluene	0.452	0.467	12.910	12.5	3
2,4_2,6-Dinitrotoluenes	0.391	0.411	25.670	25.0	3
Dibenzofuran	1.974	2.009	12.720	12.5	2
1-Naphthylamine	1.480	1.502	12.680	12.5	1
2,3,4,6-Tetrachlorophenol	0.348	0.382	13.720	12.5	10
2-Naphthylamine	1.408	1.461	12.970	12.5	4
Diethylphthalate	1.564	1.545	12.350	12.5	-1
Thionazin	0.338	0.332	12.280	12.5	-2
Fluorene	1.549	1.581	12.760	12.5	2
4-Chlorophenyl-phenylether	0.744	0.773	12.990	12.5	4
5-Nitro-o-toluidine	0.426	0.429	12.590	12.5	1
4-Nitroaniline	0.374	0.402	13.450	12.5	8
4,6-Dinitro-2-methylphenol	0.126	0.140	13.980	12.5	12
N-Nitrosodiphenylamine (1)	0.668	0.667	12.490	12.5	0
NDPA as diphenylamine	0.668	0.667	12.490	12.5	0
1,2-Diphenylhydrazine	1.198	1.208	12.610	12.5	1
Tetraethyldithiopyrophosphate	0.192	0.191	12.410	12.5	-1
1,3,5-Trinitrobenzene	0.080	0.082	12.740	12.5	2
Diallate (peak 1)	0.502	0.510	10.520	10.4	1
Phorate	0.705	0.750	13.280	12.5	6
Phenacetin	0.480	0.513	13.370	12.5	7
4-Bromophenyl-phenylether	0.214	0.222	12.940	12.5	4
Diallate (peak 2)	0.414	0.414	2.120	2.1	0
Diallate trans/cis	0.487	0.493	12.650	12.5	1
Hexachlorobenzene	0.233	0.227	12.200	12.5	-2
Dimethoate	0.433	0.459	13.260	12.5	6
Atrazine	0.214	0.208	12.170	12.5	-3
Pentachlorophenol	0.135	0.132	12.270	12.5	-2
4-Aminobiphenyl	0.561	0.586	13.050	12.5	4
Pentachloronitrobenzene	0.106	0.112	13.170	12.5	5
Pronamide	0.368	0.398	13.510	12.5	8
Dinoseb	0.196	0.211	13.510	12.5	8
Phenanthrene	1.241	1.238	12.470	12.5	0

(1) Cannot be Separated from Diphenylamine

7C cont

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/17/18 Time: 20:27

Lab File ID: lj1101.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.206	1.248	12.940	12.5	4
Carbazole	1.090	1.128	12.940	12.5	3
Methyl parathion	0.334	0.355	13.300	12.5	6
Di-n-butylphthalate	1.418	1.505	13.270	12.5	6
Parathion	0.207	0.244	14.720	12.5	18
4-Nitroquinoline-1-oxide	0.118	0.103	10.850	12.5	-13
Octachlorostyrene	0.083	0.091	13.640	12.5	9
Isodrin	0.144	0.150	13.030	12.5	4
Fluoranthene	1.290	1.414	13.700	12.5	10
Benzidine	0.825	0.916	41.650	37.5	11
Pyrene	1.378	1.350	12.240	12.5	-2
p-Dimethylaminoazobenzene	0.199	0.211	13.270	12.5	6
Chlorobenzilate	0.426	0.454	13.340	12.5	7
3,3'-Dimethylbenzidine	0.788	0.918	14.560	12.5	17
Butylbenzylphthalate	0.634	0.714	14.070	12.5	13
2-Acetylaminofluorene	0.475	0.578	15.190	12.5	22
3,3'-Dichlorobenzidine	0.420	0.517	15.410	12.5	23
4,4'-Methylenebis(2-chloroanil	0.238	0.288	15.110	12.5	21
Benzo(a)anthracene	1.161	1.342	14.450	12.5	16
Chrysene	1.159	1.308	14.120	12.5	13
bis(2-Ethylhexyl)phthalate	0.889	1.048	14.740	12.5	18
6-Methylchrysene	0.772	0.881	14.260	12.5	14
Di-n-octylphthalate	1.688	1.879	13.910	12.5	11
Benzo(b)fluoranthene	1.258	1.309	13.010	12.5	4
7,12-Dimethylbenz[a]anthracene	0.533	0.597	14.020	12.5	12
Benzo(k)fluoranthene	1.232	1.352	13.720	12.5	10
Benzo(a)pyrene	1.171	1.252	13.360	12.5	7
3-Methylcholanthrene	0.518	0.571	13.780	12.5	10
Dibenz(a,h)acridine	0.953	0.964	12.640	12.5	1
Dibenz(a,j)acridine	1.003	0.988	12.310	12.5	-2
Indeno(1,2,3-cd)pyrene	1.133	1.134	12.510	12.5	0
Dibenz(a,h)anthracene	1.155	1.184	12.810	12.5	3
Benzo(g,h,i)perylene	1.167	1.192	12.770	12.5	2
Total PAHs	1.208	1.134	234.150	225.0	4
2-Fluorophenol	1.604	1.649	25.700	25.0	3

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/17/18 Time: 20:27

Lab File ID: 1j1101.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.204	2.256	25.590	25.0	2
Nitrobenzene-d5	0.556	0.576	25.920	25.0	4
2-Fluorobiphenyl	1.700	1.694	24.910	25.0	0
2,4,6-Tribromophenol	0.174	0.195	27.940	25.0	12
Terphenyl-d14	0.775	0.817	26.330	25.0	5
			Average %Drift:		5

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18sep24a.b/li1411.d **
/chem/HP20296.i/18sep24a.b/li1412.d
/chem/HP20296.i/18sep24a.b/li1413.d
/chem/HP20296.i/18sep24a.b/li1414.d
/chem/HP20296.i/18sep24a.b/li1415.d
/chem/HP20296.i/18sep24a.b/li1416.d
/chem/HP20296.i/18sep24a.b/li1417.d
/chem/HP20296.i/18sep24a.b/li1418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18oct17a.b/lj1101.d

Area Summary

File ID:

Internal Standard Name	lj1101.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	91045	104542	52271	209084	Yes
Naphthalene-d8	326682	390672	195336	781344	Yes
Acenaphthene-d10	152939	183697	91848	367394	Yes
Phenanthrene-d10	293196	350191	175096	700382	Yes
Pyrene-d10	314243	348756	174378	697512	Yes
Perylene-d12	310406	311681	155840	623362	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	lj1101.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.229	6.974	No
Naphthalene-d8	8.208	8.958	No
Acenaphthene-d10	11.043	11.782	No
Phenanthrene-d10	13.027	13.708	No
Pyrene-d10	14.931	15.751	No
Perylene-d12	19.360	20.324	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 07:04

Lab File ID: lj1141.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.773	0.797	12.890	12.5	3
N-Nitrosodimethylamine	1.184	1.200	12.660	12.5	1
Pyridine	2.105	1.955	11.610	12.5	-7
2-Picoline	2.080	2.067	12.420	12.5	-1
N-Nitrosomethylethylamine	0.865	0.834	12.050	12.5	-4
Methyl methanesulfonate	1.089	1.047	12.020	12.5	-4
N-Nitrosodiethylamine	0.816	0.779	11.930	12.5	-5
Ethyl methanesulfonate	0.848	0.823	12.120	12.5	-3
Benzaldehyde	1.601	1.451	11.330	12.5	-9
Phenol	2.554	2.397	11.730	12.5	-6
Aniline	3.005	2.931	12.190	12.5	-2
a-methylstyrene	0.170	0.172	12.630	12.5	1
bis(2-Chloroethyl)ether	1.979	1.941	12.260	12.5	-2
2-Chlorophenol	1.479	1.436	12.140	12.5	-3
1,3-Dichlorobenzene	1.633	1.612	12.340	12.5	-1
1,4-Dichlorobenzene	1.660	1.617	12.180	12.5	-3
Benzyl alcohol	1.067	1.012	11.850	12.5	-5
1,2-Dichlorobenzene	1.584	1.505	11.880	12.5	-5
Indene	1.838	1.789	12.170	12.5	-3
2-Methylphenol	1.541	1.502	12.190	12.5	-2
2,2'-oxybis(1-Chloropropane)	2.096	1.901	11.330	12.5	-9
bis(2-Chloroisopropyl)ether	2.096	1.901	11.330	12.5	-9
N-Nitrosopyrrolidine	0.836	0.851	12.720	12.5	2
Acetophenone	2.402	2.299	11.970	12.5	-4
4-Methylphenol	1.731	1.663	12.010	12.5	-4
Total Cresols	1.636	1.583	24.200	25.0	-3
N-Nitroso-di-n-propylamine	1.396	1.350	12.090	12.5	-3
N-Nitrosomorpholine	0.942	0.888	11.790	12.5	-6
o-Toluidine	2.829	2.642	11.670	12.5	-7
Hexachloroethane	0.762	0.763	12.520	12.5	0
Nitrobenzene	0.564	0.607	13.440	12.5	8
N-Nitrosopiperidine	0.208	0.214	12.850	12.5	3
Isophorone	0.945	0.979	12.950	12.5	4
2-Nitrophenol	0.177	0.200	14.110	12.5	13
2,4-Dimethylphenol	0.461	0.474	12.850	12.5	3
O,O,O-Triethylphosphorothioate	0.184	0.186	12.640	12.5	1

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 07:04

Lab File ID: lj1141.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.641	0.662	12.910	12.5	3
Benzoic acid	0.170	0.235	14.270	12.5	14
2,4-Dichlorophenol	0.307	0.335	13.620	12.5	9
1,2,4-Trichlorobenzene	0.346	0.382	13.820	12.5	11
Naphthalene	1.161	1.157	12.460	12.5	0
4-Chloroaniline	0.452	0.456	12.620	12.5	1
2,6-Dichlorophenol	0.306	0.322	13.160	12.5	5
Hexachloropropene	0.215	0.248	14.420	12.5	15
Hexachlorobutadiene	0.201	0.221	13.690	12.5	10
Quinoline	0.657	0.667	12.680	12.5	1
Caprolactam	0.103	0.109	13.170	12.5	5
N-Nitrosodi-n-butylamine	0.380	0.358	11.780	12.5	-6
4-Chloro-3-methylphenol	0.375	0.393	13.090	12.5	5
Safrole	0.274	0.282	12.840	12.5	3
2-Methylnaphthalene	0.720	0.738	12.830	12.5	3
1-Methylnaphthalene	0.693	0.712	12.850	12.5	3
Hexachlorocyclopentadiene	0.420	0.447	13.300	12.5	6
1,2,4,5-Tetrachlorobenzene	0.731	0.763	13.050	12.5	4
cis-Isosafrole	0.642	0.633	2.090	2.1	-1
2,4,6-Trichlorophenol	0.440	0.495	14.050	12.5	12
2,4,5-Trichlorophenol	0.464	0.510	13.750	12.5	10
trans-Isosafrole	0.650	0.666	10.620	10.4	2
Isosafrole	0.649	0.660	12.710	12.5	2
1,1'-Biphenyl	1.788	1.766	12.350	12.5	-1
2-Chloronaphthalene	1.511	1.425	11.790	12.5	-6
1-Chloronaphthalene	1.341	1.366	12.730	12.5	2
Diphenyl ether	0.982	0.973	12.380	12.5	-1
2-Nitroaniline	0.422	0.431	12.790	12.5	2
1,4-Naphthoquinone	0.553	0.541	12.230	12.5	-2
1,4-Dinitrobenzene	0.220	0.213	12.090	12.5	-3
Dimethylphthalate	1.553	1.542	12.410	12.5	-1
1,3-Dinitrobenzene	0.243	0.247	12.700	12.5	2
2,6-Dinitrotoluene	0.347	0.351	12.620	12.5	1
Acenaphthylene	1.975	2.031	12.850	12.5	3
3-Nitroaniline	0.363	0.388	13.350	12.5	7
Acenaphthene	1.507	1.491	12.360	12.5	-1

FORM VII SV-1

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 07:04

Lab File ID: lj1141.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.175	0.123	8.760	12.5	-30
4-Nitrophenol	0.299	0.283	11.850	12.5	-5
Pentachlorobenzene	0.580	0.606	13.050	12.5	4
2,4-Dinitrotoluene	0.452	0.467	12.920	12.5	3
2,4_2,6-Dinitrotoluenes	0.391	0.409	25.540	25.0	2
Dibenzofuran	1.974	2.013	12.750	12.5	2
1-Naphthylamine	1.480	1.433	12.100	12.5	-3
2,3,4,6-Tetrachlorophenol	0.348	0.388	13.940	12.5	12
2-Naphthylamine	1.408	1.439	12.770	12.5	2
Diethylphthalate	1.564	1.530	12.230	12.5	-2
Thionazin	0.338	0.331	12.220	12.5	-2
Fluorene	1.549	1.558	12.570	12.5	1
4-Chlorophenyl-phenylether	0.744	0.758	12.750	12.5	2
5-Nitro-o-toluidine	0.426	0.417	12.230	12.5	-2
4-Nitroaniline	0.374	0.388	12.970	12.5	4
4,6-Dinitro-2-methylphenol	0.126	0.120	11.910	12.5	-5
N-Nitrosodiphenylamine (1)	0.668	0.668	12.510	12.5	0
NDPA as diphenylamine	0.668	0.668	12.510	12.5	0
1,2-Diphenylhydrazine	1.198	1.173	12.240	12.5	-2
Tetraethyldithiopyrophosphate	0.192	0.193	12.520	12.5	0
1,3,5-Trinitrobenzene	0.080	0.083	12.940	12.5	4
Diallate (peak 1)	0.502	0.507	10.480	10.4	1
Phorate	0.705	0.717	12.710	12.5	2
Phenacetin	0.480	0.520	13.550	12.5	8
4-Bromophenyl-phenylether	0.214	0.219	12.790	12.5	2
Diallate (peak 2)	0.414	0.389	2.000	2.1	-6
Diallate trans/cis	0.487	0.487	12.470	12.5	0
Hexachlorobenzene	0.233	0.225	12.060	12.5	-4
Dimethoate	0.433	0.458	13.210	12.5	6
Atrazine	0.214	0.219	12.800	12.5	2
Pentachlorophenol	0.135	0.125	11.630	12.5	-7
4-Aminobiphenyl	0.561	0.585	13.030	12.5	4
Pentachloronitrobenzene	0.106	0.116	13.650	12.5	9
Pronamide	0.368	0.396	13.430	12.5	7
Dinoseb	0.196	0.190	12.150	12.5	-3
Phenanthrene	1.241	1.220	12.290	12.5	-2

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 07:04

Lab File ID: lj1141.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.206	1.237	12.830	12.5	3
Carbazole	1.090	1.122	12.870	12.5	3
Methyl parathion	0.334	0.356	13.320	12.5	7
Di-n-butylphthalate	1.418	1.496	13.190	12.5	6
Parathion	0.207	0.235	14.170	12.5	13
4-Nitroquinoline-1-oxide	0.118	0.093	9.770	12.5	-22
Octachlorostyrene	0.083	0.091	13.660	12.5	9
Isodrin	0.144	0.149	12.970	12.5	4
Fluoranthene	1.290	1.420	13.760	12.5	10
Benzidine	0.825	0.872	39.640	37.5	6
Pyrene	1.378	1.348	12.230	12.5	-2
p-Dimethylaminoazobenzene	0.199	0.217	13.650	12.5	9
Chlorobenzilate	0.426	0.452	13.270	12.5	6
3,3'-Dimethylbenzidine	0.788	0.885	14.050	12.5	12
Butylbenzylphthalate	0.634	0.698	13.740	12.5	10
2-Acetylaminofluorene	0.475	0.586	15.410	12.5	23
3,3'-Dichlorobenzidine	0.420	0.500	14.890	12.5	19
4,4'-Methylenebis(2-chloroanil	0.238	0.283	14.870	12.5	19
Benzo(a)anthracene	1.161	1.345	14.480	12.5	16
Chrysene	1.159	1.303	14.060	12.5	12
bis(2-Ethylhexyl)phthalate	0.889	1.043	14.670	12.5	17
6-Methylchrysene	0.772	0.883	14.300	12.5	14
Di-n-octylphthalate	1.688	1.841	13.630	12.5	9
Benzo(b)fluoranthene	1.258	1.338	13.300	12.5	6
7,12-Dimethylbenz[a]anthracene	0.533	0.572	13.430	12.5	7
Benzo(k)fluoranthene	1.232	1.296	13.150	12.5	5
Benzo(a)pyrene	1.171	1.238	13.220	12.5	6
3-Methylcholanthrene	0.518	0.549	13.250	12.5	6
Dibenz(a,h)acridine	0.953	0.931	12.200	12.5	-2
Dibenz(a,j)acridine	1.003	0.948	11.820	12.5	-5
Indeno(1,2,3-cd)pyrene	1.133	1.083	11.950	12.5	-4
Dibenz(a,h)anthracene	1.155	1.110	12.020	12.5	-4
Benzo(g,h,i)perylene	1.167	1.115	11.950	12.5	-4
Total PAHs	1.208	1.104	231.150	225.0	3
2-Fluorophenol	1.604	1.566	24.420	25.0	-2

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 07:04

Lab File ID: lj1141.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.204	2.192	24.870	25.0	-1
Nitrobenzene-d5	0.556	0.588	26.450	25.0	6
2-Fluorobiphenyl	1.700	1.697	24.950	25.0	0
2,4,6-Tribromophenol	0.174	0.191	27.350	25.0	9
Terphenyl-d14	0.775	0.814	26.250	25.0	5
			Average %Drift:		5

FORM VII SV-1

Continuing Calibration
Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem/HP20296.i/18sep24a.b/li1411.d **
/chem/HP20296.i/18sep24a.b/li1412.d
/chem/HP20296.i/18sep24a.b/li1413.d
/chem/HP20296.i/18sep24a.b/li1414.d
/chem/HP20296.i/18sep24a.b/li1415.d
/chem/HP20296.i/18sep24a.b/li1416.d
/chem/HP20296.i/18sep24a.b/li1417.d
/chem/HP20296.i/18sep24a.b/li1418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18oct18.b/lj1141.d

Area Summary

File ID:

Internal Standard Name	lj1141.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	103667	104542	52271	209084	Yes
Naphthalene-d8	356090	390672	195336	781344	Yes
Acenaphthene-d10	171078	183697	91848	367394	Yes
Phenanthrene-d10	326351	350191	175096	700382	Yes
Pyrene-d10	346532	348756	174378	697512	Yes
Perylene-d12	350574	311681	155840	623362	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	lj1141.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.218	6.974	No
Naphthalene-d8	8.203	8.958	No
Acenaphthene-d10	11.032	11.782	No
Phenanthrene-d10	13.022	13.708	No
Pyrene-d10	14.926	15.751	No
Perylene-d12	19.360	20.324	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

7B

SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 21:26

Lab File ID: lj1171.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,4-Dioxane	0.773	0.827	8.030	7.5	7
N-Nitrosodimethylamine	1.184	1.187	7.520	7.5	0
Pyridine	2.105	2.064	7.350	7.5	-2
2-Picoline	2.080	2.084	7.510	7.5	0
N-Nitrosomethylethylamine	0.865	0.729	6.320	7.5	-16
Methyl methanesulfonate	1.089	1.061	7.310	7.5	-3
N-Nitrosodiethylamine	0.816	0.794	7.300	7.5	-3
Ethyl methanesulfonate	0.848	0.853	7.540	7.5	1
Benzaldehyde	1.601	1.589	7.440	7.5	-1
Phenol	2.554	2.515	7.380	7.5	-2
Aniline	3.005	2.974	7.420	7.5	-1
a-methylstyrene	0.170	0.154	6.820	7.5	-9
bis(2-Chloroethyl)ether	1.979	1.975	7.480	7.5	0
2-Chlorophenol	1.479	1.498	7.600	7.5	1
1,3-Dichlorobenzene	1.633	1.646	7.560	7.5	1
1,4-Dichlorobenzene	1.660	1.650	7.450	7.5	-1
Benzyl alcohol	1.067	0.985	6.920	7.5	-8
1,2-Dichlorobenzene	1.584	1.586	7.510	7.5	0
Indene	1.838	1.763	7.190	7.5	-4
2-Methylphenol	1.541	1.554	7.570	7.5	1
2,2'-oxybis(1-Chloropropane)	2.096	2.085	7.460	7.5	-1
bis(2-Chloroisopropyl)ether	2.096	2.085	7.460	7.5	-1
N-Nitrosopyrrolidine	0.836	0.880	7.900	7.5	5
Acetophenone	2.402	2.422	7.560	7.5	1
4-Methylphenol	1.731	1.758	7.620	7.5	2
Total Cresols	1.636	1.656	15.180	15.0	1
N-Nitroso-di-n-propylamine	1.396	1.451	7.800	7.5	4
N-Nitrosomorpholine	0.942	0.957	7.620	7.5	2
o-Toluidine	2.829	2.806	7.440	7.5	-1
Hexachloroethane	0.762	0.809	7.970	7.5	6
Nitrobenzene	0.564	0.600	7.970	7.5	6
N-Nitrosopiperidine	0.208	0.216	7.780	7.5	4
Isophorone	0.945	0.965	7.660	7.5	2
2-Nitrophenol	0.177	0.193	8.140	7.5	9
2,4-Dimethylphenol	0.461	0.485	7.880	7.5	5
O,O,O-Triethylphosphorothioate	0.184	0.190	7.740	7.5	3

7C
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 21:26

Lab File ID: lj1171.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
bis(2-Chloroethoxy)methane	0.641	0.691	8.080	7.5	8
Benzoic acid	0.170	0.251	12.580	10.0	26
2,4-Dichlorophenol	0.307	0.339	8.260	7.5	10
1,2,4-Trichlorobenzene	0.346	0.368	7.990	7.5	7
Naphthalene	1.161	1.171	7.570	7.5	1
4-Chloroaniline	0.452	0.466	7.730	7.5	3
2,6-Dichlorophenol	0.306	0.321	7.860	7.5	5
Hexachloropropene	0.215	0.250	8.740	7.5	17
Hexachlorobutadiene	0.201	0.220	8.190	7.5	9
Quinoline	0.657	0.669	7.630	7.5	2
Caprolactam	0.103	0.109	7.910	7.5	5
N-Nitrosodi-n-butylamine	0.380	0.365	7.200	7.5	-4
4-Chloro-3-methylphenol	0.375	0.386	7.720	7.5	3
Safrole	0.274	0.283	7.730	7.5	3
2-Methylnaphthalene	0.720	0.758	7.900	7.5	5
1-Methylnaphthalene	0.693	0.708	7.660	7.5	2
Hexachlorocyclopentadiene	0.420	0.427	7.620	7.5	2
1,2,4,5-Tetrachlorobenzene	0.731	0.766	7.860	7.5	5
cis-Isosafrole	0.642	0.597	1.190	1.3	-7
2,4,6-Trichlorophenol	0.440	0.471	8.020	7.5	7
2,4,5-Trichlorophenol	0.464	0.491	7.940	7.5	6
trans-Isosafrole	0.650	0.699	6.690	6.2	7
Isosafrole	0.649	0.681	7.870	7.5	5
1,1'-Biphenyl	1.788	1.766	7.410	7.5	-1
2-Chloronaphthalene	1.511	1.451	7.200	7.5	-4
1-Chloronaphthalene	1.341	1.333	7.460	7.5	-1
Diphenyl ether	0.982	0.978	7.470	7.5	0
2-Nitroaniline	0.422	0.435	7.740	7.5	3
1,4-Naphthoquinone	0.553	0.521	7.070	7.5	-6
1,4-Dinitrobenzene	0.220	0.222	7.560	7.5	1
Dimethylphthalate	1.553	1.587	7.660	7.5	2
1,3-Dinitrobenzene	0.243	0.238	7.340	7.5	-2
2,6-Dinitrotoluene	0.347	0.352	7.600	7.5	1
Acenaphthylene	1.975	2.049	7.780	7.5	4
3-Nitroaniline	0.363	0.385	7.960	7.5	6
Acenaphthene	1.507	1.513	7.530	7.5	0

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 21:26

Lab File ID: lj1171.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
2,4-Dinitrophenol	0.175	0.158	9.050	10.0	-10
4-Nitrophenol	0.299	0.271	6.800	7.5	-9
Pentachlorobenzene	0.580	0.612	7.910	7.5	5
2,4-Dinitrotoluene	0.452	0.454	7.540	7.5	1
2,4_2,6-Dinitrotoluenes	0.391	0.403	15.140	15.0	1
Dibenzofuran	1.974	2.016	7.660	7.5	2
1-Naphthylamine	1.480	1.478	7.490	7.5	0
2,3,4,6-Tetrachlorophenol	0.348	0.370	7.970	7.5	6
2-Naphthylamine	1.408	1.477	7.860	7.5	5
Diethylphthalate	1.564	1.559	7.480	7.5	0
Thionazin	0.338	0.339	7.520	7.5	0
Fluorene	1.549	1.612	7.800	7.5	4
4-Chlorophenyl-phenylether	0.744	0.786	7.920	7.5	6
5-Nitro-o-toluidine	0.426	0.432	7.600	7.5	1
4-Nitroaniline	0.374	0.402	8.060	7.5	7
4,6-Dinitro-2-methylphenol	0.126	0.122	7.300	7.5	-3
N-Nitrosodiphenylamine (1)	0.668	0.676	7.600	7.5	1
NDPA as diphenylamine	0.668	0.676	7.600	7.5	1
1,2-Diphenylhydrazine	1.198	1.188	7.440	7.5	-1
Tetraethyldithiopyrophosphate	0.192	0.193	7.500	7.5	0
1,3,5-Trinitrobenzene	0.080	0.070	6.490	7.5	-13
Diallate (peak 1)	0.502	0.515	6.380	6.2	3
Phorate	0.705	0.731	7.770	7.5	4
Phenacetin	0.480	0.487	7.620	7.5	2
4-Bromophenyl-phenylether	0.214	0.223	7.800	7.5	4
Diallate (peak 2)	0.414	0.408	1.260	1.3	-2
Diallate trans/cis	0.487	0.497	7.640	7.5	2
Hexachlorobenzene	0.233	0.226	7.270	7.5	-3
Dimethoate	0.433	0.433	7.500	7.5	0
Atrazine	0.214	0.220	7.700	7.5	3
Pentachlorophenol	0.135	0.119	6.640	7.5	-11
4-Aminobiphenyl	0.561	0.587	7.850	7.5	5
Pentachloronitrobenzene	0.106	0.113	7.950	7.5	6
Pronamide	0.368	0.370	7.530	7.5	0
Dinoseb	0.196	0.194	7.440	7.5	-1
Phenanthrene	1.241	1.214	7.340	7.5	-2

(1) Cannot be Separated from Diphenylamine

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 21:26

Lab File ID: lj1171.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Anthracene	1.206	1.236	7.690	7.5	2
Carbazole	1.090	1.082	7.440	7.5	-1
Methyl parathion	0.334	0.326	7.310	7.5	-2
Di-n-butylphthalate	1.418	1.409	7.450	7.5	-1
Parathion	0.207	0.217	7.840	7.5	4
4-Nitroquinoline-1-oxide	0.118	0.084	5.340	7.5	-29
Octachlorostyrene	0.083	0.085	7.660	7.5	2
Isodrin	0.144	0.145	7.550	7.5	1
Fluoranthene	1.290	1.330	7.730	7.5	3
Benzidine	0.825	0.850	23.180	22.5	3
Pyrene	1.378	1.349	7.340	7.5	-2
p-Dimethylaminoazobenzene	0.199	0.186	7.020	7.5	-6
Chlorobenzilate	0.426	0.424	7.480	7.5	0
3,3'-Dimethylbenzidine	0.788	0.812	7.730	7.5	3
Butylbenzylphthalate	0.634	0.653	7.720	7.5	3
2-Acetylaminofluorene	0.475	0.494	7.800	7.5	4
3,3'-Dichlorobenzidine	0.420	0.470	8.410	7.5	12
4,4'-Methylenebis(2-chloroanil	0.238	0.264	8.330	7.5	11
Benzo(a)anthracene	1.161	1.237	7.990	7.5	7
Chrysene	1.159	1.245	8.060	7.5	7
bis(2-Ethylhexyl)phthalate	0.889	0.959	8.100	7.5	8
6-Methylchrysene	0.772	0.812	7.890	7.5	5
Di-n-octylphthalate	1.688	1.736	7.710	7.5	3
Benzo(b)fluoranthene	1.258	1.298	7.740	7.5	3
7,12-Dimethylbenz[a]anthracene	0.533	0.557	7.850	7.5	5
Benzo(k)fluoranthene	1.232	1.318	8.030	7.5	7
Benzo(a)pyrene	1.171	1.222	7.830	7.5	4
3-Methylcholanthrene	0.518	0.546	7.900	7.5	5
Dibenz(a,h)acridine	0.953	0.977	7.680	7.5	2
Dibenz(a,j)acridine	1.003	1.007	7.530	7.5	0
Indeno(1,2,3-cd)pyrene	1.133	1.134	7.510	7.5	0
Dibenz(a,h)anthracene	1.155	1.204	7.820	7.5	4
Benzo(g,h,i)perylene	1.167	1.240	7.970	7.5	6
Total PAHs	1.208	1.165	139.290	135.0	3
2-Fluorophenol	1.604	1.634	15.280	15.0	2

FORM VII SV-1

7C cont
SEMIVOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_____

Instrument ID: HP20296 Calibration Date: 10/18/18 Time: 21:26

Lab File ID: lj1171.d Init. Calib. Date(s): 09/24/18 09/24/18

Init. Calib. Times(s): 19:02 22:39

Min RRF for SPCC(#) = 0.050 Max %Drift for CCC(*) = 20%

COMPOUND	RRF	RRF12	ACTUAL CONC.	TRUE CONC.	% DRIFT
Phenol-d6	2.204	2.253	15.330	15.0	2
Nitrobenzene-d5	0.556	0.574	15.500	15.0	3
2-Fluorobiphenyl	1.700	1.714	15.120	15.0	1
2,4,6-Tribromophenol	0.174	0.191	16.470	15.0	10
Terphenyl-d14	0.775	0.801	15.490	15.0	3
			Average %Drift:		4

Continuing Calibration
Internal Standard Area and Retention Time
Summary

Initial Calibration Standards:

/chem/HP20296.i/18sep24a.b/li1411.d **
/chem/HP20296.i/18sep24a.b/li1412.d
/chem/HP20296.i/18sep24a.b/li1413.d
/chem/HP20296.i/18sep24a.b/li1414.d
/chem/HP20296.i/18sep24a.b/li1415.d
/chem/HP20296.i/18sep24a.b/li1416.d
/chem/HP20296.i/18sep24a.b/li1417.d
/chem/HP20296.i/18sep24a.b/li1418.d

** indicates the Mid Level Calibration Standard.

Mid Level Calibration Standard is used for comparison.

Current Continuing Calibration Standard:

/chem/HP20296.i/18oct18a.b/lj1171.d

Area Summary

File ID:

Internal Standard Name	lj1171.d	ICAL Area	Low Limit	High Limit	In Spec
1,4-Dichlorobenzene-d4	99804	104542	52271	209084	Yes
Naphthalene-d8	360274	390672	195336	781344	Yes
Acenaphthene-d10	175362	183697	91848	367394	Yes
Phenanthrene-d10	335381	350191	175096	700382	Yes
Pyrene-d10	343944	348756	174378	697512	Yes
Perylene-d12	327816	311681	155840	623362	Yes

A "No" indicates the internal standard area is outside acceptable QC limits.

RT Summary

File ID:

Internal Standard Name	lj1171.d	ICAL RT	In Spec
1,4-Dichlorobenzene-d4	6.213	6.974	No
Naphthalene-d8	8.192	8.958	No
Acenaphthene-d10	11.027	11.782	No
Phenanthrene-d10	13.011	13.708	No
Pyrene-d10	14.915	15.751	No
Perylene-d12	19.344	20.324	No

A "No" indicates the retention time is greater than 10 seconds from the RT of the referenced standard.

Comments: Unless otherwise documented, the shift in retention time is due to routine injection port maintenance, which involves the removal of a length of the analytical column.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dj1801.d Date Analyzed: 10/20/18

Instrument ID: HP19760 Time Analyzed: 09:37

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	297126	6.170	1128182	8.111	536209	10.891
UPPER LIMIT	594252	6.670	2256364	8.611	1072418	11.391
LOWER LIMIT	148563	5.670	564091	7.611	268105	10.391
LLI SAMPLE NO.						
01 SBLKWF292	268943	6.170	1051357	8.111	481250	10.885
02 292WFLCS1	228644	6.170	872208	8.111	406040	10.885
03 292WFLCSD	239883	6.176	887482	8.111	394566	10.891
04 292WFLCS	255256	6.170	960009	8.111	421424	10.885
05 292WFLCSD1	234373	6.170	860932	8.111	370621	10.885
06 9850252RE	244070	6.170	937210	8.111	421292	10.885
07 9858584	251200	6.170	948544	8.105	426909	10.885
08 9853777	271719	6.170	999994	8.105	437096	10.885
09 9850984	296684	6.170	1080708	8.105	461689	10.885
10 9850985	291295	6.170	1035028	8.105	455884	10.885
11 9850986	281779	6.170	1029491	8.105	440429	10.886
12 9850987	294129	6.170	1081461	8.105	489874	10.886
13 9850988	282633	6.170	1048166	8.105	470971	10.886

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): dj1801.d Date Analyzed: 10/20/18

Instrument ID: HP19760 Time Analyzed: 09:37

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	991776	12.861	967029	14.703	819312	19.045
UPPER LIMIT	1983552	13.361	1934058	15.203	1638624	19.545
LOWER LIMIT	495888	12.361	483515	14.203	409656	18.545
LLI SAMPLE NO.						
01 SBLKWF292	923659	12.856	864857	14.697	642964	19.046
02 292WFLCS1	781577	12.856	750207	14.703	623398	19.046
03 292WFLCSD	731716	12.856	758733	14.703	717931	19.046
04 292WFLCS	821164	12.855	791168	14.697	613539	19.040
05 292WFLCSD1	654138	12.855	612521	14.703	616650	19.045
06 9850252RE	797168	12.855	753302	14.697	631855	19.045
07 9858584	798060	12.856	760071	14.697	616504	19.046
08 9853777	805482	12.856	751760	14.697	597011	19.046
09 9850984	889809	12.855	910885	14.703	864620	19.045
10 9850985	945782	12.855	971024	14.703	871643	19.045
11 9850986	797417	12.856	820220	14.697	782243	19.040
12 9850987	983444	12.856	981669	14.697	843806	19.040
13 9850988	933426	12.856	931676	14.697	805728	19.046

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1101.d Date Analyzed: 10/17/18

Instrument ID: HP20296 Time Analyzed: 20:27

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	91045	6.229	326682	8.208	152939	11.043
UPPER LIMIT	182090	6.729	653364	8.708	305878	11.543
LOWER LIMIT	45523	5.729	163341	7.708	76470	10.543
LLI SAMPLE NO.						
01 SBLKWT288	88078	6.224	337010	8.203	156842	11.037
02 SBLKWZ288	88078	6.224	337010	8.203	156842	11.037
03 288WTLCS	85388	6.224	330362	8.203	151990	11.037
04 288WZLCS	85388	6.224	330362	8.203	151990	11.037
05 288WZLCS1	89529	6.224	330510	8.203	152342	11.032
06 288WZLCSD1	88219	6.224	324316	8.203	149133	11.032
07 9843834	88553	6.224	307704	8.197	166788	11.037
08 9843835	83475	6.218	290031	8.197	175152	11.032
09 9843836	86524	6.218	307275	8.197	158443	11.032
10 9843837	87906	6.218	313918	8.197	161086	11.032
11 9843845	86858	6.224	309072	8.197	154472	11.032
12 9843846	85811	6.224	308607	8.197	150211	11.032
13 9843847	93403	6.224	342272	8.197	163807	11.032
14 9844527	92249	6.218	334261	8.197	154385	11.032
15 9851156	82539	6.218	308126	8.197	145393	11.032
16 9851157	85574	6.218	308725	8.197	151277	11.032

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1101.d Date Analyzed: 10/17/18

Instrument ID: HP20296 Time Analyzed: 20:27

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	293196	13.027	314243	14.931	310406	19.360
UPPER LIMIT	586392	13.527	628486	15.431	620812	19.860
LOWER LIMIT	146598	12.527	157122	14.431	155203	18.860
LLI SAMPLE NO.						
01 SBLKWT288	284246	13.022	276945	14.926	255512	19.360
02 SBLKWZ288	284246	13.022	276945	14.926	255512	19.360
03 288WTLCS	275775	13.022	288941	14.926	296881	19.360
04 288WZLCS	275775	13.022	288941	14.926	296881	19.360
05 288WZLCS1	297298	13.022	292518	14.926	286884	19.355
06 288WZLCSD1	287756	13.022	281663	14.926	267043	19.354
07 9843834	239966	13.022	304050	14.926	319871	19.360
08 9843835	251116	13.022	315154	14.926	317159	19.365
09 9843836	259037	13.022	294988	14.926	319277	19.355
10 9843837	243815	13.022	303213	14.926	321695	19.360
11 9843845	254435	13.022	296905	14.926	317136	19.355
12 9843846	286161	13.016	284448	14.926	286012	19.355
13 9843847	303238	13.016	302198	14.920	301713	19.354
14 9844527	284135	13.016	292612	14.921	291087	19.355
15 9851156	278021	13.016	281433	14.921	274559	19.355
16 9851157	290349	13.016	298182	14.920	294555	19.355

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1141.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 07:04

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	103667	6.218	356090	8.203	171078	11.032
UPPER LIMIT	207334	6.718	712180	8.703	342156	11.532
LOWER LIMIT	51834	5.718	178045	7.703	85539	10.532
LLI SAMPLE NO.						
01 SBLKWD290	89681	6.213	340190	8.197	157366	11.032
02 290WDLCS	90166	6.213	329488	8.192	153905	11.027
03 9839062RE	91663	6.213	329851	8.192	158618	11.027
04 9839063RE	88184	6.213	326479	8.192	154308	11.027
05 9839064MSDSD	92829	6.218	319742	8.192	155427	11.027
06 9843845DL	98255	6.213	350418	8.192	165220	11.027
07 288WZUS	95098	6.213	343799	8.192	161845	11.027
08 9850252	95098	6.213	343799	8.192	161845	11.027
09 288WZMS	90798	6.218	328654	8.192	158239	11.027
10 9850253MS	90798	6.218	328654	8.192	158239	11.027
11 288WZMSD	86493	6.218	330453	8.192	153627	11.027
12 9850254MSD	86493	6.218	330453	8.192	153627	11.027
13 9848058	91433	6.213	333732	8.192	153583	11.027
14 9848557	86499	6.218	261725	8.240	106887	11.032
15 9850249	88685	6.213	329164	8.192	148507	11.027
16 9850250	88475	6.218	321190	8.192	152804	11.027
17 9850251	76261	6.213	277102	8.192	130251	11.027

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1141.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 07:04

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	326351	13.022	346532	14.926	350574	19.360
UPPER LIMIT	652702	13.522	693064	15.426	701148	19.860
LOWER LIMIT	163176	12.522	173266	14.426	175287	18.860
LLI SAMPLE NO.						
01 SBLKWD290	284030	13.016	277605	14.921	263048	19.349
02 290WDLCS	280256	13.017	289794	14.915	285478	19.344
03 9839062RE	288410	13.016	314420	14.915	318591	19.349
04 9839063RE	275649	13.016	305953	14.921	316675	19.355
05 9839064MSDSD	269695	13.016	308364	14.921	322069	19.349
06 9843845DL	309952	13.016	319390	14.915	316061	19.344
07 288WZUS	309115	13.016	308346	14.915	280101	19.344
08 9850252	309115	13.016	308346	14.915	280101	19.344
09 288WZMS	286884	13.016	297491	14.915	293409	19.349
10 9850253MS	286884	13.016	297491	14.915	293409	19.349
11 288WZMSD	281618	13.016	292591	14.915	295810	19.349
12 9850254MSD	281618	13.016	292591	14.915	295810	19.349
13 9848058	290411	13.016	301825	14.915	278180	19.349
14 9848557	266388	13.016	303874	14.915	268644	19.349
15 9850249	292180	13.011	304653	14.915	286593	19.349
16 9850250	285922	13.011	305128	14.915	283431	19.349
17 9850251	243549	13.011	263047	14.915	242684	19.349

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1141.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 07:04

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	103667	6.218	356090	8.203	171078	11.032
UPPER LIMIT	207334	6.718	712180	8.703	342156	11.532
LOWER LIMIT	51834	5.718	178045	7.703	85539	10.532
LLI SAMPLE NO.						
18 9850255	90419	6.213	327254	8.192	147931	11.027
19 9850256	90176	6.213	325752	8.192	150187	11.027
20 9850257	93416	6.218	341861	8.192	159980	11.027

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1141.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 07:04

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	326351	13.022	346532	14.926	350574	19.360
UPPER LIMIT	652702	13.522	693064	15.426	701148	19.860
LOWER LIMIT	163176	12.522	173266	14.426	175287	18.860
LLI SAMPLE NO.						
18 9850255	296549	13.011	306953	14.915	277517	19.349
19 9850256	299869	13.011	304122	14.915	280999	19.344
20 9850257	308722	13.011	320543	14.915	287367	19.349

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8B

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1171.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 21:26

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	99804	6.213	360274	8.192	175362	11.027
UPPER LIMIT	199608	6.713	720548	8.692	350724	11.527
LOWER LIMIT	49902	5.713	180137	7.692	87681	10.527
LLI SAMPLE NO.						
01 SBLKWF290	90326	6.213	335123	8.192	158139	11.027
02 290WFLCS	90544	6.218	328331	8.192	153166	11.027
03 9850258	93141	6.208	340101	8.192	162032	11.021
04 9850259	92292	6.213	339236	8.192	161396	11.021
05 9850260	90783	6.213	328243	8.192	155354	11.027
06 9850261	87875	6.213	330886	8.192	157888	11.027
07 9848557DL	85715	6.213	332324	8.192	157309	11.027
08 9851714	88807	6.213	332757	8.192	152629	11.027
09 9852472	89475	6.234	244073	8.219	123214	11.053
10 9852726	83202	6.213	307911	8.192	149069	11.021
11 9852727	88539	6.213	320319	8.192	154254	11.027
12 9852728	94912	6.213	347298	8.192	168244	11.027
13 9852729	86575	6.213	308809	8.192	155178	11.027
14 9852790	94637	6.213	364974	8.192	185080	11.027
15 9852793	89701	6.213	337768	8.192	168817	11.027
16 9854805	83451	6.213	317451	8.192	157024	11.021
17 9854806MS	91475	6.213	355076	8.192	181366	11.027

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1171.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 21:26

	IS4(PHN)		IS5(PYR)		IS6(PRY)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	335381	13.011	343944	14.915	327816	19.344
UPPER LIMIT	670762	13.511	687888	15.415	655632	19.844
LOWER LIMIT	167691	12.511	171972	14.415	163908	18.844
LLI SAMPLE NO.						
01 SBLKWF290	296867	13.011	294792	14.915	254071	19.349
02 290WFLCS	289517	13.011	286519	14.915	286239	19.344
03 9850258	304700	13.011	298183	14.915	260579	19.344
04 9850259	307138	13.011	296701	14.915	258564	19.344
05 9850260	291158	13.011	282975	14.915	248556	19.344
06 9850261	290745	13.011	283218	14.915	242696	19.344
07 9848557DL	316974	13.011	301716	14.915	266675	19.344
08 9851714	297129	13.011	275260	14.915	237315	19.344
09 9852472	200966	13.038	324936	14.931	336827	19.344
10 9852726	285448	13.011	289030	14.915	292633	19.344
11 9852727	296433	13.011	293896	14.915	284606	19.344
12 9852728	332661	13.011	333261	14.915	326274	19.344
13 9852729	309898	13.011	310130	14.915	301841	19.344
14 9852790	386412	13.011	402147	14.915	329779	19.344
15 9852793	343162	13.011	361102	14.915	331550	19.344
16 9854805	335142	13.011	354705	14.915	327207	19.344
17 9854806MS	371447	13.017	386349	14.915	319264	19.349

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C
SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1171.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 21:26

	IS1(DCB)		IS2(NPT)		IS3(ANT)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	99804	6.213	360274	8.192	175362	11.027
UPPER LIMIT	199608	6.713	720548	8.692	350724	11.527
LOWER LIMIT	49902	5.713	180137	7.692	87681	10.527
LLI SAMPLE NO.						
18 9854807MSD	85217	6.213	327546	8.192	156270	11.027
19 9854809	90006	6.213	317797	8.192	153524	11.021
20 9854813	92152	6.213	341787	8.192	164313	11.027
21 9854814	88153	6.213	329675	8.192	154000	11.027

IS1 (DCB) = 1,4-Dichlorobenzene-d4
IS2 (NPT) = Naphthalene-d8
IS3 (ANT) = Acenaphthene-d10

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

8C

SEMIVOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: LANCASTER LABS Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID (Standard): lj1171.d Date Analyzed: 10/18/18

Instrument ID: HP20296 Time Analyzed: 21:26

		IS4(PHN)		IS5(PYR)		IS6(PRY)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	335381	13.011	343944	14.915	327816	19.344
	UPPER LIMIT	670762	13.511	687888	15.415	655632	19.844
	LOWER LIMIT	167691	12.511	171972	14.415	163908	18.844
	LLI SAMPLE NO.						
18	9854807MSD	313918	13.011	319798	14.915	306263	19.344
19	9854809	314853	13.011	319877	14.915	308117	19.344
20	9854813	342498	13.011	351743	14.915	333717	19.344
21	9854814	307304	13.011	298482	14.915	278917	19.344

IS4 (PHN) = Phenanthrene-d10
IS5 (PYR) = Pyrene-d10
IS6 (PRY) = Perylene-d12

AREA UPPER LIMIT = +100% of internal standard area
AREA LOWER LIMIT = -50% of internal standard area
RT UPPER LIMIT = +0.50 minutes of internal standard RT
RT LOWER LIMIT = -0.50 minutes of internal standard RT

Column used to flag internal standard are and RT values with an asterisk
* Values outside of QC limits.

Sample Data

Semivolatiles by GC/MS

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1155.d
Data file Sample Info. Line: 94280;9850249;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Injection date and time: **18-OCT-2018 15:56**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.005)	921	152	88685	(-14)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	329164	(-8)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	148507	(-13)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	292180	(-10)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	304653	(-12)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	286593	(-18)	5.00	

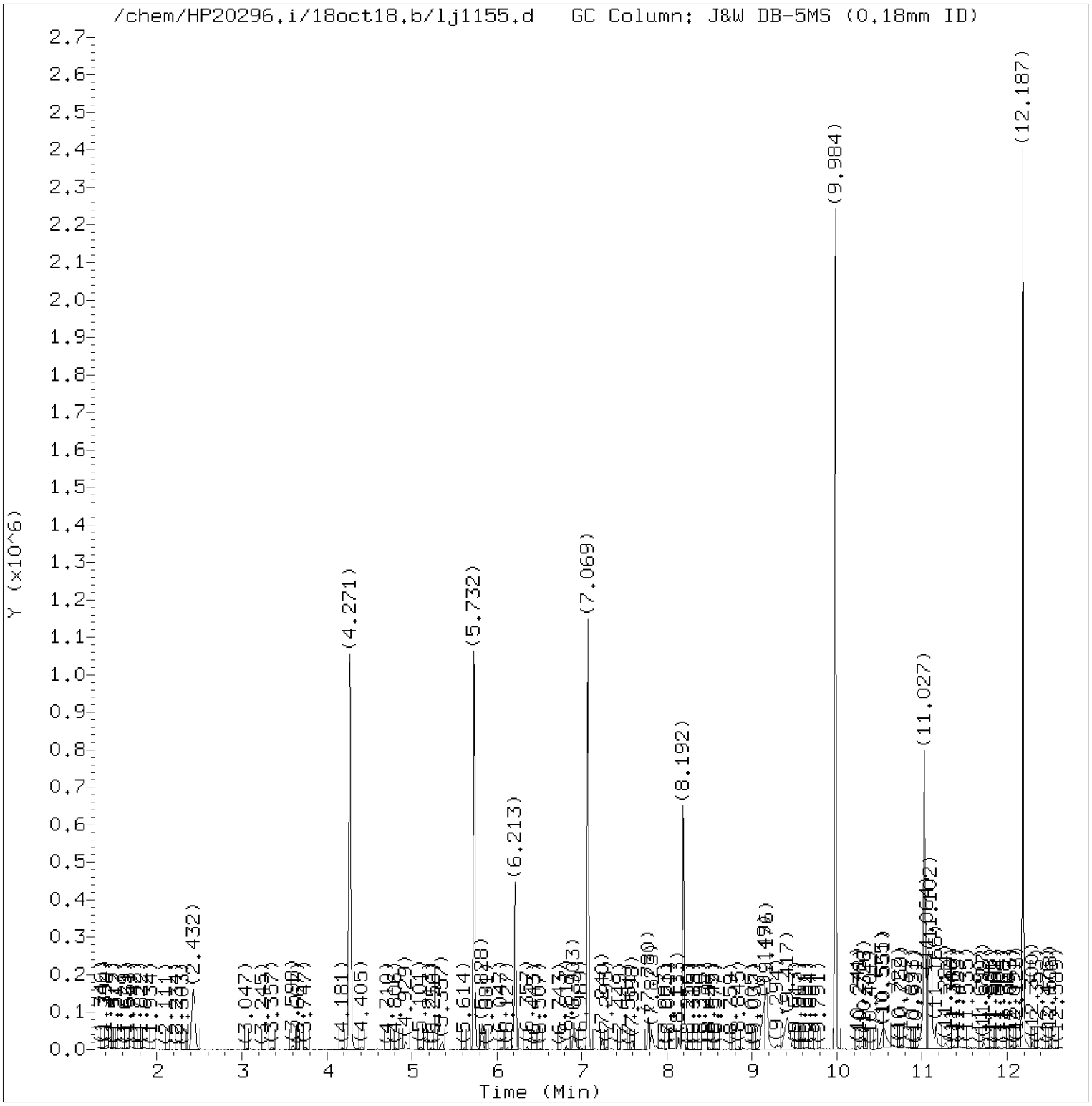
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	528544	14.442	58%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	786741	15.581	62%		39 - 105
184) Terphenyl-d14	(5)	15.242	(0.000)	244	1124679	23.804	95%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

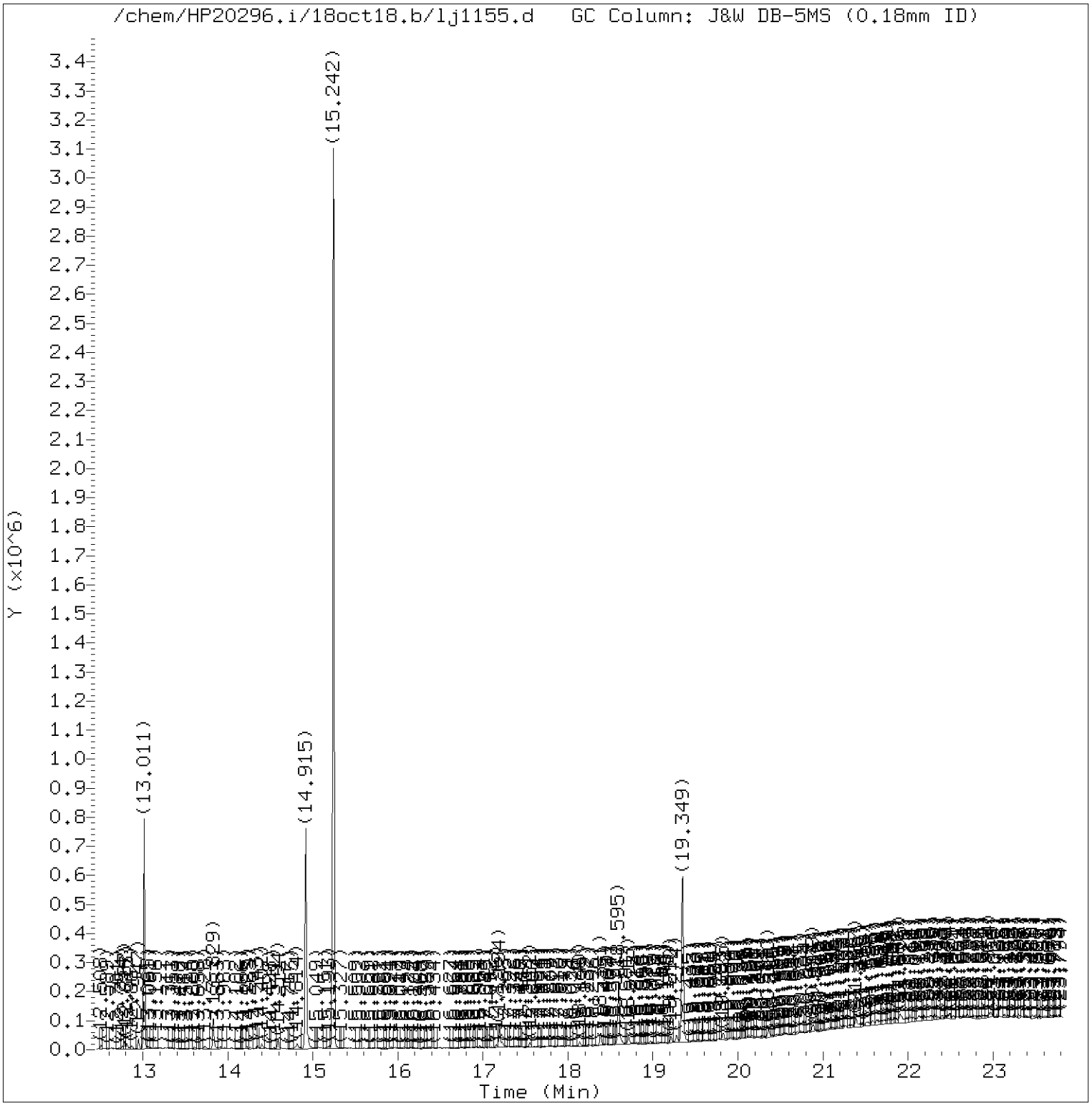
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1155.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 15:56 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94280 Lab Sample ID: 9850249

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1155.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 15:56 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94280 Lab Sample ID: 9850249

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1155.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 15:56 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94280 Lab Sample ID: 9850249

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	88685	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	528544	14.442
68)*Naphthalene-d8	(2)	8.192	136	329164	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	786741	15.581
118)*Acenaphthene-d10	(3)	11.027	164	148507	5.000
158)*Phenanthrene-d10	(4)	13.011	188	292180	5.000
180)*Pyrene-d10	(5)	14.915	212	304653	5.000
184)$Terphenyl-d14	(5)	15.242	244	1124679	23.804
218)*Perylene-d12	(6)	19.349	264	286593	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1156.d Injection date and time: **18-OCT-2018 16:25**
Data file Sample Info. Line: 94281;9850250;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.218	(0.000)	922	152	88475	(-15)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	321190	(-10)	5.00	
118) Acenaphthene-d10	11.027	(0.006)	1821	164	152804	(-11)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	285922	(-12)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	305128	(-12)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	283431	(-19)	5.00	

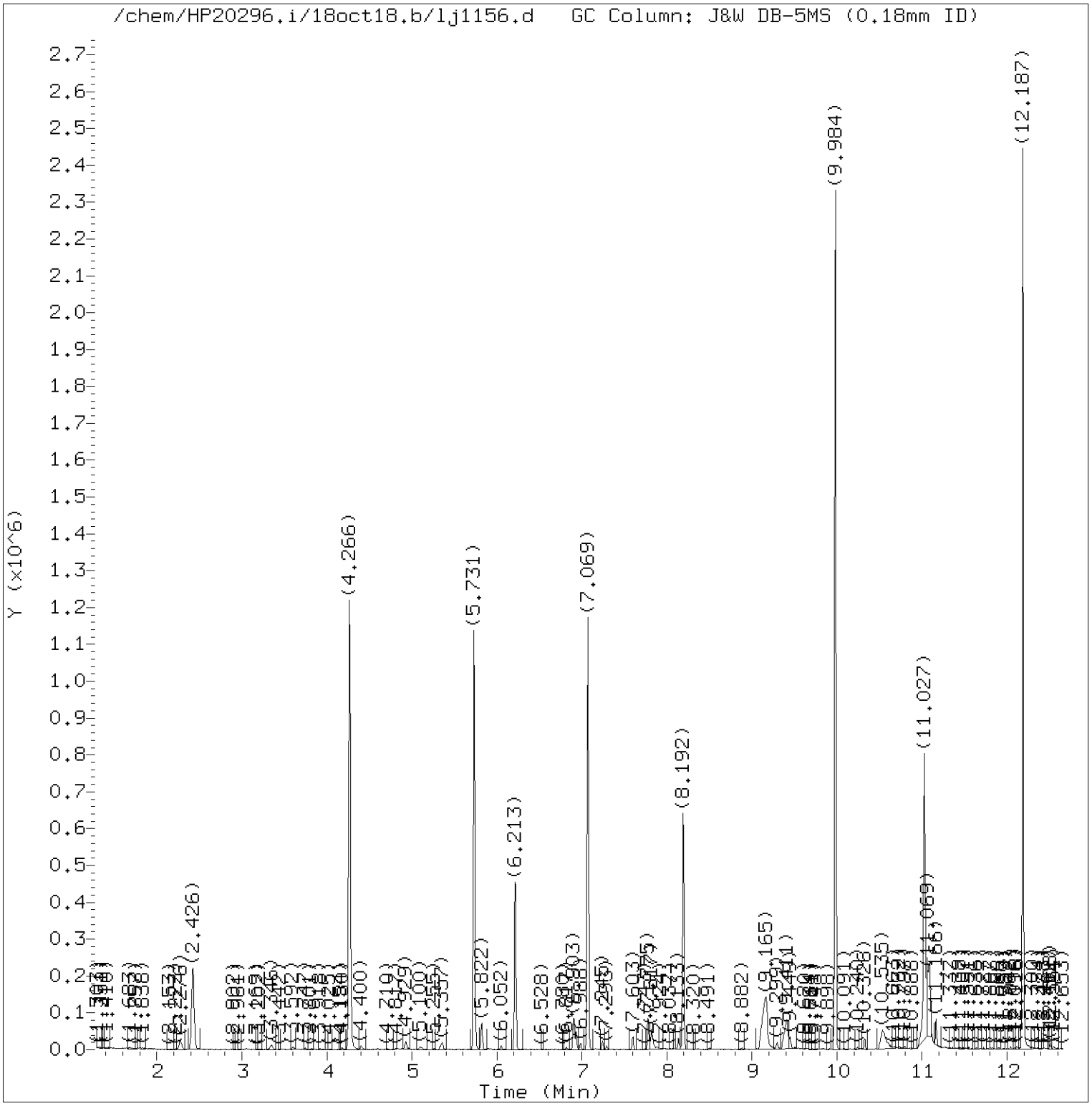
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	538537	15.081	60%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	807810	15.549	62%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	666167	14.078	56%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

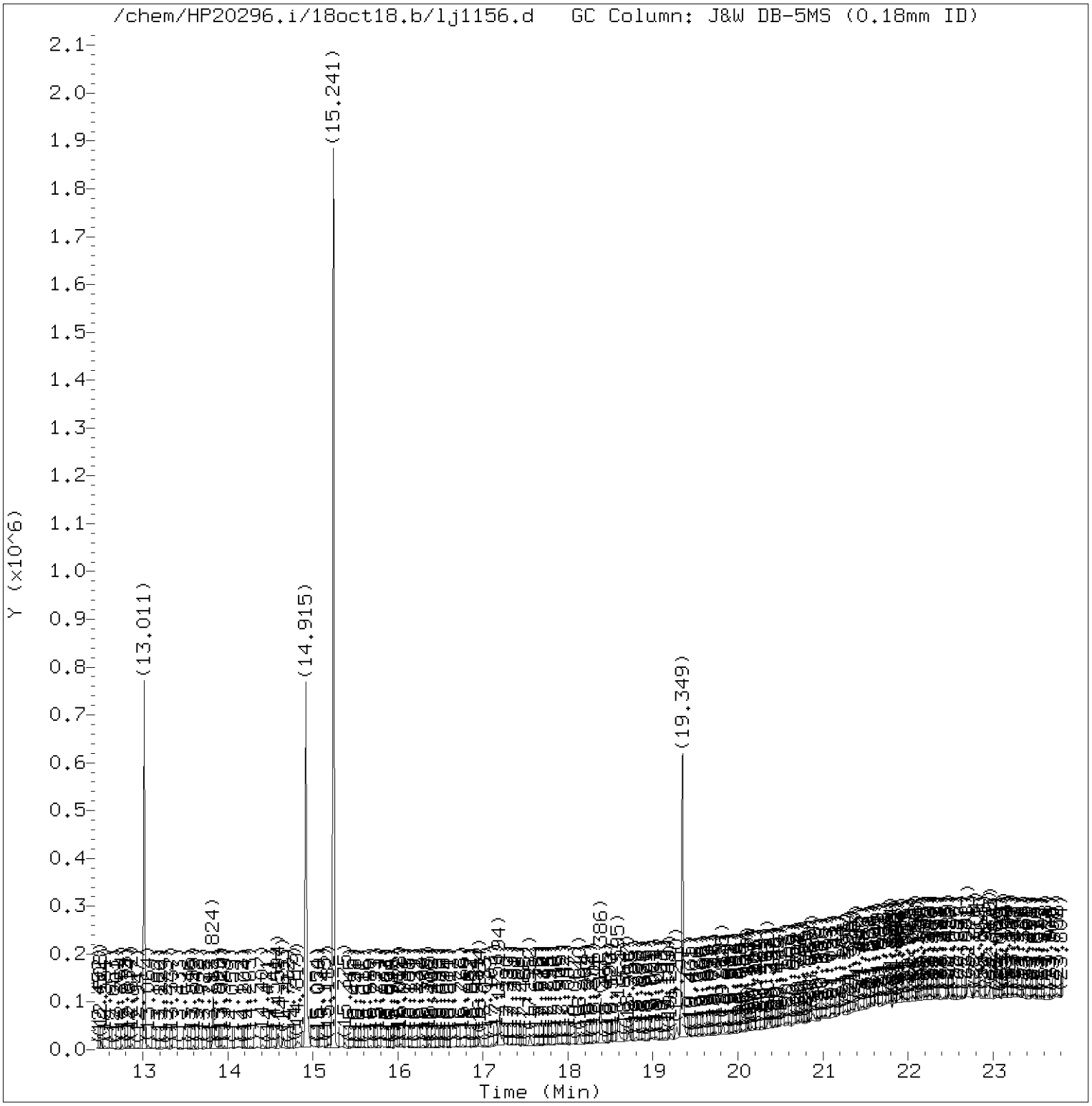
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1156.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:25 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94281 Lab Sample ID: 9850250

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1156.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:25 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94281 Lab Sample ID: 9850250

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1156.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:25 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94281 Lab Sample ID: 9850250

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.218	152	88475	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	538537	15.081
68)*Naphthalene-d8	(2)	8.192	136	321190	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	807810	15.549
118)*Acenaphthene-d10	(3)	11.027	164	152804	5.000
158)*Phenanthrene-d10	(4)	13.011	188	285922	5.000
180)*Pyrene-d10	(5)	14.915	212	305128	5.000
184)$Terphenyl-d14	(5)	15.241	244	666167	14.078
218)*Perylene-d12	(6)	19.349	264	283431	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1157.d
Data file Sample Info. Line: 94282;9850251;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Injection date and time: **18-OCT-2018 16:53**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 251 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.006)	921	152	76261	(-26)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	277102	(-22)	5.00	
118) Acenaphthene-d10	11.027	(0.006)	1821	164	130251	(-24)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	243549	(-25)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	263047	(-24)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	242684	(-31)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.074	(0.000)	82	735579	23.876	96%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	1058363	23.899	96%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1303284	31.947	128%	*	27 - 126

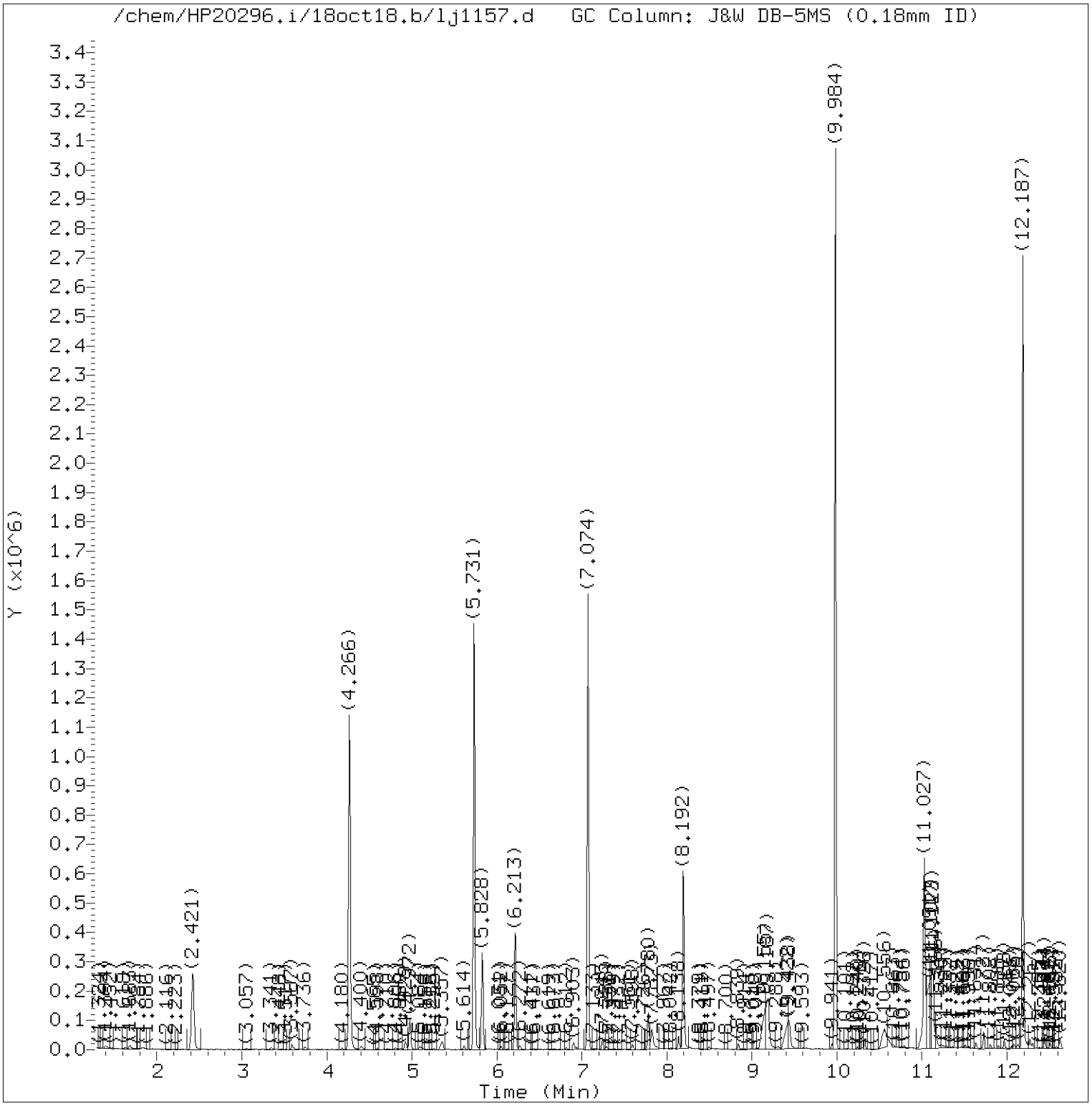
*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

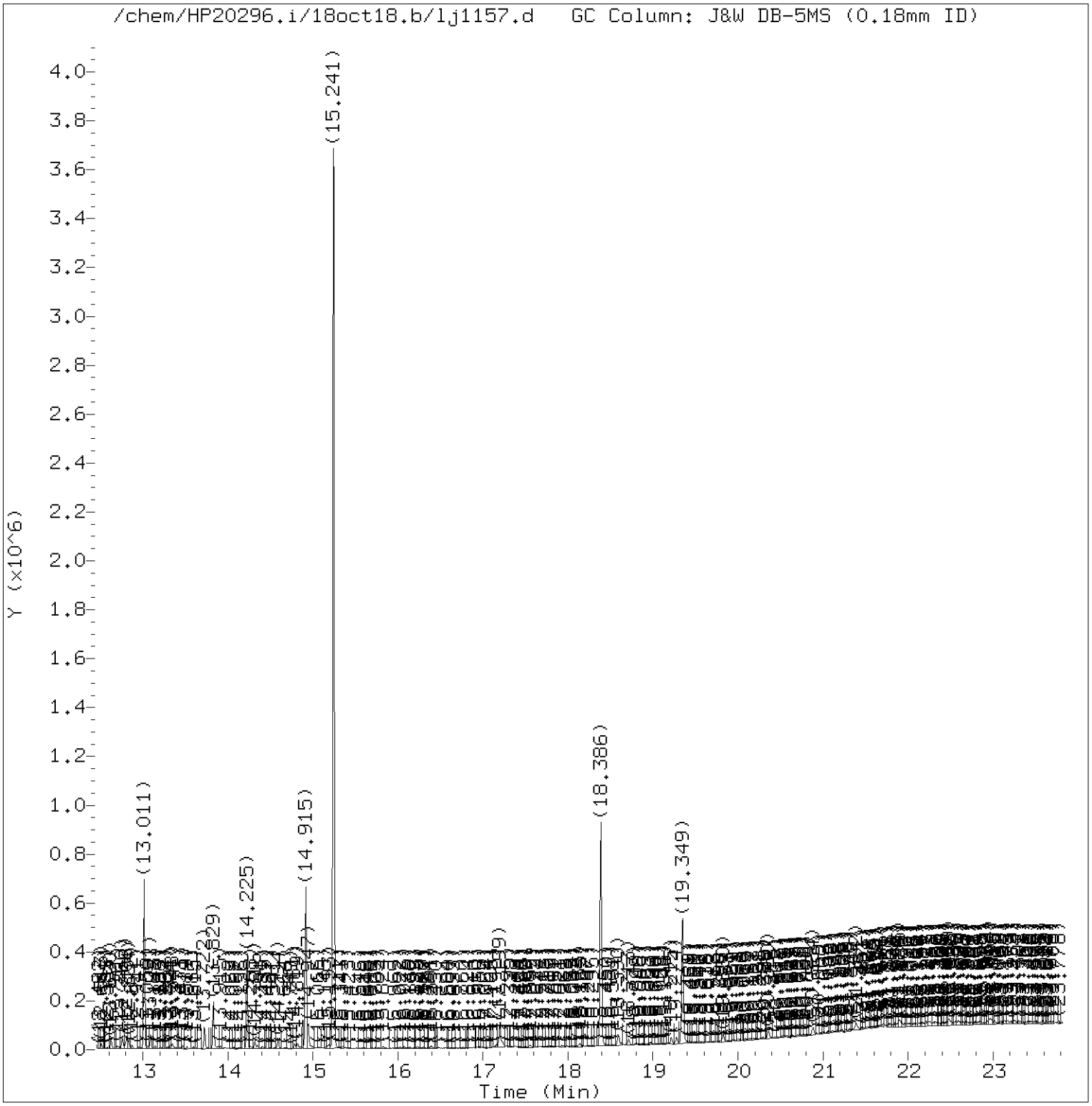
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1157.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:53 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94282 Lab Sample ID: 9850251

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1157.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:53 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94282 Lab Sample ID: 9850251

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1157.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 16:53 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94282 Lab Sample ID: 9850251

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	76261	5.000
45)$Nitrobenzene-d5	(2)	7.074	82	735579	23.876
68)*Naphthalene-d8	(2)	8.192	136	277102	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	1058363	23.899
118)*Acenaphthene-d10	(3)	11.027	164	130251	5.000
158)*Phenanthrene-d10	(4)	13.011	188	243549	5.000
180)*Pyrene-d10	(5)	14.915	212	263047	5.000
184)$Terphenyl-d14	(5)	15.241	244	1303284	31.947
218)*Perylene-d12	(6)	19.349	264	242684	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1150.d
Data file Sample Info. Line: 94283;9850252;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Injection date and time: **18-OCT-2018 13:04**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.006)	921	152	95098	(-8)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	343799	(-3)	5.00	
118) Acenaphthene-d10	11.027	(0.006)	1821	164	161845	(-5)	5.00	
158) Phenanthrene-d10	13.016	(0.006)	2193	188	309115	(-5)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	308346	(-11)	5.00	
218) Perylene-d12	19.344	(0.016)	3376	264	280101	(-20)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	143840	3.763	15%	*	30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	233422	4.242	17%	*	39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	264953	5.541	22%	*	27 - 126

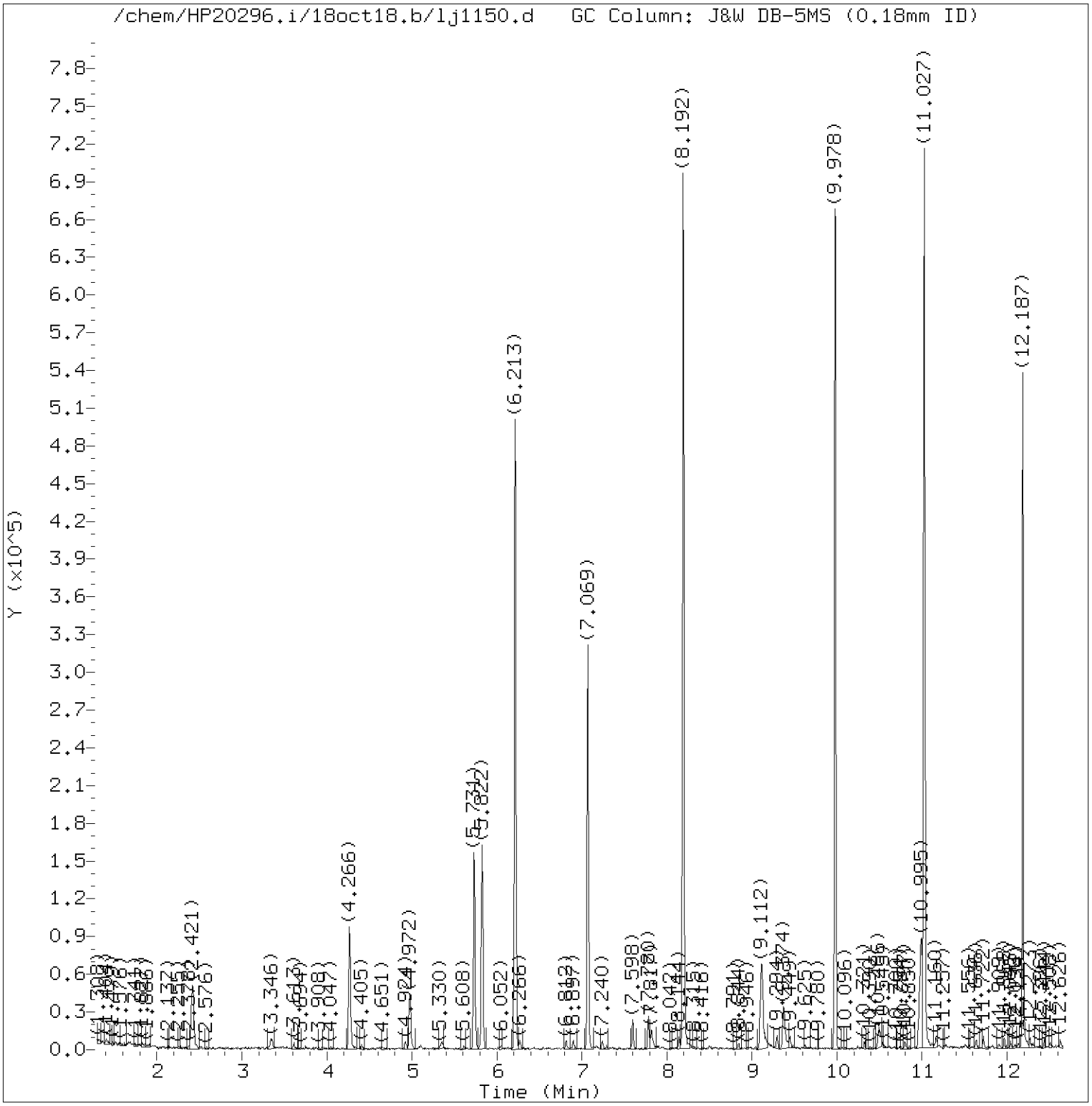
*** = Surrogate Standard % recovery outside QC limits.**

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:12. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

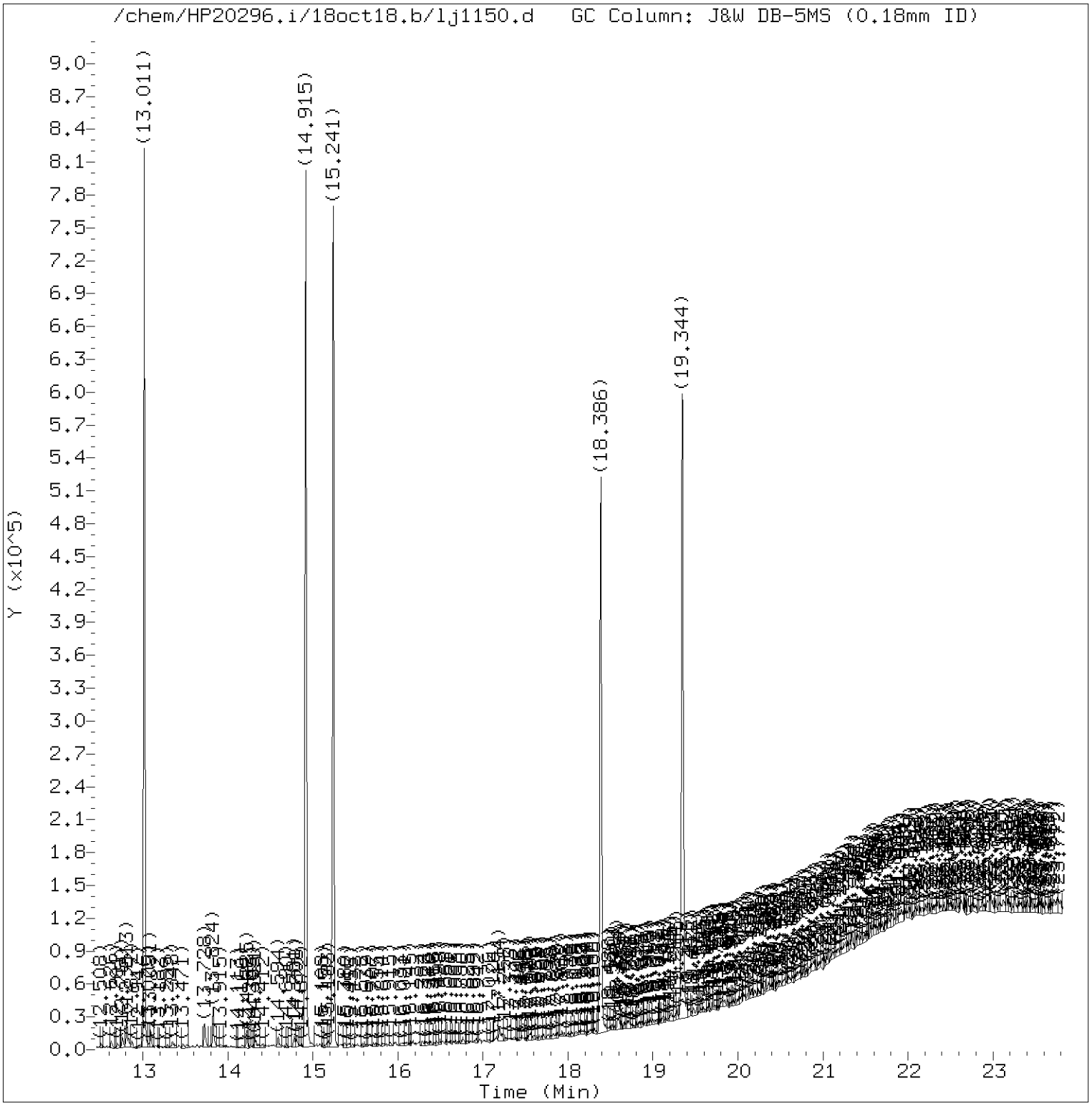
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1150.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283 Lab Sample ID: 9850252

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:12.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1150.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283 Lab Sample ID: 9850252

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:12.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1150.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283 Lab Sample ID: 9850252

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	95098	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	143840	3.763
68)*Naphthalene-d8	(2)	8.192	136	343799	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	233422	4.242
118)*Acenaphthene-d10	(3)	11.027	164	161845	5.000
158)*Phenanthrene-d10	(4)	13.016	188	309115	5.000
180)*Pyrene-d10	(5)	14.915	212	308346	5.000
184)$Terphenyl-d14	(5)	15.241	244	264953	5.541
218)*Perylene-d12	(6)	19.344	264	280101	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:12.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP19760.i/18oct20.b/dj1815.d
Data file Sample Info. Line: 94283RE;9850252RE;1;0;SAMPLE;;;
Date, time and analyst ID of latest file update: 21-Oct-2018 12:55 em10340

Injection date and time: **20-OCT-2018 17:13**
Instrument ID: **HP19760.i** Batch: **18292WAF**

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 21-OCT-2018 12:54
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 232 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.170	(0.000)	915	152	244070	(-18)	5.00	
65) Naphthalene-d8	8.111	(0.000)	1248	136	937210	(-17)	5.00	
113) Acenaphthene-d10	10.885	(0.006)	1724	164	421292	(-21)	5.00	
153) Phenanthrene-d10	12.855	(0.006)	2062	188	797168	(-20)	5.00	
175) Pyrene-d10	14.697	(0.006)	2378	212	753302	(-22)	5.00	
213) Perylene-d12	19.045	(0.000)	3124	264	631855	(-23)	5.00	

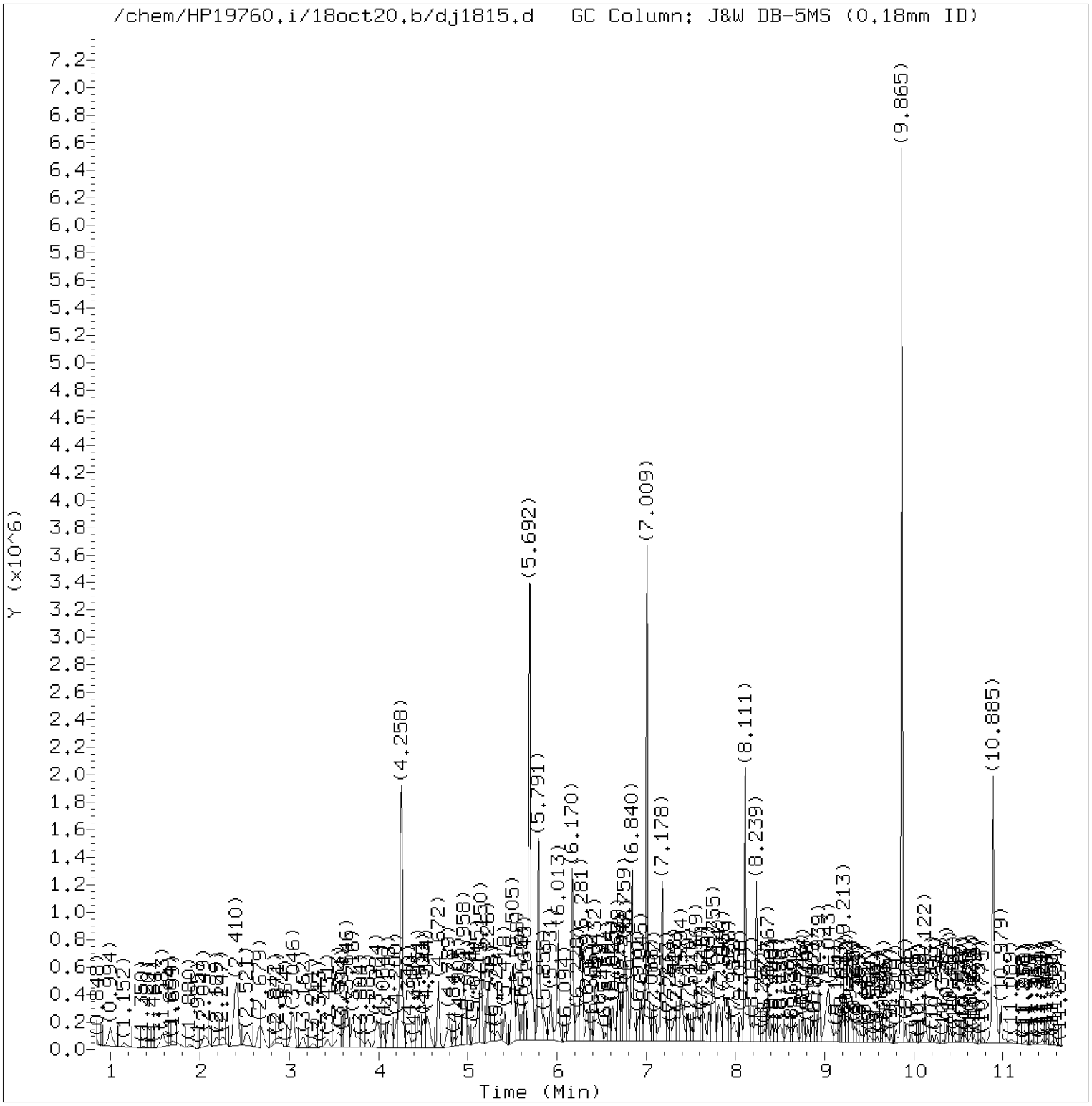
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
44) Nitrobenzene-d5	(2)	7.009	(0.000)	82	1480078	16.677	67%		30 - 111
93) 2-Fluorobiphenyl	(3)	9.865	(0.000)	172	2291796	17.029	68%		39 - 105
179) Terphenyl-d14	(5)	15.024	(0.000)	244	2371568	18.923	76%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
124) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Edward Monborne on 10/21/2018 at 14:07. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

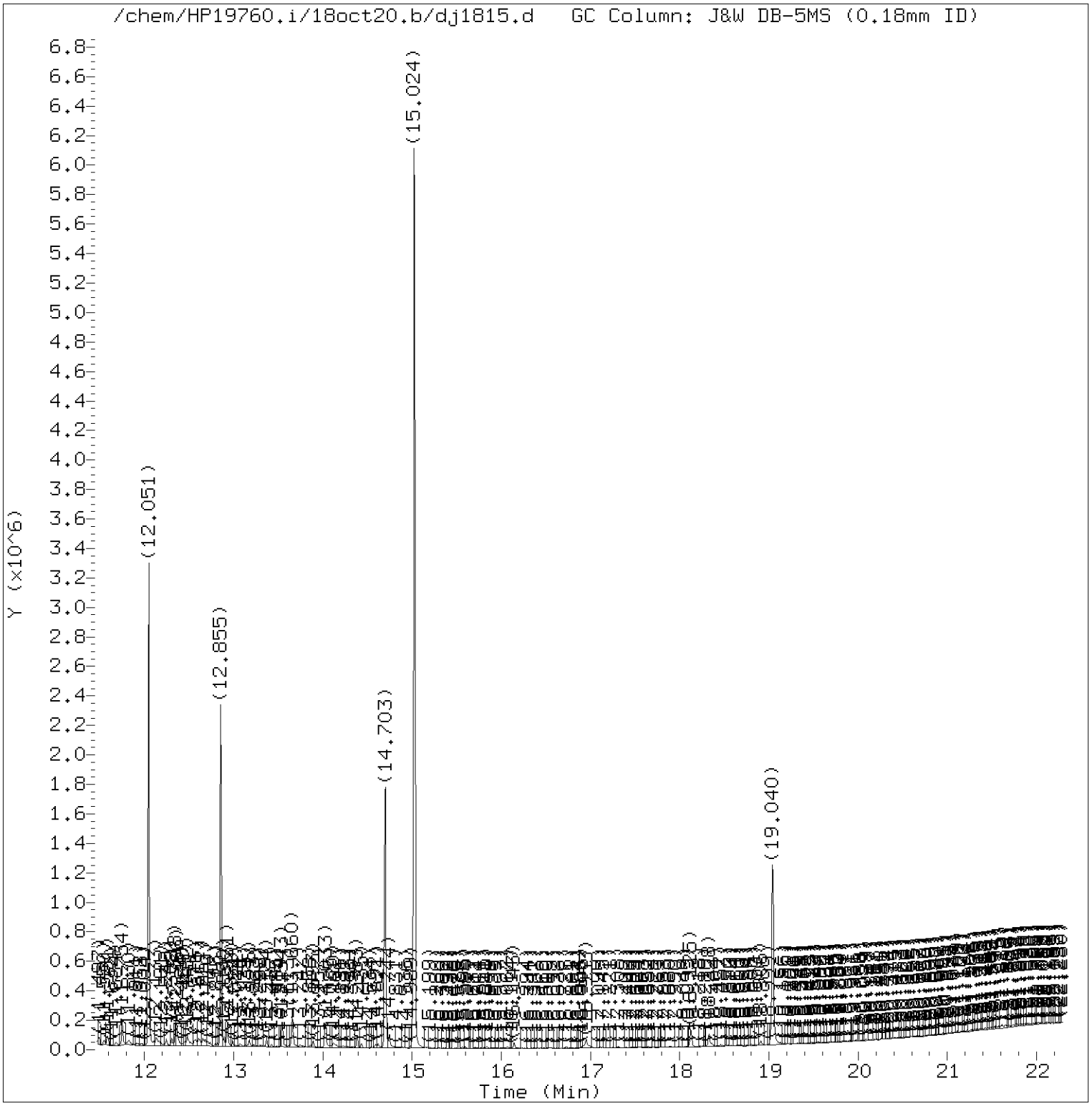
Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1815.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 17:13 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-OCT-2018 12:54
Date, time and analyst ID of latest file update: 21-Oct-2018 12:55 em10340

Sample Name: 94283RE Lab Sample ID: 9850252RE

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1815.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 17:13 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-OCT-2018 12:54
Date, time and analyst ID of latest file update: 21-Oct-2018 12:55 em10340

Sample Name: 94283RE Lab Sample ID: 9850252RE

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1815.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 17:13 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 21-OCT-2018 12:54
Date, time and analyst ID of latest file update: 21-Oct-2018 12:55 em10340

Sample Name: 94283RE Lab Sample ID: 9850252RE

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.170	152	244070	5.000
44)$Nitrobenzene-d5	(2)	7.009	82	1480078	16.677
65)*Naphthalene-d8	(2)	8.111	136	937210	5.000
93)$2-Fluorobiphenyl	(3)	9.865	172	2291796	17.029
113)*Acenaphthene-d10	(3)	10.885	164	421292	5.000
153)*Phenanthrene-d10	(4)	12.855	188	797168	5.000
175)*Pyrene-d10	(5)	14.697	212	753302	5.000
179)$Terphenyl-d14	(5)	15.024	244	2371568	18.923
213)*Perylene-d12	(6)	19.045	264	631855	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1158.d
Data file Sample Info. Line: 94284;9850255;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Injection date and time: **18-OCT-2018 17:22**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.005)	921	152	90419	(-13)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	327254	(-8)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	147931	(-14)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	296549	(-9)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	306953	(-11)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	277517	(-21)	5.00	

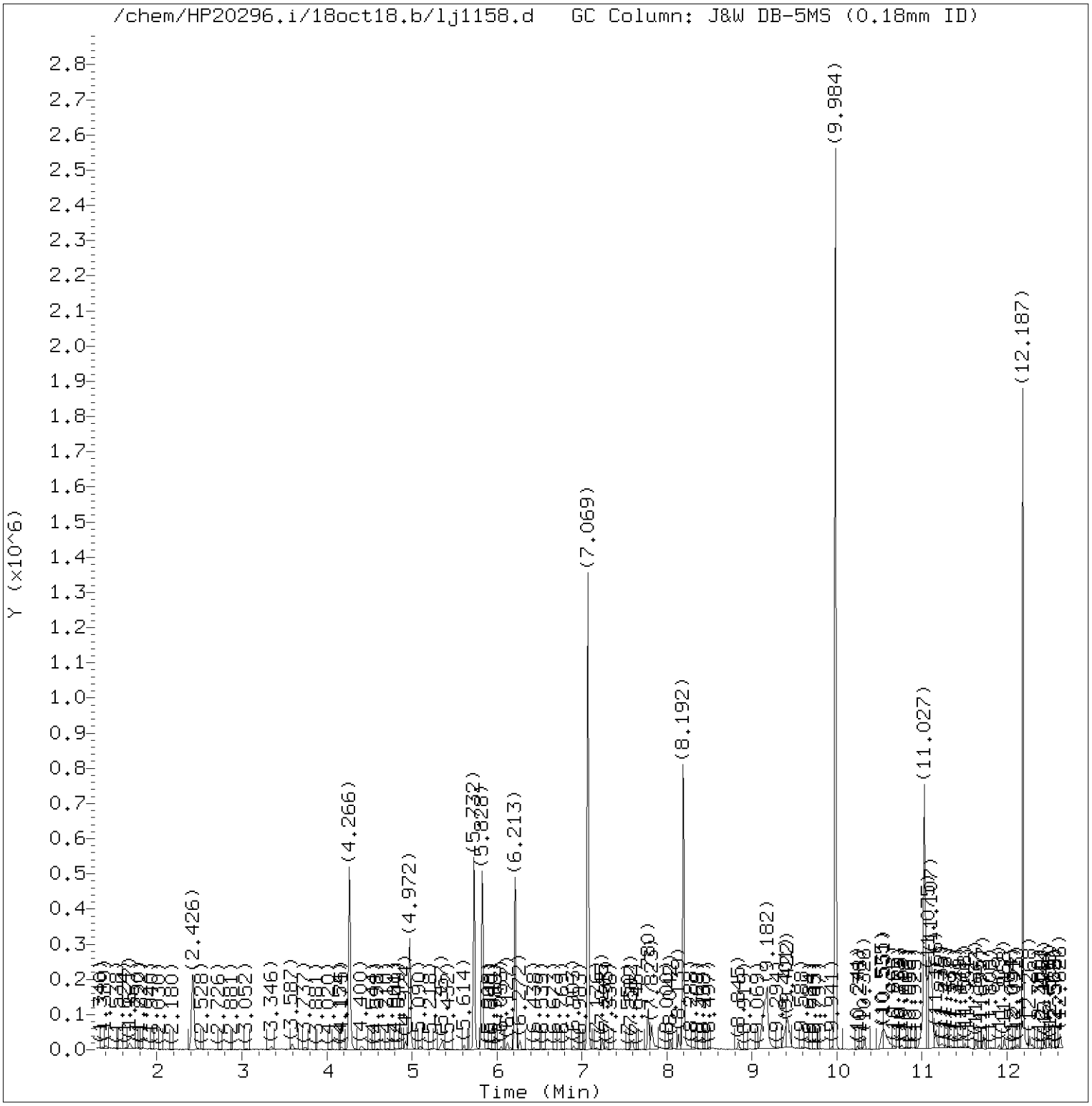
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	604638	16.618	66%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	877104	17.439	70%		39 - 105
184) Terphenyl-d14	(5)	15.242	(0.000)	244	919466	19.315	77%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

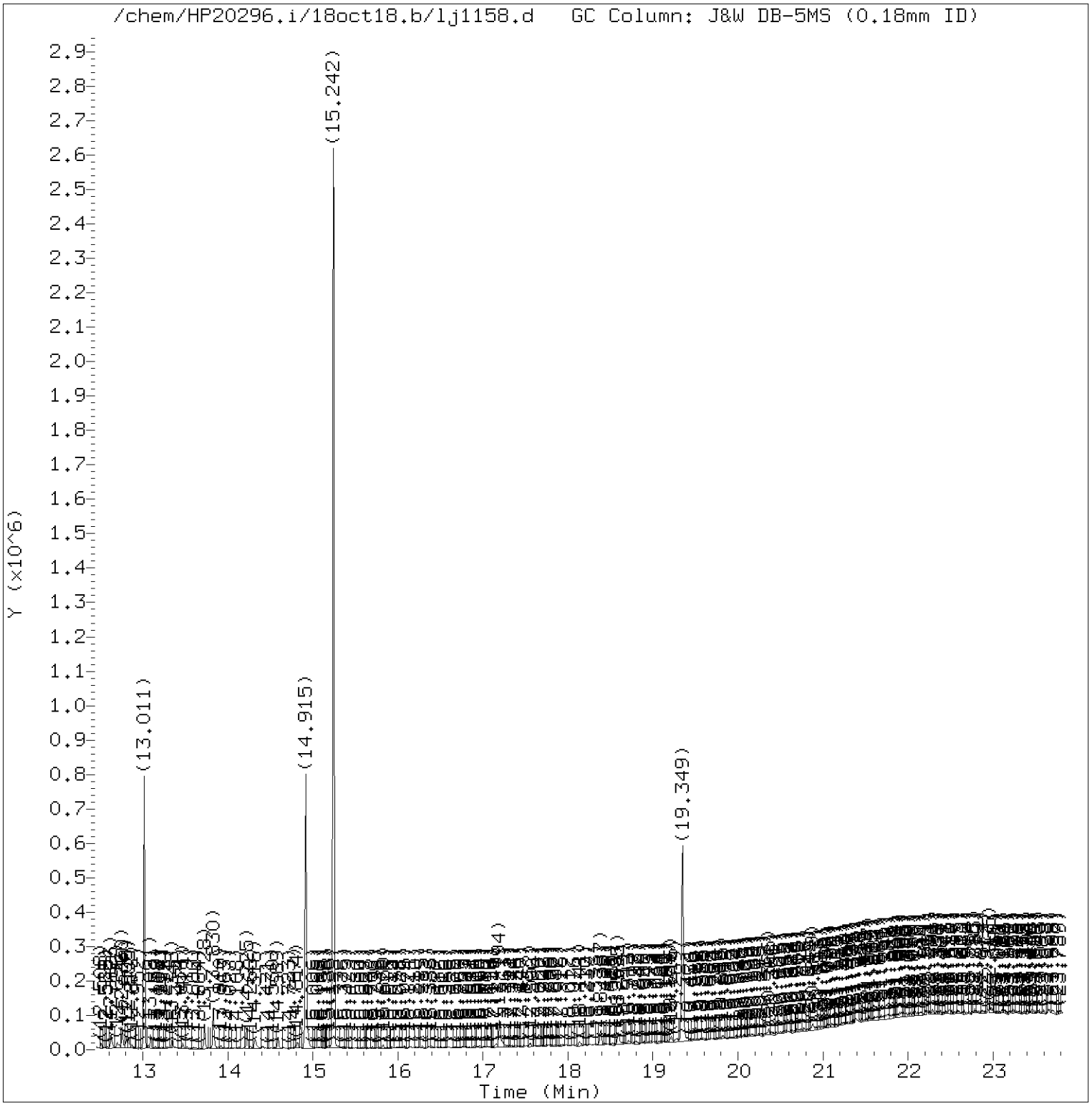
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1158.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:22 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94284 Lab Sample ID: 9850255

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1158.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:22 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94284 Lab Sample ID: 9850255

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1158.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:22 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94284 Lab Sample ID: 9850255

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	90419	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	604638	16.618
68)*Naphthalene-d8	(2)	8.192	136	327254	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	877104	17.439
118)*Acenaphthene-d10	(3)	11.027	164	147931	5.000
158)*Phenanthrene-d10	(4)	13.011	188	296549	5.000
180)*Pyrene-d10	(5)	14.915	212	306953	5.000
184)$Terphenyl-d14	(5)	15.242	244	919466	19.315
218)*Perylene-d12	(6)	19.349	264	277517	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1159.d Injection date and time: **18-OCT-2018 17:51**
Data file Sample Info. Line: 94285;9850256;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 251 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.006)	921	152	90176	(-13)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	325752	(-9)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	150187	(-12)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	299869	(-8)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	304122	(-12)	5.00	
218) Perylene-d12	19.344	(0.016)	3376	264	280999	(-20)	5.00	

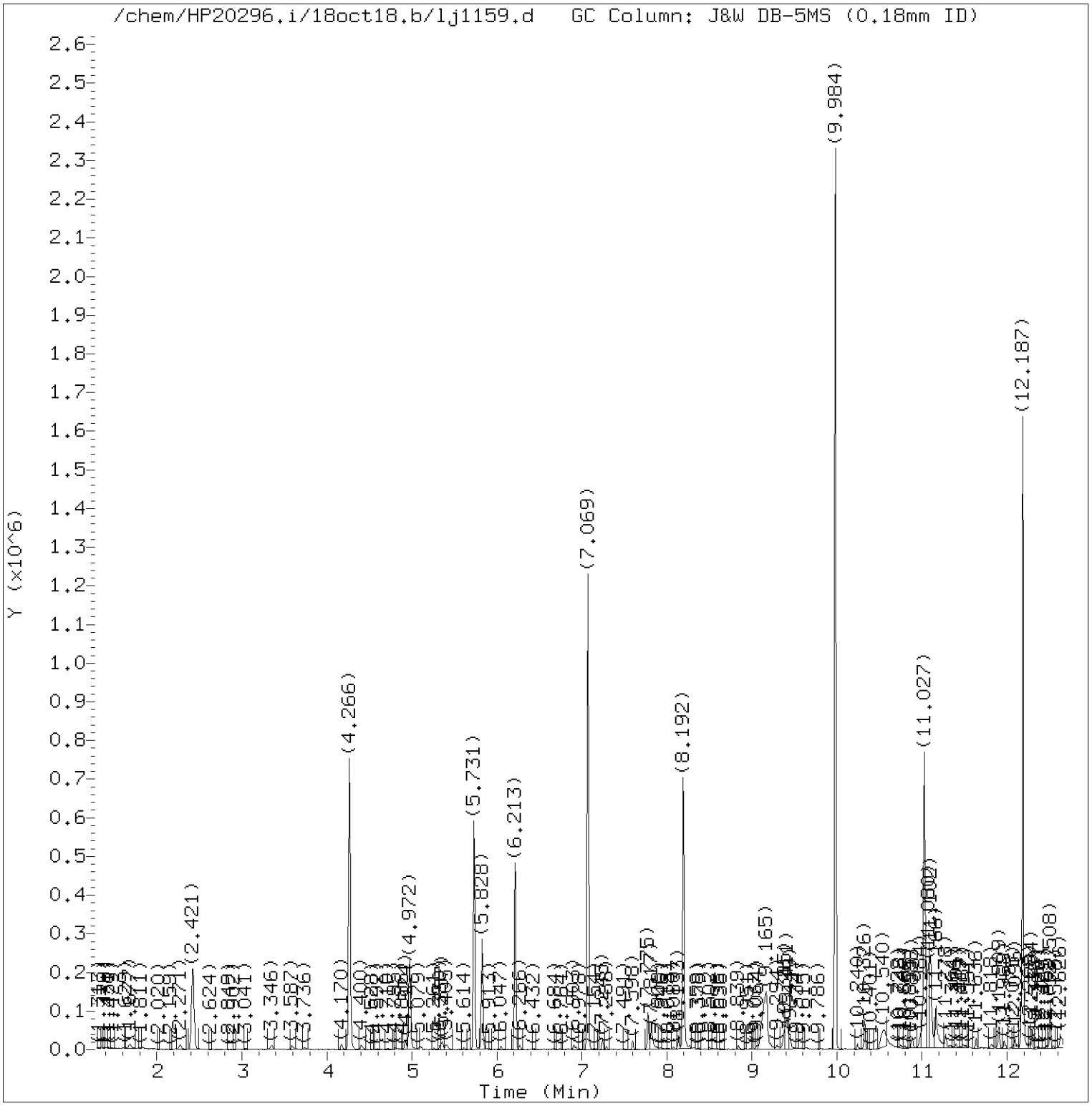
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	566942	15.654	63%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	830011	16.255	65%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	790455	16.759	67%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

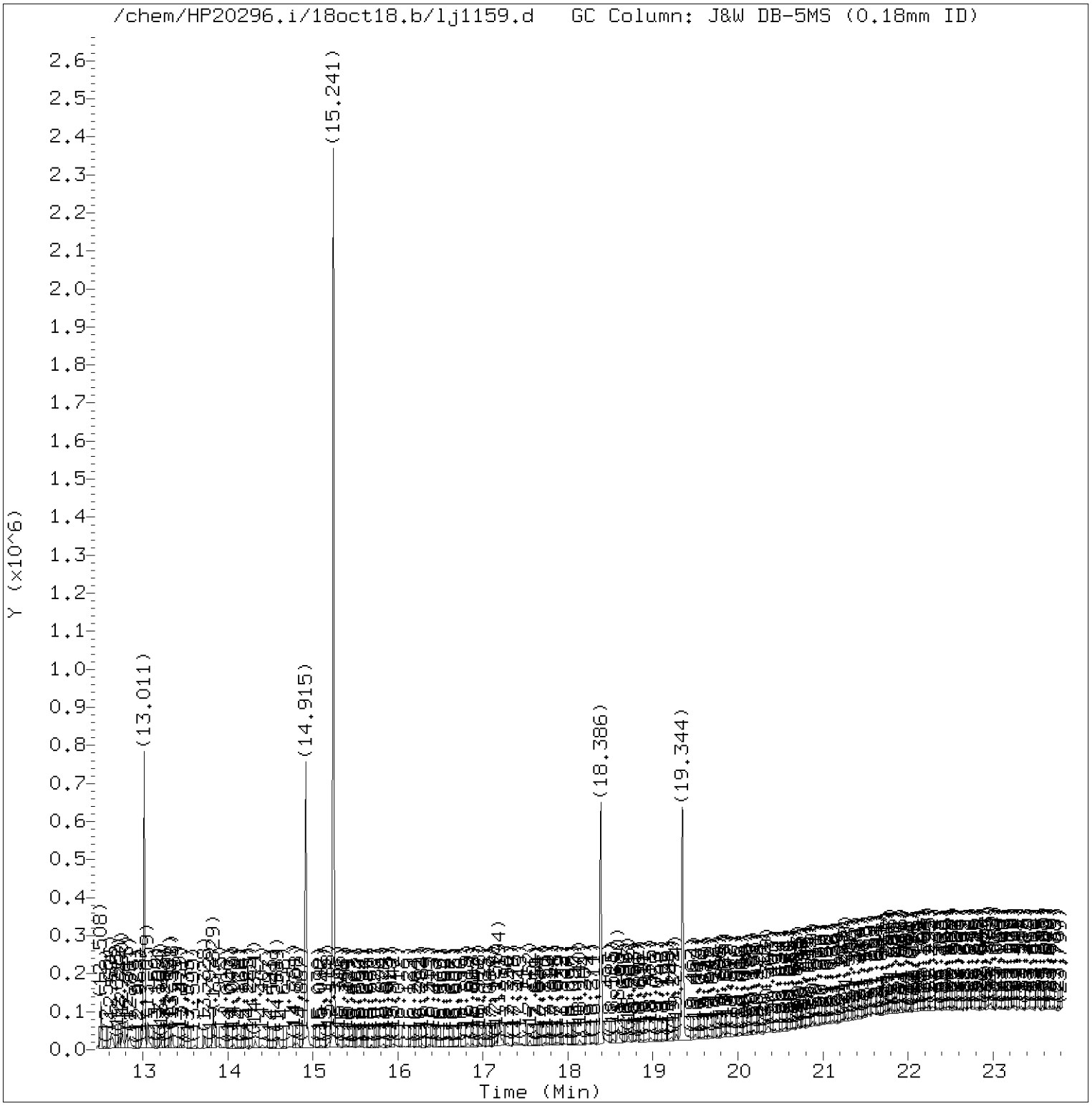
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1159.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:51 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94285 Lab Sample ID: 9850256

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1159.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:51 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94285 Lab Sample ID: 9850256

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1159.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 17:51 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94285 Lab Sample ID: 9850256

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	90176	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	566942	15.654
68)*Naphthalene-d8	(2)	8.192	136	325752	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	830011	16.255
118)*Acenaphthene-d10	(3)	11.027	164	150187	5.000
158)*Phenanthrene-d10	(4)	13.011	188	299869	5.000
180)*Pyrene-d10	(5)	14.915	212	304122	5.000
184)$Terphenyl-d14	(5)	15.241	244	790455	16.759
218)*Perylene-d12	(6)	19.344	264	280999	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1160.d Injection date and time: **18-OCT-2018 18:19**
Data file Sample Info. Line: 94286;9850257;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 241 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.218	(0.000)	922	152	93416	(-10)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	341861	(-4)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	159980	(-6)	5.00	
158) Phenanthrene-d10	13.011	(0.011)	2192	188	308722	(-5)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	320543	(-7)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	287367	(-18)	5.00	

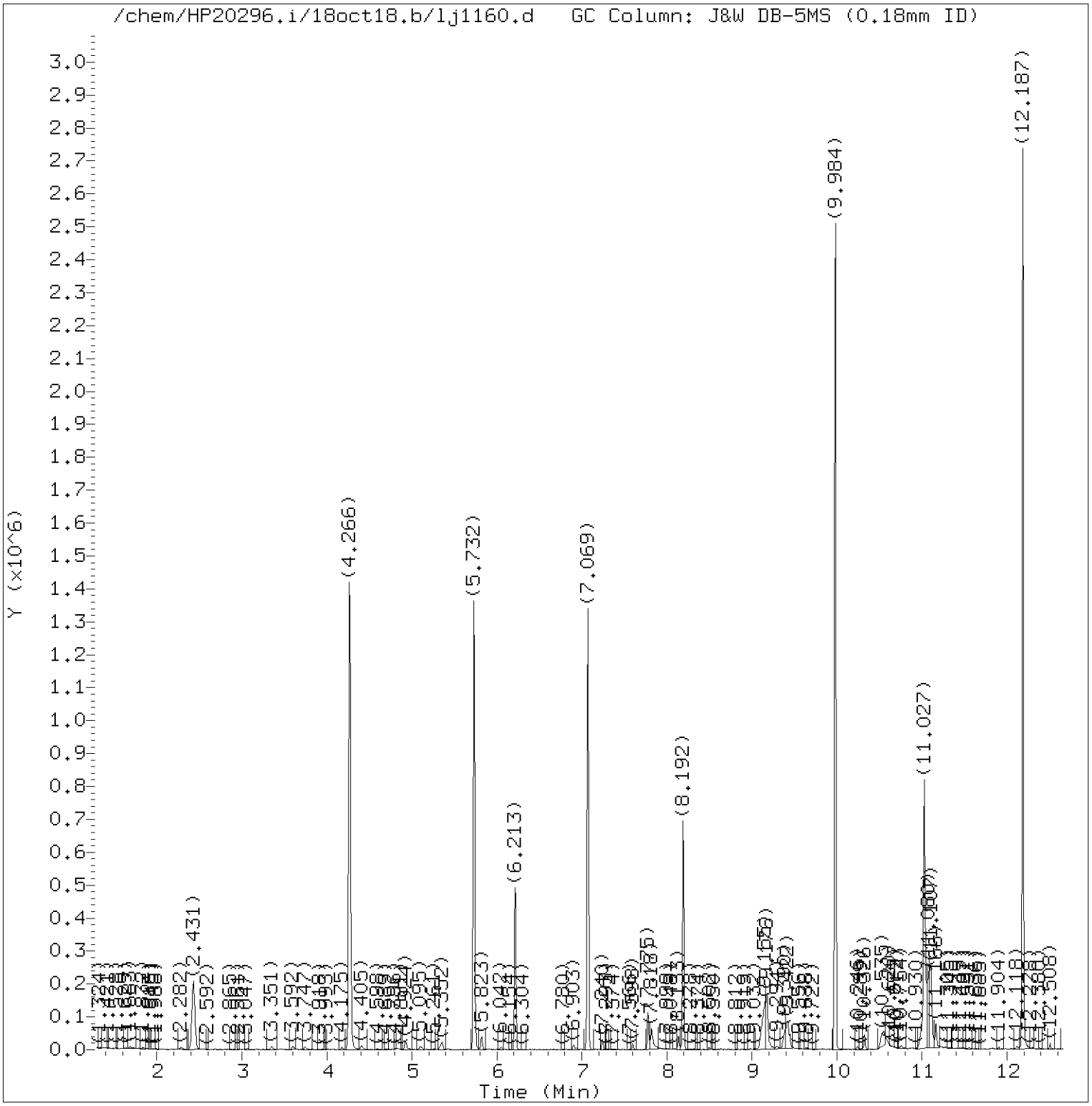
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	618784	16.280	65%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	891513	16.390	66%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1204193	24.224	97%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:14. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

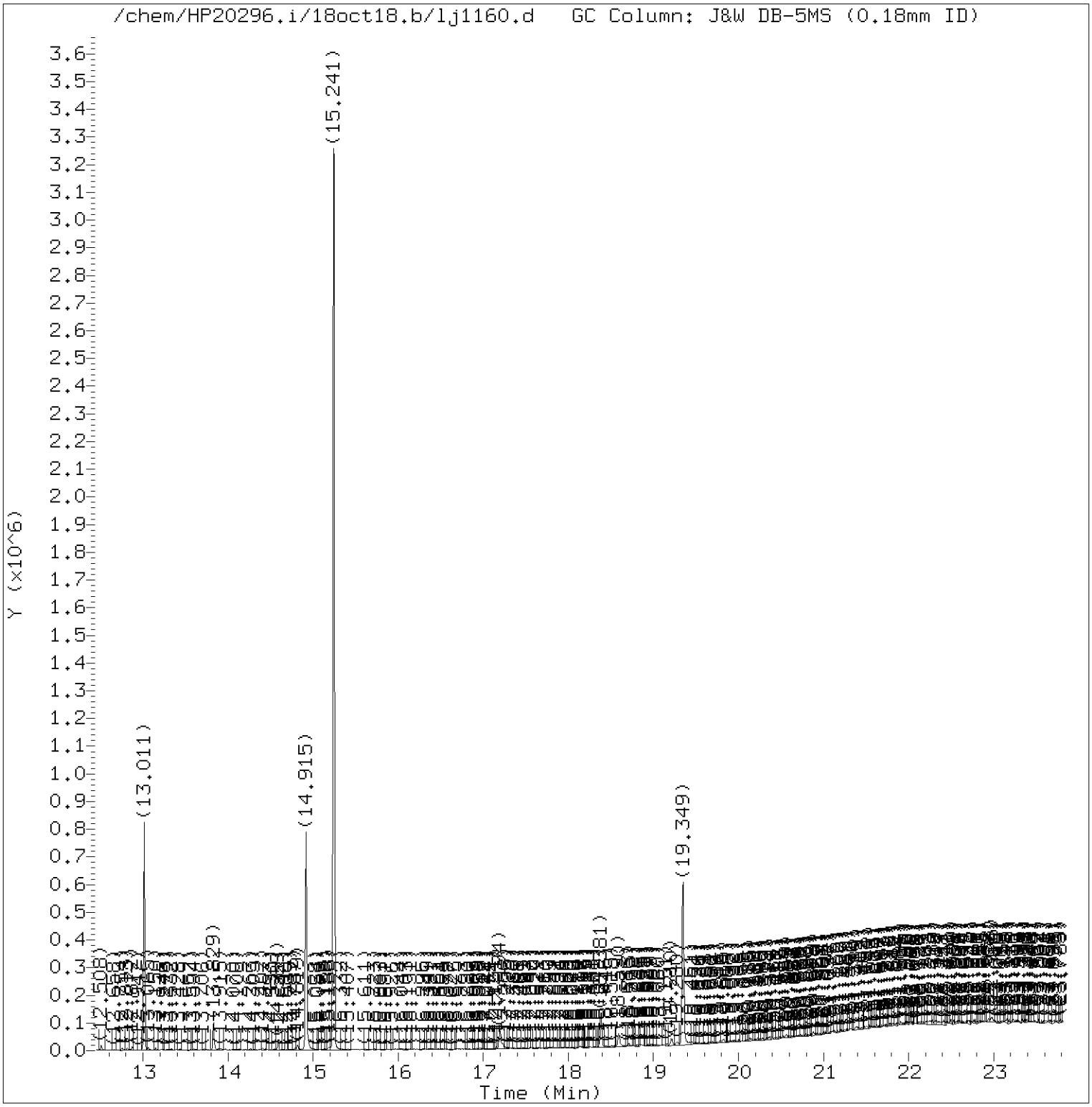
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1160.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 18:19 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94286 Lab Sample ID: 9850257

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:14.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1160.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 18:19 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94286 Lab Sample ID: 9850257

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:14.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1160.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 18:19 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:12 bkc25363

Sample Name: 94286 Lab Sample ID: 9850257

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.218	152	93416	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	618784	16.280
68)*Naphthalene-d8	(2)	8.192	136	341861	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	891513	16.390
118)*Acenaphthene-d10	(3)	11.027	164	159980	5.000
158)*Phenanthrene-d10	(4)	13.011	188	308722	5.000
180)*Pyrene-d10	(5)	14.915	212	320543	5.000
184)$Terphenyl-d14	(5)	15.241	244	1204193	24.224
218)*Perylene-d12	(6)	19.349	264	287367	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:14.
Target 3.5 esignature user ID: bkc25363

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18a.b/lj1174.d Injection date and time: **18-OCT-2018 23:37**
Data file Sample Info. Line: 94287;9850258;1;0;SAMPLE;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 19-OCT-2018 13:03
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18a.b/lj1171.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.208	(0.005)	920	152	93141	(-7)	5.00	
68) Naphthalene-d8	8.192	(0.000)	1291	136	340101	(-6)	5.00	
118) Acenaphthene-d10	11.021	(0.005)	1820	164	162032	(-8)	5.00	
158) Phenanthrene-d10	13.011	(0.000)	2192	188	304700	(-9)	5.00	
180) Pyrene-d10	14.915	(0.000)	2548	212	298183	(-13)	5.00	
218) Perylene-d12	19.344	(0.000)	3376	264	260579	(-21)	5.00	

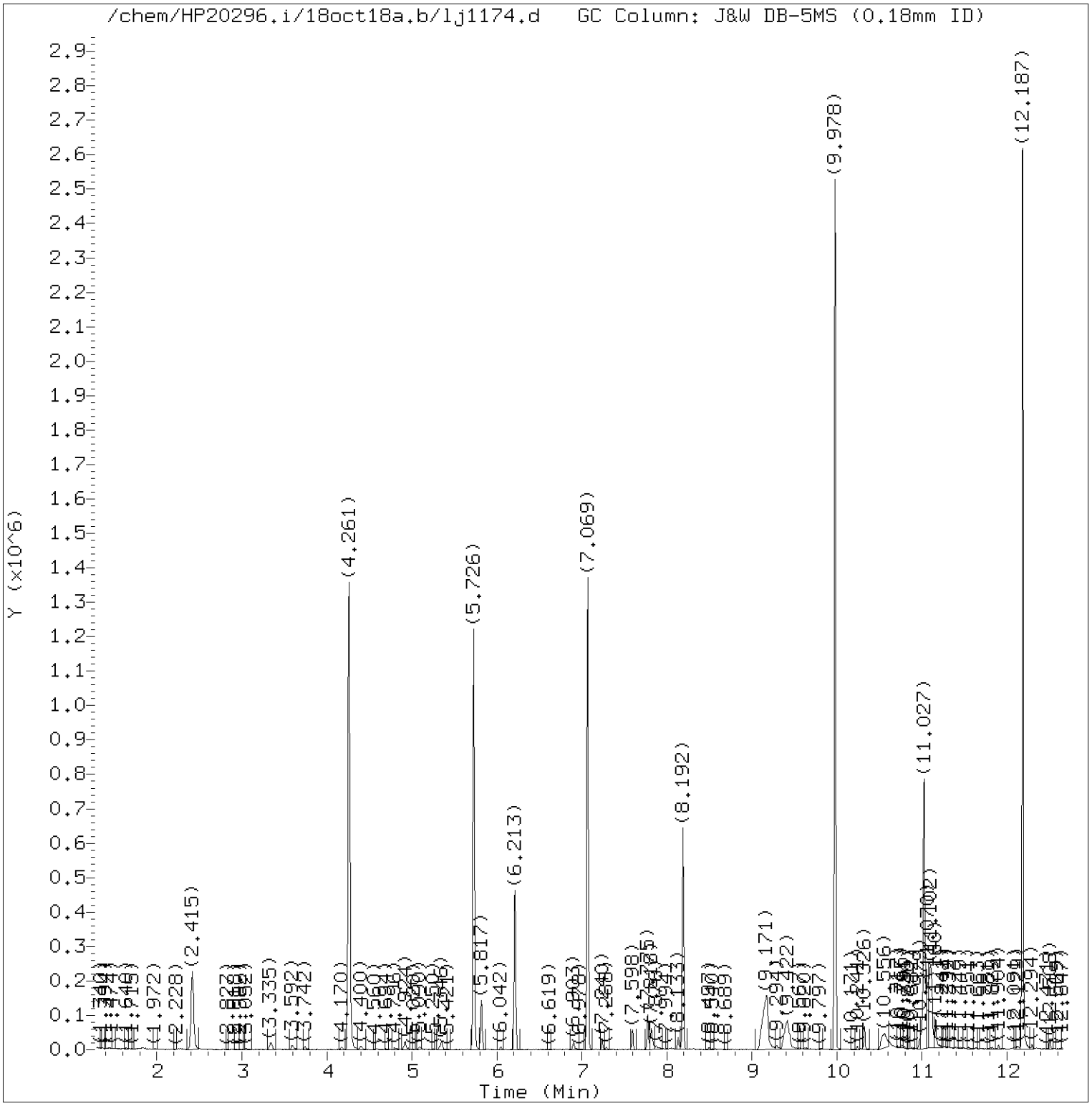
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	616999	16.317	65%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.978	(0.000)	172	892709	16.204	65%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1030922	22.293	89%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/19/2018 at 13:07. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

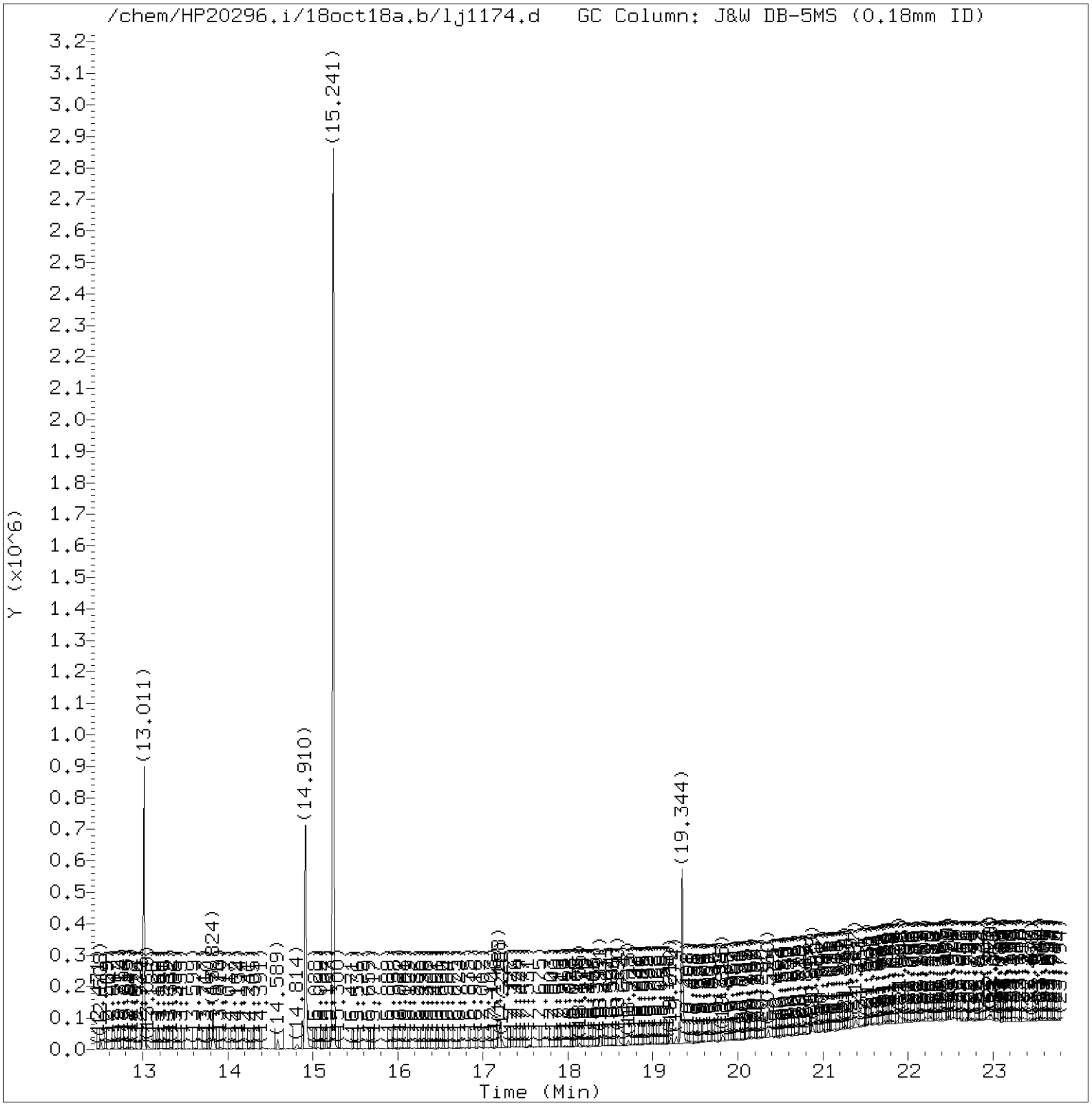
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1174.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 23:37 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94287 Lab Sample ID: 9850258

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1174.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 23:37 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94287 Lab Sample ID: 9850258

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1174.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 23:37 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94287 Lab Sample ID: 9850258

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.208	152	93141	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	616999	16.317
68)*Naphthalene-d8	(2)	8.192	136	340101	5.000
96)$2-Fluorobiphenyl	(3)	9.978	172	892709	16.204
118)*Acenaphthene-d10	(3)	11.021	164	162032	5.000
158)*Phenanthrene-d10	(4)	13.011	188	304700	5.000
180)*Pyrene-d10	(5)	14.915	212	298183	5.000
184)$Terphenyl-d14	(5)	15.241	244	1030922	22.293
218)*Perylene-d12	(6)	19.344	264	260579	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18a.b/lj1175.d
Data file Sample Info. Line: 94288;9850259;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Injection date and time: **19-OCT-2018 00:06**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 19-OCT-2018 13:03
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18a.b/lj1171.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.000)	921	152	92292	(-8)	5.00	
68) Naphthalene-d8	8.192	(0.000)	1291	136	339236	(-6)	5.00	
118) Acenaphthene-d10	11.021	(0.005)	1820	164	161396	(-8)	5.00	
158) Phenanthrene-d10	13.011	(0.000)	2192	188	307138	(-8)	5.00	
180) Pyrene-d10	14.915	(0.000)	2548	212	296701	(-14)	5.00	
218) Perylene-d12	19.344	(0.000)	3376	264	258564	(-21)	5.00	

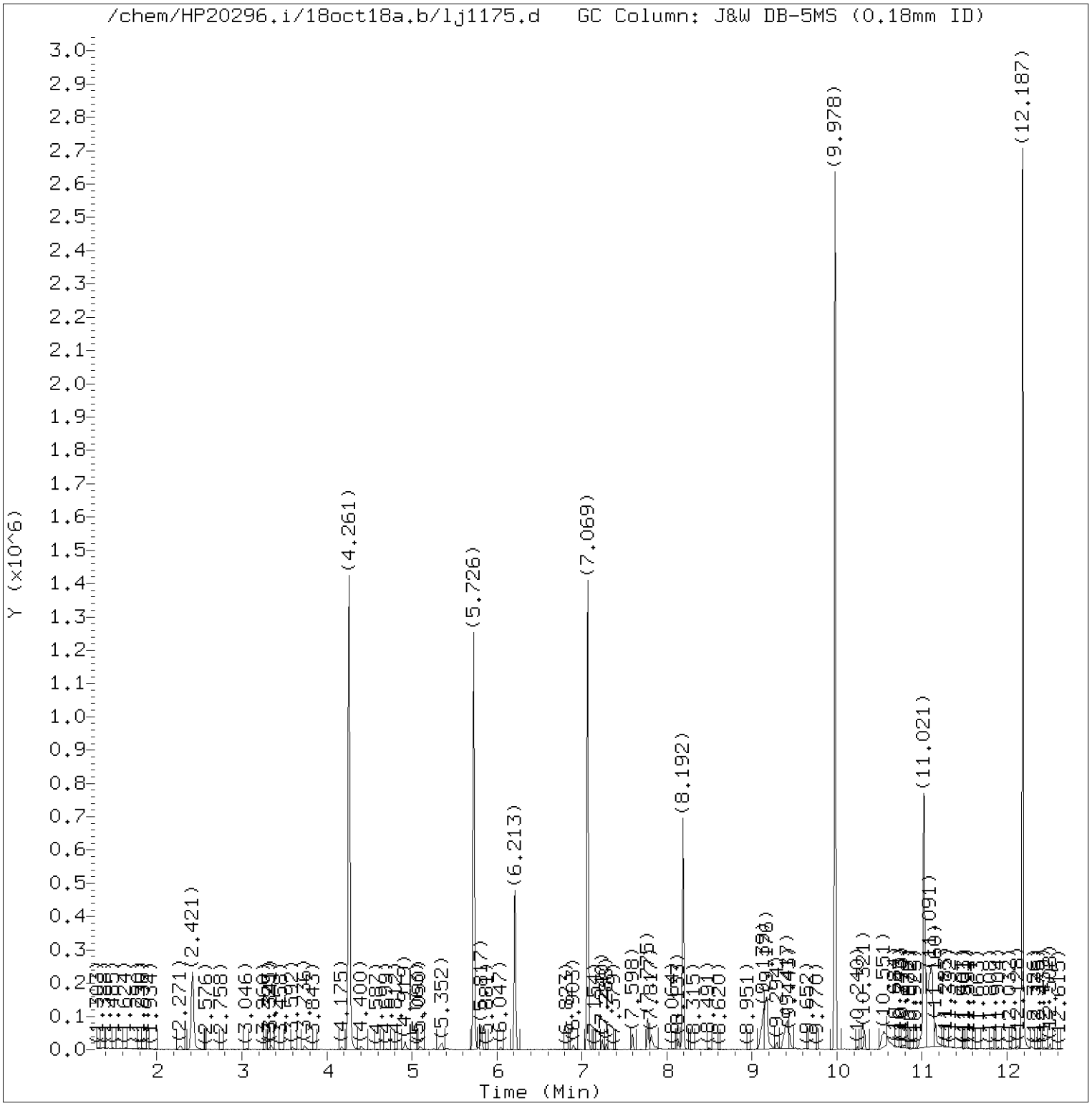
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	622623	16.508	66%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.978	(0.000)	172	888811	16.197	65%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1085655	23.594	94%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/19/2018 at 13:07. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

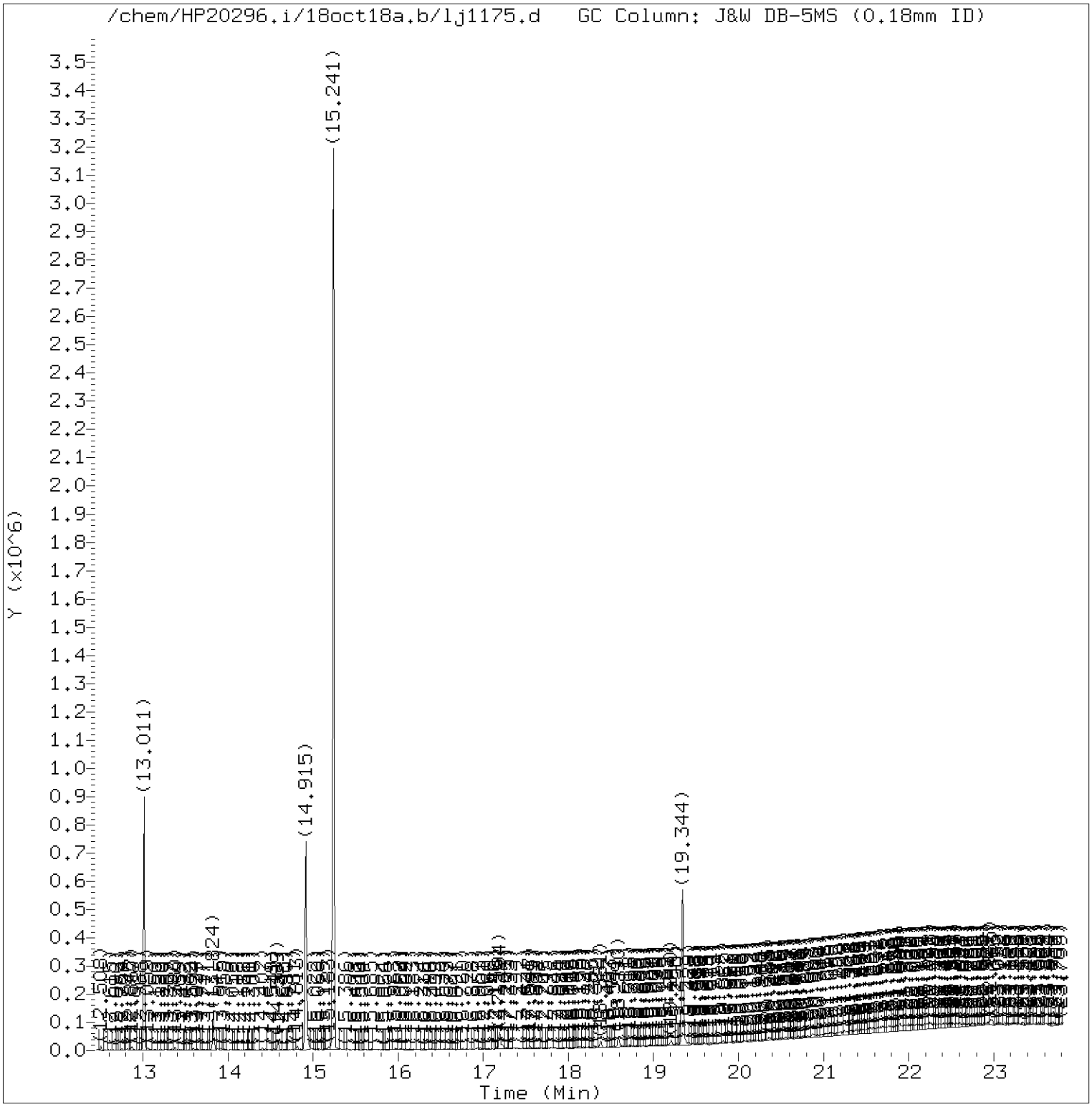
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1175.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:06 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94288 Lab Sample ID: 9850259

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1175.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:06 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94288 Lab Sample ID: 9850259

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1175.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:06 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94288 Lab Sample ID: 9850259

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	92292	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	622623	16.508
68)*Naphthalene-d8	(2)	8.192	136	339236	5.000
96)$2-Fluorobiphenyl	(3)	9.978	172	888811	16.197
118)*Acenaphthene-d10	(3)	11.021	164	161396	5.000
158)*Phenanthrene-d10	(4)	13.011	188	307138	5.000
180)*Pyrene-d10	(5)	14.915	212	296701	5.000
184)$Terphenyl-d14	(5)	15.241	244	1085655	23.594
218)*Perylene-d12	(6)	19.344	264	258564	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18a.b/lj1176.d
Data file Sample Info. Line: 94289;9850260;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Injection date and time: **19-OCT-2018 00:34**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 19-OCT-2018 13:03
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18a.b/lj1171.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 251 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.000)	921	152	90783	(-9)	5.00	
68) Naphthalene-d8	8.192	(0.000)	1291	136	328243	(-9)	5.00	
118) Acenaphthene-d10	11.027	(0.000)	1821	164	155354	(-11)	5.00	
158) Phenanthrene-d10	13.011	(0.000)	2192	188	291158	(-13)	5.00	
180) Pyrene-d10	14.915	(0.000)	2548	212	282975	(-18)	5.00	
218) Perylene-d12	19.344	(0.000)	3376	264	248556	(-24)	5.00	

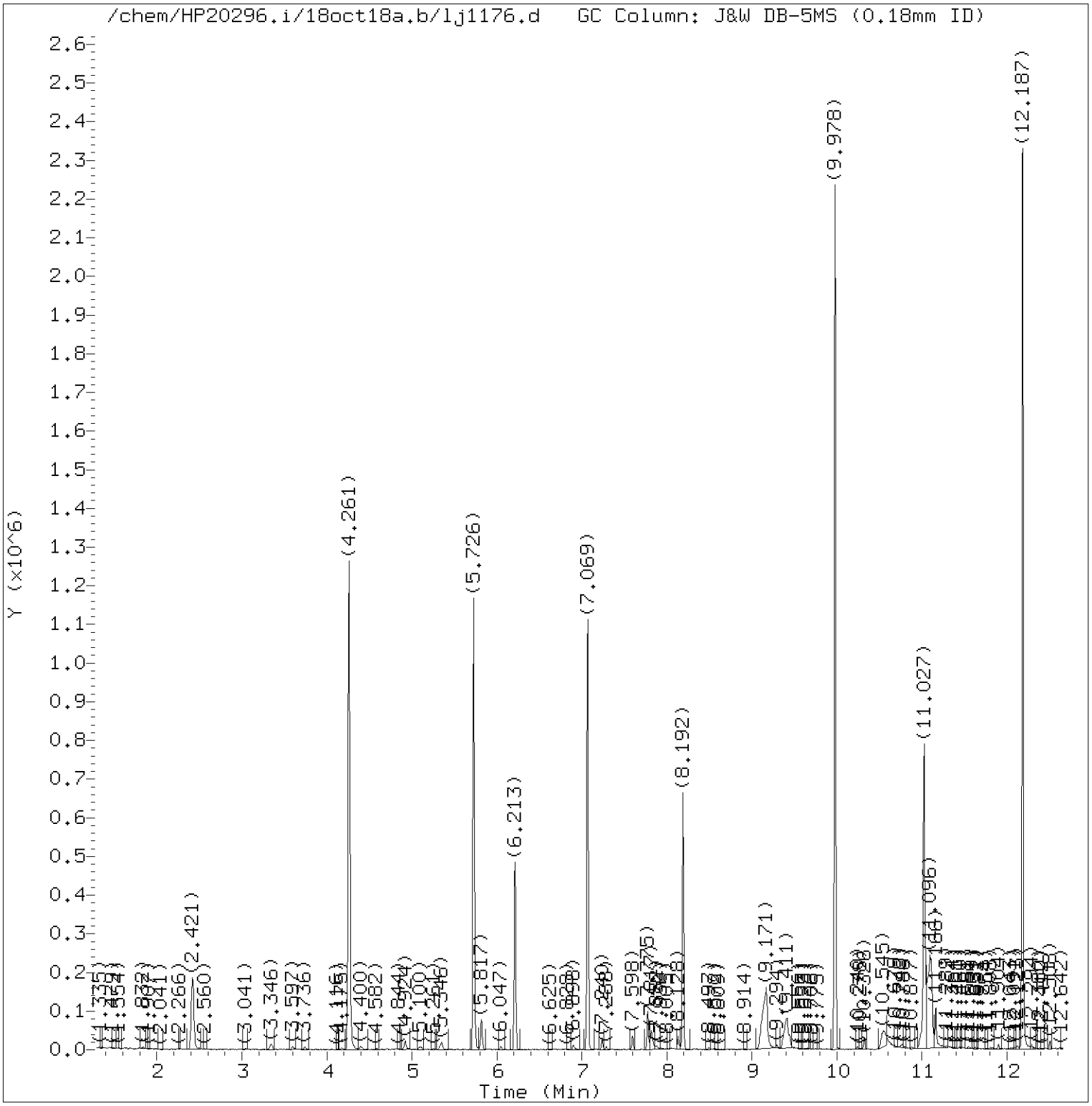
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	517947	14.193	57%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.978	(0.000)	172	762828	14.442	58%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	982088	22.378	90%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/19/2018 at 13:07. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

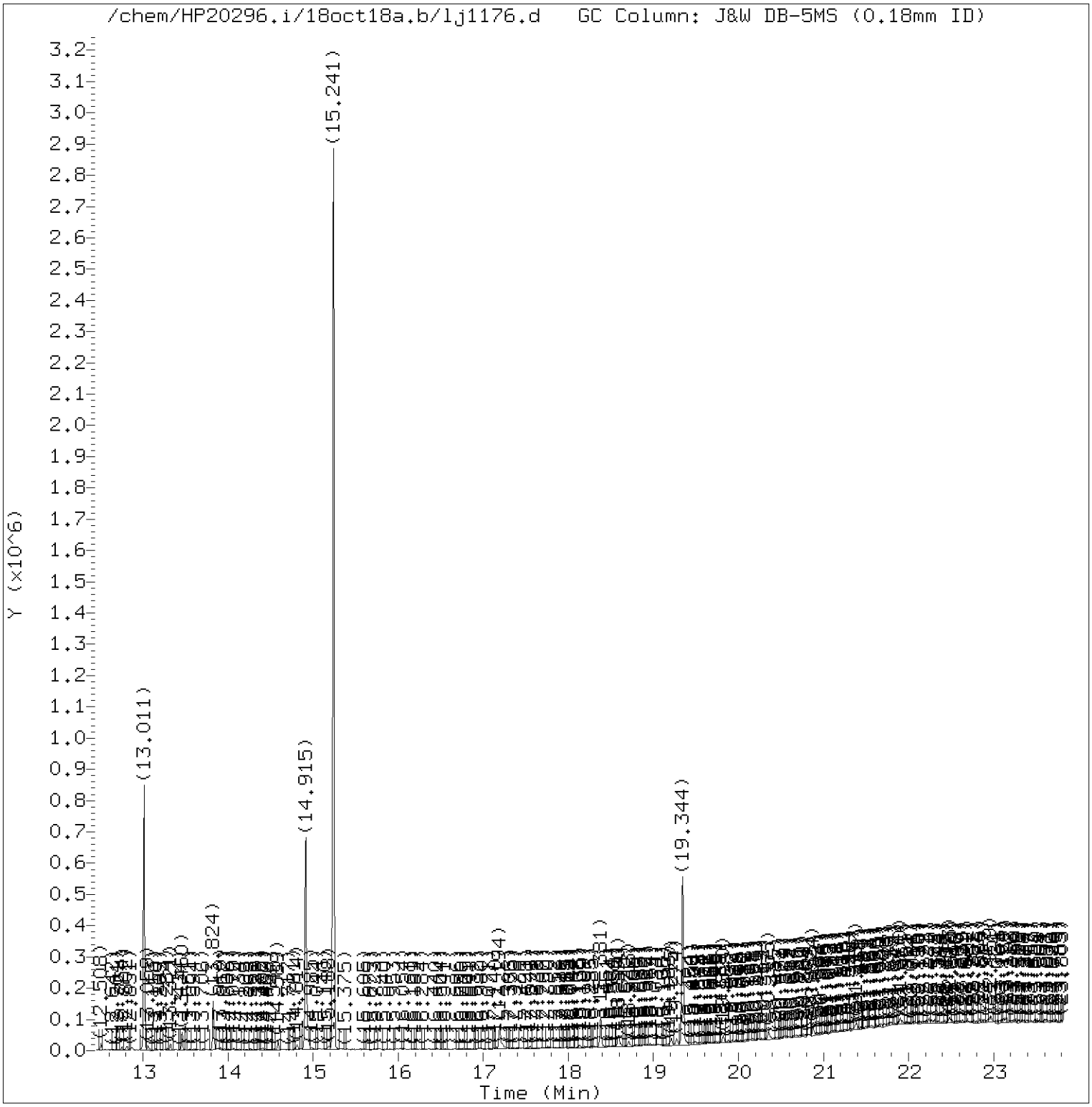
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1176.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:34 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94289 Lab Sample ID: 9850260

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1176.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:34 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94289 Lab Sample ID: 9850260

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1176.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 00:34 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94289 Lab Sample ID: 9850260

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	90783	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	517947	14.193
68)*Naphthalene-d8	(2)	8.192	136	328243	5.000
96)$2-Fluorobiphenyl	(3)	9.978	172	762828	14.442
118)*Acenaphthene-d10	(3)	11.027	164	155354	5.000
158)*Phenanthrene-d10	(4)	13.011	188	291158	5.000
180)*Pyrene-d10	(5)	14.915	212	282975	5.000
184)$Terphenyl-d14	(5)	15.241	244	982088	22.378
218)*Perylene-d12	(6)	19.344	264	248556	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18a.b/lj1177.d
Data file Sample Info. Line: 94290;9850261;1;0;SAMPLE;;RAAPVA;
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Injection date and time: **19-OCT-2018 01:03**
Instrument ID: **HP20296.i** Batch: **18288WAT**

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 19-OCT-2018 13:03
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18a.b/lj1171.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 249 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.213	(0.000)	921	152	87875	(-12)	5.00	
68) Naphthalene-d8	8.192	(0.000)	1291	136	330886	(-8)	5.00	
118) Acenaphthene-d10	11.027	(0.000)	1821	164	157888	(-10)	5.00	
158) Phenanthrene-d10	13.011	(0.000)	2192	188	290745	(-13)	5.00	
180) Pyrene-d10	14.915	(0.000)	2548	212	283218	(-18)	5.00	
218) Perylene-d12	19.344	(0.000)	3376	264	242696	(-26)	5.00	

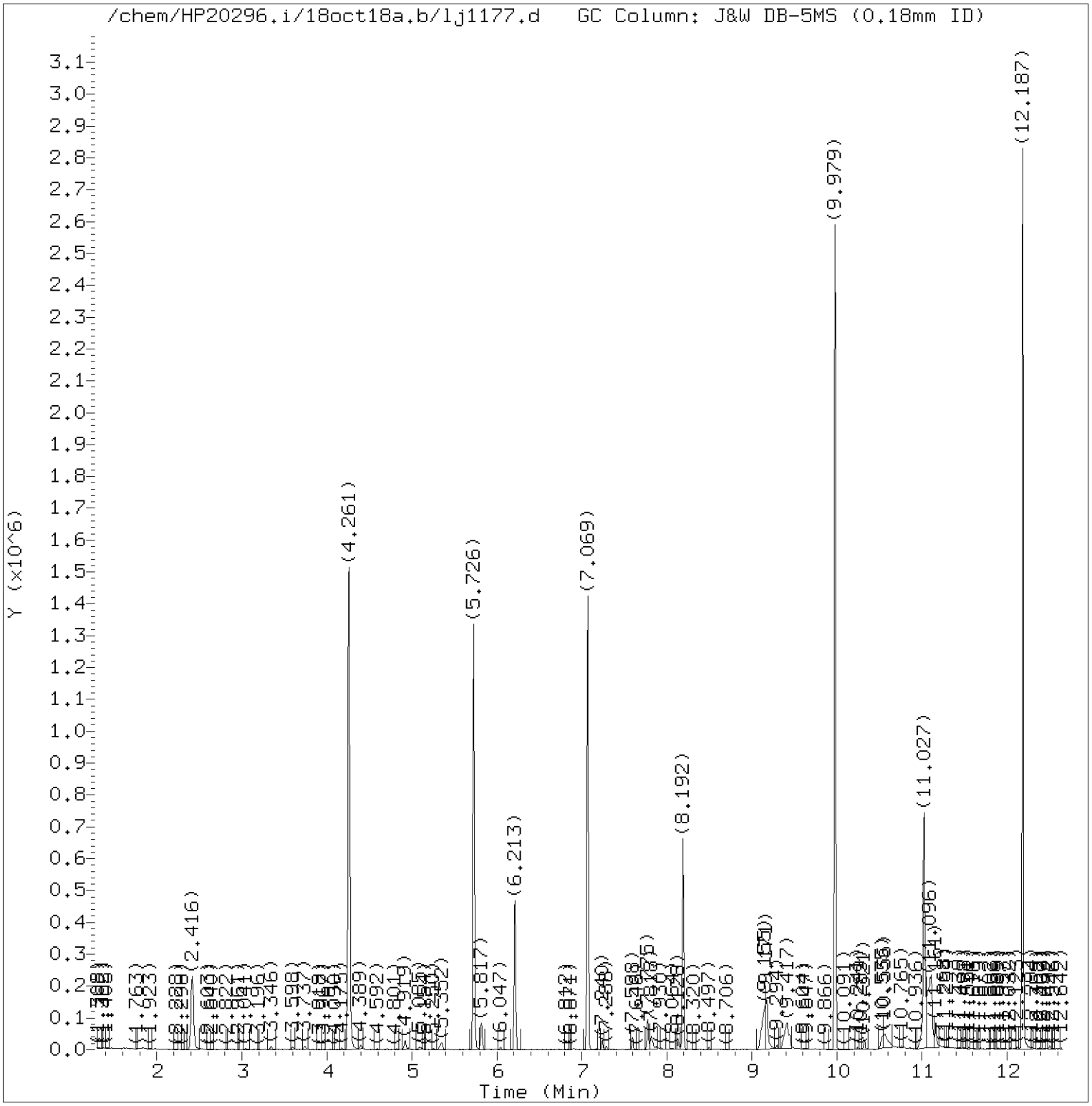
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.069	(0.000)	82	638166	17.347	69%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.979	(0.000)	172	888485	16.551	66%		39 - 105
184) Terphenyl-d14	(5)	15.242	(0.000)	244	997291	22.705	91%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/19/2018 at 13:07. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

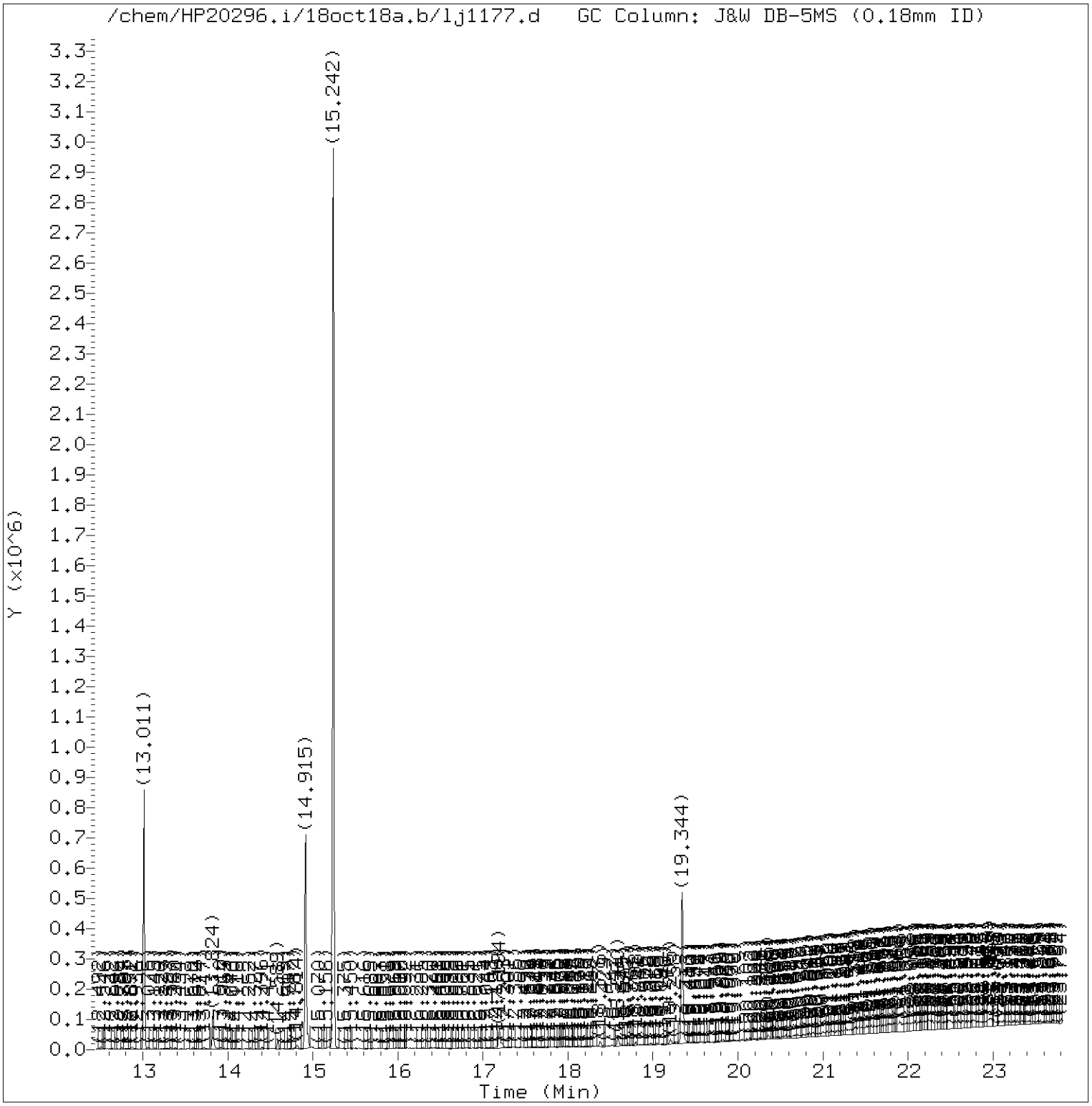
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1177.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 01:03 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94290 Lab Sample ID: 9850261

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1177.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 01:03 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94290 Lab Sample ID: 9850261

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1177.d Instrument ID: HP20296.i
Injection date and time: 19-OCT-2018 01:03 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 19-OCT-2018 13:03
Date, time and analyst ID of latest file update: 19-Oct-2018 13:05 knb25316

Sample Name: 94290 Lab Sample ID: 9850261

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	87875	5.000
45)$Nitrobenzene-d5	(2)	7.069	82	638166	17.347
68)*Naphthalene-d8	(2)	8.192	136	330886	5.000
96)$2-Fluorobiphenyl	(3)	9.979	172	888485	16.551
118)*Acenaphthene-d10	(3)	11.027	164	157888	5.000
158)*Phenanthrene-d10	(4)	13.011	188	290745	5.000
180)*Pyrene-d10	(5)	14.915	212	283218	5.000
184)$Terphenyl-d14	(5)	15.242	244	997291	22.705
218)*Perylene-d12	(6)	19.344	264	242696	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/19/2018 at 13:07.
Target 3.5 esignature user ID: knb25316

Standards Data

Semivolatiles by GC/MS

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\18sep21\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	DI1300.D	rvDFTPP2388	09/21/2018	16:51		
art12405	DI1300a.D	rvDFTPP2388	09/21/2018	17:04		
art12405	DI1301.D	rvSTD2648	09/21/2018	17:33		
art12405	DI1302.D	rvSTD2648	09/21/2018	18:19		
art12405	DI1303.D	rvSTD2648	09/21/2018	18:47		
art12405	DI1304.D	rvSTD2648	09/21/2018	19:16		
art12405	DI1305.D	rvSTD2648	09/21/2018	19:45		
art12405	DI1306.D	rvSTD2648	09/21/2018	20:13		
art12405	DI1307.D	rvSTD2648	09/21/2018	20:42		
art12405	DI1308.D	rvSTD2648	09/21/2018	21:11		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP19760 **HP #04**

Data Directory Path is - D:\data\18oct20\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
lmh00956	DJ1800.D	rvDFTPP2388	10/20/2018	09:21		
lmh00956	DJ1801.D	RVSTD2648	10/20/2018	09:37		
lmh00956	DJ1802.D	RVAMIN2758	10/20/2018	10:21		
lmh00956	DJ1803.D	RVABC2368	10/20/2018	10:48		
lmh00956	DJ1804.D	RVAAAP2538	10/20/2018	11:15		
lmh00956	DJ1805.D	RVPDA2278	10/20/2018	12:38		
lmh00956	DJ1810.D	SBLKWF292	10/20/2018	14:55	18292WAF	
lmh00956	DJ1811.D	292WFLCS	10/20/2018	15:23	18292WAF	
lmh00956	DJ1812.D	292WFLCSD	10/20/2018	15:50	18292WAF	
lmh00956	DJ1813.D	292WFLCS1	10/20/2018	16:18	18292WAF	
lmh00956	DJ1814.D	292WFLCSD1	10/20/2018	16:45	18292WAF	
lmh00956	DJ1815.D	9850252RE	10/20/2018	17:13	18292WAF	
lmh00956	DJ1816.D	9851520RE	10/20/2018	17:40	18292WAF	
lmh00956	DJ1817.D	9858584	10/20/2018	18:08	18292WAF	
lmh00956	DJ1818.D	9858585	10/20/2018	18:35	18292WAF	
lmh00956	DJ1819.D	9853777	10/20/2018	19:03	18290WAB	20
lmh00956	DJ1820.D	9850984	10/20/2018	19:30	18290WAB	
lmh00956	DJ1821.D	9850985	10/20/2018	19:57	18290WAB	
lmh00956	DJ1822.D	9850986	10/20/2018	20:25	18290WAB	
lmh00956	DJ1823.D	9850987	10/20/2018	20:52	18290WAB	
lmh00956	DJ1824.D	9850988	10/20/2018	21:19	18290WAB	
lmh00956	DJ1825.D	9850989	10/20/2018	21:47	18290WAB	
lmh00956	DJ1826.D	9850990	10/20/2018	22:14	18290WAB	
lmh00956	DJ1827.D	9850992	10/20/2018	22:41	18290WAB	
lmh00956	DJ1828.D	9850993	10/20/2018	23:09	18290WAB	
lmh00956	DJ1829.D	9850994	10/20/2018	23:36	18290WAB	

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18oct17a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
art12405	LJ1100.D	RVDFTPP2338	10/17/2018	19:37		
art12405	LJ1100a.D	RVDFTPP2338	10/17/2018	19:53		
art12405	LJ1100b.D	RVDFTPP2338	10/17/2018	20:13		
art12405	LJ1101.D	RVSTD2648	10/17/2018	20:27		
art12405	LJ1102.D	RVABC2398	10/17/2018	21:24		
art12405	LJ1103.D	RVPDA2278	10/17/2018	21:52		
art12405	LJ1104.D	SBLKWT288	10/17/2018	23:07	18288WAT	
art12405	LJ1105.D	288WTLCS	10/17/2018	23:35	18288WAT	
art12405	LJ1106.D	288WTLCS	10/18/2018	00:04	18288WAT	
art12405	LJ1107.D	288WTLCSD	10/18/2018	00:33	18288WAT	
art12405	LJ1108.D	9843834	10/18/2018	01:02	18288WAQ	
art12405	LJ1109.D	9843835	10/18/2018	01:30	18288WAQ	
art12405	LJ1110.D	9843836	10/18/2018	01:59	18288WAQ	
art12405	LJ1111.D	9843837	10/18/2018	02:28	18288WAQ	
art12405	LJ1112.D	9843845	10/18/2018	02:56	18288WAQ	
art12405	LJ1113.D	9843846	10/18/2018	03:25	18288WAQ	
art12405	LJ1114.D	9843847	10/18/2018	03:54	18288WAQ	
art12405	LJ1115.D	9844527	10/18/2018	04:23	18288WAQ	
art12405	LJ1116.D	9851156	10/18/2018	04:51	18288WAQ	
art12405	LJ1117.D	9851157	10/18/2018	05:20	18288WAQ	
art12405	LJ1134.D	RVSTD2648	10/18/2018	05:49		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18oct18\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
knb25316	LJ1140.D	RVDFTPP2338	10/18/2018	06:41		
knb25316	LJ1141.D	RVSTD2648	10/18/2018	07:04		
knb25316	LJ1141.D	RVSTD2648	10/18/2018	07:04		
knb25316	LJ1142.D	rvABC2398	10/18/2018	08:45		
knb25316	LJ1143.D	rvPDA2278	10/18/2018	09:14		
knb25316	LJ1144.D	SBLKWD290	10/18/2018	10:09	18290WAD	
knb25316	LJ1145.D	290WDLCS	10/18/2018	10:38	18290WAD	
knb25316	LJ1146.D	9839062RE	10/18/2018	11:07	18290WAD	
knb25316	LJ1147.D	9839063RE	10/18/2018	11:37	18290WAD	
knb25316	LJ1148.D	9839064RE	10/18/2018	12:06	18290WAD	
knb25316	LJ1149.D	9843845DL	10/18/2018	12:35	18288WAQ	10
knb25316	LJ1150.D	9850252	10/18/2018	13:04	18288WAT	
knb25316	LJ1151.D	9850253MS	10/18/2018	13:33	18288WAT	
knb25316	LJ1152.D	9850254MSD	10/18/2018	14:01	18288WAT	
knb25316	LJ1153.D	9848058	10/18/2018	14:30	18288WAZ	
knb25316	LJ1154.D	9848557	10/18/2018	14:59	18288WAZ	10
knb25316	LJ1165.D	9851520	10/18/2018	15:27	18288WAZ	
knb25316	LJ1155.D	9850249	10/18/2018	15:56	18288WAT	
knb25316	LJ1156.D	9850250	10/18/2018	16:25	18288WAT	
knb25316	LJ1157.D	9850251	10/18/2018	16:53	18288WAT	
knb25316	LJ1158.D	9850255	10/18/2018	17:22	18288WAT	
knb25316	LJ1159.D	9850256	10/18/2018	17:51	18288WAT	
knb25316	LJ1160.D	9850257	10/18/2018	18:19	18288WAT	
knb25316	LJ1161.D	9850258	10/18/2018	18:48	18288WAT	
knb25316	LJ1166.D	rvSTD2648	10/18/2018	19:17		

Lancaster Laboratories
Semi-Volatiles
Runlog for Agilent GC/MS System HP20296 **HP #12**

Data Directory Path is - D:\data\18oct18a\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
bkc25363	LJ1170.D	RVDFTPP2338	10/18/2018	20:58		
bkc25363	LJ1170a.D	RVDFTPP2338	10/18/2018	21:11		
bkc25363	LJ1171.D	RVSTD2648	10/18/2018	21:26		
bkc25363	LJ1172.D	SBLKWF290	10/18/2018	22:40	18290WAF	
bkc25363	LJ1173.D	290WFLCS	10/18/2018	23:08	18290WAF	
bkc25363	LJ1174.D	9850258	10/18/2018	23:37	18288WAT	
bkc25363	LJ1175.D	9850259	10/19/2018	00:06	18288WAT	
bkc25363	LJ1176.D	9850260	10/19/2018	00:34	18288WAT	
bkc25363	LJ1177.D	9850261	10/19/2018	01:03	18288WAT	
bkc25363	LJ1178.D	9848557DL	10/19/2018	01:32	18288WAZ	10000
bkc25363	LJ1179.D	9851714	10/19/2018	02:00	18290WAF	
bkc25363	LJ1180.D	9852472	10/19/2018	02:29	18290WAF	10
bkc25363	LJ1181.D	9852726	10/19/2018	02:58	18290WAF	
bkc25363	LJ1182.D	9852727	10/19/2018	03:26	18290WAF	
bkc25363	LJ1183.D	9852728	10/19/2018	03:55	18290WAF	
bkc25363	LJ1184.D	9852729	10/19/2018	04:24	18290WAF	
bkc25363	LJ1185.D	9852790	10/19/2018	04:52	18290WAF	
bkc25363	LJ1186.D	9852793	10/19/2018	05:21	18290WAF	
bkc25363	LJ1187.D	9854805	10/19/2018	05:50	18290WAF	
bkc25363	LJ1188.D	9854806	10/19/2018	06:19	18290WAF	
bkc25363	LJ1189.D	9854807	10/19/2018	06:47	18290WAF	
bkc25363	LJ1190.D	9854809	10/19/2018	07:16	18290WAF	
bkc25363	LJ1191.D	9854813	10/19/2018	07:45	18290WAF	
bkc25363	LJ1192.D	9854814	10/19/2018	08:13	18290WAF	

Data File: /chem/HP19760.i/18sep21.b/di1300a.d

Page 1

Date : 21-SEP-2018 17:04

Client ID: DFTPP12.5

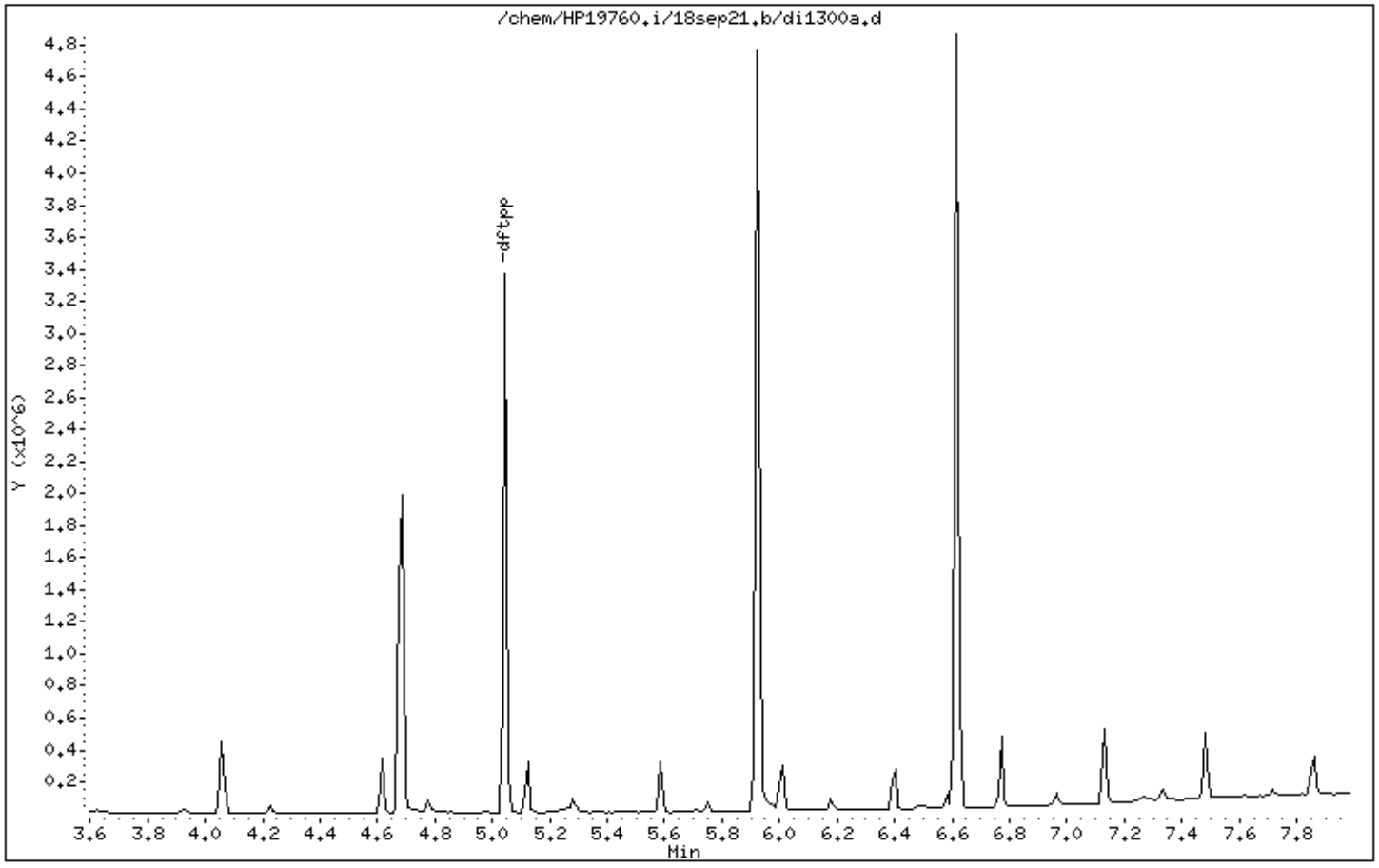
Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2388;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Edward Monborne on 09/23/2018 at 07:57.
Target 3.5 esignature user ID: em10340

Data File: /chem/HP19760.i/18sep21.b/di1300a.d

Date : 21-SEP-2018 17:04

Client ID: DFTPP12.5

Instrument: HP19760.i

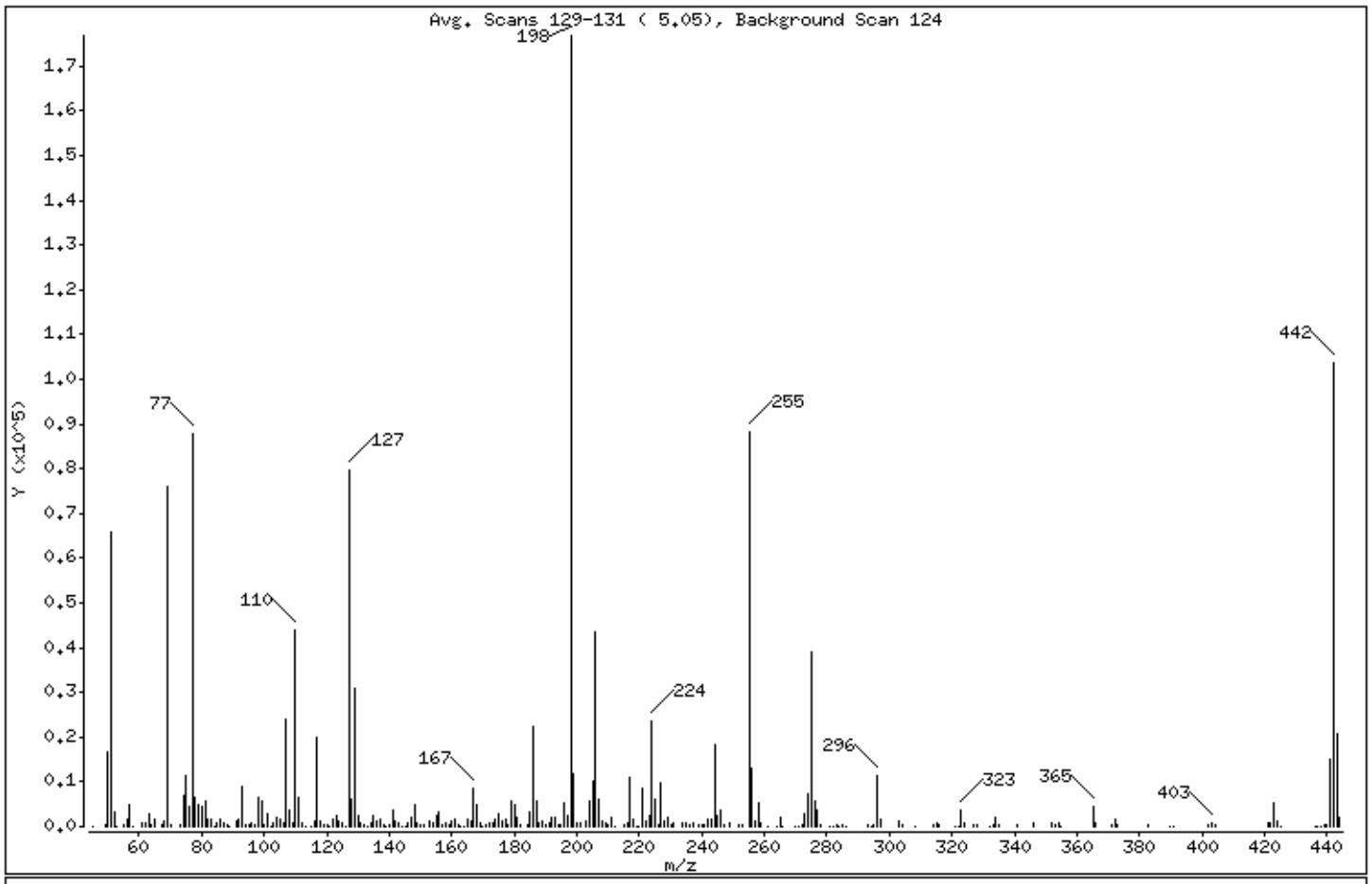
Sample Info: DFTPP12.5;rvDFTPP2388;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	37.16
68	Less than 2.00% of mass 69	0.78 (1.81)
69	Mass 69 relative abundance	43.06
70	Less than 2.00% of mass 69	0.28 (0.65)
127	10.00 - 80.00% of mass 198	45.05
197	Less than 2.00% of mass 198	1.49
199	5.00 - 9.00% of mass 198	6.78
275	10.00 - 60.00% of mass 198	22.09
365	Greater than 1.00% of mass 198	2.46
441	0.01 - 24.00% of mass 442	8.57 (14.61)
442	50.00 - 99.99% of mass 198	58.65
443	15.00 - 24.00% of mass 442	11.77 (20.08)

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Target 3.5 esignature user ID: em10340

Date : 21-SEP-2018 17:04

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2388;1;3;DFTPP; Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: di1300a.d
Spectrum: Avg. Scans 129-131 (5.05), Background Scan 124
Location of Maximum: 198.00
Number of points: 263

m/z	Y	m/z	Y	m/z	Y	m/z	Y
45.00	111	122.00	1537	190.00	242	272.00	269
49.00	397	123.00	2428	191.00	776	273.00	2848
50.00	16856	124.00	1155	192.00	2026	274.00	7504
51.00	65712	125.00	933	193.00	2149	275.00	39064
52.00	3362	126.00	102	194.00	436	276.00	5628
53.00	193	127.00	79664	195.00	289	277.00	3527
55.00	602	128.00	6049	196.00	5141	278.00	455
56.00	1691	129.00	30968	197.00	2635	281.00	79
57.00	4682	130.00	2641	198.00	176832	282.00	138
58.00	141	131.00	732	199.00	11982	283.00	493
61.00	750	132.00	296	200.00	946	284.00	159
62.00	967	133.00	66	201.00	890	285.00	470
63.00	2669	134.00	882	203.00	1148	286.00	121
64.00	407	135.00	2500	204.00	5880	293.00	563
65.00	1672	136.00	1106	205.00	10246	294.00	138
67.00	231	137.00	1524	206.00	43312	295.00	350
68.00	1378	138.00	251	207.00	6122	296.00	11485
69.00	76152	139.00	113	208.00	1204	297.00	1566
70.00	496	140.00	349	209.00	623	303.00	1151
73.00	281	141.00	3789	210.00	585	304.00	314
74.00	7047	142.00	1154	211.00	1862	308.00	127
75.00	11440	143.00	825	212.00	151	314.00	400
76.00	4390	144.00	180	215.00	466	315.00	966
77.00	87872	145.00	193	216.00	789	316.00	513
78.00	6401	146.00	664	217.00	11029	321.00	168
79.00	5016	147.00	2149	218.00	1551	322.00	106
80.00	4356	148.00	5071	219.00	178	323.00	3552
81.00	5868	149.00	984	220.00	133	324.00	613
82.00	1535	150.00	212	221.00	8496	327.00	509
83.00	1693	151.00	600	222.00	1205	328.00	286
84.00	112	153.00	1249	223.00	2505	332.00	148
85.00	923	154.00	927	224.00	23464	333.00	205
86.00	1569	155.00	2287	225.00	6023	334.00	2141
87.00	761	156.00	3161	226.00	581	335.00	502
88.00	385	157.00	588	227.00	9869	341.00	283

Digitally signed by Edward Monborne on 09/23/2018 at 07:57.
Target 3.5 esignature user ID: em10340

Date : 21-SEP-2018 17:04

Client ID: DFTPP12.5 Instrument: HP19760.i

Sample Info: DFTPP12.5;rvDFTPP2388;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: di1300a.d
Spectrum: Avg. Scans 129-131 (5.05), Background Scan 124
Location of Maximum: 198.00
Number of points: 263

m/z	Y	m/z	Y	m/z	Y	m/z	Y
89.00	105	158.00	694	228.00	1275	346.00	727
91.00	1393	159.00	503	229.00	1888	352.00	927
92.00	1506	160.00	1350	230.00	271	353.00	518
93.00	8792	161.00	1783	231.00	618	354.00	914
94.00	555	162.00	525	234.00	643	355.00	157
95.00	227	163.00	89	235.00	778	365.00	4354
96.00	612	164.00	115	236.00	347	366.00	689
97.00	320	165.00	1501	237.00	834	371.00	261
98.00	6548	166.00	1037	239.00	251	372.00	1600
99.00	5859	167.00	8711	240.00	288	373.00	267
100.00	570	168.00	5036	241.00	386	383.00	305
101.00	2857	169.00	853	242.00	1464	390.00	110
102.00	169	170.00	165	243.00	1433	391.00	103
103.00	894	171.00	327	244.00	18296	402.00	564
104.00	1963	172.00	695	245.00	2463	403.00	930
105.00	1724	173.00	907	246.00	3516	404.00	321
106.00	696	174.00	1781	247.00	593	421.00	800
107.00	23792	175.00	2975	249.00	651	422.00	810
108.00	3734	176.00	1031	252.00	213	423.00	5140
109.00	692	177.00	1600	253.00	488	424.00	1327
110.00	43864	178.00	373	255.00	88384	425.00	129
111.00	6353	179.00	5688	256.00	13068	436.00	97
112.00	809	180.00	4855	257.00	1023	437.00	186
113.00	146	181.00	1902	258.00	5205	438.00	161
115.00	132	182.00	312	259.00	645	439.00	323
116.00	1064	184.00	574	261.00	126	440.00	545
117.00	19856	185.00	3264	264.00	119	441.00	15152
118.00	1392	186.00	22168	265.00	2136	442.00	103712
119.00	216	187.00	5891	266.00	149	443.00	20816
120.00	396	188.00	775	270.00	118	444.00	1871
121.00	171	189.00	1272	271.00	90		

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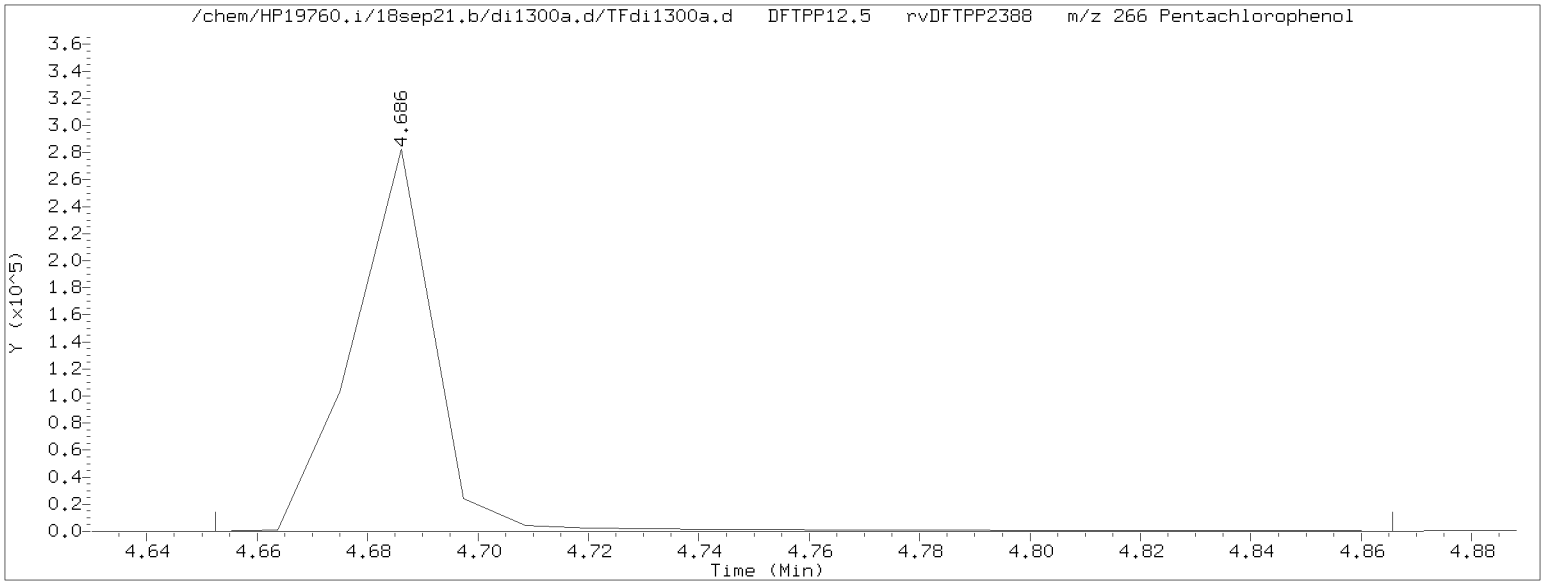
Target 3.5 esignature user ID: em10340

Assessment of GC Column Performance and Injection Port Inertness for

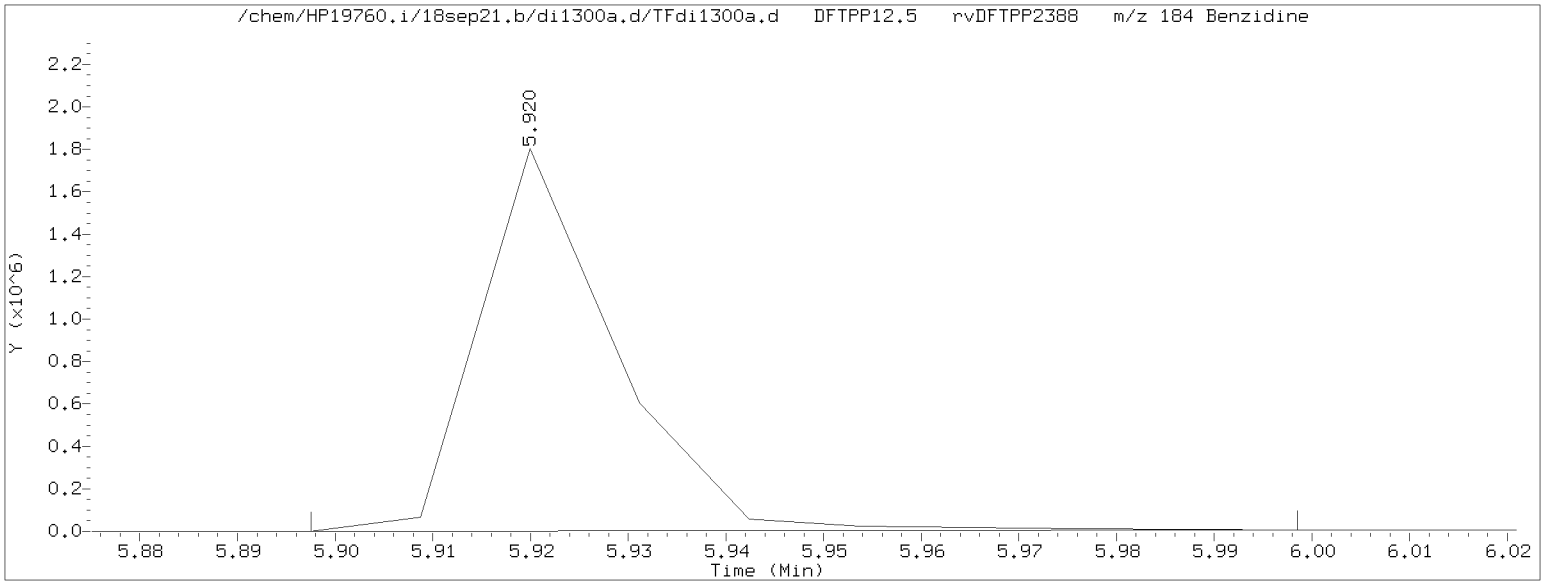
Instrument ID: HP19760.i Injection Date: 21-SEP-2018 17:04 Operator: art12405



Pentachlorophenol EICP peak height = 282560 EICP peak height at 10% = 28256 Pentachlorophenol EICP area = 288215

Pentachlorophenol EICP peak apex (min.) = 4.686
RT at 5% of front half of EICP (min.) = 4.665 'Front' peak width (min.) = 0.0209666667
RT at 5% of back half of EICP (min.) = 4.703 'Tailing' peak width (min.) = 0.0169166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0169166667}{0.0209666667} = 0.807$$



Benzidine EICP peak height = 1801318 EICP peak height at 10% = 180132 Benzidine EICP area = 1727343

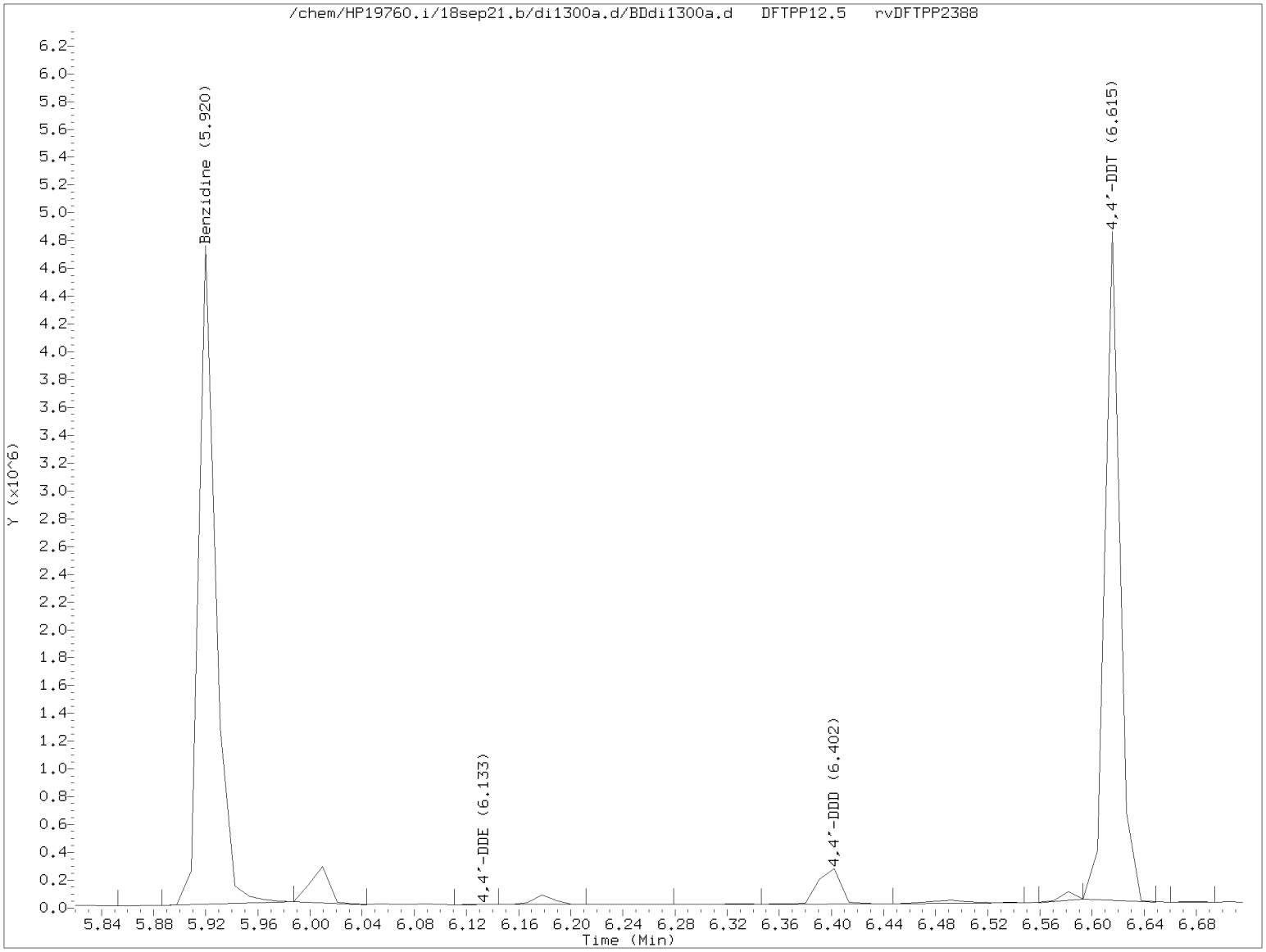
Benzidine EICP peak apex (min.) = 5.920
RT at 10% of front half of EICP (min.) = 5.910 'Front' peak width (min.) = 0.0104666667
RT at 10% of back half of EICP (min.) = 5.940 'Tailing' peak width (min.) = 0.0198833333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0198833333}{0.0104666667} = 1.900$$

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

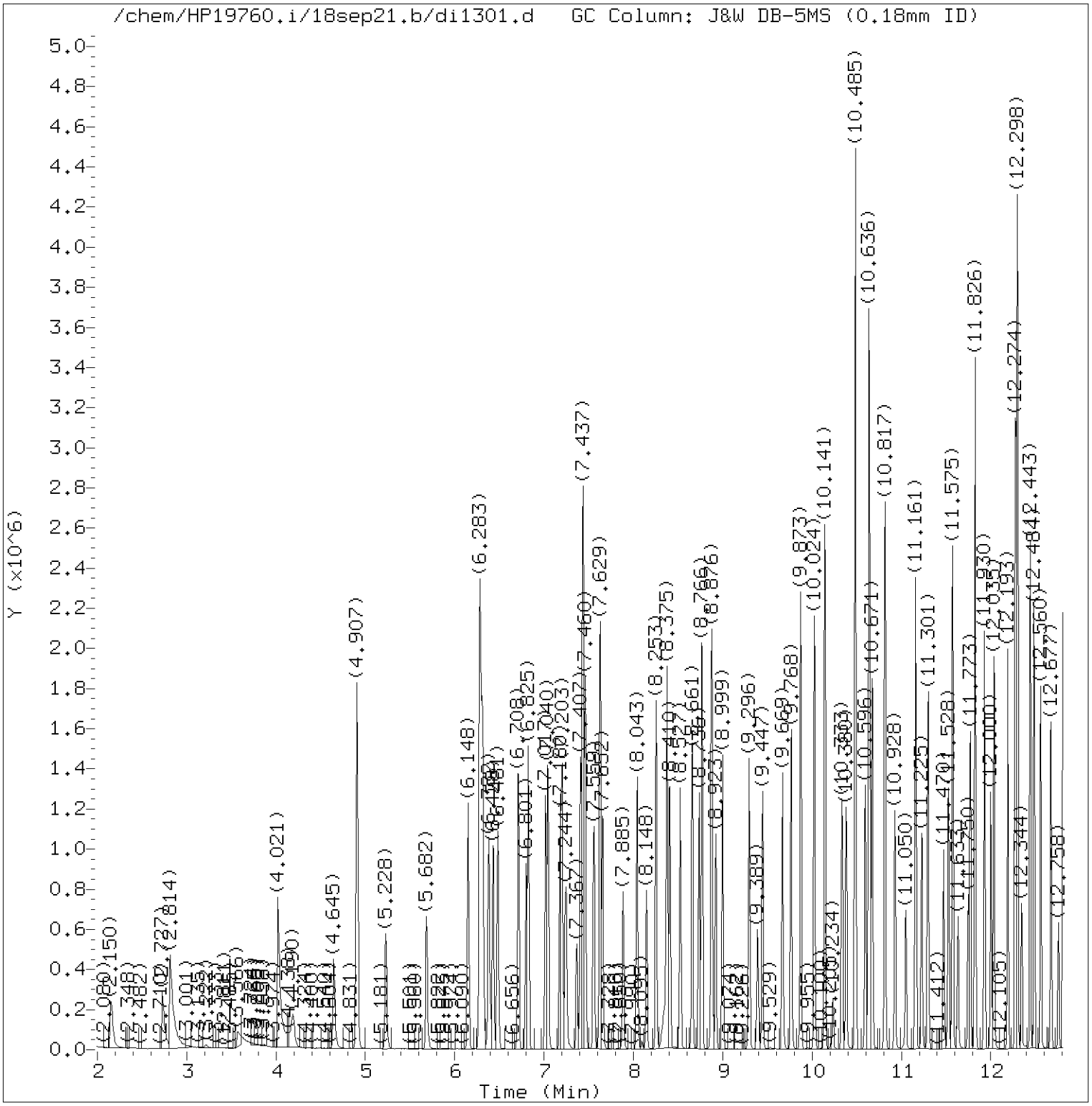
Instrument ID: HP19760.i Injection Date: 21-SEP-2018 17:04 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{2003 + 309787}{2003 + 309787 + 3907666} \times 100 = 7.4$$

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

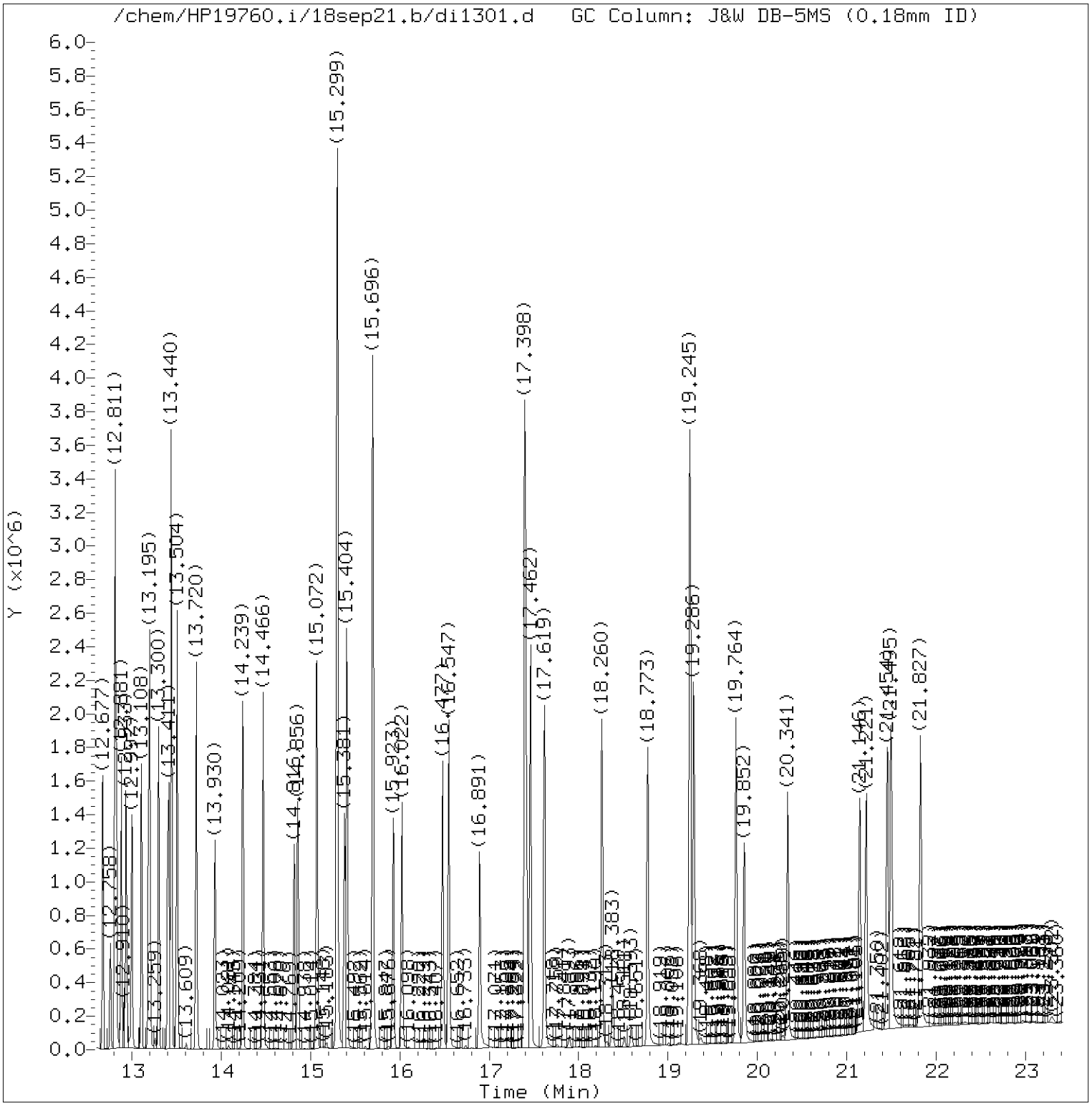
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.150	88	227612	7.500
4) N-Nitrosodimethylamine	(1)	2.727	74	320246	7.500
5) Pyridine	(1)	2.814	79	581931	7.500
7) 2-Picoline	(1)	4.021	93	555585	7.500
8) N-Nitrosomethylethylamine	(1)	4.190	88	237196	7.500
9) Methyl methanesulfonate	(1)	4.645	80	264301	7.500
11)$2-Fluorophenol	(1)	4.907	112	863491	15.000
13) N-Nitrosodiethylamine	(1)	5.228	102	223836	7.500
42) Total Cresols	(1)			890434	15.000
15) Ethyl methanesulfonate	(1)	5.682	109	218105	7.500
16) Benzaldehyde	(1)	6.148	77	390562	7.500
17)$Phenol-d6	(1)	6.283	99	1182229	15.000
18) Phenol	(1)	6.300	94	668980	7.500
19) Aniline	(1)	6.312	93	774979	7.500
20) a-methylstyrene	(1)	6.399	118	43532	7.500
22) bis(2-Chloroethyl)ether	(1)	6.428	93	494484	7.500
23) 2-Chlorophenol	(1)	6.481	128	410830	7.500
24) 1,3-Dichlorobenzene	(1)	6.714	146	468700	7.500
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	181644	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	472259	7.500
27) Benzyl alcohol	(1)	7.017	108	276442	7.500
28) 1,2-Dichlorobenzene	(1)	7.046	146	444639	7.500
30) Indene	(1)	7.180	115	462246	7.500
31) 2-Methylphenol	(1)	7.203	108	419399	7.500
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.244	45	589444	7.500
34) bis(2-Chloroisopropyl)ether	(1)	7.244	45	589444	7.500
35) N-Nitrosopyrrolidine	(1)	7.367	100	230538	7.500
97) Isosafrole	(3)			307252	7.500
36) Acetophenone	(1)	7.407	105	573856	7.500
38) N-Nitroso-di-n-propylamine	(1)	7.431	70	349989	7.500
37) 4-Methylphenol	(1)	7.437	108	471035	7.500
39) N-Nitrosomorpholine	(1)	7.437	56	265148	7.500
40) o-Toluidine	(1)	7.460	106	724322	7.500
43) Hexachloroethane	(1)	7.559	117	190009	7.500
44)$Nitrobenzene-d5	(2)	7.629	82	993811	15.000
45) Nitrobenzene	(2)	7.652	77	521739	7.500
48) N-Nitrosopiperidine	(2)	7.885	114	203511	7.500
50) Isophorone	(2)	8.043	82	853129	7.500
120) 2,4_2,6-Dinitrotoluenes	(3)			385698	15.000
51) 2-Nitrophenol	(2)	8.148	139	188373	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.253	107	440802	7.500
56) Benzoic acid	(2)	8.375	105	292626M	10.000
57) O,O,O-Triethylphosphorothioate	(2)	8.381	198	181207	7.500
55) bis(2-Chloroethoxy)methane	(2)	8.410	93	563962	7.500
60) 2,4-Dichlorophenol	(2)	8.527	162	318414	7.500
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	350903	7.500
65)*Naphthalene-d8	(2)	8.736	136	678309	5.000
66) Naphthalene	(2)	8.771	128	1190623	7.500
146) Diallate trans/cis	(4)			398736	7.500
67) 4-Chloroaniline	(2)	8.870	127	451604	7.500
68) 2,6-Dichlorophenol	(2)	8.882	162	313119	7.500
69) Hexachloropropene	(2)	8.923	213	218645	7.500
71) Hexachlorobutadiene	(2)	8.999	225	196388	7.500
75) Quinoline	(2)	9.296	129	659745	7.500
76) Caprolactam	(2)	9.389	113	114845	7.500
77) N-Nitrosodi-n-butylamine	(2)	9.447	84	296007	7.500
80) 4-Chloro-3-methylphenol	(2)	9.669	107	352388	7.500
82) Safrole	(2)	9.768	162	293313	7.500
83) 2-Methylnaphthalene	(2)	9.873	142	754890	7.500
84) 1-Methylnaphthalene	(2)	10.024	142	718391	7.500
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	330770	7.500
85) Hexachlorocyclopentadiene	(3)	10.147	237	204999	7.500
88) cis-Isosafrole	(3)	10.234	162	48980	1.275
90) 2,4,6-Trichlorophenol	(3)	10.333	196	198531	7.500
92) 2,4,5-Trichlorophenol	(3)	10.380	196	216375	7.500
93)$2-Fluorobiphenyl	(3)	10.485	172	1577687	15.000
94) trans-Isosafrole	(3)	10.596	162	258272	6.225
95) 1,1'-Biphenyl	(3)	10.636	154	847136	7.500
96) 2-Chloronaphthalene	(3)	10.642	162	710848	7.500
98) 1-Chloronaphthalene	(3)	10.677	162	639573	7.500
99) Diphenyl ether	(3)	10.817	170	473713	7.500
100) 2-Nitroaniline	(3)	10.817	138	204818	7.500
104) 1,4-Naphthoquinone	(3)	10.928	158	239764	7.500
105) 1,4-Dinitrobenzene	(3)	11.050	168	102785	7.500
106) Dimethylphthalate	(3)	11.161	163	733658	7.500
107) 1,3-Dinitrobenzene	(3)	11.161	168	124298	7.500
108) 2,6-Dinitrotoluene	(3)	11.231	165	170269	7.500
109) Acenaphthylene	(3)	11.301	152	957027	7.500
112) 3-Nitroaniline	(3)	11.470	138	179140	7.500
113)*Acenaphthene-d10	(3)	11.528	164	318311	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.575	153	692236	7.500
115) 2,4-Dinitrophenol	(3)	11.633	184	101041	10.000
116) 4-Nitrophenol	(3)	11.750	109	112963	7.500
117) Pentachlorobenzene	(3)	11.773	250	269455	7.500
118) 2,4-Dinitrotoluene	(3)	11.826	165	215429	7.500
119) Dibenzofuran	(3)	11.826	168	948696	7.500
121) 1-Naphthylamine	(3)	11.930	143	708446	7.500
122) 2,3,4,6-Tetrachlorophenol	(3)	12.000	232	155649	7.500
123) 2-Naphthylamine	(3)	12.035	143	708410	7.500
124) Diethylphthalate	(3)	12.193	149	672789	7.500
126) Fluorene	(3)	12.274	166	755800	7.500
125) Thionazin	(3)	12.286	107	144777	7.500
128) 5-Nitro-o-toluidine	(3)	12.298	152	215328	7.500
129) 4-Nitroaniline	(3)	12.298	138	207290	7.500
127) 4-Chlorophenyl-phenylether	(3)	12.303	204	360233	7.500
130) 4,6-Dinitro-2-methylphenol	(4)	12.350	198	103925	7.500
131) N-Nitrosodiphenylamine	(4)	12.443	169	613277	7.500
132) NDPA as diphenylamine	(4)	12.443	169	613277	7.500
134) 1,2-Diphenylhydrazine	(4)	12.484	77	892437	7.500
135)$2,4,6-Tribromophenol	(3)	12.560	330	167710	15.000
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	129973	7.500
139) 1,3,5-Trinitrobenzene	(4)	12.758	213	69405	7.500
141) Phorate	(4)	12.811	75	512656	7.500
140) Diallate (peak 1)	(4)	12.811	86	344726	6.225
142) Phenacetin	(4)	12.828	108	384285	7.500
143) 4-Bromophenyl-phenylether	(4)	12.886	248	195928	7.500
144) Diallate (peak 2)	(4)	12.910	86	54010	1.275
145) Hexachlorobenzene	(4)	12.939	284	195724	7.500
147) Dimethoate	(4)	12.997	87	321954	7.500
148) Atrazine	(4)	13.108	200	189251	7.500
149) Pentachlorophenol	(4)	13.184	266	115196	7.500
150) 4-Aminobiphenyl	(4)	13.195	169	519348	7.500
151) Pentachloronitrobenzene	(4)	13.201	237	85327	7.500
152) Pronamide	(4)	13.300	173	300452	7.500
153)*Phenanthrene-d10	(4)	13.411	188	573202	5.000
155) Phenanthrene	(4)	13.440	178	1101600	7.500
154) Dinoseb	(4)	13.440	211	146555	7.500
157) Anthracene	(4)	13.504	178	1100833	7.500
163) Carbazole	(4)	13.720	167	1009319	7.500
164) Methyl parathion	(4)	13.930	109	228968	7.500

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	1158762	7.500
168) 4-Nitroquinoline-1-oxide	(4)	14.466	190	89006	7.500
167) Parathion	(4)	14.472	109	148867	7.500
169) Octachlorostyrene	(4)	14.816	308	75010	7.500
171) Isodrin	(4)	14.856	193	122329	7.500
222) Total PAHs	(6)			18625782	135.000
173) Fluoranthene	(4)	15.072	202	1173199	7.500
174) Benzidine	(5)	15.299	184	2611287	22.500
175)*Pyrene-d10	(5)	15.381	212	595163	5.000
177) Pyrene	(5)	15.404	202	1224767	7.500
179)$Terphenyl-d14	(5)	15.696	244	1535150	15.000
182) p-Dimethylaminoazobenzene	(5)	15.923	225	194892	7.500
185) Chlorobenzilate	(5)	16.022	139	343423	7.500
187) 3,3'-Dimethylbenzidine	(5)	16.477	212	779032	7.500
188) Butylbenzylphthalate	(5)	16.547	149	558047	7.500
191) 2-Acetylaminofluorene	(5)	16.891	181	394793	7.500
193) 3,3'-Dichlorobenzidine	(5)	17.398	252	435259	7.500
195) Benzo(a)anthracene	(5)	17.398	228	1167296	7.500
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.415	231	240960	7.500
196) Chrysene	(5)	17.462	228	1173323	7.500
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	752910	7.500
203) 6-Methylchrysene	(5)	18.260	242	777055	7.500
205) Di-n-octylphthalate	(6)	18.773	149	1198263	7.500
206) Benzo(b)fluoranthene	(6)	19.240	252	1159925	7.500
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.251	256	553694	7.500
208) Benzo(k)fluoranthene	(6)	19.286	252	1231635	7.500
211) Benzo(a)pyrene	(6)	19.764	252	1070258	7.500
213)*Perylene-d12	(6)	19.852	264	608816	5.000
215) 3-Methylcholanthrene	(6)	20.341	268	509988	7.500
217) Dibenz(a,h)acridine	(6)	21.146	279	811019	7.500
218) Dibenz(a,j)acridine	(6)	21.221	279	897789	7.500
219) Indeno(1,2,3-cd)pyrene	(6)	21.460	276	990834M	7.500
220) Dibenz(a,h)anthracene	(6)	21.495	278	1079259	7.500
221) Benzo(g,h,i)perylene	(6)	21.827	276	1083886	7.500

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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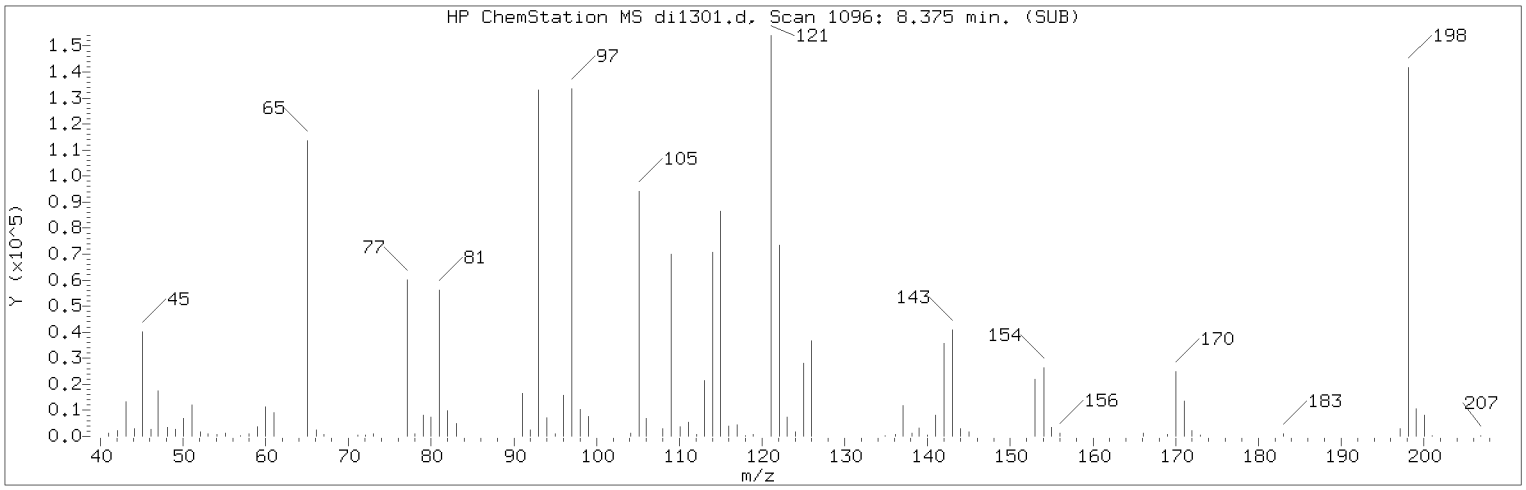
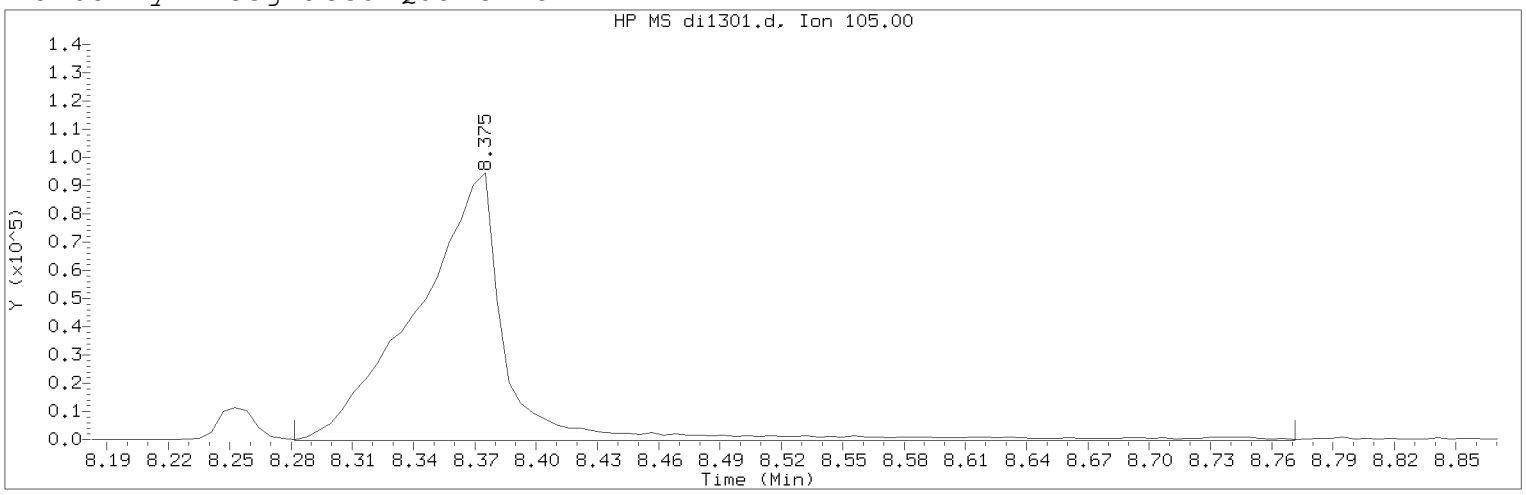
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

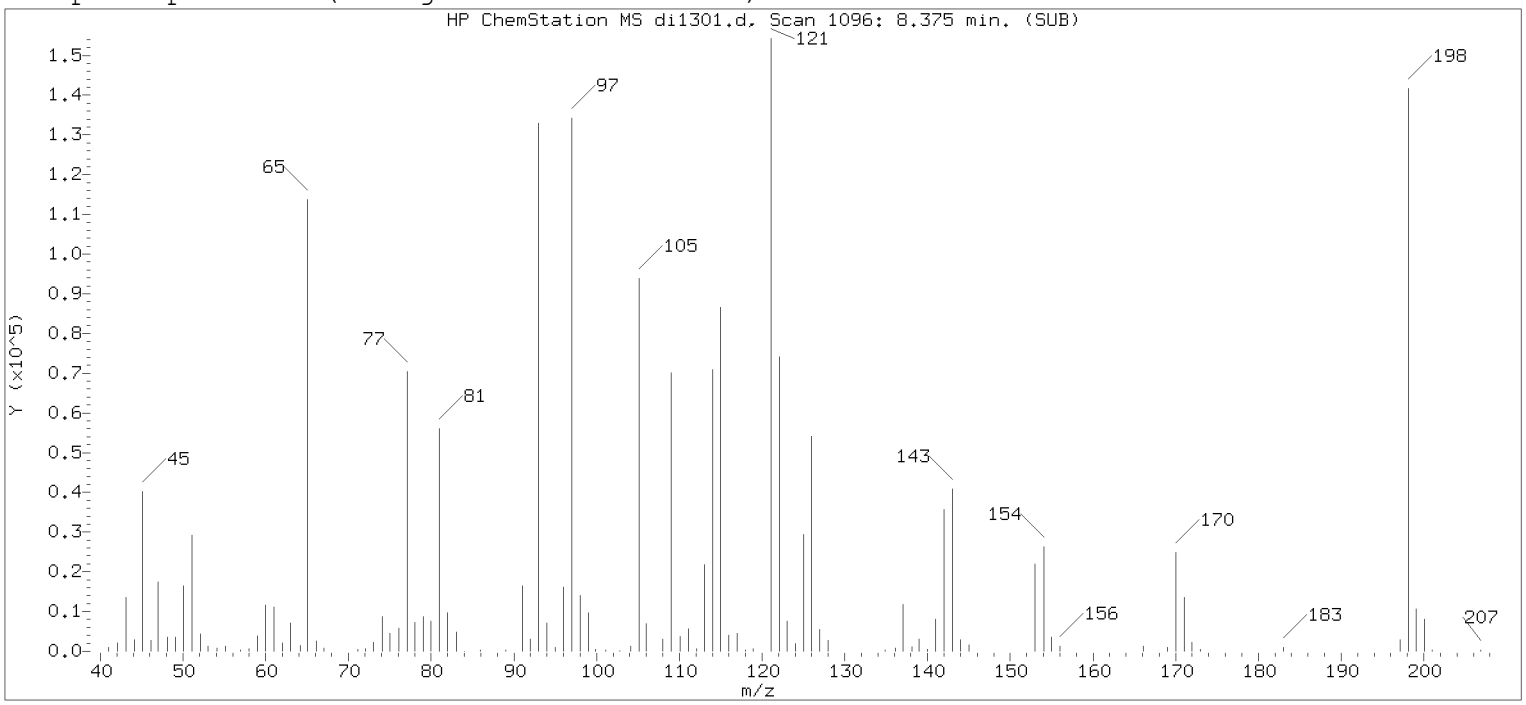
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1096
Retention Time (minutes) : 8.375
Quant Ion : 105.00
Area (flag) : 292626M
On-Column Amount (ng/ul) : 10.0000
Integration start scan : 1079 Integration stop scan: 1163
Y at integration start : -158 Y at integration end: -158

Reason for manual integration: improper integration

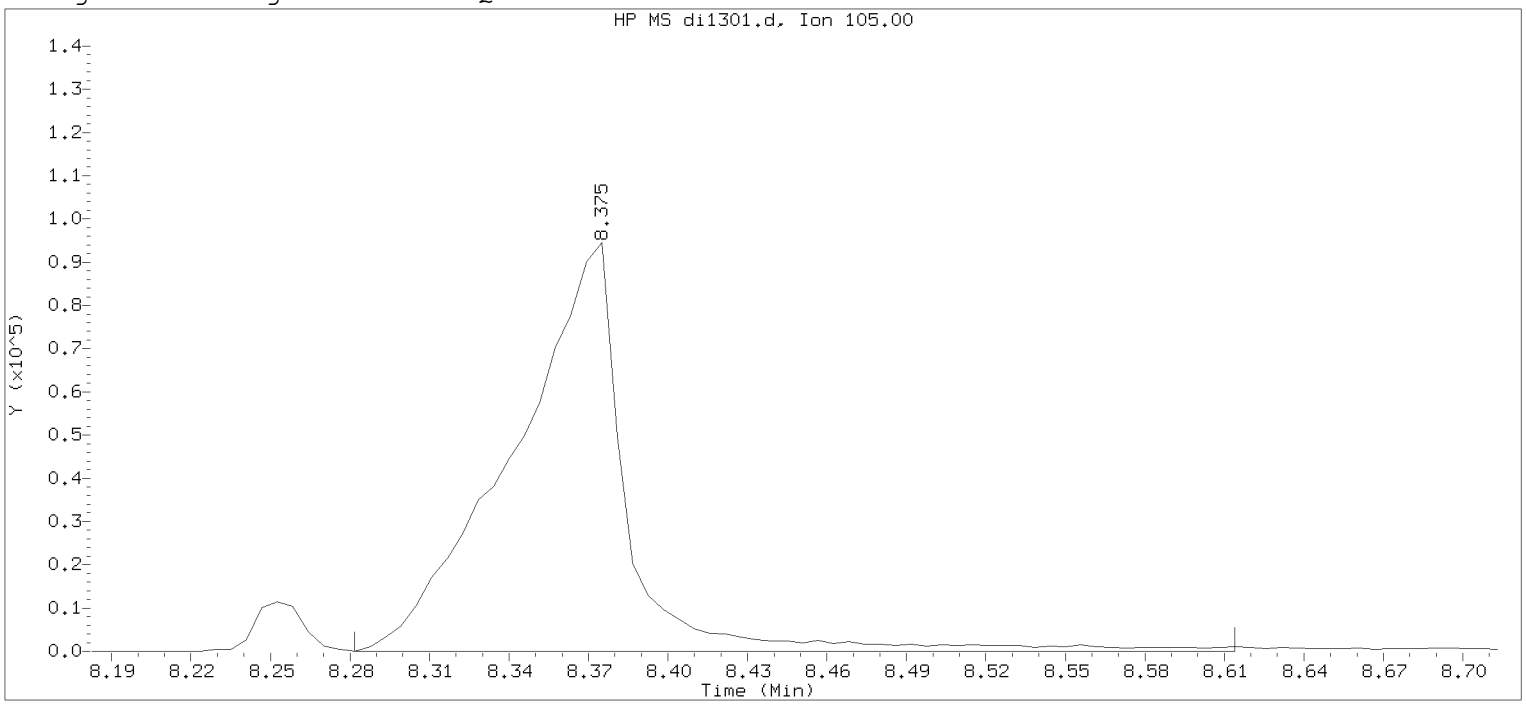
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

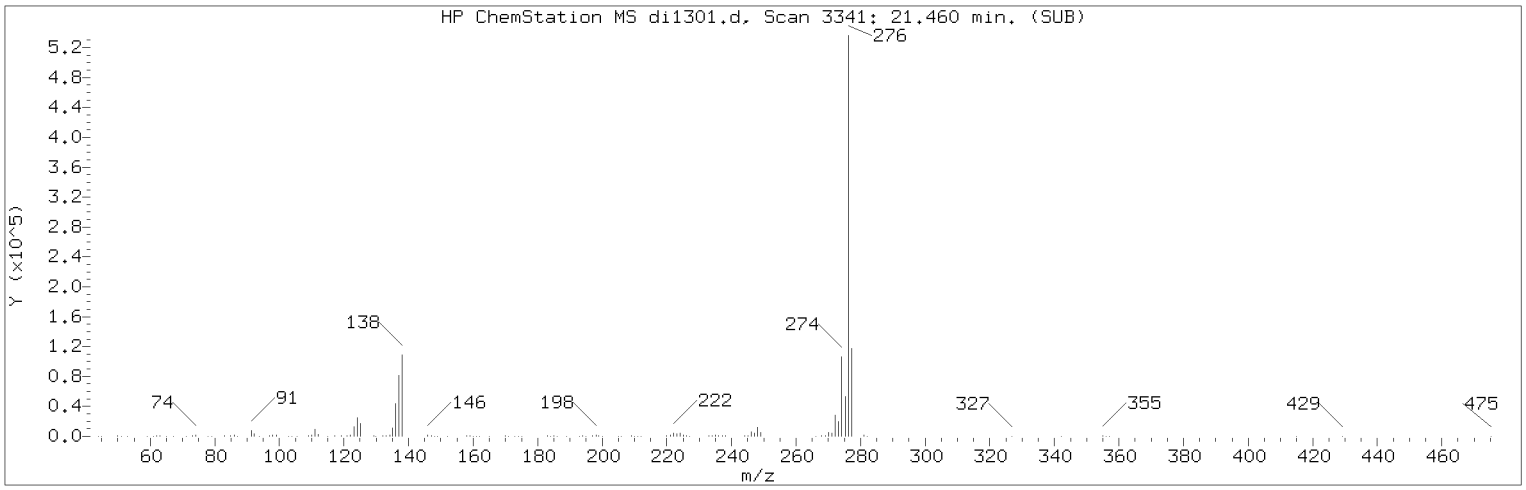
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:01
Date, time and analyst ID of latest file update: 21-Sep-2018 18:01 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

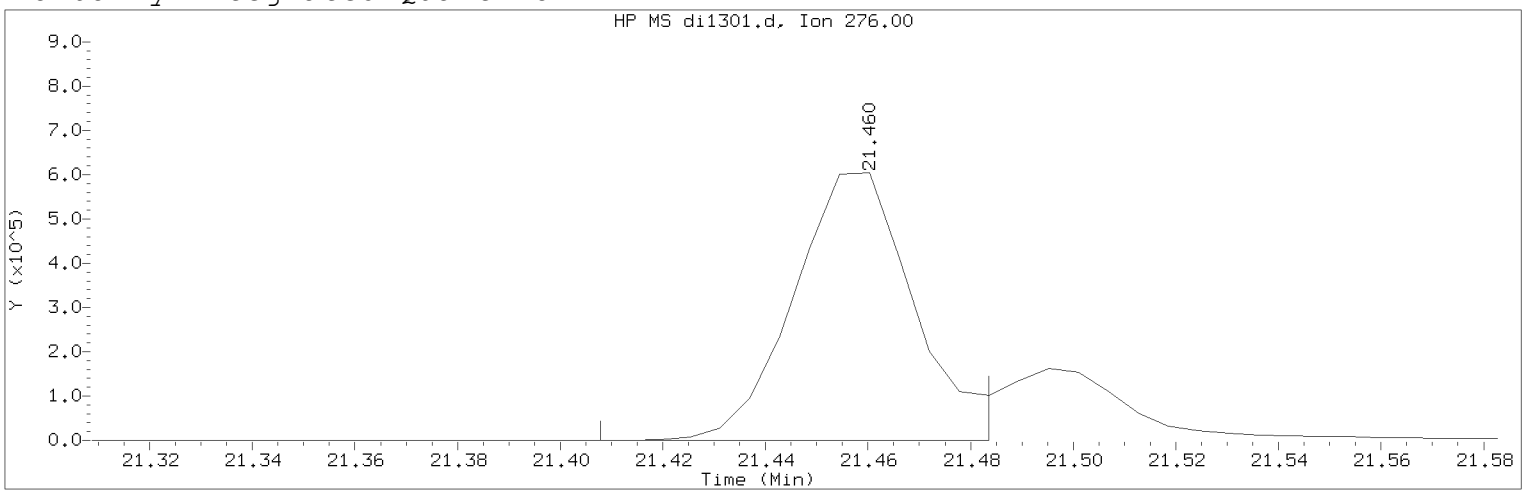
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1096		
Retention Time (minutes)	: 8.375		
Quant Ion	: 105.00		
Area	: 281708		
On-column Amount (ng/ul)	: 11.0512		
Integration start scan	: 1079	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

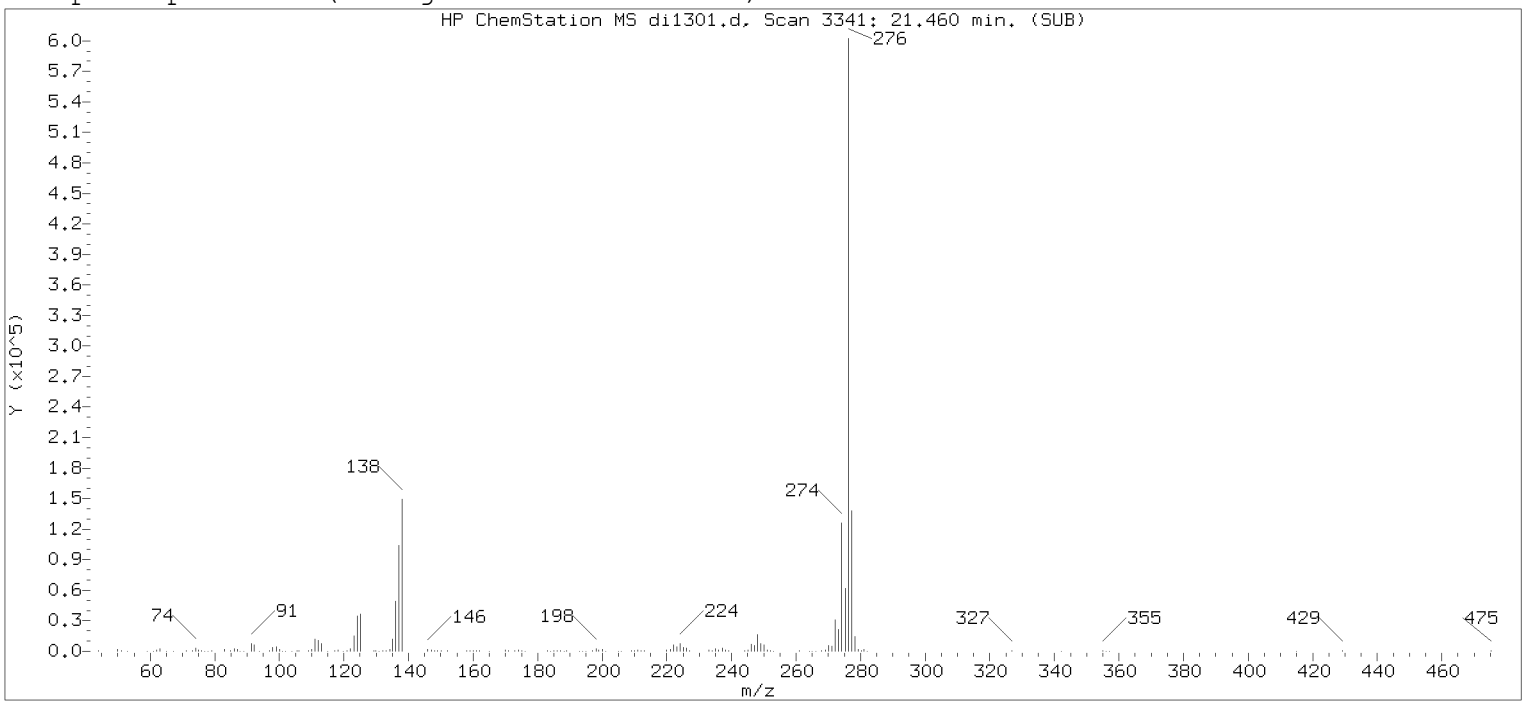
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3341
Retention Time (minutes) : 21.460
Quant Ion : 276.00
Area (flag) : 990834M
On-Column Amount (ng/ul) : 7.5000
Integration start scan : 3331 Integration stop scan: 3344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

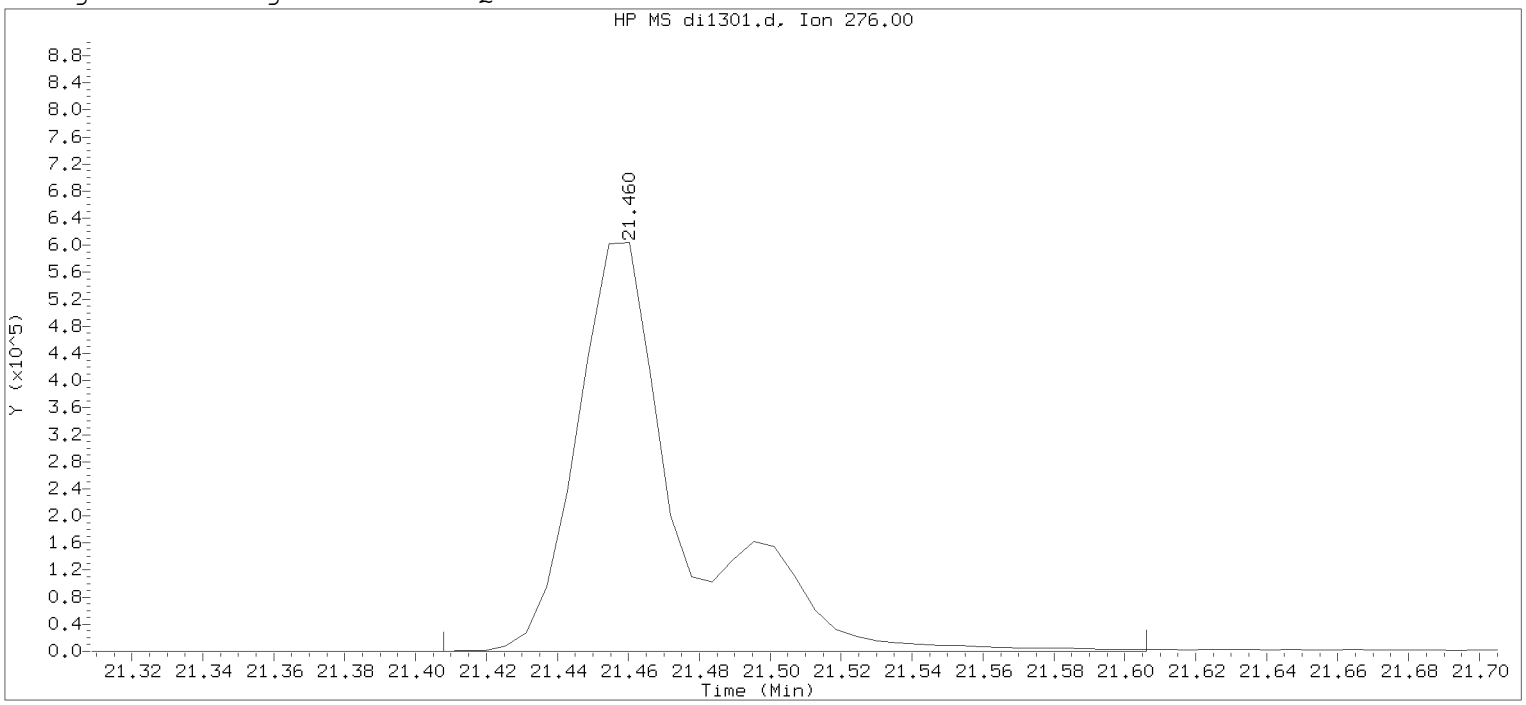
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



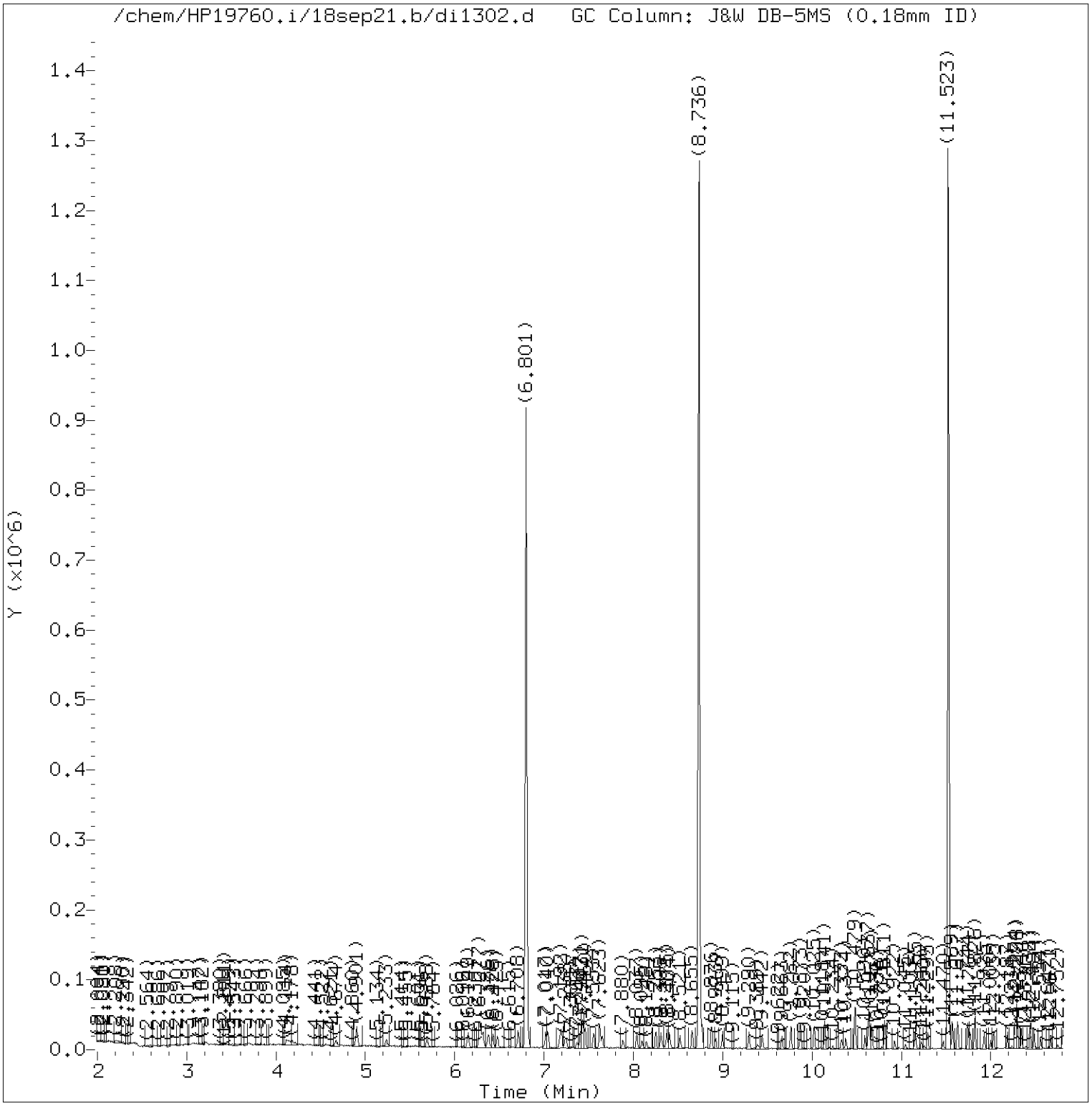
Data File: /chem/HP19760.i/18sep21.b/di1301.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 17:33 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:01
Date, time and analyst ID of latest file update: 21-Sep-2018 18:01 Automation

Sample Name: SSTD7.5 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3341		
Retention Time (minutes)	: 21.460		
Quant Ion	: 276.00		
Area	: 1259388		
On-column Amount (ng/ul)	: 10.7632		
Integration start scan	: 3331	Integration stop scan:	3365
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

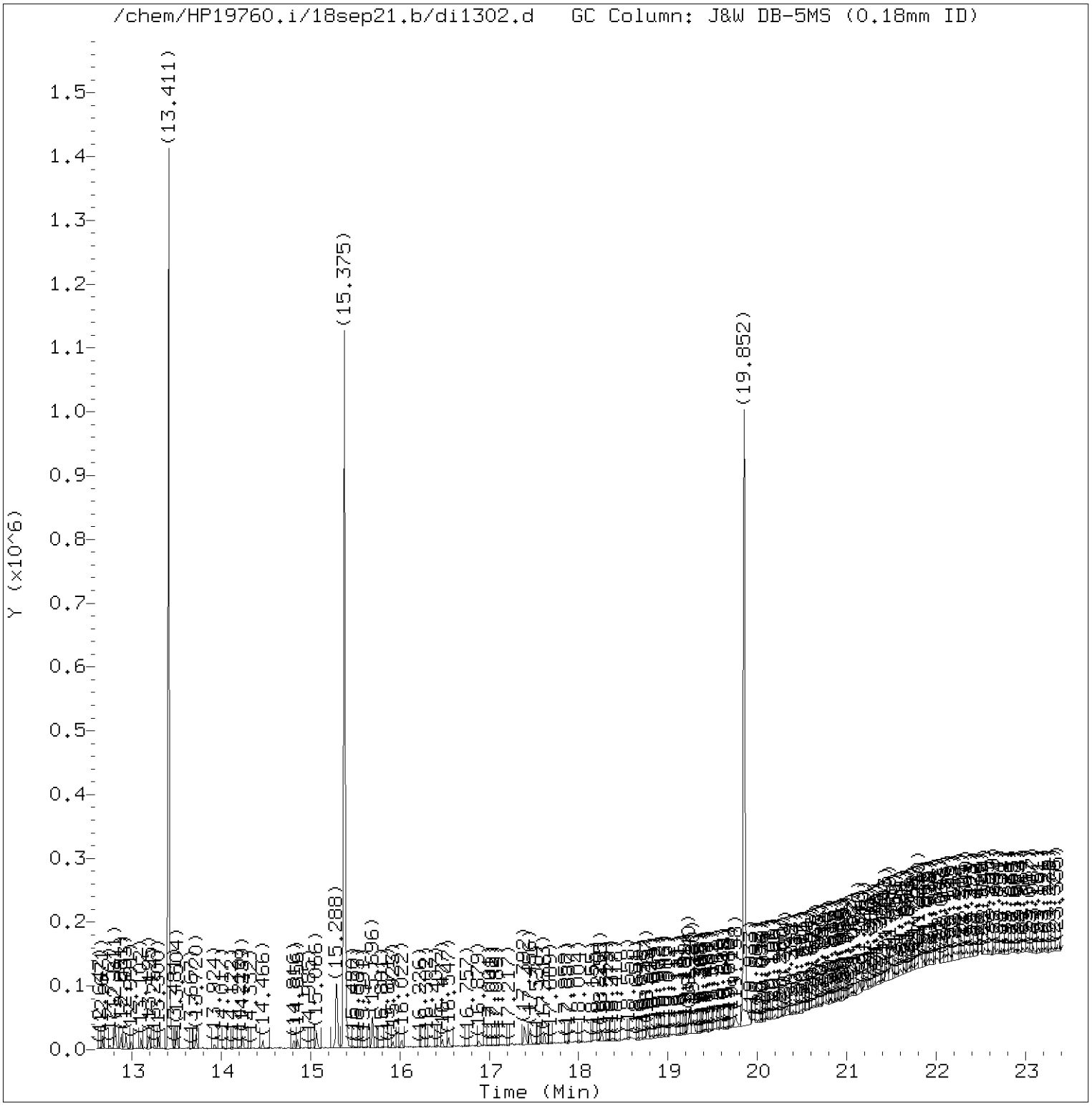
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.203	88	7069M	0.220
4) N-Nitrosodimethylamine	(1)	2.873	74	3486M	0.077
5) Pyridine	(1)	3.077	79	9444M	0.115
7) 2-Picoline	(1)	4.126	93	9087	0.116
8) N-Nitrosomethylethylamine	(1)	4.219	88	6464M	0.193
9) Methyl methanesulfonate	(1)	4.674	80	4051	0.109
11)$2-Fluorophenol	(1)	4.901	112	12711	0.209
13) N-Nitrosodiethylamine	(1)	5.233	102	3476	0.110
42) Total Cresols	(1)			13559	0.216
15) Ethyl methanesulfonate	(1)	5.688	109	3697	0.120
16) Benzaldehyde	(1)	6.149	77	6710	0.122
17)$Phenol-d6	(1)	6.277	99	18403	0.221
18) Phenol	(1)	6.294	94	10637	0.113
19) Aniline	(1)	6.318	93	12868	0.118
20) a-methylstyrene	(1)	6.393	118	589M	0.096
22) bis(2-Chloroethyl)ether	(1)	6.428	93	8616	0.124
23) 2-Chlorophenol	(1)	6.475	128	6298	0.109
24) 1,3-Dichlorobenzene	(1)	6.708	146	7465	0.113
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	191968	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	8273	0.124
27) Benzyl alcohol	(1)	7.017	108	4114	0.106
28) 1,2-Dichlorobenzene	(1)	7.040	146	7910	0.126
30) Indene	(1)	7.180	115	7430	0.114
31) 2-Methylphenol	(1)	7.198	108	6205	0.105
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.244	45	9549	0.115
34) bis(2-Chloroisopropyl)ether	(1)	7.244	45	9549	0.115
35) N-Nitrosopyrrolidine	(1)	7.367	100	2839	0.087
97) Isosafrole	(3)			4596	0.112
36) Acetophenone	(1)	7.407	105	9237	0.114
38) N-Nitroso-di-n-propylamine	(1)	7.425	70	5129	0.104
39) N-Nitrosomorpholine	(1)	7.431	56	4022	0.108
37) 4-Methylphenol	(1)	7.437	108	7354	0.111
40) o-Toluidine	(1)	7.460	106	11005	0.108
43) Hexachloroethane	(1)	7.553	117	3240	0.121
44)$Nitrobenzene-d5	(2)	7.623	82	14935	0.216
45) Nitrobenzene	(2)	7.652	77	7834	0.108
48) N-Nitrosopiperidine	(2)	7.891	114	3152	0.112
50) Isophorone	(2)	8.037	82	12842	0.108
120) 2,4_2,6-Dinitrotoluenes	(3)			3914	0.152
51) 2-Nitrophenol	(2)	8.148	139	2268	0.087

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.253	107	6513	0.106
56) Benzoic acid	(2)	8.305	105	11007M	0.361
57) O,O,O-Triethylphosphorothioate	(2)	8.375	198	3121	0.124
55) bis(2-Chloroethoxy)methane	(2)	8.404	93	8951	0.114
60) 2,4-Dichlorophenol	(2)	8.521	162	4673	0.106
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	6053	0.124
65)*Naphthalene-d8	(2)	8.736	136	706468	5.000
66) Naphthalene	(2)	8.766	128	20655	0.125
146) Diallate trans/cis	(4)			4829	0.100
67) 4-Chloroaniline	(2)	8.870	127	6941	0.111
68) 2,6-Dichlorophenol	(2)	8.882	162	4284	0.099
69) Hexachloropropene	(2)	8.917	213	2824	0.093
71) Hexachlorobutadiene	(2)	8.999	225	3174	0.116
75) Quinoline	(2)	9.296	129	10167	0.111
76) Caprolactam	(2)	9.383	113	1247M	0.078
77) N-Nitrosodi-n-butylamine	(2)	9.442	84	4905	0.119
80) 4-Chloro-3-methylphenol	(2)	9.663	107	4919	0.101
82) Safrole	(2)	9.762	162	4224	0.104
83) 2-Methylnaphthalene	(2)	9.873	142	11957	0.119
84) 1-Methylnaphthalene	(2)	10.025	142	10861	0.116
85) Hexachlorocyclopentadiene	(3)	10.141	237	2619	0.096
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	6121	0.139
88) cis-Isosafrole	(3)	10.229	162	627	0.016
90) 2,4,6-Trichlorophenol	(3)	10.333	196	2033	0.077
92) 2,4,5-Trichlorophenol	(3)	10.380	196	2445	0.085
93)$2-Fluorobiphenyl	(3)	10.479	172	25002	0.237
94) trans-Isosafrole	(3)	10.590	162	3969	0.096
95) 1,1'-Biphenyl	(3)	10.631	154	13409	0.119
96) 2-Chloronaphthalene	(3)	10.637	162	10822	0.114
98) 1-Chloronaphthalene	(3)	10.672	162	10713	0.125
99) Diphenyl ether	(3)	10.811	170	7492	0.118
100) 2-Nitroaniline	(3)	10.811	138	2061	0.075
104) 1,4-Naphthoquinone	(3)	10.922	158	2532	0.079
105) 1,4-Dinitrobenzene	(3)	11.045	168	1111M	0.081
106) Dimethylphthalate	(3)	11.155	163	10010	0.102
107) 1,3-Dinitrobenzene	(3)	11.155	168	1293M	0.078
108) 2,6-Dinitrotoluene	(3)	11.219	165	1740	0.077
109) Acenaphthylene	(3)	11.295	152	12898	0.112
112) 3-Nitroaniline	(3)	11.470	138	2036	0.085
113)*Acenaphthene-d10	(3)	11.523	164	318852	5.000

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.569	153	11683	0.126
115) 2,4-Dinitrophenol	(3)	11.627	184	6452	0.637
116) 4-Nitrophenol	(3)	11.744	109	4808	0.319
117) Pentachlorobenzene	(3)	11.773	250	4328	0.120
118) 2,4-Dinitrotoluene	(3)	11.826	165	2174	0.076
119) Dibenzofuran	(3)	11.826	168	15942	0.126
121) 1-Naphthylamine	(3)	11.925	143	8917	0.094
122) 2,3,4,6-Tetrachlorophenol	(3)	12.000	232	1717	0.083
123) 2-Naphthylamine	(3)	12.035	143	9565	0.101
124) Diethylphthalate	(3)	12.187	149	8047	0.090
126) Fluorene	(3)	12.269	166	10665	0.115
125) Thionazin	(3)	12.280	107	1276	0.066
128) 5-Nitro-o-toluidine	(3)	12.292	152	1818	0.063
129) 4-Nitroaniline	(3)	12.292	138	1957	0.071
127) 4-Chlorophenyl-phenylether	(3)	12.298	204	6033	0.125
130) 4,6-Dinitro-2-methylphenol	(4)	12.344	198	4327	0.343
131) N-Nitrosodiphenylamine	(4)	12.438	169	7445	0.100
132) NDPA as diphenylamine	(4)	12.438	169	7445	0.100
134) 1,2-Diphenylhydrazine	(4)	12.484	77	11259	0.104
135)$2,4,6-Tribromophenol	(3)	12.554	330	1749	0.156
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	1463	0.093
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	499M	0.059
140) Diallate (peak 1)	(4)	12.805	86	4071	0.081
141) Phorate	(4)	12.811	75	5344	0.086
142) Phenacetin	(4)	12.816	108	3393	0.073
143) 4-Bromophenyl-phenylether	(4)	12.881	248	2680	0.113
144) Diallate (peak 2)	(4)	12.904	86	758M	0.020
145) Hexachlorobenzene	(4)	12.933	284	3307	0.132
147) Dimethoate	(4)	12.997	87	2589	0.066
148) Atrazine	(4)	13.102	200	2081	0.091
149) Pentachlorophenol	(4)	13.184	266	1094	0.078
150) 4-Aminobiphenyl	(4)	13.195	169	5691	0.090
151) Pentachloronitrobenzene	(4)	13.201	237	701	0.068
152) Pronamide	(4)	13.294	173	2753	0.075
153)*Phenanthrene-d10	(4)	13.411	188	521787	5.000
154) Dinoseb	(4)	13.434	211	1105M	0.062
155) Phenanthrene	(4)	13.440	178	16836	0.125
157) Anthracene	(4)	13.504	178	14404	0.116
163) Carbazole	(4)	13.720	167	11733	0.096
164) Methyl parathion	(4)	13.924	109	2031	0.073

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on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	10596	0.075
168) 4-Nitroquinoline-1-oxide	(4)	14.460	190	790	0.073
167) Parathion	(4)	14.472	109	749	0.041
169) Octachlorostyrene	(4)	14.816	308	970	0.107
171) Isodrin	(4)	14.856	193	2314	0.156
222) Total PAHs	(6)			235059	2.196
173) Fluoranthene	(4)	15.066	202	14317	0.111
174) Benzidine	(5)	15.288	184	54252	0.552
175)*Pyrene-d10	(5)	15.375	212	504273	5.000
177) Pyrene	(5)	15.404	202	18586	0.129
179)$Terphenyl-d14	(5)	15.696	244	20097	0.232
182) p-Dimethylaminoazobenzene	(5)	15.923	225	1435M	0.065
185) Chlorobenzilate	(5)	16.022	139	3234	0.083
187) 3,3'-Dimethylbenzidine	(5)	16.471	212	6533	0.074
188) Butylbenzylphthalate	(5)	16.547	149	4068	0.065
191) 2-Acetylaminofluorene	(5)	16.879	181	2521	0.057
193) 3,3'-Dichlorobenzidine	(5)	17.392	252	4149	0.084
195) Benzo(a)anthracene	(5)	17.398	228	10433	0.097
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.415	231	1824	0.067
196) Chrysene	(5)	17.456	228	12431	0.107
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	5893	0.069
203) 6-Methylchrysene	(5)	18.260	242	7595	0.087
205) Di-n-octylphthalate	(6)	18.773	149	8416	0.066
206) Benzo(b)fluoranthene	(6)	19.234	252	11094	0.105
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.245	256	4446	0.076
208) Benzo(k)fluoranthene	(6)	19.280	252	12462	0.108
211) Benzo(a)pyrene	(6)	19.758	252	10010	0.104
213)*Perylene-d12	(6)	19.852	264	483590	5.000
215) 3-Methylcholanthrene	(6)	20.341	268	5489	0.102
217) Dibenz(a,h)acridine	(6)	21.140	279	8425	0.098
218) Dibenz(a,j)acridine	(6)	21.210	279	8664	0.091
219) Indeno(1,2,3-cd)pyrene	(6)	21.449	276	10499M	0.111
220) Dibenz(a,h)anthracene	(6)	21.495	278	11807	0.113
221) Benzo(g,h,i)perylene	(6)	21.816	276	13461	0.121

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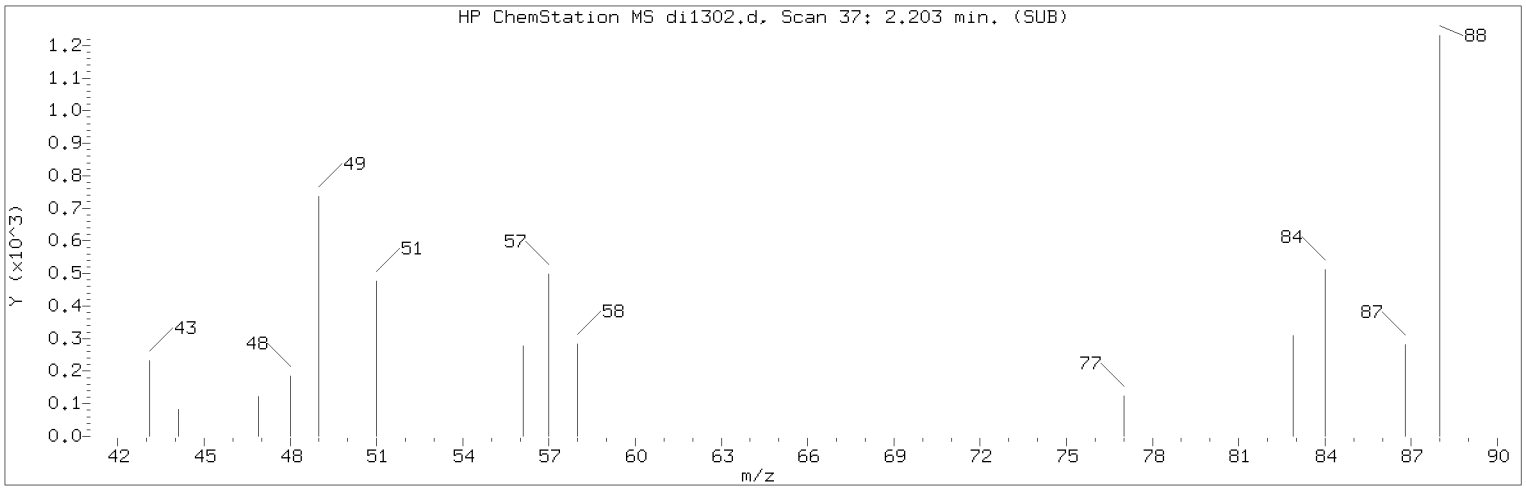
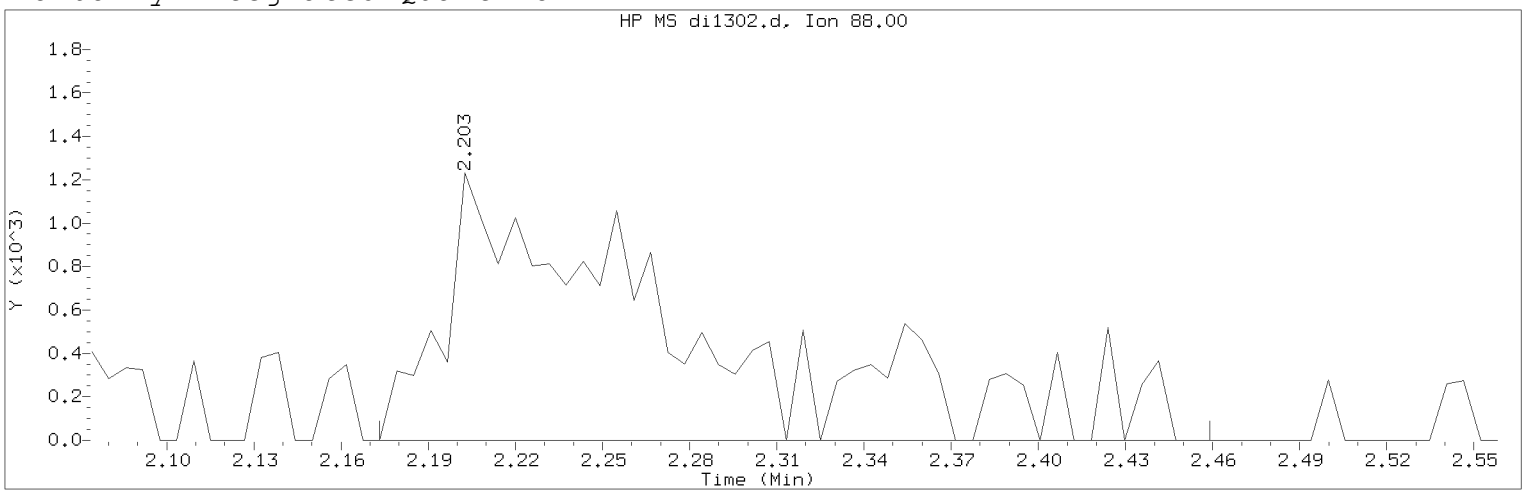
Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

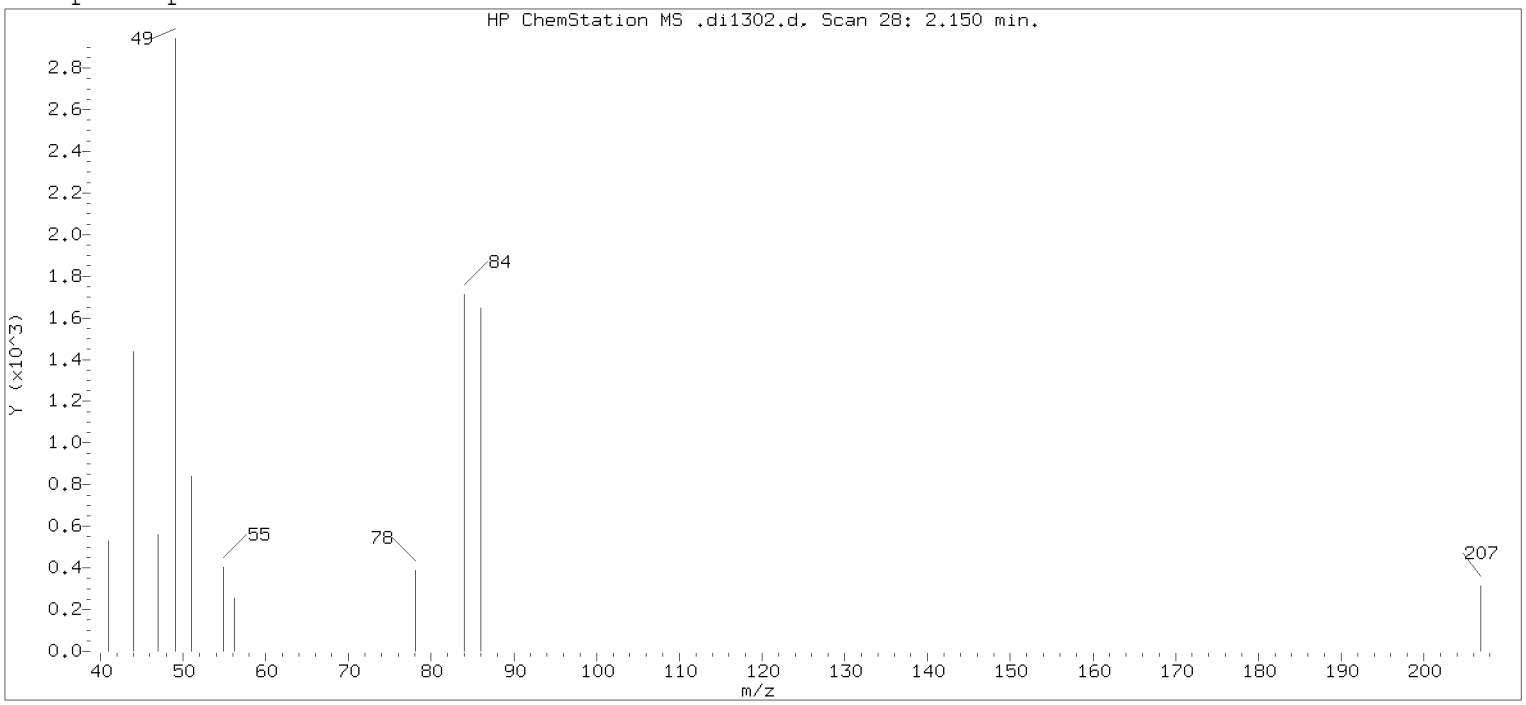
Compound Number : 1
Compound Name : 1,4-Dioxane
Scan Number : 37
Retention Time (minutes) : 2.203
Quant Ion : 88.00
Area (flag) : 7069M
On-Column Amount (ng/ul) : 0.2204
Integration start scan : 31 Integration stop scan: 80
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

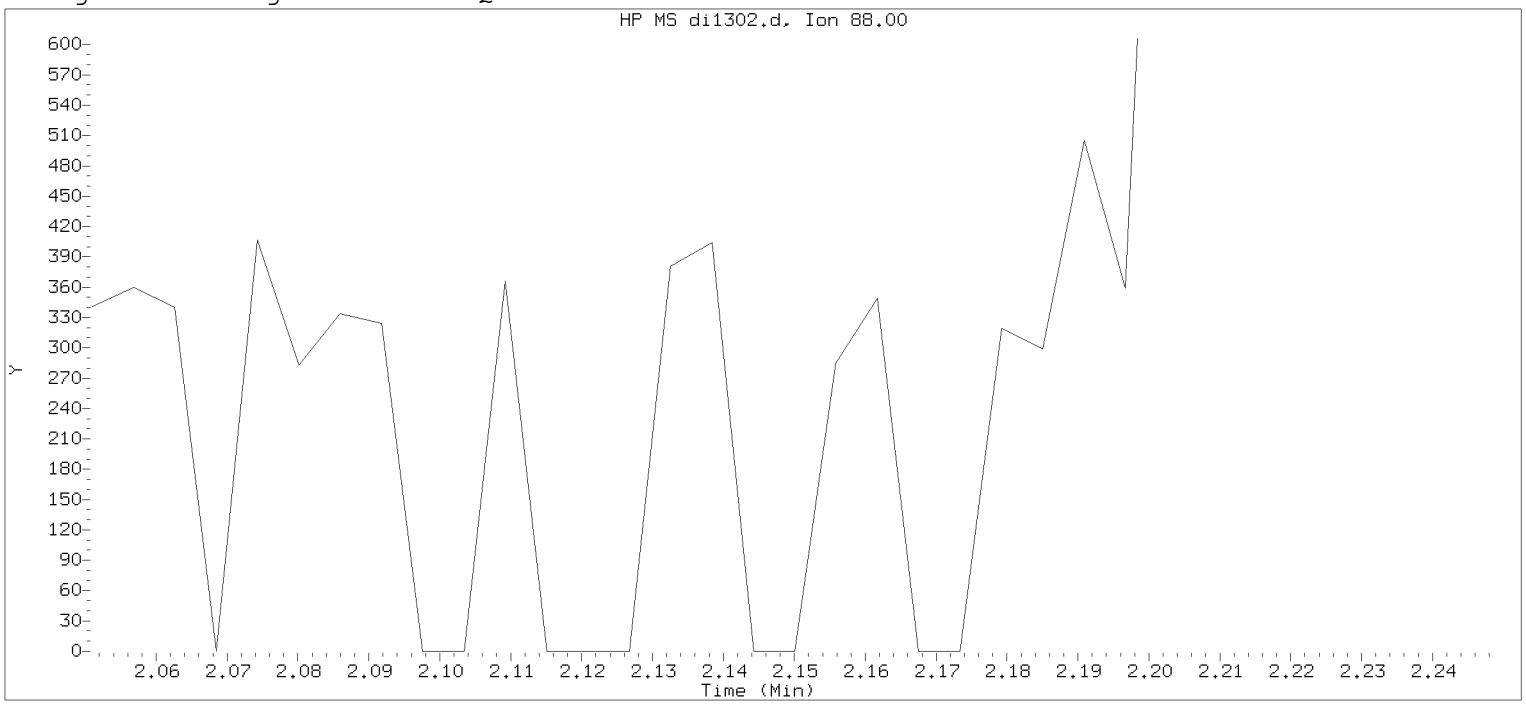
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

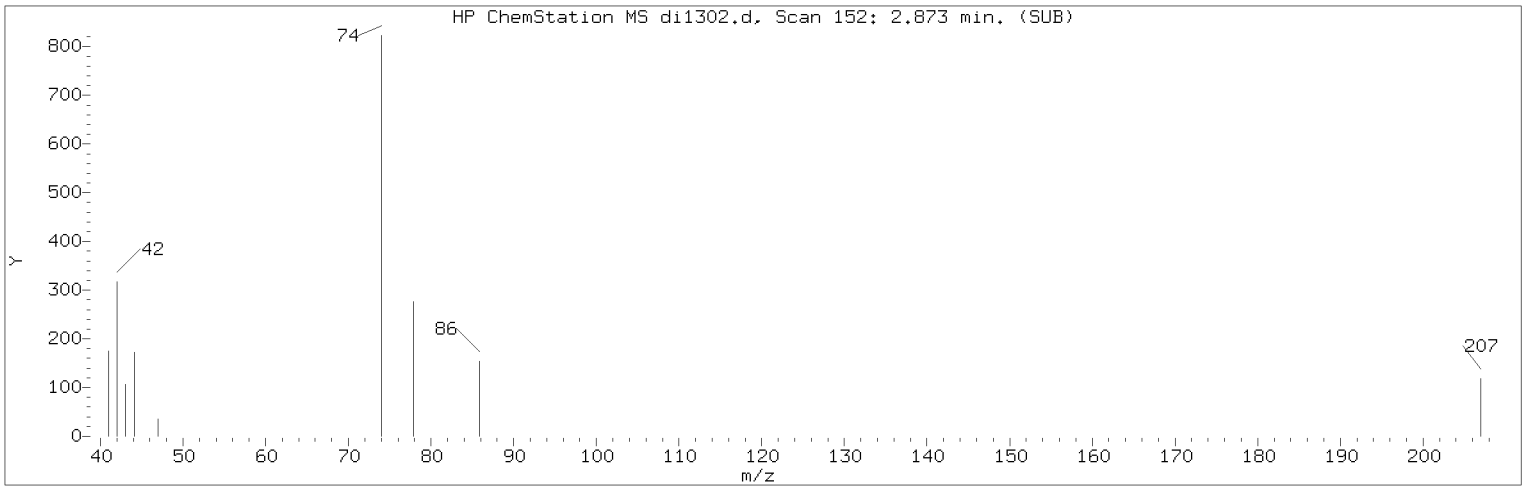
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

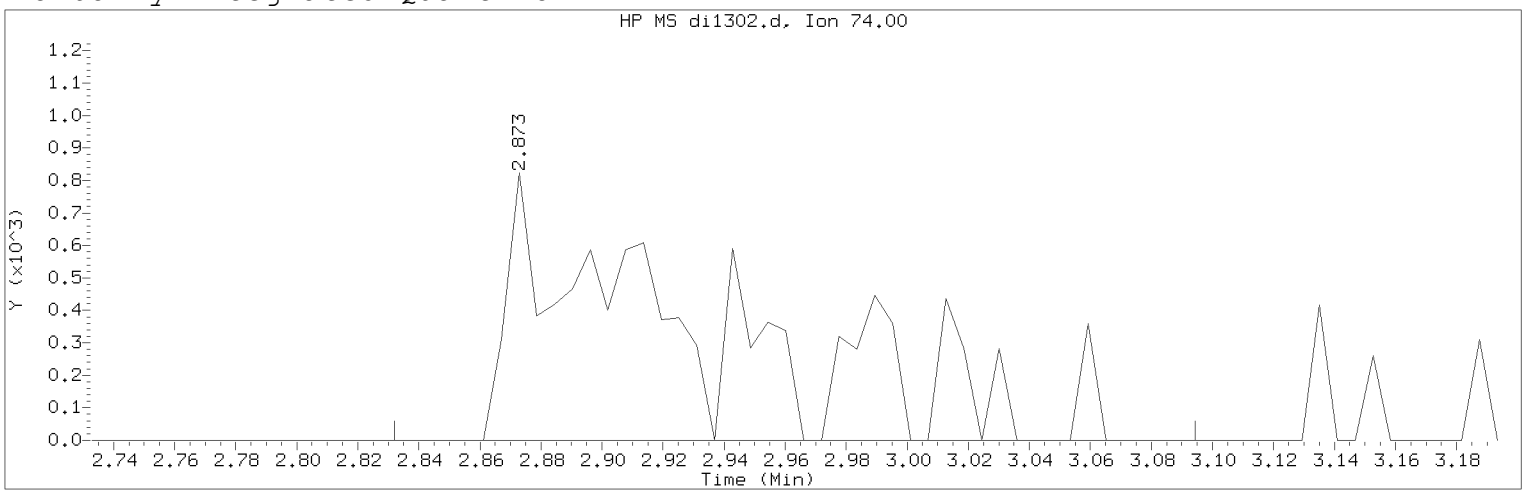
Compound Number : 1
Compound Name : 1,4-Dioxane
Expected RT (minutes) : 2.150
Quant Ion : 88.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

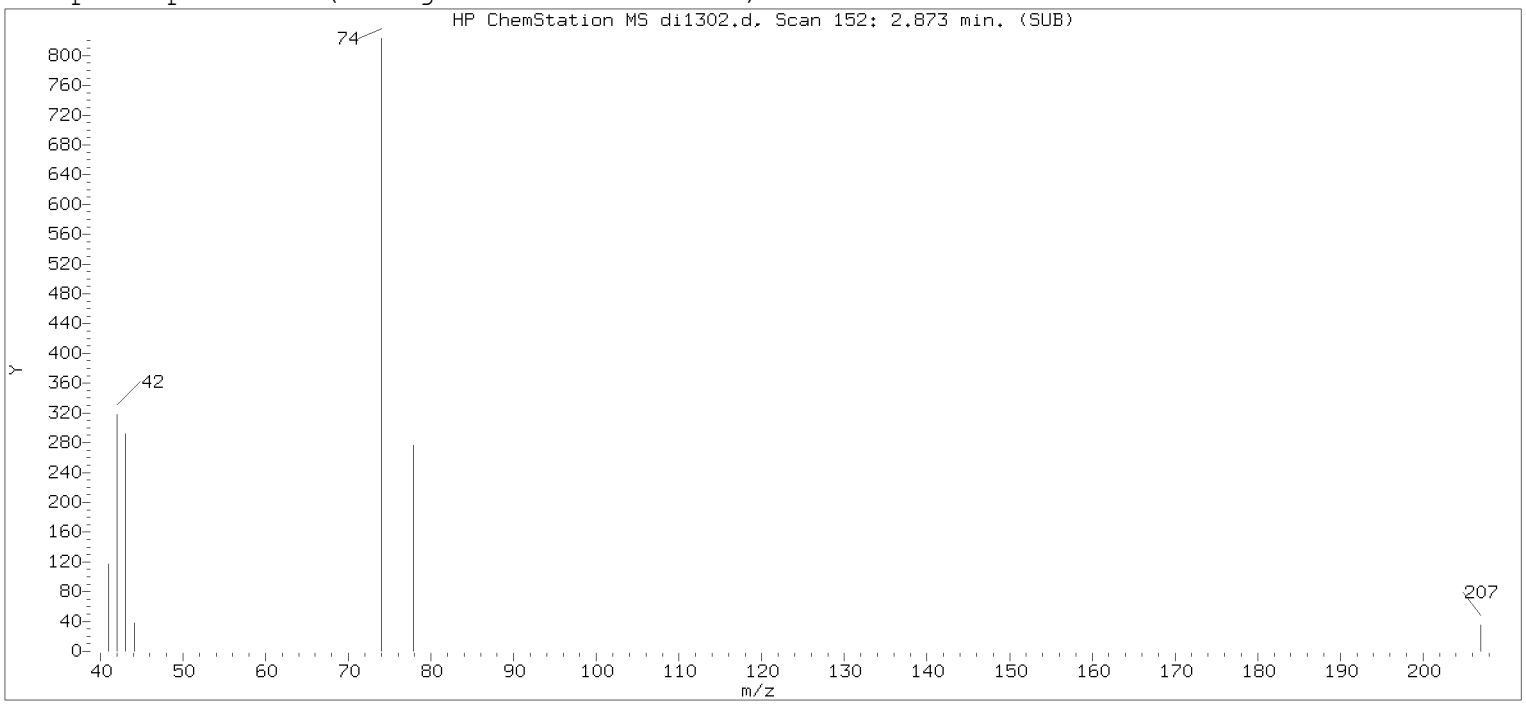
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 152
Retention Time (minutes) : 2.873
Quant Ion : 74.00
Area (flag) : 3486M
On-Column Amount (ng/ul) : 0.0772
Integration start scan : 144 Integration stop scan: 189
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

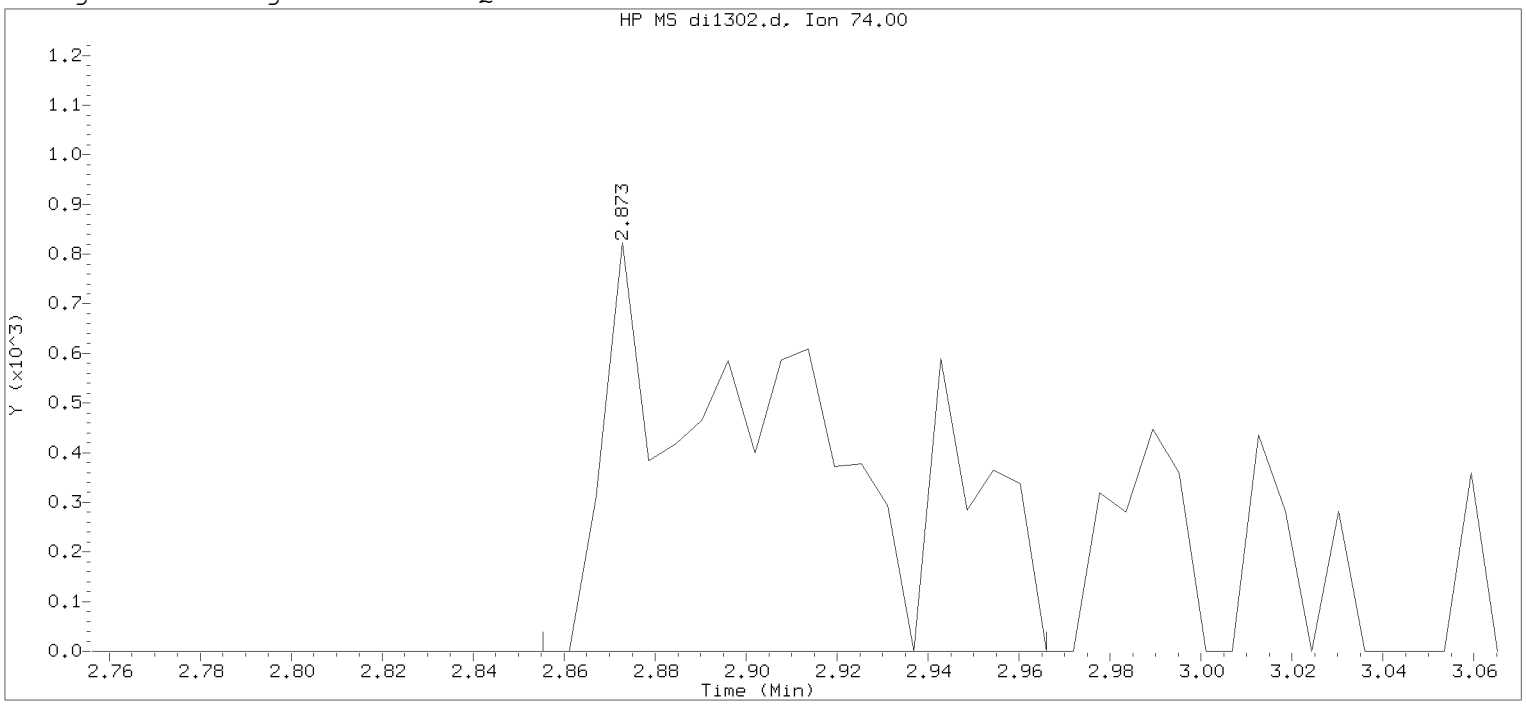
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

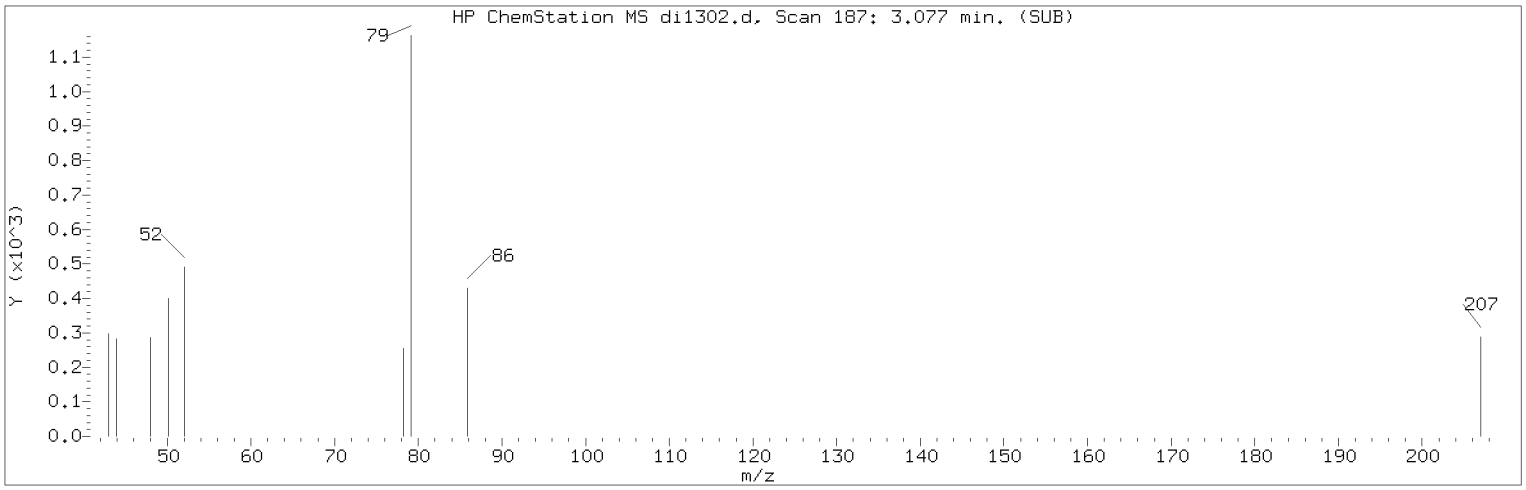
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

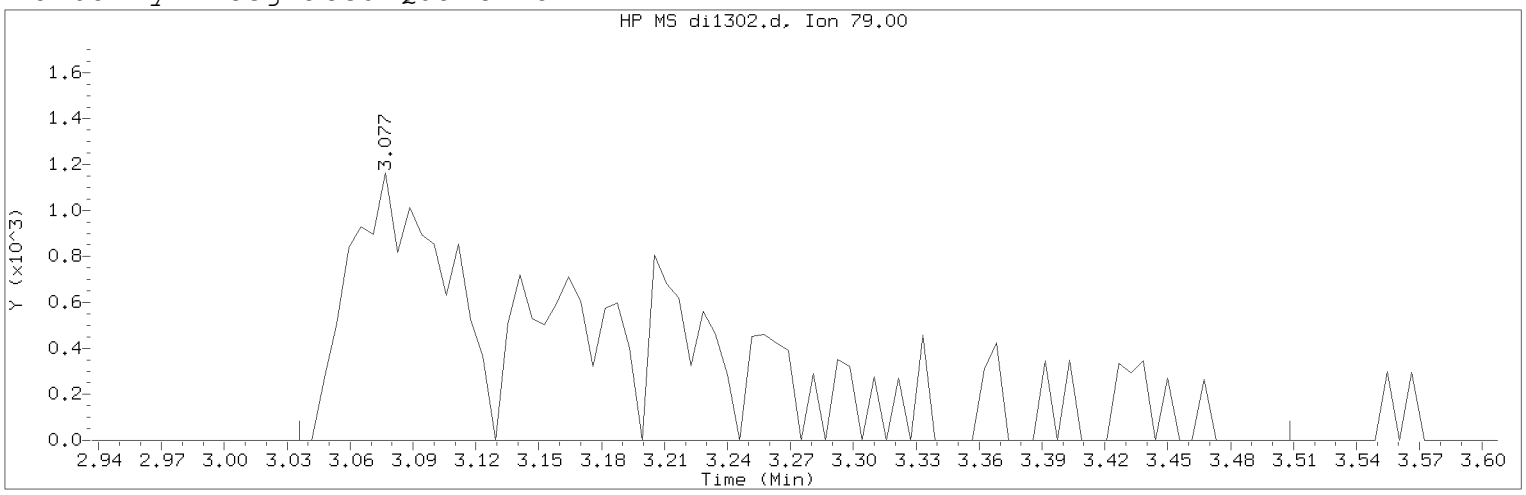
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 152		
Retention Time (minutes)	: 2.873		
Quant Ion	: 74.00		
Area	: 2518		
On-column Amount (ng/ul)	: 0.0546		
Integration start scan	: 148	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

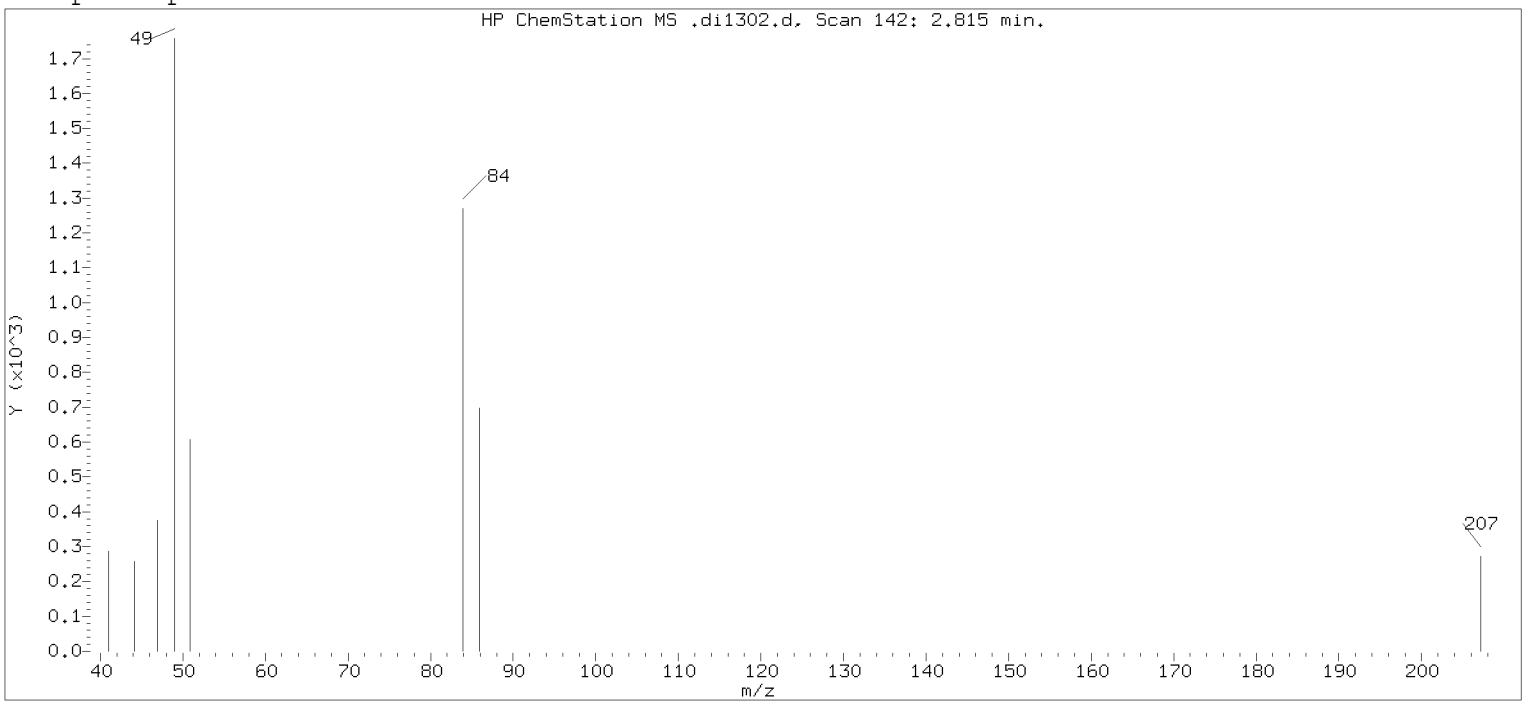
Compound Number : 5
Compound Name : Pyridine
Scan Number : 187
Retention Time (minutes) : 3.077
Quant Ion : 79.00
Area (flag) : 9444M
On-Column Amount (ng/ul) : 0.1152
Integration start scan : 179 Integration stop scan: 260
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

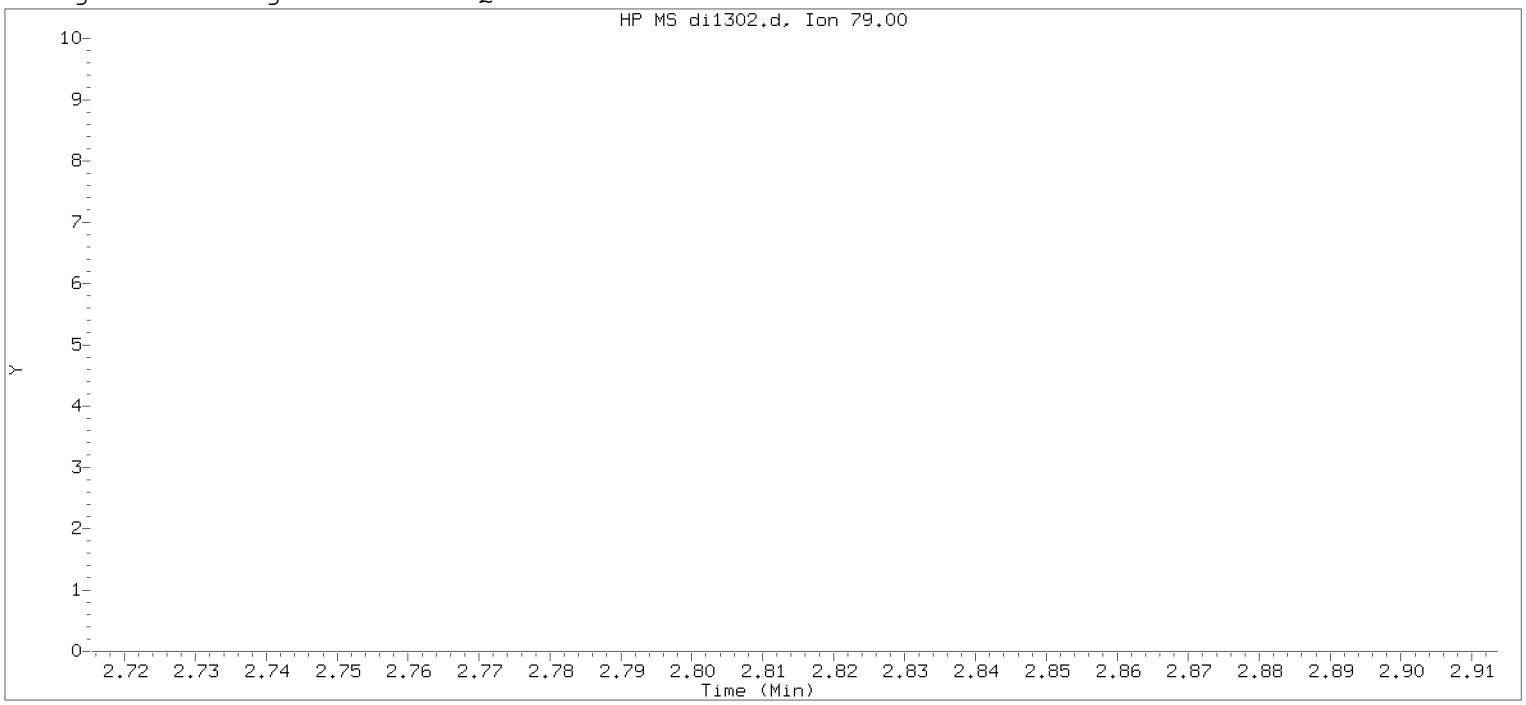
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

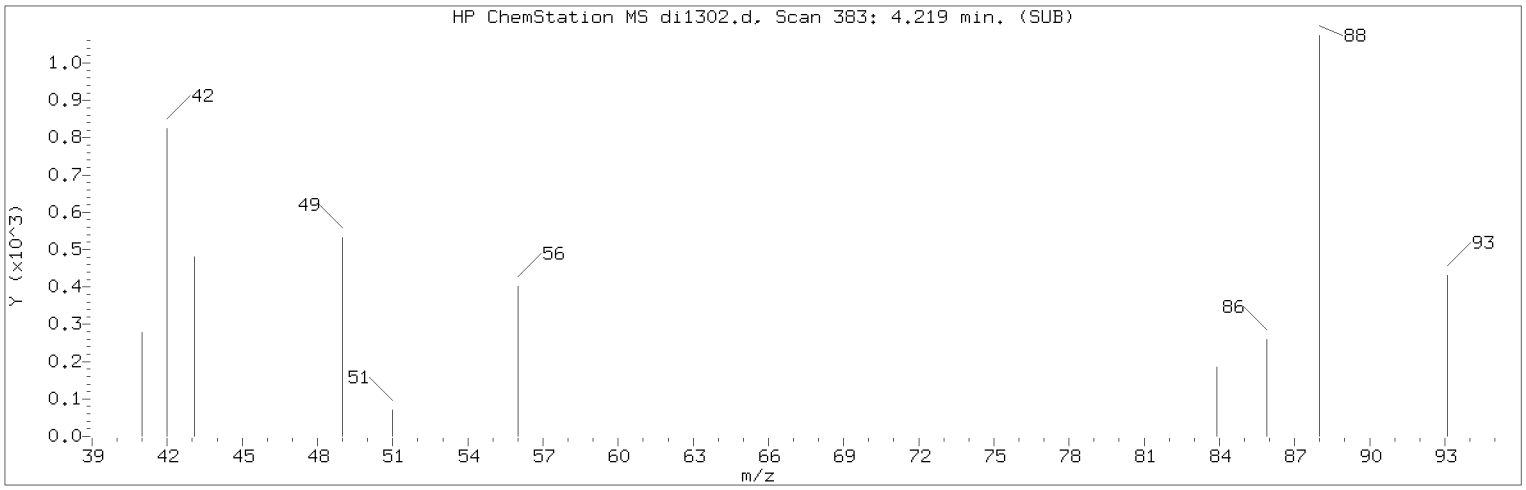
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

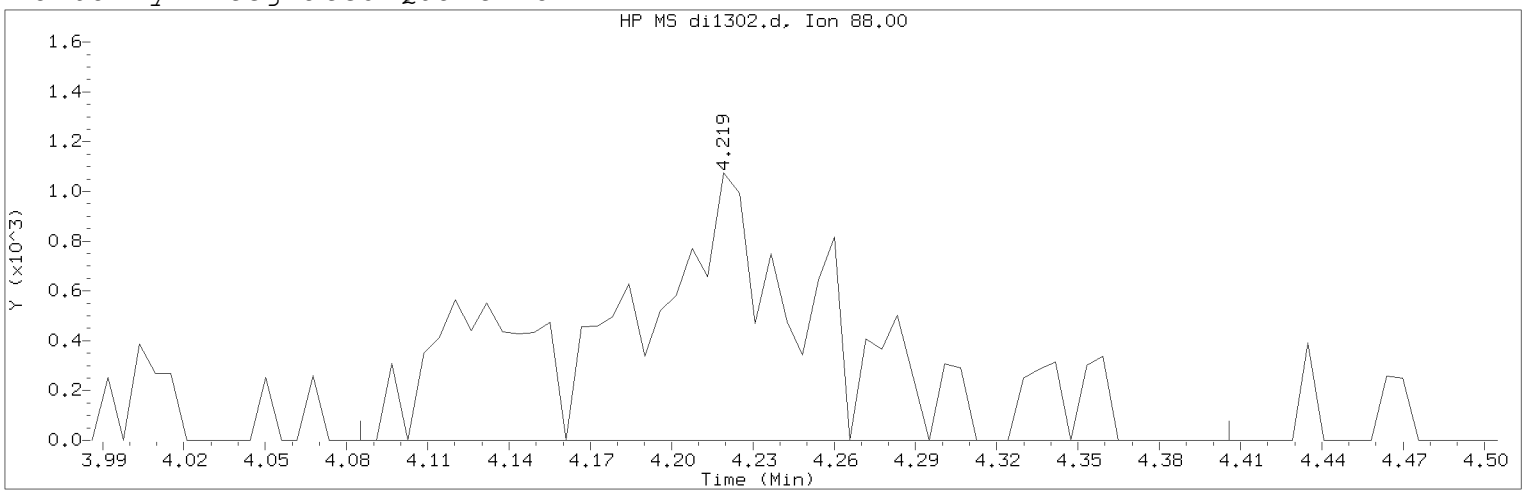
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 2.814
Quant Ion : 79.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used. AE20 e1.0.3826

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

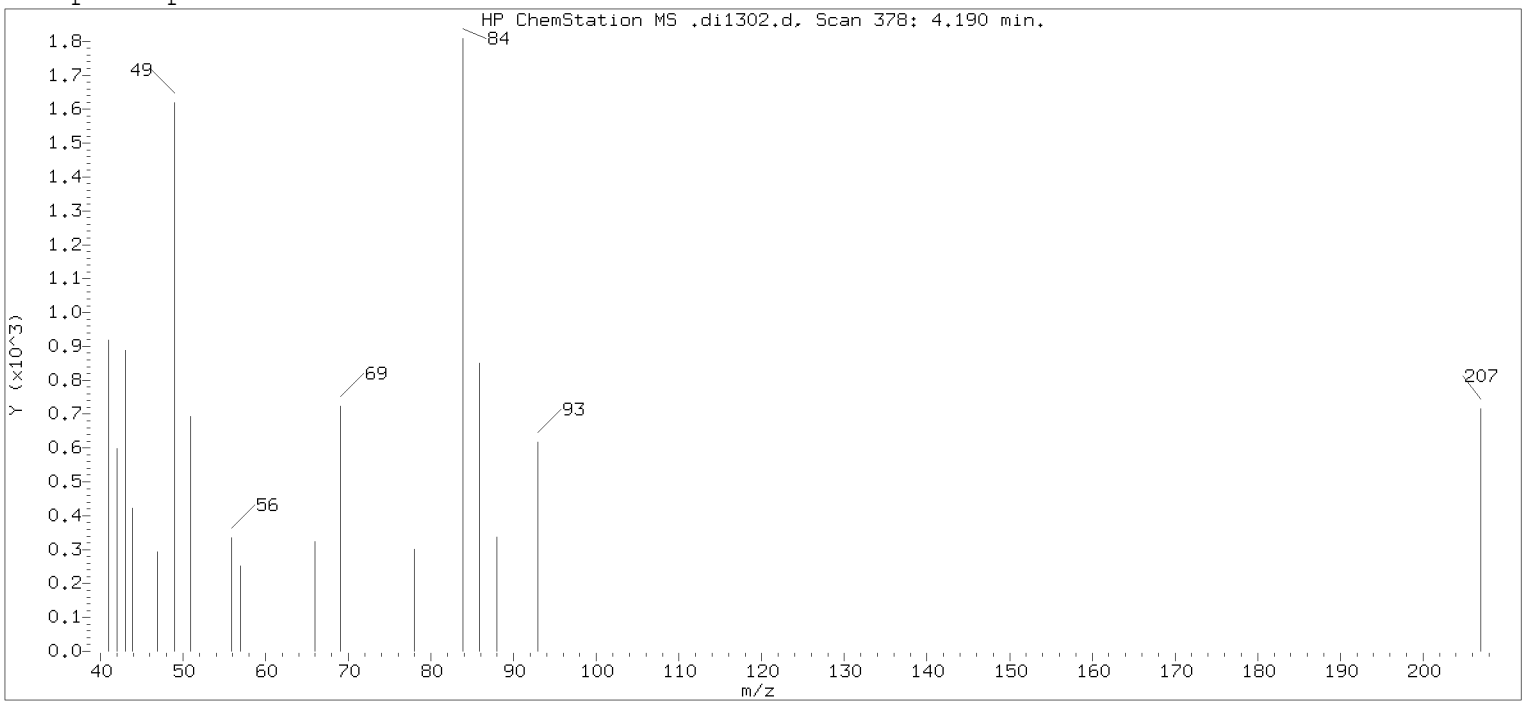
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 383
Retention Time (minutes) : 4.219
Quant Ion : 88.00
Area (flag) : 6464M
On-Column Amount (ng/ul) : 0.1934
Integration start scan : 359 Integration stop scan: 414
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

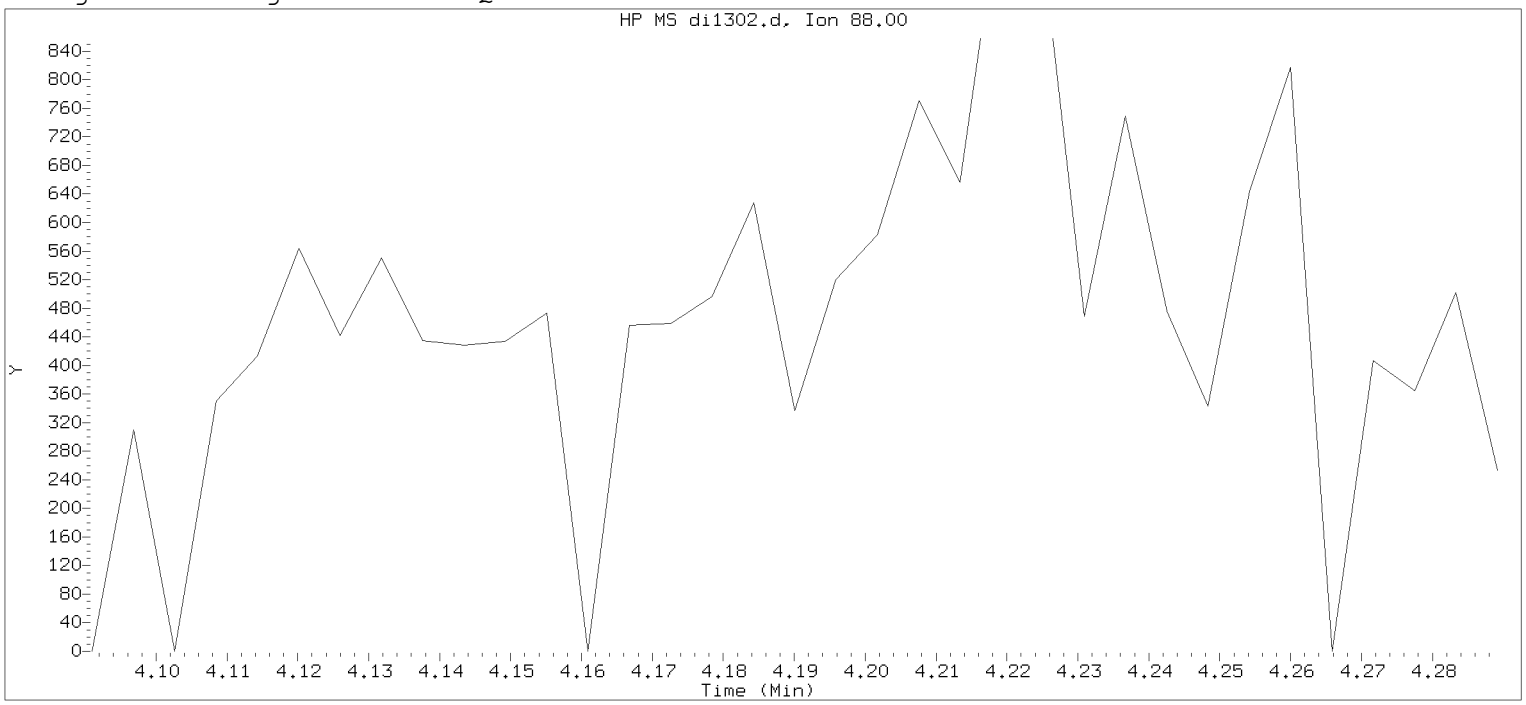
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

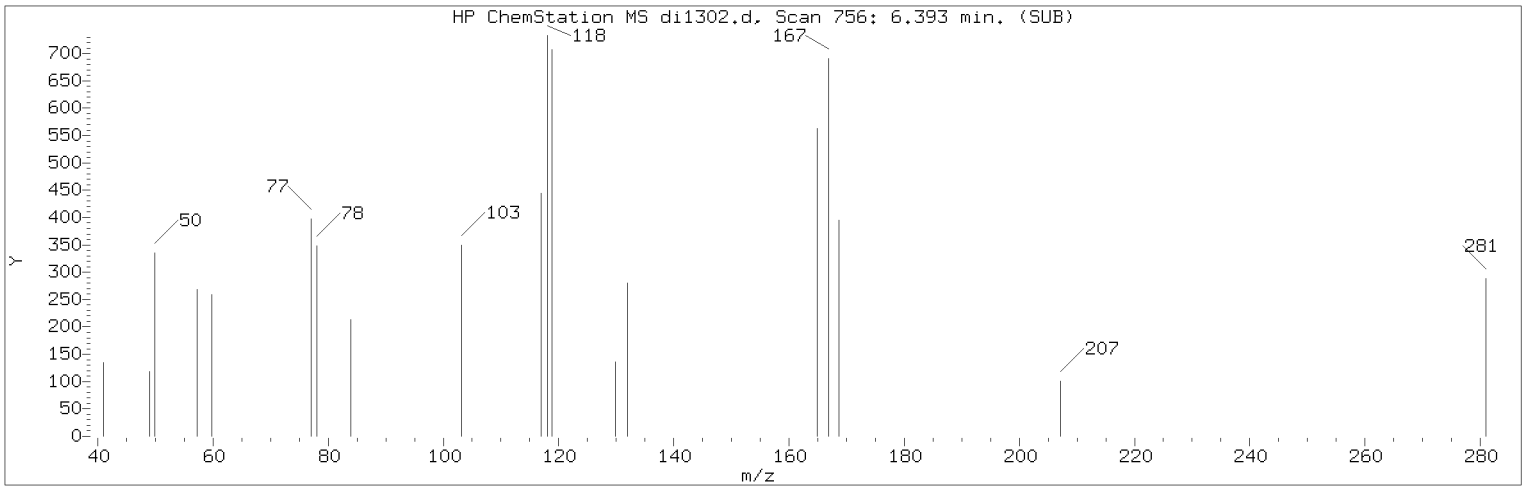
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

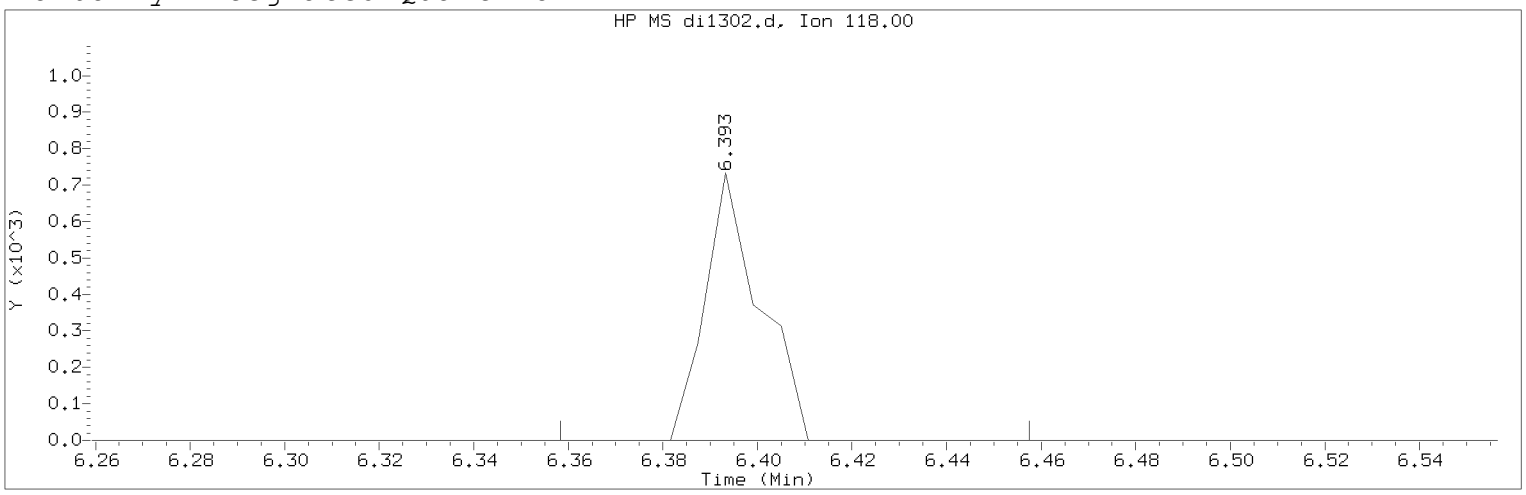
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.190
Quant Ion : 88.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

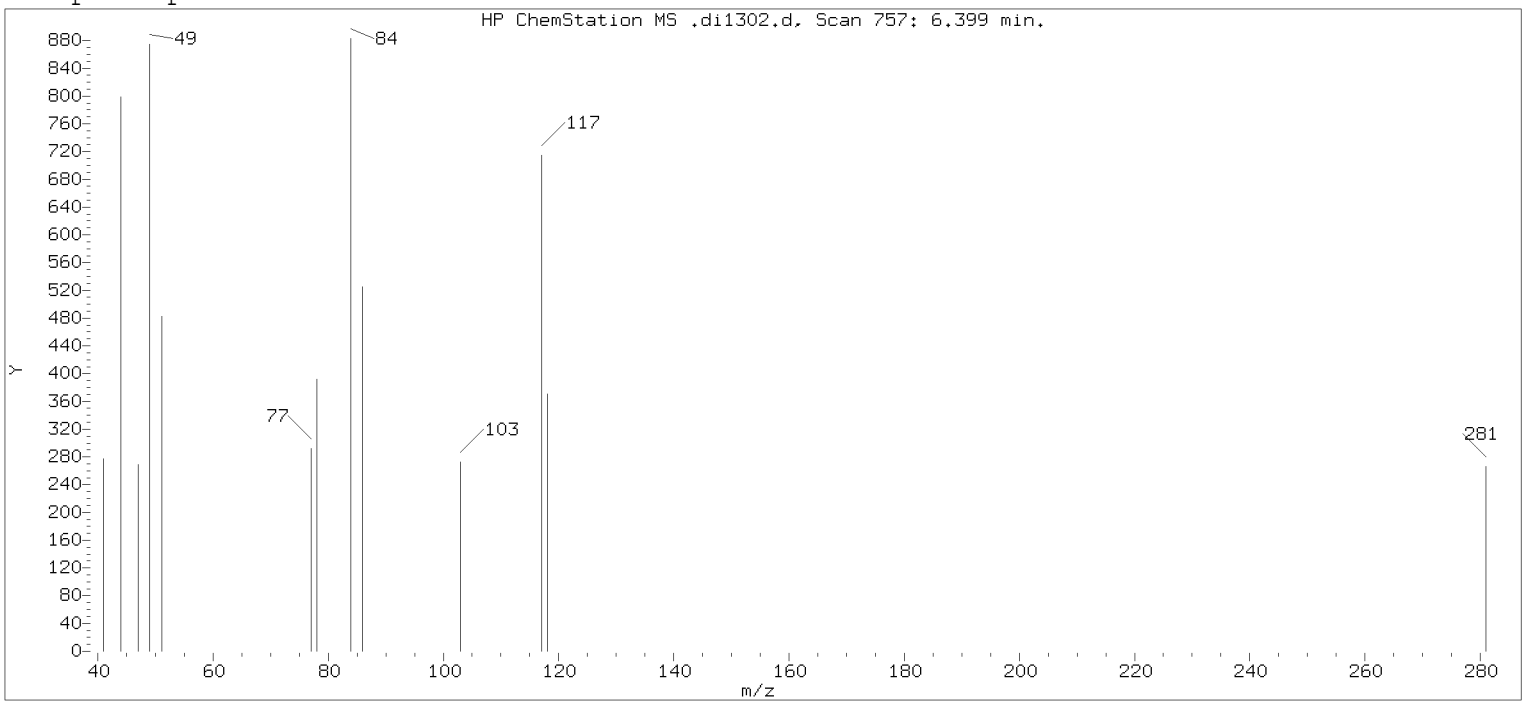
Compound Number : 20
Compound Name : a-methylstyrene
Scan Number : 756
Retention Time (minutes) : 6.393
Quant Ion : 118.00
Area (flag) : 589M
On-Column Amount (ng/ul) : 0.0960
Integration start scan : 749 Integration stop scan: 766
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

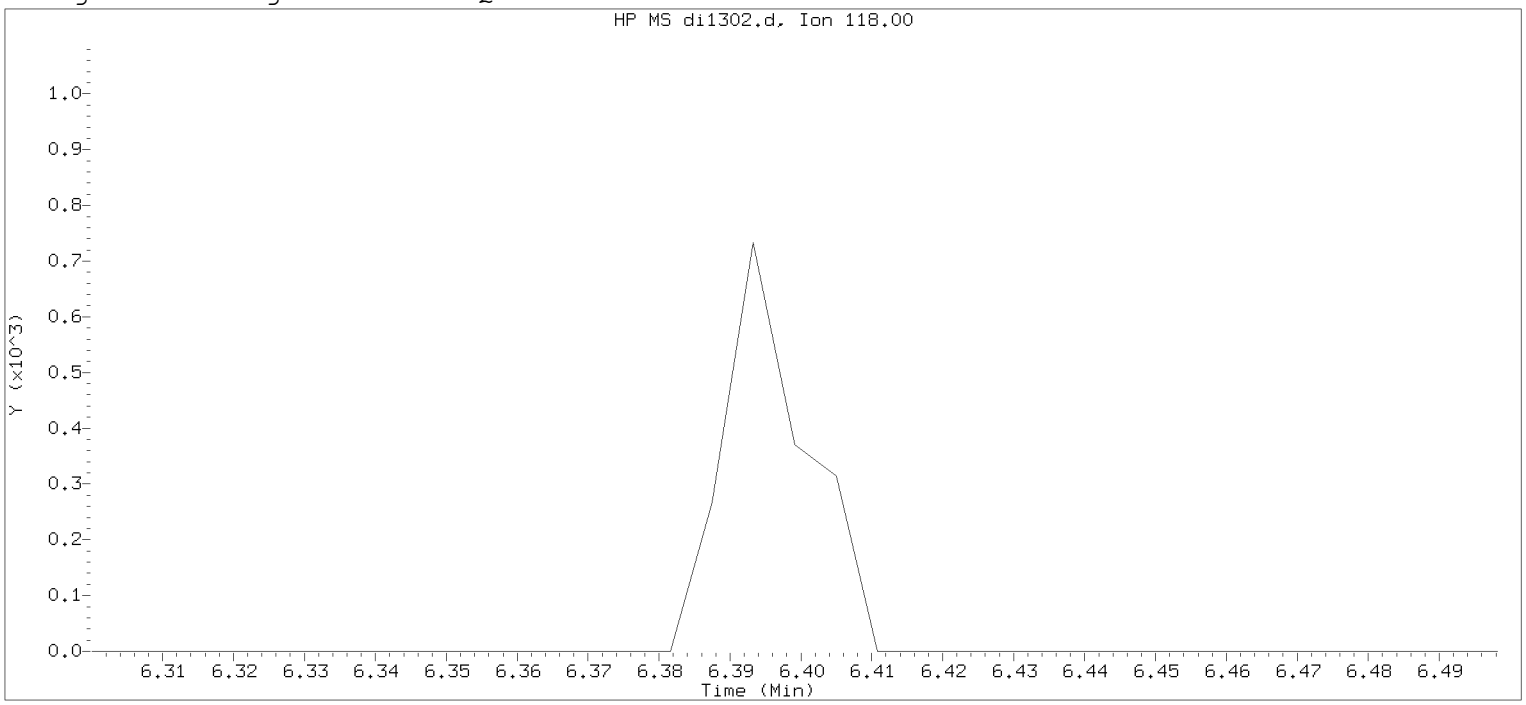
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

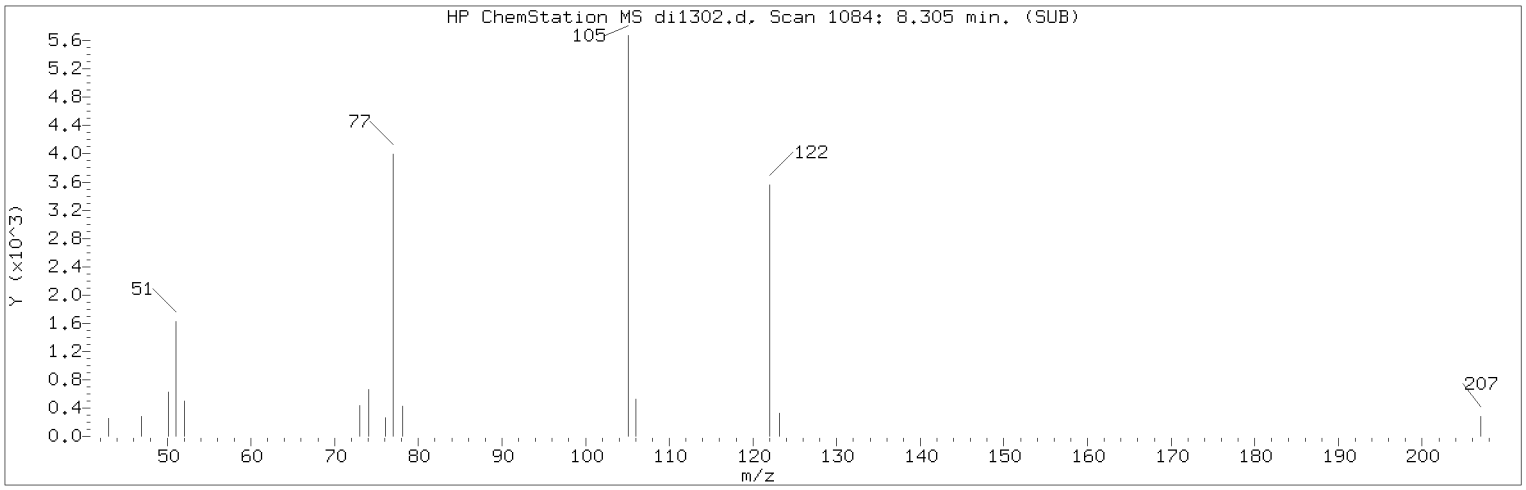
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

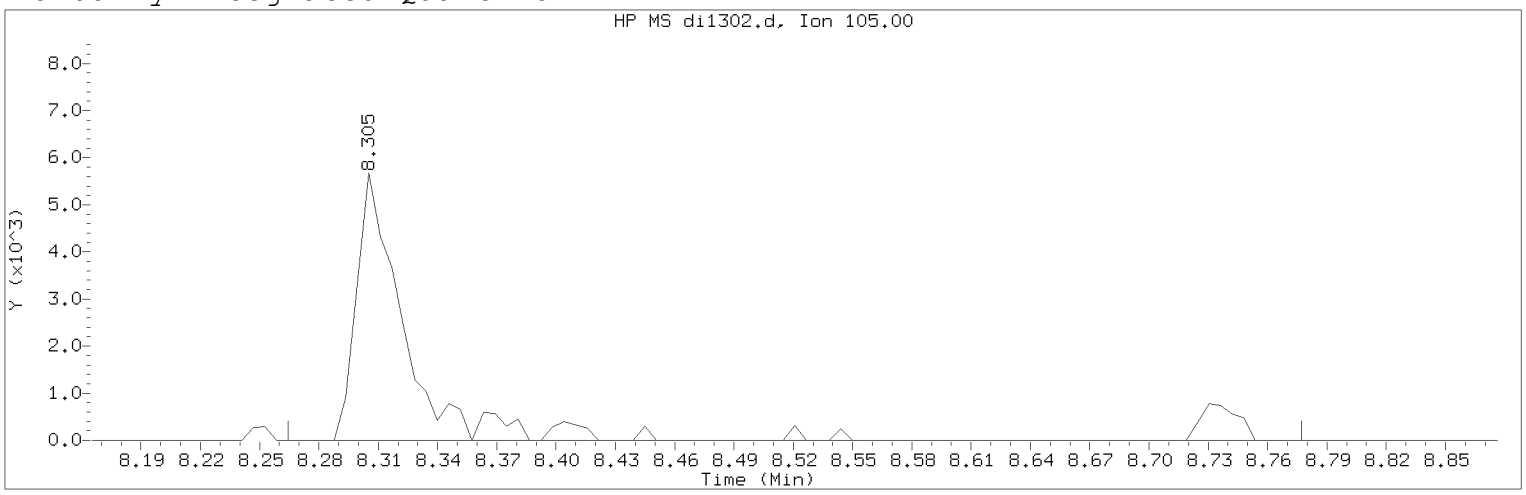
Compound Number : 20
Compound Name : a-methylstyrene
Expected RT (minutes) : 6.399
Quant Ion : 118.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

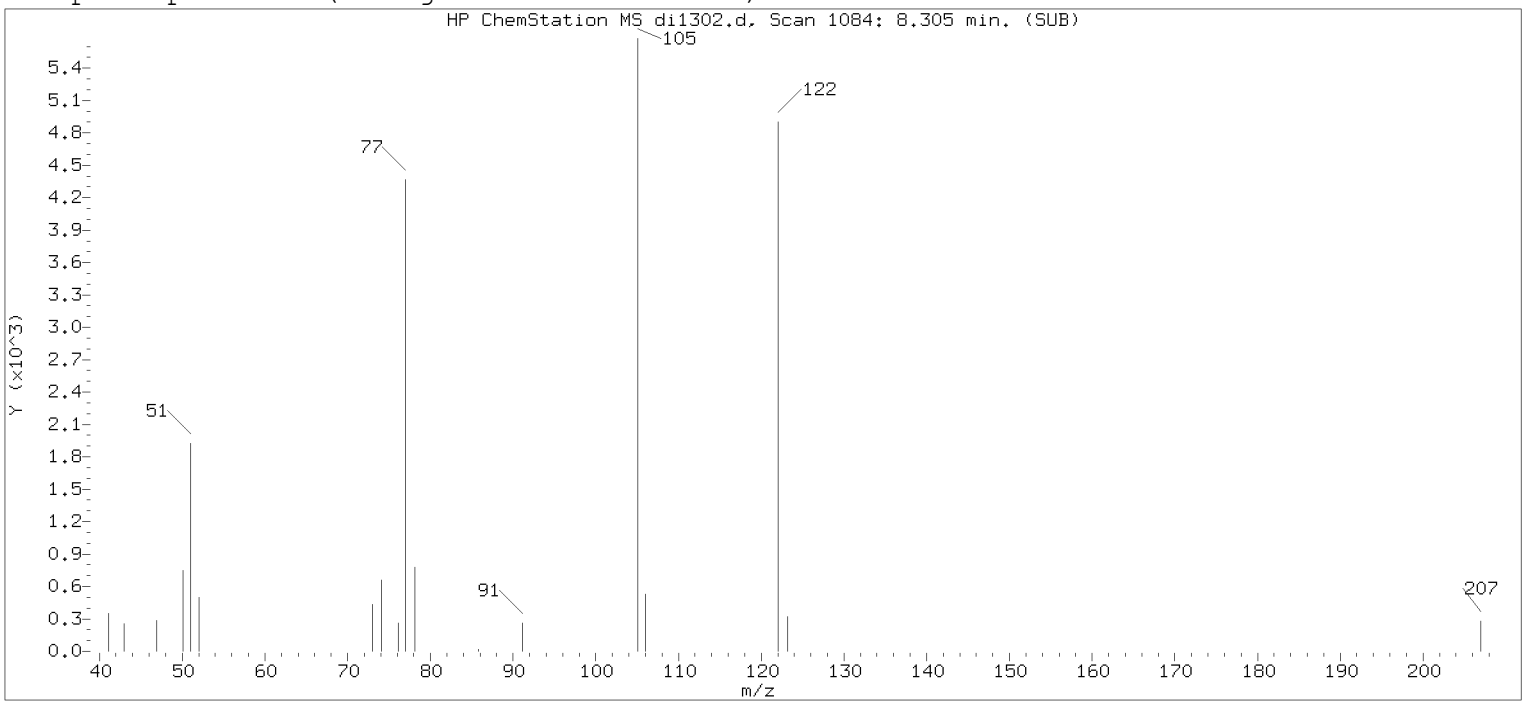
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1084
Retention Time (minutes) : 8.305
Quant Ion : 105.00
Area (flag) : 11007M
On-Column Amount (ng/ul) : 0.3612
Integration start scan : 1076 Integration stop scan: 1164
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

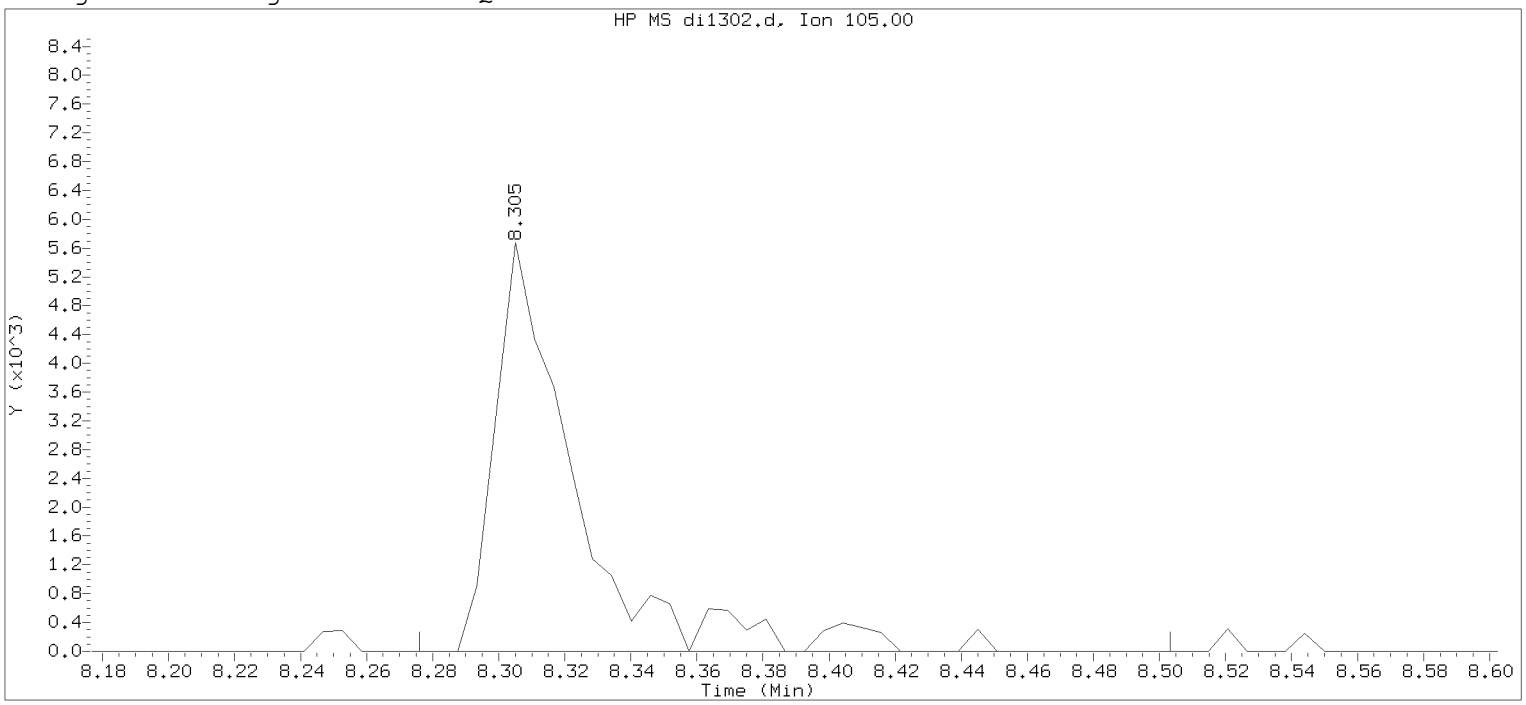
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

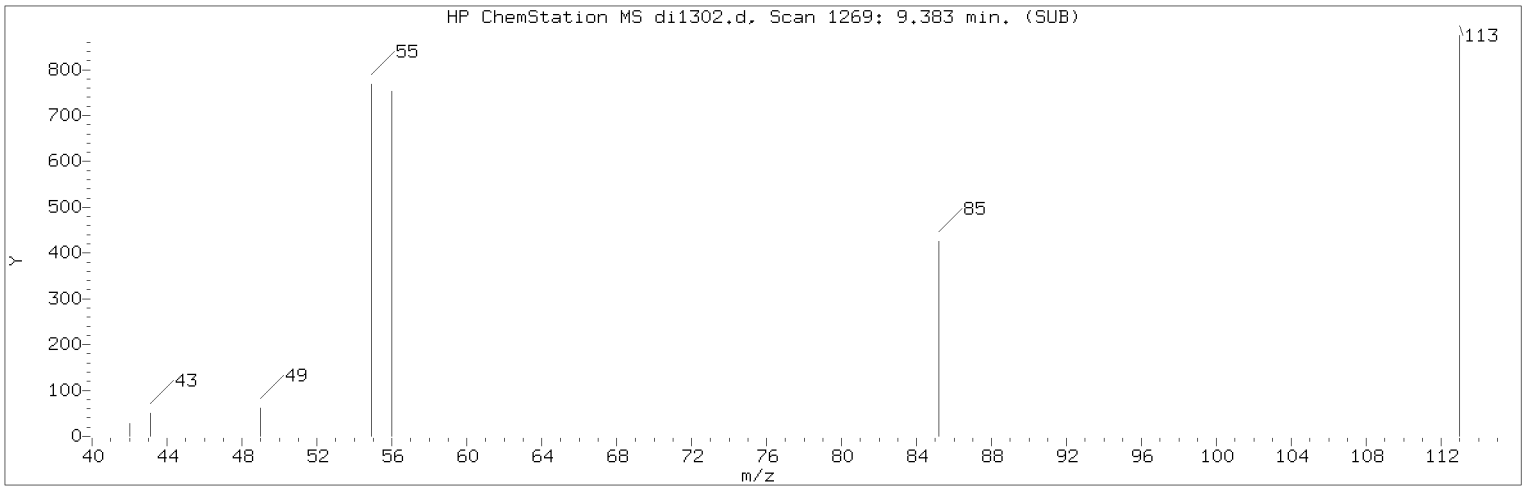
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

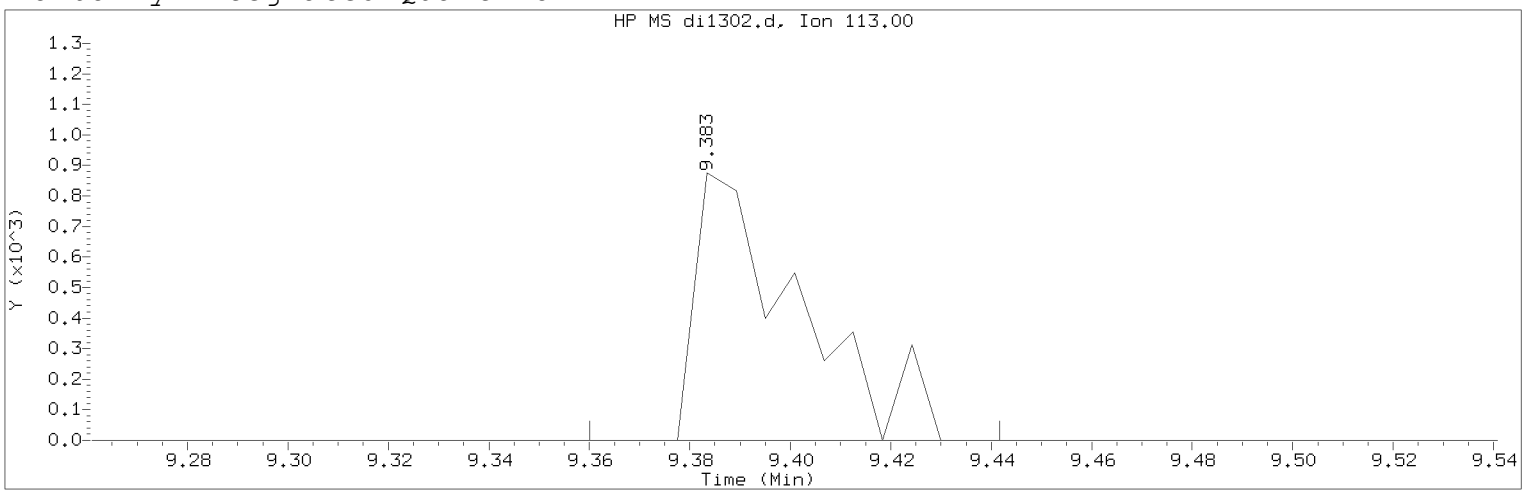
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1084		
Retention Time (minutes)	: 8.305		
Quant Ion	: 105.00		
Area	: 9787		
On-column Amount (ng/ul)	: 0.3687		
Integration start scan	: 1078	Integration stop scan:	1117
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used. AE20 e1e3838

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

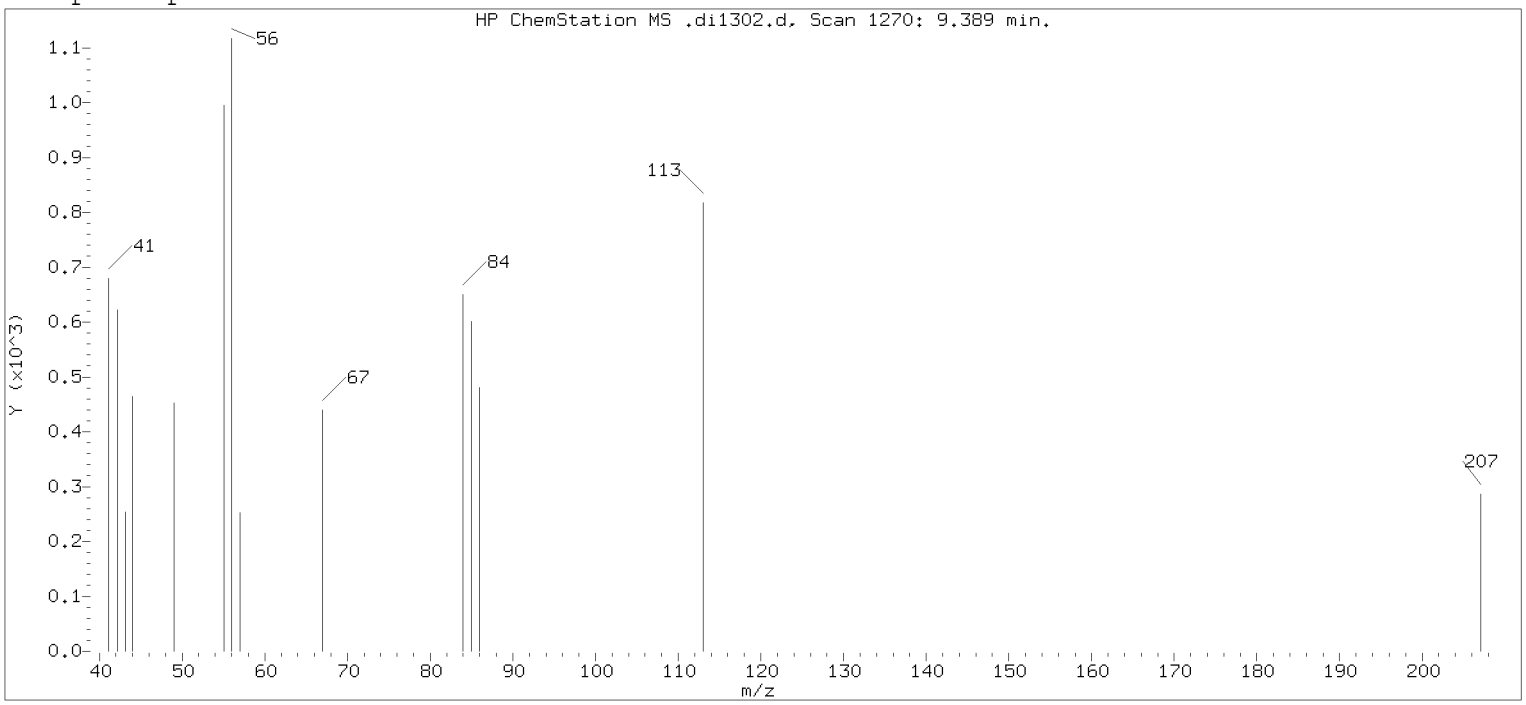
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1269
Retention Time (minutes) : 9.383
Quant Ion : 113.00
Area (flag) : 1247M
On-Column Amount (ng/ul) : 0.0782
Integration start scan : 1264 Integration stop scan: 1278
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

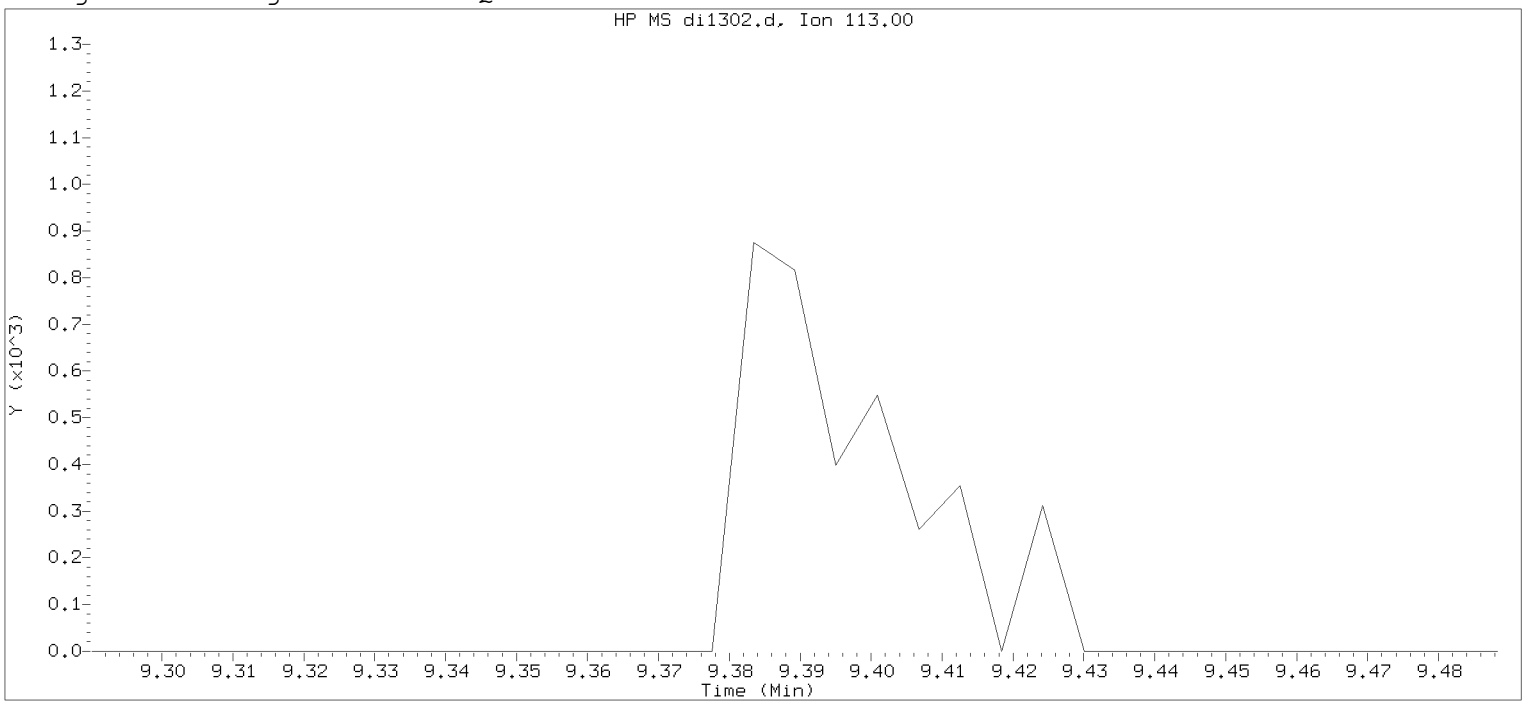
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

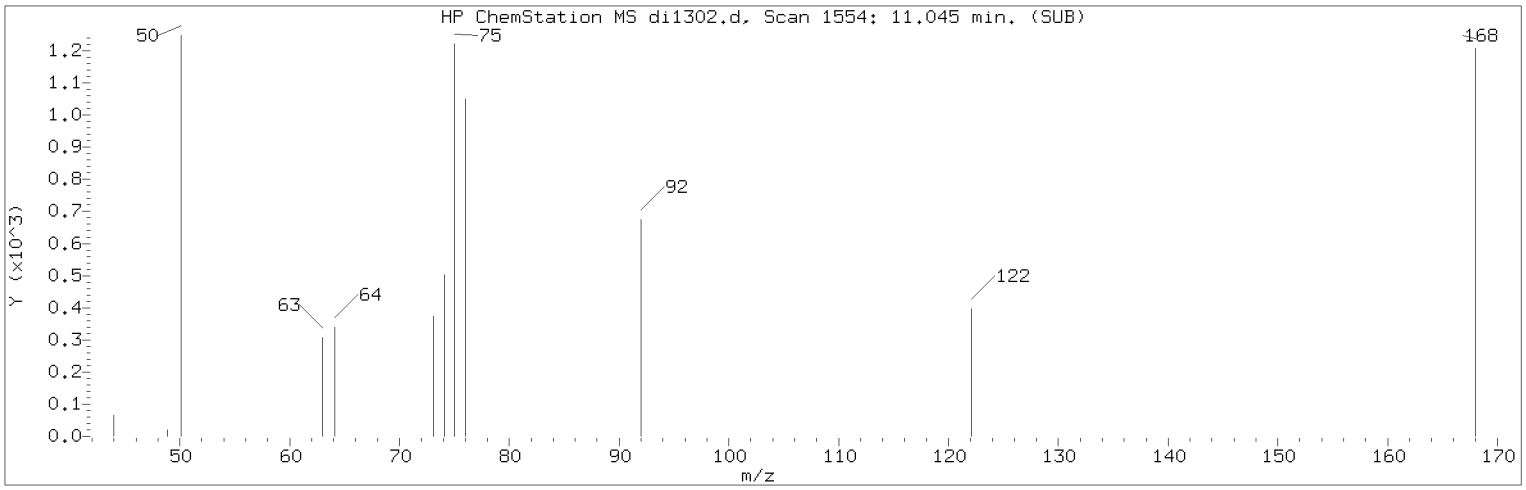
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

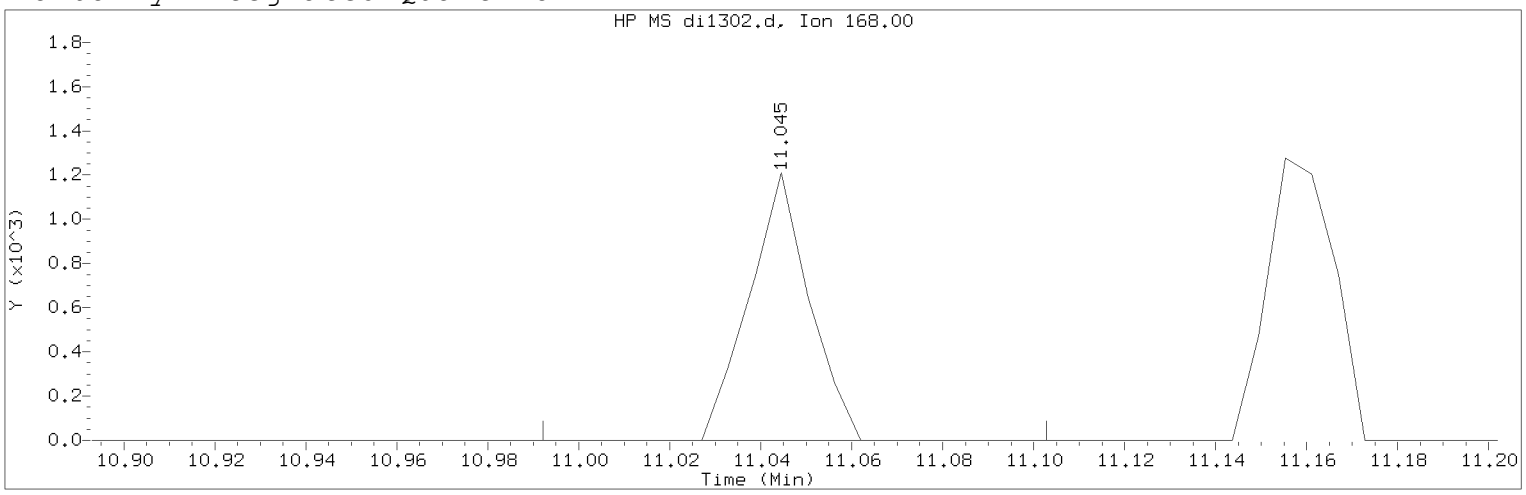
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.389
Quant Ion : 113.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used. AE20-1033

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

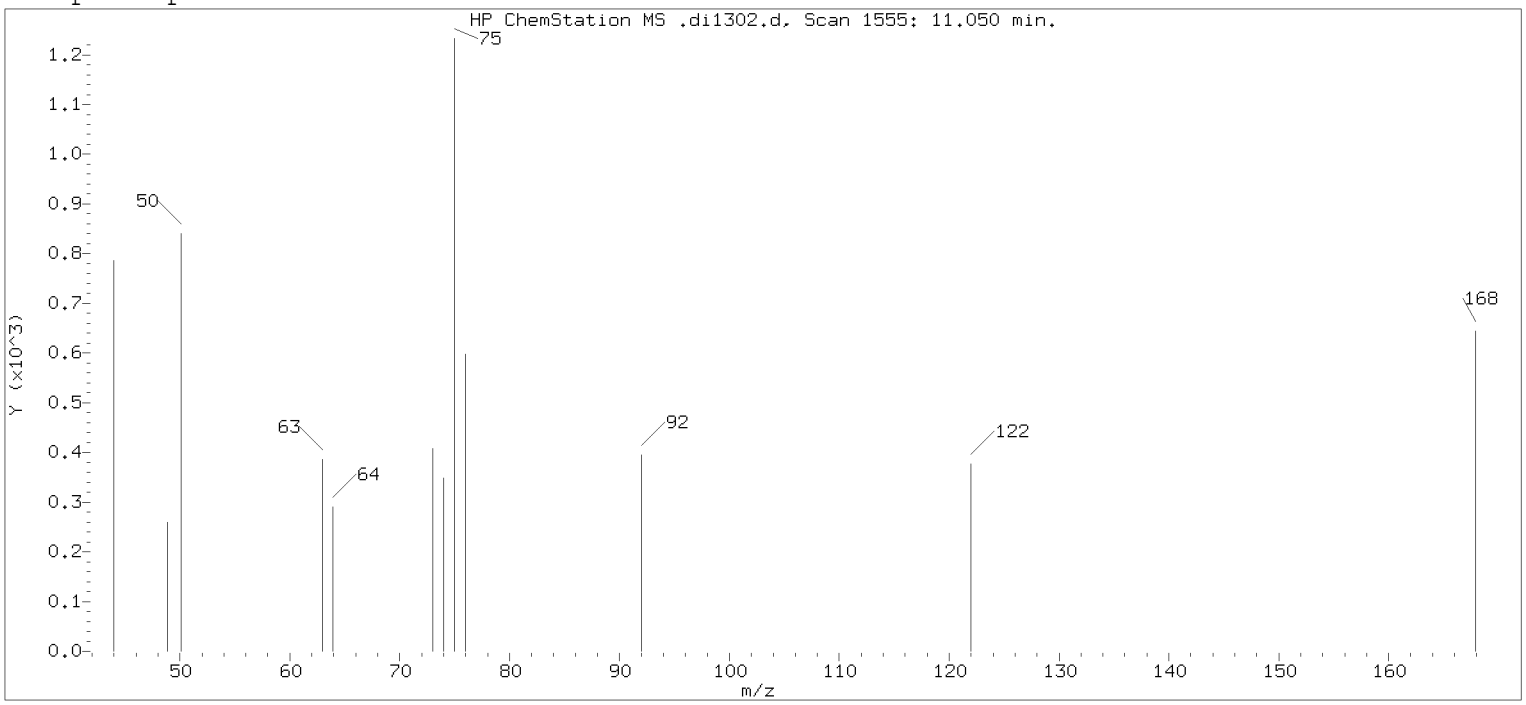
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1554
Retention Time (minutes) : 11.045
Quant Ion : 168.00
Area (flag) : 1111M
On-Column Amount (ng/ul) : 0.0809
Integration start scan : 1544 Integration stop scan: 1563
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

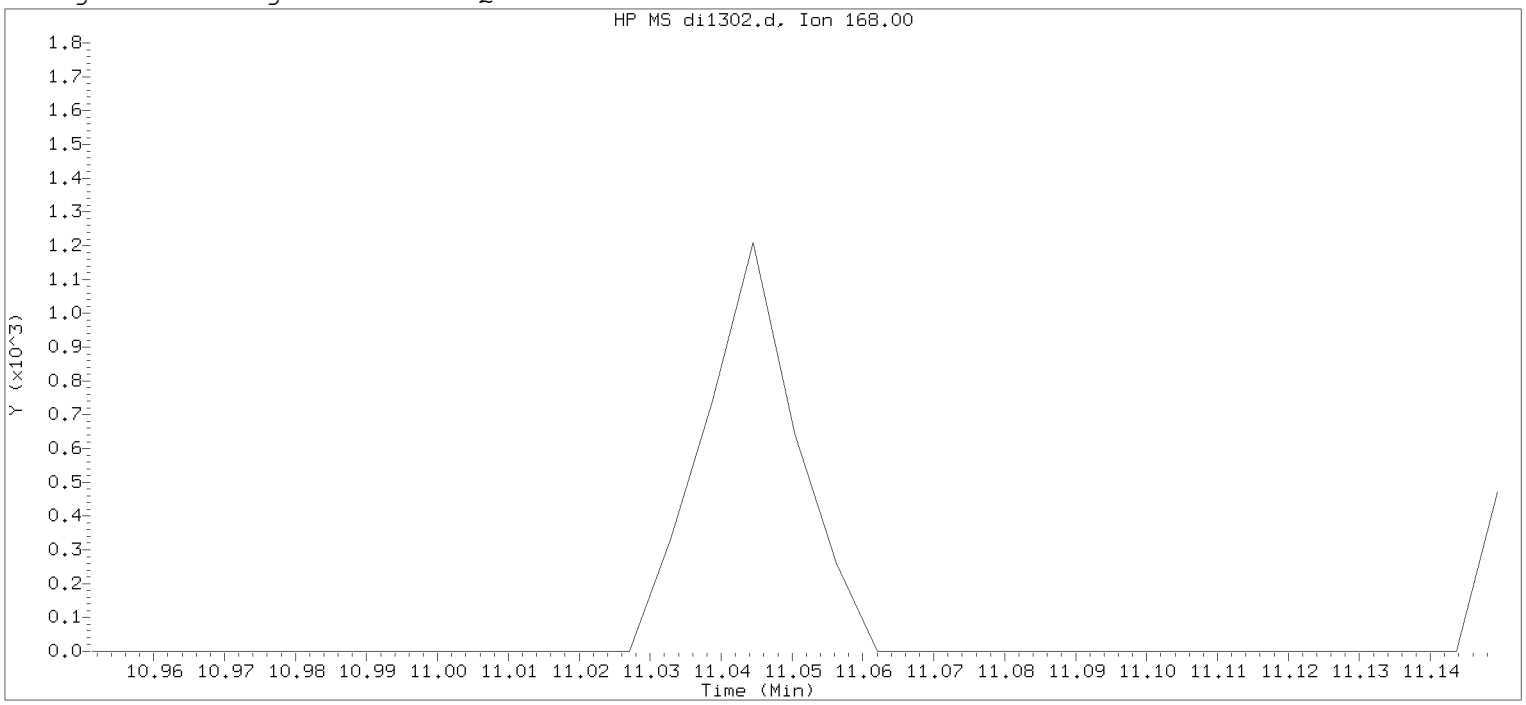
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

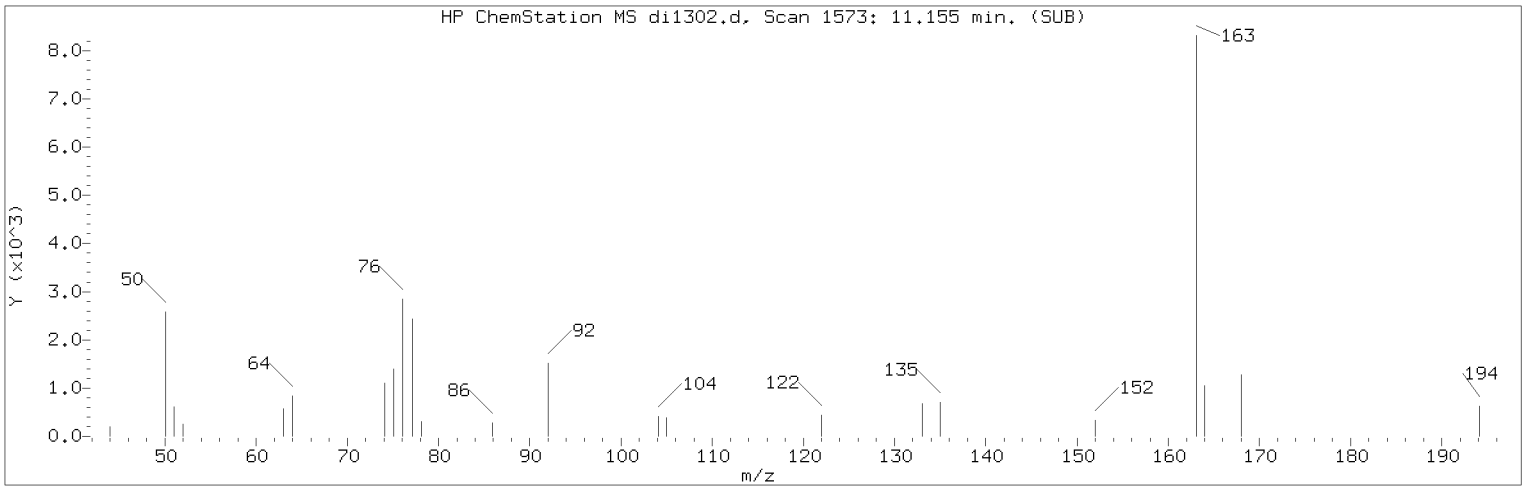
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

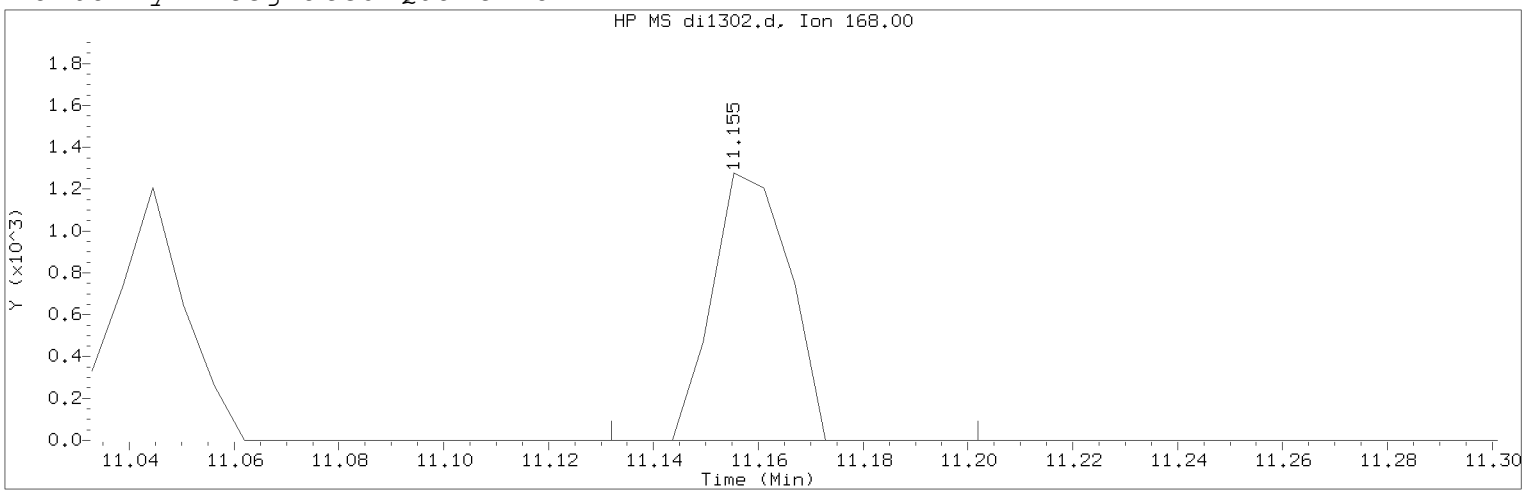
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Expected RT (minutes) : 11.050
Quant Ion : 168.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used. Reason: I am the author of this document

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

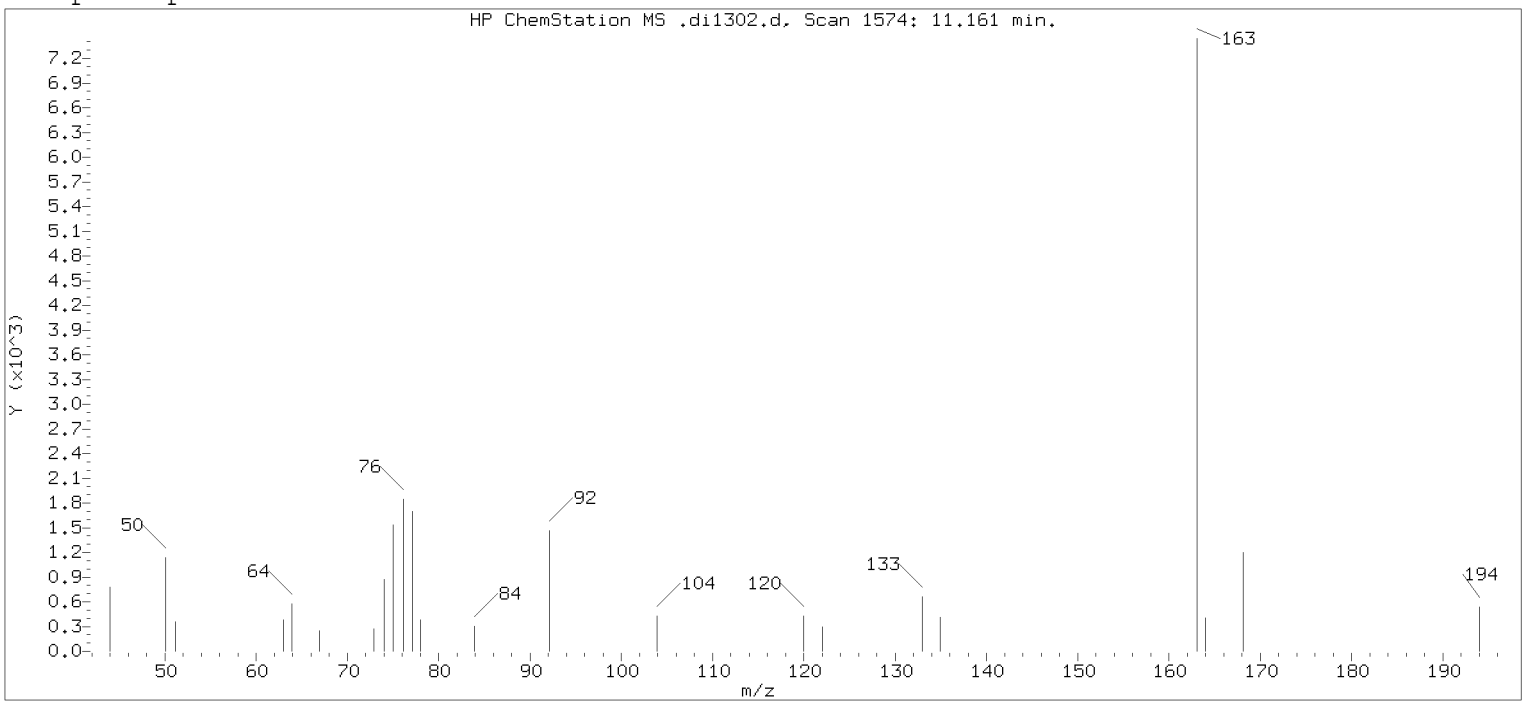
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Scan Number : 1573
Retention Time (minutes) : 11.155
Quant Ion : 168.00
Area (flag) : 1293M
On-Column Amount (ng/ul) : 0.0779
Integration start scan : 1568 Integration stop scan: 1580
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

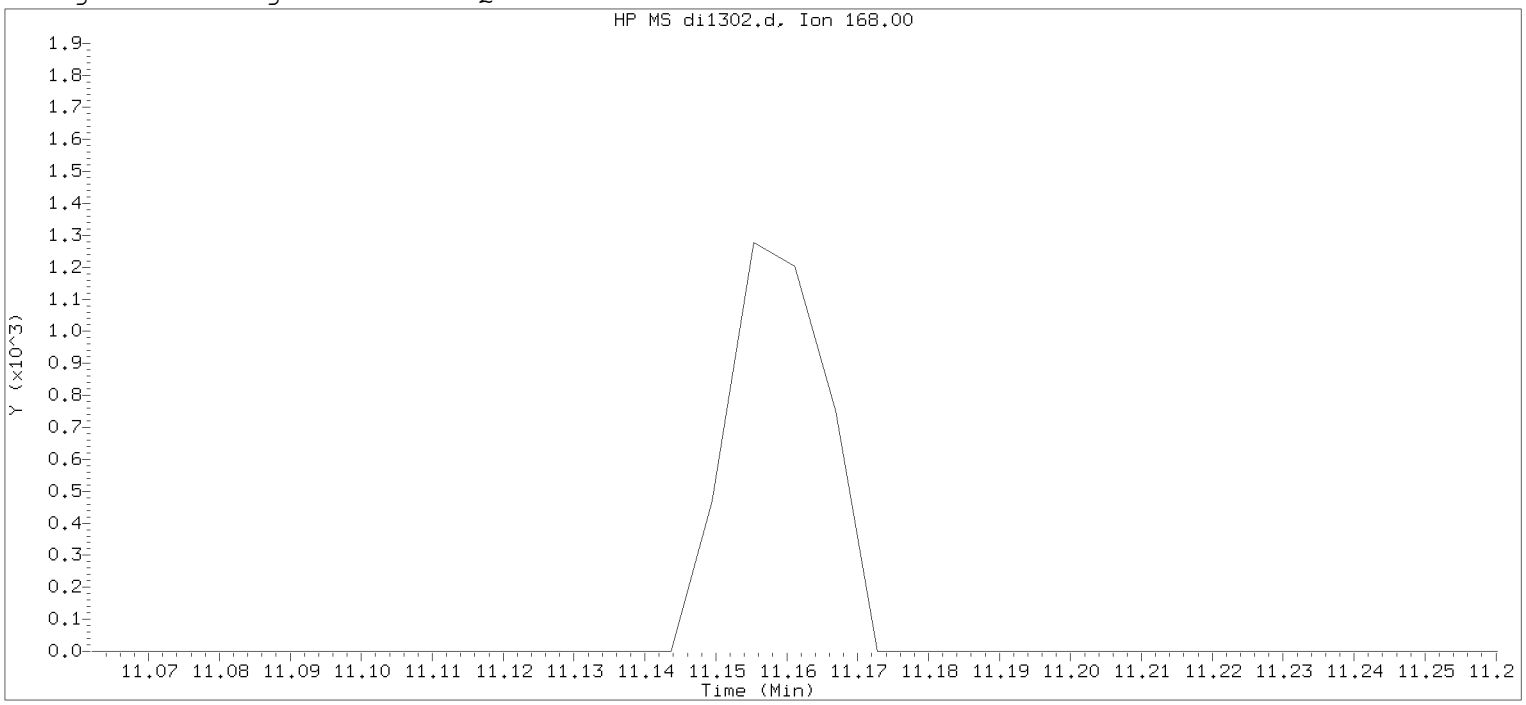
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

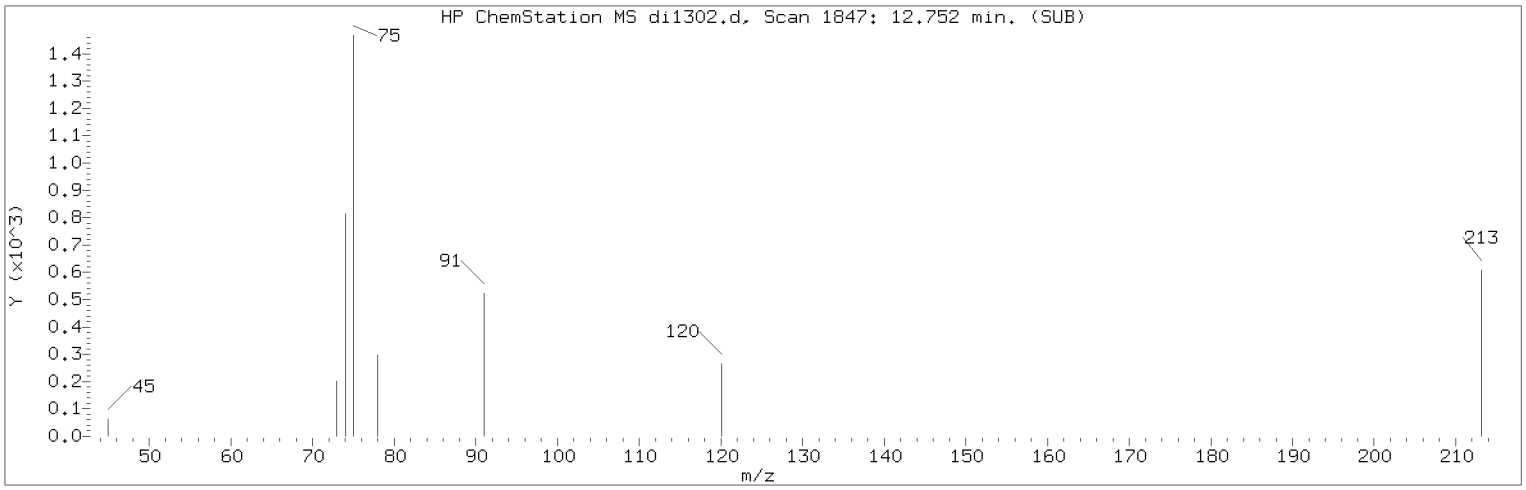
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

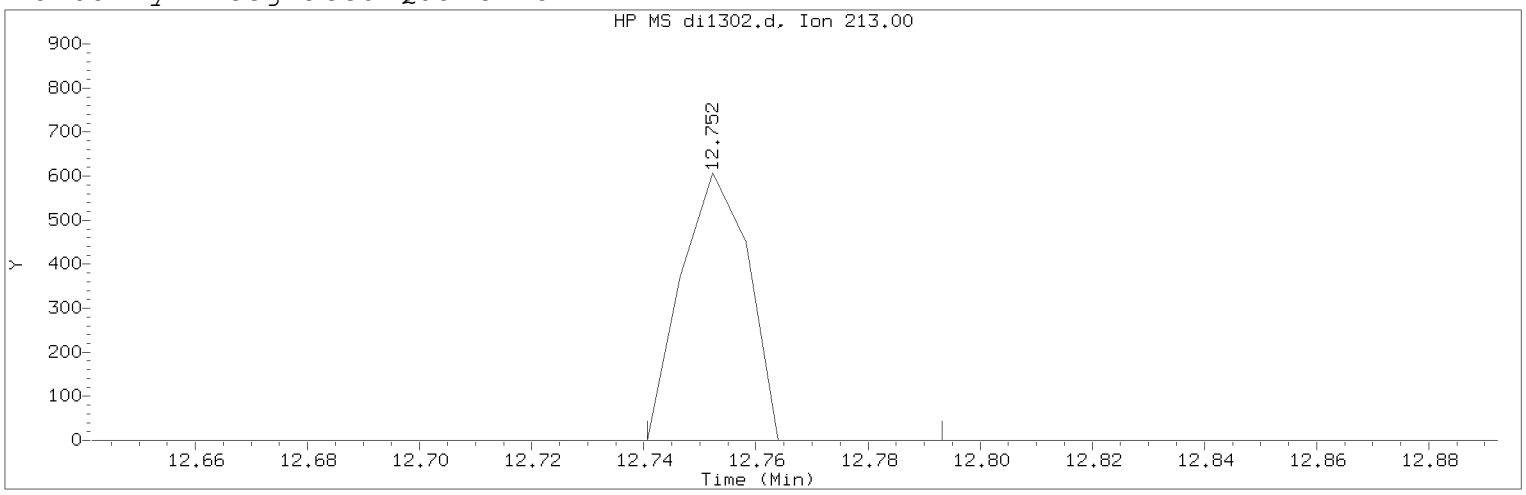
Compound Number : 107
Compound Name : 1,3-Dinitrobenzene
Expected RT (minutes) : 11.161
Quant Ion : 168.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

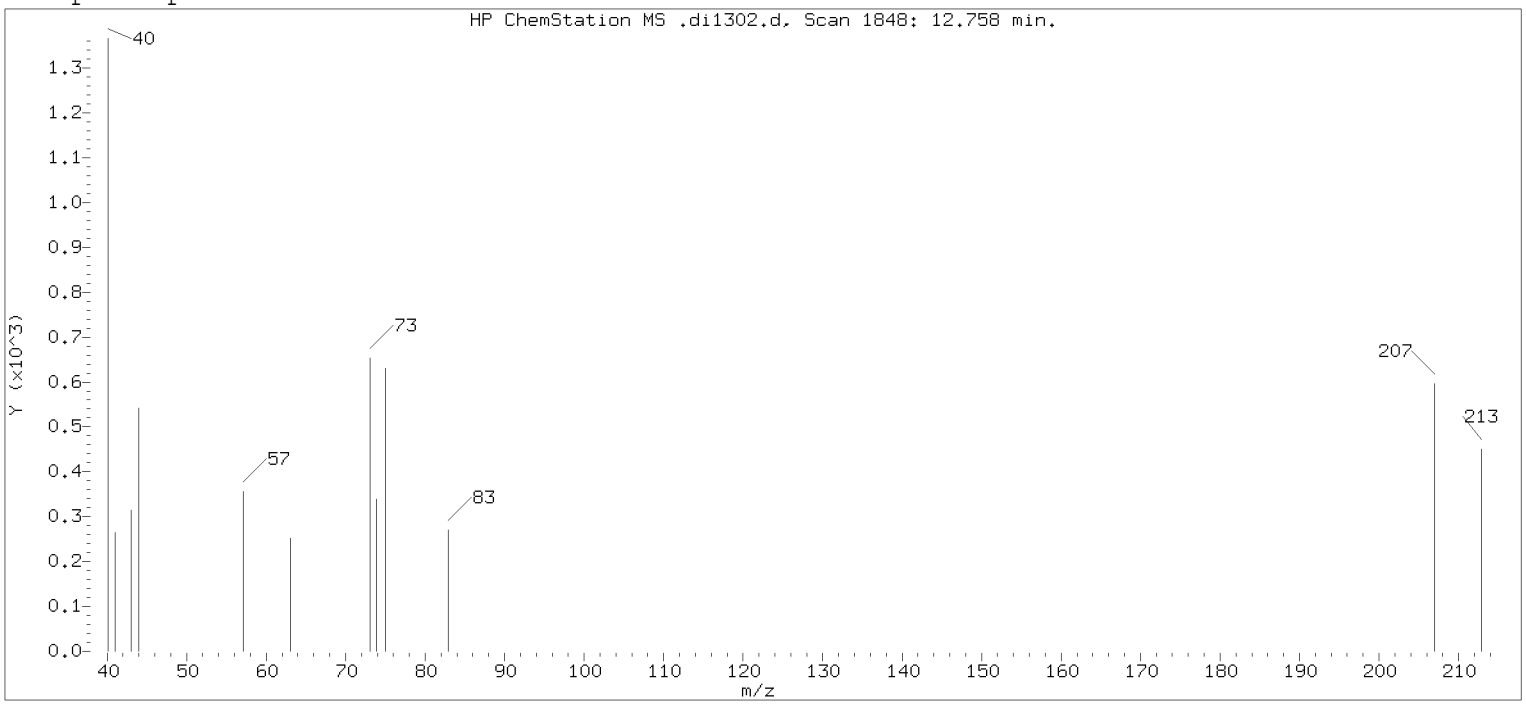
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1847
Retention Time (minutes) : 12.752
Quant Ion : 213.00
Area (flag) : 499M
On-Column Amount (ng/ul) : 0.0592
Integration start scan : 1844 Integration stop scan: 1853
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

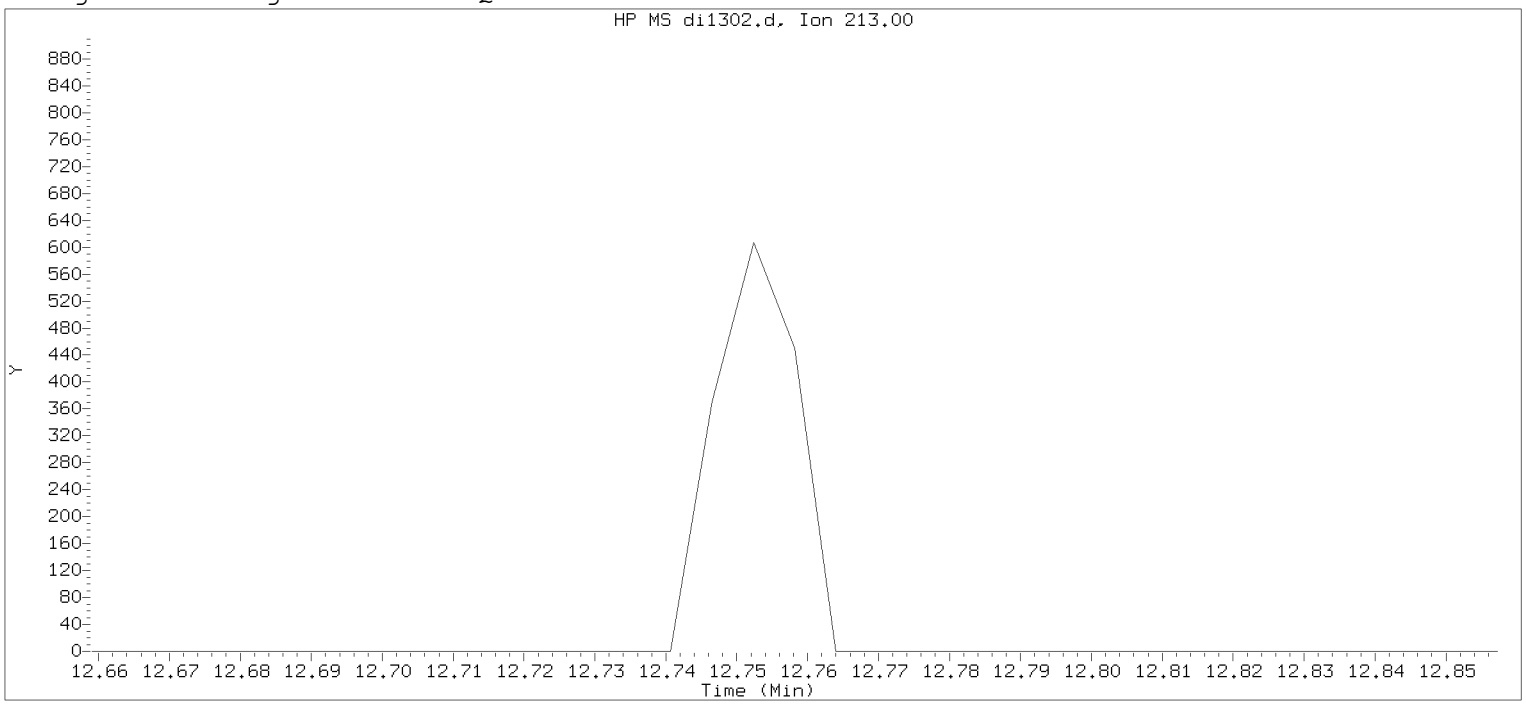
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

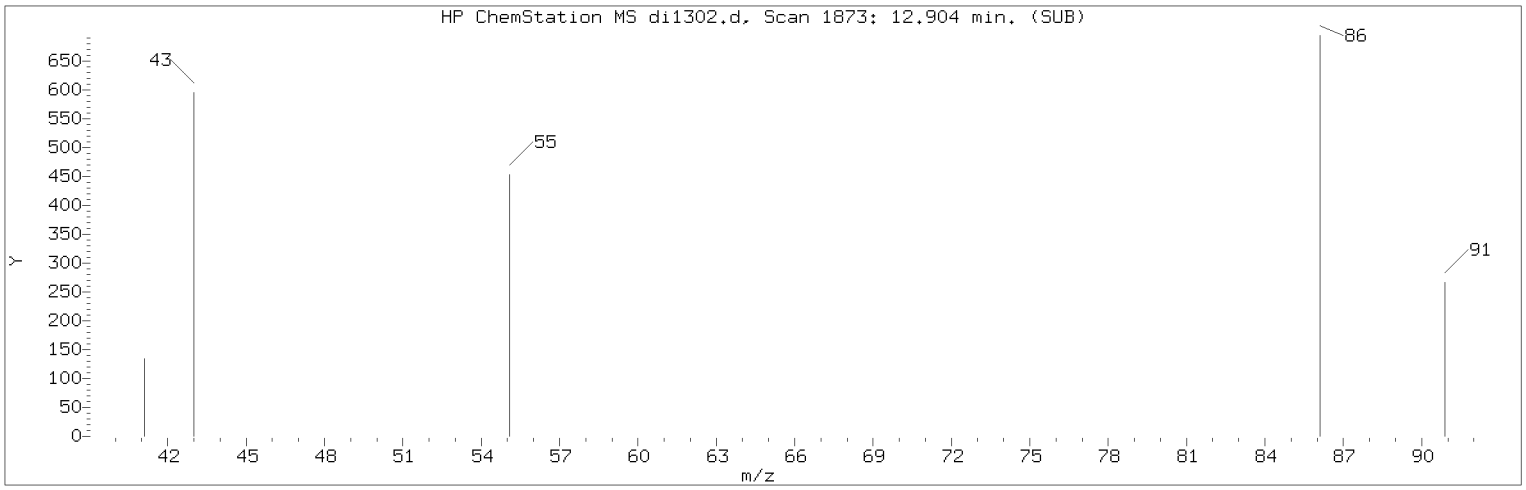
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

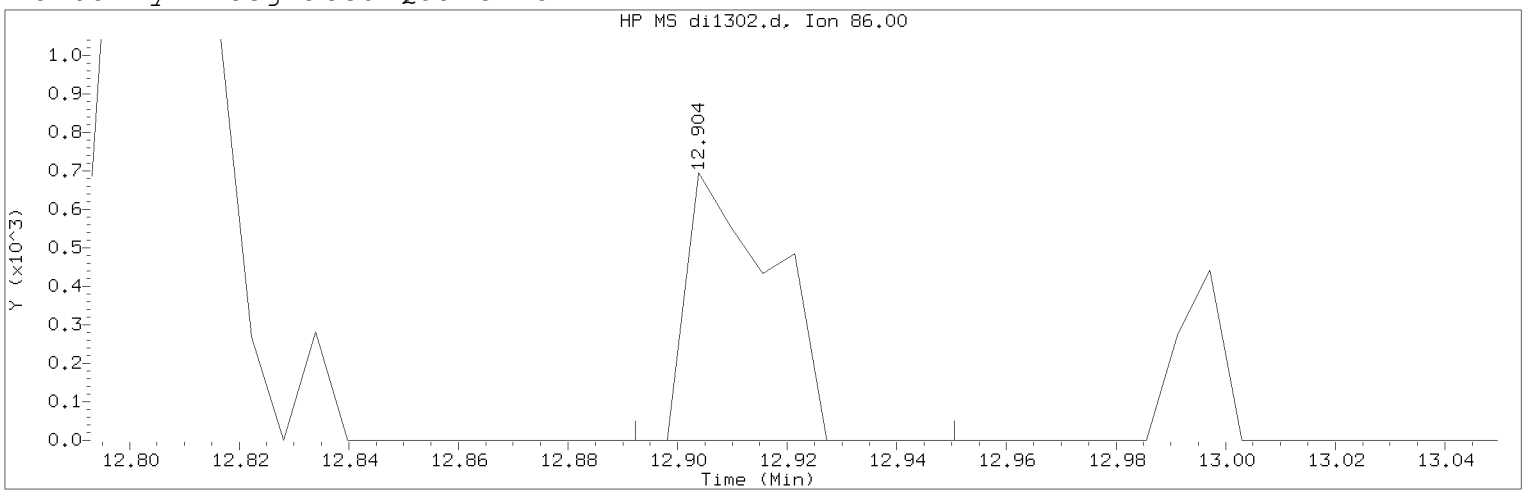
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.758
Quant Ion : 213.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

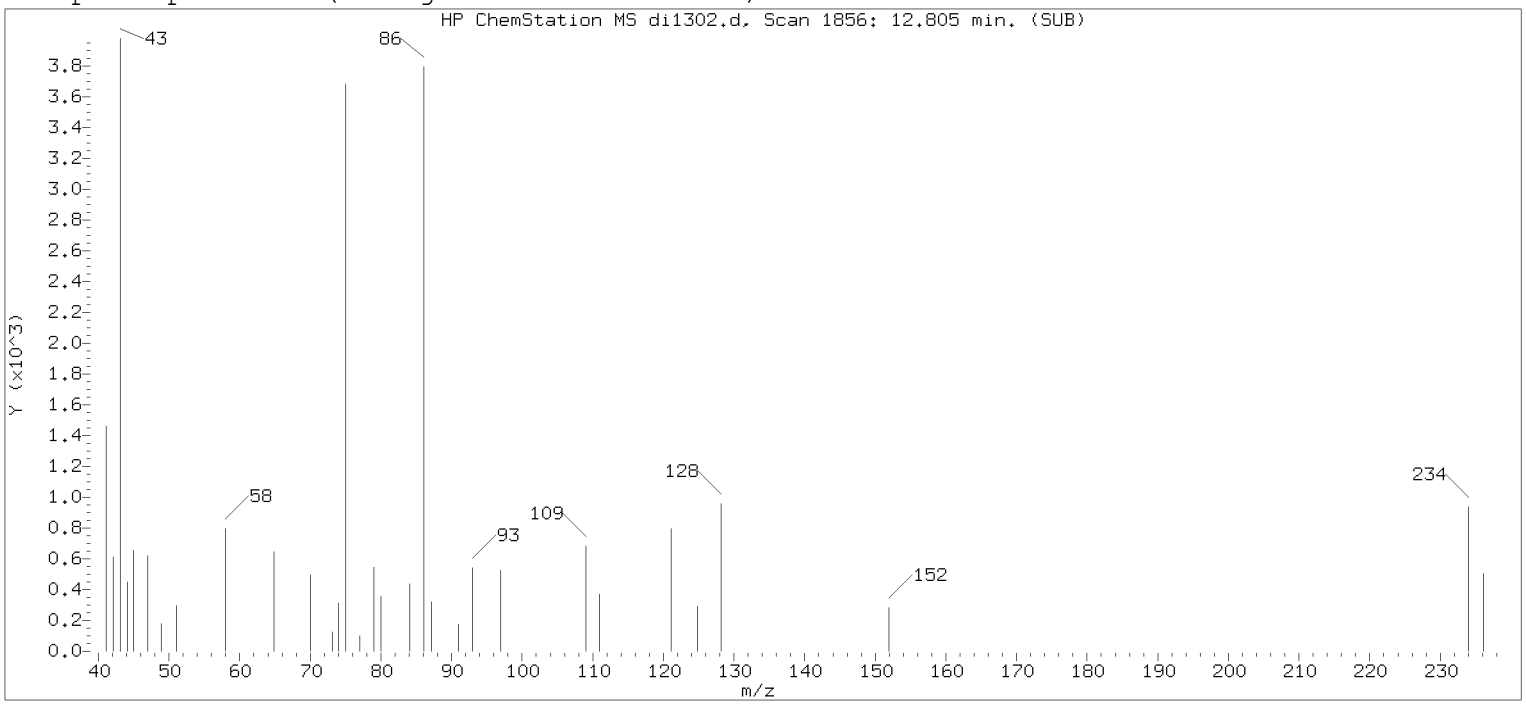
Compound Number : 144
Compound Name : Diallate (peak 2)
Scan Number : 1873
Retention Time (minutes) : 12.904
Quant Ion : 86.00
Area (flag) : 758M
On-Column Amount (ng/ul) : 0.0197
Integration start scan : 1870 Integration stop scan: 1880
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

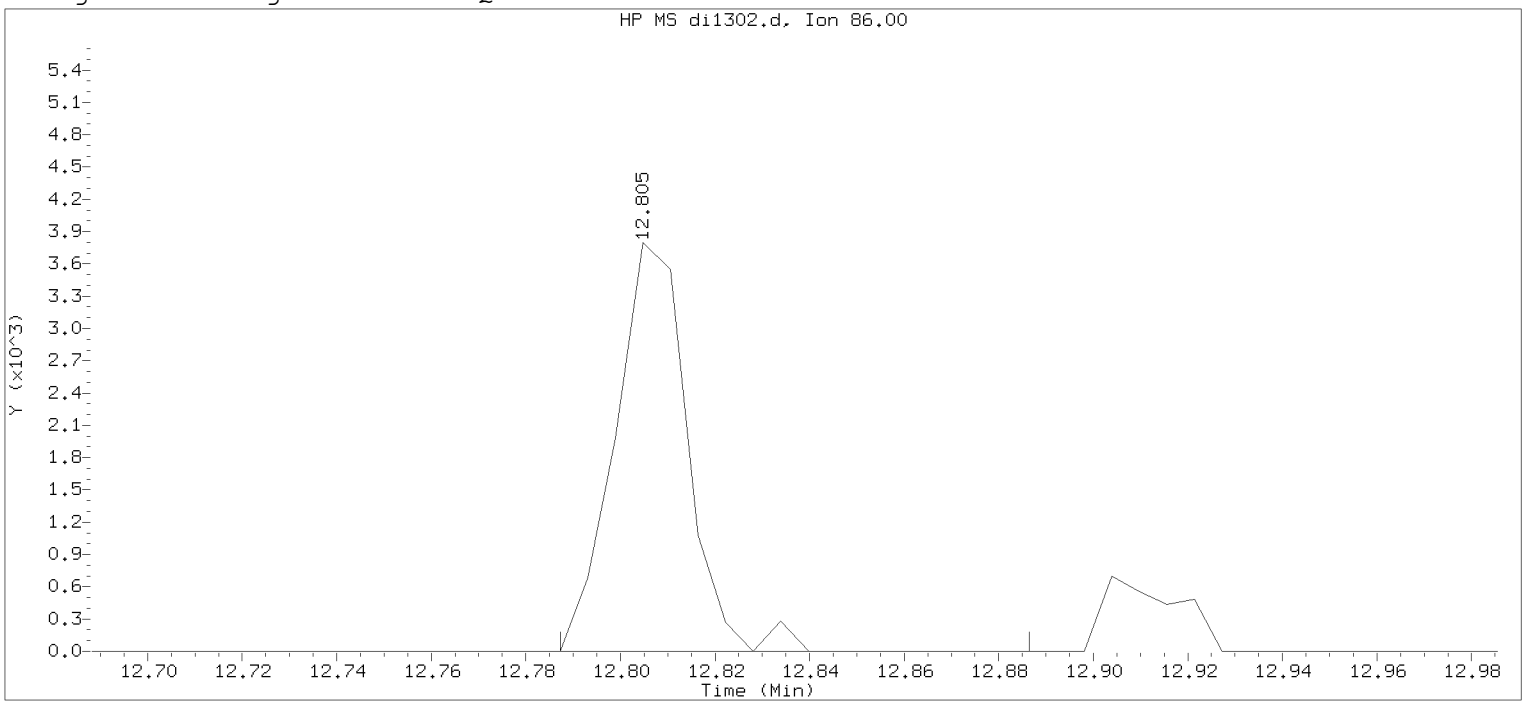
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

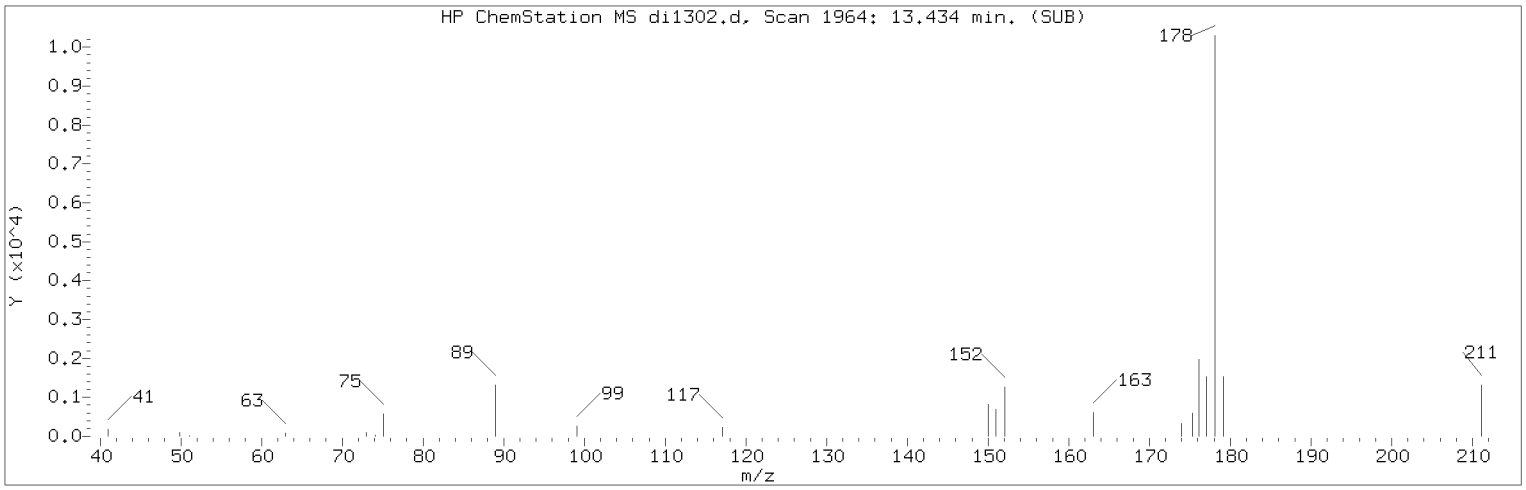
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

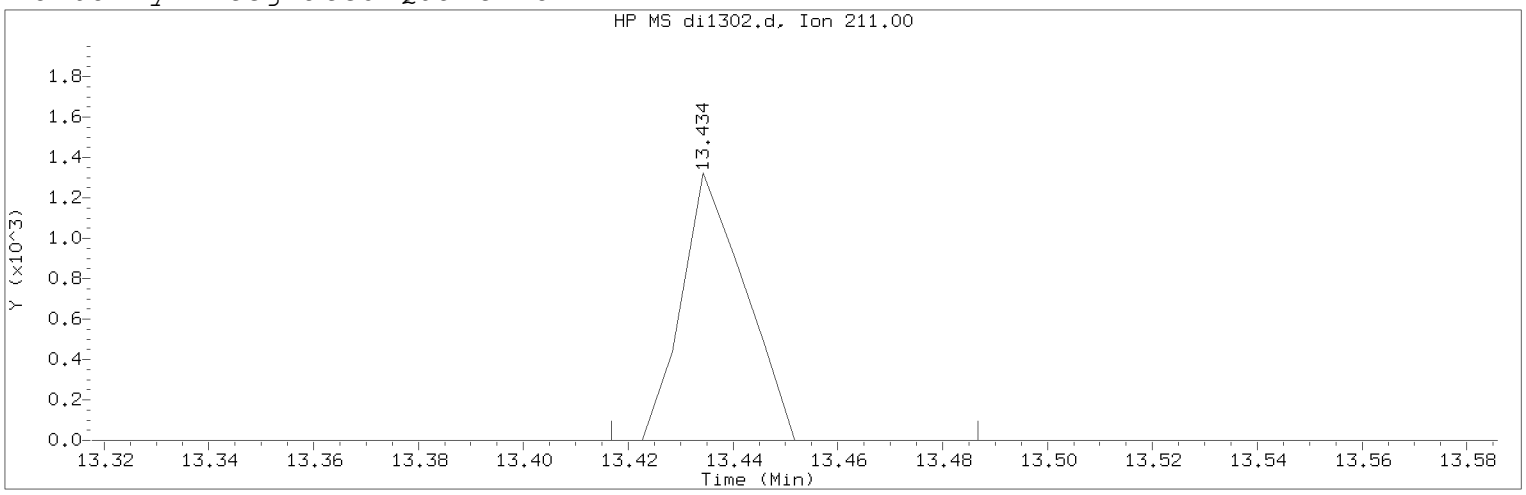
Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1856		
Retention Time (minutes)	: 12.805		
Quant Ion	: 86.00		
Area	: 4071		
On-column Amount (ng/ul)	: 0.0797		
Integration start scan	: 1852	Integration stop scan:	1869
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

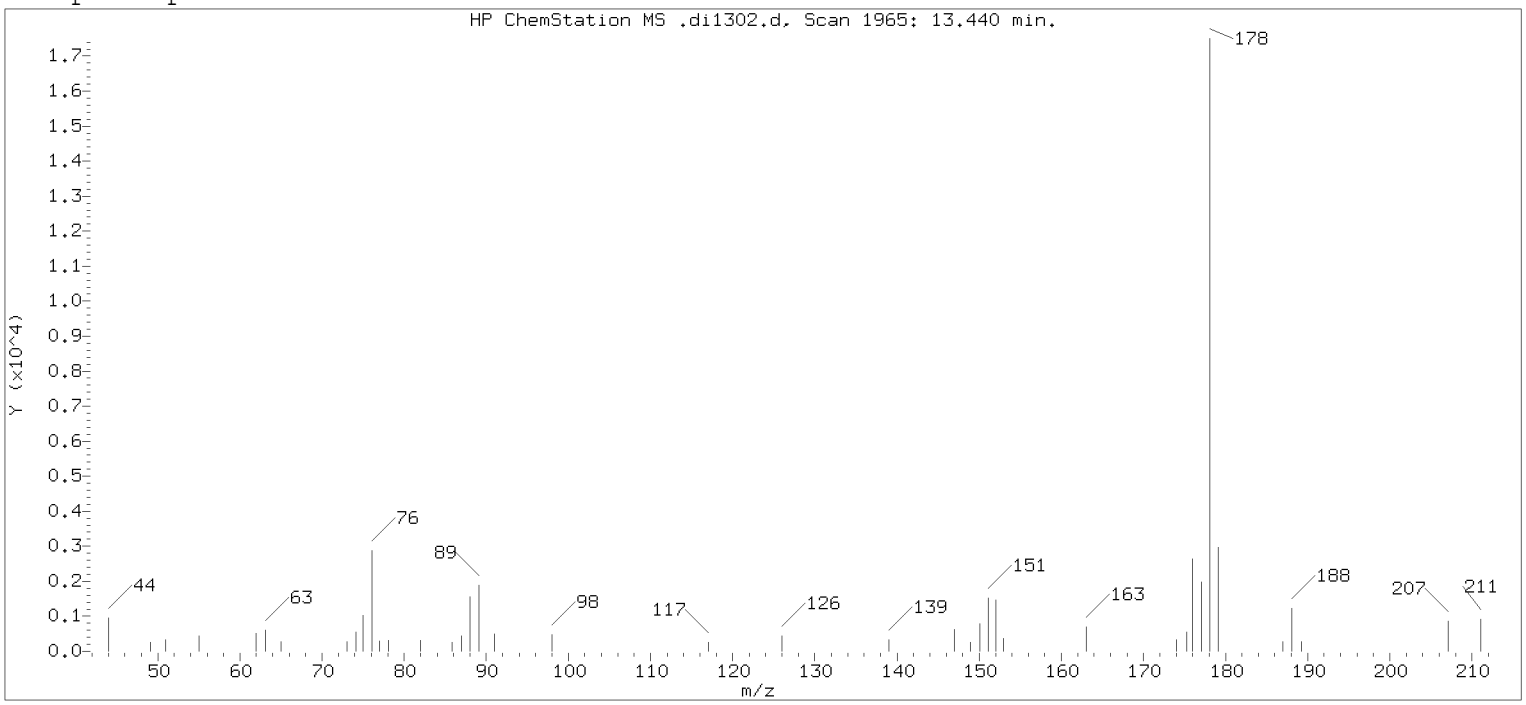
Compound Number : 154
Compound Name : Dinoseb
Scan Number : 1964
Retention Time (minutes) : 13.434
Quant Ion : 211.00
Area (flag) : 1105M
On-Column Amount (ng/ul) : 0.0621
Integration start scan : 1960 Integration stop scan: 1972
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

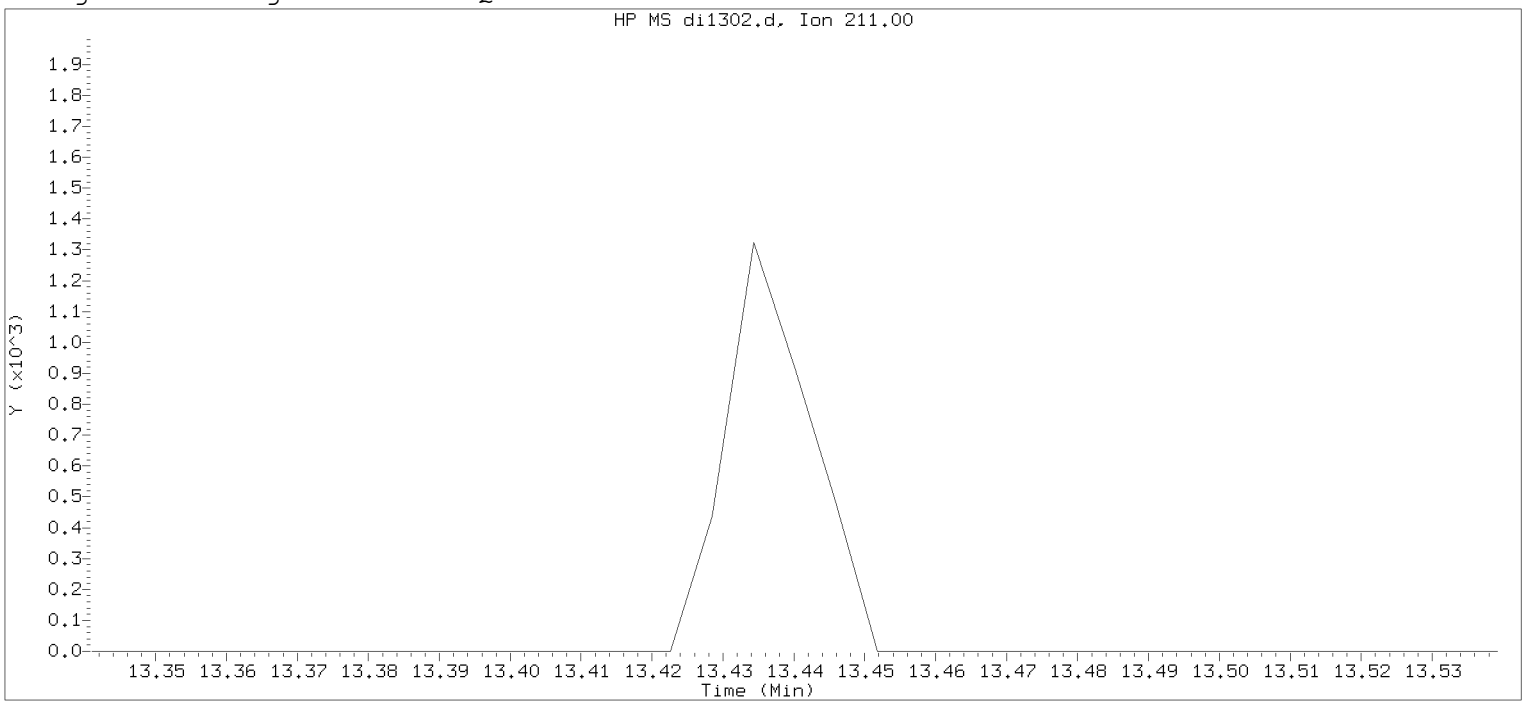
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

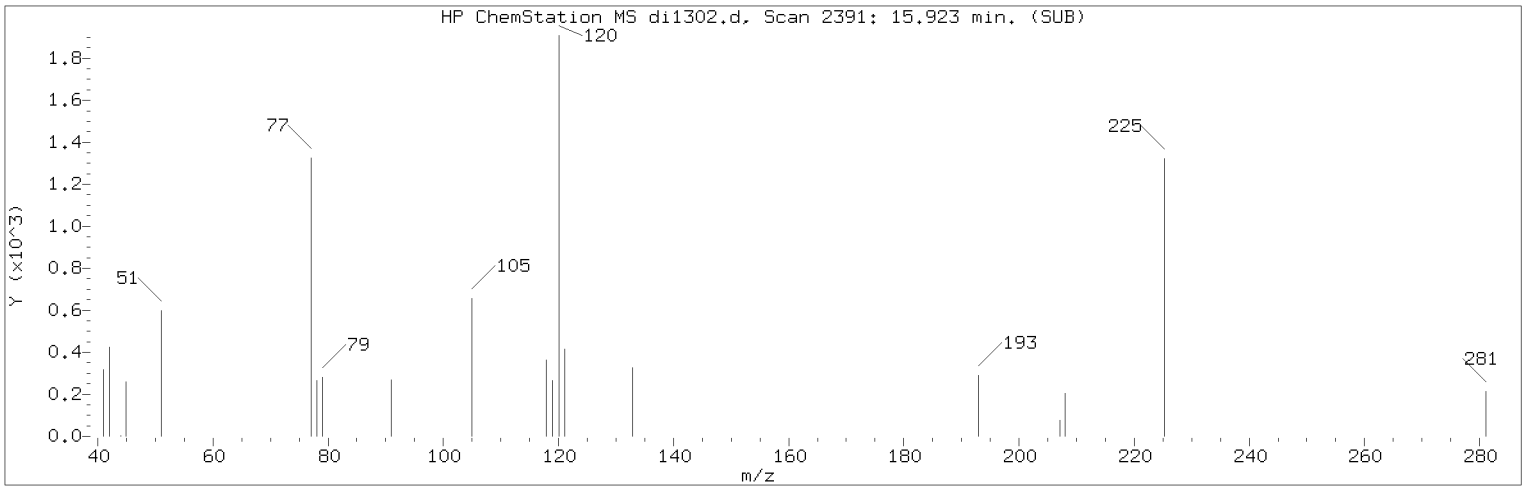
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

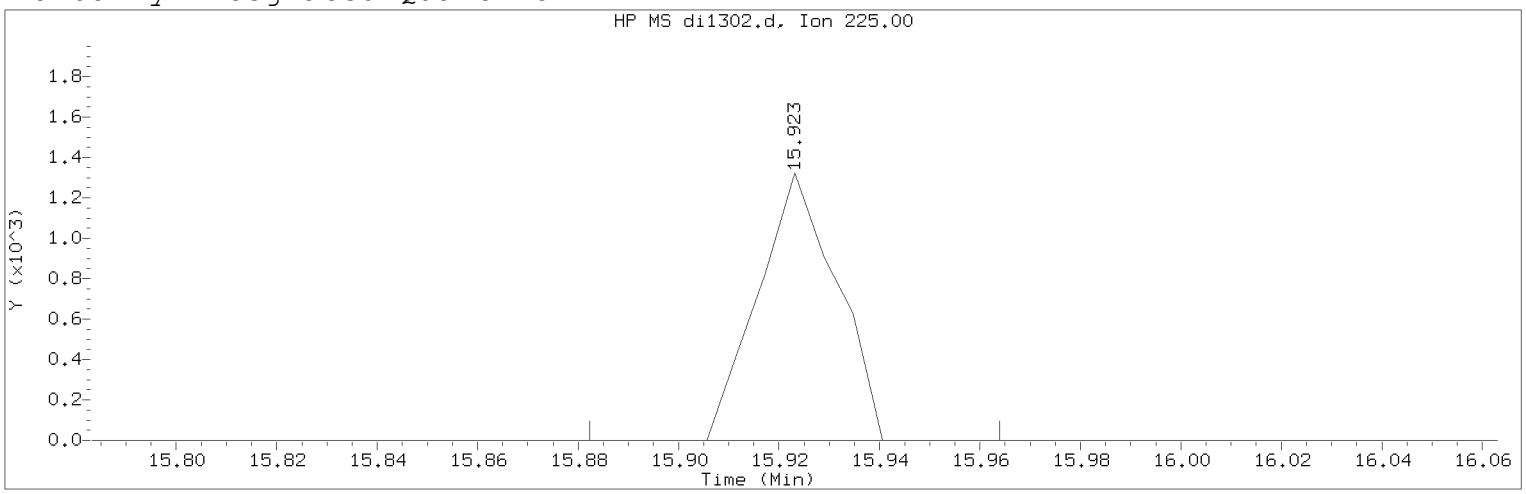
Compound Number : 154
Compound Name : Dinoseb
Expected RT (minutes) : 13.440
Quant Ion : 211.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used. Page 1 of 1

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

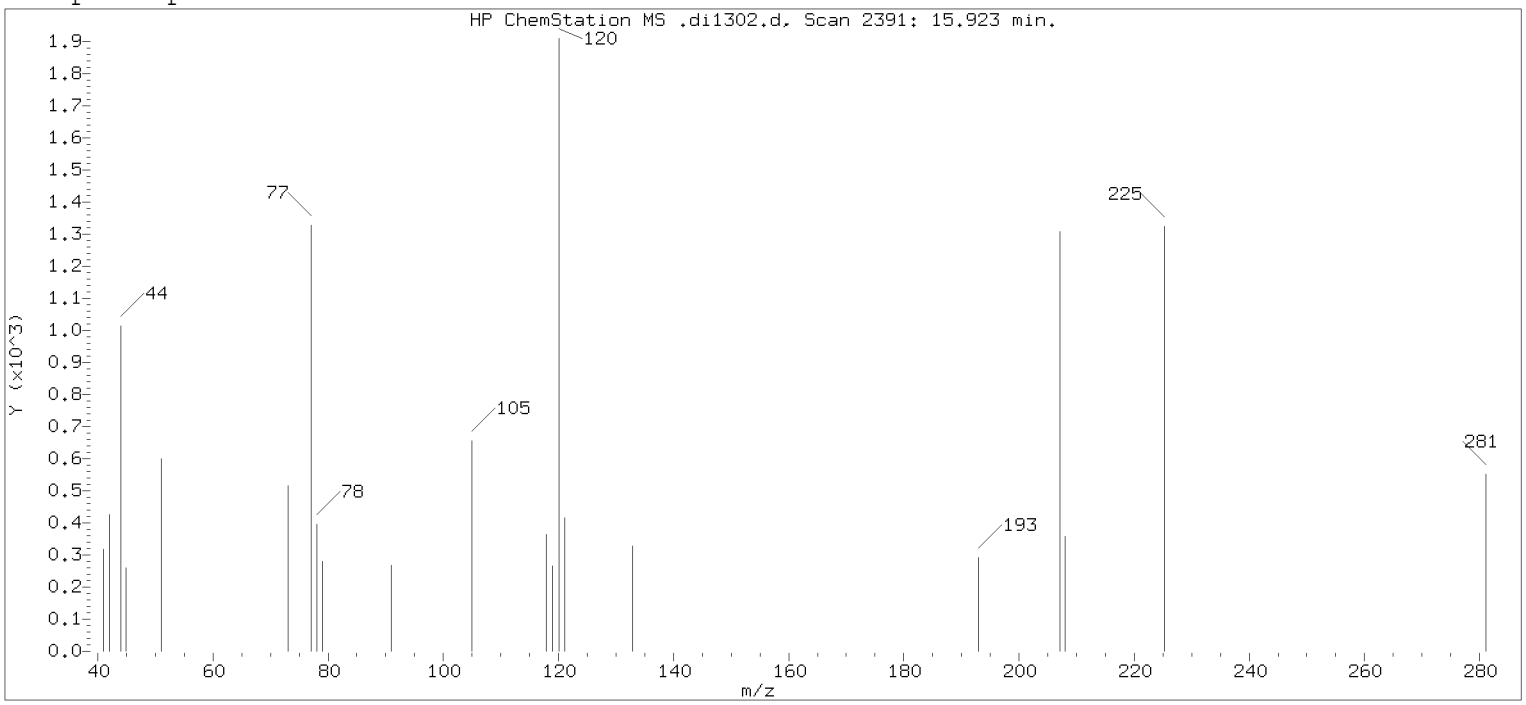
Compound Number : 182
Compound Name : p-Dimethylaminoazobenzene
Scan Number : 2391
Retention Time (minutes) : 15.923
Quant Ion : 225.00
Area (flag) : 1435M
On-Column Amount (ng/ul) : 0.0652
Integration start scan : 2383 Integration stop scan: 2397
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

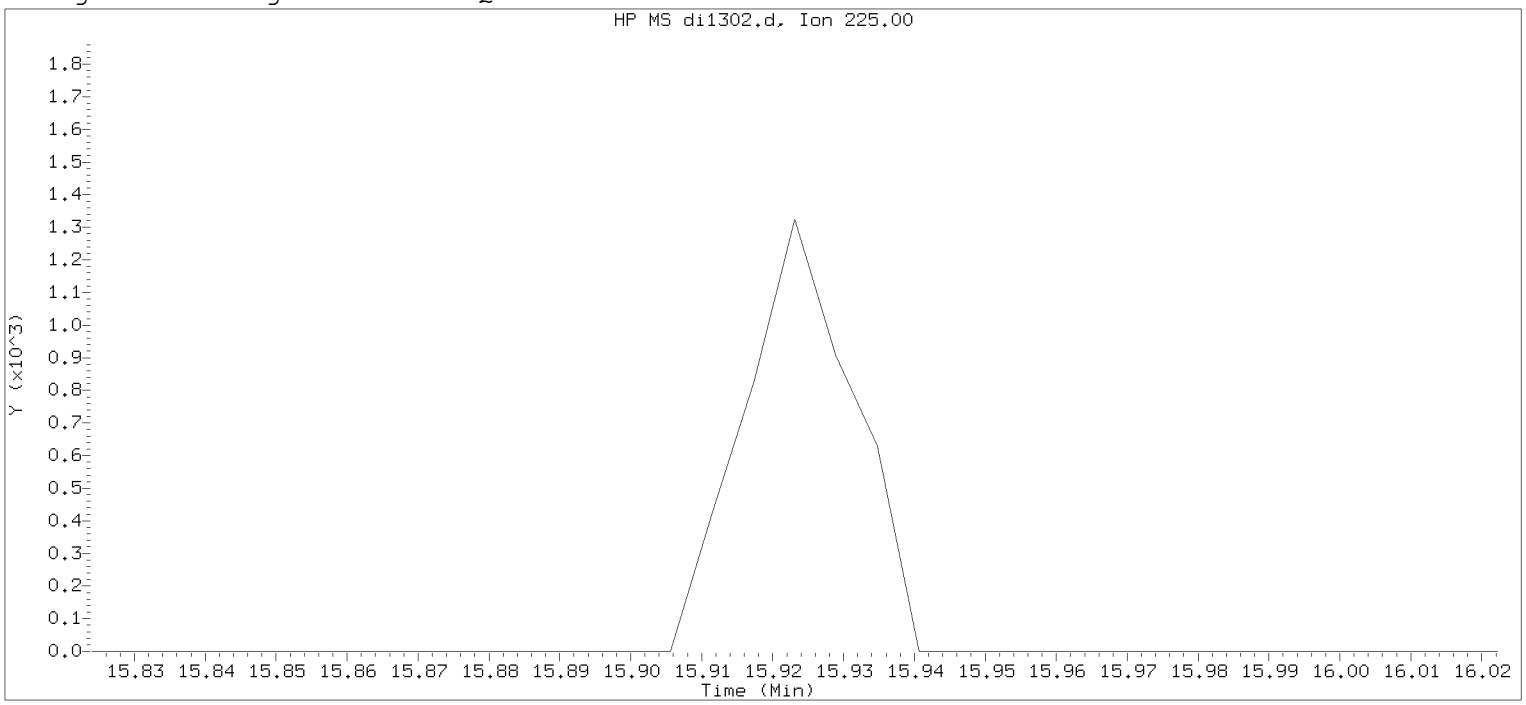
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

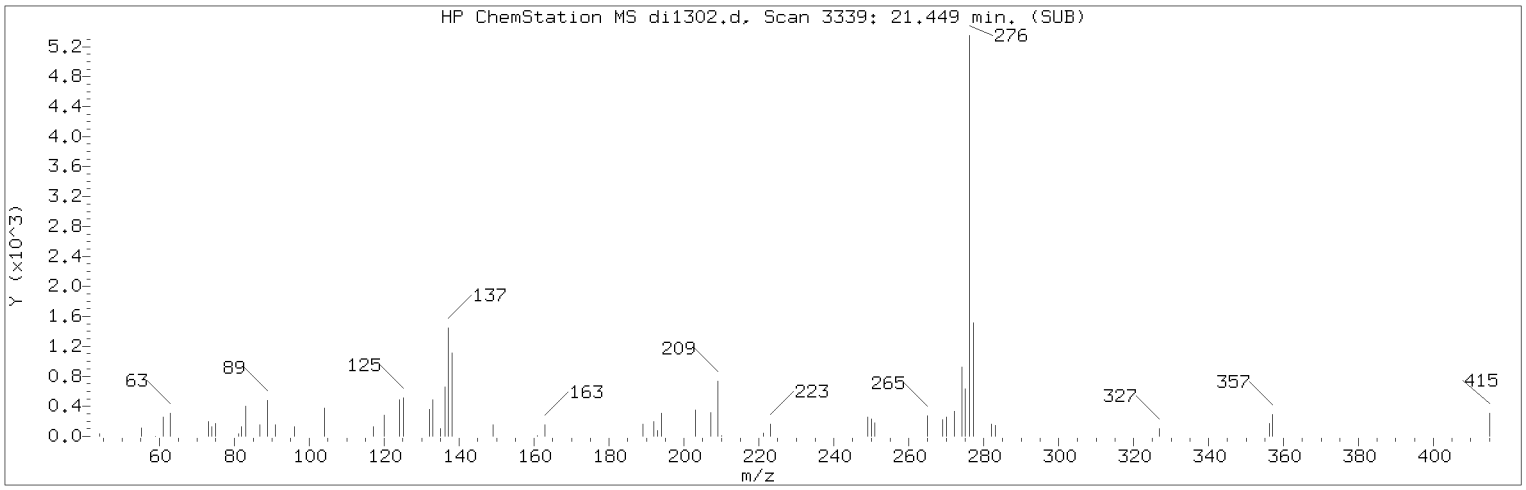
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

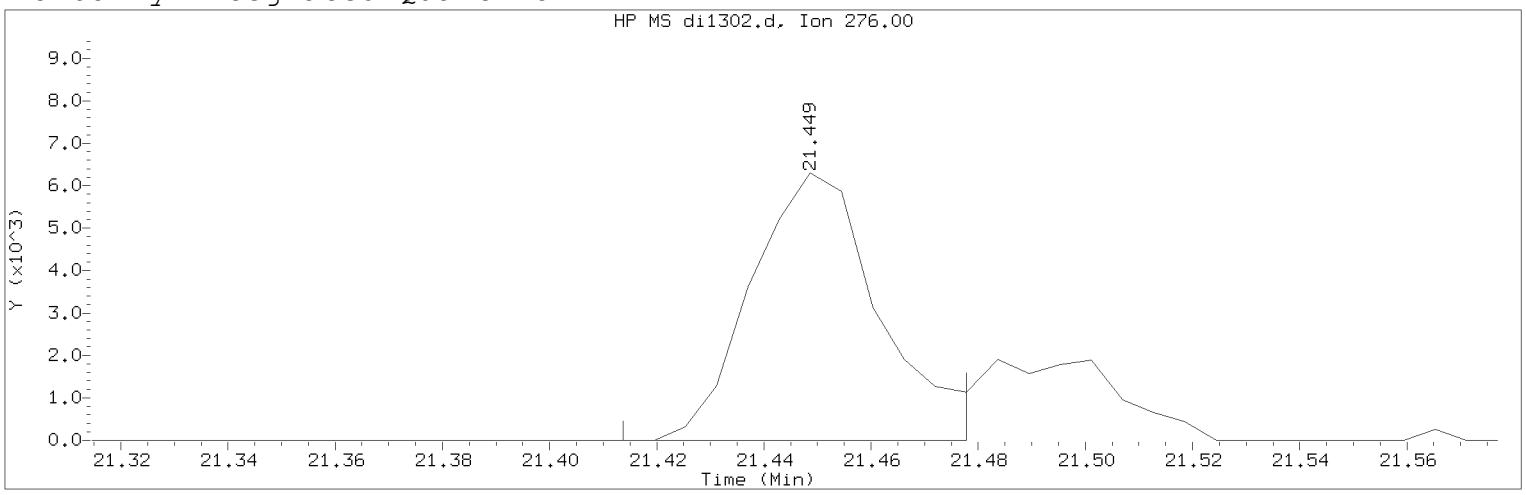
Compound Number : 182
Compound Name : p-Dimethylaminoazobenzene
Expected RT (minutes) : 15.923
Quant Ion : 225.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

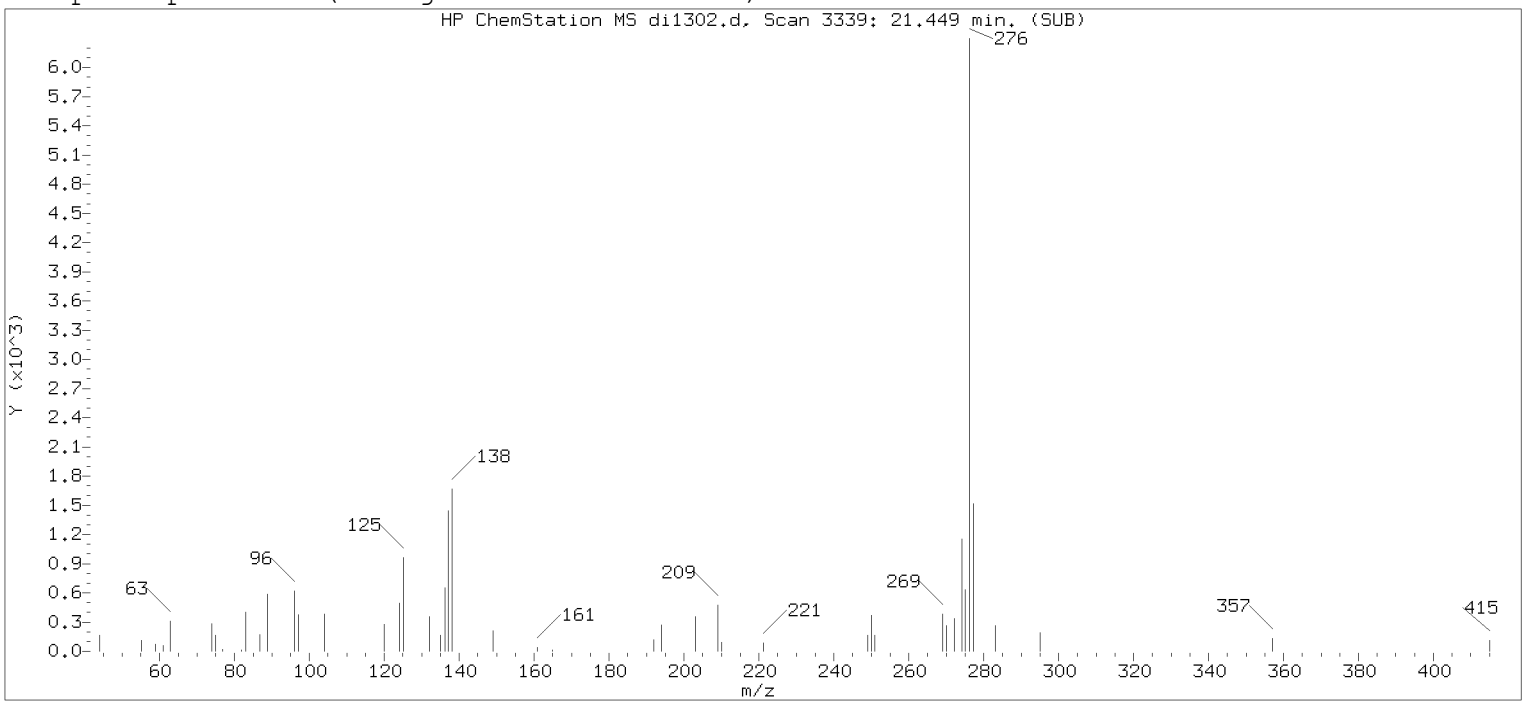
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3339
Retention Time (minutes) : 21.449
Quant Ion : 276.00
Area (flag) : 10499M
On-Column Amount (ng/ul) : 0.1111
Integration start scan : 3332 Integration stop scan: 3343
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

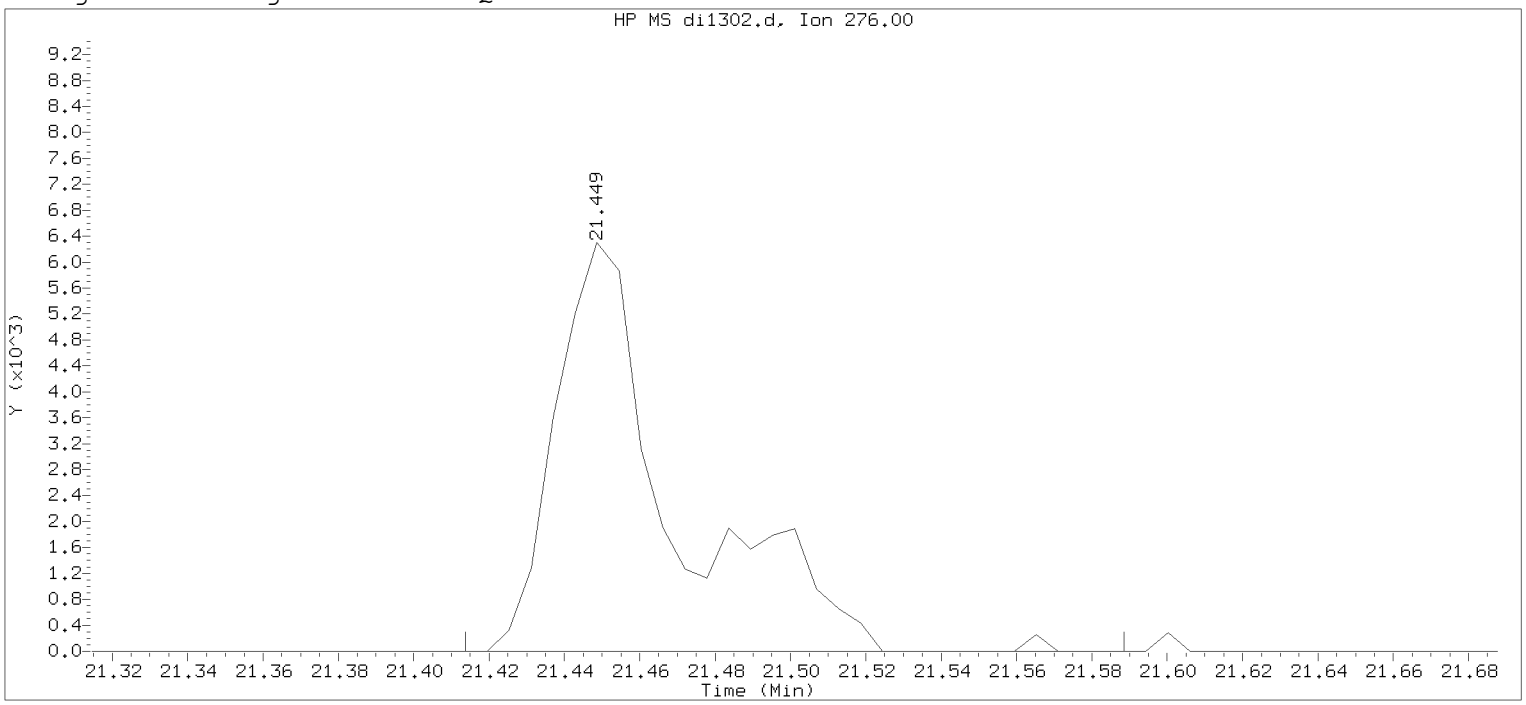
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1302.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:19 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 18:46
Date, time and analyst ID of latest file update: 21-Sep-2018 18:47 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3339		
Retention Time (minutes)	: 21.449		
Quant Ion	: 276.00		
Area	: 13805		
On-column Amount (ng/ul)	: 0.1422		
Integration start scan	: 3332	Integration stop scan:	3362
Y at integration start	: 0	Y at integration end:	0

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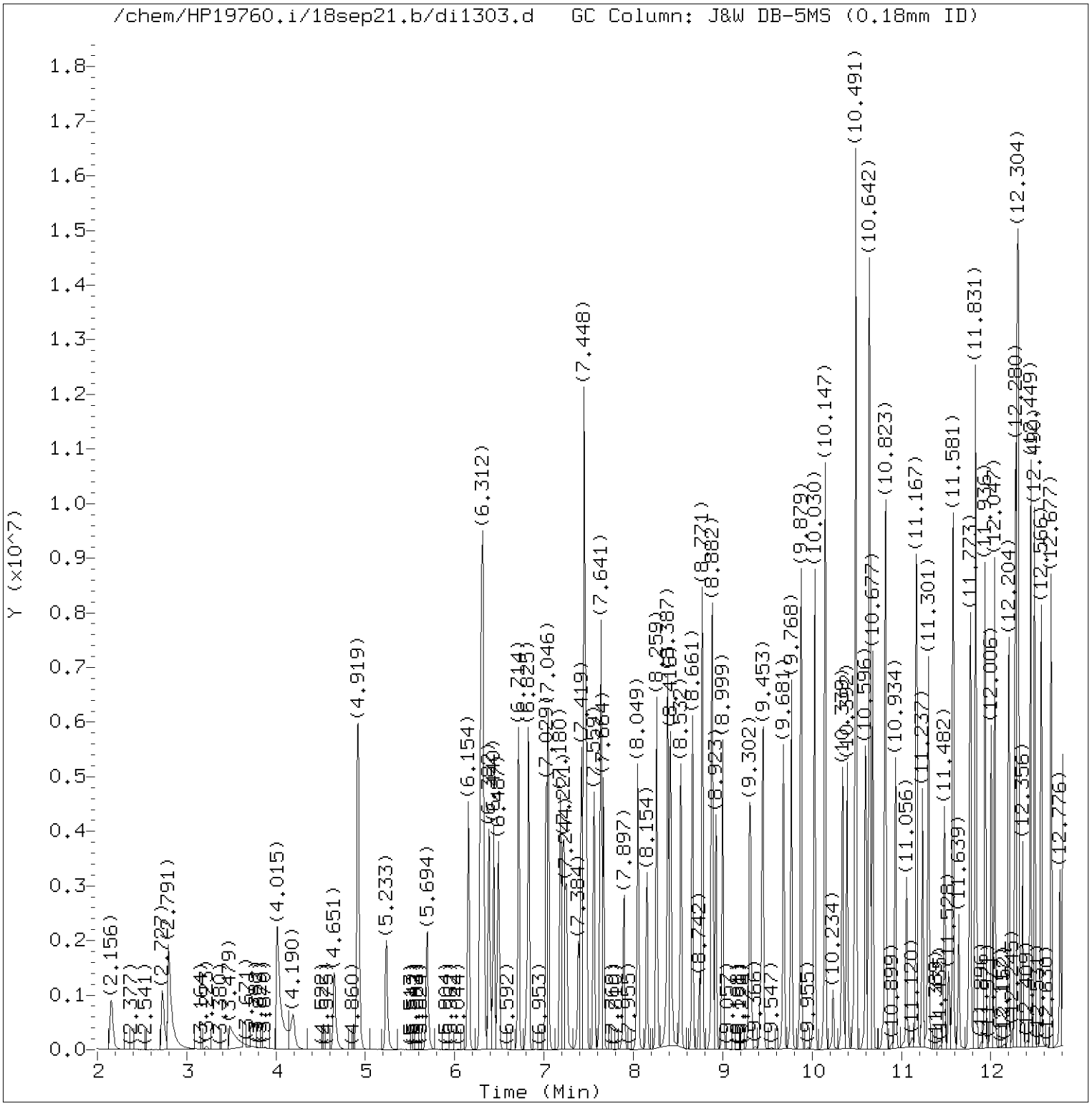
Target 3.5 esignature used: AE20 e1e3384



Total Ion Chromatogram (TIC)

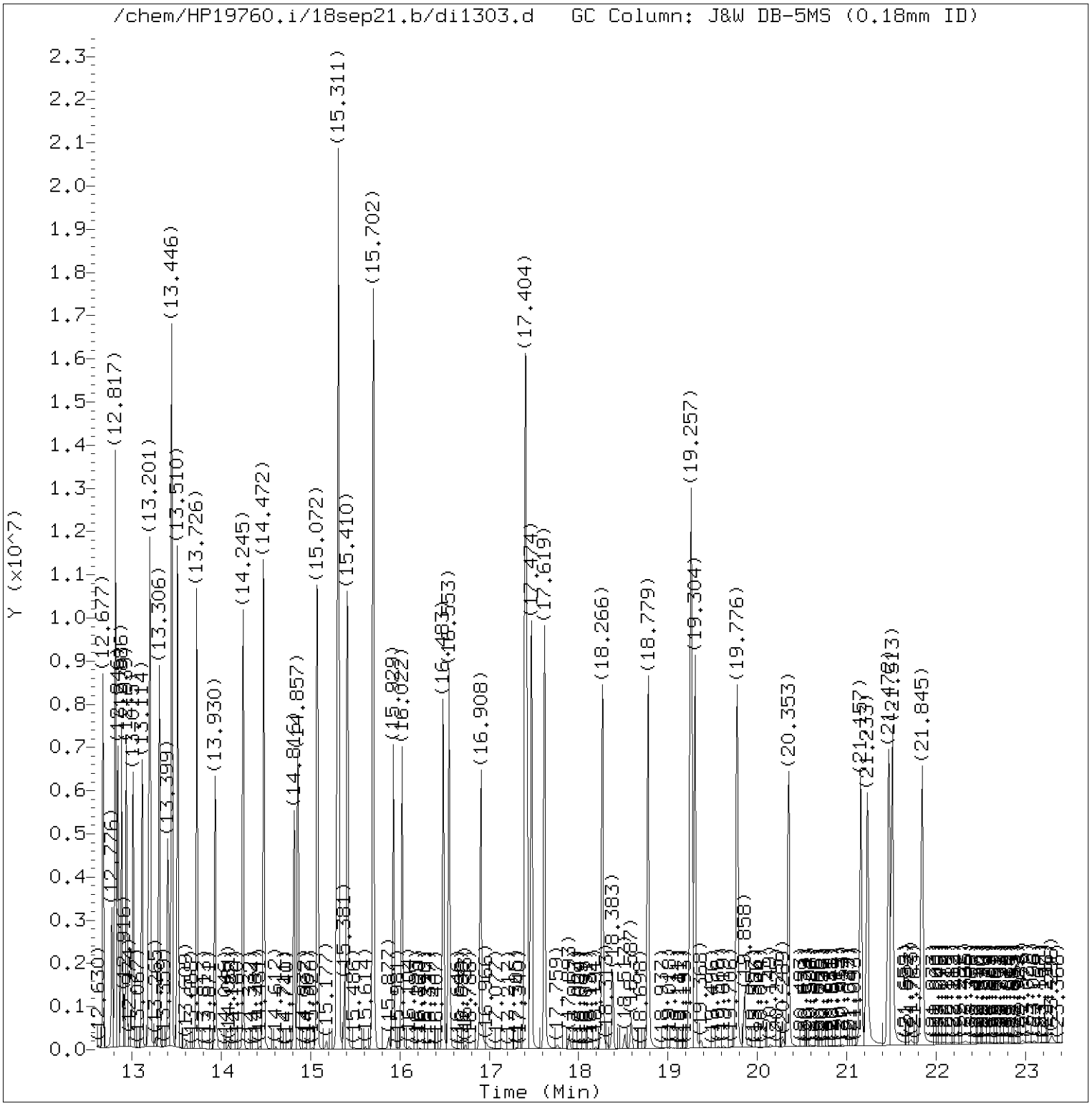
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.156	88	931630	29.372
4) N-Nitrosodimethylamine	(1)	2.727	74	1336412	29.662
5) Pyridine	(1)	2.797	79	2320441	28.980
7) 2-Picoline	(1)	4.015	93	2299183	29.537
8) N-Nitrosomethylethylamine	(1)	4.190	88	997070	29.771
9) Methyl methanesulfonate	(1)	4.651	80	1084565	29.410
11)$2-Fluorophenol	(1)	4.919	112	3632535	59.566
13) N-Nitrosodiethylamine	(1)	5.233	102	960946	30.087
42) Total Cresols	(1)			3715634	59.322
15) Ethyl methanesulfonate	(1)	5.694	109	913446	29.716
16) Benzaldehyde	(1)	6.154	77	1593509	29.324
17)$Phenol-d6	(1)	6.294	99	4908624	59.172
18) Phenol	(1)	6.312	94	2762049	29.502
19) Aniline	(1)	6.318	93	3248306	29.728
20) a-methylstyrene	(1)	6.399	118	180294	29.549
22) bis(2-Chloroethyl)ether	(1)	6.440	93	2010161	29.269
23) 2-Chlorophenol	(1)	6.487	128	1736962	29.858
24) 1,3-Dichlorobenzene	(1)	6.714	146	1927521	29.443
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	193821	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	1939483	29.422
27) Benzyl alcohol	(1)	7.023	108	1191713	30.149
28) 1,2-Dichlorobenzene	(1)	7.046	146	1824462	29.409
30) Indene	(1)	7.180	115	1937983	29.732
31) 2-Methylphenol	(1)	7.215	108	1764180	29.782
34) bis(2-Chloroisopropyl)ether	(1)	7.250	45	2343211	28.934
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.250	45	2343211	28.934
97) Isosafrole	(3)			1454314	30.667
35) N-Nitrosopyrrolidine	(1)	7.384	100	1027515	30.649
36) Acetophenone	(1)	7.419	105	2456017	30.041
37) 4-Methylphenol	(1)	7.448	108	1951454	29.553
38) N-Nitroso-di-n-propylamine	(1)	7.448	70	1452643	29.581
39) N-Nitrosomorpholine	(1)	7.448	56	1067870	29.130
40) o-Toluidine	(1)	7.472	106	2992168	29.510
43) Hexachloroethane	(1)	7.559	117	791511	29.635
44)$Nitrobenzene-d5	(2)	7.641	82	4176683	60.022
45) Nitrobenzene	(2)	7.664	77	2115377	29.473
48) N-Nitrosopiperidine	(2)	7.897	114	891071	30.626
50) Isophorone	(2)	8.049	82	3737925	30.636
120) 2,4_2,6-Dinitrotoluenes	(3)			1820231	61.245
51) 2-Nitrophenol	(2)	8.154	139	857653	31.211

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.259	107	1875723	30.198
57) O,O,O-Triethylphosphorothioate	(2)	8.387	198	779113	30.353
55) bis(2-Chloroethoxy)methane	(2)	8.416	93	2124339	28.370
56) Benzoic acid	(2)	8.439	105	1105579M	32.722
60) 2,4-Dichlorophenol	(2)	8.532	162	1396623	30.652
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	1462867	29.890
65)*Naphthalene-d8	(2)	8.736	136	712147	5.000
66) Naphthalene	(2)	8.771	128	4984660	29.944
146) Diallate trans/cis	(4)			1805922	29.455
67) 4-Chloroaniline	(2)	8.876	127	1964808	30.530
68) 2,6-Dichlorophenol	(2)	8.888	162	1334676	30.223
69) Hexachloropropene	(2)	8.923	213	941130	30.370
71) Hexachlorobutadiene	(2)	8.999	225	817765	29.873
75) Quinoline	(2)	9.302	129	2985144	31.118
76) Caprolactam	(2)	9.442	113	561666M	32.281
77) N-Nitrosodi-n-butylamine	(2)	9.453	84	1662573	34.331
80) 4-Chloro-3-methylphenol	(2)	9.681	107	1604862	31.216
82) Safrole	(2)	9.768	162	1272997	30.494
83) 2-Methylnaphthalene	(2)	9.879	142	3193277	31.049
84) 1-Methylnaphthalene	(2)	10.030	142	3082272	31.788
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.147	216	1399489	28.985
85) Hexachlorocyclopentadiene	(3)	10.147	237	917356	29.825
88) cis-Isosafrole	(3)	10.234	162	225546	5.143
90) 2,4,6-Trichlorophenol	(3)	10.339	196	962151	31.021
92) 2,4,5-Trichlorophenol	(3)	10.392	196	958119	29.667
93)$2-Fluorobiphenyl	(3)	10.491	172	6681659	57.998
94) trans-Isosafrole	(3)	10.596	162	1228768	25.517
95) 1,1'-Biphenyl	(3)	10.637	154	3636971	29.204
96) 2-Chloronaphthalene	(3)	10.648	162	3109673	29.485
98) 1-Chloronaphthalene	(3)	10.677	162	2545013	28.067
99) Diphenyl ether	(3)	10.817	170	2042077	29.265
100) 2-Nitroaniline	(3)	10.829	138	989145	30.968
104) 1,4-Naphthoquinone	(3)	10.934	158	1149815	30.863
105) 1,4-Dinitrobenzene	(3)	11.056	168	507522	31.300
106) Dimethylphthalate	(3)	11.167	163	3150726	29.208
107) 1,3-Dinitrobenzene	(3)	11.173	168	576003	30.349
108) 2,6-Dinitrotoluene	(3)	11.237	165	763355	29.853
109) Acenaphthylene	(3)	11.307	152	4294410	31.876
112) 3-Nitroaniline	(3)	11.482	138	891619	31.420
113)*Acenaphthene-d10	(3)	11.528	164	360283	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.581	153	2932568	28.580
115) 2,4-Dinitrophenol	(3)	11.645	184	435384	33.557
116) 4-Nitrophenol	(3)	11.762	109	563849	31.462
117) Pentachlorobenzene	(3)	11.773	250	1165829	29.320
119) Dibenzofuran	(3)	11.831	168	4026178	29.030
118) 2,4-Dinitrotoluene	(3)	11.837	165	1056876	31.204
121) 1-Naphthylamine	(3)	11.936	143	3236293	30.134
122) 2,3,4,6-Tetrachlorophenol	(3)	12.006	232	762465	31.181
123) 2-Naphthylamine	(3)	12.047	143	3266832	30.276
124) Diethylphthalate	(3)	12.204	149	3210004	30.786
126) Fluorene	(3)	12.280	166	3226156	30.435
125) Thionazin	(3)	12.292	107	671683	30.367
127) 4-Chlorophenyl-phenylether	(3)	12.304	204	1513345	28.878
128) 5-Nitro-o-toluidine	(3)	12.309	152	1023489	30.730
129) 4-Nitroaniline	(3)	12.315	138	962104	30.373
130) 4,6-Dinitro-2-methylphenol	(4)	12.356	198	601704	33.127
131) N-Nitrosodiphenylamine	(4)	12.449	169	2728506	29.188
132) NDPA as diphenylamine	(4)	12.449	169	2728506	29.188
134) 1,2-Diphenylhydrazine	(4)	12.490	77	3907113	28.947
135)$2,4,6-Tribromophenol	(3)	12.566	330	803075	61.681
137) Tetraethyldithiopyrophosphate	(4)	12.677	97	611549	30.027
139) 1,3,5-Trinitrobenzene	(4)	12.776	213	428912	34.091
140) Diallate (peak 1)	(4)	12.811	86	1553999	24.389
141) Phorate	(4)	12.817	75	2385949	29.863
142) Phenacetin	(4)	12.846	108	1932833	31.027
143) 4-Bromophenyl-phenylether	(4)	12.886	248	876275	29.266
144) Diallate (peak 2)	(4)	12.916	86	251923	5.082
145) Hexachlorobenzene	(4)	12.939	284	862452	27.668
147) Dimethoate	(4)	13.015	87	1577799	30.638
148) Atrazine	(4)	13.114	200	839551	29.144
149) Pentachlorophenol	(4)	13.190	266	617154	31.972
150) 4-Aminobiphenyl	(4)	13.201	169	2477303	30.233
151) Pentachloronitrobenzene	(4)	13.207	237	417172	30.602
152) Pronamide	(4)	13.306	173	1513581	31.051
153)*Phenanthrene-d10	(4)	13.417	188	673033	5.000
155) Phenanthrene	(4)	13.446	178	5035829	29.389
154) Dinoseb	(4)	13.446	211	882409	33.707
157) Anthracene	(4)	13.510	178	5135265	31.303
163) Carbazole	(4)	13.726	167	4817164	30.241
164) Methyl parathion	(4)	13.930	109	1269717	32.486

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

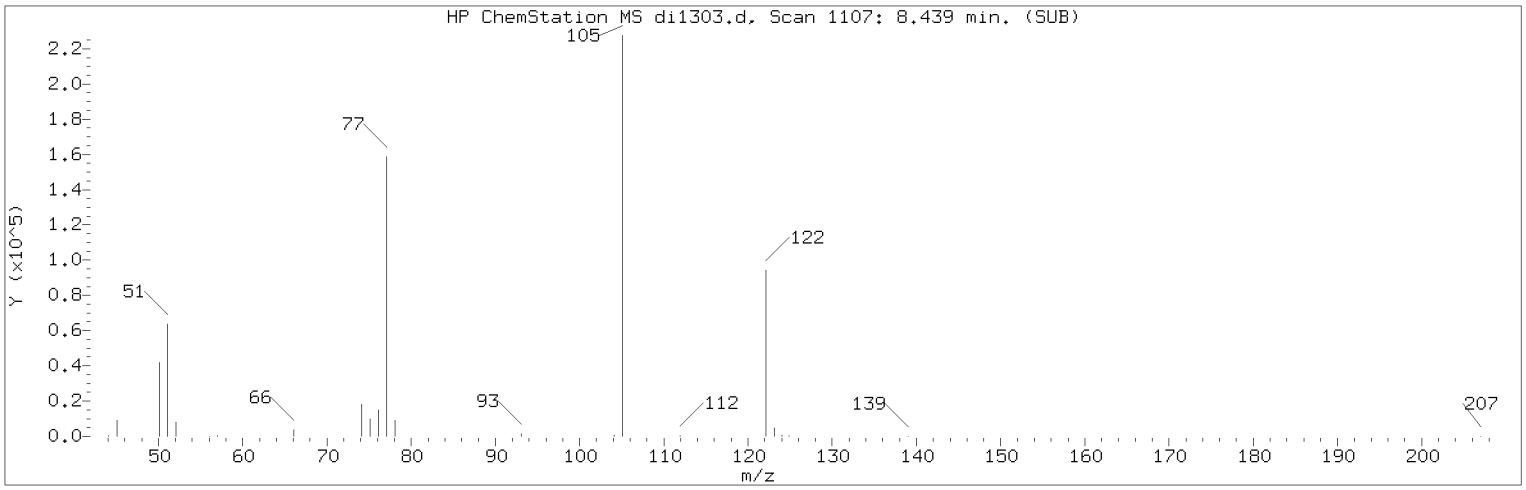
Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.245	149	5880416	31.161
167) Parathion	(4)	14.472	109	810389	32.210
168) 4-Nitroquinoline-1-oxide	(4)	14.478	190	639009	36.272
169) Octachlorostyrene	(4)	14.816	308	360105	30.329
171) Isodrin	(4)	14.857	193	593230	30.480
222) Total PAHs	(6)			81930677	564.723
173) Fluoranthene	(4)	15.078	202	5720159	32.870
174) Benzidine	(5)	15.311	184	11667417	87.627
175)*Pyrene-d10	(5)	15.381	212	700816	5.000
177) Pyrene	(5)	15.410	202	5691882	29.008
179)$Terphenyl-d14	(5)	15.702	244	7089453	59.408
182) p-Dimethylaminoazobenzene	(5)	15.929	225	1055733	32.094
185) Chlorobenzilate	(5)	16.022	139	1716106	30.887
187) 3,3'-Dimethylbenzidine	(5)	16.483	212	3862363	30.769
188) Butylbenzylphthalate	(5)	16.553	149	2647299	30.107
191) 2-Acetylaminofluorene	(5)	16.908	181	2182801	32.399
193) 3,3'-Dichlorobenzidine	(5)	17.404	252	2064950	30.108
195) Benzo(a)anthracene	(5)	17.409	228	5274859	33.308
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.421	231	1101702	29.554
196) Chrysene	(5)	17.474	228	5078046	30.983
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	3632898	30.362
203) 6-Methylchrysene	(5)	18.266	242	3604109	29.769
205) Di-n-octylphthalate	(6)	18.779	149	6195224	33.077
206) Benzo(b)fluoranthene	(6)	19.251	252	5231705	34.522
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.263	256	2455172	30.784
208) Benzo(k)fluoranthene	(6)	19.304	252	4995140	31.795
211) Benzo(a)pyrene	(6)	19.776	252	4839387	34.774
213)*Perylene-d12	(6)	19.858	264	640506	5.000
215) 3-Methylcholanthrene	(6)	20.353	268	2317029	31.149
217) Dibenz(a,h)acridine	(6)	21.157	279	3657181	31.036
218) Dibenz(a,j)acridine	(6)	21.233	279	3924150	30.569
219) Indeno(1,2,3-cd)pyrene	(6)	21.472	276	4253419M	32.550
220) Dibenz(a,h)anthracene	(6)	21.513	278	4515556	31.724
221) Benzo(g,h,i)perylene	(6)	21.845	276	4446087	30.117

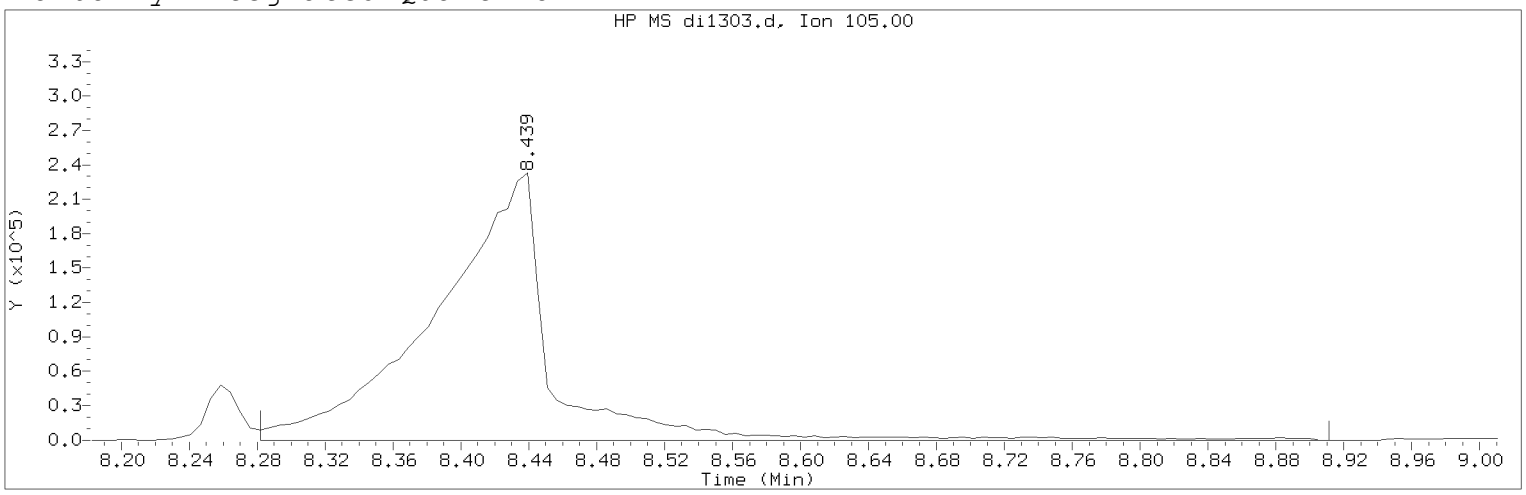
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

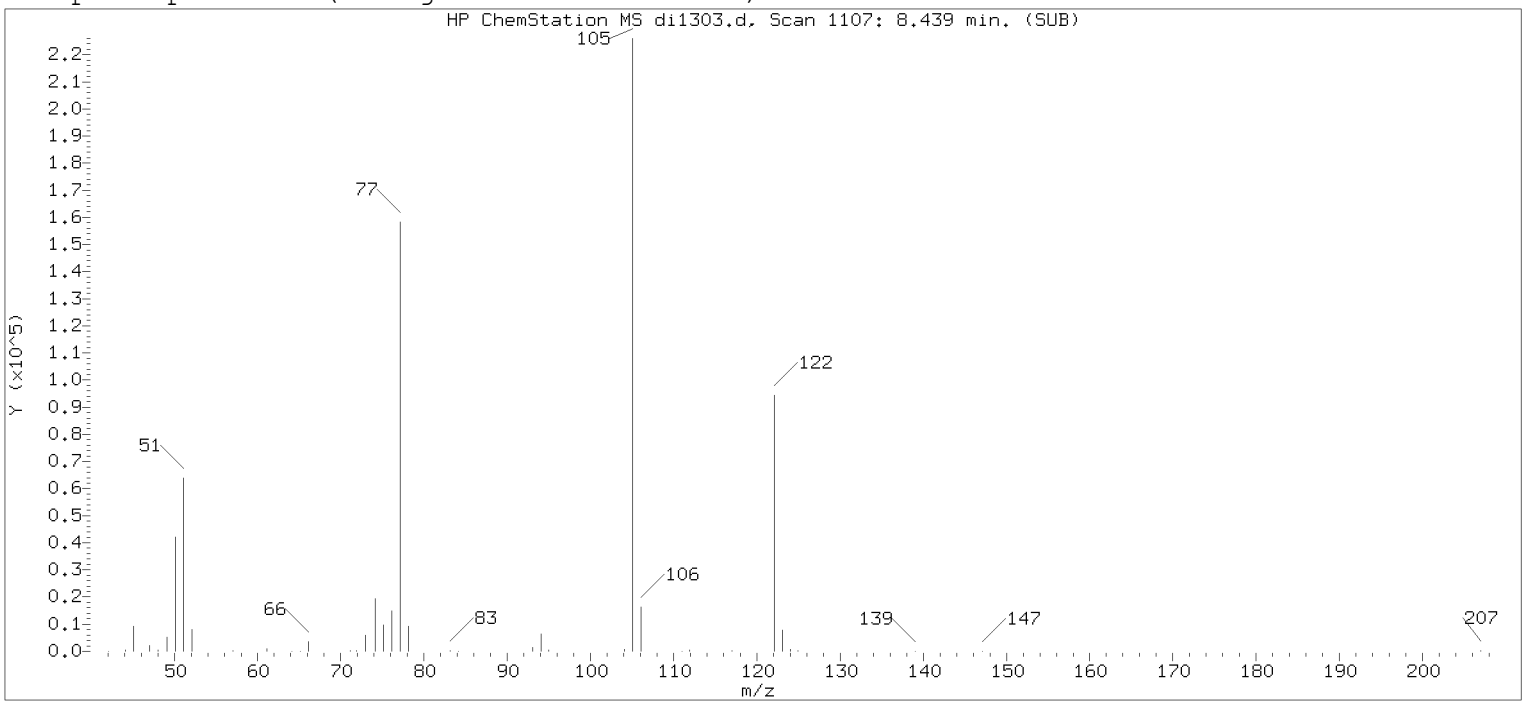
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1107
Retention Time (minutes) : 8.439
Quant Ion : 105.00
Area (flag) : 1105579M
On-Column Amount (ng/ul) : 32.7215
Integration start scan : 1079 Integration stop scan: 1187
Y at integration start : -242 Y at integration end: -242

Reason for manual integration: improper integration

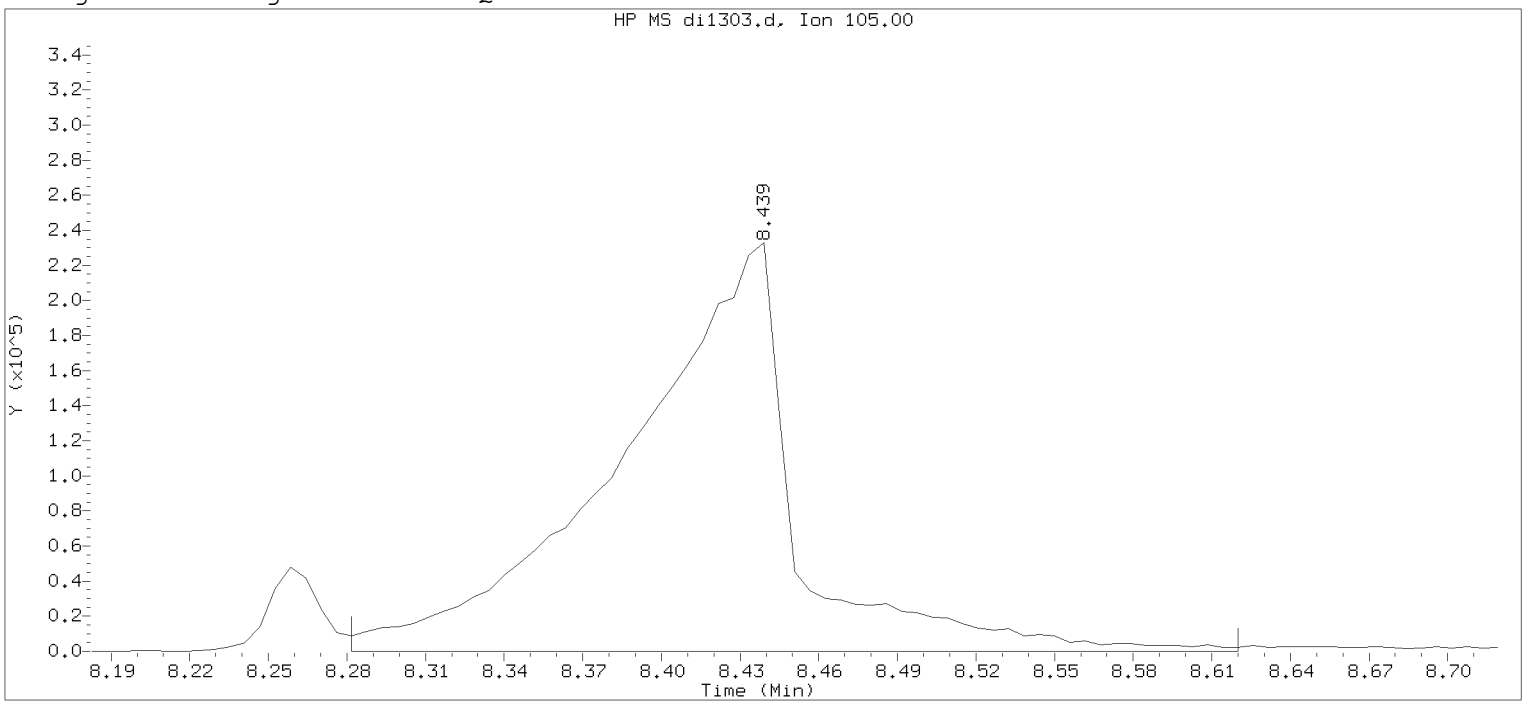
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 19:15
Date, time and analyst ID of latest file update: 21-Sep-2018 19:15 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1107		
Retention Time (minutes)	: 8.439		
Quant Ion	: 105.00		
Area	: 1064427		
On-column Amount (ng/ul)	: 39.1095		
Integration start scan	: 1079	Integration stop scan:	1137
Y at integration start	: 0	Y at integration end:	0

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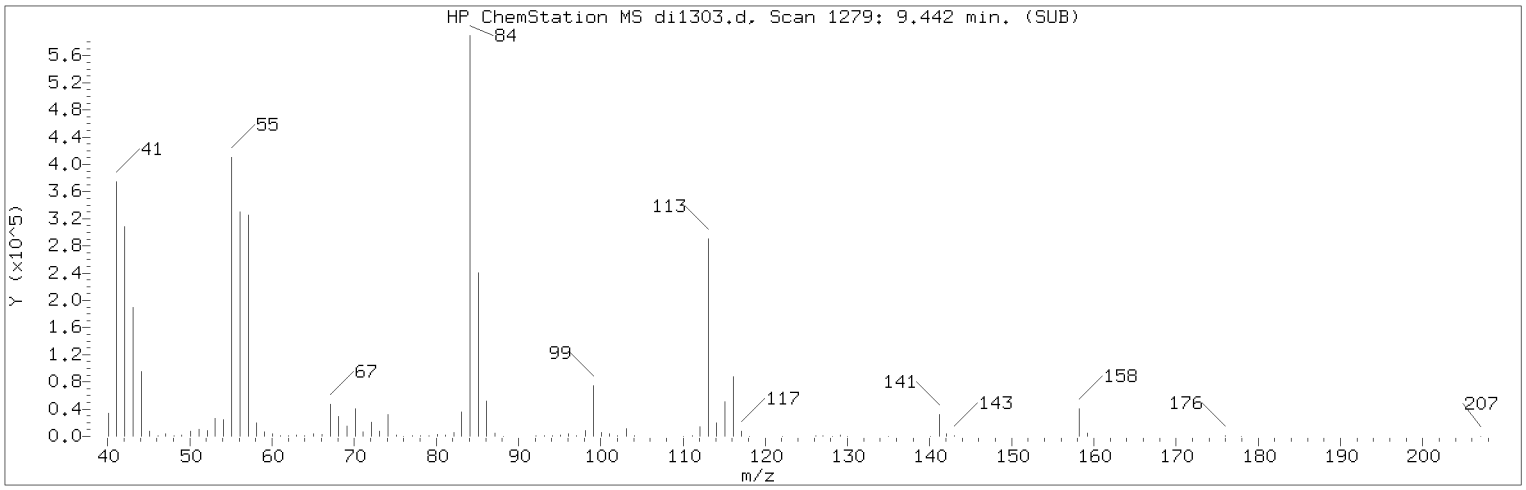
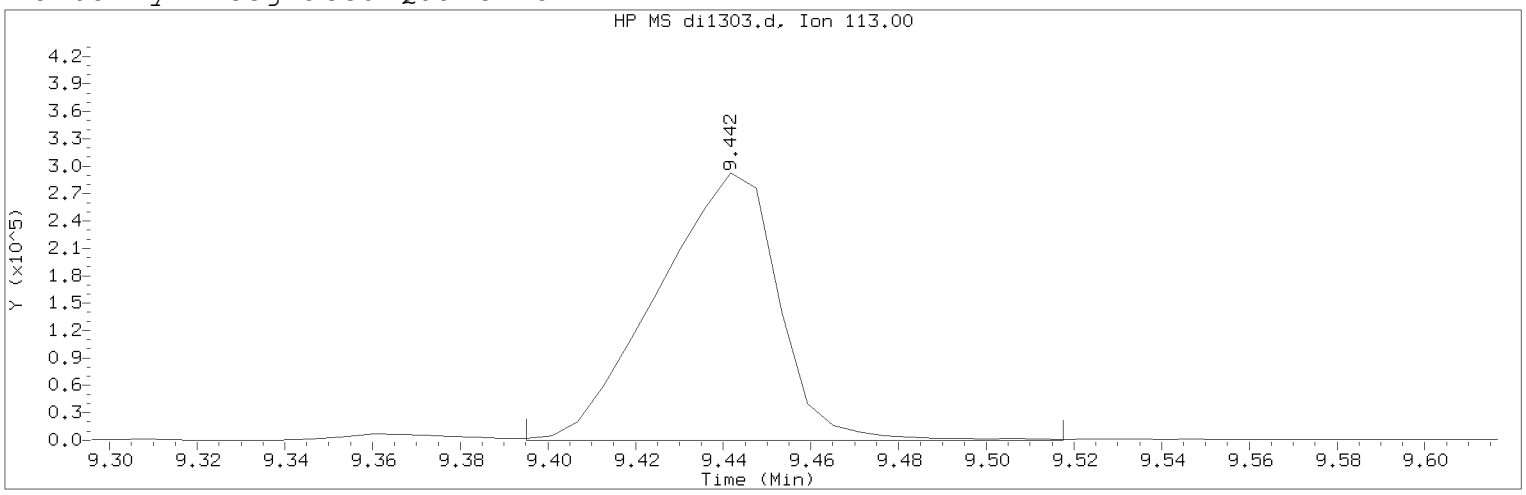
Target 3.5 esignature used. AE20-103854

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

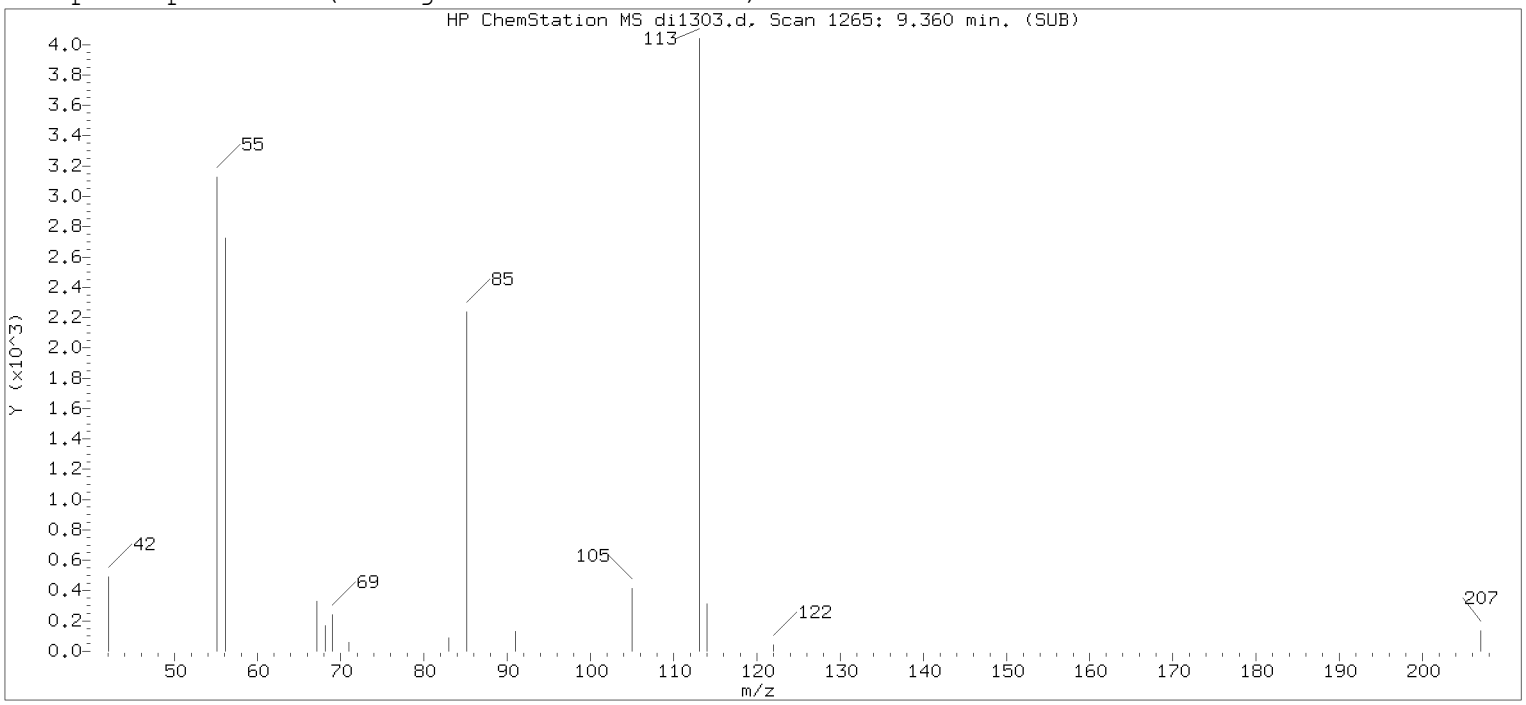
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1279
Retention Time (minutes) : 9.442
Quant Ion : 113.00
Area (flag) : 561666M
On-Column Amount (ng/ul) : 32.2808
Integration start scan : 1270 Integration stop scan: 1291
Y at integration start : -76 Y at integration end: -76

Reason for manual integration: improper integration

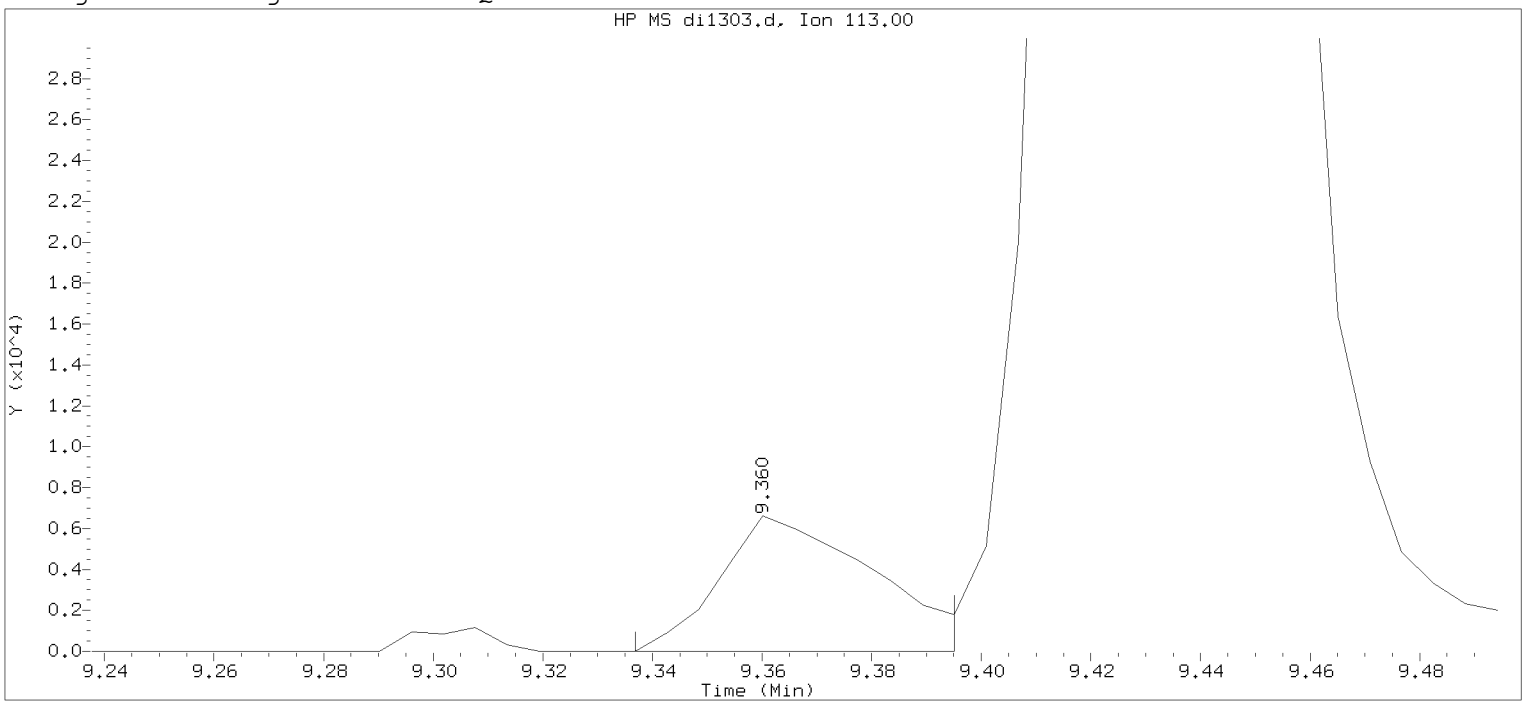
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 19:15
Date, time and analyst ID of latest file update: 21-Sep-2018 19:15 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number	: 76		
Compound Name	: Caprolactam		
Scan Number	: 1265		
Retention Time (minutes)	: 9.360		
Quant Ion	: 113.00		
Area	: 12660		
On-column Amount (ng/ul)	: 0.9032		
Integration start scan	: 1260	Integration stop scan:	1270
Y at integration start	: 0	Y at integration end:	0

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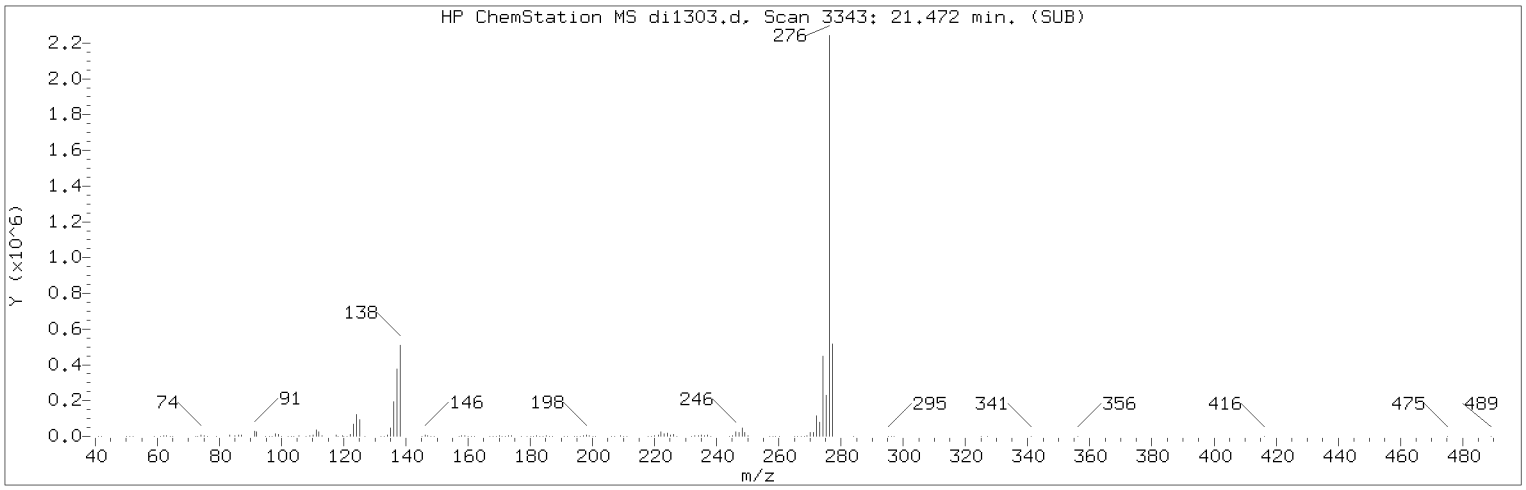
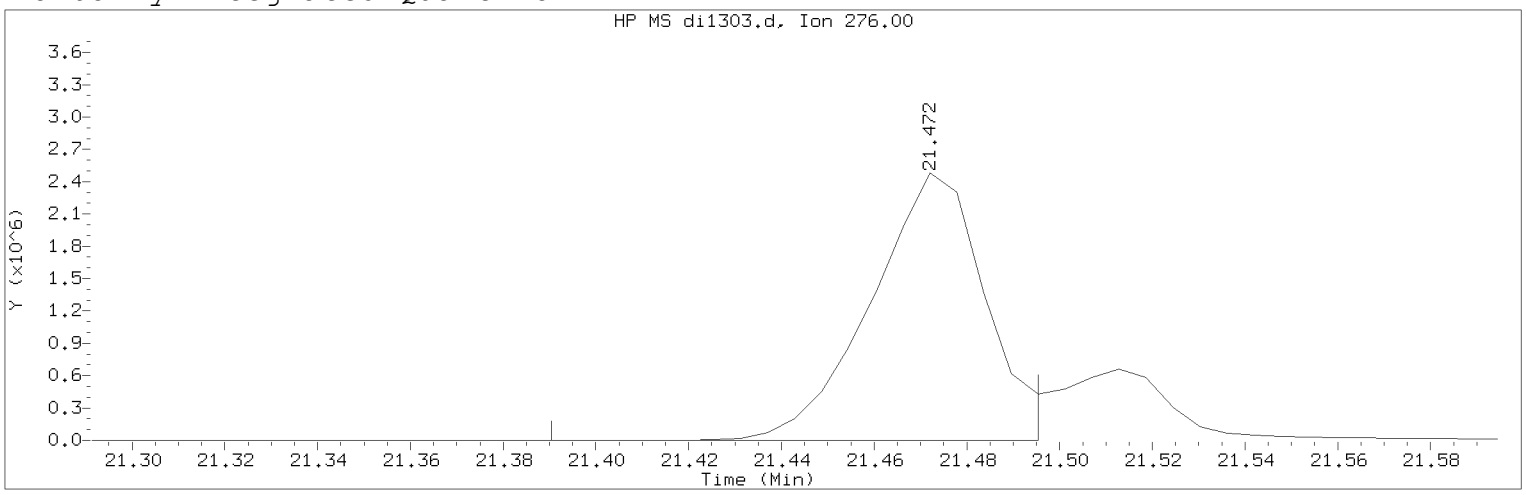
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

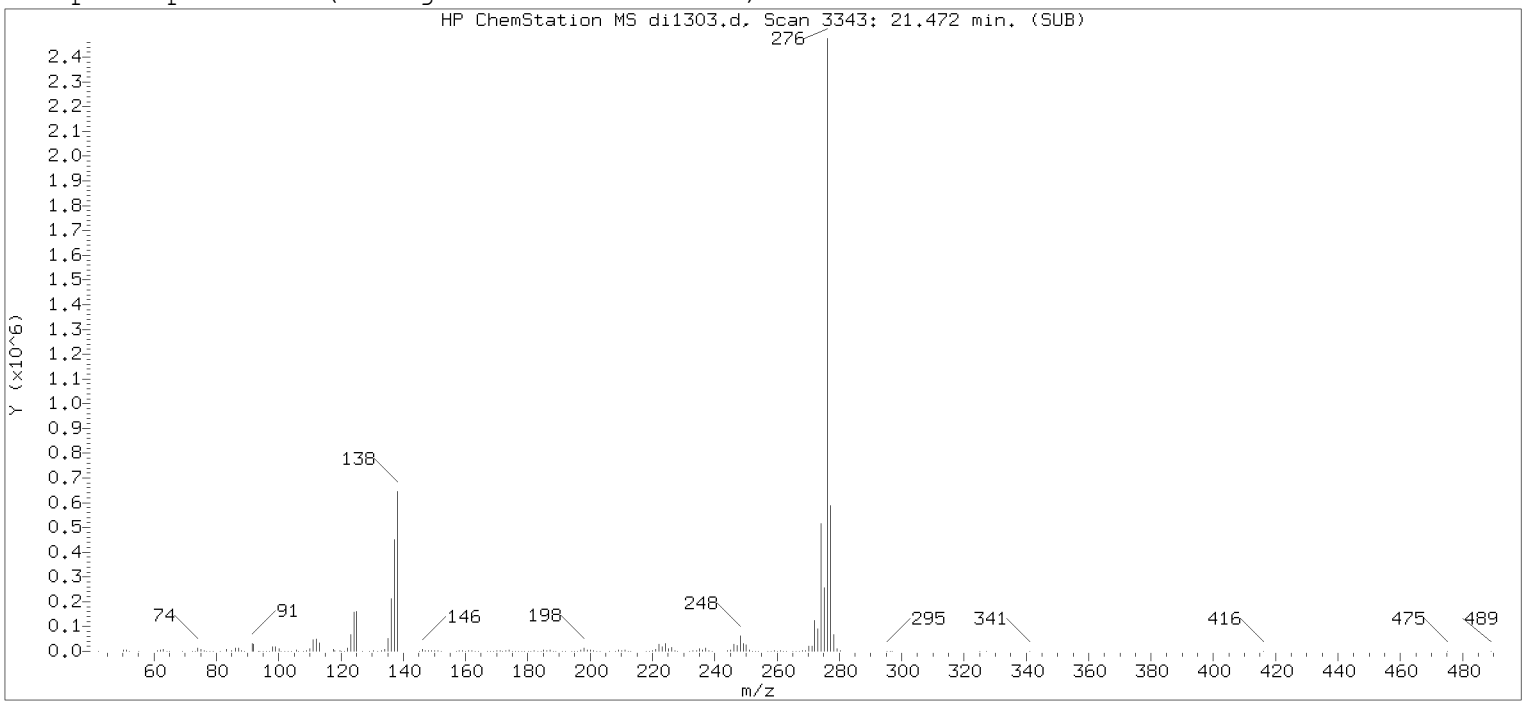
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3343
Retention Time (minutes) : 21.472
Quant Ion : 276.00
Area (flag) : 4253419M
On-Column Amount (ng/ul) : 32.5505
Integration start scan : 3328 Integration stop scan: 3346
Y at integration start : 348 Y at integration end: 348

Reason for manual integration: improper integration

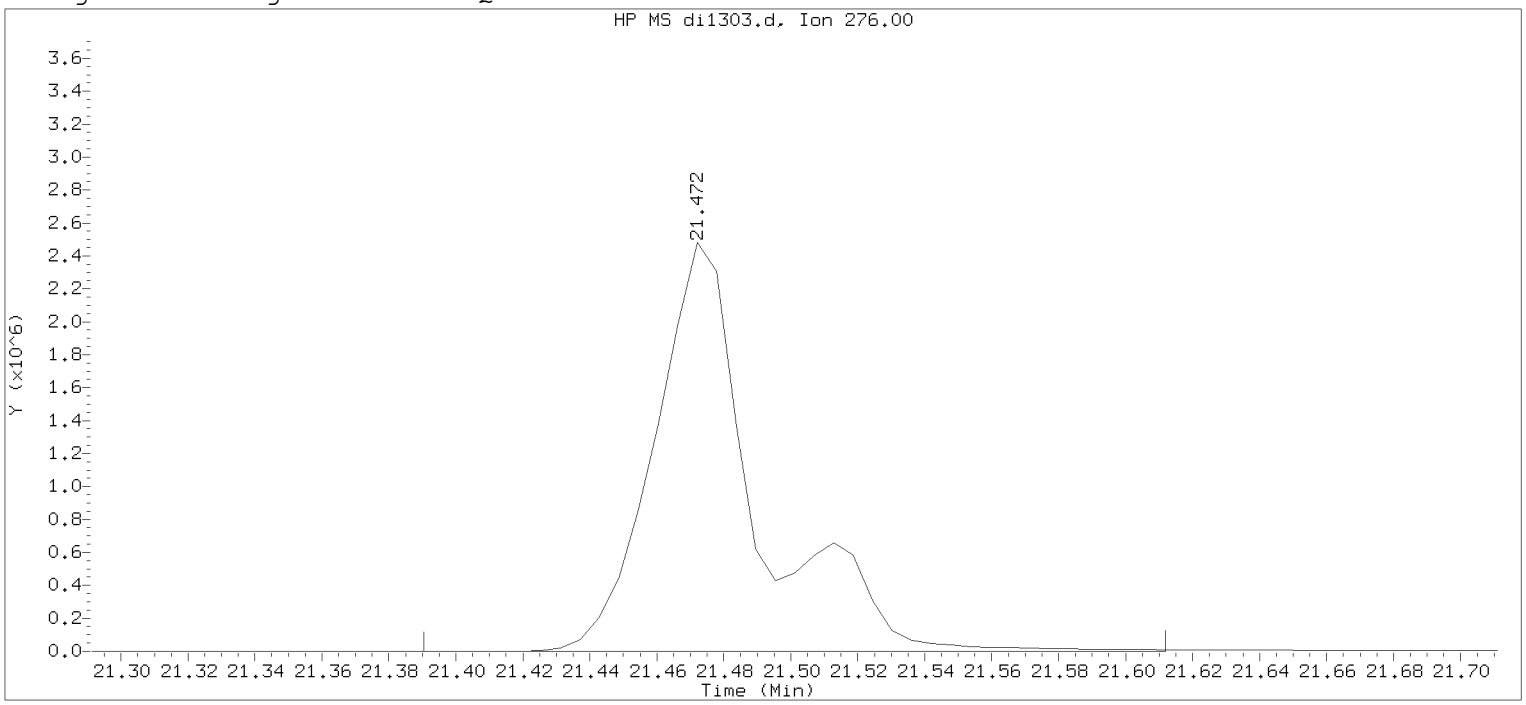
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:54.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



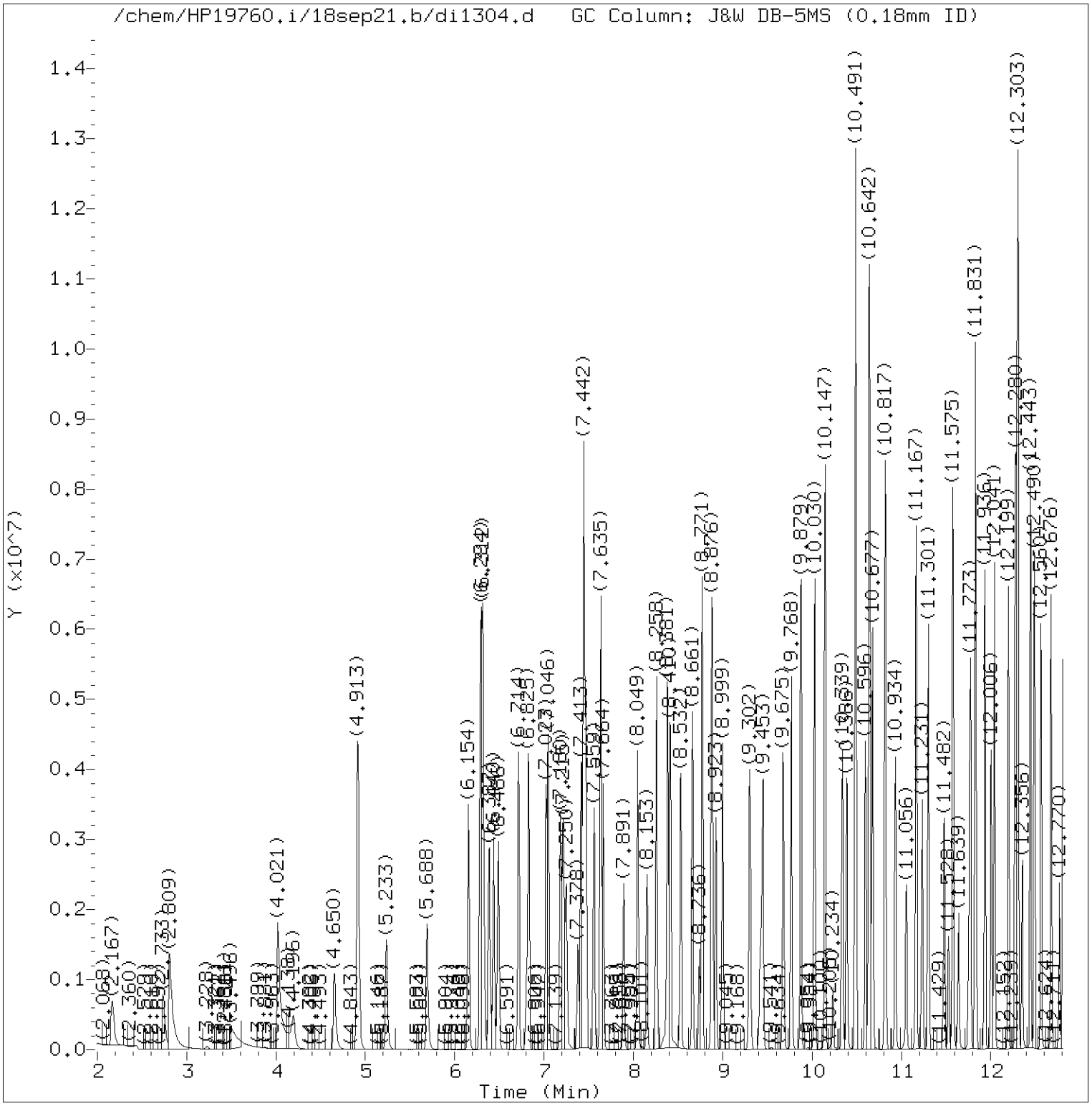
Data File: /chem/HP19760.i/18sep21.b/di1303.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 18:47 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 19:15
Date, time and analyst ID of latest file update: 21-Sep-2018 19:15 Automation

Sample Name: SSTD30 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3343		
Retention Time (minutes)	: 21.472		
Quant Ion	: 276.00		
Area	: 5319586		
On-column Amount (ng/ul)	: 39.7156		
Integration start scan	: 3328	Integration stop scan:	3366
Y at integration start	: 348	Y at integration end:	348

Digitally signed by Edward Monborne on 09/25/2018 at 07:54.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

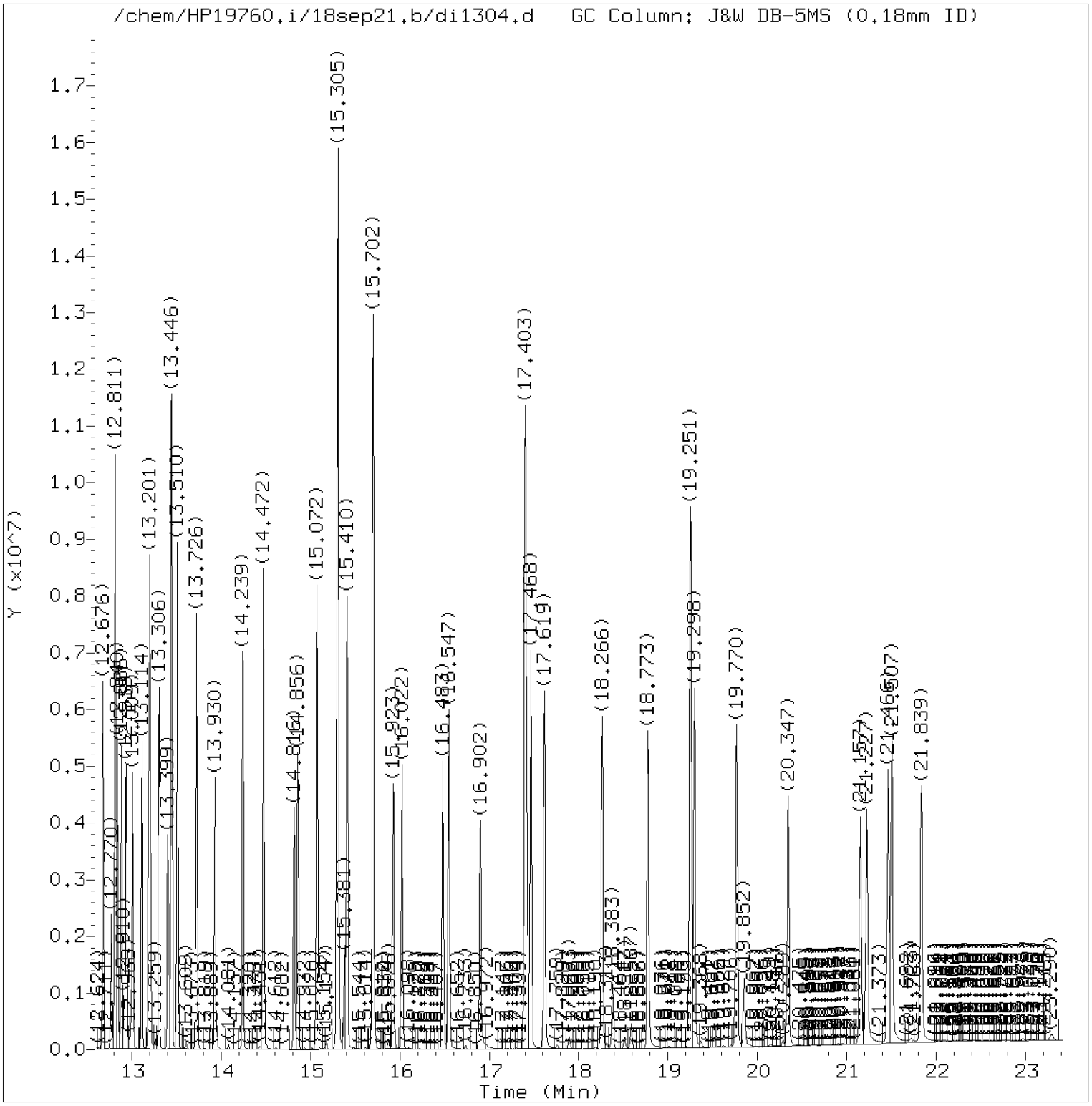
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.167	88	650372	19.404
4) N-Nitrosodimethylamine	(1)	2.733	74	957102	19.872
5) Pyridine	(1)	2.809	79	1613794	19.179
7) 2-Picoline	(1)	4.021	93	1654511	19.879
8) N-Nitrosomethylethylamine	(1)	4.196	88	725760	20.137
9) Methyl methanesulfonate	(1)	4.650	80	785317	19.905
11)$2-Fluorophenol	(1)	4.919	112	2613614	39.976
13) N-Nitrosodiethylamine	(1)	5.233	102	707035	20.424
42) Total Cresols	(1)			2766219	40.780
15) Ethyl methanesulfonate	(1)	5.688	109	678918	20.393
16) Benzaldehyde	(1)	6.154	77	1176568	20.126
17)$Phenol-d6	(1)	6.288	99	3622773	40.479
18) Phenol	(1)	6.306	94	2012999	20.033
19) Aniline	(1)	6.317	93	2384223	20.230
20) a-methylstyrene	(1)	6.399	118	133585	20.275
22) bis(2-Chloroethyl)ether	(1)	6.440	93	1472086	19.991
23) 2-Chlorophenol	(1)	6.486	128	1278530	20.326
24) 1,3-Dichlorobenzene	(1)	6.714	146	1398582	19.947
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	207858	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	1406705	19.932
27) Benzyl alcohol	(1)	7.023	108	881534	20.524
28) 1,2-Dichlorobenzene	(1)	7.046	146	1339666	20.091
30) Indene	(1)	7.180	115	1414575	20.157
31) 2-Methylphenol	(1)	7.215	108	1304078	20.349
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.250	45	1706508	19.765
34) bis(2-Chloroisopropyl)ether	(1)	7.250	45	1706508	19.765
35) N-Nitrosopyrrolidine	(1)	7.378	100	773207	20.980
97) Isosafrole	(3)			1051251	20.257
36) Acetophenone	(1)	7.413	105	1806921	20.402
38) N-Nitroso-di-n-propylamine	(1)	7.442	70	1074239	20.264
37) 4-Methylphenol	(1)	7.448	108	1462141	20.427
39) N-Nitrosomorpholine	(1)	7.448	56	790887	20.078
40) o-Toluidine	(1)	7.466	106	2233768	20.359
43) Hexachloroethane	(1)	7.559	117	581579	20.202
44)$Nitrobenzene-d5	(2)	7.635	82	3105748	40.357
45) Nitrobenzene	(2)	7.664	77	1564300	19.863
48) N-Nitrosopiperidine	(2)	7.891	114	672918	20.660
50) Isophorone	(2)	8.049	82	2796433	20.537
120) 2,4_2,6-Dinitrotoluenes	(3)			1374904	41.664
51) 2-Nitrophenol	(2)	8.153	139	648135	20.927

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.258	107	1403073	20.341
57) O,O,O-Triethylphosphorothioate	(2)	8.387	198	585793	20.480
55) bis(2-Chloroethoxy)methane	(2)	8.410	93	1765661	20.923
56) Benzoic acid	(2)	8.422	105	833469M	21.542
60) 2,4-Dichlorophenol	(2)	8.532	162	1024563	20.280
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	1082200	20.056
65)*Naphthalene-d8	(2)	8.736	136	784074	5.000
66) Naphthalene	(2)	8.771	128	3718789	20.217
146) Diallate trans/cis	(4)			1357194	20.082
67) 4-Chloroaniline	(2)	8.876	127	1474614	20.534
68) 2,6-Dichlorophenol	(2)	8.888	162	1007459	20.475
69) Hexachloropropene	(2)	8.923	213	703262	20.404
71) Hexachlorobutadiene	(2)	8.999	225	608859	20.134
75) Quinoline	(2)	9.302	129	2228896	20.722
76) Caprolactam	(2)	9.430	113	417634	21.166
77) N-Nitrosodi-n-butylamine	(2)	9.453	84	1243384	22.097
80) 4-Chloro-3-methylphenol	(2)	9.675	107	1194730	20.724
82) Safrole	(2)	9.768	162	954572	20.506
83) 2-Methylnaphthalene	(2)	9.879	142	2387853	20.805
84) 1-Methylnaphthalene	(2)	10.030	142	2293604	21.093
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.147	216	1050042	20.001
85) Hexachlorocyclopentadiene	(3)	10.147	237	678250	20.187
88) cis-Isosafrole	(3)	10.234	162	166994	3.468
90) 2,4,6-Trichlorophenol	(3)	10.339	196	690231	20.309
92) 2,4,5-Trichlorophenol	(3)	10.392	196	755328	20.983
93)$2-Fluorobiphenyl	(3)	10.491	172	5063009	40.280
94) trans-Isosafrole	(3)	10.596	162	884257	16.792
95) 1,1'-Biphenyl	(3)	10.636	154	2743732	20.175
96) 2-Chloronaphthalene	(3)	10.648	162	2154485	19.176
98) 1-Chloronaphthalene	(3)	10.677	162	2120135	20.979
99) Diphenyl ether	(3)	10.817	170	1527646	20.090
100) 2-Nitroaniline	(3)	10.823	138	755998	21.146
104) 1,4-Naphthoquinone	(3)	10.934	158	881873	21.147
105) 1,4-Dinitrobenzene	(3)	11.056	168	381313	21.058
106) Dimethylphthalate	(3)	11.167	163	2439447	20.526
107) 1,3-Dinitrobenzene	(3)	11.167	168	440702	20.884
108) 2,6-Dinitrotoluene	(3)	11.231	165	582625	20.628
109) Acenaphthylene	(3)	11.301	152	3213774	21.421
112) 3-Nitroaniline	(3)	11.482	138	659623	20.899
113)*Acenaphthene-d10	(3)	11.528	164	391720	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.575	153	2255836	20.165
115) 2,4-Dinitrophenol	(3)	11.639	184	320840	21.749
116) 4-Nitrophenol	(3)	11.761	109	409471	20.665
117) Pentachlorobenzene	(3)	11.773	250	872288	20.117
118) 2,4-Dinitrotoluene	(3)	11.831	165	792279	20.985
119) Dibenzofuran	(3)	11.831	168	3083357	20.296
121) 1-Naphthylamine	(3)	11.936	143	2428389	20.524
122) 2,3,4,6-Tetrachlorophenol	(3)	12.006	232	582836	21.242
123) 2-Naphthylamine	(3)	12.041	143	2444123	20.548
124) Diethylphthalate	(3)	12.199	149	2424628	20.904
126) Fluorene	(3)	12.274	166	2471730	21.066
125) Thionazin	(3)	12.292	107	501661	20.565
128) 5-Nitro-o-toluidine	(3)	12.303	152	756035	20.577
127) 4-Chlorophenyl-phenylether	(3)	12.303	204	1163471	20.278
129) 4-Nitroaniline	(3)	12.309	138	699462	20.205
130) 4,6-Dinitro-2-methylphenol	(4)	12.356	198	439039	21.274
131) N-Nitrosodiphenylamine	(4)	12.443	169	2078005	20.138
132) NDPA as diphenylamine	(4)	12.443	169	2078005	20.138
134) 1,2-Diphenylhydrazine	(4)	12.490	77	2932375	19.833
135)$2,4,6-Tribromophenol	(3)	12.566	330	598567	41.494
137) Tetraethyldithiopyrophosphate	(4)	12.676	97	459608	20.340
139) 1,3,5-Trinitrobenzene	(4)	12.770	213	304691	21.300
140) Diallate (peak 1)	(4)	12.811	86	1168355	16.646
141) Phorate	(4)	12.816	75	1756529	19.991
142) Phenacetin	(4)	12.840	108	1370787	20.003
143) 4-Bromophenyl-phenylether	(4)	12.886	248	666818	20.163
144) Diallate (peak 2)	(4)	12.910	86	188839	3.442
145) Hexachlorobenzene	(4)	12.939	284	663188	19.502
147) Dimethoate	(4)	13.009	87	1129396	19.958
148) Atrazine	(4)	13.114	200	621650	19.744
149) Pentachlorophenol	(4)	13.189	266	449912	20.777
151) Pentachloronitrobenzene	(4)	13.201	237	309982	20.443
150) 4-Aminobiphenyl	(4)	13.201	169	1829560	20.197
152) Pronamide	(4)	13.306	173	1102704	20.373
153)*Phenanthrene-d10	(4)	13.411	188	740347	5.000
154) Dinoseb	(4)	13.440	211	642729	21.489
155) Phenanthrene	(4)	13.446	178	3677796	19.632
157) Anthracene	(4)	13.510	178	3768582	20.655
163) Carbazole	(4)	13.726	167	3442216	19.762
164) Methyl parathion	(4)	13.930	109	908232	20.736

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	4223761	20.230
168) 4-Nitroquinoline-1-oxide	(4)	14.472	190	417646	21.008
167) Parathion	(4)	14.472	109	575582	20.525
169) Octachlorostyrene	(4)	14.816	308	263387	20.110
171) Isodrin	(4)	14.856	193	425588	19.919
222) Total PAHs	(6)			57802743	393.548
173) Fluoranthene	(4)	15.072	202	4022740	20.751
174) Benzidine	(5)	15.305	184	8205165	59.744
175)*Pyrene-d10	(5)	15.381	212	724414	5.000
177) Pyrene	(5)	15.410	202	4036373	19.925
179)$Terphenyl-d14	(5)	15.702	244	5014386	40.432
182) p-Dimethylaminoazobenzene	(5)	15.929	225	722599	20.817
185) Chlorobenzilate	(5)	16.022	139	1196124	20.544
187) 3,3'-Dimethylbenzidine	(5)	16.483	212	2516945	19.594
188) Butylbenzylphthalate	(5)	16.547	149	1787631	19.778
191) 2-Acetylaminofluorene	(5)	16.902	181	1388002	19.954
193) 3,3'-Dichlorobenzidine	(5)	17.398	252	1350655	19.358
195) Benzo(a)anthracene	(5)	17.403	228	3578932	21.366
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.421	231	730316	19.290
196) Chrysene	(5)	17.468	228	3450305	20.273
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	2382802	19.504
203) 6-Methylchrysene	(5)	18.266	242	2359972	19.224
205) Di-n-octylphthalate	(6)	18.773	149	4000901	21.150
206) Benzo(b)fluoranthene	(6)	19.251	252	3467989	22.397
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.257	256	1640231	20.634
208) Benzo(k)fluoranthene	(6)	19.298	252	3362745	21.335
211) Benzo(a)pyrene	(6)	19.770	252	3211494	22.532
213)*Perylene-d12	(6)	19.857	264	628287	5.000
215) 3-Methylcholanthrene	(6)	20.347	268	1529482	20.631
217) Dibenz(a,h)acridine	(6)	21.157	279	2428571	20.663
218) Dibenz(a,j)acridine	(6)	21.227	279	2635536	20.611
219) Indeno(1,2,3-cd)pyrene	(6)	21.466	276	2847761M	21.618
220) Dibenz(a,h)anthracene	(6)	21.507	278	3021345	21.205
221) Benzo(g,h,i)perylene	(6)	21.839	276	3015095	20.610

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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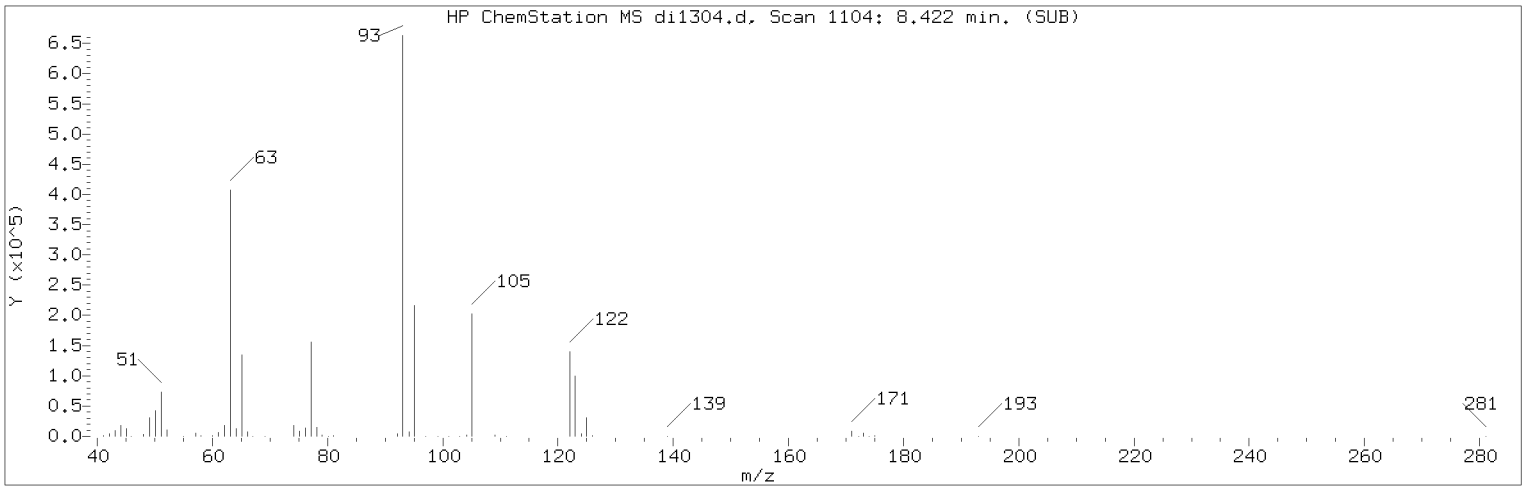
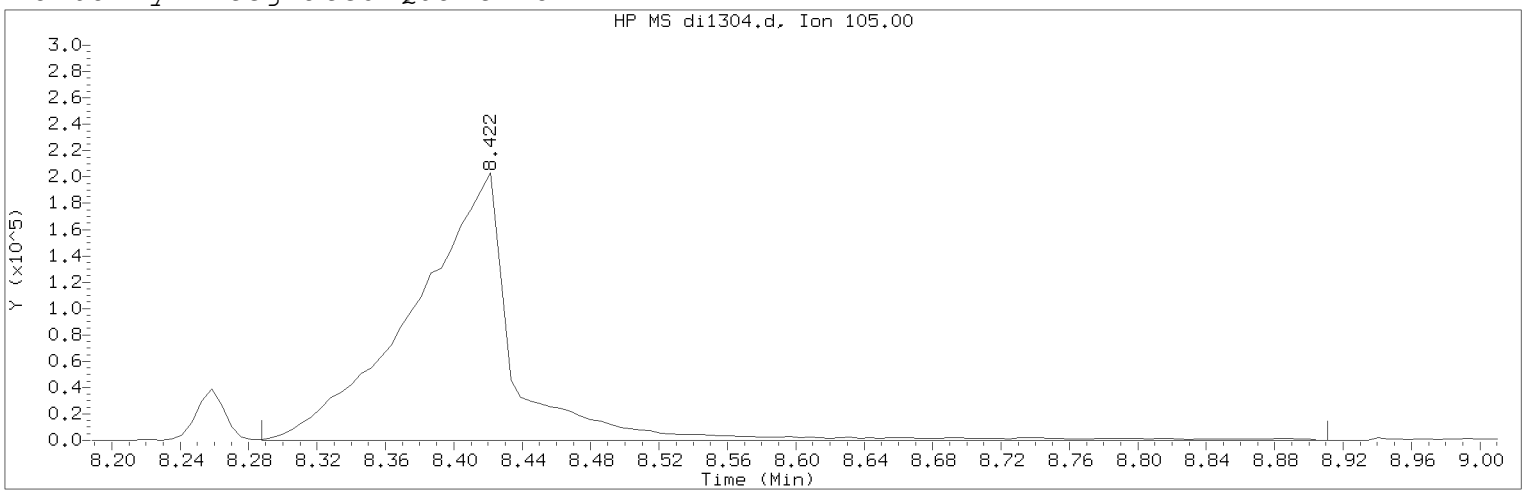
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

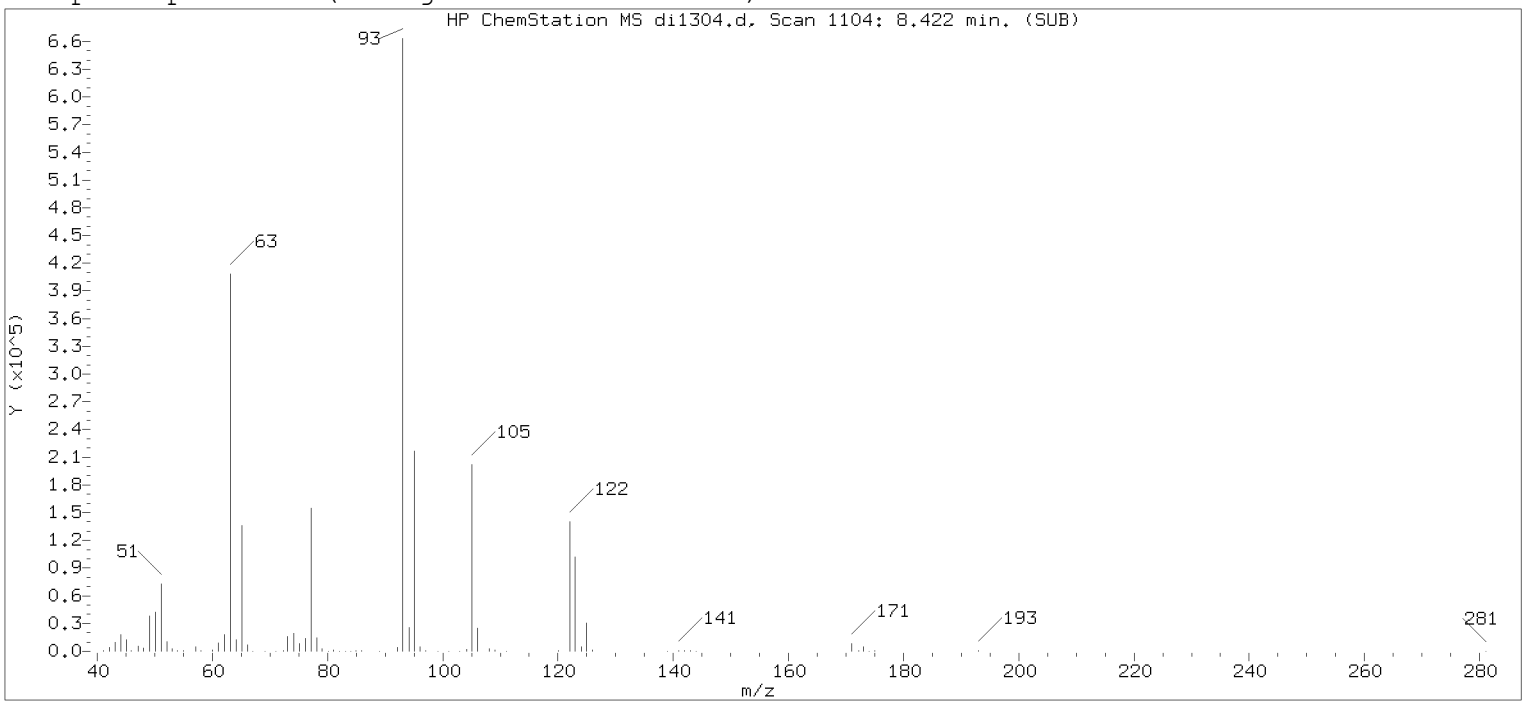
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1104
Retention Time (minutes) : 8.422
Quant Ion : 105.00
Area (flag) : 833469M
On-Column Amount (ng/ul) : 21.5416
Integration start scan : 1080 Integration stop scan: 1187
Y at integration start : 145 Y at integration end: 145

Reason for manual integration: improper integration

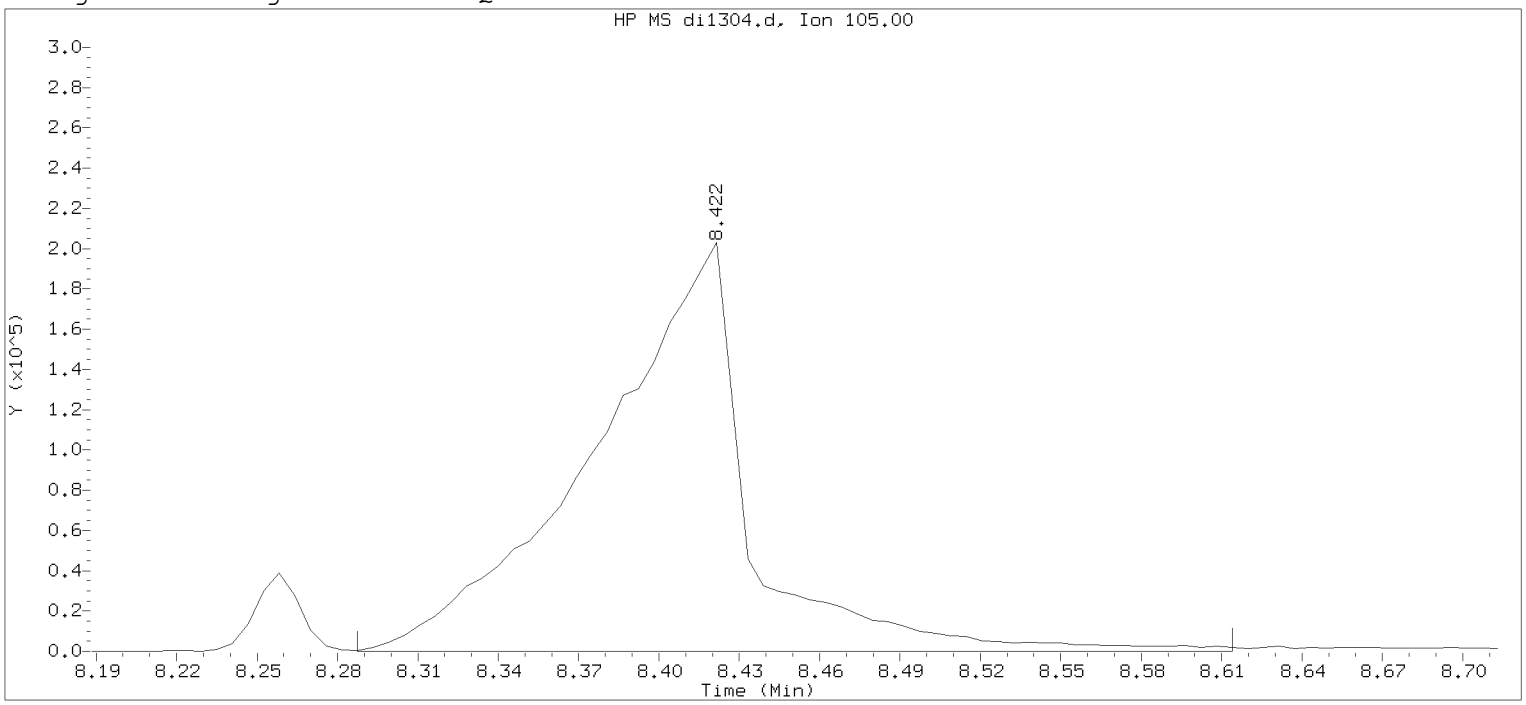
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

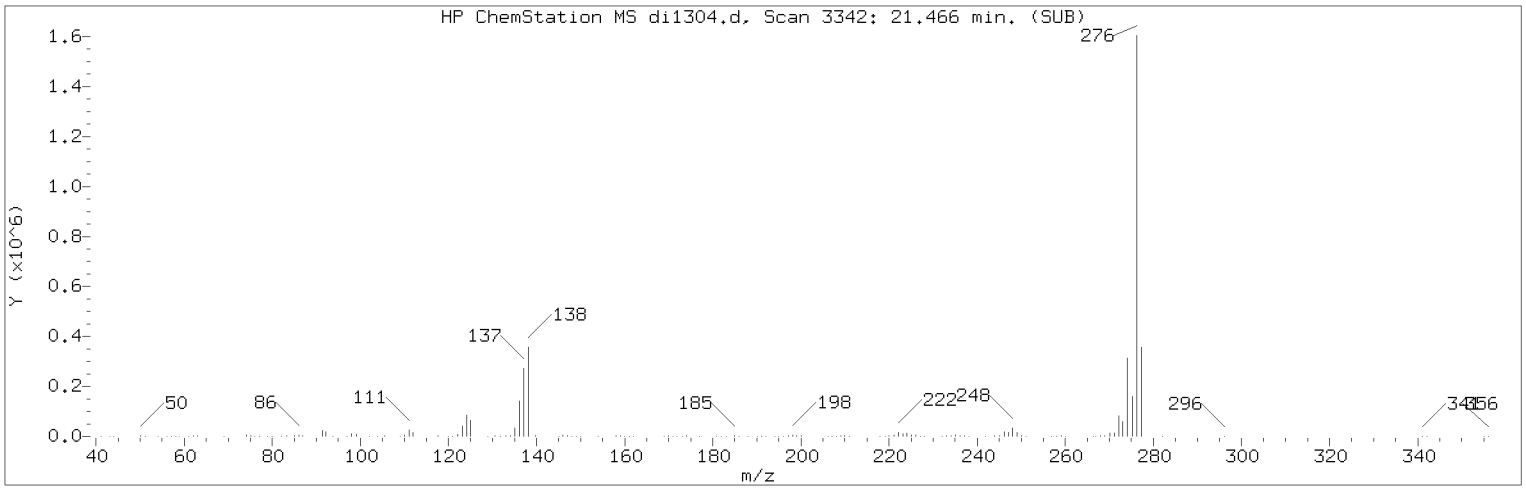
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 19:44
Date, time and analyst ID of latest file update: 21-Sep-2018 19:44 Automation

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

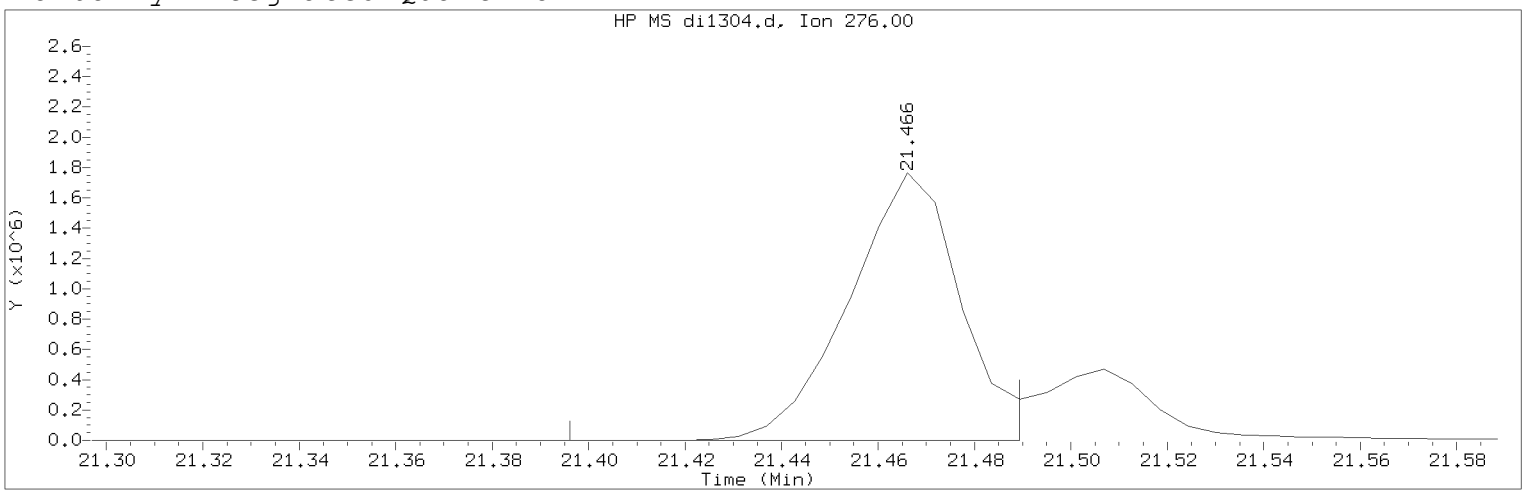
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1104		
Retention Time (minutes)	: 8.422		
Quant Ion	: 105.00		
Area	: 814737		
On-column Amount (ng/ul)	: 26.1359		
Integration start scan	: 1080	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

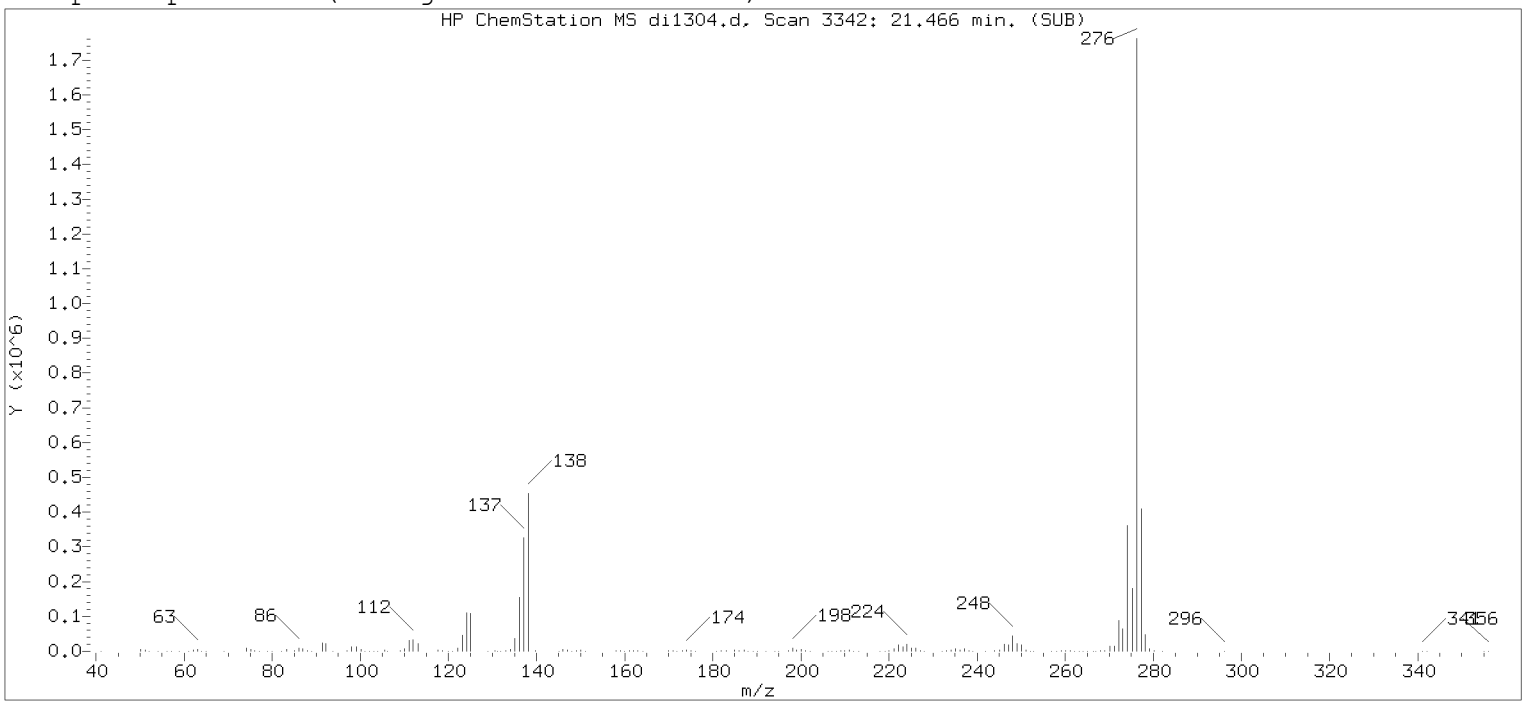
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3342
Retention Time (minutes) : 21.466
Quant Ion : 276.00
Area (flag) : 2847761M
On-Column Amount (ng/ul) : 21.6180
Integration start scan : 3329 Integration stop scan: 3345
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

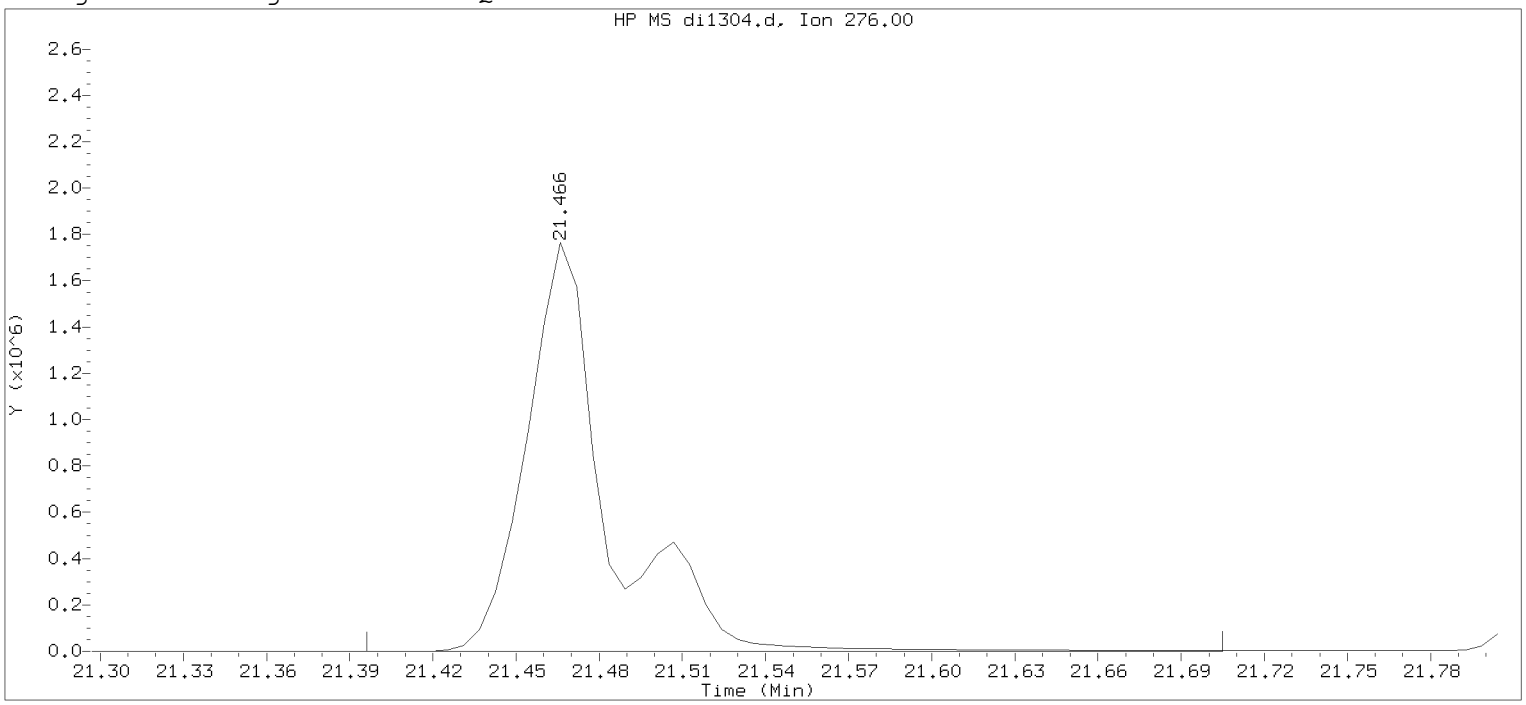
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



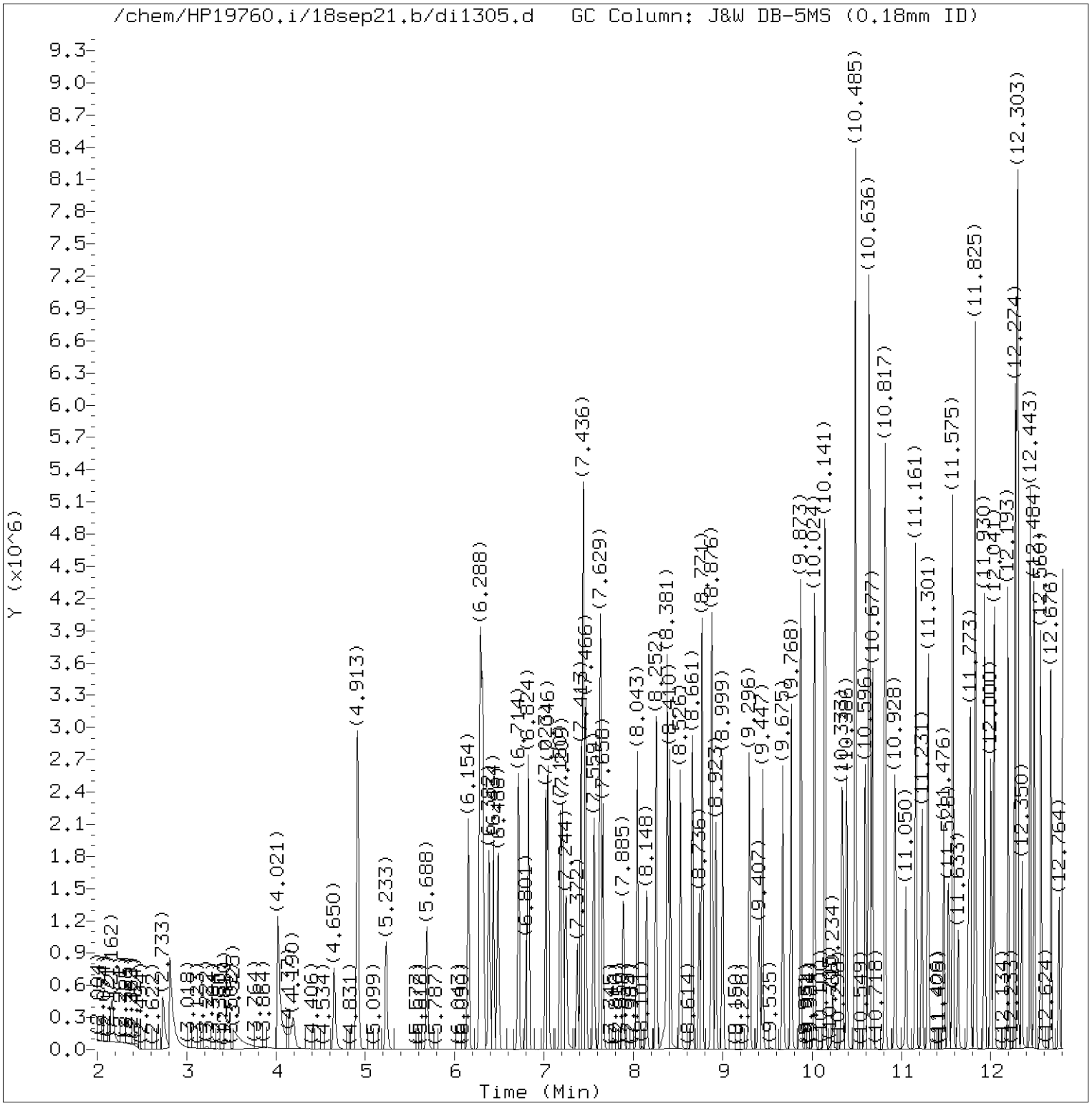
Data File: /chem/HP19760.i/18sep21.b/di1304.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:16 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 19:44
Date, time and analyst ID of latest file update: 21-Sep-2018 19:44 Automation

Sample Name: SSTD20 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3342		
Retention Time (minutes)	: 21.466		
Quant Ion	: 276.00		
Area	: 3615248		
On-column Amount (ng/ul)	: 26.4676		
Integration start scan	: 3329	Integration stop scan:	3382
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

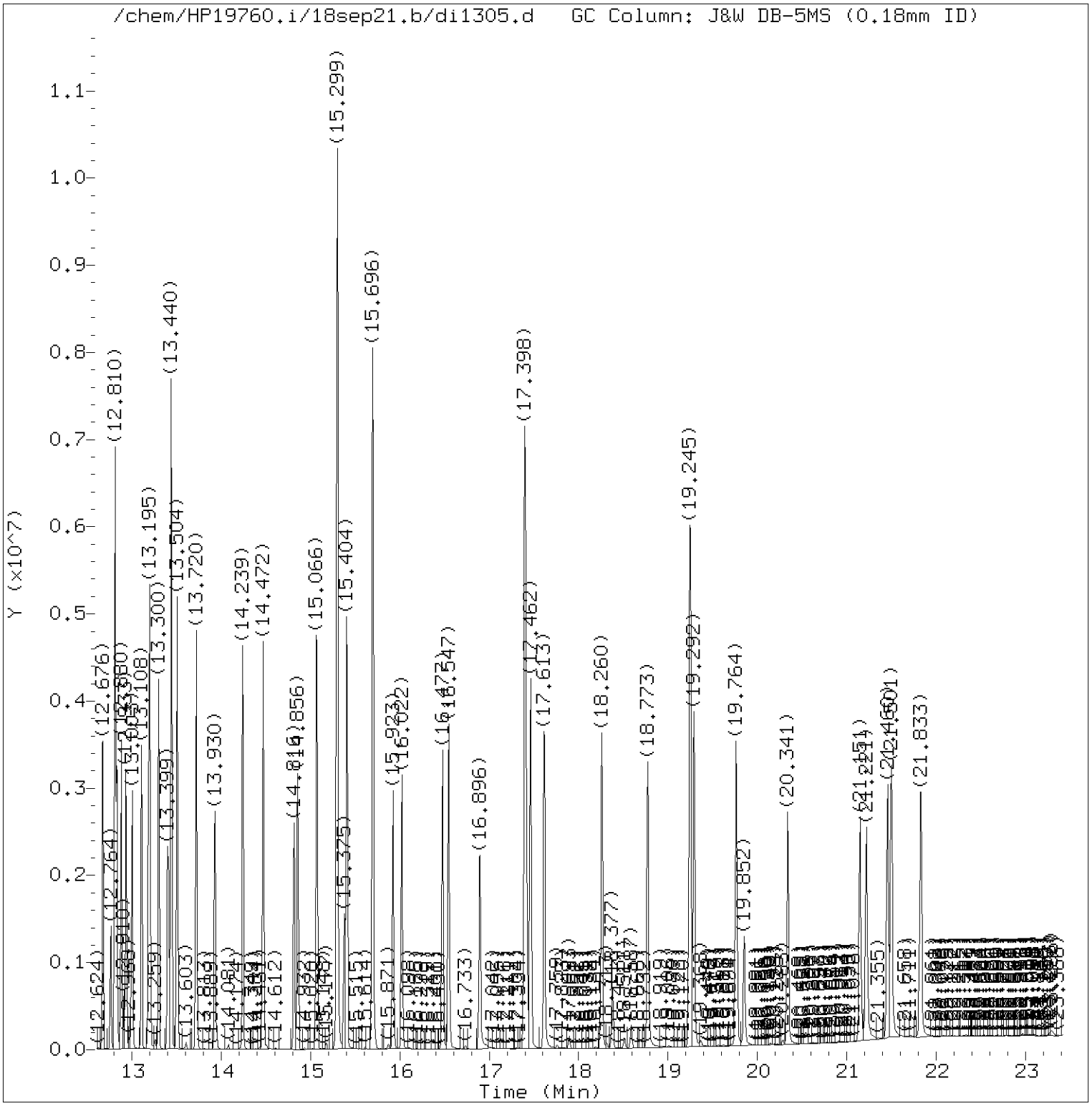
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.162	88	393394	12.002
4) N-Nitrosodimethylamine	(1)	2.733	74	576063	12.174
5) Pyridine	(1)	2.809	79	955378	11.702
7) 2-Picoline	(1)	4.021	93	1002644	12.241
8) N-Nitrosomethylethylamine	(1)	4.190	88	440018	12.365
9) Methyl methanesulfonate	(1)	4.650	80	486266	12.453
11)$2-Fluorophenol	(1)	4.913	112	1591880	24.676
13) N-Nitrosodiethylamine	(1)	5.233	102	430544	12.537
42) Total Cresols	(1)			1697320	25.187
15) Ethyl methanesulfonate	(1)	5.688	109	408851	12.419
16) Benzaldehyde	(1)	6.154	77	730090	12.576
17)$Phenol-d6	(1)	6.282	99	2178856	24.674
18) Phenol	(1)	6.306	94	1232005	12.404
19) Aniline	(1)	6.317	93	1457991	12.488
20) a-methylstyrene	(1)	6.399	118	81999	12.544
22) bis(2-Chloroethyl)ether	(1)	6.434	93	906905	12.446
23) 2-Chlorophenol	(1)	6.486	128	784488	12.564
24) 1,3-Dichlorobenzene	(1)	6.714	146	861394	12.423
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	205984	5.000
26) 1,4-Dichlorobenzene	(1)	6.824	146	862748	12.377
27) Benzyl alcohol	(1)	7.023	108	548465	12.787
28) 1,2-Dichlorobenzene	(1)	7.046	146	820909	12.442
30) Indene	(1)	7.180	115	880909	12.625
31) 2-Methylphenol	(1)	7.209	108	791834	12.476
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.244	45	1056854	12.389
34) bis(2-Chloroisopropyl)ether	(1)	7.244	45	1056854	12.389
35) N-Nitrosopyrrolidine	(1)	7.372	100	465906	12.691
97) Isosafrole	(3)			637574	12.471
36) Acetophenone	(1)	7.413	105	1127387	12.757
38) N-Nitroso-di-n-propylamine	(1)	7.436	70	659453	12.539
37) 4-Methylphenol	(1)	7.442	108	905486	12.698
39) N-Nitrosomorpholine	(1)	7.442	56	490300	12.545
40) o-Toluidine	(1)	7.466	106	1374490	12.605
43) Hexachloroethane	(1)	7.559	117	357217	12.516
44)$Nitrobenzene-d5	(2)	7.629	82	1905399	25.111
45) Nitrobenzene	(2)	7.658	77	962846	12.439
48) N-Nitrosopiperidine	(2)	7.891	114	411350	12.744
50) Isophorone	(2)	8.043	82	1697510	12.622
120) 2,4_2,6-Dinitrotoluenes	(3)			826667	25.304
51) 2-Nitrophenol	(2)	8.153	139	387163	12.647

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.252	107	856286	12.582
57) O,O,O-Triethylphosphorothioate	(2)	8.381	198	362069	12.766
56) Benzoic acid	(2)	8.392	105	489708M	12.765
55) bis(2-Chloroethoxy)methane	(2)	8.410	93	1050016	12.603
60) 2,4-Dichlorophenol	(2)	8.526	162	628408	12.601
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	666121	12.529
65)*Naphthalene-d8	(2)	8.736	136	771931	5.000
66) Naphthalene	(2)	8.771	128	2290148	12.617
146) Diallate trans/cis	(4)			830431	12.602
67) 4-Chloroaniline	(2)	8.870	127	904665	12.720
68) 2,6-Dichlorophenol	(2)	8.882	162	620486	12.730
69) Hexachloropropene	(2)	8.923	213	424933	12.517
71) Hexachlorobutadiene	(2)	8.999	225	374336	12.555
75) Quinoline	(2)	9.296	129	1350021	12.686
76) Caprolactam	(2)	9.407	113	252311	12.863
77) N-Nitrosodi-n-butylamine	(2)	9.447	84	611130	11.365
80) 4-Chloro-3-methylphenol	(2)	9.675	107	724621	12.699
82) Safrole	(2)	9.768	162	587489	12.738
83) 2-Methylnaphthalene	(2)	9.873	142	1476213	12.947
84) 1-Methylnaphthalene	(2)	10.024	142	1409524	13.028
85) Hexachlorocyclopentadiene	(3)	10.147	237	417380	12.574
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.147	216	647265	12.504
88) cis-Isosafrole	(3)	10.234	162	103699	2.169
90) 2,4,6-Trichlorophenol	(3)	10.339	196	418847	12.500
92) 2,4,5-Trichlorophenol	(3)	10.386	196	455563	12.750
93)$2-Fluorobiphenyl	(3)	10.485	172	3139618	25.249
94) trans-Isosafrole	(3)	10.596	162	533875	10.306
95) 1,1'-Biphenyl	(3)	10.636	154	1730848	12.804
96) 2-Chloronaphthalene	(3)	10.642	162	1402633	12.621
98) 1-Chloronaphthalene	(3)	10.677	162	1262513	12.627
99) Diphenyl ether	(3)	10.817	170	949783	12.626
100) 2-Nitroaniline	(3)	10.817	138	456924	12.844
104) 1,4-Naphthoquinone	(3)	10.928	158	539388	12.958
105) 1,4-Dinitrobenzene	(3)	11.050	168	229011	12.744
106) Dimethylphthalate	(3)	11.161	163	1503589	12.747
107) 1,3-Dinitrobenzene	(3)	11.167	168	263775	12.633
108) 2,6-Dinitrotoluene	(3)	11.231	165	357455	12.750
109) Acenaphthylene	(3)	11.301	152	1981887	13.208
112) 3-Nitroaniline	(3)	11.476	138	393848	12.617
113)*Acenaphthene-d10	(3)	11.528	164	386217	5.000

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.575	153	1385323	12.548
115) 2,4-Dinitrophenol	(3)	11.633	184	177373	12.270
116) 4-Nitrophenol	(3)	11.750	109	245735	12.559
117) Pentachlorobenzene	(3)	11.773	250	548384	12.744
119) Dibenzofuran	(3)	11.825	168	1912954	12.703
118) 2,4-Dinitrotoluene	(3)	11.831	165	469212	12.578
121) 1-Naphthylamine	(3)	11.930	143	1458152	12.500
122) 2,3,4,6-Tetrachlorophenol	(3)	12.000	232	338707	12.515
123) 2-Naphthylamine	(3)	12.041	143	1486229	12.629
124) Diethylphthalate	(3)	12.193	149	1471912	12.776
126) Fluorene	(3)	12.274	166	1522287	13.021
125) Thionazin	(3)	12.286	107	308899	12.756
128) 5-Nitro-o-toluidine	(3)	12.298	152	452613	12.496
129) 4-Nitroaniline	(3)	12.303	138	428180	12.534
127) 4-Chlorophenyl-phenylether	(3)	12.303	204	719953	12.669
130) 4,6-Dinitro-2-methylphenol	(4)	12.350	198	253292	12.591
131) N-Nitrosodiphenylamine	(4)	12.443	169	1241446	12.404
132) NDPA as diphenylamine	(4)	12.443	169	1241446	12.404
134) 1,2-Diphenylhydrazine	(4)	12.484	77	1811945	12.577
135)$2,4,6-Tribromophenol	(3)	12.560	330	360377	25.253
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	280238	12.690
139) 1,3,5-Trinitrobenzene	(4)	12.764	213	170783	12.333
141) Phorate	(4)	12.810	75	1088788	12.681
140) Diallate (peak 1)	(4)	12.810	86	717617	10.479
142) Phenacetin	(4)	12.834	108	823888	12.397
143) 4-Bromophenyl-phenylether	(4)	12.880	248	410965	12.708
144) Diallate (peak 2)	(4)	12.910	86	112814	2.117
145) Hexachlorobenzene	(4)	12.933	284	405793	12.316
147) Dimethoate	(4)	13.003	87	685315	12.466
148) Atrazine	(4)	13.108	200	389243	12.659
149) Pentachlorophenol	(4)	13.184	266	264511	12.546
150) 4-Aminobiphenyl	(4)	13.195	169	1118240	12.646
151) Pentachloronitrobenzene	(4)	13.201	237	188289	12.701
152) Pronamide	(4)	13.300	173	664301	12.591
153)*Phenanthrene-d10	(4)	13.411	188	719914	5.000
154) Dinoseb	(4)	13.440	211	362814	12.481
155) Phenanthrene	(4)	13.440	178	2256907	12.411
157) Anthracene	(4)	13.504	178	2282211	12.789
163) Carbazole	(4)	13.720	167	2097999	12.415
164) Methyl parathion	(4)	13.930	109	546684	12.750

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	2544609	12.525
168) 4-Nitroquinoline-1-oxide	(4)	14.472	190	230504	12.063
167) Parathion	(4)	14.472	109	339903	12.473
169) Octachlorostyrene	(4)	14.816	308	162016	12.665
171) Isodrin	(4)	14.856	193	261218	12.555
222) Total PAHs	(6)			35356824	240.299
173) Fluoranthene	(4)	15.072	202	2439923	12.852
174) Benzidine	(5)	15.299	184	5041809	37.154
175)*Pyrene-d10	(5)	15.375	212	717962	5.000
177) Pyrene	(5)	15.404	202	2459193	12.298
179)$Terphenyl-d14	(5)	15.696	244	3112525	25.241
182) p-Dimethylaminoazobenzene	(5)	15.923	225	417730	12.230
185) Chlorobenzilate	(5)	16.022	139	716554	12.438
187) 3,3'-Dimethylbenzidine	(5)	16.477	212	1557306	12.298
188) Butylbenzylphthalate	(5)	16.547	149	1098956	12.325
191) 2-Acetylaminofluorene	(5)	16.896	181	771147	11.488
193) 3,3'-Dichlorobenzidine	(5)	17.398	252	815433	11.961
195) Benzo(a)anthracene	(5)	17.398	228	2227128	13.221
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.415	231	446891	12.052
196) Chrysene	(5)	17.462	228	2155739	12.723
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	1411090	11.855
203) 6-Methylchrysene	(5)	18.260	242	1422426	11.883
205) Di-n-octylphthalate	(6)	18.773	149	2319730	12.465
206) Benzo(b)fluoranthene	(6)	19.245	252	2076096	13.377
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.251	256	1002452	12.728
208) Benzo(k)fluoranthene	(6)	19.292	252	2088266	13.252
211) Benzo(a)pyrene	(6)	19.764	252	1927537	13.468
213)*Perylene-d12	(6)	19.852	264	618703	5.000
215) 3-Methylcholanthrene	(6)	20.341	268	903505	12.407
217) Dibenz(a,h)acridine	(6)	21.151	279	1443181	12.477
218) Dibenz(a,j)acridine	(6)	21.221	279	1587059	12.577
219) Indeno(1,2,3-cd)pyrene	(6)	21.460	276	1695566M	12.953
220) Dibenz(a,h)anthracene	(6)	21.501	278	1844681	13.012
221) Benzo(g,h,i)perylene	(6)	21.833	276	1838195	12.707

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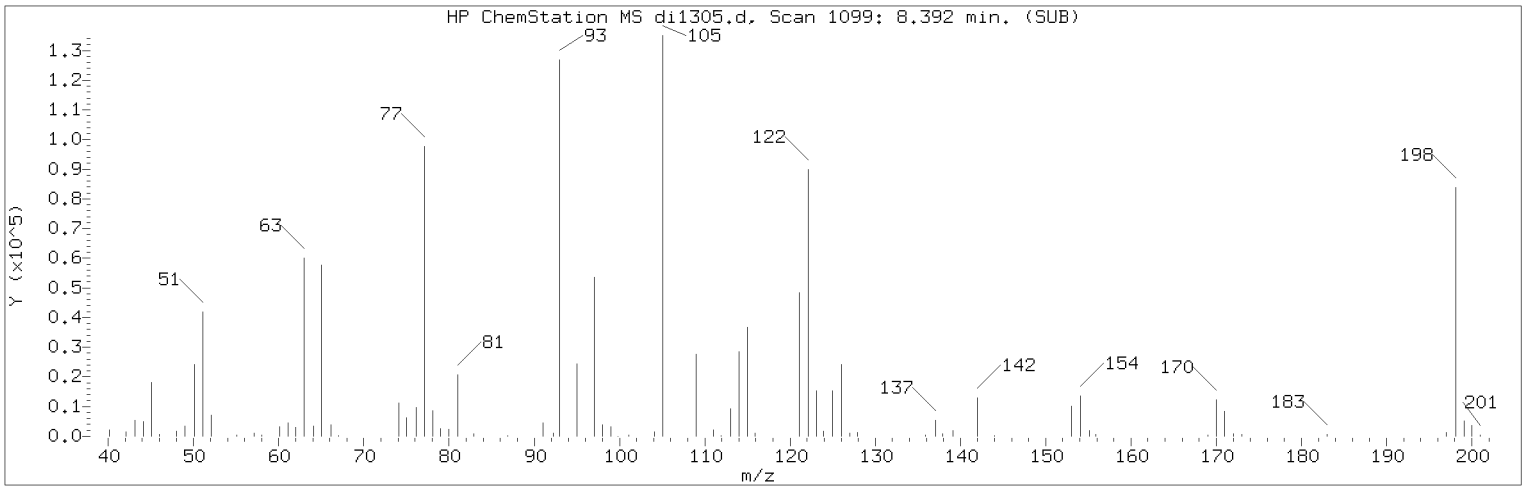
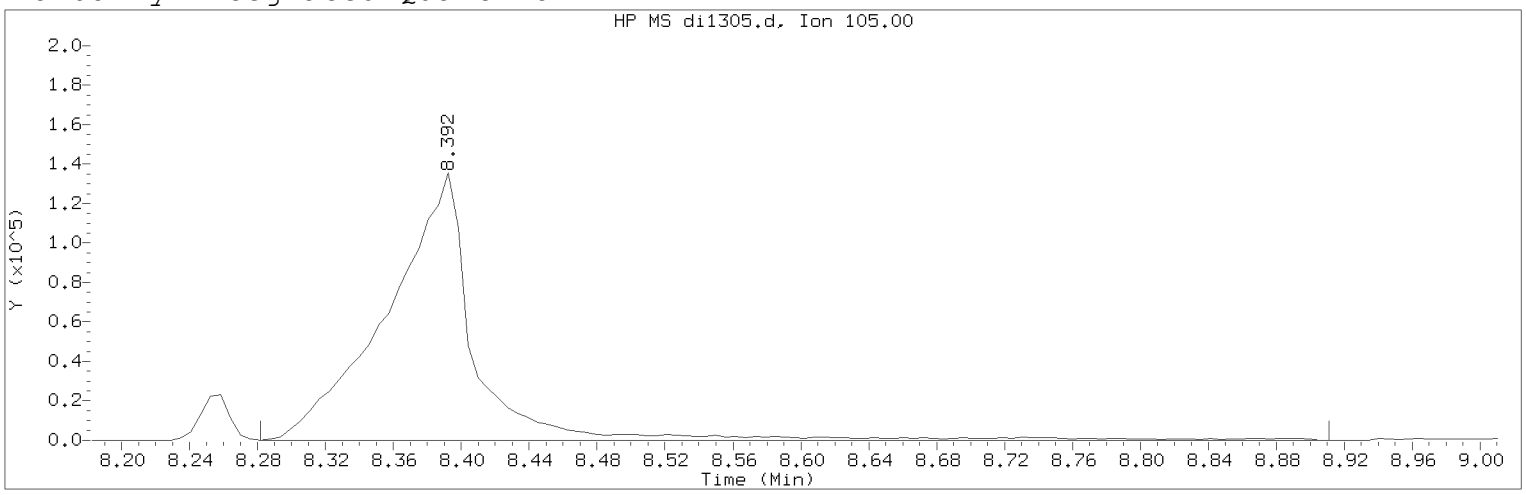
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

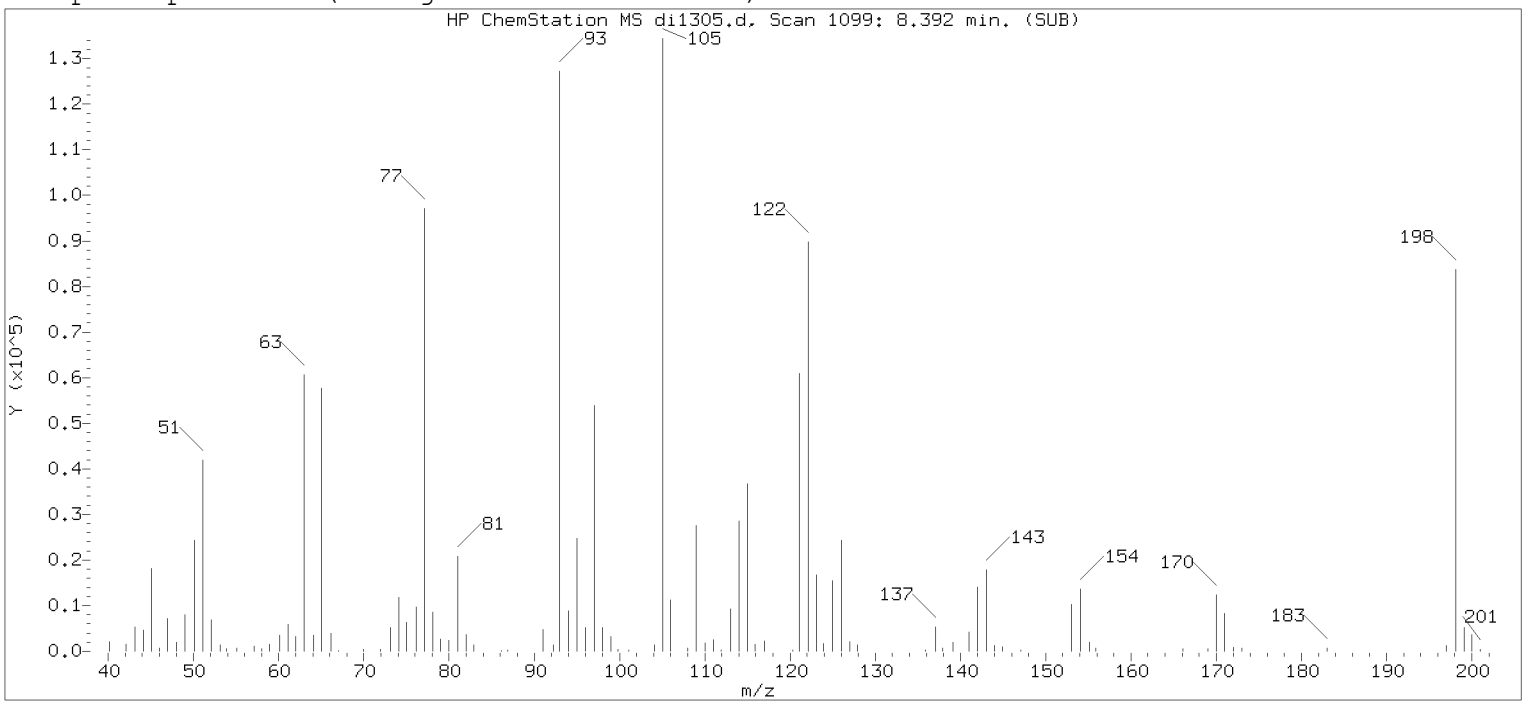
Compound Number : 56
Compound Name : Benzoic acid
Scan Number : 1099
Retention Time (minutes) : 8.392
Quant Ion : 105.00
Area (flag) : 489708M
On-Column Amount (ng/ul) : 12.7651
Integration start scan : 1079 Integration stop scan: 1187
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

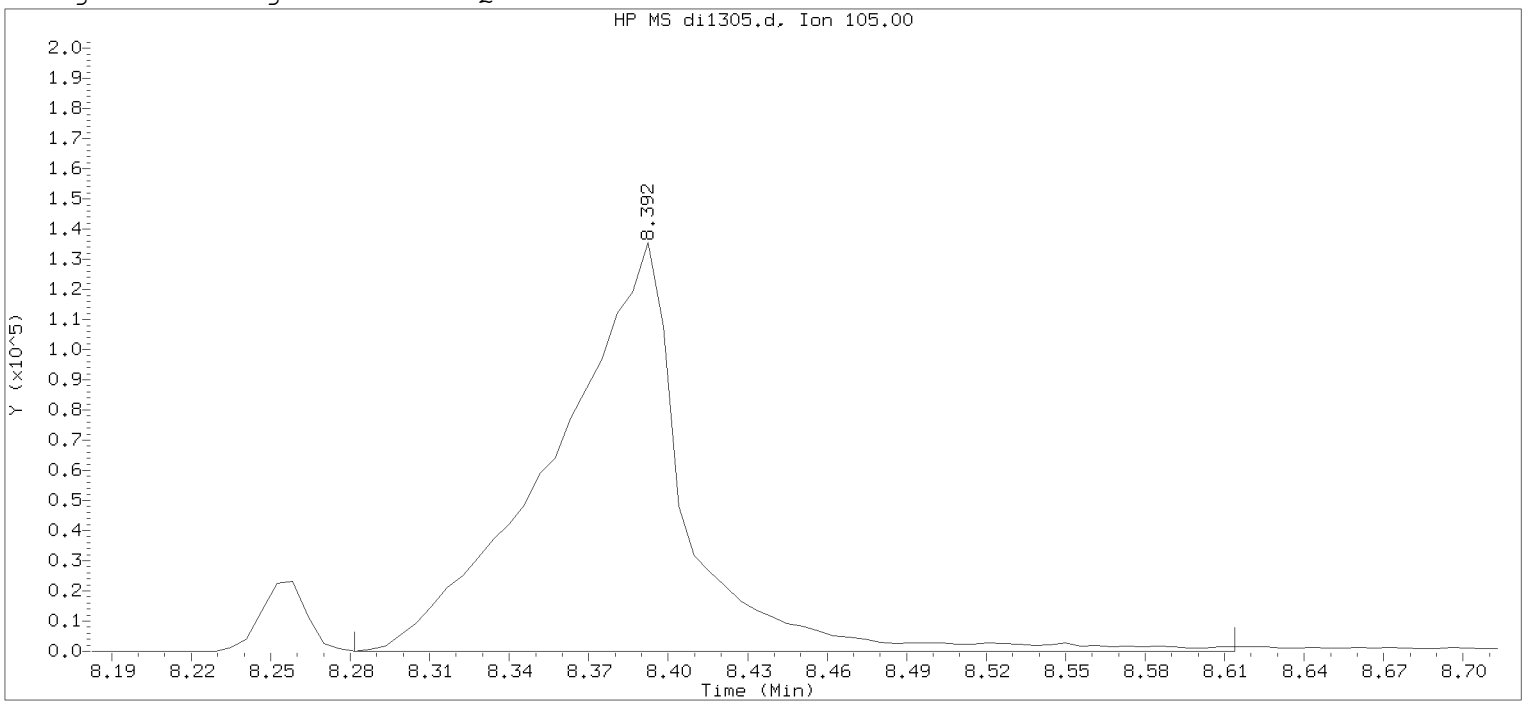
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

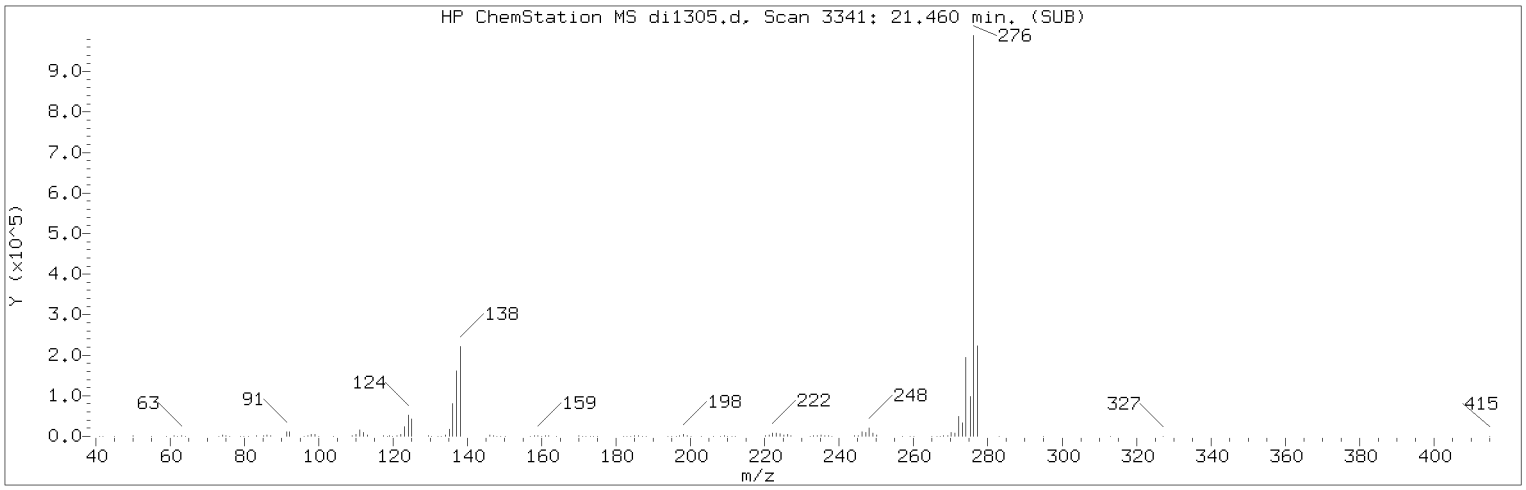
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 20:13
Date, time and analyst ID of latest file update: 21-Sep-2018 20:13 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

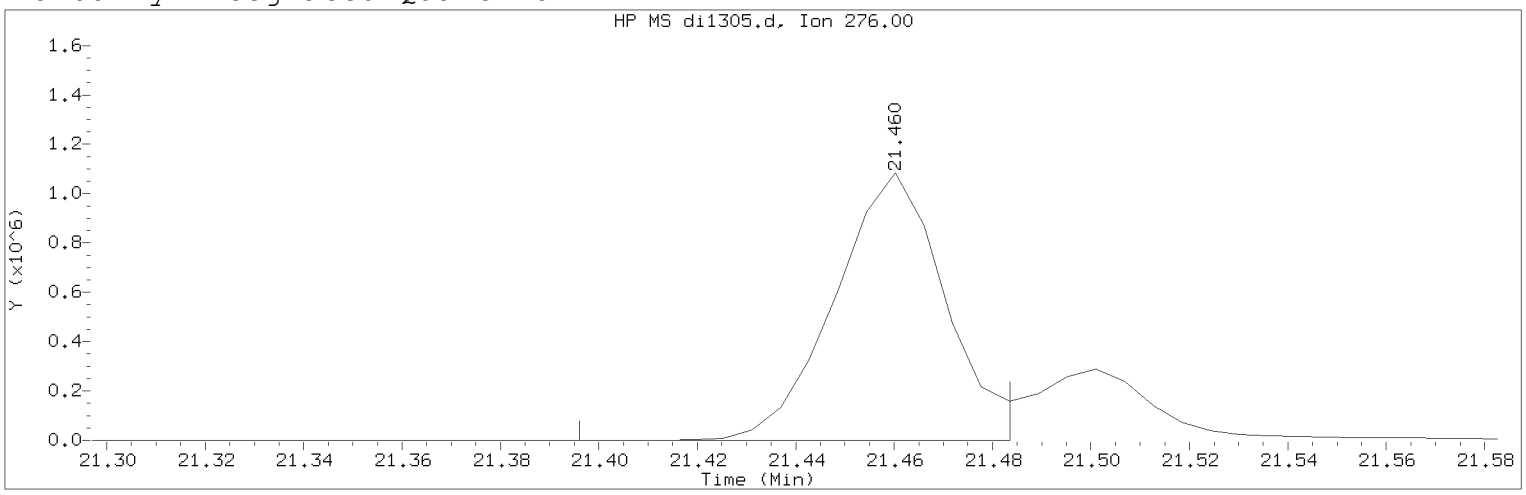
Compound Number	: 56		
Compound Name	: Benzoic acid		
Scan Number	: 1099		
Retention Time (minutes)	: 8.392		
Quant Ion	: 105.00		
Area	: 473187		
On-column Amount (ng/ul)	: 14.9022		
Integration start scan	: 1079	Integration stop scan:	1136
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

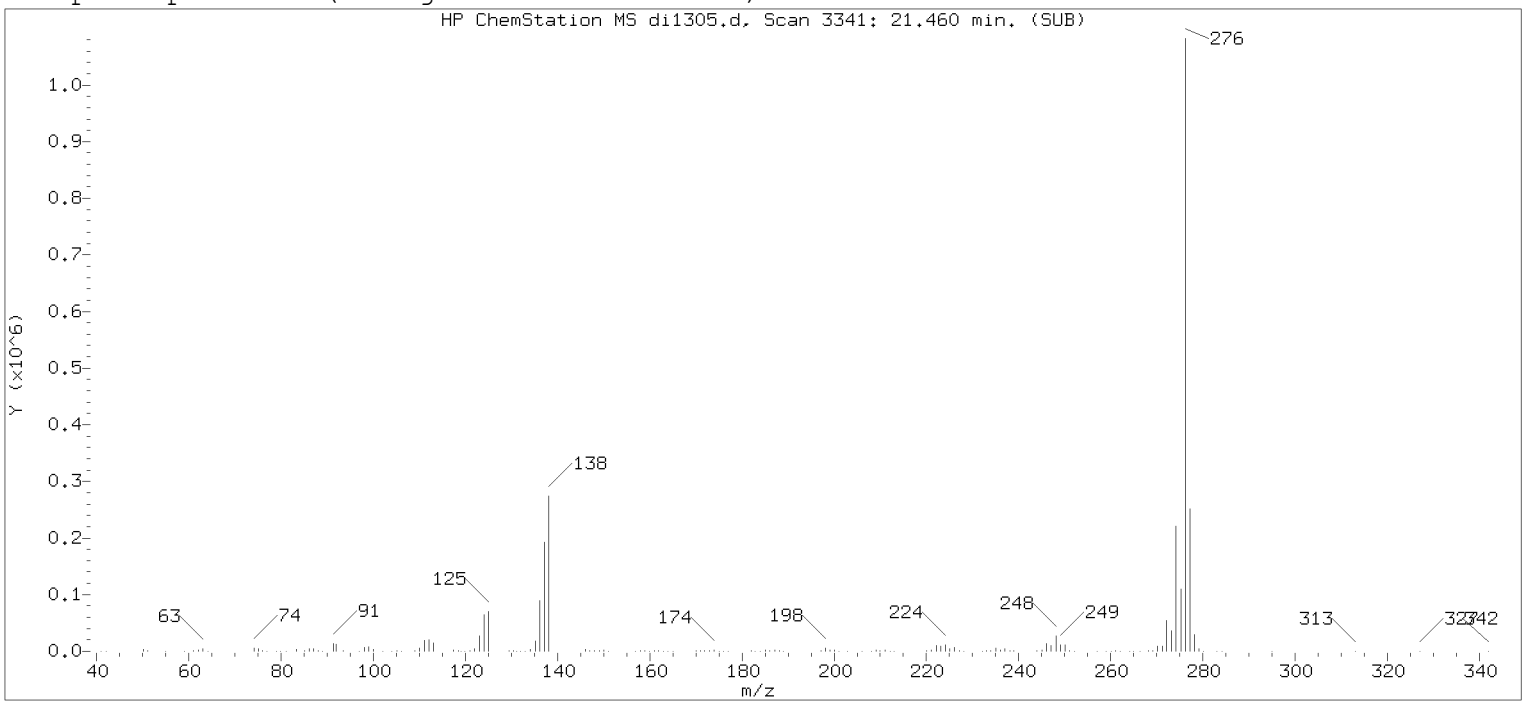
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3341
Retention Time (minutes) : 21.460
Quant Ion : 276.00
Area (flag) : 1695566M
On-Column Amount (ng/ul) : 12.9525
Integration start scan : 3329 Integration stop scan: 3344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

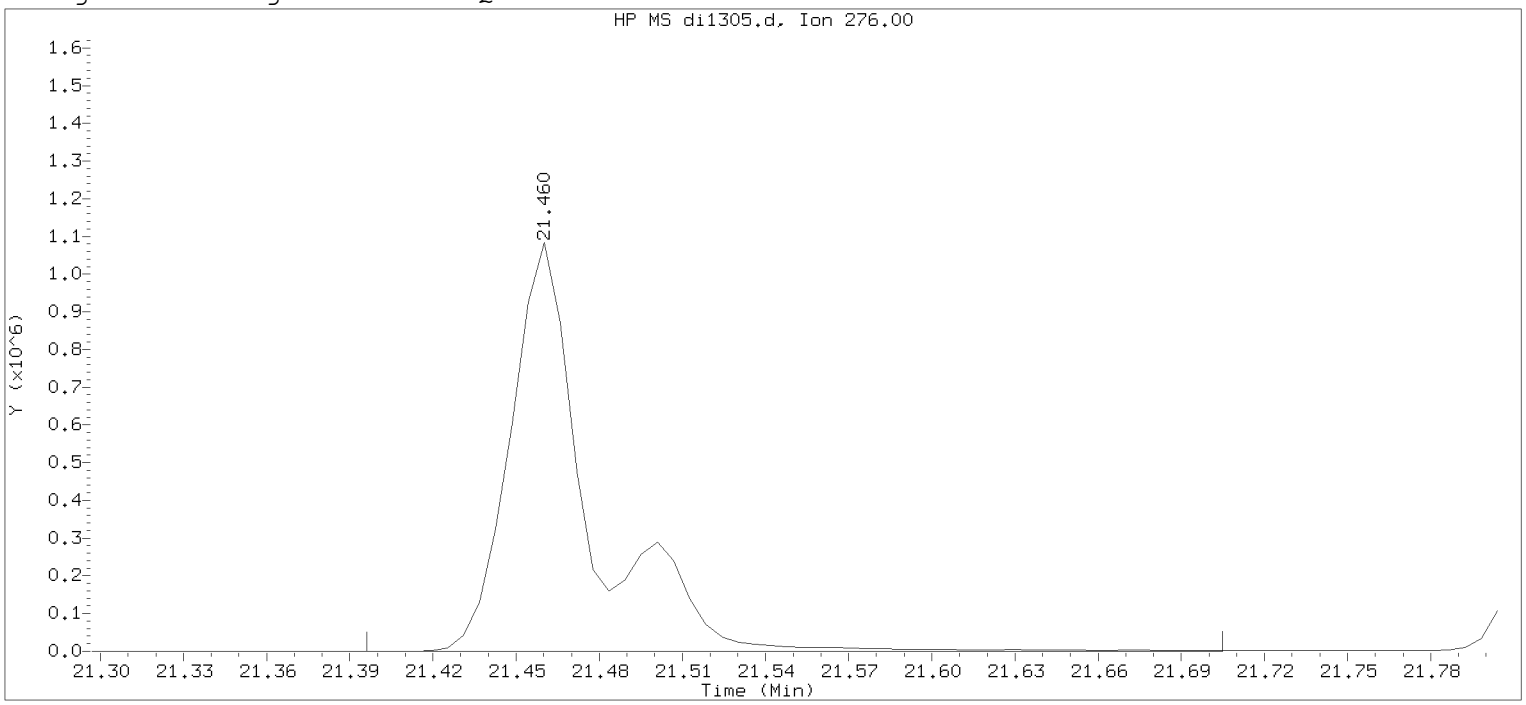
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



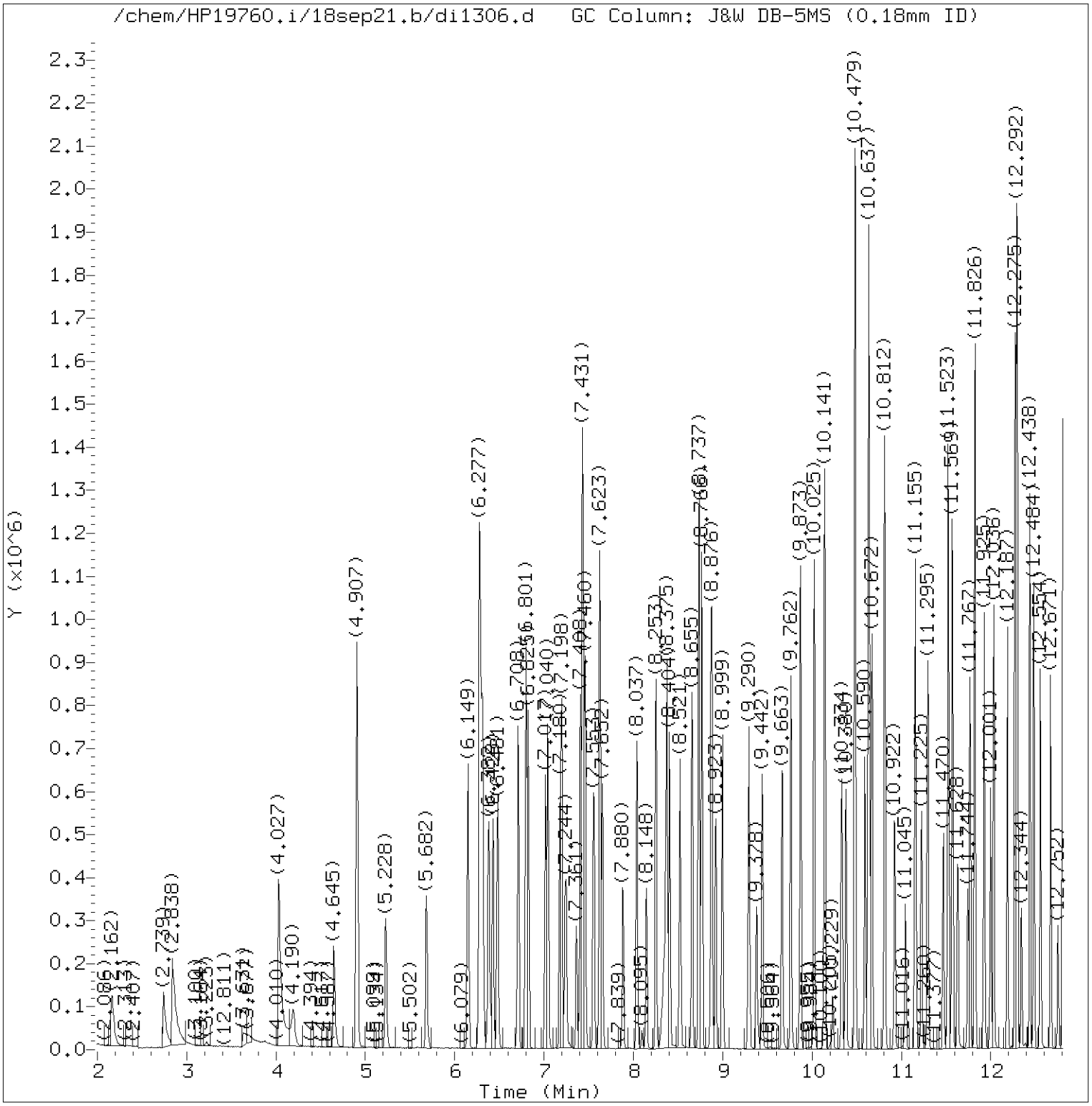
Data File: /chem/HP19760.i/18sep21.b/di1305.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 19:45 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 20:13
Date, time and analyst ID of latest file update: 21-Sep-2018 20:13 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3341		
Retention Time (minutes)	: 21.460		
Quant Ion	: 276.00		
Area	: 2190631		
On-column Amount (ng/ul)	: 15.6229		
Integration start scan	: 3329	Integration stop scan:	3382
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

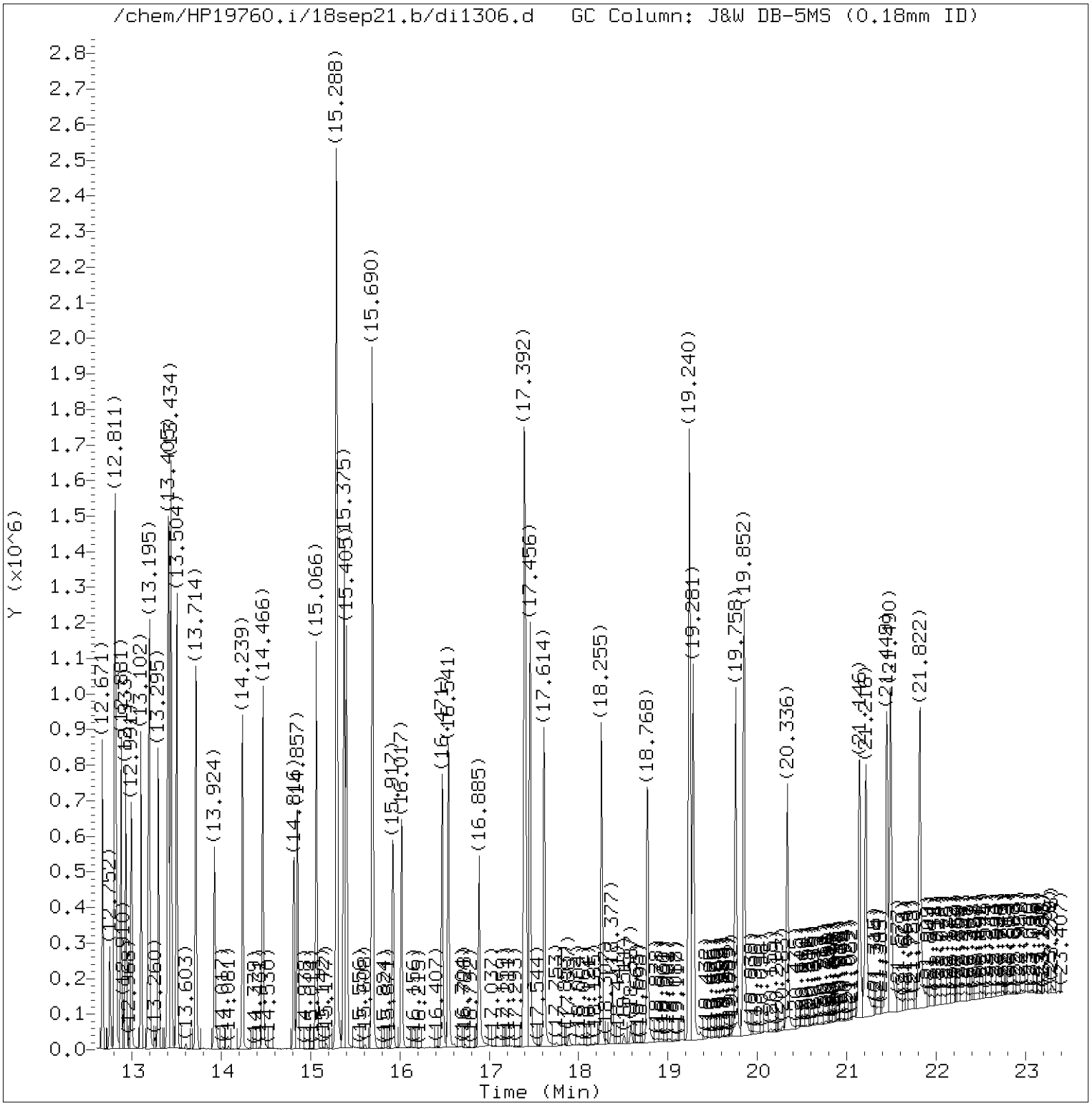
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.168	88	115281	3.653
4) N-Nitrosodimethylamine	(1)	2.739	74	156212	3.471
5) Pyridine	(1)	2.838	79	266987	3.444
7) 2-Picoline	(1)	4.027	93	285940	3.631
8) N-Nitrosomethylethylamine	(1)	4.196	88	126854	3.693
9) Methyl methanesulfonate	(1)	4.645	80	134057	3.583
11)$2-Fluorophenol	(1)	4.907	112	445573	7.200
13) N-Nitrosodiethylamine	(1)	5.228	102	118528	3.598
42) Total Cresols	(1)			459671	7.127
15) Ethyl methanesulfonate	(1)	5.682	109	113697	3.600
16) Benzaldehyde	(1)	6.149	77	207525	3.701
17)$Phenol-d6	(1)	6.277	99	608529	7.186
18) Phenol	(1)	6.294	94	348378	3.645
19) Aniline	(1)	6.312	93	410616	3.653
20) a-methylstyrene	(1)	6.399	118	21997	3.525
22) bis(2-Chloroethyl)ether	(1)	6.428	93	251225	3.595
23) 2-Chlorophenol	(1)	6.481	128	214301	3.582
24) 1,3-Dichlorobenzene	(1)	6.708	146	244656	3.663
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	199584	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	247513	3.681
27) Benzyl alcohol	(1)	7.017	108	135187	3.341
28) 1,2-Dichlorobenzene	(1)	7.040	146	231752	3.649
30) Indene	(1)	7.180	115	228255	3.445
31) 2-Methylphenol	(1)	7.198	108	215620	3.552
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.244	45	290291	3.557
34) bis(2-Chloroisopropyl)ether	(1)	7.244	45	290291	3.557
35) N-Nitrosopyrrolidine	(1)	7.361	100	121047	3.467
97) Isosafrole	(3)			158133	3.593
36) Acetophenone	(1)	7.408	105	311722	3.662
38) N-Nitroso-di-n-propylamine	(1)	7.431	70	173517	3.469
39) N-Nitrosomorpholine	(1)	7.431	56	133872	3.576
37) 4-Methylphenol	(1)	7.437	108	244051	3.574
40) o-Toluidine	(1)	7.460	106	379402	3.622
43) Hexachloroethane	(1)	7.553	117	100466	3.656
44)$Nitrobenzene-d5	(2)	7.623	82	512435	7.249
45) Nitrobenzene	(2)	7.652	77	262658	3.639
48) N-Nitrosopiperidine	(2)	7.886	114	106427	3.556
50) Isophorone	(2)	8.037	82	430756	3.473
120) 2,4_2,6-Dinitrotoluenes	(3)			194351	6.962
51) 2-Nitrophenol	(2)	8.148	139	98767	3.493

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.253	107	223333	3.542
56) Benzoic acid	(2)	8.358	105	212216	6.153
57) O,O,O-Triethylphosphorothioate	(2)	8.375	198	94526	3.587
55) bis(2-Chloroethoxy)methane	(2)	8.404	93	286120	3.674
60) 2,4-Dichlorophenol	(2)	8.521	162	167561	3.610
62) 1,2,4-Trichlorobenzene	(2)	8.655	180	185355	3.719
65)*Naphthalene-d8	(2)	8.737	136	725140	5.000
66) Naphthalene	(2)	8.766	128	629897	3.703
146) Diallate trans/cis	(4)			190828	3.587
67) 4-Chloroaniline	(2)	8.871	127	236546	3.581
68) 2,6-Dichlorophenol	(2)	8.876	162	163342	3.602
69) Hexachloropropene	(2)	8.923	213	114031	3.609
71) Hexachlorobutadiene	(2)	8.999	225	102398	3.674
75) Quinoline	(2)	9.290	129	346844	3.522
76) Caprolactam	(2)	9.378	113	57038	3.207
77) N-Nitrosodi-n-butylamine	(2)	9.442	84	150023	3.099
80) 4-Chloro-3-methylphenol	(2)	9.663	107	177432	3.390
82) Safrole	(2)	9.762	162	149057	3.498
83) 2-Methylnaphthalene	(2)	9.873	142	392455	3.678
84) 1-Methylnaphthalene	(2)	10.025	142	374151	3.693
85) Hexachlorocyclopentadiene	(3)	10.141	237	103539	3.618
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	174338	3.847
88) cis-Isosafrole	(3)	10.235	162	24841	0.605
90) 2,4,6-Trichlorophenol	(3)	10.334	196	100851	3.515
92) 2,4,5-Trichlorophenol	(3)	10.380	196	108926	3.551
93)$2-Fluorobiphenyl	(3)	10.479	172	819910	7.565
94) trans-Isosafrole	(3)	10.590	162	133292	2.988
95) 1,1'-Biphenyl	(3)	10.631	154	456160	3.853
96) 2-Chloronaphthalene	(3)	10.643	162	363860	3.761
98) 1-Chloronaphthalene	(3)	10.672	162	344075	3.913
99) Diphenyl ether	(3)	10.812	170	246604	3.765
100) 2-Nitroaniline	(3)	10.812	138	101006	3.351
104) 1,4-Naphthoquinone	(3)	10.928	158	117532	3.336
105) 1,4-Dinitrobenzene	(3)	11.045	168	49583	3.273
106) Dimethylphthalate	(3)	11.155	163	368383	3.621
107) 1,3-Dinitrobenzene	(3)	11.161	168	59060	3.341
108) 2,6-Dinitrotoluene	(3)	11.225	165	87509	3.620
109) Acenaphthylene	(3)	11.295	152	490841	3.759
112) 3-Nitroaniline	(3)	11.470	138	89765	3.386
113)*Acenaphthene-d10	(3)	11.523	164	335922	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.569	153	349249	3.655
115) 2,4-Dinitrophenol	(3)	11.633	184	70935	5.936
116) 4-Nitrophenol	(3)	11.744	109	55380	3.342
117) Pentachlorobenzene	(3)	11.767	250	138252	3.705
118) 2,4-Dinitrotoluene	(3)	11.826	165	106842	3.375
119) Dibenzofuran	(3)	11.826	168	489012	3.737
121) 1-Naphthylamine	(3)	11.925	143	352553	3.526
122) 2,3,4,6-Tetrachlorophenol	(3)	12.001	232	77514	3.375
123) 2-Naphthylamine	(3)	12.036	143	358470	3.549
124) Diethylphthalate	(3)	12.187	149	335319	3.420
126) Fluorene	(3)	12.275	166	377246	3.717
125) Thionazin	(3)	12.280	107	68521M	3.342
128) 5-Nitro-o-toluidine	(3)	12.292	152	105281	3.416
129) 4-Nitroaniline	(3)	12.292	138	105058	3.577
127) 4-Chlorophenyl-phenylether	(3)	12.298	204	182837	3.709
130) 4,6-Dinitro-2-methylphenol	(4)	12.344	198	47751	3.046
131) N-Nitrosodiphenylamine	(4)	12.438	169	300552	3.694
132) NDPA as diphenylamine	(4)	12.438	169	300552	3.694
134) 1,2-Diphenylhydrazine	(4)	12.484	77	431568	3.687
135)$2,4,6-Tribromophenol	(3)	12.554	330	82614	6.809
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	60411	3.425
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	30670	2.873
140) Diallate (peak 1)	(4)	12.805	86	163608	2.963
141) Phorate	(4)	12.811	75	239041	3.475
142) Phenacetin	(4)	12.822	108	181796	3.425
143) 4-Bromophenyl-phenylether	(4)	12.881	248	101966	3.841
144) Diallate (peak 2)	(4)	12.910	86	27220	0.628
145) Hexachlorobenzene	(4)	12.933	284	98912	3.691
147) Dimethoate	(4)	12.991	87	152070	3.456
148) Atrazine	(4)	13.102	200	94030	3.748
149) Pentachlorophenol	(4)	13.178	266	53380	3.214
150) 4-Aminobiphenyl	(4)	13.190	169	251975	3.541
151) Pentachloronitrobenzene	(4)	13.195	237	41673	3.502
152) Pronamide	(4)	13.295	173	138908	3.319
153)*Phenanthrene-d10	(4)	13.411	188	587436	5.000
154) Dinoseb	(4)	13.434	211	62735	2.810
155) Phenanthrene	(4)	13.440	178	551000	3.719
157) Anthracene	(4)	13.504	178	544673	3.742
163) Carbazole	(4)	13.714	167	495339	3.623
164) Methyl parathion	(4)	13.924	109	101850	3.047

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	535638	3.323
168) 4-Nitroquinoline-1-oxide	(4)	14.466	190	36664	2.541
167) Parathion	(4)	14.466	109	67083	3.140
169) Octachlorostyrene	(4)	14.816	308	34940	3.421
171) Isodrin	(4)	14.857	193	60986	3.623
222) Total PAHs	(6)			9263005	63.081
173) Fluoranthene	(4)	15.066	202	550913	3.587
174) Benzidine	(5)	15.288	184	1216664	10.773
175)*Pyrene-d10	(5)	15.375	212	603838	5.000
177) Pyrene	(5)	15.405	202	608444	3.639
179)$Terphenyl-d14	(5)	15.690	244	738695	7.195
182) p-Dimethylaminoazobenzene	(5)	15.923	225	87182	3.155
185) Chlorobenzilate	(5)	16.017	139	152763	3.257
187) 3,3'-Dimethylbenzidine	(5)	16.471	212	359355	3.443
188) Butylbenzylphthalate	(5)	16.541	149	254369	3.458
191) 2-Acetylaminofluorene	(5)	16.885	181	177861	3.254
193) 3,3'-Dichlorobenzidine	(5)	17.392	252	203626	3.589
195) Benzo(a)anthracene	(5)	17.398	228	559687	3.916
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.410	231	111203	3.601
196) Chrysene	(5)	17.456	228	582300	4.026
199) bis(2-Ethylhexyl)phthalate	(5)	17.614	149	340187	3.463
203) 6-Methylchrysene	(5)	18.255	242	368282	3.676
205) Di-n-octylphthalate	(6)	18.773	149	534206	2.984
206) Benzo(b)fluoranthene	(6)	19.234	252	571225	3.658
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.246	256	257602	3.326
208) Benzo(k)fluoranthene	(6)	19.281	252	593634	3.730
211) Benzo(a)pyrene	(6)	19.758	252	541170	3.741
213)*Perylene-d12	(6)	19.852	264	625557	5.000
215) 3-Methylcholanthrene	(6)	20.336	268	246999	3.427
217) Dibenz(a,h)acridine	(6)	21.146	279	399139	3.475
218) Dibenz(a,j)acridine	(6)	21.216	279	443123	3.525
219) Indeno(1,2,3-cd)pyrene	(6)	21.449	276	482173M	3.660
220) Dibenz(a,h)anthracene	(6)	21.495	278	522065	3.660
221) Benzo(g,h,i)perylene	(6)	21.822	276	541882	3.712

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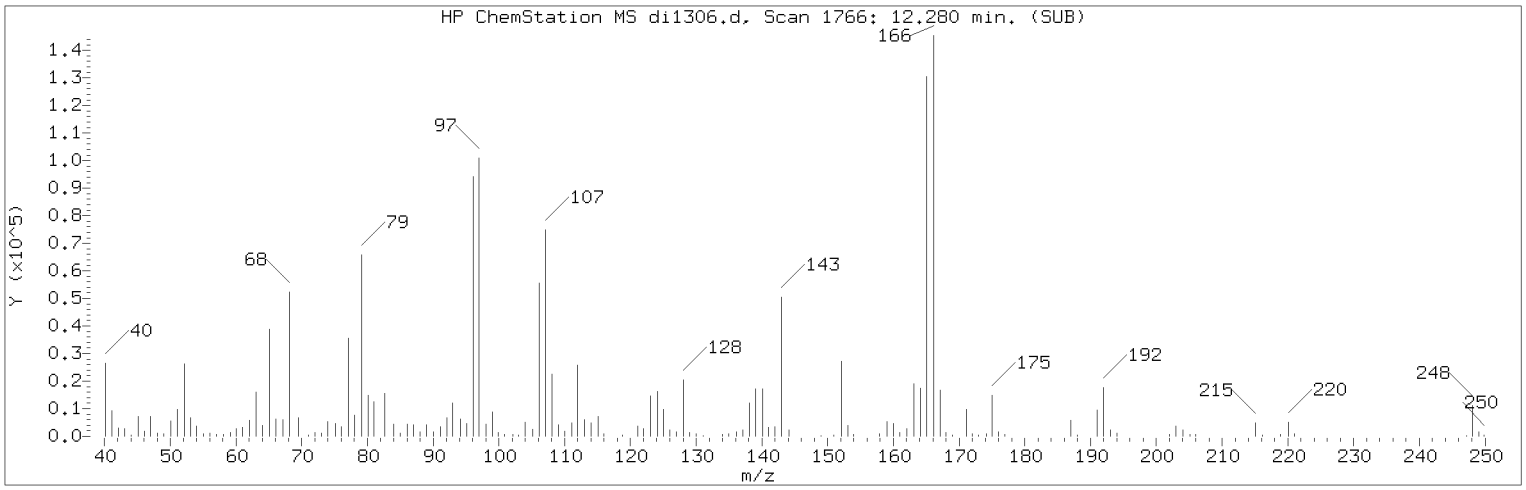
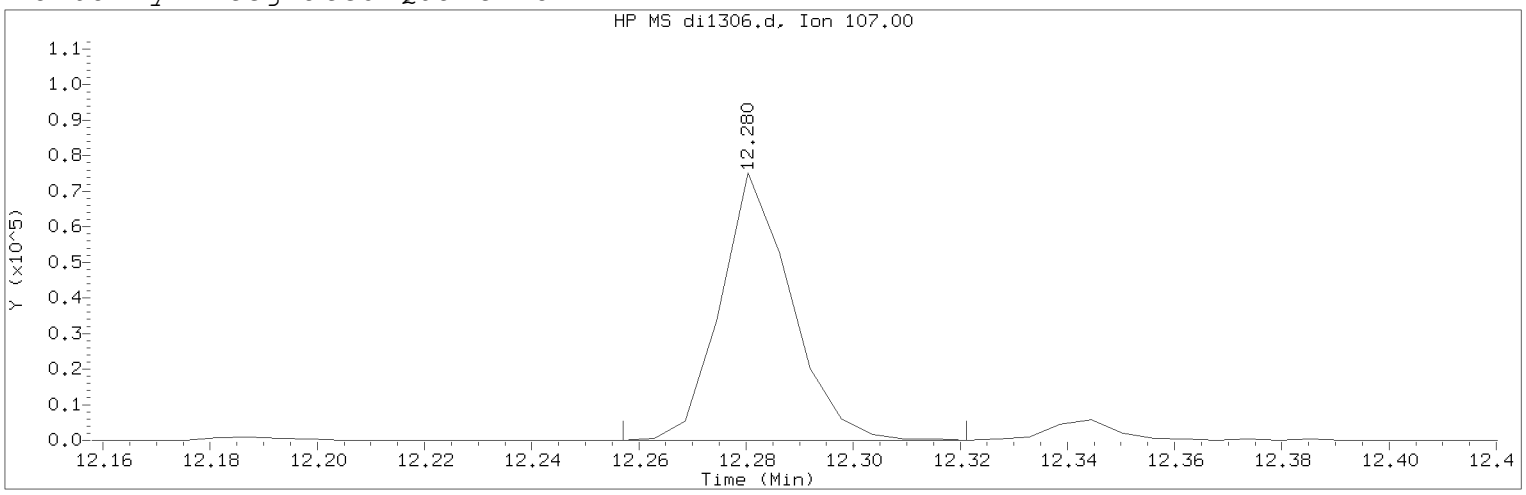
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

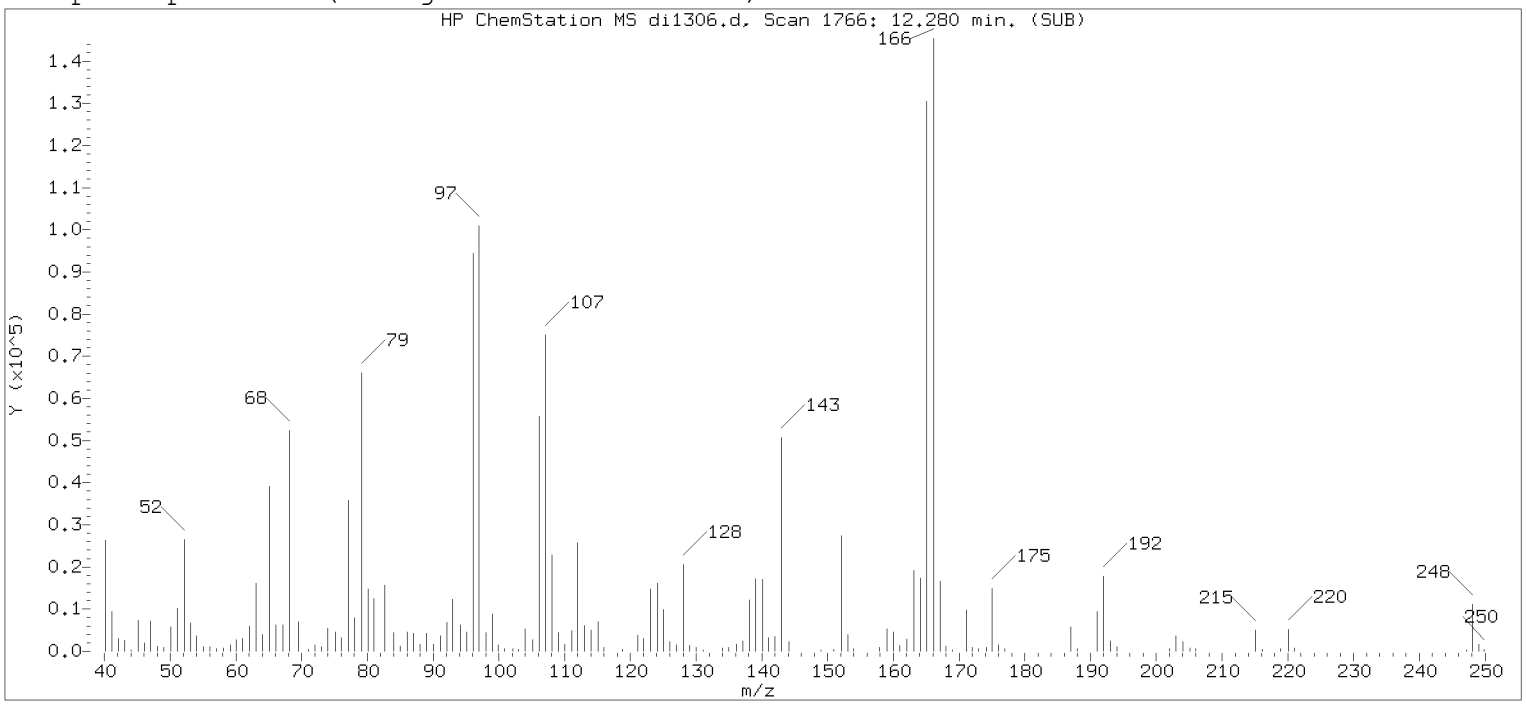
Compound Number : 125
Compound Name : Thionazin
Scan Number : 1766
Retention Time (minutes) : 12.280
Quant Ion : 107.00
Area (flag) : 68521M
On-Column Amount (ng/ul) : 3.3417
Integration start scan : 1761 Integration stop scan: 1772
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

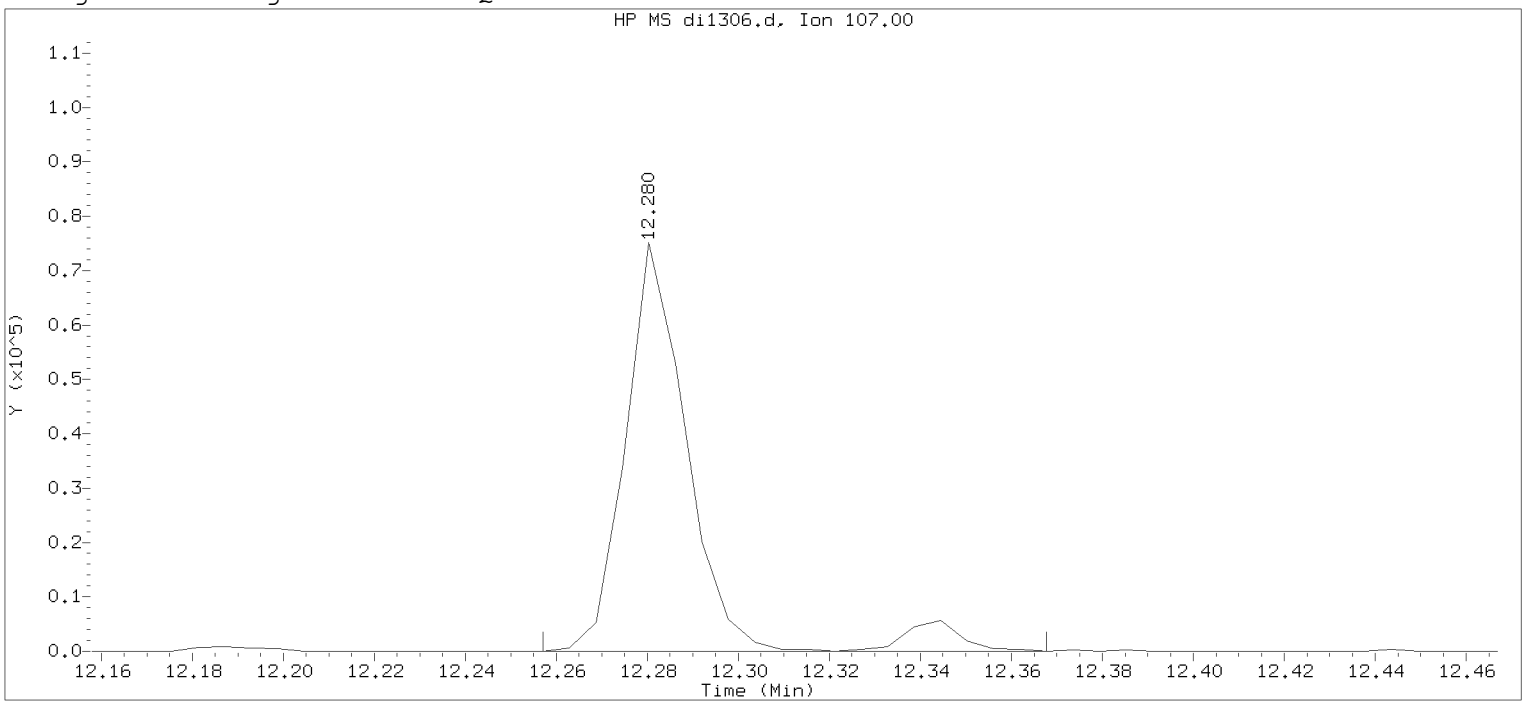
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

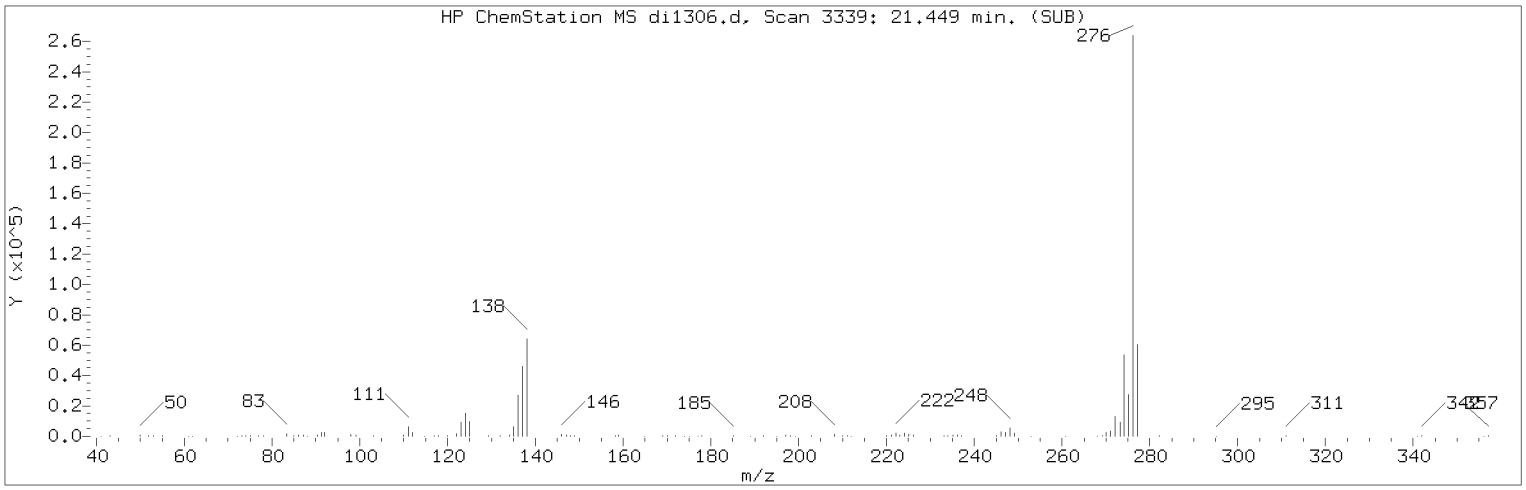
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 20:41
Date, time and analyst ID of latest file update: 21-Sep-2018 20:41 Automation

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

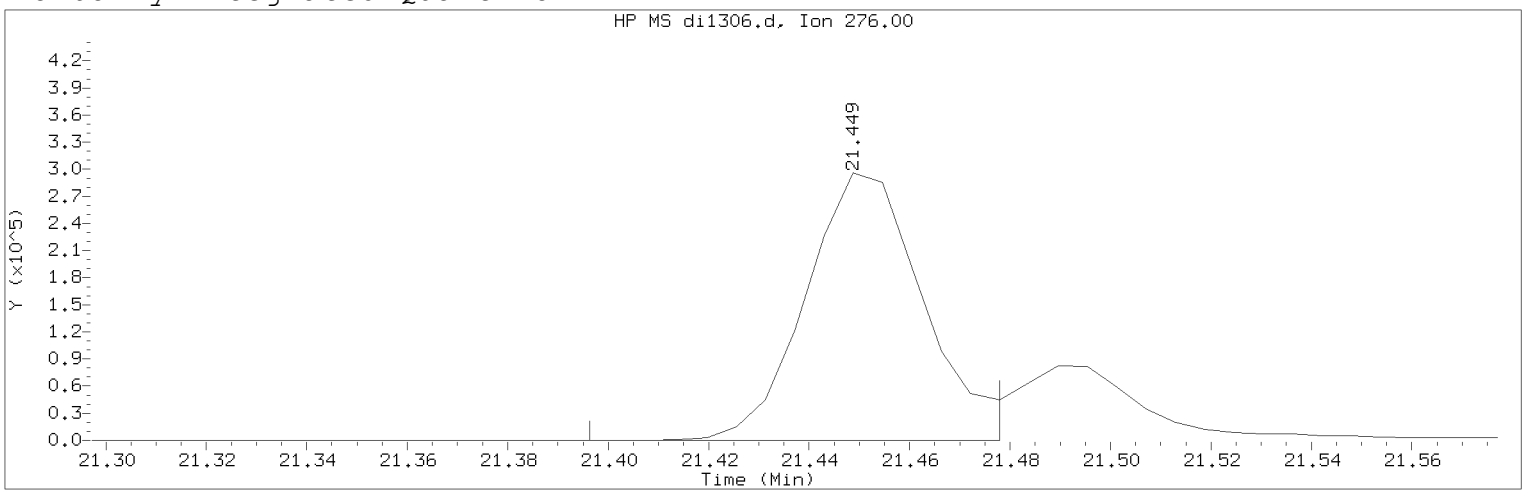
Compound Number	: 125		
Compound Name	: Thionazin		
Scan Number	: 1766		
Retention Time (minutes)	: 12.280		
Quant Ion	: 107.00		
Area	: 73468		
On-column Amount (ng/ul)	: 3.4785		
Integration start scan	: 1761	Integration stop scan:	1780
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

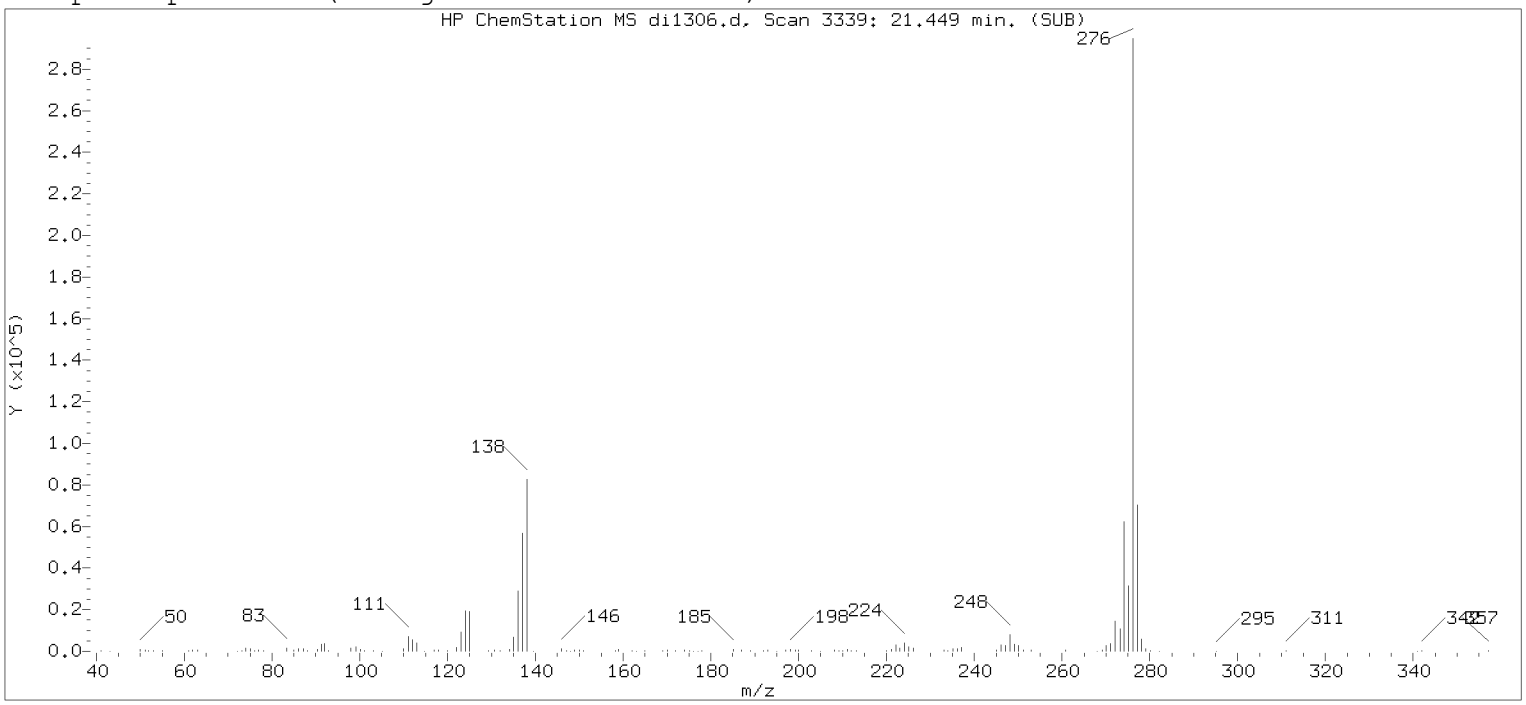
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3339
Retention Time (minutes) : 21.449
Quant Ion : 276.00
Area (flag) : 482173M
On-Column Amount (ng/ul) : 3.6604
Integration start scan : 3329 Integration stop scan: 3343
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

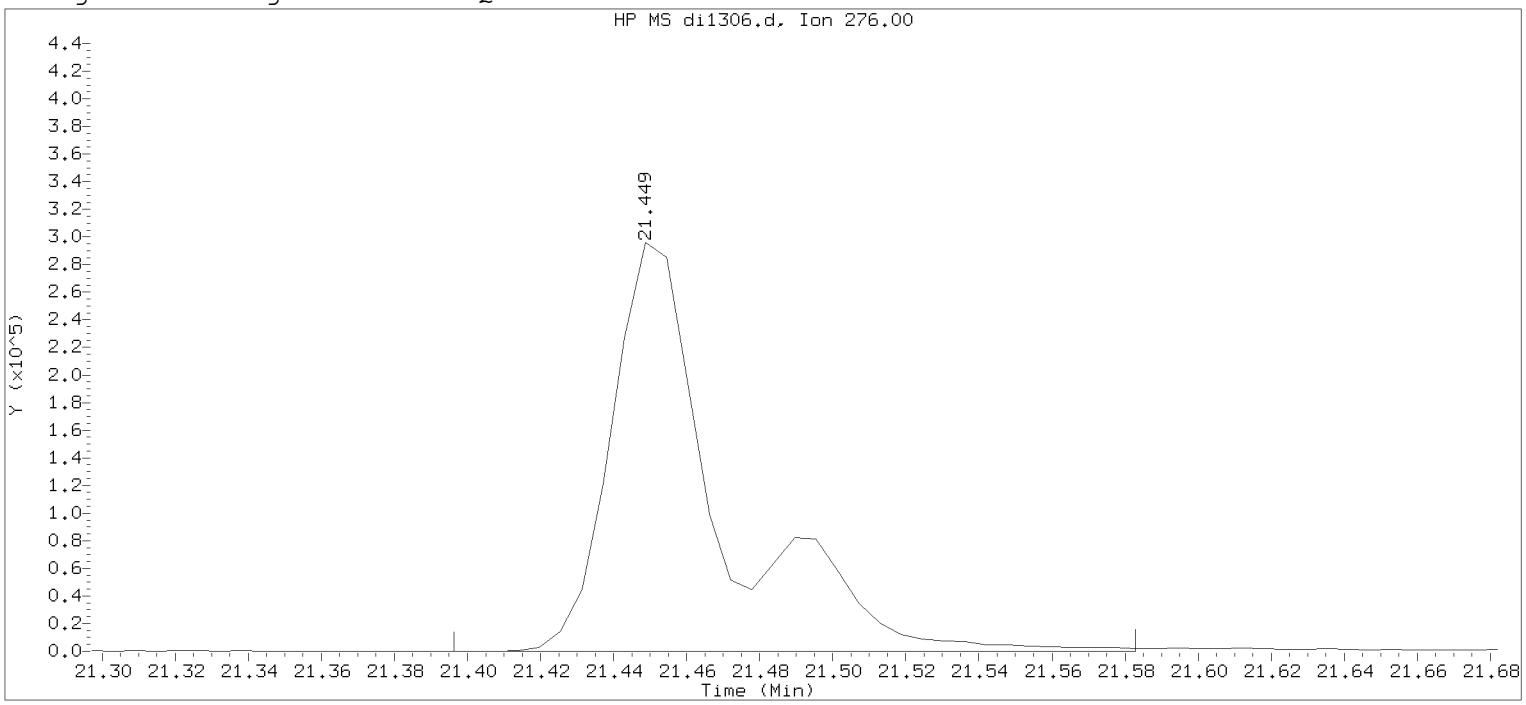
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



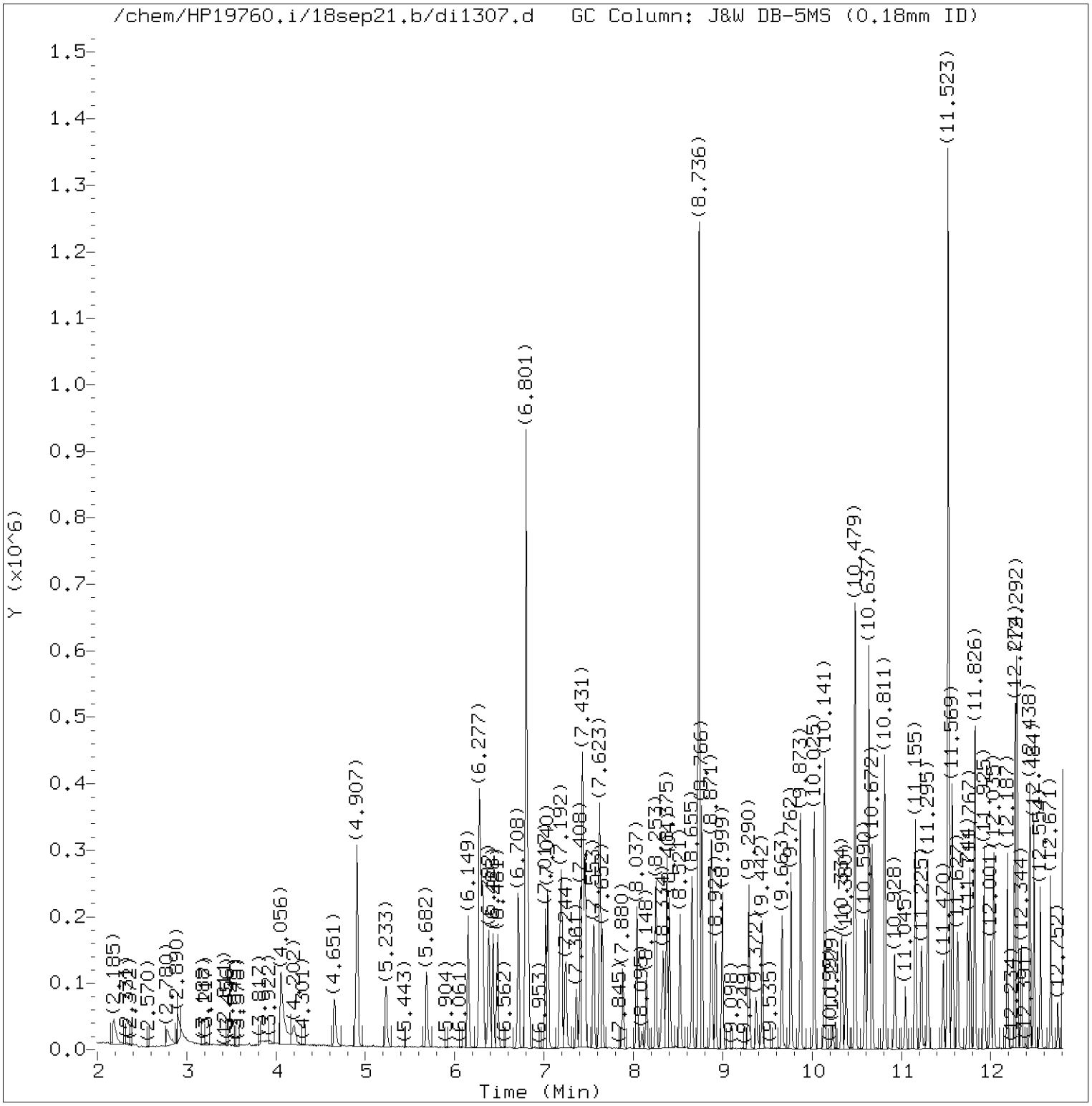
Data File: /chem/HP19760.i/18sep21.b/di1306.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:13 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 20:41
Date, time and analyst ID of latest file update: 21-Sep-2018 20:41 Automation

Sample Name: SSTD3.75 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3339		
Retention Time (minutes)	: 21.449		
Quant Ion	: 276.00		
Area	: 622699		
On-column Amount (ng/ul)	: 4.2345		
Integration start scan	: 3329	Integration stop scan:	3361
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

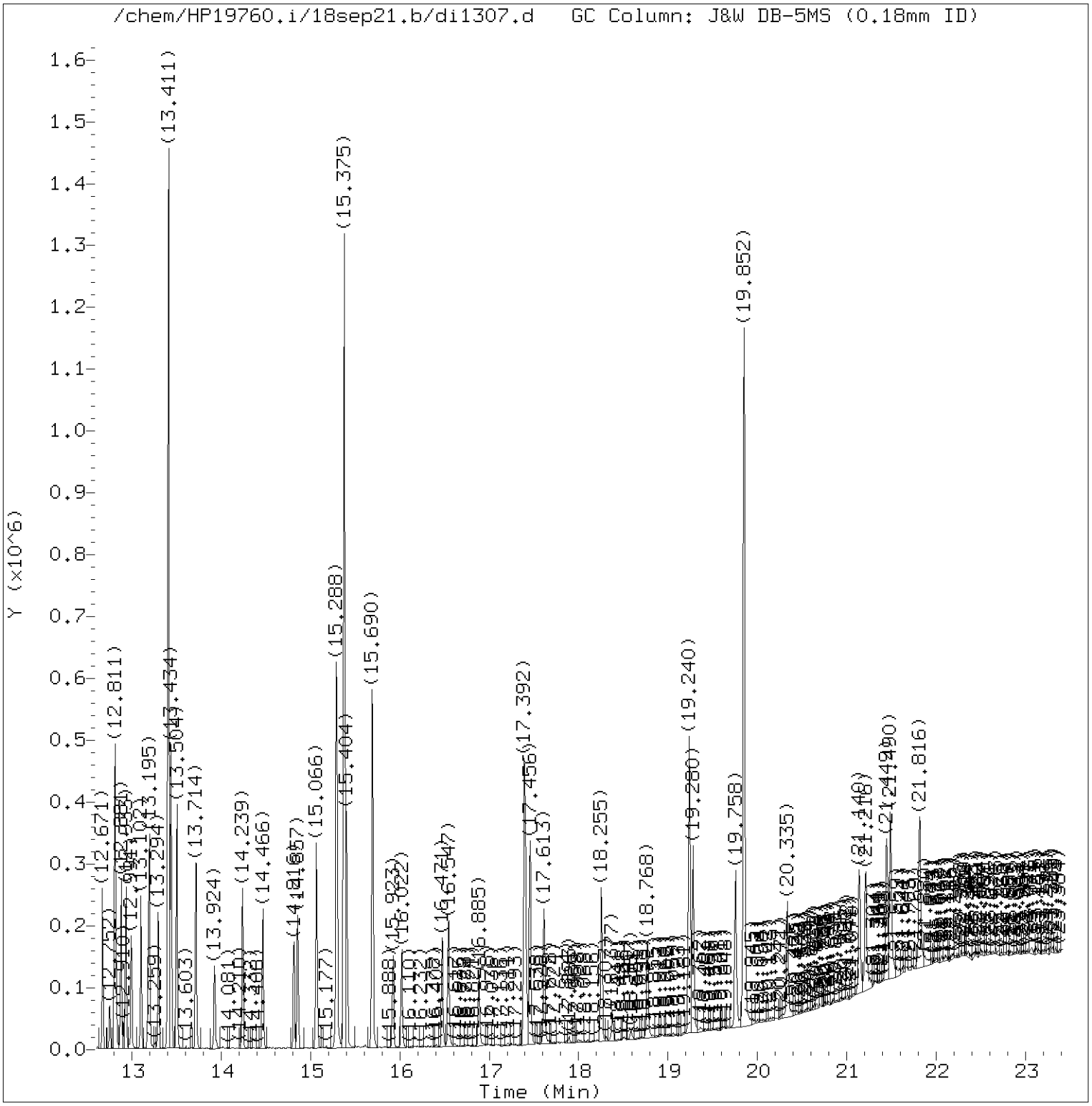
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.185	88	39552	1.286
4) N-Nitrosodimethylamine	(1)	2.780	74	48002M	1.123
5) Pyridine	(1)	2.902	79	88826M	1.193
7) 2-Picoline	(1)	4.056	93	89590	1.186
8) N-Nitrosomethylethylamine	(1)	4.202	88	40843	1.231
9) Methyl methanesulfonate	(1)	4.651	80	42474	1.184
11)$2-Fluorophenol	(1)	4.907	112	139302	2.351
13) N-Nitrosodiethylamine	(1)	5.228	102	35634	1.137
42) Total Cresols	(1)			139219	2.269
15) Ethyl methanesulfonate	(1)	5.682	109	35744	1.181
16) Benzaldehyde	(1)	6.149	77	62386	1.164
17)$Phenol-d6	(1)	6.277	99	184014	2.282
18) Phenol	(1)	6.294	94	108889	1.188
19) Aniline	(1)	6.312	93	125961	1.171
20) a-methylstyrene	(1)	6.399	118	7307	1.215
22) bis(2-Chloroethyl)ether	(1)	6.428	93	83073	1.231
23) 2-Chlorophenol	(1)	6.481	128	65673	1.151
24) 1,3-Dichlorobenzene	(1)	6.708	146	76866	1.198
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	193342	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	78162	1.208
27) Benzyl alcohol	(1)	7.017	108	42703	1.113
28) 1,2-Dichlorobenzene	(1)	7.046	146	72712	1.193
30) Indene	(1)	7.180	115	74624	1.176
31) 2-Methylphenol	(1)	7.198	108	63916	1.111
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.244	45	94287	1.202
34) bis(2-Chloroisopropyl)ether	(1)	7.244	45	94287	1.202
35) N-Nitrosopyrrolidine	(1)	7.361	100	35665	1.083
97) Isosafrole	(3)			47616	1.143
36) Acetophenone	(1)	7.408	105	92669	1.143
38) N-Nitroso-di-n-propylamine	(1)	7.425	70	53772	1.131
37) 4-Methylphenol	(1)	7.431	108	75303	1.155
39) N-Nitrosomorpholine	(1)	7.431	56	41434	1.159
40) o-Toluidine	(1)	7.460	106	118428	1.180
43) Hexachloroethane	(1)	7.559	117	31650	1.199
44)$Nitrobenzene-d5	(2)	7.623	82	158094	2.334
45) Nitrobenzene	(2)	7.652	77	79574	1.153
48) N-Nitrosopiperidine	(2)	7.880	114	32312	1.133
50) Isophorone	(2)	8.037	82	125709	1.073
120) 2,4_2,6-Dinitrotoluenes	(3)			52404	2.025
51) 2-Nitrophenol	(2)	8.148	139	25385	0.967

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.253	107	68202	1.134
56) Benzoic acid	(2)	8.334	105	80840	2.566
57) O,O,O-Triethylphosphorothioate	(2)	8.375	198	29376	1.164
55) bis(2-Chloroethoxy)methane	(2)	8.404	93	90722	1.208
60) 2,4-Dichlorophenol	(2)	8.521	162	49686	1.125
62) 1,2,4-Trichlorobenzene	(2)	8.655	180	59224	1.228
65)*Naphthalene-d8	(2)	8.736	136	704134	5.000
66) Naphthalene	(2)	8.766	128	200759	1.220
146) Diallate trans/cis	(4)			55299	1.102
67) 4-Chloroaniline	(2)	8.871	127	70572	1.123
68) 2,6-Dichlorophenol	(2)	8.876	162	48438	1.123
69) Hexachloropropene	(2)	8.923	213	35407	1.169
71) Hexachlorobutadiene	(2)	8.999	225	33957	1.254
75) Quinoline	(2)	9.290	129	108427	1.152
76) Caprolactam	(2)	9.372	113	15212	0.927
77) N-Nitrosodi-n-butylamine	(2)	9.442	84	43128	0.960
80) 4-Chloro-3-methylphenol	(2)	9.663	107	51298	1.043
82) Safrole	(2)	9.762	162	43642	1.083
83) 2-Methylnaphthalene	(2)	9.873	142	121804	1.186
84) 1-Methylnaphthalene	(2)	10.025	142	116151	1.190
85) Hexachlorocyclopentadiene	(3)	10.141	237	30185	1.119
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	55141	1.262
88) cis-Isosafrole	(3)	10.234	162	7674	0.197
90) 2,4,6-Trichlorophenol	(3)	10.334	196	28141	1.051
92) 2,4,5-Trichlorophenol	(3)	10.380	196	31173	1.084
93)$2-Fluorobiphenyl	(3)	10.485	172	257591	2.474
94) trans-Isosafrole	(3)	10.590	162	39942	0.946
95) 1,1'-Biphenyl	(3)	10.631	154	137024	1.210
96) 2-Chloronaphthalene	(3)	10.637	162	114323	1.231
98) 1-Chloronaphthalene	(3)	10.672	162	105928	1.251
99) Diphenyl ether	(3)	10.811	170	76958	1.226
100) 2-Nitroaniline	(3)	10.811	138	27924	1.001
104) 1,4-Naphthoquinone	(3)	10.928	158	32225	0.990
105) 1,4-Dinitrobenzene	(3)	11.045	168	13719	0.981
106) Dimethylphthalate	(3)	11.155	163	115402	1.190
107) 1,3-Dinitrobenzene	(3)	11.161	168	15081	0.931
108) 2,6-Dinitrotoluene	(3)	11.225	165	23346	1.037
109) Acenaphthylene	(3)	11.295	152	145810	1.172
112) 3-Nitroaniline	(3)	11.470	138	24837	1.011
113)*Acenaphthene-d10	(3)	11.523	164	323345	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.569	153	110713	1.210
115) 2,4-Dinitrophenol	(3)	11.627	184	27257	2.370
116) 4-Nitrophenol	(3)	11.744	109	28070	1.760
117) Pentachlorobenzene	(3)	11.767	250	43961	1.228
118) 2,4-Dinitrotoluene	(3)	11.826	165	29058	0.993
119) Dibenzofuran	(3)	11.826	168	154476	1.230
121) 1-Naphthylamine	(3)	11.925	143	103902	1.080
122) 2,3,4,6-Tetrachlorophenol	(3)	12.001	232	22449	1.048
123) 2-Naphthylamine	(3)	12.035	143	105271	1.083
124) Diethylphthalate	(3)	12.187	149	97907	1.068
126) Fluorene	(3)	12.274	166	114344	1.181
125) Thionazin	(3)	12.280	107	19620	1.029
128) 5-Nitro-o-toluidine	(3)	12.292	152	31137	1.078
129) 4-Nitroaniline	(3)	12.292	138	28823	1.052
127) 4-Chlorophenyl-phenylether	(3)	12.298	204	57925	1.226
130) 4,6-Dinitro-2-methylphenol	(4)	12.344	198	23394	1.545
131) N-Nitrosodiphenylamine	(4)	12.438	169	90909	1.172
132) NDPA as diphenylamine	(4)	12.438	169	90909	1.172
134) 1,2-Diphenylhydrazine	(4)	12.484	77	128822	1.157
135)$2,4,6-Tribromophenol	(3)	12.554	330	22108	1.973
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	18302	1.100
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	7547	0.732
140) Diallate (peak 1)	(4)	12.805	86	46687	0.899
141) Phorate	(4)	12.811	75	68754	1.065
142) Phenacetin	(4)	12.816	108	45834	0.939
143) 4-Bromophenyl-phenylether	(4)	12.881	248	30173	1.189
144) Diallate (peak 2)	(4)	12.910	86	8612	0.207
145) Hexachlorobenzene	(4)	12.933	284	32339	1.250
147) Dimethoate	(4)	12.991	87	38532	0.950
148) Atrazine	(4)	13.102	200	27301	1.146
149) Pentachlorophenol	(4)	13.178	266	13620	0.897
151) Pentachloronitrobenzene	(4)	13.195	237	11947	1.070
150) 4-Aminobiphenyl	(4)	13.195	169	71710	1.073
152) Pronamide	(4)	13.294	173	37273	0.964
153)*Phenanthrene-d10	(4)	13.411	188	567264	5.000
154) Dinoseb	(4)	13.434	211	14789	0.686
155) Phenanthrene	(4)	13.440	178	175303	1.229
157) Anthracene	(4)	13.504	178	160883	1.159
163) Carbazole	(4)	13.720	167	144329	1.116
164) Methyl parathion	(4)	13.924	109	24329	0.807

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

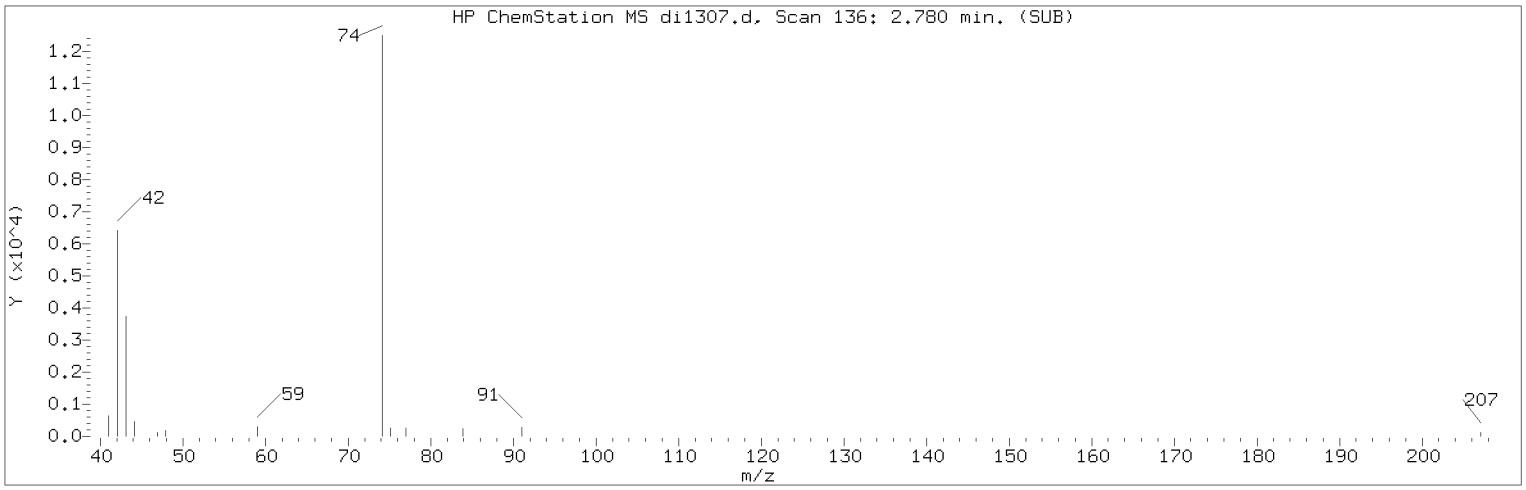
Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	145535	0.976
168) 4-Nitroquinoline-1-oxide	(4)	14.466	190	9496	0.682
167) Parathion	(4)	14.466	109	15194	0.791
169) Octachlorostyrene	(4)	14.810	308	11188	1.152
171) Isodrin	(4)	14.857	193	18568	1.159
222) Total PAHs	(6)			2741251	20.998
173) Fluoranthene	(4)	15.066	202	163941	1.124
174) Benzidine	(5)	15.288	184	314011	2.930
175)*Pyrene-d10	(5)	15.375	212	573058	5.000
177) Pyrene	(5)	15.404	202	187335	1.190
179)$Terphenyl-d14	(5)	15.690	244	225475	2.343
182) p-Dimethylaminoazobenzene	(5)	15.923	225	20947	0.850
185) Chlorobenzilate	(5)	16.022	139	38188	0.905
187) 3,3'-Dimethylbenzidine	(5)	16.477	212	85666	0.912
188) Butylbenzylphthalate	(5)	16.547	149	63322	0.951
191) 2-Acetylaminofluorene	(5)	16.885	181	39657	0.765
193) 3,3'-Dichlorobenzidine	(5)	17.392	252	53302	1.026
195) Benzo(a)anthracene	(5)	17.398	228	149720	1.122
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.409	231	28289	0.965
196) Chrysene	(5)	17.456	228	169585	1.238
199) bis(2-Ethylhexyl)phthalate	(5)	17.613	149	79861	0.904
203) 6-Methylchrysene	(5)	18.255	242	101485	1.094
205) Di-n-octylphthalate	(6)	18.768	149	115807	0.774
206) Benzo(b)fluoranthene	(6)	19.240	252	153545	1.114
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.245	256	66738	0.997
208) Benzo(k)fluoranthene	(6)	19.280	252	169782	1.195
211) Benzo(a)pyrene	(6)	19.758	252	145793	1.138
213)*Perylene-d12	(6)	19.852	264	562340	5.000
215) 3-Methylcholanthrene	(6)	20.335	268	63641	1.019
217) Dibenz(a,h)acridine	(6)	21.140	279	107443	1.071
218) Dibenz(a,j)acridine	(6)	21.216	279	125785	1.134
219) Indeno(1,2,3-cd)pyrene	(6)	21.449	276	139538M	1.188
220) Dibenz(a,h)anthracene	(6)	21.490	278	154351	1.210
221) Benzo(g,h,i)perylene	(6)	21.822	276	161894	1.236

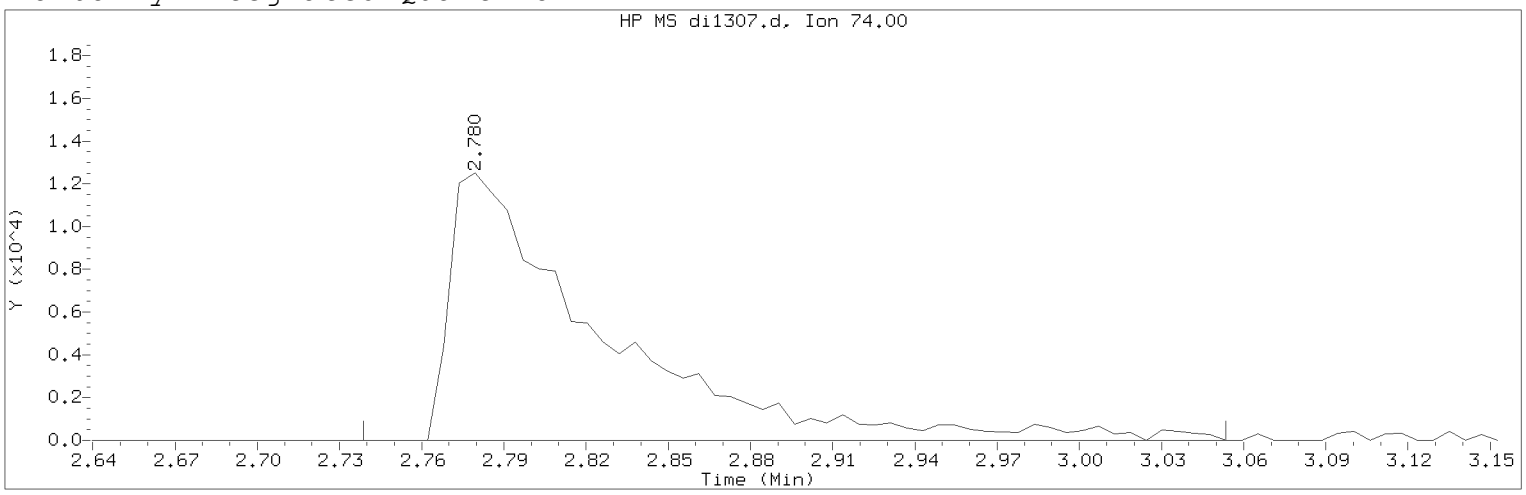
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

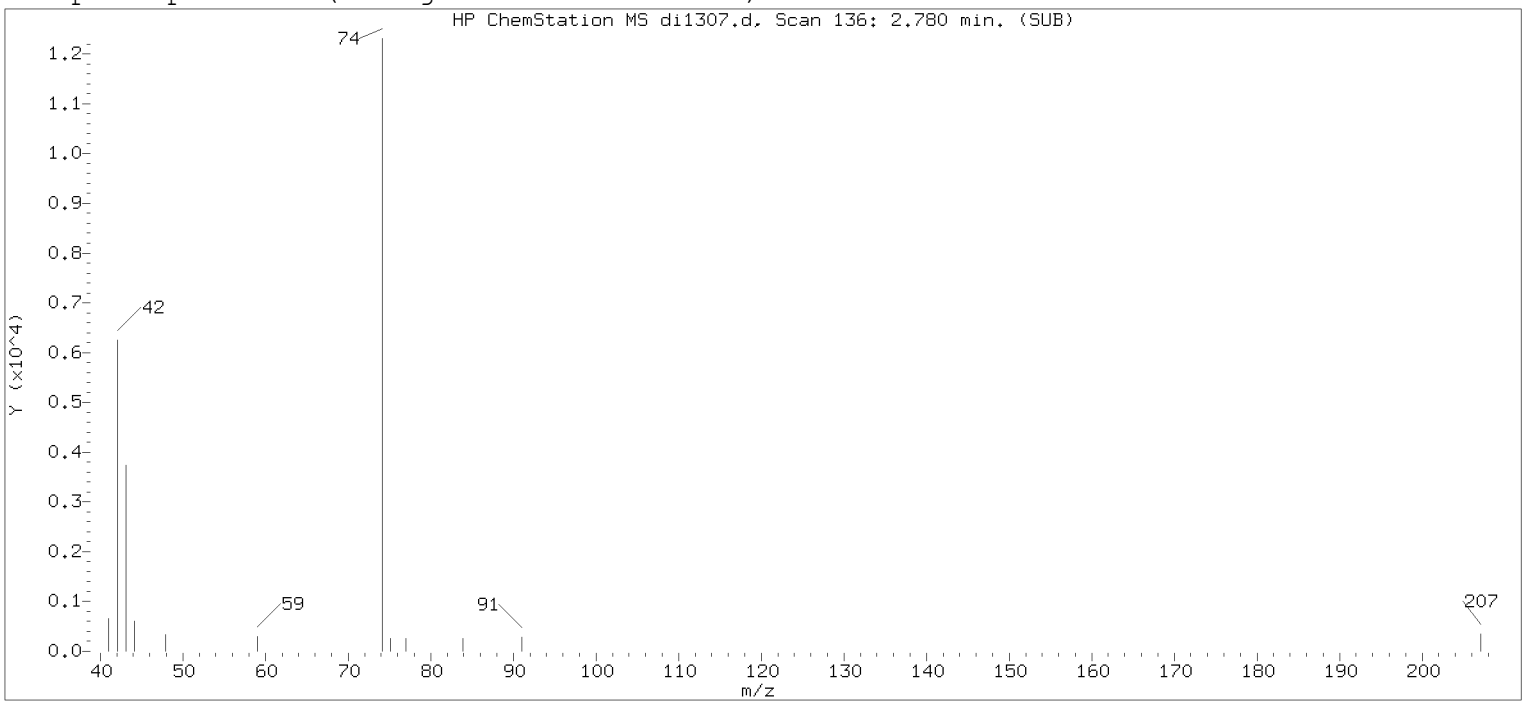
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 136
Retention Time (minutes) : 2.780
Quant Ion : 74.00
Area (flag) : 48002M
On-Column Amount (ng/ul) : 1.1232
Integration start scan : 128 Integration stop scan: 182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

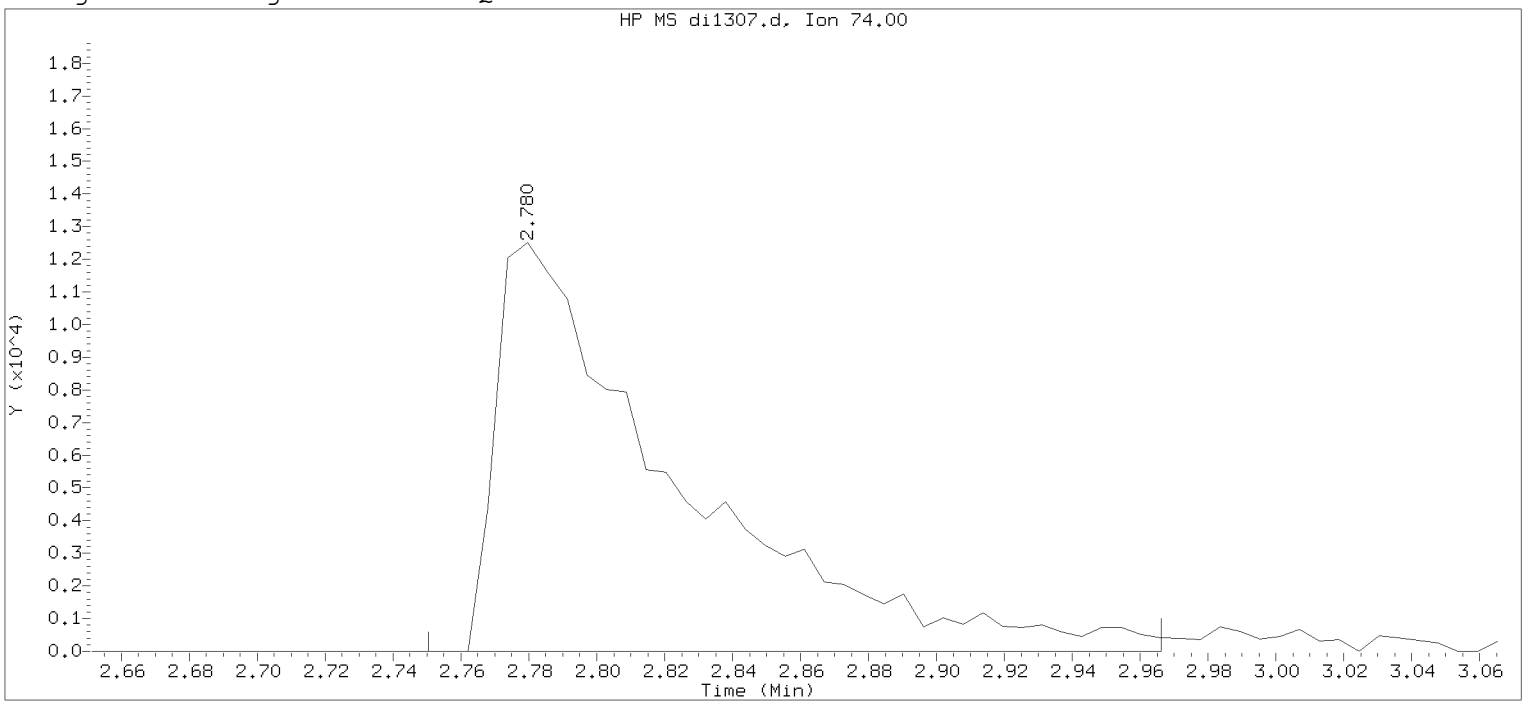
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:10
Date, time and analyst ID of latest file update: 21-Sep-2018 21:10 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 136		
Retention Time (minutes)	: 2.780		
Quant Ion	: 74.00		
Area	: 45925		
On-column Amount (ng/ul)	: 1.0715		
Integration start scan	: 130	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

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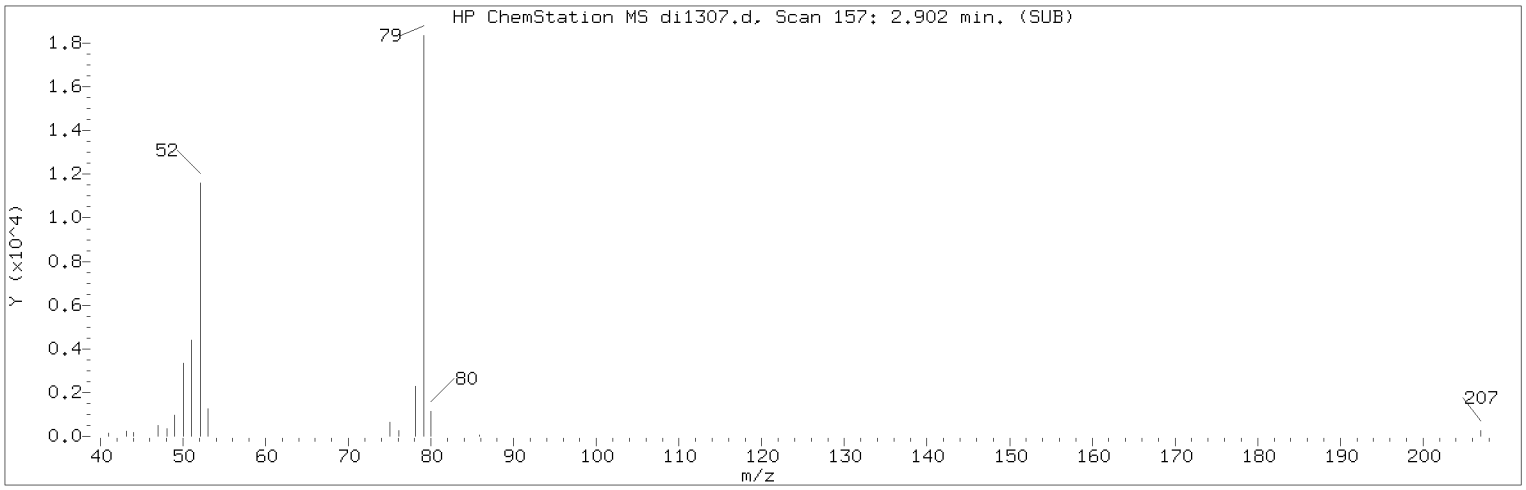
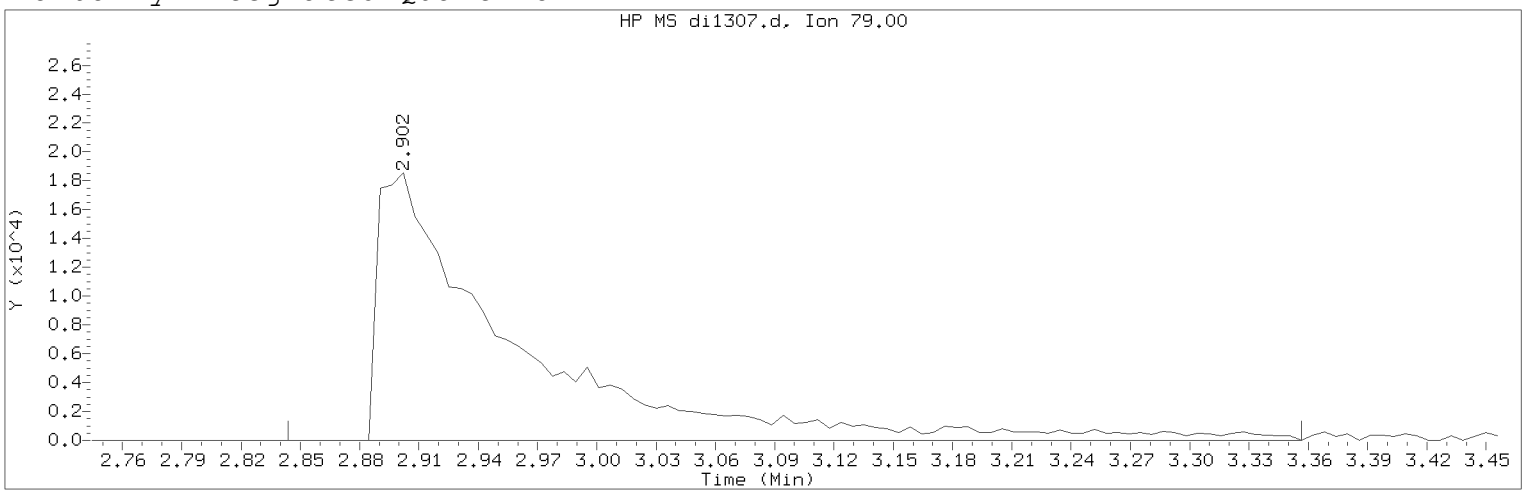
Target 3.5 esignature used. AE20 eAE20 Page 898 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

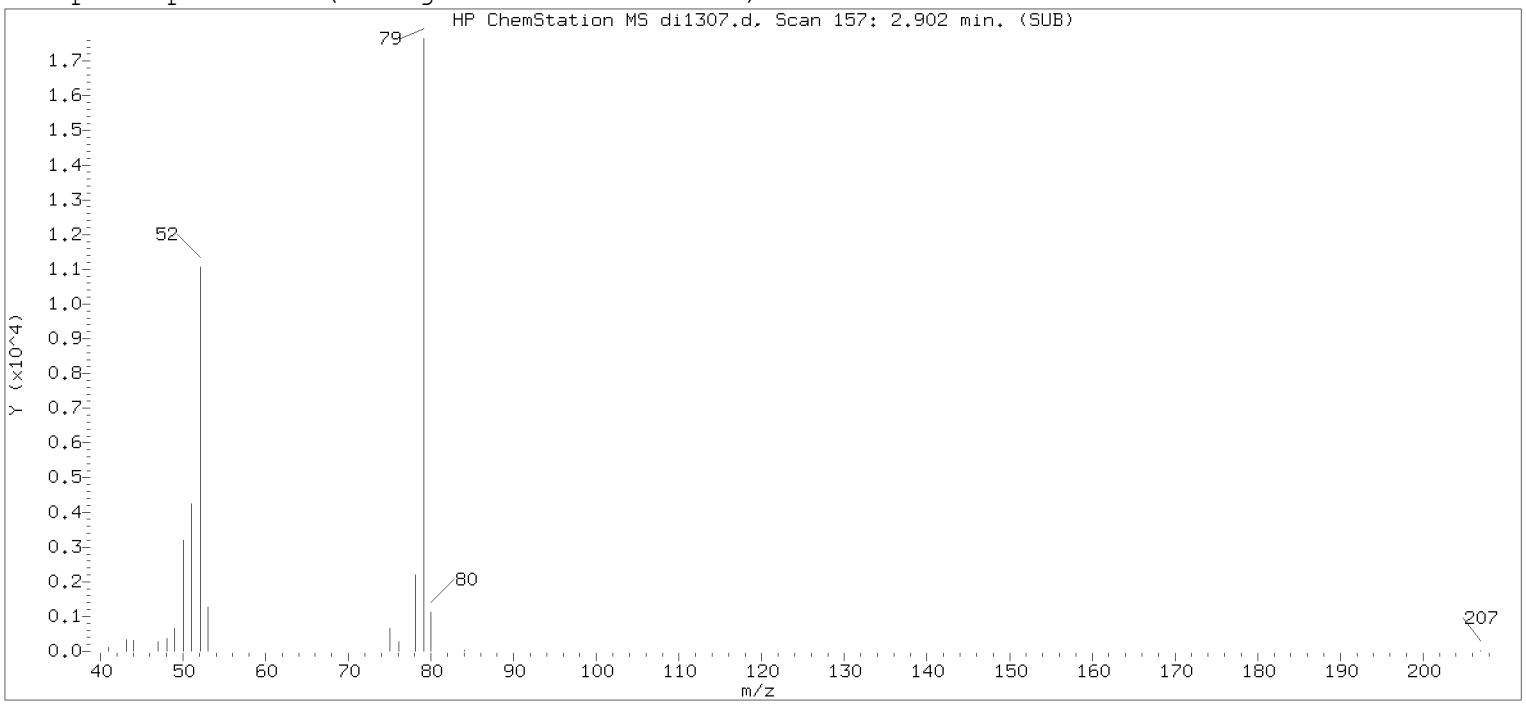
Compound Number : 5
Compound Name : Pyridine
Scan Number : 157
Retention Time (minutes) : 2.902
Quant Ion : 79.00
Area (flag) : 88826M
On-Column Amount (ng/ul) : 1.1934
Integration start scan : 146 Integration stop scan: 234
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

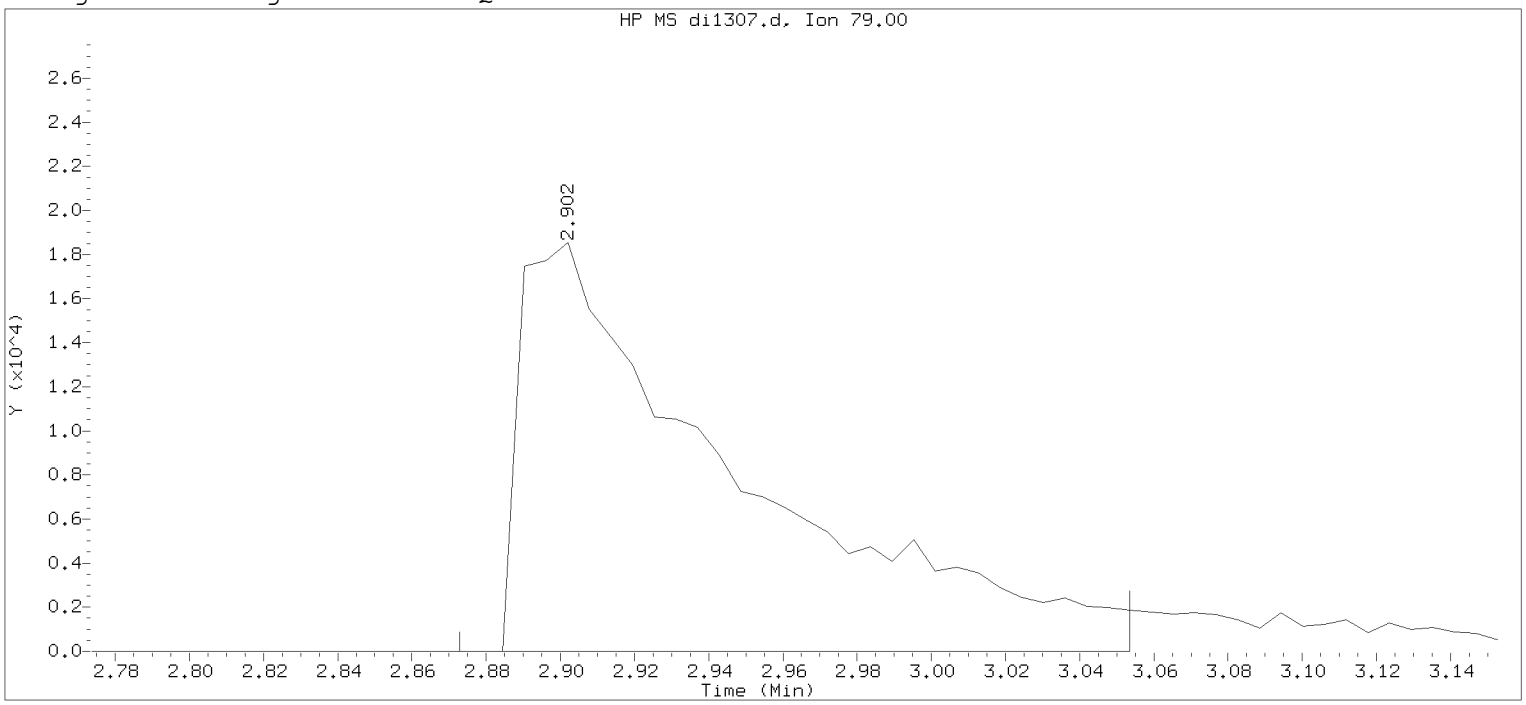
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

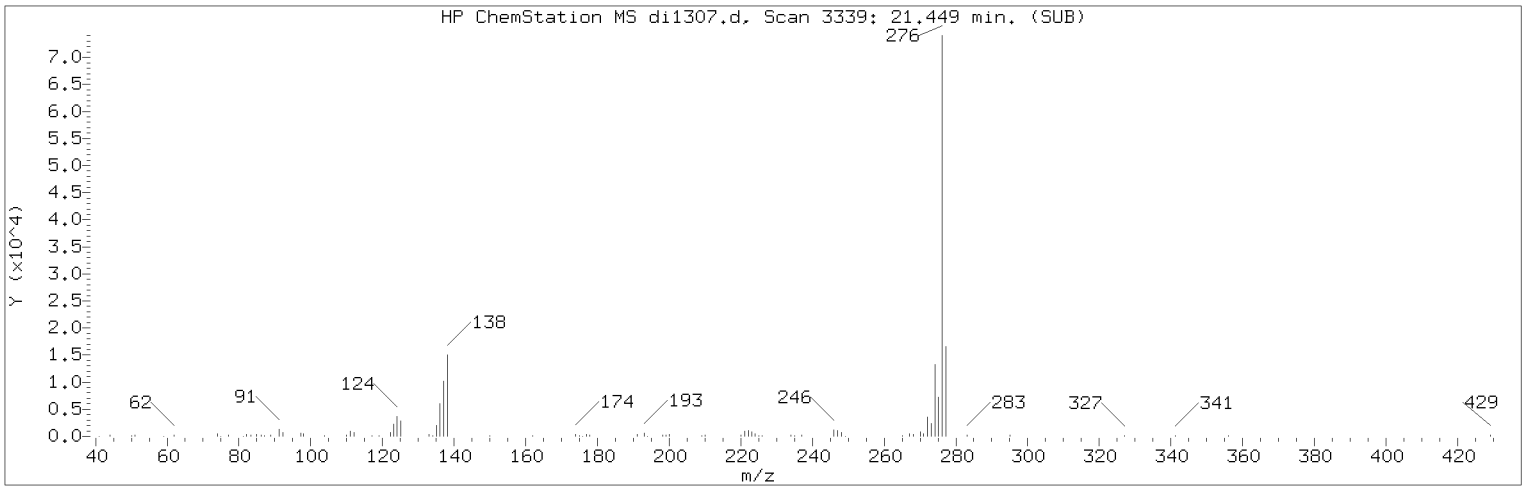
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:10
Date, time and analyst ID of latest file update: 21-Sep-2018 21:10 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

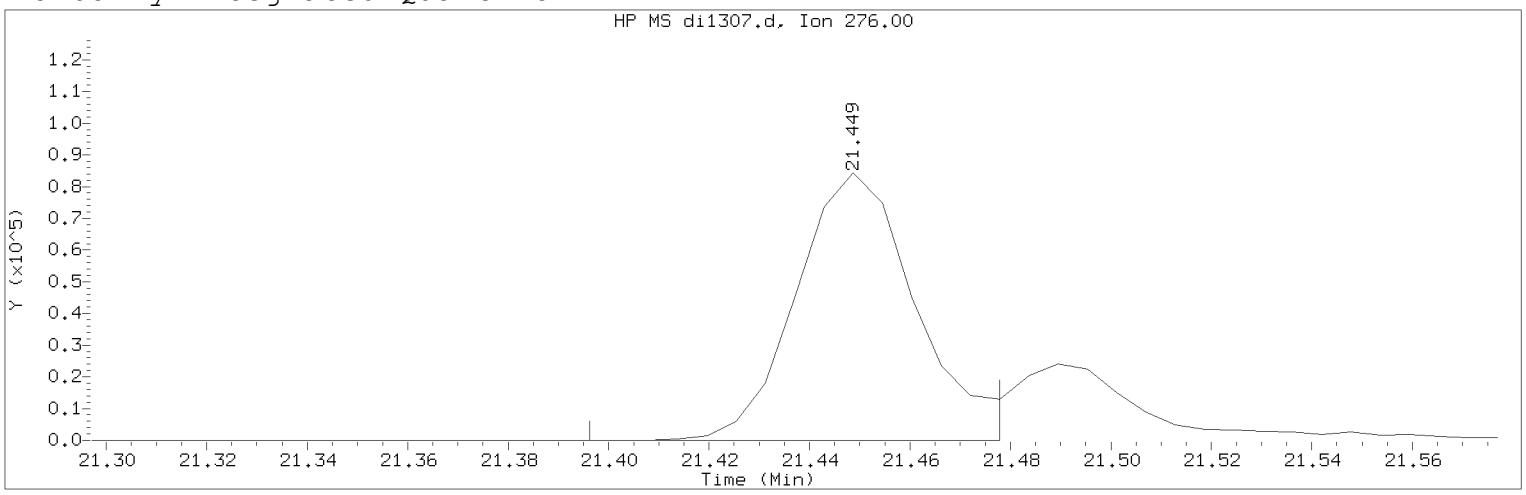
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 157		
Retention Time (minutes)	: 2.902		
Quant Ion	: 79.00		
Area	: 74521		
On-column Amount (ng/ul)	: 1.0347		
Integration start scan	: 151	Integration stop scan:	182
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used: AE2 en1330

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:34 em10340

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

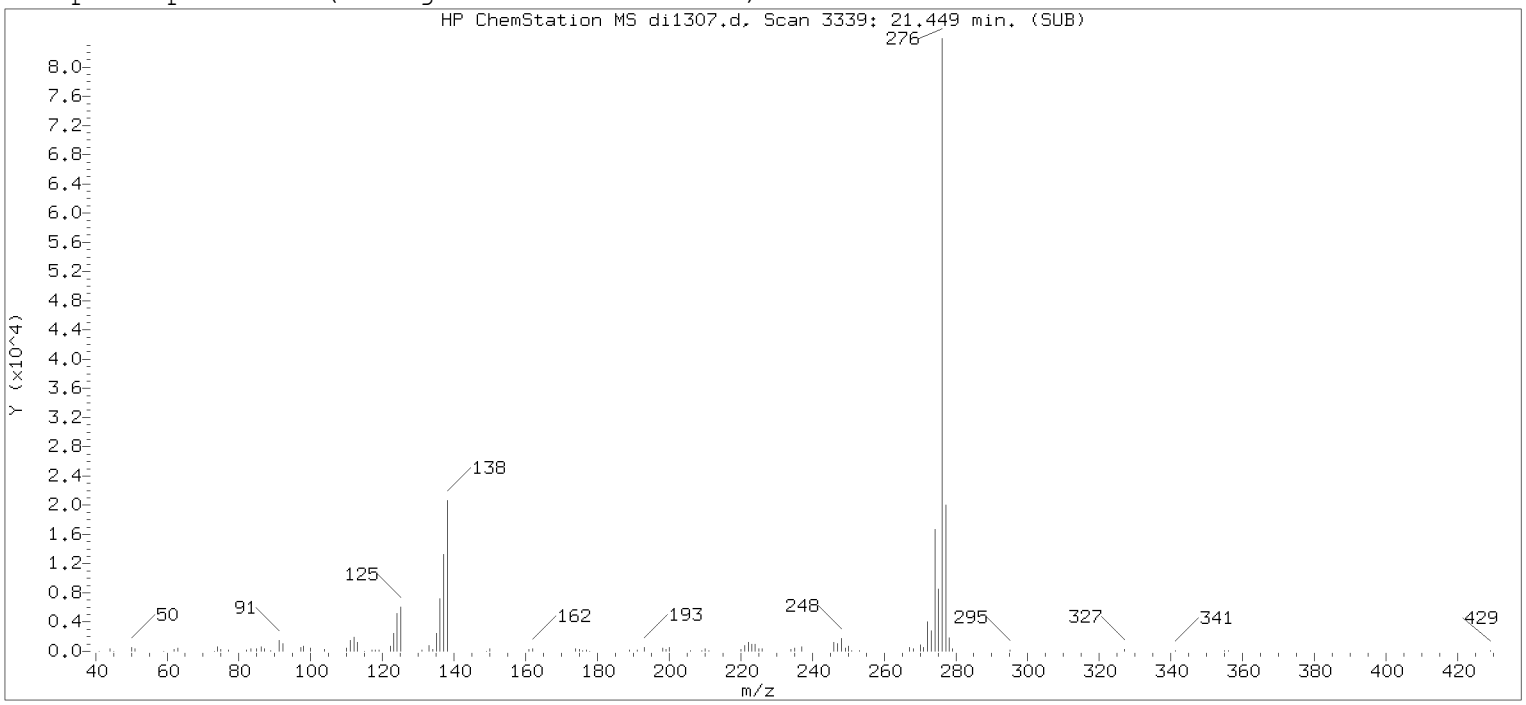
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3339
Retention Time (minutes) : 21.449
Quant Ion : 276.00
Area (flag) : 139538M
On-Column Amount (ng/ul) : 1.1881
Integration start scan : 3329 Integration stop scan: 3343
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

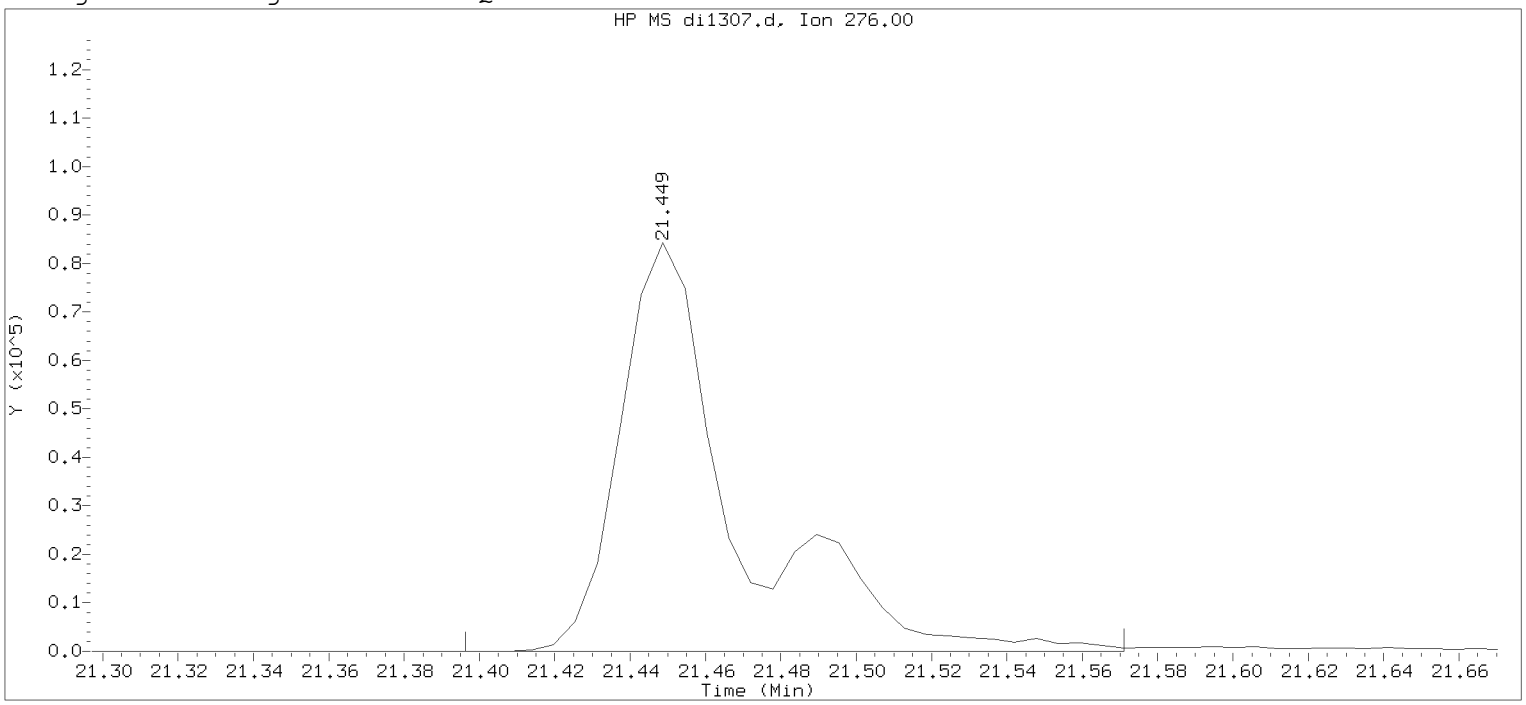
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



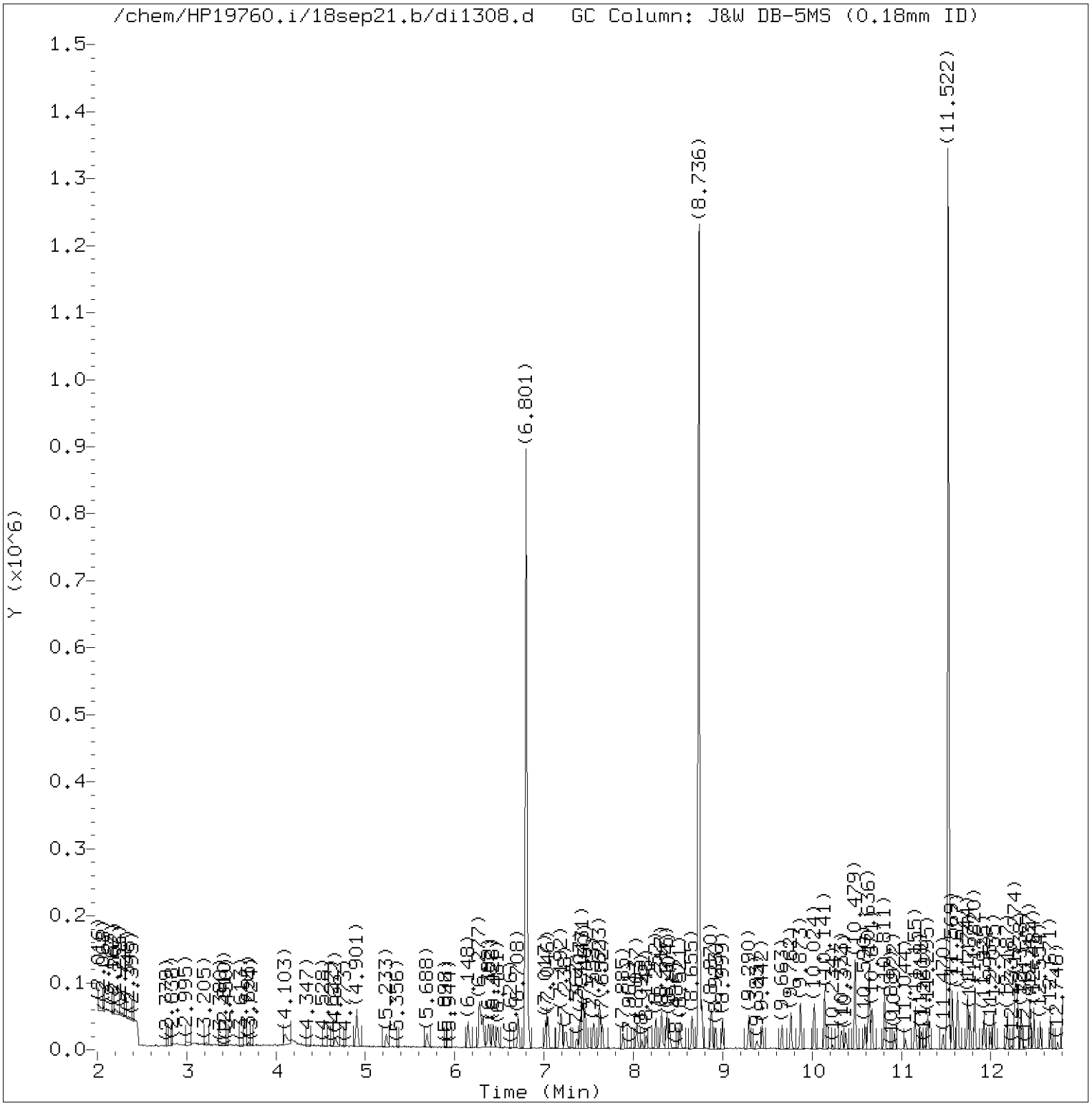
Data File: /chem/HP19760.i/18sep21.b/di1307.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 20:42 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:10
Date, time and analyst ID of latest file update: 21-Sep-2018 21:10 Automation

Sample Name: SSTD1.25 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3339		
Retention Time (minutes)	: 21.449		
Quant Ion	: 276.00		
Area	: 180471		
On-column Amount (ng/ul)	: 1.3110		
Integration start scan	: 3329	Integration stop scan:	3359
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

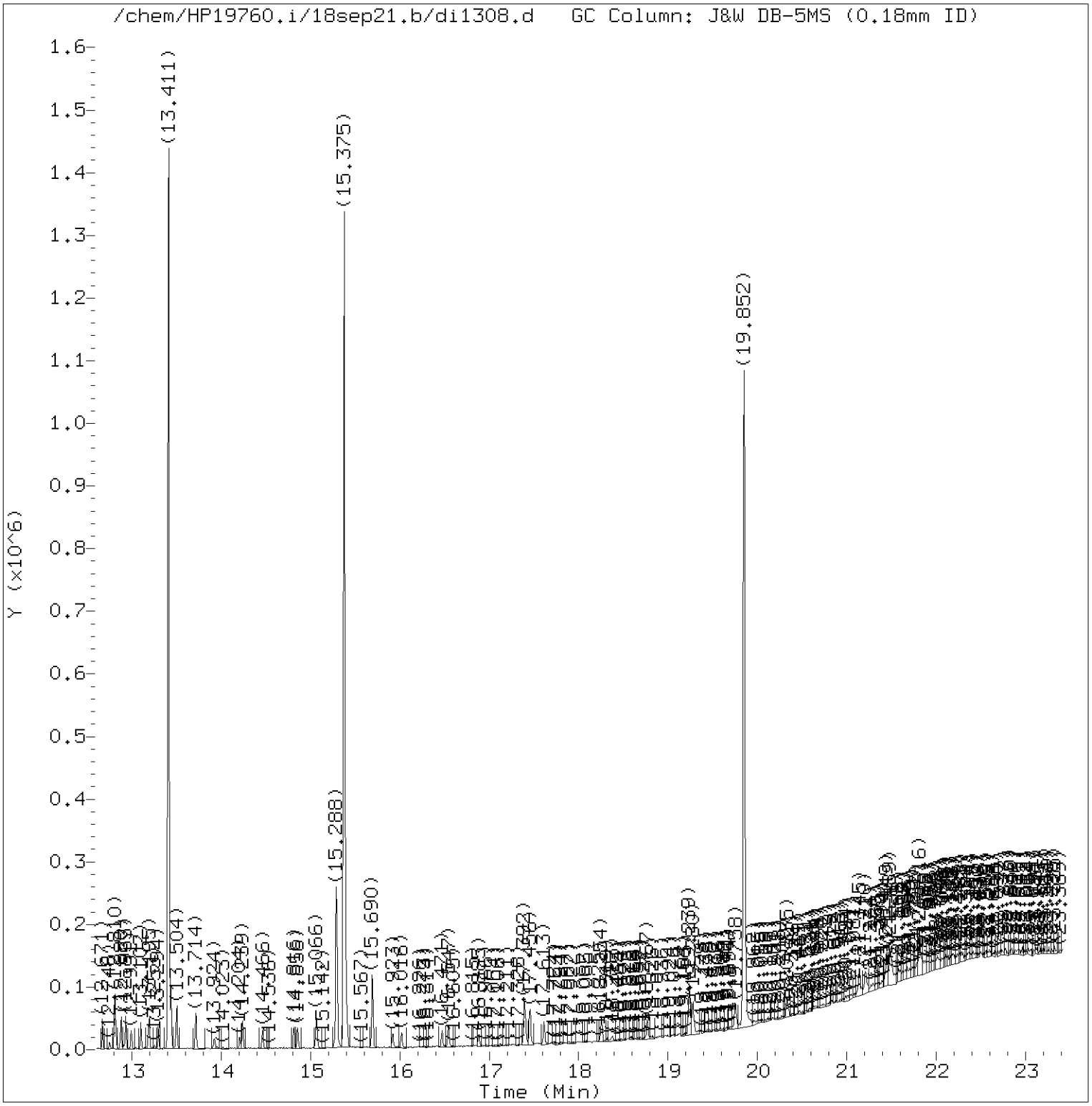
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.208	88	10126	0.337
4) N-Nitrosodimethylamine	(1)	2.855	74	8104M	0.194
5) Pyridine	(1)	3.018	79	15486M	0.213
7) 2-Picoline	(1)	4.091	93	16212	0.220
8) N-Nitrosomethylethylamine	(1)	4.207	88	9518M	0.293
9) Methyl methanesulfonate	(1)	4.662	80	7870	0.224
11)$2-Fluorophenol	(1)	4.901	112	25421	0.447
13) N-Nitrosodiethylamine	(1)	5.233	102	6126	0.206
42) Total Cresols	(1)			25878	0.440
15) Ethyl methanesulfonate	(1)	5.688	109	6827	0.233
16) Benzaldehyde	(1)	6.148	77	13382	0.255
17)$Phenol-d6	(1)	6.277	99	33815	0.438
18) Phenol	(1)	6.300	94	20191	0.228
19) Aniline	(1)	6.317	93	25458	0.243
20) a-methylstyrene	(1)	6.399	118	1313M	0.223
22) bis(2-Chloroethyl)ether	(1)	6.428	93	15843	0.241
23) 2-Chlorophenol	(1)	6.481	128	12506	0.228
24) 1,3-Dichlorobenzene	(1)	6.708	146	15104	0.242
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	189046	5.000
26) 1,4-Dichlorobenzene	(1)	6.824	146	16513	0.259
27) Benzyl alcohol	(1)	7.017	108	7672	0.205
28) 1,2-Dichlorobenzene	(1)	7.040	146	15274	0.255
30) Indene	(1)	7.180	115	15398	0.248
31) 2-Methylphenol	(1)	7.192	108	11150	0.204
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.238	45	17831	0.235
34) bis(2-Chloroisopropyl)ether	(1)	7.238	45	17831	0.235
35) N-Nitrosopyrrolidine	(1)	7.367	100	6344	0.203
97) Isosafrole	(3)			9403	0.224
36) Acetophenone	(1)	7.407	105	16590	0.214
38) N-Nitroso-di-n-propylamine	(1)	7.425	70	10657	0.232
39) N-Nitrosomorpholine	(1)	7.431	56	7935	0.227
37) 4-Methylphenol	(1)	7.436	108	14728	0.234
40) o-Toluidine	(1)	7.460	106	21116	0.220
43) Hexachloroethane	(1)	7.553	117	6276	0.243
44)$Nitrobenzene-d5	(2)	7.623	82	30099	0.452
45) Nitrobenzene	(2)	7.652	77	15855	0.233
48) N-Nitrosopiperidine	(2)	7.879	114	5952	0.214
50) Isophorone	(2)	8.037	82	23678	0.208
120) 2,4_2,6-Dinitrotoluenes	(3)			9235	0.369
51) 2-Nitrophenol	(2)	8.148	139	4815	0.184

M = Compound was manually integrated.
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$ = Compound is a surrogate standard.

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.252	107	12029	0.206
56) Benzoic acid	(2)	8.317	105	24911	0.792
57) O,O,O-Triethylphosphorothioate	(2)	8.375	198	5614	0.223
55) bis(2-Chloroethoxy)methane	(2)	8.404	93	17442	0.235
60) 2,4-Dichlorophenol	(2)	8.521	162	8875	0.207
62) 1,2,4-Trichlorobenzene	(2)	8.655	180	11153	0.234
65)*Naphthalene-d8	(2)	8.736	136	702663	5.000
66) Naphthalene	(2)	8.765	128	39638	0.242
146) Diallate trans/cis	(4)			10117	0.198
67) 4-Chloroaniline	(2)	8.865	127	13450	0.219
68) 2,6-Dichlorophenol	(2)	8.882	162	8285	0.199
69) Hexachloropropene	(2)	8.923	213	6326	0.209
71) Hexachlorobutadiene	(2)	8.999	225	6403	0.239
75) Quinoline	(2)	9.290	129	19988	0.213
76) Caprolactam	(2)	9.377	113	2740	0.167
77) N-Nitrosodi-n-butylamine	(2)	9.442	84	8486	0.189
80) 4-Chloro-3-methylphenol	(2)	9.663	107	8947	0.190
82) Safrole	(2)	9.762	162	8007	0.199
83) 2-Methylnaphthalene	(2)	9.873	142	23011	0.227
84) 1-Methylnaphthalene	(2)	10.024	142	22860	0.236
85) Hexachlorocyclopentadiene	(3)	10.141	237	5878	0.216
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	10702	0.244
88) cis-Isosafrole	(3)	10.234	162	1360	0.035
90) 2,4,6-Trichlorophenol	(3)	10.333	196	4952	0.191
92) 2,4,5-Trichlorophenol	(3)	10.374	196	4994	0.180
93)$2-Fluorobiphenyl	(3)	10.479	172	49578	0.476
94) trans-Isosafrole	(3)	10.590	162	8043	0.189
95) 1,1'-Biphenyl	(3)	10.631	154	26351	0.233
96) 2-Chloronaphthalene	(3)	10.636	162	21769	0.235
98) 1-Chloronaphthalene	(3)	10.671	162	22251	0.259
99) Diphenyl ether	(3)	10.811	170	15136	0.241
100) 2-Nitroaniline	(3)	10.811	138	4398	0.165
104) 1,4-Naphthoquinone	(3)	10.928	158	5500	0.168
105) 1,4-Dinitrobenzene	(3)	11.044	168	1876	0.133
106) Dimethylphthalate	(3)	11.155	163	21673	0.222
107) 1,3-Dinitrobenzene	(3)	11.155	168	2613	0.160
108) 2,6-Dinitrotoluene	(3)	11.225	165	4236	0.194
109) Acenaphthylene	(3)	11.295	152	26005	0.212
112) 3-Nitroaniline	(3)	11.464	138	4176	0.177
113)*Acenaphthene-d10	(3)	11.522	164	325875	5.000

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
114) Acenaphthene	(3)	11.569	153	22263	0.243
115) 2,4-Dinitrophenol	(3)	11.627	184	12211	1.053
116) 4-Nitrophenol	(3)	11.744	109	10136	0.631
117) Pentachlorobenzene	(3)	11.767	250	8583	0.240
118) 2,4-Dinitrotoluene	(3)	11.820	165	4999	0.169
119) Dibenzofuran	(3)	11.820	168	31507	0.249
121) 1-Naphthylamine	(3)	11.925	143	19013	0.196
122) 2,3,4,6-Tetrachlorophenol	(3)	12.000	232	3641	0.169
123) 2-Naphthylamine	(3)	12.035	143	19638	0.200
124) Diethylphthalate	(3)	12.187	149	18931	0.205
126) Fluorene	(3)	12.274	166	22209	0.230
125) Thionazin	(3)	12.280	107	3070	0.160
128) 5-Nitro-o-toluidine	(3)	12.286	152	4693	0.170
129) 4-Nitroaniline	(3)	12.286	138	4116	0.158
127) 4-Chlorophenyl-phenylether	(3)	12.298	204	11109	0.235
130) 4,6-Dinitro-2-methylphenol	(4)	12.344	198	8609	0.559
131) N-Nitrosodiphenylamine	(4)	12.437	169	17239	0.222
132) NDPA as diphenylamine	(4)	12.437	169	17239	0.222
134) 1,2-Diphenylhydrazine	(4)	12.484	77	23388	0.212
135)$2,4,6-Tribromophenol	(3)	12.554	330	3775	0.351
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	3709	0.219
139) 1,3,5-Trinitrobenzene	(4)	12.752	213	1135	0.108
140) Diallate (peak 1)	(4)	12.805	86	8804	0.167
141) Phorate	(4)	12.810	75	12380	0.196
142) Phenacetin	(4)	12.816	108	7531	0.152
143) 4-Bromophenyl-phenylether	(4)	12.880	248	6126	0.239
144) Diallate (peak 2)	(4)	12.910	86	1313	0.031
145) Hexachlorobenzene	(4)	12.933	284	6481	0.247
147) Dimethoate	(4)	12.991	87	6679	0.162
148) Atrazine	(4)	13.102	200	5200	0.215
149) Pentachlorophenol	(4)	13.178	266	1987	0.129
150) 4-Aminobiphenyl	(4)	13.195	169	11849	0.182
151) Pentachloronitrobenzene	(4)	13.195	237	1899	0.167
152) Pronamide	(4)	13.294	173	5694	0.154
153)*Phenanthrene-d10	(4)	13.411	188	576849	5.000
154) Dinoseb	(4)	13.434	211	2299	0.105
155) Phenanthrene	(4)	13.440	178	36481	0.251
157) Anthracene	(4)	13.504	178	30266	0.218
163) Carbazole	(4)	13.714	167	25437	0.200
164) Methyl parathion	(4)	13.924	109	3678	0.120

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on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
165) Di-n-butylphthalate	(4)	14.239	149	26603	0.175
168) 4-Nitroquinoline-1-oxide	(4)	14.454	190	1371	0.097
167) Parathion	(4)	14.466	109	1945	0.100
169) Octachlorostyrene	(4)	14.810	308	2400	0.243
171) Isodrin	(4)	14.856	193	3987	0.245
222) Total PAHs	(6)			502013	4.128
173) Fluoranthene	(4)	15.066	202	29169	0.202
174) Benzidine	(5)	15.288	184	129537	1.222
175)*Pyrene-d10	(5)	15.375	212	566795	5.000
177) Pyrene	(5)	15.404	202	39167	0.251
179)$Terphenyl-d14	(5)	15.690	244	44509	0.472
182) p-Dimethylaminoazobenzene	(5)	15.923	225	3324	0.136
185) Chlorobenzilate	(5)	16.016	139	5850	0.140
187) 3,3'-Dimethylbenzidine	(5)	16.471	212	14155	0.152
188) Butylbenzylphthalate	(5)	16.541	149	10545	0.160
191) 2-Acetylaminofluorene	(5)	16.885	181	5758	0.112
193) 3,3'-Dichlorobenzidine	(5)	17.392	252	7842	0.153
195) Benzo(a)anthracene	(5)	17.398	228	26122	0.203
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.409	231	4394	0.152
196) Chrysene	(5)	17.456	228	30189	0.226
199) bis(2-Ethylhexyl)phthalate	(5)	17.613	149	11940	0.137
203) 6-Methylchrysene	(5)	18.254	242	17522	0.191
205) Di-n-octylphthalate	(6)	18.767	149	18072	0.128
206) Benzo(b)fluoranthene	(6)	19.234	252	25919	0.205
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.245	256	10317	0.164
208) Benzo(k)fluoranthene	(6)	19.280	252	28183	0.215
211) Benzo(a)pyrene	(6)	19.758	252	22126	0.190
213)*Perylene-d12	(6)	19.852	264	530080	5.000
215) 3-Methylcholanthrene	(6)	20.335	268	10374M	0.184
217) Dibenz(a,h)acridine	(6)	21.140	279	17879	0.189
218) Dibenz(a,j)acridine	(6)	21.215	279	19086	0.183
219) Indeno(1,2,3-cd)pyrene	(6)	21.449	276	23084M	0.213
220) Dibenz(a,h)anthracene	(6)	21.489	278	26321	0.222
221) Benzo(g,h,i)perylene	(6)	21.816	276	29000	0.237

M = Compound was manually integrated.
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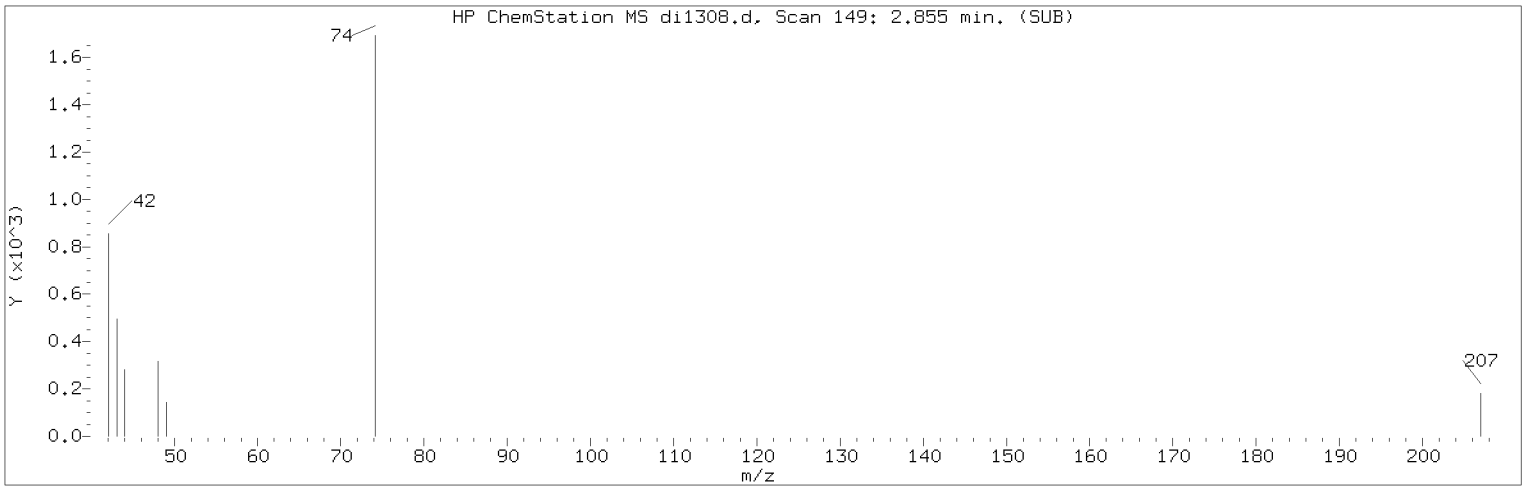
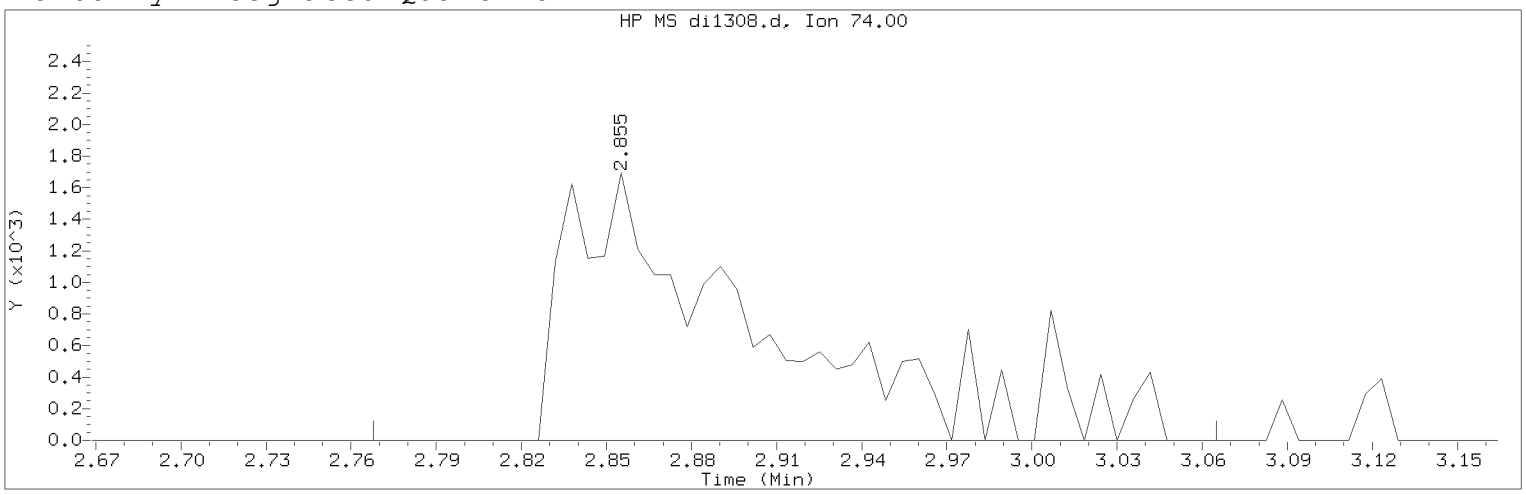
Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

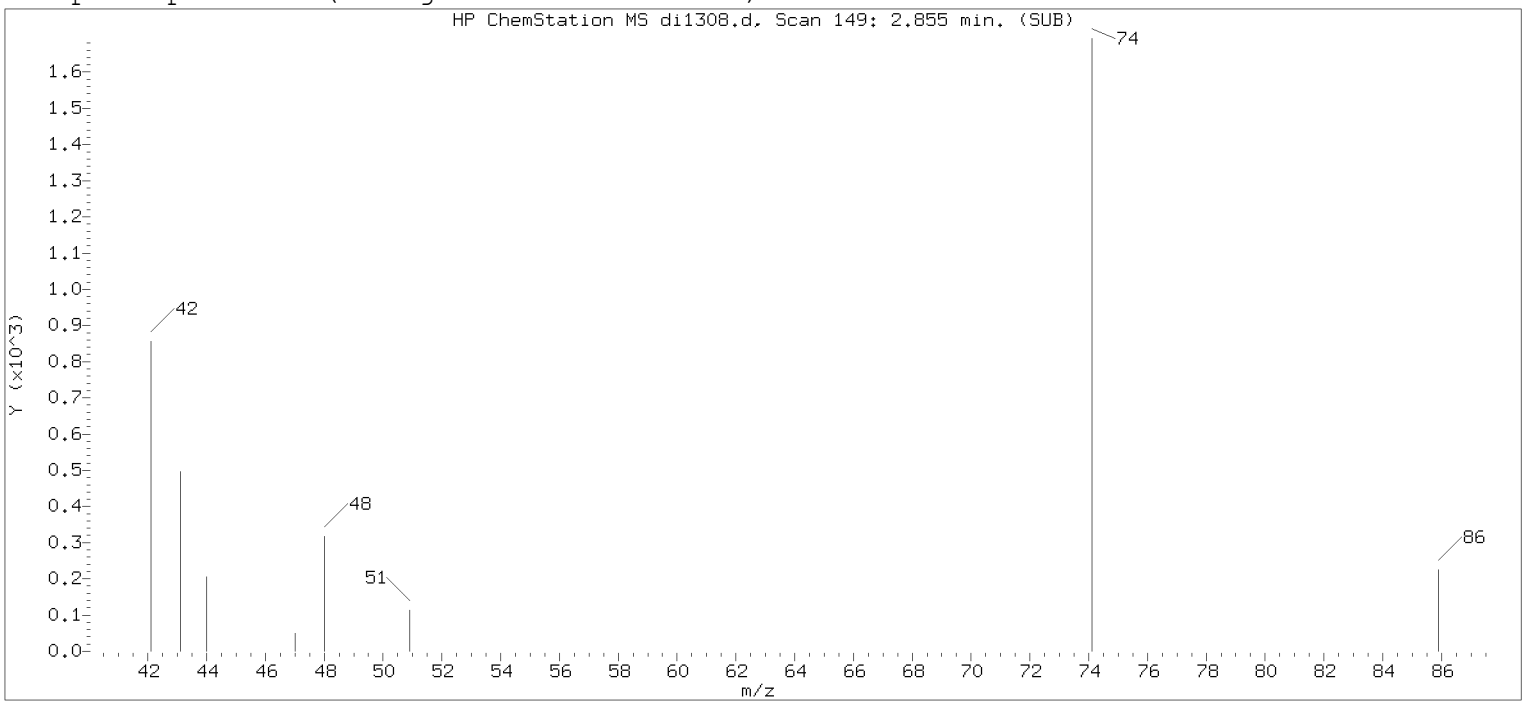
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 149
Retention Time (minutes) : 2.855
Quant Ion : 74.00
Area (flag) : 8104M
On-Column Amount (ng/ul) : 0.1939
Integration start scan : 133 Integration stop scan: 184
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

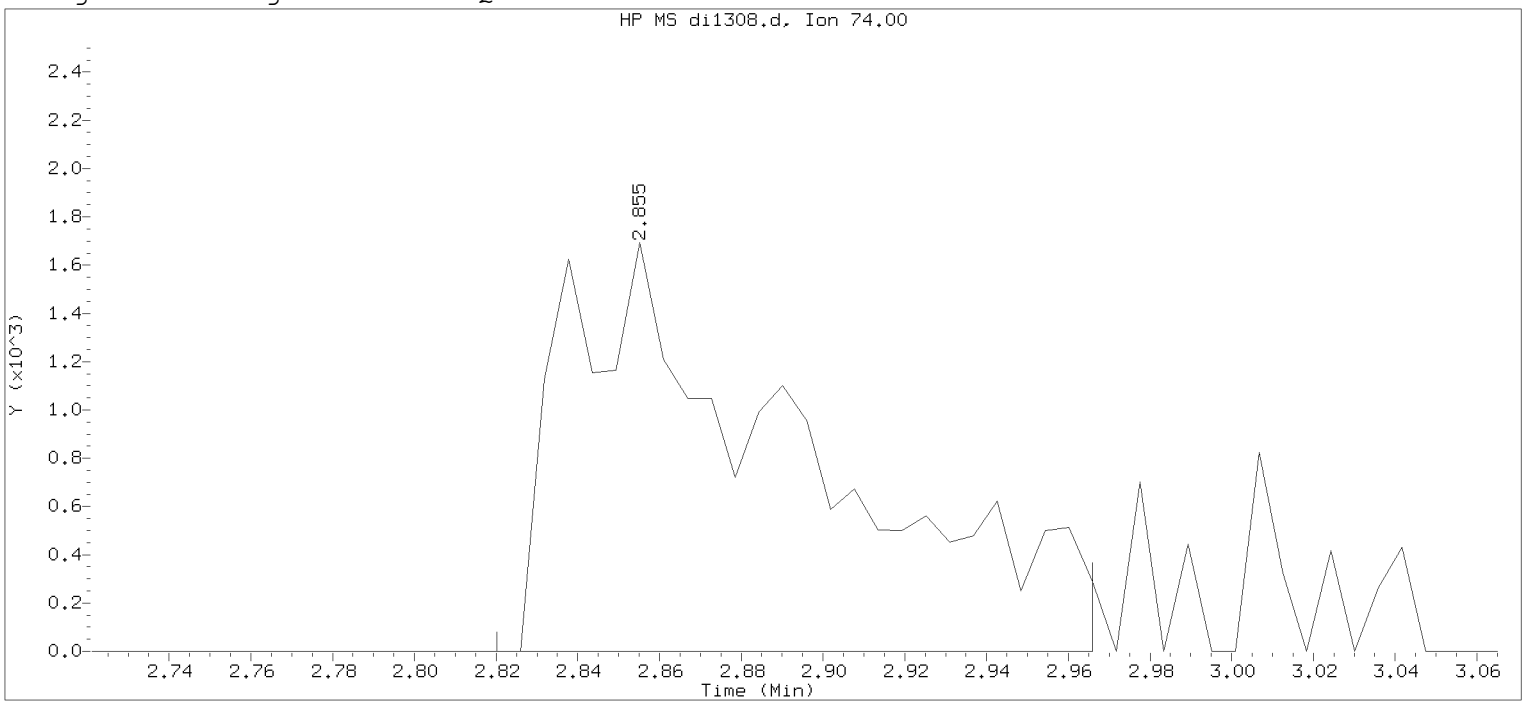
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

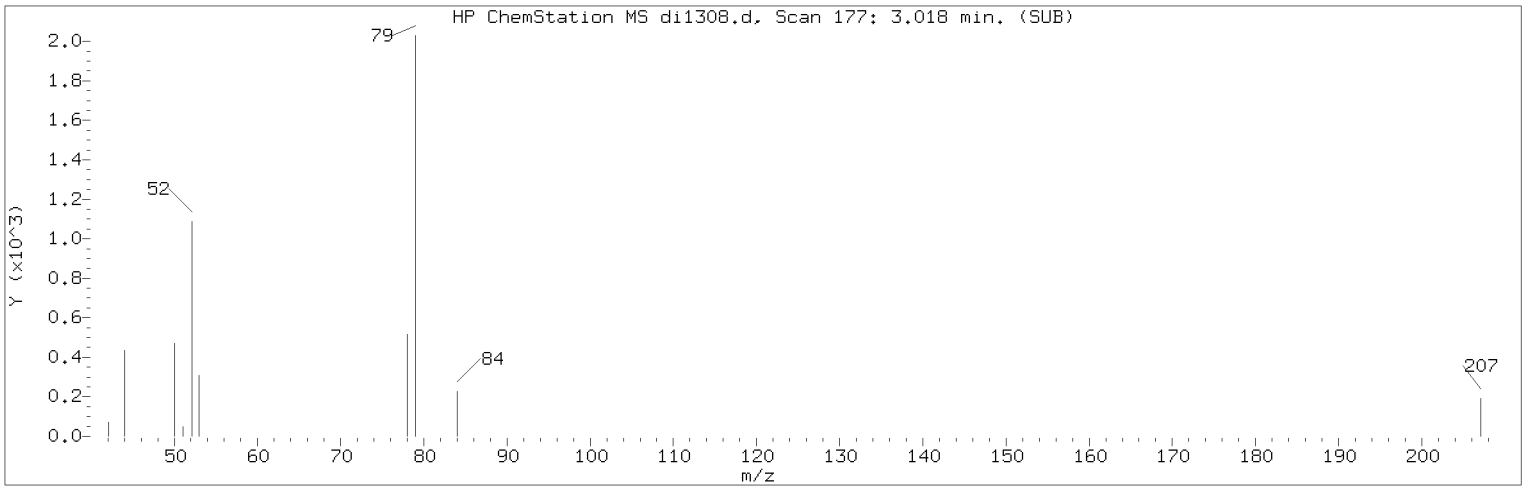
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

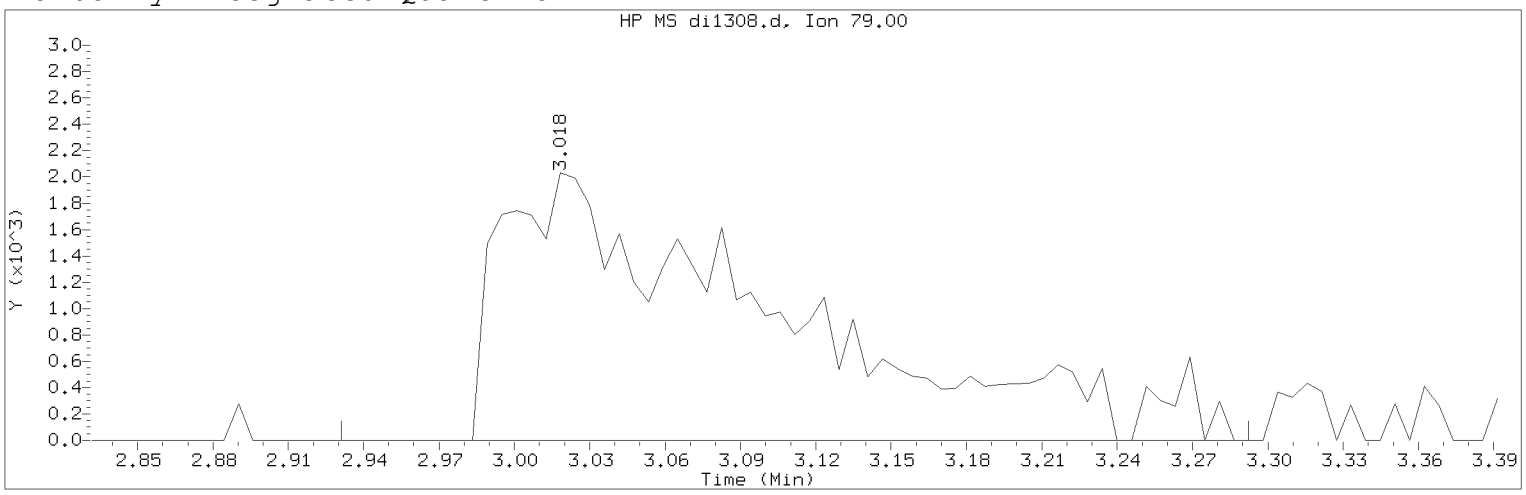
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 149		
Retention Time (minutes)	: 2.855		
Quant Ion	: 74.00		
Area	: 6861		
On-column Amount (ng/ul)	: 0.1637		
Integration start scan	: 142	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used: AE20-e1e3391

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

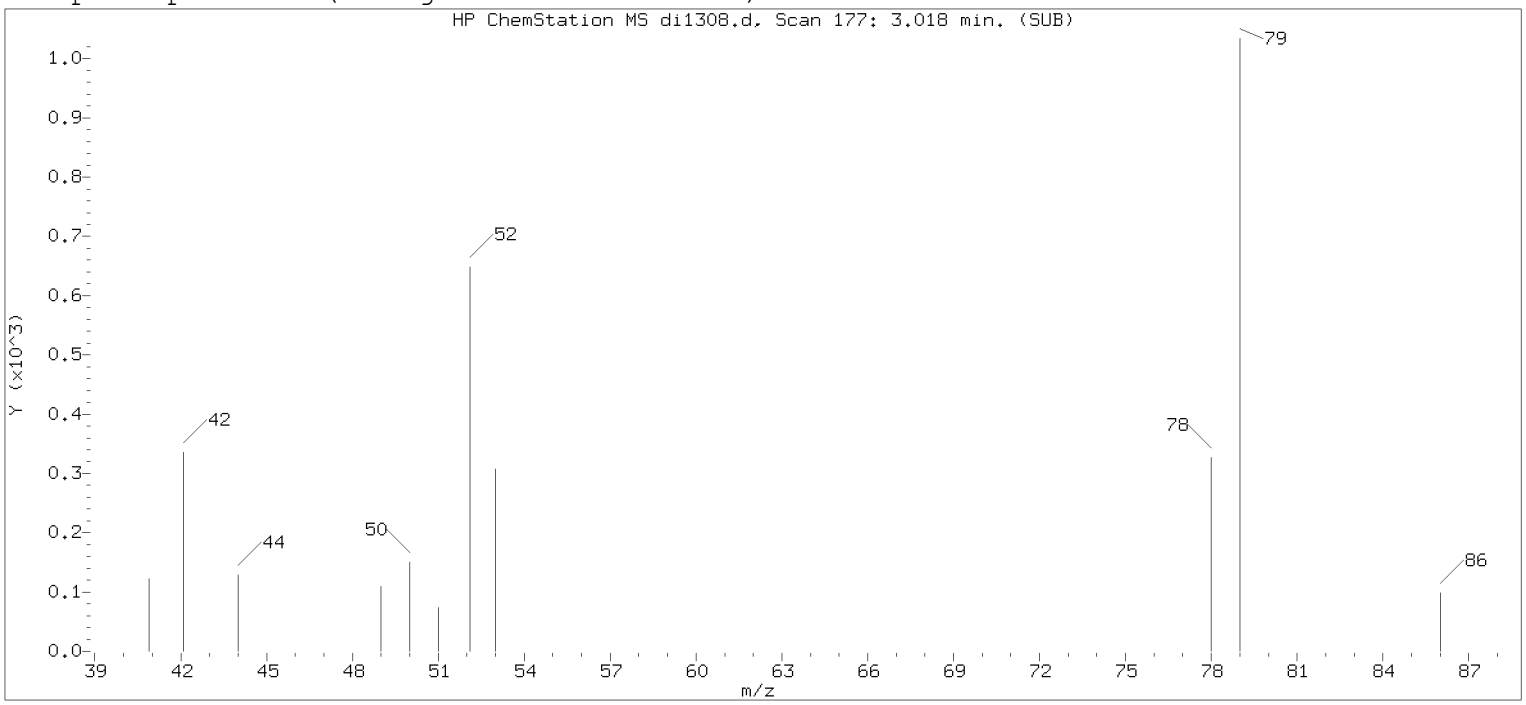
Compound Number : 5
Compound Name : Pyridine
Scan Number : 177
Retention Time (minutes) : 3.018
Quant Ion : 79.00
Area (flag) : 15486M
On-Column Amount (ng/ul) : 0.2128
Integration start scan : 161 Integration stop scan: 223
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

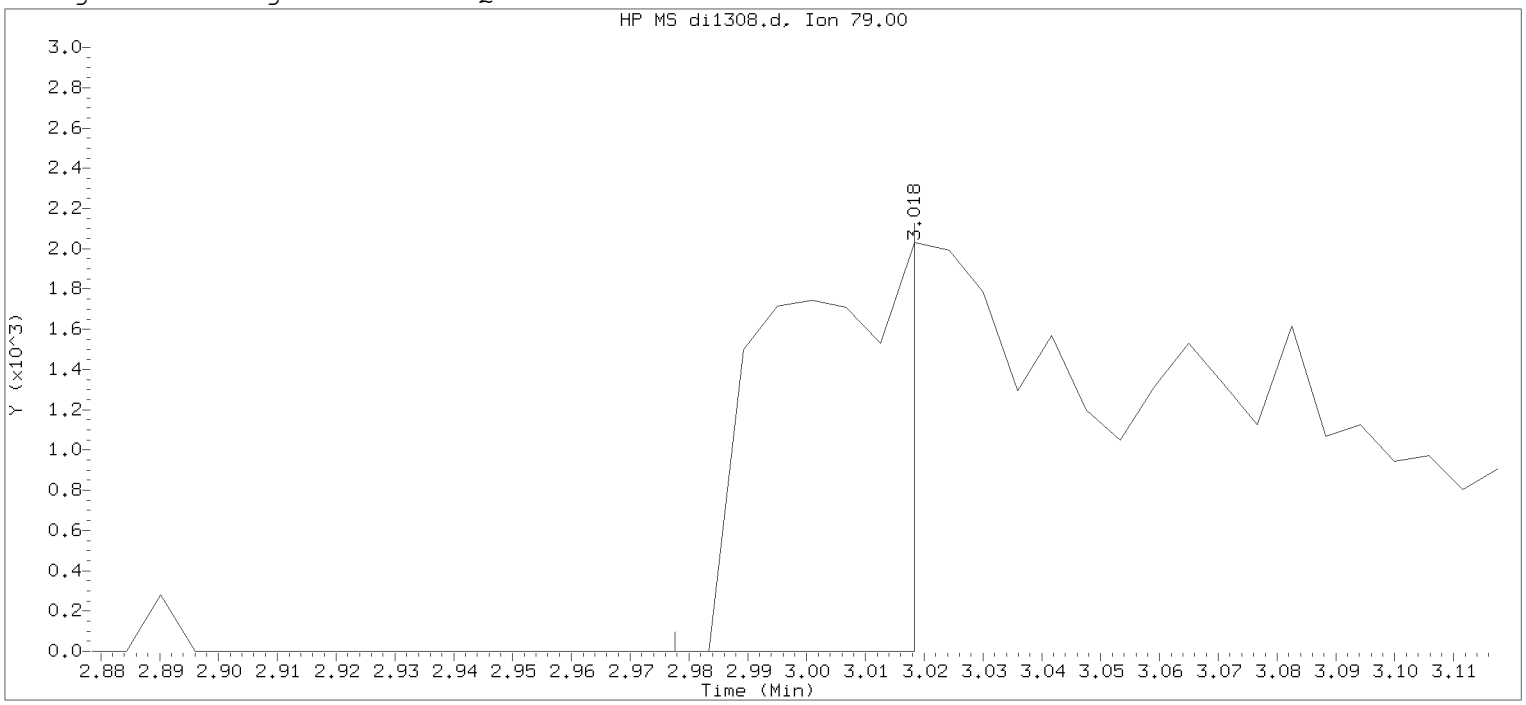
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

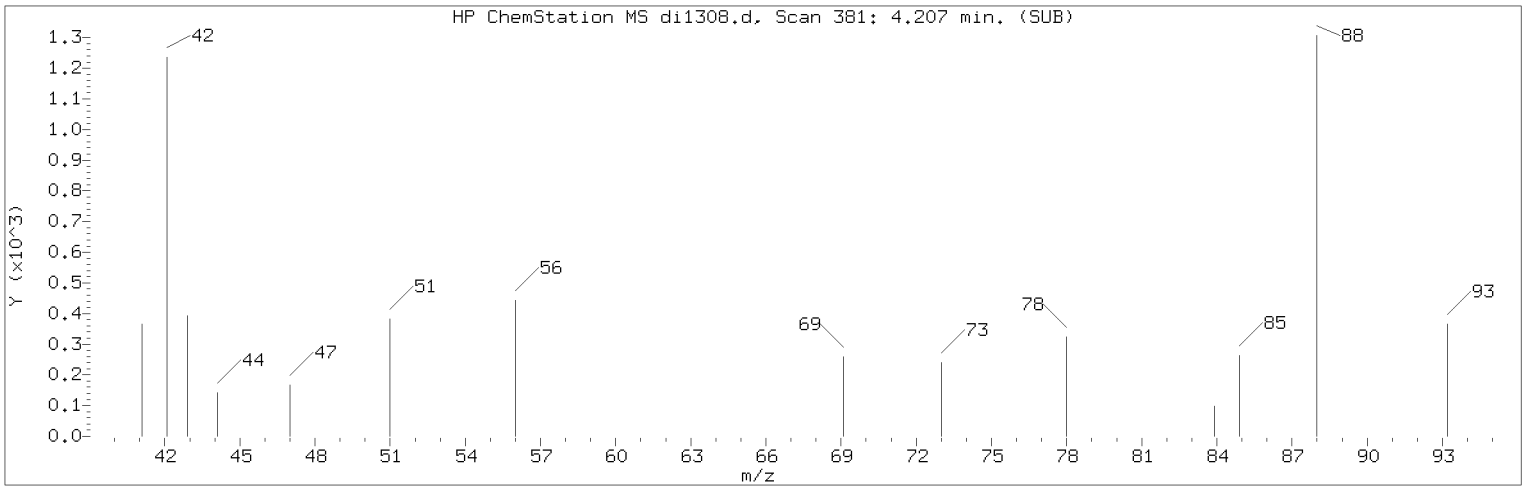
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

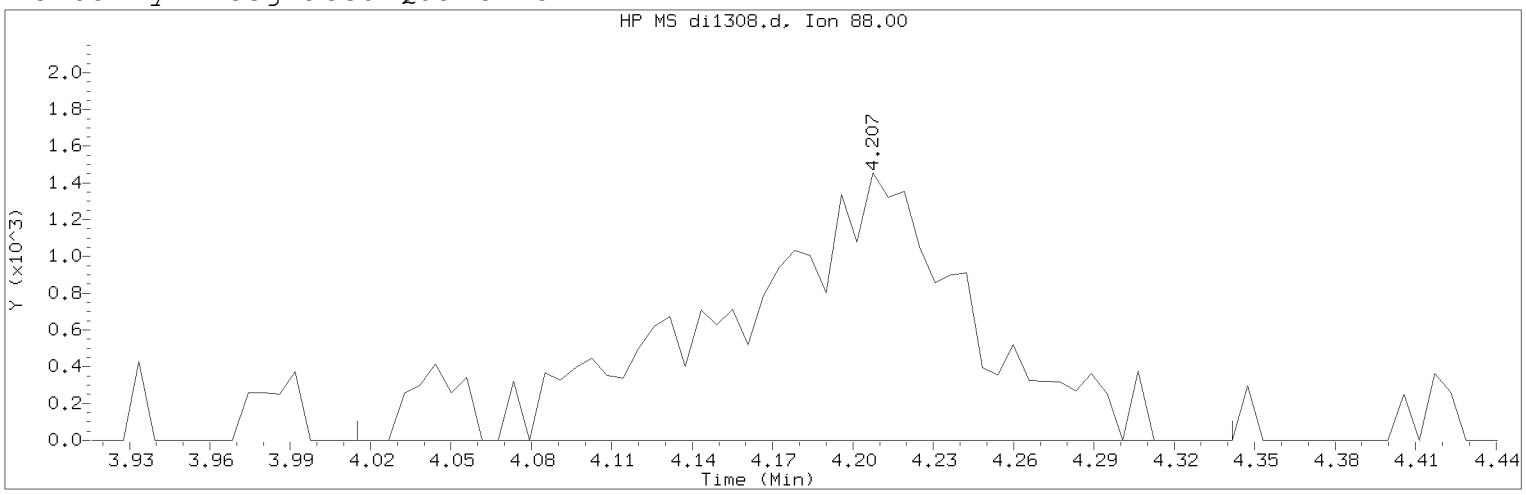
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 177		
Retention Time (minutes)	: 3.018		
Quant Ion	: 79.00		
Area	: 3221		
On-column Amount (ng/ul)	: 0.0457		
Integration start scan	: 169	Integration stop scan:	176
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used: AE20 e1e3312

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

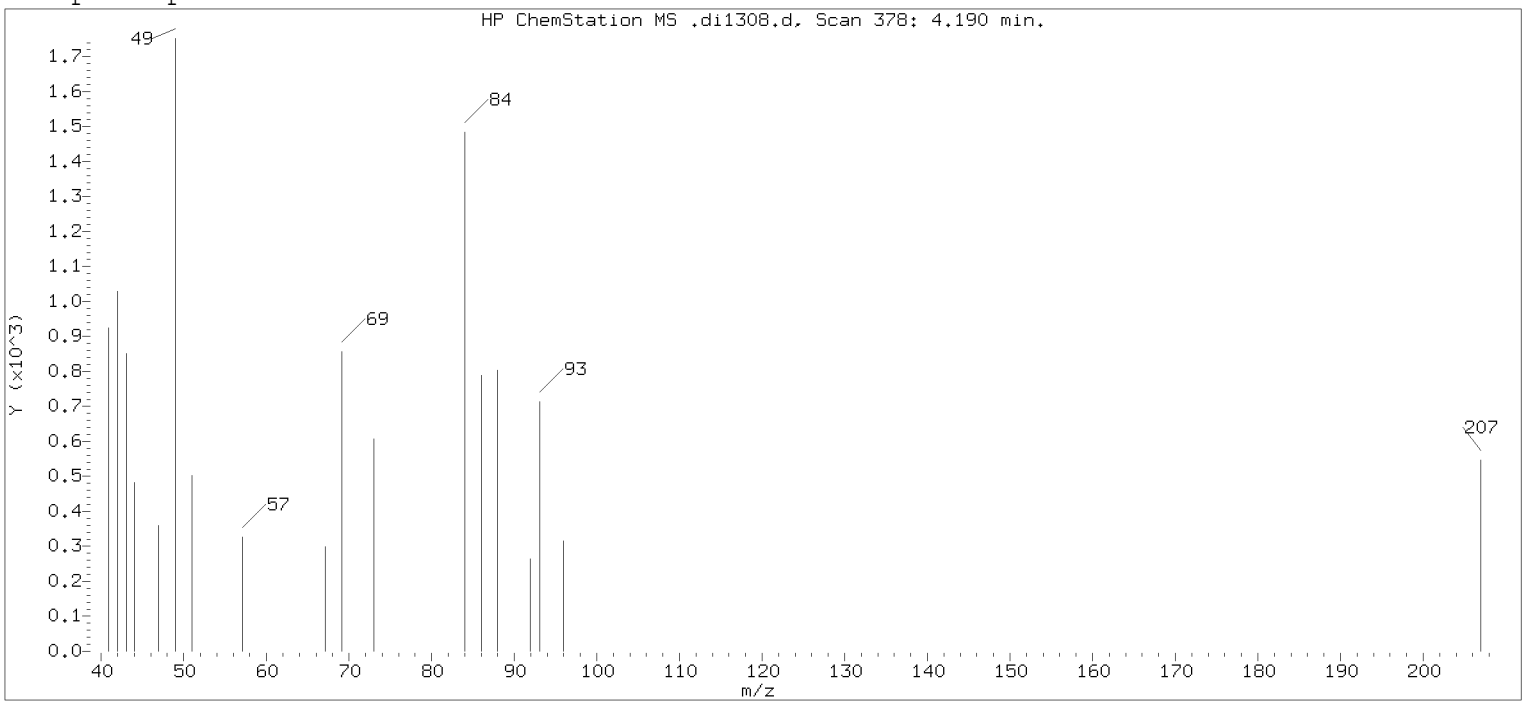
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 381
Retention Time (minutes) : 4.207
Quant Ion : 88.00
Area (flag) : 9518M
On-Column Amount (ng/ul) : 0.2934
Integration start scan : 347 Integration stop scan: 403
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

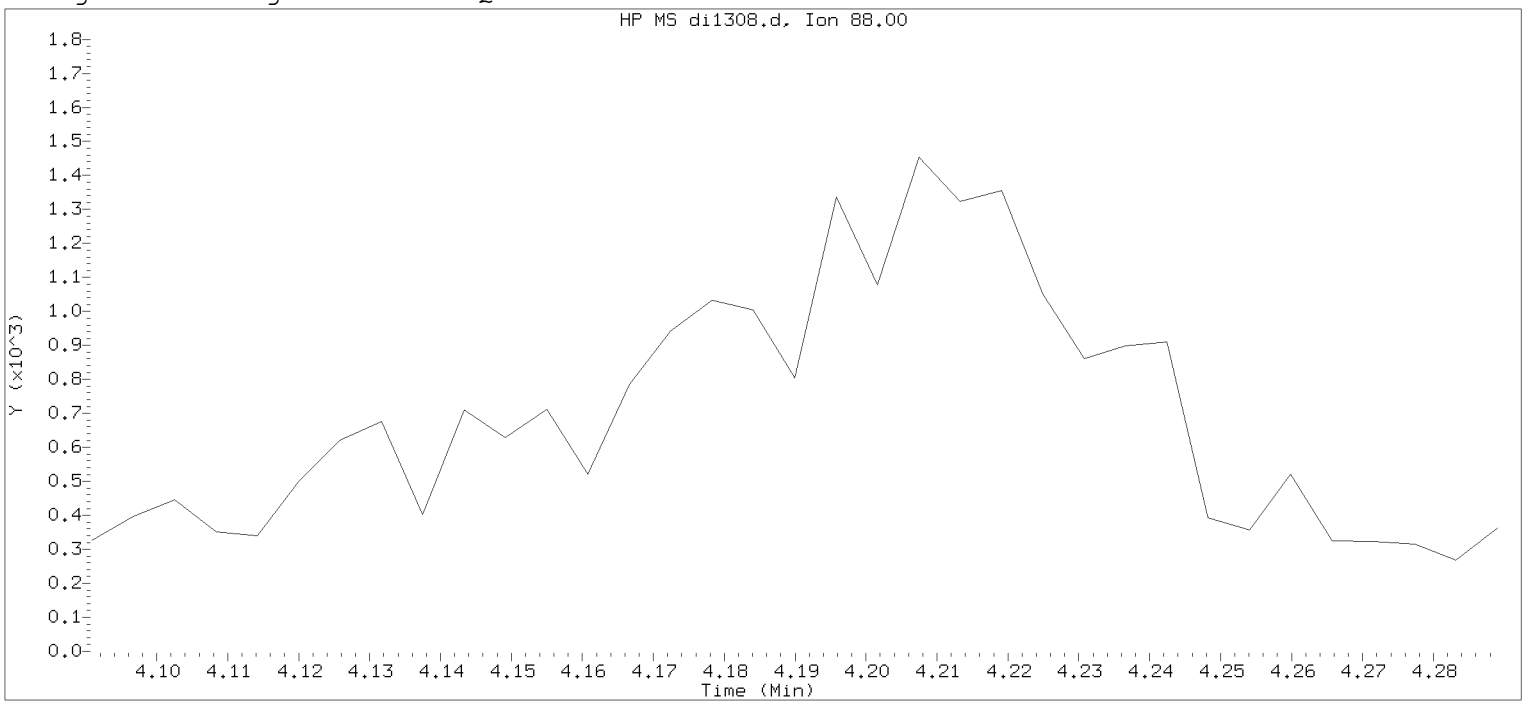
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

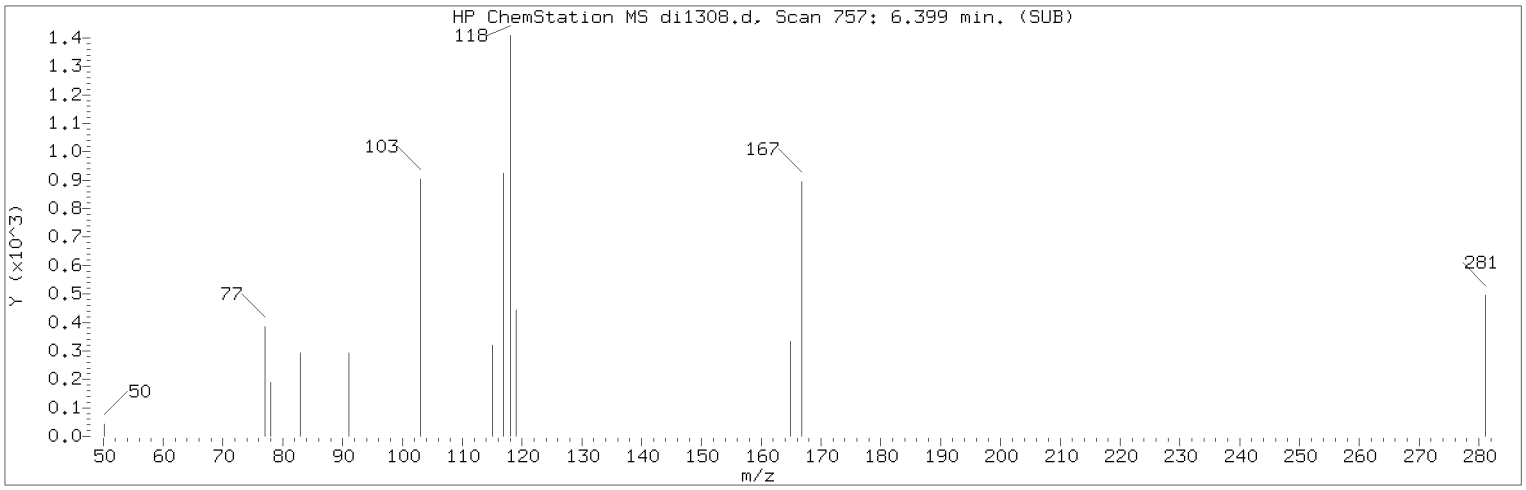
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

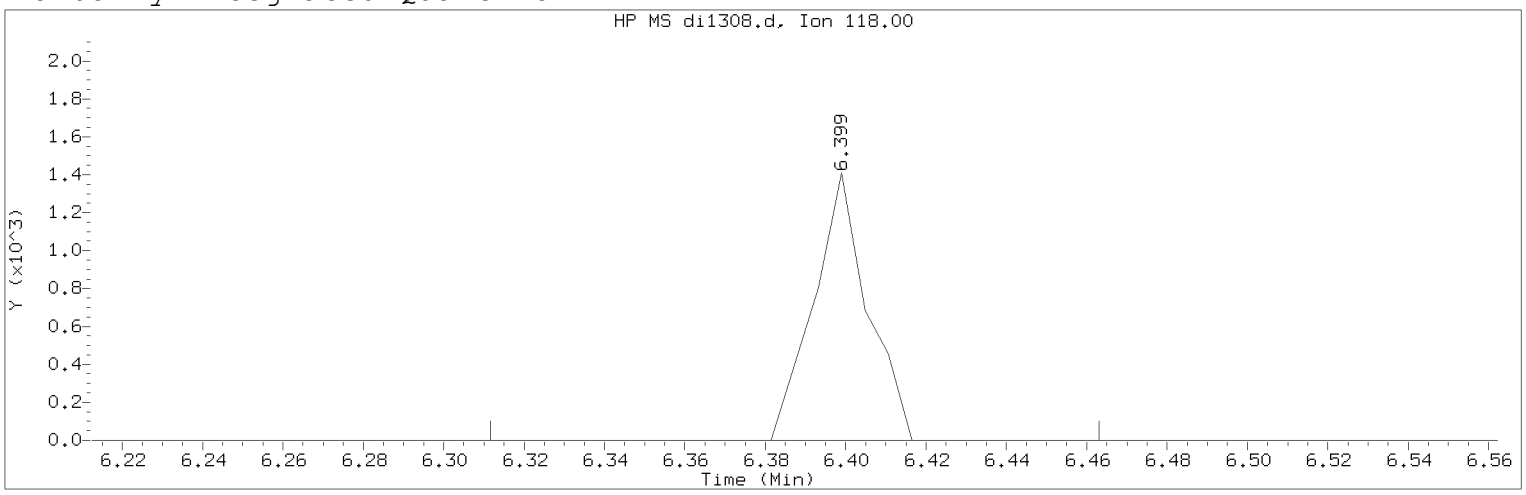
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.190
Quant Ion : 88.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used on 1/30/2014

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

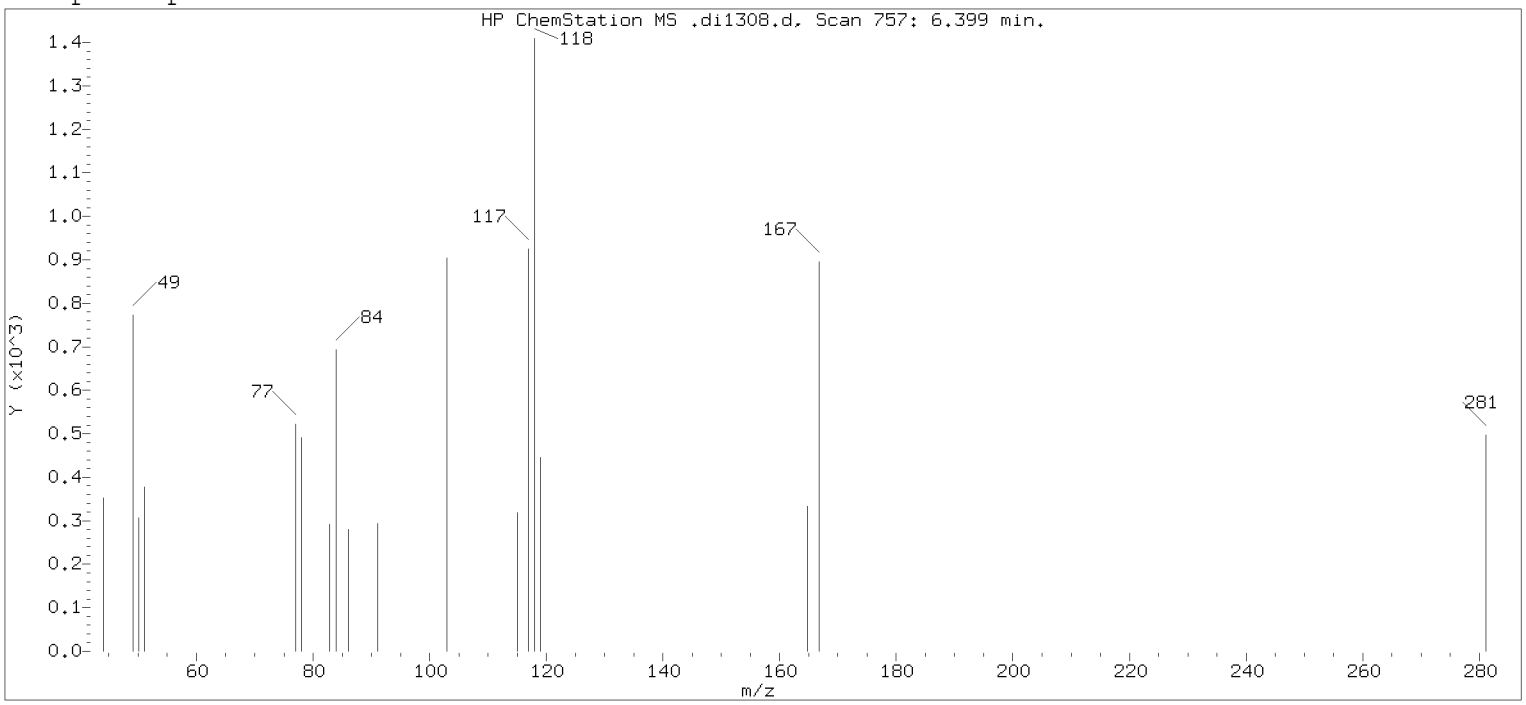
Compound Number : 20
Compound Name : a-methylstyrene
Scan Number : 757
Retention Time (minutes) : 6.399
Quant Ion : 118.00
Area (flag) : 1313M
On-Column Amount (ng/ul) : 0.2234
Integration start scan : 741 Integration stop scan: 767
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

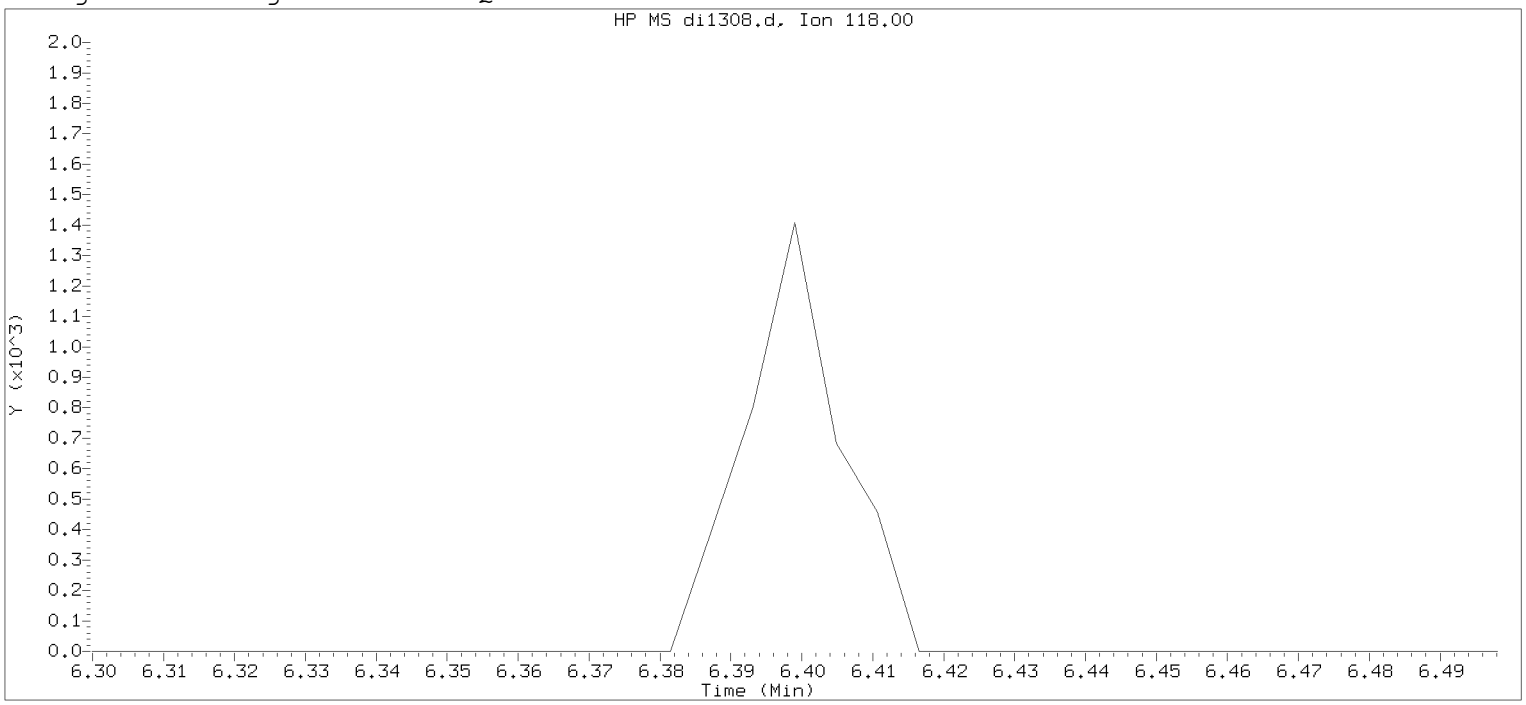
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

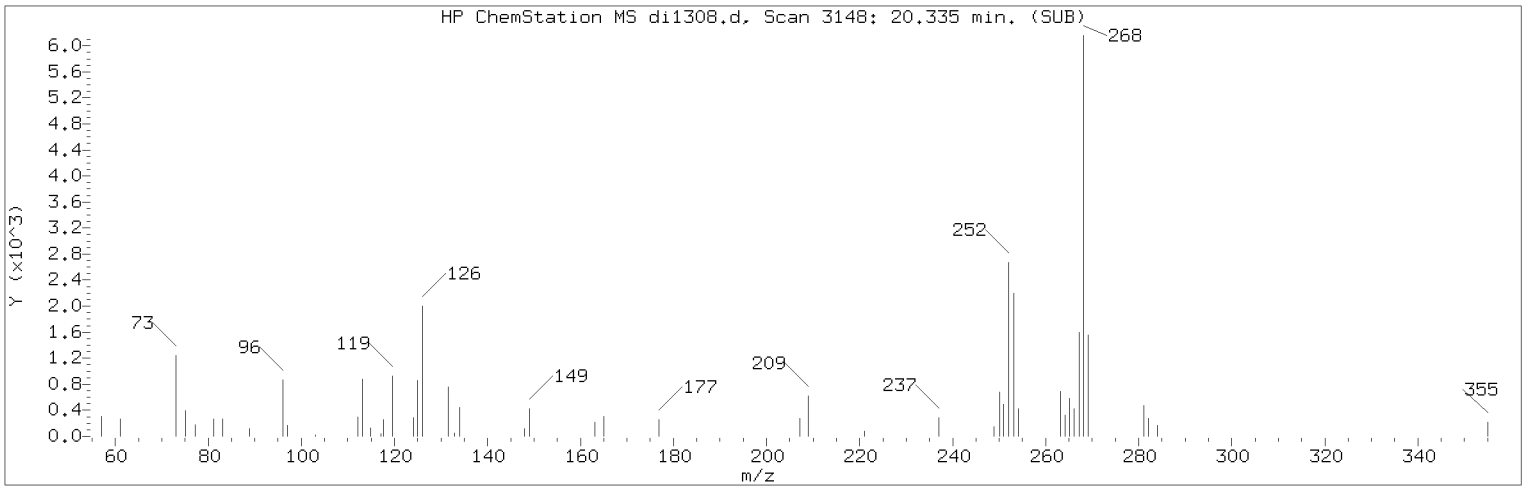
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

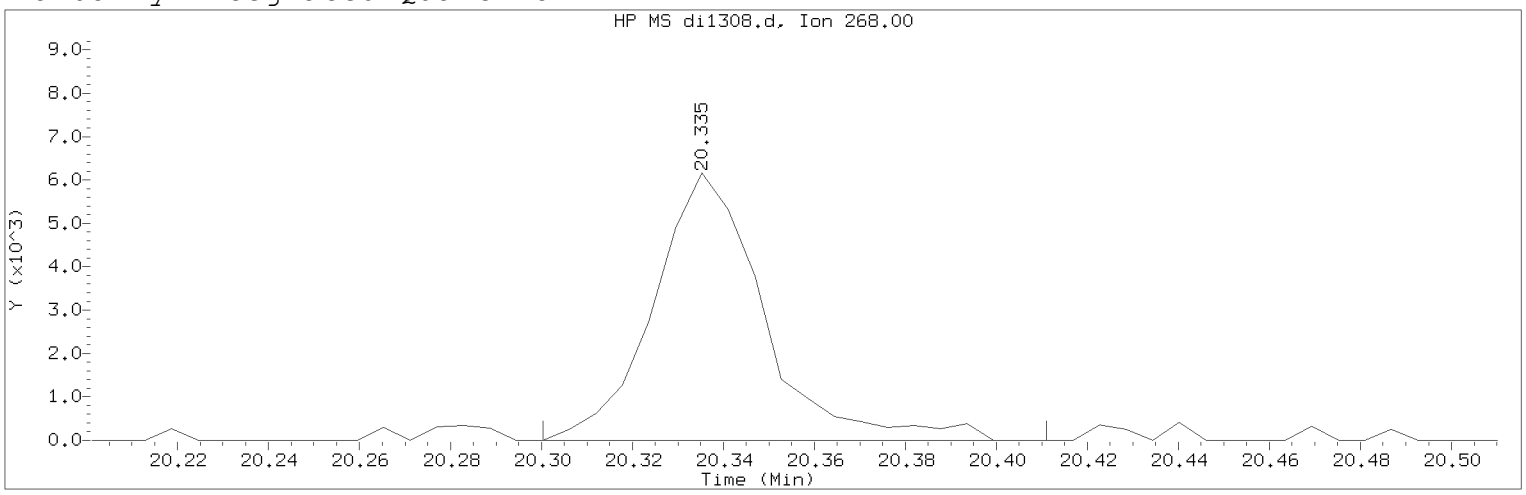
Compound Number : 20
Compound Name : a-methylstyrene
Expected RT (minutes) : 6.399
Quant Ion : 118.00

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

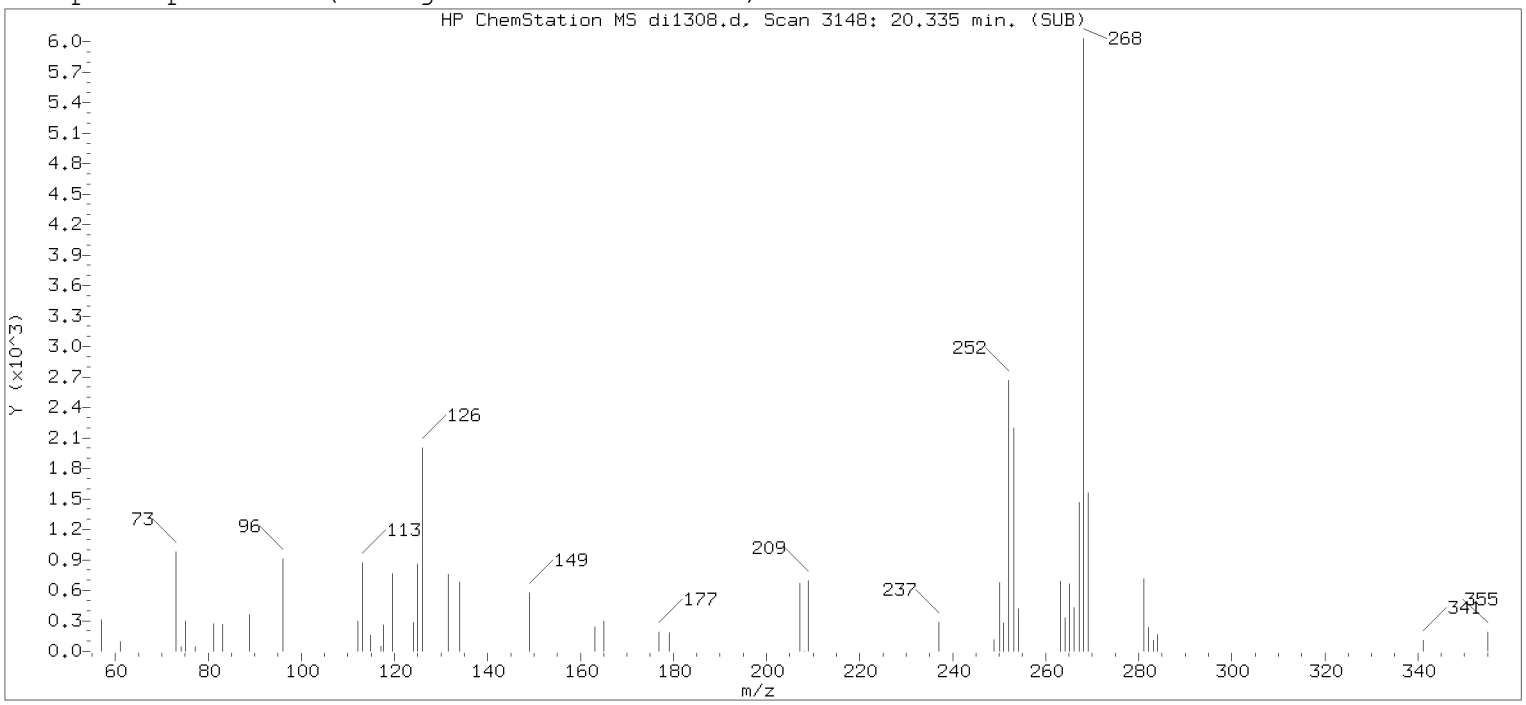
Compound Number : 215
Compound Name : 3-Methylcholanthrene
Scan Number : 3148
Retention Time (minutes) : 20.335
Quant Ion : 268.00
Area (flag) : 10374M
On-Column Amount (ng/ul) : 0.1839
Integration start scan : 3141 Integration stop scan: 3160
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

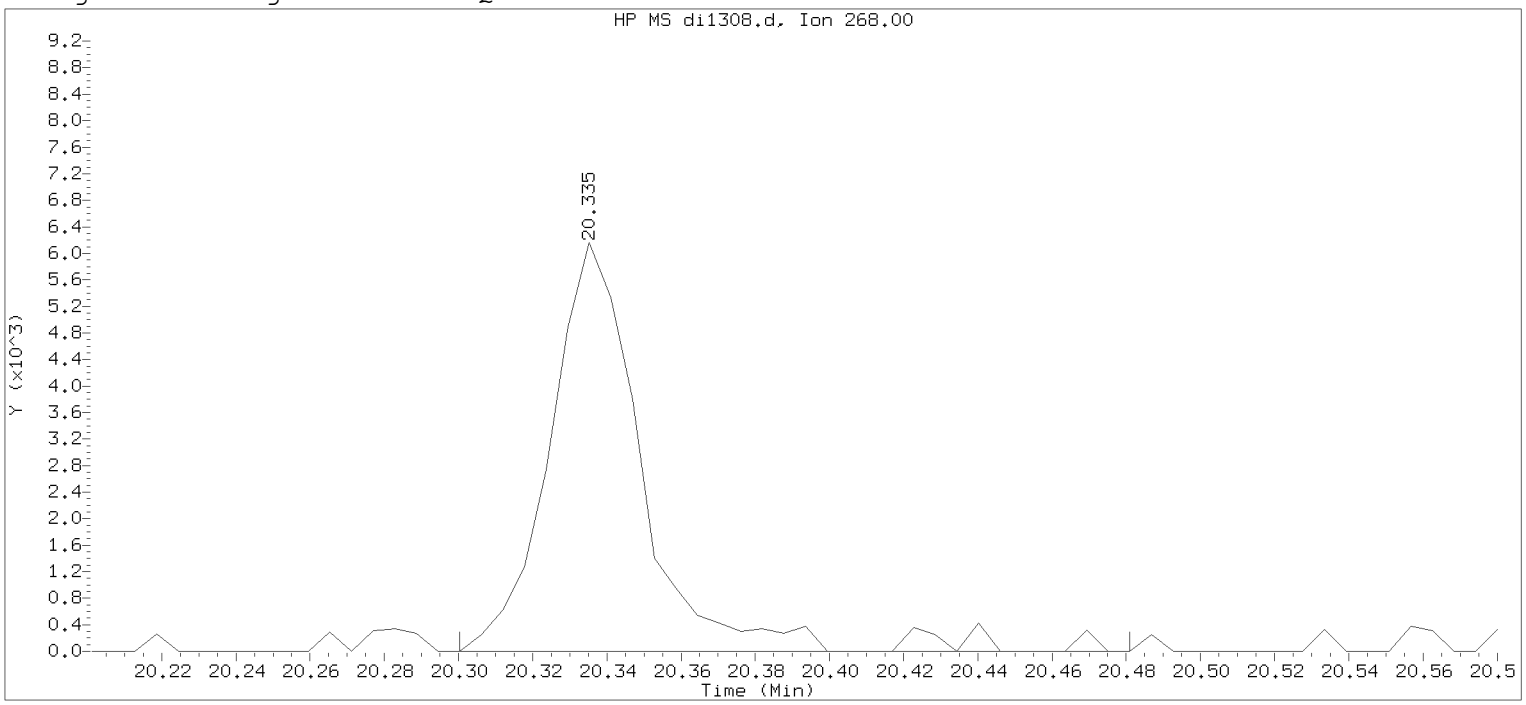
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

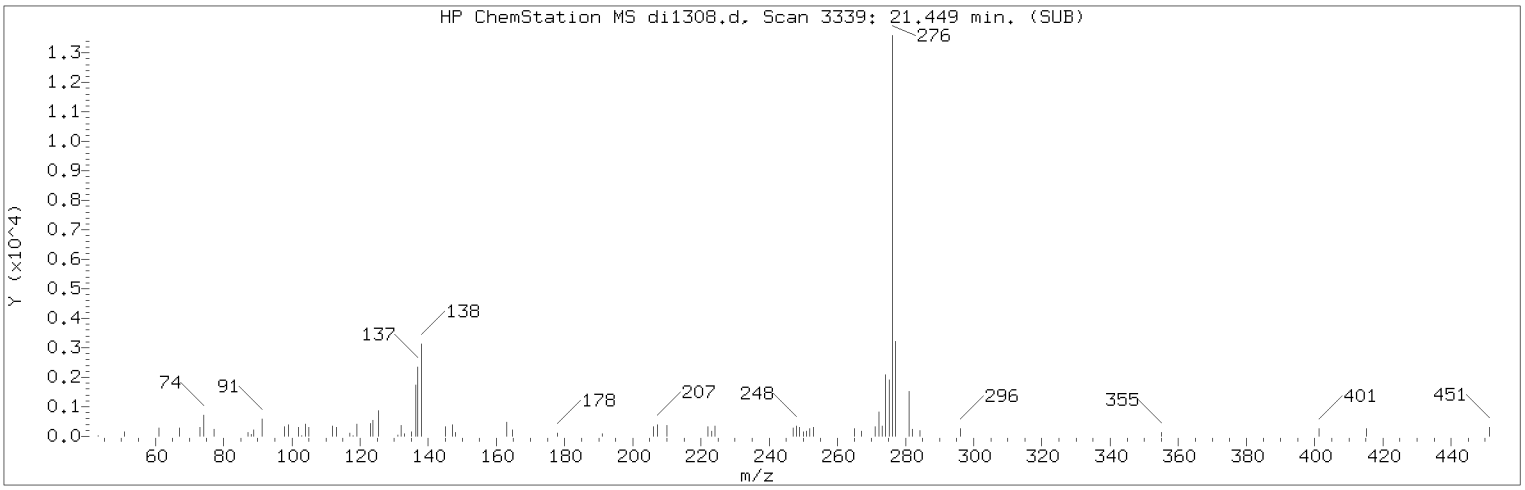
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

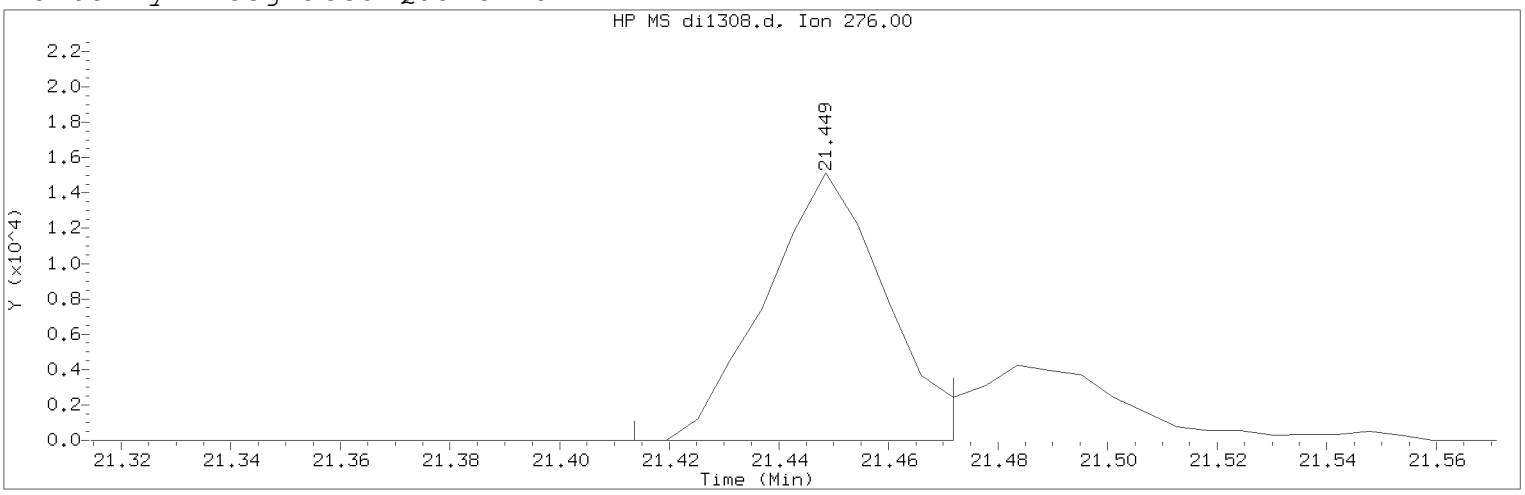
Compound Number	: 215		
Compound Name	: 3-Methylcholanthrene		
Scan Number	: 3148		
Retention Time (minutes)	: 20.335		
Quant Ion	: 268.00		
Area	: 10849		
On-column Amount (ng/ul)	: 0.1909		
Integration start scan	: 3141	Integration stop scan:	3172
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 23-SEP-2018 07:34
Date, time and analyst ID of latest file update: 23-Sep-2018 07:35 em10340

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

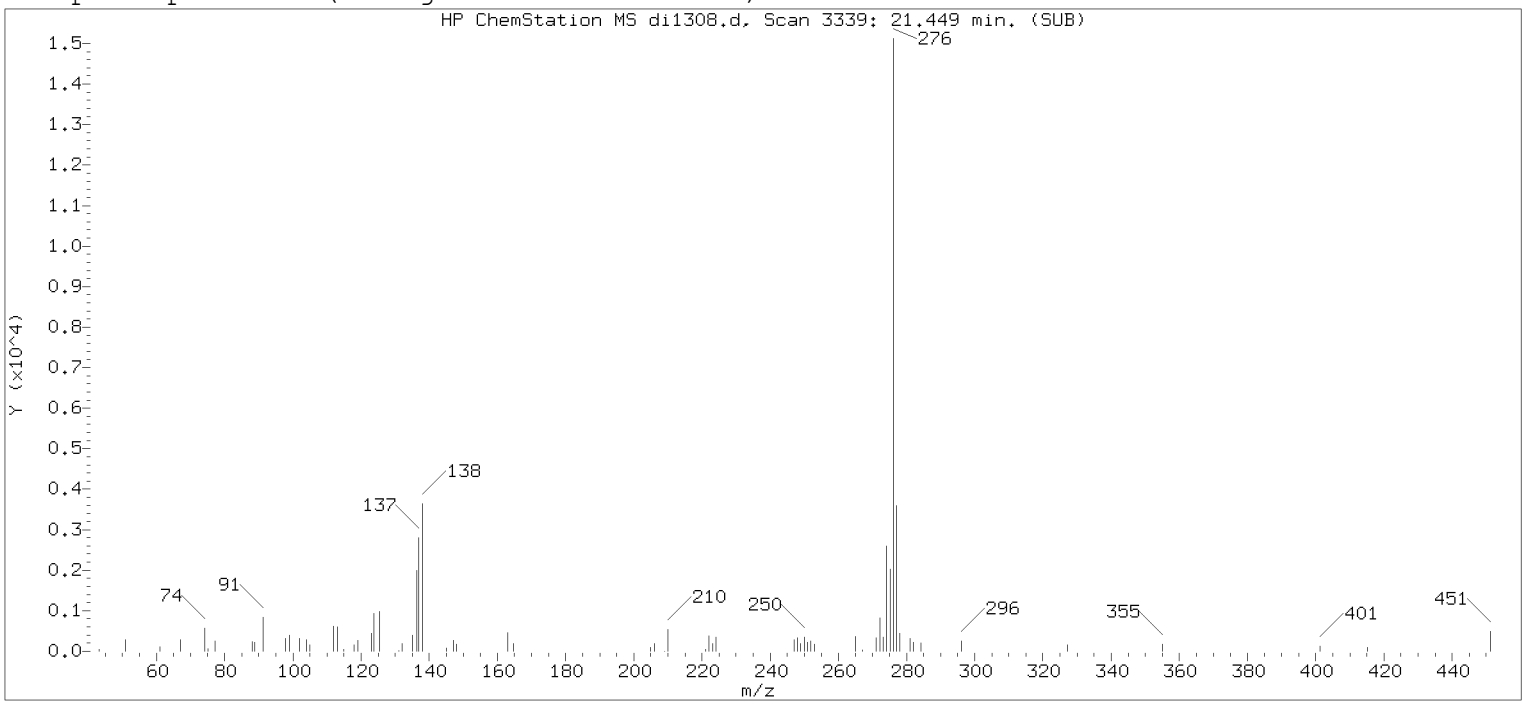
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3339
Retention Time (minutes) : 21.449
Quant Ion : 276.00
Area (flag) : 23084M
On-Column Amount (ng/ul) : 0.2129
Integration start scan : 3332 Integration stop scan: 3342
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

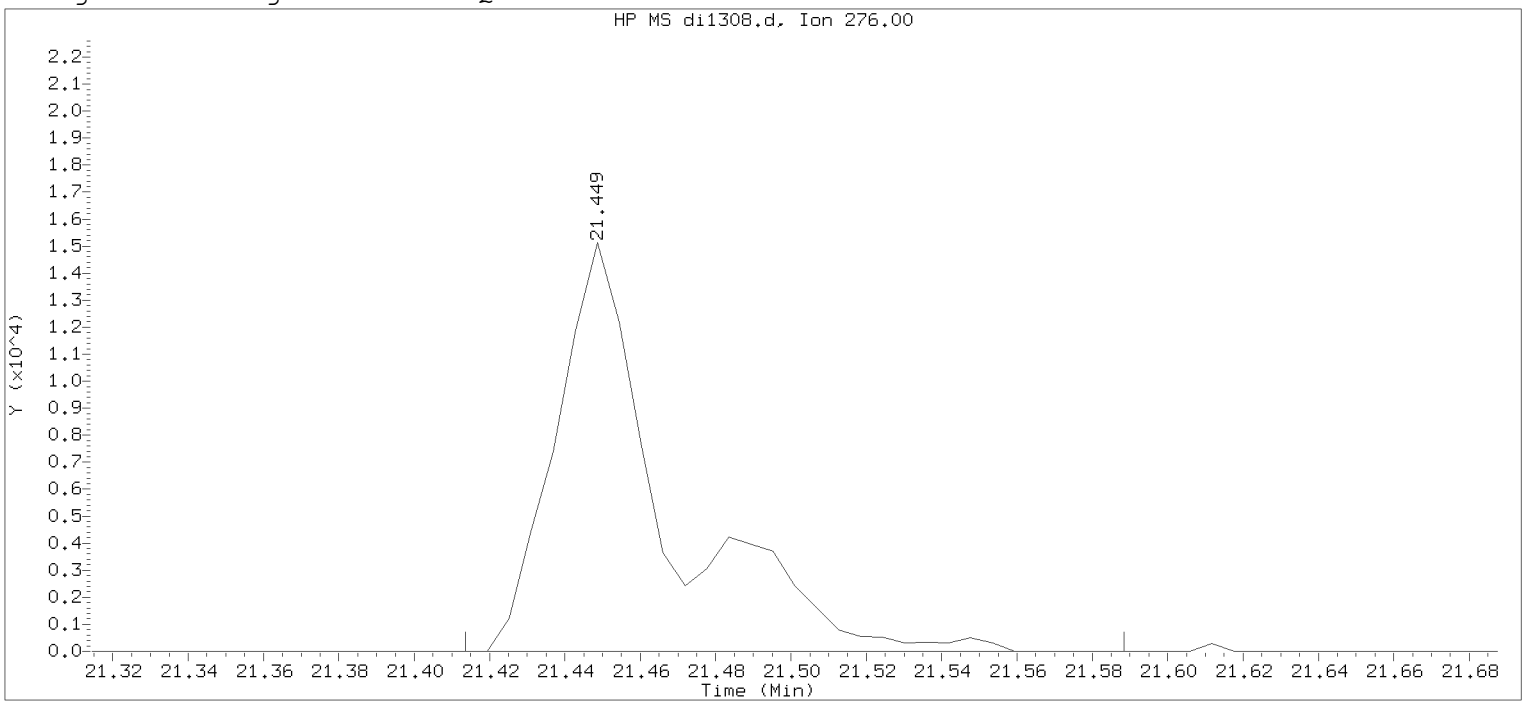
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/25/2018 at 07:55.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/25/2018 at 08:26.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



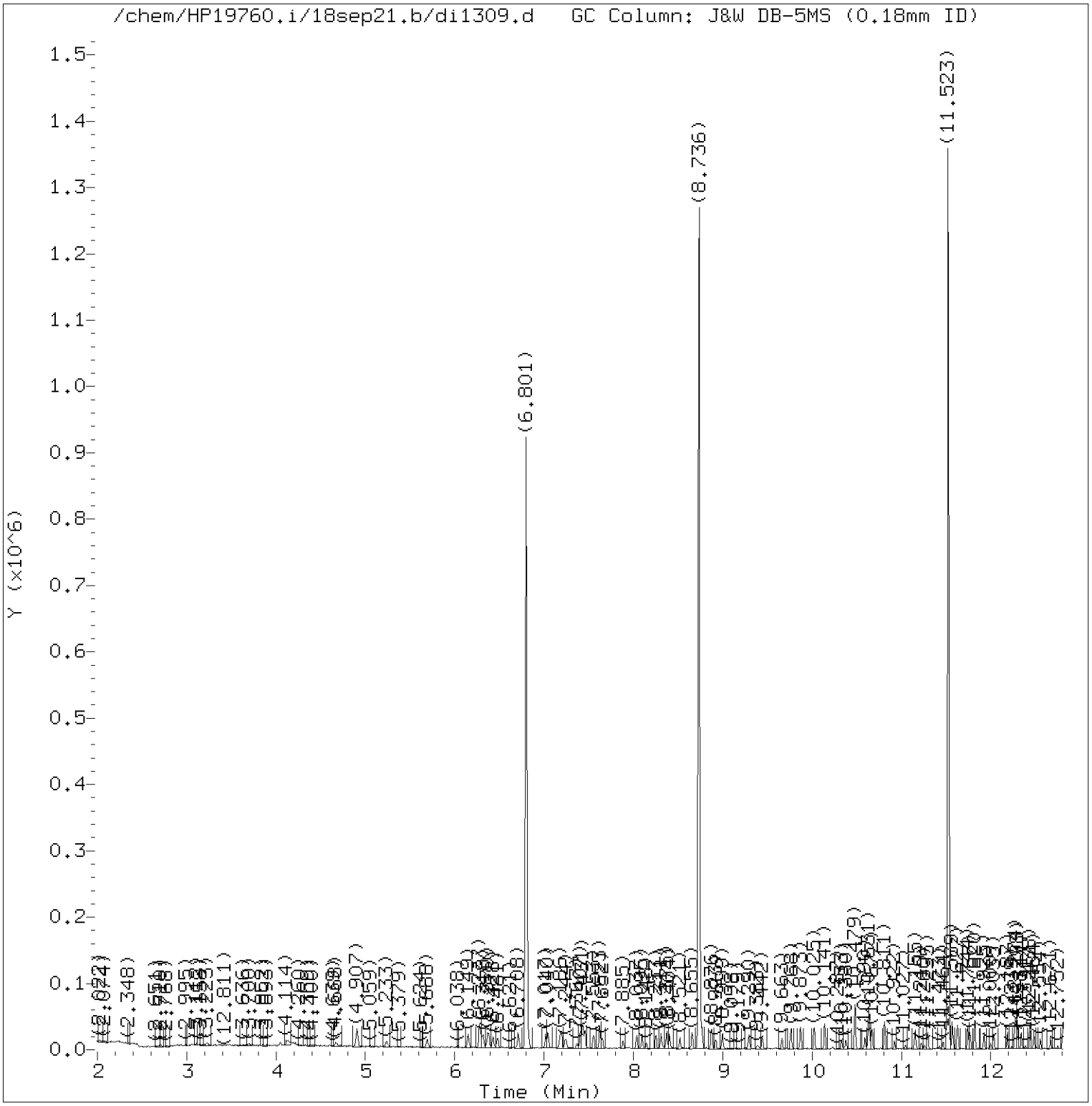
Data File: /chem/HP19760.i/18sep21.b/di1308.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:11 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: all1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 21:39 Automation

Sample Name: SSTD0.25 Lab Sample ID: rvSTD2648

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3339		
Retention Time (minutes)	: 21.449		
Quant Ion	: 276.00		
Area	: 31001		
On-column Amount (ng/ul)	: 0.2293		
Integration start scan	: 3332	Integration stop scan:	3362
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/25/2018 at 07:55.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

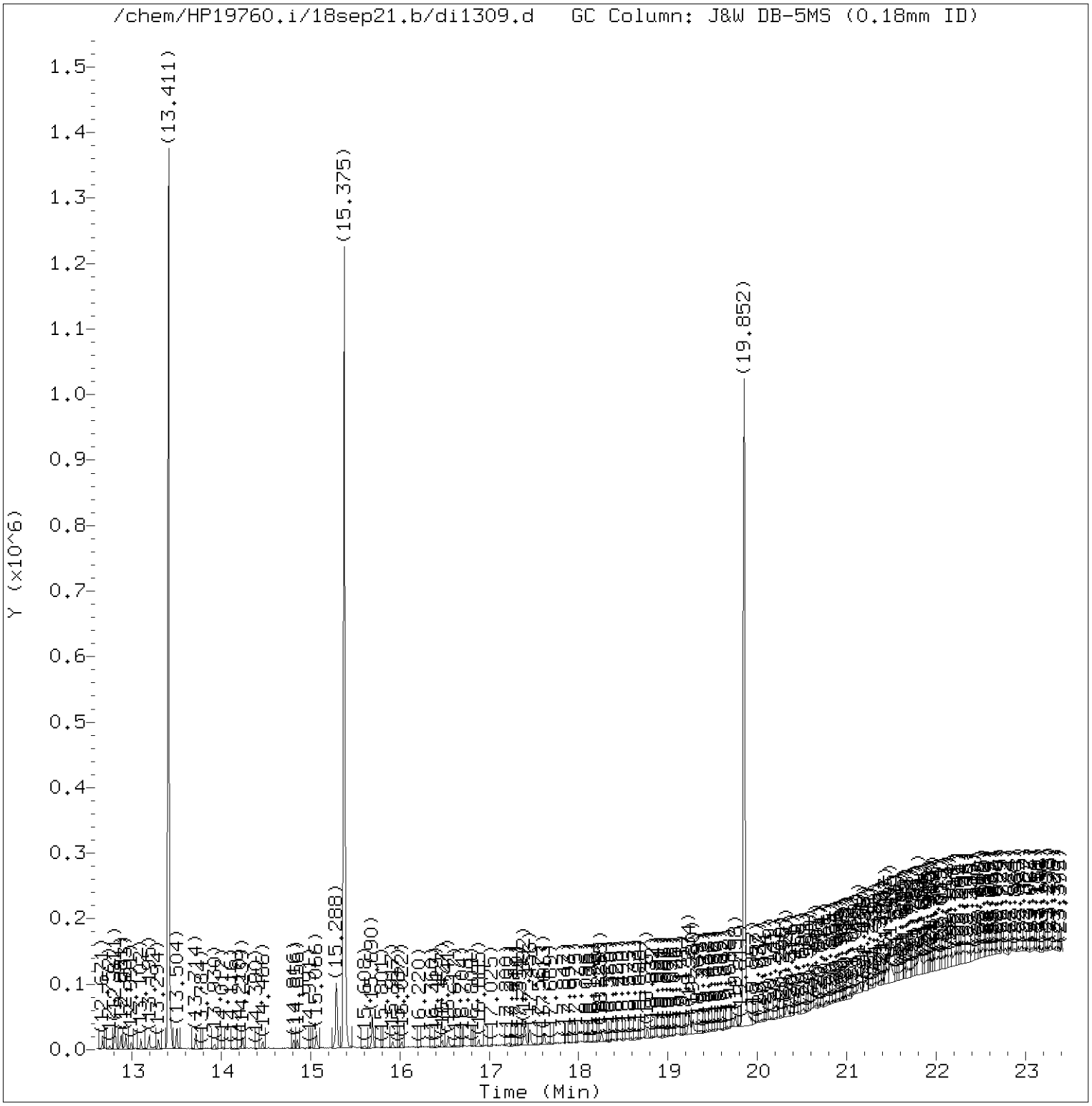
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	2.232	88	7890M	0.258
4) N-Nitrosodimethylamine	(1)	2.879	74	3568M	0.084
5) Pyridine	(1)	3.059	79	7769M	0.105
7) 2-Picoline	(1)	4.120	93	8064	0.107
8) N-Nitrosomethylethylamine	(1)	4.219	88	5178M	0.157
9) Methyl methanesulfonate	(1)	4.668	80	4264M	0.119
11)$2-Fluorophenol	(1)	4.907	112	12366	0.213
13) N-Nitrosodiethylamine	(1)	5.233	102	3297	0.109
42) Total Cresols	(1)			12640	0.211
15) Ethyl methanesulfonate	(1)	5.688	109	3288	0.110
16) Benzaldehyde	(1)	6.149	77	6718	0.126
17)$Phenol-d6	(1)	6.277	99	16724	0.213
18) Phenol	(1)	6.294	94	8670	0.096
19) Aniline	(1)	6.318	93	11557	0.108
20) a-methylstyrene	(1)	6.399	118	412M	0.069
22) bis(2-Chloroethyl)ether	(1)	6.428	93	8657	0.130
23) 2-Chlorophenol	(1)	6.481	128	5904	0.105
24) 1,3-Dichlorobenzene	(1)	6.708	146	7648	0.120
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	192492	5.000
26) 1,4-Dichlorobenzene	(1)	6.825	146	8408	0.130
27) Benzyl alcohol	(1)	7.017	108	4175	0.109
28) 1,2-Dichlorobenzene	(1)	7.040	146	7491	0.123
30) Indene	(1)	7.180	115	8123	0.129
31) 2-Methylphenol	(1)	7.198	108	5997	0.108
33) 2,2'-oxybis(1-Chloropropane)	(1)	7.238	45	9841	0.127
34) bis(2-Chloroisopropyl)ether	(1)	7.238	45	9841	0.127
35) N-Nitrosopyrrolidine	(1)	7.367	100	3281	0.103
97) Isosafrole	(3)			3997	0.099
36) Acetophenone	(1)	7.407	105	9024	0.114
38) N-Nitroso-di-n-propylamine	(1)	7.425	70	4526	0.097
37) 4-Methylphenol	(1)	7.431	108	6643	0.103
39) N-Nitrosomorpholine	(1)	7.437	56	3915	0.110
40) o-Toluidine	(1)	7.460	106	9756	0.100
43) Hexachloroethane	(1)	7.553	117	3354	0.128
44)$Nitrobenzene-d5	(2)	7.623	82	14376	0.215
45) Nitrobenzene	(2)	7.652	77	7412	0.108
48) N-Nitrosopiperidine	(2)	7.880	114	2650	0.095
50) Isophorone	(2)	8.037	82	11774	0.103
120) 2,4_2,6-Dinitrotoluenes	(3)			3469	0.139
51) 2-Nitrophenol	(2)	8.148	139	2041	0.078

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
53) 2,4-Dimethylphenol	(2)	8.247	107	5837	0.100
56) Benzoic acid	(2)	8.311	105	9784	0.310
57) O,O,O-Triethylphosphorothioate	(2)	8.375	198	3032	0.120
55) bis(2-Chloroethoxy)methane	(2)	8.404	93	8882	0.119
60) 2,4-Dichlorophenol	(2)	8.527	162	4193	0.097
62) 1,2,4-Trichlorobenzene	(2)	8.655	180	5558	0.116
65)*Naphthalene-d8	(2)	8.736	136	705460	5.000
146) Diallate trans/cis	(4)			4970	0.104
67) 4-Chloroaniline	(2)	8.870	127	7263	0.118
68) 2,6-Dichlorophenol	(2)	8.876	162	4436	0.106
69) Hexachloropropene	(2)	8.917	213	2943	0.097
71) Hexachlorobutadiene	(2)	8.999	225	3418	0.127
75) Quinoline	(2)	9.296	129	9933	0.105
76) Caprolactam	(2)	9.389	113	876M	0.053
77) N-Nitrosodi-n-butylamine	(2)	9.442	84	3662	0.081
80) 4-Chloro-3-methylphenol	(2)	9.663	107	4322	0.091
82) Safrole	(2)	9.762	162	3510	0.087
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.141	216	5548	0.131
85) Hexachlorocyclopentadiene	(3)	10.141	237	2763	0.105
88) cis-Isosafrole	(3)	10.234	162	747	0.020
90) 2,4,6-Trichlorophenol	(3)	10.333	196	2260	0.090
92) 2,4,5-Trichlorophenol	(3)	10.380	196	2584	0.097
93)$2-Fluorobiphenyl	(3)	10.479	172	25289	0.252
94) trans-Isosafrole	(3)	10.596	162	3250	0.079
95) 1,1'-Biphenyl	(3)	10.631	154	13928	0.128
98) 1-Chloronaphthalene	(3)	10.672	162	10636	0.128
100) 2-Nitroaniline	(3)	10.806	138	2366	0.092
99) Diphenyl ether	(3)	10.811	170	7596	0.125
104) 1,4-Naphthoquinone	(3)	10.928	158	1896	0.060
105) 1,4-Dinitrobenzene	(3)	11.045	168	884M	0.065
106) Dimethylphthalate	(3)	11.155	163	10997	0.117
107) 1,3-Dinitrobenzene	(3)	11.155	168	1041	0.066
108) 2,6-Dinitrotoluene	(3)	11.219	165	1372	0.065
112) 3-Nitroaniline	(3)	11.470	138	1694	0.074
113)*Acenaphthene-d10	(3)	11.523	164	314574	5.000
115) 2,4-Dinitrophenol	(3)	11.627	184	5658	0.506
116) 4-Nitrophenol	(3)	11.744	109	4601	0.297
117) Pentachlorobenzene	(3)	11.767	250	3884	0.112
118) 2,4-Dinitrotoluene	(3)	11.820	165	2097	0.074
119) Dibenzofuran	(3)	11.820	168	15058	0.123

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
121) 1-Naphthylamine	(3)	11.925	143	8954	0.096
122) 2,3,4,6-Tetrachlorophenol	(3)	11.995	232	1932	0.093
123) 2-Naphthylamine	(3)	12.035	143	8254	0.087
124) Diethylphthalate	(3)	12.187	149	8812	0.099
125) Thionazin	(3)	12.280	107	1743	0.094
129) 4-Nitroaniline	(3)	12.286	138	1833	0.073
128) 5-Nitro-o-toluidine	(3)	12.286	152	1895	0.071
127) 4-Chlorophenyl-phenylether	(3)	12.298	204	5245	0.115
130) 4,6-Dinitro-2-methylphenol	(4)	12.344	198	3558	0.245
131) N-Nitrosodiphenylamine	(4)	12.438	169	7960	0.109
132) NDPA as diphenylamine	(4)	12.438	169	7960	0.109
134) 1,2-Diphenylhydrazine	(4)	12.484	77	11330	0.109
135)$2,4,6-Tribromophenol	(3)	12.554	330	1667	0.161
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	1315	0.082
139) 1,3,5-Trinitrobenzene	(4)	12.747	213	523M	0.053
140) Diallate (peak 1)	(4)	12.805	86	4188	0.084
141) Phorate	(4)	12.811	75	5173	0.087
142) Phenacetin	(4)	12.816	108	3221	0.069
143) 4-Bromophenyl-phenylether	(4)	12.881	248	2575	0.106
144) Diallate (peak 2)	(4)	12.916	86	782M	0.020
147) Dimethoate	(4)	12.991	87	2572	0.066
148) Atrazine	(4)	13.102	200	2068	0.090
149) Pentachlorophenol	(4)	13.184	266	809	0.055
150) 4-Aminobiphenyl	(4)	13.190	169	5514	0.090
151) Pentachloronitrobenzene	(4)	13.195	237	616M	0.057
152) Pronamide	(4)	13.294	173	2535	0.584
153)*Phenanthrene-d10	(4)	13.411	188	544726	5.000
154) Dinoseb	(4)	13.434	211	1064	0.051
163) Carbazole	(4)	13.714	167	11978	0.100
164) Methyl parathion	(4)	13.924	109	1511	0.989
165) Di-n-butylphthalate	(4)	14.239	149	11932	0.083
168) 4-Nitroquinoline-1-oxide	(4)	14.460	190	552	2.752
167) Parathion	(4)	14.466	109	869M	0.982
169) Octachlorostyrene	(4)	14.816	308	958M	0.103
171) Isodrin	(4)	14.856	193	2002	0.131
174) Benzidine	(5)	15.288	184	51101	0.522
175)*Pyrene-d10	(5)	15.375	212	523891	5.000
179)$Terphenyl-d14	(5)	15.690	244	19327	0.222
182) p-Dimethylaminoazobenzene	(5)	15.929	225	1064M	0.047
185) Chlorobenzilate	(5)	16.022	139	2822	0.073

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
187) 3,3'-Dimethylbenzidine	(5)	16.471	212	5065	0.059
188) Butylbenzylphthalate	(5)	16.541	149	3792	0.062
191) 2-Acetylaminofluorene	(5)	16.885	181	2723	0.057
193) 3,3'-Dichlorobenzidine	(5)	17.392	252	3752	0.079
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.409	231	1965	0.073
199) bis(2-Ethylhexyl)phthalate	(5)	17.613	149	5158	0.064
203) 6-Methylchrysene	(5)	18.255	242	8124	0.096
205) Di-n-octylphthalate	(6)	18.767	149	8070	1.180
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.245	256	4351	0.073
213)*Perylene-d12	(6)	19.852	264	499729	5.000
215) 3-Methylcholanthrene	(6)	20.330	268	5213	0.098
217) Dibenz(a,h)acridine	(6)	21.140	279	8316	0.093
218) Dibenz(a,j)acridine	(6)	21.210	279	8437	0.086

* = Compound is an internal standard.

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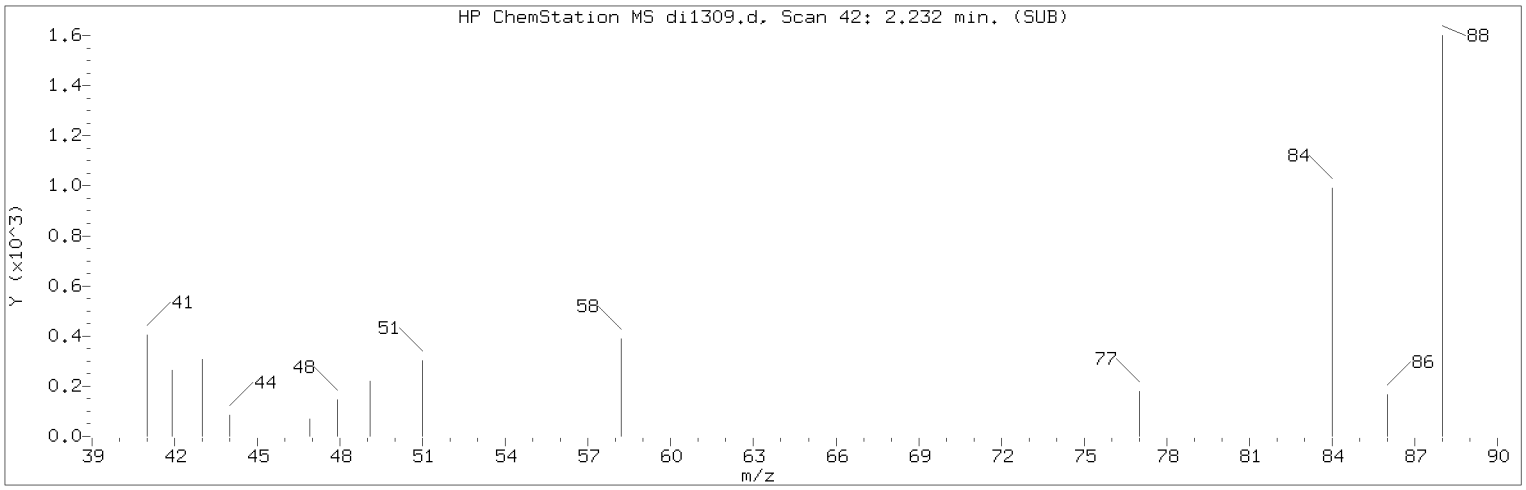
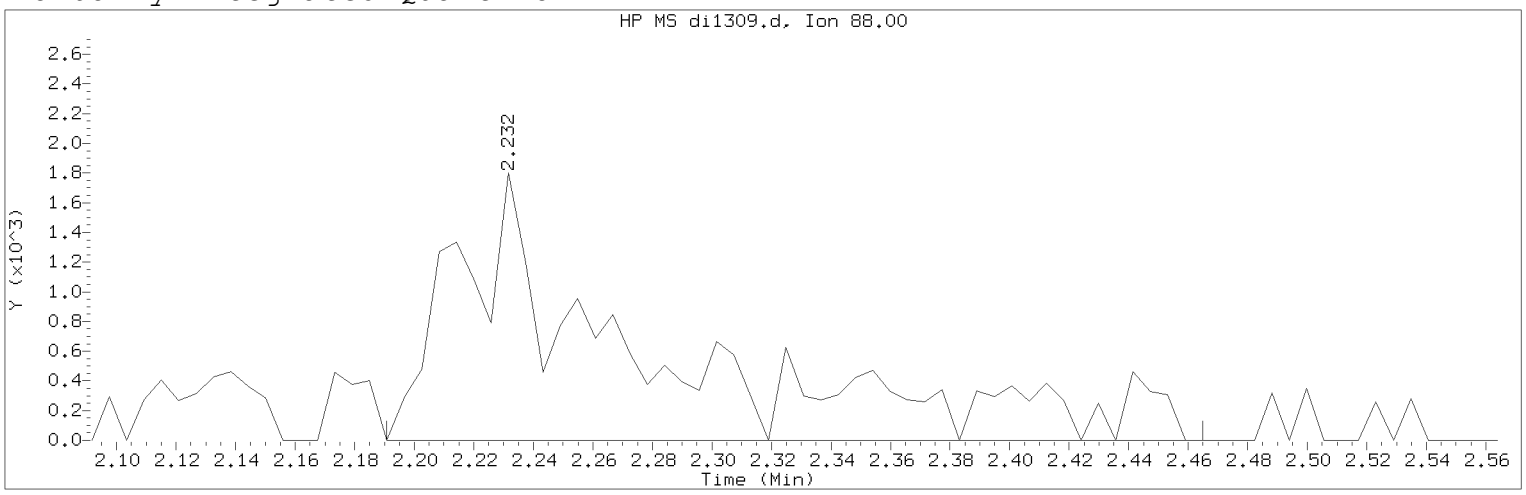
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

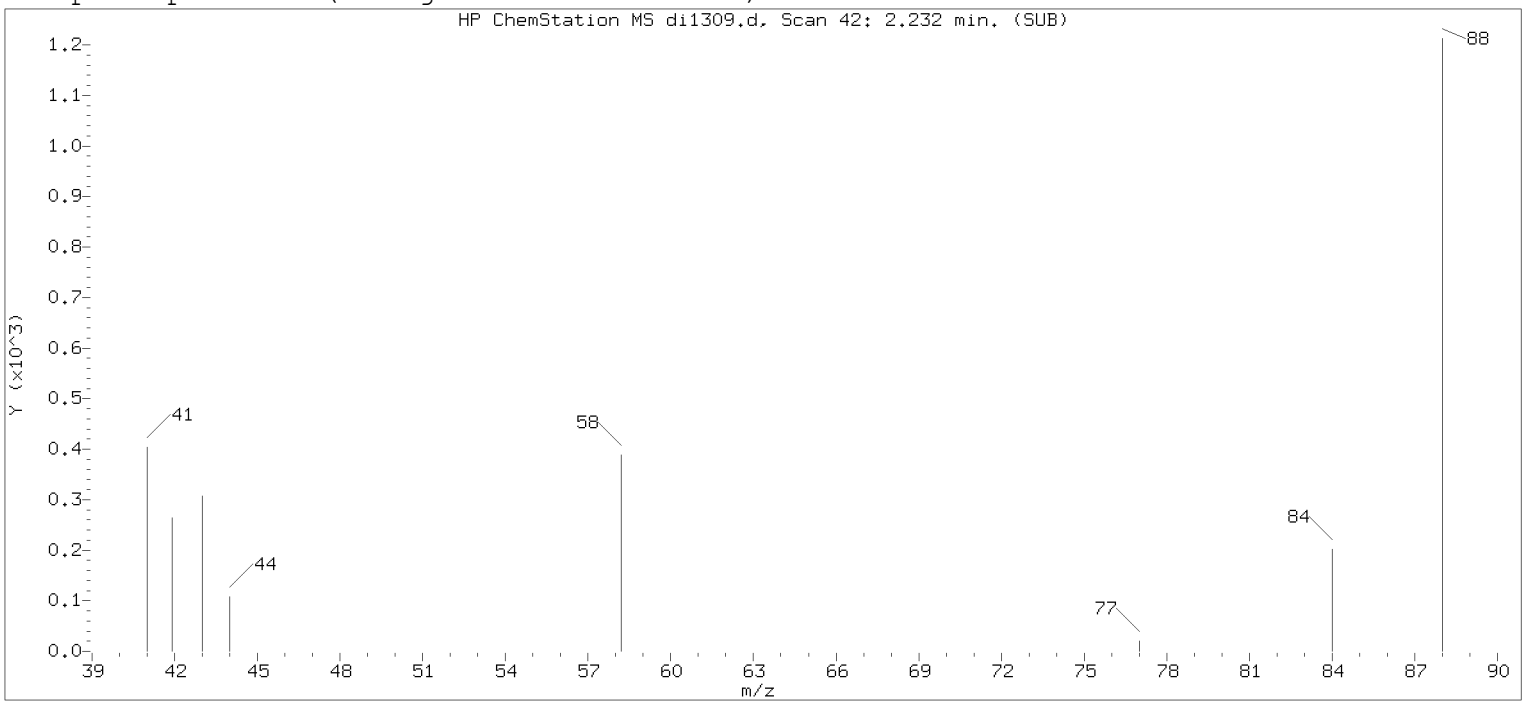
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 42		
Retention Time (minutes)	: 2.232		
Quant Ion	: 88.00		
Area (flag)	: 7890M		
On-Column Amount (ng/ul)	: 0.2577		
Integration start scan	: 34	Integration stop scan:	81
Y at integration start	: 0	Y at integration end:	0

Reason for manual integration: improper integration

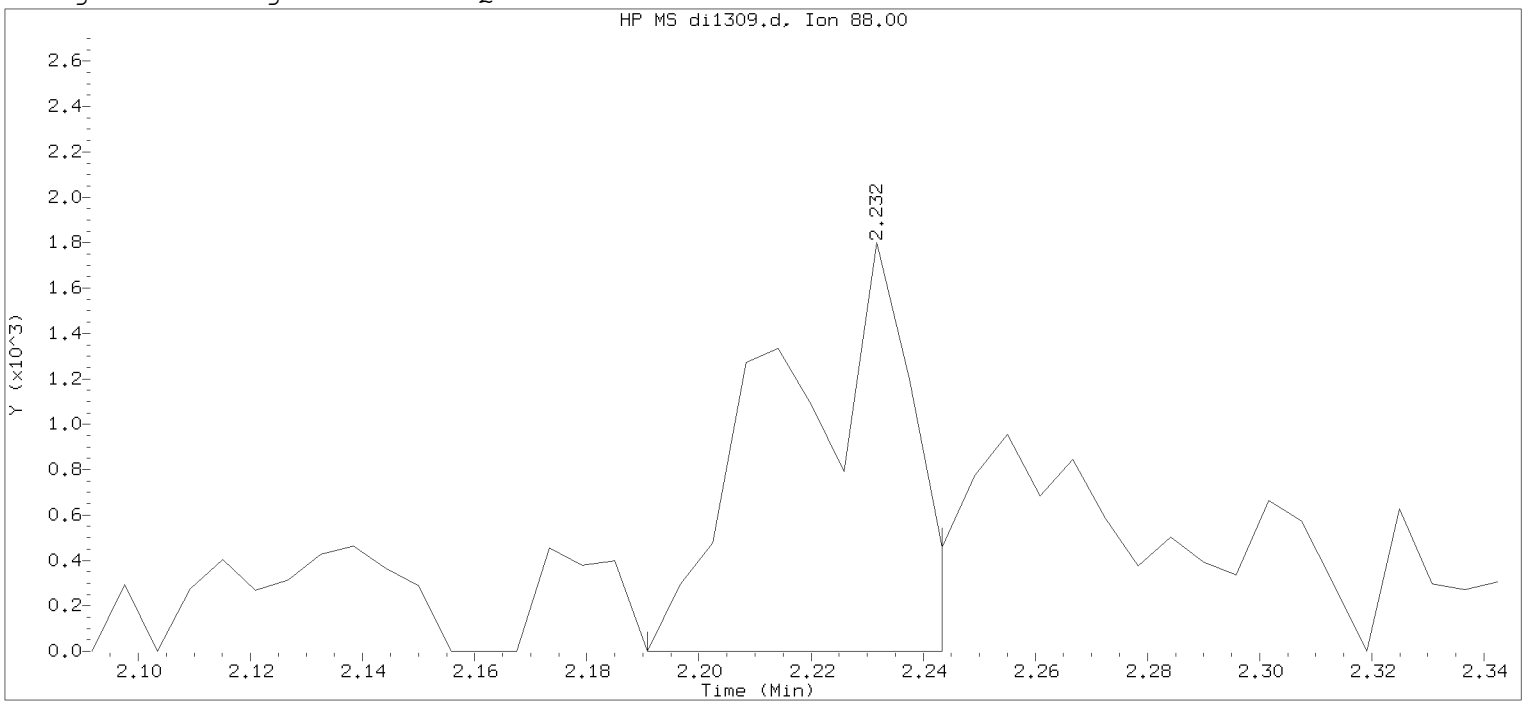
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

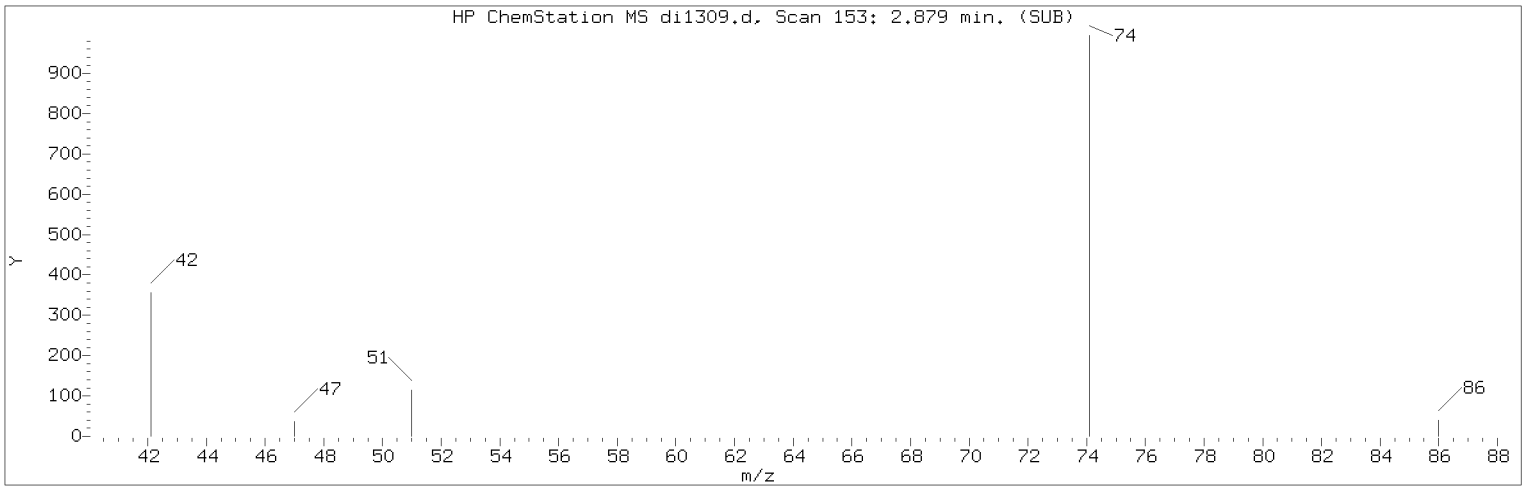
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

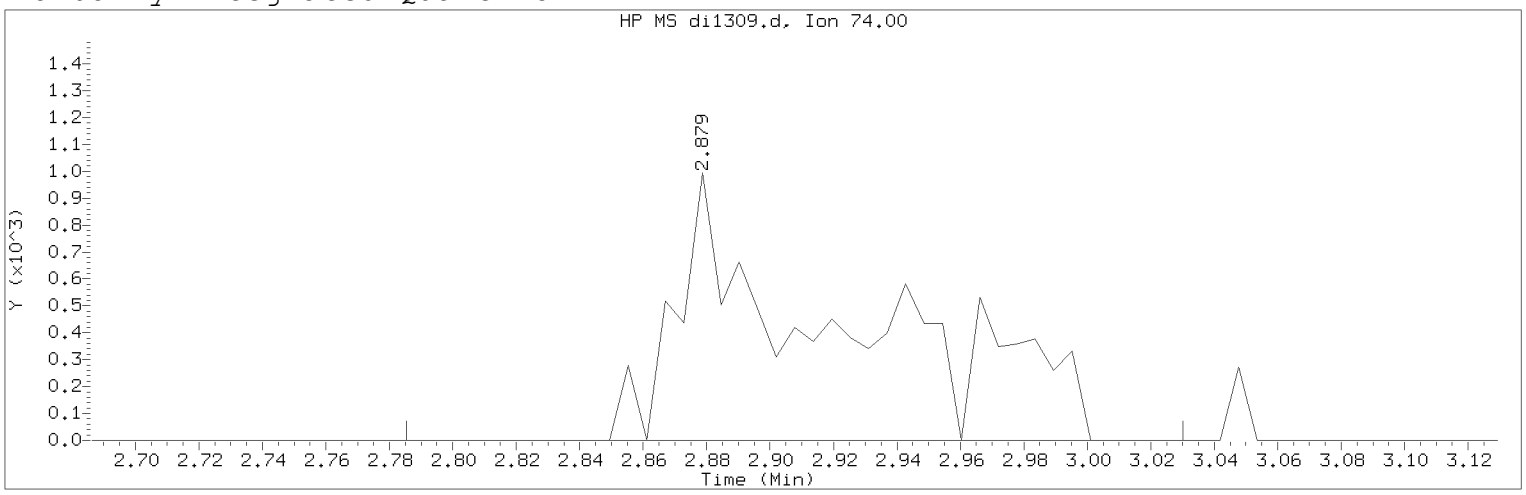
Compound Number	: 1		
Compound Name	: 1,4-Dioxane		
Scan Number	: 42		
Retention Time (minutes)	: 2.232		
Quant Ion	: 88.00		
Area	: 2966		
On-column Amount (ng/ul)	: 0.0977		
Integration start scan	: 34	Integration stop scan:	43
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used: AE2 ert1338

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

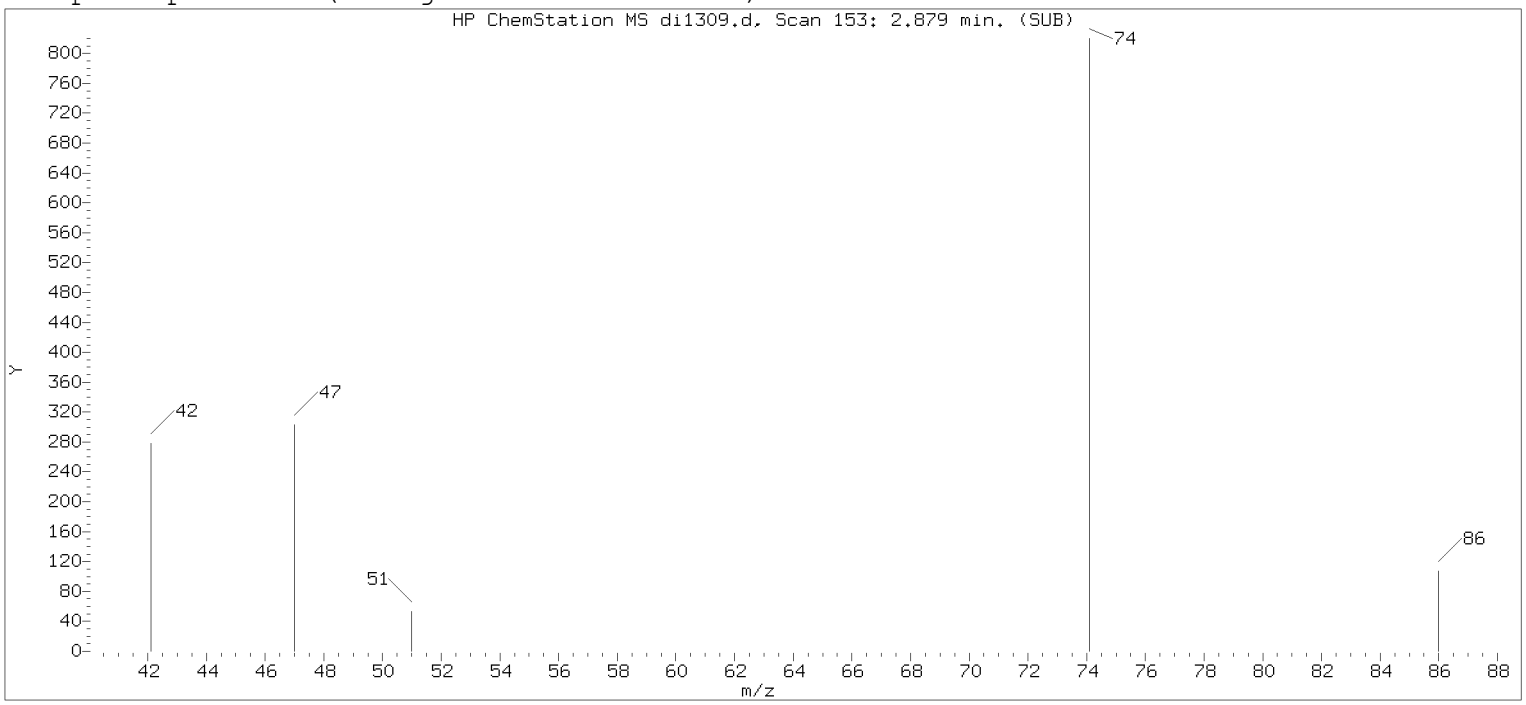
Compound Number : 4
Compound Name : N-Nitrosodimethylamine
Scan Number : 153
Retention Time (minutes) : 2.879
Quant Ion : 74.00
Area (flag) : 3568M
On-Column Amount (ng/ul) : 0.0839
Integration start scan : 136 Integration stop scan: 178
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

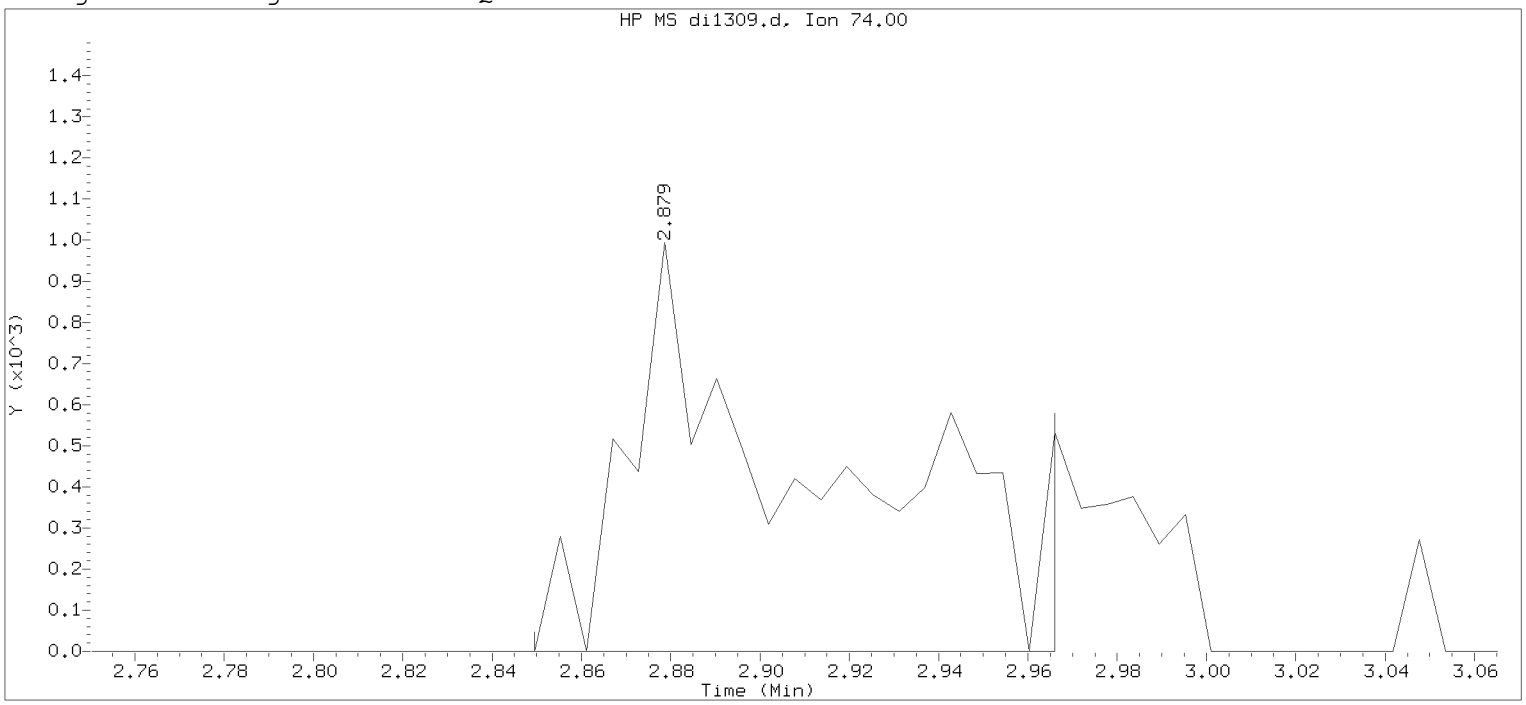
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

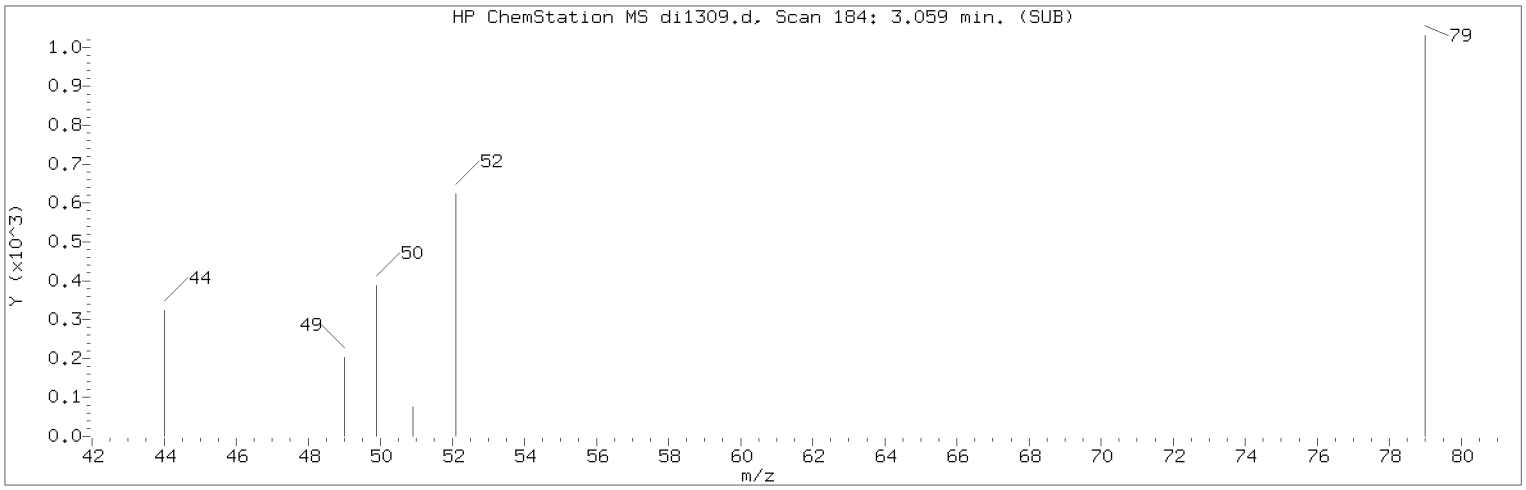
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

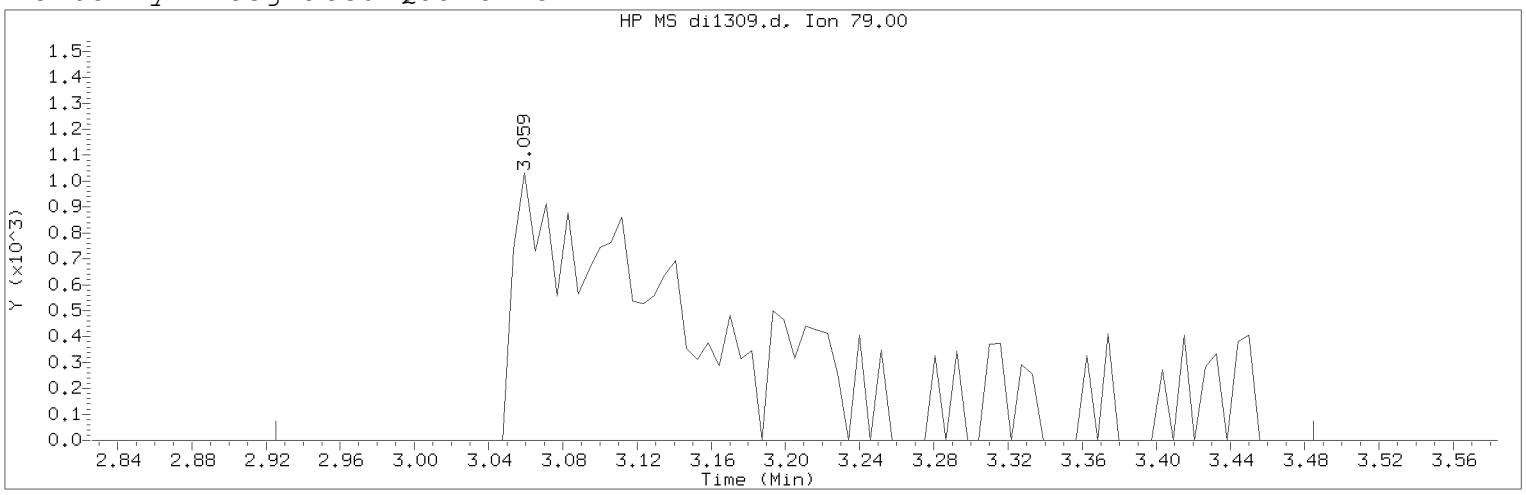
Compound Number	: 4		
Compound Name	: N-Nitrosodimethylamine		
Scan Number	: 153		
Retention Time (minutes)	: 2.879		
Quant Ion	: 74.00		
Area	: 2889		
On-column Amount (ng/ul)	: 0.0677		
Integration start scan	: 147	Integration stop scan:	167
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

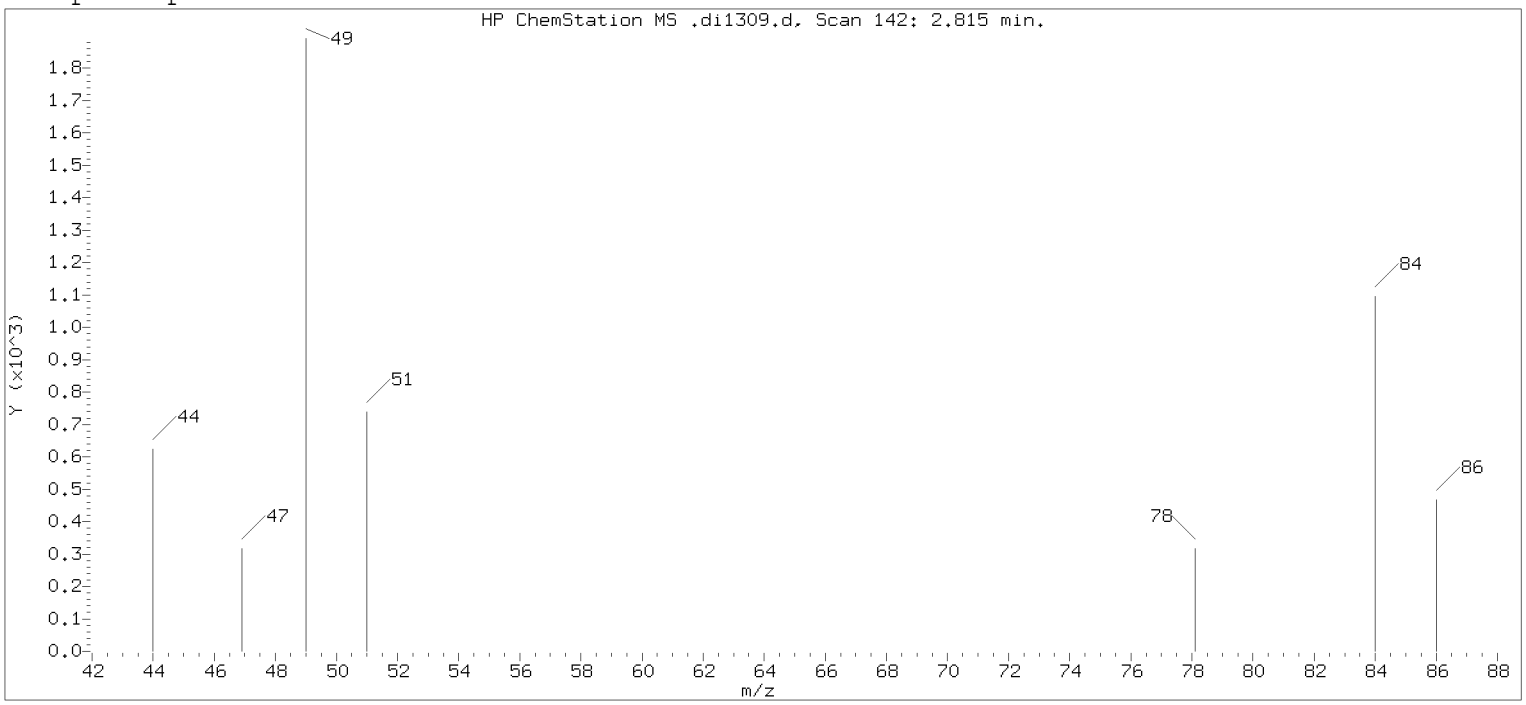
Compound Number : 5
Compound Name : Pyridine
Scan Number : 184
Retention Time (minutes) : 3.059
Quant Ion : 79.00
Area (flag) : 7769M
On-Column Amount (ng/ul) : 0.1048
Integration start scan : 160 Integration stop scan: 256
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

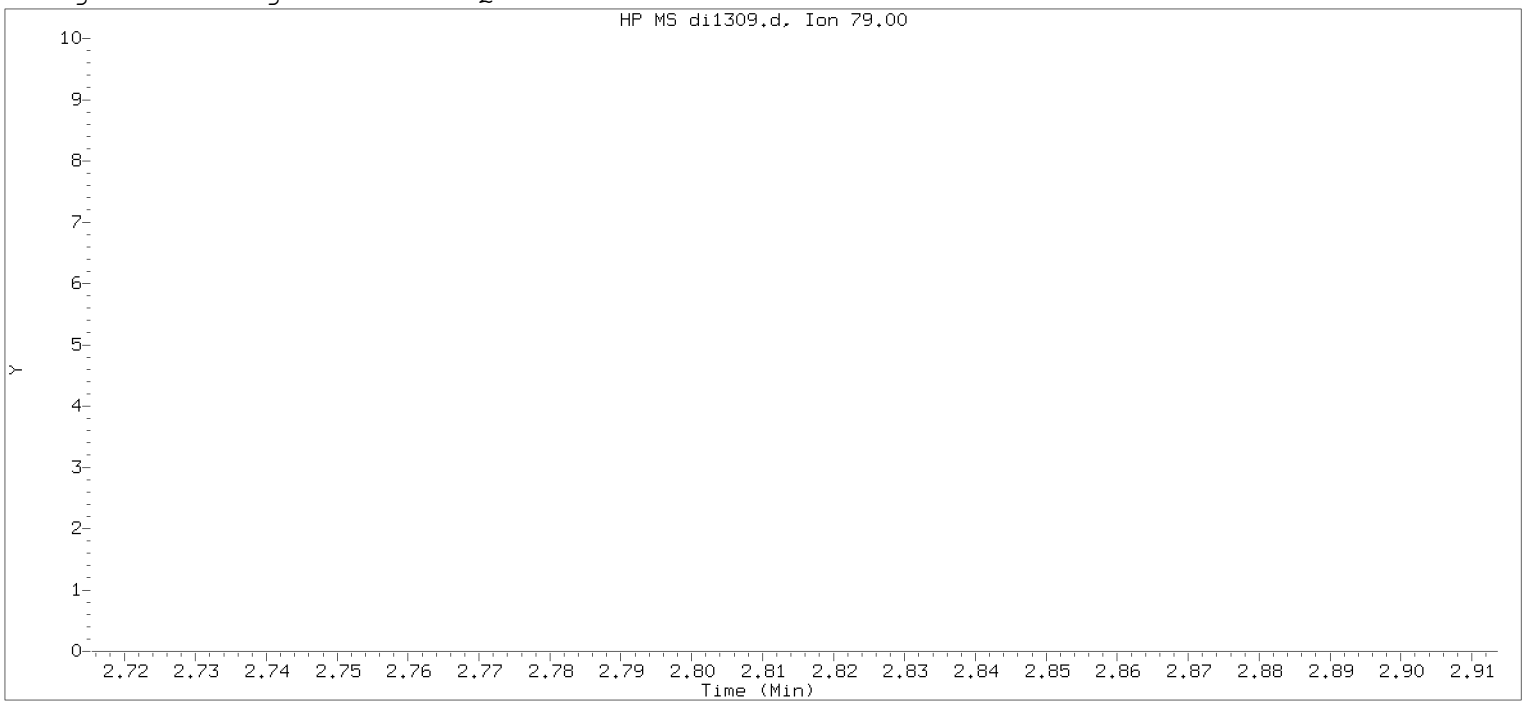
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

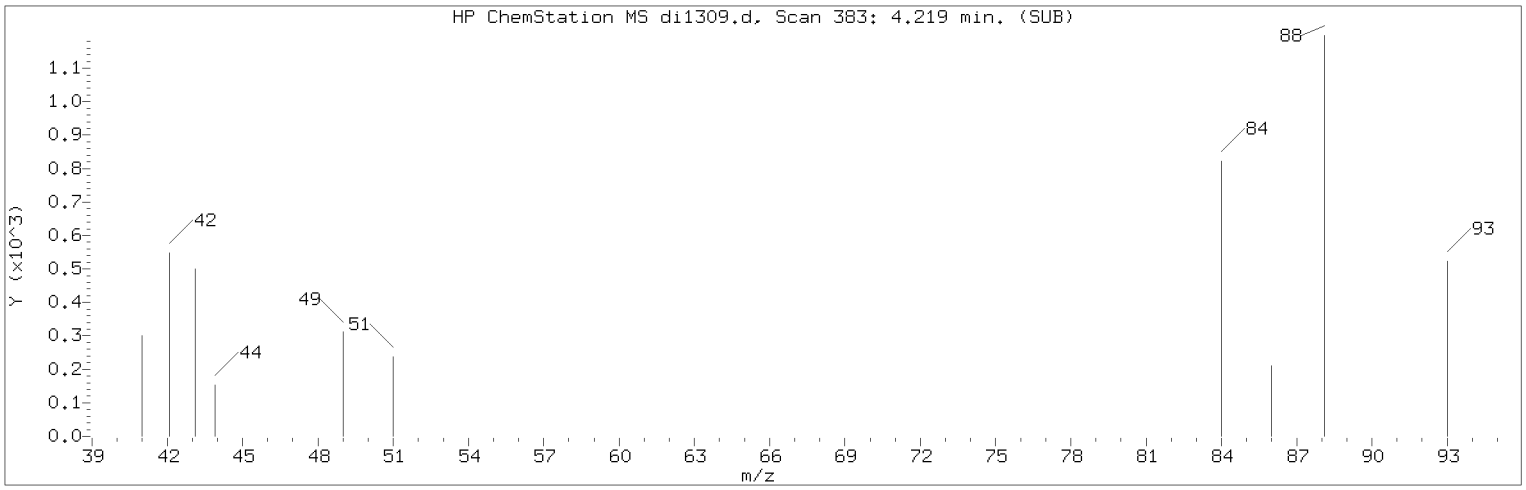
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

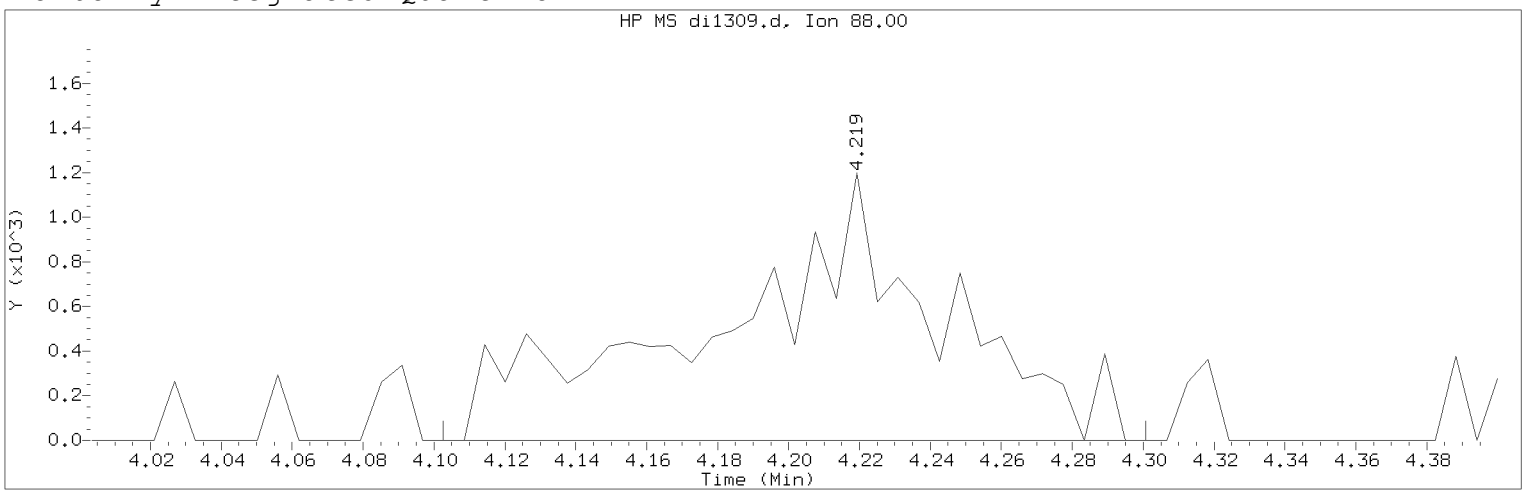
Compound Number : 5
Compound Name : Pyridine
Expected RT (minutes) : 2.814
Quant Ion : 79.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

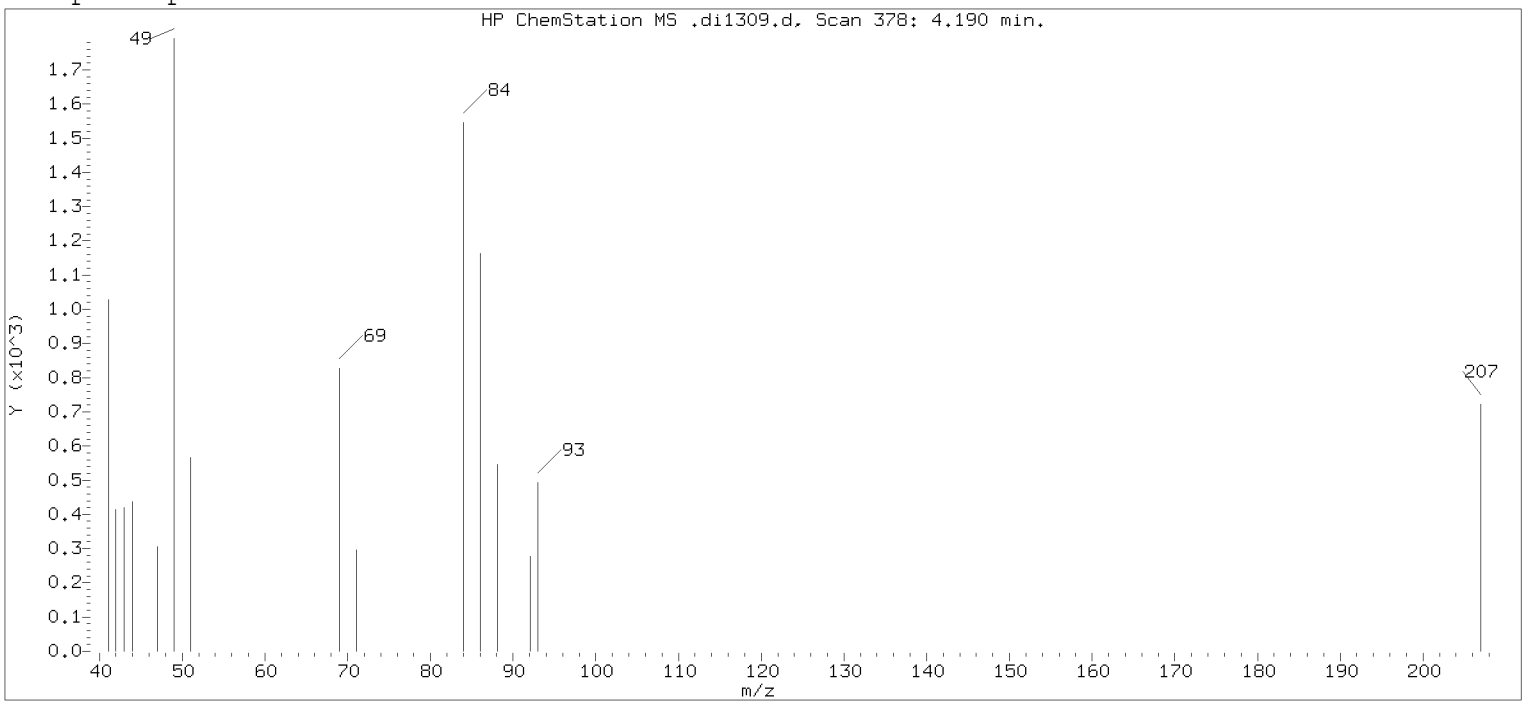
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Scan Number : 383
Retention Time (minutes) : 4.219
Quant Ion : 88.00
Area (flag) : 5178M
On-Column Amount (ng/ul) : 0.1568
Integration start scan : 362 Integration stop scan: 396
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

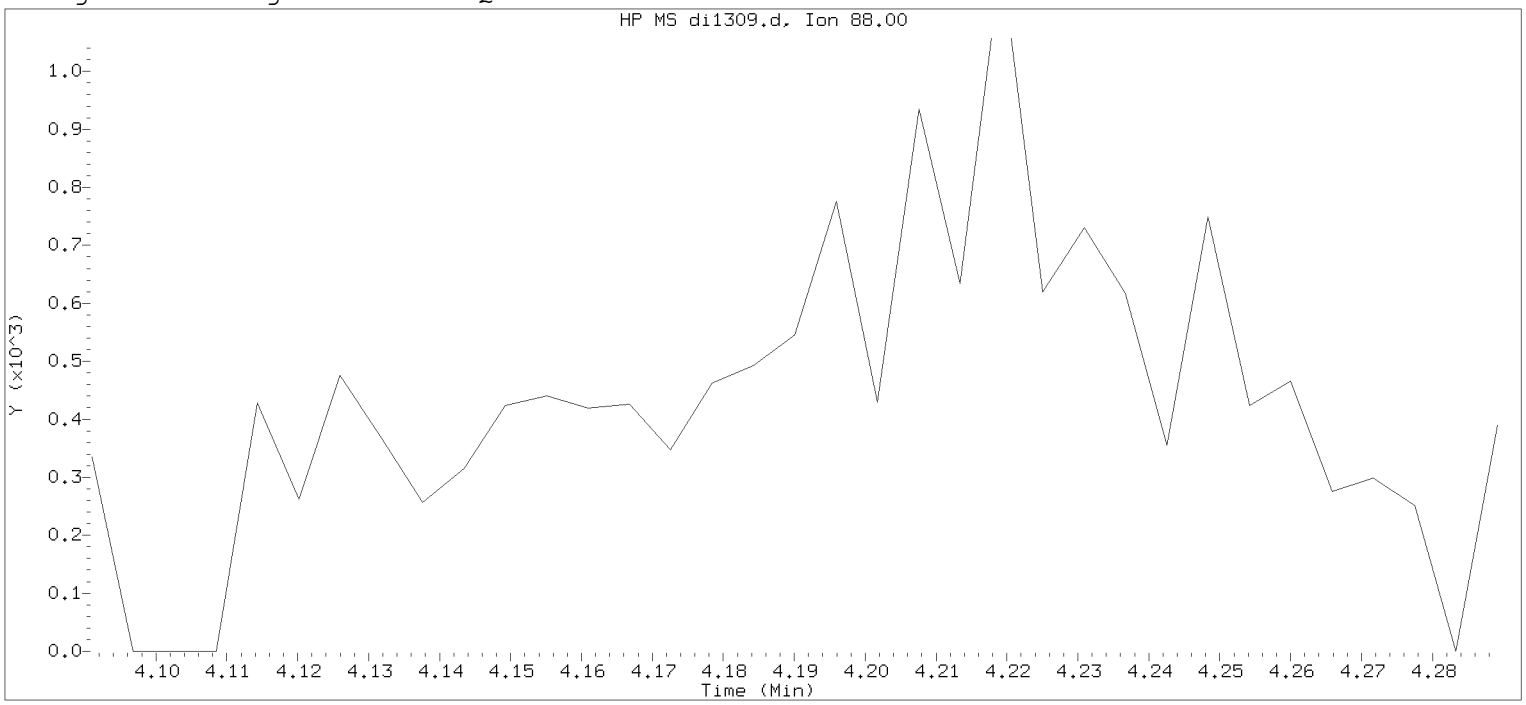
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

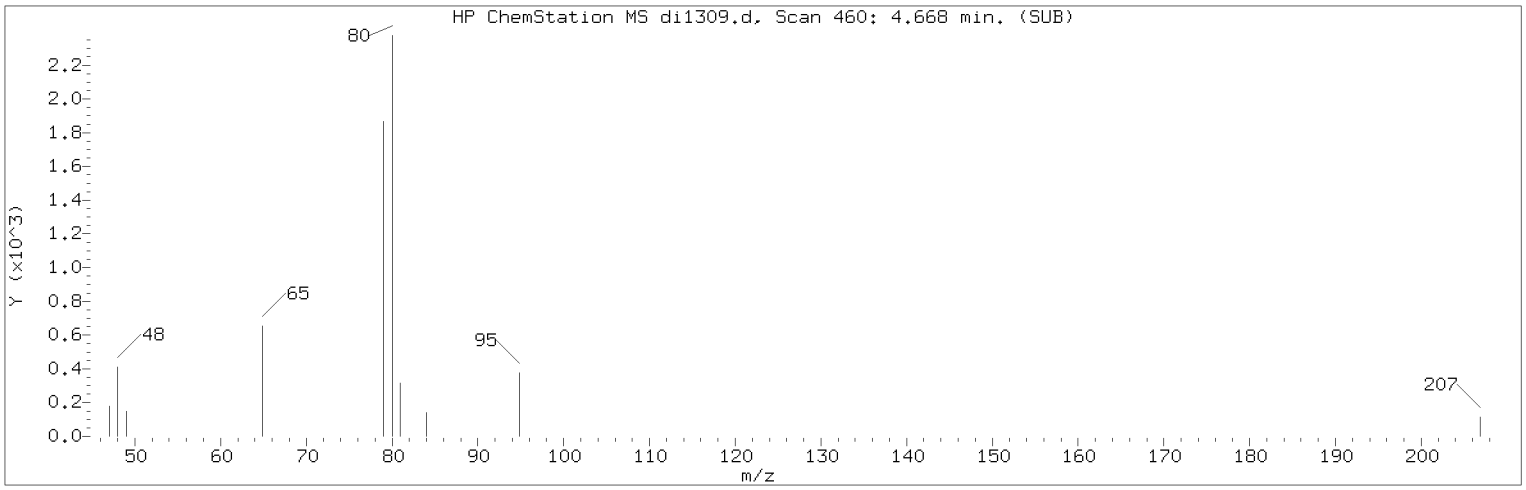
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

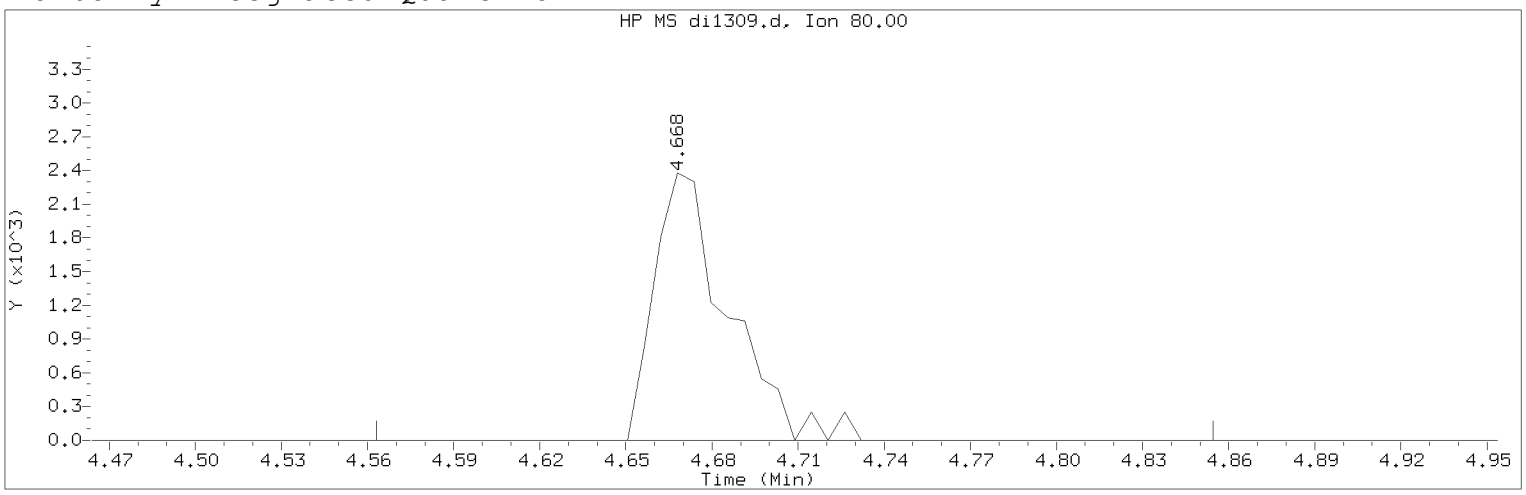
Compound Number : 8
Compound Name : N-Nitrosomethylethylamine
Expected RT (minutes) : 4.190
Quant Ion : 88.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 e1033934

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

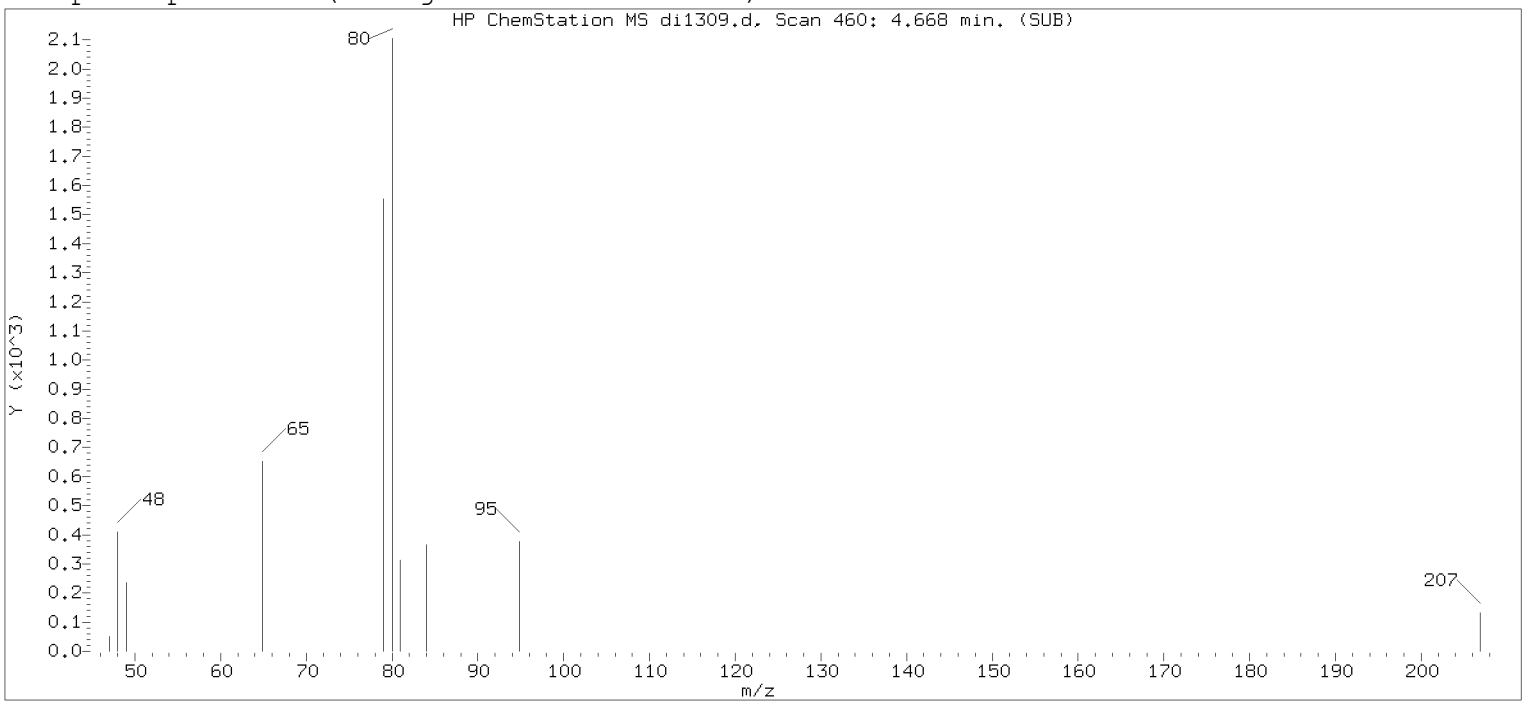
Compound Number : 9
Compound Name : Methyl methanesulfonate
Scan Number : 460
Retention Time (minutes) : 4.668
Quant Ion : 80.00
Area (flag) : 4264M
On-Column Amount (ng/ul) : 0.1194
Integration start scan : 441 Integration stop scan: 491
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

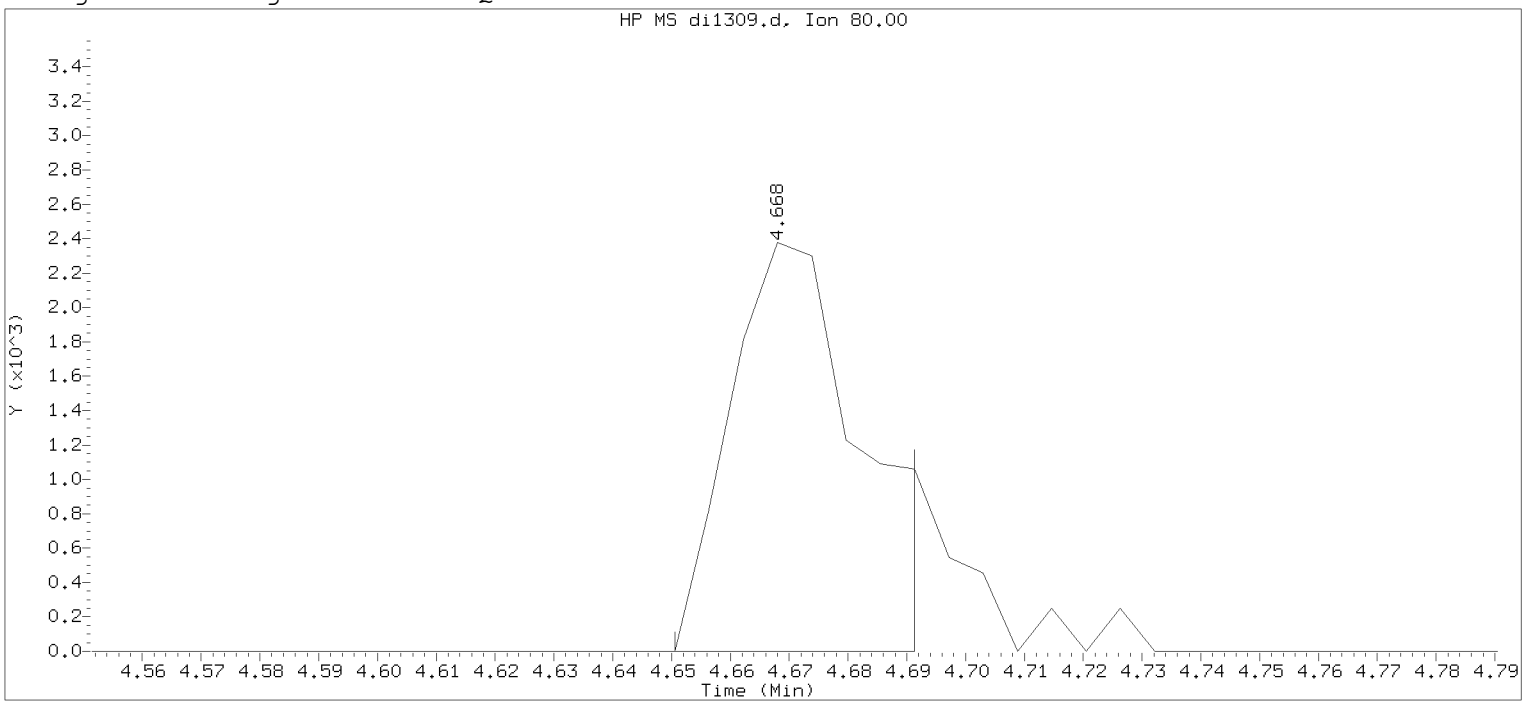
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

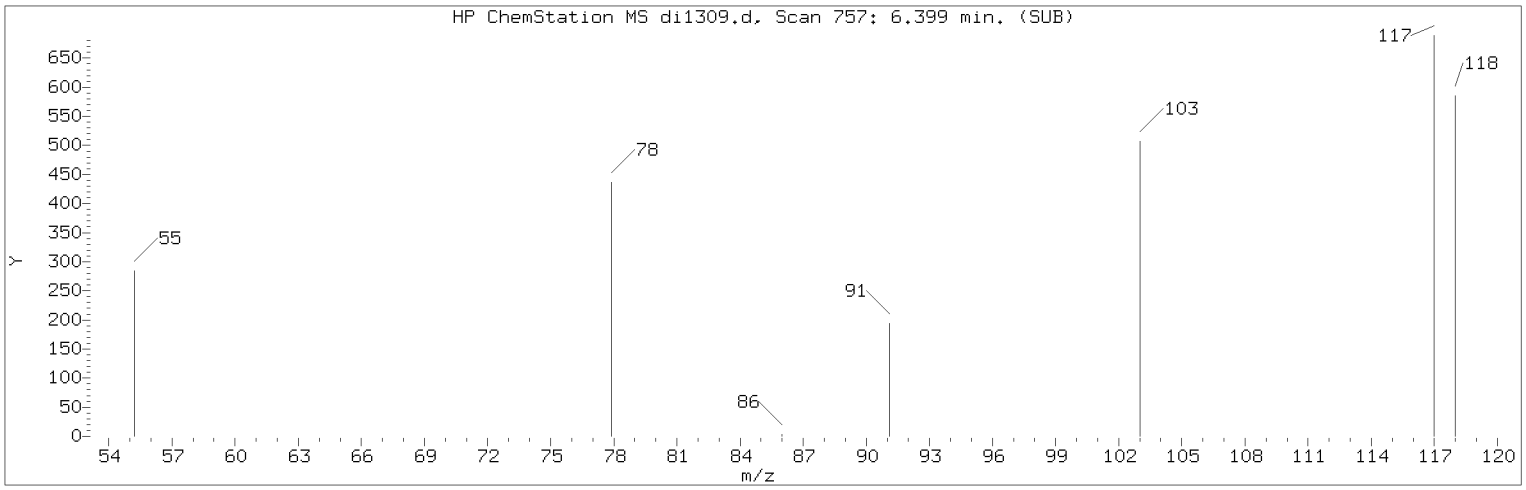
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

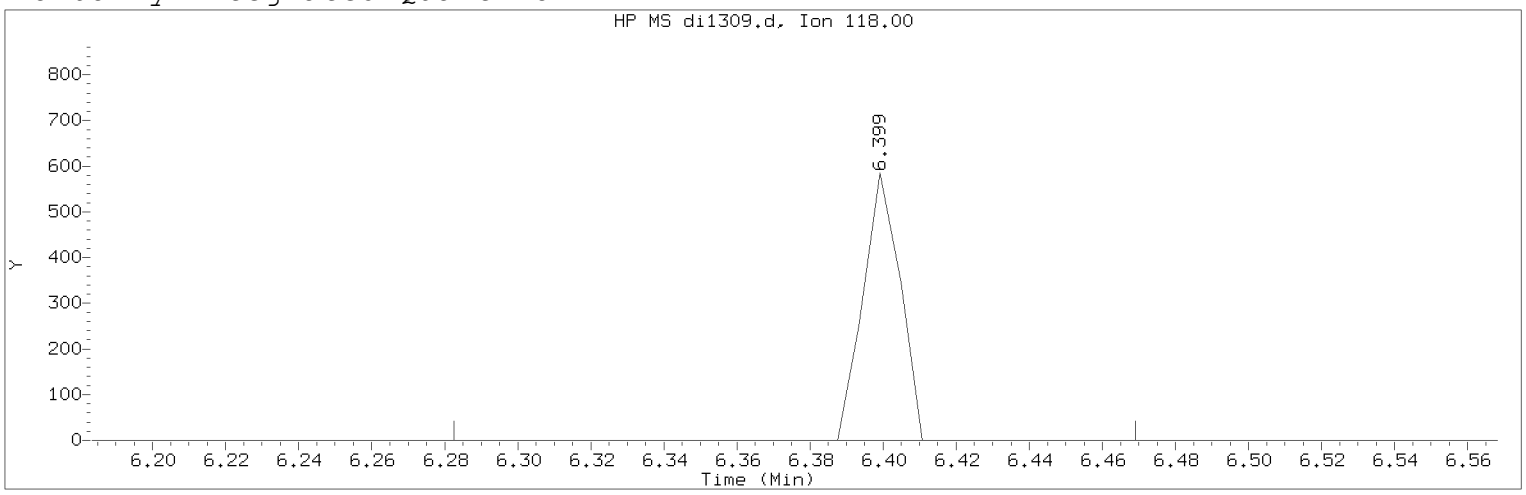
Compound Number	: 9		
Compound Name	: Methyl methanesulfonate		
Scan Number	: 460		
Retention Time (minutes)	: 4.668		
Quant Ion	: 80.00		
Area	: 3553		
On-column Amount (ng/ul)	: 0.0972		
Integration start scan	: 456	Integration stop scan:	463
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 eml 3936

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

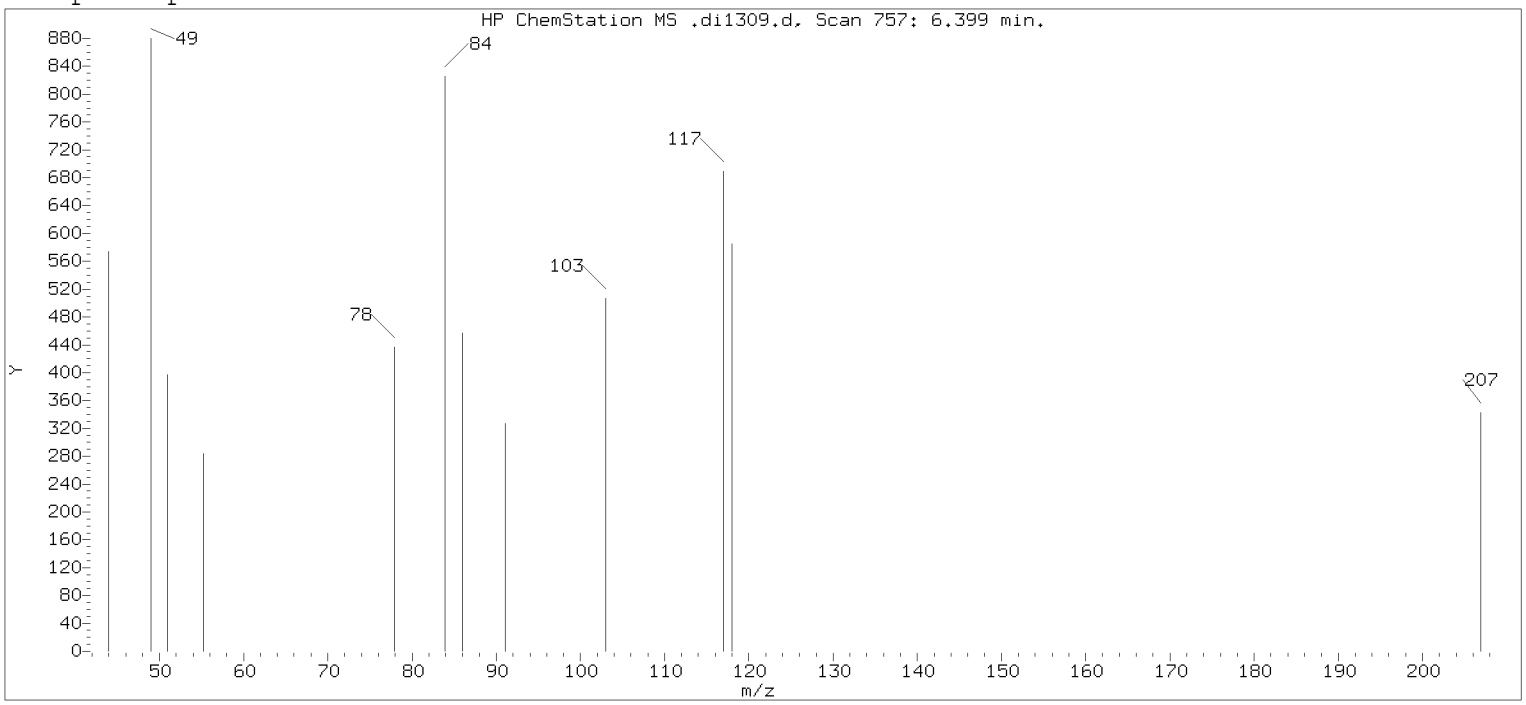
Compound Number : 20
Compound Name : a-methylstyrene
Scan Number : 757
Retention Time (minutes) : 6.399
Quant Ion : 118.00
Area (flag) : 412M
On-Column Amount (ng/ul) : 0.0689
Integration start scan : 736 Integration stop scan: 768
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

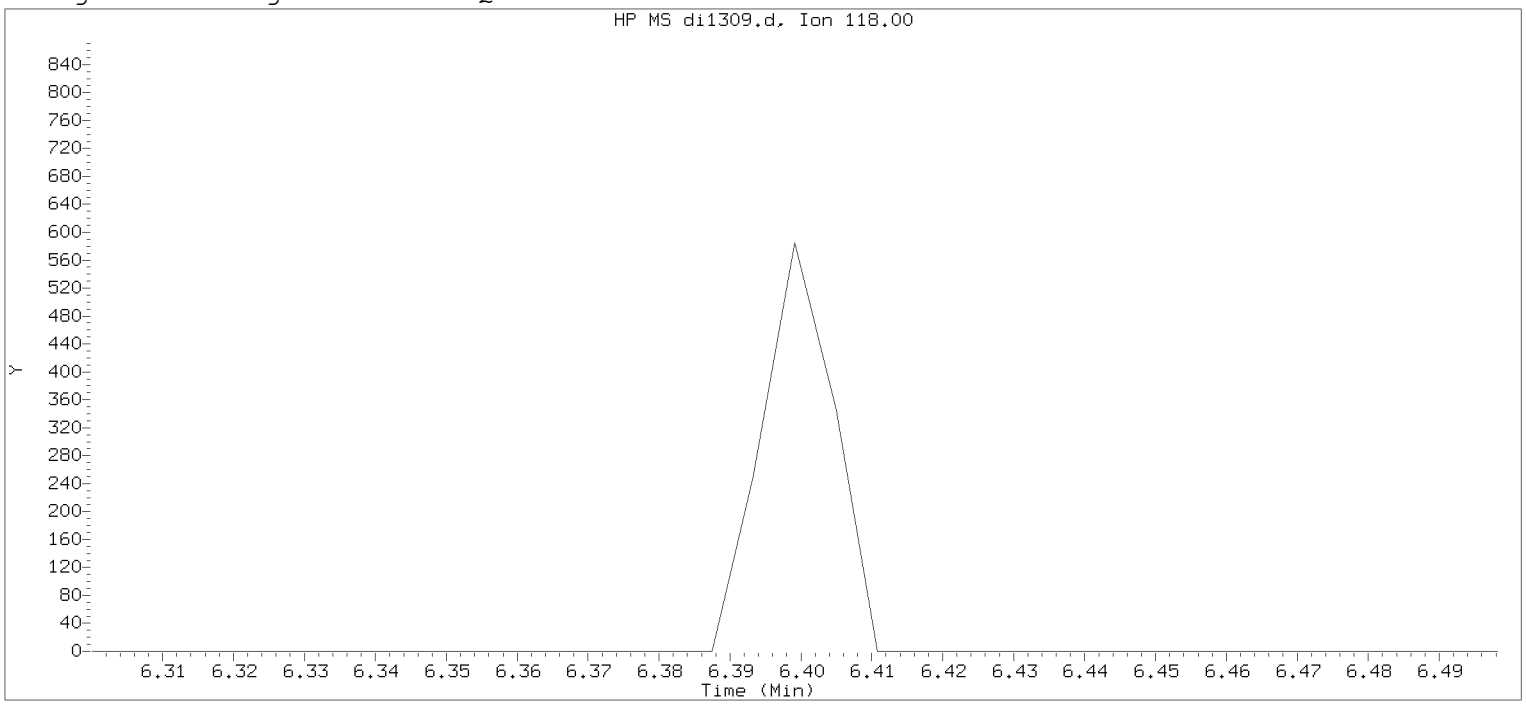
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

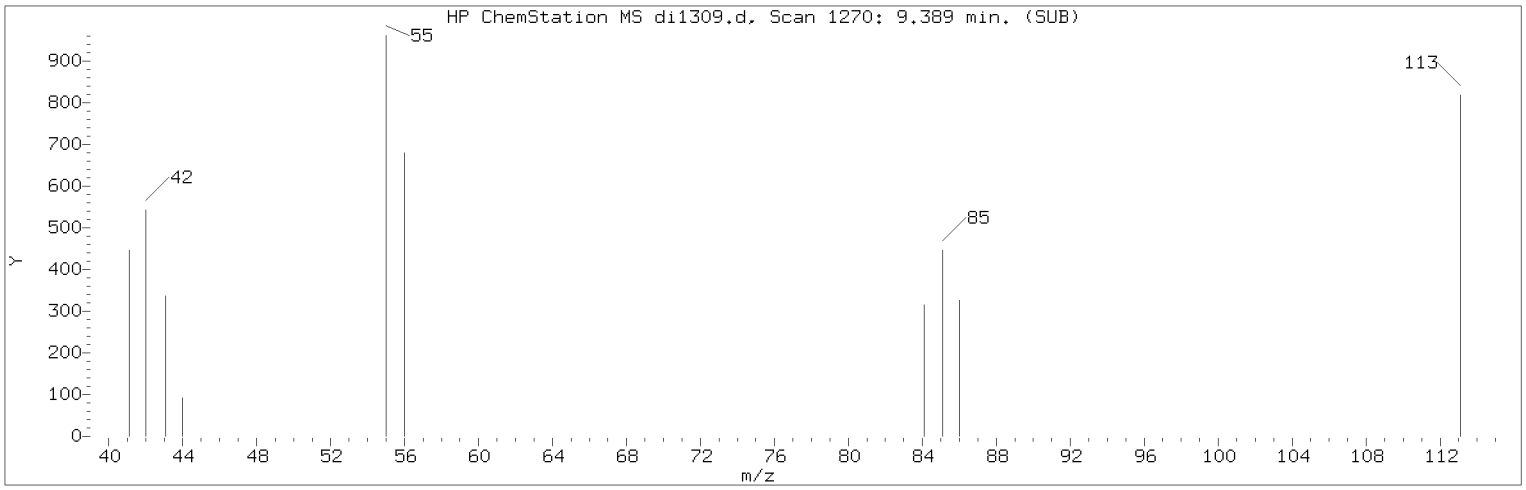
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

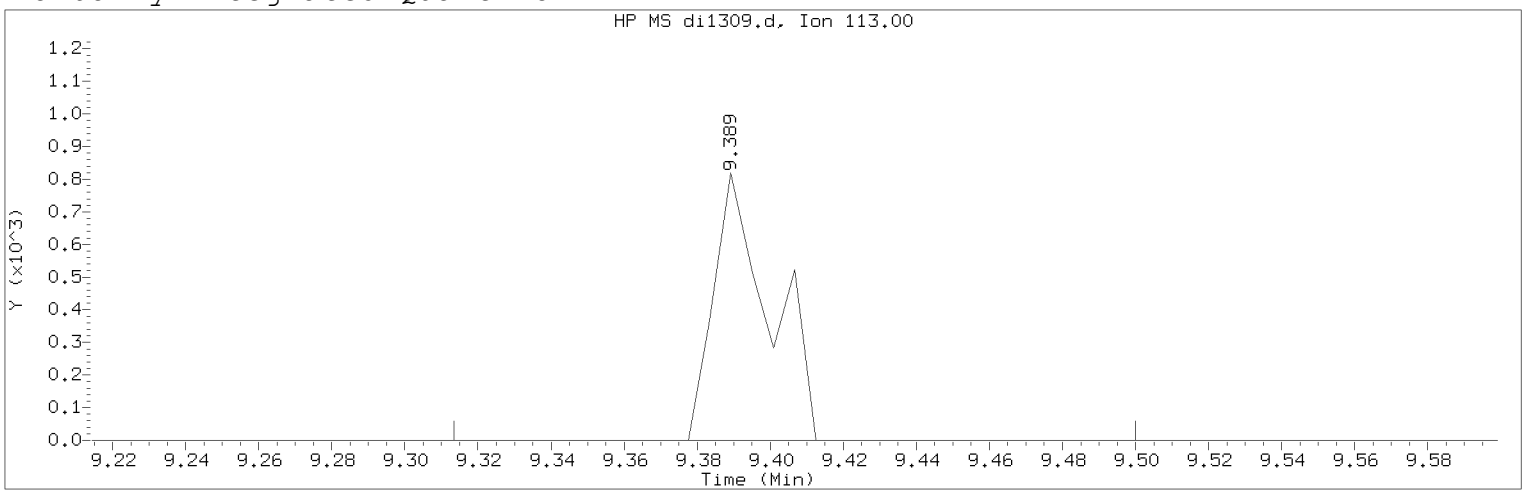
Compound Number : 20
Compound Name : a-methylstyrene
Expected RT (minutes) : 6.399
Quant Ion : 118.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 Page 938 of 1072

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

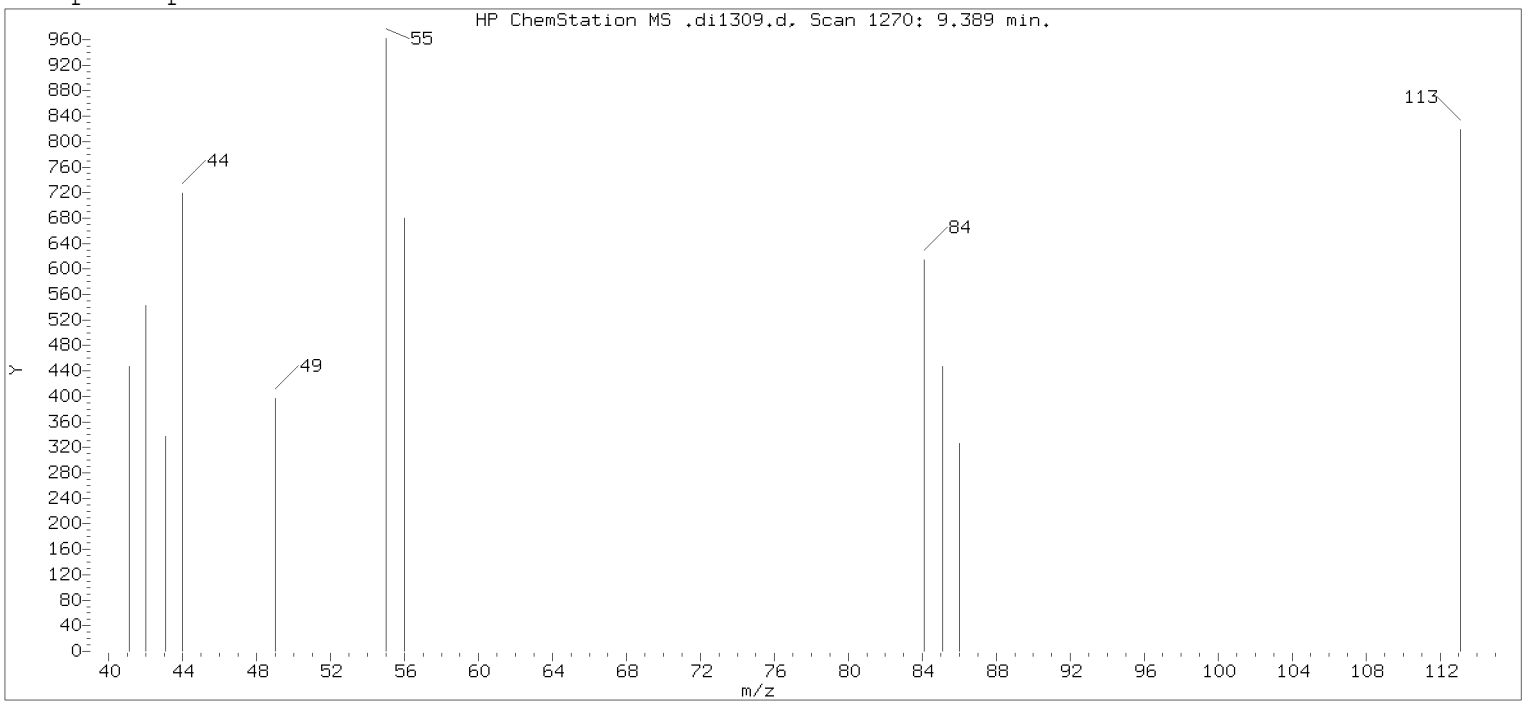
Compound Number : 76
Compound Name : Caprolactam
Scan Number : 1270
Retention Time (minutes) : 9.389
Quant Ion : 113.00
Area (flag) : 876M
On-Column Amount (ng/ul) : 0.0533
Integration start scan : 1256 Integration stop scan: 1288
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

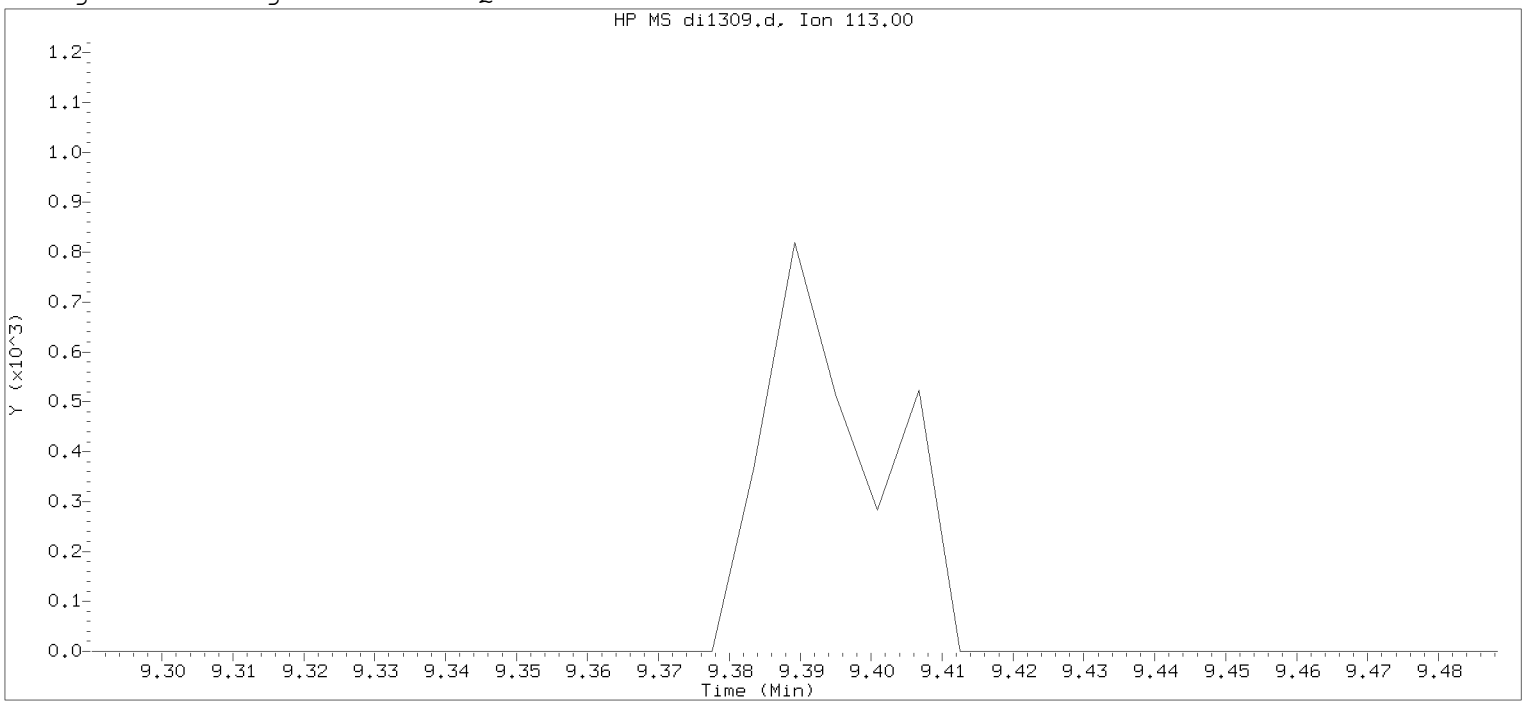
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

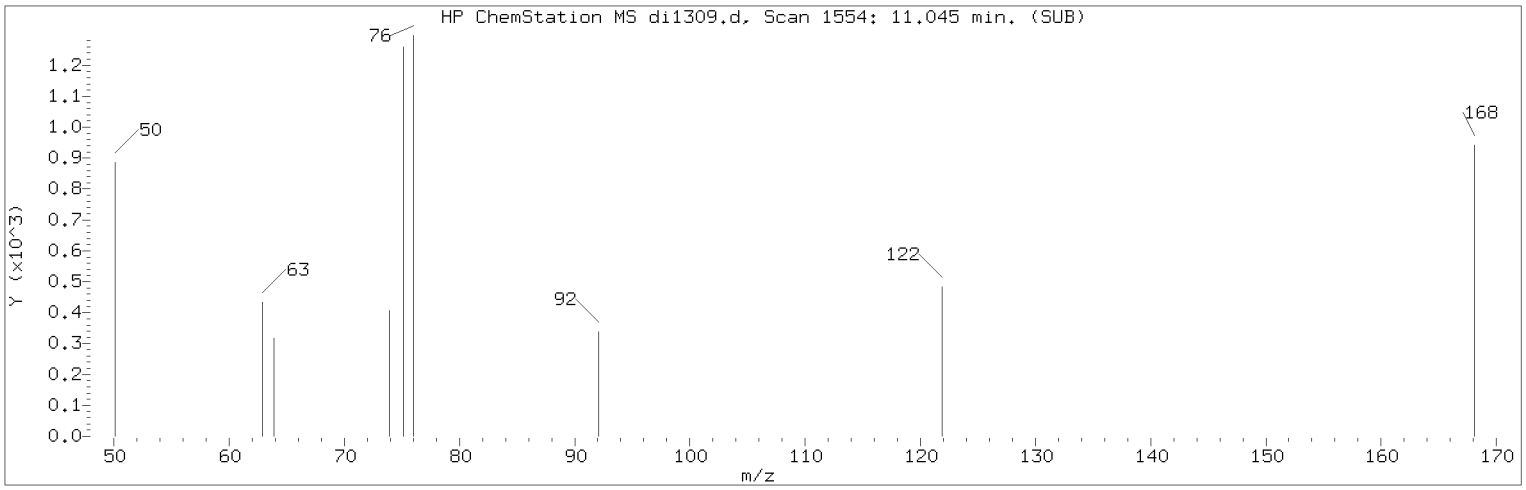
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

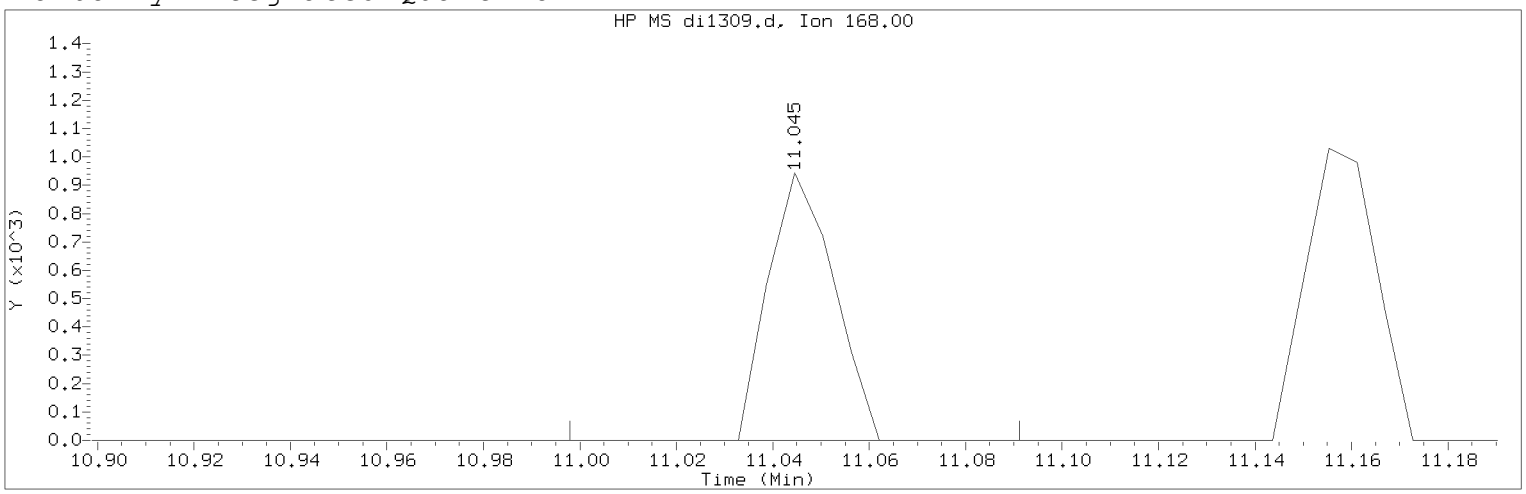
Compound Number : 76
Compound Name : Caprolactam
Expected RT (minutes) : 9.389
Quant Ion : 113.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 eng 1.33

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

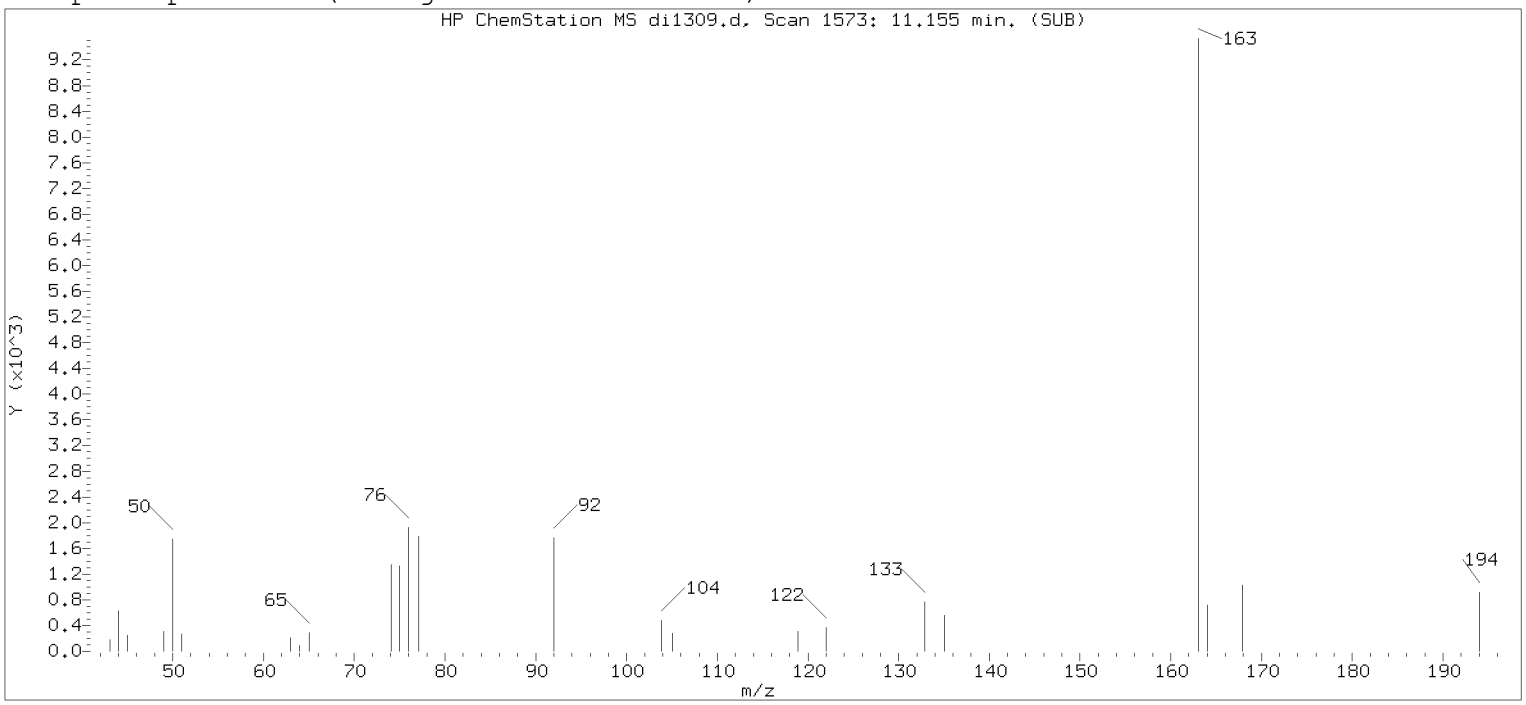
Compound Number : 105
Compound Name : 1,4-Dinitrobenzene
Scan Number : 1554
Retention Time (minutes) : 11.045
Quant Ion : 168.00
Area (flag) : 884M
On-Column Amount (ng/ul) : 0.0650
Integration start scan : 1545 Integration stop scan: 1561
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

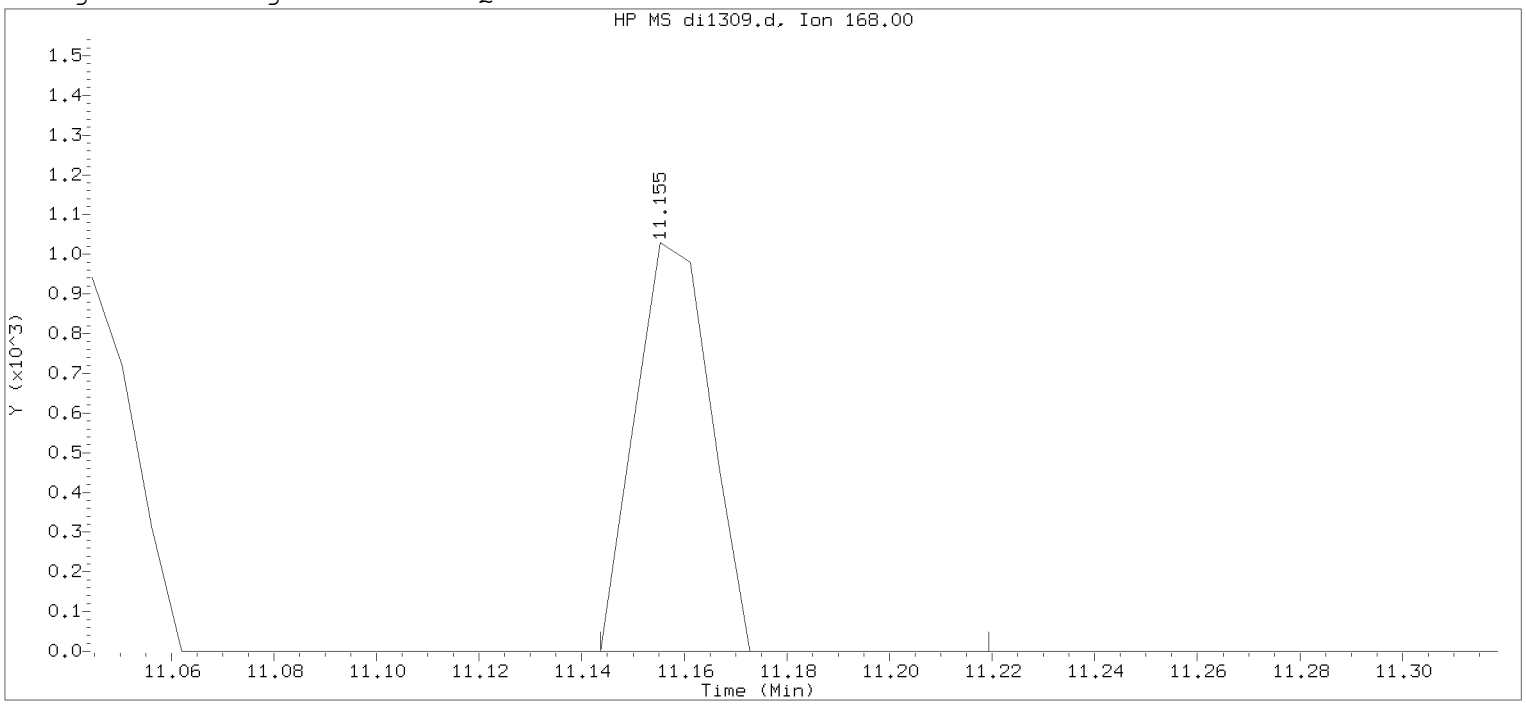
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

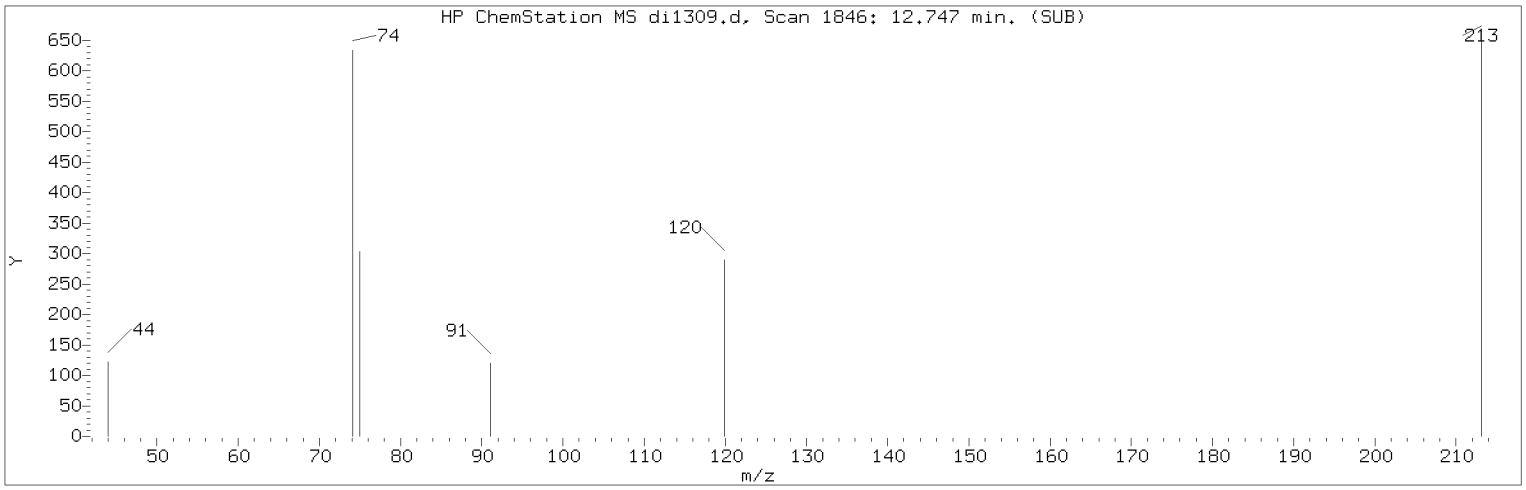
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

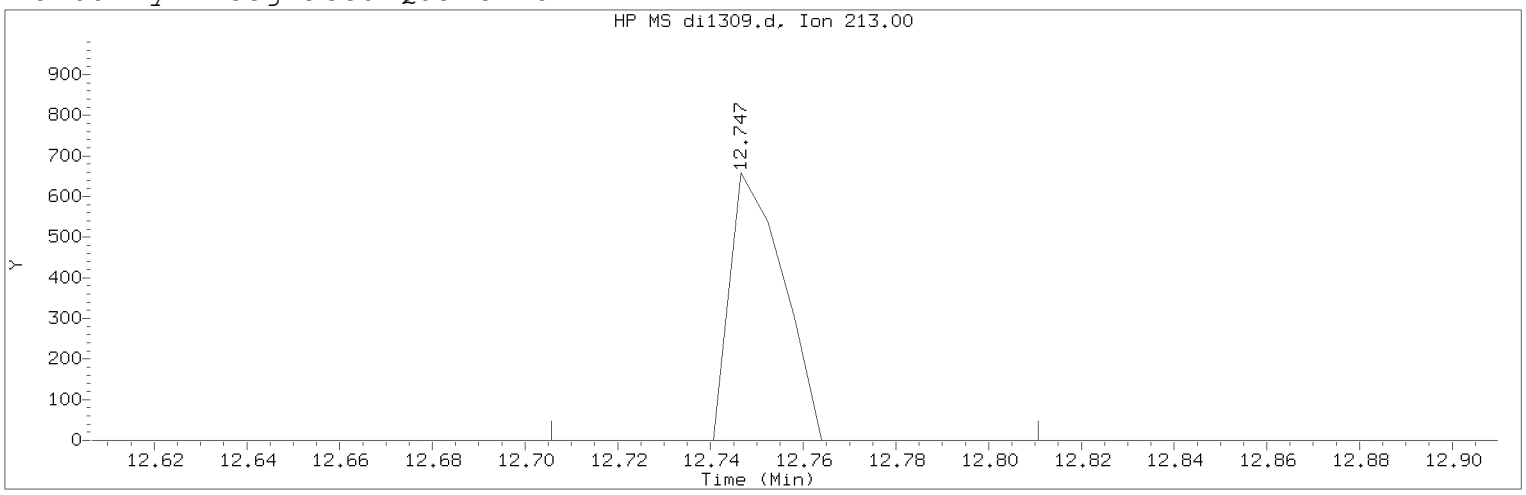
Compound Number	: 105		
Compound Name	: 1,4-Dinitrobenzene		
Scan Number	: 1573		
Retention Time (minutes)	: 11.155		
Quant Ion	: 168.00		
Area	: 1041		
On-column Amount (ng/ul)	: 0.0748		
Integration start scan	: 1570	Integration stop scan:	1583
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20-1338

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

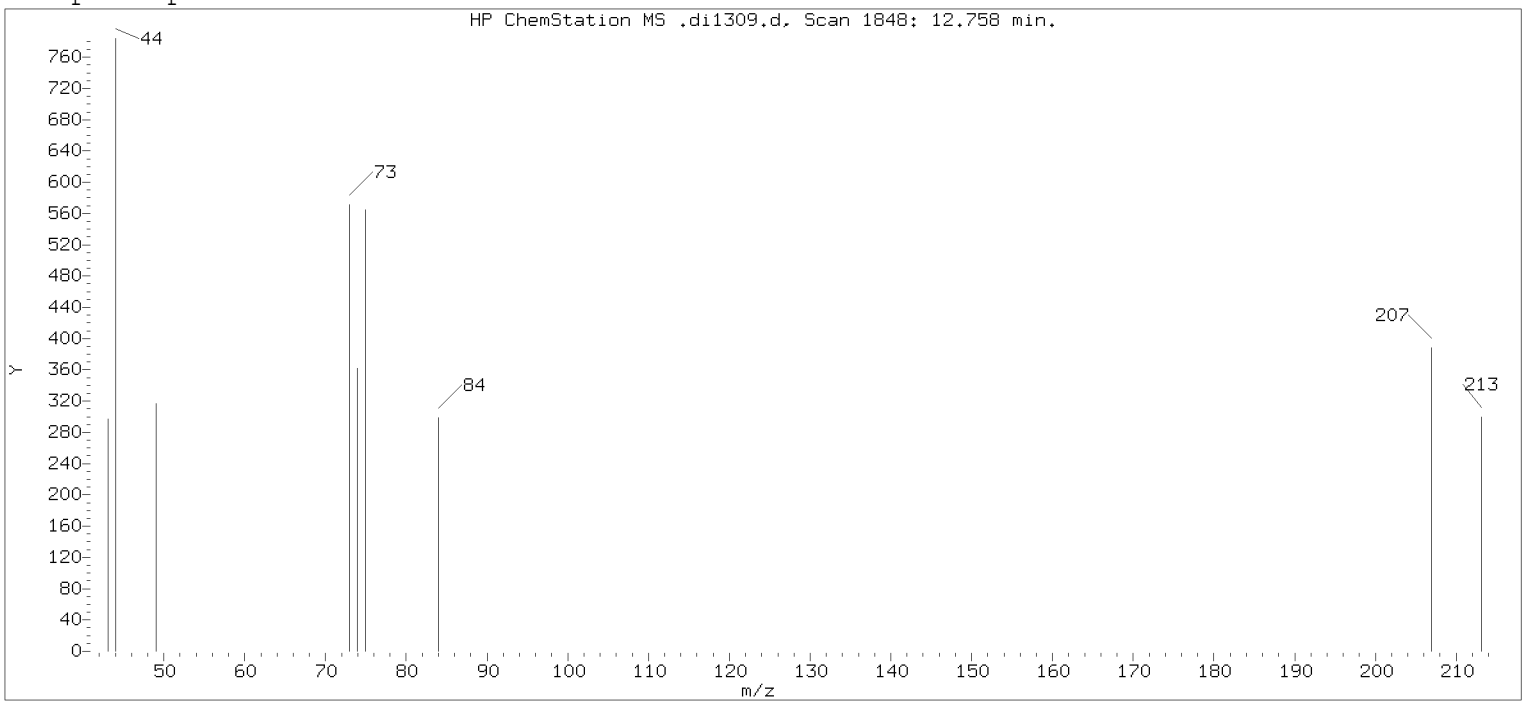
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Scan Number : 1846
Retention Time (minutes) : 12.747
Quant Ion : 213.00
Area (flag) : 523M
On-Column Amount (ng/ul) : 0.0529
Integration start scan : 1838 Integration stop scan: 1856
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

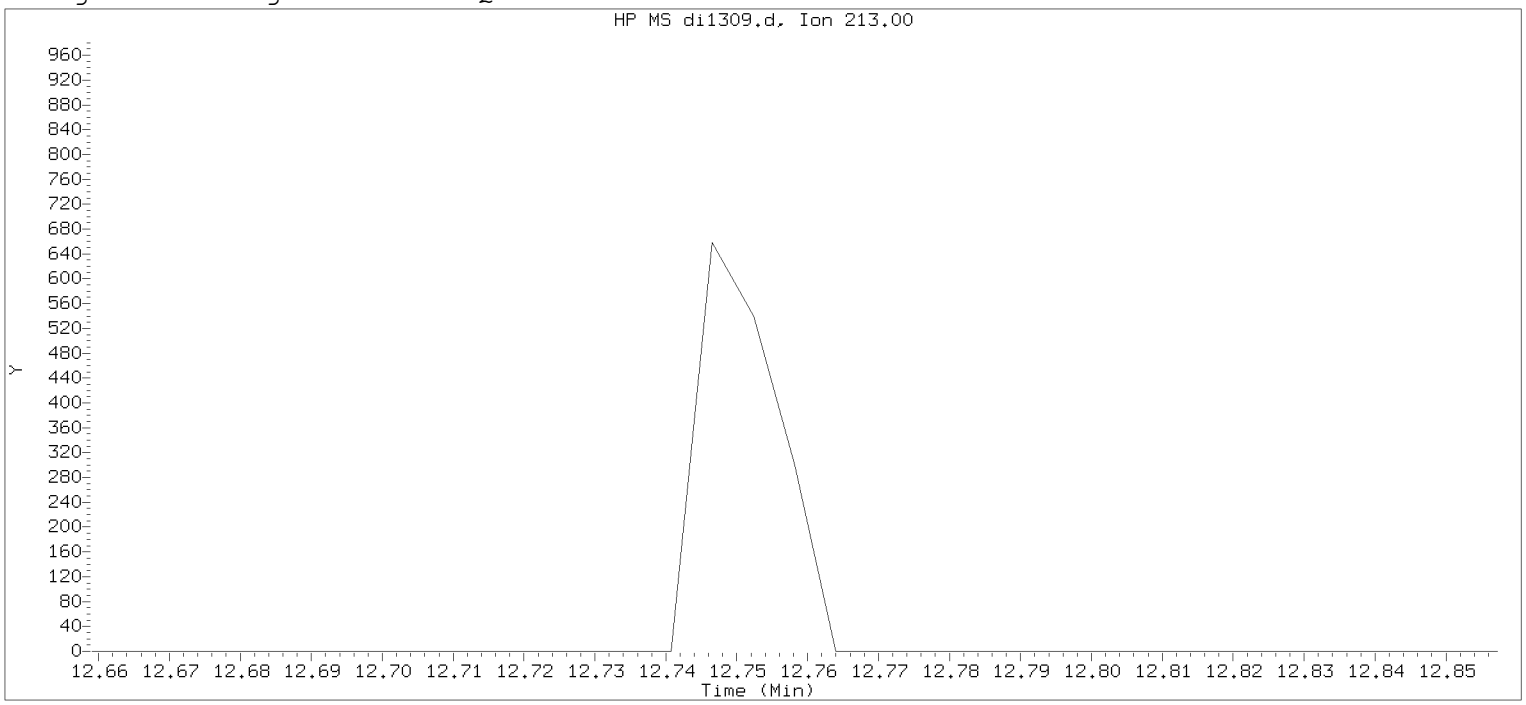
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

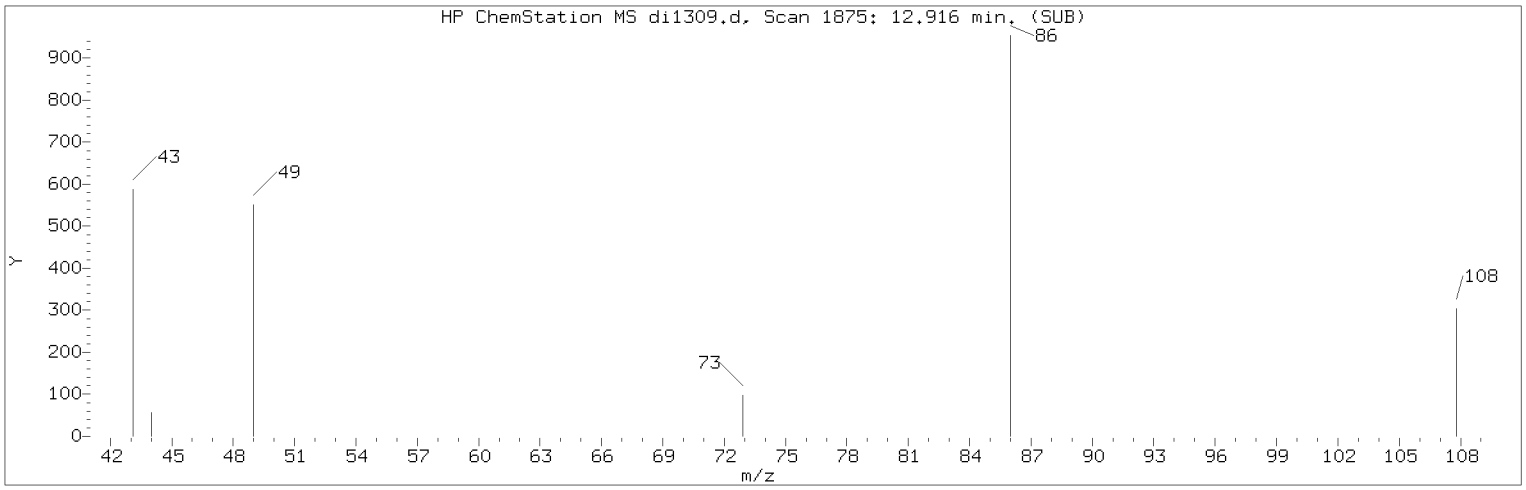
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

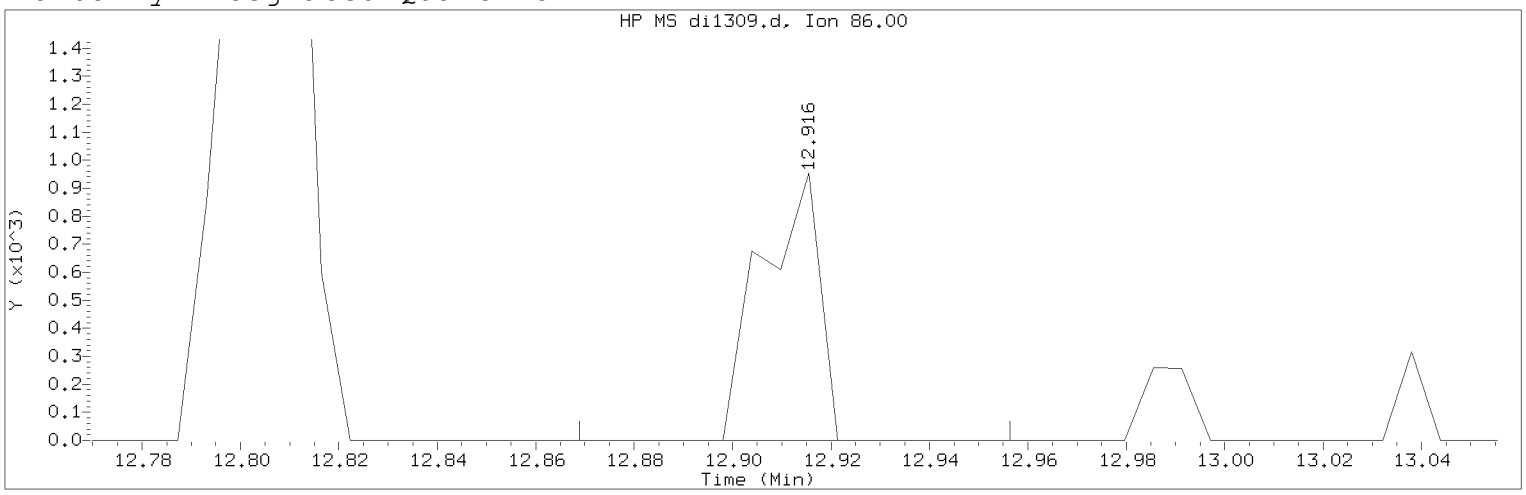
Compound Number : 139
Compound Name : 1,3,5-Trinitrobenzene
Expected RT (minutes) : 12.758
Quant Ion : 213.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

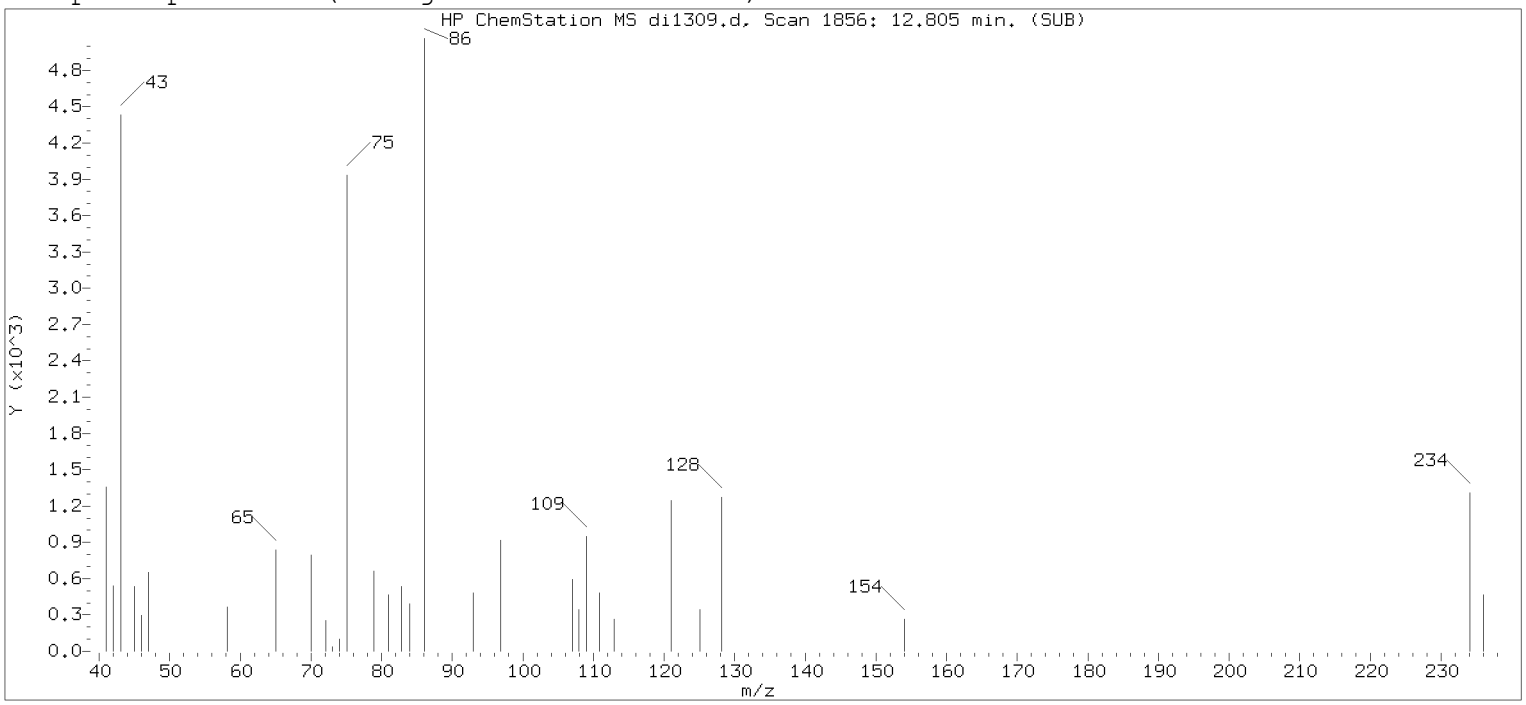
Compound Number : 144
Compound Name : Diallate (peak 2)
Scan Number : 1875
Retention Time (minutes) : 12.916
Quant Ion : 86.00
Area (flag) : 782M
On-Column Amount (ng/ul) : 0.0196
Integration start scan : 1866 Integration stop scan: 1881
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

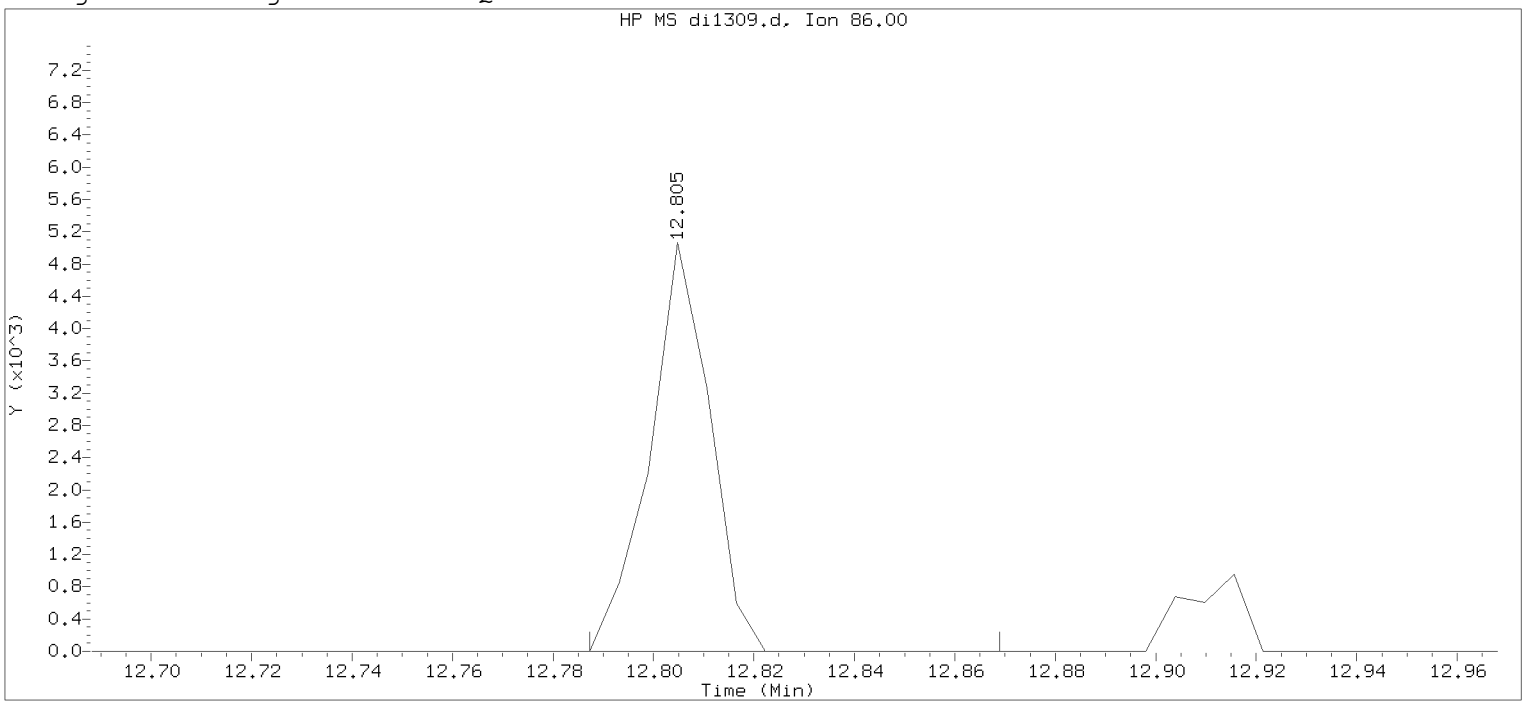
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

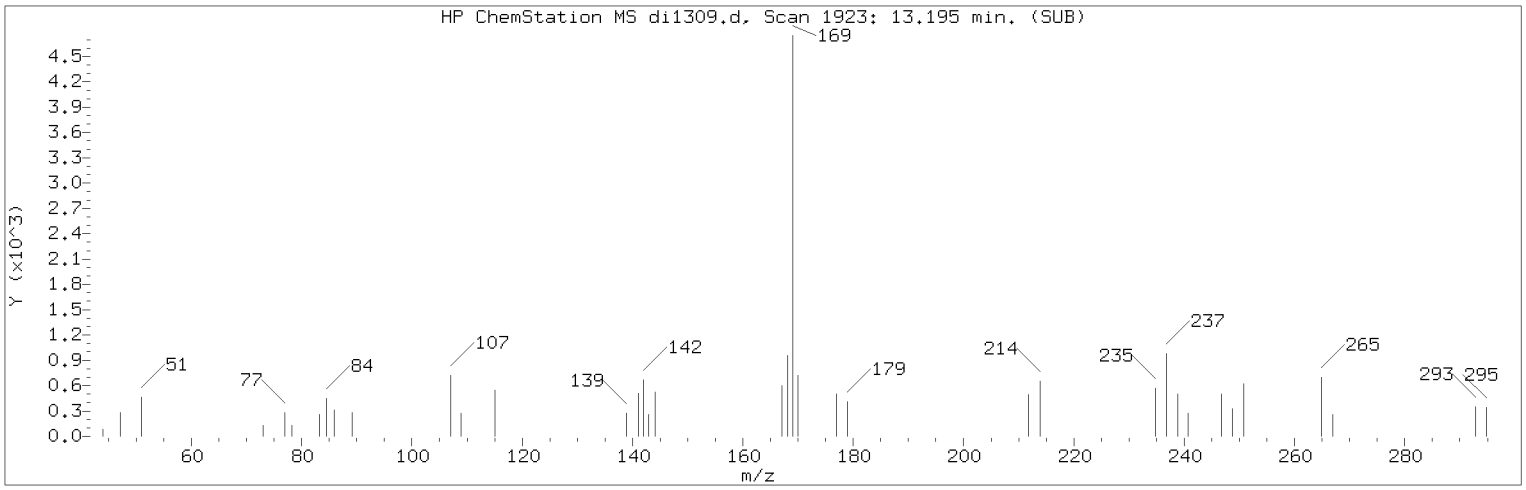
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

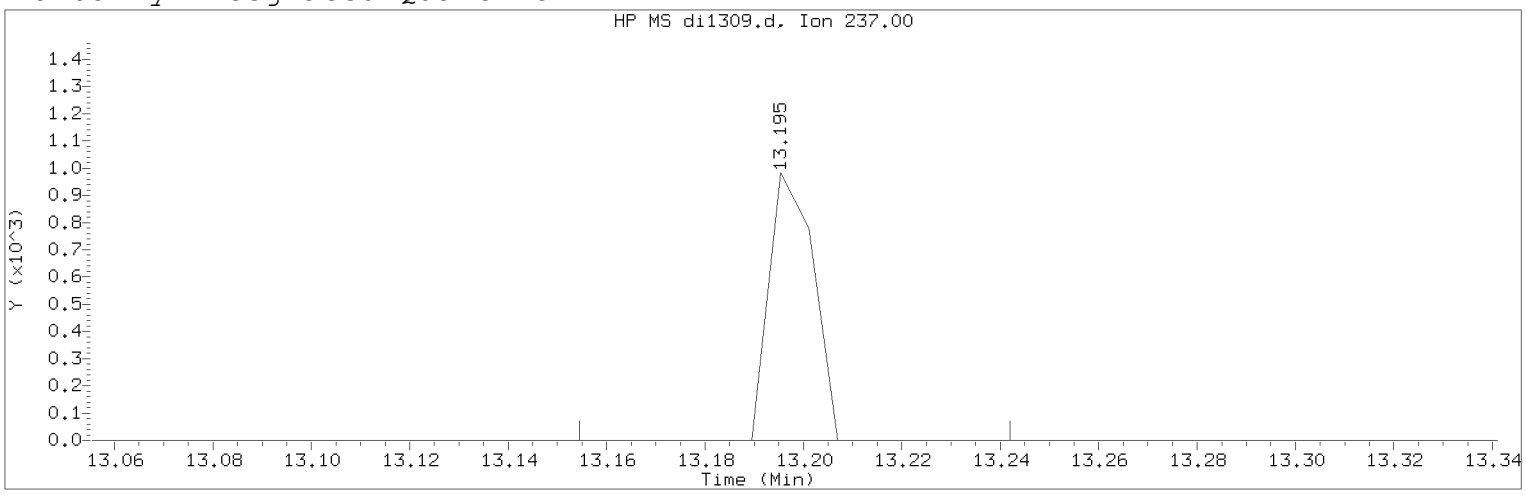
Compound Number	: 144		
Compound Name	: Diallate (peak 2)		
Scan Number	: 1856		
Retention Time (minutes)	: 12.805		
Quant Ion	: 86.00		
Area	: 4188		
On-column Amount (ng/ul)	: 0.0994		
Integration start scan	: 1852	Integration stop scan:	1866
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 eng 13346

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

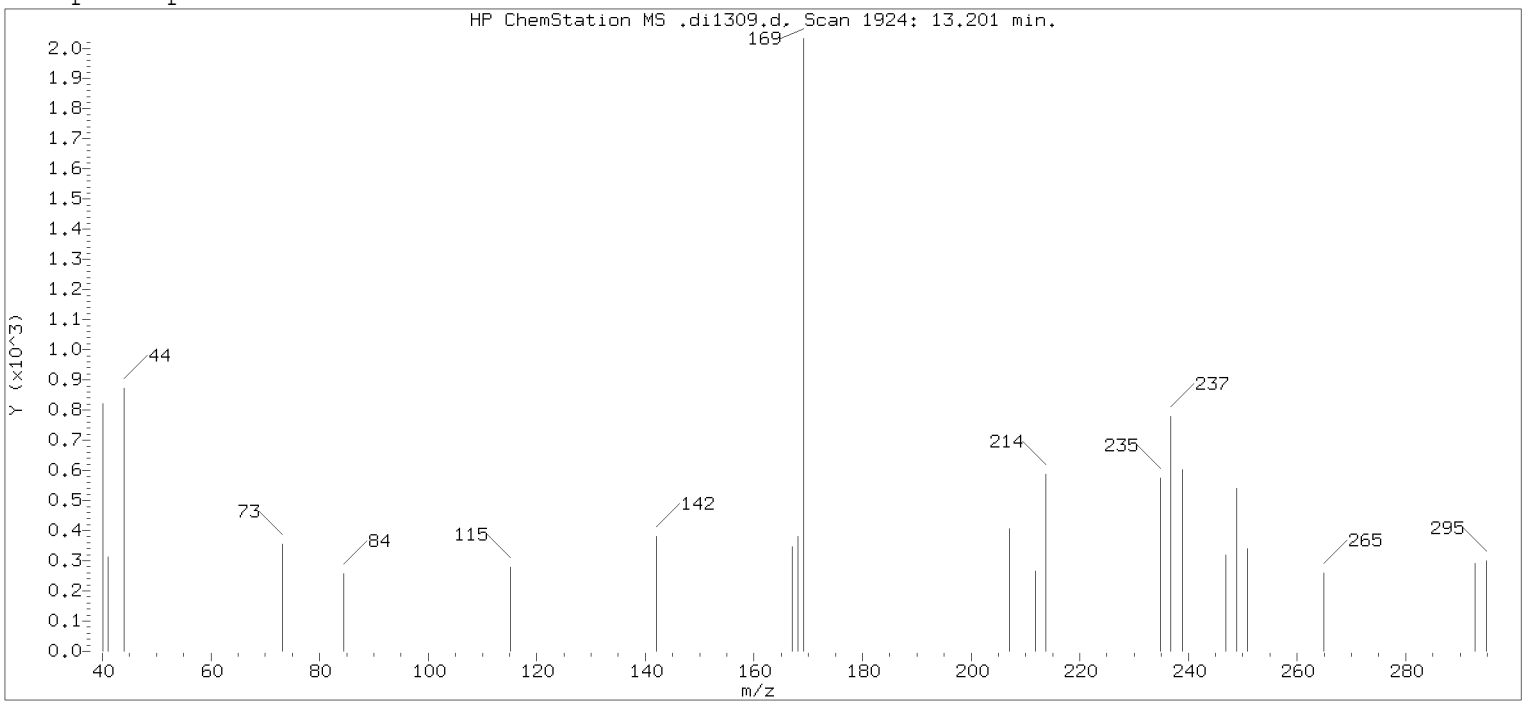
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Scan Number : 1923
Retention Time (minutes) : 13.195
Quant Ion : 237.00
Area (flag) : 616M
On-Column Amount (ng/ul) : 0.0575
Integration start scan : 1915 Integration stop scan: 1930
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

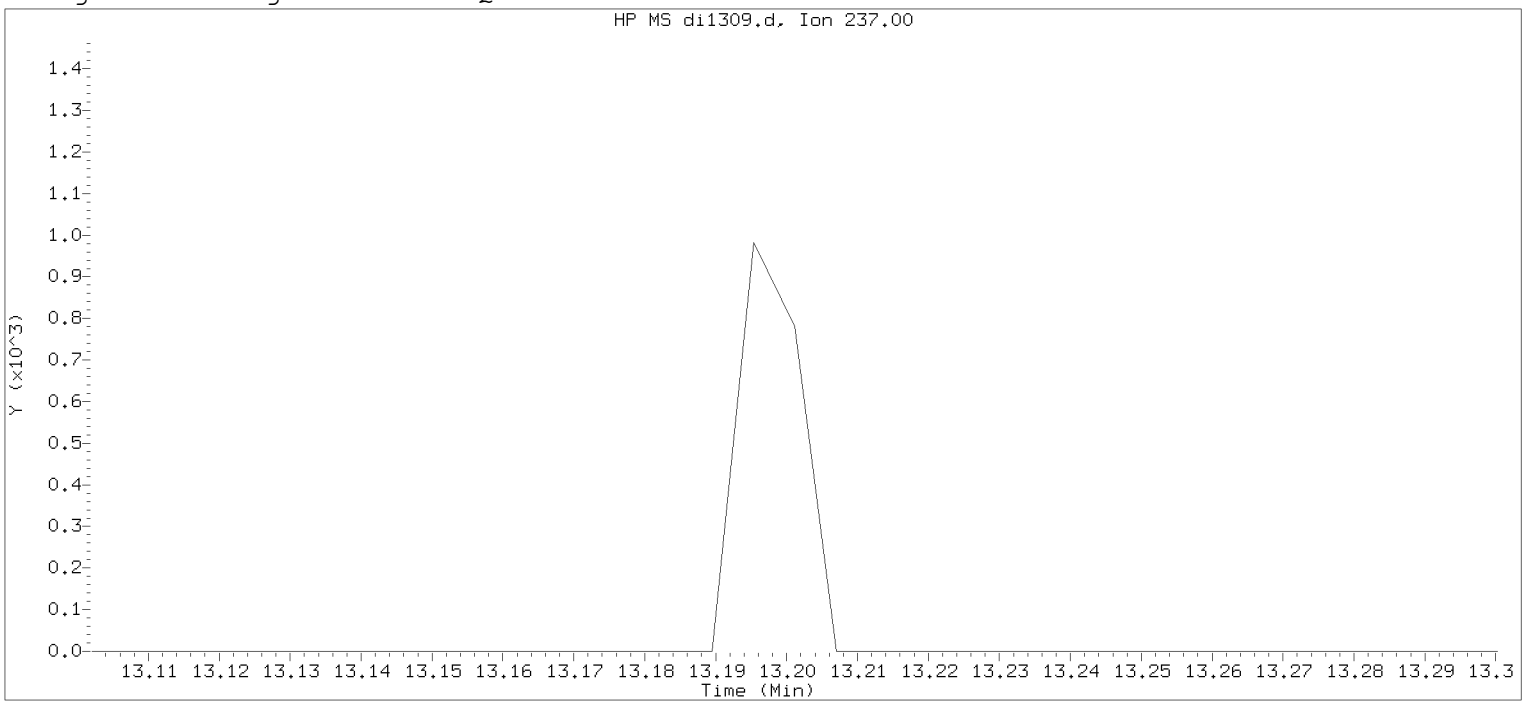
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

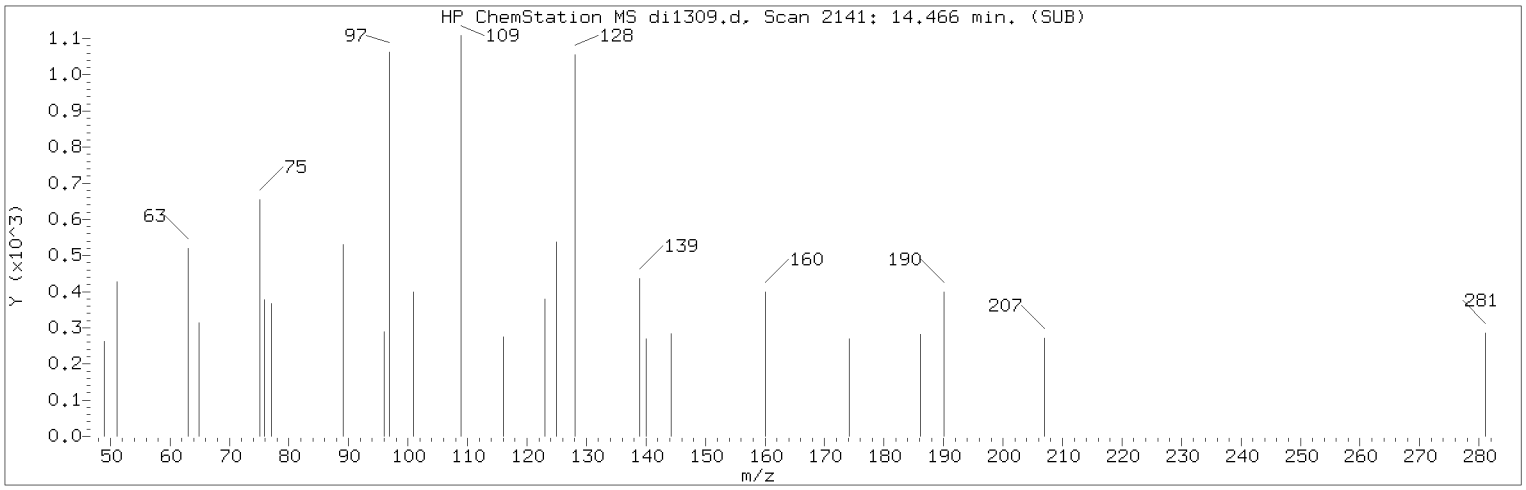
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

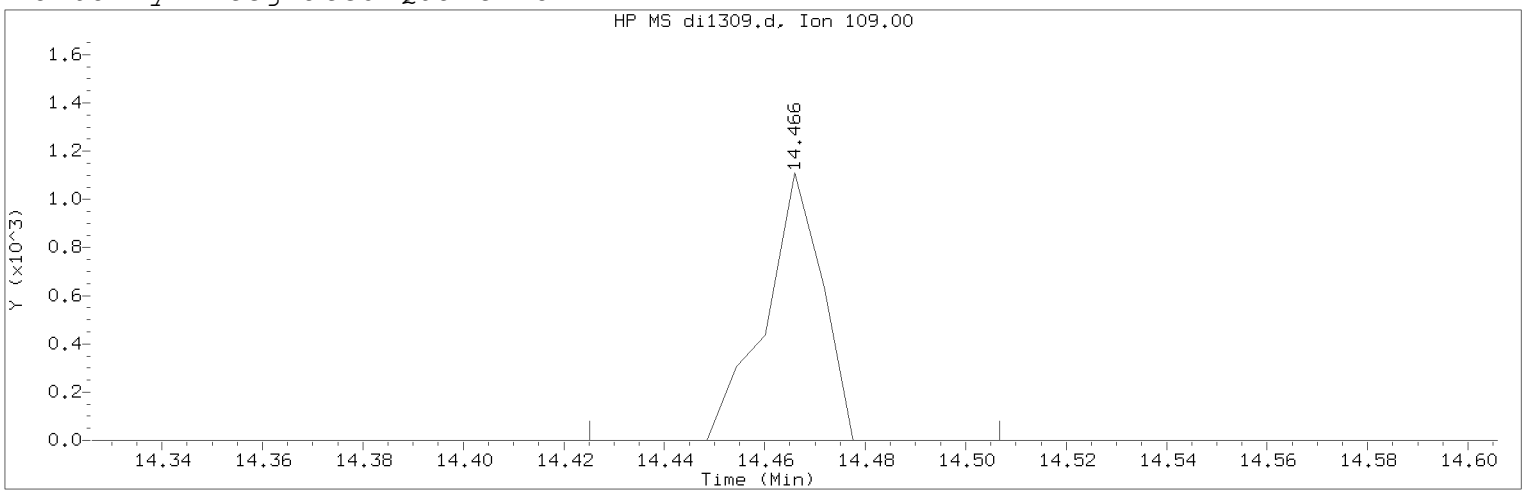
Compound Number : 151
Compound Name : Pentachloronitrobenzene
Expected RT (minutes) : 13.201
Quant Ion : 237.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 e1033

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

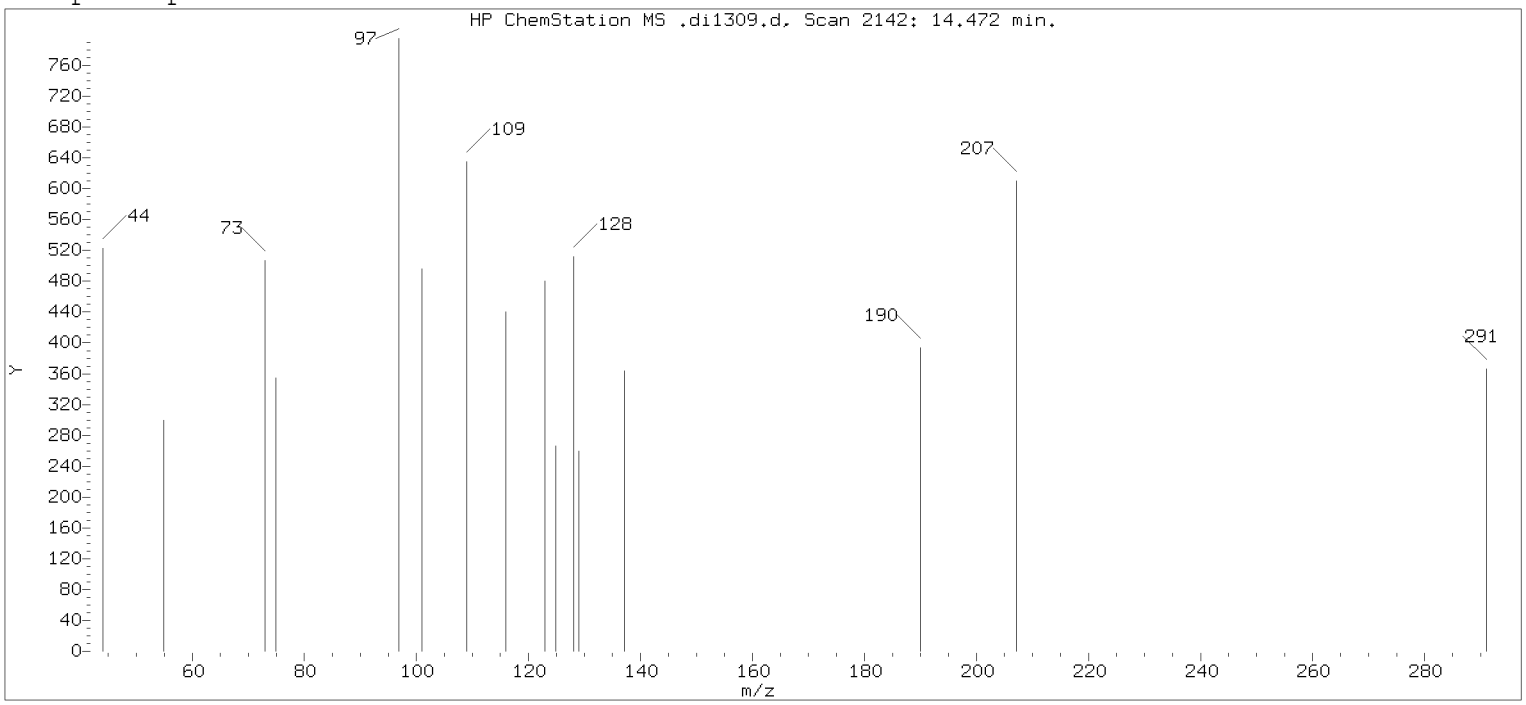
Compound Number : 167
Compound Name : Parathion
Scan Number : 2141
Retention Time (minutes) : 14.466
Quant Ion : 109.00
Area (flag) : 869M
On-Column Amount (ng/ul) : 0.9825
Integration start scan : 2133 Integration stop scan: 2147
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

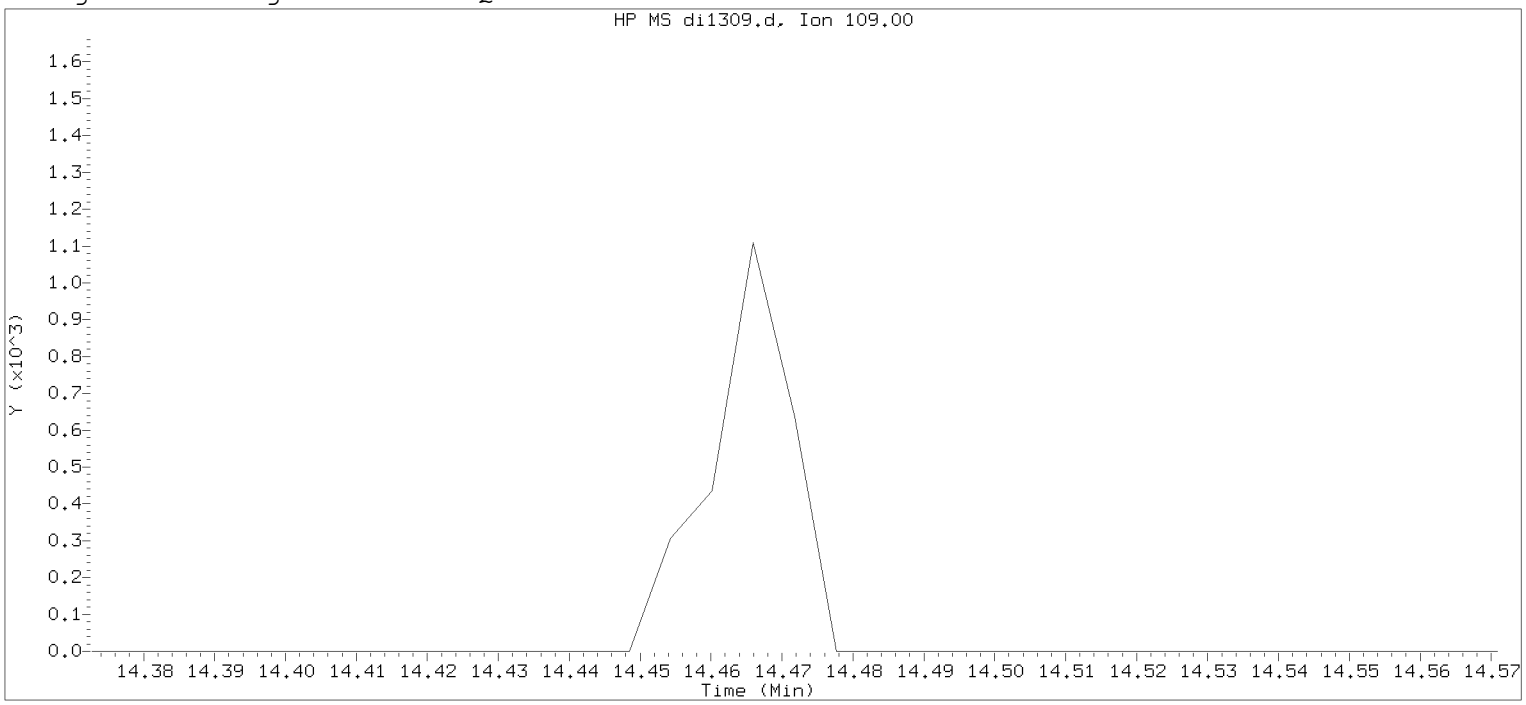
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

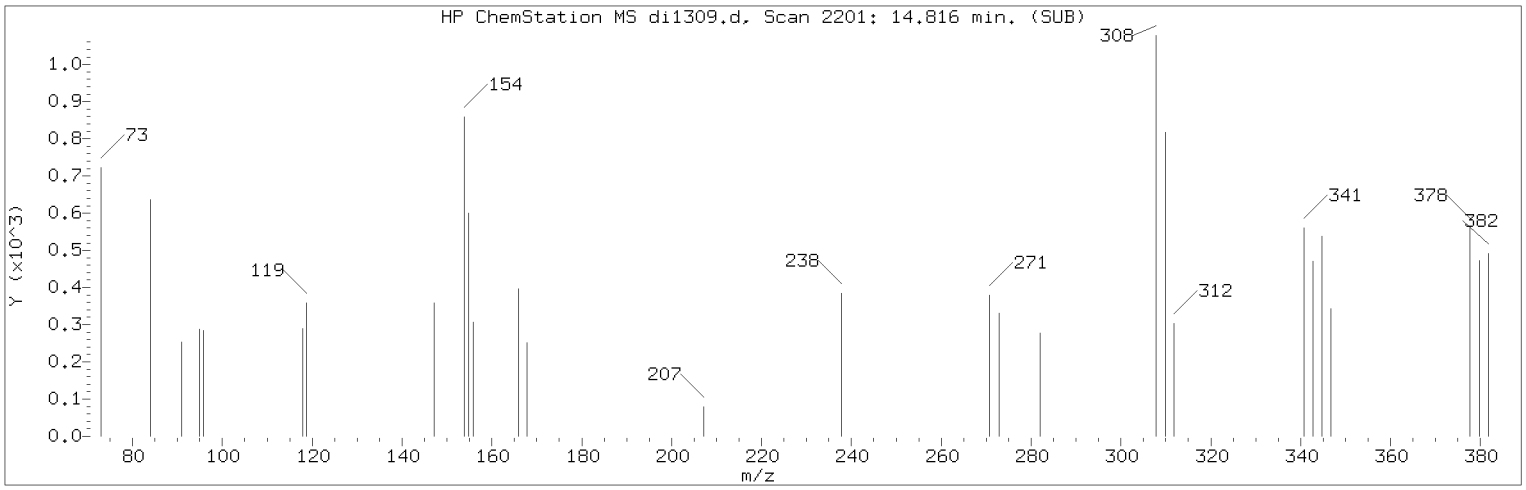
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

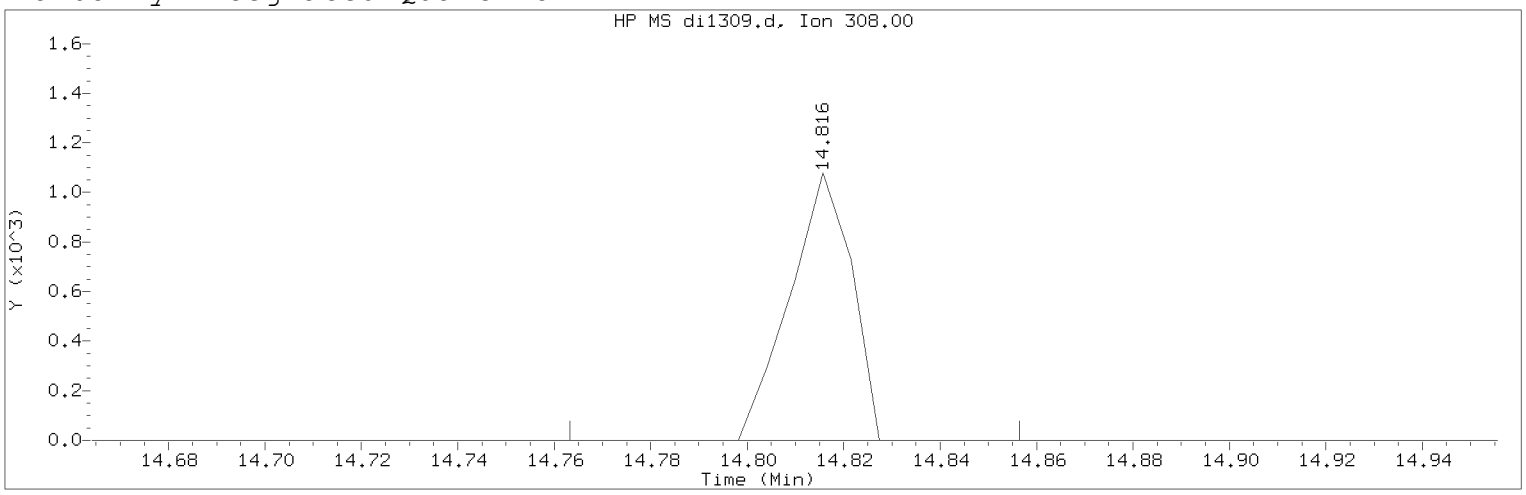
Compound Number : 167
Compound Name : Parathion
Expected RT (minutes) : 14.472
Quant Ion : 109.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

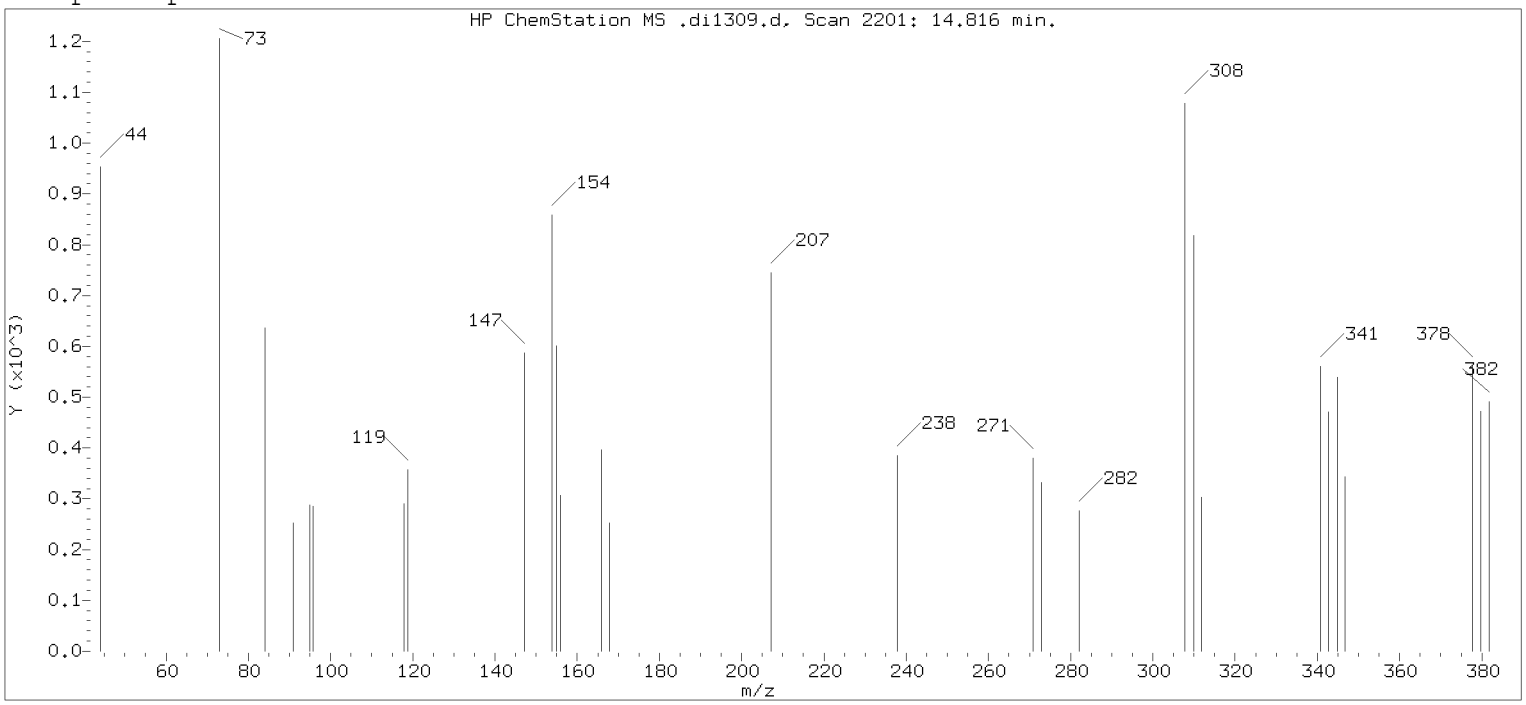
Compound Number : 169
Compound Name : Octachlorostyrene
Scan Number : 2201
Retention Time (minutes) : 14.816
Quant Ion : 308.00
Area (flag) : 958M
On-Column Amount (ng/ul) : 0.1028
Integration start scan : 2191 Integration stop scan: 2207
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

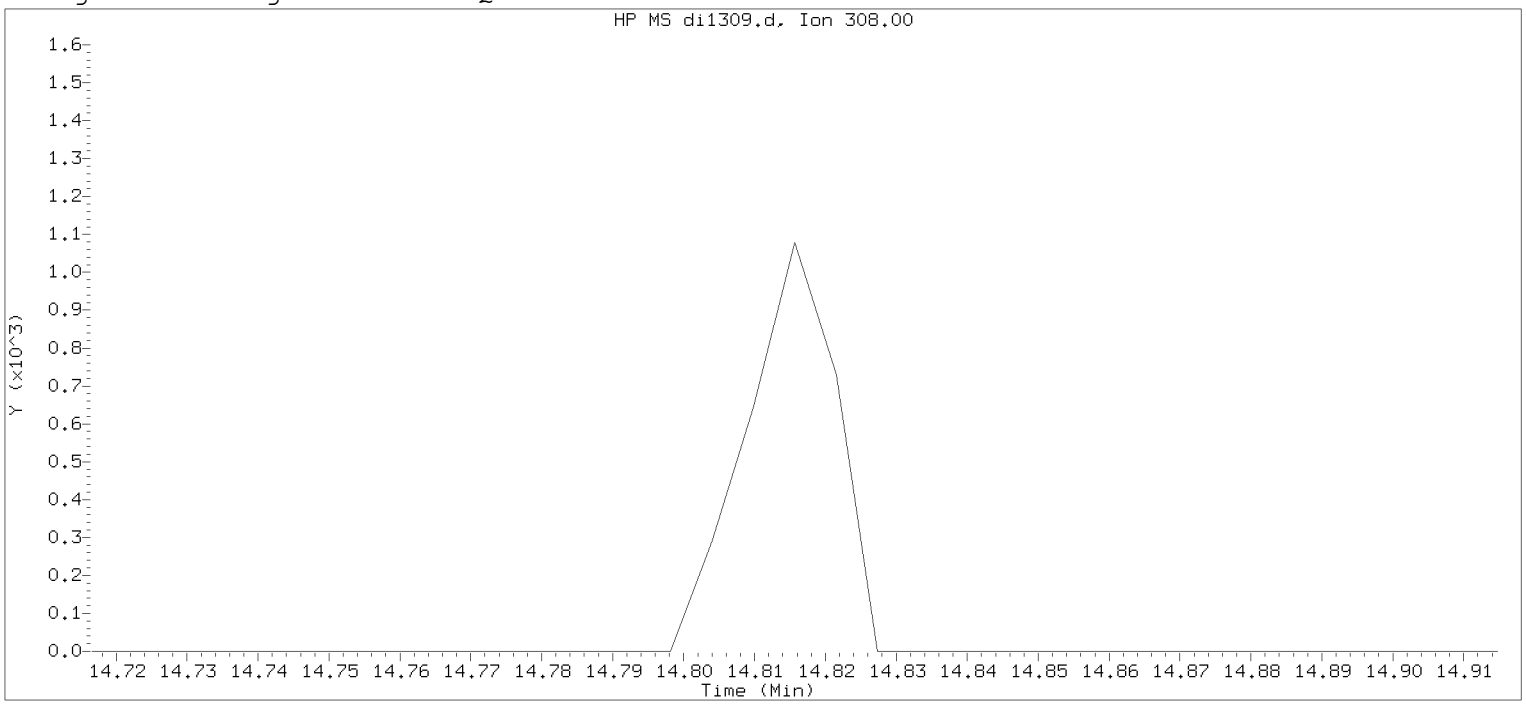
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

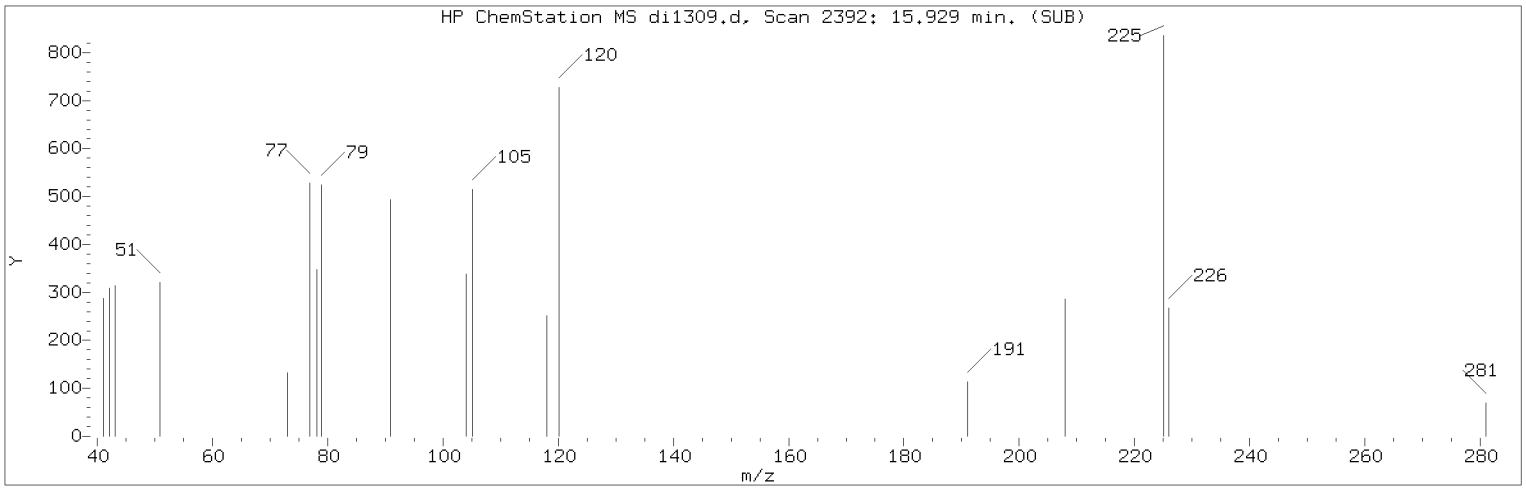
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

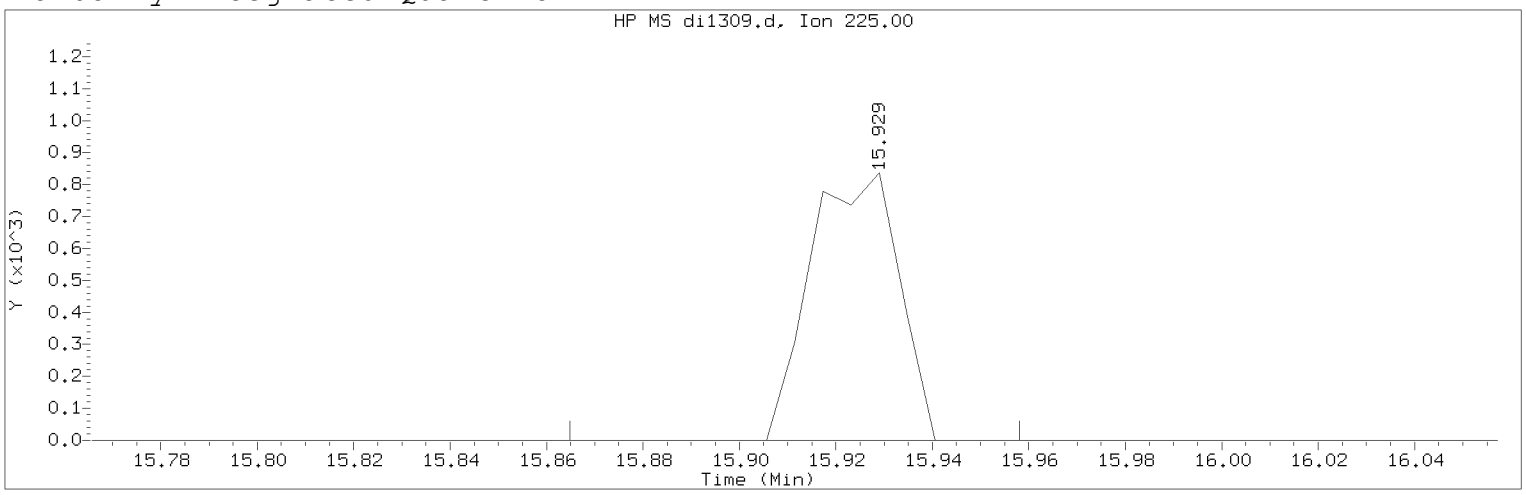
Compound Number : 169
Compound Name : Octachlorostyrene
Expected RT (minutes) : 14.816
Quant Ion : 308.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:52 em10340

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

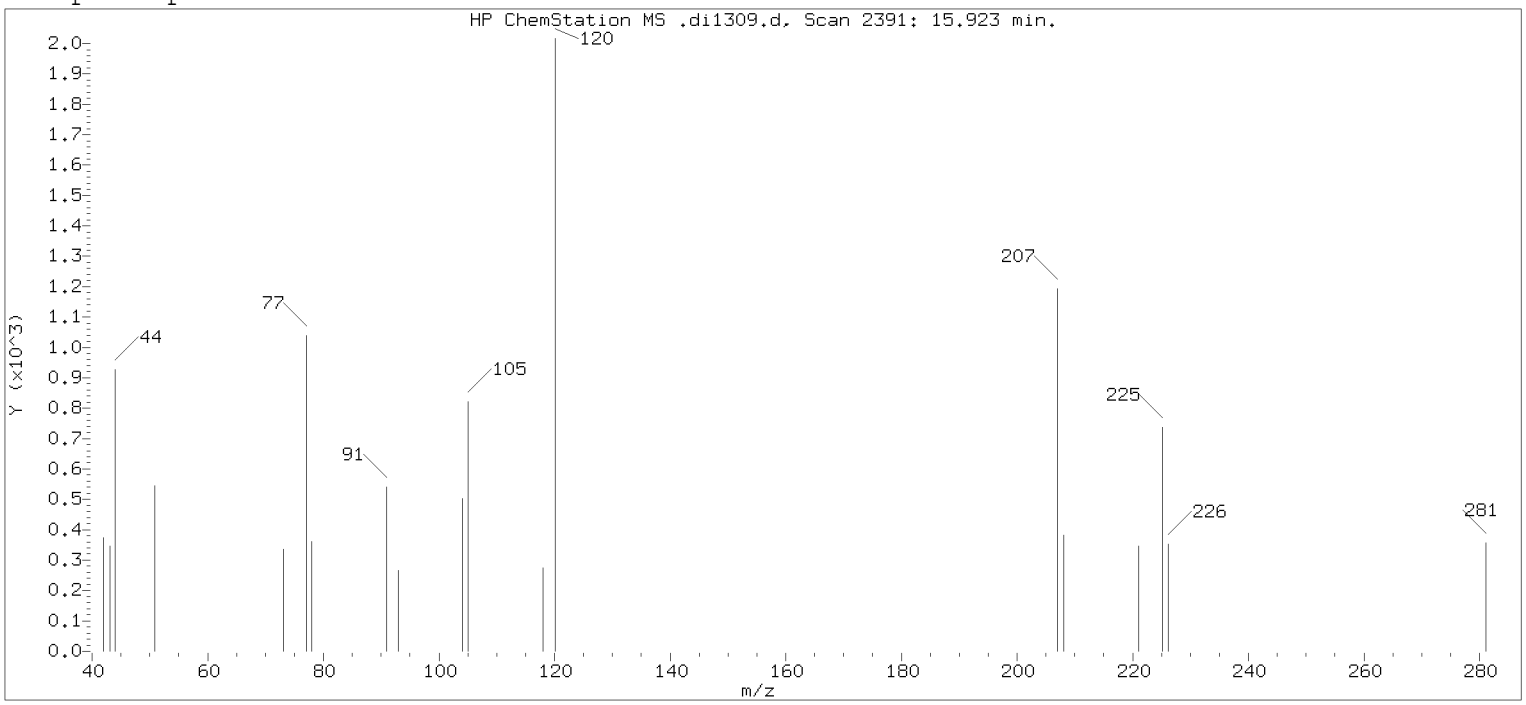
Compound Number : 182
Compound Name : p-Dimethylaminoazobenzene
Scan Number : 2392
Retention Time (minutes) : 15.929
Quant Ion : 225.00
Area (flag) : 1064M
On-Column Amount (ng/ul) : 0.0473
Integration start scan : 2380 Integration stop scan: 2396
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: missed peak

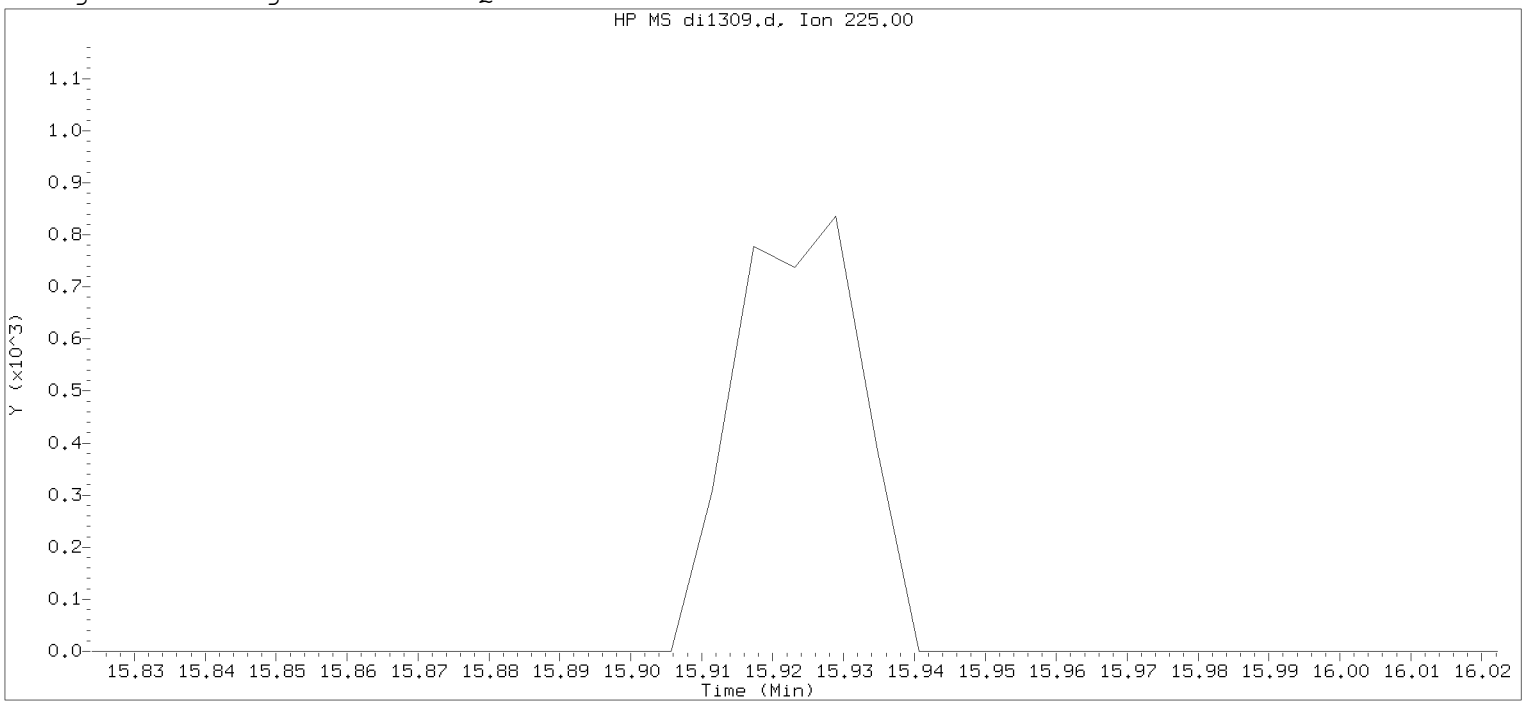
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum



Original Integration of Quant Ion



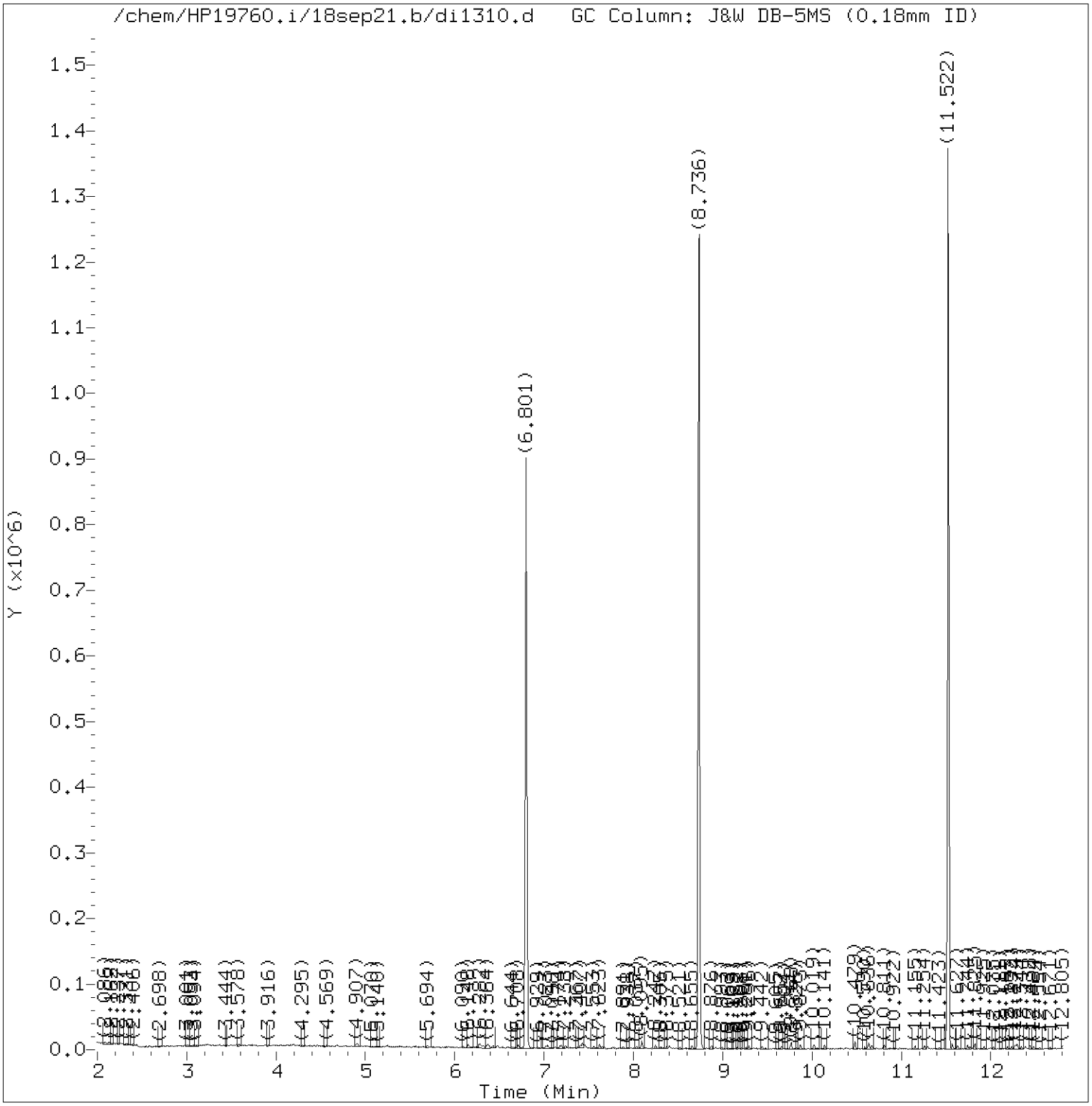
Data File: /chem/HP19760.i/18sep21.b/di1309.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 21:39 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: mdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:07 Automation

Sample Name: SSTD0.125 Lab Sample ID: rvMDL2648

Compound Number : 182
Compound Name : p-Dimethylaminoazobenzene
Expected RT (minutes) : 15.923
Quant Ion : 225.00

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

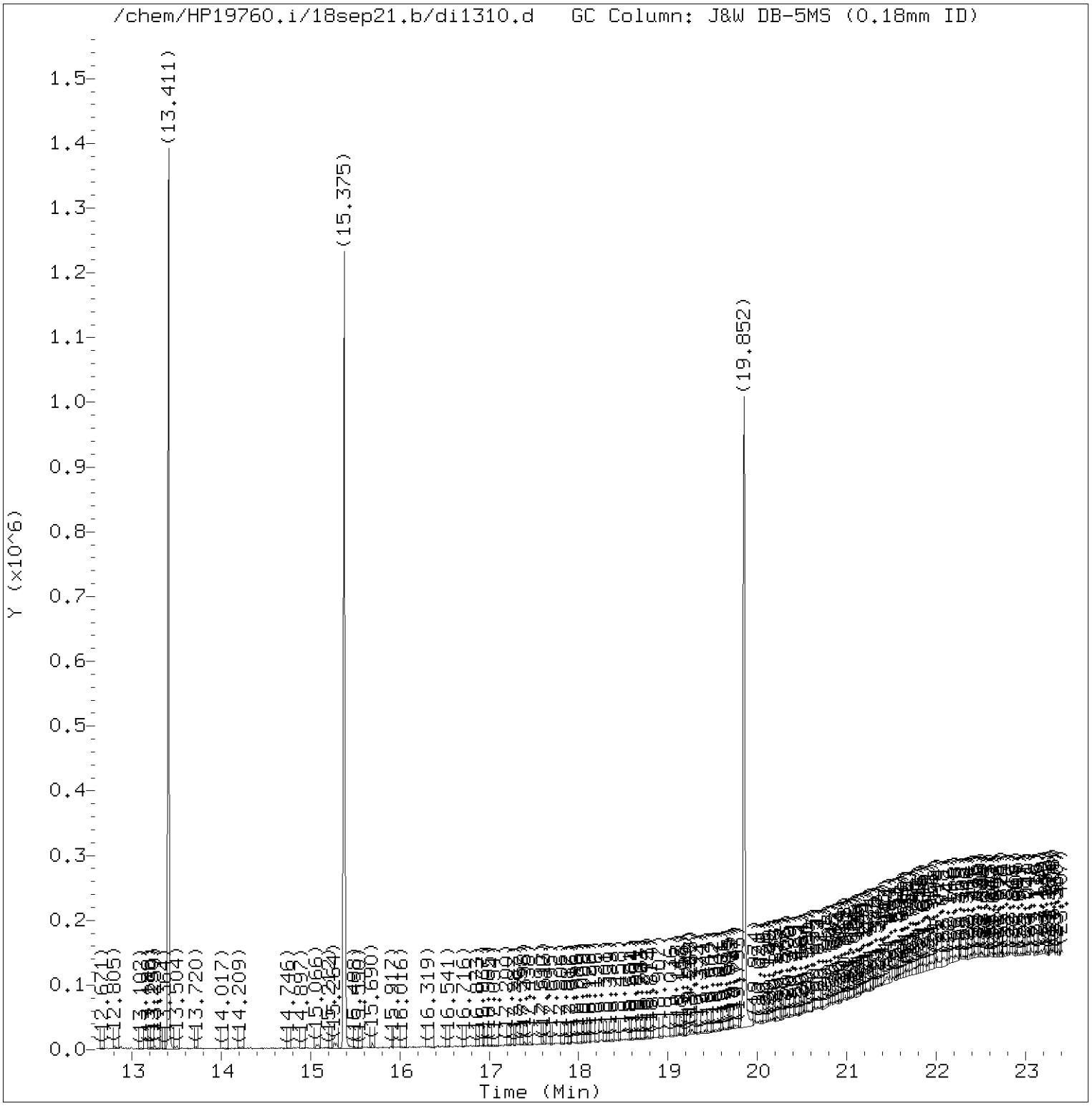
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

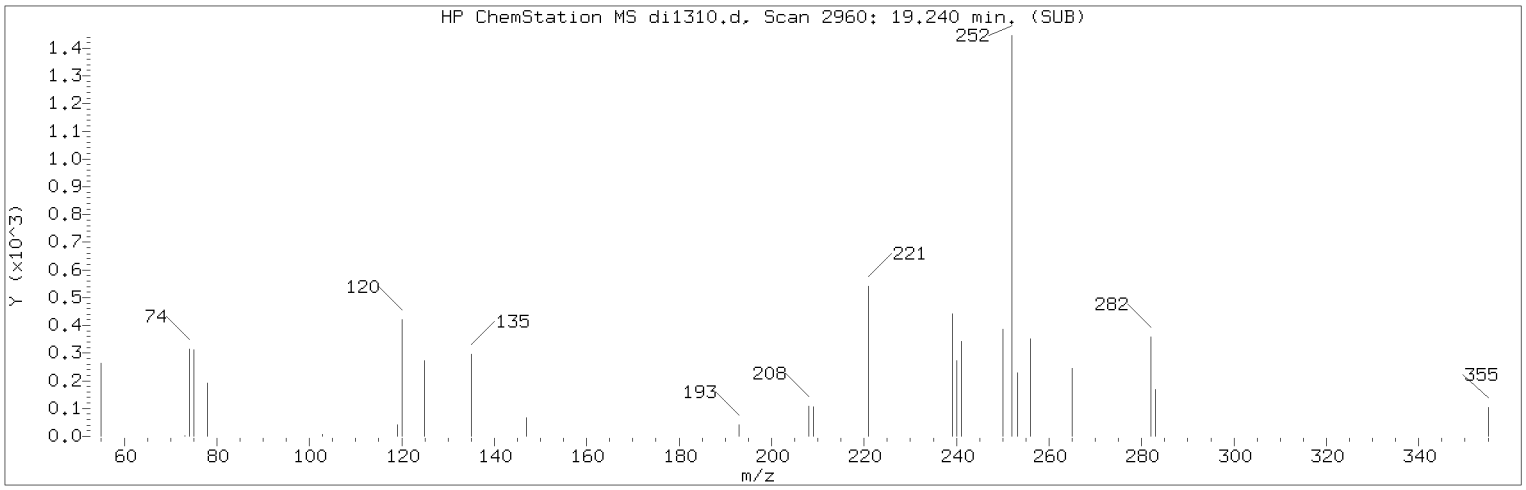
Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	189614	5.000
44)$Nitrobenzene-d5	(2)	7.623	82	2951	0.044
65)*Naphthalene-d8	(2)	8.736	136	704583	5.000
66) Naphthalene	(2)	8.765	128	4567	0.028
83) 2-Methylnaphthalene	(2)	9.873	142	2636	0.026
84) 1-Methylnaphthalene	(2)	10.019	142	2150	0.022
93)$2-Fluorobiphenyl	(3)	10.479	172	5037	0.050
96) 2-Chloronaphthalene	(3)	10.642	162	1830	0.020
109) Acenaphthylene	(3)	11.295	152	2233	0.019
113)*Acenaphthene-d10	(3)	11.522	164	315549	5.000
114) Acenaphthene	(3)	11.569	153	2051	0.023
126) Fluorene	(3)	12.274	166	1909	0.020
145) Hexachlorobenzene	(4)	12.927	284	534	0.021
153)*Phenanthrene-d10	(4)	13.411	188	551165	5.000
155) Phenanthrene	(4)	13.440	178	3449	0.025
157) Anthracene	(4)	13.504	178	2419	0.018
222) Total PAHs	(6)			45605	0.380
173) Fluoranthene	(4)	15.066	202	2884	0.021
175)*Pyrene-d10	(5)	15.375	212	527680	5.000
177) Pyrene	(5)	15.404	202	4235	0.029
179)$Terphenyl-d14	(5)	15.696	244	3960	0.045
195) Benzo(a)anthracene	(5)	17.392	228	2120	0.018
196) Chrysene	(5)	17.456	228	2221	0.018
206) Benzo(b)fluoranthene	(6)	19.240	252	1969M	0.017
208) Benzo(k)fluoranthene	(6)	19.286	252	1945M	0.016
211) Benzo(a)pyrene	(6)	19.758	252	2067M	0.019
213)*Perylene-d12	(6)	19.852	264	496069	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	21.449	276	2055	0.020
220) Dibenz(a,h)anthracene	(6)	21.489	278	1931	0.017
221) Benzo(g,h,i)perylene	(6)	21.822	276	2764	0.024

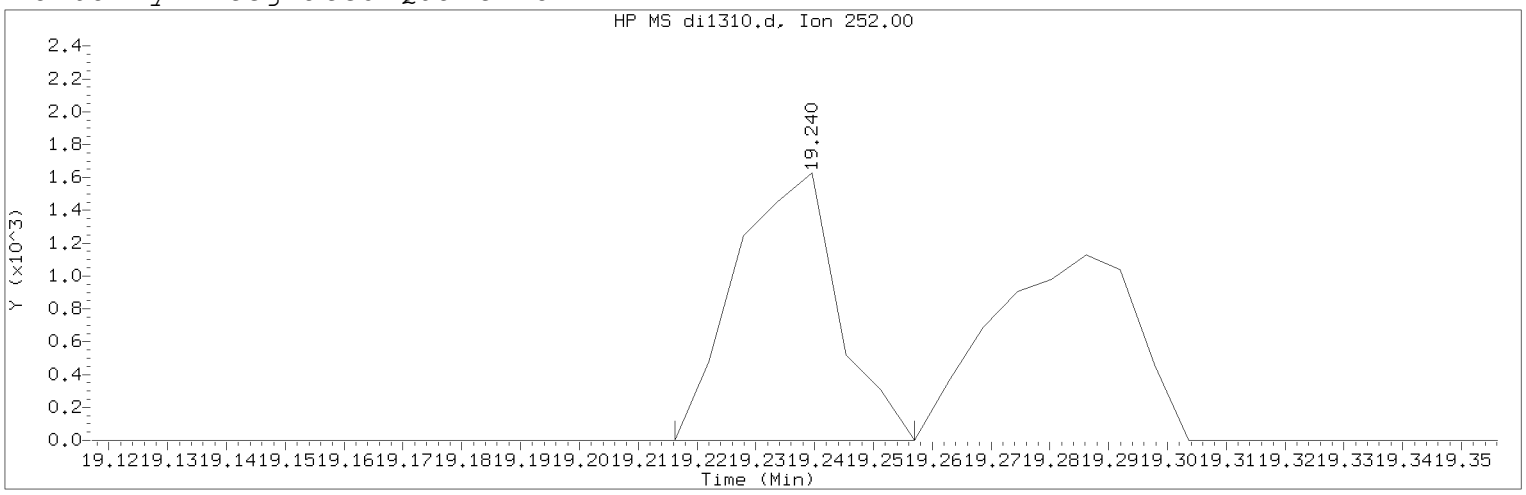
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

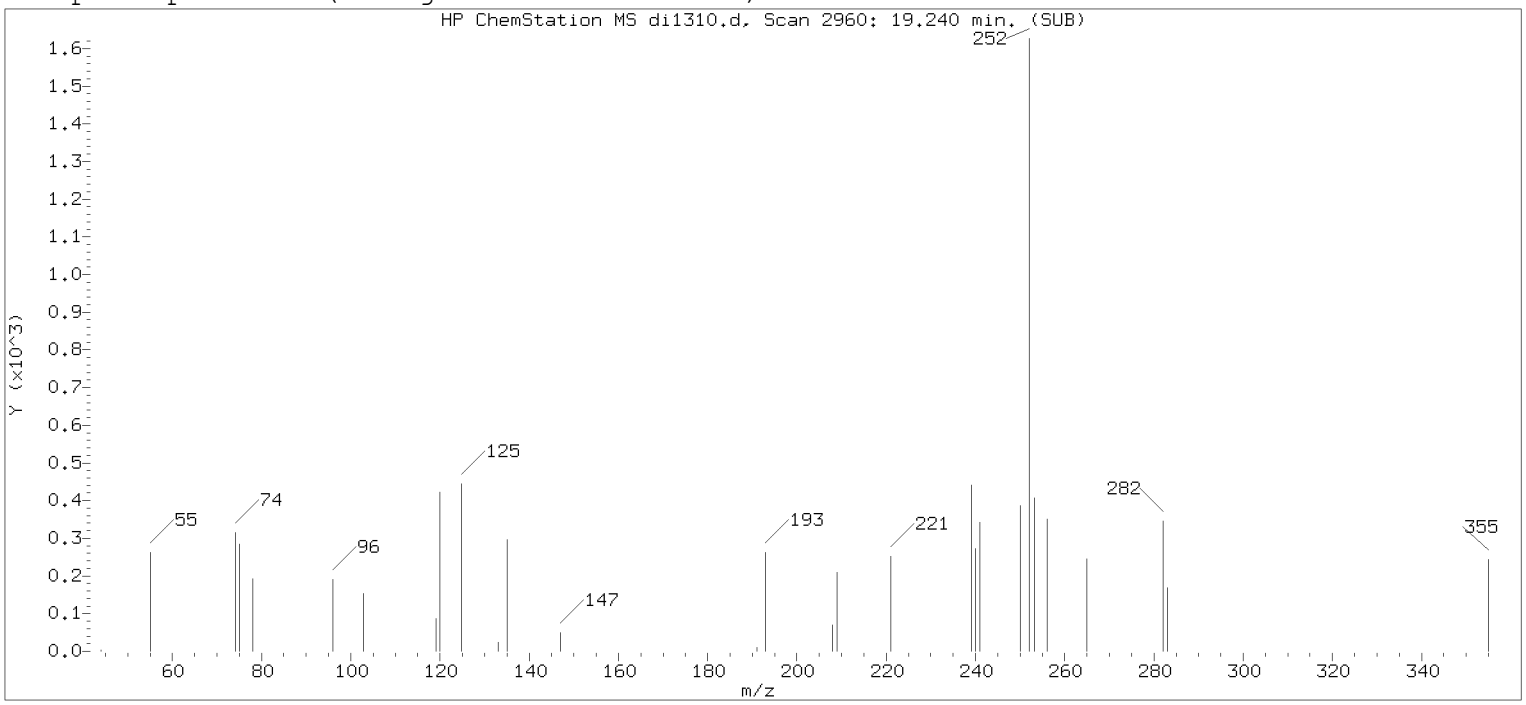
Compound Number : 206
Compound Name : Benzo(b)fluoranthene
Scan Number : 2960
Retention Time (minutes) : 19.240
Quant Ion : 252.00
Area (flag) : 1969M
On-Column Amount (ng/ul) : 0.0166
Integration start scan : 2955 Integration stop scan: 2962
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

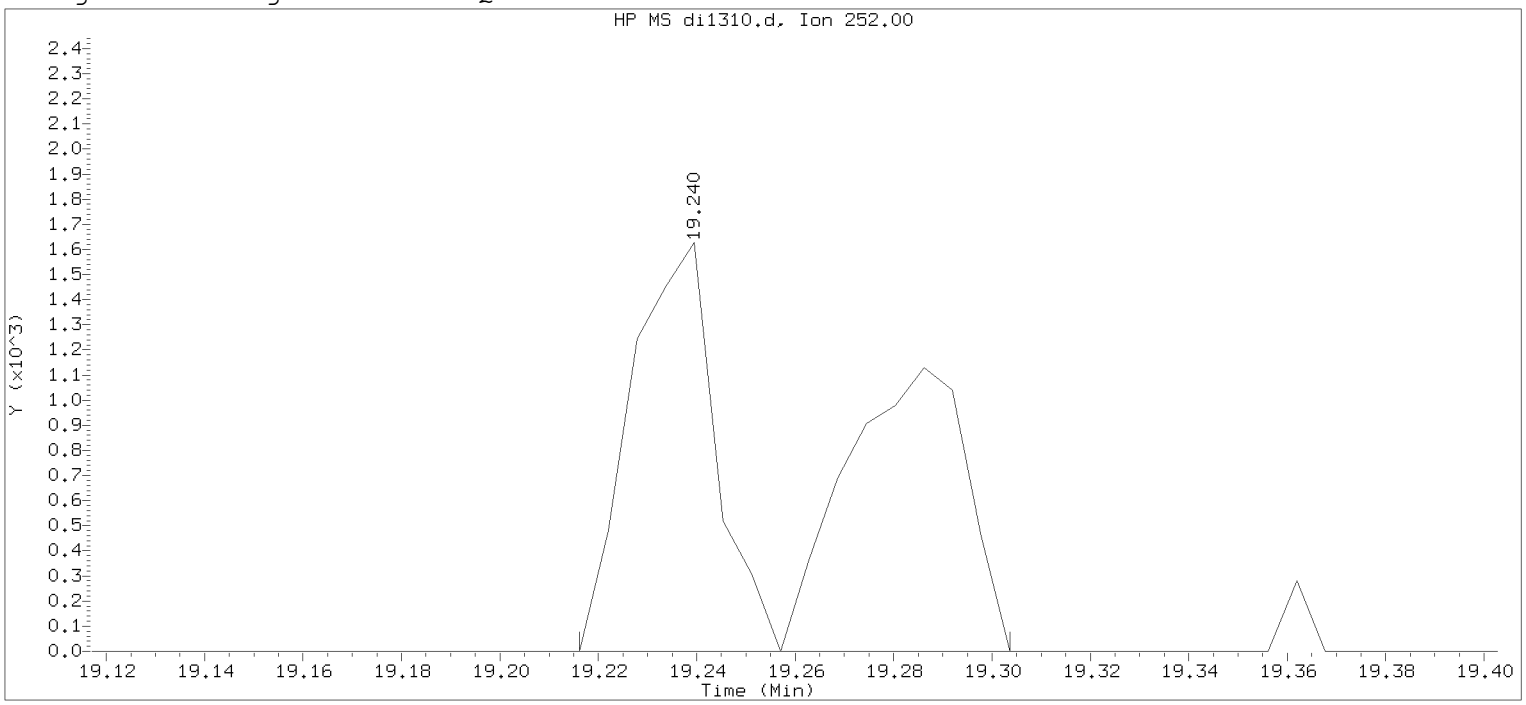
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

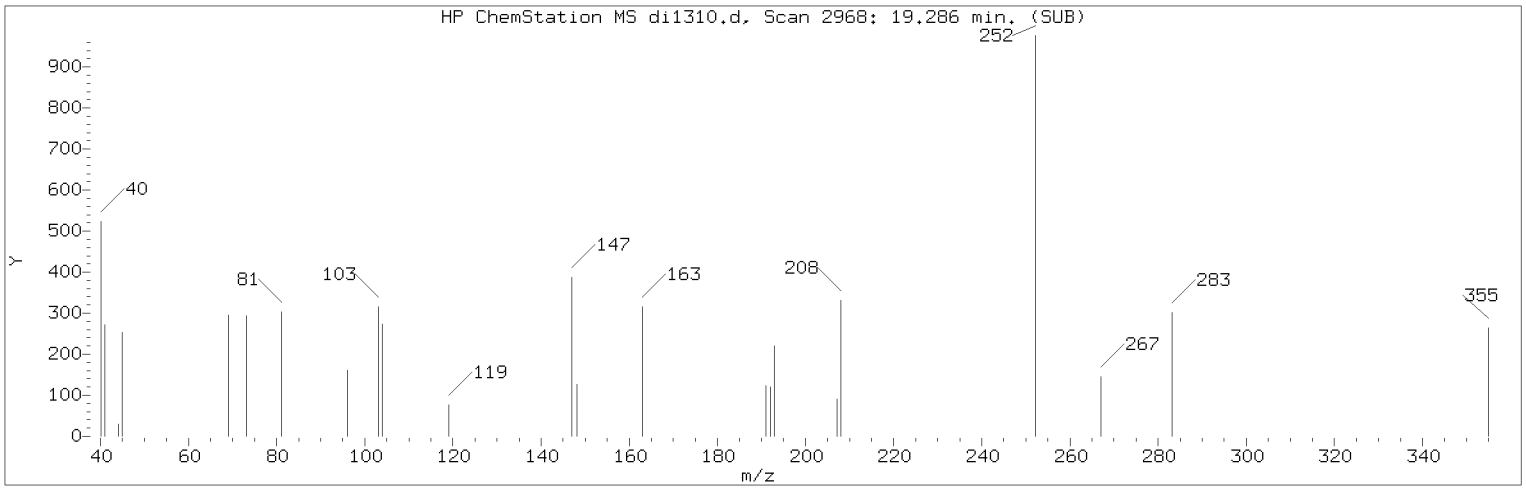
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:36 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

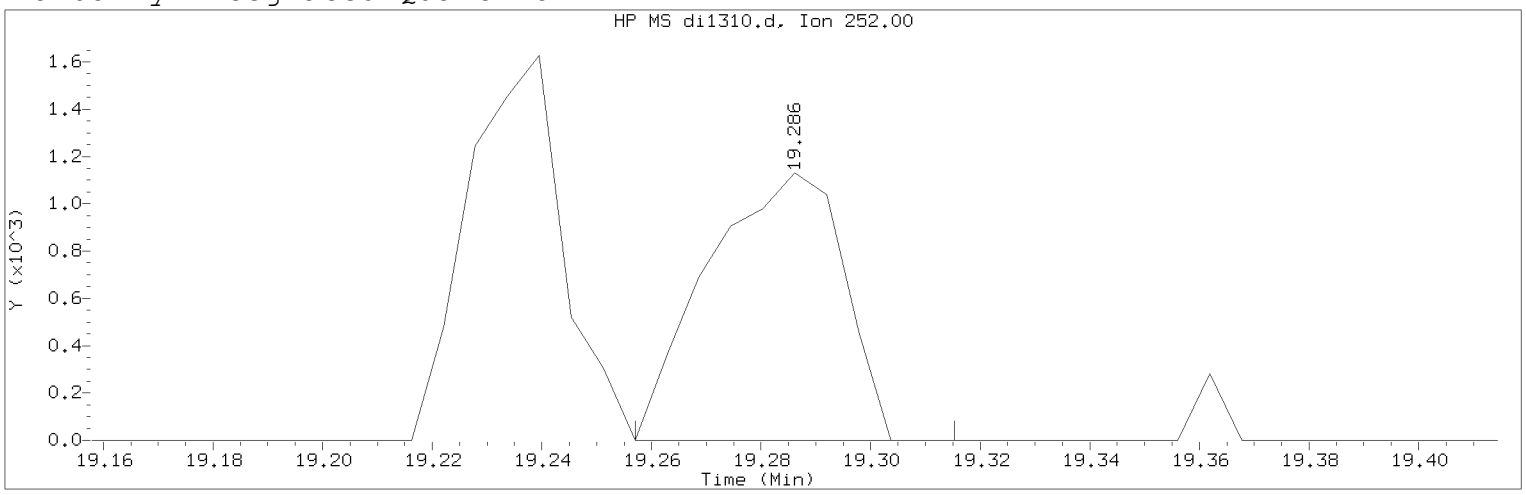
Compound Number	: 206		
Compound Name	: Benzo(b)fluoranthene		
Scan Number	: 2960		
Retention Time (minutes)	: 19.240		
Quant Ion	: 252.00		
Area	: 3915		
On-column Amount (ng/ul)	: 0.0329		
Integration start scan	: 2955	Integration stop scan:	2970
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used. AE20 e1.0.3359

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

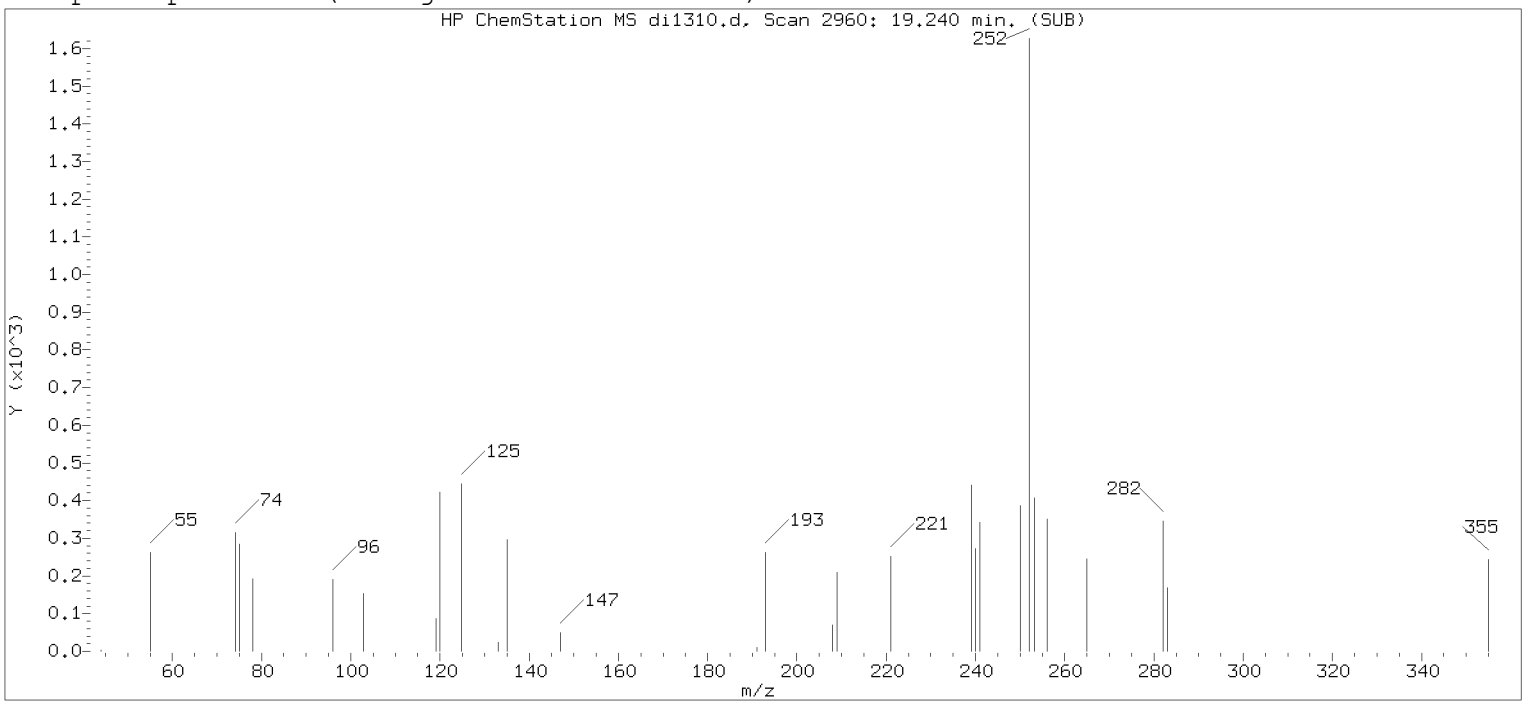
Compound Number : 208
Compound Name : Benzo(k)fluoranthene
Scan Number : 2968
Retention Time (minutes) : 19.286
Quant Ion : 252.00
Area (flag) : 1945M
On-Column Amount (ng/ul) : 0.0158
Integration start scan : 2962 Integration stop scan: 2972
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

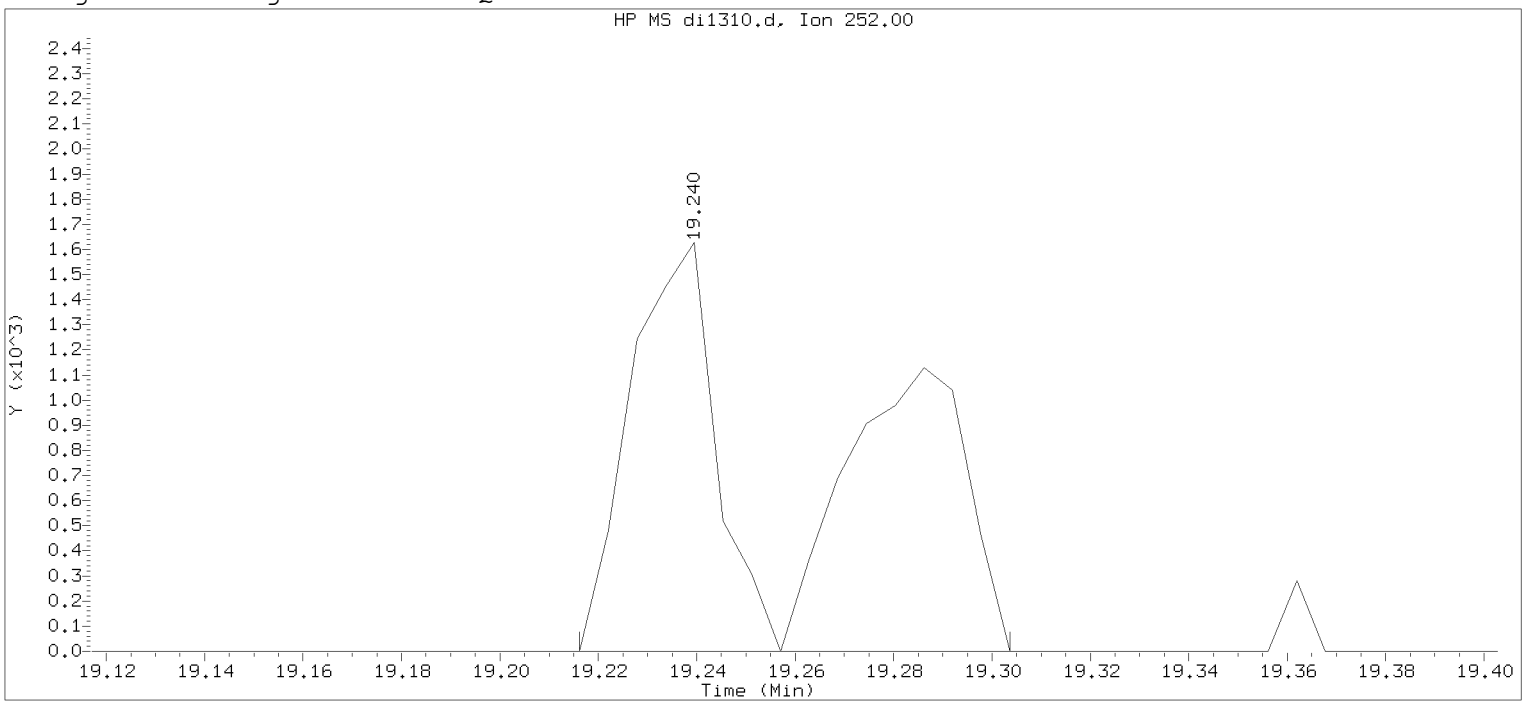
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

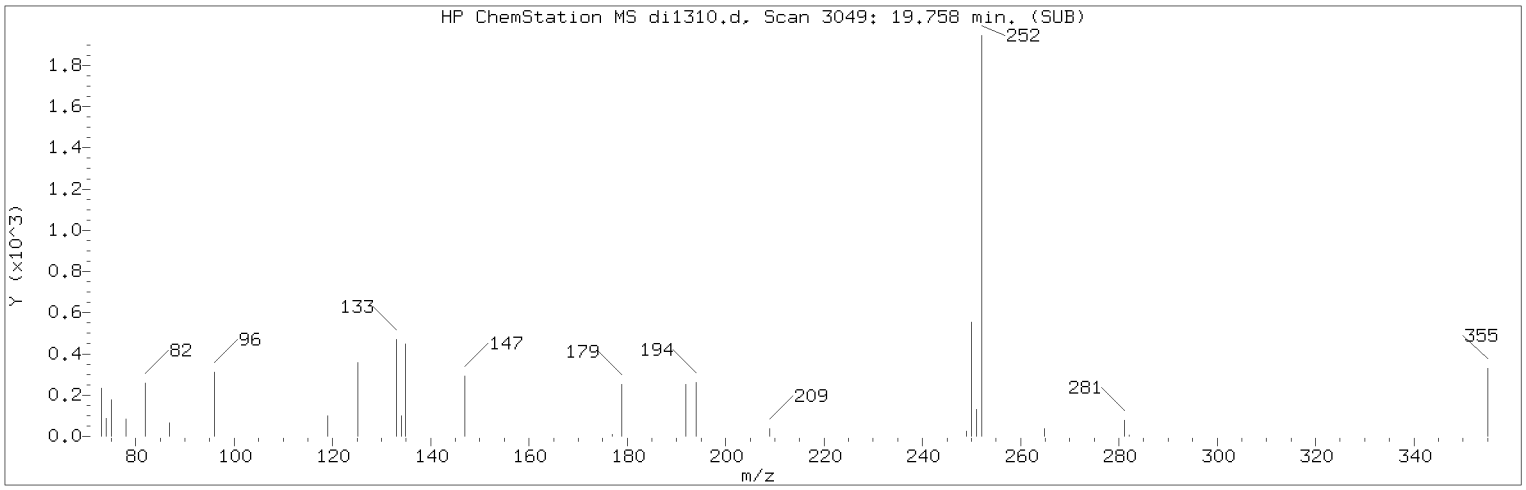
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:36 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

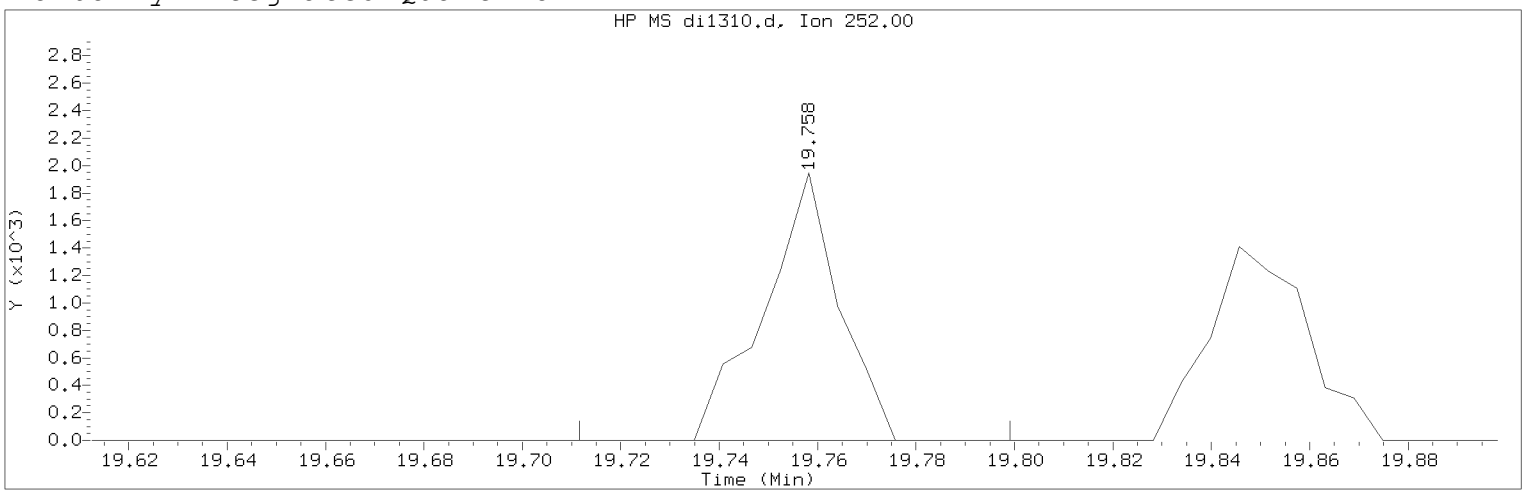
Compound Number	: 208		
Compound Name	: Benzo(k)fluoranthene		
Scan Number	: 2960		
Retention Time (minutes)	: 19.240		
Quant Ion	: 252.00		
Area	: 3915		
On-column Amount (ng/ul)	: 0.0319		
Integration start scan	: 2955	Integration stop scan:	2970
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used: AE20 en1033961

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 23-Sep-2018 07:53 em10340

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

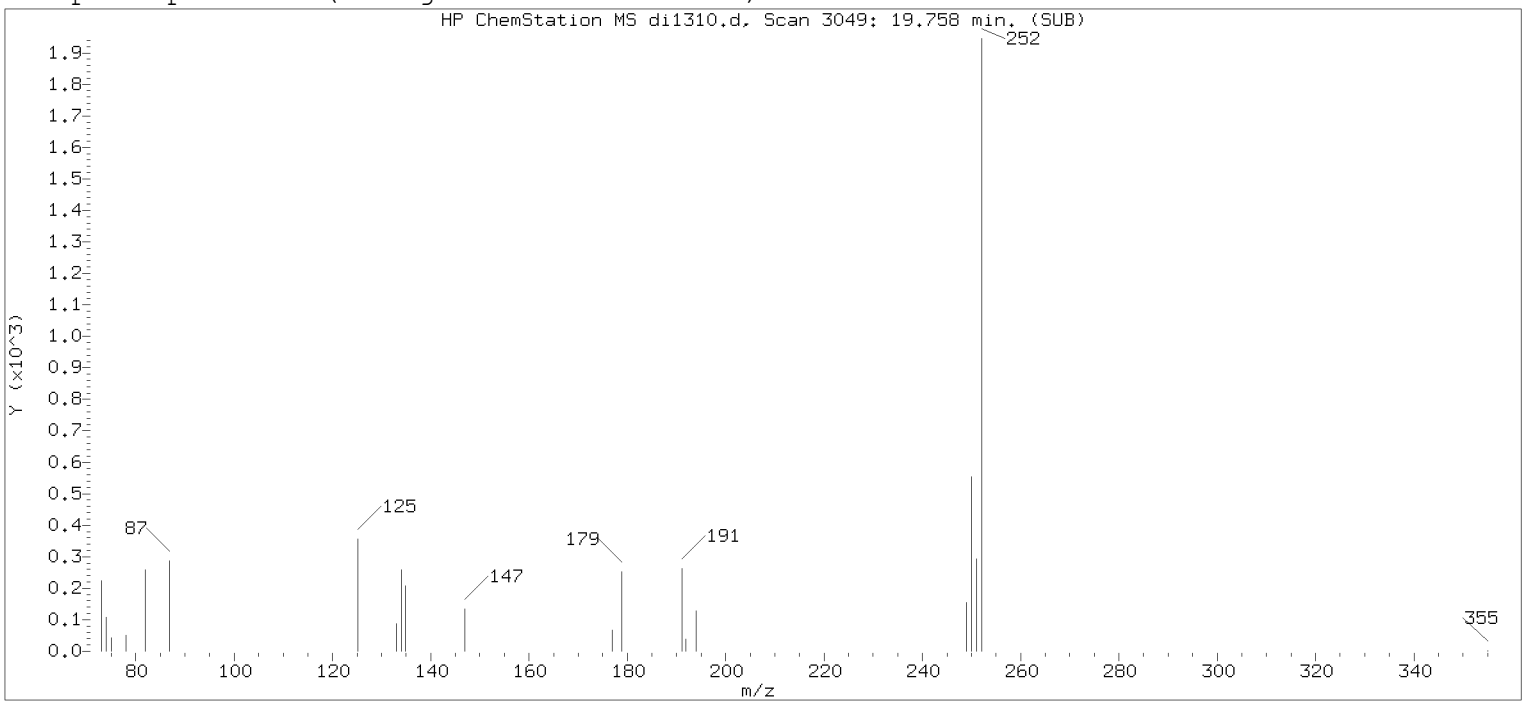
Compound Number : 211
Compound Name : Benzo(a)pyrene
Scan Number : 3049
Retention Time (minutes) : 19.758
Quant Ion : 252.00
Area (flag) : 2067M
On-Column Amount (ng/ul) : 0.0189
Integration start scan : 3040 Integration stop scan: 3055
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

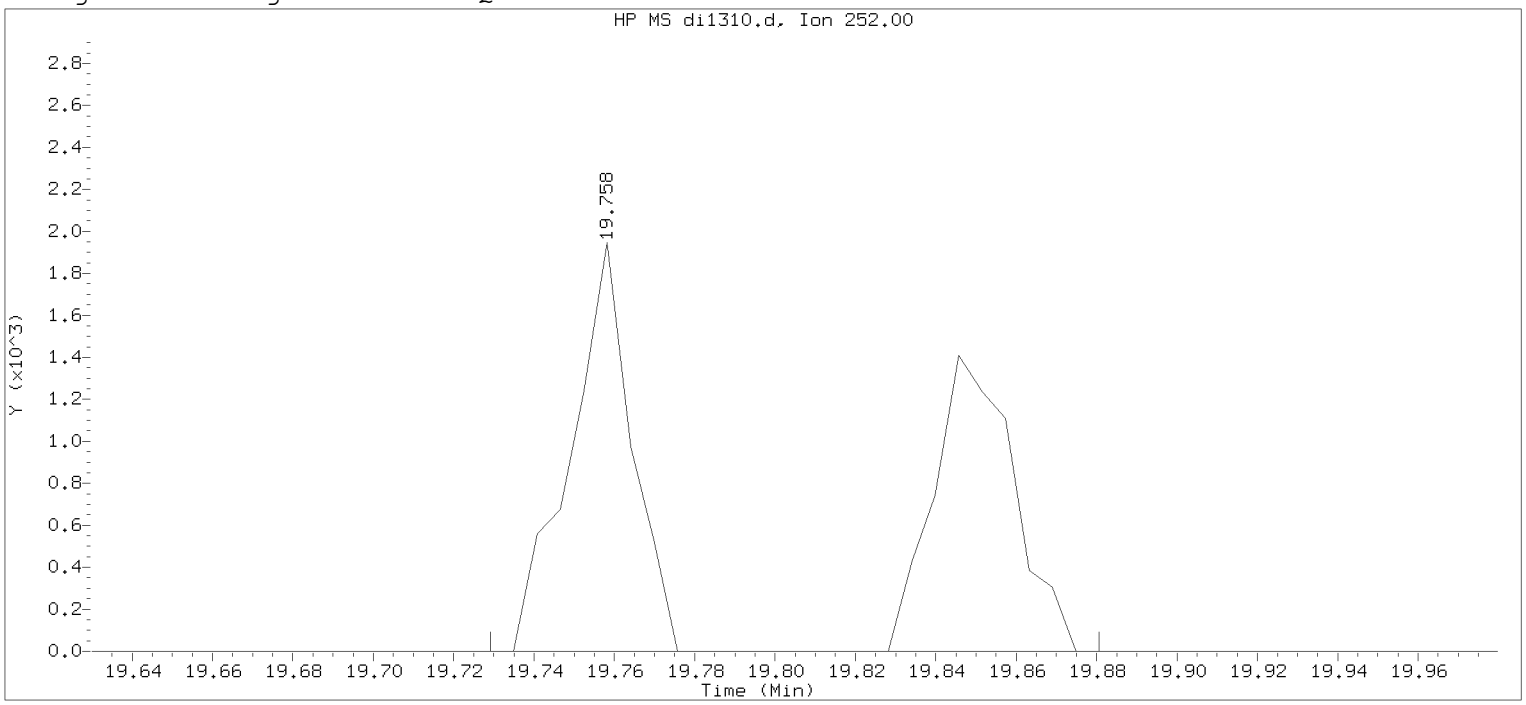
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 07:59.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



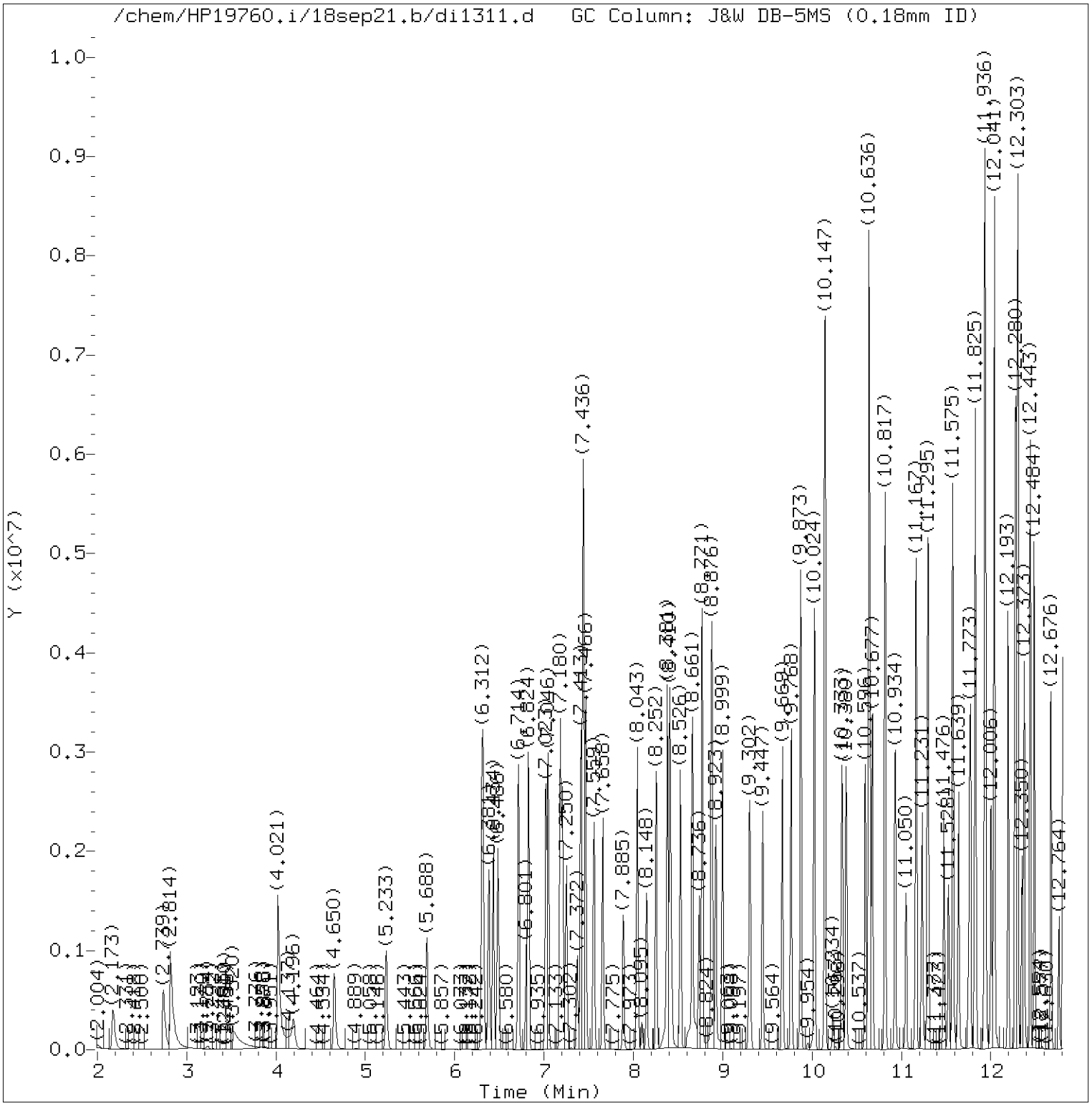
Data File: /chem/HP19760.i/18sep21.b/di1310.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:08 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: pahmdlall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 22:36 Automation

Sample Name: SSTD0.025 Lab Sample ID: PAHMDL2648

Compound Number	: 211		
Compound Name	: Benzo(a)pyrene		
Scan Number	: 3049		
Retention Time (minutes)	: 19.758		
Quant Ion	: 252.00		
Area	: 4030		
On-column Amount (ng/ul)	: 0.0369		
Integration start scan	: 3043	Integration stop scan:	3069
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 07:59.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

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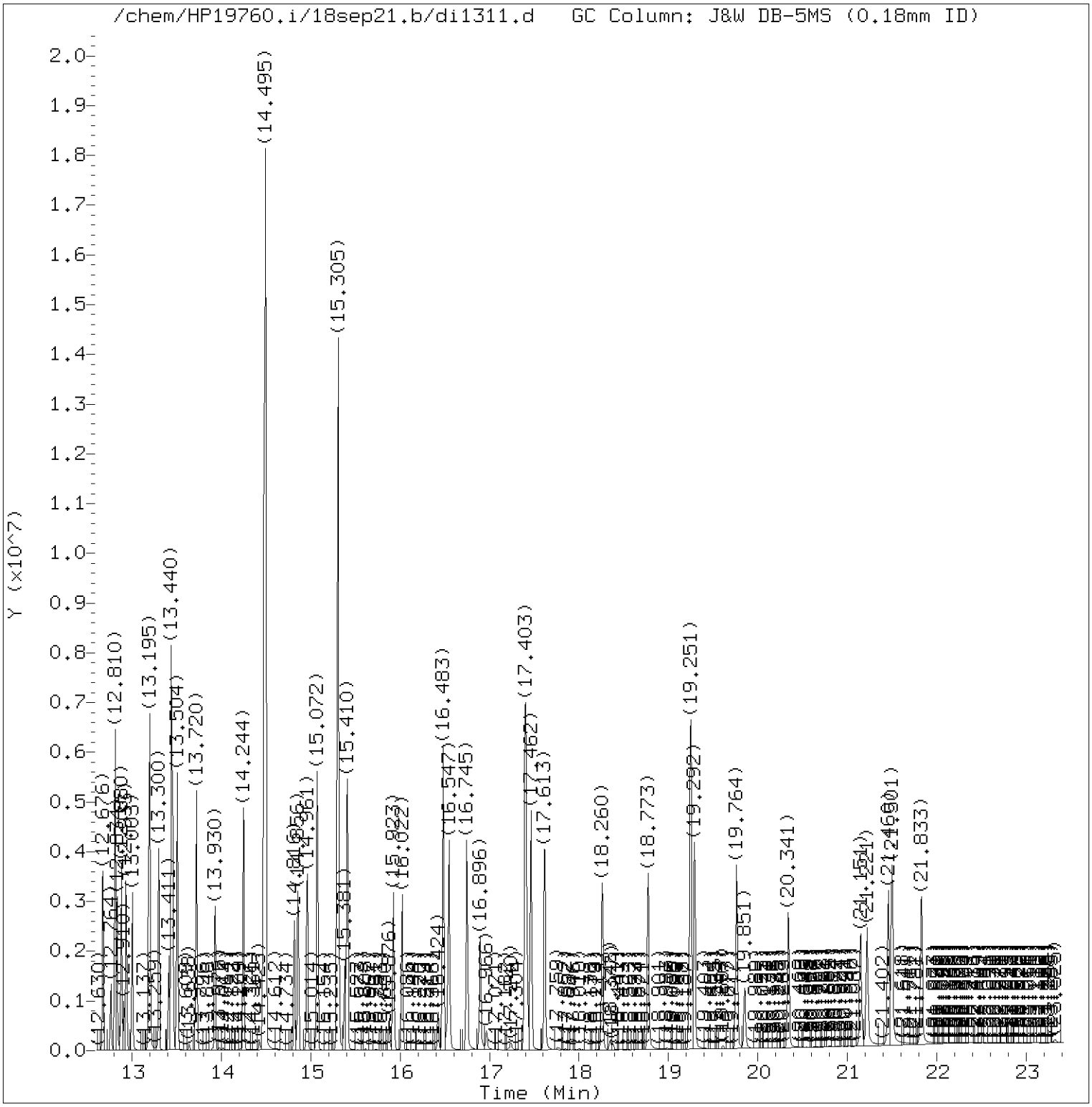
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

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on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

	Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1)	1,4-Dioxane	(1)	2.173	88	376187	11.425
4)	N-Nitrosodimethylamine	(1)	2.739	74	644929	14.093
5)	Pyridine	(1)	2.814	79	1027100	12.887
7)	2-Picoline	(1)	4.021	93	1094108	13.531
8)	N-Nitrosomethylethylamine	(1)	4.196	88	420853	11.847
9)	Methyl methanesulfonate	(1)	4.650	80	492606	12.825
13)	N-Nitrosodiethylamine	(1)	5.233	102	409128	12.549
42)	Total Cresols	(1)	5.660	100	1836247	28.512
15)	Ethyl methanesulfonate	(1)	5.688	109	397900	12.416
18)	Phenol	(1)	6.300	94	1310823	13.545
19)	Aniline	(1)	6.317	93	1480318	12.914
22)	bis(2-Chloroethyl)ether	(1)	6.434	93	980505	13.645
23)	2-Chlorophenol	(1)	6.486	128	844253	14.026
24)	1,3-Dichlorobenzene	(1)	6.714	146	929377	13.597
25)*	1,4-Dichlorobenzene-d4	(1)	6.801	152	207035	5.000
26)	1,4-Dichlorobenzene	(1)	6.824	146	960175	13.772
27)	Benzyl alcohol	(1)	7.023	108	611834	14.897
28)	1,2-Dichlorobenzene	(1)	7.046	146	906042	13.831
30)	Indene	(1)	7.180	115	1380144	20.316
31)	2-Methylphenol	(1)	7.209	108	847995	14.187
33)	2,2'-oxybis(1-Chloropropane)	(1)	7.250	45	1128943	13.575
34)	bis(2-Chloroisopropyl)ether	(1)	7.250	45	1128943	13.575
35)	N-Nitrosopyrrolidine	(1)	7.372	100	444087	12.984
97)	Isosafrole	(3)	7.383	162	654923	12.763
36)	Acetophenone	(1)	7.413	105	1268950	14.964
38)	N-Nitroso-di-n-propylamine	(1)	7.436	70	740635	14.721
39)	N-Nitrosomorpholine	(1)	7.436	56	492486	12.867
37)	4-Methylphenol	(1)	7.442	108	988252	14.316
40)	o-Toluidine	(1)	7.466	106	1471076	13.967
43)	Hexachloroethane	(1)	7.559	117	378684	13.393
45)	Nitrobenzene	(2)	7.658	77	1026336	13.306
48)	N-Nitrosopiperidine	(2)	7.885	114	382511	12.145
50)	Isophorone	(2)	8.043	82	1885018	14.633
120)	2,4_2,6-Dinitrotoluenes	(3)	8.050	165	901748	29.507
51)	2-Nitrophenol	(2)	8.148	139	397054	13.374
53)	2,4-Dimethylphenol	(2)	8.252	107	758316	11.483
57)	O,O,O-Triethylphosphorothioate	(2)	8.381	198	359467	12.597
55)	bis(2-Chloroethoxy)methane	(2)	8.410	93	1162856	13.833
56)	Benzoic acid	(2)	8.433	105	870138	24.436
60)	2,4-Dichlorophenol	(2)	8.526	162	683905	14.085

* = Compound is an internal standard.

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on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
62) 1,2,4-Trichlorobenzene	(2)	8.661	180	724572	13.431
65)*Naphthalene-d8	(2)	8.736	136	795948	5.000
66) Naphthalene	(2)	8.771	128	2480541	13.396
146) Diallate trans/cis	(4)	8.775	86	783876	12.287
67) 4-Chloroaniline	(2)	8.870	127	1018702	14.633
68) 2,6-Dichlorophenol	(2)	8.882	162	586018	12.424
69) Hexachloropropene	(2)	8.923	213	452446	13.216
71) Hexachlorobutadiene	(2)	8.999	225	409007	13.463
75) Quinoline	(2)	9.302	129	1356505	12.747
77) N-Nitrosodi-n-butylamine	(2)	9.447	84	574782	11.319
80) 4-Chloro-3-methylphenol	(2)	9.669	107	782152	14.631
82) Safrole	(2)	9.768	162	558137	12.252
83) 2-Methylnaphthalene	(2)	9.873	142	1625530	14.180
84) 1-Methylnaphthalene	(2)	10.024	142	1501749	13.715
86) 1,2,4,5-Tetrachlorobenzene	(3)	10.147	216	707379	13.191
85) Hexachlorocyclopentadiene	(3)	10.147	237	863825	25.987
88) cis-Isosafrole	(3)	10.234	162	73100	1.523
90) 2,4,6-Trichlorophenol	(3)	10.333	196	453595	14.297
92) 2,4,5-Trichlorophenol	(3)	10.380	196	503694	14.876
94) trans-Isosafrole	(3)	10.596	162	581823	11.191
95) 1,1'-Biphenyl	(3)	10.636	154	1953669	14.158
96) 2-Chloronaphthalene	(3)	10.642	162	1530629	13.516
98) 1-Chloronaphthalene	(3)	10.677	162	1230937	11.731
99) Diphenyl ether	(3)	10.817	170	913490	11.881
100) 2-Nitroaniline	(3)	10.817	138	488826	15.024
104) 1,4-Naphthoquinone	(3)	10.934	158	662030	16.505
105) 1,4-Dinitrobenzene	(3)	11.050	168	245194	14.235
106) Dimethylphthalate	(3)	11.167	163	1624057	13.592
107) 1,3-Dinitrobenzene	(3)	11.167	168	289162	14.496
108) 2,6-Dinitrotoluene	(3)	11.231	165	389595	14.579
109) Acenaphthylene	(3)	11.301	152	2372726	15.819
112) 3-Nitroaniline	(3)	11.476	138	431500	14.947
113)*Acenaphthene-d10	(3)	11.528	164	398369	5.000
114) Acenaphthene	(3)	11.575	153	1539682	13.719
115) 2,4-Dinitrophenol	(3)	11.639	184	419091	29.572
116) 4-Nitrophenol	(3)	11.756	109	265317	13.503
117) Pentachlorobenzene	(3)	11.773	250	535575	12.229
119) Dibenzofuran	(3)	11.825	168	2127681	13.761
118) 2,4-Dinitrotoluene	(3)	11.831	165	512153	14.205
121) 1-Naphthylamine	(3)	11.936	143	3026245	25.525

* = Compound is an internal standard.

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on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
122) 2,3,4,6-Tetrachlorophenol	(3)	12.006	232	353181	13.387
123) 2-Naphthylamine	(3)	12.041	143	2960336	24.715
124) Diethylphthalate	(3)	12.193	149	1611150	14.261
126) Fluorene	(3)	12.274	166	1693934	14.363
125) Thionazin	(3)	12.286	107	319510	13.604
128) 5-Nitro-o-toluidine	(3)	12.298	152	439275	13.009
129) 4-Nitroaniline	(3)	12.303	138	457987	14.395
127) 4-Chlorophenyl-phenylether	(3)	12.303	204	781025	13.543
130) 4,6-Dinitro-2-methylphenol	(4)	12.350	198	276603	14.370
131) N-Nitrosodiphenylamine	(4)	12.443	169	1445274	14.919
132) NDPA as diphenylamine	(4)	12.443	169	1445274	14.919
134) 1,2-Diphenylhydrazine	(4)	12.484	77	2046429	14.820
137) Tetraethyldithiopyrophosphate	(4)	12.671	97	277776	13.135
139) 1,3,5-Trinitrobenzene	(4)	12.764	213	165708	12.643
141) Phorate	(4)	12.810	75	1107512	13.990
140) Diallate (peak 1)	(4)	12.810	86	599286	9.076
142) Phenacetin	(4)	12.834	108	763644	12.302
143) 4-Bromophenyl-phenylether	(4)	12.880	248	437921	13.667
144) Diallate (peak 2)	(4)	12.910	86	184590	3.489
145) Hexachlorobenzene	(4)	12.933	284	432439	13.168
147) Dimethoate	(4)	13.003	87	699081	13.562
149) Pentachlorophenol	(4)	13.184	266	302531	15.673
151) Pentachloronitrobenzene	(4)	13.201	237	183357	12.913
152) Pronamide	(4)	13.300	173	662661	12.556
153)*Phenanthrene-d10	(4)	13.411	188	721212	5.000
154) Dinoseb	(4)	13.440	211	332648	12.138
155) Phenanthrene	(4)	13.440	178	2494429	13.743
157) Anthracene	(4)	13.510	178	2518287	14.523
163) Carbazole	(4)	13.720	167	2366822	14.881
164) Methyl parathion	(4)	13.930	109	569413	13.140
165) Di-n-butylphthalate	(4)	14.244	149	2790534	14.719
167) Parathion	(4)	14.472	109	371765	13.465
168) 4-Nitroquinoline-1-oxide	(4)	14.495	190	3742892	154.865
171) Isodrin	(4)	14.856	193	262432	12.922
222) Total PAHs	(6)	15.000	100	38705371	267.512
173) Fluoranthene	(4)	15.072	202	2657289	14.723
174) Benzidine	(5)	15.305	184	7261697	53.008
175)*Pyrene-d10	(5)	15.381	212	732484	5.000
177) Pyrene	(5)	15.410	202	2721343	13.515
182) p-Dimethylaminoazobenzene	(5)	15.923	225	471653	14.972

* = Compound is an internal standard.

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on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
185) Chlorobenzilate	(5)	16.022	139	735530	13.639
187) 3,3'-Dimethylbenzidine	(5)	16.483	212	2798484	23.301
188) Butylbenzylphthalate	(5)	16.547	149	1198189	14.071
191) 2-Acetylaminofluorene	(5)	16.896	181	726466	10.958
193) 3,3'-Dichlorobenzidine	(5)	17.398	252	775256	11.670
195) Benzo(a)anthracene	(5)	17.403	228	2359216	14.207
198) 4,4'-Methylenebis(2-chloroanil	(5)	17.415	231	426460	11.385
196) Chrysene	(5)	17.462	228	2325920	13.463
199) bis(2-Ethylhexyl)phthalate	(5)	17.619	149	1560633	13.822
203) 6-Methylchrysene	(5)	18.260	242	1366285	11.523
205) Di-n-octylphthalate	(6)	18.773	149	2504198	13.003
206) Benzo(b)fluoranthene	(6)	19.245	252	2256651	14.975
207) 7,12-Dimethylbenz[a]anthracene	(6)	19.251	256	1085225	14.463
208) Benzo(k)fluoranthene	(6)	19.292	252	2291973	14.680
211) Benzo(a)pyrene	(6)	19.764	252	2108504	15.184
213)*Perylene-d12	(6)	19.851	264	630595	5.000
215) 3-Methylcholanthrene	(6)	20.341	268	983577	14.657
217) Dibenz(a,h)acridine	(6)	21.151	279	1382454	12.284
218) Dibenz(a,j)acridine	(6)	21.221	279	1532163	12.317
219) Indeno(1,2,3-cd)pyrene	(6)	21.460	276	1786615M	13.853
220) Dibenz(a,h)anthracene	(6)	21.501	278	2030411	14.419
221) Benzo(g,h,i)perylene	(6)	21.833	276	1940571	13.313

M = Compound was manually integrated.
* = Compound is an internal standard.

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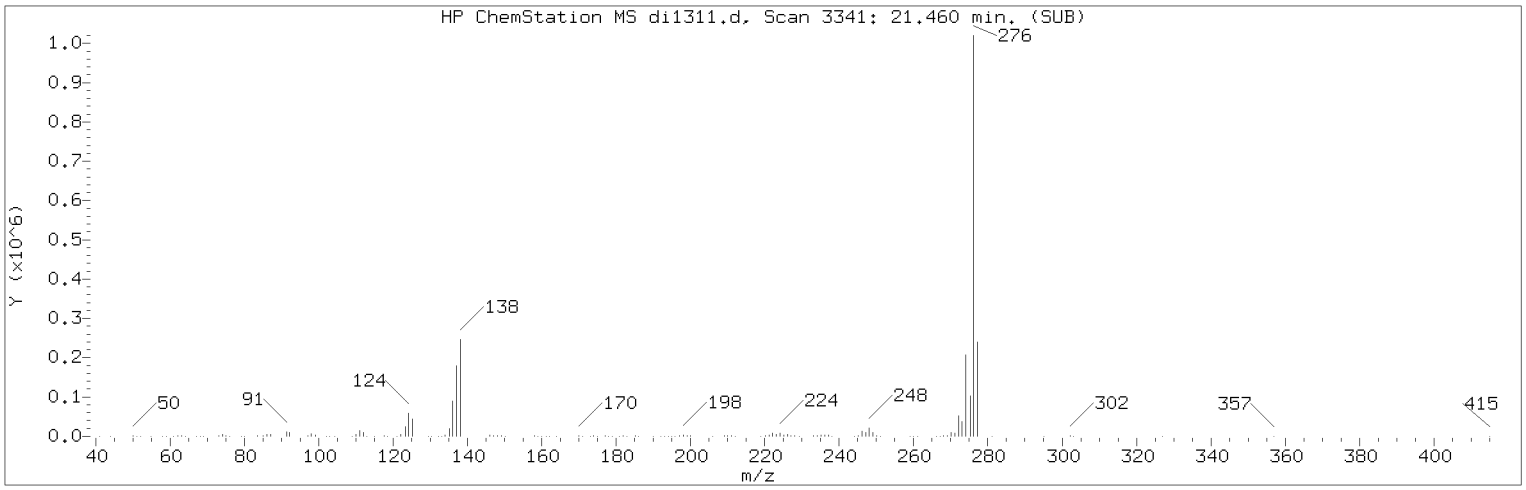
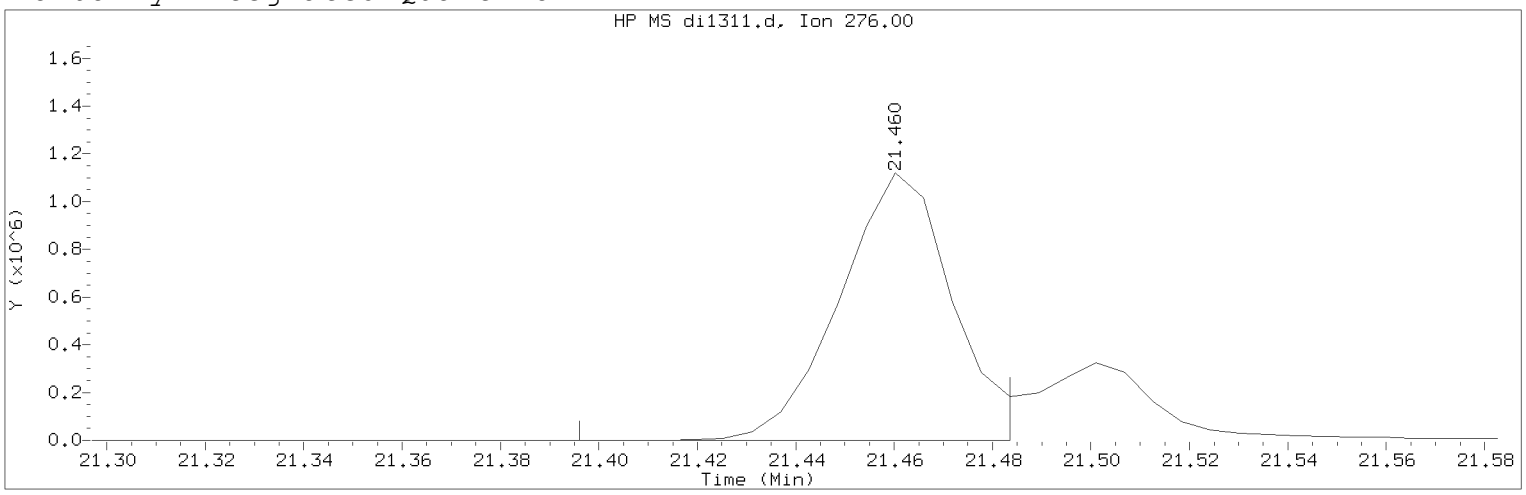
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

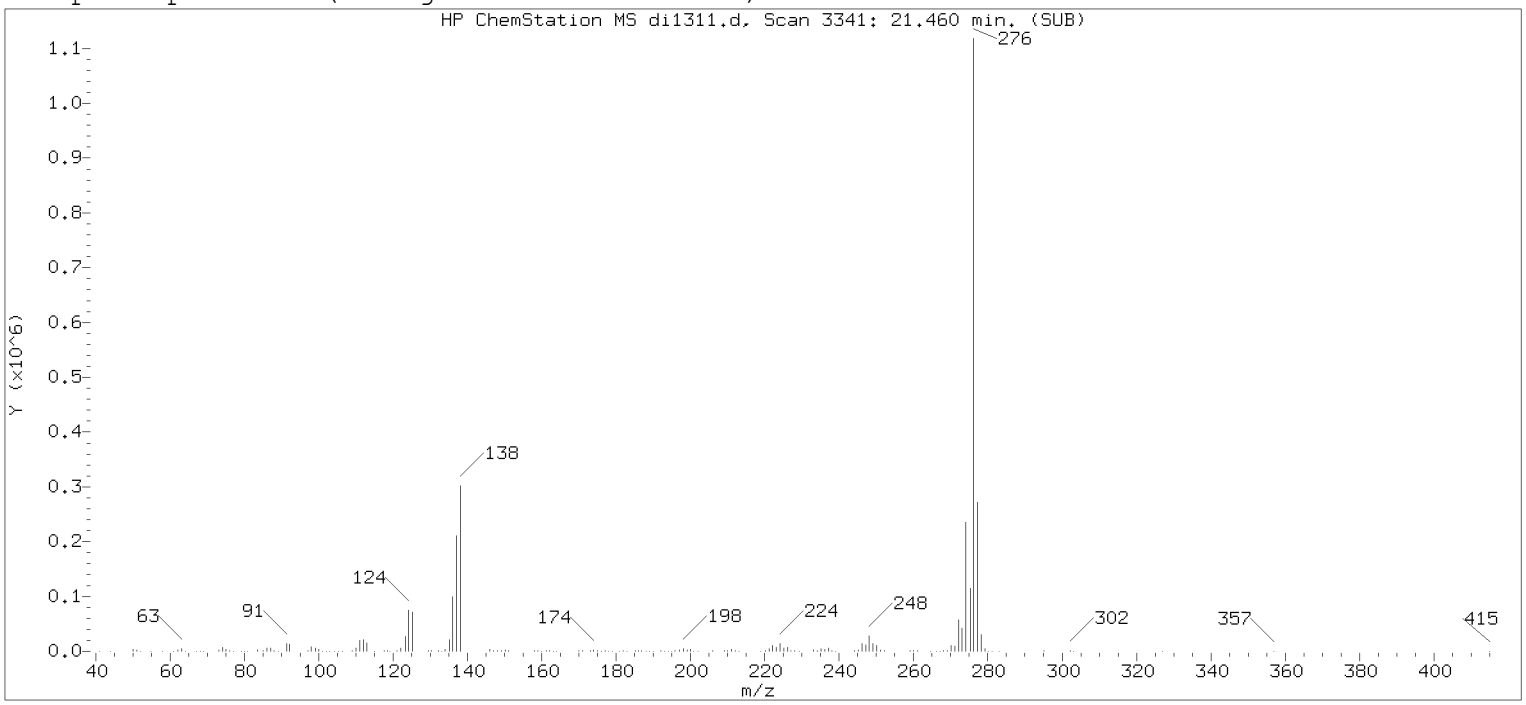
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3341
Retention Time (minutes) : 21.460
Quant Ion : 276.00
Area (flag) : 1786615M
On-Column Amount (ng/ul) : 13.8531
Integration start scan : 3329 Integration stop scan: 3344
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

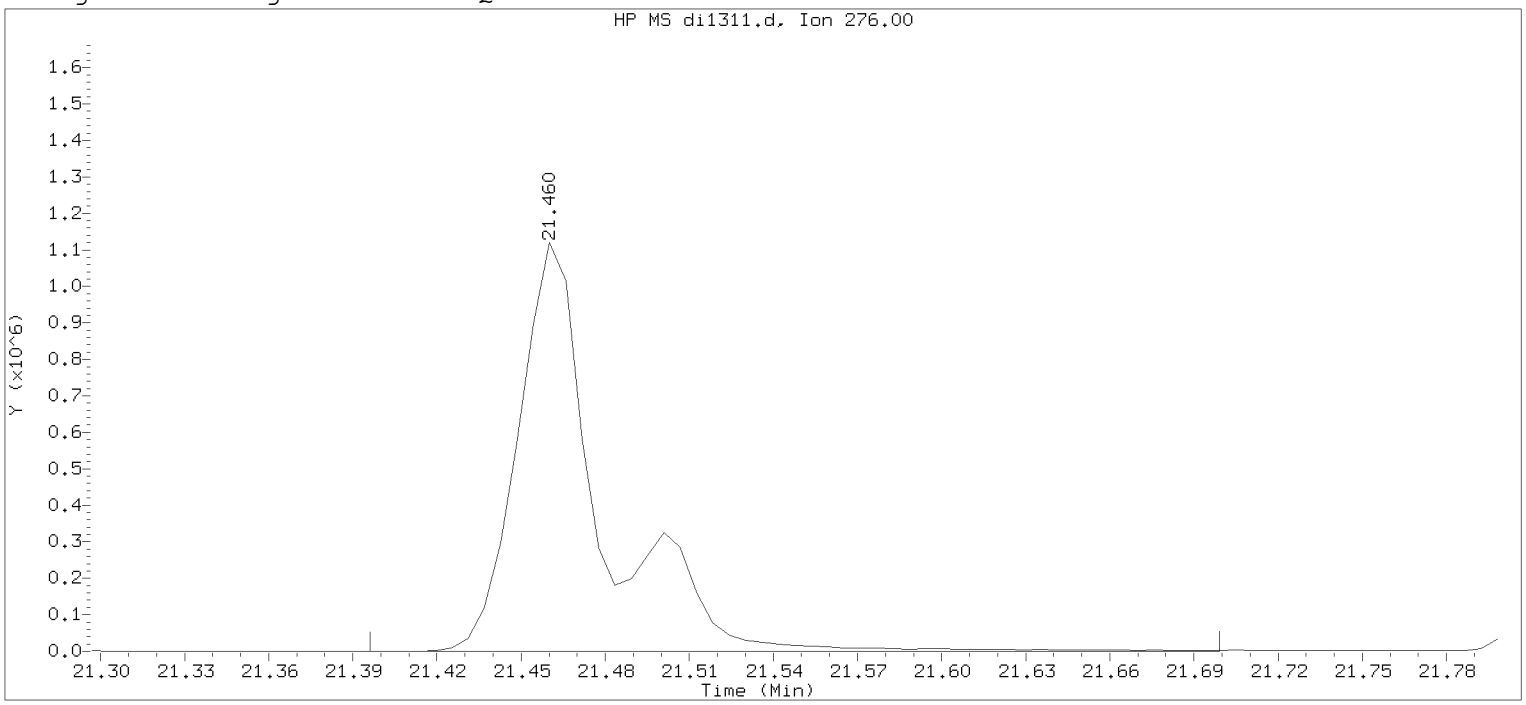
Analyst responsible for change: Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 09/24/2018 at 13:02.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



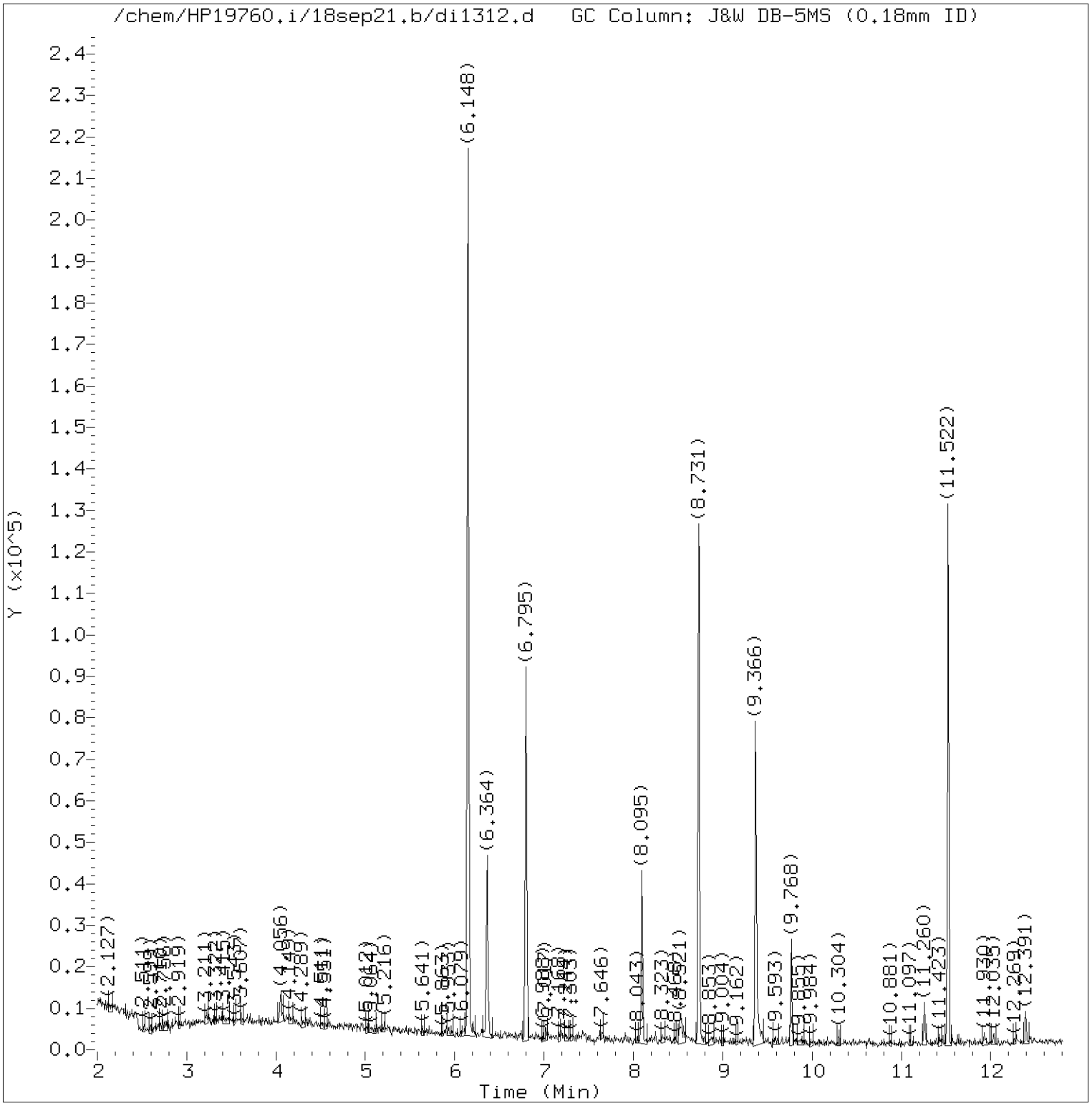
Data File: /chem/HP19760.i/18sep21.b/di1311.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 22:37 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: icvall1
Calibration date and time: 21-SEP-2018 21:39
Date, time and analyst ID of latest file update: 21-Sep-2018 23:05 Automation

Sample Name: SSTD12.5 Lab Sample ID: rvICV2628

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3341		
Retention Time (minutes)	: 21.460		
Quant Ion	: 276.00		
Area	: 2338546		
On-column Amount (ng/ul)	: 16.4355		
Integration start scan	: 3329	Integration stop scan:	3381
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 09/23/2018 at 09:15.
Target 3.5 esignature used [illegible]



Total Ion Chromatogram (TIC)

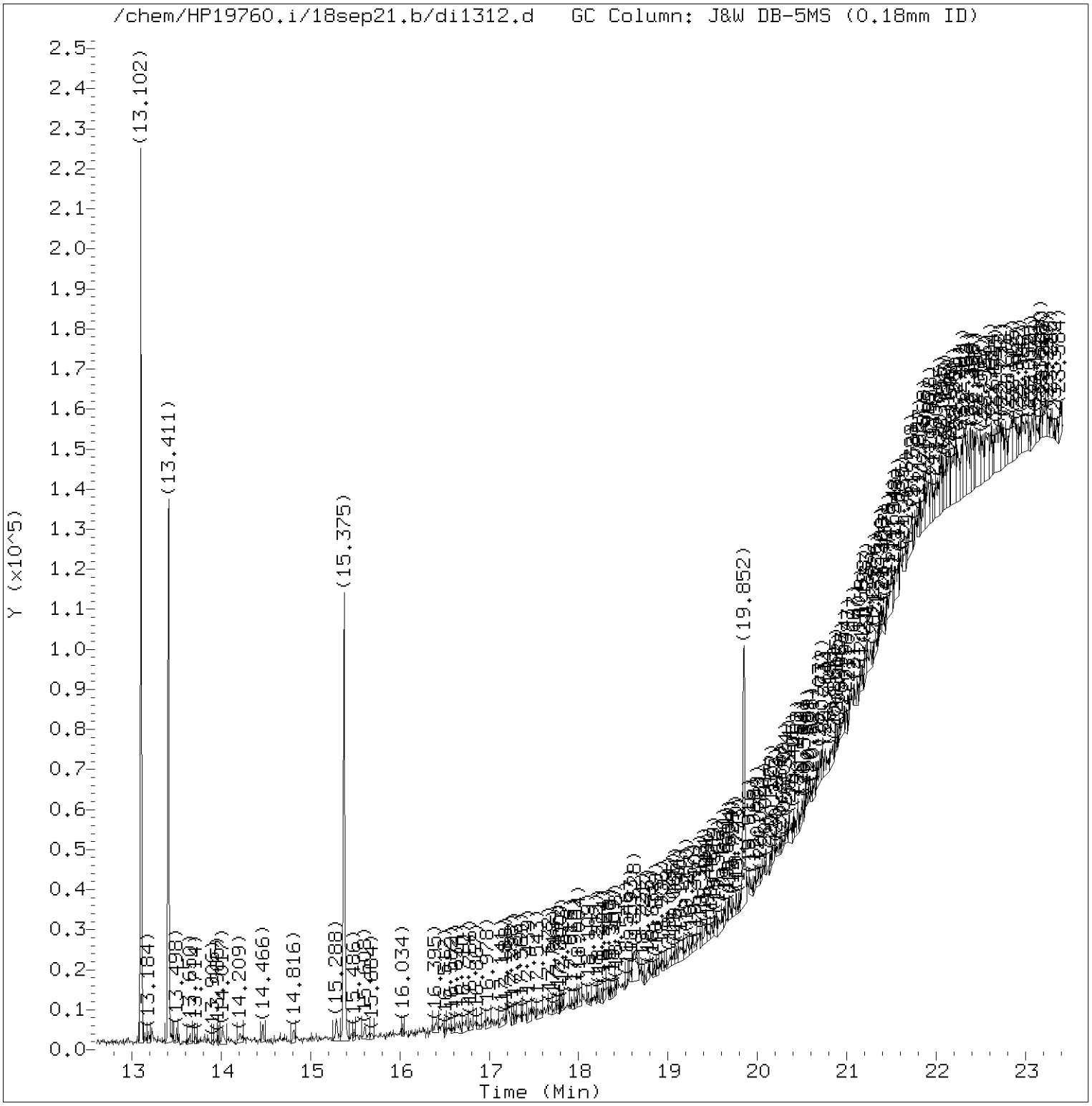
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1312.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 23:05 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2578

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1312.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 23:05 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2578

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1312.d Instrument ID: HP19760.i
Injection date and time: 21-SEP-2018 23:05 Analyst ID: art12405

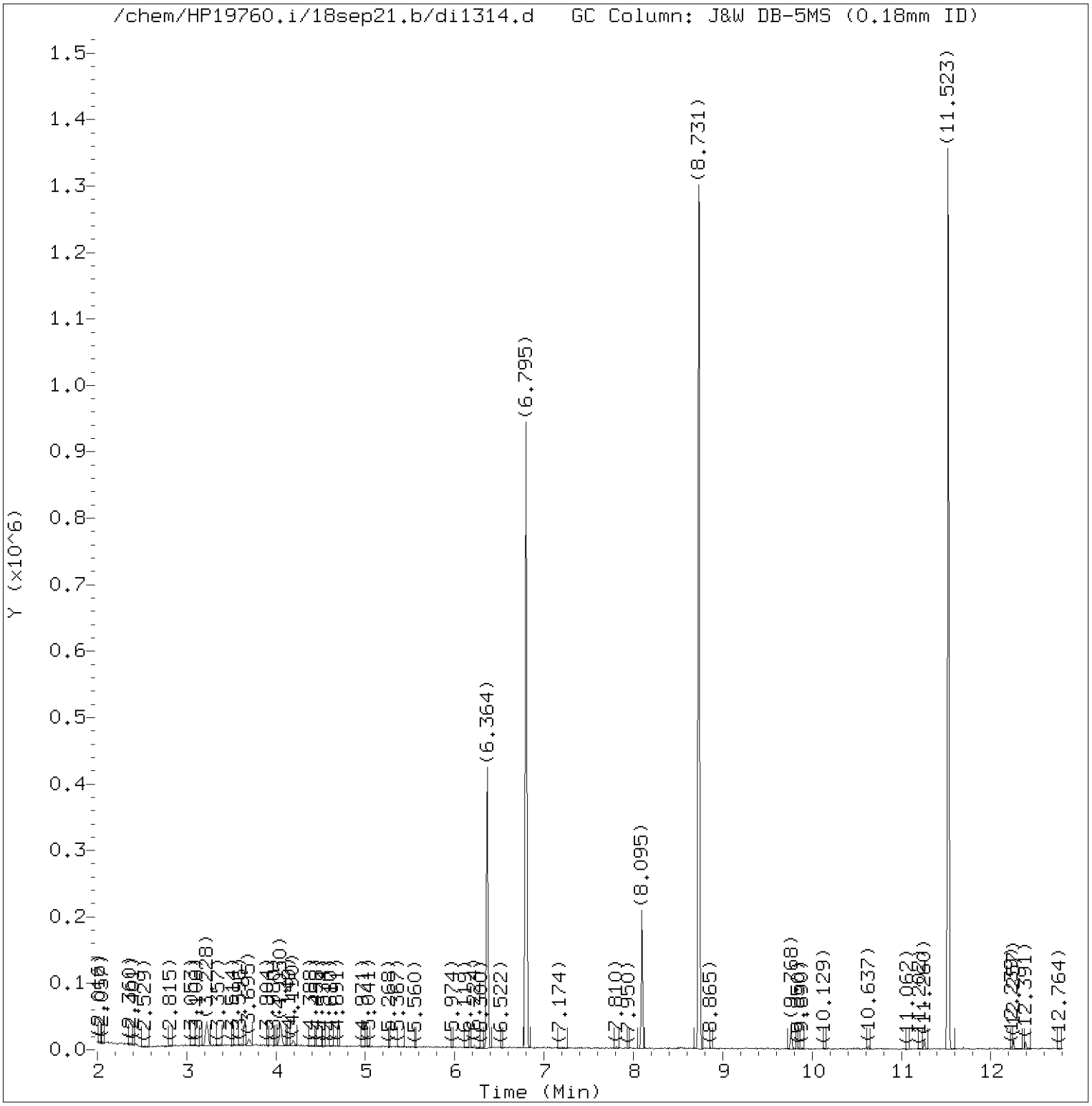
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: basicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvBASICV2578

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
16) Benzaldehyde	(1)	6.148	77	63998	11.770
25)*1,4-Dichlorobenzene-d4	(1)	6.795	152	19621	5.000
65)*Naphthalene-d8	(2)	8.731	136	68723	5.000
113)*Acenaphthene-d10	(3)	11.522	164	30774	5.000
148) Atrazine	(4)	13.102	200	24174	10.326
153)*Phenanthrene-d10	(4)	13.411	188	55734	5.000
175)*Pyrene-d10	(5)	15.375	212	49271	5.000
213)*Perylene-d12	(6)	19.852	264	36423	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

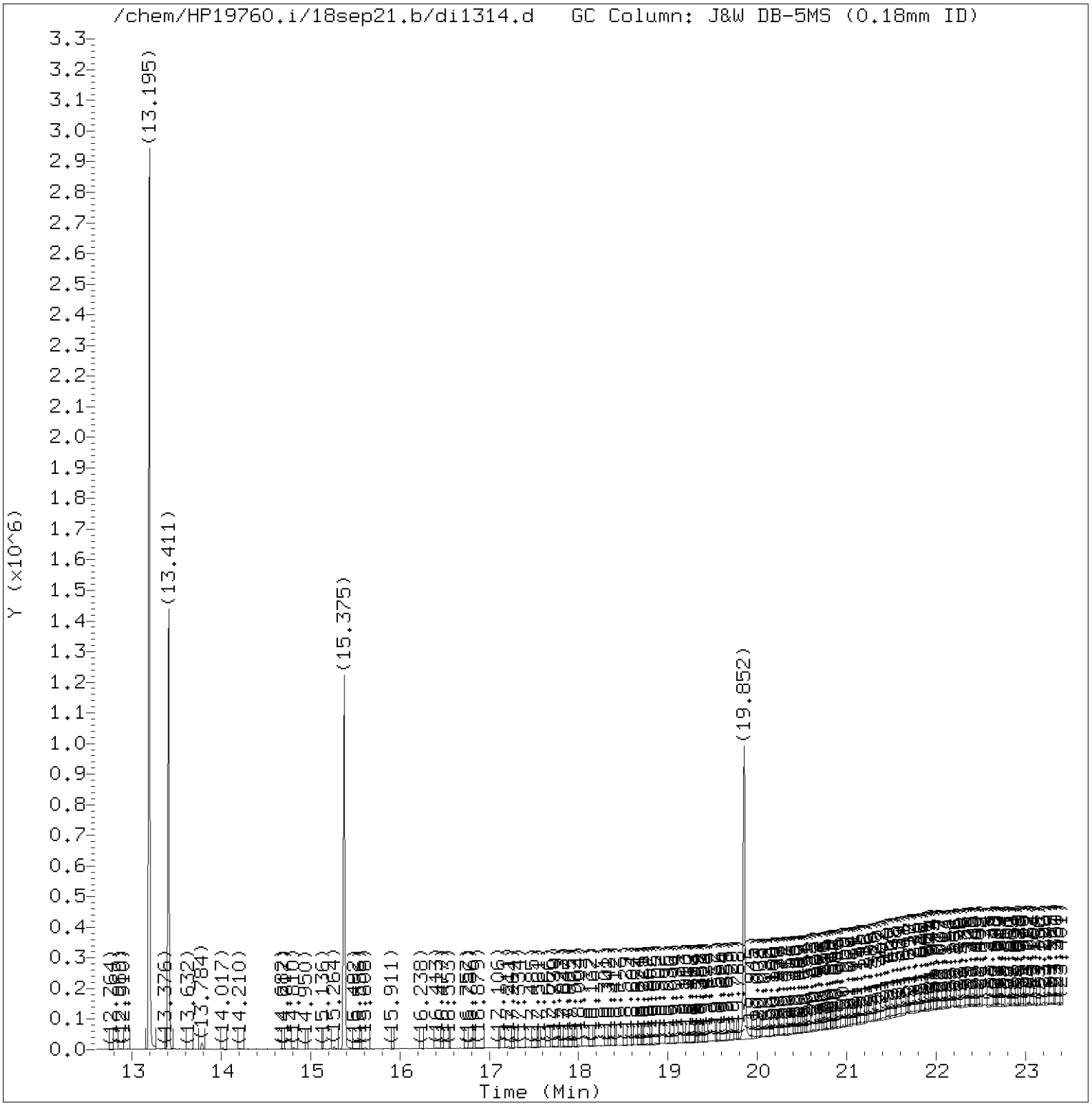
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1314.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:03 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: 4abp
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rv4ABPICV2258

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1314.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:03 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: 4abp
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rv4ABPICV2258

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1314.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:03 Analyst ID: art12405

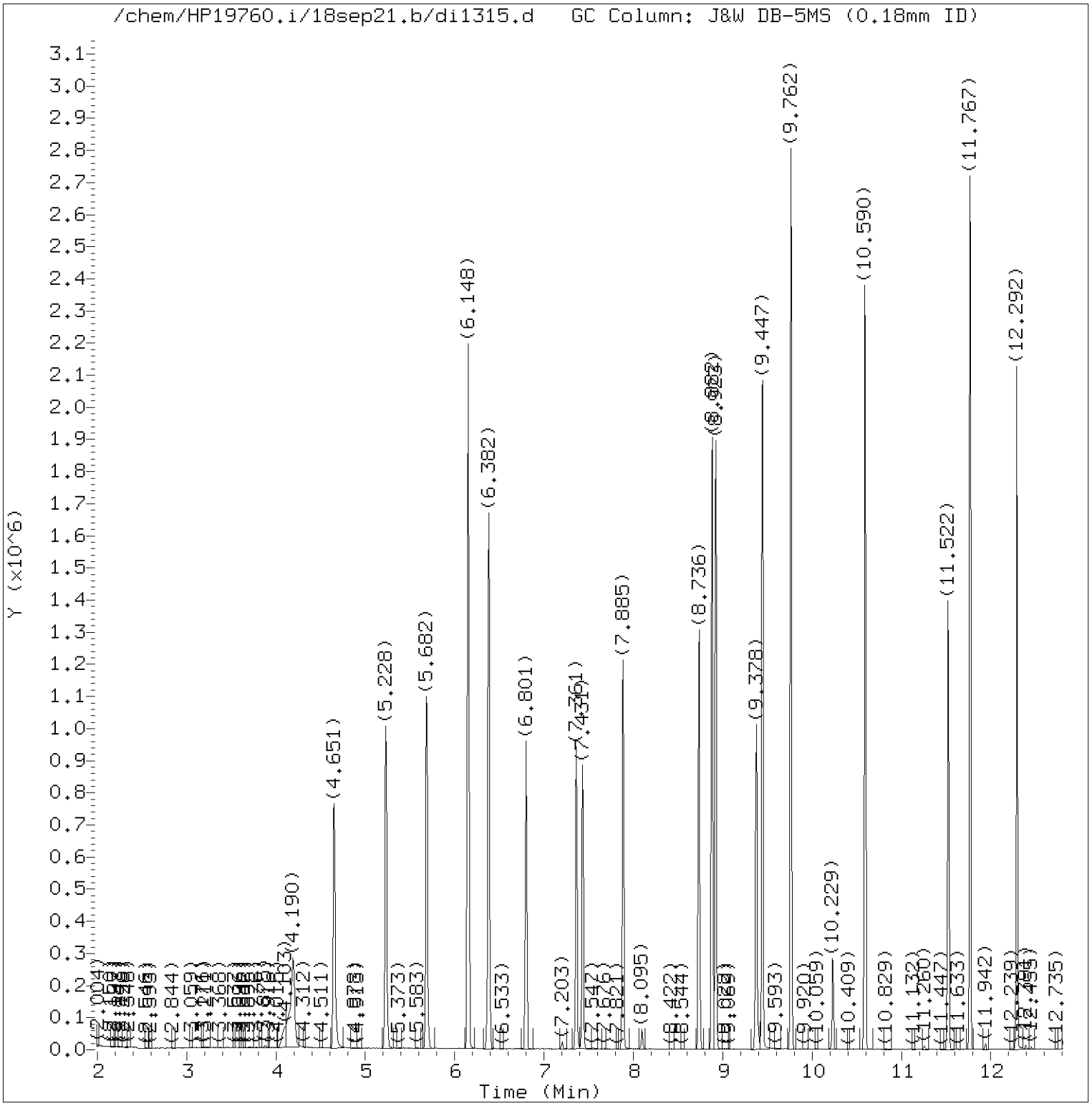
Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: 4abp
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rv4ABPICV2258

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.795	152	198605	5.000
65)*Naphthalene-d8	(2)	8.731	136	734789	5.000
113)*Acenaphthene-d10	(3)	11.523	164	327694	5.000
150) 4-Aminobiphenyl	(4)	13.195	169	1123710	17.301
153)*Phenanthrene-d10	(4)	13.411	188	576226	5.000
175)*Pyrene-d10	(5)	15.375	212	526883	5.000
213)*Perylene-d12	(6)	19.852	264	499905	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

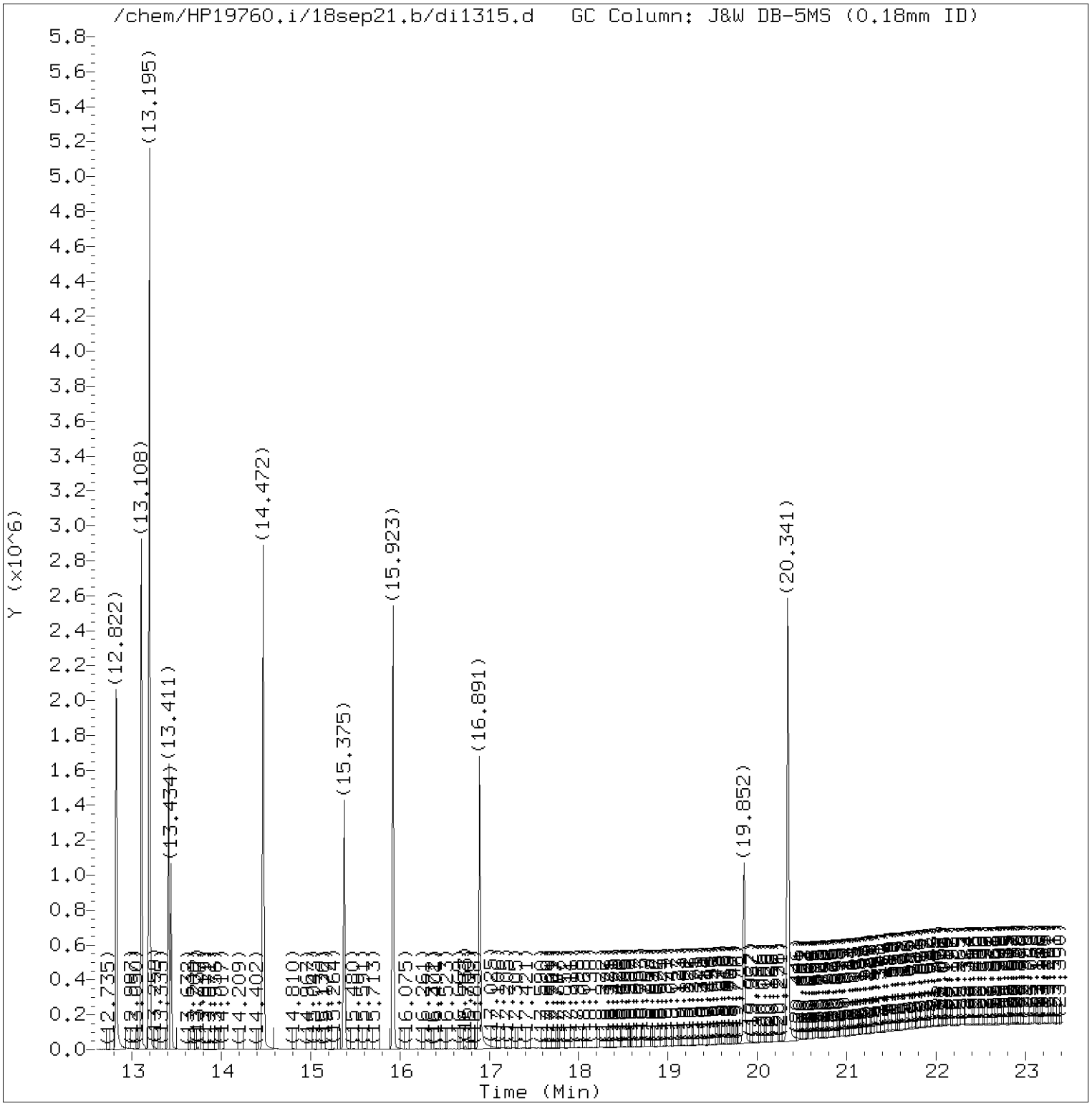
Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1315.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:31 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: capicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2608

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1315.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:31 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: capicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2608

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18sep21.b/di1315.d Instrument ID: HP19760.i
Injection date and time: 22-SEP-2018 00:31 Analyst ID: art12405

Method used: /chem/HP19760.i/18sep21.b/rv8270d.m Sublist used: capicvall1
Calibration date and time: 23-SEP-2018 09:08
Date, time and analyst ID of latest file update: 23-Sep-2018 09:09 em10340

Sample Name: SSTD12.5 Lab Sample ID: rvICV2608

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
25)*1,4-Dichlorobenzene-d4	(1)	6.801	152	195843	5.000
65)*Naphthalene-d8	(2)	8.736	136	726424	5.000
76) Caprolactam	(2)	9.378	113	186621	11.018
113)*Acenaphthene-d10	(3)	11.522	164	343047	5.000
153)*Phenanthrene-d10	(4)	13.411	188	629191	5.000
175)*Pyrene-d10	(5)	15.375	212	596915	5.000
213)*Perylene-d12	(6)	19.852	264	541584	5.000

* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 09/23/2018 at 09:15.
Target 3.5 esignature user ID: em10340

5B

SEMIVOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____

Lab File ID: li1410.d DFTPP Injection Date: 09/24/18

Instrument ID: HP20296 DFTPP Injection Time: 18:41

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
51	10.0 - 80.00% of mass 198	45.7
68	Less than 2.0% of mass 69	0.86 (1.46)1
69	Mass 69 relative abundance	59.1
70	Less than 2.0% of mass 69	0.29 (0.48)1
127	10.0 - 80.00% of mass 198	50.8
197	Less than 2.0% of mass 198	1.36
198	Base peak, 100% relative abundance	100.0
199	5.00 to 9.00% of mass 198	7.23
275	10.0 - 60.0% of mass 198	20.5
365	Greater than 1.00% of mass 198	2.38
441	Present, and less than mass 443	11.5
442	Greater than 50.00% of mass 198	70.4
443	15.00 - 24.00% of mass 442	13.7 (19.4)2

1-Value is % mass 69 2-Value is % mass of 442

THIS TUNE APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS, AND STANDARDS:

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	RVSTD2648 - SSTD7.5	li1411.d	09/24/18	19:02
02	RVSTD2648 - SSTD.125	li1412.d	09/24/18	19:47
03	RVSTD2648 - SSTD30	li1413.d	09/24/18	20:15
04	RVSTD2648 - SSTD20	li1414.d	09/24/18	20:44
05	RVSTD2648 - SSTD12.5	li1415.d	09/24/18	21:13
06	RVSTD2648 - SSTD3.75	li1416.d	09/24/18	21:42
07	RVSTD2648 - SSTD1.25	li1417.d	09/24/18	22:11
08	RVSTD2648 - SSTD.25	li1418.d	09/24/18	22:39
09	RVSTD2648 - SSTD0.125	li1419.d	09/24/18	23:08
10	PAHMDL2648 - SSTD0.025	li1420.d	09/24/18	23:37
11	RVICV2628 - SSTD12.5	li1421.d	09/25/18	00:05
12	BASICV2578 - SSTD12.5	li1423.d	09/25/18	01:03

Data File: /chem/HP20296.i/18oct17a.b/lj1100b.d

Page 1

Date : 17-OCT-2018 20:13

Client ID: DFTPP12.5

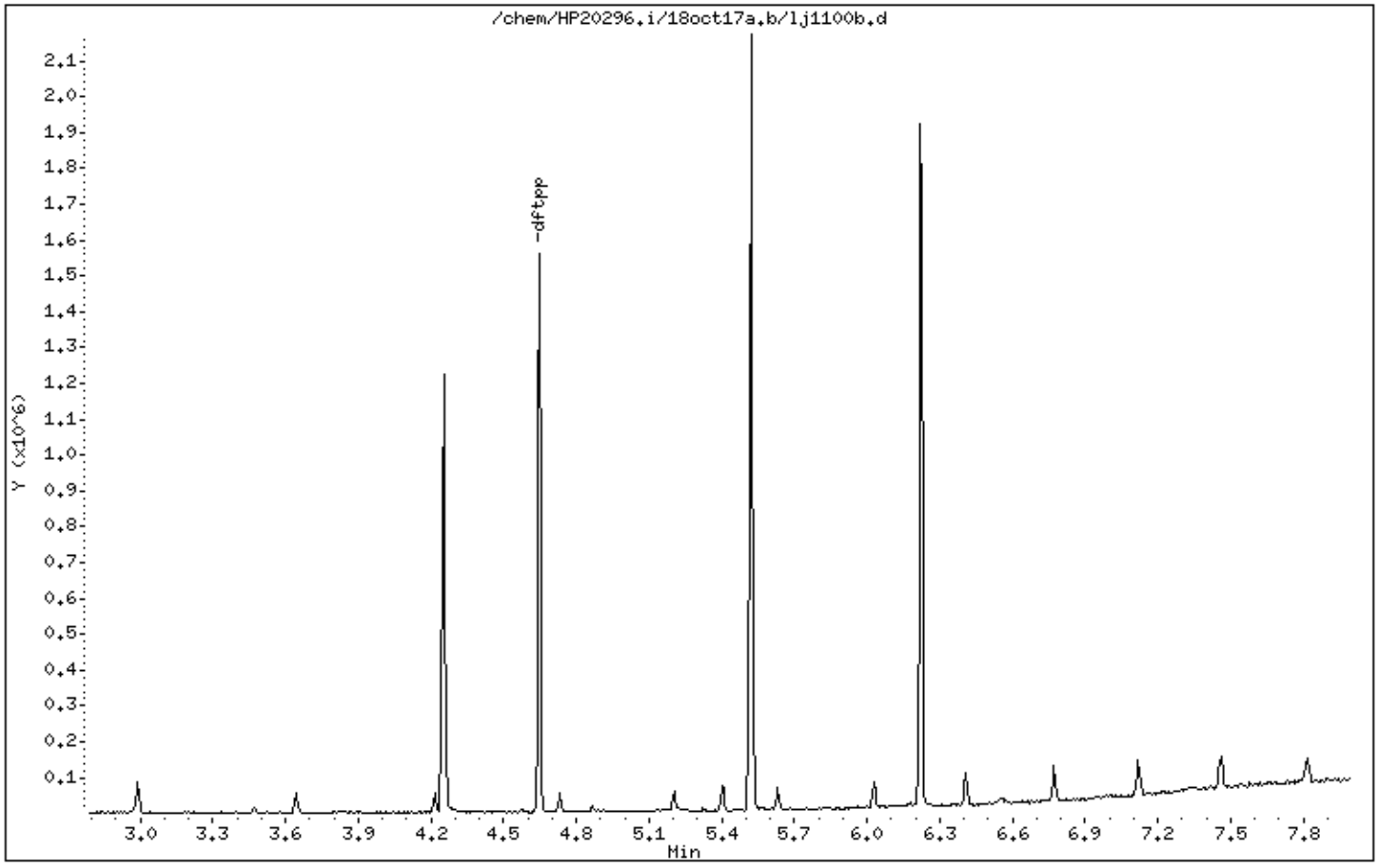
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Data File: /chem/HP20296.i/18oct17a.b/lj1100b.d

Date : 17-OCT-2018 20:13

Client ID: DFTPP12.5

Instrument: HP20296.i

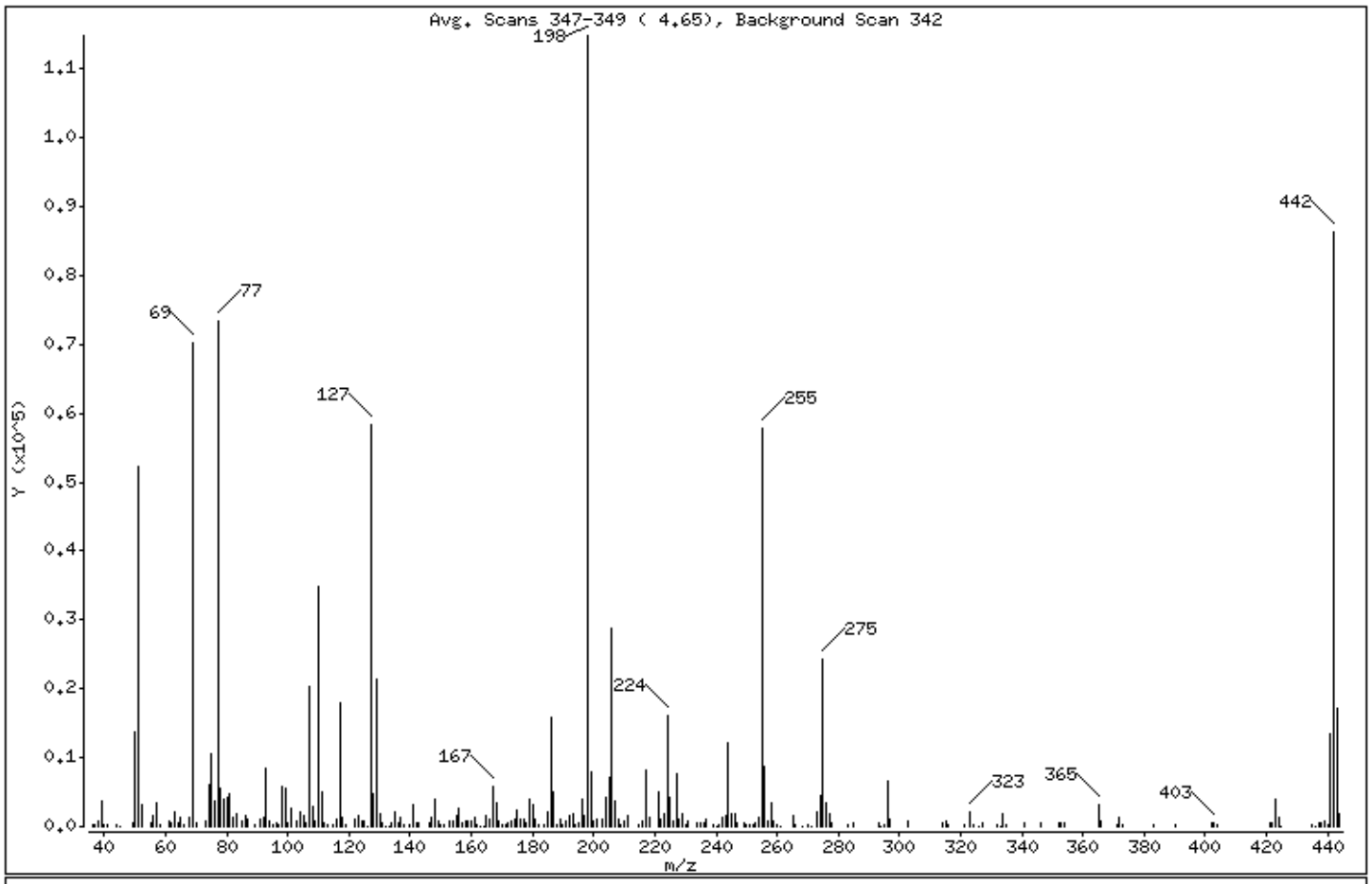
Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	45.57
68	Less than 2.00% of mass 69	1.07 (1.75)
69	Mass 69 relative abundance	61.22
70	Less than 2.00% of mass 69	0.39 (0.64)
127	10.00 - 80.00% of mass 198	50.87
197	Less than 2.00% of mass 198	1.39
199	5.00 - 9.00% of mass 198	7.00
275	10.00 - 60.00% of mass 198	21.17
365	Greater than 1.00% of mass 198	2.84
441	0.01 - 24.00% of mass 442	11.79 (15.70)
442	50.00 - 99.99% of mass 198	75.08
443	15.00 - 24.00% of mass 442	14.99 (19.96)

Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Date : 17-OCT-2018 20:13

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1100b.d
Spectrum: Avg. Scans 347-349 (4.65), Background Scan 342
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	194	117.00	17976	188.00	337	265.00	1464
37.00	318	118.00	1231	189.00	1079	266.00	278
38.00	739	119.00	337	190.00	306	268.00	104
39.00	3692	122.00	1111	191.00	764	270.00	172
40.00	309	123.00	1493	192.00	1648	271.00	89
41.00	338	124.00	888	193.00	1852	273.00	2061
44.00	154	125.00	826	194.00	299	274.00	4533
45.00	90	126.00	116	195.00	632	275.00	24304
49.00	569	127.00	58408	196.00	3983	276.00	3322
50.00	13694	128.00	4729	197.00	1598	277.00	1829
51.00	52320	129.00	21408	198.00	114816	278.00	523
52.00	3161	130.00	1938	199.00	8043	283.00	393
55.00	473	131.00	484	200.00	768	285.00	422
56.00	1505	132.00	123	201.00	978	293.00	464
57.00	3542	133.00	114	203.00	1158	294.00	109
58.00	350	134.00	651	204.00	4349	295.00	215
61.00	832	135.00	1993	205.00	7200	296.00	6621
62.00	611	136.00	633	206.00	28792	297.00	1061
63.00	2013	137.00	1260	207.00	3823	303.00	700
64.00	499	138.00	236	208.00	1090	314.00	437
65.00	1410	140.00	197	209.00	284	315.00	827
66.00	151	141.00	3189	210.00	689	316.00	273
68.00	1227	142.00	636	211.00	1538	321.00	371
69.00	70296	143.00	462	215.00	326	323.00	2221
70.00	452	146.00	498	216.00	845	324.00	298
73.00	699	147.00	1346	217.00	8159	326.00	114
74.00	5965	148.00	3900	218.00	1304	327.00	529
75.00	10634	149.00	851	221.00	5065	332.00	387
76.00	3791	150.00	285	222.00	1184	333.00	90
77.00	73496	151.00	347	223.00	1810	334.00	1815
78.00	5531	153.00	844	224.00	16161	335.00	231
79.00	4019	154.00	694	225.00	4143	341.00	498
80.00	4252	155.00	1475	226.00	716	346.00	438
81.00	4655	156.00	2548	227.00	7599	352.00	544
82.00	1201	157.00	589	228.00	1003	353.00	591

Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Date : 17-OCT-2018 20:13

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: art12405

Column phase: DB-5MS Column diameter: 0.18

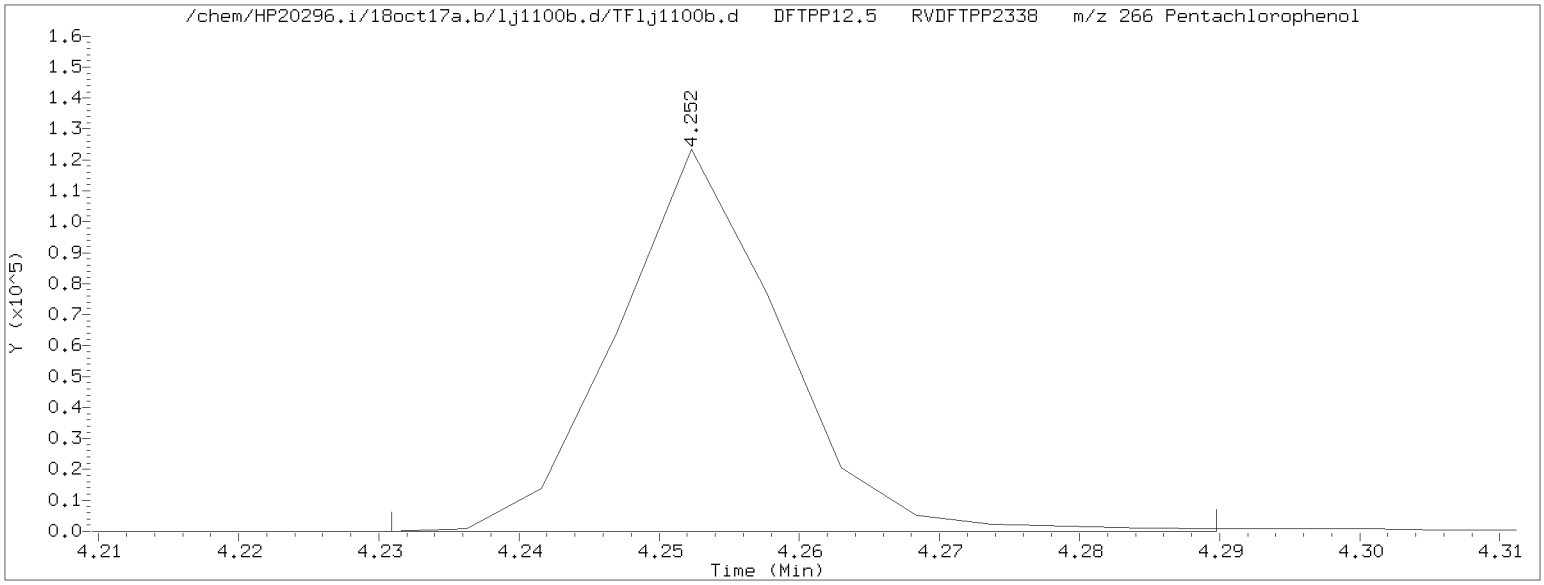
Data File: lj1100b.d
Spectrum: Avg. Scans 347-349 (4.65), Background Scan 342
Location of Maximum: 198.00
Number of points: 253

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1764	158.00	752	229.00	1757	354.00	556
85.00	823	159.00	701	230.00	332	365.00	3262
86.00	1495	160.00	716	231.00	920	366.00	662
87.00	969	161.00	1386	234.00	584	371.00	220
89.00	190	162.00	275	235.00	581	372.00	1336
91.00	1145	163.00	97	236.00	429	373.00	290
92.00	1209	164.00	98	237.00	929	383.00	338
93.00	8420	165.00	1492	239.00	143	390.00	161
94.00	741	166.00	1076	240.00	91	402.00	399
95.00	134	167.00	5775	241.00	188	403.00	494
96.00	487	168.00	3336	242.00	1205	404.00	277
97.00	136	169.00	838	243.00	1599	421.00	506
98.00	5904	170.00	223	244.00	12150	422.00	532
99.00	5538	171.00	275	245.00	1930	423.00	3875
100.00	440	172.00	496	246.00	1828	424.00	1416
101.00	2745	173.00	752	247.00	549	425.00	131
103.00	794	174.00	1007	249.00	618	435.00	176
104.00	2090	175.00	2443	250.00	243	436.00	120
105.00	1648	176.00	924	251.00	313	437.00	620
106.00	549	177.00	1059	252.00	253	438.00	423
107.00	20200	178.00	446	253.00	563	439.00	663
108.00	2854	179.00	3927	254.00	1399	440.00	340
109.00	716	180.00	3054	255.00	57880	441.00	13534
110.00	34776	181.00	1056	256.00	8601	442.00	86200
111.00	5062	182.00	239	257.00	888	443.00	17208
112.00	614	184.00	278	258.00	3403	444.00	1747
113.00	298	185.00	2157	259.00	874		
115.00	209	186.00	15756	260.00	209		
116.00	1092	187.00	4908	261.00	90		

Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Assessment of GC Column Performance and Injection Port Inertness for

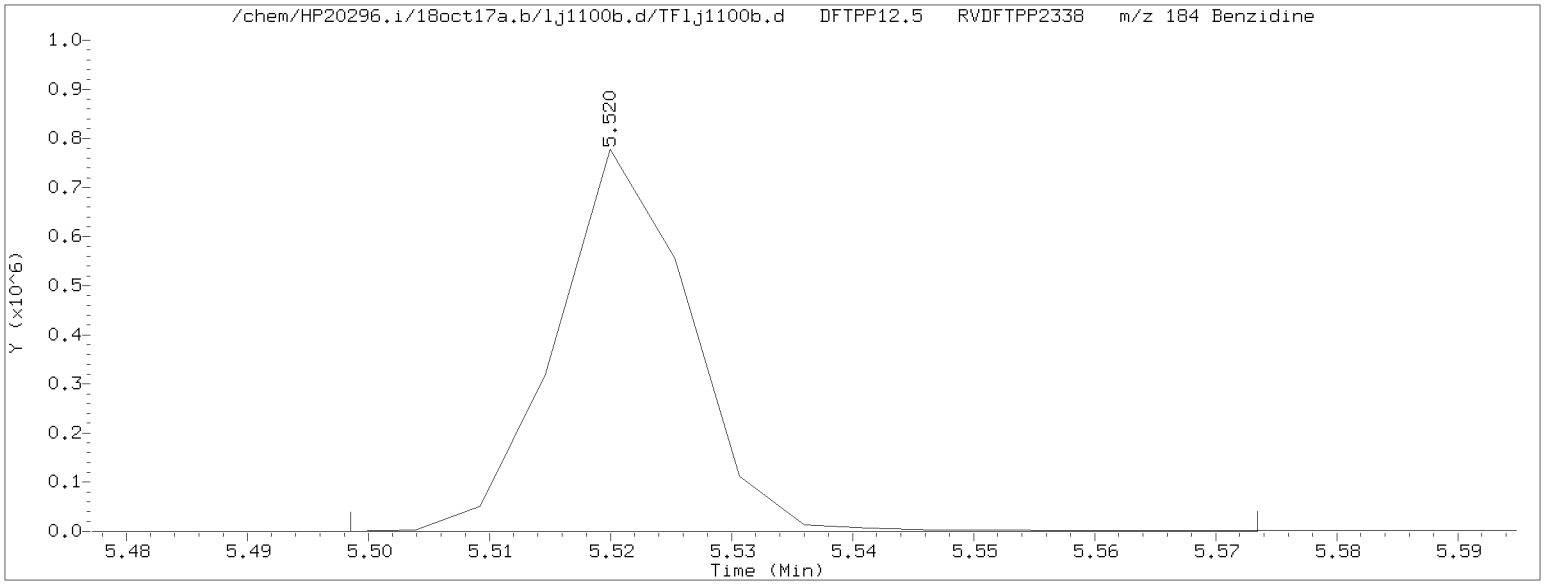
Instrument ID: HP20296.i Injection Date: 17-OCT-2018 20:13 Operator: art12405



Pentachlorophenol EICP peak height = 123504 EICP peak height at 10% = 12350 Pentachlorophenol EICP area = 99754

Pentachlorophenol EICP peak apex (min.) = 4.252
RT at 10% of front half of EICP (min.) = 4.241 'Front' peak width (min.) = 0.0112000000
RT at 10% of back half of EICP (min.) = 4.266 'Tailing' peak width (min.) = 0.0134333333

PCP tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0134333333}{0.0112000000} = 1.199$



Benzidine EICP peak height = 778304 EICP peak height at 10% = 77830 Benzidine EICP area = 593502

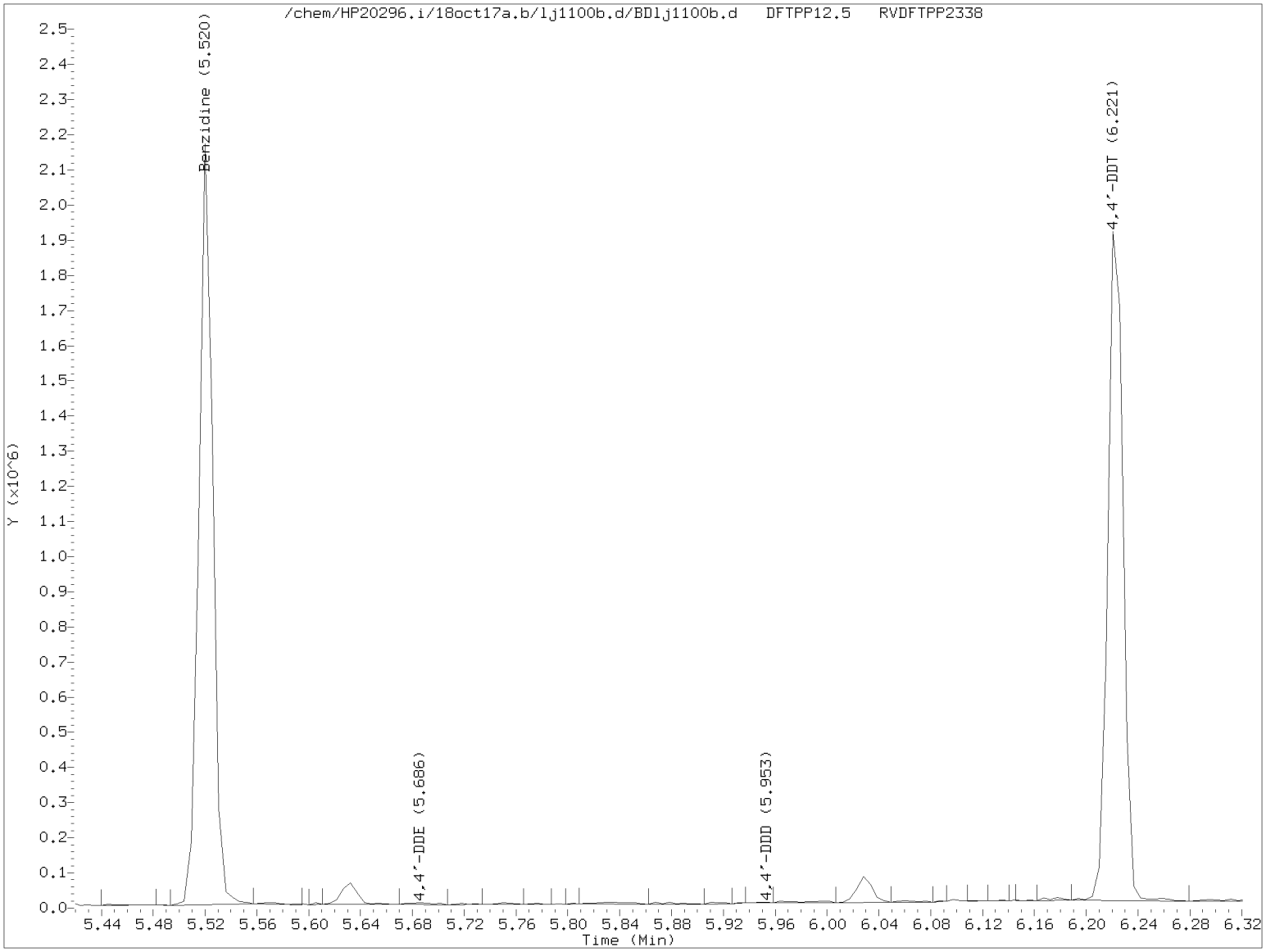
Benzidine EICP peak apex (min.) = 5.520
RT at 10% of front half of EICP (min.) = 5.510 'Front' peak width (min.) = 0.0101333333
RT at 10% of back half of EICP (min.) = 5.532 'Tailing' peak width (min.) = 0.0125500000

Benzidine tailing factor = $\frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0125500000}{0.0101333333} = 1.238$

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

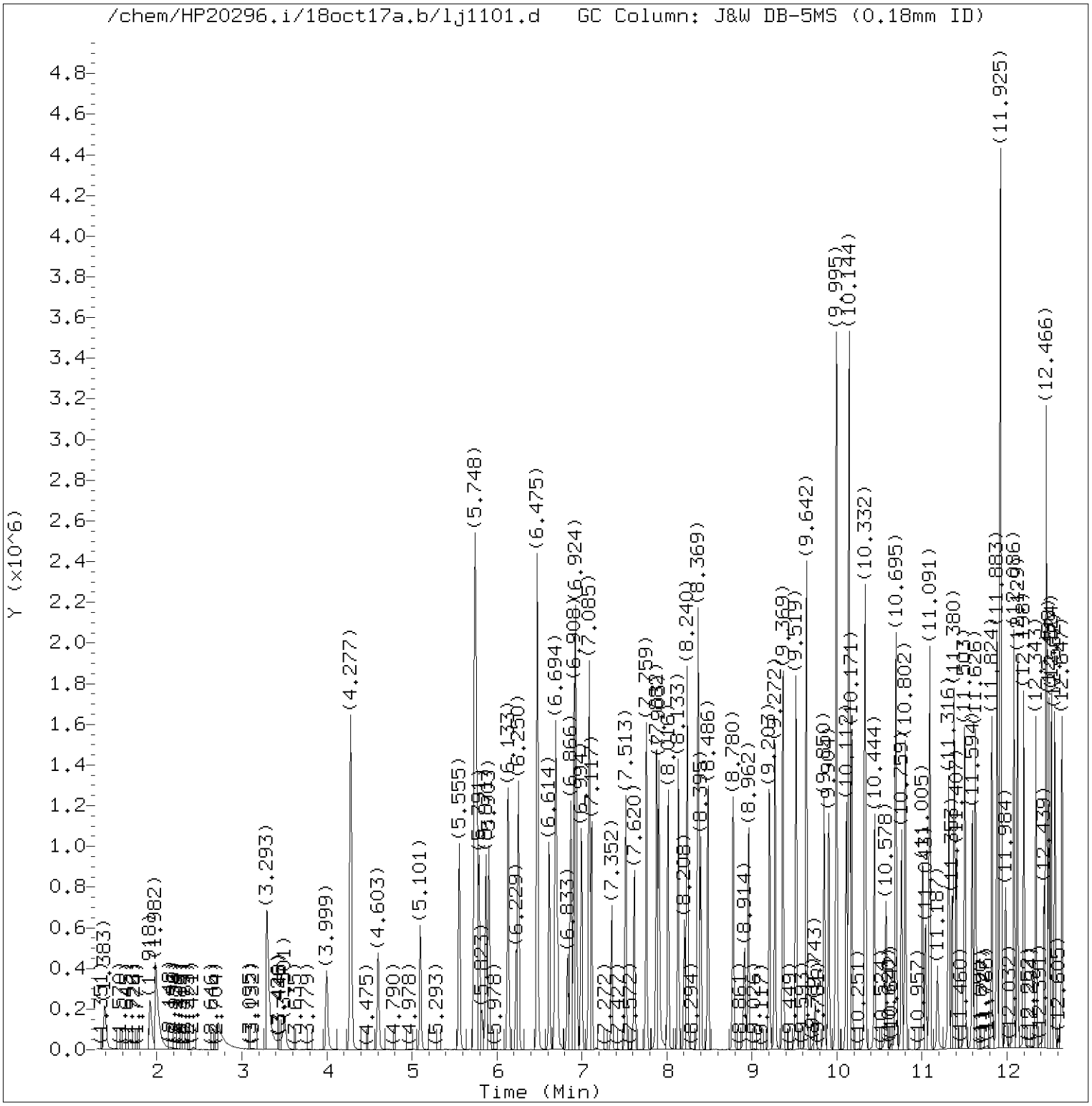
Instrument ID: HP20296.i Injection Date: 17-OCT-2018 20:13 Operator: art12405



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{6964 + 1083}{6964 + 1083 + 1586299} \times 100 = 0.5$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

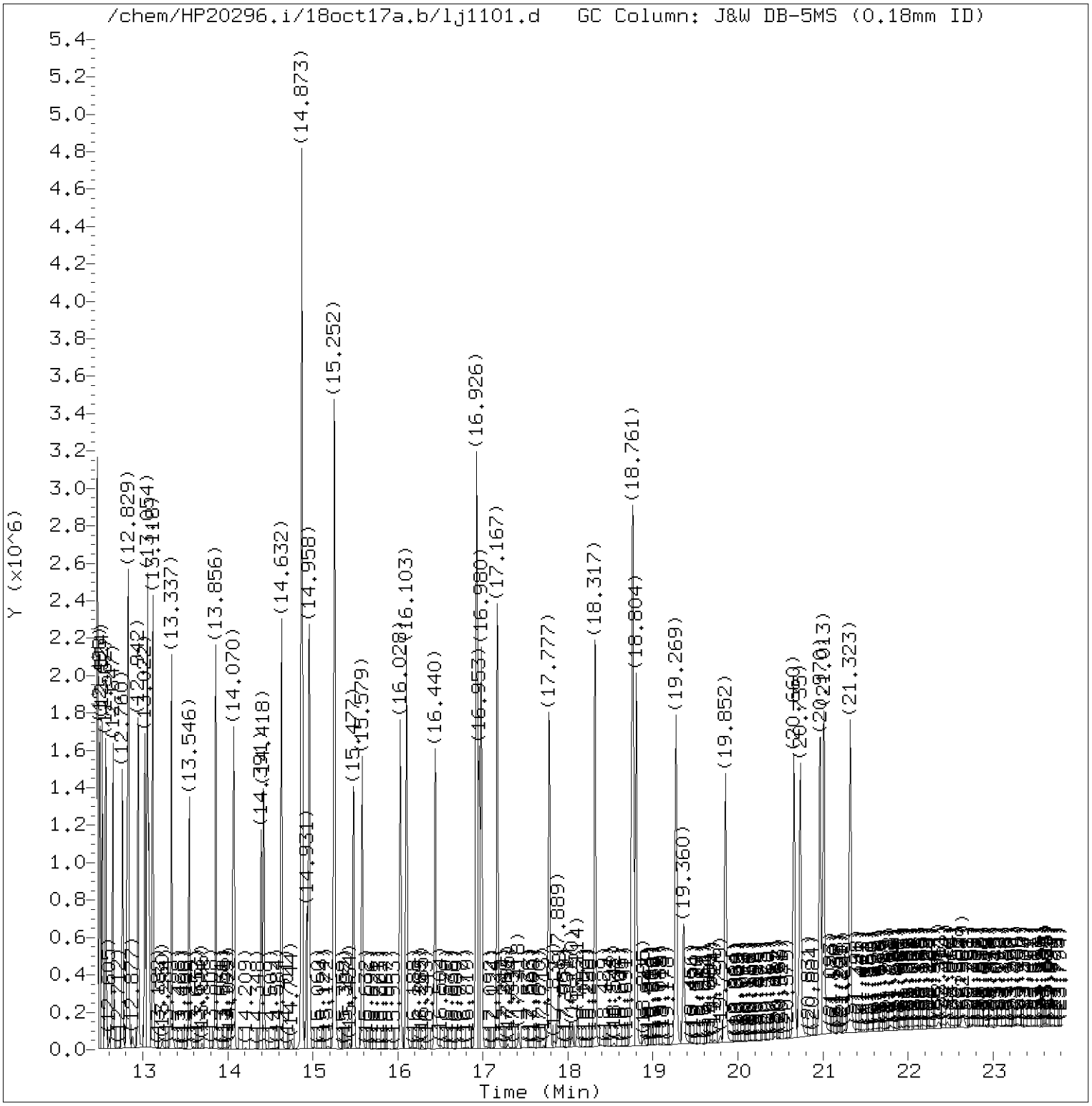
Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.383	88	189015	13.428
5) N-Nitrosodimethylamine	(1)	1.923	74	284906	13.213
6) Pyridine	(1)	1.982	79	488947	12.756
8) 2-Picoline	(1)	3.298	93	486055	12.831
9) N-Nitrosomethylethylamine	(1)	3.507	88	195887M	12.433
10) Methyl methanesulfonate	(1)	3.999	80	242693	12.241
12)$2-Fluorophenol	(1)	4.282	112	750576	25.701
14) N-Nitrosodiethylamine	(1)	4.603	102	183827	12.377
16) Ethyl methanesulfonate	(1)	5.101	109	190376	12.324
17) Benzaldehyde	(1)	5.555	77	337741	11.584
43) Total Cresols	(1)			756371	25.416
20) Aniline	(1)	5.737	93	677088	12.376
18)$Phenol-d6	(1)	5.748	99	1026998	25.588
19) Phenol	(1)	5.769	94	559551	12.031
21) a-methylstyrene	(1)	5.817	118	36225	11.711
23) bis(2-Chloroethyl)ether	(1)	5.871	93	457362	12.691
24) 2-Chlorophenol	(1)	5.908	128	339853	12.621
25) 1,3-Dichlorobenzene	(1)	6.133	146	374283	12.590
26)*1,4-Dichlorobenzene-d4	(1)	6.229	152	91045	5.000
27) 1,4-Dichlorobenzene	(1)	6.250	146	375423	12.419
29) 1,2-Dichlorobenzene	(1)	6.475	146	358812	12.442
28) Benzyl alcohol	(1)	6.475	108	242492	12.477
31) Indene	(1)	6.614	115	421711	12.603
32) 2-Methylphenol	(1)	6.689	108	361345	12.882
34) 2,2'-oxybis(1-Chloropropane)	(1)	6.710	45	454719	11.913
35) bis(2-Chloroisopropyl)ether	(1)	6.710	45	454719	11.913
36) N-Nitrosopyrrolidine	(1)	6.833	100	195492	12.846
37) Acetophenone	(1)	6.871	105	533315	12.195
40) N-Nitrosomorpholine	(1)	6.903	56	209680	12.229
39) N-Nitroso-di-n-propylamine	(1)	6.908	70	319712	12.579
41) o-Toluidine	(1)	6.924	106	622099	12.075
38) 4-Methylphenol	(1)	6.935	108	395026	12.535
44) Hexachloroethane	(1)	6.994	117	178024	12.834
45)$Nitrobenzene-d5	(2)	7.085	82	941307	25.917
46) Nitrobenzene	(2)	7.117	77	488265	13.240
50) N-Nitrosopiperidine	(2)	7.352	114	175370	12.876
100) Isosafrole	(3)			248513	12.518
52) Isophorone	(2)	7.513	82	782442	12.668
53) 2-Nitrophenol	(2)	7.620	139	160579	13.848
55) 2,4-Dimethylphenol	(2)	7.759	107	386279	12.822

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
59) O,O,O-Triethylphosphorothioate	(2)	7.882	198	148917	12.396
57) bis(2-Chloroethoxy)methane	(2)	7.903	93	546899	13.053
58) Benzoic acid	(2)	7.925	105	192217	14.302
62) 2,4-Dichlorophenol	(2)	8.016	162	274517	13.668
125) 2,4_2,6-Dinitrotoluenes	(3)			313930	25.670
65) 1,2,4-Trichlorobenzene	(2)	8.133	180	301837	13.365
68)*Naphthalene-d8	(2)	8.208	136	326682	5.000
69) Naphthalene	(2)	8.240	128	947261	12.492
70) 4-Chloroaniline	(2)	8.363	127	370284	12.547
71) 2,6-Dichlorophenol	(2)	8.369	162	259503	12.977
72) Hexachloropropene	(2)	8.395	213	209222	14.922
74) Hexachlorobutadiene	(2)	8.486	225	177973	13.526
151) Diallate trans/cis	(4)			361608	12.647
78) Quinoline	(2)	8.780	129	528931	12.317
79) Caprolactam	(2)	8.914	113	82685	12.280
80) N-Nitrosodi-n-butylamine	(2)	8.962	84	288596	11.617
83) 4-Chloro-3-methylphenol	(2)	9.203	107	318098	12.975
85) Safrole	(2)	9.272	162	228549	12.747
86) 2-Methylnaphthalene	(2)	9.369	142	599587	12.755
87) 1-Methylnaphthalene	(2)	9.519	142	574857	12.696
88) Hexachlorocyclopentadiene	(3)	9.642	237	176148	13.699
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.642	216	294866	13.184
91) cis-Isosafrole	(3)	9.743	162	41073	2.091
93) 2,4,6-Trichlorophenol	(3)	9.850	196	185291	13.754
95) 2,4,5-Trichlorophenol	(3)	9.904	196	196201	13.824
96)$2-Fluorobiphenyl	(3)	9.995	172	1295361	24.911
97) trans-Isosafrole	(3)	10.112	162	207440	10.427
98) 1,1'-Biphenyl	(3)	10.144	154	681417	12.461
99) 2-Chloronaphthalene	(3)	10.144	162	590324	12.773
101) 1-Chloronaphthalene	(3)	10.171	162	485029	11.822
103) Diphenyl ether	(3)	10.332	170	382115	12.720
104) 2-Nitroaniline	(3)	10.337	138	173290	13.434
108) 1,4-Naphthoquinone	(3)	10.444	158	208340	12.320
109) 1,4-Dinitrobenzene	(3)	10.578	168	86501	12.853
110) Dimethylphthalate	(3)	10.695	163	590226	12.422
111) 1,3-Dinitrobenzene	(3)	10.695	168	94353	12.705
113) 2,6-Dinitrotoluene	(3)	10.759	165	135560	12.765
114) Acenaphthylene	(3)	10.802	152	773729	12.805
117) 3-Nitroaniline	(3)	11.005	138	149658	13.475
118)*Acenaphthene-d10	(3)	11.043	164	152939	5.000

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$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.091	153	578626	12.550
120) 2,4-Dinitrophenol	(3)	11.187	184	62226	11.618
122) Pentachlorobenzene	(3)	11.316	250	228228	12.867
121) 4-Nitrophenol	(3)	11.358	109	108421	11.858
124) Dibenzofuran	(3)	11.380	168	768195	12.721
123) 2,4-Dinitrotoluene	(3)	11.407	165	178370	12.905
126) 1-Naphthylamine	(3)	11.503	143	574223	12.681
127) 2,3,4,6-Tetrachlorophenol	(3)	11.594	232	146033	13.722
128) 2-Naphthylamine	(3)	11.631	143	558789	12.971
129) Diethylphthalate	(3)	11.824	149	590773	12.348
131) Fluorene	(3)	11.883	166	604628	12.759
130) Thionazin	(3)	11.920	107	126977	12.277
133) 5-Nitro-o-toluidine	(3)	11.925	152	164179	12.586
132) 4-Chlorophenyl-phenylether	(3)	11.925	204	295484	12.991
134) 4-Nitroaniline	(3)	11.936	138	153861	13.448
135) 4,6-Dinitro-2-methylphenol	(4)	11.984	198	102959	13.984
137) NDPA as diphenylamine	(4)	12.086	169	488973	12.487
136) N-Nitrosodiphenylamine	(4)	12.086	169	488973	12.487
139) 1,2-Diphenylhydrazine	(4)	12.129	77	885417	12.605
140)$2,4,6-Tribromophenol	(3)	12.198	330	148815	27.940
142) Tetraethyldithiopyrophosphate	(4)	12.343	97	140104	12.412
144) 1,3,5-Trinitrobenzene	(4)	12.439	213	59996	12.740
145) Diallate (peak 1)	(4)	12.460	86	310025	10.523
146) Phorate	(4)	12.466	75	549420	13.284
147) Phenacetin	(4)	12.498	108	375957	13.368
148) 4-Bromophenyl-phenylether	(4)	12.524	248	162610	12.939
149) Diallate (peak 2)	(4)	12.557	86	51583	2.124
150) Hexachlorobenzene	(4)	12.567	284	166626	12.203
152) Dimethoate	(4)	12.647	87	336504	13.256
153) Atrazine	(4)	12.760	200	152589	12.166
154) Pentachlorophenol	(4)	12.813	266	96998	12.273
155) 4-Aminobiphenyl	(4)	12.829	169	429319	13.052
156) Pentachloronitrobenzene	(4)	12.829	237	82148	13.173
157) Pronamide	(4)	12.942	173	291787	13.513
158)*Phenanthrene-d10	(4)	13.027	188	293196	5.000
160) Phenanthrene	(4)	13.054	178	907465	12.475
159) Dinoseb	(4)	13.075	211	154997	13.513
162) Anthracene	(4)	13.118	178	914612	12.938
168) Carbazole	(4)	13.337	167	827091	12.935
169) Methyl parathion	(4)	13.546	109	260371	13.299

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	13.856	149	1103087	13.269
173) 4-Nitroquinoline-1-oxide	(4)	14.059	190	75307	10.845
172) Parathion	(4)	14.070	109	179000	14.719
174) Octachlorostyrene	(4)	14.391	308	66673	13.640
176) Isodrin	(4)	14.423	193	109853	13.026
178) Fluoranthene	(4)	14.632	202	1036364	13.702
179) Benzidine	(5)	14.873	184	2159846	41.649
180)*Pyrene-d10	(5)	14.931	212	314243	5.000
182) Pyrene	(5)	14.958	202	1060399	12.239
227) Total PAHs	(6)			15839161	234.154
184)$Terphenyl-d14	(5)	15.252	244	1283383	26.334
187) p-Dimethylaminoazobenzene	(5)	15.482	225	165984	13.267
190) Chlorobenzilate	(5)	15.579	139	356727	13.338
192) 3,3'-Dimethylbenzidine	(5)	16.028	212	721114	14.565
193) Butylbenzylphthalate	(5)	16.103	149	560818	14.066
196) 2-Acetylaminofluorene	(5)	16.440	181	453972	15.192
200) Benzo(a)anthracene	(5)	16.921	228	1054281	14.447
198) 3,3'-Dichlorobenzidine	(5)	16.932	252	406450	15.409
203) 4,4'-Methylenebis(2-chloroanil	(5)	16.953	231	225883	15.113
201) Chrysene	(5)	16.980	228	1027898	14.116
204) bis(2-Ethylhexyl)phthalate	(5)	17.167	149	823625	14.744
208) 6-Methylchrysene	(5)	17.777	242	691973	14.260
210) Di-n-octylphthalate	(6)	18.317	149	1458373	13.914
211) Benzo(b)fluoranthene	(6)	18.756	252	1015585	13.008
212) 7,12-Dimethylbenz[a]anthracene	(6)	18.766	256	463444	14.018
213) Benzo(k)fluoranthene	(6)	18.804	252	1049088	13.718
216) Benzo(a)pyrene	(6)	19.274	252	971270	13.363
218)*Perylene-d12	(6)	19.360	264	310406	5.000
220) 3-Methylcholanthrene	(6)	19.852	268	443249	13.783
222) Dibenz(a,h)acridine	(6)	20.660	279	748216	12.639
223) Dibenz(a,j)acridine	(6)	20.735	279	766678	12.311
224) Indeno(1,2,3-cd)pyrene	(6)	20.970	276	879811M	12.505
225) Dibenz(a,h)anthracene	(6)	21.013	278	918695	12.814
226) Benzo(g,h,i)perylene	(6)	21.323	276	925005	12.773

M = Compound was manually integrated.
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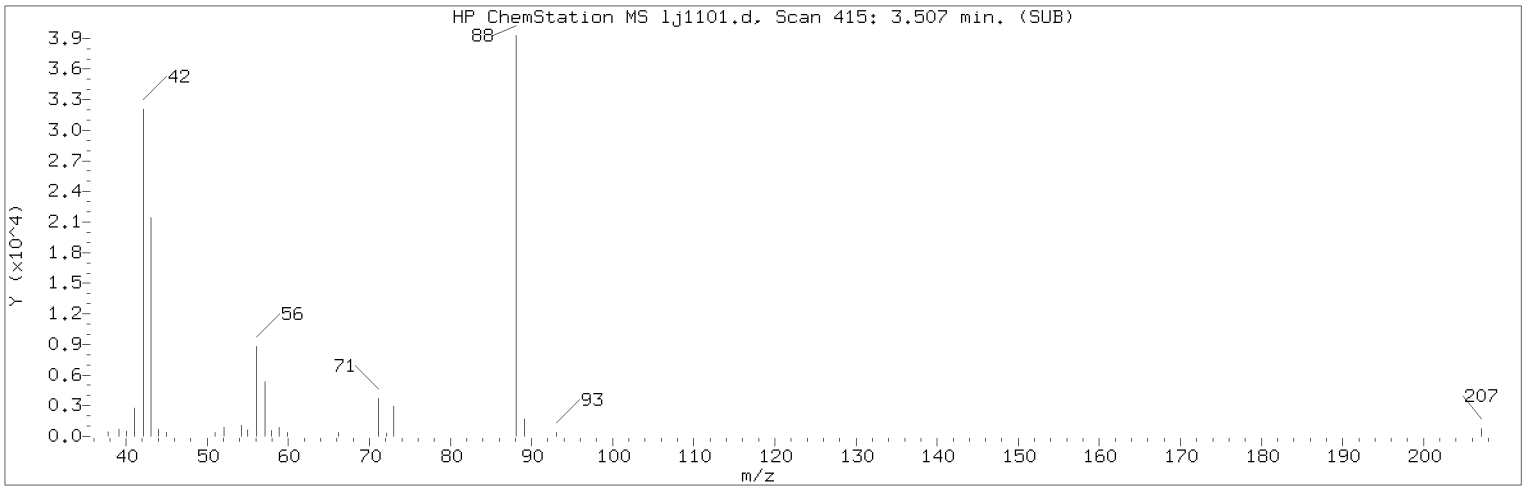
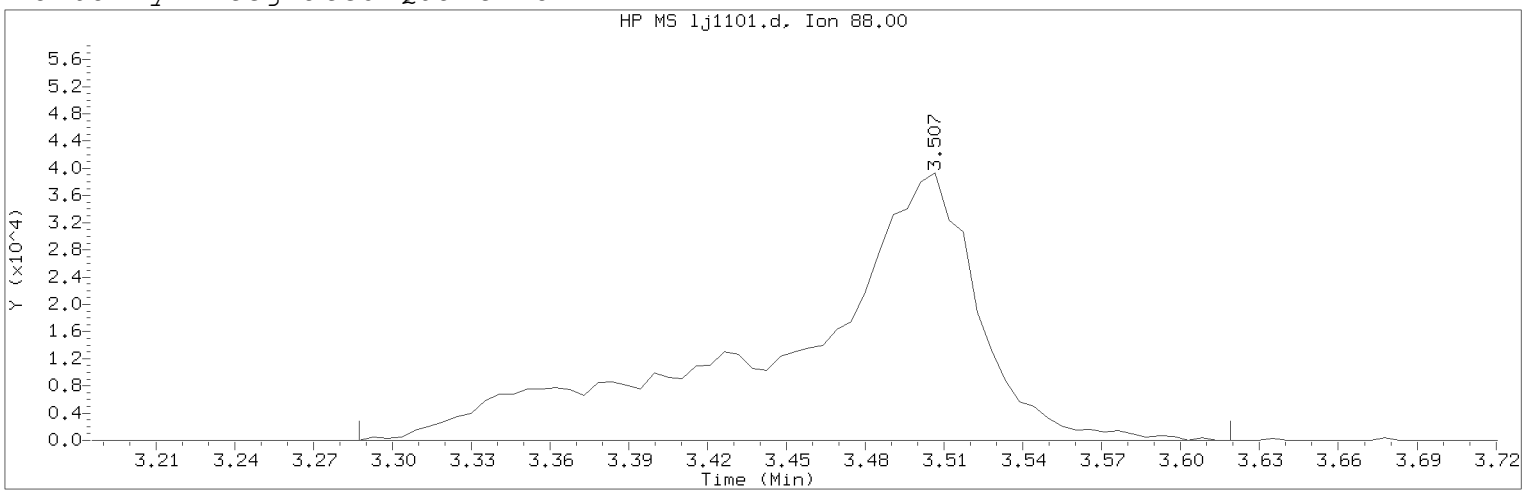
Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

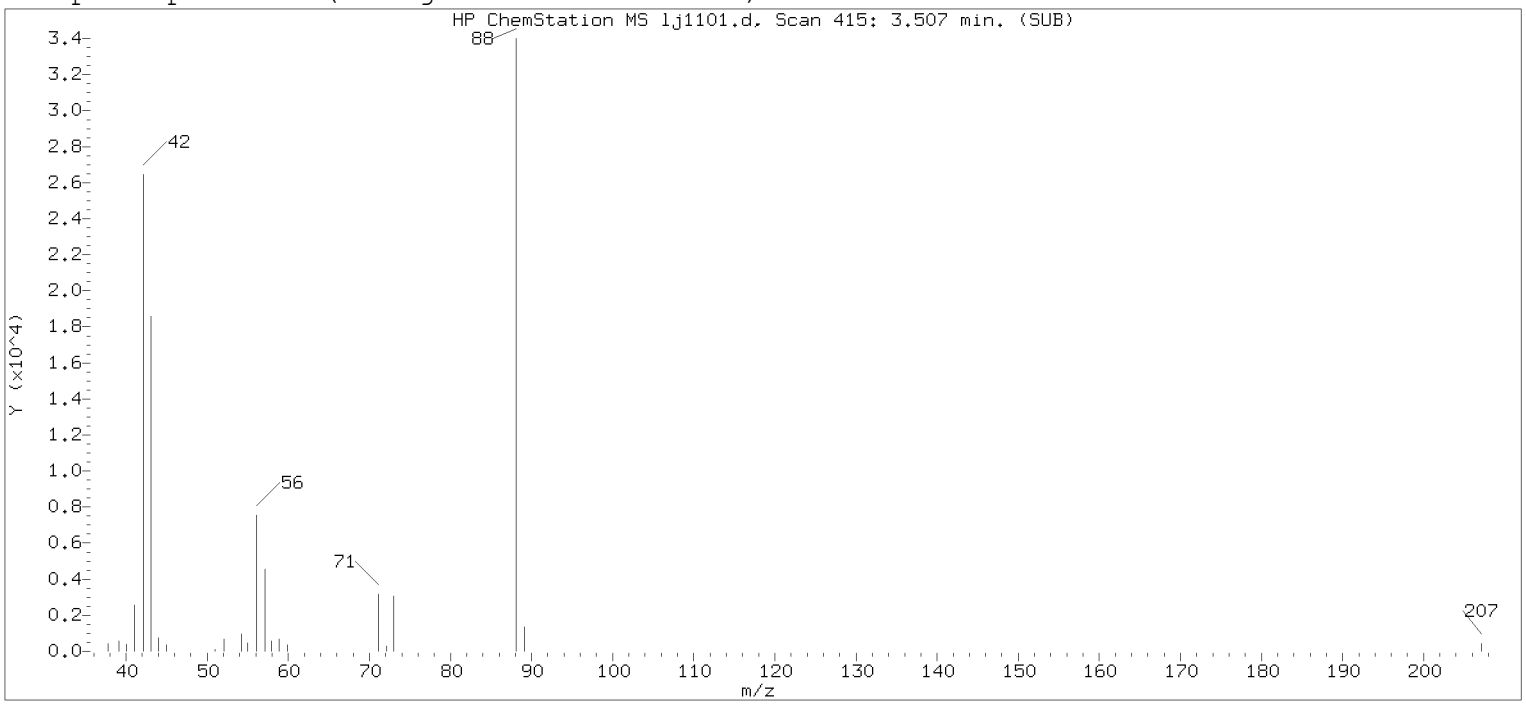
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 415
Retention Time (minutes) : 3.507
Quant Ion : 88.00
Area (flag) : 195887M
On-Column Amount (ng/ul) : 12.4332
Integration start scan : 373 Integration stop scan: 435
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

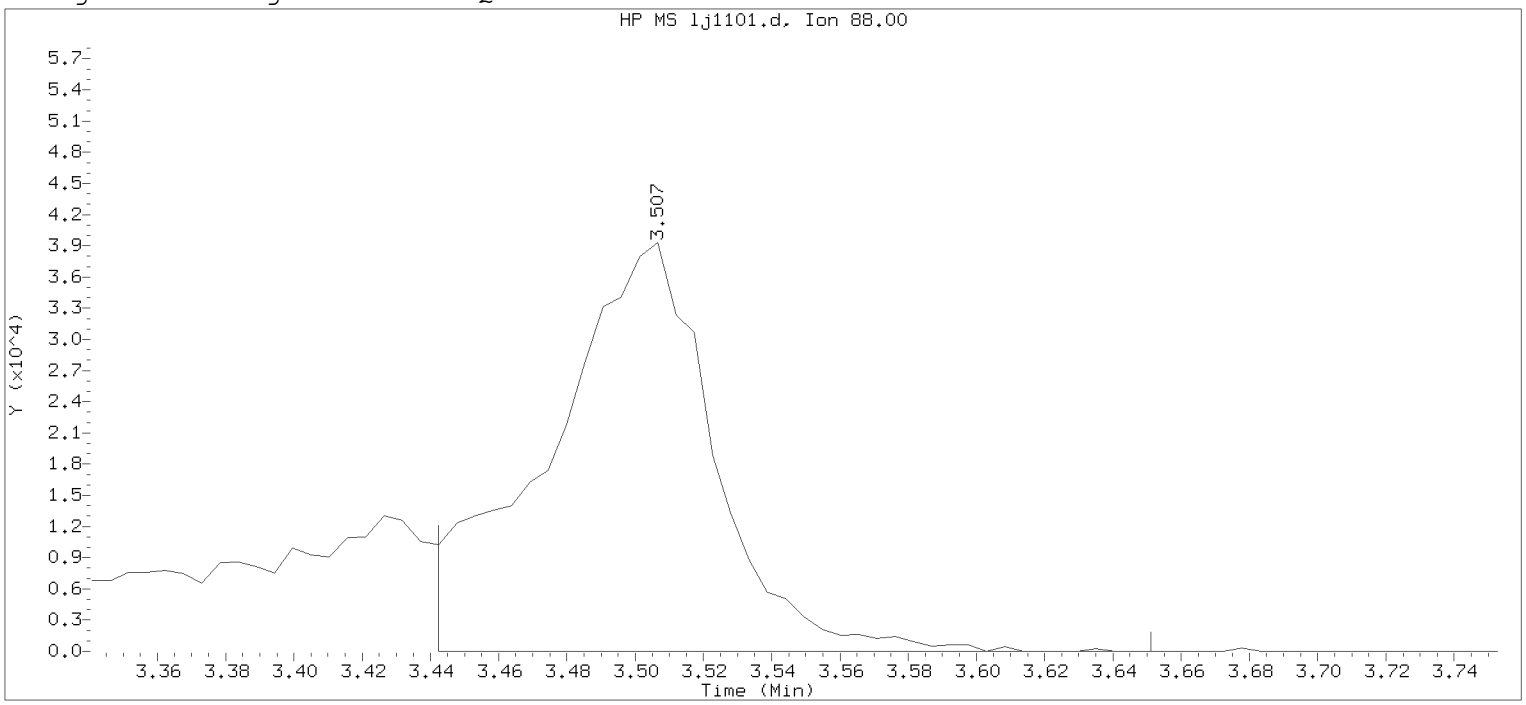
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

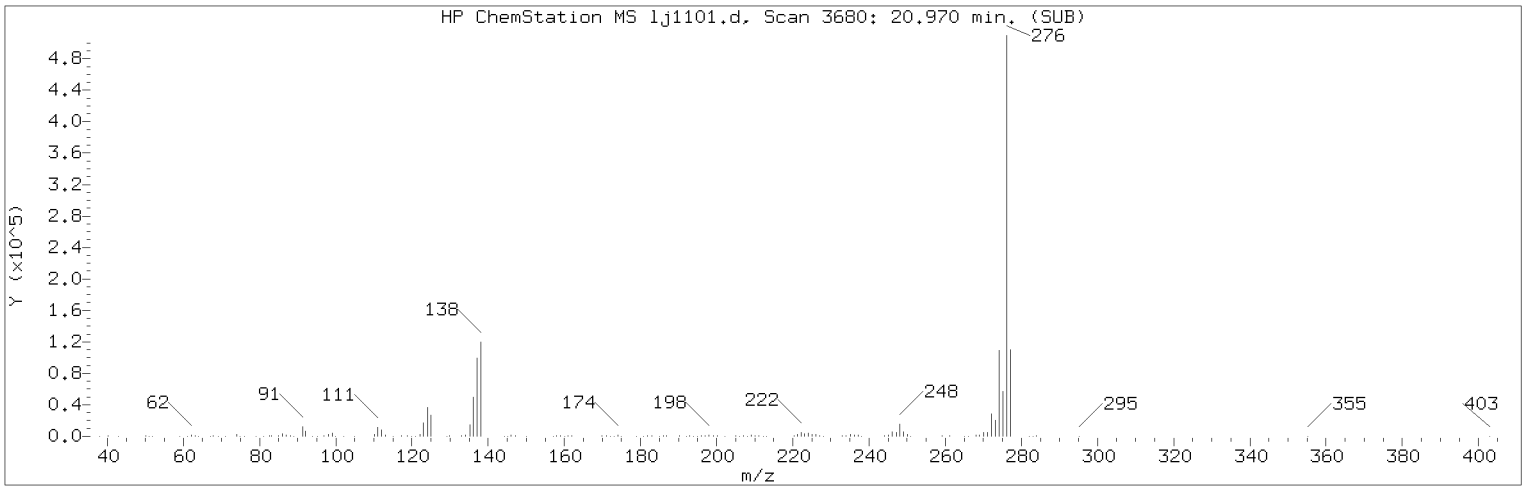
Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:10
Date, time and analyst ID of latest file update: 17-Oct-2018 21:11 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

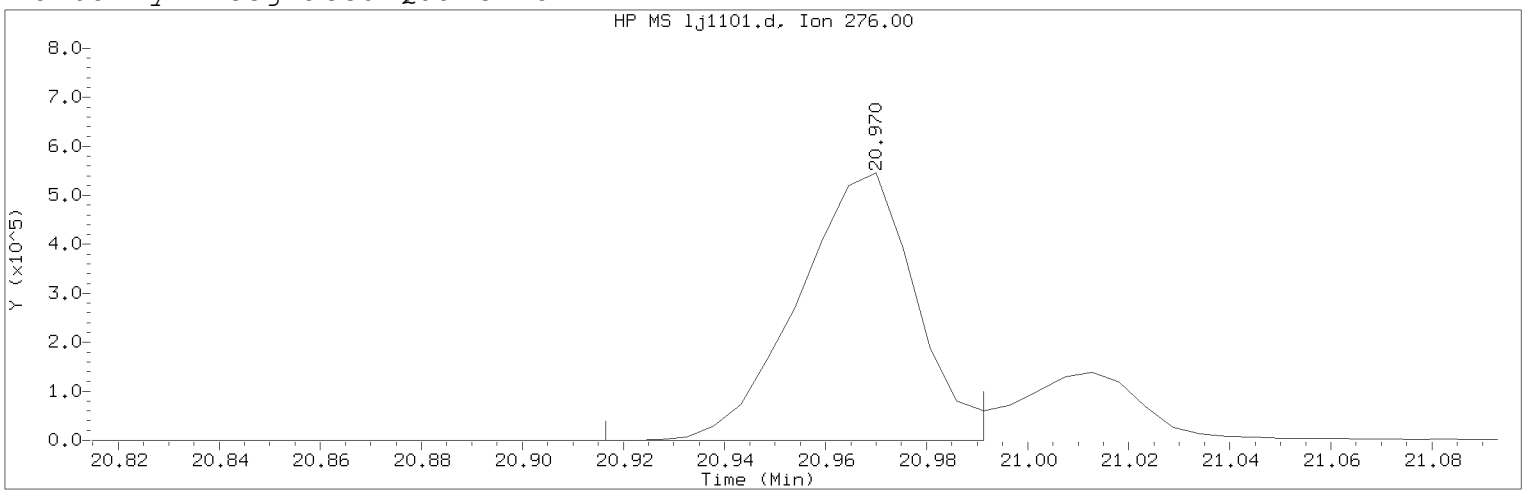
Compound Number	: 9		
Compound Name	: N-Nitrosomethylethylamine		
Scan Number	: 415		
Retention Time (minutes)	: 3.507		
Quant Ion	: 88.00		
Area	: 133140		
On-column Amount (ng/ul)	: 8.4505		
Integration start scan	: 402	Integration stop scan:	441
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature used at 0.25

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:14
Date, time and analyst ID of latest file update: 17-Oct-2018 21:14 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

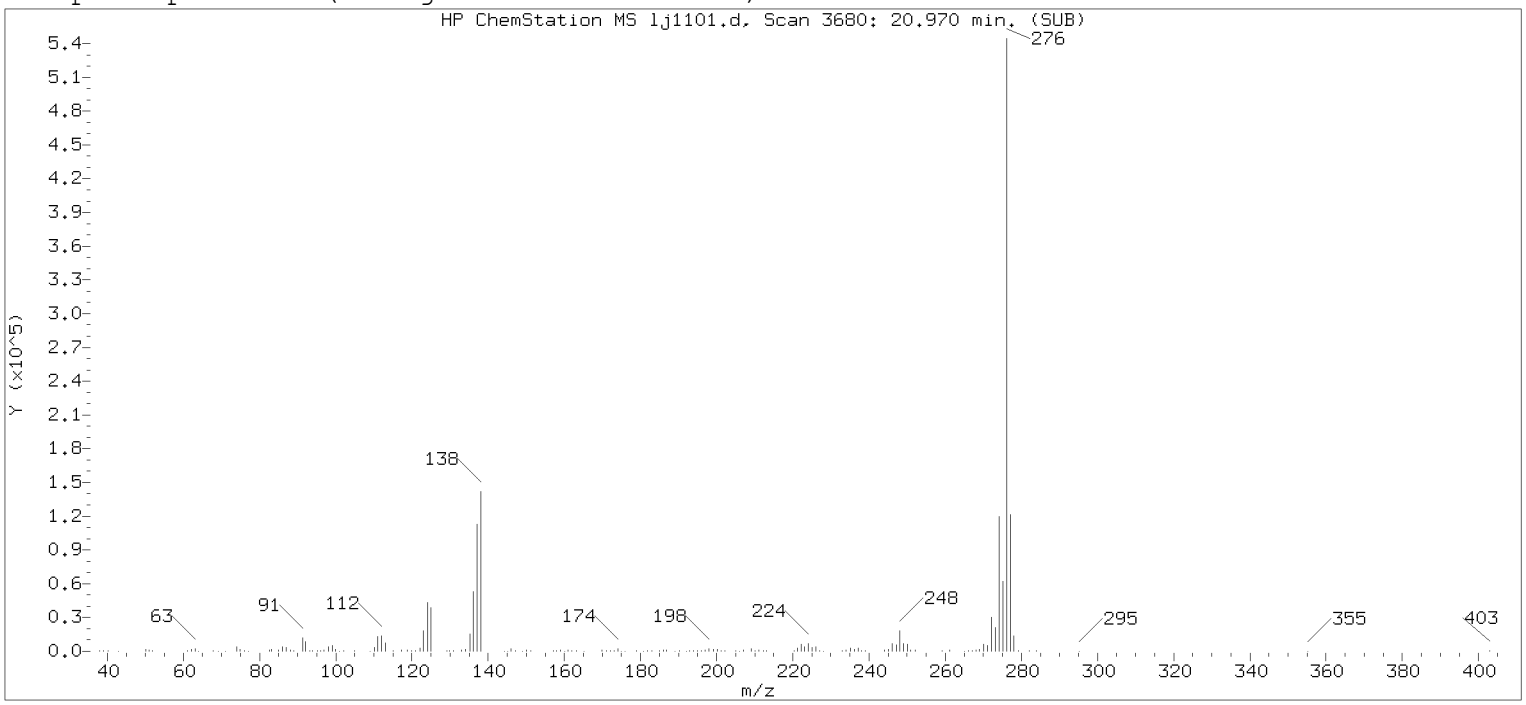
Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3680
Retention Time (minutes) : 20.970
Quant Ion : 276.00
Area (flag) : 879811M
On-Column Amount (ng/ul) : 12.5053
Integration start scan : 3669 Integration stop scan: 3683
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

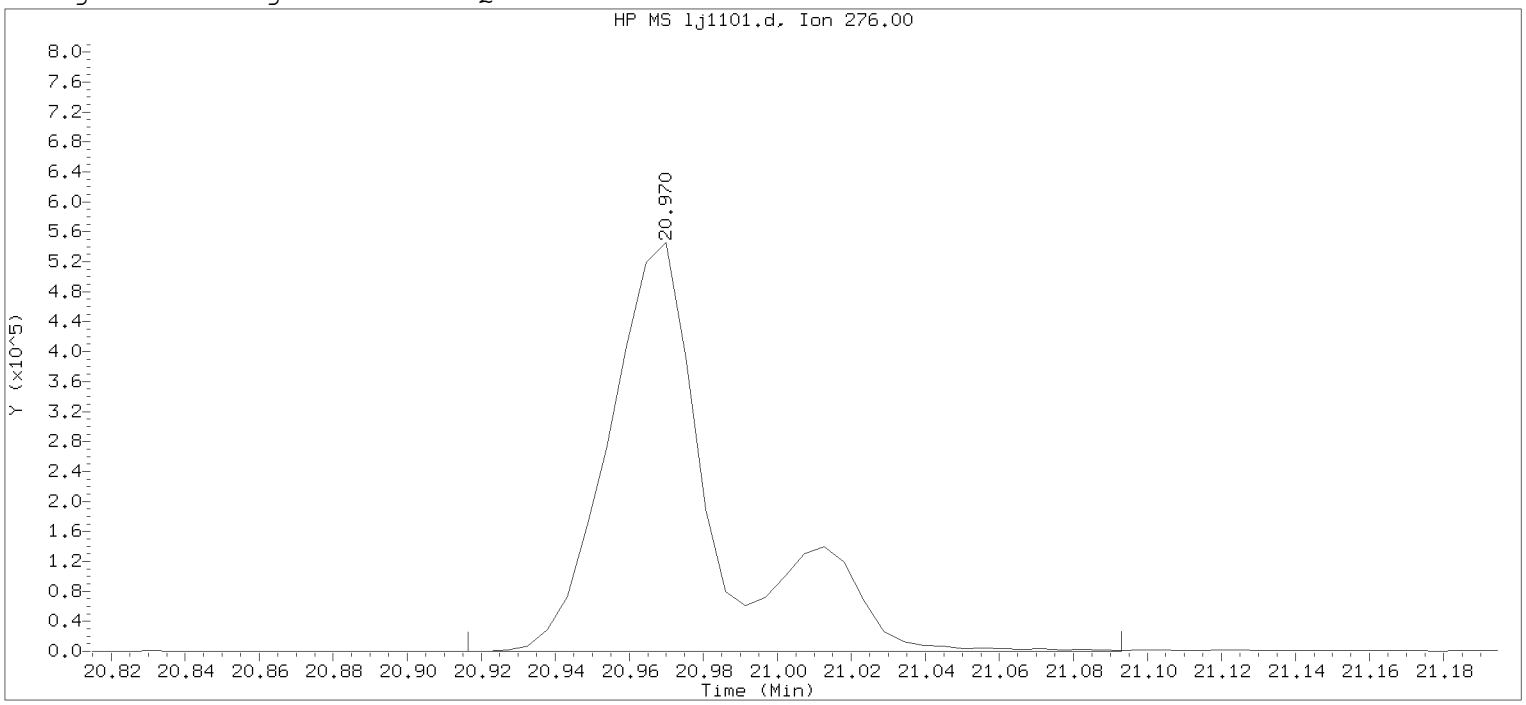
Analyst responsible for change: Digitally signed by Ashley R. Transue
on 10/17/2018 at 21:16.
Target 3.5 esignature user ID: art12405

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP20296.i/18oct17a.b/lj1101.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 20:27 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: all1
Calibration date and time: 17-OCT-2018 21:10
Date, time and analyst ID of latest file update: 17-Oct-2018 21:11 art12405

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compound Number	: 224		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3680		
Retention Time (minutes)	: 20.970		
Quant Ion	: 276.00		
Area	: 1105969		
On-column Amount (ng/ul)	: 15.7198		
Integration start scan	: 3669	Integration stop scan:	3702
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Ashley R. Transue on 10/17/2018 at 21:16.
Target 3.5 esignature used at 21:16:25

Data File: /chem/HP20296.i/18oct18.b/lj1140.d

Date : 18-OCT-2018 06:41

Client ID: DFTPP12.5

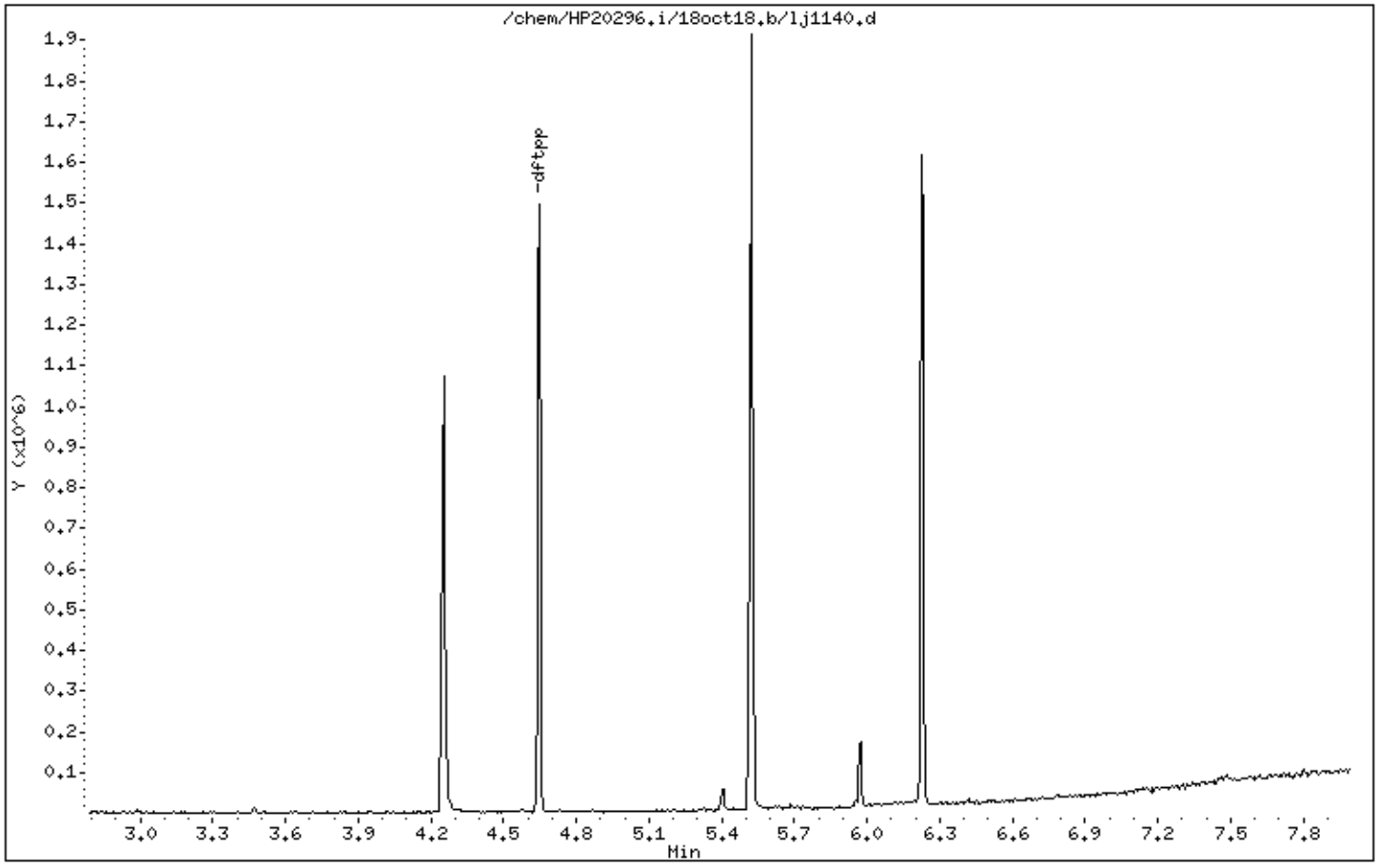
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Kira N. Beck on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Data File: /chem/HP20296.i/18oct18.b/lj1140.d

Date : 18-OCT-2018 06:41

Client ID: DFTPP12.5

Instrument: HP20296.i

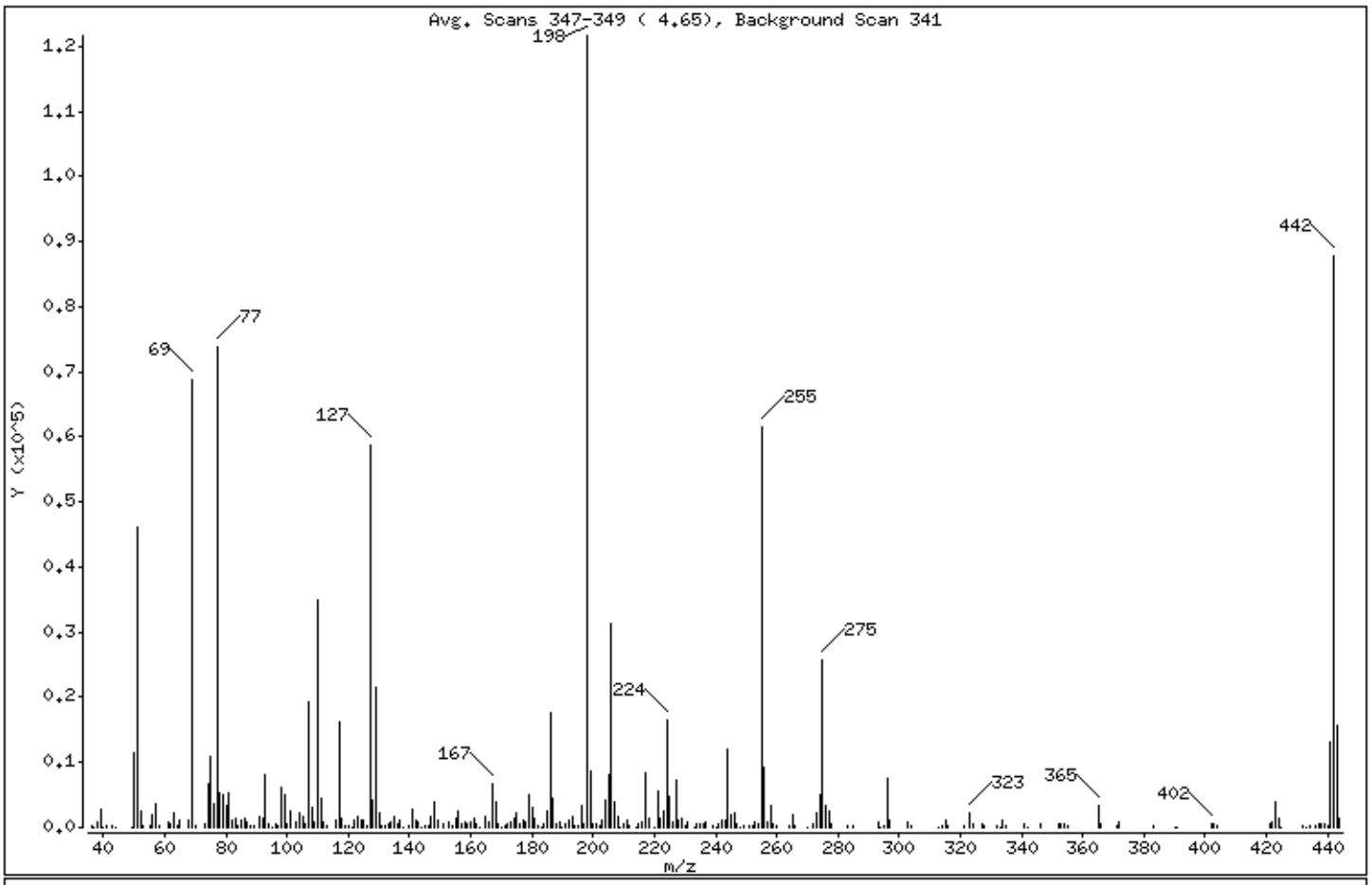
Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	38.03
68	Less than 2.00% of mass 69	0.95 (1.67)
69	Mass 69 relative abundance	56.57
70	Less than 2.00% of mass 69	0.32 (0.57)
127	10.00 - 80.00% of mass 198	48.37
197	Less than 2.00% of mass 198	0.45
199	5.00 - 9.00% of mass 198	7.18
275	10.00 - 60.00% of mass 198	21.12
365	Greater than 1.00% of mass 198	2.73
441	0.01 - 24.00% of mass 442	10.87 (15.07)
442	50.00 - 99.99% of mass 198	72.11
443	15.00 - 24.00% of mass 442	12.97 (17.99)

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Target 3.5 esignature user ID: knb25316

Date : 18-OCT-2018 06:41

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: knb25316

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1140.d
Spectrum: Avg. Scans 347-349 (4.65), Background Scan 341
Location of Maximum: 198.00
Number of points: 267

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	260	119.00	185	190.00	97	265.00	1969
37.00	101	120.00	234	191.00	612	266.00	363
38.00	737	121.00	113	192.00	1241	270.00	100
39.00	2882	122.00	1131	193.00	1560	272.00	444
40.00	30	123.00	1667	194.00	323	273.00	2126
41.00	313	124.00	1086	195.00	334	274.00	5123
43.00	237	125.00	980	196.00	3418	275.00	25688
44.00	5	126.00	318	197.00	546	276.00	3437
49.00	33	127.00	58832	198.00	121624	277.00	2408
50.00	11412	128.00	4250	199.00	8737	278.00	511
51.00	46248	129.00	21568	200.00	638	283.00	172
52.00	2578	130.00	2142	201.00	620	285.00	371
53.00	171	131.00	369	202.00	284	293.00	741
55.00	355	132.00	144	203.00	1171	294.00	85
56.00	1842	133.00	444	204.00	4231	295.00	205
57.00	3726	134.00	806	205.00	8202	296.00	7526
58.00	183	135.00	1741	206.00	31344	297.00	1213
61.00	813	136.00	615	207.00	3986	303.00	821
62.00	668	137.00	1182	208.00	1680	304.00	227
63.00	2121	138.00	130	209.00	102	313.00	107
64.00	405	140.00	257	210.00	638	314.00	368
65.00	1012	141.00	2882	211.00	1249	315.00	983
68.00	1151	142.00	1138	212.00	212	316.00	258
69.00	68792	143.00	746	214.00	129	321.00	247
70.00	391	144.00	137	215.00	614	323.00	2344
73.00	608	145.00	221	216.00	726	324.00	479
74.00	6645	146.00	335	217.00	8321	327.00	505
75.00	10939	147.00	1741	218.00	1263	328.00	313
76.00	3668	148.00	3813	220.00	85	332.00	363
77.00	73792	149.00	982	221.00	5592	333.00	130
78.00	5281	151.00	607	222.00	1312	334.00	1174
79.00	5041	153.00	837	223.00	2436	335.00	404
80.00	3259	154.00	400	224.00	16600	341.00	422
81.00	5270	155.00	1293	225.00	4715	342.00	115
82.00	1124	156.00	2550	226.00	743	346.00	440

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Target 3.5 esignature user ID: knb25316

Date : 18-OCT-2018 06:41

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP; Operator: knb25316

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1140.d
Spectrum: Avg. Scans 347-349 (4.65), Background Scan 341
Location of Maximum: 198.00
Number of points: 267

m/z	Y	m/z	Y	m/z	Y	m/z	Y
83.00	1470	157.00	583	227.00	7144	352.00	585
84.00	258	158.00	701	228.00	1247	353.00	499
85.00	1113	159.00	565	229.00	1478	354.00	603
86.00	1484	160.00	932	230.00	196	355.00	168
87.00	730	161.00	1333	231.00	717	365.00	3315
88.00	390	162.00	448	233.00	95	366.00	581
89.00	148	163.00	124	234.00	573	371.00	192
91.00	1545	165.00	1586	235.00	530	372.00	974
92.00	1334	166.00	727	236.00	448	383.00	285
93.00	8134	167.00	6721	237.00	942	390.00	102
94.00	566	168.00	3871	239.00	202	391.00	110
95.00	130	169.00	522	240.00	132	402.00	665
96.00	423	170.00	87	241.00	467	403.00	468
97.00	225	171.00	239	242.00	1003	404.00	291
98.00	6216	172.00	651	243.00	1235	421.00	621
99.00	4927	173.00	768	244.00	12100	422.00	724
100.00	469	174.00	1284	245.00	2032	423.00	3830
101.00	2547	175.00	2349	246.00	2173	424.00	1346
103.00	963	176.00	562	247.00	632	425.00	104
104.00	2236	177.00	1103	248.00	112	432.00	213
105.00	1571	178.00	776	249.00	366	433.00	85
106.00	582	179.00	4956	251.00	164	434.00	178
107.00	19344	180.00	2954	252.00	313	436.00	321
108.00	2940	181.00	1531	253.00	771	437.00	479
109.00	798	182.00	187	254.00	691	438.00	459
110.00	35064	183.00	86	255.00	61544	439.00	426
111.00	4571	184.00	468	256.00	9185	440.00	161
112.00	800	185.00	2449	257.00	888	441.00	13219
113.00	266	186.00	17544	258.00	3367	442.00	87704
116.00	1040	187.00	4412	259.00	455	443.00	15779
117.00	16170	188.00	442	260.00	198	444.00	1402
118.00	1418	189.00	890	264.00	285		

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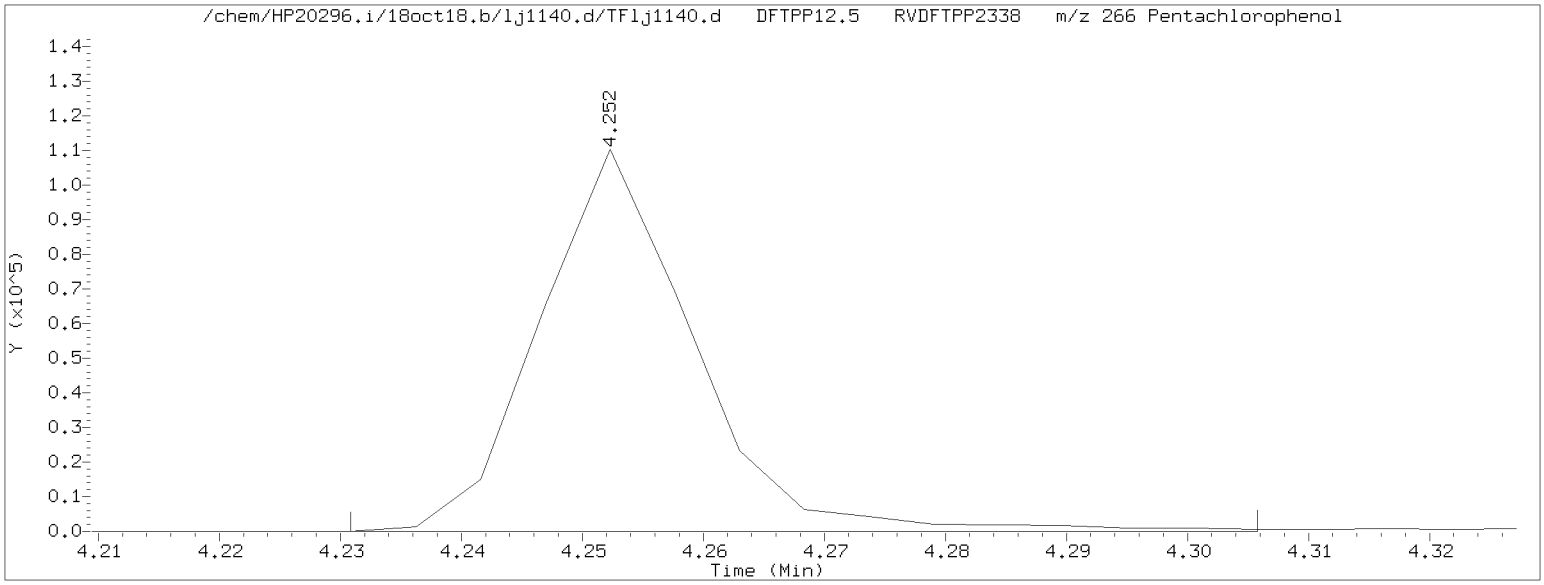
Target 3.5 esignature user ID: knb25316

Assessment of GC Column Performance and Injection Port Inertness for

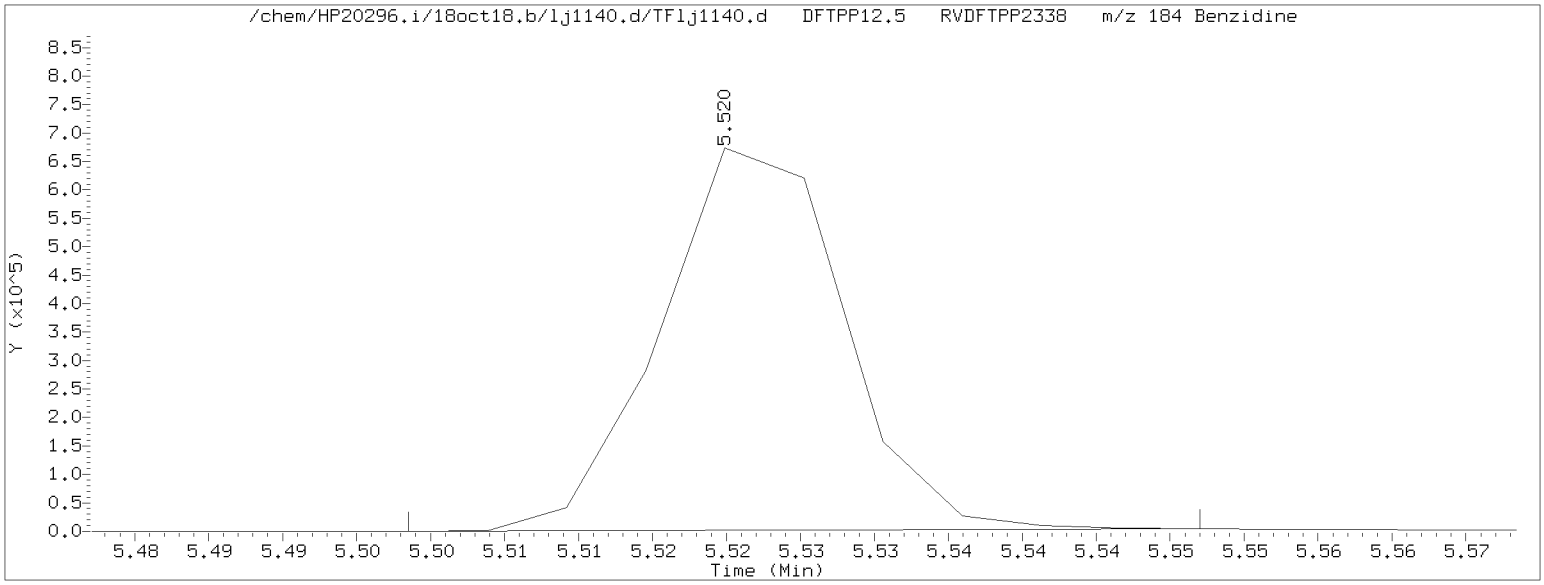
Instrument ID: HP20296.i Injection Date: 18-OCT-2018 06:41 Operator: knb25316



Pentachlorophenol EICP peak height = 110408 EICP peak height at 10% = 11041 Pentachlorophenol EICP area = 97253

Pentachlorophenol EICP peak apex (min.) = 4.252
RT at 10% of front half of EICP (min.) = 4.240 'Front' peak width (min.) = 0.0121833333
RT at 10% of back half of EICP (min.) = 4.267 'Tailing' peak width (min.) = 0.0145166667

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0145166667}{0.0121833333} = 1.192$$



Benzidine EICP peak height = 671664 EICP peak height at 10% = 67166 Benzidine EICP area = 578484

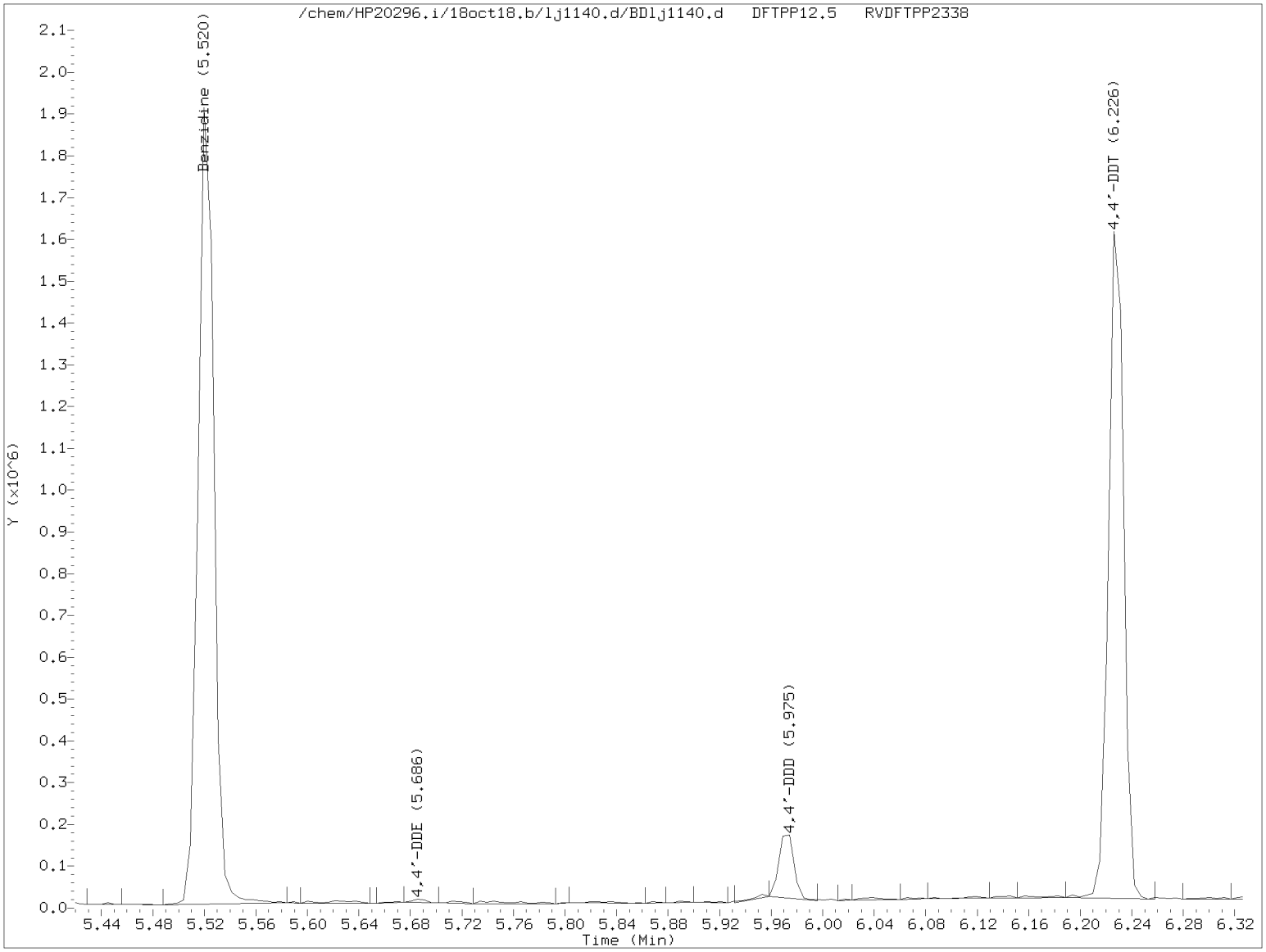
Benzidine EICP peak apex (min.) = 5.520
RT at 10% of front half of EICP (min.) = 5.510 'Front' peak width (min.) = 0.0100666667
RT at 10% of back half of EICP (min.) = 5.534 'Tailing' peak width (min.) = 0.0143166667

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0143166667}{0.0100666667} = 1.422$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

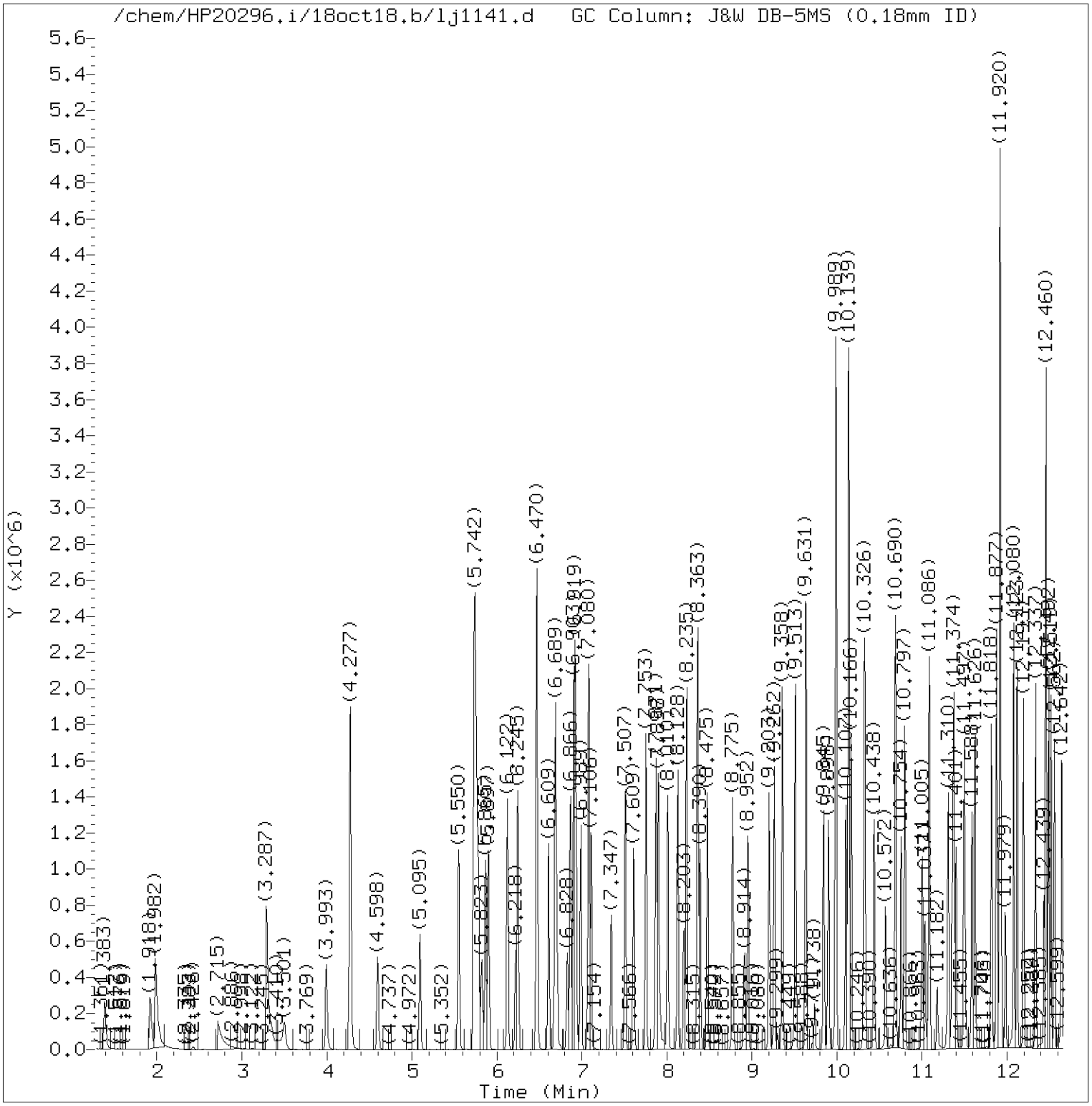
Instrument ID: HP20296.i Injection Date: 18-OCT-2018 06:41 Operator: knb25316



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{5289 + 124343}{5289 + 124343 + 1313970} \times 100 = 9.0$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

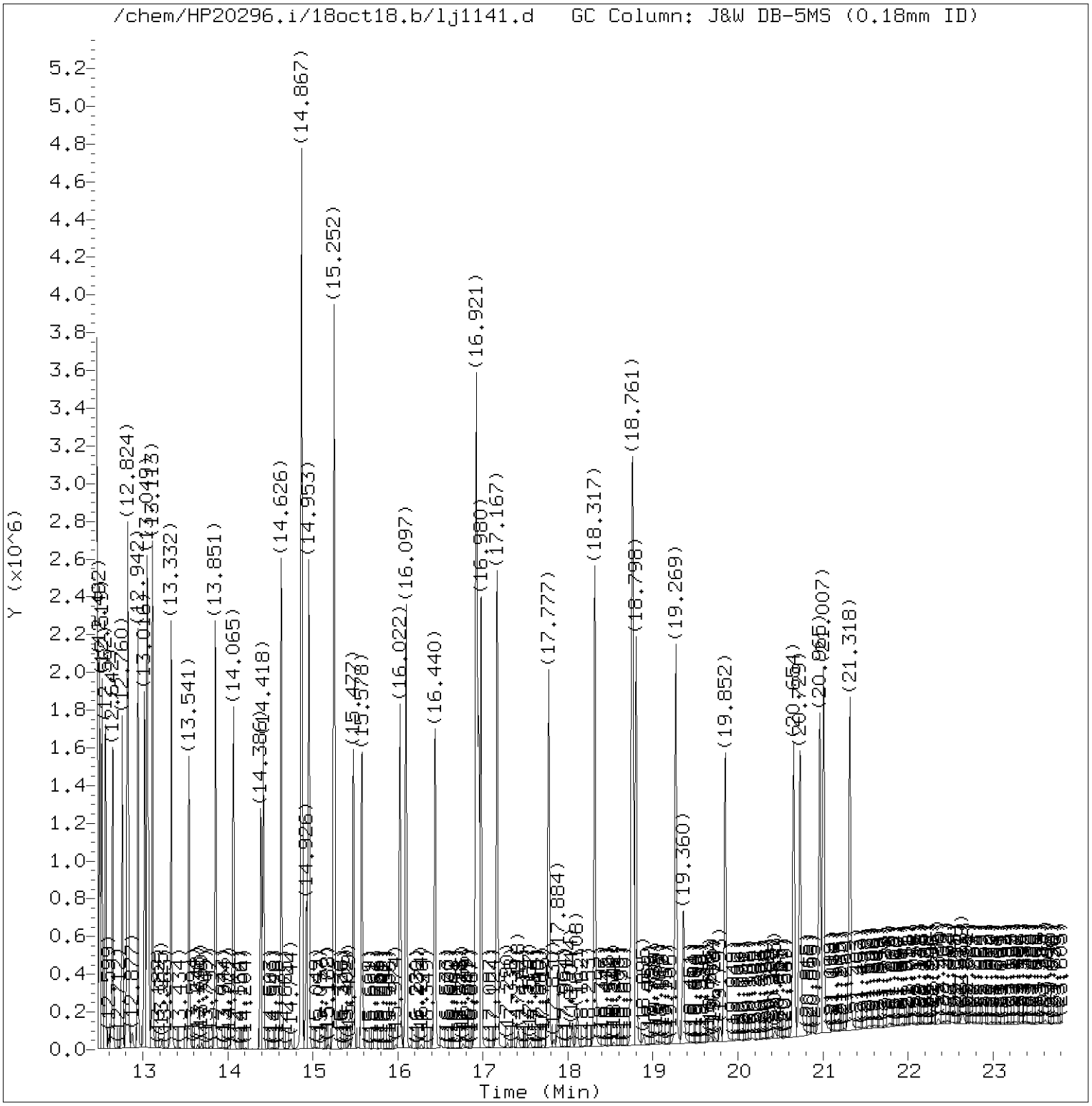
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.383	88	206671	12.895
5) N-Nitrosodimethylamine	(1)	1.923	74	310879	12.662
6) Pyridine	(1)	1.982	79	506618	11.608
8) 2-Picoline	(1)	3.287	93	535687	12.419
9) N-Nitrosomethylethylamine	(1)	3.501	88	216187M	12.051
10) Methyl methanesulfonate	(1)	3.993	80	271295	12.017
12)$2-Fluorophenol	(1)	4.277	112	811861	24.415
14) N-Nitrosodiethylamine	(1)	4.598	102	201825	11.935
16) Ethyl methanesulfonate	(1)	5.095	109	213247	12.124
17) Benzaldehyde	(1)	5.550	77	376083	11.328
43) Total Cresols	(1)			820421	24.203
20) Aniline	(1)	5.726	93	759511	12.192
18)$Phenol-d6	(1)	5.748	99	1136376	24.866
19) Phenol	(1)	5.764	94	621258	11.731
21) a-methylstyrene	(1)	5.812	118	44478	12.629
23) bis(2-Chloroethyl)ether	(1)	5.865	93	503003	12.258
24) 2-Chlorophenol	(1)	5.903	128	372124	12.136
25) 1,3-Dichlorobenzene	(1)	6.122	146	417654	12.338
26)*1,4-Dichlorobenzene-d4	(1)	6.218	152	103667	5.000
27) 1,4-Dichlorobenzene	(1)	6.245	146	419149	12.177
29) 1,2-Dichlorobenzene	(1)	6.470	146	390032	11.878
28) Benzyl alcohol	(1)	6.470	108	262208	11.849
31) Indene	(1)	6.609	115	463735	12.171
32) 2-Methylphenol	(1)	6.689	108	389307	12.189
34) 2,2'-oxybis(1-Chloropropane)	(1)	6.700	45	492572	11.333
35) bis(2-Chloroisopropyl)ether	(1)	6.700	45	492572	11.333
36) N-Nitrosopyrrolidine	(1)	6.828	100	220473	12.724
37) Acetophenone	(1)	6.866	105	595783	11.965
40) N-Nitrosomorpholine	(1)	6.898	56	230098	11.785
39) N-Nitroso-di-n-propylamine	(1)	6.903	70	349787	12.086
41) o-Toluidine	(1)	6.919	106	684680	11.671
38) 4-Methylphenol	(1)	6.930	108	431114	12.014
44) Hexachloroethane	(1)	6.989	117	197726	12.518
45)$Nitrobenzene-d5	(2)	7.080	82	1047043	26.447
46) Nitrobenzene	(2)	7.106	77	540241	13.439
50) N-Nitrosopiperidine	(2)	7.347	114	190716	12.846
100) Isosafrole	(3)			282351	12.714
52) Isophorone	(2)	7.507	82	871580	12.946
53) 2-Nitrophenol	(2)	7.614	139	178401	14.115
55) 2,4-Dimethylphenol	(2)	7.753	107	421899	12.847

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
59) O,O,O-Triethylphosphorothioate	(2)	7.876	198	165577	12.645
57) bis(2-Chloroethoxy)methane	(2)	7.898	93	589658	12.911
58) Benzoic acid	(2)	7.925	105	209003	14.273
62) 2,4-Dichlorophenol	(2)	8.010	162	298241	13.623
125) 2,4_2,6-Dinitrotoluenes	(3)			349724	25.544
65) 1,2,4-Trichlorobenzene	(2)	8.128	180	340248	13.822
68)*Naphthalene-d8	(2)	8.203	136	356090	5.000
69) Naphthalene	(2)	8.235	128	1029860	12.460
70) 4-Chloroaniline	(2)	8.358	127	406005	12.621
71) 2,6-Dichlorophenol	(2)	8.363	162	286862	13.161
72) Hexachloropropene	(2)	8.390	213	220457	14.425
74) Hexachlorobutadiene	(2)	8.475	225	196385	13.692
151) Diallate trans/cis	(4)			397458	12.470
78) Quinoline	(2)	8.775	129	593374	12.677
79) Caprolactam	(2)	8.914	113	96673	13.172
80) N-Nitrosodi-n-butylamine	(2)	8.952	84	319083	11.783
83) 4-Chloro-3-methylphenol	(2)	9.203	107	349857	13.092
85) Safrole	(2)	9.267	162	250898	12.837
86) 2-Methylnaphthalene	(2)	9.358	142	657236	12.827
87) 1-Methylnaphthalene	(2)	9.513	142	634192	12.850
88) Hexachlorocyclopentadiene	(3)	9.636	237	191272	13.298
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.636	216	326536	13.052
91) cis-Isosafrole	(3)	9.738	162	46009	2.094
93) 2,4,6-Trichlorophenol	(3)	9.845	196	211712	14.049
95) 2,4,5-Trichlorophenol	(3)	9.898	196	218289	13.750
96)$2-Fluorobiphenyl	(3)	9.989	172	1451336	24.951
97) trans-Isosafrole	(3)	10.107	162	236342	10.620
98) 1,1'-Biphenyl	(3)	10.139	154	755503	12.351
99) 2-Chloronaphthalene	(3)	10.139	162	609389	11.788
101) 1-Chloronaphthalene	(3)	10.166	162	584059	12.726
103) Diphenyl ether	(3)	10.321	170	415985	12.379
104) 2-Nitroaniline	(3)	10.331	138	184500	12.787
108) 1,4-Naphthoquinone	(3)	10.438	158	231275	12.226
109) 1,4-Dinitrobenzene	(3)	10.572	168	91007	12.088
110) Dimethylphthalate	(3)	10.690	163	659593	12.410
111) 1,3-Dinitrobenzene	(3)	10.690	168	105502	12.700
113) 2,6-Dinitrotoluene	(3)	10.754	165	149921	12.621
114) Acenaphthylene	(3)	10.797	152	868736	12.853
117) 3-Nitroaniline	(3)	11.005	138	165812	13.347
118)*Acenaphthene-d10	(3)	11.032	164	171078	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.086	153	637566	12.362
120) 2,4-Dinitrophenol	(3)	11.182	184	52474	8.759
122) Pentachlorobenzene	(3)	11.310	250	258999	13.054
121) 4-Nitrophenol	(3)	11.353	109	121205	11.851
124) Dibenzofuran	(3)	11.374	168	861087	12.748
123) 2,4-Dinitrotoluene	(3)	11.401	165	199803	12.923
126) 1-Naphthylamine	(3)	11.503	143	612975	12.101
127) 2,3,4,6-Tetrachlorophenol	(3)	11.588	232	165933	13.939
128) 2-Naphthylamine	(3)	11.626	143	615608	12.774
129) Diethylphthalate	(3)	11.818	149	654365	12.227
131) Fluorene	(3)	11.877	166	666315	12.570
130) Thionazin	(3)	11.915	107	141364	12.218
133) 5-Nitro-o-toluidine	(3)	11.920	152	178452	12.230
132) 4-Chlorophenyl-phenylether	(3)	11.920	204	324315	12.746
134) 4-Nitroaniline	(3)	11.931	138	165957	12.967
135) 4,6-Dinitro-2-methylphenol	(4)	11.984	198	97642	11.915
137) NDPA as diphenylamine	(4)	12.080	169	545126	12.507
136) N-Nitrosodiphenylamine	(4)	12.080	169	545126	12.507
139) 1,2-Diphenylhydrazine	(4)	12.123	77	957336	12.244
140)$2,4,6-Tribromophenol	(3)	12.198	330	162969	27.353
142) Tetraethyldithiopyrophosphate	(4)	12.337	97	157323	12.521
144) 1,3,5-Trinitrobenzene	(4)	12.439	213	67822	12.939
145) Diallate (peak 1)	(4)	12.460	86	343517	10.475
146) Phorate	(4)	12.460	75	585014	12.708
147) Phenacetin	(4)	12.492	108	424269	13.553
148) 4-Bromophenyl-phenylether	(4)	12.519	248	178938	12.792
149) Diallate (peak 2)	(4)	12.551	86	53941	1.995
150) Hexachlorobenzene	(4)	12.562	284	183247	12.057
152) Dimethoate	(4)	12.647	87	373382	13.214
153) Atrazine	(4)	12.760	200	178752	12.804
154) Pentachlorophenol	(4)	12.813	266	102325	11.631
155) 4-Aminobiphenyl	(4)	12.824	169	477217	13.034
156) Pentachloronitrobenzene	(4)	12.824	237	94751	13.650
157) Pronamide	(4)	12.942	173	322888	13.434
158)*Phenanthrene-d10	(4)	13.022	188	326351	5.000
160) Phenanthrene	(4)	13.049	178	995376	12.293
159) Dinoseb	(4)	13.070	211	155093	12.148
162) Anthracene	(4)	13.113	178	1009193	12.826
168) Carbazole	(4)	13.332	167	915687	12.866
169) Methyl parathion	(4)	13.541	109	290194	13.316

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

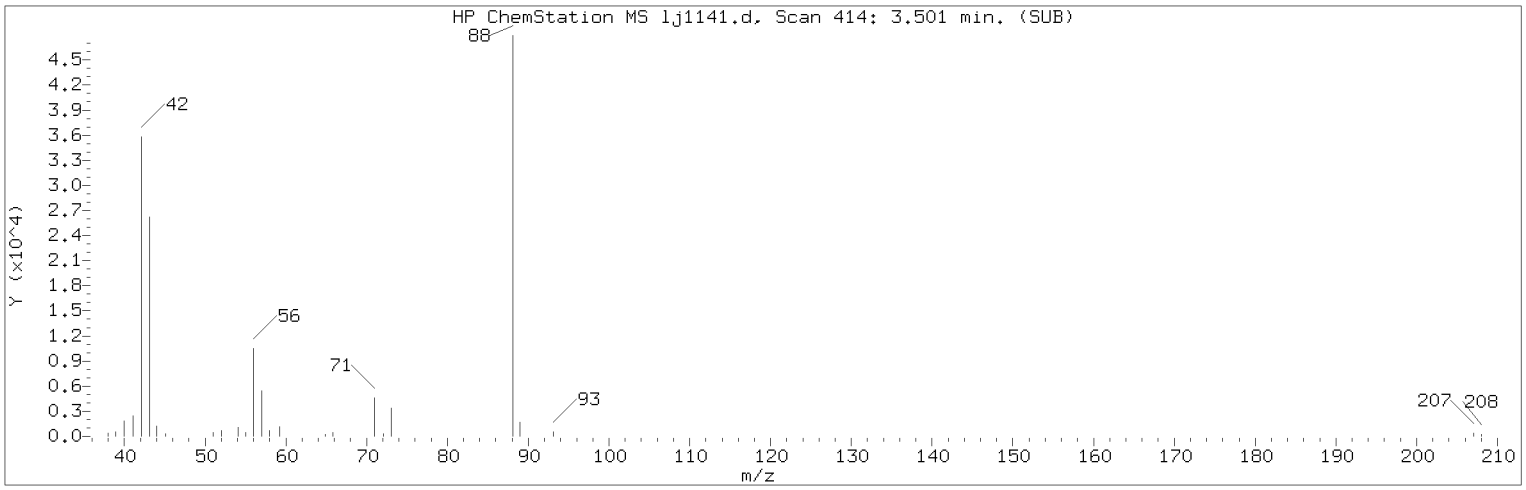
Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	13.851	149	1220778	13.193
173) 4-Nitroquinoline-1-oxide	(4)	14.054	190	75543	9.774
172) Parathion	(4)	14.065	109	191869	14.175
174) Octachlorostyrene	(4)	14.391	308	74326	13.660
176) Isodrin	(4)	14.418	193	121735	12.968
178) Fluoranthene	(4)	14.626	202	1158611	13.762
179) Benzidine	(5)	14.867	184	2266827	39.639
180)*Pyrene-d10	(5)	14.926	212	346532	5.000
182) Pyrene	(5)	14.953	202	1168105	12.226
227) Total PAHs	(6)			17412747	231.148
184)$Terphenyl-d14	(5)	15.252	244	1410798	26.251
187) p-Dimethylaminoazobenzene	(5)	15.477	225	188382	13.654
190) Chlorobenzilate	(5)	15.578	139	391512	13.274
192) 3,3'-Dimethylbenzidine	(5)	16.022	212	767096	14.050
193) Butylbenzylphthalate	(5)	16.097	149	604276	13.744
196) 2-Acetylaminofluorene	(5)	16.440	181	507811	15.411
200) Benzo(a)anthracene	(5)	16.921	228	1165549	14.484
198) 3,3'-Dichlorobenzidine	(5)	16.926	252	433070	14.888
203) 4,4'-Methylenebis(2-chloroanil	(5)	16.948	231	245122	14.872
201) Chrysene	(5)	16.980	228	1128619	14.055
204) bis(2-Ethylhexyl)phthalate	(5)	17.167	149	903658	14.669
208) 6-Methylchrysene	(5)	17.777	242	765032	14.296
210) Di-n-octylphthalate	(6)	18.317	149	1613154	13.627
211) Benzo(b)fluoranthene	(6)	18.750	252	1172869	13.301
212) 7,12-Dimethylbenz[a]anthracene	(6)	18.761	256	501396	13.428
213) Benzo(k)fluoranthene	(6)	18.798	252	1135736	13.149
216) Benzo(a)pyrene	(6)	19.269	252	1084839	13.215
218)*Perylene-d12	(6)	19.360	264	350574	5.000
220) 3-Methylcholanthrene	(6)	19.852	268	481387	13.253
222) Dibenz(a,h)acridine	(6)	20.660	279	815954	12.204
223) Dibenz(a,j)acridine	(6)	20.735	279	831256	11.819
224) Indeno(1,2,3-cd)pyrene	(6)	20.965	276	949330M	11.947
225) Dibenz(a,h)anthracene	(6)	21.007	278	972975	12.016
226) Benzo(g,h,i)perylene	(6)	21.318	276	977640	11.953

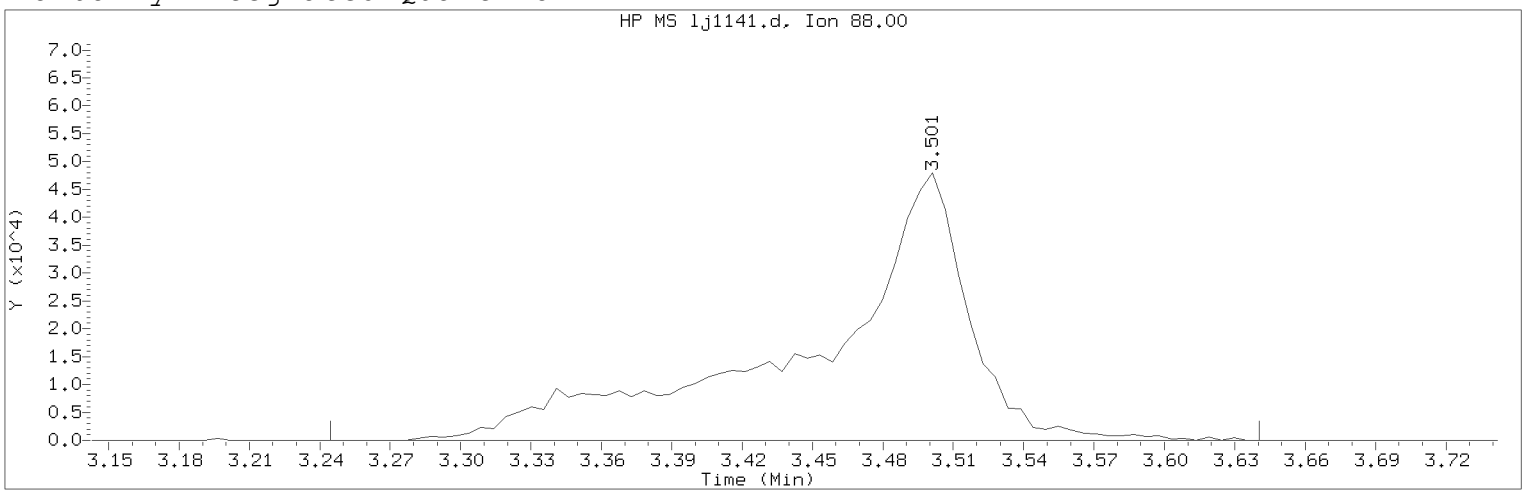
M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

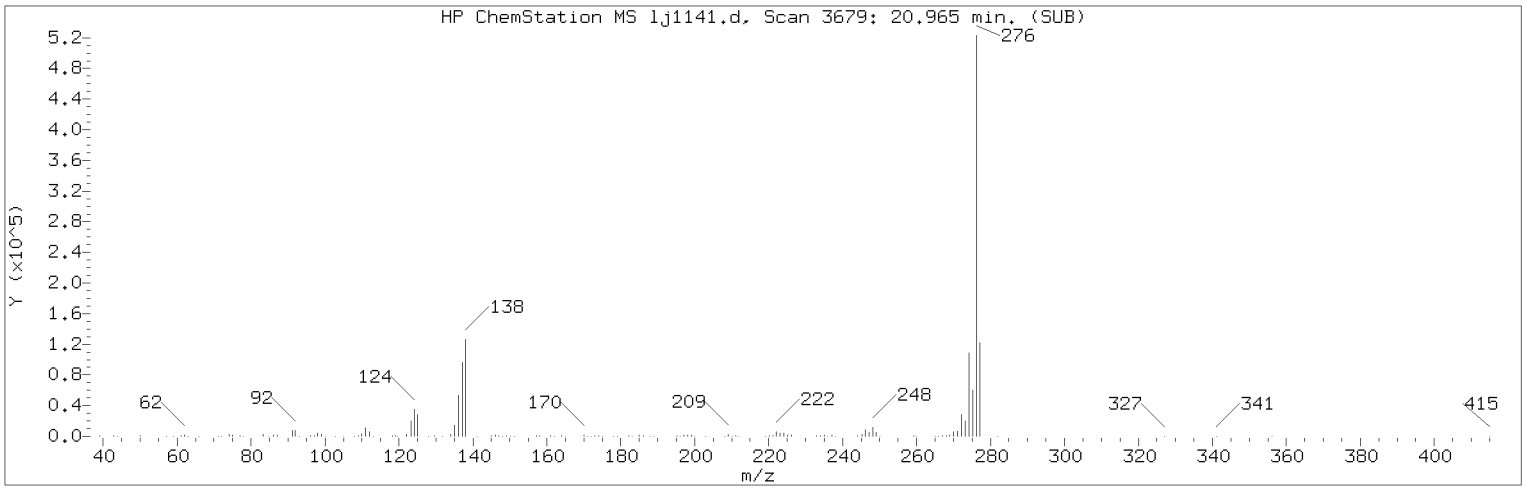
Compound Number : 9
Compound Name : N-Nitrosomethylethylamine
Scan Number : 414
Retention Time (minutes) : 3.501
Quant Ion : 88.00
Area (flag) : 216187M
On-Column Amount (ng/ul) : 12.0510
Integration start scan : 365 Integration stop scan: 439
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

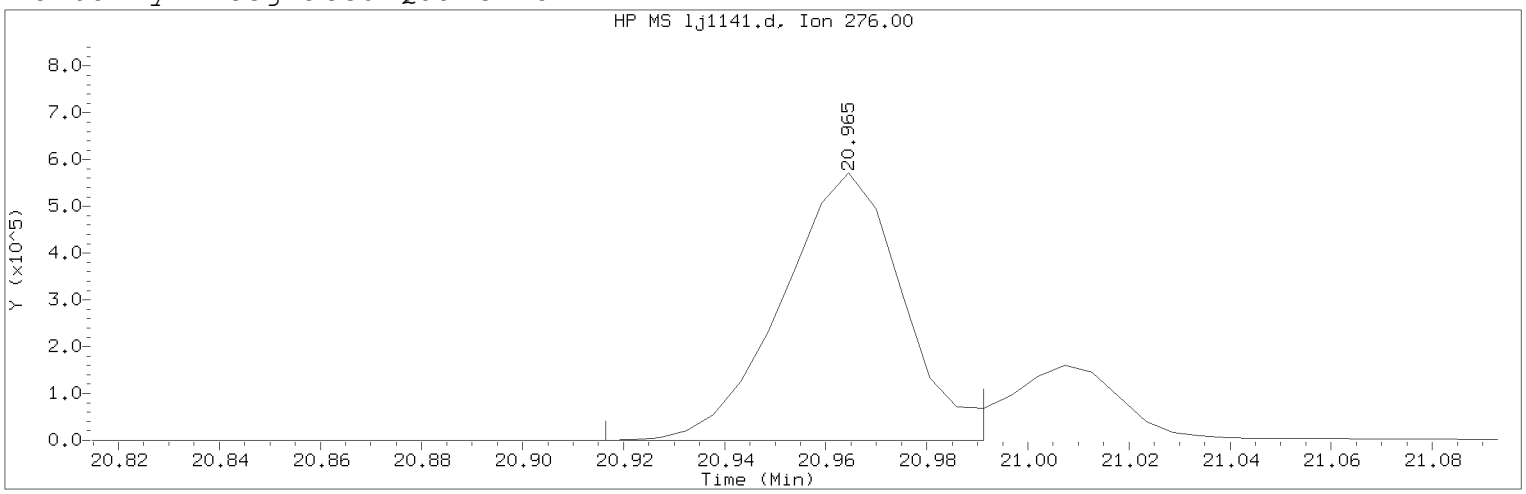
Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP20296.i/18oct18.b/lj1141.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 07:04 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 07:56
Date, time and analyst ID of latest file update: 18-Oct-2018 07:56 knb25316

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compound Number : 224
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3679
Retention Time (minutes) : 20.965
Quant Ion : 276.00
Area (flag) : 949330M
On-Column Amount (ng/ul) : 11.9474
Integration start scan : 3669 Integration stop scan: 3683
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: compound not in processing sublist

Analyst responsible for change: Digitally signed by Kira N. Beck
on 10/18/2018 at 07:58.
Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/19/2018 at 10:47.
PARALLAX ID: reb00745

Data File: /chem/HP20296.i/18oct18a.b/lj1170a.d

Date : 18-OCT-2018 21:11

Client ID: DFTPP12.5

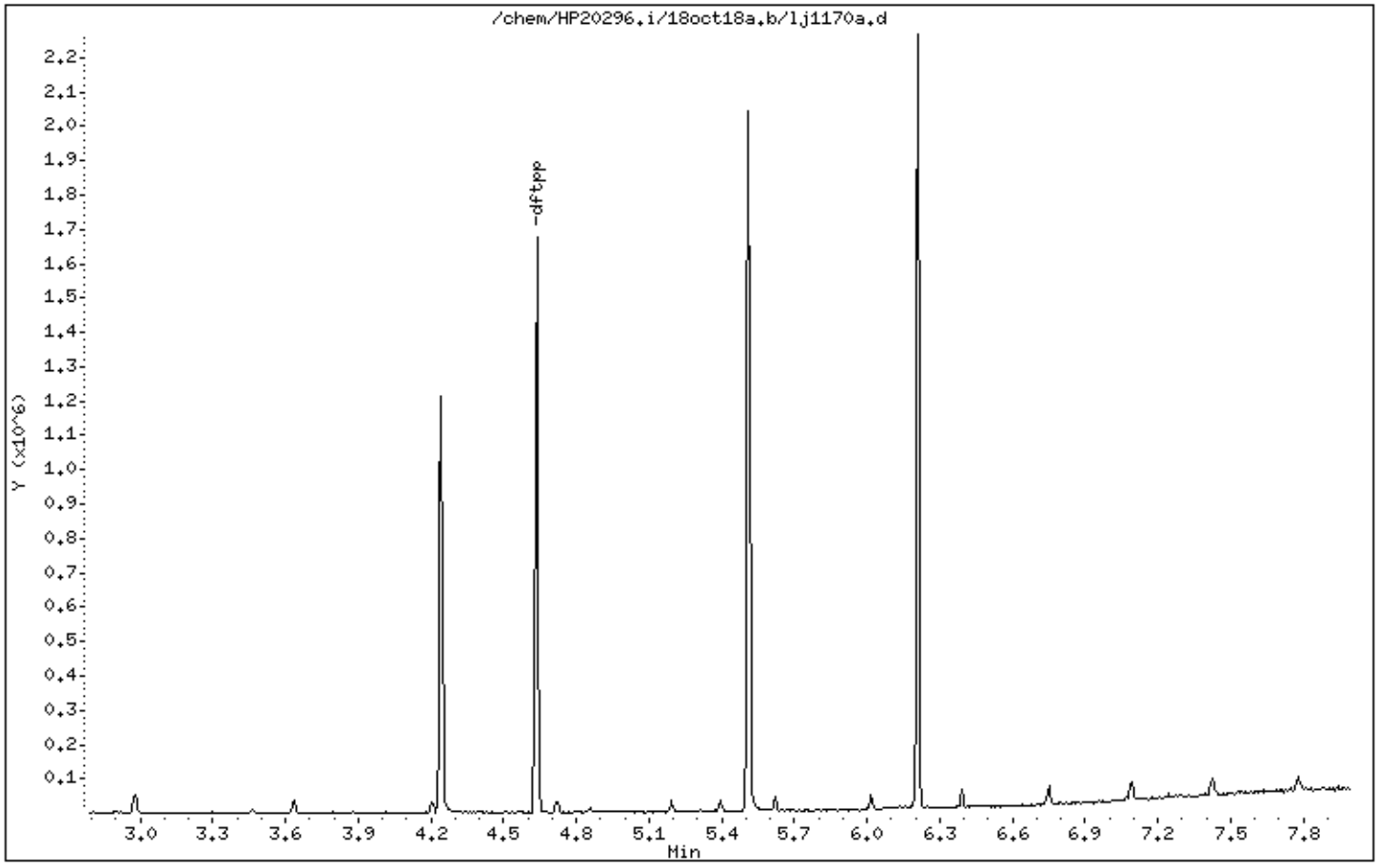
Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: bkc25363

Column phase: DB-5MS

Column diameter: 0.18



Digitally signed by Brandon K. Cordova on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Data File: /chem/HP20296.i/18oct18a.b/lj1170a.d

Date : 18-OCT-2018 21:11

Client ID: DFTPP12.5

Instrument: HP20296.i

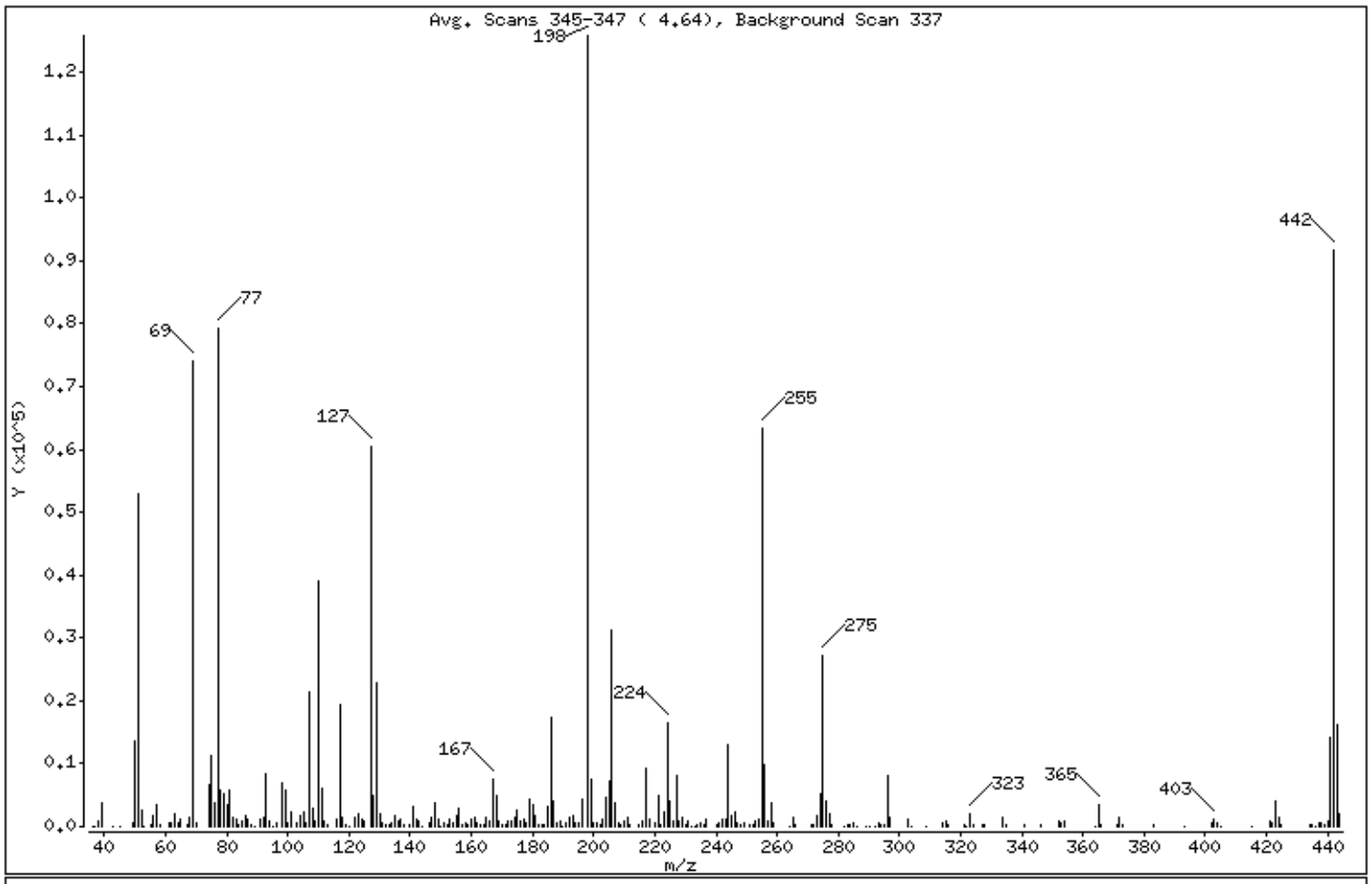
Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: bkc25363

Column phase: DB-5MS

Column diameter: 0.18

1 dftpp



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
198	Base Peak, 100% relative abundance	100.00
51	10.00 - 80.00% of mass 198	42.01
68	Less than 2.00% of mass 69	1.13 (1.92)
69	Mass 69 relative abundance	58.92
70	Less than 2.00% of mass 69	0.37 (0.62)
127	10.00 - 80.00% of mass 198	47.95
197	Less than 2.00% of mass 198	0.00
199	5.00 - 9.00% of mass 198	5.90
275	10.00 - 60.00% of mass 198	21.65
365	Greater than 1.00% of mass 198	2.86
441	0.01 - 24.00% of mass 442	11.19 (15.35)
442	50.00 - 99.99% of mass 198	72.92
443	15.00 - 24.00% of mass 442	12.90 (17.69)

Digitally signed by Brandon K. Cordova on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Date : 18-OCT-2018 21:11

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: bkc25363

Column phase: DB-5MS Column diameter: 0.18

Data File: lj1170a.d
Spectrum: Avg. Scans 345-347 (4.64), Background Scan 337
Location of Maximum: 198.00
Number of points: 266

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	99	123.00	1960	193.00	1636	275.00	27240
37.00	130	124.00	1078	194.00	478	276.00	3937
38.00	834	125.00	842	195.00	668	277.00	2101
39.00	3807	127.00	60320	196.00	4260	278.00	363
43.00	107	128.00	4911	198.00	125808	282.00	106
45.00	98	129.00	22984	199.00	7427	283.00	152
49.00	551	130.00	2093	200.00	627	284.00	238
50.00	13687	131.00	442	201.00	706	285.00	633
51.00	52848	132.00	375	202.00	284	286.00	120
52.00	2712	133.00	225	203.00	1198	289.00	133
53.00	121	134.00	640	204.00	4612	290.00	96
55.00	282	135.00	1723	205.00	7369	292.00	87
56.00	1654	136.00	821	206.00	31232	293.00	668
57.00	3518	137.00	1282	207.00	3820	294.00	331
58.00	174	138.00	201	208.00	722	295.00	183
61.00	548	140.00	244	209.00	283	296.00	7996
62.00	678	141.00	3230	210.00	727	297.00	1325
63.00	2166	142.00	1179	211.00	1305	303.00	1134
64.00	503	143.00	797	212.00	246	304.00	129
65.00	1138	144.00	83	215.00	378	309.00	110
67.00	202	146.00	610	216.00	772	314.00	637
68.00	1425	147.00	1398	217.00	9246	315.00	795
69.00	74128	148.00	3764	218.00	1269	316.00	403
70.00	462	149.00	1032	220.00	542	321.00	186
74.00	6705	150.00	104	221.00	4985	322.00	99
75.00	11149	151.00	502	222.00	271	323.00	2075
76.00	3894	152.00	396	223.00	2194	324.00	401
77.00	79272	153.00	1047	224.00	16584	327.00	225
78.00	5777	154.00	598	225.00	3970	328.00	268
79.00	5313	155.00	1864	226.00	726	334.00	1327
80.00	3484	156.00	2856	227.00	8066	335.00	416
81.00	5806	157.00	416	228.00	947	341.00	321
82.00	1323	158.00	524	229.00	1498	346.00	338
83.00	1172	159.00	353	230.00	389	352.00	840
84.00	349	160.00	1195	231.00	725	353.00	458

Digitally signed by Brandon K. Cordova on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Date : 18-OCT-2018 21:11

Client ID: DFTPP12.5 Instrument: HP20296.i

Sample Info: DFTPP12.5;RVDFTPP2338;1;3;DFTPP;

Operator: bkc25363

Column phase: DB-5MS Column diameter: 0.18

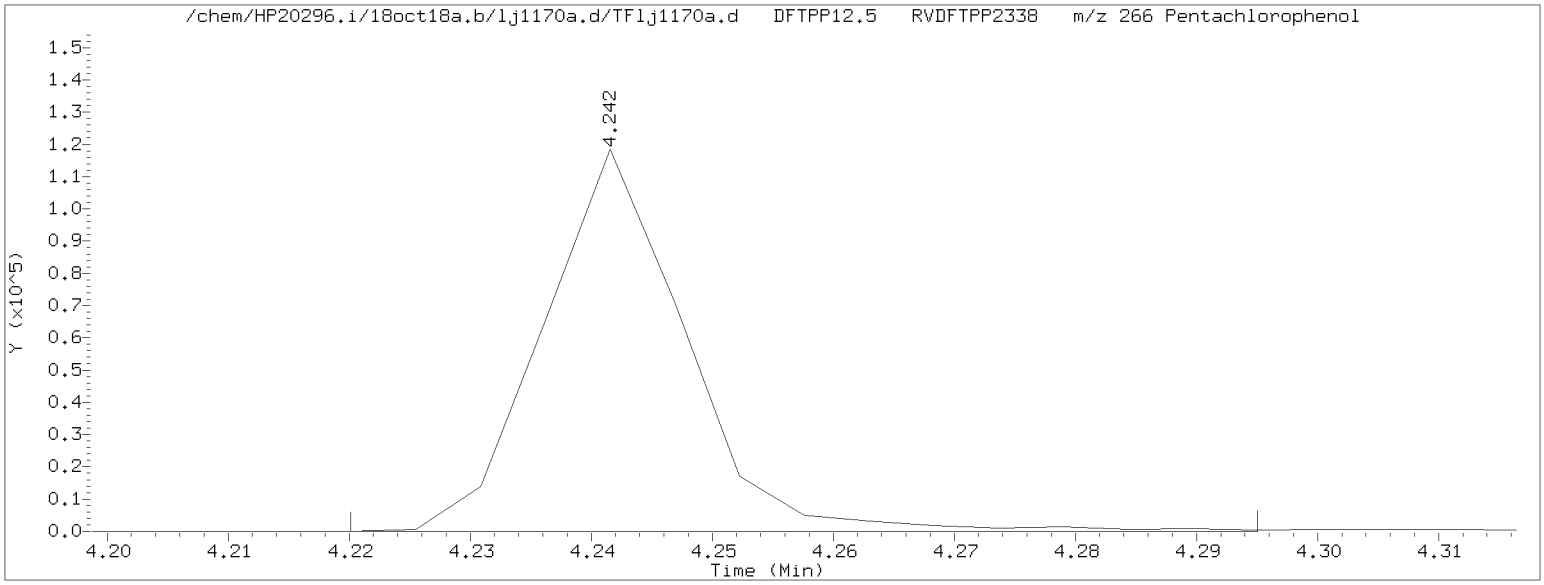
Data File: lj1170a.d
Spectrum: Avg. Scans 345-347 (4.64), Background Scan 337
Location of Maximum: 198.00
Number of points: 266

m/z	Y	m/z	Y	m/z	Y	m/z	Y
85.00	976	161.00	1513	232.00	97	354.00	838
86.00	1632	162.00	441	233.00	96	364.00	102
87.00	1015	163.00	183	234.00	378	365.00	3596
88.00	147	164.00	223	235.00	652	366.00	413
89.00	84	165.00	1451	236.00	327	371.00	184
91.00	1186	166.00	881	237.00	1047	372.00	1390
92.00	1423	167.00	7502	240.00	232	373.00	397
93.00	8437	168.00	4883	241.00	465	383.00	364
94.00	778	169.00	738	242.00	1148	393.00	139
95.00	126	170.00	259	243.00	1255	402.00	544
96.00	655	171.00	242	244.00	13107	403.00	1060
98.00	6849	172.00	731	245.00	1743	404.00	557
99.00	5656	173.00	876	246.00	2440	405.00	89
100.00	618	174.00	1414	247.00	642	415.00	83
101.00	2360	175.00	2525	248.00	199	421.00	803
103.00	709	176.00	777	249.00	623	422.00	623
104.00	1878	177.00	1127	251.00	211	423.00	3983
105.00	2418	178.00	658	252.00	200	424.00	1366
106.00	615	179.00	4356	253.00	956	425.00	381
107.00	21368	180.00	3429	254.00	1227	434.00	380
108.00	3020	181.00	1591	255.00	63448	435.00	414
109.00	840	182.00	241	256.00	9784	436.00	91
110.00	39016	183.00	195	257.00	897	437.00	569
111.00	5983	184.00	321	258.00	3697	438.00	637
112.00	828	185.00	3259	259.00	487	439.00	427
113.00	190	186.00	17240	264.00	96	440.00	833
116.00	1252	187.00	4028	265.00	1365	441.00	14083
117.00	19344	188.00	474	266.00	376	442.00	91736
118.00	1395	189.00	741	271.00	248	443.00	16232
119.00	246	190.00	137	272.00	244	444.00	1919
120.00	99	191.00	447	273.00	1824		
122.00	1357	192.00	1345	274.00	5337		

Digitally signed by Brandon K. Cordova on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Assessment of GC Column Performance and Injection Port Inertness for

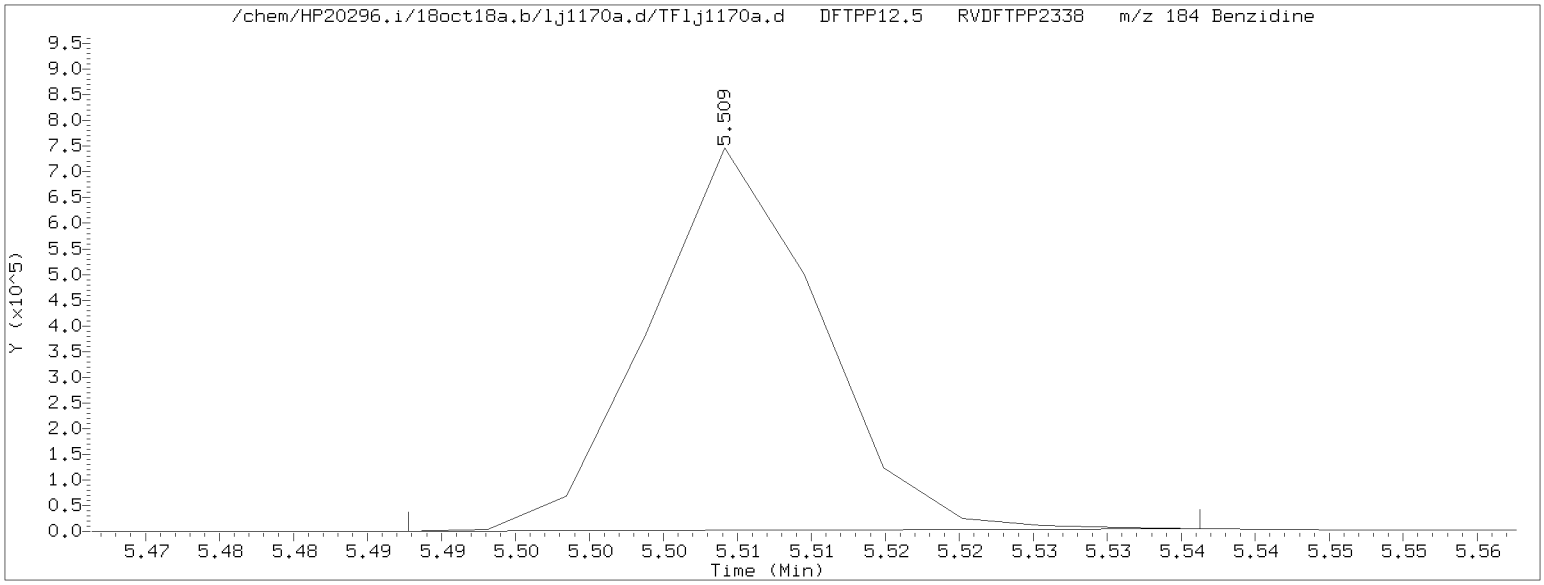
Instrument ID: HP20296.i Injection Date: 18-OCT-2018 21:11 Operator: bkc25363



Pentachlorophenol EICP peak height = 118544 EICP peak height at 10% = 11854 Pentachlorophenol EICP area = 96468

Pentachlorophenol EICP peak apex (min.) = 4.242
RT at 10% of front half of EICP (min.) = 4.230 'Front' peak width (min.) = 0.0114500000
RT at 10% of back half of EICP (min.) = 4.254 'Tailing' peak width (min.) = 0.0129333333

$$\text{PCP tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0129333333}{0.0114500000} = 1.130$$



Benzidine EICP peak height = 744412 EICP peak height at 10% = 74441 Benzidine EICP area = 592964

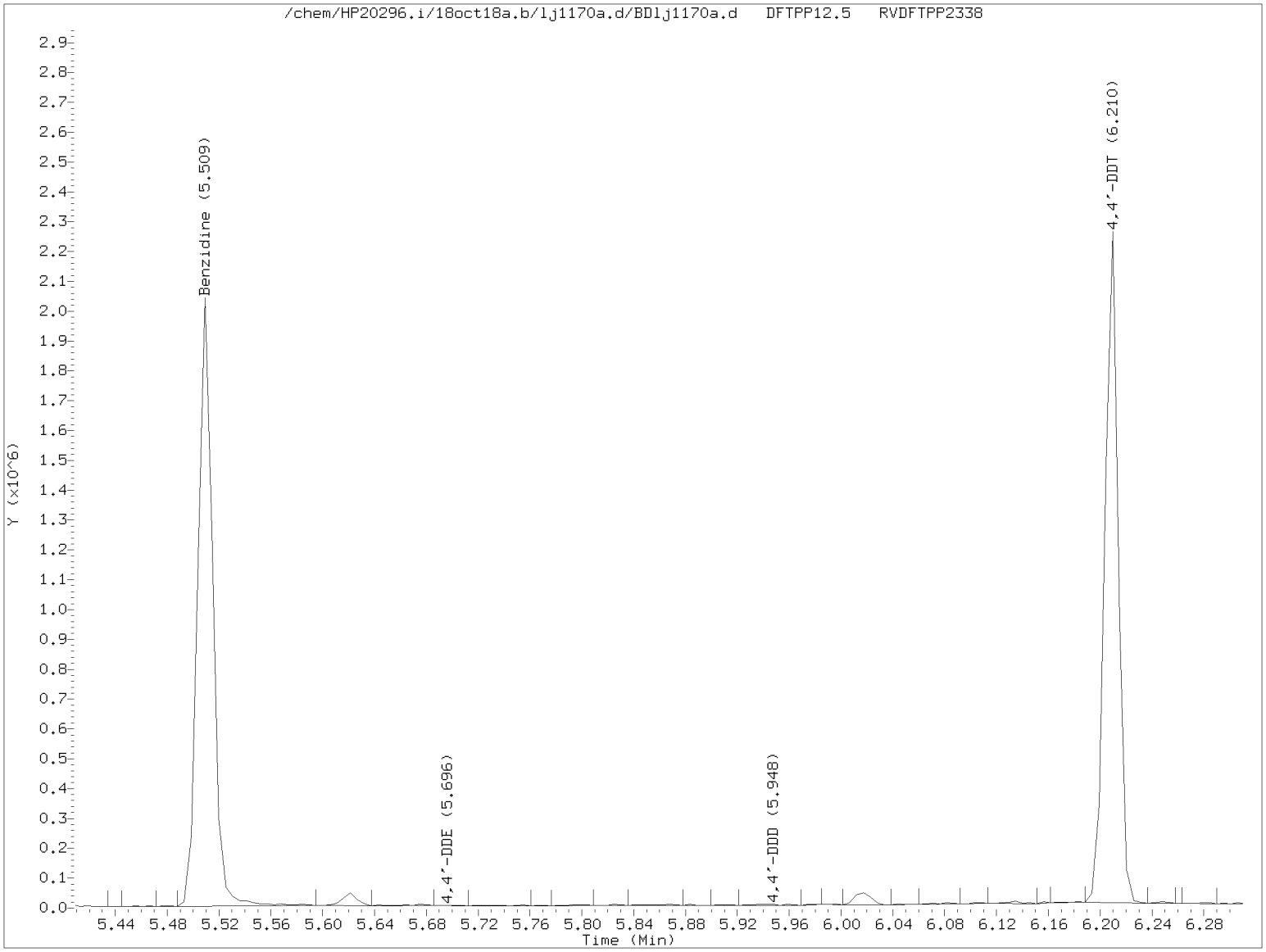
Benzidine EICP peak apex (min.) = 5.509
RT at 10% of front half of EICP (min.) = 5.499 'Front' peak width (min.) = 0.0105500000
RT at 10% of back half of EICP (min.) = 5.522 'Tailing' peak width (min.) = 0.0132333333

$$\text{Benzidine tailing factor} = \frac{\text{'Tailing' peak width (min.)}}{\text{'Front' peak width (min.)}} = \frac{0.0132333333}{0.0105500000} = 1.254$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 11:11. PARALLAX ID: reb00745

Assessment of GC Column Performance and Injection Port Inertness for

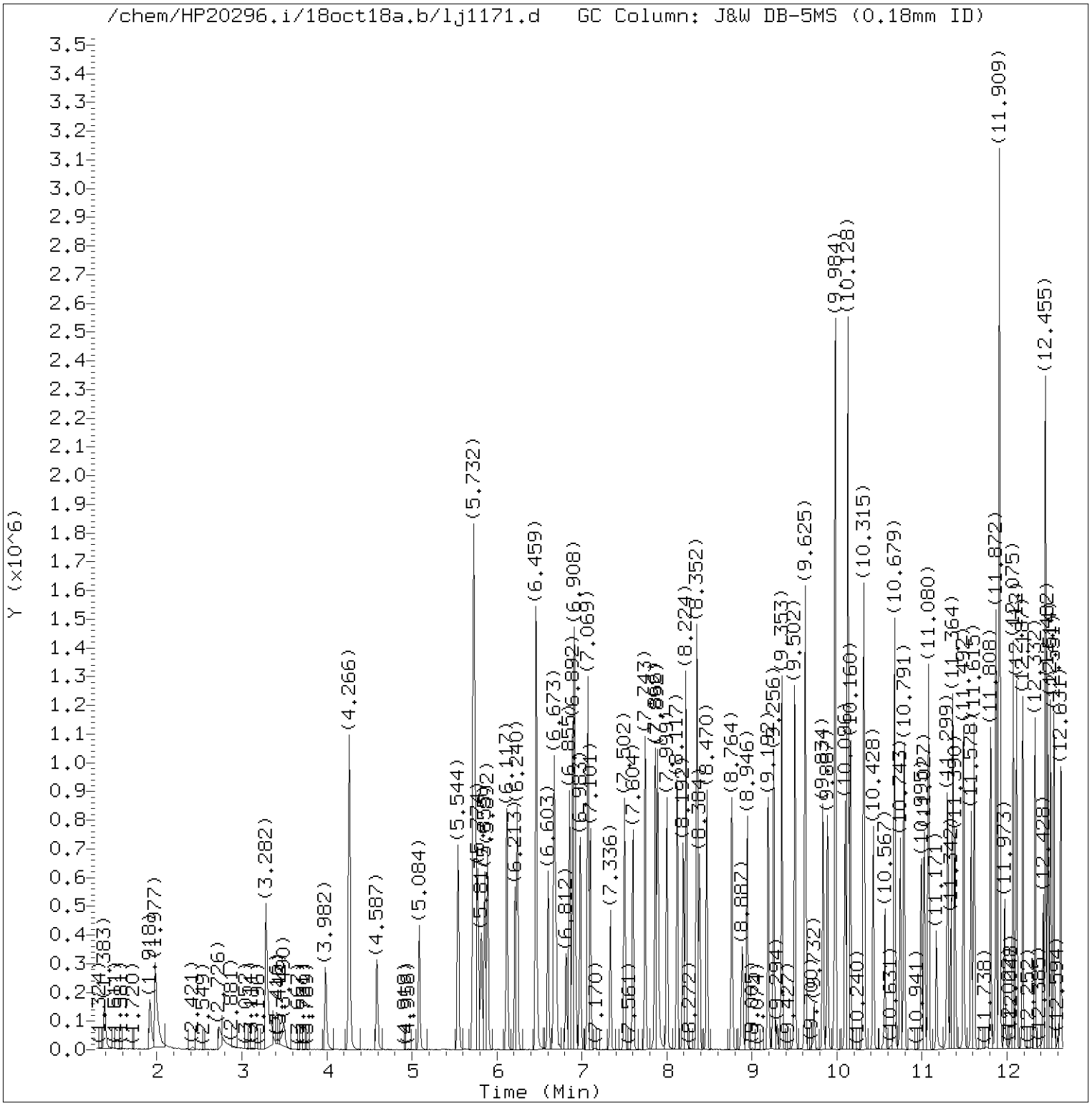
Instrument ID: HP20296.i Injection Date: 18-OCT-2018 21:11 Operator: bkc25363



$$\% \text{ 4,4'-DDT breakdown} = \frac{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area}}{\text{4,4'-DDE TIC area + 4,4'-DDD TIC area + 4,4'-DDT TIC area}} \times 100$$

$$\% \text{ 4,4'-DDT breakdown} = \frac{869 + 8218}{869 + 8218 + 1646277} \times 100 = 0.5$$

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 11:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

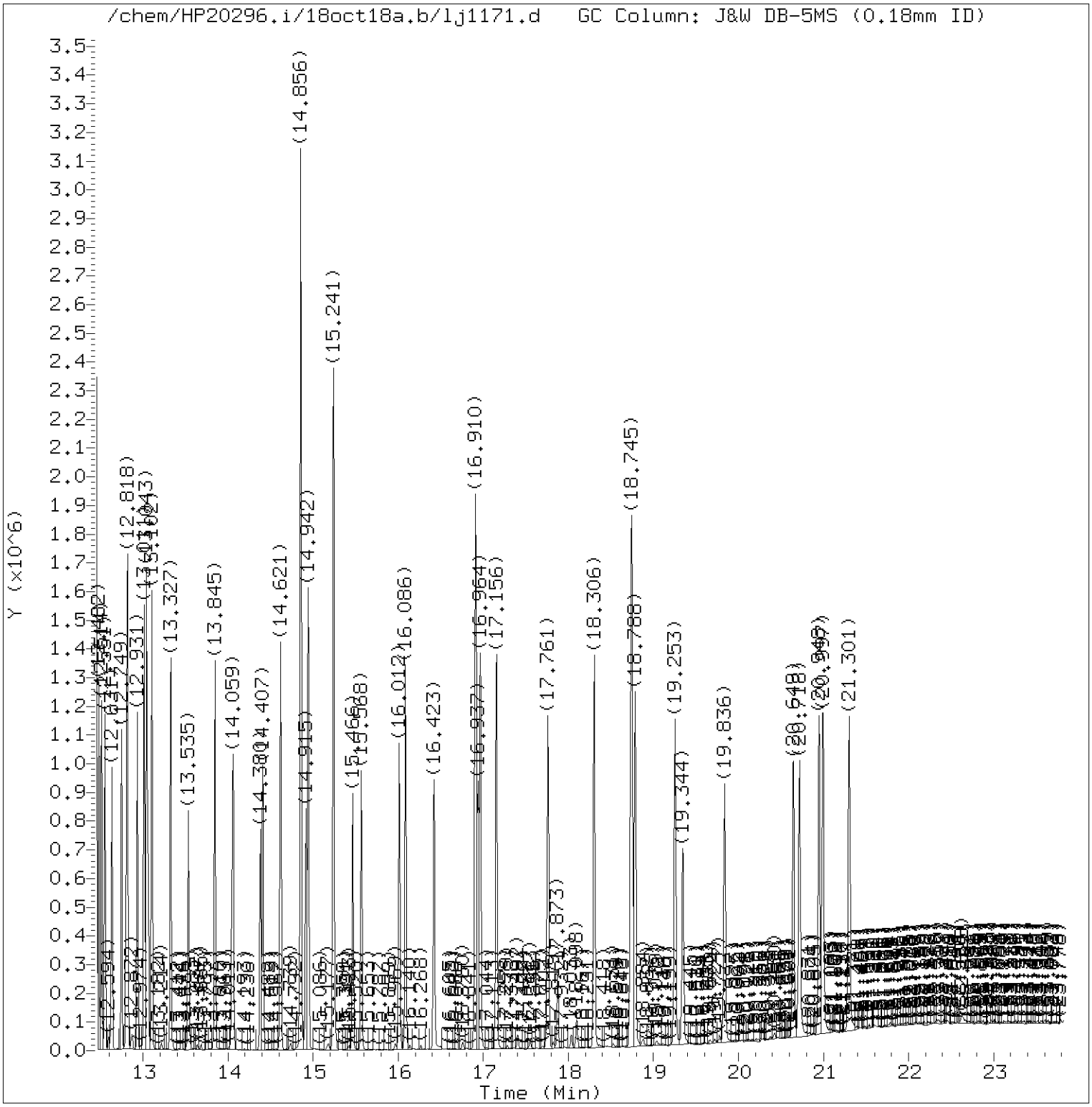
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Brandon K. Cordova
on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Digitally signed by Brandon K. Cordova
on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.383	88	123853	8.027
5) N-Nitrosodimethylamine	(1)	1.913	74	177657	7.516
6) Pyridine	(1)	1.977	79	309027	7.355
8) 2-Picoline	(1)	3.282	93	311955	7.512
9) N-Nitrosomethylethylamine	(1)	3.496	88	109173	6.321
10) Methyl methanesulfonate	(1)	3.982	80	158774	7.305
12)$2-Fluorophenol	(1)	4.266	112	489123	15.279
14) N-Nitrosodiethylamine	(1)	4.587	102	118798	7.297
16) Ethyl methanesulfonate	(1)	5.084	109	127729	7.543
17) Benzaldehyde	(1)	5.544	77	237878	7.443
43) Total Cresols	(1)			495814	15.184
20) Aniline	(1)	5.721	93	445154	7.422
18)$Phenol-d6	(1)	5.732	99	674579	15.332
19) Phenol	(1)	5.753	94	376500	7.384
21) a-methylstyrene	(1)	5.806	118	23113	6.816
23) bis(2-Chloroethyl)ether	(1)	5.855	93	295613	7.483
24) 2-Chlorophenol	(1)	5.892	128	224327	7.599
25) 1,3-Dichlorobenzene	(1)	6.117	146	246425	7.561
26)*1,4-Dichlorobenzene-d4	(1)	6.213	152	99804	5.000
27) 1,4-Dichlorobenzene	(1)	6.240	146	246966	7.452
29) 1,2-Dichlorobenzene	(1)	6.459	146	237495	7.512
28) Benzyl alcohol	(1)	6.464	108	147507	6.924
31) Indene	(1)	6.603	115	263871	7.194
32) 2-Methylphenol	(1)	6.673	108	232640	7.566
34) 2,2'-oxybis(1-Chloropropane)	(1)	6.689	45	312067	7.458
35) bis(2-Chloroisopropyl)ether	(1)	6.689	45	312067	7.458
36) N-Nitrosopyrrolidine	(1)	6.812	100	131746	7.897
37) Acetophenone	(1)	6.855	105	362593	7.564
40) N-Nitrosomorpholine	(1)	6.887	56	143282	7.623
39) N-Nitroso-di-n-propylamine	(1)	6.887	70	217289	7.799
41) o-Toluidine	(1)	6.908	106	420129	7.439
38) 4-Methylphenol	(1)	6.919	108	263174	7.618
44) Hexachloroethane	(1)	6.983	117	121159	7.968
45)$Nitrobenzene-d5	(2)	7.069	82	620718	15.497
46) Nitrobenzene	(2)	7.101	77	324088	7.969
50) N-Nitrosopiperidine	(2)	7.336	114	116820	7.777
100) Isosafrole	(3)			179205	7.871
52) Isophorone	(2)	7.502	82	521498	7.656
53) 2-Nitrophenol	(2)	7.604	139	104069	8.138
55) 2,4-Dimethylphenol	(2)	7.743	107	261887	7.882

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
59) O,O,O-Triethylphosphorothioate	(2)	7.866	198	102483	7.735
57) bis(2-Chloroethoxy)methane	(2)	7.892	93	373534	8.084
58) Benzoic acid	(2)	7.908	105	180539	12.576
62) 2,4-Dichlorophenol	(2)	7.999	162	183000	8.262
125) 2,4_2,6-Dinitrotoluenes	(3)			212060	15.142
65) 1,2,4-Trichlorobenzene	(2)	8.122	180	198976	7.989
68)*Naphthalene-d8	(2)	8.192	136	360274	5.000
69) Naphthalene	(2)	8.224	128	632913	7.569
70) 4-Chloroaniline	(2)	8.347	127	251698	7.733
71) 2,6-Dichlorophenol	(2)	8.358	162	173375	7.862
72) Hexachloropropene	(2)	8.384	213	135210	8.744
74) Hexachlorobutadiene	(2)	8.470	225	118862	8.191
78) Quinoline	(2)	8.764	129	361479	7.633
151) Diallate trans/cis	(4)			249963	7.638
79) Caprolactam	(2)	8.887	113	58736	7.910
80) N-Nitrosodi-n-butylamine	(2)	8.946	84	197151	7.196
83) 4-Chloro-3-methylphenol	(2)	9.192	107	208777	7.722
85) Safrole	(2)	9.256	162	152815	7.728
86) 2-Methylnaphthalene	(2)	9.353	142	409449	7.898
87) 1-Methylnaphthalene	(2)	9.502	142	382650	7.663
88) Hexachlorocyclopentadiene	(3)	9.625	237	112351	7.620
89) 1,2,4,5-Tetrachlorobenzene	(3)	9.625	216	201605	7.862
91) cis-Isosafrole	(3)	9.732	162	26701	1.186
93) 2,4,6-Trichlorophenol	(3)	9.834	196	123935	8.023
95) 2,4,5-Trichlorophenol	(3)	9.887	196	129243	7.942
96)$2-Fluorobiphenyl	(3)	9.984	172	901571	15.121
97) trans-Isosafrole	(3)	10.096	162	152504	6.685
98) 1,1'-Biphenyl	(3)	10.128	154	464589	7.409
99) 2-Chloronaphthalene	(3)	10.128	162	381544	7.200
101) 1-Chloronaphthalene	(3)	10.160	162	350724	7.455
103) Diphenyl ether	(3)	10.315	170	257183	7.467
104) 2-Nitroaniline	(3)	10.321	138	114513	7.743
108) 1,4-Naphthoquinone	(3)	10.428	158	137114	7.071
109) 1,4-Dinitrobenzene	(3)	10.567	168	58311	7.556
110) Dimethylphthalate	(3)	10.679	163	417322	7.660
111) 1,3-Dinitrobenzene	(3)	10.679	168	62508	7.341
113) 2,6-Dinitrotoluene	(3)	10.743	165	92586	7.604
114) Acenaphthylene	(3)	10.791	152	538941	7.779
117) 3-Nitroaniline	(3)	10.995	138	101356	7.959
118)*Acenaphthene-d10	(3)	11.027	164	175362	5.000

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$ = Compound is a surrogate standard.

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on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
119) Acenaphthene	(3)	11.080	153	397985	7.528
120) 2,4-Dinitrophenol	(3)	11.171	184	55563	9.048
122) Pentachlorobenzene	(3)	11.305	250	160888	7.911
121) 4-Nitrophenol	(3)	11.342	109	71272	6.799
124) Dibenzofuran	(3)	11.364	168	530197	7.657
123) 2,4-Dinitrotoluene	(3)	11.390	165	119474	7.539
126) 1-Naphthylamine	(3)	11.492	143	388772	7.488
127) 2,3,4,6-Tetrachlorophenol	(3)	11.578	232	97195	7.965
128) 2-Naphthylamine	(3)	11.615	143	388493	7.865
129) Diethylphthalate	(3)	11.808	149	410197	7.477
131) Fluorene	(3)	11.872	166	423974	7.803
130) Thionazin	(3)	11.909	107	89222	7.523
133) 5-Nitro-o-toluidine	(3)	11.909	152	113719	7.603
132) 4-Chlorophenyl-phenylether	(3)	11.915	204	206673	7.924
134) 4-Nitroaniline	(3)	11.920	138	105748	8.061
135) 4,6-Dinitro-2-methylphenol	(4)	11.973	198	61447	7.296
137) NDPA as diphenylamine	(4)	12.075	169	340292	7.597
136) N-Nitrosodiphenylamine	(4)	12.075	169	340292	7.597
139) 1,2-Diphenylhydrazine	(4)	12.112	77	597848	7.441
140)$2,4,6-Tribromophenol	(3)	12.187	330	100576	16.469
142) Tetraethyldithiopyrophosphate	(4)	12.332	97	96879	7.503
144) 1,3,5-Trinitrobenzene	(4)	12.428	213	34975	6.493
145) Diallate (peak 1)	(4)	12.449	86	215087	6.382
146) Phorate	(4)	12.455	75	367627	7.771
147) Phenacetin	(4)	12.482	108	244994	7.616
148) 4-Bromophenyl-phenylether	(4)	12.514	248	112095	7.798
149) Diallate (peak 2)	(4)	12.546	86	34876	1.255
150) Hexachlorobenzene	(4)	12.556	284	113584	7.272
152) Dimethoate	(4)	12.631	87	217702	7.497
153) Atrazine	(4)	12.749	200	110511	7.703
154) Pentachlorophenol	(4)	12.802	266	60044	6.641
156) Pentachloronitrobenzene	(4)	12.813	237	56698	7.948
155) 4-Aminobiphenyl	(4)	12.818	169	295274	7.848
157) Pronamide	(4)	12.931	173	186103	7.534
158)*Phenanthrene-d10	(4)	13.011	188	335381	5.000
160) Phenanthrene	(4)	13.043	178	610843	7.341
159) Dinoseb	(4)	13.059	211	97660	7.444
162) Anthracene	(4)	13.107	178	621584	7.687
168) Carbazole	(4)	13.327	167	544299	7.442
169) Methyl parathion	(4)	13.535	109	163774	7.313

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$ = Compound is a surrogate standard.

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on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18a.b/lj1171.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 21:26 Analyst ID: bkc25363

Method used: /chem/HP20296.i/18oct18a.b/rv8270d.m Sublist used: all1
Calibration date and time: 18-OCT-2018 22:16
Date, time and analyst ID of latest file update: 18-Oct-2018 22:16 bkc25363

Sample Name: SSTD12.5 Lab Sample ID: RVSTD2648

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
170) Di-n-butylphthalate	(4)	13.845	149	708604	7.452
173) 4-Nitroquinoline-1-oxide	(4)	14.049	190	42382	5.336
172) Parathion	(4)	14.059	109	109006	7.836
174) Octachlorostyrene	(4)	14.380	308	42843	7.662
176) Isodrin	(4)	14.407	193	72801	7.547
178) Fluoranthene	(4)	14.621	202	669029	7.733
179) Benzidine	(5)	14.856	184	1315667	23.180
180)*Pyrene-d10	(5)	14.915	212	343944	5.000
182) Pyrene	(5)	14.942	202	695900	7.339
227) Total PAHs	(6)			10311087	139.286
184)$Terphenyl-d14	(5)	15.241	244	826279	15.491
187) p-Dimethylaminoazobenzene	(5)	15.466	225	96081	7.016
190) Chlorobenzilate	(5)	15.568	139	218883	7.477
192) 3,3'-Dimethylbenzidine	(5)	16.012	212	419086	7.734
193) Butylbenzylphthalate	(5)	16.086	149	337011	7.723
196) 2-Acetylaminofluorene	(5)	16.423	181	255025	7.798
200) Benzo(a)anthracene	(5)	16.905	228	638381	7.992
198) 3,3'-Dichlorobenzidine	(5)	16.916	252	242701	8.407
203) 4,4'-Methylenebis(2-chloroanil	(5)	16.942	231	136214	8.327
201) Chrysene	(5)	16.964	228	642253	8.058
204) bis(2-Ethylhexyl)phthalate	(5)	17.156	149	495017	8.096
208) 6-Methylchrysene	(5)	17.761	242	419048	7.890
210) Di-n-octylphthalate	(6)	18.306	149	853538	7.711
211) Benzo(b)fluoranthene	(6)	18.739	252	638479	7.744
212) 7,12-Dimethylbenz[a]anthracene	(6)	18.750	256	274083	7.850
213) Benzo(k)fluoranthene	(6)	18.788	252	648286	8.027
216) Benzo(a)pyrene	(6)	19.253	252	600842	7.827
218)*Perylene-d12	(6)	19.344	264	327816	5.000
220) 3-Methylcholanthrene	(6)	19.836	268	268426	7.903
222) Dibenz(a,h)acridine	(6)	20.649	279	480433	7.685
223) Dibenz(a,j)acridine	(6)	20.718	279	495046	7.527
224) Indeno(1,2,3-cd)pyrene	(6)	20.948	276	557722	7.506
225) Dibenz(a,h)anthracene	(6)	20.997	278	592067	7.819
226) Benzo(g,h,i)perylene	(6)	21.301	276	609789	7.973

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$ = Compound is a surrogate standard.

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on 10/18/2018 at 22:41.
Target 3.5 esignature user ID: bkc25363

Raw QC Data

Semivolatiles by GC/MS

Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct17a.b/lj1104.d Injection date and time: **17-OCT-2018 23:07**
Data file Sample Info. Line: SBLKWT288;SBLKWT288;1;3;BLANK;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 18-OCT-2018 13:30
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct17a.b/lj1101.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.224	(0.006)	923	152	88078	(-3)	5.00	
68) Naphthalene-d8	8.203	(0.006)	1293	136	337010	(3)	5.00	
118) Acenaphthene-d10	11.037	(0.006)	1823	164	156842	(3)	5.00	
158) Phenanthrene-d10	13.022	(0.006)	2194	188	284246	(-3)	5.00	
180) Pyrene-d10	14.926	(0.006)	2550	212	276945	(-12)	5.00	
218) Perylene-d12	19.360	(0.000)	3379	264	255512	(-18)	5.00	

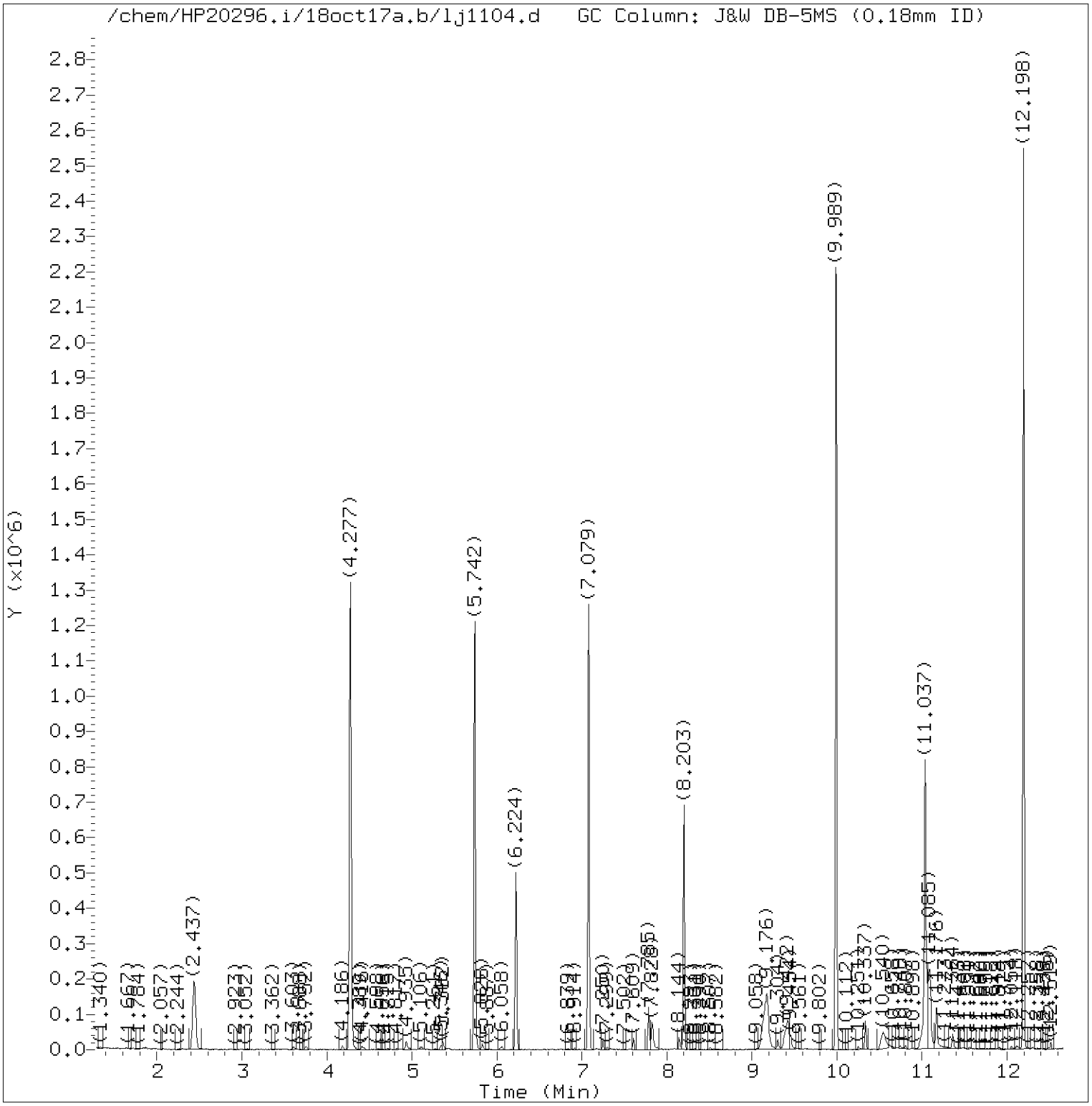
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
45) Nitrobenzene-d5	(2)	7.079	(0.000)	82	563415	15.037	60%
96) 2-Fluorobiphenyl	(3)	9.994	(0.000)	172	799315	14.989	60%
184) Terphenyl-d14	(5)	15.252	(0.000)	244	1108415	25.807	103%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
123) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
129) Diethylphthalate	(3)				Not Detected					0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/18/2018 at 13:52. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

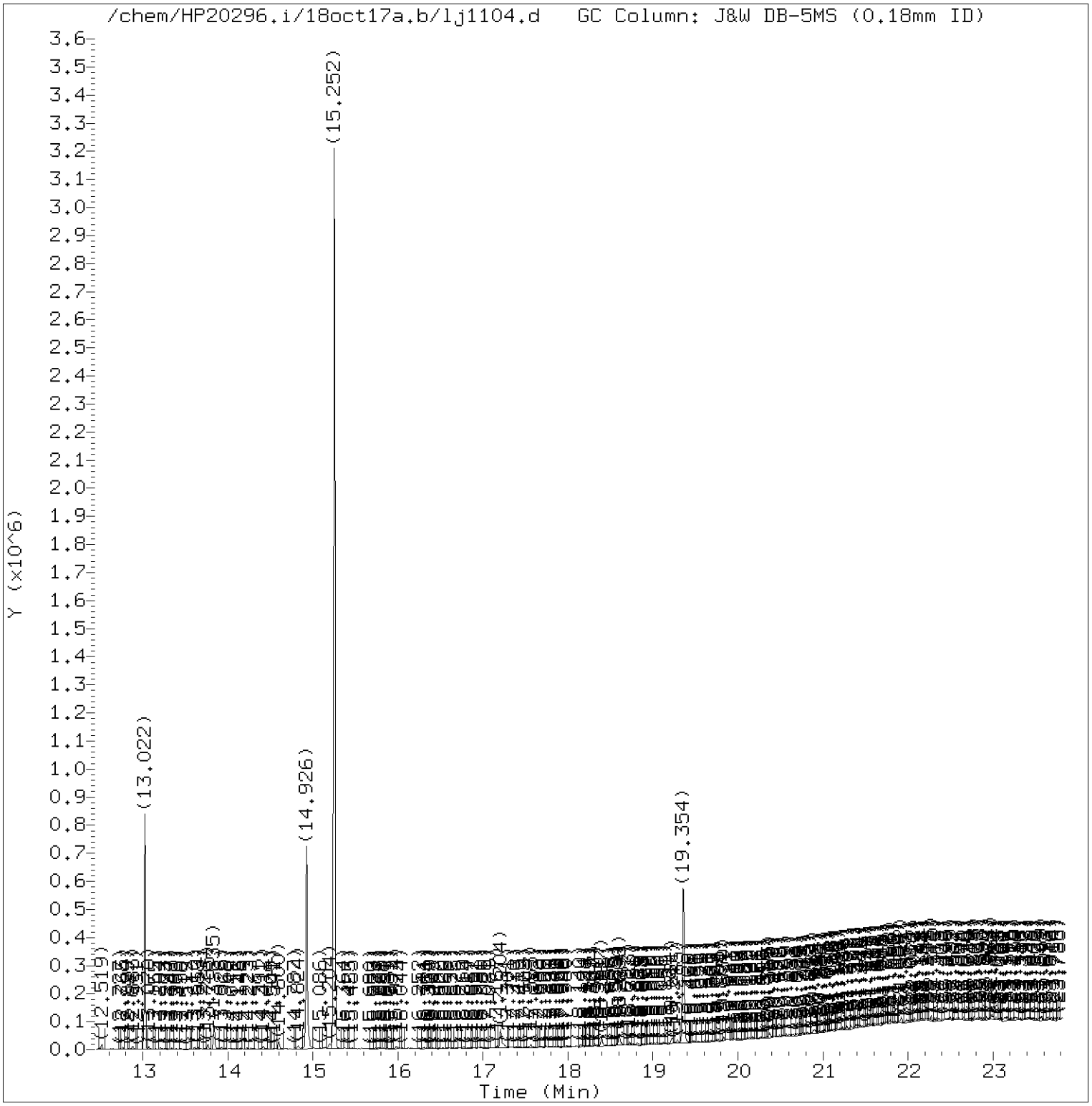
Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1104.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:07 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: SBLKWT288 Lab Sample ID: SBLKWT288

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1104.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:07 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: SBLKWT288 Lab Sample ID: SBLKWT288

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1104.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:07 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: SBLKWT288 Lab Sample ID: SBLKWT288

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.224	152	88078	5.000
45)$Nitrobenzene-d5	(2)	7.079	82	563415	15.037
68)*Naphthalene-d8	(2)	8.203	136	337010	5.000
96)$2-Fluorobiphenyl	(3)	9.994	172	799315	14.989
118)*Acenaphthene-d10	(3)	11.037	164	156842	5.000
158)*Phenanthrene-d10	(4)	13.022	188	284246	5.000
180)*Pyrene-d10	(5)	14.926	212	276945	5.000
184)$Terphenyl-d14	(5)	15.252	244	1108415	25.807
218)*Perylene-d12	(6)	19.360	264	255512	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316

Data file: /chem/HP19760.i/18oct20.b/dj1810.d Injection date and time: **20-OCT-2018 14:55**
Data file Sample Info. Line: SBLKWF292;SBLKWF292;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAF**
Calibration date and time (Last Method Edit): 20-OCT-2018 16:29
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.170	(0.000)	915	152	268943	(-9)	5.00	
65) Naphthalene-d8	8.111	(0.000)	1248	136	1051357	(-7)	5.00	
113) Acenaphthene-d10	10.885	(0.006)	1724	164	481250	(-10)	5.00	
153) Phenanthrene-d10	12.855	(0.006)	2062	188	923659	(-7)	5.00	
175) Pyrene-d10	14.697	(0.006)	2378	212	864857	(-11)	5.00	
213) Perylene-d12	19.046	(0.000)	3124	264	642964	(-22)	5.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.258	(0.000)	112	1677022	20.711	41%
17) Phenol-d6	(1)	5.692	(0.001)	99	1667664	15.178	30%
44) Nitrobenzene-d5	(2)	7.009	(0.000)	82	1660759	16.681	67%
93) 2-Fluorobiphenyl	(3)	9.865	(0.000)	172	2731039	17.764	71%
135) 2,4,6-Tribromophenol	(3)	12.051	(-0.001)	330	683959	43.047	86%
179) Terphenyl-d14	(5)	15.024	(0.000)	244	3255066	22.623	90%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)				Not Detected					0.5
4) N-Nitrosodimethylamine	(1)				Not Detected					0.5
5) Pyridine	(1)				Not Detected					0.5
7) 2-Picoline	(1)				Not Detected					0.5
8) N-Nitrosomethylethylamine	(1)				Not Detected					0.5
9) Methyl methanesulfonate	(1)				Not Detected					0.3
13) N-Nitrosodiethylamine	(1)				Not Detected					0.1
15) Ethyl methanesulfonate	(1)				Not Detected					0.1
18) Phenol	(1)				Not Detected					0.1
19) Aniline	(1)				Not Detected					0.8
22) bis(2-Chloroethyl)ether	(1)				Not Detected					0.1
23) 2-Chlorophenol	(1)				Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)				Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)				Not Detected					0.1
27) Benzyl alcohol	(1)				Not Detected					3
28) 1,2-Dichlorobenzene	(1)				Not Detected					0.1
31) 2-Methylphenol	(1)				Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)				Not Detected					0.1
35) N-Nitrosopyrrolidine	(1)				Not Detected					0.1
36) Acetophenone	(1)				Not Detected					1
37) 4-Methylphenol	(1)				Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)				Not Detected					0.2
39) N-Nitrosomorpholine	(1)				Not Detected					0.5
40) o-Toluidine	(1)	6.846	(0.000)	106	159291	1.164	4.66		J	1
43) Hexachloroethane	(1)				Not Detected					0.3
45) Nitrobenzene	(2)				Not Detected					0.1
48) N-Nitrosopiperidine	(2)				Not Detected					0.1

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Data file: /chem/HP19760.i/18oct20.b/dj1810.d Injection date and time: **20-OCT-2018 14:55**
Data file Sample Info. Line: SBLKWF292;SBLKWF292;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAF**
Calibration date and time (Last Method Edit): 20-OCT-2018 16:29
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.8
53) 2,4-Dimethylphenol	(2)			Not Detected					0.8
57) O,O,O-Triethylphosphorothioate	(2)			Not Detected					0.5
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1
66) Naphthalene	(2)	8.140(-0.000)	128	15924	0.065	0.26		J	0.03
67) 4-Chloroaniline	(2)			Not Detected					1
68) 2,6-Dichlorophenol	(2)			Not Detected					0.1
69) Hexachloropropene	(2)			Not Detected					0.5
71) Hexachlorobutadiene	(2)			Not Detected					0.1
77) N-Nitrosodi-n-butylamine	(2)			Not Detected					3
81) 1,4-Phenylenediamine	(2)			Not Detected					19
80) 4-Chloro-3-methylphenol	(2)			Not Detected					0.1
82) Safrole	(2)			Not Detected					0.5
83) 2-Methylnaphthalene	(2)	9.248(0.000)	142	30129	0.199	0.80			0.03
85) Hexachlorocyclopentadiene	(3)			Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)			Not Detected					0.1
88) cis-Isosafrole	(3)			Not Detected					0.3
90) 2,4,6-Trichlorophenol	(3)			Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)			Not Detected					0.1
94) trans-Isosafrole	(3)			Not Detected					0.3
97) Isosafrole	(3)			Not Detected					1
95) 1,1'-Biphenyl	(3)			Not Detected					0.8
96) 2-Chloronaphthalene	(3)			Not Detected					0.1
99) Diphenyl ether	(3)			Not Detected					0.1
100) 2-Nitroaniline	(3)			Not Detected					0.5
104) 1,4-Naphthoquinone	(3)			Not Detected					6
106) Dimethylphthalate	(3)			Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)			Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)			Not Detected					0.1
109) Acenaphthylene	(3)			Not Detected					0.03
112) 3-Nitroaniline	(3)			Not Detected					0.8
114) Acenaphthene	(3)			Not Detected					0.03
115) 2,4-Dinitrophenol	(3)			Not Detected					4
116) 4-Nitrophenol	(3)			Not Detected					3
117) Pentachlorobenzene	(3)			Not Detected					0.1
118) 2,4-Dinitrotoluene	(3)			Not Detected					0.3
119) Dibenzofuran	(3)			Not Detected					0.1
121) 1-Naphthylamine	(3)			Not Detected					2
122) 2,3,4,6-Tetrachlorophenol	(3)			Not Detected					1
123) 2-Naphthylamine	(3)			Not Detected					2
124) Diethylphthalate	(3)			Not Detected					0.5
125) Thionazin	(3)			Not Detected					0.5
126) Fluorene	(3)	11.736(-0.000)	166	7484	0.053	0.21		J	0.03
127) 4-Chlorophenyl-phenylether	(3)			Not Detected					0.1
128) 5-Nitro-o-toluidine	(3)			Not Detected					1
129) 4-Nitroaniline	(3)			Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)			Not Detected					2
131) N-Nitrosodiphenylamine	(4)			Not Detected					0.2
137) Tetraethyldithiopyrophosphate	(4)			Not Detected					0.3
139) 1,3,5-Trinitrobenzene	(4)			Not Detected					24
140) Diallate (peak 1)	(4)			Not Detected					0.06

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Data file: /chem/HP19760.i/18oct20.b/dj1810.d Injection date and time: **20-OCT-2018 14:55**
Data file Sample Info. Line: SBLKWF292;SBLKWF292;1;3;BLANK;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAF**
Calibration date and time (Last Method Edit): 20-OCT-2018 16:29
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
142) Phenacetin	(4)			Not Detected					0.1
143) 4-Bromophenyl-phenylether	(4)			Not Detected					0.1
144) Diallate (peak 2)	(4)			Not Detected					0.06
146) Diallate trans/cis	(4)			Not Detected					0.3
145) Hexachlorobenzene	(4)			Not Detected					0.03
147) Dimethoate	(4)			Not Detected					0.8
149) Pentachlorophenol	(4)			Not Detected					0.3
150) 4-Aminobiphenyl	(4)			Not Detected					1
151) Pentachloronitrobenzene	(4)			Not Detected					0.5
152) Pronamide	(4)			Not Detected					0.1
155) Phenanthrene	(4)	12.885(0.000)	178	12222	0.053	0.21		J	0.03
157) Anthracene	(4)			Not Detected					0.03
165) Di-n-butylphthalate	(4)			Not Detected					0.5
168) 4-Nitroquinoline-1-oxide	(4)			Not Detected					5
170) Methapyrilene	(4)			Not Detected					4
171) Isodrin	(4)			Not Detected					0.1
173) Fluoranthene	(4)			Not Detected					0.03
177) Pyrene	(5)			Not Detected					0.03
182) p-Dimethylaminoazobenzene	(5)			Not Detected					1
185) Chlorobenzilate	(5)			Not Detected					0.8
187) 3,3'-Dimethylbenzidine	(5)			Not Detected					6
188) Butylbenzylphthalate	(5)			Not Detected					0.5
191) 2-Acetylaminofluorene	(5)			Not Detected					3
193) 3,3'-Dichlorobenzidine	(5)			Not Detected					0.8
195) Benzo(a)anthracene	(5)			Not Detected					0.03
196) Chrysene	(5)			Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)			Not Detected					1
205) Di-n-octylphthalate	(6)			Not Detected					1
206) Benzo(b)fluoranthene	(6)			Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)			Not Detected					1
208) Benzo(k)fluoranthene	(6)			Not Detected					0.03
211) Benzo(a)pyrene	(6)			Not Detected					0.03
215) 3-Methylcholanthrene	(6)			Not Detected					1
219) Indeno(1,2,3-cd)pyrene	(6)			Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)			Not Detected					0.03
221) Benzo(g,h,i)perylene	(6)			Not Detected					0.03

Total number of targets = 117

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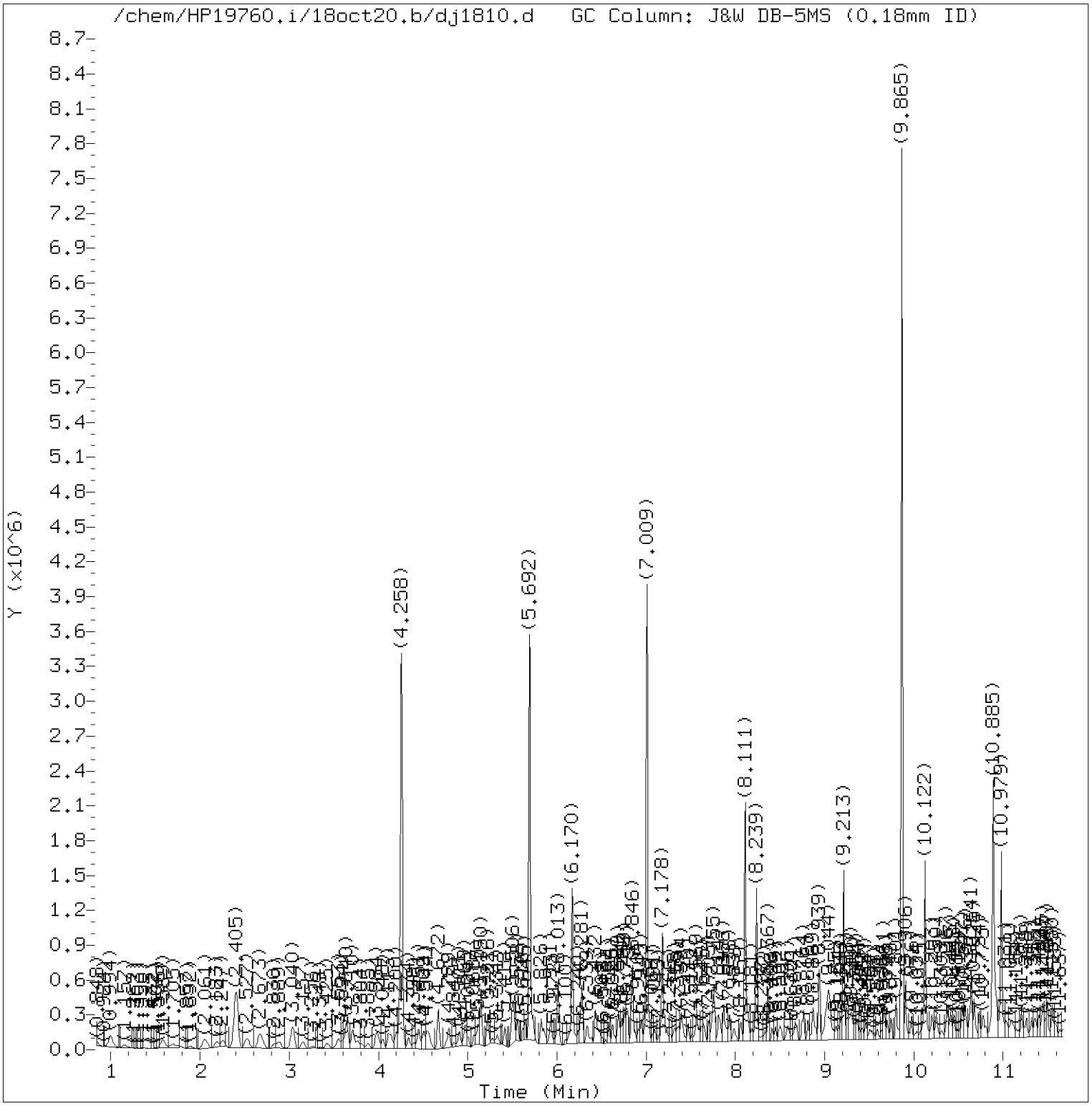
Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

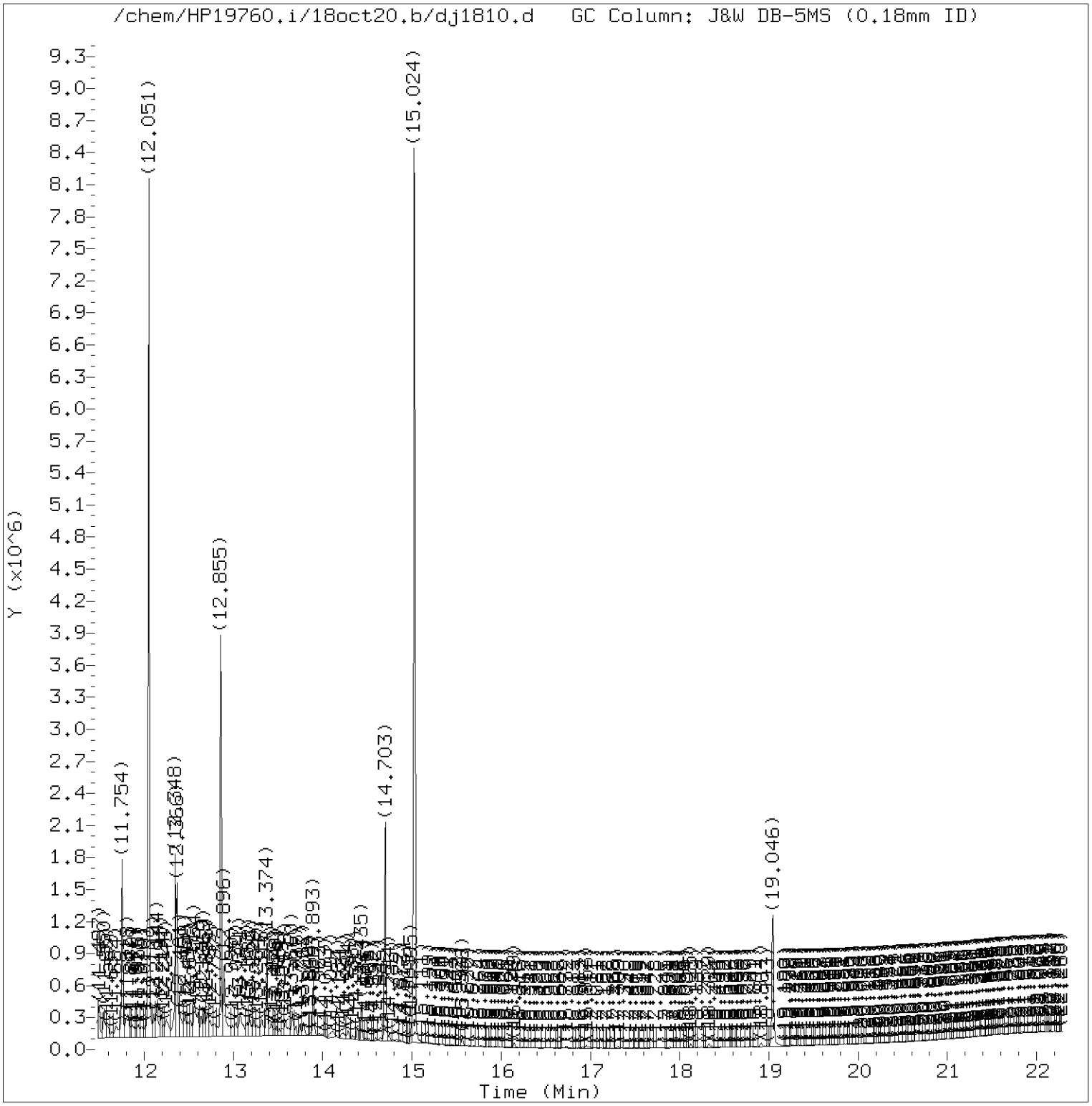
Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Digitally signed by Ashley R. Transue
on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Digitally signed by Ashley R. Transue
on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.258	112	1677022	20.711
17)$Phenol-d6	(1)	5.692	99	1667664	15.178
25)*1,4-Dichlorobenzene-d4	(1)	6.170	152	268943	5.000
40) o-Toluidine	(1)	6.846	106	159291	1.164
44)$Nitrobenzene-d5	(2)	7.009	82	1660759	16.681
65)*Naphthalene-d8	(2)	8.111	136	1051357	5.000
66) Naphthalene	(2)	8.140	128	15924	0.065
83) 2-Methylnaphthalene	(2)	9.248	142	30129	0.199
93)$2-Fluorobiphenyl	(3)	9.865	172	2731039	17.764
113)*Acenaphthene-d10	(3)	10.885	164	481250	5.000
126) Fluorene	(3)	11.736	166	7484	0.053
135)$2,4,6-Tribromophenol	(3)	12.051	330	683959	43.047
153)*Phenanthrene-d10	(4)	12.855	188	923659	5.000
155) Phenanthrene	(4)	12.885	178	12222	0.053
175)*Pyrene-d10	(5)	14.697	212	864857	5.000
179)$Terphenyl-d14	(5)	15.024	244	3255066	22.623
213)*Perylene-d12	(6)	19.046	264	642964	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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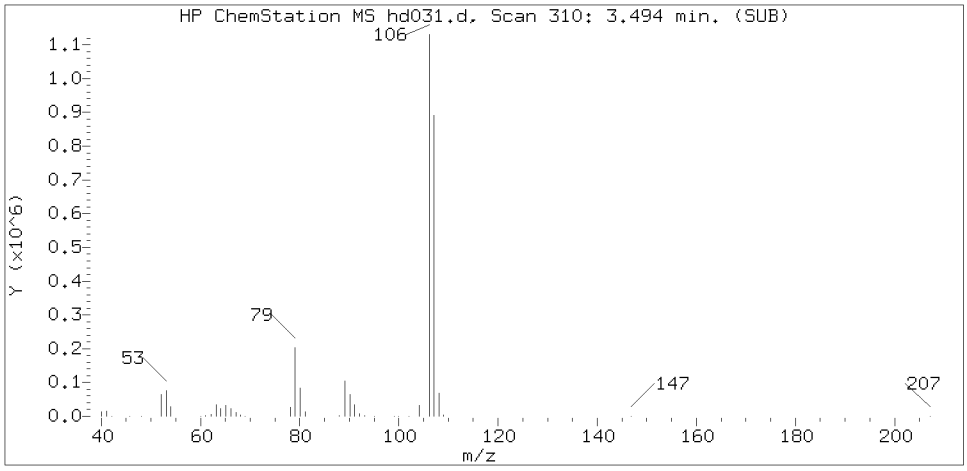
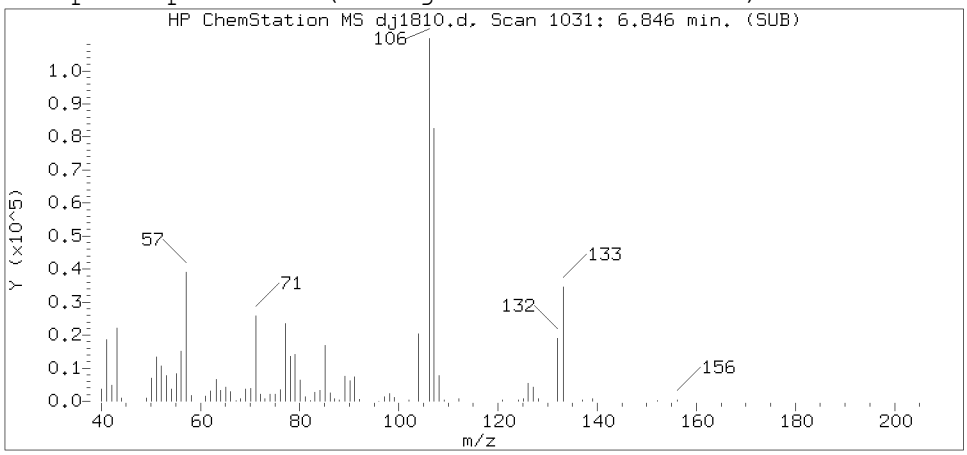
on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405

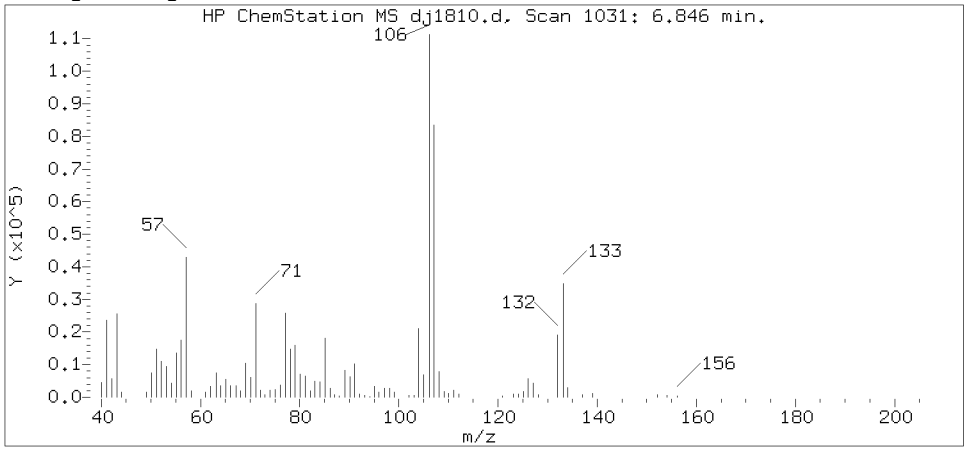
Reference Standard Spectrum for o-Toluidine

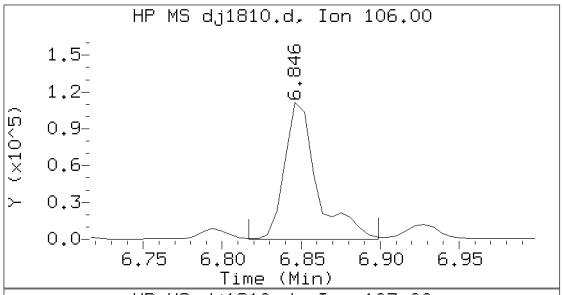


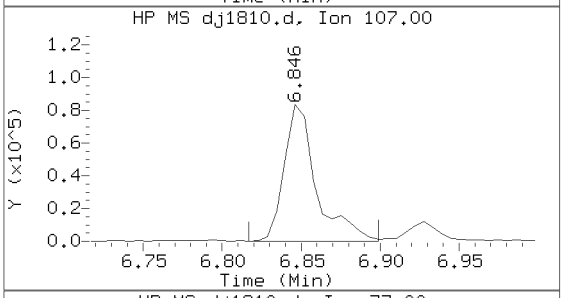
Sample Spectrum (Background Subtracted)

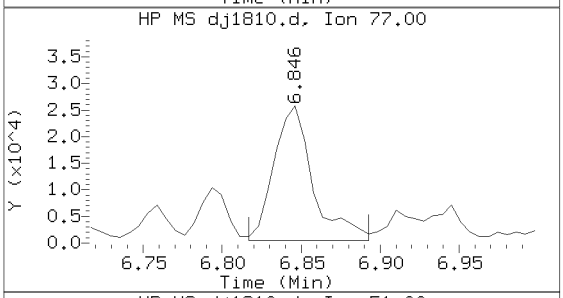


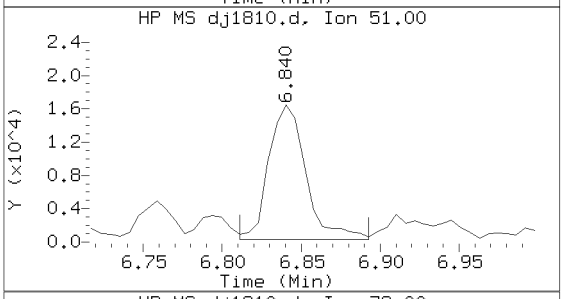
Sample Spectrum (Unaltered)

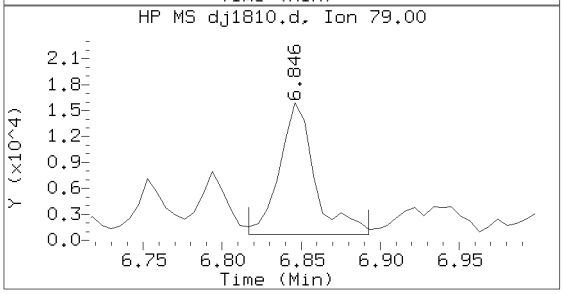












Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compound Number	: 40
Compound Name	: o-Toluidine
Scan Number	: 1031
Retention Time (minutes)	: 6.846
Relative Retention Time	: 0.00095
Quant Ion	: 106.00
Area (flag)	: 159291
On-column Amount (ng/ul)	: 1.1642

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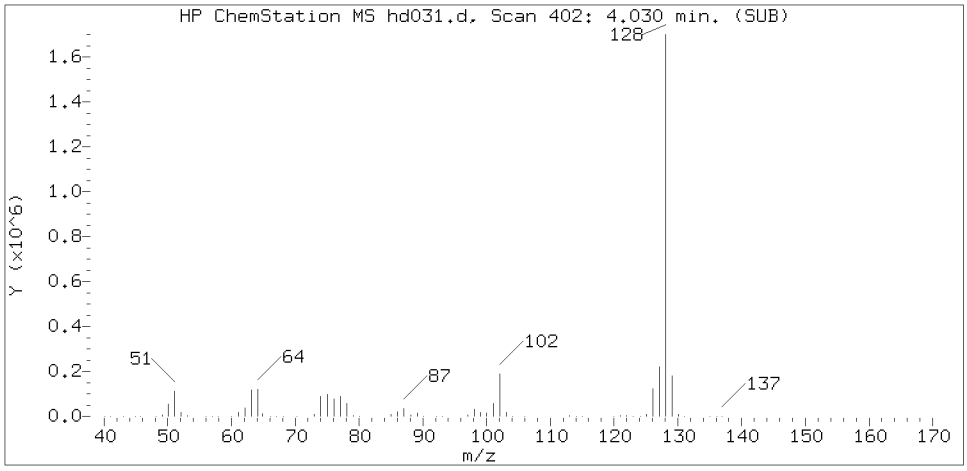
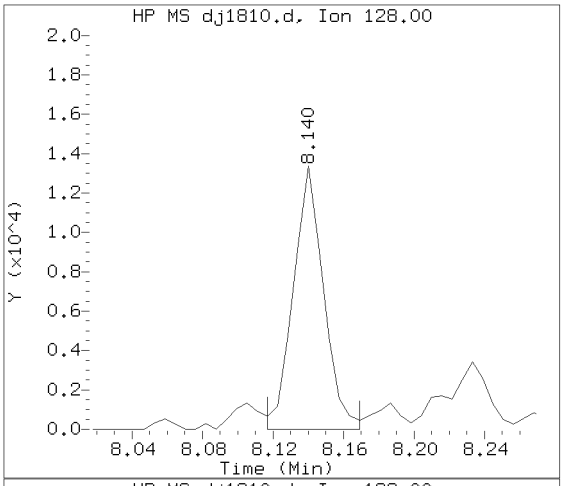
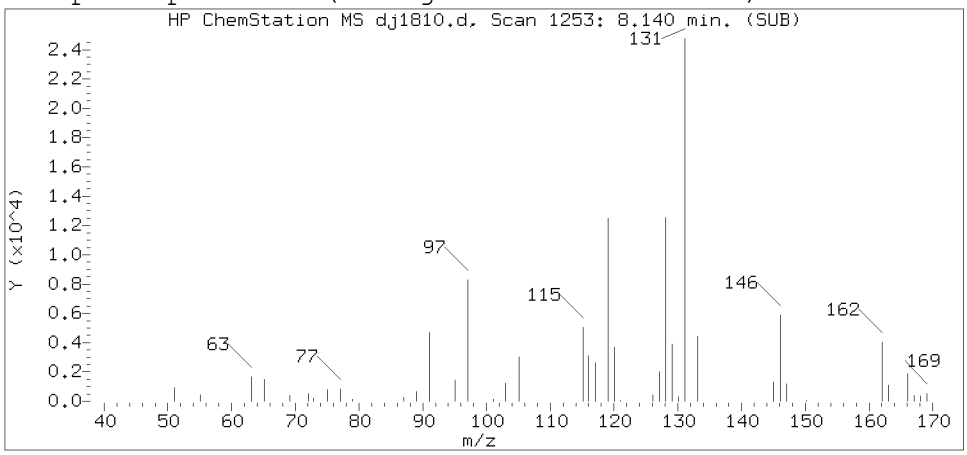
Target 3.5 esignature user ID: art12405

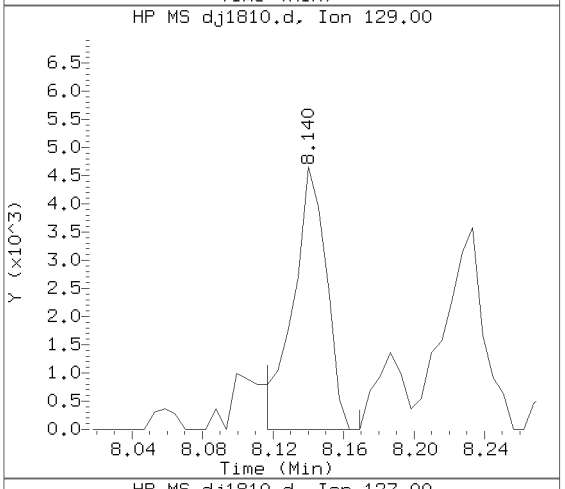
Reference Standard Spectrum for Naphthalene



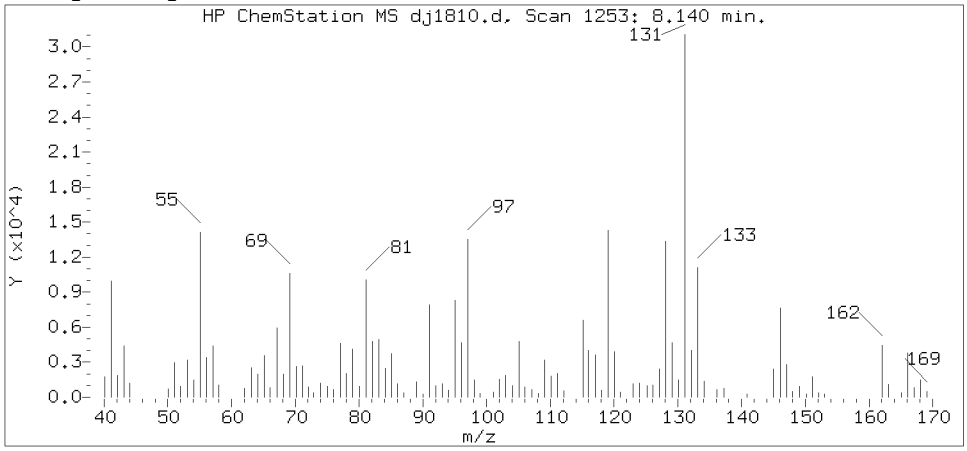


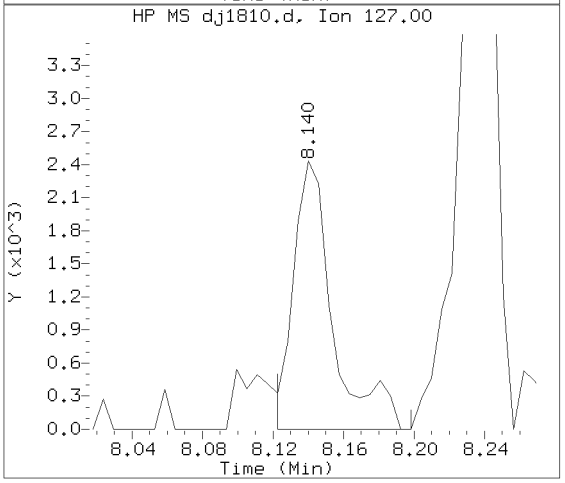
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compound Number : 66
Compound Name : Naphthalene
Scan Number : 1253
Retention Time (minutes) : 8.140
Relative Retention Time :-0.00000
Quant Ion : 128.00
Area (flag) : 15924
On-column Amount (ng/ul) : 0.0651

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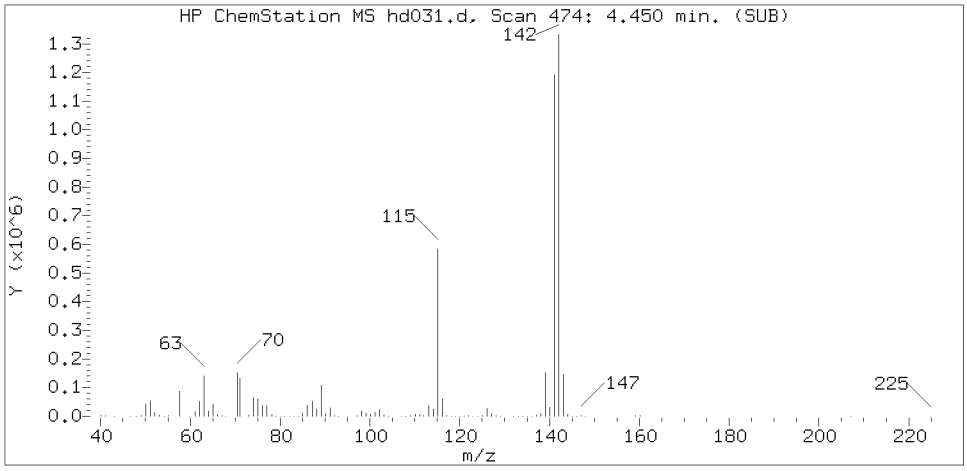
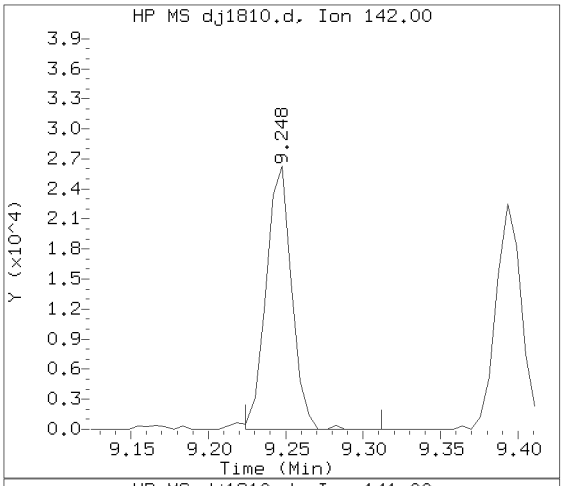
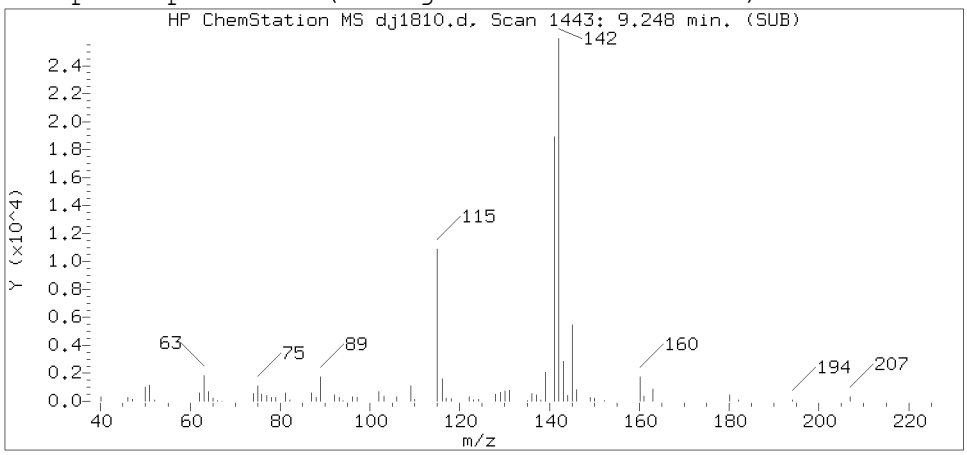
Target 3.5 esignature user ID: art12405

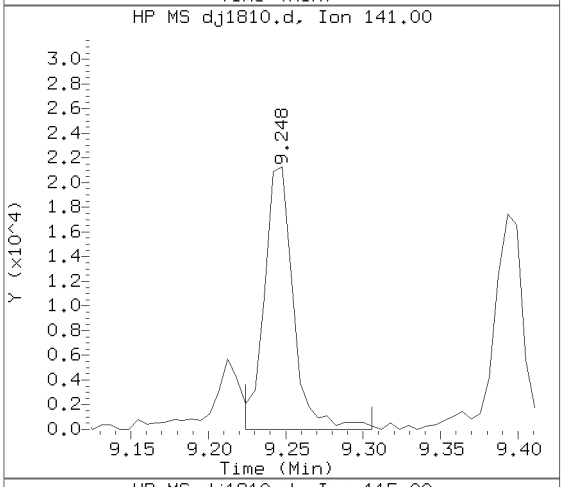
Reference Standard Spectrum for 2-Methylnaphthalene



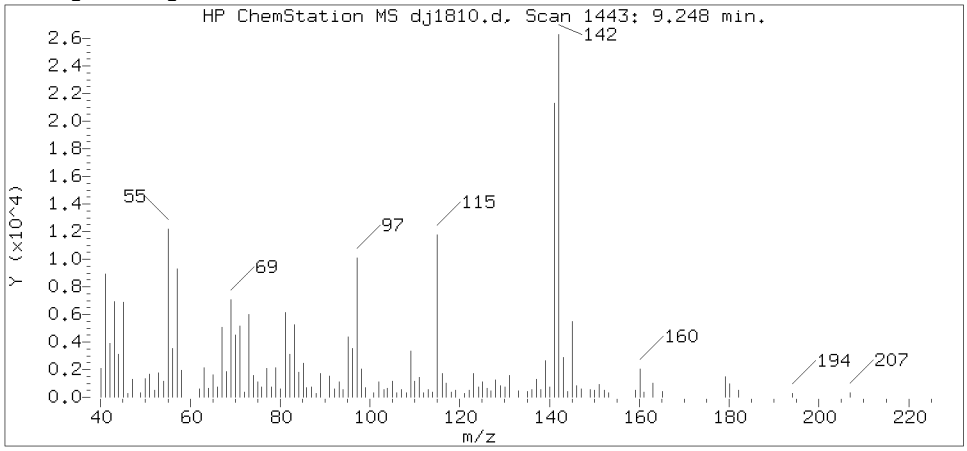


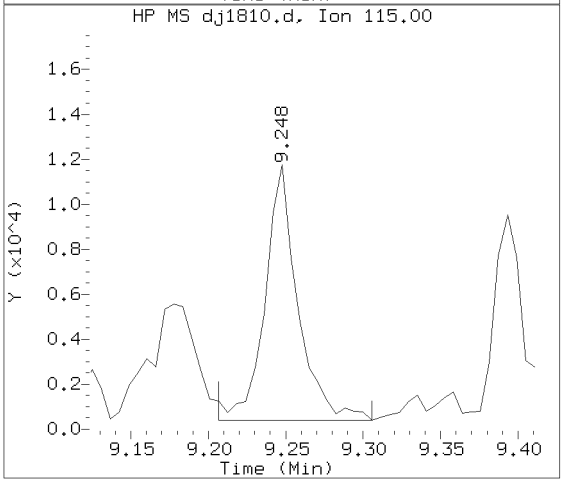
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

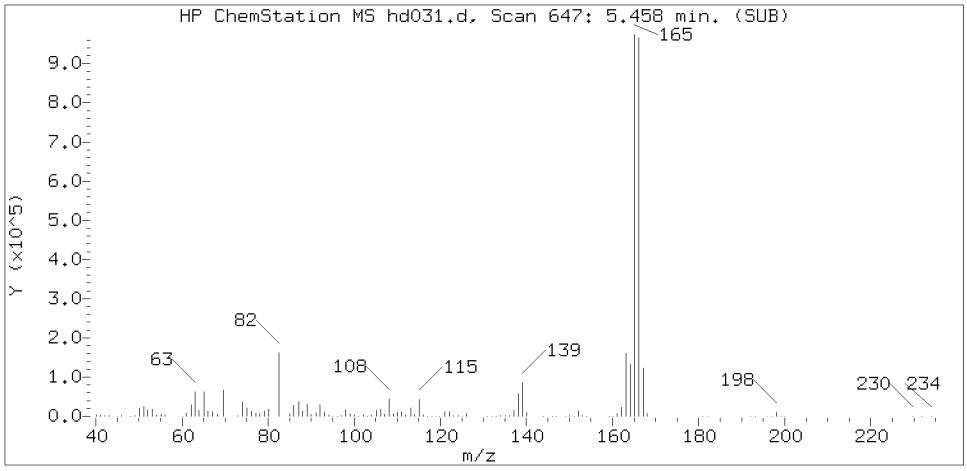
Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

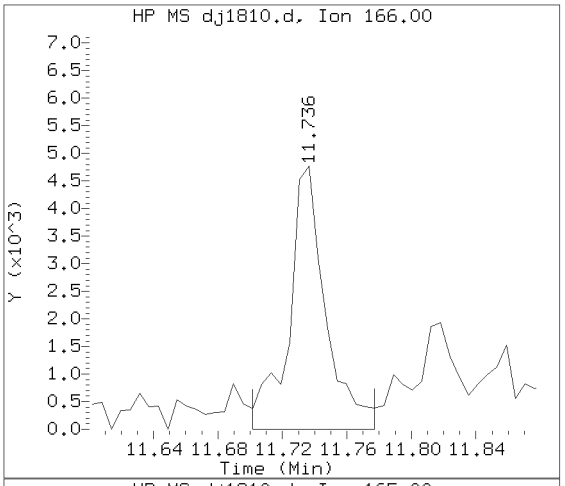
Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compound Number	: 83
Compound Name	: 2-Methylnaphthalene
Scan Number	: 1443
Retention Time (minutes)	: 9.248
Relative Retention Time	: 0.00000
Quant Ion	: 142.00
Area (flag)	: 30129
On-column Amount (ng/ul)	: 0.1990

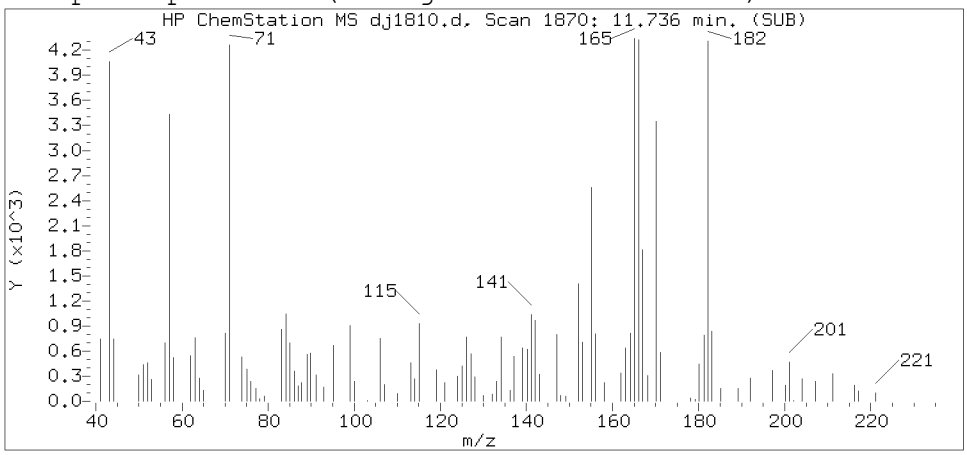
Digitally signed by Ashley R. Transue on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405

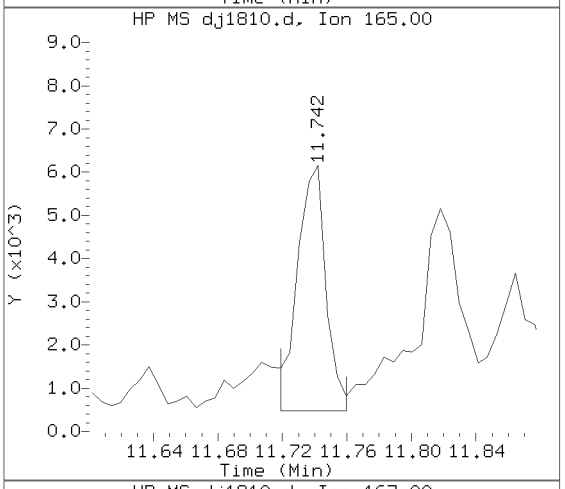
Reference Standard Spectrum for Fluorene



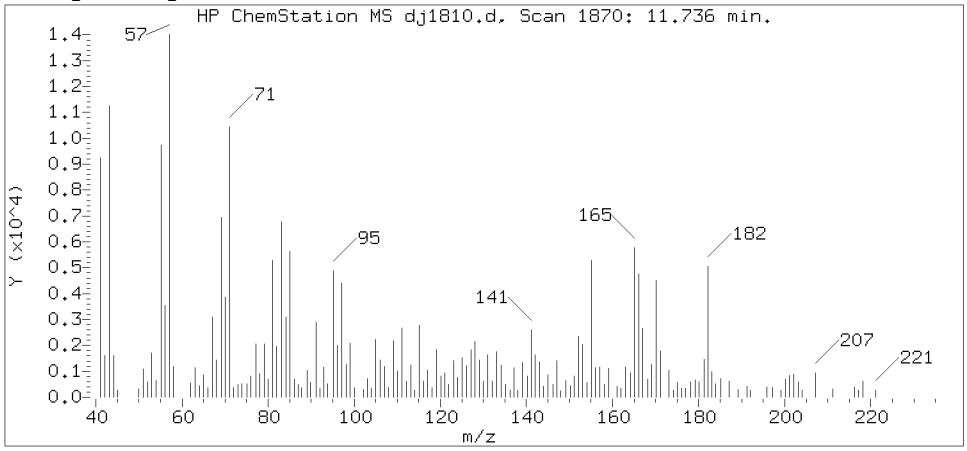


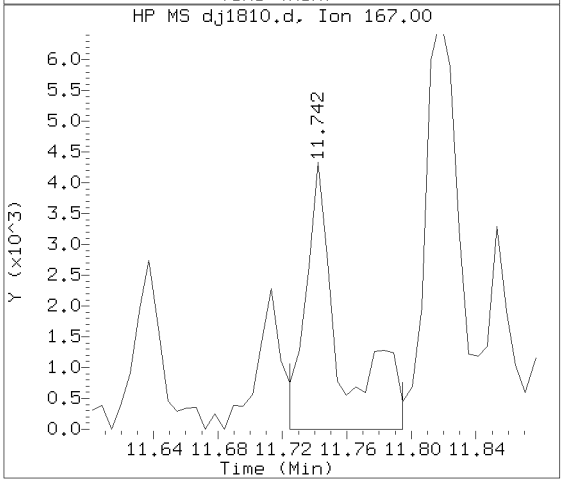
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

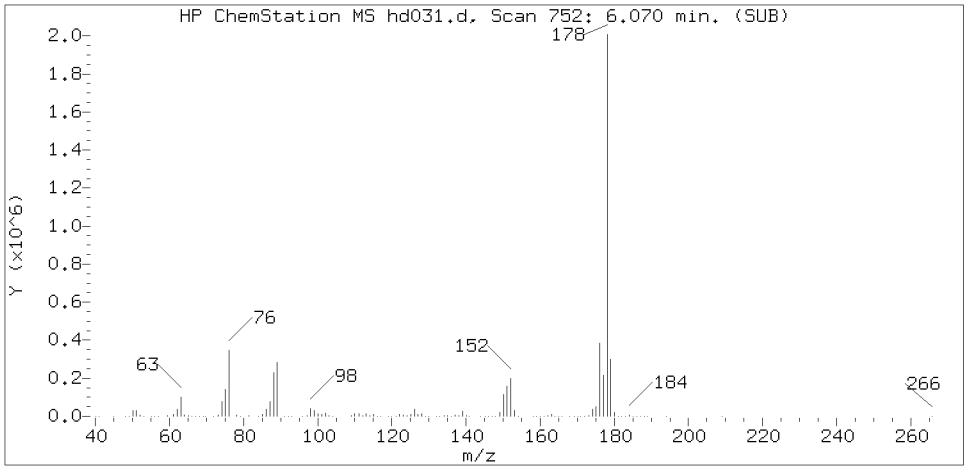
Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

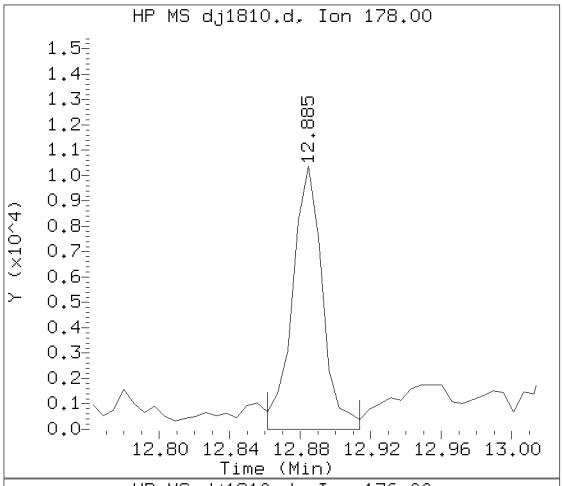
Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compound Number : 126
Compound Name : Fluorene
Scan Number : 1870
Retention Time (minutes) : 11.736
Relative Retention Time :-0.00058
Quant Ion : 166.00
Area (flag) : 7484
On-column Amount (ng/ul) : 0.0525

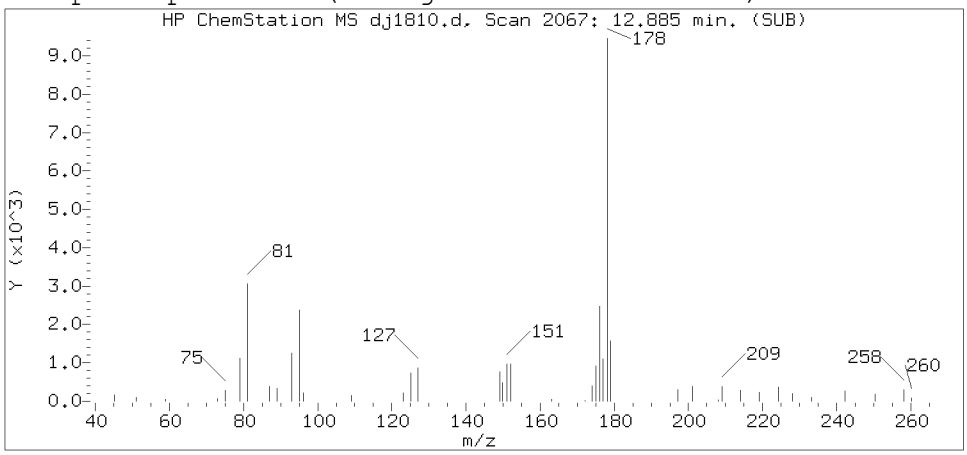
Digitally signed by Ashley R. Transue on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405

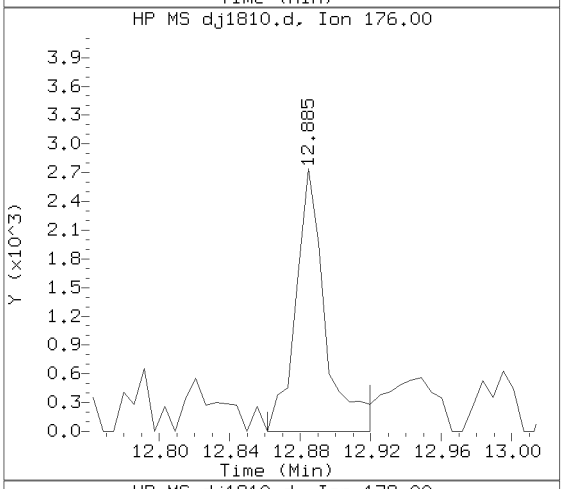
Reference Standard Spectrum for Phenanthrene



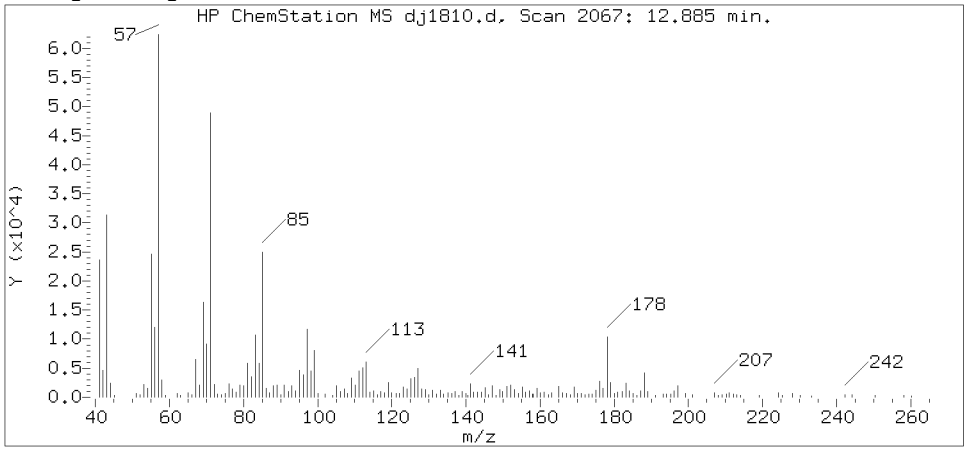


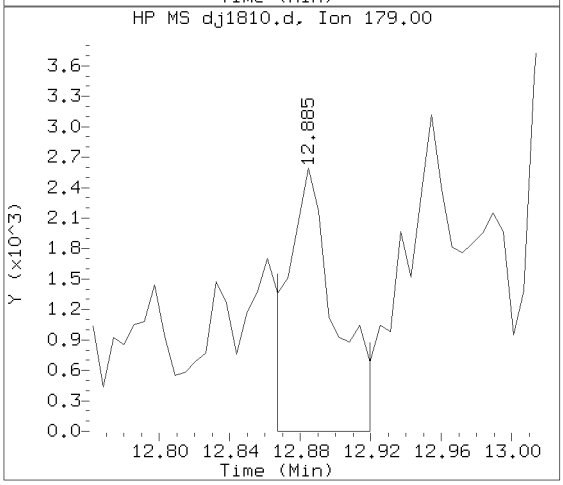
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem/HP19760.i/18oct20.b/dj1810.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 14:55 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 17:31 art12405

Sample Name: SBLKWF292 Lab Sample ID: SBLKWF292

Compound Number	: 155
Compound Name	: Phenanthrene
Scan Number	: 2067
Retention Time (minutes)	: 12.885
Relative Retention Time	: 0.00000
Quant Ion	: 178.00
Area (flag)	: 12222
On-column Amount (ng/ul)	: 0.0526

Digitally signed by Ashley R. Transue on 10/20/2018 at 17:32.
Target 3.5 esignature user ID: art12405

94283MS Lancaster Laboratories, Inc. 9850253MS
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1151.d Injection date and time: **18-OCT-2018 13:33**
Data file Sample Info. Line: 94283MS;9850253MS;1;3;MS;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.218	(0.000)	922	152	90798	(-12)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	328654	(-8)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	158239	(-8)	5.00	
158) Phenanthrene-d10	13.016	(0.005)	2193	188	286884	(-12)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	297491	(-14)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	293409	(-16)	5.00	

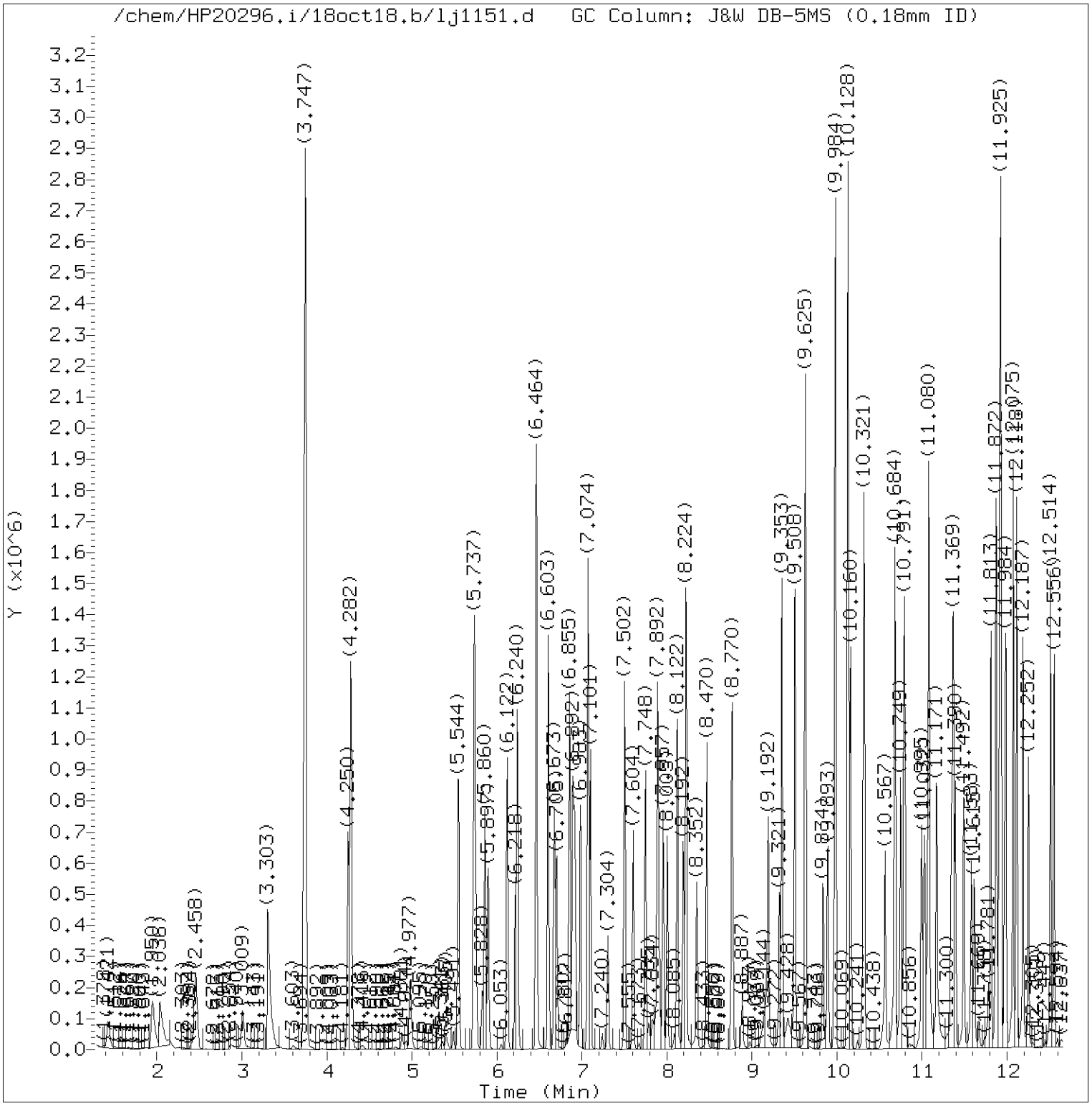
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.074	(0.000)	82	756600	20.706	83%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	1061062	19.722	79%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1054168	22.849	91%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)	10.749	(0.000)	165	118202	10.758	43.03			0.1
123) 2,4-Dinitrotoluene	(3)	11.390	(0.000)	165	153545	10.737	42.95			0.3
129) Diethylphthalate	(3)	11.813	(-0.000)	149	492154	9.942	39.77			0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

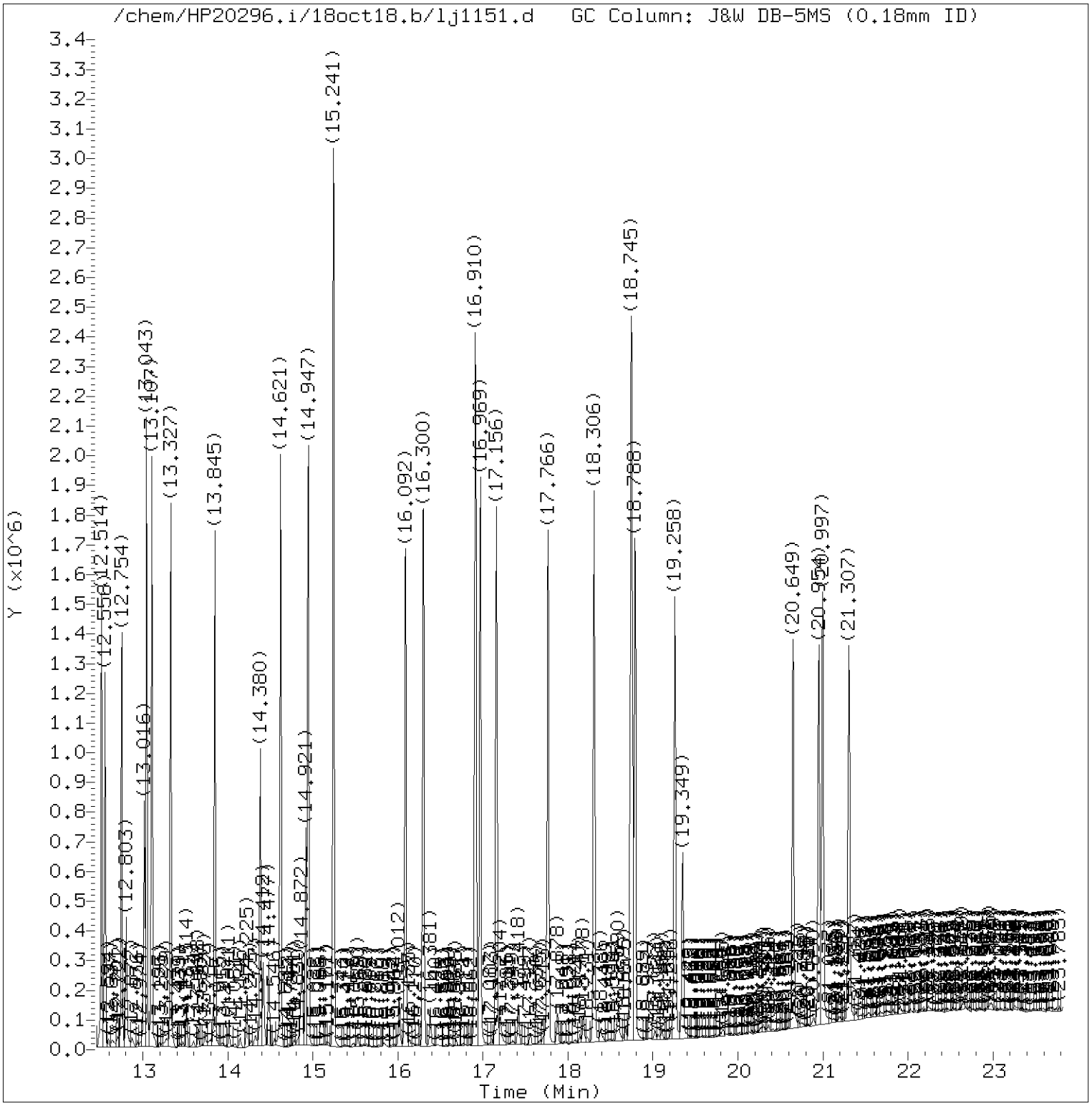
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1151.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:33 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MS Lab Sample ID: 9850253MS

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1151.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:33 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MS Lab Sample ID: 9850253MS

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1151.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 13:33 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MS Lab Sample ID: 9850253MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.218	152	90798	5.000
45)$Nitrobenzene-d5	(2)	7.074	82	756600	20.706
68)*Naphthalene-d8	(2)	8.192	136	328654	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	1061062	19.722
113) 2,6-Dinitrotoluene	(3)	10.749	165	118202	10.758
118)*Acenaphthene-d10	(3)	11.027	164	158239	5.000
123) 2,4-Dinitrotoluene	(3)	11.390	165	153545	10.737
129) Diethylphthalate	(3)	11.813	149	492154	9.942
158)*Phenanthrene-d10	(4)	13.016	188	286884	5.000
180)*Pyrene-d10	(5)	14.915	212	297491	5.000
184)$Terphenyl-d14	(5)	15.241	244	1054168	22.849
218)*Perylene-d12	(6)	19.349	264	293409	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

94283MSD Lancaster Laboratories, Inc. 9850254MSD
Analysis Summary for GC/MS Semivolatiles

Data file: /chem/HP20296.i/18oct18.b/lj1152.d Injection date and time: **18-OCT-2018 14:01**
Data file Sample Info. Line: 94283MSD;9850254MSD;1;3;MSD;;RAAPVA; Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 22-OCT-2018 16:11
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct18.b/lj1141.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.218	(0.000)	922	152	86493	(-17)	5.00	
68) Naphthalene-d8	8.192	(0.011)	1291	136	330453	(-7)	5.00	
118) Acenaphthene-d10	11.027	(0.005)	1821	164	153627	(-10)	5.00	
158) Phenanthrene-d10	13.016	(0.005)	2193	188	281618	(-14)	5.00	
180) Pyrene-d10	14.915	(0.011)	2548	212	292591	(-16)	5.00	
218) Perylene-d12	19.349	(0.011)	3377	264	295810	(-16)	5.00	

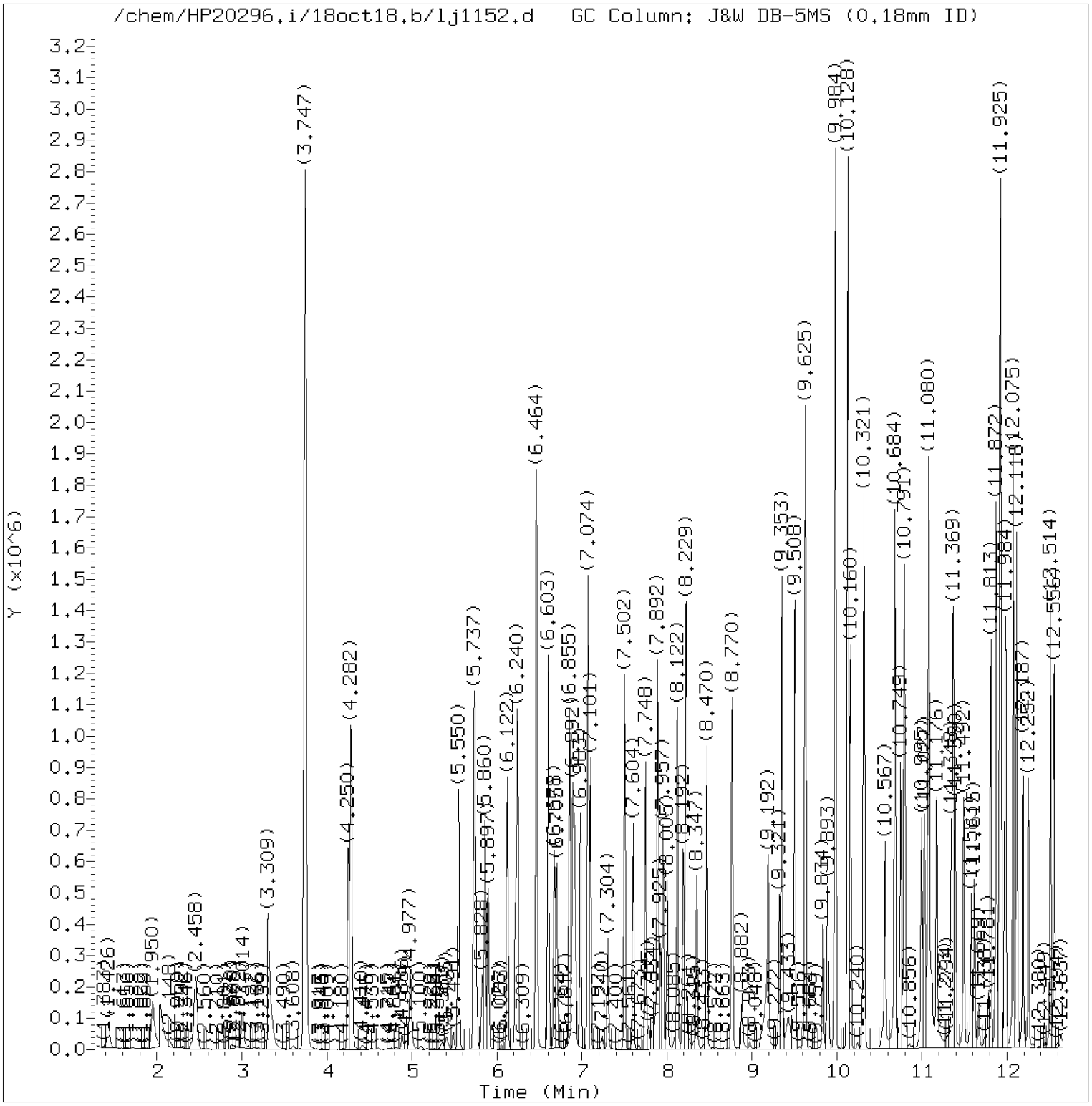
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
45) Nitrobenzene-d5	(2)	7.074	(0.000)	82	737180	20.065	80%		30 - 111
96) 2-Fluorobiphenyl	(3)	9.984	(0.000)	172	1040101	19.913	80%		39 - 105
184) Terphenyl-d14	(5)	15.241	(0.000)	244	1048572	23.108	92%		27 - 126

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)	10.749	(0.000)	165	112427	10.539	42.16			0.1
123) 2,4-Dinitrotoluene	(3)	11.390	(0.000)	165	152126	10.957	43.83			0.3
129) Diethylphthalate	(3)	11.813	(-0.000)	149	493878	10.276	41.10			0.5

Total number of targets = 3

Digitally signed by Brandon K. Cordova on 10/22/2018 at 16:13. Target 3.5 esignature user ID: bkc25363

Secondary review performed and digitally signed by Matthew E. Barton on 10/23/2018 at 07:11. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

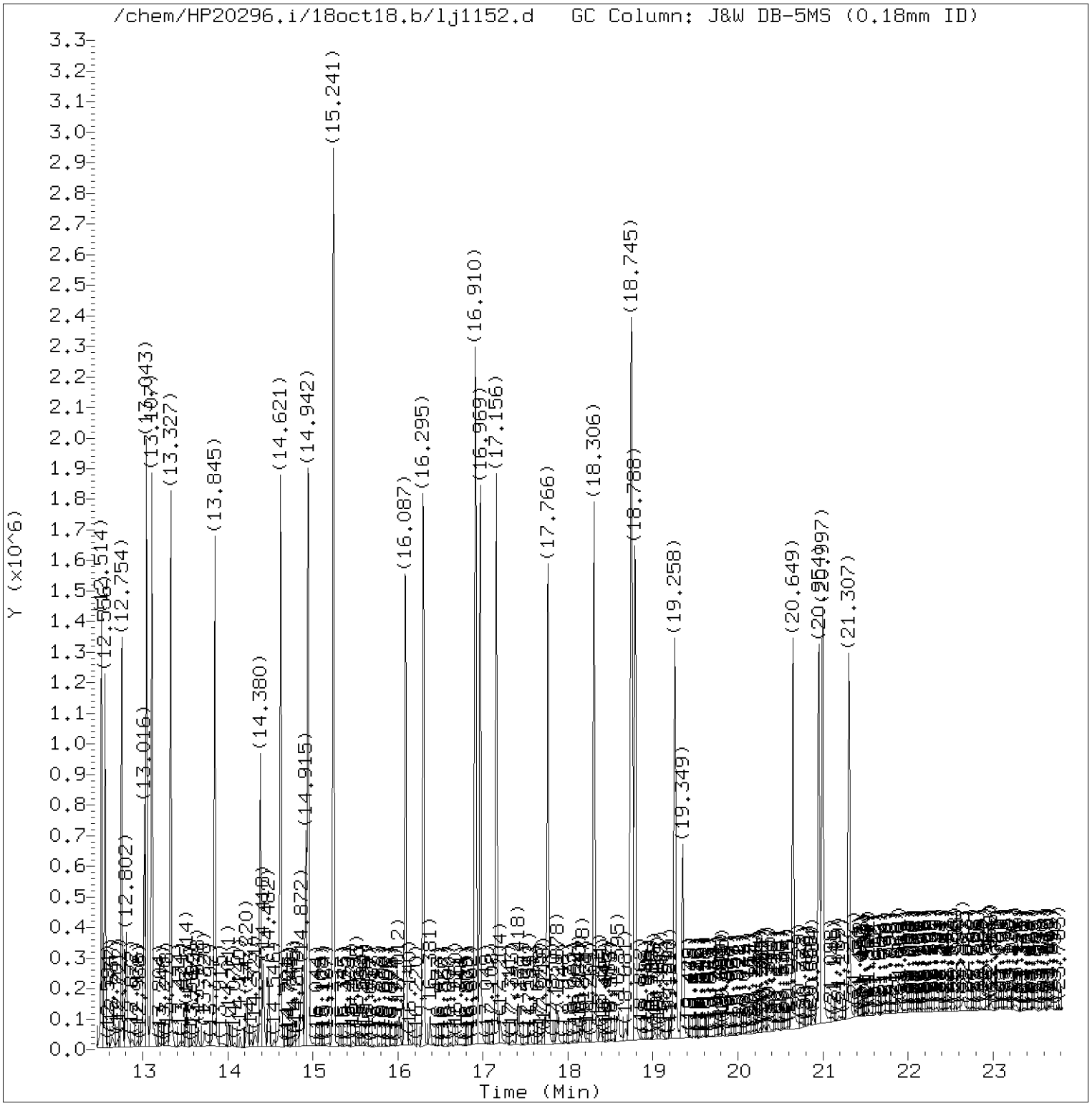
Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1152.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 14:01 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1152.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 14:01 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct18.b/lj1152.d Instrument ID: HP20296.i
Injection date and time: 18-OCT-2018 14:01 Analyst ID: knb25316

Method used: /chem/HP20296.i/18oct18.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 22-OCT-2018 16:11
Date, time and analyst ID of latest file update: 22-Oct-2018 16:11 bkc25363

Sample Name: 94283MSD Lab Sample ID: 9850254MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.218	152	86493	5.000
45)$Nitrobenzene-d5	(2)	7.074	82	737180	20.065
68)*Naphthalene-d8	(2)	8.192	136	330453	5.000
96)$2-Fluorobiphenyl	(3)	9.984	172	1040101	19.913
113) 2,6-Dinitrotoluene	(3)	10.749	165	112427	10.539
118)*Acenaphthene-d10	(3)	11.027	164	153627	5.000
123) 2,4-Dinitrotoluene	(3)	11.390	165	152126	10.957
129) Diethylphthalate	(3)	11.813	149	493878	10.276
158)*Phenanthrene-d10	(4)	13.016	188	281618	5.000
180)*Pyrene-d10	(5)	14.915	212	292591	5.000
184)$Terphenyl-d14	(5)	15.241	244	1048572	23.108
218)*Perylene-d12	(6)	19.349	264	295810	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Brandon K. Cordova
on 10/22/2018 at 16:13.
Target 3.5 esignature user ID: bkc25363

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

288WTLCS

Data file: /chem/HP20296.i/18oct17a.b/lj1105.d
Injection date and time: **17-OCT-2018 23:35**
Data file Sample Info. Line: 288WTLCS;288WTLCS;1;3;LCS;;RAAPVA;
Instrument ID: **HP20296.i** Batch: **18288WAT**
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Blank Data file reference: **/chem/HP20296.i/18oct17a.b/lj1104.d**

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: **22230M**
Calibration date and time (Last Method Edit): 18-OCT-2018 13:30
Mid Level Daily Calibration Standard Reference: **/chem/HP20296.i/18oct17a.b/lj1101.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf*(Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 1 ul

Analysis Comments:

Internal Standards	RT	(+/-RT)	Scan	QIon	Area	(+/- %Change)	Conc. (on-column)	QC Flag
26) 1,4-Dichlorobenzene-d4	6.224	(0.005)	923	152	85388	(-6)	5.00	
68) Naphthalene-d8	8.203	(0.005)	1293	136	330362	(1)	5.00	
118) Acenaphthene-d10	11.037	(0.005)	1823	164	151990	(-1)	5.00	
158) Phenanthrene-d10	13.022	(0.005)	2194	188	275775	(-6)	5.00	
180) Pyrene-d10	14.926	(0.005)	2550	212	288941	(-8)	5.00	
218) Perylene-d12	19.360	(0.000)	3379	264	296881	(-4)	5.00	

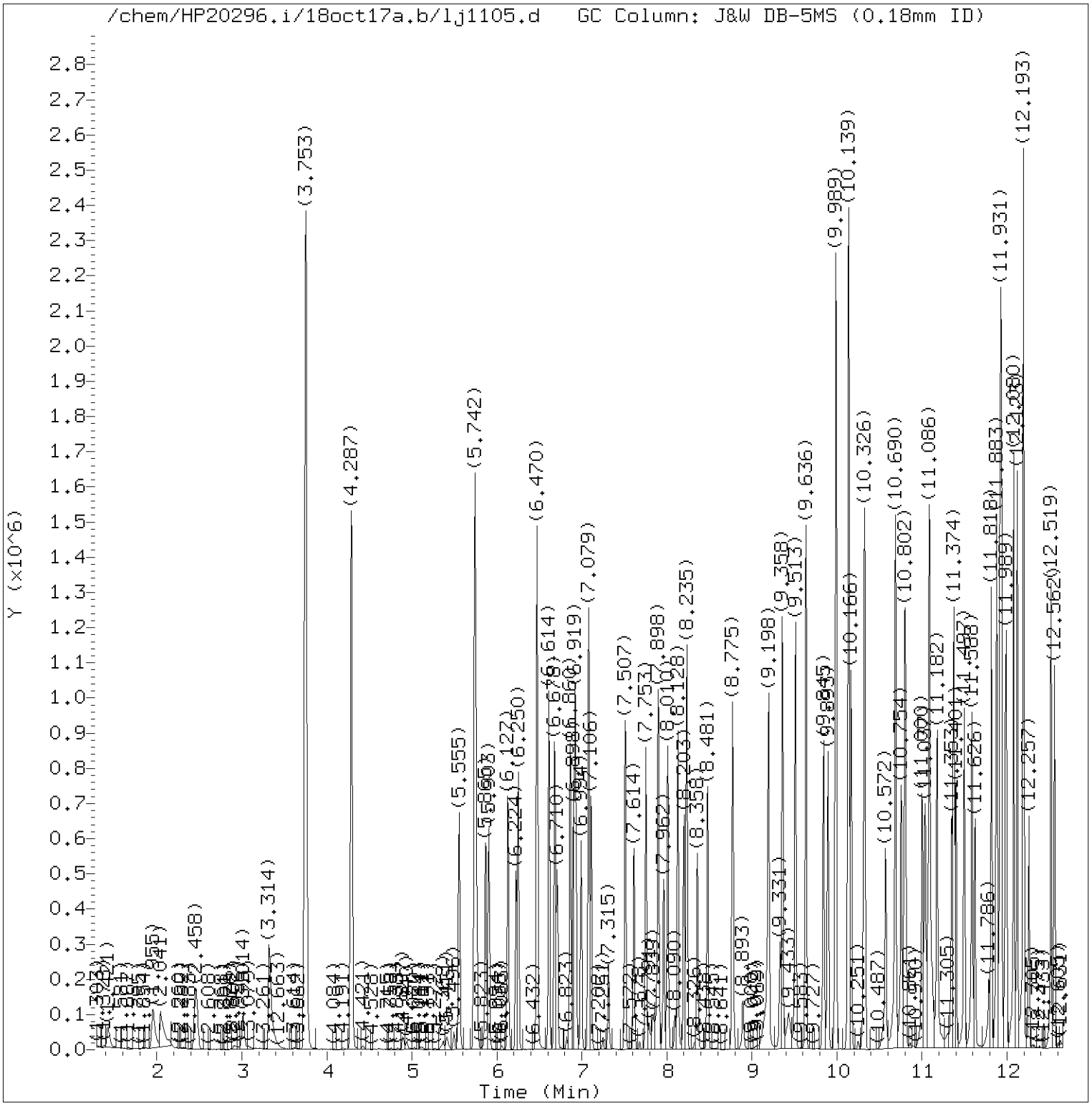
Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
45) Nitrobenzene-d5	(2)	7.079	(0.000)	82	596022	16.227	65%
96) 2-Fluorobiphenyl	(3)	9.989	(0.000)	172	890165	17.226	69%
184) Terphenyl-d14	(5)	15.252	(0.000)	244	1056905	23.586	94%

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
113) 2,6-Dinitrotoluene	(3)	10.754	(0.000)	165	106235	10.066	40.26			0.1
123) 2,4-Dinitrotoluene	(3)	11.401	(-0.000)	165	142083	10.344	41.38			0.3
129) Diethylphthalate	(3)	11.818	(-0.000)	149	455778	9.586	38.34			0.5

Total number of targets = 3

Digitally signed by Kira N. Beck on 10/18/2018 at 13:52. Target 3.5 esignature user ID: knb25316

Secondary review performed and digitally signed by Matthew E. Barton on 10/22/2018 at 12:30. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

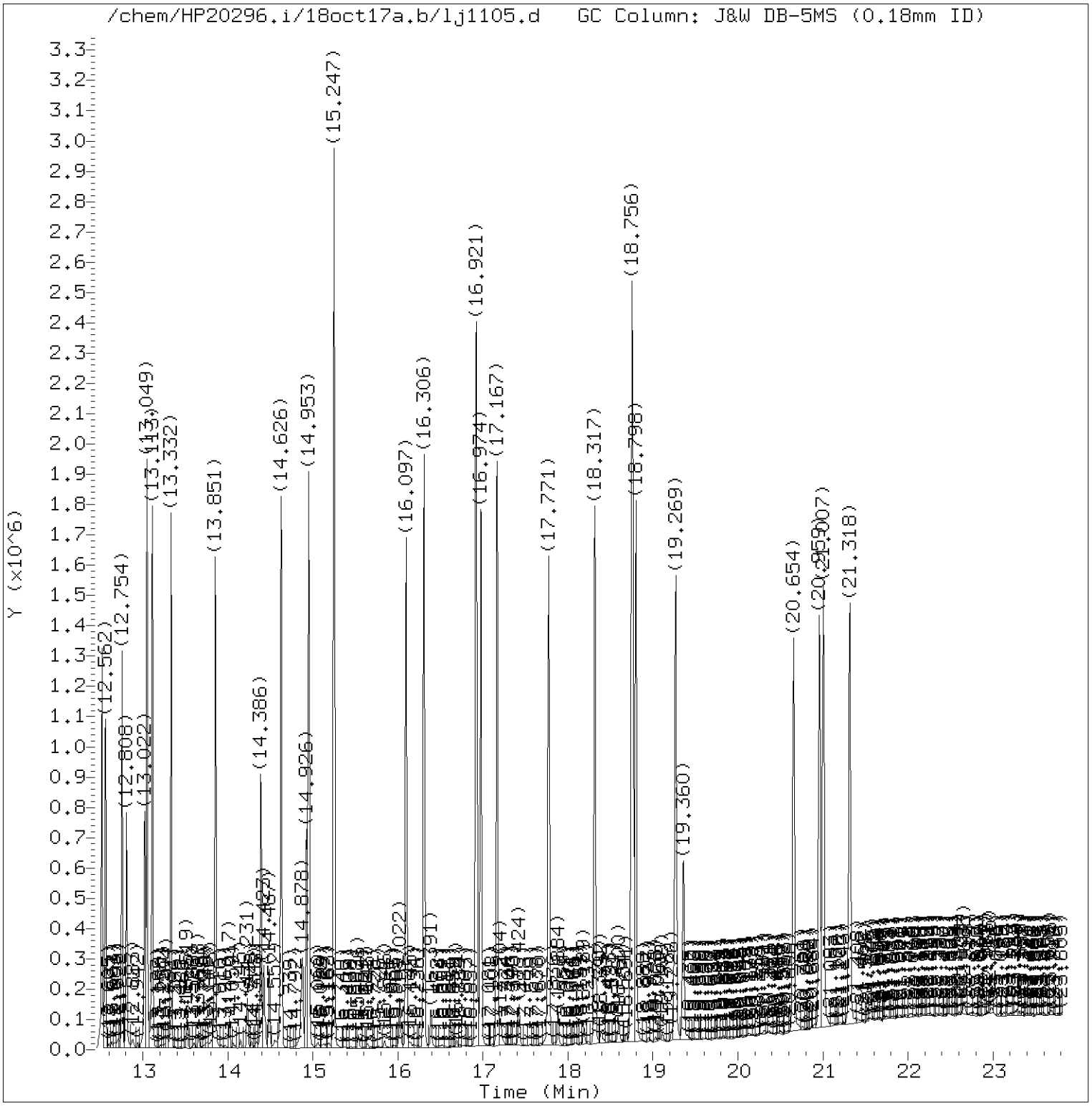
Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1105.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:35 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: 288WTLCS Lab Sample ID: 288WTLCS

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1105.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:35 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: 288WTLCS Lab Sample ID: 288WTLCS

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316

Quant Report

Target Revision 3.5

Data File: /chem/HP20296.i/18oct17a.b/lj1105.d Instrument ID: HP20296.i
Injection date and time: 17-OCT-2018 23:35 Analyst ID: art12405

Method used: /chem/HP20296.i/18oct17a.b/rv8270d.m Sublist used: 22230M
Calibration date and time: 18-OCT-2018 13:30
Date, time and analyst ID of latest file update: 18-Oct-2018 13:51 knb25316

Sample Name: 288WTLCS Lab Sample ID: 288WTLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
26)*1,4-Dichlorobenzene-d4	(1)	6.224	152	85388	5.000
45)$Nitrobenzene-d5	(2)	7.079	82	596022	16.227
68)*Naphthalene-d8	(2)	8.203	136	330362	5.000
96)$2-Fluorobiphenyl	(3)	9.989	172	890165	17.226
113) 2,6-Dinitrotoluene	(3)	10.754	165	106235	10.066
118)*Acenaphthene-d10	(3)	11.037	164	151990	5.000
123) 2,4-Dinitrotoluene	(3)	11.401	165	142083	10.344
129) Diethylphthalate	(3)	11.818	149	455778	9.586
158)*Phenanthrene-d10	(4)	13.022	188	275775	5.000
180)*Pyrene-d10	(5)	14.926	212	288941	5.000
184)$Terphenyl-d14	(5)	15.252	244	1056905	23.586
218)*Perylene-d12	(6)	19.360	264	296881	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kira N. Beck
on 10/18/2018 at 13:52.
Target 3.5 esignature user ID: knb25316

Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

292WFLCS

Data file: /chem/HP19760.i/18oct20.b/dj1813.d
Data file Sample Info. Line: 292WFLCS;292WFLCS;1;3;LCS;;;
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Injection date and time: **20-OCT-2018 16:18**
Instrument ID: **HP19760.i** Batch: **18292WAF**

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.170(0.000)	915	152	255256 (-14)	5.00	
65) Naphthalene-d8	8.111(0.000)	1248	136	960009 (-15)	5.00	
113) Acenaphthene-d10	10.885(0.006)	1724	164	421424 (-21)	5.00	
153) Phenanthrene-d10	12.855(0.006)	2062	188	821164 (-17)	5.00	
175) Pyrene-d10	14.697(0.006)	2378	212	791168 (-18)	5.00	
213) Perylene-d12	19.040(0.006)	3123	264	613539 (-25)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.258(0.000)	112	48236	0.628	1%
17) Phenol-d6	(1)	5.698(0.000)	99	46891	0.450	1%
44) Nitrobenzene-d5	(2)	7.009(0.000)	82	41544	0.457	2%
93) 2-Fluorobiphenyl	(3)	9.865(0.000)	172	71428	0.531	2%
135) 2,4,6-Tribromophenol	(3)	12.051(-0.001)	330	12267	0.882	2%
179) Terphenyl-d14	(5)	15.024(0.000)	244	74571	0.567	2%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)			Not Detected					0.5
4) N-Nitrosodimethylamine	(1)			Not Detected					0.5
5) Pyridine	(1)			Not Detected					0.5
7) 2-Picoline	(1)			Not Detected					0.5
18) Phenol	(1)			Not Detected					0.1
19) Aniline	(1)			Not Detected					0.8
22) bis(2-Chloroethyl)ether	(1)			Not Detected					0.1
23) 2-Chlorophenol	(1)			Not Detected					0.1
24) 1,3-Dichlorobenzene	(1)			Not Detected					0.1
26) 1,4-Dichlorobenzene	(1)			Not Detected					0.1
27) Benzyl alcohol	(1)			Not Detected					3
28) 1,2-Dichlorobenzene	(1)			Not Detected					0.1
31) 2-Methylphenol	(1)			Not Detected					0.1
34) bis(2-Chloroisopropyl)ether	(1)			Not Detected					0.1
36) Acetophenone	(1)			Not Detected					1
37) 4-Methylphenol	(1)			Not Detected					0.1
38) N-Nitroso-di-n-propylamine	(1)			Not Detected					0.2
40) o-Toluidine	(1)			Not Detected					1
43) Hexachloroethane	(1)			Not Detected					0.3
45) Nitrobenzene	(2)			Not Detected					0.1
50) Isophorone	(2)			Not Detected					0.1
51) 2-Nitrophenol	(2)			Not Detected					0.8
53) 2,4-Dimethylphenol	(2)			Not Detected					0.8
55) bis(2-Chloroethoxy)methane	(2)			Not Detected					0.1
60) 2,4-Dichlorophenol	(2)			Not Detected					0.1
62) 1,2,4-Trichlorobenzene	(2)			Not Detected					0.1

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Lancaster Laboratories, Inc.
Analysis Summary for GC/MS Semivolatiles

292WFLCS

Data file: /chem/HP19760.i/18oct20.b/dj1813.d Injection date and time: **20-OCT-2018 16:18**
Data file Sample Info. Line: 292WFLCS;292WFLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
66) Naphthalene	(2)				Not Detected					0.03
67) 4-Chloroaniline	(2)				Not Detected					1
71) Hexachlorobutadiene	(2)				Not Detected					0.1
80) 4-Chloro-3-methylphenol	(2)				Not Detected					0.1
83) 2-Methylnaphthalene	(2)				Not Detected					0.03
85) Hexachlorocyclopentadiene	(3)				Not Detected					1
86) 1,2,4,5-Tetrachlorobenzene	(3)				Not Detected					0.1
90) 2,4,6-Trichlorophenol	(3)				Not Detected					0.1
92) 2,4,5-Trichlorophenol	(3)				Not Detected					0.1
95) 1,1'-Biphenyl	(3)				Not Detected					0.8
96) 2-Chloronaphthalene	(3)				Not Detected					0.1
99) Diphenyl ether	(3)				Not Detected					0.1
100) 2-Nitroaniline	(3)				Not Detected					0.5
106) Dimethylphthalate	(3)				Not Detected					0.5
107) 1,3-Dinitrobenzene	(3)				Not Detected					0.5
108) 2,6-Dinitrotoluene	(3)				Not Detected					0.1
109) Acenaphthylene	(3)				Not Detected					0.03
112) 3-Nitroaniline	(3)				Not Detected					0.8
114) Acenaphthene	(3)				Not Detected					0.03
115) 2,4-Dinitrophenol	(3)				Not Detected					4
116) 4-Nitrophenol	(3)				Not Detected					3
118) 2,4-Dinitrotoluene	(3)				Not Detected					0.3
119) Dibenzofuran	(3)				Not Detected					0.1
121) 1-Naphthylamine	(3)				Not Detected					2
122) 2,3,4,6-Tetrachlorophenol	(3)				Not Detected					1
123) 2-Naphthylamine	(3)				Not Detected					2
124) Diethylphthalate	(3)				Not Detected					0.5
126) Fluorene	(3)				Not Detected					0.03
127) 4-Chlorophenyl-phenylether	(3)				Not Detected					0.1
129) 4-Nitroaniline	(3)				Not Detected					0.2
130) 4,6-Dinitro-2-methylphenol	(4)				Not Detected					2
131) N-Nitrosodiphenylamine	(4)				Not Detected					0.2
143) 4-Bromophenyl-phenylether	(4)				Not Detected					0.1
145) Hexachlorobenzene	(4)				Not Detected					0.03
149) Pentachlorophenol	(4)				Not Detected					0.3
155) Phenanthrene	(4)				Not Detected					0.03
157) Anthracene	(4)				Not Detected					0.03
165) Di-n-butylphthalate	(4)				Not Detected					0.5
173) Fluoranthene	(4)				Not Detected					0.03
177) Pyrene	(5)				Not Detected					0.03
188) Butylbenzylphthalate	(5)				Not Detected					0.5
193) 3,3'-Dichlorobenzidine	(5)				Not Detected					0.8
195) Benzo(a)anthracene	(5)				Not Detected					0.03
196) Chrysene	(5)				Not Detected					0.03
199) bis(2-Ethylhexyl)phthalate	(5)				Not Detected					1
205) Di-n-octylphthalate	(6)				Not Detected					1
206) Benzo(b)fluoranthene	(6)				Not Detected					0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)				Not Detected					1
208) Benzo(k)fluoranthene	(6)				Not Detected					0.03
211) Benzo(a)pyrene	(6)				Not Detected					0.03
219) Indeno(1,2,3-cd)pyrene	(6)				Not Detected					0.03
220) Dibenz(a,h)anthracene	(6)				Not Detected					0.03
221) Benzo(g,h,i)perylene	(6)				Not Detected					0.03

Digitally signed by Edward Monborne on 10/21/2018 at 14:07. Target 3.5 esignature user ID: em10340

Data file: /chem/HP19760.i/18oct20.b/dj1813.d Injection date and time: **20-OCT-2018 16:18**
Data file Sample Info. Line: 292WFLCS;292WFLCS;1;3;LCS;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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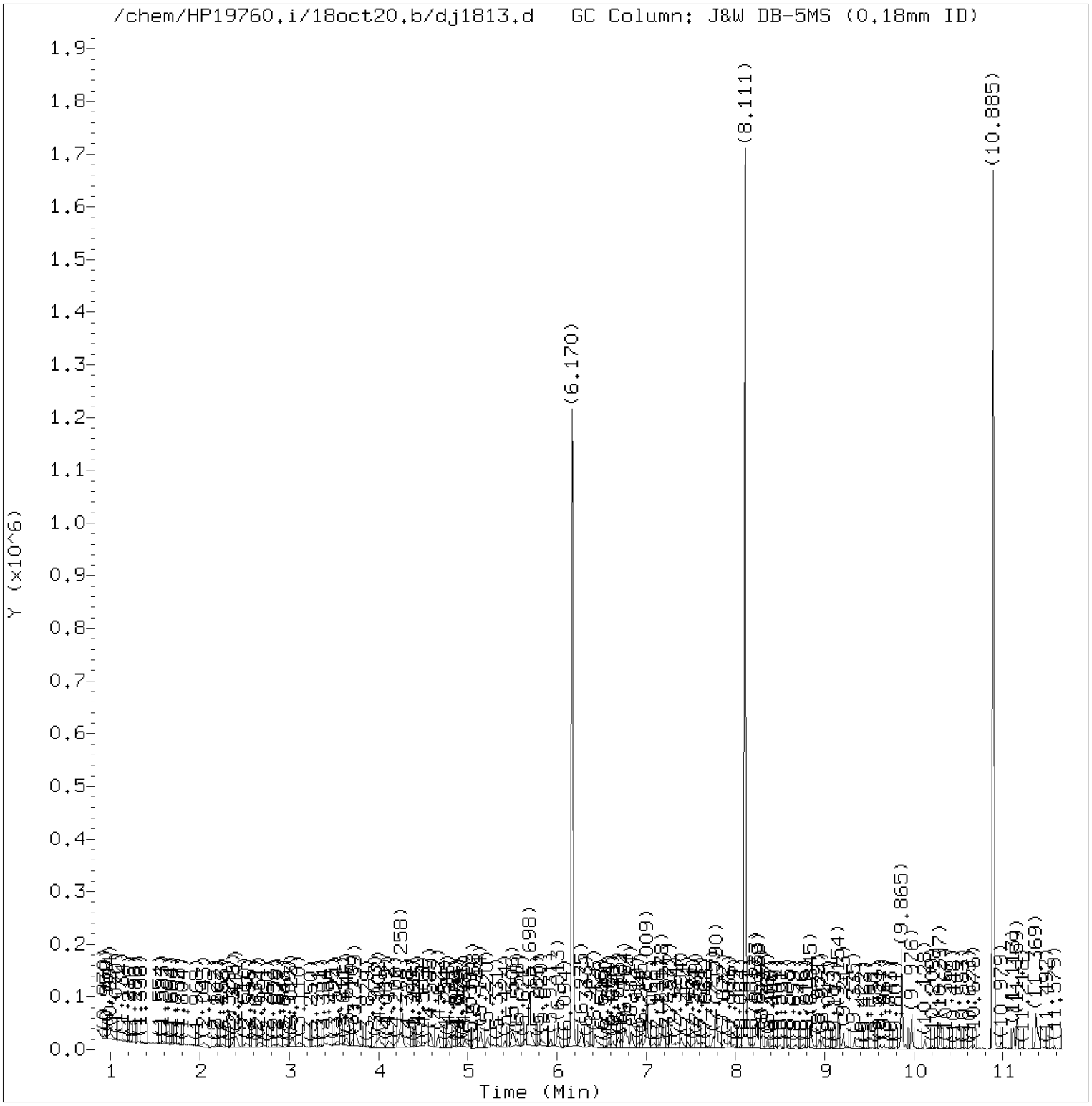
Total number of targets = 79

Digitally signed by Edward Monborne on 10/21/2018 at 14:07. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

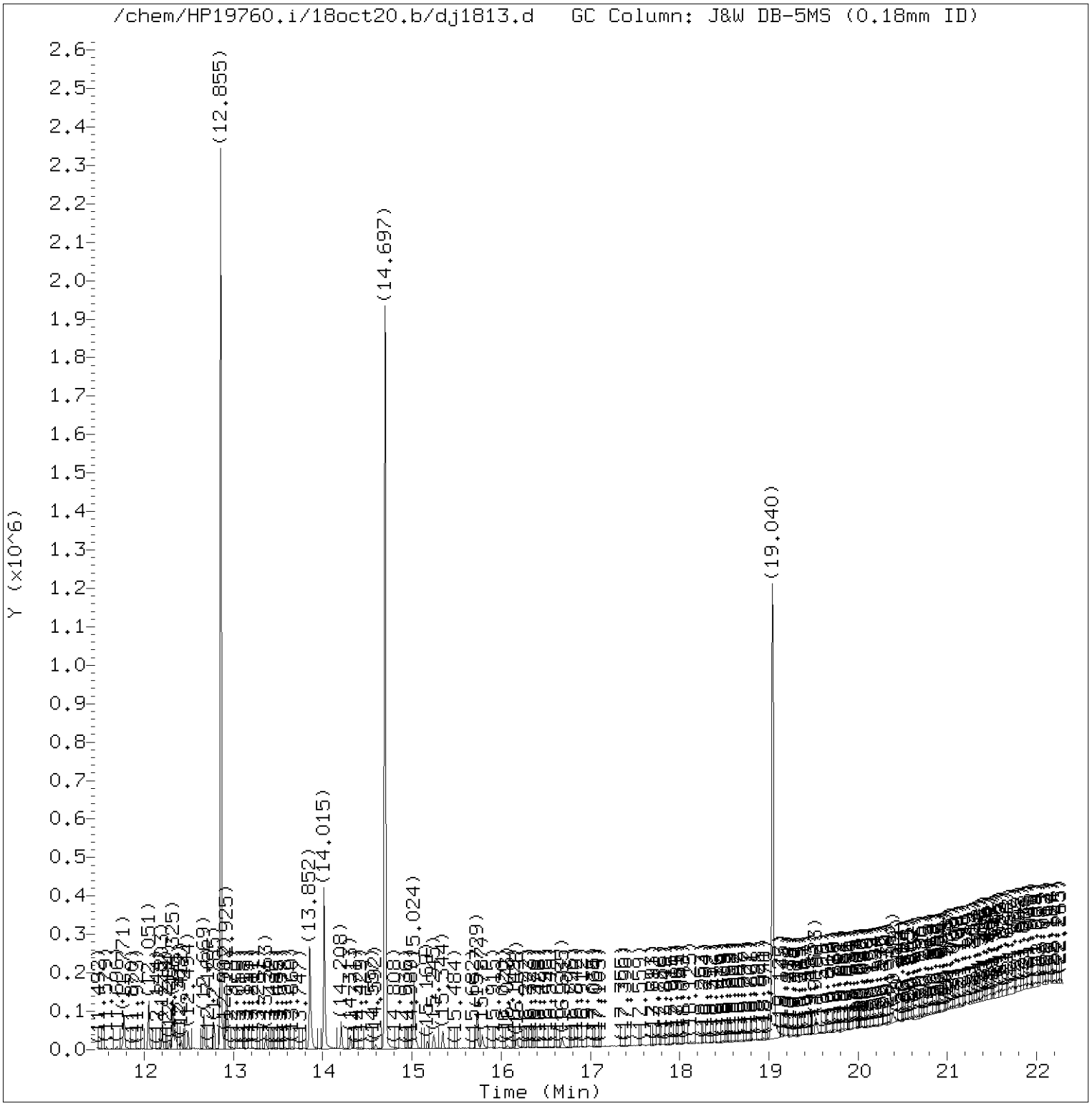
Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1813.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 16:18 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCS Lab Sample ID: 292WFLCS

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1813.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 16:18 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCS Lab Sample ID: 292WFLCS

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1813.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 16:18 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCS Lab Sample ID: 292WFLCS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
11)$2-Fluorophenol	(1)	4.258	112	48236	0.628
17)$Phenol-d6	(1)	5.698	99	46891	0.450
25)*1,4-Dichlorobenzene-d4	(1)	6.170	152	255256	5.000
44)$Nitrobenzene-d5	(2)	7.009	82	41544	0.457
65)*Naphthalene-d8	(2)	8.111	136	960009	5.000
93)$2-Fluorobiphenyl	(3)	9.865	172	71428	0.531
113)*Acenaphthene-d10	(3)	10.885	164	421424	5.000
135)$2,4,6-Tribromophenol	(3)	12.051	330	12267	0.882
153)*Phenanthrene-d10	(4)	12.855	188	821164	5.000
175)*Pyrene-d10	(5)	14.697	212	791168	5.000
179)$Terphenyl-d14	(5)	15.024	244	74571	0.567
213)*Perylene-d12	(6)	19.040	264	613539	5.000

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Edward Monborne
on 10/21/2018 at 14:07.
Target 3.5 esignature user ID: em10340

Data file: /chem/HP19760.i/18oct20.b/dj1812.d Injection date and time: **20-OCT-2018 15:50**
Data file Sample Info. Line: 292WFLCSD;292WFLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area (+/- %Change)	Conc. (on-column)	QC Flag
25) 1,4-Dichlorobenzene-d4	6.176(-0.006)	916	152	239883 (-19)	5.00	
65) Naphthalene-d8	8.111(0.000)	1248	136	887482 (-21)	5.00	
113) Acenaphthene-d10	10.891(0.000)	1725	164	394566 (-26)	5.00	
153) Phenanthrene-d10	12.856(0.006)	2062	188	731716 (-26)	5.00	
175) Pyrene-d10	14.703(0.000)	2379	212	758733 (-22)	5.00	
213) Perylene-d12	19.046(0.000)	3124	264	717931 (-12)	5.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.
11) 2-Fluorophenol	(1)	4.270(-0.001)	112	1912034	26.474	53%
17) Phenol-d6	(1)	5.698(0.001)	99	1940603	19.802	40%
44) Nitrobenzene-d5	(2)	7.009(0.000)	82	1562747	18.595	74%
93) 2-Fluorobiphenyl	(3)	9.865(0.000)	172	2461592	19.529	78%
135) 2,4,6-Tribromophenol	(3)	12.057(-0.001)	330	562593	43.187	86%
179) Terphenyl-d14	(5)	15.030(0.000)	244	2810002	22.261	89%

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
1) 1,4-Dioxane	(1)	1.344(-0.006)	88	194882	5.108	20.43			0.5
4) N-Nitrosodimethylamine	(1)	1.909(-0.006)	74	348294	6.569	26.28			0.5
5) Pyridine	(1)	2.043(-0.010)	79	494350M	5.353	21.41			0.5
7) 2-Picoline	(1)	3.320(-0.003)	93	754000	8.048	32.19			0.5
18) Phenol	(1)	5.715(0.000)	94	585148	5.219	20.87			0.1
19) Aniline	(1)	5.692(0.000)	93	694906	5.232	20.93			0.8
22) bis(2-Chloroethyl)ether	(1)	5.826(-0.000)	93	805073	9.669	38.68			0.1
23) 2-Chlorophenol	(1)	5.855(0.000)	128	653967	9.377	37.51			0.1
24) 1,3-Dichlorobenzene	(1)	6.083(-0.000)	146	579047	7.311	29.25			0.1
26) 1,4-Dichlorobenzene	(1)	6.199(0.000)	146	603411	7.470	29.88			0.1
27) Benzyl alcohol	(1)	6.415(0.000)	108	436817	9.179	36.72			3
28) 1,2-Dichlorobenzene	(1)	6.415(0.000)	146	599292	7.895	31.58			0.1
31) 2-Methylphenol	(1)	6.619(0.001)	108	623385	9.001	36.00			0.1
34) bis(2-Chloroisopropyl)ether	(1)	6.648(0.001)	45	893887	9.276	37.11			0.1
36) Acetophenone	(1)	6.800(0.001)	105	1078454	10.976	43.91			1
37) 4-Methylphenol	(1)	6.858(0.001)	108	674537	8.433	33.73			0.1
38) N-Nitroso-di-n-propylamine	(1)	6.834(0.001)	70	569745	9.774	39.09			0.2
40) o-Toluidine	(1)	6.852(0.001)	106	955992	7.834	31.33	4.657	B	1
43) Hexachloroethane	(1)	6.928(0.000)	117	217781	6.648	26.59			0.3
45) Nitrobenzene	(2)	7.038(-0.000)	77	801344	9.317	37.27			0.1
50) Isophorone	(2)	7.435(-0.000)	82	1461725	10.177	40.71			0.1
51) 2-Nitrophenol	(2)	7.534(-0.000)	139	323667	9.778	39.11			0.8
53) 2,4-Dimethylphenol	(2)	7.668(-0.000)	107	580903	7.890	31.56			0.8
55) bis(2-Chloroethoxy)methane	(2)	7.814(0.000)	93	904723	9.653	38.61			0.1
60) 2,4-Dichlorophenol	(2)	7.919(-0.000)	162	500485	9.245	36.98			0.1
62) 1,2,4-Trichlorobenzene	(2)	8.041(-0.000)	180	465561	7.740	30.96			0.1
66) Naphthalene	(2)	8.140(-0.000)	128	1851572	8.968	35.87	0.260	B	0.03

M = Compound was manually integrated. B = Compound detected in referenced method blank.

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Data file: /chem/HP19760.i/18oct20.b/dj1812.d Injection date and time: **20-OCT-2018 15:50**
Data file Sample Info. Line: 292WFLCSD;292WFLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (on-column)
67) 4-Chloroaniline	(2)	8.262(0.000)	127	585937	7.548	30.19			1
71) Hexachlorobutadiene	(2)	8.385(0.000)	225	203373	6.004	24.01			0.1
80) 4-Chloro-3-methylphenol	(2)	9.084(0.000)	107	622885	10.450	41.80			0.1
83) 2-Methylnaphthalene	(2)	9.248(0.000)	142	1183644	9.260	37.04	0.796	B	0.03
85) Hexachlorocyclopentadiene	(3)	9.516(0.000)	237	85876	2.608	10.43		J	1
86) 1,2,4,5-Tetrachlorobenzene	(3)	9.516(0.000)	216	436369	8.215	32.86			0.1
90) 2,4,6-Trichlorophenol	(3)	9.720(-0.000)	196	352646	11.222	44.89			0.1
92) 2,4,5-Trichlorophenol	(3)	9.766(0.000)	196	370666	11.053	44.21			0.1
95) 1,1'-Biphenyl	(3)	10.011(0.000)	154	1389712	10.168	40.67			0.8
96) 2-Chloronaphthalene	(3)	10.005(0.000)	162	1117194	9.960	39.84			0.1
99) Diphenyl ether	(3)	10.192(-0.000)	170	759496	9.973	39.89			0.1
100) 2-Nitroaniline	(3)	10.198(0.000)	138	405910	12.596	50.38			0.5
106) Dimethylphthalate	(3)	10.553(0.000)	163	1088374	9.197	36.79			0.5
107) 1,3-Dinitrobenzene	(3)	10.547(-0.000)	168	239963	12.145	48.58			0.5
108) 2,6-Dinitrotoluene	(3)	10.617(0.000)	165	299242	11.306	45.22			0.1
109) Acenaphthylene	(3)	10.652(0.000)	152	1672937	11.261	45.04			0.03
112) 3-Nitroaniline	(3)	10.856(-0.000)	138	302098	10.565	42.26			0.8
114) Acenaphthene	(3)	10.938(0.000)	153	1149436	10.341	41.36			0.03
115) 2,4-Dinitrophenol	(3)	11.031(0.000)	184	345362	24.604	98.42			4
116) 4-Nitrophenol	(3)	11.200(0.000)	109	123863	6.365	25.46		J	3
118) 2,4-Dinitrotoluene	(3)	11.247(0.000)	165	387837	10.860	43.44			0.3
119) Dibenzofuran	(3)	11.224(0.000)	168	1590219	10.384	41.54			0.1
121) 1-Naphthylamine	(3)	11.346(0.000)	143	1213504	10.334	41.34			2
122) 2,3,4,6-Tetrachlorophenol	(3)	11.439(0.000)	232	285622	10.930	43.72			1
123) 2-Naphthylamine	(3)	11.474(0.000)	143	916119	7.722	30.89			2
124) Diethylphthalate	(3)	11.678(0.000)	149	1174842	10.499	42.00			0.5
126) Fluorene	(3)	11.736(0.000)	166	1295106	11.087	44.35	0.210	B	0.03
127) 4-Chlorophenyl-phenylether	(3)	11.783(0.000)	204	570045	9.980	39.92			0.1
129) 4-Nitroaniline	(3)	11.783(0.000)	138	340381	10.802	43.21			0.2
130) 4,6-Dinitro-2-methylphenol	(4)	11.836(0.000)	198	216630	11.093	44.37			2
131) N-Nitrosodiphenylamine	(4)	11.940(-0.000)	169	1075556	10.943	43.77			0.2
143) 4-Bromophenyl-phenylether	(4)	12.383(-0.000)	248	307254	9.451	37.81			0.1
145) Hexachlorobenzene	(4)	12.418(-0.000)	284	308348	9.255	37.02			0.03
149) Pentachlorophenol	(4)	12.652(0.000)	266	174217	8.896	35.58			0.3
155) Phenanthrene	(4)	12.885(-0.000)	178	1879203	10.205	40.82	0.210	B	0.03
157) Anthracene	(4)	12.949(-0.000)	178	1791503	10.184	40.73			0.03
165) Di-n-butylphthalate	(4)	13.672(-0.000)	149	2219235	11.538	46.15			0.5
173) Fluoranthene	(4)	14.412(-0.000)	202	2133445	11.651	46.60			0.03
177) Pyrene	(5)	14.726(0.000)	202	2235659	10.719	42.87			0.03
188) Butylbenzylphthalate	(5)	15.863(0.000)	149	1039300	11.783	47.13			0.5
193) 3,3'-Dichlorobenzidine	(5)	16.662(0.000)	252	606621	8.816	35.26			0.8
195) Benzo(a)anthracene	(5)	16.650(0.000)	228	1975652	11.486	45.94			0.03
196) Chrysene	(5)	16.708(0.000)	228	2037631	11.386	45.54			0.03
199) bis(2-Ethylhexyl)phthalate	(5)	16.918(0.000)	149	1394710	11.925	47.70			1
205) Di-n-octylphthalate	(6)	18.049(-0.000)	149	2316178	10.776	43.10			1
206) Benzo(b)fluoranthene	(6)	18.445(0.000)	252	1921645	11.201	44.80			0.03
207) 7,12-Dimethylbenz[a]anthracene	(6)	18.463(-0.000)	256	870841	10.194	40.78			1
208) Benzo(k)fluoranthene	(6)	18.498(0.000)	252	1976044	11.117	44.47			0.03
211) Benzo(a)pyrene	(6)	18.958(0.000)	252	1790293	11.324	45.30			0.03
219) Indeno(1,2,3-cd)pyrene	(6)	20.625(0.000)	276	1368011M	9.317	37.27			0.03
220) Dibenz(a,h)anthracene	(6)	20.672(0.000)	278	1549534	9.666	38.66			0.03
221) Benzo(g,h,i)perylene	(6)	20.975(0.000)	276	1530286	9.221	36.89			0.03

B = Compound detected in referenced method blank. M = Compound was manually integrated.

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Data file: /chem/HP19760.i/18oct20.b/dj1812.d Injection date and time: **20-OCT-2018 15:50**
Data file Sample Info. Line: 292WFLCSD;292WFLCSD;1;3;LCSD;;; Instrument ID: **HP19760.i** Batch: **18292WAF**
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Blank Data file reference: **/chem/HP19760.i/18oct20.b/dj1810.d**

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: **292WAFl**
Calibration date and time (Last Method Edit): 21-OCT-2018 13:00
Mid Level Daily Calibration Standard Reference: **/chem/HP19760.i/18oct20.b/dj1801.d**

Matrix: WATER Level: Low GPC clean-up: No On-Column Amount units: ng/ul In Sample Concentration units: ug/L

Sample Concentration Formula: On-Column Amount * DF * gpcf * (Uf * Vt/(Vo))

Dilution Factor (DF): 1 Unit Correction Factor (Uf): 1 Final Extract Volume (Vt): 1000 ul
Sample Volume (Vo): 250 ml Volume Injected (Vi): 0.5 ul

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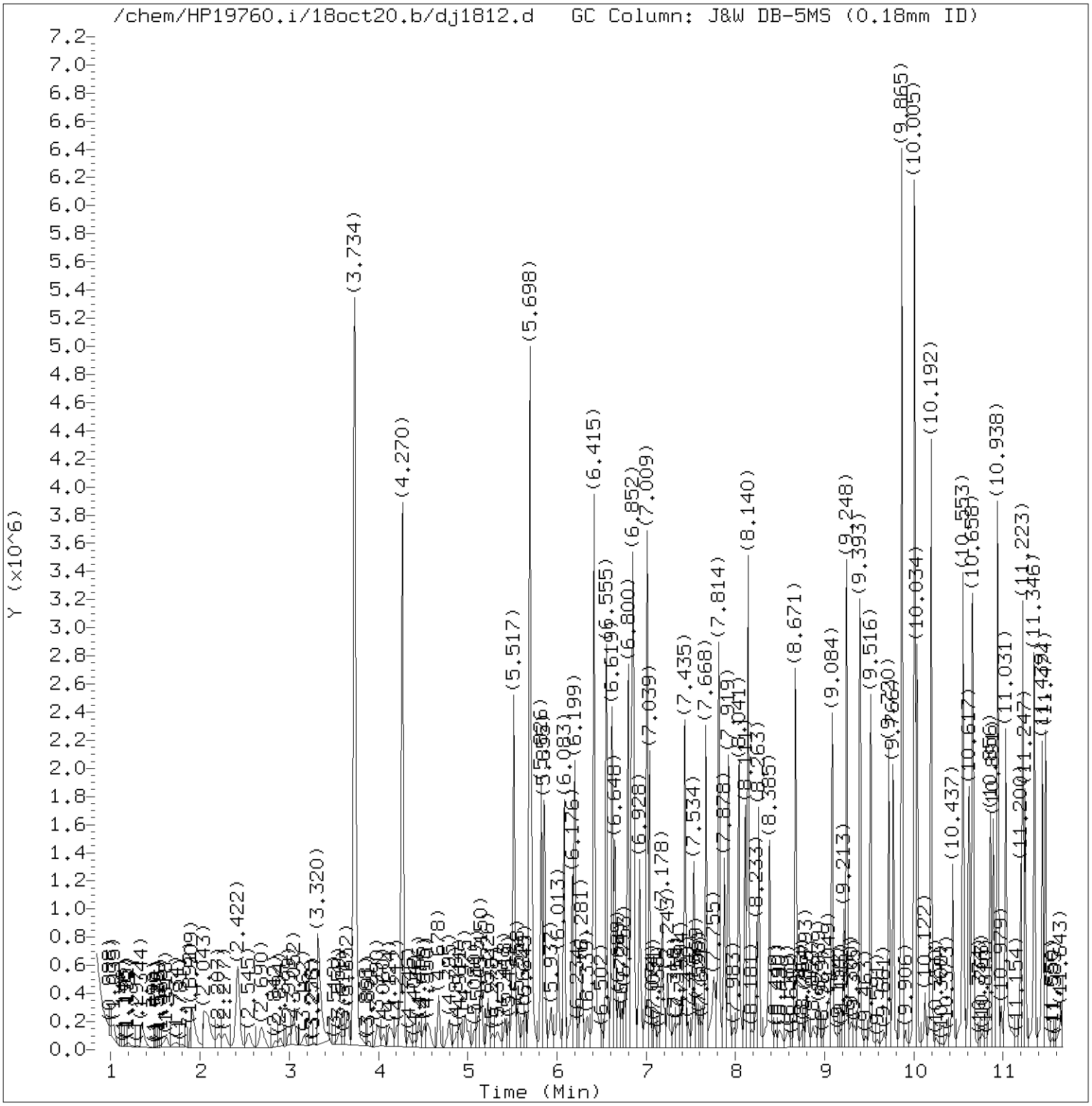
WAS LEFT

BLANK INTENTIONALLY

Total number of targets = 79

Digitally signed by Edward Monborne on 10/21/2018 at 14:06. Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00. PARALLAX ID: reb00745



Total Ion Chromatogram (TIC)

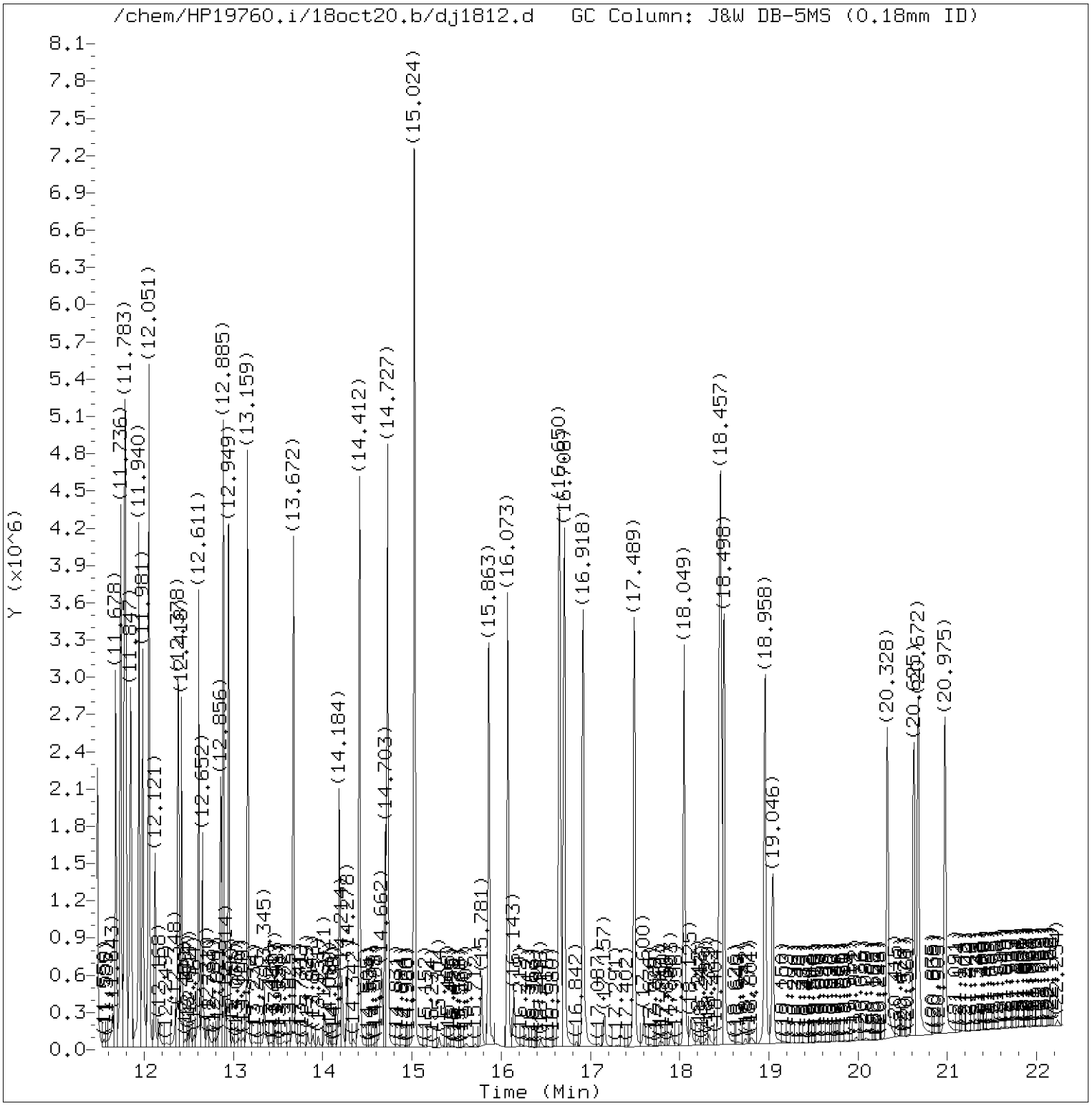
Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Digitally signed by Edward Monborne
on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Digitally signed by Edward Monborne
on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
1) 1,4-Dioxane	(1)	1.344	88	194882	5.108
4) N-Nitrosodimethylamine	(1)	1.909	74	348294	6.569
5) Pyridine	(1)	2.043	79	494350M	5.353
7) 2-Picoline	(1)	3.320	93	754000	8.048
11)$2-Fluorophenol	(1)	4.270	112	1912034	26.474
19) Aniline	(1)	5.692	93	694906	5.232
17)$Phenol-d6	(1)	5.698	99	1940603	19.802
18) Phenol	(1)	5.715	94	585148	5.219
22) bis(2-Chloroethyl)ether	(1)	5.826	93	805073	9.669
23) 2-Chlorophenol	(1)	5.855	128	653967	9.377
24) 1,3-Dichlorobenzene	(1)	6.083	146	579047	7.311
25)*1,4-Dichlorobenzene-d4	(1)	6.176	152	239883	5.000
26) 1,4-Dichlorobenzene	(1)	6.199	146	603411	7.470
27) Benzyl alcohol	(1)	6.415	108	436817	9.179
28) 1,2-Dichlorobenzene	(1)	6.415	146	599292	7.895
31) 2-Methylphenol	(1)	6.619	108	623385	9.001
34) bis(2-Chloroisopropyl)ether	(1)	6.648	45	893887	9.276
36) Acetophenone	(1)	6.800	105	1078454	10.976
38) N-Nitroso-di-n-propylamine	(1)	6.835	70	569745	9.774
40) o-Toluidine	(1)	6.852	106	955992	7.834
37) 4-Methylphenol	(1)	6.858	108	674537	8.433
43) Hexachloroethane	(1)	6.928	117	217781	6.648
44)$Nitrobenzene-d5	(2)	7.009	82	1562747	18.595
45) Nitrobenzene	(2)	7.039	77	801344	9.317
50) Isophorone	(2)	7.435	82	1461725	10.177
51) 2-Nitrophenol	(2)	7.534	139	323667	9.778
53) 2,4-Dimethylphenol	(2)	7.668	107	580903	7.890
55) bis(2-Chloroethoxy)methane	(2)	7.814	93	904723	9.653
60) 2,4-Dichlorophenol	(2)	7.919	162	500485	9.245
62) 1,2,4-Trichlorobenzene	(2)	8.041	180	465561	7.740
65)*Naphthalene-d8	(2)	8.111	136	887482	5.000
66) Naphthalene	(2)	8.140	128	1851572	8.968
67) 4-Chloroaniline	(2)	8.263	127	585937	7.548
71) Hexachlorobutadiene	(2)	8.385	225	203373	6.004
80) 4-Chloro-3-methylphenol	(2)	9.084	107	622885	10.450
83) 2-Methylnaphthalene	(2)	9.248	142	1183644	9.260
86) 1,2,4,5-Tetrachlorobenzene	(3)	9.516	216	436369	8.215
85) Hexachlorocyclopentadiene	(3)	9.516	237	85876	2.608
90) 2,4,6-Trichlorophenol	(3)	9.720	196	352646	11.222
92) 2,4,5-Trichlorophenol	(3)	9.766	196	370666	11.053

M = Compound was manually integrated.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
93)$2-Fluorobiphenyl	(3)	9.865	172	2461592	19.529
96) 2-Chloronaphthalene	(3)	10.005	162	1117194	9.960
95) 1,1'-Biphenyl	(3)	10.011	154	1389712	10.168
99) Diphenyl ether	(3)	10.192	170	759496	9.973
100) 2-Nitroaniline	(3)	10.198	138	405910	12.596
107) 1,3-Dinitrobenzene	(3)	10.547	168	239963	12.145
106) Dimethylphthalate	(3)	10.553	163	1088374	9.197
108) 2,6-Dinitrotoluene	(3)	10.617	165	299242	11.306
109) Acenaphthylene	(3)	10.652	152	1672937	11.261
112) 3-Nitroaniline	(3)	10.856	138	302098	10.565
113)*Acenaphthene-d10	(3)	10.891	164	394566	5.000
114) Acenaphthene	(3)	10.938	153	1149436	10.341
115) 2,4-Dinitrophenol	(3)	11.031	184	345362	24.604
116) 4-Nitrophenol	(3)	11.200	109	123863	6.365
119) Dibenzofuran	(3)	11.223	168	1590219	10.384
118) 2,4-Dinitrotoluene	(3)	11.247	165	387837	10.860
121) 1-Naphthylamine	(3)	11.346	143	1213504	10.334
122) 2,3,4,6-Tetrachlorophenol	(3)	11.439	232	285622	10.930
123) 2-Naphthylamine	(3)	11.474	143	916119	7.722
124) Diethylphthalate	(3)	11.678	149	1174842	10.499
126) Fluorene	(3)	11.736	166	1295106	11.087
127) 4-Chlorophenyl-phenylether	(3)	11.783	204	570045	9.980
129) 4-Nitroaniline	(3)	11.783	138	340381	10.802
130) 4,6-Dinitro-2-methylphenol	(4)	11.835	198	216630	11.093
131) N-Nitrosodiphenylamine	(4)	11.940	169	1075556	10.943
135)$2,4,6-Tribromophenol	(3)	12.057	330	562593	43.187
143) 4-Bromophenyl-phenylether	(4)	12.383	248	307254	9.451
145) Hexachlorobenzene	(4)	12.418	284	308348	9.255
149) Pentachlorophenol	(4)	12.652	266	174217	8.896
153)*Phenanthrene-d10	(4)	12.856	188	731716	5.000
155) Phenanthrene	(4)	12.885	178	1879203	10.205
157) Anthracene	(4)	12.949	178	1791503	10.184
165) Di-n-butylphthalate	(4)	13.672	149	2219235	11.538
173) Fluoranthene	(4)	14.412	202	2133445	11.651
175)*Pyrene-d10	(5)	14.703	212	758733	5.000
177) Pyrene	(5)	14.727	202	2235659	10.719
179)$Terphenyl-d14	(5)	15.030	244	2810002	22.261
188) Butylbenzylphthalate	(5)	15.863	149	1039300	11.783
195) Benzo(a)anthracene	(5)	16.650	228	1975652	11.486
193) 3,3'-Dichlorobenzidine	(5)	16.662	252	606621	8.816

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Quant Report

Target Revision 3.5

Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

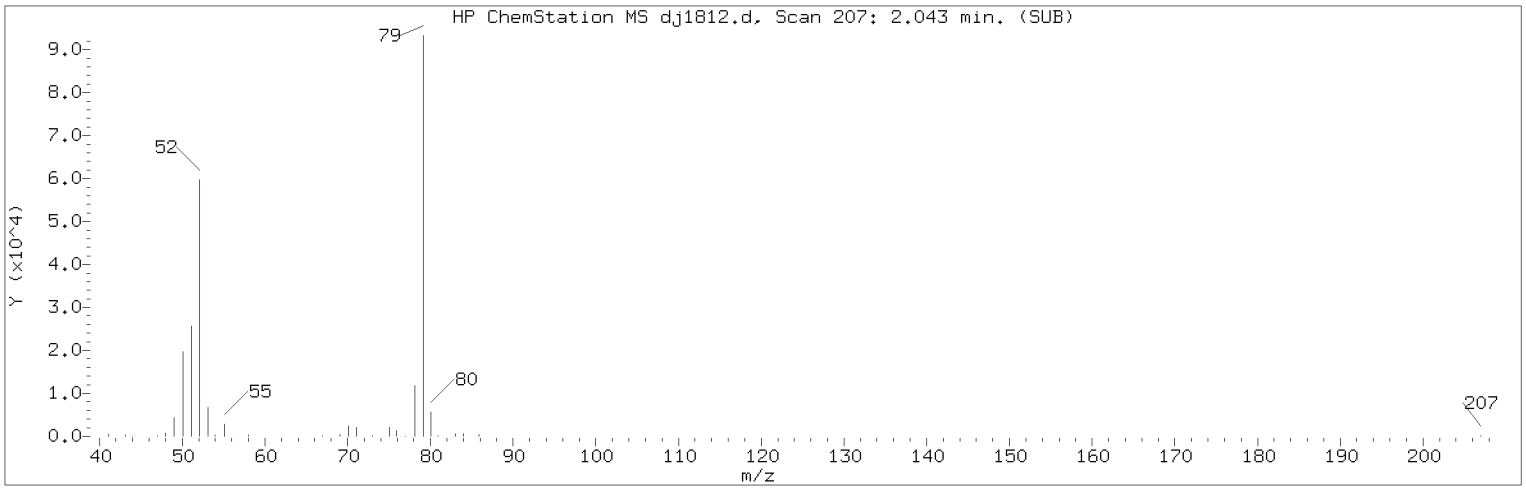
Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng/ul)
196) Chrysene	(5)	16.708	228	2037631	11.386
199) bis(2-Ethylhexyl)phthalate	(5)	16.918	149	1394710	11.925
205) Di-n-octylphthalate	(6)	18.049	149	2316178	10.776
206) Benzo(b)fluoranthene	(6)	18.445	252	1921645	11.201
207) 7,12-Dimethylbenz[a]anthracene	(6)	18.463	256	870841	10.194
208) Benzo(k)fluoranthene	(6)	18.498	252	1976044	11.117
211) Benzo(a)pyrene	(6)	18.958	252	1790293	11.324
213)*Perylene-d12	(6)	19.046	264	717931	5.000
219) Indeno(1,2,3-cd)pyrene	(6)	20.625	276	1368011M	9.317
220) Dibenz(a,h)anthracene	(6)	20.672	278	1549534	9.666
221) Benzo(g,h,i)perylene	(6)	20.975	276	1530286	9.221

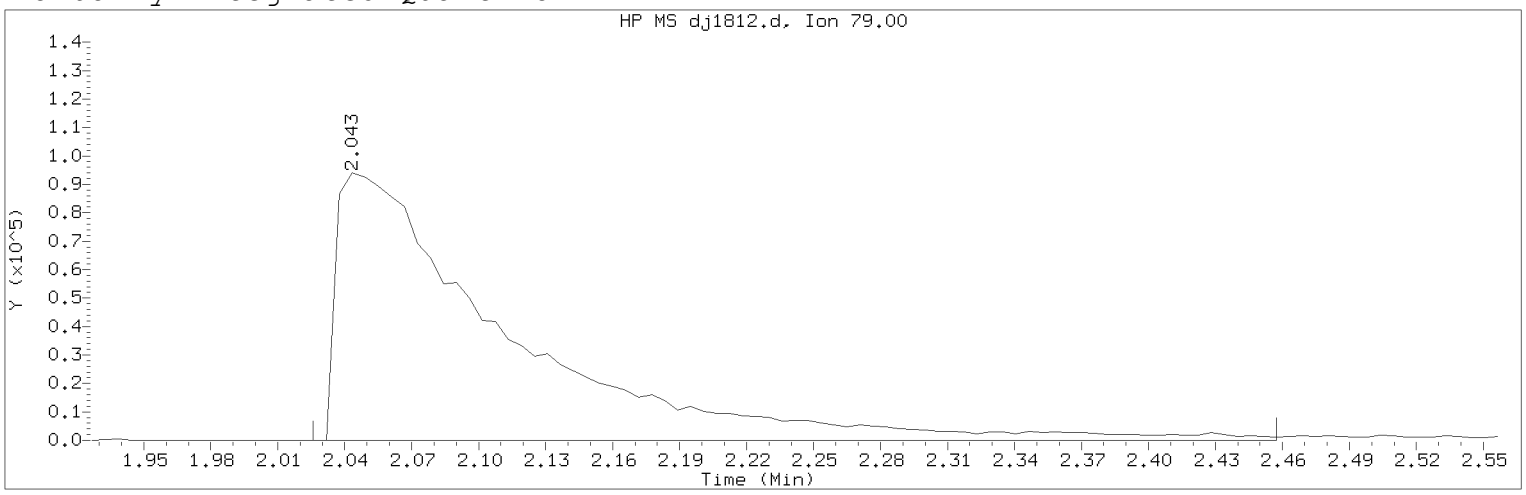
M = Compound was manually integrated.
* = Compound is an internal standard.

Digitally signed by Edward Monborne
on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

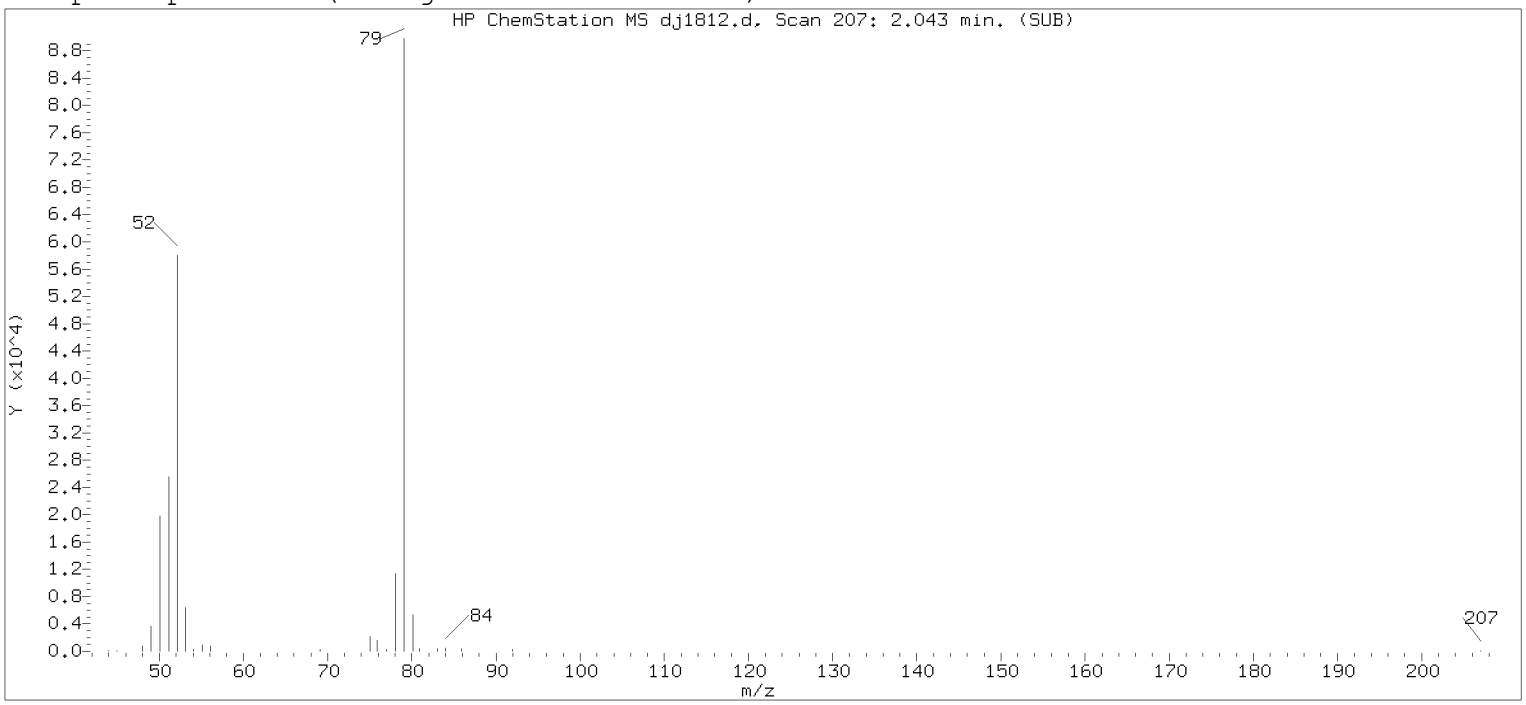
Compound Number : 5
Compound Name : Pyridine
Scan Number : 207
Retention Time (minutes) : 2.043
Quant Ion : 79.00
Area (flag) : 494350M
On-Column Amount (ng/ul) : 5.3533
Integration start scan : 203 Integration stop scan: 277
Y at integration start : 6 Y at integration end: 6

Reason for manual integration: improper integration

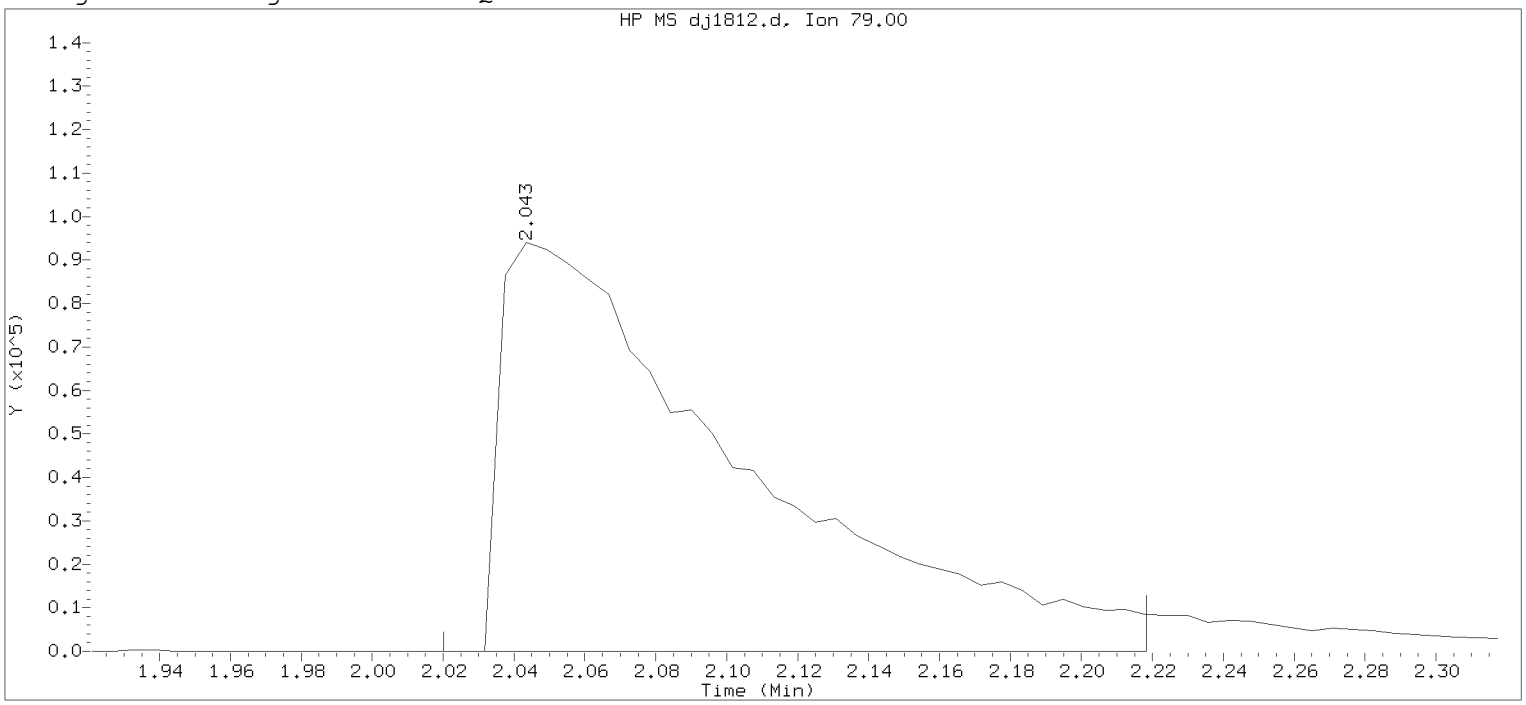
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: lmh00956

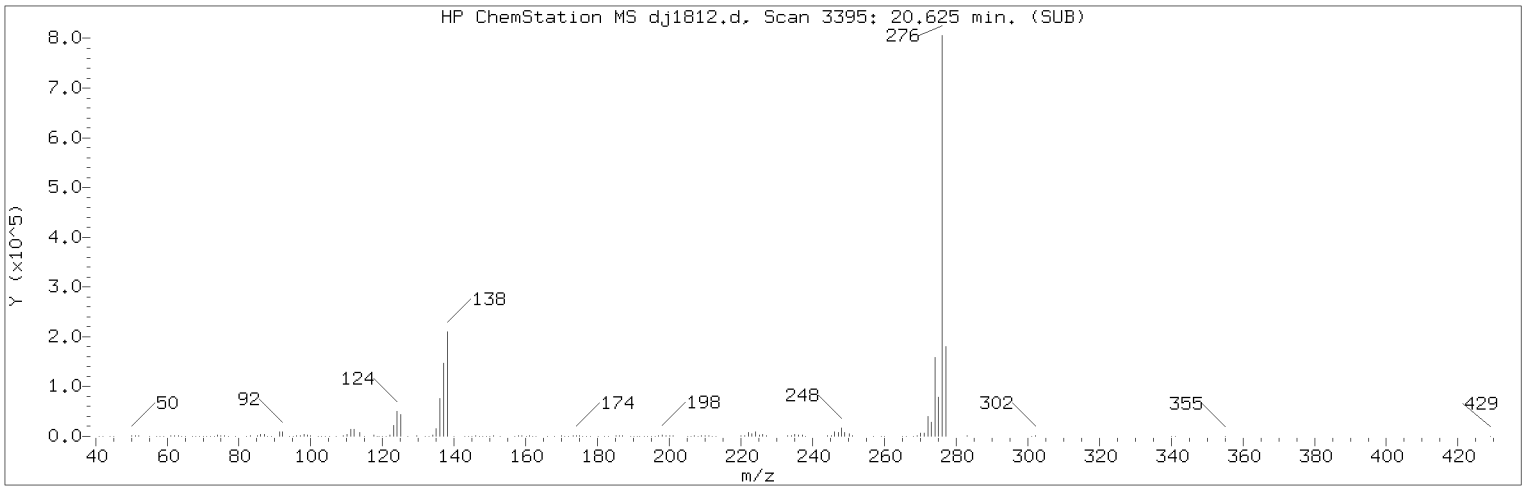
Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 16:29 lmh00956

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

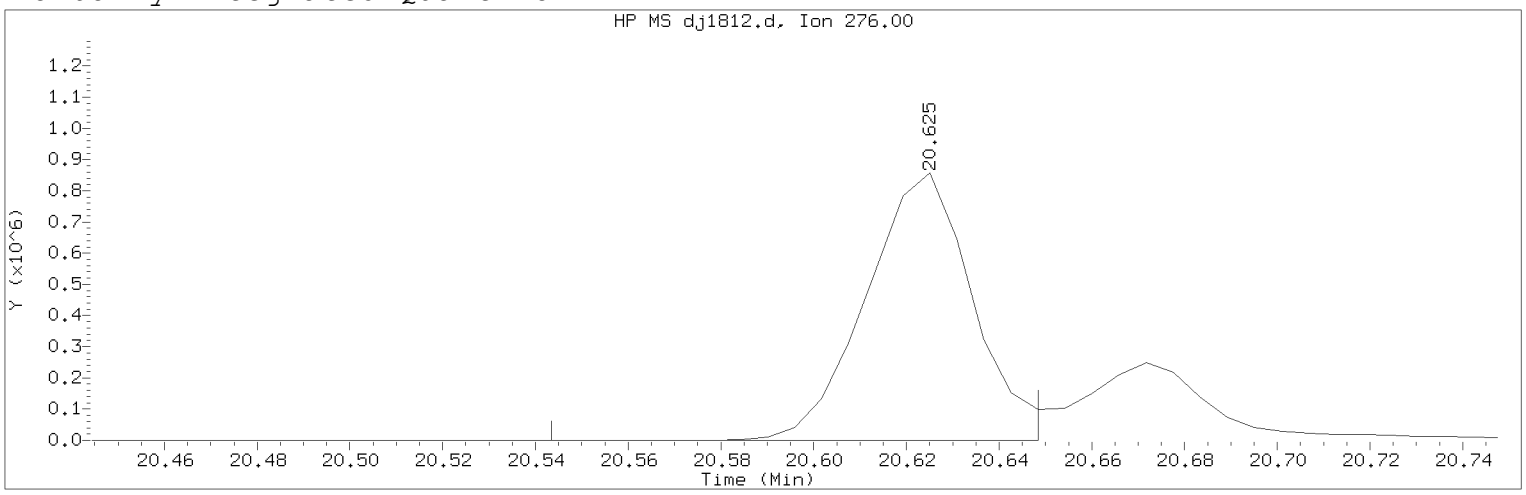
Compound Number	: 5		
Compound Name	: Pyridine		
Scan Number	: 207		
Retention Time (minutes)	: 2.043		
Quant Ion	: 79.00		
Area	: 443398		
On-column Amount (ng/ul)	: 4.8016		
Integration start scan	: 202	Integration stop scan:	236
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/21/2018 at 14:06.
Target 3.5 esignature user: EPA Region 6

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: almh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAFl
Calibration date and time: 21-OCT-2018 13:00
Date, time and analyst ID of latest file update: 21-Oct-2018 14:05 em10340

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

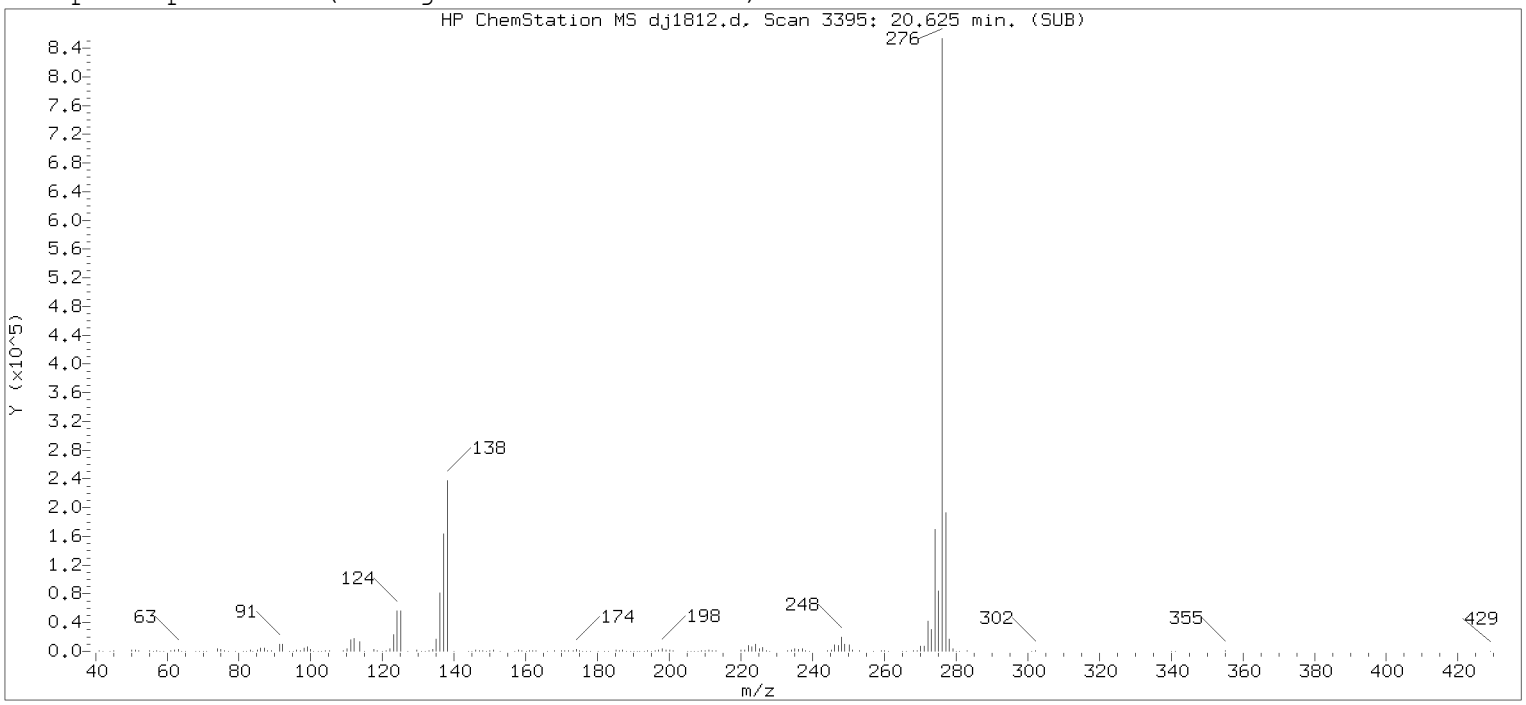
Compound Number : 219
Compound Name : Indeno(1,2,3-cd)pyrene
Scan Number : 3395
Retention Time (minutes) : 20.625
Quant Ion : 276.00
Area (flag) : 1368011M
On-Column Amount (ng/ul) : 9.3169
Integration start scan : 3380 Integration stop scan: 3398
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

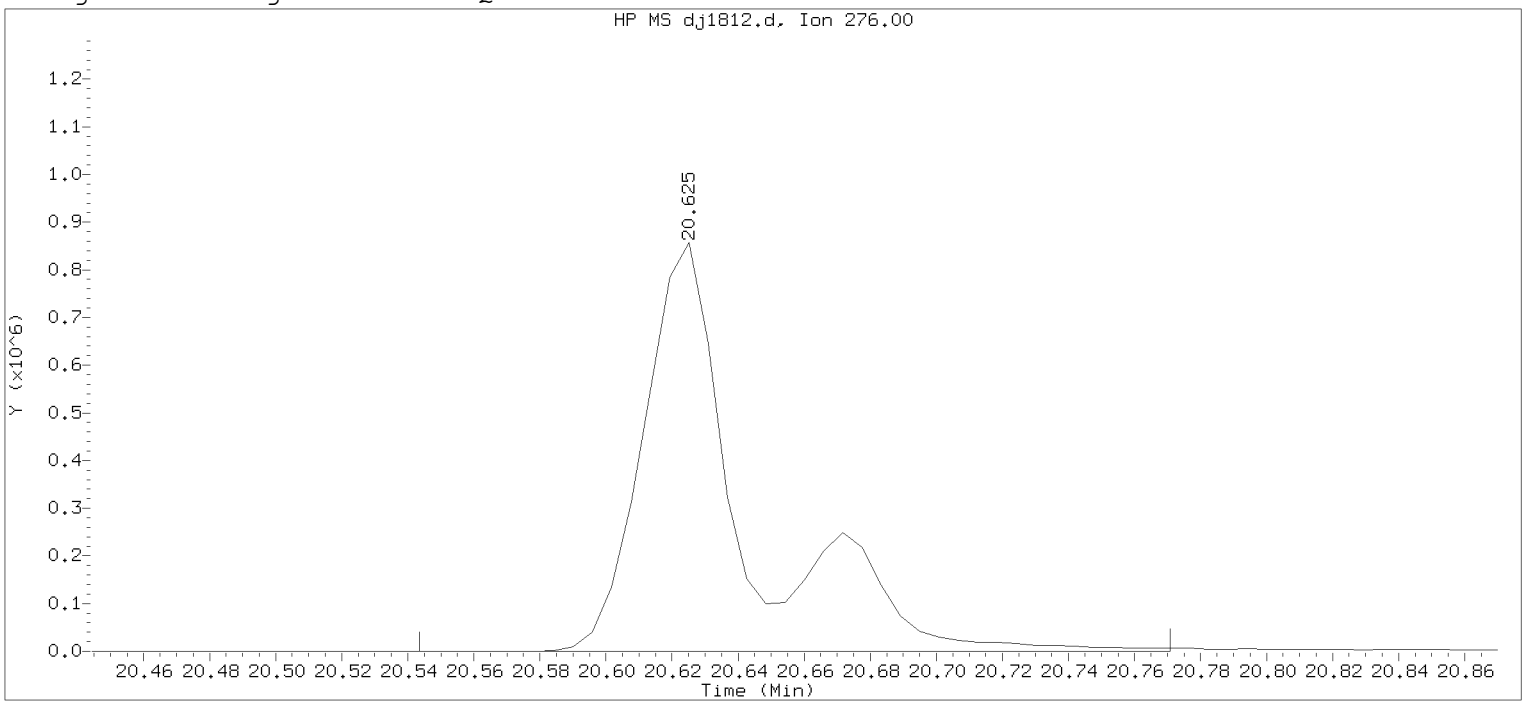
Analyst responsible for change: Digitally signed by Edward Monborne
on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: em10340

Secondary review performed and digitally signed by Matthew E. Barton on 10/28/2018 at 13:00.
PARALLAX ID: reb00745

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem/HP19760.i/18oct20.b/dj1812.d Instrument ID: HP19760.i
Injection date and time: 20-OCT-2018 15:50 Analyst ID: lmh00956

Method used: /chem/HP19760.i/18oct20.b/rv8270d.m Sublist used: 292WAF
Calibration date and time: 20-OCT-2018 16:29
Date, time and analyst ID of latest file update: 20-Oct-2018 16:29 lmh00956

Sample Name: 292WFLCSD Lab Sample ID: 292WFLCSD

Compound Number	: 219		
Compound Name	: Indeno(1,2,3-cd)pyrene		
Scan Number	: 3395		
Retention Time (minutes)	: 20.625		
Quant Ion	: 276.00		
Area	: 1844026		
On-column Amount (ng/ul)	: 12.5588		
Integration start scan	: 3380	Integration stop scan:	3419
Y at integration start	: 0	Y at integration end:	0

Digitally signed by Edward Monborne on 10/21/2018 at 14:06.
Target 3.5 esignature user ID: EDWARD.MONBORNE

Extraction/Distillation/Digestion Logs

Semivolatiles by GC/MS

Organic Extraction Batchlog Assigned to: 12366 Joshua Ruth

Reviewed by: AT12405 10/17/18 Start Date: 10/16/18 Start time: 9:00

18288WAT026

Tech 1: JSZ 12366 Tech 2: LAB 26557

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
9850253MS	94283	250	~~SS1827726B~~	1.0	MS1828326A MS1828326B	1.0	1	✓	✓	153a	Tan Tint
9850254MSD	94283	250	SS1827726B		MS1828326A MS1828326B		1	✓	✓	153a	Tan Tint
BLANKA	SBLKWT288	250	SS1827726B				1	✓	✓		TapH2O
LCSA	288WTLCS	250	SS1827726B		MS1828326A MS1828326B	1.0	1	✓	✓		
LCSAP1	288WTLCS	250	SS1827726B		MS1828326C		1	✓	✓		
LCSDAP1	288WTLCSD	250	~~SS1827726B~~ ⑧		MS1828326C		1	✓	✓		

Solvent Used	Lot No.
10N NaOH	4711F51
Methylene Chloride	186618
Sodium Sulfate	182813
Sulfuric Acid	182559

Spike Solutions: Witness: N/A

MS1828326C	APPIX #1 MINI SPIKE
MS1828326A	MINI SEP. LCS SPIKE #1
MS1828326B	MINI SEP. LCS SPIKE #2
~~SS1827726~~B	MINI SEP. BNA SURROGATE

⊕Samples split to 18288WAT0220 10-18-18 KB325310 KY9874 10/16/18

⑧A Reduced initial volume, sample would not concentrate, poor matrix.

N/A KY9874 10/16/18 ⑧ KY9874 10/16/18 SS1828826B

Sample #	Sample Code	Amt	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
⊕1 9848058	S17-9	249	~~SS1827726B~~	1.0	1	✓	✓	153A	Clear	14241	26150	10/22/2018	N
⑧A ⊕2 9848557	RVRD1	10	SS1827726B		25	✓	✓	153A	Dark red/Brown	14241	29880	10/22/2018	N
3 9850249	94280	250	SS1827726B		1	✓	✓	153A	Clear	14241		10/23/2018	N
4 9850250	94281	250	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
5 9850251	94282	251	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
6 9850252BKG	94283	250	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
7 9850255	94284	250	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
8 9850256	94285	251	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
9 9850257	94286	241	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
10 9850258	94287	250	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
11 9850259	94288	249	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
12 9850260	94289	251	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
13 9850261	94290	249	SS1827726B		1	✓	✓	153A	clear	14241		10/23/2018	N
⊕14 9851520	EBB17	242	~~SS1827726B~~ ⑧		1	✓	✓	153A	clear	14241	22193	10/24/2018	N

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Bench#	Bench#	Bench#							
Rack ID:		Work Station	Tumble	Micro Temp 100?					
Internal Standard	KVISTD2878	Balance #	25996						

R-VAP ID 5	90 C	R-VAP ID 3	90 C	R-VAP ID 1	90 C				
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	18288WAT026	

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

Organic Extraction Batchlog Assigned to: 11067 Osvaldo Sanchez Reviewed by: 10/20/18 Start Date: 10/19/18 Start time: 16:30

18292WAF026

Tech 1: 0821067 Tech 2: M013836

Dept: 26 Prep Analysis: 11010 8270D BNA Extraction SVOAs 8270D MINI

QC	Sample Code	Amt (ml)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments
BLANKA	SBLKWF292	250	SS1828826A	1.0			1	✓	✓		tw H2O
LCSA	292WFLCS	250	SS1828826A		MS1828326A MS1828326B	1.0 1.0	1	✓	✓		tw H2O
LCSAP1	292WFLCS	250	SS1828826A		MS1829026B	1.0	1	✓	✓		tw H2O
LCSDA	292WFLCSD	250	SS1828826A		MS1828326A MS1828326B	1.0 1.0	1	✓	✓		tw H2O
LCSDAP1	292WFLCSD	250	SS1828826A		MS1829026B	1.0	1	✓	✓		tw H2O

Solvent Used	Lot No.
10N NaOH	471151
Methylene Chloride	186617
Sodium Sulfate	182589A
Sulfuric Acid	182569

Spike Solutions: Witness: NA

MS1829026B APPIX #1 MINI SPIKE
MS1828326A MINI SEP. LCS SPIKE #1
MS1828326B MINI SEP. LCS SPIKE #2
SS1828826A MINI SEP. BNA SURROGATE

(6a) Sample Cert because due to Sample being Hydrophobic. OSilva 10/19/18 (5) M013836 10/19/18 153B

Sample #	Sample Code	Amt (ml)	SS/IS Sol.	Amt (mL)	FV (mL)	pH <2	pH >11	BC	Comments	Analyses	List	Due Date	Prio
(6) 1 9848557 R	RVRD1	10	SS1828826A					~~153B~~ (6)	black	~~14241~~	~~29680~~	10/22/2018	N
2 9850252BKGR	94283	232	SS1828826A	1.0	1	✓	✓	153B	clear	14241	22230	10/23/2018	N
3 9851520 R	EBB17	241	SS1828826A		1	✓	✓	153B	clear	14241	22193	10/24/2018	N
4 9858584	17-01	232	SS1828826A		1	✓	✓	153A	clear	14241	21230	10/29/2018	N
5 9858585	17-02	238	SS1828826A		1	✓	✓	153A	clear	14241	21230	10/29/2018	N

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NA

Bench# 12	Bench# 11	Bench# 3		
Rack ID:		Work Station	tumble	Micro Temp 100?
Internal Standard	[illegible]	Balance #	25996	

R-VAP ID 6	90 C	R-VAP ID	C	R-VAP ID	C			
S-bath ID	C	S-bath ID	C	N-Evap	C	M-vap	C	18292WAF026

DF = Dilution Factor FV = Final Volume

Documented temps are NIST corrected.

SHEALY ENVIRONMENTAL SERVICES, INC.

Report of Analysis

Draper Aden Associates
2206 South Main Street
Blacksburg, VA 24060
Attention: Janet Frazier

Project Name: RAAP HWMU16

Project Number: B03204-18A

Lot Number:**TJ13026**

Date Completed:11/27/2018

11/27/2018
Approved and released by:
Project Manager: Cathy S. Dover

The electronic signature above is the equivalent of a handwritten signature.
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Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Case Narrative
Draper Aden Associates
Lot Number: TJ13026

This Report of Analysis contains the analytical result(s) for the sample(s) listed on the Sample Summary following this Case Narrative. The sample receiving date is documented in the header information associated with each sample.

All results listed in this report relate only to the samples that are contained within this report.

Sample receipt, sample analysis, and data review have been performed in accordance with the most current approved NELAC standards, the Shealy Environmental Services, Inc. ("Shealy") Quality Assurance Management Plan (QAMP), standard operating procedures (SOPs), and Shealy policies. Any exceptions to the NELAC standards, the QAMP, SOPs or policies are qualified on the results page or discussed below.

If you have any questions regarding this report please contact the Shealy Project Manager listed on the cover page.

Sample Summary
Draper Aden Associates
Lot Number: TJ13026
Project Name: RAAP HWMU16
Project Number: B03204-18A

Sample Number	Sample ID	Matrix	Date Sampled	Date Received
001	16C1	Aqueous	10/11/2018 1200	10/12/2018
002	16MW8	Aqueous	10/11/2018 0815	10/12/2018
003	16MW9	Aqueous	10/11/2018 1115	10/12/2018
004	16WC1A	Aqueous	10/11/2018 1000	10/12/2018
005	16WDUP	Aqueous	10/11/2018 1010	10/12/2018
006	16WC1B	Aqueous	10/11/2018 0910	10/12/2018
007	16-2	Aqueous	10/11/2018 1135	10/12/2018
008	16-3	Aqueous	10/09/2018 1345	10/12/2018
009	16-5	Aqueous	10/10/2018 0945	10/12/2018
010	16WC2B	Aqueous	10/10/2018 1050	10/12/2018
011	16SPRING	Aqueous	10/10/2018 0955	10/12/2018

(11 samples)

ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1200** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1101	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**190**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1200** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1212	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0815** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1107	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	**7440-50-8**	**6020B**	**17**		**5.0**	**ug/L**	**1**
Lead	**7439-92-1**	**6020B**	**4.4**		**2.0**	**ug/L**	**1**
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	**7440-66-6**	**6020B**	**70**		**30**	**ug/L**	**1**

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0815** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1214	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1115** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1113	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**540**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**12**		**10**	**ug/L**	**1**
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
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N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1115** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1217	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1000** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1118	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**280**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**8.3**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1000** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1224	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1206	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**8.6**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1231	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
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N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1212	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**120**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	7470A	7470A	1	10/18/2018 1524	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	2

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1135** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1217	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**230**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1135** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1236	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2018 1345** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1223	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**720**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2018 1345** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1238	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0945** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1229	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**170**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0945** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1240	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2018 1050** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1235	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**110**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2018 1050** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1243	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0955** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1241	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**220**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0955** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1245	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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QC Summary

ICP-MS - MB

Sample ID: TQ86791-001
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	11/16/2018 1049
Barium	10	U	1	10	ug/L	11/16/2018 1049
Beryllium	1.0	U	1	1.0	ug/L	11/16/2018 1049
Cadmium	1.0	U	1	1.0	ug/L	11/16/2018 1049
Chromium	5.0	U	1	5.0	ug/L	11/16/2018 1049
Cobalt	5.0	U	1	5.0	ug/L	11/16/2018 1049
Copper	5.0	U	1	5.0	ug/L	11/16/2018 1049
Lead	2.0	U	1	2.0	ug/L	11/16/2018 1049
Nickel	10	U	1	10	ug/L	11/16/2018 1049
Vanadium	10	U	1	10	ug/L	11/16/2018 1049
Zinc	30	U	1	30	ug/L	11/16/2018 1049

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: TQ86791-002
Batch: 86791
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	100		1	100	80-120	11/16/2018 1055
Barium	100	98		1	98	80-120	11/16/2018 1055
Beryllium	100	94		1	94	80-120	11/16/2018 1055
Cadmium	100	93		1	93	80-120	11/16/2018 1055
Chromium	100	100		1	100	80-120	11/16/2018 1055
Cobalt	100	99		1	99	80-120	11/16/2018 1055
Copper	100	100		1	101	80-120	11/16/2018 1055
Lead	100	100		1	100	80-120	11/16/2018 1055
Nickel	100	96		1	96	80-120	11/16/2018 1055
Vanadium	100	100		1	101	80-120	11/16/2018 1055
Zinc	100	99		1	99	80-120	11/16/2018 1055

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: TJ13026-004MS
Batch: 86791
Analytical Method: 6020B

Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	99		1	99	75-125	11/16/2018 1124
Barium	280	100	390		1	104	75-125	11/16/2018 1124
Beryllium	0.0	100	45	N	1	45	75-125	11/16/2018 1124
Cadmium	0.0	100	92		1	92	75-125	11/16/2018 1124
Chromium	0.0	100	98		1	98	75-125	11/16/2018 1124
Cobalt	8.3	100	100		1	94	75-125	11/16/2018 1124
Copper	0.0	100	95		1	95	75-125	11/16/2018 1124
Lead	0.0	100	97		1	97	75-125	11/16/2018 1124
Nickel	0.0	100	100		1	102	75-125	11/16/2018 1124
Vanadium	0.0	100	100		1	102	75-125	11/16/2018 1124
Zinc	0.0	100	98		1	98	75-125	11/16/2018 1124

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: TJ13026-004MD
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	99		1	99	0.061	75-125	20	11/16/2018 1130
Barium	280	100	380		1	99	1.3	75-125	20	11/16/2018 1130
Beryllium	0.0	100	44	N	1	44	0.61	75-125	20	11/16/2018 1130
Cadmium	0.0	100	92		1	92	0.24	75-125	20	11/16/2018 1130
Chromium	0.0	100	97		1	97	0.87	75-125	20	11/16/2018 1130
Cobalt	8.3	100	100		1	95	0.39	75-125	20	11/16/2018 1130
Copper	0.0	100	94		1	94	0.65	75-125	20	11/16/2018 1130
Lead	0.0	100	97		1	97	0.52	75-125	20	11/16/2018 1130
Nickel	0.0	100	100		1	100	2.1	75-125	20	11/16/2018 1130
Vanadium	0.0	100	100		1	102	0.39	75-125	20	11/16/2018 1130
Zinc	0.0	100	97		1	97	0.97	75-125	20	11/16/2018 1130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MB

Sample ID: TQ86774-001
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	10/18/2018 1207

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: TQ86774-002
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	1.9		1	96	80-120	10/18/2018 1210

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MS

Sample ID: TJ13026-004MS
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	97	85-115	10/18/2018 1226

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MSD

Sample ID: TJ13026-004MD
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	93	4.3	85-115	20	10/18/2018 1228

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and >_DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Chain of Custody
and
Miscellaneous Documents

CHAIN OF CUSTODY RECORD

10/24/18

Laboratory: Shealy Environmental Services- 106 Vantage Point Drive, Columbia, SC 29172 - Cathy Dover, Project Manager, 803-648-4480

Client: 0 **Attn:** 0 **Address:** 0 0 **Phone:** 0 **Fax:** 0 **Fax:** 0	**Consultant:** Draper Aden Associates **Attn:** Jared C. Frazier **Address:** 2206 South Main Street Blacksburg, Virginia 24060 **Phone:** (540) 552-0444 **Fax:** (540) 552-0291	**Sample Site:** RFAAP, Radford, Virginia **Location:** HWMU16 **Event:** 2018 - 2nd Semiannual Monitoring Event **DAA JN:** 8003204-18A **Lab JN:**	**Project Specific (DW or Batch (B) QC:** **Sample Collection for Project Complete?** YES **Carrier:** UPS **Tracking Number:** 1Z 231 301 03 9896 4770

Box 1: Matrix
SW Surface Water — T Trip Blank
GW Groundwater — E Equipment Blank
L Leachate — P Product
S Soil — O Other

Box 3: Preservative
A HCL — E NaOH
B HNO_3 — F ZnAc
C H_2SO_4 — G Other (Specify)
D $Na_2S_2O_3$ — H None

Box 3: Filtered/Unfiltered
F Filtered
U Unfiltered

Box 3: Sample Container Type
P Plastic — V VOA
AG Amber Glass — CG Clear Glass

Box 4: Sample Type
C Grab
G Composite

Invoice
Copy to Consultant: YES
Bill: CLIENT OTHER
Preserved and shipped on Ice: YES

| | | |

CHAIN OF CUSTODY RECORD

10/12/18

Laboratory: Shealy Environmental Services- 106 Vantage Point Drive, Columbia, SC 29172 - Cathy Dover, Project Manager, 604-648-4480

Client: 0 Attn: 0 Address: 0 0 Phone: 0 Fax: 0 Fax: 0	Consultant: Draper Aden Associates Attn: Janet C. Frazier Address: 2206 South Main Street Blacksburg, Virginia 24060 Phone: (540) 552-0444 Fax: (540) 552-0291	Sample Site: RFAAP, Radford, Virginia Location: HWMU18 Event: 2018 - 2nd Semiannual Monitoring Event DAA JN: 50324-18A Lab JN:	Project Specific (S) or Batch (B) QC: Sample Collection for Project Complete? YES Carrier: UPS Tracking Number: 1Z 237 301 03 9876 4770

Box 1: Matrix		Box 2: Preservative		Box 3: Filtered/Unfiltered	Box 4: Sample Type	Invoice
SW Surface Water	T Trip Blank	A HCL	F NaOH	F Filtered	G Grab	
GW Groundwater	E Equipment Blank	B HNO_3	F ZnAc	U Unfiltered	C Composite	Copy to Consultant: YES
L Leachate	P Product	C H_2SO_4	G Other (Specify)	Box 5: Sample Container Type		Bill: CLIENT OTHER
S Soil	O Other	D $Na_2S_2O_3$	H None	P Plastic V VOA		Preserved and shipped on ice: YES
				AG Amber Glass CG Clear Glass		

Sample ID	Date: 2018	Time	Box 1: Matrix	Number of Bottles	ICP/MS 6020B/3005A (Metals-Total)	7470A (Mercury-Total)							
Box 4 - Sample Type				G	G								
Box 3 - Filtered/Unfiltered				U	U								
Required pH of Sample				<2	<2								
Box 2 - Preservative				B	B								
Box 5 - Sample Container Type				1-500 ml P									
16C1	10/11	1200	GW	1	X	X							
16MW8	10/11	0815	GW	1	X	X							
16MW9	10/11	1115	GW	1	X	X							
16WC1A	10/11	1000	GW	3	X	X							USE FOR QC
16WDUP	10/11	1010	GW	1	X	X							
16WC1B	10/11	0910	GW	1	X	X							
16-2	10/10	1135	GW	1	X	X							
16-3	10/9	1345	GW	1	X	X	250ml						
16-5	10/10	0945	GW	1	X	X							
16WC2B	10/10	1050	GW	1	X	X							
16SPRING	10/10	0955	GW	1	X	X							

GENERAL NOTES:

1. ERIS EDD & DAA EDD required.
2. Level 4 deliverables required. (Full deliverable)
3. See attached target analyte list
4. Report results at or above QL permit, (attached).

JW 10/12/18

TJ13026

CSD

Client Special Instructions:

Received by/in Good Condition: ✓ Yes ___ No Custody Seal Intact: ✓ Yes ___ No Temperature upon arrival 4.8°C Received on Ice: ✓ Yes ___ No

Describe problems, if any:

Sampler Name (Print): Ken Coddington	Date: 10/9/18	#1 Relinquished by (Signature):	Date:	#2 Relinquished by (Signature):	Date	Sample Storage Time Requested:
Sampler Signature:	Time: 0700	Company Name:	Time	Company Name:	Time	
Sampler Name (Print): Kai-Tran Vo	Date: 10/9/18	#1 Received by (Signature):	Date:	#2 Received by (Signature):	Date: 10/12/18	30 DYS ORGNS MTLS INORG
Sampler Signature:	Time: 0700	Company Name:	Time	Company Name: Shealy Env./EDI	Time: 0910	

JW 4-12-18

V2

SHEALY ENVIRONMENTAL SERVICES, INC.

HWMU16
Radford Army Ammunition Plant (RFAAP)
Semiannual Monitoring Event
DAA JN: B03204-18A

ANALYTICAL METHOD: SEE BELOW
TYPE METHOD: SEE BELOW
CLASS: TOTAL

Method SW 846-6020B/3005A (ICP/MS)

No.	ANALYTE	CAS RN	Required LOQ (µg/l)
1.	Arsenic	7440-38-2	10
2.	Barium	7440-39-3	10
3.	Beryllium	7440-41-7	1
4	Cadmium	7440-43-9	1
5.	Chromium	7440-47-3	5
6.	Cobalt	7440-48-4	5
7	Copper	7440-50-8	5
8.	Lead	7440-92-1	2
9.	Nickel	7440-02-0	10
10.	Vanadium	7440 62 2	10
11.	Zinc	7440-66-6	30

✓ JCF 5-5-18

Method SW 7470A/CVAA

12	Mercury	7439-97-6 2/7470A	2

Notes.

- Antimony, selenium and silver deleted 4-6.2012.
- 11 Zinc QL increased 11 2016, lead increased to 2 ppb.
- 10/2016 JCF- rev 102017
- **10/2018 – Changed to 6020 "B" for Shealy. 6020 "A" can still be used. No other changes. Still current.**

t:\environmental\hbg\databases\wasp\sample event set up\semi-annual events\hwmu-16\hwmu16-target analyte list-q as of 10-2018.doc
JCF 11/04/2004

Shealy Environmental Services, Inc.
Document Number: MI000[illegible]C-14

Page 1 of 1
Effective Date: 8/2/2018

Sample Receipt Checklist (SRC)

Client: Draper Cooler Inspected by/date: LKH / 10-12-18 Lot #: TJ13026

Means of receipt: ☐ SESI ☐ Client ☑ UPS ☐ FedEx ☐ Other: _____

☑ Yes	☐ No		1. Were custody seals present on the cooler?
☑ Yes	☐ No	☐ NA	2. If custody seals were present, were they intact and unbroken?

pH Strip ID: 18-1636 Chlorine Strip ID: _____ Tested by: LKH

Original temperature upon receipt / Derived (Corrected) temperature upon receipt: %Solid Snap-Cup ID: _____

4.8 / 4.8 °C ____ / ____ °C ____ / ____ °C ____ / ____ °C

Method: ☑ Temperature Blank ☐ Against Bottles IR Gun ID: 6 IR Gun Correction Factor: 0 °C

Method of coolant: ☑ Wet Ice ☐ Ice Packs ☐ Dry Ice ☐ None

☐ Yes	☐ No	☑ NA	3. If temperature of any cooler exceeded 6.0°C, was Project Manager Notified? PM was Notified by: phone / email / face-to-face (circle one).
☑ Yes	☐ No	☐ NA	4. Is the commercial courier's packing slip attached to this form?
☑ Yes	☐ No		5. Were proper custody procedures (relinquished/received) followed?
☑ Yes	☐ No		6. Were sample IDs listed on the COC?
☑ Yes	☐ No		7. Were sample IDs listed on all sample containers?
☑ Yes	☐ No		8. Was collection date & time listed on the COC?
☑ Yes	☐ No		9. Was collection date & time listed on all sample containers?
☑ Yes	☐ No		10. Did all container label information (ID, date, time) agree with the COC?
☑ Yes	☐ No		11. Were tests to be performed listed on the COC?
☑ Yes	☐ No		12. Did all samples arrive in the proper containers for each test and/or in good condition (unbroken, lids on, etc.)?
☑ Yes	☐ No		13. Was adequate sample volume available?
☑ Yes	☐ No		14. Were all samples received within ½ the holding time or 48 hours, whichever comes first?
☐ Yes	☑ No		15. Were any samples containers missing/excess (circle one) samples Not listed on COC?
☐ Yes	☐ No	☑ NA	16. For VOA and RSK-175 samples, were bubbles present >"pea-size" (¼"or 6mm in diameter) in any of the VOA vials?
☑ Yes	☐ No	☐ NA	17. Were all DRO/metals/nutrient samples received at a pH of < 2?
☐ Yes	☐ No	☑ NA	18. Were all cyanide samples received at a pH > 12 and sulfide samples received at a pH > 9?
☐ Yes	☐ No	☑ NA	19. Were all applicable NH_3/TKN/cyanide/phenol/625 (< 0.5mg/L) samples free of residual chlorine?
☐ Yes	☐ No	☑ NA	20. Were client remarks/requests (i.e. requested dilutions, MS/MSD designations, etc…) correctly transcribed from the COC into the comment section in LIMS?
☐ Yes	☑ No		21. Was the quote number listed on the container label? If yes, Quote # _____.

Sample Preservation (Must be completed for any sample(s) incorrectly preserved or with headspace.)

Sample(s) _____ were received incorrectly preserved and were adjusted accordingly in sample receiving with _____mL of circle one: H_2SO_4, HNO_3, HCl, NaOH using SR # _____.
Time of preservation _____. If more than one preservative is needed, please note in the comments below.

Sample(s) _____ were received with bubbles >6 mm in diameter.

Samples(s) _____ were received with TRC > 0.5 mg/L (If #19 is ***no***) and were adjusted accordingly in sample receiving with sodium thiosulfate ($Na_2S_2O_3$) with Shealy ID: _____.

SR barcode labels applied by: LKH Date: 10-13-18

Comments:

Metals

ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1200** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1101	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**190**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

Shealy Environmental Services, Inc.
106 Vantage Point Drive West Columbia, SC 29172 (803) 791-9700 Fax (803) 791-9111 www.shealylab.com

Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-001**

Description: **16C1** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1200** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1212	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0815** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1107	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**130**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	**7440-50-8**	**6020B**	**17**		**5.0**	**ug/L**	**1**
Lead	**7439-92-1**	**6020B**	**4.4**		**2.0**	**ug/L**	**1**
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	**7440-66-6**	**6020B**	**70**		**30**	**ug/L**	**1**

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-002**

Description: **16MW8** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0815** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1214	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1115** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1113	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**540**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	**7440-02-0**	**6020B**	**12**		**10**	**ug/L**	**1**
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-003**

Description: **16MW9** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1115** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1217	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1000** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1118	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**280**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**8.3**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-004**

Description: **16WC1A** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1000** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1224	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1206	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**290**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	**7440-48-4**	**6020B**	**8.6**		**5.0**	**ug/L**	**1**
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-005**

Description: **16WDUP** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1010** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1231	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1212	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**120**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-006**

Description: **16WC1B** Matrix: **Aqueous**

Date Sampled: **10/11/2018 0910** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
2	7470A	7470A	1	10/18/2018 1524	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	2

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1135** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1217	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**230**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-007**

Description: **16-2** Matrix: **Aqueous**

Date Sampled: **10/11/2018 1135** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1236	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2018 1345** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1223	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**720**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-008**

Description: **16-3** Matrix: **Aqueous**

Date Sampled: **10/09/2018 1345** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1238	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0945** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1229	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**170**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-009**

Description: **16-5** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0945** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1240	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2018 1050** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1235	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**110**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-010**

Description: **16WC2B** Matrix: **Aqueous**

Date Sampled: **10/10/2018 1050** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1243	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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ICP-MS

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0955** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	3005A	6020B	1	11/16/2018 1241	BNW	10/17/2018 1629	86791

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Arsenic	7440-38-2	6020B	10	U	10	ug/L	1
Barium	**7440-39-3**	**6020B**	**220**		**10**	**ug/L**	**1**
Beryllium	7440-41-7	6020B	1.0	U	1.0	ug/L	1
Cadmium	7440-43-9	6020B	1.0	U	1.0	ug/L	1
Chromium	7440-47-3	6020B	5.0	U	5.0	ug/L	1
Cobalt	7440-48-4	6020B	5.0	U	5.0	ug/L	1
Copper	7440-50-8	6020B	5.0	U	5.0	ug/L	1
Lead	7439-92-1	6020B	2.0	U	2.0	ug/L	1
Nickel	7440-02-0	6020B	10	U	10	ug/L	1
Vanadium	7440-62-2	6020B	10	U	10	ug/L	1
Zinc	7440-66-6	6020B	30	U	30	ug/L	1

LOQ = Limit of Quantitation
B = Detected in the method blank
E = Quantitation of compound exceeded the calibration range
U = Not detected at or above the DL
N = Recovery is out of criteria
P = The RPD between two GC columns exceeds 40%
H = Out of holding time
W = Reported on wet weight basis
D = Dilution > 1

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Mercury

Client: **Draper Aden Associates** Laboratory ID: **TJ13026-011**

Description: **16SPRING** Matrix: **Aqueous**

Date Sampled: **10/10/2018 0955** Project Name: **RAAP HWMU16**

Date Received: **10/12/2018** Project Number: **B03204-18A**

Run	Prep Method	Analytical Method	Dilution	Analysis Date	Analyst	Prep Date	Batch
1	7470A	7470A	1	10/18/2018 1245	SLS	10/17/2018 1351	86774

Parameter	CAS Number	Analytical Method	Result	Q	LOQ	Units	Run
Mercury	7439-97-6	7470A	2.0	U	2.0	ug/L	1

LOQ = Limit of Quantitation
U = Not detected at or above the DL
H = Out of holding time
B = Detected in the method blank
N = Recovery is out of criteria
W = Reported on wet weight basis
E = Quantitation of compound exceeded the calibration range
P = The RPD between two GC columns exceeds 40%
D = Dilution > 1

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QC Summary

ICP-MS - MB

Sample ID: TQ86791-001
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Arsenic	10	U	1	10	ug/L	11/16/2018 1049
Barium	10	U	1	10	ug/L	11/16/2018 1049
Beryllium	1.0	U	1	1.0	ug/L	11/16/2018 1049
Cadmium	1.0	U	1	1.0	ug/L	11/16/2018 1049
Chromium	5.0	U	1	5.0	ug/L	11/16/2018 1049
Cobalt	5.0	U	1	5.0	ug/L	11/16/2018 1049
Copper	5.0	U	1	5.0	ug/L	11/16/2018 1049
Lead	2.0	U	1	2.0	ug/L	11/16/2018 1049
Nickel	10	U	1	10	ug/L	11/16/2018 1049
Vanadium	10	U	1	10	ug/L	11/16/2018 1049
Zinc	30	U	1	30	ug/L	11/16/2018 1049

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - LCS

Sample ID: TQ86791-002
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	100	100		1	100	80-120	11/16/2018 1055
Barium	100	98		1	98	80-120	11/16/2018 1055
Beryllium	100	94		1	94	80-120	11/16/2018 1055
Cadmium	100	93		1	93	80-120	11/16/2018 1055
Chromium	100	100		1	100	80-120	11/16/2018 1055
Cobalt	100	99		1	99	80-120	11/16/2018 1055
Copper	100	100		1	101	80-120	11/16/2018 1055
Lead	100	100		1	100	80-120	11/16/2018 1055
Nickel	100	96		1	96	80-120	11/16/2018 1055
Vanadium	100	100		1	101	80-120	11/16/2018 1055
Zinc	100	99		1	99	80-120	11/16/2018 1055

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MS

Sample ID: TJ13026-004MS
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Arsenic	0.0	100	99		1	99	75-125	11/16/2018 1124
Barium	280	100	390		1	104	75-125	11/16/2018 1124
Beryllium	0.0	100	45	N	1	45	75-125	11/16/2018 1124
Cadmium	0.0	100	92		1	92	75-125	11/16/2018 1124
Chromium	0.0	100	98		1	98	75-125	11/16/2018 1124
Cobalt	8.3	100	100		1	94	75-125	11/16/2018 1124
Copper	0.0	100	95		1	95	75-125	11/16/2018 1124
Lead	0.0	100	97		1	97	75-125	11/16/2018 1124
Nickel	0.0	100	100		1	102	75-125	11/16/2018 1124
Vanadium	0.0	100	100		1	102	75-125	11/16/2018 1124
Zinc	0.0	100	98		1	98	75-125	11/16/2018 1124

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS - MSD

Sample ID: TJ13026-004MD
Batch: 86791
Analytical Method: 6020B
Matrix: Aqueous
Prep Method: 3005A
Prep Date: 10/17/2018 1629

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Arsenic	0.0	100	99		1	99	0.061	75-125	20	11/16/2018 1130
Barium	280	100	380		1	99	1.3	75-125	20	11/16/2018 1130
Beryllium	0.0	100	44	N	1	44	0.61	75-125	20	11/16/2018 1130
Cadmium	0.0	100	92		1	92	0.24	75-125	20	11/16/2018 1130
Chromium	0.0	100	97		1	97	0.87	75-125	20	11/16/2018 1130
Cobalt	8.3	100	100		1	95	0.39	75-125	20	11/16/2018 1130
Copper	0.0	100	94		1	94	0.65	75-125	20	11/16/2018 1130
Lead	0.0	100	97		1	97	0.52	75-125	20	11/16/2018 1130
Nickel	0.0	100	100		1	100	2.1	75-125	20	11/16/2018 1130
Vanadium	0.0	100	100		1	102	0.39	75-125	20	11/16/2018 1130
Zinc	0.0	100	97		1	97	0.97	75-125	20	11/16/2018 1130

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MB

Sample ID: TQ86774-001
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Result	Q	Dil	LOQ	Units	Analysis Date
Mercury	2.0	U	1	2.0	ug/L	10/18/2018 1207

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - LCS

Sample ID: TQ86774-002
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	2.0	1.9		1	96	80-120	10/18/2018 1210

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection
P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit
N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MS

Sample ID: TJ13026-004MS
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% Rec Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	97	85-115	10/18/2018 1226

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

Mercury - MSD

Sample ID: TJ13026-004MD
Batch: 86774
Analytical Method: 7470A
Matrix: Aqueous
Prep Method: 7470A
Prep Date: 10/17/2018 1351

Parameter	Sample Amount (ug/L)	Spike Amount (ug/L)	Result (ug/L)	Q	Dil	% Rec	% RPD	% Rec Limit	% RPD Limit	Analysis Date
Mercury	0.0	2.0	1.9		1	93	4.3	85-115	20	10/18/2018 1228

LOQ = Limit of Quantitation
DL = Detection Limit
LOD = Limit of Detection

P = The RPD between two GC columns exceeds 40%
J = Estimated result < LOQ and ≥ DL
U = Not detected at or above the detection limit

N = Recovery is out of criteria
+ = RPD is out of criteria

Note: Calculations are performed before rounding to avoid round-off errors in calculated results

ICP-MS Metals

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: TJ13026 **Method Type:** ICP-MS **SOW No.:**

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Lab Sample ID	Client Sample ID	QC Description
TJ13026-001	16C1	
TJ13026-002	16MW8	
TJ13026-003	16MW9	
TJ13026-004	16WC1A	
TJ13026-004S	16WC1AS	Matrix Spike
TJ13026-004SD	16WC1ASD	Matrix Spike Duplicate
TJ13026-005	16WDUP	
TJ13026-006	16WC1B	
TJ13026-007	16-2	
TJ13026-008	16-3	
TJ13026-009	16-5	
TJ13026-010	16WC2B	
TJ13026-011	16SPRING	

Were ICP interelement corrections applied? Yes/No Yes

Were ICP background corrections applied? Yes/No Yes

If yes - were raw data generated before applications of background corrections? Yes/No No

Comments:

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: Name:

Date: Title:

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1									
	Arsenic	195.70	200.0	98	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Barium	198.80	200.0	99	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Beryllium	194.60	200.0	97	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Cadmium	189.73	200.0	95	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Chromium	197.30	200.0	99	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Cobalt	191.30	200.0	96	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Copper	189.57	200.0	95	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Lead	193.27	200.0	97	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Nickel	187.13	200.0	94	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Vanadium	203.93	200.0	102	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
	Zinc	190.77	200.0	95	90.0 - 110.0	MS	11/16/2018	10:02	MS2111618A 6020B 200.8, g
CCV1									
	Arsenic	302.00	300.0	101	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Barium	306.57	300.0	102	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Beryllium	293.63	300.0	98	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Cadmium	289.23	300.0	96	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Chromium	315.67	300.0	105	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Cobalt	304.23	300.0	101	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Copper	286.67	300.0	96	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Lead	292.80	300.0	98	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Nickel	289.47	300.0	96	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Vanadium	318.30	300.0	106	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
	Zinc	285.90	300.0	95	90.0 - 110.0	MS	11/16/2018	10:19	MS2111618A 6020B 200.8, g
CCV2									
	Arsenic	289.20	300.0	96	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Barium	305.70	300.0	102	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Beryllium	293.73	300.0	98	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Cadmium	284.67	300.0	95	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Chromium	301.37	300.0	100	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Cobalt	293.47	300.0	98	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Copper	283.10	300.0	94	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Lead	290.67	300.0	97	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Nickel	285.10	300.0	95	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Vanadium	305.87	300.0	102	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g
	Zinc	286.27	300.0	95	90.0 - 110.0	MS	11/16/2018	11:36	MS2111618A 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic Ventures

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
CCV3									
	Arsenic	291.90	300.0	97	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Barium	307.63	300.0	103	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Beryllium	291.43	300.0	97	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Cadmium	289.87	300.0	97	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Chromium	297.57	300.0	99	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Cobalt	285.43	300.0	95	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Copper	280.50	300.0	94	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Lead	294.13	300.0	98	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Nickel	285.43	300.0	95	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Vanadium	301.13	300.0	100	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g
	Zinc	287.77	300.0	96	90.0 - 110.0	MS	11/16/2018	12:47	MS2111618A 6020B 200.8, g

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	½ LOQ	½ LOQ	M	Analysis Date	Analysis Time	Run
ICB1										
	Arsenic	0.037	+/-1.000	U	1.000	1.000	MS	11/16/2018	10:07	MS2111618A 6
	Barium	0.000	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Beryllium	0.003	+/-0.200	U	0.200	0.200	MS	11/16/2018	10:07	MS2111618A 6
	Cadmium	0.003	+/-0.250	U	0.250	0.250	MS	11/16/2018	10:07	MS2111618A 6
	Chromium	-0.009	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Cobalt	0.002	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Copper	-0.002	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Lead	0.003	+/-0.500	U	0.500	0.500	MS	11/16/2018	10:07	MS2111618A 6
	Nickel	0.004	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Vanadium	-0.105	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:07	MS2111618A 6
	Zinc	-0.074	+/-5.000	U	5.000	5.000	MS	11/16/2018	10:07	MS2111618A 6
CCB1										
	Arsenic	0.159	+/-1.000	U	1.000	1.000	MS	11/16/2018	10:25	MS2111618A 6
	Barium	0.003	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Beryllium	0.005	+/-0.200	U	0.200	0.200	MS	11/16/2018	10:25	MS2111618A 6
	Cadmium	0.001	+/-0.250	U	0.250	0.250	MS	11/16/2018	10:25	MS2111618A 6
	Chromium	-0.006	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Cobalt	0.003	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Copper	-0.002	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Lead	0.004	+/-0.500	U	0.500	0.500	MS	11/16/2018	10:25	MS2111618A 6
	Nickel	0.008	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Vanadium	-0.084	+/-2.500	U	2.500	2.500	MS	11/16/2018	10:25	MS2111618A 6
	Zinc	-0.102	+/-5.000	U	5.000	5.000	MS	11/16/2018	10:25	MS2111618A 6

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INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	½ LOQ	½ LOQ	M	Analysis Date	Analysis Time	Run
CCB2										
	Arsenic	0.113	+/-1.000	U	1.000	1.000	MS	11/16/2018	11:42	MS2111618A 6
	Barium	0.016	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Beryllium	0.003	+/-0.200	U	0.200	0.200	MS	11/16/2018	11:42	MS2111618A 6
	Cadmium	0.003	+/-0.250	U	0.250	0.250	MS	11/16/2018	11:42	MS2111618A 6
	Chromium	0.005	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Cobalt	0.005	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Copper	0.004	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Lead	0.004	+/-0.500	U	0.500	0.500	MS	11/16/2018	11:42	MS2111618A 6
	Nickel	0.009	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Vanadium	-0.042	+/-2.500	U	2.500	2.500	MS	11/16/2018	11:42	MS2111618A 6
	Zinc	-0.113	+/-5.000	U	5.000	5.000	MS	11/16/2018	11:42	MS2111618A 6
CCB3										
	Arsenic	0.110	+/-1.000	U	1.000	1.000	MS	11/16/2018	12:53	MS2111618A 6
	Barium	0.010	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Beryllium	0.006	+/-0.200	U	0.200	0.200	MS	11/16/2018	12:53	MS2111618A 6
	Cadmium	0.000	+/-0.250	U	0.250	0.250	MS	11/16/2018	12:53	MS2111618A 6
	Chromium	0.006	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Cobalt	0.004	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Copper	0.003	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Lead	0.004	+/-0.500	U	0.500	0.500	MS	11/16/2018	12:53	MS2111618A 6
	Nickel	0.006	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Vanadium	-0.029	+/-2.500	U	2.500	2.500	MS	11/16/2018	12:53	MS2111618A 6
	Zinc	-0.086	+/-5.000	U	5.000	5.000	MS	11/16/2018	12:53	MS2111618A 6

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INTERFERENCE CHECK SAMPLE

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

ICS Source: Inorganic Ventures **Instrument ID:** ICPMS2

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window	Analysis Date	Analysis Time	Run Number
ICSA								
	Arsenic	0.23			-4.00 to 4.00	11/16/2018	10:13	MS2111618A 6
	Barium	0.083			-10.000 to 10.000	11/16/2018	10:13	MS2111618A 6
	Beryllium	0.0073			-0.8000 to 0.8000	11/16/2018	10:13	MS2111618A 6
	Cadmium	0.081			-1.000 to 1.000	11/16/2018	10:13	MS2111618A 6
	Chromium	0.25			-10.00 to 10.00	11/16/2018	10:13	MS2111618A 6
	Cobalt	0.072			-10.000 to 10.000	11/16/2018	10:13	MS2111618A 6
	Copper	-0.20			-10.00 to 10.00	11/16/2018	10:13	MS2111618A 6
	Lead	0.085			-2.000 to 2.000	11/16/2018	10:13	MS2111618A 6
	Nickel	0.68			-10.00 to 10.00	11/16/2018	10:13	MS2111618A 6
	Vanadium	0.057			-10.000 to 10.000	11/16/2018	10:13	MS2111618A 6
	Zinc	1.5			-20.0 to 20.0	11/16/2018	10:13	MS2111618A 6

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POST DIGEST SPIKE SUMMARY

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Matrix: WATER **Level:** **Client ID:** 16WC1AA

Sample ID: TJ13026-004 **Spiked ID:** TJ13026-004A

Analyte	Units	Acceptance Limit %R	Spiked Result	C	Sample Result	C	Spike Added	% Recovery	Qual	M
Beryllium	ug/L	80 - 120	43.66		1.00	U	100.0	43.7		MS

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SERIAL DILUTION SAMPLE SUMMARY

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** Shealy **Case No.:** **SAS No.:**

Matrix: WATER **Level:** **Client ID:** 16WC1AL

Sample ID: TJ13026-004 **Serial Dilution ID:** TJ13026-004L

Batch Number: 86791

Analyte	Initial Result ug/L	C	Serial Result ug/L	C	% Difference	Qual	Acceptance Limits	M
Arsenic	10.00	U	50.00	U			10.00 %	MS
Barium	281.90		298.50		5.9		10.00 %	MS
Beryllium	1.00	U	5.00	U			10.00 %	MS
Cadmium	1.00	U	5.00	U			10.00 %	MS
Chromium	5.00	U	25.00	U			10.00 %	MS
Cobalt	8.35		25.00	U	100.0		10.00 %	MS
Copper	5.00	U	25.00	U			10.00 %	MS
Lead	2.00	U	10.00	U			10.00 %	MS
Nickel	10.00	U	50.00	U			10.00 %	MS
Vanadium	10.00	U	50.00	U			10.00 %	MS
Zinc	30.00	U	150.00	U			10.00 %	MS

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0901																										
ZZZZZZ	1.00	0908																										
BLANK	1.00	0914				X	X	X	X		X	x	x		X				X						x	X		
MW10490	1.00	0920																										
CAL1	1.00	0926				X	X	X			X	x	x		X				X						x	X		
CAL2	1.00	0932				X	X	X	X		X	x	x		X				X						x	X		
CAL3	1.00	0938				X	X	X	X		X	x	x		X				X						x	X		
CAL4	1.00	0944				X	X	X	X		X	x	x		X				X						x	X		
CAL5	1.00	0950																										
CAL6	1.00	0956																										
ICV1	1.00	1002				X	X	X	X		X	x	x		X				X						x	X		
ICB1	1.00	1007				X	X	X	X		X	x	x		X				X						x	X		
ICSA	1.00	1013				X	X	X	X		X	x	x		X				X						x	X		
CCV1	1.00	1019				X	X	X	X		X	x	x		X				X						x	X		
CCB1	1.00	1025				X	X	X	X		X	x	x		X				X						x	X		
ZZZZZZ	1.00	1031																										
ZZZZZZ	1.00	1037																										
ZZZZZZ	5.00	1043																										
TO86791-001	1.00	1049				X	X	X	X		X	x	x		X				X						x	X		
TO86791-002	1.00	1055				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-001	1.00	1101				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-002	1.00	1107				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-003	1.00	1113				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-004	1.00	1118				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-004S	1.00	1124				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-004SD	1.00	1130				X	X	X	X		X	x	x		X				X						x	X		
CCV2	1.00	1136				X	X	X	X		X	x	x		X				X						x	X		
CCB2	1.00	1142				X	X	X	X		X	x	x		X				X						x	X		
ZZZZZZ	1.00	1148																										
TJ13026-004L	5.00	1154				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-004A	1.00	1200						X																				
TJ13026-005	1.00	1206				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-006	1.00	1212				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-007	1.00	1217				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-008	1.00	1223				X	X	X	X		X	x	x		X				X						x	X		
TJ13026-009	1.00	1229				X	X	X	X		X	x	x		X				X						x	X		

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
TJ13026-010	1.00	1235				X	X	X	X		X	X	X		X				X						X	X	
TJ13026-011	1.00	1241				X	X	X	X		X	X	X		X				X						X	X	
CCV3	1.00	1247				X	X	X	X		X	X	X		X				X						X	X	
CCB3	1.00	1253				X	X	X	X		X	X	X		X				X						X	X	
ZZZZZZ	1.00	1259																										
ZZZZZZ	1.00	1305																										
ZZZZZZ	1.00	1311																										
ZZZZZZ	1.00	1316																										
ZZZZZZ	1.00	1322																										
ZZZZZZ	1.00	1328																										
ZZZZZZ	1.00	1334																										
ZZZZZZ	1.00	1340																										
ZZZZZZ	5.00	1346																										
ZZZZZZ	1.00	1352																										
ZZZZZZ	1.00	1358																										
ZZZZZZ	1.00	1404																										
ZZZZZZ	1.00	1410																										
ZZZZZZ	1.00	1415																										
ZZZZZZ	5.00	1421																										
ZZZZZZ	1.00	1427																										
ZZZZZZ	1.00	1433																										
ZZZZZZ	1.00	1439																										
ZZZZZZ	1.00	1445																										
ZZZZZZ	1.00	1451																										
ZZZZZZ	1.00	1457																										
ZZZZZZ	1.00	1503																										
ZZZZZZ	1.00	1508																										
ZZZZZZ	1.00	1514																										
ZZZZZZ	1.00	1520																										
ZZZZZZ	1.00	1526																										
ZZZZZZ	1.00	1532																										
ZZZZZZ	1.00	1538																										
ZZZZZZ	1.00	1544																										
ZZZZZZ	5.00	1550																										
ZZZZZZ	1.00	1556																										
ZZZZZZ	1.00	1601																										

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1607																								
ZZZZZZ	1.00	1613																								
ZZZZZZ	1.00	1619																								
ZZZZZZ	1.00	1625																								
ZZZZZZ	1.00	1631																								
ZZZZZZ	1.00	1637																								
ZZZZZZ	1.00	1643																								
ZZZZZZ	1.00	1649																								
ZZZZZZ	1.00	1655																								
ZZZZZZ	1.00	1700																								
ZZZZZZ	1.00	1706																								
ZZZZZZ	1.00	1712																								
ZZZZZZ	1.00	1718																								
ZZZZZZ	1.00	1724																								
ZZZZZZ	1.00	1730																								
ZZZZZZ	1.00	1736																								
ZZZZZZ	5.00	1742																								
ZZZZZZ	1.00	1748																								
ZZZZZZ	1.00	1754																								
ZZZZZZ	1.00	1759																								
ZZZZZZ	1.00	1805																								
ZZZZZZ	1.00	1811																								
ZZZZZZ	1.00	1817																								
ZZZZZZ	1.00	1823																								
ZZZZZZ	1.00	1829																								
ZZZZZZ	1.00	1835																								
ZZZZZZ	1.00	1841																								
ZZZZZZ	1.00	1847																								
ZZZZZZ	1.00	1852																								
ZZZZZZ	1.00	1858																								
ZZZZZZ	1.00	1904																								
ZZZZZZ	1.00	1910																								
ZZZZZZ	1.00	1916																								
ZZZZZZ	1.00	1922																								
ZZZZZZ	1.00	1928																								
ZZZZZZ	1.00	1934																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1940																								
ZZZZZZ	1.00	1946																								
ZZZZZZ	1.00	1951																								
ZZZZZZ	1.00	1957																								
ZZZZZZ	1.00	2003																								
ZZZZZZ	1.00	2009																								
ZZZZZZ	1.00	2015																								
ZZZZZZ	1.00	2021																								
ZZZZZZ	1.00	2027																								
ZZZZZZ	1.00	2033																								
ZZZZZZ	1.00	2039																								
ZZZZZZ	5.00	2045																								
ZZZZZZ	1.00	2051																								
ZZZZZZ	1.00	2057																								
ZZZZZZ	1.00	2102																								
ZZZZZZ	1.00	2108																								
ZZZZZZ	1.00	2114																								
ZZZZZZ	1.00	2120																								
ZZZZZZ	1.00	2126																								
ZZZZZZ	5.00	2132																								
ZZZZZZ	5.00	2138																								
ZZZZZZ	5.00	2144																								
ZZZZZZ	5.00	2150																								
ZZZZZZ	10.00	2156																								
ZZZZZZ	5.00	2202																								
ZZZZZZ	1.00	2208																								
ZZZZZZ	1.00	2214																								
ZZZZZZ	5.00	2219																								
ZZZZZZ	5.00	2225																								
ZZZZZZ	5.00	2231																								
ZZZZZZ	5.00	2237																								
ZZZZZZ	5.00	2243																								
ZZZZZZ	10.00	2249																								
ZZZZZZ	1.00	2255																								
ZZZZZZ	1.00	2301																								
ZZZZZZ	1.00	2307																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	2313																								
ZZZZZZ	1.00	2319																								
ZZZZZZ	1.00	2325																								
ZZZZZZ	1.00	2331																								
ZZZZZZ	1.00	2337																								
ZZZZZZ	1.00	2343																								
ZZZZZZ	1.00	2348																								
ZZZZZZ	1.00	2354																								
ZZZZZZ	1.00	0000																								
ZZZZZZ	1.00	0006																								
ZZZZZZ	1.00	0012																								
ZZZZZZ	1.00	0018																								
ZZZZZZ	1.00	0024																								
ZZZZZZ	1.00	0030																								
ZZZZZZ	1.00	0036																								
ZZZZZZ	1.00	0042																								
ZZZZZZ	1.00	0048																								
ZZZZZZ	1.00	0054																								
ZZZZZZ	5.00	0100																								
ZZZZZZ	1.00	0106																								
ZZZZZZ	1.00	0112																								
ZZZZZZ	1.00	0117																								
ZZZZZZ	1.00	0123																								
ZZZZZZ	1.00	0129																								
ZZZZZZ	1.00	0135																								
ZZZZZZ	1.00	0141																								
ZZZZZZ	1.00	0147																								
ZZZZZZ	1.00	0153																								
ZZZZZZ	1.00	0159																								
ZZZZZZ	1.00	0205																								
ZZZZZZ	1.00	0211																								
ZZZZZZ	1.00	0217																								
ZZZZZZ	1.00	0223																								
ZZZZZZ	1.00	0229																								
ZZZZZZ	1.00	0235																								
ZZZZZZ	1.00	0241																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0247																								
ZZZZZZ	1.00	0253																								
ZZZZZZ	1.00	0258																								
ZZZZZZ	1.00	0304																								
ZZZZZZ	5.00	0310																								
ZZZZZZ	1.00	0316																								
ZZZZZZ	1.00	0322																								
ZZZZZZ	1.00	0328																								
ZZZZZZ	1.00	0334																								
ZZZZZZ	1.00	0340																								
ZZZZZZ	1.00	0346																								
ZZZZZZ	1.00	0352																								
ZZZZZZ	1.00	0358																								
ZZZZZZ	1.00	0404																								
ZZZZZZ	1.00	0410																								
ZZZZZZ	1.00	0416																								
ZZZZZZ	1.00	0422																								
ZZZZZZ	1.00	0428																								
ZZZZZZ	1.00	0434																								
ZZZZZZ	1.00	0440																								
ZZZZZZ	1.00	0446																								
ZZZZZZ	1.00	0451																								
ZZZZZZ	1.00	0457																								
ZZZZZZ	5.00	0503																								
ZZZZZZ	1.00	0509																								
ZZZZZZ	1.00	0515																								
ZZZZZZ	1.00	0521																								
ZZZZZZ	1.00	0527																								
ZZZZZZ	1.00	0533																								
ZZZZZZ	5.00	0539																								
ZZZZZZ	5.00	0545																								
ZZZZZZ	1.00	0551																								
ZZZZZZ	1.00	0557																								
ZZZZZZ	1.00	0603																								
ZZZZZZ	1.00	0609																								
ZZZZZZ	1.00	0615																								

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: Shealy Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: ICPMS2 Run Number: MS2111618A 6020B 200.8, generate

Start Date: 11/16/2018 End Date: 11/17/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	0621																								
ZZZZZZ	1.00	0627																								
ZZZZZZ	1.00	0633																								
ZZZZZZ	1.00	0639																								
ZZZZZZ	1.00	0645																								
ZZZZZZ	1.00	0650																								
ZZZZZZ	1.00	0656																								
ZZZZZZ	1.00	0702																								
ZZZZZZ	1.00	0708																								
ZZZZZZ	1.00	0714																								
ZZZZZZ	1.00	0720																								
ZZZZZZ	1.00	0726																								
ZZZZZZ	1.00	0732																								
ZZZZZZ	1.00	0738																								
ZZZZZZ	1.00	0744																								
ZZZZZZ	1.00	0750																								
ZZZZZZ	5.00	0756																								
ZZZZZZ	1.00	0802																								
ZZZZZZ	1.00	0808																								
ZZZZZZ	1.00	0814																								
ZZZZZZ	5.00	0820																								
ZZZZZZ	5.00	0826																								
ZZZZZZ	1.00	0832																								
ZZZZZZ	1.00	0837																								
ZZZZZZ	1.00	0843																								
ZZZZZZ	1.00	0849																								
ZZZZZZ	1.00	0857																								
ZZZZZZ	1.00	0903																								
ZZZZZZ	1.00	0908																								

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: _____ NRAS No.: _____ SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
RINSE	ZZZZZZ	0901	0											
TUNE	ZZZZZZ	0908	0											
BLANK	BLANK IM9061-02	0914	100		100		100		100		100		100	
MW10490	MW10490	0920	101		101		101		102		102		100	
CAL1	CAL1 MW-10571	0926	100		101		102		101		102		100	
CAL2	CAL2 MW-10572	0932	100		100		101		100		101		99	
CAL3	CAL3 MW-10515	0938	97		97		97		97		99		96	
CAL4	CAL4 MW-10516	0944	97		95		95		94		97		94	
CAL5	CAL5 MW-10488	0950	99		89		88		92		93		89	
CAL6	CAL6 MW-10489	0956	97		85		83		87		90		86	
ICV1	ICV1	1002	95		90		89		92		95		91	
ICB1	ICB1	1007	103		99		99		94		100		97	
ICSA	ICSA	1013	122		86		85		79		86		78	
CCV1	CCV1	1019	98		89		87		88		93		89	
CCB1	CCB1	1025	101		97		97		93		100		96	
LR	ZZZZZZ	1031	0											
TJ18096-004	ZZZZZZ	1037	0											
TJ18014-002	ZZZZZZ	1043	0											
TQ86791-001	TQ86791-001MB	1049	114		95		99		91		99		94	
TQ86791-002	LCS	1055	114		98		101		96		100		96	
TJ13026-001	16C1	1101	120		98		105		97		101		99	
TJ13026-002	16MW8	1107	124		96		104		94		101		100	
TJ13026-003	16MW9	1113	119		97		108		96		101		97	
TJ13026-004	16WC1A	1118	121		96		104		94		100		96	
TJ13026-004	16WC1AS	1124	113		96		104		97		99		96	
TJ13026-004	16WC1ASD	1130	114		95		102		95		100		95	
CCV2	CCV2	1136	98		89		89		92		93		90	
CCB2	CCB2	1142	100		99		101		94		101		97	

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: _____ NRAS No.: _____ SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
LR	LR 2X MW10519	1148	103		88		86		85		88		84	
TJ13026-004	16WC1AL	1154	107		99		101		94		102		98	
TJ13026-004	16WC1AA	1200	119		95		101		94		101		95	
TJ13026-005	16WDUP	1206	123		97		104		95		102		97	
TJ13026-006	16WC1B	1212	123		99		107		97		104		100	
TJ13026-007	16-2	1217	122		99		108		97		104		99	
TJ13026-008	16-3	1223	128		100		109		98		104		99	
TJ13026-009	16-5	1229	123		100		109		99		104		100	
TJ13026-010	16WC2B	1235	128		101		111		99		106		100	
TJ13026-011	16SPRING	1241	125		100		109		99		104		100	
CCV3	CCV3	1247	99		90		90		92		94		91	
CCB3	CCB3	1253	100		99		100		95		101		98	
TQ88061-001	ZZZZZZ	1259	0											
TQ88061-002	ZZZZZZ	1305	0											
TJ22039-001	ZZZZZZ	1311	0											
TJ22039-002	ZZZZZZ	1316	0											
TJ22039-003	ZZZZZZ	1322	0											
TJ22039-004	ZZZZZZ	1328	0											
TJ22039-004	ZZZZZZ	1334	0											
TJ22039-004	ZZZZZZ	1340	0											
TJ22039-004	ZZZZZZ	1346	0											
TJ22039-004	ZZZZZZ	1352	0											
CCV	ZZZZZZ	1358	0											
CCB	ZZZZZZ	1404	0											
TJ26010-001	ZZZZZZ	1410	0											
TJ26010-002	ZZZZZZ	1415	0											
TJ26011-001	ZZZZZZ	1421	0											
TJ29026-001	ZZZZZZ	1427	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TJ29026-002	ZZZZZZ	1433	0											
TQ87940-001	ZZZZZZ	1439	0											
TQ87940-002	ZZZZZZ	1445	0											
TJ22041-004	ZZZZZZ	1451	0											
TJ22041-005	ZZZZZZ	1457	0											
TJ22041-006	ZZZZZZ	1503	0											
CCV	ZZZZZZ	1508	0											
CCB	ZZZZZZ	1514	0											
TJ22041-007	ZZZZZZ	1520	0											
TJ22041-008	ZZZZZZ	1526	0											
TJ24027-001	ZZZZZZ	1532	0											
TJ24027-001	ZZZZZZ	1538	0											
TJ24027-001	ZZZZZZ	1544	0											
TJ24027-001	ZZZZZZ	1550	0											
TJ24027-001	ZZZZZZ	1556	0											
TJ24027-002	ZZZZZZ	1601	0											
TJ24027-003	ZZZZZZ	1607	0											
TJ24027-004	ZZZZZZ	1613	0											
CCV	ZZZZZZ	1619	0											
CCB	ZZZZZZ	1625	0											
TJ24027-005	ZZZZZZ	1631	0											
TJ24027-006	ZZZZZZ	1637	0											
TJ24027-007	ZZZZZZ	1643	0											
TJ24029-001	ZZZZZZ	1649	0											
TJ24029-002	ZZZZZZ	1655	0											
TQ87733-001	ZZZZZZ	1700	0											
TQ87733-002	ZZZZZZ	1706	0											
TJ24026-002	ZZZZZZ	1712	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TJ24026-002	ZZZZZZ	1718	0											
TJ24026-002	ZZZZZZ	1724	0											
CCV	ZZZZZZ	1730	0											
CCB	ZZZZZZ	1736	0											
TJ24026-002	ZZZZZZ	1742	0											
TJ24026-002	ZZZZZZ	1748	0											
TJ24026-003	ZZZZZZ	1754	0											
TJ24026-004	ZZZZZZ	1759	0											
TJ24026-005	ZZZZZZ	1805	0											
TJ24026-006	ZZZZZZ	1811	0											
TJ24026-007	ZZZZZZ	1817	0											
TJ24026-008	ZZZZZZ	1823	0											
TJ24026-009	ZZZZZZ	1829	0											
TJ24026-010	ZZZZZZ	1835	0											
CCV	ZZZZZZ	1841	0											
CCB	ZZZZZZ	1847	0											
TJ24026-011	ZZZZZZ	1852	0											
TJ24026-013	ZZZZZZ	1858	0											
TJ24026-014	ZZZZZZ	1904	0											
TJ24026-015	ZZZZZZ	1910	0											
TJ24026-016	ZZZZZZ	1916	0											
TJ24026-017	ZZZZZZ	1922	0											
TJ24026-018	ZZZZZZ	1928	0											
TJ24026-019	ZZZZZZ	1934	0											
TJ24026-020	ZZZZZZ	1940	0											
CCV	ZZZZZZ	1946	0											
CCB	ZZZZZZ	1951	0											
TQ88009-001	ZZZZZZ	1957	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TQ88009-002	ZZZZZZ	2003	0											
TJ25041-001	ZZZZZZ	2009	0											
TJ25041-003	ZZZZZZ	2015	0											
TJ25041-005	ZZZZZZ	2021	0											
TJ25041-007	ZZZZZZ	2027	0											
TJ25041-007	ZZZZZZ	2033	0											
TJ25041-007	ZZZZZZ	2039	0											
TJ25041-007	ZZZZZZ	2045	0											
TJ25041-007	ZZZZZZ	2051	0											
CCV	ZZZZZZ	2057	0											
CCB	ZZZZZZ	2102	0											
TQ87913-001	ZZZZZZ	2108	0											
TQ87913-002	ZZZZZZ	2114	0											
TJ23010-001	ZZZZZZ	2120	0											
TJ23010-003	ZZZZZZ	2126	0											
TJ23010-001	ZZZZZZ	2132	0											
TJ23010-002	ZZZZZZ	2138	0											
TJ23010-003	ZZZZZZ	2144	0											
TJ23010-011	ZZZZZZ	2150	0											
TJ23010-007	ZZZZZZ	2156	0											
TJ23010-005	ZZZZZZ	2202	0											
CCV	ZZZZZZ	2208	0											
CCB	ZZZZZZ	2214	0											
TJ23010-004	ZZZZZZ	2219	0											
TJ23010-012	ZZZZZZ	2225	0											
TJ23010-012	ZZZZZZ	2231	0											
TJ23010-012	ZZZZZZ	2237	0											
TJ23010-012	ZZZZZZ	2243	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TJ23010-017	ZZZZZZ	2249	0											
TJ24030-001	ZZZZZZ	2255	0											
TJ24030-002	ZZZZZZ	2301	0											
TJ24030-003	ZZZZZZ	2307	0											
TJ24030-004	ZZZZZZ	2313	0											
CCV	ZZZZZZ	2319	0											
CCB	ZZZZZZ	2325	0											
TJ24030-006	ZZZZZZ	2331	0											
TJ24030-007	ZZZZZZ	2337	0											
TJ24030-008	ZZZZZZ	2343	0											
TJ24030-008	ZZZZZZ	2348	0											
TJ24030-009	ZZZZZZ	2354	0											
TJ24030-012	ZZZZZZ	0000	0											
TJ24030-013	ZZZZZZ	0006	0											
TJ24030-014	ZZZZZZ	0012	0											
TJ24030-015	ZZZZZZ	0018	0											
TJ24030-017	ZZZZZZ	0024	0											
CCV	ZZZZZZ	0030	0											
CCB	ZZZZZZ	0036	0											
TJ24030-018	ZZZZZZ	0042	0											
TJ24030-018	ZZZZZZ	0048	0											
TJ24030-018	ZZZZZZ	0054	0											
TJ24030-018	ZZZZZZ	0100	0											
TJ24030-020	ZZZZZZ	0106	0											
TJ24030-021	ZZZZZZ	0112	0											
TJ24030-022	ZZZZZZ	0117	0											
TQ88159-001	ZZZZZZ	0123	0											
TQ88159-002	ZZZZZZ	0129	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TJ25084-001	ZZZZZZ	0135	0											
CCV	ZZZZZZ	0141	0											
CCB	ZZZZZZ	0147	0											
TJ25084-002	ZZZZZZ	0153	0											
TJ25084-003	ZZZZZZ	0159	0											
TJ25084-004	ZZZZZZ	0205	0											
TJ25084-005	ZZZZZZ	0211	0											
TJ25084-006	ZZZZZZ	0217	0											
TJ25084-007	ZZZZZZ	0223	0											
TJ25084-008	ZZZZZZ	0229	0											
TJ25084-009	ZZZZZZ	0235	0											
TJ25084-013	ZZZZZZ	0241	0											
TJ25084-013	ZZZZZZ	0247	0											
CCV	ZZZZZZ	0253	0											
CCB	ZZZZZZ	0258	0											
TJ25084-013	ZZZZZZ	0304	0											
TJ25084-013	ZZZZZZ	0310	0											
TJ25084-014	ZZZZZZ	0316	0											
TJ25084-015	ZZZZZZ	0322	0											
TJ25084-016	ZZZZZZ	0328	0											
TJ25084-016	ZZZZZZ	0334	0											
TJ25084-017	ZZZZZZ	0340	0											
TJ25084-018	ZZZZZZ	0346	0											
TJ25084-019	ZZZZZZ	0352	0											
TJ25084-020	ZZZZZZ	0358	0											
CCV	ZZZZZZ	0404	0											
CCB	ZZZZZZ	0410	0											
TJ25084-024	ZZZZZZ	0416	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TJ25018-001	ZZZZZZ	0422	0											
TJ25018-002	ZZZZZZ	0428	0											
TQ88843-001	ZZZZZZ	0434	0											
TQ88843-002	ZZZZZZ	0440	0											
TK02043-001	ZZZZZZ	0446	0											
TK02043-001	ZZZZZZ	0451	0											
TK02043-001	ZZZZZZ	0457	0											
TK02043-001	ZZZZZZ	0503	0											
TK02044-001	ZZZZZZ	0509	0											
CCV	ZZZZZZ	0515	0											
CCB	ZZZZZZ	0521	0											
TK02048-001	ZZZZZZ	0527	0											
TK02055-001	ZZZZZZ	0533	0											
TK02056-001	ZZZZZZ	0539	0											
TK02058-001	ZZZZZZ	0545	0											
TK02062-001	ZZZZZZ	0551	0											
TK02065-001	ZZZZZZ	0557	0											
TK02067-001	ZZZZZZ	0603	0											
TK02068-001	ZZZZZZ	0609	0											
TK02073-001	ZZZZZZ	0615	0											
TK02073-002	ZZZZZZ	0621	0											
CCV	ZZZZZZ	0627	0											
CCB	ZZZZZZ	0633	0											
TK02073-003	ZZZZZZ	0639	0											
TK02075-001	ZZZZZZ	0645	0											
TK02075-001	ZZZZZZ	0650	0											
TK02083-001	ZZZZZZ	0656	0											
TK02084-001	ZZZZZZ	0702	0											

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ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

Lab Name: Shealy Environmental Services, In Contract: RAAP HWMU16

Lab Code: Shealy Case No.: NRAS No.: SDG NO.: TJ13026

ICP-MS Instrument ID: ICPMS2 Start Date: 11/16/2018 End Date: 11/16/2018

EPA Sample No.	Client ID	Time	Internal Standards %RI For:											
			Element Bi	Q	Element In	Q	Element Li	Q	Element Sc	Q	Element Tb	Q	Element Y	Q
TK05023-008	ZZZZZZ	0708	0											
TK05023-009	ZZZZZZ	0714	0											
TK05023-010	ZZZZZZ	0720	0											
TK08070-001	ZZZZZZ	0726	0											
TK08070-001	ZZZZZZ	0732	0											
CCV	ZZZZZZ	0738	0											
CCB	ZZZZZZ	0744	0											
TK08070-001	ZZZZZZ	0750	0											
TK08070-001	ZZZZZZ	0756	0											
TK09005-001	ZZZZZZ	0802	0											
TK09006-001	ZZZZZZ	0808	0											
TK09086-001	ZZZZZZ	0814	0											
TK10002-001	ZZZZZZ	0820	0											
TK10003-001	ZZZZZZ	0826	0											
TK08033-001	ZZZZZZ	0832	0											
CCV	ZZZZZZ	0837	0											
CCB	ZZZZZZ	0843	0											
IS	ZZZZZZ	0849	0											
RINSE	ZZZZZZ	0857	0											
RINSE	ZZZZZZ	0903	0											
RINSE	ZZZZZZ	0908	0											

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, Inc. **Contract:** RAAP HWMU16

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:** TJ13026

Instrument ID: ICPMS2 **Start Date:** 11/16/2018

Analytical Method: ICP-MS **Run Batch:** MS2111618A 6020B 200.8, generated 1

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Arsenic	0.00	0.000000	0	2.00	2.0	-2	10.0	9.5	-5
Barium	0.00	0.000000	0	5.00	4.9	-3	25.0	25	-2
Beryllium	0.00	0.000000	0	0.400	0.40	-1	2.00	2.0	-3
Cadmium	0.00	0.000000	0			0	0.500	0.43	-14
Chromium	0.00	0.000000	0	5.00	4.8	-3	25.0	24	-2
Cobalt	0.00	0.000000	0	1.00	0.96	-4	5.00	4.9	-2
Copper	0.00	0.000000	0	5.00	5.0	0	25.0	25	0
Lead	0.00	0.000000	0	1.00	0.94	-6	5.00	4.8	-4
Nickel	0.00	0.000000	0	5.00	4.8	-3	25.0	24	-2
Vanadium	0.00	0.000000	0	5.00	4.7	-6	25.0	25	-1
Zinc	0.00	0.000000	0	10.0	9.5	-5	50.0	49	-2

FORM 15-IN

INITIAL CALIBRATION

Lab Name: Shealy Environmental Services, **Contract:** RAAP HWMU16

Lab Code: Shealy **Case No.:** _____ **MA No.:** _____ **SDG No.:** TJ13026

Instrument ID: ICPMS2 **Start Date:** 11/16/2018

Analytical Method: ICP-MS **Run Batch:** MS2111618A 6020B 200.8, generat

Concentration Units: ug/L

Analyte	True	Found	%D	True	Found	%D	True	Found	%D
Arsenic	250	249	-1	500	501	0			
Barium	250	251	0	500	500	0			
Beryllium	250	247	-1	500	502	0			
Cadmium	250	244	-2	500	503	1			
Chromium	250	258	3	500	496	-1			
Cobalt	250	251	0	500	499	0			
Copper	250	258	3	500	517	3			
Lead	250	253	1	500	498	0			
Nickel	250	250	0	500	504	1			
Vanadium	250	253	1	500	499	0			
Zinc	250	250	0	500	500	0			

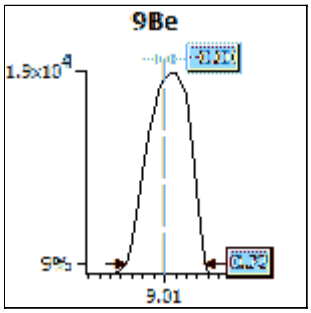
Raw Sample Data

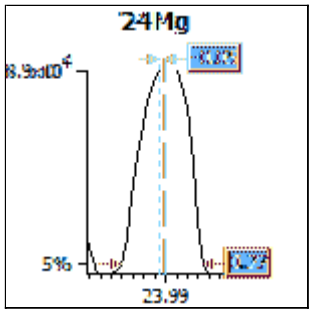
Performance Report

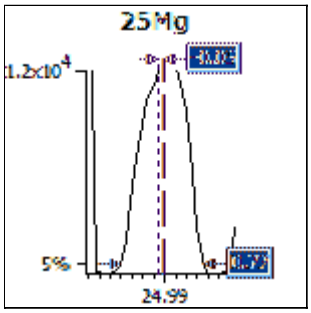
Sample details
Acquired at : 11/16/2018 08:48:30
Report name : Shealy Performance Report ICPMS2 [11/14/2016 11:21:19]

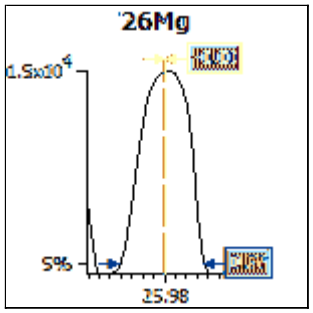
Mass Calibration verification

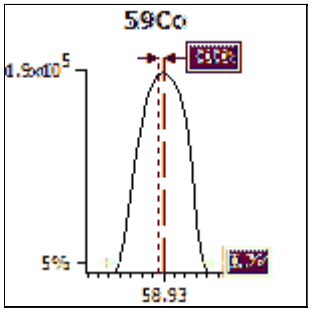
Acquisition parameters
Sweeps : 10
Dwell : 10.0 mSecs
Point spacing : 0.05 amu
Peak width measured at 5% of the peak maximum

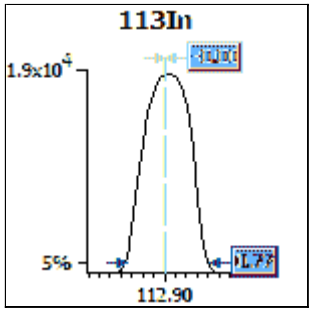


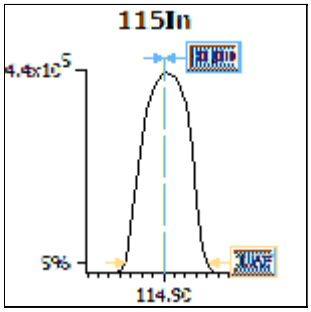


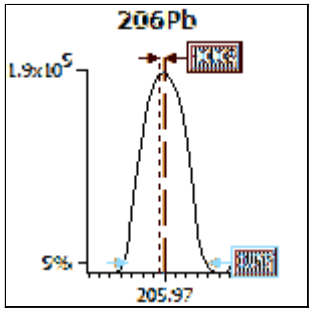


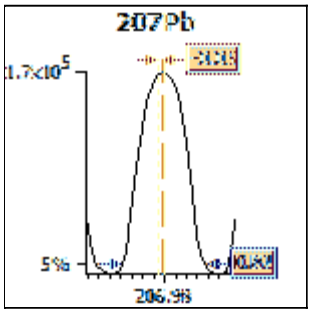


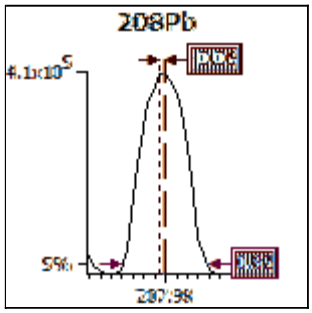












Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.72	-0.00
24Mg	0.85	0.65	0.10	0.77	-0.05
25Mg	0.85	0.65	0.10	0.77	-0.05
26Mg	0.85	0.65	0.10	0.77	-0.00
59Co	0.85	0.65	0.10	0.77	-0.05
113In	0.85	0.65	0.10	0.77	-0.00
115In	0.85	0.65	0.10	0.77	-0.00
206Pb	0.85	0.65	0.10	0.77	-0.05
207Pb	0.85	0.65	0.10	0.82	-0.05
208Pb	0.85	0.65	0.10	0.82	-0.05

Sample details
Acquired at : 11/16/2018 08:48:30
Report name : Shealy Performance Report ICPMS2 [11/14/2016 11:21:19]

Tune conditions

Major	
Extraction	-113.7
Lens 1	-1114
Lens 2	-85.5
Focus	17.1
D1	-38.4
D2	-154
Pole Bias	-1.0
Hexapole Bias	-4.0
Nebuliser	0.77

Minor	
Lens 3	-186.7
Forward power	1200
Horizontal	76
Vertical	703
DA	-55.7
Cool	13.0
Auxiliary	0.90
Sampling Depth	10

Global	
Standard resolution	100
High resolution	110
Analogue Detector	2000
PC Detector	3175

Add. Gases

Sensitivity and stability results

Acquisition parameters

Sweeps : 130

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	56Ar O	59Co	136Ba++	101Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	-	5.0%	5.0%	5.0%	5.0%	-	5.0%	-	-
	Countrate	-	>5000	>1000	>1000	>1000	-	>10000	-	-
1	08:49:06	2.308	17764.055	98351.400	13198.162	15229.834	306646.87	185532.03	2148.011	0.000
2	08:49:37	0.000	17669.208	98391.944	12906.869	15231.375	308431.82	183608.57	2001.045	0.000
3	08:50:09	1.538	17882.808	98484.731	12998.571	15220.584	310586.36	184631.78	2006.432	0.769
4	08:50:40	0.000	17663.810	97722.203	13012.442	15431.028	309557.56	183737.94	1966.421	0.000
5	08:51:12	0.000	17683.088	98646.914	13095.669	15273.001	306038.88	184313.05	1876.397	0.000
x		0.769	17732.594	98319.438	13042.343	15277.164	308252.30	184364.67	1999.661	0.154
σ		1.09	93.21	352.68	109.87	88.36	1914.44	774.79	97.92	0.34
%RSD		141.421	0.526	0.359	0.842	0.578	0.621	0.420	4.897	223.607

Run	Time	113In	115In	138Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Limits	%RSD	5.0%	5.0%	-	-	-	5.0%	5.0%	5.0%	-
	Countrate	>1000	>10000	-	-	-	>10000	>10000	>10000	<2
1	08:49:06	18937.791	444461.23	503.094	36.154	0.769	190977.72	173005.48	419419.67	0.000
2	08:49:37	18882.262	443731.56	503.094	30.000	5.385	190877.43	173214.23	418938.38	0.000
3	08:50:09	18861.438	444543.76	513.864	36.154	1.538	189936.26	172473.80	416523.42	0.000
4	08:50:40	18728.787	441984.08	513.095	34.615	2.308	189394.66	172717.98	412831.66	0.000
5	08:51:12	18904.627	441233.42	488.478	37.692	0.769	190380.78	173040.93	416325.60	0.000
x		18862.981	443190.81	504.325	34.923	2.154	190313.37	172890.49	416807.75	0.000
σ		80.18	1502.03	10.27	2.96	1.92	661.49	293.28	2621.27	0.00
%RSD		0.425	0.339	2.037	8.474	88.928	0.348	0.170	0.629	0.000

Ratio results

Run	Time	56Ar O/59Co	136Ba++/138Ba	115In/101Bkg	156Ce O/140Ce
Ratio limits		-	-	-	-
1	08:49:06	1.653	4.270	INF	0.021
2	08:49:37	1.680	3.977	INF	0.179
3	08:50:09	1.682	3.905	577906.86	0.043
4	08:50:40	1.685	3.832	INF	0.067
5	08:51:12	1.660	3.841	INF	0.020
x		1.6720	3.9651	577906.86	0.0661
σ		0.01	0.18	0.00	0.07
%RSD		0.8621	4.5369	0.0000	100.1228

Result : The performance report passed.

FORM 11-IN

ICP-MS INTERNAL STANDARD ASSOCIATION

Lab Name: Shealy Environmental Services, I **Contract:**

Lab Code: Shealy **Case No.:** **MA No.:** **SDG No.:**

Instrument ID: ICPMS2

Run Batch: MS2111618A 6020B 200.8, gen **Date:** 11/16/2018

Analyte	Assoc. Internal Standard 1	Assoc. Internal Standard 2
Aluminum	6Li	45Sc
Antimony	159Tb	
Arsenic	45Sc	
Barium	115In	159Tb
Beryllium	6Li	45Sc
Boron	6Li	45Sc
Cadmium	115In	
Calcium	6Li	45Sc
Chromium	45Sc	
Cobalt	45Sc	
Copper	89Y	
Iron	45Sc	
Lead	159Tb	
Magnesium	6Li	45Sc
Manganese	45Sc	
Molybdenum	115In	
Nickel	115In	
Potassium	6Li	
Selenium	45Sc	
Silicon	6Li	
Silver	115In	
Sodium	6Li	45Sc
Strontium	89Y	
Thallium	159Tb	
Tin	115In	159Tb
Titanium	45Sc	
Vanadium	45Sc	
Zinc	115In	

Experiment Details

Description	PlasmaLab Template BlankExperiment
Template Filename	C:\Program Files\Thermo Fisher\PlasmaLab\data\MS2111518C 6020B 200.8.tee
Created By User	DemoX
Analyte Database	200_8.tea
Creation Timestamp	12/1/2004 11:33:01
Last Edited By	eqi.im
Last Edit Timestamp	11/17/2018 10:49:10
Instrument Detector	Simultaneous
Database Version	3.51
Acquisition Mode	Unknown

Numerical Results report key (text indicates meaning)

Blue text indicates that cell is a statistic.
Underlining indicates that a data warning flag is set.

Column headings
- No flag
- Semi Quant
- Standard Addition
- Multi Element

Result cells
- Internal Standard
- Excluded
- QC Warning
- QC Failure

Transient TRA only:
- Peak Not Found
- Manually Edited
- Merged Peak

Data warning flags
I - Invalid calibration
T - Tripped
F - Interference correction failed
M - Result over max
V - Valley integration failed
D - Different method used

Fully Quantitative Concentrations

Id	Label	9Be	10B	11B	23Na	24Mg	25Mg	26Mg	27Al	28Si
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490			25.000				50.000		
5	cal1 MW-10571	0.400	50.000	50.000	400.000	400.000	400.000	400.000	40.000	100.000
6	cal2 MW-10572	2.000			2000.000	2000.000	2000.000	2000.000	200.000	
7	cal3 MW-10515	250.000	250.000	250.000					250.000	250.000
8	cal4 MW-10516	500.000	500.000	500.000					500.000	500.000
9	cal5 MW-10488				50000.000	50000.000	50000.000	50000.000		5000.000
10	cal6 MW-10489				100000.000	100000.000	100000.000	100000.000		10000.000

Id	Label	39K	43Ca	44Ca	47Ti	51V	52Cr	55Mn	54Fe	56Fe
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490	200.000								
5	cal1 MW-10571	400.000	400.000	400.000	5.000	5.000	5.000	5.000	50.000	50.000
6	cal2 MW-10572	2000.000	2000.000	2000.000	25.000	25.000	25.000	25.000		
7	cal3 MW-10515				250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW-10516				500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW-10488	50000.000	50000.000	50000.000					50000.000	50000.000
10	cal6 MW-10489	100000.000	100000.000	100000.000					100000.000	100000.000

Id	Label	57Fe	59Co	60Ni	62Ni	63Cu	65Cu	66Zn	67Zn	68Zn
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490	20.000					1.000			
5	cal1 MW-10571	50.000	1.000	5.000	5.000	5.000	5.000	10.000	10.000	10.000
6	cal2 MW-10572		5.000	25.000	25.000	25.000	25.000	50.000	50.000	50.000
7	cal3 MW-10515	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW-10516	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW-10488	50000.000								
10	cal6 MW-10489	100000.000								

Id	Label	75As	78Se	82Se	88Sr	95Mo	97Mo	98Mo	107Ag	109Ag
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490									
5	cal1 MW-10571	2.000	5.000	5.000	10.000	10.000	10.000	10.000	1.000	1.000
6	cal2 MW-10572	10.000	25.000	25.000	50.000	50.000	50.000	50.000	5.000	5.000
7	cal3 MW-10515	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW-10516	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW-10488									
10	cal6 MW-10489									

Id	Label	106Cd	111Cd	114Cd	116Sn	118Sn	121Sb	123Sb	135Ba	137Ba
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490					5.000				
5	cal1 MW-10571	0.100	0.100	0.100	20.000	20.000	2.000	2.000	5.000	5.000

6	cal2 MW-10572	0.500	0.500	0.500	100.000	100.000	10.000	10.000	25.000	25.000
7	cal3 MW-10515	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000	250.000
8	cal4 MW-10516	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000	500.000
9	cal5 MW-10488									
10	cal6 MW-10489									

Id	Label	203Tl	205Tl	206Pb	207Pb	208Pb	232Th	238U
		ppb	ppb	ppb	ppb	ppb	ppb	ppb
4	MW10490							
5	cal1 MW-10571	0.500	0.500	1.000	1.000	1.000		50.000
6	cal2 MW-10572	2.500	2.500	5.000	5.000	5.000		250.000
7	cal3 MW-10515	250.000	250.000	250.000	250.000	250.000		
8	cal4 MW-10516	500.000	500.000	500.000	500.000	500.000		500.000
9	cal5 MW-10488							
10	cal6 MW-10489							

Sample List

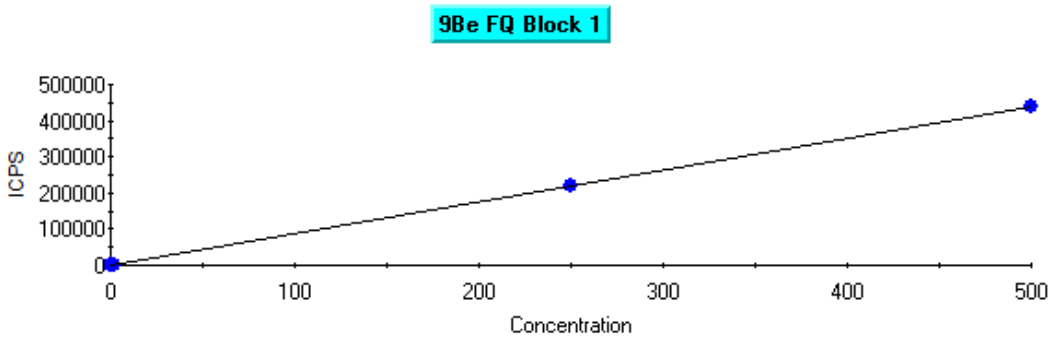
No	Label	Type	Weight	Rack	Row	Col	Height
1	RINSE	Unknown	1.000	0	1	5	144
2	TUNE MW10562	Unknown	1.000	0	1	5	144
3	BLANK IM9061-02	Blank	1.000	0	1	1	144
4	MW10490	Fully Quant Standard	1.000	4	5	1	144
5	cal1 MW-10571	Fully Quant Standard	1.000	4	5	2	144
6	cal2 MW-10572	Fully Quant Standard	1.000	4	5	3	144
7	cal3 MW-10515	Fully Quant Standard	1.000	4	5	4	144
8	cal4 MW-10516	Fully Quant Standard	1.000	4	5	5	144
9	cal5 MW-10488	Fully Quant Standard	1.000	4	5	6	144
10	cal6 MW-10489	Fully Quant Standard	1.000	4	5	7	144
11	ICV MW-10574 prep 11/16/18	QC Sample	1.000	4	5	11	144
12	ICB IM9061-02	QC Sample	1.000	0	1	1	144
13	ICSA MW10426	QC Sample	1.000	4	5	12	144
14	CCV MW10535	QC Sample	1.000	0	1	8	144
15	CCB IM9061-02	QC Sample	1.000	0	1	1	144
16	LR MW10519	QC Sample	1.000	4	5	10	144
17	TJ18096-004	Unknown	1.000	1	1	1	144
18	TJ18014-002(5)	Unknown	1.000	1	1	2	144
19	TQ86791-001	QC Sample	1.000	1	1	3	144
20	TQ86791-002	Unknown	1.000	1	1	4	144
21	TJ13026-001	Unknown	1.000	1	1	5	144
22	TJ13026-002	Unknown	1.000	1	1	6	144
23	TJ13026-003	Unknown	1.000	1	1	7	144
24	TJ13026-004	Unknown	1.000	1	1	8	144
25	TJ13026-004S	Unknown	1.000	1	1	9	144
26	TJ13026-004SD	Unknown	1.000	1	1	10	144
27	CCV MW10535	QC Sample	1.000	0	1	8	144
28	CCB IM9061-02	QC Sample	1.000	0	1	1	144
29	LR 2X MW10519	Unknown	1.000	4	5	9	144
30	TJ13026-004L(5)	Unknown	1.000	1	2	1	144
31	TJ13026-004A	Unknown	1.000	1	2	2	144
32	TJ13026-005	Unknown	1.000	1	2	3	144
33	TJ13026-006	Unknown	1.000	1	2	4	144
34	TJ13026-007	Unknown	1.000	1	2	5	144
35	TJ13026-008	Unknown	1.000	1	2	6	144
36	TJ13026-009	Unknown	1.000	1	2	7	144
37	TJ13026-010	Unknown	1.000	1	2	8	144
38	TJ13026-011	Unknown	1.000	1	2	9	144
39	CCV MW10535	QC Sample	1.000	0	1	8	144
40	CCB IM9061-02	QC Sample	1.000	0	1	1	144
41	TQ88061-001	QC Sample	1.000	1	3	1	144
42	TQ88061-002	Unknown	1.000	1	3	2	144
43	TJ22039-001	Unknown	1.000	1	3	3	144
44	TJ22039-002	Unknown	1.000	1	3	4	144
45	TJ22039-003	Unknown	1.000	1	3	5	144
46	TJ22039-004	Unknown	1.000	1	3	6	144
47	TJ22039-004S	Unknown	1.000	1	3	7	144
48	TJ22039-004SD	Unknown	1.000	1	3	8	144
49	TJ22039-004L(5)	Unknown	1.000	1	3	9	144
50	TJ22039-004A	Unknown	1.000	1	3	10	144
51	CCV MW10535	QC Sample	1.000	0	1	8	144
52	CCB IM9061-02	QC Sample	1.000	0	1	1	144
53	TJ26010-001	Unknown	1.000	1	4	1	144
54	TJ26010-002	Unknown	1.000	1	4	2	144
55	TJ26011-001(5)	Unknown	1.000	1	4	3	144
56	TJ29026-001	Unknown	1.000	1	4	4	144
57	TJ29026-002	Unknown	1.000	1	4	5	144

58	TQ87940-001	QC Sample	1.000	1	4	6	144
59	TQ87940-002	QC Sample	1.000	1	4	7	144
60	TJ22041-004	Unknown	1.000	1	4	8	144
61	TJ22041-005	Unknown	1.000	1	4	9	144
62	TJ22041-006	Unknown	1.000	1	4	10	144
63	CCV MW10535	QC Sample	1.000	0	1	8	144
64	CCB IM9061-02	QC Sample	1.000	0	1	1	144
65	TJ22041-007	Unknown	1.000	1	5	1	144
66	TJ22041-008	Unknown	1.000	1	5	2	144
67	TJ24027-001	Unknown	1.000	1	5	3	144
68	TJ24027-001S	Unknown	1.000	1	5	4	144
69	TJ24027-001SD	Unknown	1.000	1	5	5	144
70	TJ24027-001L(5)	Unknown	1.000	1	5	6	144
71	TJ24027-001A	Unknown	1.000	1	5	7	144
72	TJ24027-002	Unknown	1.000	1	5	8	144
73	TJ24027-003	Unknown	1.000	1	5	9	144
74	TJ24027-004	Unknown	1.000	1	5	10	144
75	CCV MW10535	QC Sample	1.000	0	1	8	144
76	CCB IM9061-02	QC Sample	1.000	0	1	1	144
77	TJ24027-005	Unknown	1.000	2	1	1	144
78	TJ24027-006	Unknown	1.000	2	1	2	144
79	TJ24027-007	Unknown	1.000	2	1	3	144
80	TJ24029-001	Unknown	1.000	2	1	4	144
81	TJ24029-002	Unknown	1.000	2	1	5	144
82	TQ87733-001	QC Sample	1.000	2	1	6	144
83	TQ87733-002	Unknown	1.000	2	1	7	144
84	TJ24026-002	Unknown	1.000	2	1	8	144
85	TJ24026-002S	Unknown	1.000	2	1	9	144
86	TJ24026-002SD	Unknown	1.000	2	1	10	144
87	CCV MW10535	QC Sample	1.000	0	1	8	144
88	CCB IM9061-02	QC Sample	1.000	0	1	1	144
89	TJ24026-002L(5)	Unknown	1.000	2	2	1	144
90	TJ24026-002A	Unknown	1.000	2	2	2	144
91	TJ24026-003	Unknown	1.000	2	2	3	144
92	TJ24026-004	Unknown	1.000	2	2	4	144
93	TJ24026-005	Unknown	1.000	2	2	5	144
94	TJ24026-006	Unknown	1.000	2	2	6	144
95	TJ24026-007	Unknown	1.000	2	2	7	144
96	TJ24026-008	Unknown	1.000	2	2	8	144
97	TJ24026-009	Unknown	1.000	2	2	9	144
98	TJ24026-010	Unknown	1.000	2	2	10	144
99	CCV MW10535	QC Sample	1.000	0	1	8	144
100	CCB IM9061-02	QC Sample	1.000	0	1	1	144
101	TJ24026-011	Unknown	1.000	2	3	1	144
102	TJ24026-013	Unknown	1.000	2	3	2	144
103	TJ24026-014	Unknown	1.000	2	3	3	144
104	TJ24026-015	Unknown	1.000	2	3	4	144
105	TJ24026-016	Unknown	1.000	2	3	5	144
106	TJ24026-017	Unknown	1.000	2	3	6	144
107	TJ24026-018	Unknown	1.000	2	3	7	144
108	TJ24026-019	Unknown	1.000	2	3	8	144
109	TJ24026-020	Unknown	1.000	2	3	9	144
110	CCV MW10535	QC Sample	1.000	0	1	8	144
111	CCB IM9061-02	QC Sample	1.000	0	1	1	144
112	TQ88009-001	QC Sample	1.000	2	4	1	144
113	TQ88009-002	Unknown	1.000	2	4	2	144
114	TJ25041-001	Unknown	1.000	2	4	3	144
115	TJ25041-003	Unknown	1.000	2	4	4	144
116	TJ25041-005	Unknown	1.000	2	4	5	144
117	TJ25041-007	Unknown	1.000	2	4	6	144
118	TJ25041-007S	Unknown	1.000	2	4	7	144
119	TJ25041-007SD	Unknown	1.000	2	4	8	144
120	TJ25041-007L(5)	Unknown	1.000	2	4	9	144
121	TJ25041-007A	Unknown	1.000	2	4	10	144
122	CCV MW10535	QC Sample	1.000	0	1	8	144
123	CCB IM9061-02	QC Sample	1.000	0	1	1	144
124	TQ87913-001	QC Sample	1.000	2	5	1	144
125	TQ87913-002	Unknown	1.000	2	5	2	144
126	TJ23010-001	Unknown	1.000	2	5	3	144
127	TJ23010-003	Unknown	1.000	2	5	4	144
128	TJ23010-001(5)	Unknown	1.000	2	5	5	144
129	TJ23010-002(5)	Unknown	1.000	2	5	6	144
130	TJ23010-003(5)	Unknown	1.000	2	5	7	144
131	TJ23010-011(5)	Unknown	1.000	2	5	8	144
132	TJ23010-007(10)	Unknown	1.000	2	5	9	144
133	TJ23010-005(5)	Unknown	1.000	2	5	10	144

	CCV MW10535	QC Sample	1.000	0	1	8	144
135	CCB IM9061-02	QC Sample	1.000	0	1	1	144
136	TJ23010-004(5)	Unknown	1.000	3	1	1	144
137	TJ23010-012(5)	Unknown	1.000	3	1	2	144
138	TJ23010-012S(5)	Unknown	1.000	3	1	3	144
139	TJ23010-012SD(5)	Unknown	1.000	3	1	4	144
140	TJ23010-012L(5)	Unknown	1.000	3	1	5	144
141	TJ23010-017(10)	Unknown	1.000	3	1	6	144
142	TJ24030-001	Unknown	1.000	3	1	7	144
143	TJ24030-002	Unknown	1.000	3	1	8	144
144	TJ24030-003	Unknown	1.000	3	1	9	144
145	TJ24030-004	Unknown	1.000	3	1	10	144
146	CCV MW10535	QC Sample	1.000	0	1	8	144
147	CCB IM9061-02	QC Sample	1.000	0	1	1	144
148	TJ24030-006	Unknown	1.000	3	2	1	144
149	TJ24030-007	Unknown	1.000	3	2	2	144
150	TJ24030-008	Unknown	1.000	3	2	3	144
151	TJ24030-008S	Unknown	1.000	3	2	4	144
152	TJ24030-009	Unknown	1.000	3	2	5	144
153	TJ24030-012	Unknown	1.000	3	2	6	144
154	TJ24030-013	Unknown	1.000	3	2	7	144
155	TJ24030-014	Unknown	1.000	3	2	8	144
156	TJ24030-015	Unknown	1.000	3	2	9	144
157	TJ24030-017	Unknown	1.000	3	2	10	144
158	CCV MW10535	QC Sample	1.000	0	1	8	144
159	CCB IM9061-02	QC Sample	1.000	0	1	1	144
160	TJ24030-018	Unknown	1.000	3	3	1	144
161	TJ24030-018S	Unknown	1.000	3	3	2	144
162	TJ24030-018SD	Unknown	1.000	3	3	3	144
163	TJ24030-018L(5)	Unknown	1.000	3	3	4	144
164	TJ24030-020	Unknown	1.000	3	3	5	144
165	TJ24030-021	Unknown	1.000	3	3	6	144
166	TJ24030-022	Unknown	1.000	3	3	7	144
167	TQ88159-001	Unknown	1.000	3	3	8	144
168	TQ88159-002	Unknown	1.000	3	3	9	144
169	TJ25084-001	Unknown	1.000	3	3	10	144
170	CCV MW10535	QC Sample	1.000	0	1	8	144
171	CCB IM9061-02	QC Sample	1.000	0	1	1	144
172	TJ25084-002	Unknown	1.000	3	4	1	144
173	TJ25084-003	Unknown	1.000	3	4	2	144
174	TJ25084-004	Unknown	1.000	3	4	3	144
175	TJ25084-005	Unknown	1.000	3	4	4	144
176	TJ25084-006	Unknown	1.000	3	4	5	144
177	TJ25084-007	Unknown	1.000	3	4	6	144
178	TJ25084-008	Unknown	1.000	3	4	7	144
179	TJ25084-009	Unknown	1.000	3	4	8	144
180	TJ25084-013	Unknown	1.000	3	4	9	144
181	TJ25084-013S	Unknown	1.000	3	4	10	144
182	CCV MW10535	QC Sample	1.000	0	1	8	144
183	CCB IM9061-02	QC Sample	1.000	0	1	1	144
184	TJ25084-013SD	Unknown	1.000	3	5	1	144
185	TJ25084-013L(5)	Unknown	1.000	3	5	2	144
186	TJ25084-014	Unknown	1.000	3	5	3	144
187	TJ25084-015	Unknown	1.000	3	5	4	144
188	TJ25084-016	Unknown	1.000	3	5	5	144
189	TJ25084-016S	Unknown	1.000	3	5	6	144
190	TJ25084-017	Unknown	1.000	3	5	7	144
191	TJ25084-018	Unknown	1.000	3	5	8	144
192	TJ25084-019	Unknown	1.000	3	5	9	144
193	TJ25084-020	Unknown	1.000	3	5	10	144
194	CCV MW10535	QC Sample	1.000	0	1	8	144
195	CCB IM9061-02	QC Sample	1.000	0	1	1	144
196	TJ25084-024	Unknown	1.000	4	1	1	144
197	TJ25018-001	Unknown	1.000	4	1	2	144
198	TJ25018-002	Unknown	1.000	4	1	3	144
199	TQ88843-001	Unknown	1.000	4	1	4	144
200	TQ88843-002	Unknown	1.000	4	1	5	144
201	TK02043-001	Unknown	1.000	4	1	6	144
202	TK02043-001S	Unknown	1.000	4	1	7	144
203	TK02043-001SD	Unknown	1.000	4	1	8	144
204	TK02043-001L(5)	Unknown	1.000	4	1	9	144
205	TK02044-001	Unknown	1.000	4	1	10	144
206	CCV MW10535	QC Sample	1.000	0	1	7	144
207	CCB IM9061-02	QC Sample	1.000	0	1	2	144
208	TK02048-001	Unknown	1.000	4	2	1	144
209	TK02055-001	Unknown	1.000	4	2	2	144

	TK02056-001(5)	Unknown	1.000	4	2	3	144
211	TK02058-001(5)	Unknown	1.000	4	2	4	144
212	TK02062-001	Unknown	1.000	4	2	5	144
213	TK02065-001	Unknown	1.000	4	2	6	144
214	TK02067-001	Unknown	1.000	4	2	7	144
215	TK02068-001	Unknown	1.000	4	2	8	144
216	TK02073-001	Unknown	1.000	4	2	9	144
217	TK02073-002	Unknown	1.000	4	2	10	144
218	CCV MW10535	QC Sample	1.000	0	1	7	144
219	CCB IM9061-02	QC Sample	1.000	0	1	2	144
220	TK02073-003	Unknown	1.000	4	3	1	144
221	TK02075-001	Unknown	1.000	4	3	2	144
222	TK02075-001S	Unknown	1.000	4	3	3	144
223	TK02083-001	Unknown	1.000	4	3	4	144
224	TK02084-001	Unknown	1.000	4	3	5	144
225	TK05023-008	Unknown	1.000	4	3	6	144
226	TK05023-009	Unknown	1.000	4	3	7	144
227	TK05023-010	Unknown	1.000	4	3	8	144
228	TK08070-001	Unknown	1.000	4	3	9	144
229	TK08070-001S	Unknown	1.000	4	3	10	144
230	CCV MW10535	QC Sample	1.000	0	1	7	144
231	CCB IM9061-02	QC Sample	1.000	0	1	2	144
232	TK08070-001SD	Unknown	1.000	4	4	1	144
233	TK08070-001L(5)	Unknown	1.000	4	4	2	144
234	TK09005-001	Unknown	1.000	4	4	3	144
235	TK09006-001	Unknown	1.000	4	4	4	144
236	TK09086-001	Unknown	1.000	4	4	5	144
237	TK10002-001(5)	Unknown	1.000	4	4	6	144
238	TK10003-001(5)	Unknown	1.000	4	4	7	144
239	TK08033-001	Unknown	1.000	4	4	8	144
240	CCV MW10535	QC Sample	1.000	0	1	7	144
241	CCB IM9061-02	QC Sample	1.000	0	1	2	144
242	IS MW10570	Unknown	1.000	0	1	5	144
243	RINSE	Unknown	1.000	0	1	5	144
244	RINSE	Unknown	1.000	0	1	5	144
245	RINSE	Unknown	1.000	0	1	5	144

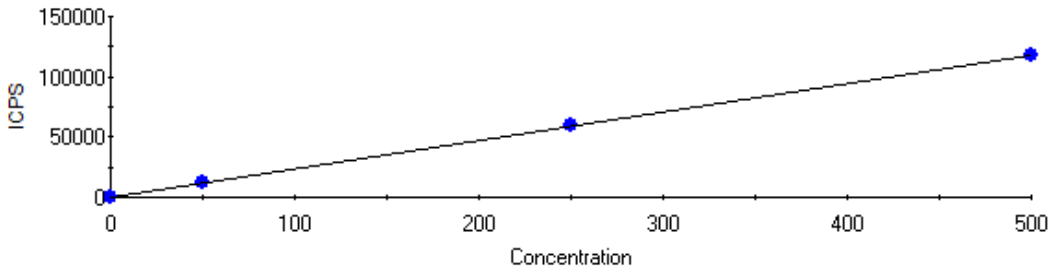
Fully Quant Calibration



Intercept CPS=1.323773 Intercept Conc=0.001506
Sensitivity=879.124960 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	1.32	0.00
cal1 MW-10571	0.400	0.397	0.003	350.31	0.76
cal2 MW-10572	2.000	1.954	0.046	1718.83	2.32
cal3 MW-10515	250.000	246.990	3.010	217136.26	1.20
cal4 MW-10516	500.000	501.505	1.505	440887.12	0.30

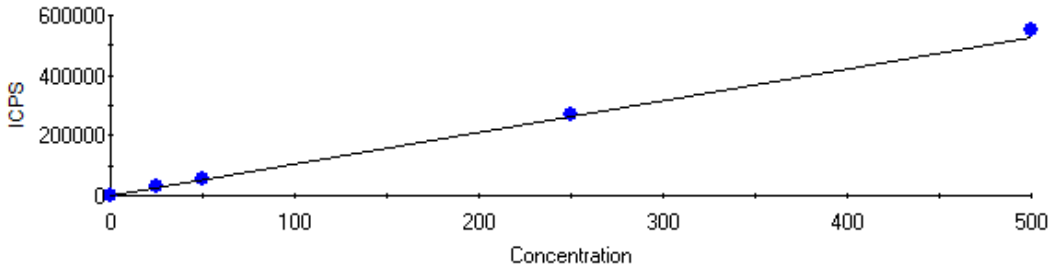
10B FQ Block 1



Intercept CPS=553.220283 Intercept Conc=2.355942
Sensitivity=234.819109 Correlation Coeff=0.999980

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	553.22	0.00
cal1 MW-10571	50.000	46.864	3.136	11557.67	6.27
cal3 MW-10515	250.000	248.677	1.323	58947.26	0.53
cal4 MW-10516	500.000	500.975	0.975	118191.79	0.20

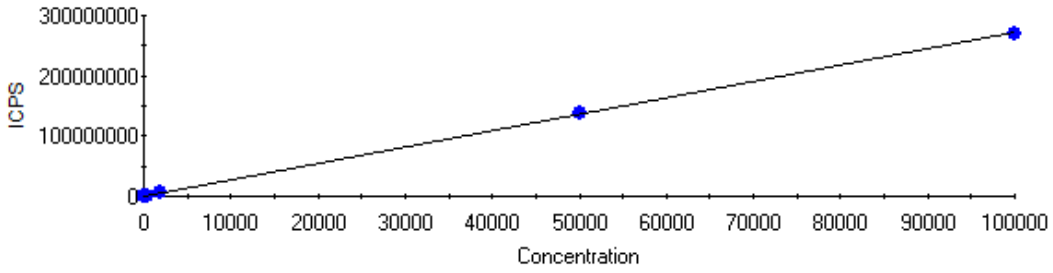
11B FQ Block 1



Intercept CPS=2694.823542 Intercept Conc=2.557504
Sensitivity=1053.692846 Correlation Coeff=0.999930

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	2694.82	0.00
MW10490	25.000	25.069	0.069	29109.69	0.28
cal1 MW-10571	50.000	48.099	1.901	53376.46	3.80
cal3 MW-10515	250.000	254.061	4.061	270396.68	1.62
cal4 MW-10516	500.000	519.743	19.743	550344.18	3.95

23Na FQ Block 1

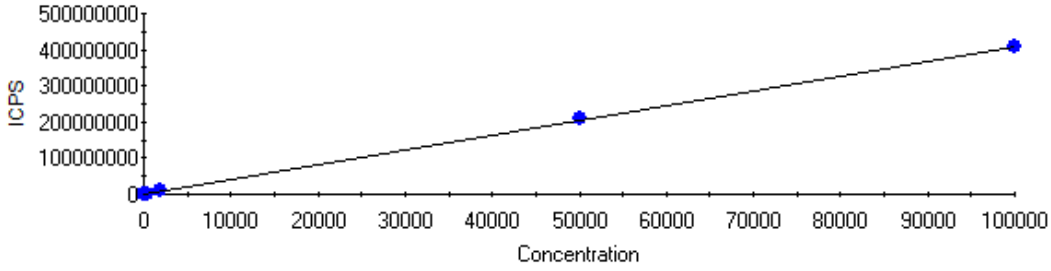


Intercept CPS=9743.402815 Intercept Conc=3.591790
Sensitivity=2712.686920 Correlation Coeff=0.999991

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	9743.40	0.00
cal1 MW-10571	400.000	407.727	7.727	1115777.97	1.93
cal2 MW-10572	2000.000	2024.868	24.868	5502576.95	1.24

cal5 MW-10488	50000.000	50344.376	344.376	136578272.94	0.69
cal6 MW-10489	100000.000	99827.284	172.716	270809910.57	0.17

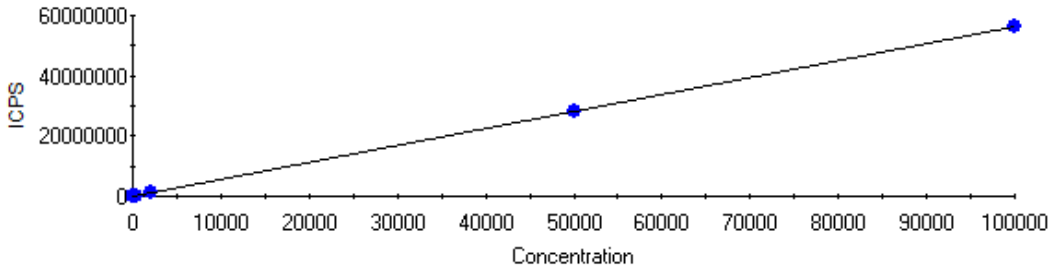
24Mg FQ Block 1



Intercept CPS=1113.913254 Intercept Conc=0.271990
Sensitivity=4095.424145 Correlation Coeff=0.999982

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	1113.91	0.00
cal1 MW-10571	400.000	415.783	15.783	1703923.21	3.95
cal2 MW-10572	2000.000	2062.202	62.202	8446703.77	3.11
cal5 MW-10488	50000.000	50500.934	500.934	206823856.89	1.00
cal6 MW-10489	100000.000	99748.226	251.774	408512407.11	0.25

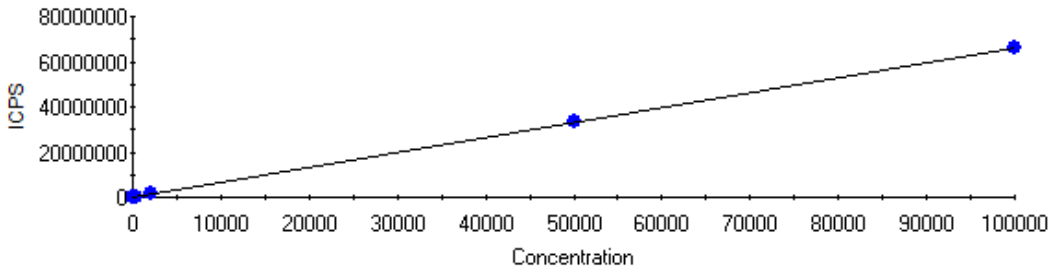
25Mg FQ Block 1



Intercept CPS=140.288208 Intercept Conc=0.248205
Sensitivity=565.210578 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	140.29	0.00
cal1 MW-10571	400.000	408.504	8.504	231030.94	2.13
cal2 MW-10572	2000.000	2130.609	130.609	1204383.26	6.53
cal5 MW-10488	50000.000	50020.152	20.152	28272059.09	0.04
cal6 MW-10489	100000.000	99987.278	12.722	56514007.42	0.01

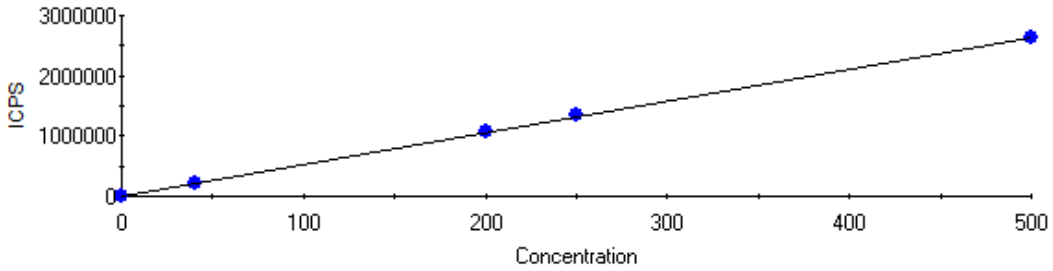
26Mg FQ Block 1



Intercept CPS=179.972216 Intercept Conc=0.271838
Sensitivity=662.057056 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	179.97	0.00
MW10490	50.000	54.538	4.538	36287.14	9.08
cal1 MW-10571	400.000	414.477	14.477	274587.50	3.62
cal2 MW-10572	2000.000	2162.786	162.786	1432067.61	8.14
cal5 MW-10488	50000.000	49937.817	62.183	33061863.95	0.12
cal6 MW-10489	100000.000	100027.776	27.776	66224274.72	0.03

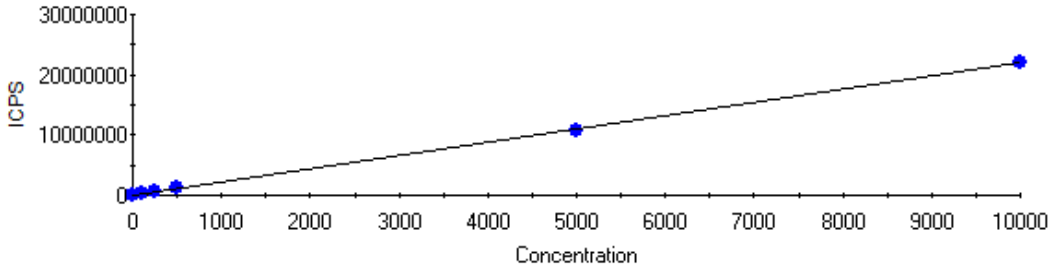
27Al FQ Block 1



Intercept CPS=441.644739 Intercept Conc=0.083505
Sensitivity=5288.856241 Correlation Coeff=0.999823

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	441.64	0.00
cal1 MW-10571	40.000	39.999	0.001	211992.19	0.00
cal2 MW-10572	200.000	202.560	2.560	1071752.12	1.28
cal3 MW-10515	250.000	256.410	6.410	1356558.10	2.56
cal4 MW-10516	500.000	495.771	4.229	2622503.17	0.85

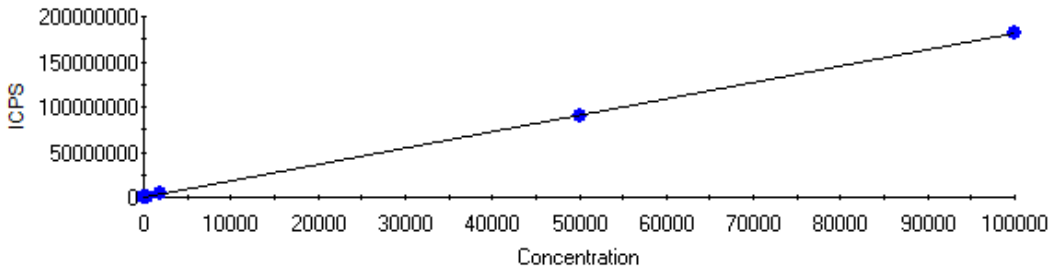
28Si FQ Block 1



Intercept CPS=30245.166170 Intercept Conc=13.818469
Sensitivity=2188.749484 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	30245.17	0.00
cal1 MW-10571	100.000	92.356	7.644	232390.32	7.64
cal3 MW-10515	250.000	246.684	3.316	570175.48	1.33
cal4 MW-10516	500.000	501.319	1.319	1127507.70	0.26
cal5 MW-10488	5000.000	4938.799	61.201	10840040.02	1.22
cal6 MW-10489	10000.000	10030.694	30.694	21984920.63	0.31

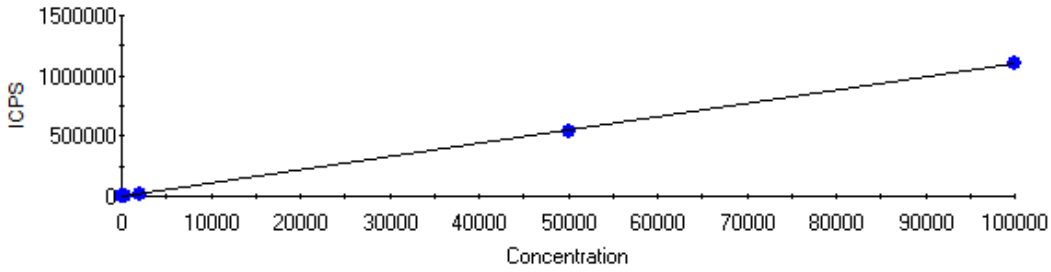
39K FQ Block 1



Intercept CPS=77159.701773 Intercept Conc=42.558257
Sensitivity=1813.037163 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	77159.70	0.00
MW10490	200.000	204.524	4.524	447968.70	2.26
cal1 MW-10571	400.000	391.690	8.310	787307.58	2.08
cal2 MW-10572	2000.000	1973.986	26.014	3656069.65	1.30
cal5 MW-10488	50000.000	49703.323	296.677	90191130.81	0.59
cal6 MW-10489	100000.000	100148.883	148.883	181650806.73	0.15

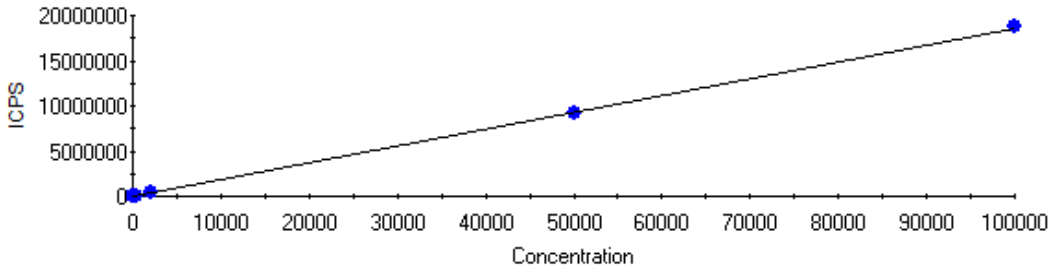
43Ca FQ Block 1



Intercept CPS=15.998536 Intercept Conc=1.452860
Sensitivity=11.011754 Correlation Coeff=0.999935

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	16.00	0.00
cal1 MW-10571	400.000	404.171	4.171	4466.63	1.04
cal2 MW-10572	2000.000	2074.525	74.525	22860.16	3.73
cal5 MW-10488	50000.000	49074.039	925.961	540407.24	1.85
cal6 MW-10489	100000.000	100461.473	461.473	1106273.02	0.46

44Ca FQ Block 1

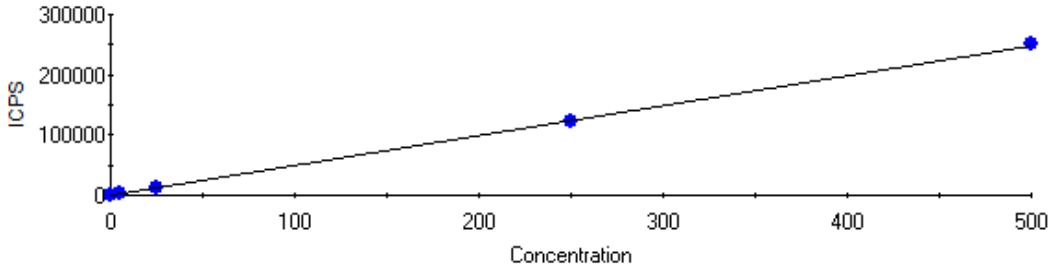


Intercept CPS=625.445482 Intercept Conc=3.356096
Sensitivity=186.361034 Correlation Coeff=0.999973

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	625.45	0.00

cal1 MW-10571	400.000	382.536	17.464	71915.28	4.37
cal2 MW-10572	2000.000	1962.506	37.494	366360.15	1.87
cal5 MW-10488	50000.000	49387.070	612.930	9204450.89	1.23
cal6 MW-10489	100000.000	100307.285	307.285	18693994.79	0.31

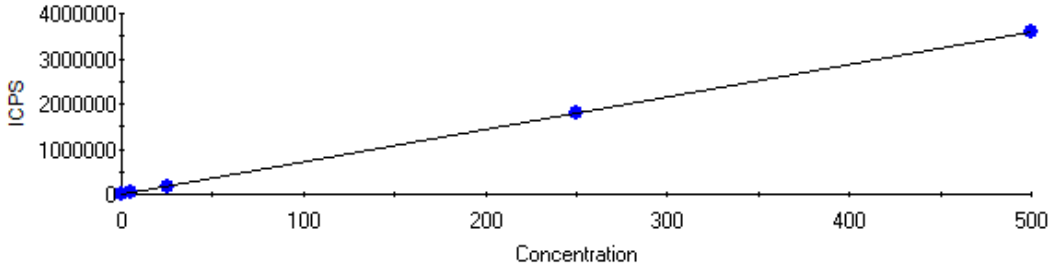
47Ti FQ Block 1



Intercept CPS=9.365090 Intercept Conc=0.018784
Sensitivity=498.576026 Correlation Coeff=0.999984

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	9.37	0.00
cal1 MW-10571	5.000	4.938	0.062	2471.40	1.24
cal2 MW-10572	25.000	24.915	0.085	12431.57	0.34
cal3 MW-10515	250.000	247.704	2.296	123508.88	0.92
cal4 MW-10516	500.000	501.153	1.153	249872.04	0.23

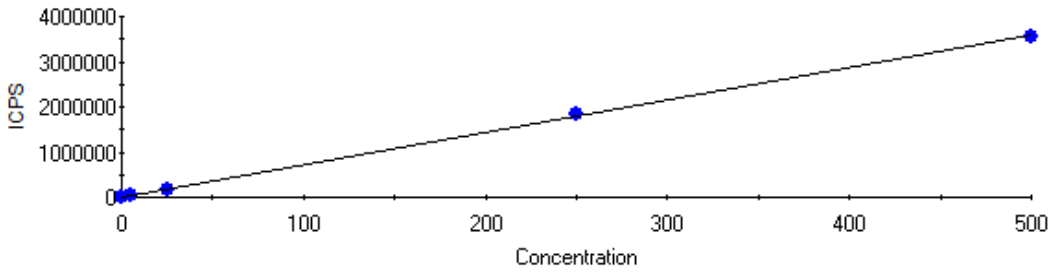
51V FQ Block 1



Intercept CPS=1180.321480 Intercept Conc=0.164446
Sensitivity=7177.541052 Correlation Coeff=0.999975

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	1180.32	0.00
cal1 MW-10571	5.000	4.722	0.278	35075.17	5.55
cal2 MW-10572	25.000	24.639	0.361	178024.61	1.45
cal3 MW-10515	250.000	252.754	2.754	1815330.45	1.10
cal4 MW-10516	500.000	498.644	1.356	3580218.06	0.27

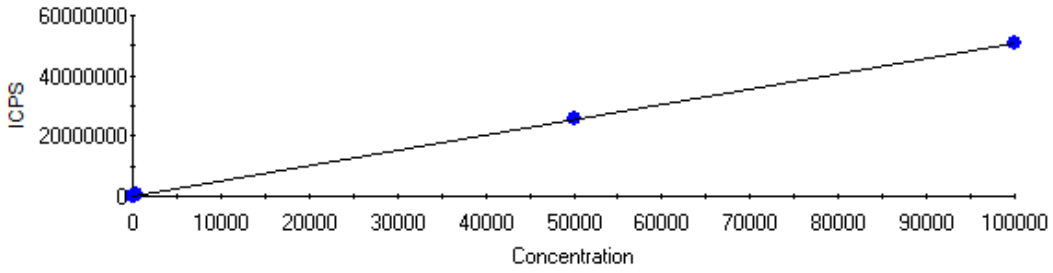
52Cr FQ Block 1



Intercept CPS=1309.076137 Intercept Conc=0.182134
Sensitivity=7187.441457 Correlation Coeff=0.999791

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	1309.08	0.00
cal1 MW-10571	5.000	4.828	0.172	36007.93	3.45
cal2 MW-10572	25.000	24.490	0.510	177330.10	2.04
cal3 MW-10515	250.000	258.165	8.165	1856856.80	3.27
cal4 MW-10516	500.000	495.945	4.055	3565881.76	0.81

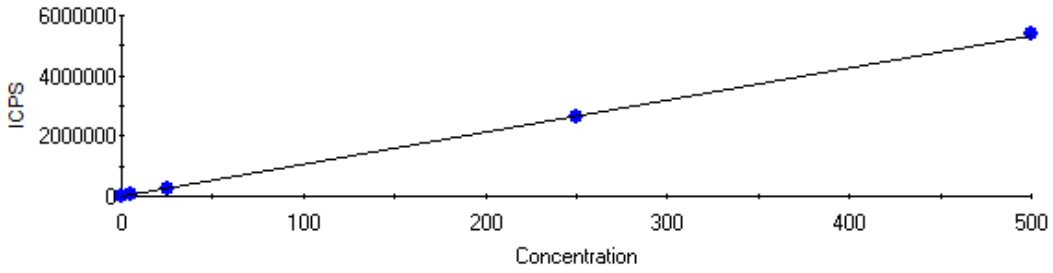
54Fe FQ Block 1



Intercept CPS=9790.978510 Intercept Conc=19.246244
Sensitivity=508.721511 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	9790.98	0.00
cal1 MW-10571	50.000	53.766	3.766	37142.91	7.53
cal3 MW-10515	250.000	367.697	117.697	196846.35	47.08
cal4 MW-10516	500.000	747.636	247.636	390129.24	49.53
cal5 MW-10488	50000.000	50024.087	24.087	25458120.02	0.05
cal6 MW-10489	100000.000	99986.422	13.578	50875034.77	0.01

55Mn FQ Block 1

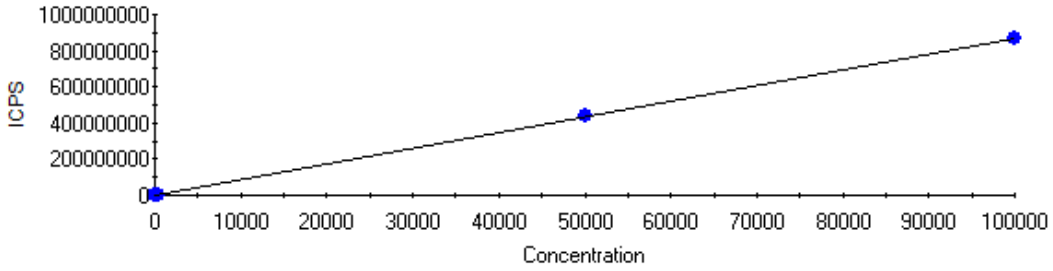


Intercept CPS=687.374091 Intercept Conc=0.064214
Sensitivity=10704.348007 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	687.37	0.00

cal1 MW-10571	5.000	4.708	0.292	51087.44	5.83
cal2 MW-10572	25.000	23.983	1.017	257405.02	4.07
cal3 MW-10515	250.000	248.702	1.298	2662881.90	0.52
cal4 MW-10516	500.000	500.703	0.703	5360383.39	0.14

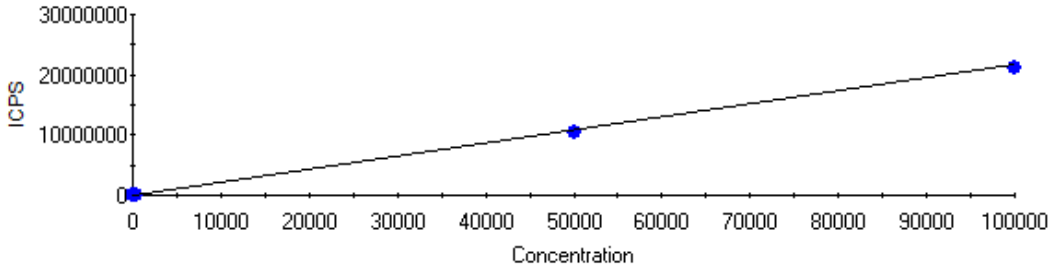
56Fe FQ Block 1



Intercept CPS=306069.989704 Intercept Conc=35.311609
Sensitivity=8667.687478 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	306069.99	0.00
cal1 MW-10571	50.000	52.172	2.172	758283.80	4.34
cal3 MW-10515	250.000	267.409	17.409	2623886.64	6.96
cal4 MW-10516	500.000	526.821	26.821	4872389.82	5.36
cal5 MW-10488	50000.000	50021.463	21.463	433876476.79	0.04
cal6 MW-10489	100000.000	99989.090	10.910	866980252.32	0.01

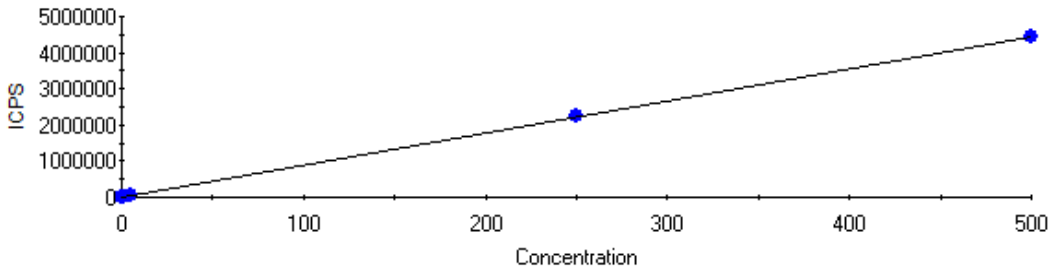
57Fe FQ Block 1



Intercept CPS=3857.024383 Intercept Conc=17.757217
Sensitivity=217.208831 Correlation Coeff=0.999985

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	3857.02	0.00
MW10490	20.000	20.036	0.036	8208.92	0.18
cal1 MW-10571	50.000	47.581	2.419	14192.14	4.84
cal3 MW-10515	250.000	251.198	1.198	58419.37	0.48
cal4 MW-10516	500.000	505.369	5.369	113627.65	1.07
cal5 MW-10488	50000.000	48141.700	1858.300	10460659.44	3.72
cal6 MW-10489	100000.000	97433.416	2566.584	21167255.49	2.57

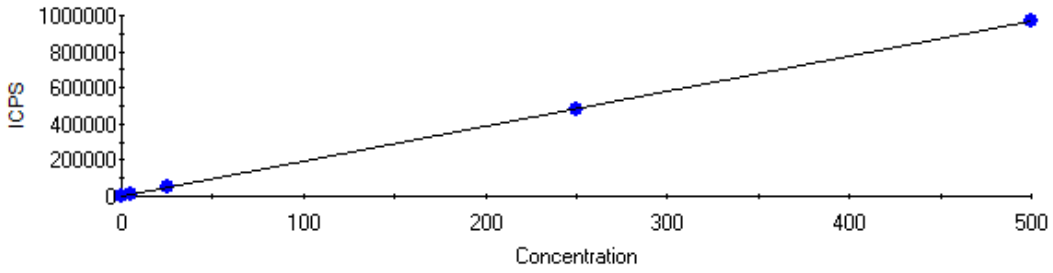
59Co FQ Block 1



Intercept CPS=53.348349 Intercept Conc=0.006017
Sensitivity=8866.801756 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	53.35	0.00
cal1 MW-10571	1.000	0.958	0.042	8545.43	4.23
cal2 MW-10572	5.000	4.887	0.113	43381.90	2.27
cal3 MW-10515	250.000	251.192	1.192	2227323.94	0.48
cal4 MW-10516	500.000	499.405	0.595	4428179.95	0.12

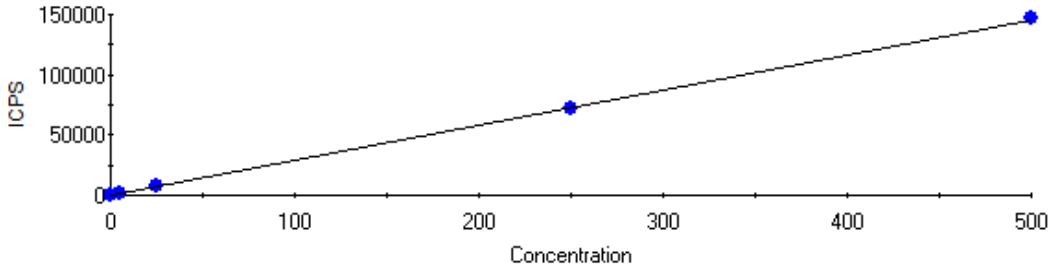
60Ni FQ Block 1



Intercept CPS=15.974179 Intercept Conc=0.008277
Sensitivity=1929.897962 Correlation Coeff=0.999996

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	15.97	0.00
cal1 MW-10571	5.000	4.842	0.158	9359.75	3.17
cal2 MW-10572	25.000	24.469	0.531	47238.43	2.12
cal3 MW-10515	250.000	250.386	0.386	483236.03	0.15
cal4 MW-10516	500.000	503.583	3.583	971879.65	0.72

62Ni FQ Block 1

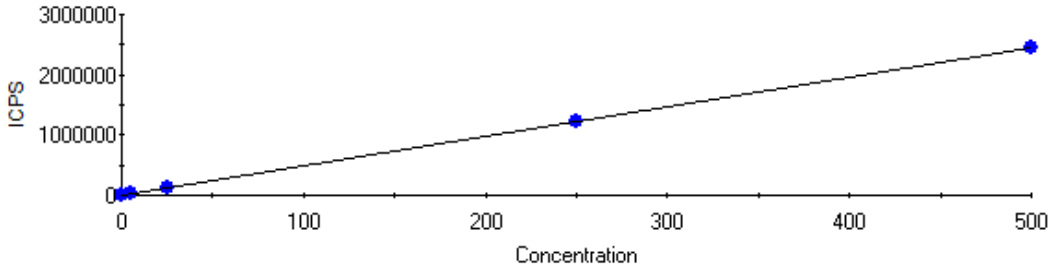


Intercept CPS=357.743834 Intercept Conc=1.228866
Sensitivity=291.116947 Correlation Coeff=0.999989

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	357.74	0.00
cal1 MW-10571	5.000	5.083	0.083	1837.45	1.66

cal2 MW-10572	25.000	24.397	0.603	7460.08	2.41
cal3 MW-10515	250.000	248.100	1.900	72583.80	0.76
cal4 MW-10516	500.000	500.979	0.979	146201.34	0.20

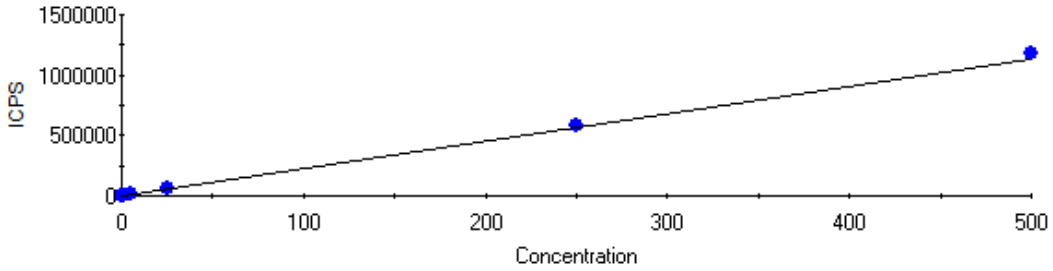
63Cu FQ Block 1



Intercept CPS=443.707371 Intercept Conc=0.090653
Sensitivity=4894.548422 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	443.71	0.00
cal1 MW-10571	5.000	4.772	0.228	23801.37	4.56
cal2 MW-10572	25.000	23.746	1.254	116671.13	5.01
cal3 MW-10515	250.000	248.448	1.552	1216485.78	0.62
cal4 MW-10516	500.000	500.841	0.841	2451833.40	0.17

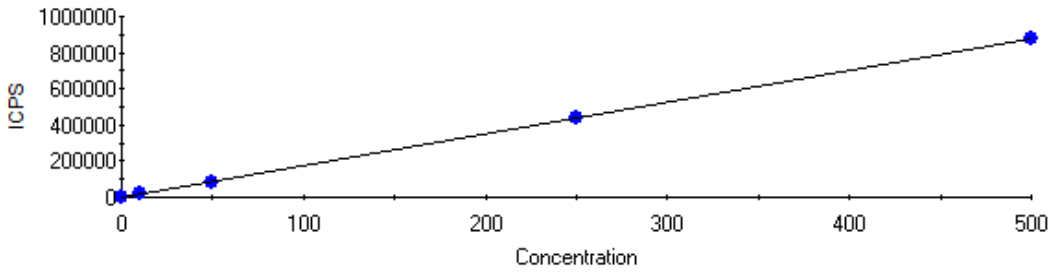
65Cu FQ Block 1



Intercept CPS=162.662079 Intercept Conc=0.071683
Sensitivity=2269.188833 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	162.66	0.00
MW10490	1.000	1.091	0.091	2638.67	9.11
cal1 MW-10571	5.000	4.985	0.015	11475.11	0.30
cal2 MW-10572	25.000	25.041	0.041	56985.01	0.16
cal3 MW-10515	250.000	258.232	8.232	586139.96	3.29
cal4 MW-10516	500.000	516.894	16.894	1173093.38	3.38

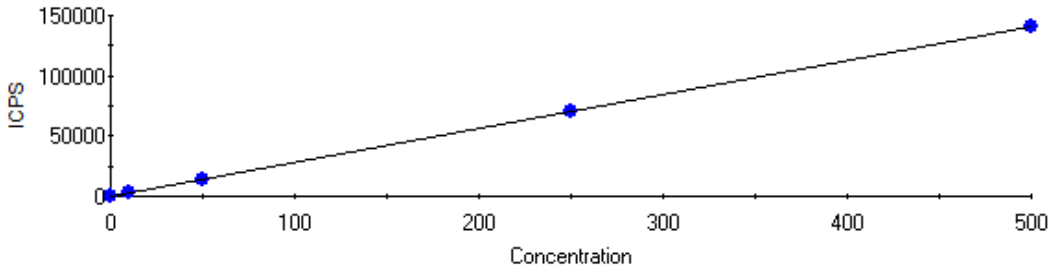
66Zn FQ Block 1



Intercept CPS=438.931467 Intercept Conc=0.251028
Sensitivity=1748.537596 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	438.93	0.00
cal1 MW-10571	10.000	9.539	0.461	17117.74	4.61
cal2 MW-10572	50.000	48.897	1.103	85937.34	2.21
cal3 MW-10515	250.000	250.128	0.128	437796.76	0.05
cal4 MW-10516	500.000	500.056	0.056	874804.99	0.01

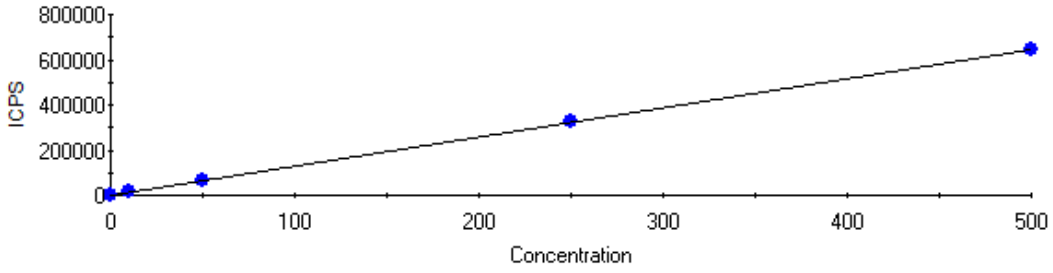
67Zn FQ Block 1



Intercept CPS=142.771803 Intercept Conc=0.506954
Sensitivity=281.626719 Correlation Coeff=0.999983

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	142.77	0.00
cal1 MW-10571	10.000	9.407	0.593	2792.14	5.93
cal2 MW-10572	50.000	47.582	2.418	13543.09	4.84
cal3 MW-10515	250.000	251.280	1.280	70909.95	0.51
cal4 MW-10516	500.000	499.614	0.386	140847.32	0.08

68Zn FQ Block 1

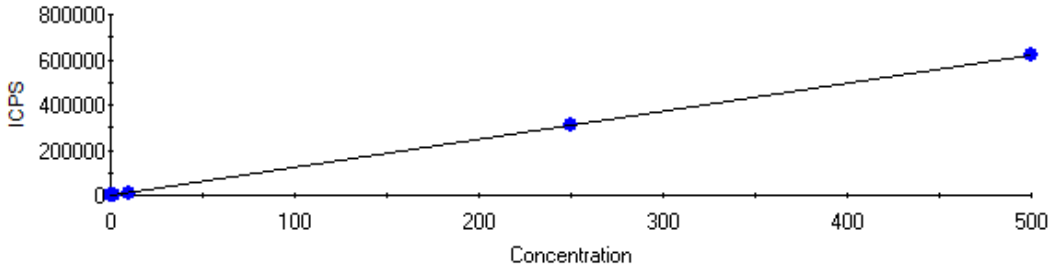


Intercept CPS=330.922573 Intercept Conc=0.255966
Sensitivity=1292.836312 Correlation Coeff=0.999994

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	330.92	0.00
cal1 MW-10571	10.000	9.297	0.703	12349.96	7.03

cal2 MW-10572	50.000	48.086	1.914	62498.68	3.83
cal3 MW-10515	250.000	249.606	0.394	323030.98	0.16
cal4 MW-10516	500.000	500.402	0.402	647269.18	0.08

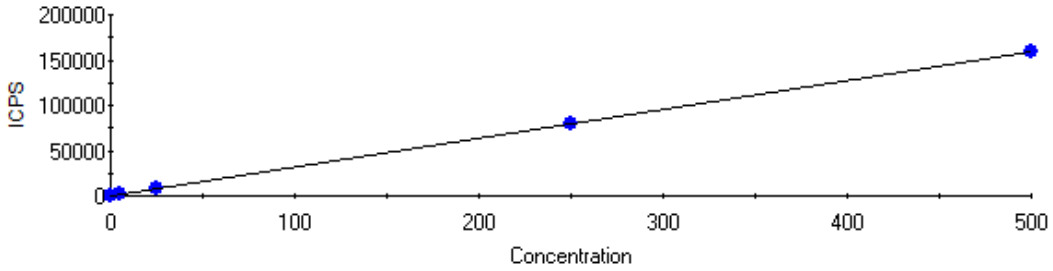
75As FQ Block 1



Intercept CPS=193.996008 Intercept Conc=0.157240
Sensitivity=1233.753823 Correlation Coeff=0.999993

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	194.00	0.00
cal1 MW-10571	2.000	1.963	0.037	2615.50	1.86
cal2 MW-10572	10.000	9.468	0.532	11875.08	5.32
cal3 MW-10515	250.000	248.484	1.516	306762.42	0.61
cal4 MW-10516	500.000	500.769	0.769	618019.24	0.15

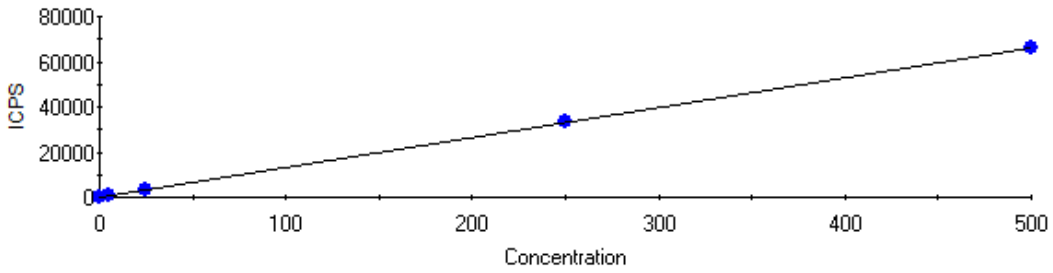
78Se FQ Block 1



Intercept CPS=609.150862 Intercept Conc=1.915853
Sensitivity=317.952747 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	609.15	0.00
cal1 MW-10571	5.000	4.841	0.159	2148.43	3.18
cal2 MW-10572	25.000	24.482	0.518	8393.19	2.07
cal3 MW-10515	250.000	250.115	0.115	80133.90	0.05
cal4 MW-10516	500.000	499.970	0.030	159575.99	0.01

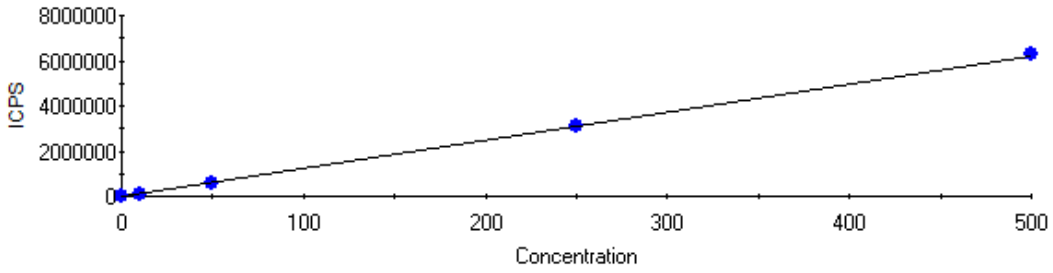
82Se FQ Block 1



Intercept CPS=125.495820 Intercept Conc=0.948289
Sensitivity=132.339176 Correlation Coeff=0.999997

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	125.50	0.00
cal1 MW-10571	5.000	4.855	0.145	768.01	2.90
cal2 MW-10572	25.000	24.085	0.915	3312.86	3.66
cal3 MW-10515	250.000	250.897	0.897	33328.97	0.36
cal4 MW-10516	500.000	500.103	0.103	66308.74	0.02

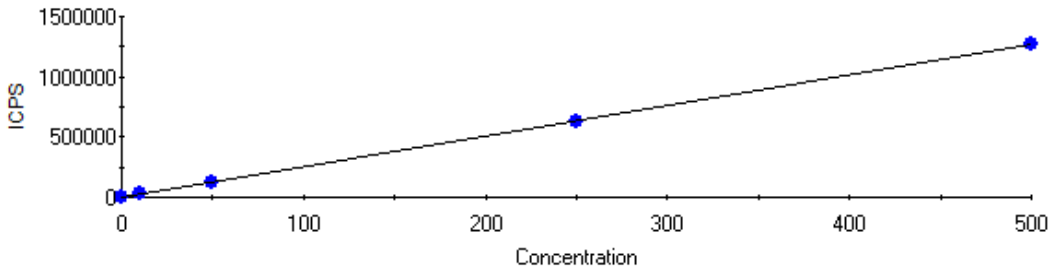
88Sr FQ Block 1



Intercept CPS=14.652227 Intercept Conc=0.001186
Sensitivity=12349.579294 Correlation Coeff=0.999995

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	14.65	0.00
cal1 MW-10571	10.000	9.539	0.461	117813.57	4.61
cal2 MW-10572	50.000	49.416	0.584	610277.38	1.17
cal3 MW-10515	250.000	253.659	3.659	3132602.37	1.46
cal4 MW-10516	500.000	510.033	10.033	6298706.17	2.01

95Mo FQ Block 1

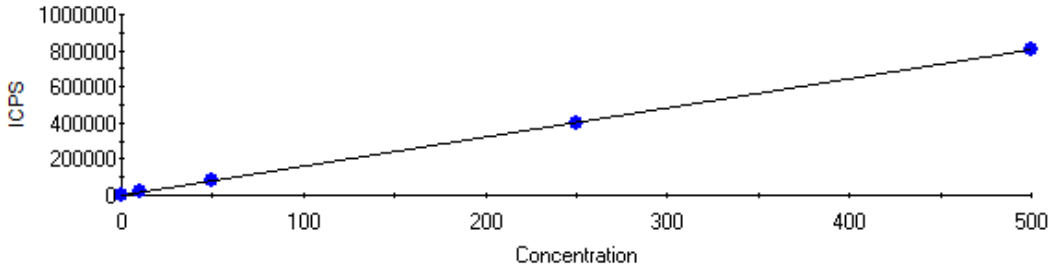


Intercept CPS=161.337662 Intercept Conc=0.063493
Sensitivity=2541.045478 Correlation Coeff=0.999918

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	161.34	0.00
cal1 MW-10571	10.000	9.491	0.509	24277.25	5.09

cal2 MW-10572	50.000	48.169	1.831	122561.67	3.66
cal3 MW-10515	250.000	244.821	5.179	622261.65	2.07
cal4 MW-10516	500.000	502.783	2.783	1277755.69	0.56

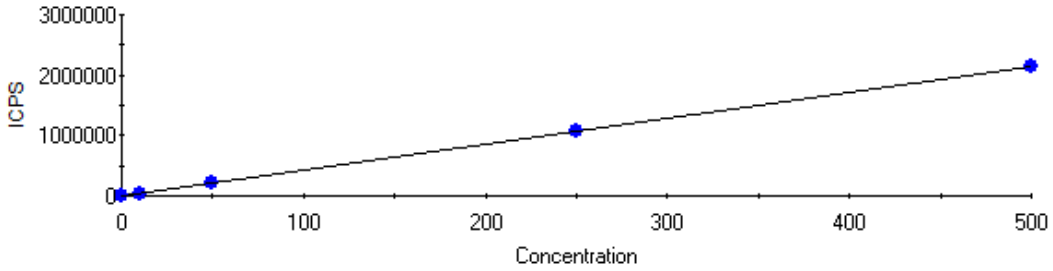
97Mo FQ Block 1



Intercept CPS=95.929635 Intercept Conc=0.059716
Sensitivity=1606.420396 Correlation Coeff=0.999968

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	95.93	0.00
cal1 MW-10571	10.000	9.547	0.453	15432.04	4.53
cal2 MW-10572	50.000	49.092	0.908	78957.68	1.82
cal3 MW-10515	250.000	246.749	3.251	396478.23	1.30
cal4 MW-10516	500.000	501.726	1.726	806078.02	0.35

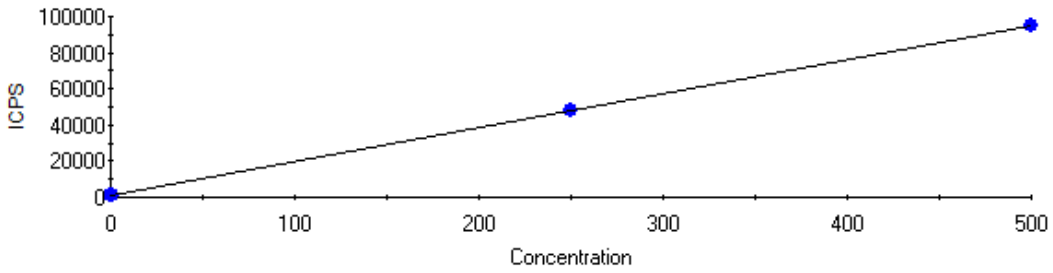
98Mo FQ Block 1



Intercept CPS=233.042484 Intercept Conc=0.054530
Sensitivity=4273.665463 Correlation Coeff=0.999974

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	233.04	0.00
cal1 MW-10571	10.000	9.208	0.792	39585.30	7.92
cal2 MW-10572	50.000	47.682	2.318	204010.50	4.64
cal3 MW-10515	250.000	247.312	2.688	1057162.25	1.08
cal4 MW-10516	500.000	501.592	1.592	2143867.62	0.32

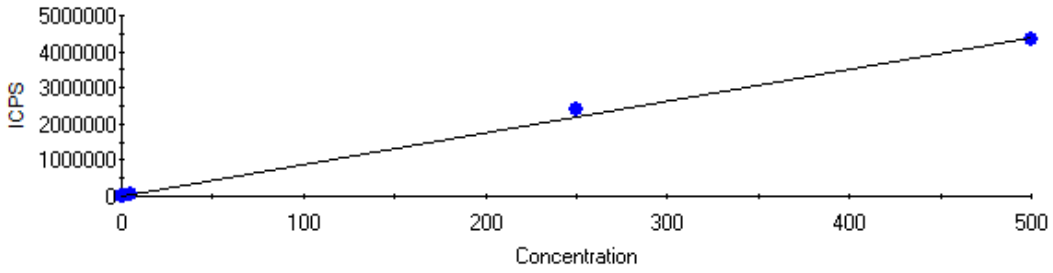
106Cd FQ Block 1



Intercept CPS=631.758023 Intercept Conc=3.339584
Sensitivity=189.172664 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	631.76	0.00
cal1 MW-10571	0.100	-0.317	0.417	571.70	417.46
cal2 MW-10572	0.500	1.308	0.808	879.21	161.61
cal3 MW-10515	250.000	251.451	1.451	48199.33	0.58
cal4 MW-10516	500.000	499.274	0.726	95080.75	0.15

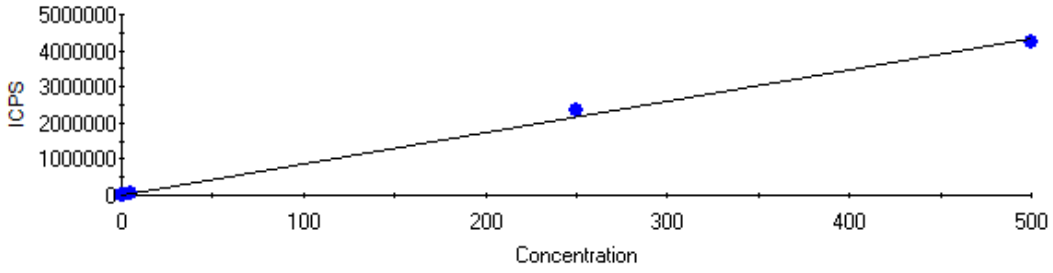
107Ag FQ Block 1



Intercept CPS=32.000814 Intercept Conc=0.003639
Sensitivity=8794.702097 Correlation Coeff=0.998468

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	32.00	0.00
cal1 MW-10571	1.000	0.961	0.039	8487.83	3.85
cal2 MW-10572	5.000	5.029	0.029	44263.24	0.59
cal3 MW-10515	250.000	274.019	24.019	2409946.65	9.61
cal4 MW-10516	500.000	491.257	8.743	4320491.64	1.75

109Ag FQ Block 1

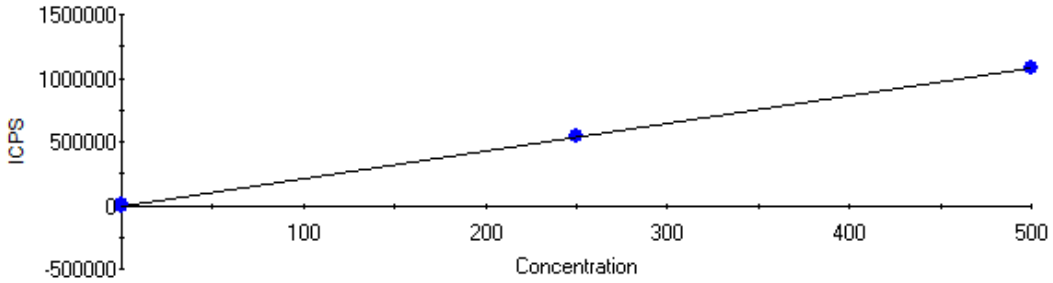


Intercept CPS=9.329091 Intercept Conc=0.001073
Sensitivity=8697.252688 Correlation Coeff=0.998522

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	9.33	0.00
cal1 MW-10571	1.000	0.985	0.015	8578.50	1.47

cal2 MW-10572	5.000	4.942	0.058	42990.11	1.16
cal3 MW-10515	250.000	272.191	22.191	2367324.64	8.88
cal4 MW-10516	500.000	488.905	11.095	4252139.91	2.22

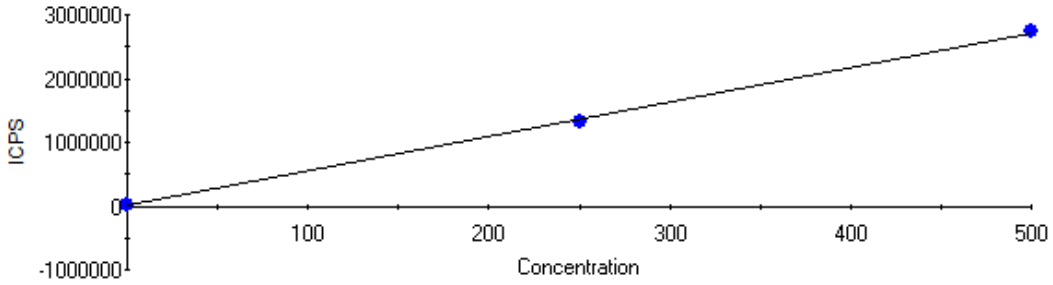
111Cd FQ Block 1



Intercept CPS=-0.442781 Intercept Conc=-0.000204
Sensitivity=2171.446382 Correlation Coeff=1.000000

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	-0.44	0.00
cal1 MW-10571	0.100	0.074	0.026	159.59	26.30
cal2 MW-10572	0.500	0.383	0.117	831.13	23.41
cal3 MW-10515	250.000	250.291	0.291	543492.52	0.12
cal4 MW-10516	500.000	499.855	0.145	1085407.33	0.03

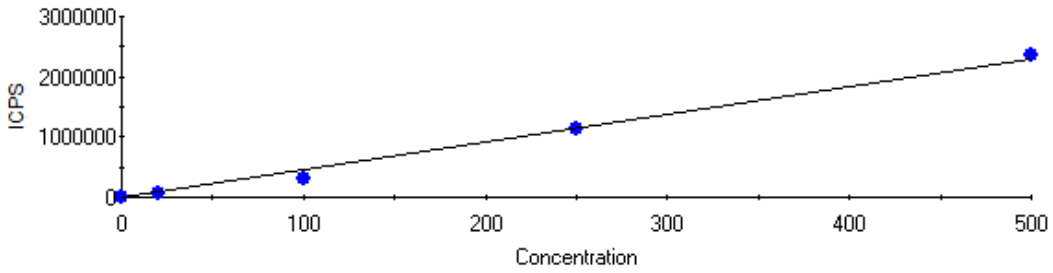
114Cd FQ Block 1



Intercept CPS=1.555461 Intercept Conc=0.000286
Sensitivity=5447.545722 Correlation Coeff=0.999892

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	1.56	0.00
cal1 MW-10571	0.100	0.082	0.018	450.76	17.54
cal2 MW-10572	0.500	0.431	0.069	2349.83	13.79
cal3 MW-10515	250.000	243.916	6.084	1328744.37	2.43
cal4 MW-10516	500.000	503.042	3.042	2740346.62	0.61

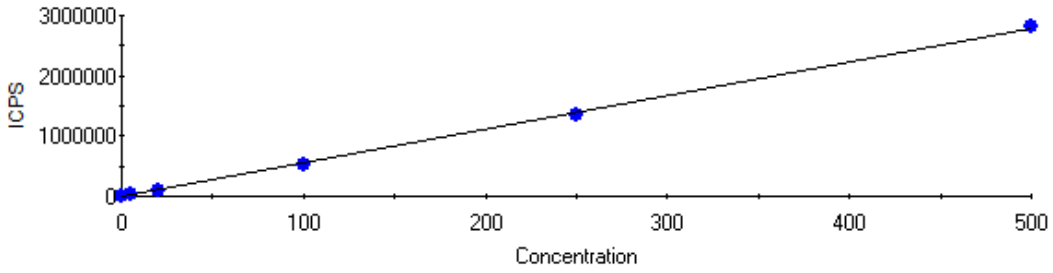
116Sn FQ Block 1



Intercept CPS=423.954247 Intercept Conc=0.092140
Sensitivity=4601.205419 Correlation Coeff=0.997647

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	423.95	0.00
cal1 MW-10571	20.000	12.101	7.899	56102.57	39.50
cal2 MW-10572	100.000	64.794	35.206	298555.16	35.21
cal3 MW-10515	250.000	244.803	5.197	1126812.90	2.08
cal4 MW-10516	500.000	509.956	9.956	2346834.56	1.99

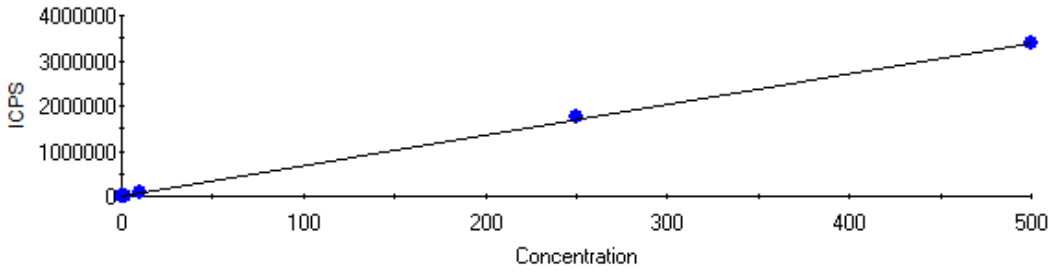
118Sn FQ Block 1



Intercept CPS=729.413061 Intercept Conc=0.130620
Sensitivity=5584.248101 Correlation Coeff=0.999675

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	729.41	0.00
MW10490	5.000	4.503	0.497	25877.32	9.93
cal1 MW-10571	20.000	17.558	2.442	98778.58	12.21
cal2 MW-10572	100.000	93.514	6.486	522934.68	6.49
cal3 MW-10515	250.000	240.588	9.412	1344234.89	3.76
cal4 MW-10516	500.000	506.106	6.106	2826948.81	1.22

121Sb FQ Block 1

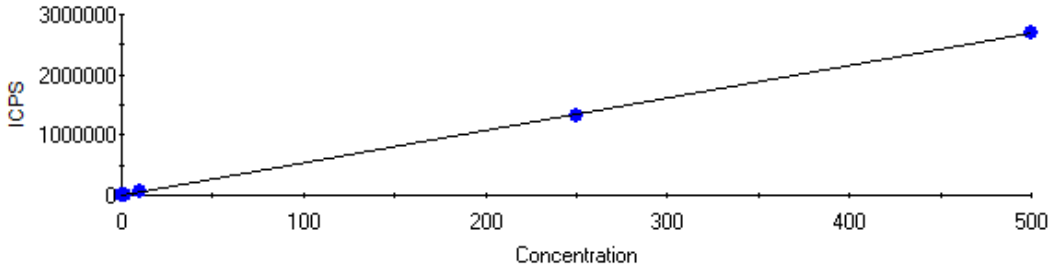


Intercept CPS=196.017850 Intercept Conc=0.028832
Sensitivity=6798.539749 Correlation Coeff=0.999836

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	196.02	0.00

cal1 MW-10571	2.000	1.997	0.003	13776.02	0.13
cal2 MW-10572	10.000	9.865	0.135	67261.35	1.35
cal3 MW-10515	250.000	257.389	7.389	1750068.21	2.96
cal4 MW-10516	500.000	496.308	3.692	3374365.73	0.74

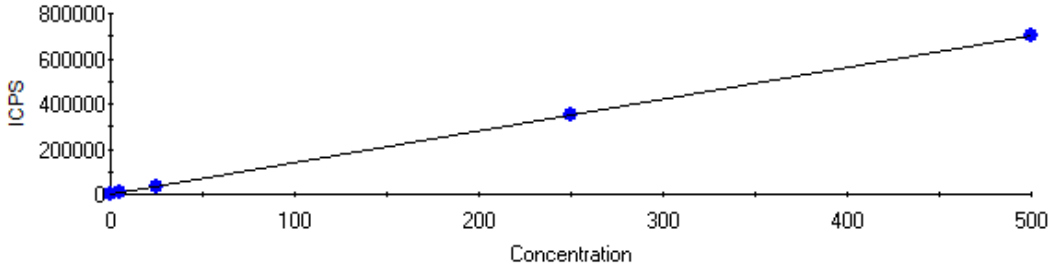
123Sb FQ Block 1



Intercept CPS=164.095111 Intercept Conc=0.030555
Sensitivity=5370.532305 Correlation Coeff=0.999978

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	164.10	0.00
cal1 MW-10571	2.000	1.950	0.050	10634.25	2.52
cal2 MW-10572	10.000	9.679	0.321	52145.72	3.21
cal3 MW-10515	250.000	247.253	2.747	1328046.72	1.10
cal4 MW-10516	500.000	501.380	1.380	2692841.03	0.28

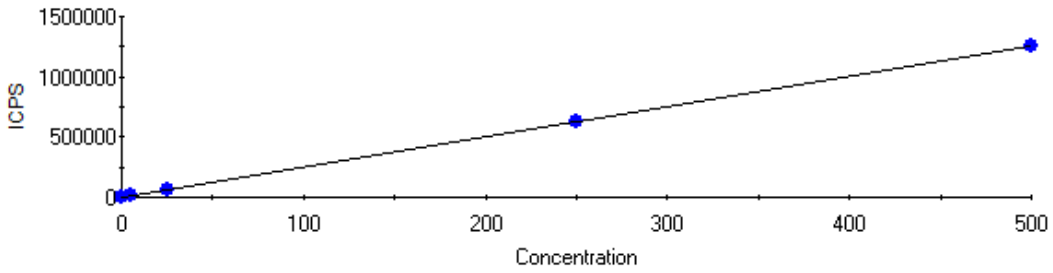
135Ba FQ Block 1



Intercept CPS=8.022324 Intercept Conc=0.005693
Sensitivity=1409.068688 Correlation Coeff=0.999999

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	8.02	0.00
cal1 MW-10571	5.000	4.853	0.147	6846.36	2.94
cal2 MW-10572	25.000	24.533	0.467	34576.66	1.87
cal3 MW-10515	250.000	250.451	0.451	352910.61	0.18
cal4 MW-10516	500.000	499.799	0.201	704259.63	0.04

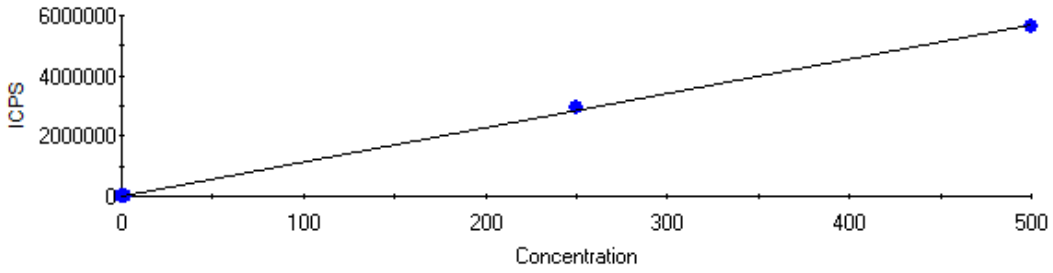
137Ba FQ Block 1



Intercept CPS=11.979564 Intercept Conc=0.004773
Sensitivity=2510.023425 Correlation Coeff=0.999992

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	11.98	0.00
cal1 MW-10571	5.000	4.797	0.203	12052.70	4.06
cal2 MW-10572	25.000	24.282	0.718	60960.34	2.87
cal3 MW-10515	250.000	248.368	1.632	623421.76	0.65
cal4 MW-10516	500.000	500.854	0.854	1257166.93	0.17

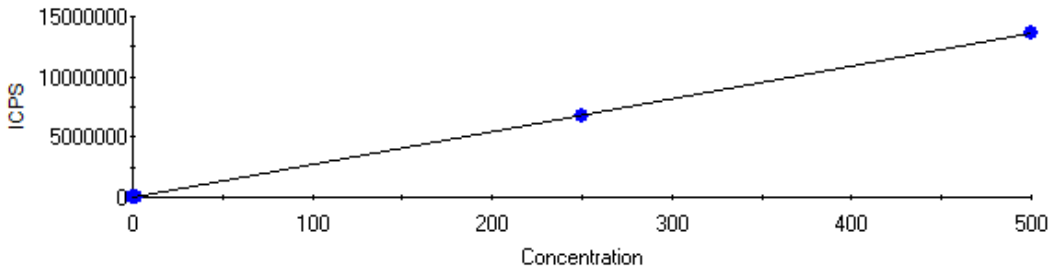
203Tl FQ Block 1



Intercept CPS=213.489624 Intercept Conc=0.018788
Sensitivity=11362.899913 Correlation Coeff=0.999815

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	-0.000	0.000	213.49	0.00
cal1 MW-10571	0.500	0.481	0.019	5677.70	3.82
cal2 MW-10572	2.500	2.382	0.118	27282.94	4.71
cal3 MW-10515	250.000	257.884	7.884	2930524.67	3.15
cal4 MW-10516	500.000	496.059	3.941	5636877.25	0.79

205Tl FQ Block 1

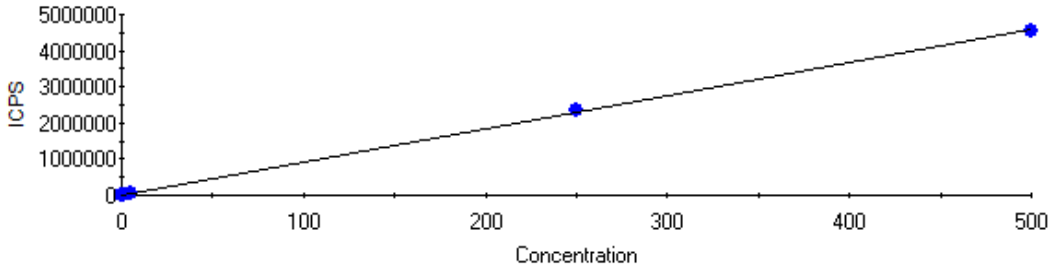


Intercept CPS=547.195616 Intercept Conc=0.020116
Sensitivity=27202.257973 Correlation Coeff=0.999998

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	547.20	0.00
cal1 MW-10571	0.500	0.451	0.049	12820.65	9.76

cal2 MW-10572	2.500	2.409	0.091	66089.50	3.62
cal3 MW-10515	250.000	249.132	0.868	6777505.15	0.35
cal4 MW-10516	500.000	500.434	0.434	13613493.10	0.09

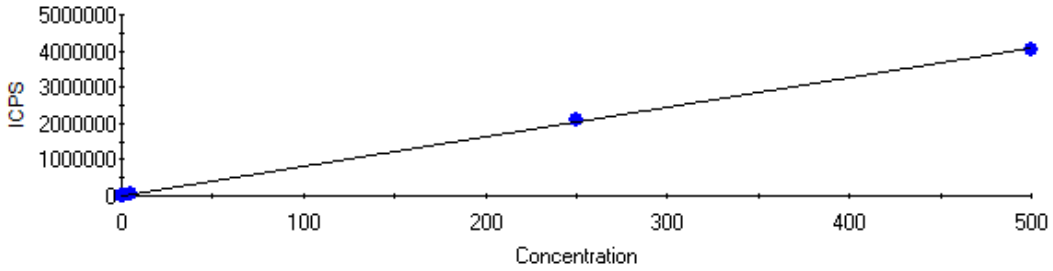
206Pb FQ Block 1



Intercept CPS=82.766709 Intercept Conc=0.009051
Sensitivity=9144.438531 Correlation Coeff=0.999932

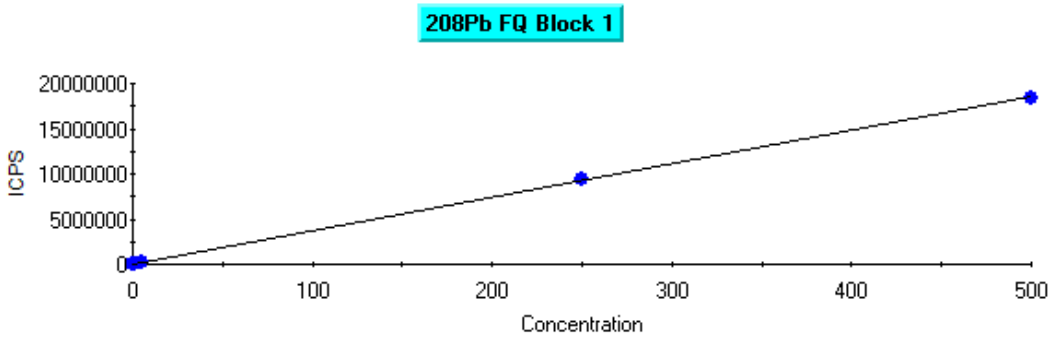
Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	82.77	0.00
cal1 MW-10571	1.000	0.919	0.081	8482.69	8.14
cal2 MW-10572	5.000	4.710	0.290	43152.21	5.80
cal3 MW-10515	250.000	254.742	4.742	2329559.70	1.90
cal4 MW-10516	500.000	497.632	2.368	4550646.40	0.47

207Pb FQ Block 1



Intercept CPS=81.467371 Intercept Conc=0.010006
Sensitivity=8141.818695 Correlation Coeff=0.999799

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	81.47	0.00
cal1 MW-10571	1.000	0.936	0.064	7698.79	6.44
cal2 MW-10572	5.000	4.840	0.160	39484.79	3.21
cal3 MW-10515	250.000	258.195	8.195	2102254.98	3.28
cal4 MW-10516	500.000	495.904	4.096	4037645.50	0.82



Intercept CPS=390.450345 Intercept Conc=0.010560
Sensitivity=36975.686507 Correlation Coeff=0.999970

Label	Defined	Measured	Error	Mean CPS	% Error
BLANK IM9061-02	0.000	0.000	0.000	390.45	0.00
cal1 MW-10571	1.000	0.938	0.062	35087.13	6.16
cal2 MW-10572	5.000	4.810	0.190	178234.09	3.81
cal3 MW-10515	250.000	253.151	3.151	9360815.81	1.26
cal4 MW-10516	500.000	498.427	1.573	18430056.74	0.31

Dilution Corrected Concentrations

RINSE 11/16/2018 09:01:07

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	99.5%	0.012	0.524	0.417	102.100	5.224	3.030	3.128	3.085
2	09:02:01	98.6%	0.012	0.087	0.686	105.800	5.428	3.173	3.170	2.561
3	09:02:28	100.1%	0.008	0.501	0.481	104.700	5.576	3.187	3.461	3.091
4	09:02:56	100.3%	0.007	0.340	0.256	102.600	5.400	3.047	2.838	3.102
5	09:03:23	101.5%	0.025	0.543	0.570	104.500	5.145	2.949	2.790	3.232
6	09:03:50	100.0%	0.003	0.444	0.461	103.600	5.402	3.216	2.973	3.077
x		100.0%	0.011	0.407	0.479	103.900	5.362	3.100	3.060	3.025
σ		1.0%	0.008	0.173	0.145	1.370	0.155	0.107	0.248	0.234
%RSD		1.0	67.590	42.450	30.300	1.319	2.882	3.446	8.106	7.744

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	1.202	1.221	829.100	4.857	9.542	4.573	99.1%	0.054	-0.043
2	09:02:01	1.260	1.639	813.600	5.097	6.473	4.433	T 100.9%	0.037	-0.046
3	09:02:28	1.294	1.477	841.400	3.309	4.437	4.715	98.7%	0.038	-0.033
4	09:02:56	1.239	1.197	820.900	3.286	6.523	5.066	100.1%	0.069	0.083
5	09:03:23	1.286	1.654	821.300	3.211	5.419	4.982	100.4%	0.101	0.097
6	09:03:50	1.283	1.417	817.500	4.717	3.956	3.841	100.9%	0.101	-0.073
x		1.261	1.434	824.000	4.080	6.058	4.602	T 100.0%	0.067	-0.003
σ		0.035	0.197	9.966	0.897	1.999	0.443	T 0.9%	0.029	0.073
%RSD		2.779	13.740	1.210	21.990	33.000	9.629	T 0.9	43.460	2801.000

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	0.041	1354.000	5.365	0.057	4.677	4.316	0.025	0.108	0.326
2	09:02:01	0.061	1250.000	4.915	0.038	3.226	2.088	0.027	0.145	0.019
3	09:02:28	0.042	1319.000	4.458	0.054	5.067	4.556	0.024	0.129	0.530
4	09:02:56	0.014	1297.000	4.535	0.032	3.874	2.589	0.027	0.096	0.241
5	09:03:23	0.042	1242.000	4.506	0.041	4.001	3.094	0.024	0.130	0.000
6	09:03:50	0.030	1349.000	4.153	0.041	4.031	1.636	0.019	0.125	0.242
x		0.038	1302.000	4.655	0.044	4.146	3.046	0.024	0.122	0.226
σ		0.016	47.860	0.424	0.010	0.646	1.184	0.003	0.017	0.198
%RSD		40.660	3.677	9.112	22.040	15.580	38.870	11.690	14.260	87.630

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	0.090	0.090	0.137	-0.019	0.150	0.223	0.081	1.179	3.219
2	09:02:01	0.108	0.120	0.121	0.089	0.084	0.232	0.307	1.154	3.167
3	09:02:28	0.081	0.057	0.133	0.165	0.111	0.090	0.127	1.101	3.106
4	09:02:56	0.092	0.096	0.085	0.005	0.122	0.148	-0.178	1.117	3.660
5	09:03:23	0.080	0.064	0.075	-0.055	0.079	0.095	-0.231	1.272	3.173
6	09:03:50	0.079	0.110	0.044	0.084	0.094	0.223	-0.345	1.122	3.218
x		0.088	0.090	0.099	0.045	0.107	0.169	-0.040	1.158	3.257
σ		0.011	0.025	0.037	0.082	0.027	0.066	0.250	0.063	0.202
%RSD		12.240	27.800	37.670	183.600	25.130	39.380	623.400	5.406	6.189

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	6.216	0.580	5.605	0.024	98.9%	0.045	0.041	0.052	-0.127
2	09:02:01	5.779	0.438	4.514	0.021	99.2%	0.022	0.050	0.046	-0.755
3	09:02:28	4.414	0.179	5.150	0.016	100.2%	0.059	0.037	0.049	-0.732
4	09:02:56	5.220	0.349	5.420	0.023	99.8%	0.049	0.063	0.035	-0.885
5	09:03:23	5.565	0.443	5.626	0.016	101.0%	0.050	0.024	0.044	-0.275
6	09:03:50	5.429	0.397	5.230	0.024	101.0%	0.016	0.071	0.047	-0.785
x		5.437	0.398	5.257	0.021	100.0%	0.040	0.048	0.045	-0.593
σ		0.606	0.132	0.412	0.004	0.9%	0.017	0.017	0.006	0.312
%RSD		11.140	33.220	7.832	17.380	0.9	42.740	35.970	13.070	52.590

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:01:34	0.015	0.018	0.035	0.028	99.6%	0.038	0.075	0.043	0.041
2	09:02:01	0.016	0.016	0.029	0.015	100.1%	0.057	0.063	0.035	0.034
3	09:02:28	0.015	0.019	0.026	0.023	99.5%	0.040	0.076	0.034	0.043
4	09:02:56	0.021	0.018	0.009	0.017	99.5%	0.019	0.067	0.050	0.032
5	09:03:23	0.022	0.021	0.027	0.029	100.3%	0.028	0.048	0.042	0.046
6	09:03:50	0.017	0.018	0.024	0.026	101.0%	0.035	0.052	0.058	0.025

x		0.018	0.018	0.025	0.023	100.0%	0.036	0.064	0.044	0.037
σ		0.003	0.002	0.009	0.006	0.6%	0.013	0.011	0.009	0.008
%RSD		16.870	9.711	34.810	25.230	0.6	35.440	18.050	20.920	22.210
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**	**ppb**
1	09:01:34	0.077	0.093	98.6%	0.017	0.020	0.036	0.033	0.035	94.7%
2	09:02:01	0.057	0.073	99.5%	0.021	0.019	0.031	0.029	0.029	96.9%
3	09:02:28	0.066	0.055	99.0%	0.019	0.018	0.025	0.027	0.027	100.3%
4	09:02:56	0.094	0.084	100.7%	0.013	0.013	0.032	0.028	0.030	100.6%
5	09:03:23	0.119	0.071	100.9%	0.013	0.020	0.035	0.028	0.031	102.4%
6	09:03:50	0.067	0.047	101.3%	0.015	0.015	0.030	0.026	0.030	105.2%
x		0.080	0.071	100.0%	0.016	0.017	0.031	0.029	0.030	100.0%
σ		0.023	0.017	1.1%	0.003	0.003	0.004	0.003	0.002	3.8%
%RSD		28.380	24.640	1.1	20.260	15.430	12.990	8.988	8.170	3.8

TUNE MW10562 11/16/2018 09:08:24

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	97.2%	0.003	0.686	0.299	111.400	5.669	3.201	3.033	3.301
2	09:09:18	98.7%	0.017	0.156	0.252	109.800	5.256	3.239	3.130	3.289
3	09:09:44	99.5%	0.016	0.080	0.297	101.500	5.223	3.009	3.202	3.144
x		98.5%	0.012	0.307	0.283	107.600	5.383	3.150	3.122	3.245
σ		1.2%	0.008	0.330	0.027	5.349	0.249	0.123	0.085	0.088
%RSD		1.2	63.590	107.500	9.378	4.973	4.617	3.907	2.707	2.697
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	1.321	2.010	756.100	5.830	4.098	4.335	98.3%	0.030	-0.018
2	09:09:18	1.196	1.765	749.900	4.689	4.749	4.295	99.6%	0.062	-0.139
3	09:09:44	1.260	2.015	735.000	5.328	3.830	4.341	T 103.2%	0.067	-0.005
x		1.259	1.930	747.000	5.282	4.226	4.324	T 100.4%	0.053	-0.054
σ		0.062	0.143	10.840	0.572	0.473	0.025	T 2.5%	0.020	0.074
%RSD		4.944	7.418	1.452	10.830	11.190	0.588	T 2.5	37.470	135.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	0.034	1299.000	3.506	0.041	3.833	2.535	0.026	0.137	-0.130
2	09:09:18	0.042	1325.000	4.840	0.046	4.259	3.004	0.026	0.138	0.185
3	09:09:44	0.008	1228.000	4.510	0.037	3.448	2.321	0.018	0.136	0.191
x		0.028	1284.000	4.285	0.041	3.847	2.620	0.023	0.137	0.082
σ		0.018	50.370	0.695	0.005	0.405	0.349	0.005	0.001	0.184
%RSD		62.790	3.923	16.220	11.200	10.540	13.330	19.540	0.719	224.400
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	0.103	0.089	0.078	0.096	0.141	0.056	-0.154	1.040	3.581
2	09:09:18	0.082	0.080	0.102	0.102	0.013	0.097	-0.076	1.193	3.391
3	09:09:44	0.082	0.098	0.065	0.089	-0.008	0.162	-0.017	1.094	3.108
x		0.089	0.089	0.082	0.096	0.048	0.105	-0.082	1.109	3.360
σ		0.012	0.009	0.019	0.007	0.081	0.053	0.069	0.077	0.238
%RSD		13.630	9.981	22.690	6.823	166.800	50.990	83.430	6.981	7.086
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	4.035	0.084	4.913	0.019	99.6%	0.024	0.053	0.054	-0.392
2	09:09:18	5.579	0.471	6.426	0.026	100.8%	0.027	0.015	0.027	-0.630
3	09:09:44	4.854	0.258	5.572	0.024	101.7%	0.036	0.080	0.032	-0.303
x		4.823	0.271	5.637	0.023	100.7%	0.029	0.049	0.037	-0.442
σ		0.773	0.194	0.759	0.004	1.0%	0.006	0.033	0.014	0.169
%RSD		16.020	71.520	13.460	15.600	1.0	21.630	66.740	38.240	38.220
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	0.017	0.016	0.024	0.023	98.7%	0.056	0.026	0.037	0.030
2	09:09:18	0.017	0.018	0.030	0.026	99.3%	0.051	0.040	0.025	0.033
3	09:09:44	0.012	0.017	0.024	0.016	100.6%	0.041	0.022	0.044	0.032
x		0.015	0.017	0.026	0.022	99.5%	0.049	0.029	0.035	0.032
σ		0.003	0.001	0.003	0.005	1.0%	0.008	0.010	0.010	0.001
%RSD		18.350	5.269	12.770	22.580	1.0	15.370	33.110	28.340	4.731
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:08:51	0.092	0.071	98.5%	0.026	0.019	0.026	0.022	0.025	94.0%
2	09:09:18	0.060	0.060	98.7%	0.007	0.018	0.024	0.032	0.027	98.0%
3	09:09:44	0.085	0.100	100.0%	0.014	0.017	0.032	0.032	0.029	101.2%
x		0.079	0.077	99.1%	0.016	0.018	0.028	0.029	0.027	97.7%
σ		0.017	0.021	0.8%	0.010	0.001	0.004	0.006	0.002	3.6%
%RSD		21.140	27.070	0.8	61.650	3.328	14.680	20.400	7.190	3.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	99.7%	-0.002	0.091	-0.073	2.606	0.072	0.016	0.068	-0.002
2	09:15:12	98.2%	0.003	0.198	0.107	-1.340	-0.052	0.003	-0.038	0.064
3	09:15:38	102.1%	-0.002	-0.289	-0.034	-1.266	-0.020	-0.019	-0.030	-0.062
x		100.0%	0.000	-0.000	0.000	-0.000	0.000	0.000	-0.000	0.000
σ		2.0%	0.003	0.256	0.095	2.257	0.065	0.018	0.059	0.063
%RSD		2.0	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	0.007	0.064	-4.985	-0.370	0.039	0.018	97.3%	0.006	0.037
2	09:15:12	0.006	0.273	-8.240	1.386	-0.374	0.086	T 101.0%	-0.011	-0.049
3	09:15:38	-0.013	-0.338	13.230	-1.017	0.335	-0.104	T 101.7%	0.005	0.012
x		0.000	-0.000	-0.000	-0.000	-0.000	0.000	T 100.0%	0.000	-0.000
σ		0.011	0.311	11.570	1.244	0.356	0.096	T 2.4%	0.009	0.044
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	T 2.4	0.000	0.000

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	-0.005	-33.840	0.457	0.005	1.544	1.330	0.000	-0.002	0.143
2	09:15:12	0.009	23.030	-0.242	-0.002	-0.741	-0.509	0.001	-0.002	-0.068
3	09:15:38	-0.004	10.810	-0.215	-0.003	-0.803	-0.820	-0.001	0.004	-0.074
x		0.000	-0.000	0.000	0.000	-0.000	0.000	-0.000	-0.000	-0.000
σ		0.008	29.930	0.396	0.004	1.338	1.162	0.001	0.004	0.124
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	-0.007	0.003	0.050	0.041	0.020	-0.005	-0.163	-0.177	0.110
2	09:15:12	0.008	0.002	-0.017	-0.012	0.003	0.050	0.092	0.025	-0.315
3	09:15:38	-0.001	-0.005	-0.033	-0.029	-0.023	-0.045	0.071	0.152	0.205
x		0.000	-0.000	0.000	-0.000	0.000	-0.000	0.000	-0.000	-0.000
σ		0.007	0.004	0.044	0.037	0.022	0.048	0.142	0.166	0.277
%RSD		0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	0.117	0.051	0.249	-0.000	99.6%	-0.000	-0.010	-0.011	0.121
2	09:15:12	0.349	0.072	0.081	-0.001	100.0%	0.001	-0.010	0.010	0.215
3	09:15:38	-0.466	-0.123	-0.330	0.001	100.4%	-0.001	0.020	0.001	-0.336
x		0.000	0.000	0.000	0.000	100.0%	-0.000	-0.000	-0.000	0.000
σ		0.420	0.107	0.298	0.001	0.4%	0.001	0.017	0.011	0.295
%RSD		0.000	0.000	0.000	0.000	0.4	0.000	0.000	0.000	0.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	0.000	0.000	0.000	0.002	99.5%	-0.002	0.005	-0.001	0.003
2	09:15:12	0.000	-0.001	-0.000	-0.001	99.8%	-0.002	-0.004	0.002	-0.003
3	09:15:38	-0.000	0.000	-0.000	-0.001	100.7%	0.004	-0.000	-0.001	-0.000
x		-0.000	0.000	0.000	0.000	100.0%	-0.000	-0.000	0.000	-0.000
σ		0.000	0.001	0.000	0.002	0.6%	0.003	0.005	0.002	0.003
%RSD		0.000	0.000	0.000	0.000	0.6	0.000	0.000	0.000	0.000

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:14:44	0.003	0.000	98.8%	0.003	0.003	0.002	0.002	-0.001	96.1%
2	09:15:12	-0.000	-0.003	100.2%	-0.003	-0.001	-0.002	0.001	0.001	100.5%
3	09:15:38	-0.003	0.003	101.0%	0.000	-0.002	-0.000	-0.003	0.000	103.4%
x		-0.000	-0.000	100.0%	-0.000	0.000	0.000	0.000	0.000	100.0%
σ		0.003	0.003	1.1%	0.003	0.002	0.002	0.002	0.001	3.7%
%RSD		0.000	0.000	1.1	0.000	0.000	0.000	0.000	0.000	3.7

MW10490 11/16/2018 09:20:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	99.7%	0.350	24.260	24.890	24.260	214.600	54.940	55.270	54.140
2	09:21:07	101.7%	0.322	25.400	24.880	25.120	213.400	55.010	53.120	54.610
3	09:21:35	101.4%	0.355	25.110	25.430	22.790	218.700	55.700	53.590	54.860
x		100.9%	0.342	24.920	25.070	24.060	215.600	55.220	54.000	54.540
σ		1.1%	0.018	0.587	0.316	1.179	2.781	0.418	1.131	0.366
%RSD		1.1	5.277	2.357	1.260	4.901	1.290	0.757	2.095	0.671
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	40.940	98.730	-25.040	203.400	193.700	195.100	T 102.9%	4.901	4.731
2	09:21:07	40.400	95.620	-12.190	202.600	201.800	200.400	101.0%	5.297	5.143
3	09:21:35	42.130	96.490	-4.928	207.500	219.600	197.900	101.2%	5.169	4.897
x		41.160	96.950	-14.050	204.500	205.000	197.800	T 101.7%	5.122	4.924
σ		0.887	1.605	10.190	2.615	13.260	2.645	T 1.1%	0.203	0.207
%RSD		2.154	1.655	72.470	1.279	6.469	1.337	T 1.1	3.954	4.209
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	0.989	40.810	20.140	4.644	18.750	20.070	4.818	4.855	5.062
2	09:21:07	1.045	-118.800	21.820	4.833	21.080	20.000	4.981	4.943	5.591
3	09:21:35	1.004	9.319	21.480	4.963	22.120	20.040	4.910	4.804	5.091
x		1.012	-22.880	21.140	4.814	20.650	20.040	4.903	4.868	5.248
σ		0.029	84.520	0.884	0.160	1.723	0.037	0.082	0.070	0.297
%RSD		2.876	369.400	4.180	3.333	8.345	0.184	1.664	1.446	5.668
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	1.002	1.109	9.987	9.433	9.937	1.170	1.294	-0.307	0.012
2	09:21:07	0.980	1.083	10.240	9.415	10.080	1.085	1.238	-0.380	-0.467
3	09:21:35	1.030	1.081	10.130	9.709	9.846	1.043	0.959	-0.162	-0.473
x		1.004	1.091	10.120	9.519	9.953	1.099	1.164	-0.283	-0.309
σ		0.025	0.015	0.126	0.165	0.117	0.065	0.179	0.111	0.278
%RSD		2.515	1.393	1.246	1.735	1.171	5.892	15.400	39.190	90.010
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	6.100	1.336	1.013	0.022	99.5%	9.705	9.705	9.540	-0.301
2	09:21:07	6.146	1.428	1.749	0.025	100.9%	9.694	9.695	9.431	-0.115
3	09:21:35	3.654	0.809	-0.331	0.022	100.5%	9.542	9.761	9.734	-0.142
x		5.300	1.191	0.810	0.023	100.3%	9.647	9.720	9.568	-0.186
σ		1.426	0.334	1.054	0.002	0.7%	0.091	0.036	0.153	0.101
%RSD		26.900	28.080	130.100	7.340	0.7	0.945	0.367	1.602	54.310
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	1.008	1.038	0.096	0.108	100.6%	3.068	4.546	0.943	0.968
2	09:21:07	0.996	1.000	0.089	0.111	100.9%	3.230	4.462	0.980	0.956
3	09:21:35	1.004	1.004	0.067	0.093	101.5%	3.155	4.502	0.943	0.938
x		1.003	1.014	0.084	0.104	101.0%	3.151	4.503	0.955	0.954
σ		0.006	0.021	0.015	0.009	0.5%	0.081	0.042	0.022	0.015
%RSD		0.620	2.078	18.040	8.880	0.5	2.561	0.931	2.258	1.565
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:20:40	4.927	4.971	100.7%	0.475	0.483	0.975	0.942	0.979	97.8%
2	09:21:07	4.851	4.774	102.1%	0.443	0.474	0.952	0.968	0.971	100.7%
3	09:21:35	4.831	4.952	102.7%	0.471	0.481	0.958	0.968	0.964	103.4%
x		4.870	4.899	101.8%	0.463	0.480	0.962	0.959	0.971	100.6%
σ		0.051	0.109	1.0%	0.018	0.005	0.012	0.015	0.007	2.8%
%RSD		1.043	2.221	1.0	3.809	0.963	1.209	1.553	0.758	2.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	102.0%	0.424	47.120	47.810	-4.889	410.600	431.400	412.900	414.600
2	09:27:05	100.6%	0.366	45.920	48.230	-7.134	409.300	T 412.800	406.400	414.300
3	09:27:33	102.7%	0.400	47.550	48.260	-11.670	403.300	T 403.200	406.200	414.600
x		101.8%	0.397	46.860	48.100	-7.897	407.700	T 415.800	408.500	414.500
σ		1.0%	0.029	0.843	0.255	3.453	3.894	T 14.330	3.786	0.137
%RSD		1.0	7.323	1.800	0.529	43.730	0.955	T 3.446	0.927	0.033
Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	40.130	94.090	-81.880	388.600	414.400	388.500	100.8%	4.827	4.594
2	09:27:05	40.500	93.310	-71.590	394.900	399.200	383.100	99.6%	5.104	4.739
3	09:27:33	39.360	89.680	-79.460	391.600	398.900	376.000	T 101.5%	4.883	4.834
x		40.000	92.360	-77.640	391.700	404.200	382.500	T 100.7%	4.938	4.722
σ		0.581	2.354	5.381	3.169	8.901	6.299	T 0.9%	0.146	0.121
%RSD		1.453	2.548	6.930	0.809	2.202	1.647	T 0.9	2.963	2.551
Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	4.883	27.420	52.560	4.620	51.800	47.680	0.972	4.710	5.202
2	09:27:05	4.769	-62.260	54.290	4.791	53.440	48.370	0.952	4.968	4.947
3	09:27:33	4.831	-106.600	54.450	4.714	51.280	46.690	0.949	4.847	5.100
x		4.828	-47.150	53.770	4.708	52.170	47.580	0.958	4.842	5.083
σ		0.057	68.290	1.045	0.086	1.130	0.848	0.012	0.129	0.129
%RSD		1.185	144.800	1.944	1.828	2.166	1.782	1.299	2.670	2.529
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	4.763	4.978	9.635	9.675	9.190	2.172	4.622	-0.293	0.114
2	09:27:05	4.893	4.988	9.517	8.725	9.514	1.955	5.009	-0.469	-0.269
3	09:27:33	4.660	4.990	9.465	9.822	9.186	1.762	4.893	-0.182	-0.159
x		4.772	4.985	9.539	9.407	9.297	1.963	4.841	-0.315	-0.104
σ		0.117	0.006	0.087	0.595	0.188	0.205	0.199	0.145	0.197
%RSD		2.453	0.124	0.915	6.329	2.025	10.450	4.105	46.050	188.800
Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	22.700	5.121	0.595	9.549	100.3%	9.490	9.502	9.148	-0.553
2	09:27:05	23.680	5.393	1.287	9.506	99.8%	9.268	9.692	9.229	-0.166
3	09:27:33	18.090	4.052	-0.209	9.561	100.7%	9.713	9.446	9.247	-0.234
x		21.490	4.855	0.558	9.539	100.3%	9.491	9.547	9.208	-0.318
σ		2.986	0.709	0.749	0.029	0.5%	0.223	0.129	0.052	0.206
%RSD		13.900	14.600	134.200	0.303	0.5	2.348	1.353	0.570	65.020
Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	0.982	0.993	0.072	0.090	101.0%	11.850	17.500	1.991	1.949
2	09:27:05	0.955	0.977	0.076	0.042	100.5%	12.020	17.430	1.989	1.920
3	09:27:33	0.948	0.987	0.074	0.116	100.1%	12.440	17.740	2.013	1.980
x		0.962	0.985	0.074	0.082	100.5%	12.100	17.560	1.997	1.950
σ		0.018	0.008	0.002	0.038	0.5%	0.304	0.165	0.013	0.030
%RSD		1.898	0.807	2.654	45.610	0.5	2.511	0.942	0.659	1.545
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:26:38	4.797	4.688	102.6%	0.488	0.452	0.908	0.946	0.936	97.3%
2	09:27:05	4.762	4.923	101.3%	0.492	0.442	0.941	0.926	0.939	99.7%
3	09:27:33	5.001	4.780	103.2%	0.463	0.459	0.907	0.935	0.939	103.9%
x		4.853	4.797	102.4%	0.481	0.451	0.919	0.936	0.938	100.3%
σ		0.129	0.118	1.0%	0.016	0.009	0.019	0.010	0.002	3.3%
%RSD		2.665	2.465	1.0	3.243	1.946	2.067	1.051	0.180	3.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	101.1%	1.920	233.400	243.000	-10.350	T 1991.000	T 2034.000	2088.000	2123.000
2	09:33:05	100.9%	1.982	244.800	253.700	-7.273	T 2051.000	T 2081.000	2147.000	2185.000
3	09:33:32	102.0%	1.959	243.400	253.100	-8.746	T 2033.000	T 2072.000	2156.000	2180.000
x		101.3%	1.954	240.600	249.900	-8.791	T 2025.000	T 2062.000	2131.000	2163.000
σ		0.6%	0.031	6.246	6.024	1.541	T 30.630	T 24.630	37.060	34.150
%RSD		0.6	1.607	2.597	2.410	17.530	T 1.513	T 1.194	1.740	1.579

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	197.800	485.600	-175.800	T 1968.000	2105.000	1961.000	100.4%	24.850	24.710
2	09:33:05	205.300	488.700	-166.800	T 1968.000	2055.000	1951.000	100.0%	25.050	24.540
3	09:33:32	204.600	485.600	-160.400	T 1986.000	2063.000	1975.000	99.1%	24.850	24.670
x		202.600	486.600	-167.700	T 1974.000	2075.000	1963.000	99.8%	24.920	24.640
σ		4.146	1.803	7.740	T 10.720	26.770	12.000	0.7%	0.116	0.087
%RSD		2.047	0.371	4.617	T 0.543	1.290	0.611	0.7	0.465	0.354

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	24.050	87.980	270.200	23.800	T 268.800	251.500	4.848	24.150	23.350
2	09:33:05	24.650	-72.520	264.100	23.840	T 269.700	252.100	4.911	25.300	24.960
3	09:33:32	24.780	139.100	276.300	24.310	T 267.800	254.700	4.901	23.950	24.880
x		24.490	51.540	270.200	23.980	T 268.700	252.800	4.887	24.470	24.400
σ		0.390	110.400	6.147	0.287	T 0.961	1.717	0.034	0.725	0.904
%RSD		1.592	214.300	2.275	1.195	T 0.358	0.679	0.697	2.963	3.704

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	23.830	24.620	48.090	47.370	48.280	8.905	24.190	-0.485	-0.589
2	09:33:05	23.480	25.370	49.740	47.300	48.160	10.150	24.720	-0.495	-0.155
3	09:33:32	23.930	25.130	48.860	48.080	47.820	9.347	24.530	-0.362	-0.360
x		23.750	25.040	48.900	47.580	48.090	9.468	24.480	-0.447	-0.368
σ		0.233	0.383	0.829	0.429	0.240	0.632	0.269	0.074	0.217
%RSD		0.980	1.530	1.695	0.902	0.498	6.675	1.099	16.590	58.990

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	102.600	22.990	0.239	49.170	99.4%	47.410	48.440	47.390	0.898
2	09:33:05	113.600	25.390	1.210	49.490	98.6%	48.460	49.770	48.360	1.380
3	09:33:32	105.700	23.880	-0.405	49.590	99.0%	48.640	49.070	47.300	1.646
x		107.300	24.080	0.348	49.420	99.0%	48.170	49.090	47.680	1.308
σ		5.669	1.214	0.813	0.221	0.4%	0.662	0.661	0.591	0.379
%RSD		5.285	5.042	233.800	0.446	0.4	1.374	1.346	1.239	28.980

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	4.985	4.932	0.355	0.391	99.8%	63.890	92.510	9.849	9.625
2	09:33:05	5.089	5.001	0.395	0.438	98.9%	65.150	94.470	9.962	9.699
3	09:33:32	5.014	4.892	0.399	0.464	100.2%	65.340	93.560	9.782	9.714
x		5.029	4.942	0.383	0.431	99.6%	64.790	93.510	9.865	9.679
σ		0.054	0.055	0.025	0.037	0.7%	0.786	0.978	0.091	0.048
%RSD		1.067	1.116	6.409	8.529	0.7	1.213	1.046	0.923	0.492

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:32:39	24.450	24.330	100.0%	2.402	2.415	4.700	4.852	4.828	97.7%
2	09:33:05	24.680	24.390	100.5%	2.369	2.391	4.732	4.857	4.859	100.1%
3	09:33:32	24.470	24.130	101.7%	2.376	2.423	4.699	4.810	4.742	102.5%
x		24.530	24.280	100.7%	2.382	2.409	4.710	4.840	4.810	100.1%
σ		0.125	0.139	0.9%	0.017	0.017	0.019	0.026	0.060	2.4%
%RSD		0.510	0.572	0.9	0.717	0.690	0.398	0.533	1.257	2.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	98.3%	244.500	246.000	253.800	10.630	259.200	271.900	264.500	264.300
2	09:39:05	95.9%	246.700	249.800	253.300	13.430	264.600	271.400	264.300	266.700
3	09:39:32	96.8%	249.800	250.200	255.100	13.230	265.200	276.600	269.700	269.900
x		97.0%	247.000	248.700	254.100	12.430	263.000	273.300	266.200	267.000
σ		1.2%	2.691	2.288	0.960	1.564	3.307	2.840	3.064	2.851
%RSD		1.2	1.090	0.920	0.378	12.590	1.257	1.039	1.151	1.068
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	254.800	247.900	-230.400	247.800	468.100	364.200	98.0%	247.600	┬253.400
2	09:39:05	255.800	248.300	-223.500	253.900	490.900	355.100	┬97.0%	245.400	┬252.900
3	09:39:32	258.600	243.800	-202.700	252.000	465.600	362.700	94.8%	250.200	┬252.000
x		256.400	246.700	-218.900	251.200	474.900	360.700	┬96.6%	247.700	┬252.800
σ		1.987	2.480	14.410	3.126	13.930	4.865	┬1.6%	2.422	┬0.699
%RSD		0.775	1.005	6.586	1.244	2.934	1.349	┬1.7	0.978	┬0.277
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	260.100	-65.630	371.500	┬248.100	┬271.700	253.400	┬252.600	257.300	252.200
2	09:39:05	257.200	-230.900	363.900	┬247.700	┬264.500	249.500	┬245.900	247.900	245.400
3	09:39:32	257.200	871.000	367.700	┬250.200	┬266.000	250.700	255.000	245.900	246.700
x		258.200	191.500	367.700	┬248.700	┬267.400	251.200	┬251.200	250.400	248.100
σ		1.675	594.200	3.823	┬1.346	┬3.812	1.993	┬4.714	6.086	3.625
%RSD		0.649	310.300	1.040	┬0.541	┬1.425	0.793	┬1.877	2.431	1.461
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	251.800	262.400	249.100	253.100	248.900	246.600	250.300	-0.313	-0.148
2	09:39:05	245.300	257.300	251.100	251.400	247.400	247.200	251.000	-0.347	-0.614
3	09:39:32	248.300	255.000	250.200	249.300	252.500	251.700	249.100	-0.110	-0.384
x		248.400	258.200	250.100	251.300	249.600	248.500	250.100	-0.257	-0.382
σ		3.267	3.774	0.997	1.900	2.608	2.768	0.962	0.128	0.233
%RSD		1.315	1.461	0.399	0.756	1.045	1.114	0.385	50.040	61.100
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	1082.000	243.700	-0.621	┬253.300	97.5%	243.200	246.600	247.600	253.700
2	09:39:05	1121.000	250.800	0.405	┬253.600	95.7%	246.200	248.600	248.200	250.400
3	09:39:32	1138.000	258.200	0.580	┬254.100	95.2%	245.100	245.000	246.100	250.300
x		1114.000	250.900	0.122	┬253.700	96.1%	244.800	246.700	247.300	251.500
σ		28.650	7.289	0.649	┬0.407	1.2%	1.559	1.838	1.053	1.919
%RSD		2.572	2.905	533.900	┬0.161	1.3	0.637	0.745	0.426	0.763
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	277.500	275.900	248.700	244.400	97.7%	243.300	237.800	252.900	245.800
2	09:39:05	272.600	270.900	250.400	243.400	96.3%	242.800	240.500	259.000	246.200
3	09:39:32	271.900	269.800	251.800	243.900	96.1%	248.300	243.500	260.300	249.700
x		274.000	272.200	250.300	243.900	96.7%	244.800	240.600	257.400	247.300
σ		3.033	3.250	1.508	0.511	0.9%	3.071	2.884	3.928	2.159
%RSD		1.107	1.194	0.603	0.210	0.9	1.255	1.199	1.526	0.873
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:38:38	250.100	248.400	98.5%	257.300	┬249.400	┬250.800	258.300	┬252.600	94.6%
2	09:39:05	251.600	247.900	98.3%	258.300	┬249.900	┬251.100	259.200	┬252.600	97.5%
3	09:39:32	249.700	248.900	98.9%	258.000	┬248.000	262.300	257.000	┬254.200	100.0%
x		250.500	248.400	98.5%	257.900	┬249.100	┬254.700	258.200	┬253.200	97.4%
σ		0.982	0.511	0.3%	0.489	┬0.971	┬6.570	1.114	┬0.882	2.7%
%RSD		0.392	0.206	0.3	0.190	┬0.390	┬2.579	0.431	┬0.348	2.8

cal4 MW-10516 11/16/2018 09:44:09

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	94.4%	M 500.500	M 504.100	M 513.700	16.530	526.600	T 529.600	531.700	530.800
2	09:45:03	95.9%	M 514.300	M 514.300	M 524.000	17.120	537.200	T 541.300	534.200	537.300
3	09:45:30	94.7%	489.800	484.600	M 521.500	16.280	538.000	T 533.900	524.600	538.800
x		95.0%	M 501.500	M 501.000	M 519.700	16.640	533.900	T 535.000	530.200	535.600
σ		0.8%	M 12.280	M 15.070	M 5.333	0.430	6.373	T 5.923	5.002	4.234
%RSD		0.8	M 2.448	M 3.009	M 1.026	2.586	1.194	T 1.107	0.944	0.791
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	T 492.600	507.100	-208.500	499.100	902.400	714.500	94.9%	497.300	T 492.200
2	09:45:03	T 499.500	496.500	-207.300	498.800	918.100	725.600	93.5%	M 506.000	TM 501.700
3	09:45:30	T 495.100	500.400	-195.500	501.900	900.600	717.900	93.0%	M 500.200	TM 502.000
x		T 495.800	501.300	-203.800	499.900	907.000	719.300	93.8%	M 501.200	TM 498.600
σ		T 3.495	5.337	7.226	1.695	9.603	5.696	1.0%	M 4.446	TM 5.558
%RSD		T 0.705	1.065	3.546	0.339	1.059	0.792	1.0	M 0.887	TM 1.115
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	T 490.300	5705.000	751.700	TM 502.400	T 521.500	499.500	T 497.800	M 509.300	M 503.800
2	09:45:03	TM 500.100	5411.000	748.700	TM 501.100	T 527.200	514.400	TM 503.300	M 501.700	M 500.400
3	09:45:30	T 497.500	6309.000	742.500	T 498.600	T 531.800	502.200	T 497.100	499.800	498.800
x		TM 495.900	5808.000	747.600	TM 500.700	T 526.800	505.400	TM 499.400	M 503.600	M 501.000
σ		TM 5.086	458.000	4.696	TM 1.909	T 5.163	7.938	TM 3.380	M 5.057	M 2.537
%RSD		TM 1.025	7.886	0.628	TM 0.381	T 0.980	1.571	TM 0.677	M 1.004	M 0.506
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	M 514.200	M 518.900	M 501.800	496.600	494.900	499.400	495.900	-0.224	-0.326
2	09:45:03	M 506.100	M 514.100	499.800	497.100	M 505.400	M 502.900	M 503.300	-0.254	-0.537
3	09:45:30	T 482.200	M 517.700	498.600	M 505.100	M 501.000	M 500.000	M 500.700	-0.314	-0.540
x		TM 500.800	M 516.900	M 500.100	M 499.600	M 500.400	M 500.800	M 500.000	-0.264	-0.468
σ		TM 16.620	M 2.472	M 1.605	M 4.721	M 5.273	M 1.876	M 3.765	0.046	0.123
%RSD		TM 3.318	M 0.478	M 0.321	M 0.945	M 1.054	M 0.375	M 0.753	17.320	26.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	2227.000	M 500.900	0.337	TM 507.900	94.3%	M 500.200	M 500.100	M 508.200	493.200
2	09:45:03	2206.000	M 501.600	1.056	TM 513.300	94.1%	M 506.800	M 503.600	500.000	M 506.700
3	09:45:30	2201.000	497.800	1.397	TM 508.900	93.0%	M 501.400	M 501.500	496.600	497.900
x		2211.000	M 500.100	0.930	TM 510.000	93.8%	M 502.800	M 501.700	M 501.600	M 499.300
σ		13.620	M 2.013	0.541	TM 2.894	0.7%	M 3.516	M 1.745	M 5.958	M 6.835
%RSD		0.616	M 0.402	58.150	TM 0.568	0.7	M 0.699	M 0.348	M 1.188	M 1.369
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	T 492.600	T 494.500	M 507.100	M 507.900	94.7%	M 511.500	M 508.400	T 496.300	M 512.200
2	09:45:03	T 488.100	T 485.700	497.900	M 500.700	95.6%	M 508.400	M 504.300	T 494.100	M 507.300
3	09:45:30	T 493.100	T 486.500	494.500	M 500.500	95.6%	M 509.900	M 505.600	T 498.500	T 484.700
x		T 491.300	T 488.900	M 499.900	M 503.000	95.3%	M 510.000	M 506.100	T 496.300	TM 501.400
σ		T 2.727	T 4.842	M 6.508	M 4.236	0.5%	M 1.557	M 2.107	T 2.210	TM 14.660
%RSD		T 0.555	T 0.990	M 1.302	M 0.842	0.6	M 0.305	M 0.416	T 0.445	TM 2.924
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:44:36	M 503.300	M 500.600	96.8%	T 495.000	TM 500.900	T 498.800	T 494.200	T 499.100	93.6%
2	09:45:03	498.700	M 501.800	97.8%	T 496.000	T 499.300	T 494.700	T 496.200	T 497.000	97.1%
3	09:45:30	497.400	M 500.200	97.1%	T 497.200	TM 501.100	T 499.400	T 497.300	T 499.200	99.2%
x		M 499.800	M 500.900	97.2%	T 496.100	TM 500.400	T 497.600	T 495.900	T 498.400	96.6%
σ		M 3.109	M 0.818	0.5%	T 1.124	TM 1.009	T 2.519	T 1.534	T 1.248	2.8%
%RSD		M 0.622	M 0.163	0.5	T 0.227	TM 0.202	T 0.506	T 0.309	T 0.250	2.9

cal5 MW-10488 11/16/2018 09:50:06

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	89.5%	0.030	6.014	5.679	16.700	T 49850.000	T 50040.000	T 49420.000	T 49300.000
2	09:51:00	86.9%	0.025	5.580	5.182	21.070	T 50620.000	T 50570.000	T 50340.000	T 50380.000
3	09:51:27	87.2%	0.030	3.737	4.584	18.010	T 50560.000	T 50900.000	T 50300.000	T 50140.000
x		87.9%	0.028	5.110	5.148	18.590	T 50340.000	T 50500.000	T 50020.000	T 49940.000
σ		1.4%	0.003	1.209	0.548	2.242	T 424.700	T 435.800	T 520.400	T 566.100
%RSD		1.6	10.260	23.660	10.650	12.060	T 0.844	T 0.863	T 1.040	T 1.134
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	1.094	T 4869.000	-181.700	T 48190.000	48460.000	T 48960.000	92.9%	0.949	-0.018
2	09:51:00	1.217	T 4995.000	-172.800	T 50360.000	48920.000	T 49150.000	91.9%	0.950	-0.063
3	09:51:27	1.174	T 4952.000	-157.400	T 50560.000	49830.000	T 50040.000	91.7%	0.909	-0.069
x		1.161	T 4939.000	-170.600	T 49700.000	49070.000	T 49390.000	92.1%	0.936	-0.050
σ		0.062	T 64.170	12.290	T 1317.000	696.800	T 575.000	0.6%	0.024	0.028
%RSD		5.374	T 1.299	7.203	T 2.649	1.420	T 1.164	0.7	2.522	56.180
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	0.187	-468.700	T 49630.000	0.660	T 49270.000	T 47660.000	2.297	2.024	2.827
2	09:51:00	0.187	-401.100	T 49870.000	0.704	T 50630.000	T 48040.000	2.281	2.083	3.432
3	09:51:27	0.218	-459.200	T 50580.000	0.663	T 50160.000	T 48730.000	2.263	2.198	3.550
x		0.198	-443.000	T 50020.000	0.676	T 50020.000	T 48140.000	2.280	2.102	3.270
σ		0.018	36.610	T 493.900	0.025	T 690.800	T 543.700	0.017	0.088	0.388
%RSD		9.150	8.264	T 0.987	3.697	T 1.381	T 1.129	0.748	4.199	11.860
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	0.306	0.221	1.004	0.684	0.920	0.492	0.514	1.013	-0.434
2	09:51:00	0.383	0.261	1.164	0.959	1.060	0.508	0.044	0.647	-0.187
3	09:51:27	0.349	0.201	0.978	0.622	1.090	0.422	0.584	1.052	-0.187
x		0.346	0.228	1.049	0.755	1.023	0.474	0.381	0.904	-0.269
σ		0.039	0.030	0.101	0.180	0.091	0.046	0.294	0.224	0.142
%RSD		11.120	13.350	9.620	23.790	8.890	9.602	77.190	24.720	52.910
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	1.758	0.399	2.531	0.429	88.5%	0.799	0.716	0.733	-0.549
2	09:51:00	2.374	0.499	0.468	0.424	88.4%	0.685	0.812	0.733	-0.053
3	09:51:27	1.712	0.383	1.004	0.460	89.6%	0.749	0.697	0.660	-0.759
x		1.948	0.427	1.334	0.437	88.8%	0.744	0.742	0.709	-0.454
σ		0.370	0.063	1.071	0.020	0.7%	0.057	0.062	0.043	0.363
%RSD		18.980	14.670	80.230	4.501	0.7	7.634	8.297	5.997	79.880
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	0.032	0.016	0.008	0.004	88.7%	1.241	1.800	0.867	0.816
2	09:51:00	0.049	0.042	0.037	0.029	88.9%	1.197	1.708	0.857	0.823
3	09:51:27	0.030	0.032	0.026	0.020	90.3%	1.089	1.517	0.767	0.788
x		0.037	0.030	0.023	0.018	89.3%	1.176	1.675	0.830	0.809
σ		0.010	0.013	0.015	0.012	0.9%	0.078	0.144	0.055	0.019
%RSD		27.750	44.800	62.580	70.700	1.0	6.652	8.622	6.578	2.318
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:50:34	0.063	0.043	92.2%	0.029	0.027	0.074	0.065	0.069	96.3%
2	09:51:00	0.051	0.076	92.7%	0.039	0.039	0.081	0.082	0.078	98.6%
3	09:51:27	0.081	0.068	93.8%	0.039	0.038	0.081	0.094	0.081	101.1%
x		0.065	0.062	92.9%	0.036	0.034	0.079	0.080	0.076	98.7%
σ		0.015	0.017	0.8%	0.006	0.007	0.004	0.015	0.006	2.4%
%RSD		23.260	27.830	0.9	16.340	19.120	5.220	18.310	8.167	2.4

cal6 MW-10489 11/16/2018 09:56:04

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	82.2%	0.004	2.520	2.726	26.090	T 99700.000	T 99000.000	T 99460.000	T 99770.000
2	09:56:58	82.9%	0.015	2.851	2.587	26.620	TM 100200.000	TM 101400.000	TM 100900.000	TM 100800.000
3	09:57:25	82.5%	0.020	3.148	1.984	17.450	T 99610.000	T 98880.000	T 99650.000	T 99510.000
x		82.6%	0.013	2.840	2.432	23.390	TM 99830.000	TM 99750.000	TM 99990.000	TM 100000.000
σ		0.3%	0.008	0.314	0.394	5.152	TM 307.400	TM 1409.000	TM 754.000	TM 681.100
%RSD		0.4	63.530	11.050	16.220	22.030	TM 0.308	TM 1.412	TM 0.754	TM 0.681
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	1.541	T 9974.000	-173.700	T 99330.000	98840.000	T 99640.000	87.0%	1.189	-0.104
2	09:56:58	1.524	TM 10020.000	-161.700	T 99790.000	M 101400.000	TM 101500.000	86.2%	1.061	-0.113
3	09:57:25	1.590	TM 10100.000	-164.000	TM 101300.000	M 101200.000	T 99830.000	87.4%	1.238	-0.087
x		1.552	TM 10030.000	-166.500	TM 100100.000	M 100500.000	TM 100300.000	86.9%	1.163	-0.102
σ		0.034	TM 64.330	6.386	TM 1041.000	M 1409.000	TM 1001.000	0.7%	0.091	0.013
%RSD		2.208	TM 0.641	3.836	TM 1.039	M 1.403	TM 0.998	0.8	7.850	12.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	0.379	-577.500	T 99360.000	1.335	T 99470.000	T 96180.000	4.487	4.092	6.178
2	09:56:58	0.395	-512.800	TM 101000.000	1.319	TM 100400.000	T 98730.000	4.559	3.900	6.337
3	09:57:25	0.384	-549.100	T 99640.000	1.326	TM 100100.000	T 97380.000	4.565	4.048	6.960
x		0.386	-546.500	TM 99990.000	1.327	TM 99990.000	T 97430.000	4.537	4.013	6.492
σ		0.008	32.440	TM 859.600	0.008	TM 461.200	T 1276.000	0.044	0.101	0.414
%RSD		2.102	5.937	TM 0.860	0.587	TM 0.461	T 1.309	0.962	2.513	6.369
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	0.607	0.396	2.205	1.705	1.877	0.609	1.010	3.498	-0.221
2	09:56:58	0.558	0.458	2.031	1.830	2.107	0.671	1.216	3.122	-0.257
3	09:57:25	0.552	0.373	2.294	1.849	2.020	0.527	0.919	3.298	-0.239
x		0.572	0.409	2.176	1.794	2.001	0.602	1.048	3.306	-0.239
σ		0.030	0.044	0.134	0.078	0.116	0.072	0.152	0.188	0.018
%RSD		5.224	10.720	6.137	4.364	5.784	11.970	14.500	5.686	7.560
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	1.846	0.434	1.893	0.791	85.1%	0.380	0.337	0.281	-0.390
2	09:56:58	2.399	0.606	2.584	0.827	86.5%	0.444	0.300	0.289	-0.435
3	09:57:25	1.563	0.345	-0.363	0.791	87.4%	0.348	0.328	0.271	-0.565
x		1.936	0.462	1.371	0.803	86.3%	0.390	0.321	0.280	-0.463
σ		0.425	0.133	1.541	0.021	1.2%	0.049	0.019	0.009	0.091
%RSD		21.980	28.770	112.400	2.573	1.3	12.520	5.967	3.193	19.590
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	0.010	0.013	0.010	0.003	84.0%	0.476	0.666	0.662	0.595
2	09:56:58	0.012	0.016	0.012	0.008	84.5%	0.478	0.678	0.633	0.588
3	09:57:25	0.021	0.018	0.008	0.012	85.4%	0.454	0.608	0.628	0.576
x		0.014	0.016	0.010	0.008	84.7%	0.469	0.651	0.641	0.586
σ		0.006	0.003	0.002	0.005	0.7%	0.014	0.037	0.018	0.010
%RSD		42.500	18.350	22.280	63.750	0.8	2.885	5.748	2.881	1.672
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:56:31	0.080	0.060	88.7%	0.019	0.019	0.107	0.092	0.098	94.5%
2	09:56:58	0.066	0.063	91.0%	0.022	0.018	0.090	0.094	0.090	96.2%
3	09:57:25	0.075	0.066	91.4%	0.017	0.020	0.096	0.096	0.099	99.4%
x		0.074	0.063	90.4%	0.019	0.019	0.098	0.094	0.096	96.7%
σ		0.007	0.003	1.5%	0.003	0.001	0.008	0.002	0.005	2.5%
%RSD		9.787	4.590	1.6	13.910	4.408	8.551	1.836	4.969	2.6

ICV MW-10574 prep 11/16/18 11/16/2018 10:02:02 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	88.0%	198.800	202.100	207.400	4.966	T 40300.000	T 40470.000	T 40350.000	T 40120.000
2	10:02:56	90.9%	194.600	193.800	200.400	3.331	T 40730.000	T 40120.000	T 39390.000	T 39910.000
3	10:03:23	89.3%	190.400	186.200	188.500	4.378	T 40620.000	T 39670.000	T 39250.000	T 39620.000
x		89.4%	97.293%	97.011%	99.369%	4.225	T 101.376%	T 40090.000	T 39670.000	T 99.707%
σ		1.4%	n/a	n/a	n/a	0.828	T n/a	T 400.200	T 600.500	T n/a
%RSD		1.6	2.167	4.088	4.807	19.610	T 0.551	T 0.998	T 1.514	T 0.638

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	195.900	T 1935.000	-225.800	T 39740.000	38850.000	T 39570.000	92.8%	194.800	204.400
2	10:02:56	198.600	T 1864.000	-218.800	T 39070.000	39440.000	T 39810.000	91.4%	195.200	206.300
3	10:03:23	193.800	T 1893.000	-220.000	T 40270.000	40210.000	T 40190.000	90.9%	195.300	201.100
x		98.055%	T 94.881%	-221.500	T 99.234%	39500.000	T 99.639%	91.7%	97.558%	101.964%
σ		n/a	T n/a	3.770	T n/a	681.200	T n/a	1.0%	n/a	n/a
%RSD		1.227	T 1.878	1.701	T 1.511	1.725	T 0.785	1.1	0.120	1.286

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	197.800	-343.700	T 40020.000	194.600	T 39790.000	T 38280.000	190.200	191.200	189.000
2	10:02:56	196.400	-234.400	T 39600.000	193.100	T 39880.000	T 38290.000	192.100	189.100	185.800
3	10:03:23	197.700	-187.400	T 39860.000	194.300	T 39910.000	T 38560.000	191.600	181.100	183.800
x		98.645%	-255.100	T 39830.000	97.003%	T 99.660%	T 95.942%	95.662%	93.574%	186.200
σ		n/a	80.190	T 213.700	n/a	T n/a	T n/a	n/a	n/a	2.622
%RSD		0.398	31.430	T 0.536	0.413	T 0.154	T 0.425	0.526	2.858	1.408

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	184.300	191.200	191.400	189.100	186.900	191.900	189.000	1.085	0.070
2	10:02:56	185.000	192.800	193.200	192.600	187.100	196.300	195.200	1.327	0.116
3	10:03:23	182.100	184.700	187.700	188.300	187.600	198.900	185.700	1.331	0.246
x		183.800	94.780%	95.399%	190.000	187.200	97.851%	190.000	1.248	0.144
σ		1.500	n/a	n/a	2.301	0.374	n/a	4.804	0.141	0.091
%RSD		0.816	2.262	1.471	1.211	0.200	1.789	2.529	11.280	63.410

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	866.500	191.500	0.667	208.000	90.3%	201.700	204.000	201.000	194.600
2	10:02:56	871.100	194.000	2.170	T 203.300	89.8%	200.700	200.400	201.600	196.200
3	10:03:23	841.500	191.100	-0.089	T 202.800	91.4%	198.800	200.300	196.500	195.000
x		859.700	96.093%	0.916	T 102.357%	90.5%	100.198%	100.799%	99.858%	195.300
σ		15.900	n/a	1.150	T n/a	0.8%	n/a	n/a	n/a	0.839
%RSD		1.850	0.807	125.600	T 1.411	0.9	0.716	1.048	1.386	0.430

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	182.400	180.300	192.100	188.900	89.6%	199.300	200.300	206.800	195.900
2	10:02:56	181.900	180.700	194.500	190.600	89.3%	201.500	201.300	207.100	194.000
3	10:03:23	176.900	175.400	190.900	189.700	91.5%	199.200	198.900	209.400	195.500
x		90.200%	178.800	96.248%	94.881%	90.1%	100.005%	100.075%	207.800	97.577%
σ		n/a	2.948	n/a	n/a	1.2%	n/a	n/a	1.443	n/a
%RSD		1.705	1.649	0.966	0.446	1.3	0.651	0.614	0.695	0.510

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:02:29	200.200	199.200	93.9%	194.100	T 190.500	194.800	193.300	T 194.200	95.1%
2	10:02:56	198.700	198.200	94.3%	194.600	T 192.300	195.800	194.800	T 193.900	T 93.3%
3	10:03:23	197.500	196.500	96.4%	191.200	T 191.000	195.300	191.500	T 191.700	T 97.2%
x		99.406%	98.995%	94.9%	193.300	T 95.646%	195.300	193.200	T 96.641%	T 95.2%
σ		n/a	n/a	1.3%	1.810	T n/a	0.526	1.660	T n/a	T 2.0%
%RSD		0.678	0.705	1.4	0.936	T 0.481	0.269	0.859	T 0.692	T 2.1

ICB IM9061-02 11/16/2018 10:07:59 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	96.2%	0.003	0.099	-0.150	-0.458	2.390	0.396	0.497	0.276
2	10:08:54	99.5%	-0.002	-0.043	-0.101	-3.555	2.241	0.509	0.463	0.583
3	10:09:21	99.8%	0.008	0.131	-0.238	-4.762	1.952	0.489	0.586	0.528
x		98.5%	0.003	0.062	-0.163	-2.925	2.194	0.465	0.515	0.462
σ		2.0%	0.005	0.093	0.069	2.220	0.223	0.060	0.063	0.164
%RSD		2.0	146.900	149.100	42.640	75.910	10.150	12.950	12.290	35.400
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	-0.006	2.375	-269.500	0.969	-0.284	0.470	93.0%	0.085	-0.086
2	10:08:54	0.010	1.489	-271.300	-0.416	0.856	0.466	94.3%	0.092	-0.158
3	10:09:21	-0.010	1.189	-272.900	-0.785	-0.310	0.405	95.2%	0.074	-0.072
x		-0.002	1.685	-271.200	-0.077	0.087	0.447	94.2%	0.083	-0.105
σ		0.011	0.617	1.715	0.925	0.666	0.036	1.1%	0.009	0.046
%RSD		533.200	36.600	0.632	1195.000	763.000	8.128	1.2	10.820	43.670
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	0.006	-523.800	7.596	0.041	7.606	8.799	0.004	0.007	0.566
2	10:08:54	-0.017	-488.300	7.491	0.027	7.118	6.217	0.002	0.006	0.681
3	10:09:21	-0.016	-491.700	7.465	0.034	6.888	8.012	0.002	0.000	0.622
x		-0.009	-501.300	7.518	0.034	7.204	7.676	0.002	0.004	0.623
σ		0.013	19.610	0.069	0.007	0.367	1.323	0.001	0.004	0.057
%RSD		147.000	3.911	0.923	22.010	5.093	17.240	44.770	86.540	9.219
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	0.018	0.013	-0.080	-0.236	-0.112	0.006	-0.172	0.045	-0.189
2	10:08:54	0.030	-0.012	-0.075	-0.226	-0.095	0.023	0.457	-0.153	-0.119
3	10:09:21	0.005	-0.006	-0.066	-0.181	-0.027	0.082	0.044	0.030	-0.072
x		0.017	-0.002	-0.074	-0.215	-0.078	0.037	0.110	-0.026	-0.127
σ		0.012	0.013	0.007	0.029	0.045	0.040	0.320	0.110	0.059
%RSD		71.450	684.500	9.878	13.650	57.570	109.100	291.400	426.100	46.630
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	-1.549	-0.318	0.698	0.002	96.0%	0.242	0.216	0.254	-0.837
2	10:08:54	0.605	0.141	-1.293	0.001	98.0%	0.188	0.234	0.241	-0.831
3	10:09:21	-0.601	-0.127	-0.033	0.001	96.7%	0.180	0.180	0.207	-0.581
x		-0.515	-0.101	-0.209	0.001	96.9%	0.204	0.210	0.234	-0.750
σ		1.079	0.231	1.007	0.000	1.0%	0.033	0.028	0.024	0.146
%RSD		209.600	227.900	481.100	16.930	1.0	16.440	13.200	10.230	19.460
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	0.002	0.004	0.005	0.005	97.8%	0.182	0.243	0.125	0.107
2	10:08:54	0.007	0.005	0.001	-0.004	98.9%	0.180	0.251	0.103	0.093
3	10:09:21	0.003	0.004	0.001	0.007	100.1%	0.194	0.253	0.084	0.090
x		0.004	0.005	0.002	0.003	98.9%	0.185	0.249	0.104	0.097
σ		0.003	0.000	0.002	0.006	1.1%	0.007	0.005	0.021	0.009
%RSD		64.830	9.812	94.940	201.400	1.2	3.797	2.183	19.770	9.358
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:08:26	-0.003	0.003	99.3%	0.019	0.010	0.003	0.002	0.003	99.7%
2	10:08:54	-0.003	0.010	99.9%	0.010	0.015	0.003	0.004	0.004	103.8%
3	10:09:21	0.006	0.003	101.7%	0.017	0.009	0.004	0.007	0.003	104.9%
x		-0.000	0.005	100.3%	0.015	0.011	0.003	0.004	0.003	102.8%
σ		0.005	0.004	1.2%	0.005	0.003	0.001	0.003	0.001	2.8%
%RSD		19360.000	69.320	1.2	30.580	28.910	22.350	64.600	31.500	2.7

ICSA MW10426 11/16/2018 10:13:55 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	84.3%	-0.002	0.016	-0.022	495.600	TM 101200.000	TM 100300.000	TM 101200.000	TM 100800.000
2	10:14:49	85.6%	0.020	0.185	-0.234	494.600	TM 103300.000	TM 102700.000	TM 101800.000	TM 102800.000
3	10:15:16	85.0%	0.004	0.074	0.359	519.100	TM 103900.000	TM 102500.000	TM 102400.000	TM 103600.000
x		85.0%	1.#IO%	0.092	1.#IO%	503.100	TM 102.829%	TM 101800.000	TM 101800.000	TM 102.425%
σ		0.6%	n/a	0.086	n/a	13.860	TM n/a	TM 1305.000	TM 599.600	TM n/a
%RSD		0.7	149.800	93.650	875.600	2.754	TM 1.375	TM 1.281	TM 0.589	TM 1.383

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	TM 94950.000	22.510	T 25650.000	T 99820.000	M 107000.000	TM 106600.000	79.0%	M 2358.000	0.037
2	10:14:49	TM 95920.000	20.300	T 25850.000	T 98520.000	M 107400.000	TM 106900.000	79.2%	M 2372.000	-0.001
3	10:15:16	TM 97240.000	T 32.040	T 26450.000	TM 100000.000	M 107200.000	TM 108800.000	78.9%	M 2382.000	0.134
x		TM 96.037%	T 1.#IO%	T 25990.000	TM 99.463%	M 107200.000	TM 107.448%	79.0%	M 118.534%	1.#IO%
σ		TM n/a	T n/a	T 416.700	TM n/a	M 216.500	TM n/a	0.2%	M n/a	n/a
%RSD		TM 1.199	T 25.020	T 1.603	TM 0.824	M 0.202	TM 1.122	0.2	M 0.520	123.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	0.234	1585.000	TM 105800.000	0.361	TM 107900.000	TM 105300.000	0.078	0.770	9.027
2	10:14:49	0.249	1694.000	TM 107600.000	0.367	TM 107900.000	TM 104400.000	0.069	0.635	10.200
3	10:15:16	0.268	1726.000	TM 107900.000	0.343	TM 108800.000	TM 105800.000	0.070	0.642	9.893
x		1.#IO%	1668.000	TM 107100.000	1.#IO%	TM 108200.000	TM 105.176%	1.#IO%	1.#IO%	9.707
σ		n/a	73.790	TM 1149.000	n/a	TM 501.600	TM n/a	n/a	n/a	0.609
%RSD		6.885	4.423	TM 1.073	3.508	TM 0.464	TM 0.632	6.965	11.140	6.271

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	-1.408	-0.238	1.440	1.382	0.437	0.376	0.477	2.720	0.902
2	10:14:49	-1.438	-0.133	1.418	1.068	0.458	0.343	0.614	2.748	1.011
3	10:15:16	-1.328	-0.244	1.518	1.597	0.422	-0.031	0.632	2.951	1.095
x		-1.391	-1.#IO%	1.#IO%	1.349	0.439	1.#IO%	0.574	2.806	1.003
σ		0.057	n/a	n/a	0.266	0.018	n/a	0.085	0.126	0.097
%RSD		4.097	30.460	3.597	19.730	4.162	98.410	14.740	4.488	9.684

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	2.063	0.907	20.690	1.008	77.4%	TM 2167.000	TM 2400.000	TM 1992.000	-1.488
2	10:14:49	3.071	1.092	18.900	0.994	77.7%	TM 2134.000	TM 2389.000	TM 1993.000	-1.826
3	10:15:16	0.271	0.453	17.070	1.015	79.1%	TM 2149.000	TM 2402.000	TM 2001.000	-2.428
x		1.801	1.#IO%	18.890	1.006	78.1%	TM 2150.000	TM 119.843%	TM 1995.000	-1.914
σ		1.418	n/a	1.806	0.010	0.9%	TM 16.360	TM n/a	TM 4.938	0.476
%RSD		78.720	40.240	9.562	1.033	1.1	TM 0.761	TM 0.300	TM 0.248	24.870

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	0.044	0.039	-4.838	0.148	85.3%	0.959	0.154	0.202	0.166
2	10:14:49	0.037	0.043	-5.048	0.098	86.4%	0.969	0.141	0.157	0.143
3	10:15:16	0.039	0.050	-5.088	-0.003	87.1%	0.980	0.133	0.164	0.146
x		1.#IO%	0.044	-4.991	1.#IO%	86.2%	1.#IO%	1.#IO%	0.175	1.#IO%
σ		n/a	0.006	0.134	n/a	0.9%	n/a	n/a	0.024	n/a
%RSD		9.216	12.570	2.693	94.920	1.1	1.087	7.673	13.920	8.357

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:14:22	0.078	0.078	85.1%	-0.008	-0.005	0.086	0.085	0.085	123.6%
2	10:14:49	0.083	0.052	86.3%	-0.006	-0.006	0.090	0.082	0.083	122.2%
3	10:15:16	0.089	0.078	87.2%	-0.009	-0.007	0.086	0.092	0.088	119.9%
x		0.083	1.#IO%	86.2%	-0.008	-1.#IO%	0.087	0.086	1.#IO%	121.9%
σ		0.006	n/a	1.1%	0.001	n/a	0.002	0.005	n/a	1.9%
%RSD		6.713	20.950	1.2	19.280	16.540	2.743	5.766	2.850	1.5

CCV MW10535 11/16/2018 10:19:53 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	85.8%	293.800	291.200	310.200	11.620	┬61960.000	┬62360.000	┬61820.000	┬62070.000
2	10:20:47	87.5%	294.900	285.100	292.100	7.210	┬62760.000	┬62110.000	┬61040.000	┬61530.000
3	10:21:14	87.0%	292.200	287.100	292.600	10.330	┬62120.000	┬62620.000	┬62090.000	┬62400.000
x		86.8%	97.883%	95.932%	99.438%	9.722	┬103.799%	┬62360.000	┬61650.000	┬103.336%
σ		0.9%	n/a	n/a	n/a	2.269	┬n/a	┬252.200	┬548.700	┬n/a
%RSD		1.0	0.464	1.090	3.462	23.340	┬0.681	┬0.404	┬0.890	┬0.702

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	305.900	┬3275.000	-189.000	┬61690.000	62400.000	┬61920.000	88.6%	308.400	┬321.100
2	10:20:47	302.900	┬3186.000	-188.600	┬60930.000	62430.000	┬62830.000	88.7%	305.300	┬312.100
3	10:21:14	304.900	┬3221.000	-180.700	┬61400.000	63800.000	┬62590.000	87.3%	314.000	┬321.700
x		101.522%	┬107.573%	-186.100	┬102.229%	62880.000	┬104.078%	88.2%	103.083%	┬106.096%
σ		n/a	┬n/a	4.678	┬n/a	800.800	┬n/a	0.8%	n/a	┬n/a
%RSD		0.504	┬1.383	2.514	┬0.629	1.274	┬0.760	0.9	1.411	┬1.691

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	316.700	-2264.000	┬62370.000	┬294.300	┬63150.000	┬60220.000	┬299.500	293.400	295.300
2	10:20:47	312.200	-1408.000	┬62260.000	┬295.800	┬61810.000	┬60680.000	┬299.200	287.000	289.700
3	10:21:14	318.100	-1725.000	┬63610.000	┬305.000	┬63880.000	┬61770.000	314.000	288.000	290.800
x		105.228%	-1799.000	┬62750.000	┬99.458%	┬62950.000	┬101.484%	┬101.410%	96.481%	291.900
σ		n/a	432.900	┬752.400	┬n/a	┬1047.000	┬n/a	┬n/a	n/a	2.996
%RSD		0.972	24.060	┬1.199	┬1.941	┬1.663	┬1.304	┬2.785	1.200	1.026

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	281.400	289.900	288.100	286.100	285.300	304.700	287.800	3.028	-0.206
2	10:20:47	278.000	286.500	282.100	286.000	286.500	297.900	288.800	2.294	-0.063
3	10:21:14	283.800	283.600	287.500	285.800	287.800	303.400	282.600	2.264	-0.133
x		281.100	95.561%	95.303%	286.000	286.500	100.667%	286.400	2.529	-0.134
σ		2.917	n/a	n/a	0.189	1.225	n/a	3.289	0.433	0.072
%RSD		1.038	1.115	1.143	0.066	0.428	1.187	1.149	17.110	53.520

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	1284.000	291.800	2.682	┬310.500	89.1%	314.700	314.700	315.800	292.100
2	10:20:47	1286.000	288.900	1.855	┬319.200	88.0%	312.100	313.800	317.300	294.300
3	10:21:14	1288.000	298.800	0.135	┬310.600	90.0%	315.300	317.800	317.900	298.100
x		1286.000	97.721%	1.557	┬104.471%	89.0%	104.686%	105.136%	317.000	294.800
σ		2.079	n/a	1.300	┬n/a	1.0%	n/a	n/a	1.071	3.041
%RSD		0.162	1.739	83.470	┬1.589	1.1	0.545	0.670	0.338	1.032

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	311.800	308.000	293.800	286.400	88.7%	304.100	304.600	317.700	298.700
2	10:20:47	313.800	305.900	290.800	289.800	88.9%	305.900	306.900	322.900	303.200
3	10:21:14	314.000	311.800	295.700	291.500	88.7%	306.300	310.400	326.500	306.000
x		104.399%	308.600	293.400	96.410%	88.7%	101.812%	102.420%	322.400	100.881%
σ		n/a	3.003	2.439	n/a	0.1%	n/a	n/a	4.419	n/a
%RSD		0.396	0.973	0.831	0.903	0.1	0.397	0.948	1.371	1.206

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:20:20	304.600	307.900	92.8%	304.100	┬289.900	┬289.700	297.500	┬291.700	96.4%
2	10:20:47	308.300	307.600	92.7%	307.800	┬293.400	┬291.300	298.500	┬292.300	98.8%
3	10:21:14	306.800	307.700	93.0%	309.000	┬294.000	┬291.900	300.500	┬294.400	99.6%
x		102.184%	102.581%	92.8%	307.000	┬97.482%	┬96.986%	99.607%	┬97.596%	98.3%
σ		n/a	n/a	0.2%	2.573	┬n/a	┬n/a	n/a	┬n/a	1.7%
%RSD		0.603	0.049	0.2	0.838	┬0.751	┬0.394	0.518	┬0.473	1.7

CCB IM9061-02 11/16/2018 10:25:48 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	95.7%	-0.002	1.990	1.905	0.893	3.205	1.372	1.425	1.353
2	10:26:42	97.3%	0.003	1.924	1.652	0.020	2.429	0.727	0.926	0.712
3	10:27:08	97.0%	0.013	1.210	1.683	0.459	1.871	0.613	0.768	0.622
x		96.7%	0.005	1.708	1.747	0.457	2.501	0.904	1.040	0.895
σ		0.9%	0.007	0.433	0.138	0.437	0.670	0.409	0.343	0.399
%RSD		0.9	149.700	25.330	7.882	95.540	26.780	45.230	32.970	44.530
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	0.490	0.675	-230.000	3.712	0.534	1.414	91.3%	0.175	-0.172
2	10:26:42	0.206	0.481	-210.400	2.435	-0.273	-0.007	92.2%	0.147	-0.019
3	10:27:08	0.107	0.213	-210.700	2.032	0.095	-0.087	93.9%	0.169	-0.061
x		0.268	0.457	-217.100	2.727	0.119	0.440	92.5%	0.164	-0.084
σ		0.199	0.232	11.240	0.877	0.404	0.845	1.3%	0.015	0.079
%RSD		74.220	50.800	5.178	32.170	340.700	191.800	1.4	9.140	94.290
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	0.004	-377.800	10.490	0.041	10.270	9.779	0.001	0.002	0.621
2	10:26:42	-0.003	-421.700	8.870	0.032	8.258	7.848	0.005	0.005	0.404
3	10:27:08	-0.020	-422.100	7.453	0.039	7.737	7.126	0.003	0.017	0.662
x		-0.006	-407.200	8.938	0.037	8.754	8.251	0.003	0.008	0.563
σ		0.013	25.460	1.520	0.005	1.336	1.372	0.002	0.008	0.139
%RSD		203.500	6.253	17.000	12.960	15.260	16.620	74.520	99.430	24.670
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	0.037	0.011	-0.087	-0.233	-0.057	0.099	0.111	0.005	-0.351
2	10:26:42	0.025	-0.003	-0.128	-0.128	-0.101	0.187	-0.039	0.038	0.863
3	10:27:08	0.018	-0.014	-0.091	-0.150	-0.065	0.191	0.237	0.252	-0.098
x		0.026	-0.002	-0.102	-0.171	-0.074	0.159	0.103	0.098	0.138
σ		0.009	0.013	0.023	0.055	0.023	0.052	0.138	0.134	0.641
%RSD		35.590	643.800	22.180	32.390	31.340	32.590	134.500	136.400	464.300
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	-0.262	-0.031	-0.241	0.003	95.4%	0.510	0.488	0.502	-1.265
2	10:26:42	1.287	0.328	0.175	-0.001	95.3%	0.488	0.523	0.440	-0.306
3	10:27:08	1.599	0.413	0.497	0.000	97.3%	0.433	0.362	0.424	-0.781
x		0.875	0.237	0.144	0.001	96.0%	0.477	0.458	0.455	-0.784
σ		0.997	0.236	0.370	0.002	1.1%	0.040	0.084	0.041	0.480
%RSD		113.900	99.550	256.900	181.600	1.2	8.284	18.450	9.084	61.160
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	0.007	0.006	0.000	0.006	97.3%	0.298	0.405	0.299	0.306
2	10:26:42	0.007	0.011	0.002	0.001	96.6%	0.284	0.357	0.291	0.258
3	10:27:08	0.005	0.006	0.002	-0.004	97.4%	0.255	0.402	0.248	0.279
x		0.006	0.007	0.001	0.001	97.1%	0.279	0.388	0.280	0.281
σ		0.001	0.003	0.001	0.005	0.5%	0.022	0.027	0.028	0.024
%RSD		20.530	39.260	85.770	436.900	0.5	7.907	6.844	9.884	8.495
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:26:15	0.006	0.007	98.5%	0.017	0.018	0.006	0.004	0.005	97.8%
2	10:26:42	-0.003	0.007	99.6%	0.016	0.018	0.002	0.003	0.003	101.2%
3	10:27:08	0.006	0.010	100.3%	0.019	0.016	0.005	0.011	0.004	103.0%
x		0.003	0.008	99.5%	0.017	0.018	0.004	0.006	0.004	100.7%
σ		0.005	0.002	0.9%	0.002	0.001	0.002	0.004	0.001	2.6%
%RSD		168.000	23.610	0.9	11.090	6.491	42.350	72.410	23.720	2.6

LR MW10519 11/16/2018 10:31:42 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	78.0%	M 972.400	M 1906.000	TM 2105.000	34.850	TM 121300.000	TM 121300.000	TM 120700.000	TM 121800.000
2	10:32:37	77.9%	M 957.800	M 1925.000	TM 2144.000	31.190	TM 120500.000	TM 121200.000	TM 121100.000	TM 122800.000
3	10:33:05	77.6%	M 972.800	M 1923.000	TM 2088.000	30.200	TM 122400.000	TM 122200.000	TM 122900.000	TM 123200.000
x		77.8%	M 96.769%	M 95.896%	TM 105.616%	32.080	TM 101.188%	TM 121600.000	TM 121600.000	TM 102.180%
σ		0.2%	M n/a	M n/a	TM n/a	2.453	TM n/a	TM 522.000	TM 1190.000	TM n/a
%RSD		0.3	M 0.882	M 0.533	TM 1.372	7.647	TM 0.786	TM 0.429	TM 0.979	TM 0.565
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	TM 116800.000	229.200	-243.000	TM 119000.000	M 129800.000	TM 128700.000	77.6%	M 2175.000	TM 2131.000
2	10:32:37	TM 117100.000	229.600	-233.900	TM 121900.000	M 130500.000	TM 130800.000	77.2%	M 2203.000	TM 2162.000
3	10:33:05	TM 116900.000	232.500	-236.400	TM 122600.000	M 129500.000	TM 130800.000	77.4%	M 2224.000	TM 2160.000
x		TM 97.445%	230.400	-237.800	TM 100.962%	M 129900.000	TM 108.420%	77.4%	M 110.037%	TM 107.538%
σ		TM n/a	1.833	4.700	TM n/a	M 486.200	TM n/a	0.2%	M n/a	TM n/a
%RSD		TM 0.130	0.796	1.977	TM 1.577	M 0.374	TM 0.932	0.3	M 1.124	TM 0.817
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	TM 2070.000	23300.000	TM 128700.000	TM 2019.000	TM 126800.000	TM 123100.000	TM 2009.000	TM 1690.000	M 1956.000
2	10:32:37	TM 2087.000	24450.000	TM 129300.000	TM 2063.000	TM 128100.000	TM 125200.000	TM 2019.000	TM 1694.000	M 1953.000
3	10:33:05	TM 2095.000	24080.000	TM 129800.000	TM 2074.000	TM 127900.000	TM 124500.000	TM 2022.000	TM 1685.000	M 1955.000
x		TM 104.196%	23940.000	TM 129300.000	TM 102.598%	TM 127600.000	TM 103.557%	TM 100.837%	TM 84.480%	M 1955.000
σ		TM n/a	587.500	TM 574.900	TM n/a	TM 721.200	TM n/a	TM n/a	TM n/a	M 1.785
%RSD		TM 0.593	2.454	TM 0.445	TM 1.435	TM 0.565	TM 0.879	TM 0.345	TM 0.273	M 0.091
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	TM 1863.000	TM 1968.000	M 1859.000	M 2266.000	M 2236.000	M 2159.000	M 1915.000	4.262	0.294
2	10:32:37	TM 1854.000	TM 1954.000	M 1867.000	M 2280.000	M 2253.000	M 2191.000	M 1924.000	5.419	1.289
3	10:33:05	TM 1843.000	TM 1906.000	M 1852.000	M 2254.000	M 2227.000	M 2172.000	M 1872.000	5.318	1.000
x		TM 1853.000	TM 97.127%	M 92.960%	M 2267.000	M 2239.000	M 108.693%	M 1904.000	5.000	0.861
σ		TM 9.807	TM n/a	M n/a	M 12.740	M 13.490	M n/a	M 27.750	0.641	0.512
%RSD		TM 0.529	TM 1.665	M 0.402	M 0.562	M 0.603	M 0.749	M 1.457	12.820	59.440
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	8688.000	M 1912.000	21.920	TM 2316.000	75.2%	TM 2194.000	TM 2449.000	TM 2057.000	M 1948.000
2	10:32:37	8648.000	M 1939.000	23.130	TM 2304.000	76.4%	TM 2200.000	TM 2462.000	TM 2093.000	M 1948.000
3	10:33:05	8376.000	M 1896.000	21.080	TM 2307.000	77.5%	TM 2185.000	TM 2429.000	TM 2051.000	M 1956.000
x		8571.000	M 95.790%	22.040	TM 115.448%	76.3%	TM 2193.000	TM 122.338%	TM 2067.000	M 1951.000
σ		169.500	M n/a	1.031	TM n/a	1.2%	TM 7.526	TM n/a	TM 22.390	M 4.393
%RSD		1.977	M 1.123	4.677	TM 0.275	1.5	TM 0.343	TM 0.668	TM 1.083	M 0.225
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	296.700	294.600	TM 1852.000	TM 1793.000	81.7%	TM 1917.000	TM 1947.000	TM 1025.000	TM 1026.000
2	10:32:37	299.200	294.800	TM 1869.000	TM 1832.000	82.2%	TM 1920.000	TM 1969.000	TM 1024.000	TM 1043.000
3	10:33:05	296.600	293.900	TM 1851.000	TM 1808.000	83.1%	TM 1940.000	TM 1957.000	TM 1025.000	TM 1044.000
x		297.500	294.400	TM 1857.000	TM 90.547%	82.3%	TM 1926.000	TM 97.896%	TM 1025.000	TM 103.775%
σ		1.507	0.487	TM 10.220	TM n/a	0.7%	TM 12.580	TM n/a	TM 0.774	TM n/a
%RSD		0.507	0.166	TM 0.550	TM 1.068	0.9	TM 0.653	TM 0.550	TM 0.076	TM 0.953
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:32:10	TM 10650.000	TM 10360.000	79.8%	TM 1033.000	TM 1043.000	TM 2044.000	TM 2109.000	TM 2082.000	102.8%
2	10:32:37	TM 10780.000	TM 10400.000	80.5%	TM 1046.000	TM 1057.000	TM 2057.000	TM 2129.000	TM 2108.000	105.0%
3	10:33:05	TM 10810.000	TM 10340.000	80.8%	TM 1041.000	TM 1051.000	TM 2060.000	TM 2123.000	TM 2101.000	104.5%
x		TM 107.460%	TM 10370.000	80.4%	TM 1040.000	TM 105.024%	TM 2054.000	TM 2120.000	TM 104.853%	104.1%
σ		TM n/a	TM 29.520	0.6%	TM 6.889	TM n/a	TM 8.449	TM 10.240	TM n/a	1.2%
%RSD		TM 0.806	TM 0.285	0.7	TM 0.663	TM 0.638	TM 0.411	TM 0.483	TM 0.653	1.1

TJ18096-004 11/16/2018 10:37:39

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	109.2%	0.075	12.180	12.370	-2.720	11.580	92.360	89.390	94.600
2	10:38:34	108.6%	0.061	11.620	11.200	-1.686	11.910	93.390	91.460	92.850
3	10:39:01	111.3%	0.075	10.410	10.200	-4.692	11.920	92.220	88.930	93.450
x		109.7%	0.070	11.400	11.260	-3.033	11.800	92.650	89.930	93.630
σ		1.5%	0.008	0.905	1.089	1.527	0.192	0.640	1.345	0.892
%RSD		1.3	11.660	7.940	9.671	50.360	1.630	0.690	1.495	0.952
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	TM 3617.000	T 818.900	T 166300.000	63.250	36.330	44.520	96.0%	63.500	3.524
2	10:38:34	TM 3625.000	T 819.600	T 166900.000	64.090	40.830	42.300	95.2%	63.100	3.651
3	10:39:01	TM 3554.000	T 782.800	T 166200.000	61.450	34.780	45.700	95.2%	61.620	2.910
x		TM 3599.000	T 807.100	T 166500.000	62.930	37.310	44.170	95.5%	62.740	3.362
σ		TM 38.780	T 21.060	T 367.900	1.349	3.144	1.723	0.5%	0.988	0.396
%RSD		TM 1.077	T 2.609	T 0.221	2.144	8.425	3.901	0.5	1.574	11.790
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	3.392	20040.000	590.900	7.222	T 583.700	553.700	0.296	1.505	2.130
2	10:38:34	3.320	21000.000	589.400	7.345	T 579.000	541.600	0.285	1.327	1.819
3	10:39:01	3.337	22200.000	569.300	7.293	T 568.800	546.100	0.303	1.427	1.873
x		3.350	21080.000	583.200	7.287	T 577.200	547.200	0.295	1.420	1.941
σ		0.038	1082.000	12.030	0.061	T 7.598	6.112	0.009	0.089	0.166
%RSD		1.125	5.132	2.063	0.843	T 1.316	1.117	3.089	6.289	8.561
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	2.784	2.866	4.217	6.970	4.352	0.587	0.483	8.396	8.936
2	10:38:34	2.813	2.797	4.363	7.076	4.569	0.348	0.286	9.024	8.768
3	10:39:01	2.657	2.863	4.451	6.549	4.380	0.492	0.236	7.909	8.637
x		2.751	2.842	4.344	6.865	4.433	0.476	0.335	8.443	8.781
σ		0.083	0.039	0.118	0.279	0.118	0.120	0.131	0.559	0.150
%RSD		3.008	1.359	2.713	4.057	2.670	25.230	38.970	6.620	1.707
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	2.403	0.580	1.296	2.073	97.4%	2.403	2.439	2.398	-0.593
2	10:38:34	1.667	0.368	-1.580	1.987	98.5%	2.066	2.063	2.118	-0.918
3	10:39:01	0.745	0.201	0.744	1.894	97.7%	2.006	1.837	1.793	-0.689
x		1.605	0.383	0.153	1.985	97.9%	2.158	2.113	2.103	-0.733
σ		0.831	0.190	1.526	0.090	0.6%	0.214	0.304	0.303	0.167
%RSD		51.750	49.640	997.100	4.518	0.6	9.915	14.390	14.410	22.760
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	0.076	0.080	0.060	0.078	99.1%	8.186	11.730	0.905	0.897
2	10:38:34	0.083	0.085	0.080	0.065	98.6%	7.798	11.040	0.873	0.815
3	10:39:01	0.089	0.096	0.087	0.090	98.0%	7.122	10.160	0.837	0.755
x		0.083	0.087	0.076	0.078	98.6%	7.702	10.980	0.872	0.822
σ		0.006	0.008	0.014	0.013	0.5%	0.538	0.783	0.034	0.071
%RSD		7.531	9.018	18.640	16.110	0.5	6.991	7.137	3.906	8.680
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:38:06	7.742	7.978	102.4%	0.070	0.074	4.227	4.095	4.132	137.0%
2	10:38:34	7.663	7.717	104.6%	0.086	0.088	4.154	4.036	4.109	134.8%
3	10:39:01	7.753	7.801	103.0%	0.080	0.085	4.117	3.959	4.010	132.5%
x		7.719	7.832	103.3%	0.078	0.082	4.166	4.030	4.084	134.8%
σ		0.049	0.134	1.2%	0.008	0.007	0.056	0.068	0.065	2.2%
%RSD		0.635	1.705	1.1	10.310	8.879	1.337	1.698	1.589	1.7

TJ18014-002(5) 11/16/2018 10:43:32

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	98.8%	0.170	5.708	6.282	1.404	34.200	T 4891.000	T 4884.000	T 5040.000
2	10:44:26	98.1%	0.221	5.818	6.400	4.415	34.780	T 4870.000	T 4852.000	T 4982.000
3	10:44:53	98.4%	0.188	6.211	6.285	1.299	34.140	T 4890.000	T 4814.000	T 4965.000
x		98.5%	0.193	5.912	6.322	2.373	34.370	T 4884.000	T 4850.000	T 4996.000
σ		0.3%	0.026	0.265	0.067	1.769	0.351	T 11.940	T 35.050	T 39.520
%RSD		0.3	13.570	4.475	1.059	74.560	1.021	T 0.245	T 0.723	T 0.791
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	TM 5666.000	T 677.100	T 33010.000	T 1118.000	13600.000	T 13920.000	93.3%	160.400	9.834
2	10:44:26	TM 5656.000	T 676.500	T 33240.000	T 1112.000	13770.000	T 13980.000	92.7%	161.700	8.465
3	10:44:53	TM 5547.000	T 673.200	T 33660.000	T 1133.000	13540.000	T 13750.000	93.7%	160.700	5.330
x		TM 5623.000	T 675.600	T 33300.000	T 1121.000	13640.000	T 13880.000	93.3%	160.900	7.876
σ		TM 65.740	T 2.093	T 329.700	T 10.380	122.800	T 118.500	0.5%	0.664	2.309
%RSD		TM 1.169	T 0.310	T 0.990	T 0.926	0.901	T 0.854	0.5	0.413	29.310
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	TM 554.800	7943.000	T 9869.000	139.700	T 9905.000	10160.000	3.462	9.485	9.674
2	10:44:26	TM 553.800	8878.000	T 9783.000	139.600	T 9914.000	10170.000	3.562	8.936	9.697
3	10:44:53	TM 538.400	10820.000	T 9719.000	137.900	T 9915.000	9945.000	3.370	9.007	9.574
x		TM 549.000	9215.000	T 9790.000	139.000	T 9911.000	10090.000	3.465	9.143	9.648
σ		TM 9.186	1469.000	T 75.190	0.988	T 5.520	127.300	0.096	0.299	0.066
%RSD		TM 1.673	15.940	T 0.768	0.711	T 0.056	1.262	2.764	3.271	0.680
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	9.445	9.459	35.240	33.290	34.130	3.547	-0.056	2.031	2.300
2	10:44:26	9.371	9.408	34.380	33.540	32.700	3.115	-0.154	1.963	2.005
3	10:44:53	9.047	9.296	33.920	32.080	32.180	3.467	-0.141	2.505	2.322
x		9.288	9.388	34.510	32.970	33.000	3.376	-0.117	2.166	2.209
σ		0.212	0.084	0.667	0.781	1.007	0.230	0.053	0.295	0.177
%RSD		2.278	0.891	1.933	2.367	3.051	6.809	45.480	13.630	8.009
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	1.722	0.515	1.692	11.670	100.7%	0.597	0.613	0.605	0.979
2	10:44:26	0.085	0.115	0.864	11.460	101.6%	0.591	0.532	0.597	1.356
3	10:44:53	0.854	0.306	1.222	11.340	102.2%	0.602	0.576	0.632	0.492
x		0.887	0.312	1.259	11.490	101.5%	0.597	0.574	0.611	0.942
σ		0.819	0.201	0.415	0.163	0.8%	0.006	0.040	0.018	0.433
%RSD		92.350	64.240	32.980	1.417	0.8	0.956	7.052	2.980	45.960
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	0.025	0.021	0.140	0.106	93.7%	2.309	3.233	0.270	0.277
2	10:44:26	0.020	0.019	0.114	0.125	94.4%	2.233	3.010	0.297	0.272
3	10:44:53	0.024	0.024	0.103	0.110	95.1%	2.286	3.052	0.293	0.274
x		0.023	0.021	0.119	0.113	94.4%	2.276	3.098	0.287	0.274
σ		0.002	0.002	0.019	0.010	0.7%	0.039	0.119	0.015	0.002
%RSD		9.693	9.917	15.900	8.911	0.7	1.704	3.831	5.096	0.898
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:43:59	26.970	26.780	97.1%	0.071	0.062	35.750	33.460	34.810	111.9%
2	10:44:26	27.050	26.660	97.2%	0.070	0.066	35.260	33.600	34.470	113.1%
3	10:44:53	26.100	26.620	98.8%	0.065	0.061	35.210	33.440	34.380	116.1%
x		26.710	26.690	97.7%	0.069	0.063	35.410	33.500	34.550	113.7%
σ		0.531	0.084	0.9%	0.003	0.003	0.301	0.089	0.227	2.2%
%RSD		1.989	0.313	0.9	4.701	4.660	0.849	0.265	0.655	1.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	98.1%	0.008	3.008	2.209	13.680	4.262	1.302	1.212	1.265
2	10:50:20	98.6%	0.003	2.603	2.515	13.180	3.920	1.403	1.343	1.416
3	10:50:47	98.8%	0.008	2.248	2.360	13.810	3.983	2.201	2.105	2.156
x		98.5%	0.006	2.619	2.361	13.560	4.055	1.635	1.553	1.612
σ		0.3%	0.003	0.380	0.153	0.336	0.182	0.492	0.482	0.477
%RSD		0.3	42.560	14.510	6.484	2.477	4.489	30.100	31.050	29.570

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	1.404	1.114	T 52530.000	0.879	6.097	8.151	91.0%	0.078	0.157
2	10:50:20	1.349	0.682	T 54380.000	-0.784	8.920	7.604	90.7%	0.140	-0.126
3	10:50:47	1.881	0.664	T 53090.000	0.087	6.079	9.226	91.3%	0.139	0.140
x		1.545	0.820	T 53330.000	0.061	7.032	8.327	91.0%	0.119	0.057
σ		0.293	0.255	T 947.200	0.832	1.635	0.825	0.3%	0.036	0.159
%RSD		18.960	31.090	T 1.776	1369.000	23.250	9.908	0.3	29.890	279.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	0.233	6240.000	7.511	0.032	7.463	4.157	0.010	0.027	0.263
2	10:50:20	0.250	6803.000	7.988	0.024	7.871	4.014	0.013	0.009	0.206
3	10:50:47	0.250	6692.000	6.842	0.028	5.381	2.506	0.013	0.009	-0.128
x		0.244	6578.000	7.447	0.028	6.905	3.559	0.012	0.015	0.114
σ		0.010	298.200	0.576	0.004	1.335	0.915	0.002	0.010	0.211
%RSD		3.961	4.534	7.732	13.450	19.340	25.700	15.770	67.530	185.100

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	0.039	0.060	1.924	2.691	1.950	-0.033	-0.213	2.725	3.754
2	10:50:20	0.061	0.060	2.025	2.110	1.942	-0.117	-0.091	2.867	2.880
3	10:50:47	0.044	0.071	1.970	2.483	1.864	0.325	0.497	3.124	2.519
x		0.048	0.063	1.973	2.428	1.919	0.058	0.064	2.905	3.051
σ		0.012	0.006	0.051	0.295	0.048	0.234	0.380	0.203	0.635
%RSD		24.570	9.994	2.572	12.130	2.477	402.200	590.300	6.968	20.820

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	0.938	0.252	0.668	0.023	93.8%	0.194	0.210	0.201	-0.616
2	10:50:20	0.362	0.134	1.088	0.016	93.9%	0.160	0.167	0.207	-0.686
3	10:50:47	2.496	0.575	-1.036	0.020	94.0%	0.223	0.209	0.207	-0.913
x		1.265	0.321	0.240	0.020	93.9%	0.193	0.195	0.205	-0.738
σ		1.104	0.228	1.125	0.003	0.1%	0.032	0.024	0.003	0.156
%RSD		87.250	71.160	468.800	17.680	0.1	16.380	12.470	1.651	21.080

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	0.000	0.006	0.005	0.014	95.2%	0.949	1.477	0.133	0.133
2	10:50:20	0.001	0.001	0.011	0.015	95.3%	0.975	1.385	0.146	0.144
3	10:50:47	0.002	0.005	0.011	0.026	95.5%	0.915	1.354	0.154	0.149
x		0.001	0.004	0.009	0.018	95.3%	0.946	1.405	0.144	0.142
σ		0.001	0.003	0.003	0.007	0.2%	0.030	0.064	0.011	0.008
%RSD		83.660	68.070	37.390	37.690	0.2	3.181	4.535	7.473	5.904

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:49:53	0.077	0.070	97.9%	-0.012	-0.014	0.002	0.002	0.003	112.3%
2	10:50:20	0.065	0.064	98.3%	-0.014	-0.013	0.008	0.007	0.005	113.8%
3	10:50:47	0.137	0.103	99.3%	-0.016	-0.013	0.008	0.010	0.008	116.1%
x		0.093	0.079	98.5%	-0.014	-0.013	0.006	0.006	0.005	114.1%
σ		0.039	0.021	0.7%	0.002	0.001	0.004	0.004	0.003	1.9%
%RSD		41.860	26.700	0.7	13.220	4.376	62.040	69.410	49.130	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	98.3%	96.670	97.480	97.490	8.707	T 1028.000	T 1047.000	1049.000	1074.000
2	10:56:15	101.5%	90.040	93.560	96.480	7.302	T 1011.000	T 1016.000	1035.000	1045.000
3	10:56:42	102.0%	94.440	96.010	96.380	10.410	T 1021.000	T 1029.000	1040.000	1045.000
x		100.6%	93.720	95.680	96.780	8.806	T 1020.000	T 1030.000	1041.000	1054.000
σ		2.0%	3.371	1.982	0.614	1.557	T 8.608	T 15.290	6.943	16.790
%RSD		2.0	3.597	2.072	0.634	17.680	T 0.844	T 1.484	0.667	1.592
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	102.300	T 905.200	T 50830.000	1020.000	1115.000	1032.000	94.7%	100.100	100.500
2	10:56:15	99.440	T 878.000	T 50210.000	T 964.300	1087.000	1032.000	95.4%	99.190	102.400
3	10:56:42	100.000	T 881.000	T 51180.000	T 968.300	1062.000	1016.000	96.6%	98.610	100.700
x		100.600	T 888.100	T 50740.000	T 984.200	1088.000	1027.000	95.6%	99.310	101.200
σ		1.487	T 14.910	T 489.000	T 31.120	26.490	8.932	0.9%	0.764	1.041
%RSD		1.479	T 1.679	T 0.964	T 3.162	2.434	0.870	1.0	0.770	1.028
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	99.840	7437.000	1112.000	99.910	T 1056.000	1023.000	99.440	95.710	97.180
2	10:56:15	100.300	7295.000	1107.000	101.700	T 1054.000	1034.000	99.460	95.410	97.160
3	10:56:42	99.940	8110.000	1102.000	98.810	T 1030.000	1020.000	99.480	96.150	97.440
x		100.000	7614.000	1107.000	100.100	T 1047.000	1026.000	99.460	95.760	97.260
σ		0.239	435.700	5.292	1.450	T 14.410	7.547	0.023	0.372	0.153
%RSD		0.238	5.722	0.478	1.448	T 1.376	0.736	0.024	0.389	0.157
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	97.100	101.400	98.630	102.200	100.500	101.400	99.830	2.548	2.211
2	10:56:15	96.620	101.400	98.530	101.700	99.510	100.700	99.280	2.942	2.774
3	10:56:42	96.450	100.500	98.800	99.530	100.300	98.160	99.660	2.758	2.508
x		96.730	101.100	98.650	101.100	100.100	100.100	99.590	2.749	2.498
σ		0.338	0.510	0.139	1.414	0.524	1.721	0.280	0.197	0.282
%RSD		0.350	0.505	0.141	1.398	0.523	1.719	0.281	7.176	11.280
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	437.400	99.920	-2.483	100.400	95.9%	97.070	96.190	95.240	98.950
2	10:56:15	444.400	100.500	-1.370	100.600	95.4%	96.750	97.480	93.200	98.290
3	10:56:42	444.400	99.480	1.943	100.700	95.4%	97.310	97.220	93.560	97.590
x		442.100	99.950	-0.637	100.600	95.6%	97.040	96.970	94.000	98.280
σ		4.044	0.490	2.302	0.143	0.3%	0.284	0.682	1.085	0.678
%RSD		0.915	0.490	361.500	0.142	0.3	0.292	0.704	1.154	0.690
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	102.400	101.800	97.600	93.290	96.7%	97.810	96.960	98.660	96.030
2	10:56:15	101.300	100.500	95.740	92.880	98.2%	96.720	95.410	97.810	94.610
3	10:56:42	102.300	101.600	96.330	93.160	98.1%	98.240	96.420	98.450	93.950
x		102.000	101.300	96.550	93.110	97.7%	97.590	96.260	98.310	94.860
σ		0.603	0.661	0.949	0.208	0.8%	0.785	0.786	0.446	1.063
%RSD		0.592	0.653	0.983	0.223	0.9	0.804	0.816	0.453	1.121
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	10:55:48	98.230	96.810	98.4%	97.690	103.500	99.550	97.830	100.800	110.5%
2	10:56:15	97.210	97.890	100.5%	97.580	103.000	98.080	97.270	99.750	114.3%
3	10:56:42	97.930	98.070	101.9%	95.450	102.100	97.790	96.700	99.080	115.6%
x		97.790	97.590	100.2%	96.910	102.900	98.470	97.270	99.870	113.5%
σ		0.524	0.681	1.8%	1.265	0.701	0.945	0.568	0.856	2.7%
%RSD		0.536	0.698	1.8	1.305	0.682	0.959	0.584	0.857	2.3

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	103.6%	0.001	1.567	1.573	-34.280	T 3583.000	T 22130.000	T 22760.000	T 23340.000
2	11:02:08	104.7%	0.001	1.455	1.422	-34.740	T 3614.000	T 22540.000	T 22560.000	T 23420.000
3	11:02:34	107.5%	0.005	1.256	1.356	-36.350	T 3624.000	T 22600.000	T 22950.000	T 23730.000
x		105.3%	0.002	1.426	1.450	-35.130	T 3607.000	T 22420.000	T 22760.000	T 23500.000
σ		2.0%	0.002	0.158	0.111	1.083	T 21.470	T 253.100	T 194.200	T 209.300
%RSD		1.9	124.300	11.050	7.672	3.082	T 0.595	T 1.129	T 0.853	T 0.891

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	1.769	T 7473.000	T 44590.000	T 3319.000	M 102300.000	TM 102800.000	96.0%	0.692	0.213
2	11:02:08	1.794	T 7478.000	T 44490.000	T 3316.000	99650.000	TM 100300.000	97.5%	0.854	0.051
3	11:02:34	1.999	T 7234.000	T 44940.000	T 3277.000	M 103600.000	TM 102400.000	95.9%	0.784	-0.182
x		1.854	T 7395.000	T 44670.000	T 3304.000	M 101800.000	TM 101800.000	96.5%	0.776	0.027
σ		0.127	T 139.500	T 235.500	T 23.560	M 1999.000	TM 1373.000	0.9%	0.081	0.199
%RSD		6.826	T 1.886	T 0.527	T 0.713	M 1.963	TM 1.349	0.9	10.470	730.600

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	0.539	4091.000	10.180	43.140	16.010	225.400	0.290	3.033	2.162
2	11:02:08	0.507	4396.000	9.811	43.110	14.700	213.600	0.242	3.099	2.405
3	11:02:34	0.558	4796.000	11.150	43.780	16.730	219.100	0.272	3.187	2.208
x		0.534	4428.000	10.380	43.340	15.820	219.400	0.268	3.106	2.258
σ		0.026	353.800	0.693	0.381	1.030	5.941	0.024	0.077	0.129
%RSD		4.841	7.991	6.677	0.879	6.514	2.708	8.971	2.492	5.717

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	0.090	0.220	1.499	9.586	7.451	0.139	0.209	11.860	12.170
2	11:02:08	0.083	0.178	1.297	8.922	7.251	0.031	-0.113	11.280	11.340
3	11:02:34	0.092	0.212	1.493	9.806	7.402	-0.120	0.182	11.720	10.830
x		0.088	0.204	1.430	9.438	7.368	0.017	0.093	11.620	11.450
σ		0.005	0.023	0.115	0.460	0.104	0.130	0.179	0.303	0.674
%RSD		5.370	11.090	8.041	4.878	1.415	765.600	192.400	2.612	5.887

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	0.718	0.203	1.388	51.230	98.3%	0.188	0.231	0.212	0.910
2	11:02:08	1.368	0.316	0.284	51.450	98.7%	0.178	0.181	0.216	0.558
3	11:02:34	0.954	0.252	0.676	51.750	99.2%	0.156	0.162	0.176	0.742
x		1.013	0.257	0.783	51.480	98.7%	0.174	0.191	0.201	0.737
σ		0.330	0.057	0.560	0.261	0.5%	0.016	0.036	0.022	0.176
%RSD		32.510	22.140	71.500	0.507	0.5	9.375	18.800	10.860	23.940

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	0.004	0.006	0.016	0.026	96.1%	0.658	0.939	0.091	0.097
2	11:02:08	0.001	0.006	0.029	0.027	97.8%	0.646	0.940	0.078	0.102
3	11:02:34	0.000	0.004	0.031	0.024	98.5%	0.618	0.939	0.114	0.090
x		0.002	0.005	0.026	0.026	97.5%	0.640	0.939	0.094	0.096
σ		0.002	0.001	0.008	0.001	1.3%	0.020	0.001	0.019	0.006
%RSD		107.800	23.230	31.280	5.019	1.3	3.183	0.058	19.760	6.631

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:01:41	188.900	188.900	100.2%	0.007	0.004	0.007	0.006	0.010	118.0%
2	11:02:08	187.400	184.700	101.5%	0.009	0.003	0.010	0.008	0.007	120.4%
3	11:02:34	187.500	186.200	102.3%	-0.000	0.001	0.007	0.009	0.008	121.7%
x		187.900	186.600	101.3%	0.005	0.003	0.008	0.008	0.008	120.1%
σ		0.869	2.087	1.1%	0.005	0.001	0.002	0.001	0.002	1.9%
%RSD		0.463	1.118	1.0	91.760	40.480	26.430	17.140	21.530	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	103.7%	0.156	0.150	0.087	-26.490	T 3223.000	T 4181.000	T 4256.000	T 4299.000
2	11:08:00	104.0%	0.202	0.383	0.104	-25.550	T 3209.000	T 4170.000	T 4227.000	T 4334.000
3	11:08:27	104.1%	0.164	0.350	-0.008	-23.540	T 3247.000	T 4207.000	T 4229.000	T 4330.000
x		104.0%	0.174	0.295	0.061	-25.190	T 3226.000	T 4186.000	T 4238.000	T 4321.000
σ		0.2%	0.025	0.126	0.061	1.508	T 19.630	T 18.880	T 16.400	T 19.040
%RSD		0.2	14.300	42.760	99.010	5.984	T 0.608	T 0.451	T 0.387	T 0.441
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	77.080	T 5801.000	T 45360.000	T 3372.000	8676.000	8714.000	93.2%	2.573	0.217
2	11:08:00	77.680	T 5823.000	T 45530.000	T 3376.000	8528.000	8693.000	94.3%	2.900	0.507
3	11:08:27	78.170	T 5800.000	T 45410.000	T 3405.000	8486.000	8670.000	93.7%	2.712	0.518
x		77.640	T 5808.000	T 45430.000	T 3384.000	8563.000	8693.000	93.7%	2.728	0.414
σ		0.543	T 12.700	T 88.490	T 17.980	99.990	21.970	0.6%	0.164	0.170
%RSD		0.700	T 0.219	T 0.195	T 0.531	1.168	0.253	0.6	6.011	41.130
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	2.192	11750.000	340.000	191.500	T 353.300	347.000	0.422	6.667	6.778
2	11:08:00	2.181	11580.000	338.500	192.000	T 353.500	342.100	0.425	6.998	5.952
3	11:08:27	2.117	11910.000	337.000	T 189.200	T 354.100	338.900	0.414	6.697	7.068
x		2.163	11750.000	338.500	T 190.900	T 353.600	342.700	0.420	6.787	6.600
σ		0.040	167.000	1.518	T 1.443	T 0.434	4.083	0.006	0.183	0.579
%RSD		1.867	1.422	0.449	T 0.756	T 0.123	1.192	1.338	2.701	8.773
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	16.960	17.190	69.730	72.130	71.310	-0.001	-0.073	7.104	7.770
2	11:08:00	16.720	16.740	70.800	70.600	71.300	0.107	0.058	8.545	8.890
3	11:08:27	16.760	16.400	70.390	71.970	71.140	0.280	-0.330	7.776	8.506
x		16.810	16.770	70.300	71.570	71.250	0.129	-0.115	7.808	8.389
σ		0.131	0.395	0.541	0.842	0.096	0.142	0.197	0.721	0.569
%RSD		0.781	2.355	0.770	1.176	0.135	109.900	171.300	9.232	6.787
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	0.398	0.116	-1.208	40.430	100.2%	0.201	0.239	0.241	1.018
2	11:08:00	0.547	0.179	0.673	40.950	99.5%	0.217	0.246	0.233	0.511
3	11:08:27	0.668	0.209	0.256	40.690	100.1%	0.256	0.253	0.222	1.181
x		0.538	0.168	-0.093	40.690	99.9%	0.225	0.246	0.232	0.903
σ		0.135	0.048	0.988	0.264	0.3%	0.028	0.007	0.010	0.349
%RSD		25.120	28.340	1064.000	0.648	0.3	12.470	2.714	4.254	38.660
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	5.597	5.407	0.756	0.742	96.8%	2.769	3.634	0.143	0.140
2	11:08:00	5.500	5.497	0.778	0.723	96.0%	2.855	3.745	0.148	0.161
3	11:08:27	5.491	5.450	0.751	0.761	96.3%	2.901	3.797	0.157	0.145
x		5.529	5.451	0.761	0.742	96.4%	2.842	3.725	0.150	0.149
σ		0.059	0.045	0.014	0.019	0.4%	0.067	0.083	0.007	0.011
%RSD		1.059	0.820	1.862	2.607	0.4	2.364	2.224	4.740	7.447
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:07:34	126.100	126.500	100.9%	0.035	0.030	4.467	4.358	4.400	123.2%
2	11:08:00	127.400	127.000	101.1%	0.035	0.031	4.553	4.314	4.438	124.1%
3	11:08:27	128.200	127.300	102.1%	0.039	0.027	4.522	4.213	4.388	125.5%
x		127.200	126.900	101.4%	0.037	0.029	4.514	4.295	4.408	124.3%
σ		1.060	0.366	0.6%	0.002	0.002	0.043	0.074	0.026	1.2%
%RSD		0.834	0.289	0.6	6.212	7.832	0.962	1.725	0.596	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	105.0%	0.000	1.315	1.573	-42.050	T 2889.000	T 27800.000	T 28230.000	T 29190.000
2	11:13:56	108.3%	0.007	1.314	1.436	-42.400	T 2865.000	T 27420.000	T 27980.000	T 29150.000
3	11:14:23	109.1%	0.003	1.331	1.377	-40.470	T 2878.000	T 27780.000	T 28330.000	T 29470.000
x		107.5%	0.004	1.320	1.462	-41.640	T 2877.000	T 27670.000	T 28180.000	T 29270.000
σ		2.2%	0.003	0.010	0.100	1.031	T 12.070	T 212.700	T 181.100	T 175.700
%RSD		2.0	95.240	0.746	6.866	2.476	T 0.419	T 0.769	T 0.643	T 0.600

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	1.363	T 8725.000	T 44870.000	T 3529.000	M 129400.000	TM 127400.000	95.3%	0.655	-0.166
2	11:13:56	1.347	T 8460.000	T 44780.000	T 3448.000	M 127100.000	TM 126200.000	96.8%	1.000	-0.017
3	11:14:23	1.370	T 8423.000	T 45510.000	T 3467.000	M 130900.000	TM 128100.000	95.2%	1.144	0.298
x		1.360	T 8536.000	T 45050.000	T 3481.000	M 129100.000	TM 127200.000	95.8%	0.933	0.038
σ		0.012	T 164.800	T 401.000	T 42.560	M 1896.000	TM 957.200	0.9%	0.252	0.237
%RSD		0.858	T 1.930	T 0.890	T 1.222	M 1.468	TM 0.753	0.9	26.970	619.800

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	0.353	4990.000	1447.000	T 330.000	T 1428.000	1668.000	4.407	11.900	11.220
2	11:13:56	0.368	4980.000	1428.000	T 330.600	T 1434.000	1627.000	4.507	11.860	10.220
3	11:14:23	0.350	4773.000	1456.000	T 334.100	T 1446.000	1652.000	4.533	11.470	10.510
x		0.357	4915.000	1444.000	T 331.600	T 1436.000	1649.000	4.482	11.750	10.650
σ		0.009	122.500	14.550	T 2.227	T 9.510	20.910	0.067	0.237	0.513
%RSD		2.657	2.492	1.008	T 0.672	T 0.662	1.268	1.485	2.016	4.814

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	0.076	0.317	2.037	24.520	18.070	1.482	0.073	16.620	15.360
2	11:13:56	0.093	0.309	1.935	23.200	18.310	1.643	-0.003	15.280	16.850
3	11:14:23	0.104	0.285	1.923	24.400	18.810	1.687	-0.019	14.700	15.500
x		0.091	0.303	1.965	24.040	18.400	1.604	0.017	15.530	15.900
σ		0.014	0.017	0.063	0.731	0.380	0.108	0.049	0.982	0.824
%RSD		15.700	5.558	3.196	3.041	2.067	6.713	281.900	6.321	5.178

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	0.130	0.030	0.699	81.010	95.6%	0.131	0.125	0.123	0.289
2	11:13:56	0.672	0.126	0.131	80.830	95.7%	0.123	0.122	0.130	1.063
3	11:14:23	1.681	0.402	0.181	79.750	98.2%	0.097	0.133	0.103	0.855
x		0.828	0.186	0.337	80.530	96.5%	0.117	0.127	0.119	0.736
σ		0.787	0.193	0.315	0.680	1.5%	0.018	0.006	0.014	0.400
%RSD		95.150	103.700	93.470	0.844	1.6	15.230	4.665	11.600	54.410

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	0.007	0.012	0.017	0.007	95.9%	0.441	0.569	0.071	0.074
2	11:13:56	0.015	0.007	0.015	0.005	97.0%	0.402	0.586	0.085	0.084
3	11:14:23	0.010	0.009	0.009	0.013	97.9%	0.454	0.645	0.075	0.085
x		0.011	0.009	0.014	0.008	96.9%	0.433	0.600	0.077	0.081
σ		0.004	0.002	0.004	0.005	1.0%	0.027	0.040	0.007	0.006
%RSD		36.300	24.160	29.910	55.100	1.0	6.299	6.624	8.900	7.182

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:13:29	M 541.800	M 542.100	99.5%	0.025	0.021	0.014	0.007	0.012	117.7%
2	11:13:56	M 540.300	M 539.500	100.9%	0.018	0.018	0.012	0.009	0.008	120.2%
3	11:14:23	M 534.200	M 539.700	102.9%	0.019	0.024	0.010	0.008	0.010	120.4%
x		M 538.700	M 540.400	101.1%	0.021	0.021	0.012	0.008	0.010	119.4%
σ		M 4.050	M 1.421	1.7%	0.004	0.003	0.002	0.001	0.002	1.5%
%RSD		M 0.752	M 0.263	1.7	19.140	12.970	17.370	10.600	17.570	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	102.3%	0.011	1.952	2.438	-34.990	T 3631.000	T 25760.000	T 26130.000	T 27050.000
2	11:19:48	105.2%	0.009	2.111	2.489	-33.300	T 3720.000	T 26120.000	T 26410.000	T 27130.000
3	11:20:15	104.4%	0.007	2.036	2.428	-36.660	T 3625.000	T 25640.000	T 26360.000	T 27250.000
x		104.0%	0.009	2.033	2.452	-34.980	T 3659.000	T 25840.000	T 26300.000	T 27140.000
σ		1.5%	0.002	0.080	0.033	1.684	T 53.050	T 249.600	T 151.100	T 102.200
%RSD		1.4	23.910	3.923	1.336	4.814	T 1.450	T 0.966	T 0.575	T 0.377
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	1.671	T 7098.000	T 45240.000	T 2716.000	97310.000	T 96800.000	94.1%	0.834	-0.072
2	11:19:48	1.619	T 6964.000	T 45560.000	T 2670.000	97130.000	T 97530.000	94.8%	0.675	0.038
3	11:20:15	1.665	T 6985.000	T 46490.000	T 2710.000	98190.000	T 97720.000	94.4%	0.857	0.009
x		1.652	T 7016.000	T 45760.000	T 2699.000	97540.000	T 97350.000	94.4%	0.789	-0.008
σ		0.028	T 72.450	T 649.100	T 25.060	569.800	T 488.700	0.4%	0.099	0.057
%RSD		1.720	T 1.033	T 1.418	T 0.928	0.584	T 0.502	0.4	12.560	675.700
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	0.303	5261.000	2274.000	TM 1779.000	T 2235.000	2382.000	8.384	9.146	8.512
2	11:19:48	0.284	5259.000	2283.000	TM 1797.000	T 2243.000	2374.000	8.266	8.982	8.480
3	11:20:15	0.327	5286.000	2276.000	TM 1812.000	T 2266.000	2400.000	8.395	9.408	7.995
x		0.305	5268.000	2277.000	TM 1796.000	T 2248.000	2385.000	8.348	9.179	8.329
σ		0.022	14.840	4.601	TM 16.420	T 16.050	13.410	0.071	0.215	0.290
%RSD		7.053	0.282	0.202	TM 0.914	T 0.714	0.562	0.852	2.340	3.480
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	0.180	0.325	6.146	17.370	14.350	1.124	0.064	12.760	12.700
2	11:19:48	0.192	0.303	6.203	17.040	14.250	1.436	0.175	13.850	13.610
3	11:20:15	0.182	0.265	6.329	17.960	14.750	1.128	-0.181	13.750	13.320
x		0.184	0.298	6.226	17.460	14.450	1.230	0.019	13.450	13.210
σ		0.006	0.030	0.093	0.465	0.265	0.179	0.182	0.602	0.467
%RSD		3.526	10.240	1.502	2.663	1.832	14.560	938.500	4.477	3.534
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	1.008	0.239	0.738	92.920	94.9%	0.260	0.255	0.269	2.054
2	11:19:48	0.817	0.187	0.272	92.300	96.0%	0.245	0.334	0.277	1.180
3	11:20:15	2.067	0.485	0.404	91.620	96.2%	0.192	0.282	0.270	1.614
x		1.297	0.304	0.471	92.280	95.7%	0.232	0.290	0.272	1.616
σ		0.673	0.159	0.240	0.648	0.7%	0.036	0.040	0.004	0.437
%RSD		51.890	52.290	51.000	0.703	0.7	15.310	13.810	1.600	27.050
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	-0.001	0.001	0.014	-0.001	95.2%	0.403	0.613	0.066	0.065
2	11:19:48	-0.002	0.002	0.010	0.006	96.5%	0.419	0.600	0.081	0.080
3	11:20:15	-0.000	-0.001	0.009	0.011	95.8%	0.397	0.627	0.089	0.081
x		-0.001	0.001	0.011	0.005	95.8%	0.406	0.614	0.079	0.076
σ		0.001	0.001	0.003	0.006	0.7%	0.011	0.013	0.012	0.009
%RSD		90.330	175.100	26.990	117.900	0.7	2.754	2.173	14.950	11.850
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:19:21	282.100	280.000	99.5%	0.040	0.039	0.004	0.004	0.003	119.0%
2	11:19:48	280.500	279.700	101.4%	0.036	0.036	0.003	-0.002	0.000	122.0%
3	11:20:15	283.000	281.800	100.1%	0.042	0.043	0.003	0.000	0.003	122.3%
x		281.900	280.500	100.3%	0.040	0.040	0.003	0.001	0.002	121.1%
σ		1.264	1.159	1.0%	0.003	0.003	0.001	0.003	0.001	1.8%
%RSD		0.449	0.413	1.0	7.592	8.643	23.610	326.500	68.450	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	105.1%	45.480	49.210	51.070	-28.690	T 4295.000	T 26220.000	T 26630.000	T 27510.000
2	11:25:41	103.1%	44.760	47.060	50.160	-29.620	T 4295.000	T 26380.000	T 26880.000	T 27420.000
3	11:26:08	104.6%	43.700	47.520	50.000	-30.210	T 4210.000	T 25950.000	T 26660.000	T 27510.000
x		104.3%	44.640	47.930	50.410	-29.510	T 4266.000	T 26180.000	T 26720.000	T 27480.000
σ		1.0%	0.895	1.132	0.577	0.767	T 49.040	T 217.500	T 137.500	T 52.160
%RSD		1.0	2.004	2.361	1.145	2.600	T 1.149	T 0.831	T 0.515	T 0.190
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	73.590	T 7680.000	T 43910.000	T 3555.000	96420.000	T 96120.000	96.6%	103.700	101.200
2	11:25:41	73.720	T 7962.000	T 45110.000	T 3683.000	97670.000	T 96830.000	96.5%	97.980	101.800
3	11:26:08	73.250	T 7914.000	T 44800.000	T 3637.000	96970.000	T 97430.000	97.1%	98.890	102.700
x		73.520	T 7852.000	T 44610.000	T 3625.000	97020.000	T 96800.000	96.8%	100.200	101.900
σ		0.247	T 150.900	T 619.700	T 65.030	630.300	T 654.700	0.3%	3.081	0.738
%RSD		0.337	T 1.922	T 1.389	T 1.794	0.650	T 0.676	0.4	3.075	0.724
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	97.320	5627.000	3387.000	TM 1855.000	T 3191.000	3335.000	102.200	102.700	100.600
2	11:25:41	99.580	5433.000	3435.000	TM 1883.000	T 3262.000	3412.000	103.000	103.000	103.300
3	11:26:08	98.080	5150.000	3411.000	TM 1872.000	T 3261.000	3384.000	102.800	100.400	99.890
x		98.330	5403.000	3411.000	TM 1870.000	T 3238.000	3377.000	102.700	102.000	101.300
σ		1.146	240.100	23.810	TM 14.000	T 40.470	39.170	0.404	1.440	1.794
%RSD		1.166	4.444	0.698	TM 0.749	T 1.250	1.160	0.393	1.411	1.772
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	90.570	93.940	96.600	107.200	105.100	97.430	94.090	11.580	12.190
2	11:25:41	91.190	95.110	99.030	111.400	104.800	99.840	92.370	12.550	13.320
3	11:26:08	91.460	94.760	99.040	109.700	103.700	99.130	94.400	12.360	12.630
x		91.070	94.610	98.220	109.400	104.500	98.800	93.620	12.160	12.720
σ		0.456	0.600	1.406	2.097	0.712	1.238	1.093	0.516	0.568
%RSD		0.501	0.635	1.431	1.916	0.681	1.253	1.168	4.245	4.468
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	412.400	92.830	0.665	T 192.600	96.1%	99.750	99.660	99.600	99.610
2	11:25:41	438.300	98.130	0.285	201.400	95.4%	99.630	100.400	99.400	100.100
3	11:26:08	413.900	93.350	-0.868	200.600	96.9%	99.720	100.200	99.120	98.890
x		421.500	94.770	0.027	T 198.200	96.1%	99.700	100.100	99.370	99.540
σ		14.520	2.921	0.798	T 4.843	0.7%	0.062	0.385	0.245	0.620
%RSD		3.444	3.082	2924.000	T 2.443	0.8	0.062	0.385	0.247	0.623
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	100.300	99.270	94.980	92.520	94.7%	97.580	97.220	100.000	94.380
2	11:25:41	99.860	98.170	95.190	90.930	95.4%	97.500	97.040	100.400	95.940
3	11:26:08	100.400	98.600	94.480	92.500	96.4%	97.990	98.890	100.700	95.090
x		100.200	98.680	94.880	91.990	95.5%	97.690	97.720	100.400	95.130
σ		0.301	0.555	0.365	0.912	0.9%	0.262	1.021	0.339	0.780
%RSD		0.300	0.562	0.385	0.992	0.9	0.269	1.044	0.338	0.820
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:25:14	386.100	389.600	98.3%	96.030	101.000	95.630	94.890	97.240	111.9%
2	11:25:41	385.400	383.800	99.1%	96.640	102.800	97.060	95.010	97.240	113.0%
3	11:26:08	384.600	383.200	101.0%	95.310	101.100	95.330	94.220	96.960	115.1%
x		385.400	385.500	99.4%	96.000	101.700	96.010	94.710	97.150	113.3%
σ		0.769	3.523	1.4%	0.669	1.017	0.925	0.426	0.161	1.6%
%RSD		0.200	0.914	1.4	0.697	1.001	0.964	0.450	0.166	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	99.7%	44.480	47.870	49.380	-32.250	T 4284.000	T 26230.000	T 26740.000	T 27650.000
2	11:31:37	101.9%	44.470	49.130	50.330	-33.320	T 4324.000	T 26400.000	T 26950.000	T 27970.000
3	11:32:04	102.7%	44.150	45.800	47.760	-35.950	T 4345.000	T 26200.000	T 26570.000	T 27360.000
x		101.5%	44.370	47.600	49.160	-33.840	T 4318.000	T 26270.000	T 26750.000	T 27660.000
σ		1.5%	0.186	1.682	1.302	1.908	T 30.880	T 108.400	T 186.700	T 302.100
%RSD		1.5	0.419	3.535	2.648	5.639	T 0.715	T 0.413	T 0.698	T 1.092

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	74.250	T 8121.000	T 41930.000	T 3778.000	98290.000	T 97870.000	94.2%	100.800	102.000
2	11:31:37	75.710	T 7893.000	T 42150.000	T 3755.000	98170.000	T 97870.000	95.3%	99.290	101.500
3	11:32:04	74.880	T 7899.000	T 42700.000	T 3756.000	98000.000	T 98140.000	95.4%	102.300	101.000
x		74.950	T 7971.000	T 42260.000	T 3763.000	98150.000	T 97960.000	95.0%	100.800	101.500
σ		0.730	T 130.000	T 394.800	T 13.020	146.600	T 159.100	0.7%	1.517	0.493
%RSD		0.974	T 1.631	T 0.934	T 0.346	0.149	T 0.162	0.7	1.505	0.486

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	97.180	5368.000	3403.000	TM 1867.000	T 3220.000	3360.000	103.500	101.200	95.910
2	11:31:37	97.410	5429.000	3345.000	TM 1871.000	T 3239.000	3397.000	103.700	99.760	100.700
3	11:32:04	97.840	5457.000	3391.000	TM 1902.000	T 3252.000	3361.000	102.000	98.560	97.170
x		97.480	5418.000	3380.000	TM 1880.000	T 3237.000	3373.000	103.100	99.840	97.930
σ		0.334	45.550	30.730	TM 19.510	T 16.220	21.220	0.942	1.332	2.478
%RSD		0.343	0.841	0.909	TM 1.038	T 0.501	0.629	0.913	1.334	2.530

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	89.470	94.090	97.560	108.900	104.500	98.820	93.020	12.200	13.640
2	11:31:37	90.760	93.620	97.490	108.600	105.400	98.480	92.850	13.350	12.650
3	11:32:04	89.670	94.300	96.770	110.500	106.400	99.290	92.340	12.810	13.240
x		89.970	94.000	97.270	109.300	105.500	98.860	92.740	12.790	13.170
σ		0.697	0.347	0.434	0.994	0.923	0.407	0.354	0.575	0.497
%RSD		0.774	0.369	0.447	0.909	0.875	0.412	0.381	4.497	3.772

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	419.100	94.870	1.042	T 194.100	94.3%	97.270	99.120	99.060	97.040
2	11:31:37	427.000	96.050	-0.517	199.800	94.7%	100.000	101.300	97.870	94.280
3	11:32:04	416.800	93.990	1.273	T 194.300	95.1%	99.560	100.300	97.940	99.220
x		421.000	94.970	0.599	T 196.100	94.7%	98.950	100.200	98.290	96.850
σ		5.326	1.035	0.974	T 3.250	0.4%	1.470	1.091	0.668	2.474
%RSD		1.265	1.090	162.400	T 1.658	0.4	1.485	1.088	0.680	2.554

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	98.680	98.180	94.930	91.340	94.3%	98.010	97.530	99.590	94.700
2	11:31:37	98.690	98.180	94.840	92.570	95.3%	97.550	97.760	100.600	95.970
3	11:32:04	98.570	97.250	94.790	91.410	96.1%	99.180	98.720	101.400	94.640
x		98.650	97.870	94.850	91.770	95.2%	98.240	98.000	100.600	95.110
σ		0.069	0.536	0.069	0.690	0.9%	0.838	0.629	0.929	0.750
%RSD		0.070	0.548	0.073	0.752	0.9	0.853	0.642	0.924	0.789

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:31:09	380.700	381.400	99.1%	95.240	101.200	94.770	93.410	96.180	111.6%
2	11:31:37	381.100	382.300	99.4%	96.290	102.000	96.180	94.570	97.630	113.4%
3	11:32:04	379.500	383.900	101.6%	95.730	100.900	95.450	93.770	96.130	115.5%
x		380.400	382.500	100.0%	95.750	101.400	95.460	93.920	96.650	113.5%
σ		0.811	1.287	1.4%	0.529	0.577	0.704	0.594	0.849	2.0%
%RSD		0.213	0.336	1.4	0.552	0.569	0.738	0.632	0.878	1.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	88.3%	297.700	293.200	302.100	10.260	┬60880.000	┬61050.000	┬60060.000	┬60310.000
2	11:37:33	89.3%	283.500	288.600	292.300	4.267	┬60400.000	┬60290.000	┬59670.000	┬59500.000
3	11:38:01	88.9%	300.000	285.100	294.700	9.714	┬62490.000	┬62050.000	┬61470.000	┬61930.000
x		88.9%	97.916%	96.330%	98.781%	8.080	┬102.092%	┬61130.000	┬60400.000	┬100.969%
σ		0.5%	n/a	n/a	n/a	3.313	┬n/a	┬884.000	┬944.800	┬n/a
%RSD		0.6	3.057	1.396	1.726	41.000	┬1.781	┬1.446	┬1.564	┬2.046

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	294.100	┬3162.000	184.000	┬61400.000	59400.000	┬59800.000	92.6%	293.100	┬298.600
2	11:37:33	293.800	┬3106.000	190.100	┬61890.000	61640.000	┬61600.000	90.4%	301.200	┬311.900
3	11:38:01	301.200	┬3185.000	184.900	┬62900.000	60660.000	┬61520.000	92.2%	297.300	┬307.100
x		98.788%	┬105.037%	186.300	┬103.437%	60570.000	┬101.625%	91.8%	99.067%	┬101.953%
σ		n/a	┬n/a	3.275	┬n/a	1126.000	┬n/a	1.2%	n/a	┬n/a
%RSD		1.413	┬1.294	1.757	┬1.226	1.860	┬1.665	1.3	1.373	┬2.201

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	296.500	-314.100	┬60780.000	┬285.800	┬59750.000	┬58120.000	┬282.300	288.600	277.300
2	11:37:33	307.200	-2365.000	┬61050.000	┬290.400	┬61510.000	┬59210.000	300.200	283.600	279.700
3	11:38:01	300.400	-1050.000	┬60190.000	┬288.200	┬60830.000	┬58270.000	297.900	283.100	279.900
x		100.451%	-1243.000	┬60670.000	┬96.046%	┬60700.000	┬97.555%	┬97.820%	95.028%	279.000
σ		n/a	1039.000	┬443.000	┬n/a	┬887.100	┬n/a	┬n/a	n/a	1.422
%RSD		1.797	83.570	┬0.730	┬0.790	┬1.461	┬1.009	┬3.322	1.058	0.510

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	272.200	285.400	283.200	277.200	275.700	284.500	281.100	0.551	0.192
2	11:37:33	276.000	283.500	288.100	284.000	279.900	289.800	283.800	1.179	0.577
3	11:38:01	271.300	280.400	287.500	281.900	278.300	293.300	278.900	0.973	-0.061
x		273.100	94.370%	95.412%	281.000	277.900	96.398%	281.300	0.901	0.236
σ		2.506	n/a	n/a	3.431	2.142	n/a	2.420	0.320	0.321
%RSD		0.918	0.905	0.936	1.221	0.771	1.522	0.860	35.500	136.000

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	1253.000	275.000	1.005	┬311.900	89.4%	307.200	311.200	309.800	288.900
2	11:37:33	1253.000	280.200	0.440	┬315.200	89.2%	310.700	312.700	311.100	291.100
3	11:38:01	1260.000	280.700	0.949	┬311.400	90.6%	314.800	315.100	318.100	289.800
x		1255.000	92.879%	0.798	┬104.274%	89.8%	103.627%	104.336%	313.000	289.900
σ		4.320	n/a	0.311	┬n/a	0.8%	n/a	n/a	4.441	1.107
%RSD		0.344	1.144	39.020	┬0.653	0.8	1.216	0.634	1.419	0.382

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	307.600	305.100	286.500	284.600	89.0%	303.700	305.400	316.900	300.200
2	11:37:33	310.200	307.000	291.100	282.900	88.9%	300.800	302.500	316.700	302.500
3	11:38:01	313.400	308.600	291.600	286.500	89.2%	304.100	310.300	322.900	298.000
x		103.463%	306.900	289.800	94.894%	89.0%	100.949%	102.023%	318.800	100.078%
σ		n/a	1.768	2.804	n/a	0.1%	n/a	n/a	3.511	n/a
%RSD		0.936	0.576	0.968	0.638	0.2	0.603	1.299	1.101	0.750

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:37:06	301.500	302.700	91.9%	306.900	┬292.500	┬288.700	296.300	┬291.100	95.6%
2	11:37:33	306.400	303.500	92.5%	304.800	┬292.800	┬287.900	297.400	┬290.700	96.8%
3	11:38:01	309.200	304.400	94.3%	301.900	┬292.700	┬287.600	298.000	┬290.200	100.4%
x		101.903%	101.185%	92.9%	304.500	┬97.548%	┬96.020%	99.086%	┬96.898%	97.6%
σ		n/a	n/a	1.2%	2.479	┬n/a	┬n/a	n/a	┬n/a	2.5%
%RSD		1.282	0.278	1.3	0.814	┬0.043	┬0.185	0.287	┬0.159	2.5

CCB IM9061-02 11/16/2018 11:42:34 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	100.1%	-0.002	2.218	2.508	0.284	1.416	0.749	0.800	0.630
2	11:43:28	100.7%	0.012	1.662	1.583	-5.189	1.076	0.616	0.470	0.624
3	11:43:55	102.3%	-0.002	1.978	1.730	-5.076	0.907	0.632	0.423	0.746
x		101.0%	0.003	1.953	1.941	-3.327	1.133	0.666	0.564	0.667
σ		1.2%	0.008	0.279	0.497	3.128	0.259	0.073	0.206	0.069
%RSD		1.1	258.100	14.290	25.600	94.020	22.870	10.910	36.450	10.330
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	0.084	0.350	-53.700	1.270	0.879	0.711	93.4%	0.145	-0.066
2	11:43:28	0.091	0.209	-51.400	0.450	1.261	0.453	93.4%	0.162	0.004
3	11:43:55	0.094	-0.356	-53.140	0.928	0.440	0.227	95.7%	0.141	-0.066
x		0.089	0.068	-52.750	0.883	0.860	0.464	94.2%	0.149	-0.042
σ		0.005	0.374	1.199	0.412	0.411	0.242	1.4%	0.011	0.041
%RSD		5.525	552.700	2.273	46.640	47.780	52.170	1.4	7.557	95.460
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	-0.009	-144.300	7.893	0.077	8.937	8.566	0.004	0.015	0.236
2	11:43:28	0.022	-163.500	7.341	0.065	6.951	6.725	0.008	0.000	-0.053
3	11:43:55	0.003	-177.200	6.299	0.069	6.894	5.220	0.003	0.013	0.036
x		0.005	-161.700	7.178	0.070	7.594	6.837	0.005	0.009	0.073
σ		0.016	16.510	0.809	0.006	1.163	1.676	0.002	0.008	0.148
%RSD		308.800	10.210	11.280	8.179	15.320	24.510	52.380	86.910	203.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	0.010	0.024	-0.113	-0.134	-0.116	0.120	0.283	-0.003	-0.256
2	11:43:28	0.010	-0.004	-0.092	-0.268	-0.097	0.200	0.064	0.347	-0.098
3	11:43:55	0.006	-0.009	-0.133	-0.185	-0.071	0.020	0.017	0.113	0.294
x		0.009	0.004	-0.113	-0.196	-0.095	0.113	0.121	0.152	-0.020
σ		0.002	0.018	0.020	0.068	0.023	0.090	0.142	0.178	0.283
%RSD		24.340	495.300	17.990	34.600	23.980	79.250	117.000	117.000	1416.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	-0.186	0.003	0.647	0.002	97.1%	0.312	0.368	0.332	-0.632
2	11:43:28	2.598	0.666	1.342	0.003	96.8%	0.252	0.333	0.288	-0.484
3	11:43:55	-0.101	-0.024	-0.902	0.002	98.3%	0.257	0.234	0.269	-0.894
x		0.770	0.215	0.362	0.003	97.4%	0.273	0.312	0.297	-0.670
σ		1.584	0.391	1.149	0.000	0.8%	0.034	0.069	0.032	0.208
%RSD		205.500	181.700	317.100	15.030	0.8	12.280	22.300	10.920	30.980
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	0.009	0.007	0.001	0.002	97.7%	0.373	0.554	0.273	0.263
2	11:43:28	0.008	0.004	0.004	0.005	99.4%	0.361	0.530	0.271	0.263
3	11:43:55	0.002	0.006	-0.001	0.002	98.6%	0.405	0.542	0.258	0.229
x		0.007	0.006	0.001	0.003	98.6%	0.379	0.542	0.267	0.252
σ		0.004	0.001	0.003	0.002	0.8%	0.023	0.012	0.008	0.020
%RSD		56.620	21.300	205.000	56.780	0.8	5.986	2.207	3.074	7.873
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:43:02	0.026	0.015	100.8%	0.008	0.011	0.003	0.009	0.004	96.0%
2	11:43:28	0.008	0.003	101.4%	0.006	0.006	0.003	0.004	0.003	99.9%
3	11:43:55	0.014	0.010	101.7%	0.003	0.009	0.008	0.009	0.005	103.0%
x		0.016	0.009	101.3%	0.006	0.009	0.005	0.007	0.004	99.6%
σ		0.009	0.006	0.5%	0.003	0.002	0.003	0.003	0.001	3.5%
%RSD		54.770	62.640	0.5	42.420	25.930	66.470	38.970	24.670	3.5

LR 2X MW10519 11/16/2018 11:48:29

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	85.0%	M 504.900	M 996.700	M 1021.000	8.939	T 63020.000	T 62500.000	T 62130.000	T 61650.000
2	11:49:23	85.6%	475.000	M 956.300	M 999.000	4.852	T 60710.000	T 60100.000	T 60210.000	T 60710.000
3	11:49:50	86.2%	482.600	M 987.200	M 1020.000	6.461	T 61790.000	T 61370.000	T 60100.000	T 60700.000
x		85.6%	M 487.500	M 980.100	M 1014.000	6.751	T 61840.000	T 61320.000	T 60810.000	T 61020.000
σ		0.6%	M 15.540	M 21.120	M 12.540	2.059	T 1156.000	T 1200.000	T 1139.000	T 541.900
%RSD		0.7	M 3.189	M 2.155	M 1.238	30.500	T 1.869	T 1.957	T 1.872	T 0.888
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	TM 58870.000	111.900	-149.000	T 61900.000	63410.000	T 61840.000	85.1%	M 1054.000	TM 1020.000
2	11:49:23	TM 58000.000	110.800	-144.300	T 61230.000	63350.000	T 63580.000	83.8%	M 1047.000	TM 1050.000
3	11:49:50	TM 58760.000	110.300	-147.400	T 61910.000	62320.000	T 62610.000	85.5%	M 1048.000	TM 1030.000
x		TM 58540.000	111.000	-146.900	T 61680.000	63020.000	T 62680.000	84.8%	M 1050.000	TM 1033.000
σ		TM 472.500	0.852	2.409	T 388.500	614.600	T 869.900	0.9%	M 3.604	TM 15.360
%RSD		TM 0.807	0.768	1.640	T 0.630	0.975	T 1.388	1.0	M 0.343	TM 1.486
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	TM 993.600	10040.000	T 62670.000	TM 986.900	T 62300.000	T 60620.000	TM 980.800	M 942.900	M 949.000
2	11:49:23	TM 1017.000	4630.000	T 62830.000	TM 1010.000	T 63400.000	T 60820.000	TM 990.000	M 940.900	M 969.800
3	11:49:50	TM 1006.000	8489.000	T 62150.000	TM 983.500	T 62120.000	T 60210.000	TM 979.300	M 926.600	M 937.800
x		TM 1005.000	7720.000	T 62550.000	TM 993.500	T 62600.000	T 60550.000	TM 983.300	M 936.800	M 952.200
σ		TM 11.680	2785.000	T 354.500	TM 14.540	T 692.500	T 307.400	TM 5.782	M 8.871	M 16.240
%RSD		TM 1.161	36.080	T 0.567	TM 1.464	T 1.106	T 0.508	TM 0.588	M 0.947	M 1.705
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	TM 901.200	M 999.800	M 945.500	M 1130.000	M 1109.000	M 1043.000	M 965.500	0.997	-0.168
2	11:49:23	TM 928.200	M 1004.000	M 947.500	M 1160.000	M 1126.000	M 1052.000	M 985.200	0.980	0.118
3	11:49:50	TM 903.100	M 984.600	M 933.500	M 1128.000	M 1101.000	M 1039.000	M 967.500	1.595	0.285
x		TM 910.800	M 996.000	M 942.200	M 1139.000	M 1112.000	M 1044.000	M 972.700	1.191	0.078
σ		TM 15.080	M 10.120	M 7.593	M 17.580	M 12.490	M 6.811	M 10.840	0.350	0.229
%RSD		TM 1.656	M 1.016	M 0.806	M 1.543	M 1.124	M 0.652	M 1.115	29.400	293.700
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	4387.000	M 974.900	9.291	TM 1096.000	83.3%	TM 1027.000	M 1084.000	TM 998.500	M 976.700
2	11:49:23	4449.000	M 994.900	10.370	TM 1099.000	82.7%	TM 1053.000	M 1111.000	TM 1009.000	M 992.700
3	11:49:50	4278.000	M 959.500	10.190	TM 1087.000	84.6%	TM 1043.000	M 1094.000	TM 1015.000	M 980.700
x		4371.000	M 976.400	9.951	TM 1094.000	83.5%	TM 1041.000	M 1096.000	TM 1008.000	M 983.400
σ		86.590	M 17.740	0.578	TM 6.278	1.0%	TM 13.400	M 13.650	TM 8.588	M 8.341
%RSD		1.981	M 1.816	5.811	TM 0.574	1.2	TM 1.287	M 1.245	TM 0.852	M 0.848
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	146.900	146.300	M 1007.000	TM 922.900	87.5%	TM 961.300	TM 957.400	TM 508.600	M 529.000
2	11:49:23	149.300	146.500	M 1004.000	TM 922.600	87.5%	TM 961.200	TM 970.200	TM 513.200	M 530.000
3	11:49:50	147.300	145.200	M 996.900	TM 917.200	88.4%	TM 963.600	TM 964.900	TM 514.000	M 528.300
x		147.900	146.000	M 1003.000	TM 920.900	87.8%	TM 962.000	TM 964.200	TM 511.900	M 529.100
σ		1.306	0.698	M 5.244	TM 3.220	0.5%	TM 1.337	TM 6.435	TM 2.910	M 0.823
%RSD		0.883	0.478	M 0.523	TM 0.350	0.6	TM 0.139	TM 0.667	TM 0.568	M 0.156
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:48:56	TM 5227.000	TM 5070.000	88.0%	T 491.900	T 499.800	TM 981.400	TM 1012.000	TM 996.800	100.9%
2	11:49:23	TM 5247.000	TM 5093.000	87.7%	T 499.700	TM 506.600	TM 1006.000	TM 1024.000	TM 1015.000	103.6%
3	11:49:50	TM 5236.000	TM 5037.000	89.1%	T 500.000	TM 504.200	TM 994.600	TM 1025.000	TM 1014.000	105.7%
x		TM 5237.000	TM 5067.000	88.2%	T 497.200	TM 503.500	TM 994.100	TM 1020.000	TM 1009.000	103.4%
σ		TM 10.350	TM 28.150	0.7%	T 4.597	TM 3.414	TM 12.430	TM 6.998	TM 10.260	2.4%
%RSD		TM 0.198	TM 0.556	0.8	T 0.925	TM 0.678	TM 1.251	TM 0.686	TM 1.017	2.3

TJ13026-004L(5) 11/16/2018 11:54:24

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	99.2%	0.010	6.578	6.682	-20.170	T 1020.000	T 7263.000	T 7250.000	T 7367.000
2	11:55:18	100.8%	0.002	6.173	6.551	-20.710	T 1015.000	T 7211.000	T 7183.000	T 7288.000
3	11:55:45	102.1%	0.013	5.464	5.255	-20.840	T 1023.000	T 7233.000	T 7182.000	T 7294.000
x		100.7%	0.008	6.072	6.162	-20.570	T 1019.000	T 7236.000	T 7205.000	T 7316.000
σ		1.5%	0.006	0.564	0.789	0.357	T 3.906	T 26.060	T 38.820	T 43.810
%RSD		1.5	67.410	9.288	12.800	1.736	T 0.383	T 0.360	T 0.539	T 0.599

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	1.104	T 1558.000	T 10580.000	632.700	21570.000	T 21540.000	93.1%	0.352	0.056
2	11:55:18	0.898	T 1546.000	T 10620.000	631.900	21430.000	T 21370.000	94.3%	0.270	-0.065
3	11:55:45	0.879	T 1525.000	T 10720.000	621.300	21300.000	T 21440.000	95.6%	0.300	0.054
x		0.960	T 1543.000	T 10640.000	628.600	21440.000	T 21450.000	94.4%	0.307	0.015
σ		0.125	T 16.650	T 74.730	6.341	133.500	T 85.130	1.2%	0.041	0.069
%RSD		13.040	T 1.079	T 0.702	1.009	0.623	T 0.397	1.3	13.360	460.400

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	0.092	806.400	502.900	T 400.000	T 512.500	532.000	1.919	2.043	2.624
2	11:55:18	0.057	809.000	499.800	T 394.900	T 505.700	532.400	1.897	1.912	2.325
3	11:55:45	0.063	770.100	496.000	T 393.300	T 504.400	528.300	1.866	2.105	2.378
x		0.070	795.200	499.600	T 396.100	T 507.500	530.900	1.894	2.020	2.442
σ		0.019	21.730	3.423	T 3.474	T 4.333	2.300	0.027	0.099	0.159
%RSD		26.270	2.733	0.685	T 0.877	T 0.854	0.433	1.426	4.889	6.529

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	0.076	0.099	1.301	3.781	3.341	0.535	-0.157	3.024	2.527
2	11:55:18	0.055	0.064	1.193	4.027	3.257	0.425	0.037	3.194	2.109
3	11:55:45	0.063	0.071	1.354	3.778	3.514	0.333	0.371	2.863	2.533
x		0.065	0.078	1.283	3.862	3.371	0.431	0.084	3.027	2.390
σ		0.010	0.019	0.082	0.143	0.131	0.101	0.267	0.166	0.243
%RSD		16.010	24.110	6.427	3.700	3.887	23.490	319.200	5.467	10.180

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	1.311	0.333	-0.467	19.730	97.8%	0.885	0.879	0.828	-0.288
2	11:55:18	2.003	0.491	0.081	19.830	97.4%	0.690	0.762	0.767	-0.269
3	11:55:45	-0.658	-0.142	-0.511	19.520	98.7%	0.721	0.673	0.628	-0.733
x		0.885	0.227	-0.299	19.690	98.0%	0.766	0.771	0.741	-0.430
σ		1.380	0.330	0.330	0.155	0.7%	0.105	0.103	0.102	0.263
%RSD		155.900	145.000	110.300	0.786	0.7	13.710	13.380	13.810	61.100

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	0.002	0.003	0.002	0.030	99.1%	2.387	3.297	0.274	0.291
2	11:55:18	0.003	0.004	-0.001	0.018	98.9%	2.181	3.150	0.258	0.237
3	11:55:45	0.004	0.006	0.005	0.019	100.3%	2.086	2.819	0.260	0.242
x		0.003	0.004	0.002	0.022	99.4%	2.218	3.089	0.264	0.257
σ		0.001	0.002	0.003	0.007	0.8%	0.154	0.245	0.009	0.030
%RSD		37.850	39.440	139.700	31.200	0.8	6.935	7.922	3.256	11.610

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	11:54:51	59.220	59.400	102.0%	0.018	0.016	0.008	0.008	0.007	104.2%
2	11:55:18	60.340	59.300	102.0%	0.005	0.007	0.002	0.003	0.002	106.7%
3	11:55:45	59.540	58.950	102.4%	0.008	0.005	0.005	0.002	0.003	110.4%
x		59.700	59.210	102.1%	0.011	0.009	0.005	0.004	0.004	107.1%
σ		0.578	0.237	0.2%	0.007	0.006	0.003	0.004	0.002	3.1%
%RSD		0.968	0.400	0.2	62.890	61.680	63.700	89.240	61.170	2.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	98.7%	44.510	51.660	52.740	-33.290	T 4315.000	T 25710.000	T 26050.000	T 26990.000
2	12:01:10	102.6%	43.110	47.540	51.040	-36.330	T 4255.000	T 25670.000	T 25940.000	T 26850.000
3	12:01:37	101.4%	43.380	50.470	51.710	-36.260	T 4296.000	T 26040.000	T 26310.000	T 27080.000
x		100.9%	43.660	49.890	51.830	-35.290	T 4289.000	T 25810.000	T 26100.000	T 26970.000
σ		2.0%	0.741	2.119	0.856	1.737	T 30.550	T 202.500	T 185.100	T 114.200
%RSD		2.0	1.698	4.247	1.651	4.922	T 0.712	T 0.785	T 0.709	T 0.423

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	73.980	T 7795.000	T 45130.000	T 3753.000	96000.000	T 95100.000	92.9%	99.860	99.620
2	12:01:10	71.560	T 7526.000	T 44740.000	T 3642.000	94760.000	T 95930.000	94.6%	98.240	97.960
3	12:01:37	72.160	T 7767.000	T 45440.000	T 3731.000	95710.000	T 94810.000	94.9%	97.170	100.000
x		72.570	T 7696.000	T 45100.000	T 3709.000	95490.000	T 95280.000	94.1%	98.420	99.210
σ		1.262	T 147.800	T 355.300	T 58.680	650.100	T 579.200	1.0%	1.355	1.096
%RSD		1.739	T 1.920	T 0.788	T 1.582	0.681	T 0.608	1.1	1.377	1.105

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	96.230	4307.000	3311.000	TM 1825.000	T 3176.000	3323.000	101.700	97.300	96.980
2	12:01:10	95.870	4470.000	3324.000	TM 1832.000	T 3175.000	3306.000	99.800	96.820	98.600
3	12:01:37	95.750	4997.000	3362.000	TM 1839.000	T 3179.000	3288.000	100.500	97.520	98.300
x		95.950	4592.000	3332.000	TM 1832.000	T 3177.000	3306.000	100.700	97.210	97.960
σ		0.248	360.600	26.810	TM 6.858	T 1.769	17.670	0.980	0.358	0.860
%RSD		0.258	7.854	0.804	TM 0.374	T 0.056	0.535	0.974	0.368	0.878

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	88.630	91.570	95.810	109.100	104.800	99.540	93.560	13.180	13.800
2	12:01:10	88.070	91.120	94.730	106.700	103.300	97.190	92.130	12.980	13.020
3	12:01:37	88.020	91.110	96.830	107.200	103.500	99.300	91.380	13.670	12.840
x		88.240	91.270	95.790	107.700	103.900	98.680	92.360	13.280	13.220
σ		0.335	0.265	1.049	1.278	0.772	1.289	1.110	0.352	0.512
%RSD		0.380	0.290	1.095	1.187	0.743	1.306	1.202	2.652	3.875

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	422.300	96.060	0.239	T 188.900	93.6%	98.920	99.580	97.310	98.220
2	12:01:10	426.700	96.350	1.033	T 190.100	94.4%	97.230	97.910	96.240	97.890
3	12:01:37	433.000	98.370	-0.399	197.800	95.4%	98.080	98.600	97.310	95.830
x		427.400	96.920	0.291	T 192.300	94.5%	98.080	98.700	96.950	97.310
σ		5.352	1.259	0.717	T 4.832	0.9%	0.844	0.840	0.619	1.291
%RSD		1.252	1.299	246.400	T 2.513	1.0	0.860	0.851	0.638	1.326

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	98.170	96.580	94.260	90.340	93.4%	98.910	98.490	93.480	86.990
2	12:01:10	96.920	97.050	93.350	89.760	95.4%	98.460	99.070	93.810	88.040
3	12:01:37	97.810	97.230	93.980	90.590	95.6%	97.430	98.190	93.750	87.350
x		97.630	96.950	93.860	90.230	94.8%	98.260	98.590	93.680	87.460
σ		0.645	0.336	0.471	0.429	1.2%	0.755	0.448	0.177	0.533
%RSD		0.661	0.346	0.501	0.476	1.3	0.769	0.454	0.189	0.610

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:00:43	375.800	377.300	99.4%	94.710	99.720	94.510	93.200	95.770	118.1%
2	12:01:10	373.400	374.400	100.7%	94.640	100.000	94.040	93.370	95.170	118.9%
3	12:01:37	376.800	374.800	101.9%	93.850	100.300	94.040	92.620	94.780	119.7%
x		375.300	375.500	100.7%	94.400	100.000	94.200	93.070	95.240	118.9%
σ		1.746	1.531	1.2%	0.478	0.270	0.268	0.393	0.499	0.8%
%RSD		0.465	0.408	1.2	0.506	0.270	0.284	0.422	0.523	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	102.9%	0.005	3.236	3.214	-35.590	T 3811.000	T 26690.000	T 27010.000	T 27480.000
2	12:07:04	104.7%	0.007	2.723	2.773	-36.900	T 3777.000	T 26110.000	T 26650.000	T 27510.000
3	12:07:31	105.7%	0.007	2.777	2.505	-36.100	T 3788.000	T 26420.000	T 26890.000	T 27700.000
x		104.4%	0.006	2.912	2.831	-36.200	T 3792.000	T 26400.000	T 26850.000	T 27560.000
σ		1.4%	0.001	0.282	0.358	0.661	T 17.630	T 291.100	T 182.500	T 121.500
%RSD		1.3	18.760	9.665	12.660	1.826	T 0.465	T 1.103	T 0.680	T 0.441

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	4.238	T 7191.000	T 46450.000	T 2839.000	M 101300.000	TM 100600.000	93.8%	1.067	-0.141
2	12:07:04	4.195	T 7052.000	T 46140.000	T 2840.000	M 101500.000	TM 101100.000	94.8%	0.904	-0.001
3	12:07:31	4.226	T 7051.000	T 47000.000	T 2863.000	M 102200.000	TM 101800.000	94.9%	0.919	0.309
x		4.220	T 7098.000	T 46530.000	T 2847.000	M 101700.000	TM 101200.000	94.5%	0.963	0.055
σ		0.023	T 80.530	T 436.000	T 13.440	M 477.000	TM 583.300	0.6%	0.090	0.230
%RSD		0.534	T 1.135	T 0.937	T 0.472	M 0.469	TM 0.577	0.7	9.384	415.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	0.367	4801.000	2380.000	TM 1874.000	T 2352.000	2492.000	8.644	9.818	9.467
2	12:07:04	0.372	4923.000	2352.000	TM 1875.000	T 2319.000	2449.000	8.438	9.655	9.297
3	12:07:31	0.393	4852.000	2347.000	TM 1866.000	T 2324.000	2441.000	8.590	10.020	9.548
x		0.377	4859.000	2360.000	TM 1872.000	T 2332.000	2461.000	8.557	9.831	9.437
σ		0.014	61.090	17.820	TM 4.855	T 17.490	27.230	0.107	0.183	0.128
%RSD		3.690	1.257	0.755	TM 0.259	T 0.750	1.106	1.247	1.866	1.354

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	0.901	1.088	7.407	20.130	16.160	1.398	0.088	12.560	12.430
2	12:07:04	0.884	1.060	7.795	19.350	16.060	1.146	-0.274	12.190	12.050
3	12:07:31	0.801	0.988	7.429	18.940	15.890	1.463	0.015	12.160	12.010
x		0.862	1.045	7.544	19.470	16.040	1.336	-0.057	12.300	12.160
σ		0.054	0.052	0.218	0.604	0.134	0.168	0.192	0.225	0.235
%RSD		6.238	4.958	2.886	3.099	0.833	12.550	337.000	1.832	1.933

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	0.296	0.079	0.590	95.370	95.1%	0.440	0.475	0.472	1.934
2	12:07:04	2.704	0.613	-0.729	94.360	97.1%	0.390	0.398	0.429	1.381
3	12:07:31	0.468	0.146	1.148	94.340	97.8%	0.397	0.341	0.408	1.655
x		1.156	0.279	0.336	94.690	96.7%	0.409	0.405	0.437	1.657
σ		1.344	0.291	0.964	0.589	1.4%	0.027	0.067	0.032	0.277
%RSD		116.200	104.300	286.500	0.622	1.4	6.603	16.640	7.424	16.690

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	0.003	0.005	0.014	0.010	96.3%	0.880	1.277	0.352	0.364
2	12:07:04	0.004	0.006	0.019	0.017	97.7%	0.838	1.156	0.393	0.333
3	12:07:31	0.002	0.005	0.012	0.018	97.3%	0.771	1.210	0.358	0.317
x		0.003	0.005	0.015	0.015	97.1%	0.830	1.215	0.367	0.338
σ		0.001	0.000	0.004	0.005	0.7%	0.055	0.061	0.022	0.024
%RSD		42.460	8.474	26.140	30.690	0.7	6.635	5.008	6.017	7.125

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:06:37	289.500	288.700	100.2%	0.045	0.039	0.023	0.016	0.017	119.6%
2	12:07:04	287.500	287.800	102.5%	0.048	0.046	0.015	0.019	0.018	123.4%
3	12:07:31	290.100	289.800	103.0%	0.047	0.044	0.018	0.012	0.016	124.5%
x		289.000	288.800	101.9%	0.047	0.043	0.019	0.016	0.017	122.5%
σ		1.329	1.030	1.5%	0.001	0.003	0.004	0.004	0.001	2.5%
%RSD		0.460	0.357	1.4	2.577	7.832	22.910	23.220	7.276	2.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	106.3%	-0.002	3.993	3.749	-10.770	T 3069.000	T 19770.000	T 19710.000	T 20040.000
2	12:12:57	108.0%	0.009	3.445	3.765	-12.400	T 2978.000	T 19630.000	T 19510.000	T 19940.000
3	12:13:23	106.8%	0.012	4.157	3.734	-10.760	T 3036.000	T 19710.000	T 19750.000	T 19820.000
x		107.0%	0.007	3.865	3.749	-11.310	T 3028.000	T 19710.000	T 19660.000	T 19930.000
σ		0.9%	0.007	0.373	0.016	0.943	T 46.130	T 69.470	T 127.400	T 113.100
%RSD		0.8	110.000	9.644	0.426	8.339	T 1.524	T 0.353	T 0.648	T 0.568
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	6.334	T 3182.000	T 51580.000	T 4316.000	43540.000	T 43490.000	95.1%	0.614	0.130
2	12:12:57	6.254	T 3182.000	T 50480.000	T 4285.000	42100.000	T 42550.000	T 99.4%	0.571	0.015
3	12:13:23	6.164	T 3237.000	T 51410.000	T 4411.000	43200.000	T 43060.000	97.5%	0.598	0.204
x		6.250	T 3200.000	T 51150.000	T 4338.000	42950.000	T 43030.000	T 97.3%	0.594	0.116
σ		0.085	T 32.150	T 591.900	T 65.800	750.000	T 471.600	T 2.2%	0.022	0.096
%RSD		1.357	T 1.004	T 1.157	T 1.517	1.746	T 1.096	T 2.2	3.713	82.150
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	2.016	5891.000	280.500	TM 1818.000	T 293.800	363.100	3.752	2.072	1.752
2	12:12:57	1.996	5934.000	271.600	TM 1757.000	T 281.700	349.300	3.599	2.143	1.403
3	12:13:23	1.979	5966.000	277.600	TM 1777.000	T 288.400	351.300	3.676	2.057	1.583
x		1.997	5930.000	276.600	TM 1784.000	T 288.000	354.600	3.676	2.091	1.579
σ		0.018	37.660	4.552	TM 31.190	T 6.023	7.412	0.077	0.046	0.174
%RSD		0.910	0.635	1.646	TM 1.748	T 2.092	2.090	2.088	2.208	11.040
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	0.573	0.569	3.315	9.436	6.956	0.644	0.109	6.426	6.640
2	12:12:57	0.451	0.668	3.211	8.446	6.536	0.335	0.072	6.224	6.264
3	12:13:23	0.524	0.616	3.183	8.169	7.227	0.449	0.277	6.115	6.297
x		0.516	0.618	3.236	8.683	6.906	0.476	0.152	6.255	6.401
σ		0.061	0.050	0.069	0.666	0.348	0.157	0.109	0.158	0.208
%RSD		11.890	8.046	2.144	7.672	5.041	32.910	71.710	2.522	3.253
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	0.582	0.156	0.040	160.100	98.4%	0.127	0.163	0.133	3.691
2	12:12:57	1.821	0.395	-0.841	158.100	100.2%	0.093	0.148	0.143	2.784
3	12:13:23	1.284	0.309	-0.317	158.800	100.6%	0.137	0.139	0.153	2.423
x		1.229	0.287	-0.373	159.000	99.8%	0.119	0.150	0.143	2.966
σ		0.622	0.121	0.443	0.998	1.2%	0.023	0.012	0.010	0.654
%RSD		50.570	42.080	118.900	0.628	1.2	19.710	8.225	6.938	22.040
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	0.068	0.069	0.084	0.059	97.7%	0.619	0.824	0.168	0.212
2	12:12:57	0.081	0.072	0.078	0.060	98.6%	0.630	0.854	0.191	0.187
3	12:13:23	0.070	0.066	0.077	0.053	99.2%	0.624	0.817	0.201	0.183
x		0.073	0.069	0.080	0.057	98.5%	0.624	0.831	0.187	0.194
σ		0.007	0.003	0.004	0.004	0.7%	0.006	0.020	0.017	0.016
%RSD		9.745	4.690	4.892	6.688	0.8	0.891	2.352	8.895	8.187
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:12:30	119.600	118.200	102.0%	0.021	0.012	0.018	0.021	0.020	119.1%
2	12:12:57	118.300	119.000	104.6%	0.013	0.008	0.022	0.019	0.019	123.3%
3	12:13:23	120.200	118.700	104.1%	0.015	0.009	0.027	0.028	0.020	125.0%
x		119.300	118.600	103.5%	0.016	0.010	0.022	0.023	0.020	122.5%
σ		0.968	0.410	1.4%	0.004	0.002	0.005	0.005	0.000	3.1%
%RSD		0.811	0.346	1.3	26.190	22.120	20.600	20.260	2.198	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	106.9%	0.005	4.387	4.461	-28.900	T 3296.000	T 17540.000	T 17540.000	T 18240.000
2	12:18:50	106.9%	0.001	3.601	4.287	-34.280	T 3231.000	T 17110.000	T 17400.000	T 17730.000
3	12:19:18	108.9%	-0.002	4.457	4.087	-33.390	T 3227.000	T 17150.000	T 17290.000	T 18020.000
x		107.5%	0.002	4.148	4.278	-32.190	T 3251.000	T 17270.000	T 17410.000	T 18000.000
σ		1.1%	0.004	0.475	0.187	2.885	T 38.520	T 238.500	T 123.300	T 255.200
%RSD		1.1	227.300	11.460	4.376	8.964	T 1.185	T 1.381	T 0.708	T 1.418

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	2.647	T 6364.000	T 47620.000	T 3529.000	90440.000	T 90190.000	95.1%	0.664	0.305
2	12:18:50	2.614	T 6421.000	T 47200.000	T 3556.000	88860.000	T 89270.000	97.2%	0.799	0.019
3	12:19:18	2.676	T 6379.000	T 47820.000	T 3501.000	88640.000	T 88340.000	98.3%	0.806	-0.080
x		2.646	T 6388.000	T 47540.000	T 3529.000	89310.000	T 89260.000	96.8%	0.756	0.081
σ		0.031	T 29.640	T 316.300	T 27.440	982.000	T 925.700	1.6%	0.080	0.200
%RSD		1.167	T 0.464	T 0.665	T 0.778	1.099	T 1.037	1.6	10.540	246.400

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	0.976	4532.000	8.908	0.350	14.760	187.700	0.069	0.763	-0.125
2	12:18:50	0.955	4661.000	9.840	0.344	13.630	188.700	0.071	0.825	-0.035
3	12:19:18	0.918	4849.000	9.182	0.359	14.630	180.300	0.062	0.860	-0.146
x		0.950	4681.000	9.310	0.351	14.340	185.600	0.067	0.816	-0.102
σ		0.030	159.100	0.479	0.007	0.617	4.569	0.005	0.049	0.059
%RSD		3.122	3.399	5.144	2.077	4.302	2.462	6.841	6.029	58.120

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	0.105	0.241	1.871	12.330	9.159	0.075	0.288	4.049	3.688
2	12:18:50	0.127	0.204	1.756	11.730	8.965	0.225	0.526	5.009	4.307
3	12:19:18	0.115	0.243	1.783	11.390	8.867	0.375	0.179	4.025	3.832
x		0.115	0.229	1.803	11.820	8.997	0.225	0.331	4.361	3.942
σ		0.011	0.022	0.060	0.477	0.149	0.150	0.177	0.562	0.324
%RSD		9.458	9.444	3.337	4.035	1.653	66.700	53.580	12.880	8.220

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	-1.022	-0.206	0.777	46.950	96.9%	0.337	0.376	0.361	1.409
2	12:18:50	2.722	0.630	-0.121	46.310	98.8%	0.347	0.400	0.368	0.887
3	12:19:18	-0.174	-0.036	-0.305	45.980	100.2%	0.376	0.370	0.369	0.150
x		0.509	0.129	0.117	46.410	98.6%	0.353	0.382	0.366	0.816
σ		1.963	0.442	0.579	0.494	1.6%	0.020	0.016	0.005	0.633
%RSD		386.100	342.400	494.600	1.064	1.6	5.784	4.211	1.235	77.580

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	0.001	0.001	0.029	0.026	97.8%	0.469	0.676	0.126	0.107
2	12:18:50	0.000	-0.001	0.002	0.017	99.8%	0.490	0.724	0.120	0.124
3	12:19:18	-0.001	0.002	0.021	0.023	100.7%	0.482	0.709	0.133	0.160
x		0.000	0.000	0.017	0.022	99.4%	0.480	0.703	0.126	0.130
σ		0.001	0.001	0.014	0.004	1.5%	0.010	0.024	0.006	0.027
%RSD		3036.000	299.700	78.660	20.270	1.5	2.159	3.471	4.964	20.900

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:18:23	233.400	233.400	102.7%	-0.009	-0.011	0.007	0.008	0.007	119.1%
2	12:18:50	232.900	231.800	104.0%	-0.010	-0.011	0.006	0.001	0.002	122.2%
3	12:19:18	234.400	232.600	105.1%	-0.009	-0.012	0.012	0.006	0.009	124.0%
x		233.600	232.600	103.9%	-0.010	-0.011	0.008	0.005	0.006	121.7%
σ		0.782	0.765	1.2%	0.001	0.001	0.003	0.003	0.003	2.5%
%RSD		0.335	0.329	1.2	6.252	7.054	42.640	67.910	59.550	2.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	109.3%	0.001	0.736	0.781	-21.910	395.700	T 13750.000	T 13680.000	T 14050.000
2	12:24:45	109.0%	-0.002	0.829	0.410	-21.010	T 374.100	T 13440.000	T 13460.000	T 13860.000
3	12:25:12	109.8%	-0.002	0.466	0.690	-21.280	T 380.600	T 13710.000	T 13860.000	T 14180.000
x		109.4%	-0.001	0.677	0.627	-21.400	T 383.500	T 13630.000	T 13670.000	T 14030.000
σ		0.4%	0.001	0.188	0.193	0.464	T 11.090	T 169.300	T 201.900	T 164.200
%RSD		0.4	234.100	27.850	30.810	2.169	T 2.893	T 1.242	T 1.477	T 1.171
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	7.249	T 3734.000	T 50030.000	T 961.200	19130.000	T 19300.000	96.7%	0.578	-0.026
2	12:24:45	7.083	T 3748.000	T 48900.000	T 997.700	18750.000	T 18960.000	T 99.9%	0.559	0.348
3	12:25:12	7.352	T 3716.000	T 50540.000	T 983.100	19240.000	T 19650.000	97.0%	0.445	-0.093
x		7.228	T 3732.000	T 49820.000	T 980.700	19040.000	T 19300.000	T 97.9%	0.527	0.077
σ		0.135	T 16.150	T 835.900	T 18.360	255.800	T 348.700	T 1.8%	0.072	0.238
%RSD		1.873	T 0.433	T 1.678	T 1.872	1.343	T 1.807	T 1.8	13.720	310.700
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	1.896	7839.000	14.220	0.274	14.980	45.940	0.028	0.225	-0.325
2	12:24:45	1.792	7647.000	14.170	0.307	13.870	42.470	0.026	0.192	-0.541
3	12:25:12	1.918	8199.000	13.990	0.312	15.160	40.960	0.021	0.221	-0.415
x		1.869	7895.000	14.130	0.298	14.670	43.120	0.025	0.213	-0.427
σ		0.067	280.100	0.121	0.021	0.698	2.554	0.004	0.018	0.108
%RSD		3.598	3.548	0.858	7.024	4.756	5.923	15.540	8.389	25.370
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	0.125	0.267	2.065	33.780	25.210	0.212	0.257	4.278	3.322
2	12:24:45	0.114	0.309	2.112	32.170	24.680	0.193	-0.000	3.485	3.618
3	12:25:12	0.086	0.302	2.069	35.460	24.400	0.062	0.234	4.067	3.607
x		0.108	0.293	2.082	33.800	24.770	0.156	0.163	3.943	3.516
σ		0.020	0.023	0.026	1.644	0.411	0.082	0.142	0.411	0.168
%RSD		18.880	7.709	1.242	4.865	1.661	52.300	87.120	10.420	4.770
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	1.667	0.379	-0.502	25.000	98.3%	0.275	0.294	0.239	-0.087
2	12:24:45	1.032	0.245	0.755	25.010	99.8%	0.274	0.232	0.247	-0.078
3	12:25:12	0.661	0.144	-1.077	25.000	99.6%	0.282	0.297	0.271	-0.693
x		1.120	0.256	-0.275	25.000	99.2%	0.277	0.274	0.252	-0.286
σ		0.509	0.118	0.937	0.005	0.8%	0.005	0.037	0.017	0.352
%RSD		45.430	45.890	341.200	0.020	0.8	1.658	13.410	6.638	123.100
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	-0.001	0.002	0.010	-0.002	99.7%	0.481	0.698	0.109	0.101
2	12:24:45	-0.000	0.002	0.008	-0.000	100.3%	0.453	0.713	0.127	0.101
3	12:25:12	0.000	0.003	0.008	0.013	100.3%	0.483	0.707	0.119	0.128
x		-0.000	0.002	0.009	0.004	100.1%	0.473	0.706	0.118	0.110
σ		0.001	0.000	0.001	0.008	0.4%	0.017	0.007	0.009	0.015
%RSD		303.200	21.430	12.960	227.000	0.4	3.533	1.053	7.446	14.030
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:24:17	M 715.700	M 722.100	103.4%	-0.014	-0.014	0.057	0.058	0.060	126.7%
2	12:24:45	M 723.500	M 733.800	105.2%	-0.014	-0.014	0.058	0.064	0.062	129.4%
3	12:25:12	M 730.800	M 737.900	104.8%	-0.013	-0.013	0.060	0.060	0.062	128.4%
x		M 723.400	M 731.300	104.4%	-0.014	-0.014	0.058	0.061	0.061	128.1%
σ		M 7.574	M 8.181	1.0%	0.001	0.001	0.002	0.003	0.001	1.4%
%RSD		M 1.047	M 1.119	0.9	5.013	5.246	2.834	5.209	2.331	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	108.0%	0.007	15.160	14.560	-17.040	T 2232.000	T 22460.000	T 22640.000	T 23060.000
2	12:30:39	110.2%	0.004	14.140	14.180	-18.590	T 2167.000	T 21590.000	T 21920.000	T 22360.000
3	12:31:06	108.8%	0.001	13.130	14.340	-20.360	T 2232.000	T 22230.000	T 22410.000	T 22800.000
x		109.0%	0.004	14.140	14.360	-18.660	T 2211.000	T 22090.000	T 22320.000	T 22740.000
σ		1.1%	0.003	1.015	0.193	1.665	T 37.550	T 450.200	T 363.800	T 357.400
%RSD		1.0	68.150	7.178	1.346	8.923	T 1.699	T 2.038	T 1.630	T 1.572
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	10.440	T 4840.000	T 48360.000	T 1657.000	67900.000	T 66950.000	96.6%	0.729	0.324
2	12:30:39	10.290	T 4813.000	T 46420.000	T 1616.000	64010.000	T 64240.000	T 101.9%	0.477	0.361
3	12:31:06	10.180	T 4807.000	T 47580.000	T 1653.000	66660.000	T 65830.000	97.5%	0.755	0.331
x		10.300	T 4820.000	T 47460.000	T 1642.000	66190.000	T 65670.000	T 98.7%	0.654	0.339
σ		0.127	T 17.620	T 976.200	T 23.010	1989.000	T 1363.000	T 2.8%	0.153	0.020
%RSD		1.228	T 0.366	T 2.057	T 1.401	3.006	T 2.076	T 2.9	23.440	5.786
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	0.954	5880.000	24.830	0.783	30.940	162.100	0.106	1.088	0.460
2	12:30:39	0.883	5662.000	22.840	0.720	27.610	150.900	0.097	0.920	-0.011
3	12:31:06	0.977	6062.000	23.210	0.746	27.700	141.000	0.102	1.022	0.157
x		0.938	5868.000	23.630	0.750	28.750	151.300	0.102	1.010	0.202
σ		0.049	200.200	1.058	0.032	1.897	10.540	0.004	0.085	0.239
%RSD		5.220	3.412	4.479	4.235	6.601	6.968	4.153	8.372	118.200
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	0.349	0.430	2.576	10.340	8.110	0.236	0.240	9.282	8.198
2	12:30:39	0.320	0.422	2.708	9.157	7.392	0.049	0.720	6.993	7.814
3	12:31:06	0.305	0.405	2.799	9.973	7.697	-0.091	0.591	7.656	7.189
x		0.325	0.419	2.694	9.824	7.733	0.065	0.517	7.977	7.734
σ		0.022	0.013	0.112	0.607	0.360	0.164	0.248	1.178	0.509
%RSD		6.758	3.057	4.152	6.176	4.659	253.400	48.010	14.770	6.584
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	2.025	0.512	1.333	58.760	99.3%	1.636	1.740	1.639	-0.192
2	12:30:39	3.481	0.784	0.824	58.290	101.0%	1.670	1.787	1.786	0.857
3	12:31:06	1.070	0.262	0.392	58.150	99.4%	1.696	1.632	1.690	0.307
x		2.192	0.520	0.850	58.400	99.9%	1.667	1.719	1.705	0.324
σ		1.214	0.261	0.471	0.319	1.0%	0.030	0.080	0.075	0.525
%RSD		55.400	50.280	55.490	0.546	1.0	1.828	4.625	4.381	162.100
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	0.004	0.006	0.009	0.010	99.9%	0.410	0.619	0.103	0.098
2	12:30:39	-0.000	0.004	0.004	0.007	99.8%	0.452	0.572	0.109	0.081
3	12:31:06	0.000	0.002	0.007	0.006	100.0%	0.359	0.553	0.093	0.113
x		0.001	0.004	0.007	0.008	99.9%	0.407	0.581	0.102	0.097
σ		0.002	0.002	0.002	0.002	0.1%	0.047	0.034	0.008	0.016
%RSD		175.900	57.690	32.510	27.980	0.1	11.440	5.880	7.722	16.470
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:30:12	170.100	169.700	103.7%	0.009	0.003	0.041	0.046	0.048	121.9%
2	12:30:39	172.700	170.000	103.9%	0.010	0.008	0.052	0.051	0.050	122.8%
3	12:31:06	171.300	171.000	105.2%	0.009	0.005	0.048	0.047	0.048	125.5%
x		171.400	170.200	104.3%	0.009	0.005	0.047	0.048	0.049	123.4%
σ		1.318	0.704	0.8%	0.000	0.002	0.006	0.003	0.001	1.9%
%RSD		0.769	0.413	0.8	5.263	43.700	12.060	6.135	2.786	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	110.5%	-0.002	3.810	4.053	-20.270	T 512.600	T 20830.000	T 20960.000	T 21560.000
2	12:36:33	109.6%	0.002	3.617	3.715	-18.050	T 510.900	T 20800.000	T 20740.000	T 21310.000
3	12:37:00	112.9%	0.001	3.054	3.422	-21.260	T 511.800	T 20880.000	T 21040.000	T 21210.000
x		111.0%	0.001	3.494	3.730	-19.860	T 511.800	T 20840.000	T 20910.000	T 21360.000
σ		1.7%	0.002	0.393	0.316	1.647	T 0.844	T 42.110	T 158.400	T 175.500
%RSD		1.5	346.600	11.240	8.464	8.291	T 0.165	T 0.202	T 0.758	T 0.822
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	2.793	T 3583.000	T 50690.000	T 1255.000	27250.000	T 27480.000	98.5%	0.445	0.205
2	12:36:33	2.841	T 3620.000	T 50540.000	T 1289.000	27240.000	T 27030.000	T 100.5%	0.404	0.210
3	12:37:00	2.768	T 3470.000	T 50770.000	T 1247.000	27100.000	T 27510.000	98.5%	0.429	0.114
x		2.800	T 3558.000	T 50670.000	T 1264.000	27200.000	T 27340.000	T 99.2%	0.426	0.177
σ		0.037	T 77.840	T 119.200	T 22.300	82.360	T 267.700	T 1.2%	0.021	0.054
%RSD		1.328	T 2.188	T 0.235	T 1.764	0.303	T 0.979	T 1.2	4.869	30.540
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	0.474	8538.000	14.610	0.655	19.180	62.940	0.058	0.400	-0.216
2	12:36:33	0.442	8703.000	12.930	0.602	16.440	58.120	0.060	0.370	-0.191
3	12:37:00	0.434	9064.000	14.490	0.605	17.590	61.890	0.053	0.325	-0.050
x		0.450	8768.000	14.010	0.621	17.740	60.980	0.057	0.365	-0.153
σ		0.021	269.300	0.938	0.030	1.375	2.537	0.004	0.038	0.089
%RSD		4.740	3.071	6.693	4.791	7.750	4.161	6.575	10.390	58.620
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	0.048	0.156	2.033	7.470	5.547	0.318	0.284	4.118	3.063
2	12:36:33	0.053	0.150	1.873	8.001	5.346	0.288	-0.005	3.160	3.262
3	12:37:00	0.054	0.106	2.228	7.335	5.530	0.276	0.181	3.728	4.294
x		0.052	0.137	2.045	7.602	5.474	0.294	0.153	3.668	3.540
σ		0.003	0.027	0.178	0.352	0.112	0.022	0.147	0.482	0.661
%RSD		5.762	19.800	8.685	4.629	2.042	7.481	95.730	13.140	18.670
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	0.102	0.066	1.558	47.590	99.9%	2.171	2.390	2.218	0.654
2	12:36:33	0.589	0.139	0.316	47.300	100.8%	2.315	2.236	2.336	-0.420
3	12:37:00	1.035	0.286	1.815	47.200	100.0%	2.252	2.403	2.215	0.692
x		0.575	0.164	1.230	47.360	100.2%	2.246	2.343	2.256	0.309
σ		0.467	0.112	0.802	0.203	0.5%	0.072	0.093	0.069	0.631
%RSD		81.140	68.380	65.190	0.428	0.5	3.222	3.967	3.055	204.500
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	0.000	0.002	0.003	0.005	101.5%	0.349	0.572	0.121	0.116
2	12:36:33	0.002	0.001	-0.001	0.016	101.5%	0.374	0.516	0.108	0.110
3	12:37:00	0.002	0.001	0.006	0.009	100.8%	0.370	0.524	0.109	0.105
x		0.001	0.001	0.002	0.010	101.3%	0.364	0.537	0.113	0.111
σ		0.001	0.000	0.004	0.005	0.4%	0.014	0.030	0.007	0.005
%RSD		64.670	37.810	157.100	53.440	0.4	3.767	5.647	6.424	4.918
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:36:06	112.600	113.100	106.1%	-0.016	-0.018	0.004	0.003	0.003	126.6%
2	12:36:33	113.700	113.400	106.2%	-0.015	-0.017	-0.000	0.004	0.001	128.9%
3	12:37:00	114.500	113.200	105.7%	-0.014	-0.017	0.007	0.002	0.002	128.6%
x		113.600	113.200	106.0%	-0.015	-0.017	0.003	0.003	0.002	128.0%
σ		0.992	0.165	0.2%	0.001	0.000	0.004	0.001	0.001	1.2%
%RSD		0.873	0.145	0.2	8.860	1.868	103.200	40.390	73.230	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	109.6%	0.007	16.680	17.150	-30.120	T 3980.000	T 19040.000	T 19170.000	T 19810.000
2	12:42:27	109.1%	0.003	16.460	17.710	-28.340	T 4059.000	T 19360.000	T 19760.000	T 20180.000
3	12:42:54	109.3%	0.007	16.220	16.800	-29.340	T 4014.000	T 19420.000	T 19610.000	T 20110.000
x		109.3%	0.006	16.450	17.220	-29.260	T 4018.000	T 19280.000	T 19520.000	T 20030.000
σ		0.2%	0.003	0.229	0.457	0.891	T 39.470	T 204.600	T 305.900	T 194.900
%RSD		0.2	42.760	1.389	2.653	3.045	T 0.983	T 1.061	T 1.567	T 0.973

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	112.200	T 5891.000	T 47360.000	T 2745.000	78660.000	T 77840.000	T 98.7%	3.809	0.543
2	12:42:27	113.900	T 5964.000	T 48770.000	T 2779.000	78490.000	T 78320.000	98.8%	3.743	0.645
3	12:42:54	111.800	T 5877.000	T 48460.000	T 2766.000	79070.000	T 79200.000	97.9%	3.988	0.304
x		112.600	T 5911.000	T 48200.000	T 2763.000	78740.000	T 78450.000	T 98.5%	3.846	0.497
σ		1.104	T 46.510	T 744.500	T 16.980	296.900	T 690.400	T 0.5%	0.127	0.175
%RSD		0.980	T 0.787	T 1.545	T 0.614	0.377	T 0.880	T 0.5	3.294	35.220

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	1.226	6159.000	454.600	26.190	T 469.100	595.400	0.158	0.723	-0.092
2	12:42:27	1.239	6230.000	463.300	26.690	T 478.700	599.900	0.144	0.746	-0.136
3	12:42:54	1.242	6661.000	467.100	26.590	T 478.100	604.600	0.128	0.702	-0.240
x		1.236	6350.000	461.700	26.490	T 475.300	600.000	0.143	0.724	-0.156
σ		0.009	271.300	6.396	0.267	T 5.357	4.586	0.015	0.022	0.076
%RSD		0.699	4.272	1.385	1.008	T 1.127	0.764	10.460	3.064	48.830

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	0.174	0.220	2.636	11.980	8.876	0.475	0.134	12.150	11.470
2	12:42:27	0.167	0.244	2.498	10.990	9.124	0.131	0.062	12.170	12.650
3	12:42:54	0.166	0.267	2.536	11.760	8.701	0.377	-0.080	11.460	13.080
x		0.169	0.243	2.556	11.580	8.900	0.328	0.039	11.930	12.400
σ		0.004	0.023	0.071	0.522	0.213	0.178	0.109	0.402	0.834
%RSD		2.360	9.641	2.795	4.510	2.391	54.180	282.800	3.369	6.731

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	1.316	0.285	-0.424	63.070	99.7%	0.464	0.484	0.474	1.077
2	12:42:27	0.756	0.197	1.141	63.260	100.2%	0.465	0.472	0.482	1.062
3	12:42:54	2.253	0.555	1.561	63.080	99.9%	0.467	0.468	0.450	1.229
x		1.442	0.346	0.759	63.140	99.9%	0.465	0.475	0.469	1.123
σ		0.756	0.187	1.046	0.106	0.3%	0.002	0.009	0.016	0.092
%RSD		52.460	53.990	137.700	0.168	0.3	0.331	1.802	3.500	8.217

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	-0.002	0.004	0.019	0.003	98.7%	0.369	0.489	0.082	0.072
2	12:42:27	0.000	0.001	0.013	0.012	100.0%	0.393	0.475	0.080	0.088
3	12:42:54	0.000	0.003	0.011	0.004	100.7%	0.364	0.522	0.108	0.094
x		-0.001	0.003	0.014	0.006	99.8%	0.376	0.495	0.090	0.085
σ		0.001	0.001	0.004	0.005	1.0%	0.016	0.024	0.016	0.011
%RSD		236.500	51.170	27.830	74.200	1.0	4.142	4.836	17.210	13.260

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:42:00	214.300	216.500	103.6%	-0.008	-0.010	0.147	0.129	0.133	123.5%
2	12:42:27	216.800	215.500	105.6%	-0.006	-0.007	0.151	0.133	0.138	125.9%
3	12:42:54	218.600	214.100	103.4%	-0.003	-0.011	0.137	0.152	0.141	125.7%
x		216.600	215.400	104.2%	-0.005	-0.009	0.145	0.138	0.138	125.0%
σ		2.122	1.169	1.2%	0.002	0.002	0.007	0.012	0.004	1.4%
%RSD		0.980	0.543	1.1	44.900	19.880	4.811	8.942	2.916	1.1

CCV MW10535 11/16/2018 12:47:29 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	89.3%	292.100	287.300	287.300	4.623	T 61870.000	T 61370.000	T 60120.000	T 60850.000
2	12:48:24	90.4%	288.100	283.800	296.800	3.300	T 61730.000	T 60770.000	T 59850.000	T 60370.000
3	12:48:51	90.6%	294.100	285.300	290.800	8.242	T 63030.000	T 62300.000	T 61670.000	T 62270.000
x		90.1%	97.142%	95.168%	97.211%	5.388	T 103.682%	T 61480.000	T 60550.000	T 101.941%
σ		0.7%	n/a	n/a	n/a	2.559	T n/a	T 770.200	T 981.500	T n/a
%RSD		0.8	1.045	0.615	1.641	47.490	T 1.145	T 1.253	T 1.621	T 1.618

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	297.900	T 3128.000	129.100	T 63780.000	60640.000	T 60260.000	92.6%	294.600	T 294.000
2	12:48:24	295.500	T 3089.000	115.000	T 63460.000	61530.000	T 60990.000	92.3%	291.300	T 301.100
3	12:48:51	305.100	T 3119.000	112.200	T 64380.000	62310.000	T 62160.000	92.0%	298.900	T 308.300
x		99.822%	T 103.730%	118.800	T 106.449%	61490.000	T 101.894%	92.3%	98.321%	T 100.373%
σ		n/a	T n/a	9.095	T n/a	834.100	T n/a	0.3%	n/a	T n/a
%RSD		1.664	T 0.658	7.658	T 0.730	1.356	T 1.570	0.4	1.288	T 2.375

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	T 288.600	1589.000	T 60010.000	T 283.800	T 59400.000	T 58060.000	T 282.000	285.000	279.400
2	12:48:24	297.600	-569.100	T 60600.000	T 289.100	T 61130.000	T 58860.000	T 287.800	286.000	277.700
3	12:48:51	306.500	-1210.000	T 60250.000	T 292.300	T 61760.000	T 59170.000	T 286.500	285.300	281.100
x		T 99.187%	-63.330	T 60280.000	T 96.135%	T 60760.000	T 97.826%	T 95.133%	95.142%	279.400
σ		T n/a	1467.000	T 296.100	T n/a	T 1219.000	T n/a	T n/a	n/a	1.694
%RSD		T 3.000	2316.000	T 0.491	T 1.489	T 2.006	T 0.975	T 1.066	0.167	0.606

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	269.300	278.500	287.000	279.900	278.800	286.100	283.800	0.739	0.324
2	12:48:24	270.900	279.200	285.500	281.900	279.300	293.800	277.200	1.034	-0.043
3	12:48:51	275.600	283.800	290.800	283.300	284.700	295.800	279.500	0.977	0.095
x		271.900	93.503%	95.922%	281.700	280.900	97.292%	280.200	0.917	0.126
σ		3.273	n/a	n/a	1.716	3.283	n/a	3.352	0.156	0.186
%RSD		1.203	1.036	0.955	0.609	1.169	1.756	1.196	17.060	147.900

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	1224.000	270.900	1.546	T 313.600	90.3%	306.900	308.200	310.700	293.300
2	12:48:24	1289.000	288.400	-0.236	T 310.300	91.2%	309.700	310.300	312.200	297.100
3	12:48:51	1267.000	285.000	2.646	T 311.200	91.4%	315.700	317.800	318.100	302.100
x		1260.000	93.804%	1.319	T 103.900%	90.9%	103.596%	104.043%	313.700	297.500
σ		32.590	n/a	1.454	T n/a	0.6%	n/a	n/a	3.918	4.451
%RSD		2.586	3.300	110.300	T 0.557	0.7	1.443	1.617	1.249	1.496

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	318.000	314.300	297.400	290.600	88.7%	306.100	306.200	321.700	300.400
2	12:48:24	312.200	312.300	292.400	288.700	89.9%	304.500	305.400	323.800	303.500
3	12:48:51	317.600	312.200	296.400	290.300	90.3%	312.300	312.500	327.600	307.100
x		105.312%	312.900	295.400	96.612%	89.7%	102.544%	102.683%	324.400	101.223%
σ		n/a	1.182	2.656	n/a	0.8%	n/a	n/a	2.988	n/a
%RSD		1.024	0.378	0.899	0.352	0.9	1.326	1.269	0.921	1.097

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:47:57	305.900	305.700	93.5%	305.300	T 290.900	T 289.600	301.400	T 292.400	96.0%
2	12:48:24	306.700	305.700	93.8%	308.200	T 294.600	T 289.900	300.200	T 292.200	98.7%
3	12:48:51	310.300	306.500	93.8%	311.600	T 298.100	T 295.700	303.500	T 297.800	101.1%
x		102.552%	101.986%	93.7%	308.400	T 98.178%	T 97.248%	100.559%	T 98.036%	98.6%
σ		n/a	n/a	0.2%	3.145	T n/a	T n/a	n/a	T n/a	2.6%
%RSD		0.755	0.168	0.2	1.020	T 1.224	T 1.184	0.552	T 1.074	2.6

CCB IM9061-02 11/16/2018 12:53:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	100.5%	0.008	1.144	1.301	-2.531	2.154	1.260	1.281	1.343
2	12:54:19	99.7%	0.012	1.111	1.187	-8.975	1.447	0.652	0.665	0.638
3	12:54:46	100.9%	-0.002	1.355	0.862	-7.081	1.261	0.697	0.923	0.616
x		100.3%	0.006	1.203	1.117	-6.196	1.621	0.870	0.957	0.866
σ		0.6%	0.007	0.132	0.228	3.312	0.471	0.339	0.309	0.413
%RSD		0.6	114.400	10.980	20.380	53.450	29.050	38.950	32.340	47.730

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	0.140	0.084	-96.140	3.828	0.483	1.983	93.5%	0.084	-0.074
2	12:54:19	0.096	-0.123	-103.500	3.539	-0.335	0.301	T 97.4%	0.080	-0.003
3	12:54:46	0.083	-0.072	-78.530	3.241	1.594	0.585	95.2%	0.099	-0.010
x		0.106	-0.037	-92.710	3.536	0.581	0.956	T 95.4%	0.088	-0.029
σ		0.030	0.108	12.810	0.293	0.968	0.901	T 2.0%	0.010	0.039
%RSD		28.260	289.700	13.820	8.298	166.700	94.150	T 2.1	11.460	135.600

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	0.001	30.060	7.696	0.066	9.040	7.142	0.002	0.013	0.138
2	12:54:19	0.012	-60.680	6.324	0.054	6.369	5.936	0.003	0.004	0.248
3	12:54:46	0.006	-36.720	5.474	0.042	6.391	4.971	0.006	0.002	0.353
x		0.006	-22.450	6.498	0.054	7.267	6.016	0.004	0.006	0.247
σ		0.005	47.020	1.121	0.012	1.536	1.088	0.002	0.006	0.108
%RSD		83.030	209.500	17.250	22.620	21.140	18.090	54.650	87.040	43.660

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	-0.000	0.017	-0.100	-0.211	-0.121	0.062	0.176	-0.397	-0.171
2	12:54:19	-0.010	0.004	-0.096	-0.173	-0.101	0.059	0.114	0.092	-0.243
3	12:54:46	0.005	-0.011	-0.061	-0.111	-0.109	0.209	-0.174	-0.244	-0.385
x		-0.002	0.003	-0.086	-0.165	-0.110	0.110	0.038	-0.183	-0.266
σ		0.008	0.014	0.021	0.051	0.010	0.086	0.187	0.250	0.109
%RSD		418.000	408.600	24.830	30.830	9.119	78.020	486.000	136.600	40.850

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	0.170	0.086	0.036	0.006	98.8%	0.319	0.278	0.299	-0.187
2	12:54:19	1.122	0.277	0.711	0.003	98.1%	0.281	0.295	0.308	-0.966
3	12:54:46	1.815	0.464	0.718	0.000	98.3%	0.271	0.234	0.221	-0.768
x		1.035	0.275	0.488	0.003	98.4%	0.290	0.269	0.276	-0.640
σ		0.826	0.189	0.392	0.003	0.4%	0.026	0.032	0.048	0.405
%RSD		79.760	68.690	80.270	90.640	0.4	8.796	11.780	17.340	63.220

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	0.012	0.012	0.006	0.008	98.5%	0.385	0.475	0.283	0.271
2	12:54:19	0.005	0.011	0.006	-0.003	98.9%	0.352	0.486	0.250	0.240
3	12:54:46	0.005	0.009	-0.001	-0.004	98.9%	0.366	0.536	0.247	0.228
x		0.007	0.011	0.004	0.000	98.7%	0.368	0.499	0.260	0.246
σ		0.004	0.002	0.004	0.006	0.2%	0.017	0.033	0.020	0.022
%RSD		57.200	15.240	104.800	1661.000	0.2	4.584	6.528	7.699	9.079

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:53:52	0.017	0.010	100.2%	0.007	0.006	0.001	0.006	0.004	97.1%
2	12:54:19	0.003	0.013	102.0%	0.003	0.008	0.004	0.008	0.003	100.9%
3	12:54:46	0.011	0.013	101.1%	0.007	0.005	0.006	0.003	0.004	103.2%
x		0.010	0.012	101.1%	0.005	0.007	0.004	0.006	0.004	100.4%
σ		0.007	0.002	0.9%	0.002	0.001	0.002	0.002	0.001	3.1%
%RSD		69.240	15.090	0.9	40.120	15.980	61.730	41.810	14.940	3.1

TQ88061-001 11/16/2018 12:59:17 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	101.1%	0.013	-0.004	0.092	4.054	12.370	3.007	2.621	2.844
2	13:00:12	102.3%	0.012	-0.469	0.175	1.531	11.840	2.872	2.895	2.892
3	13:00:39	101.4%	0.003	0.158	0.002	6.861	12.480	2.918	3.083	2.895
x		101.6%	0.009	-0.105	0.090	4.149	12.230	2.932	2.866	2.877
σ		0.6%	0.005	0.325	0.086	2.667	0.342	0.069	0.232	0.029
%RSD		0.6	56.750	309.600	95.990	64.270	2.793	2.341	8.093	1.001

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	1.904	2.721	T 53980.000	4.798	57.710	54.370	89.9%	0.115	-0.228
2	13:00:12	1.843	2.739	T 54420.000	3.715	68.280	57.010	91.2%	0.131	-0.070
3	13:00:39	1.900	2.835	T 55040.000	4.551	61.690	56.890	92.4%	0.129	-0.027
x		1.882	2.765	T 54480.000	4.355	62.560	56.090	91.2%	0.125	-0.108
σ		0.034	0.061	T 529.700	0.567	5.339	1.491	1.3%	0.009	0.106
%RSD		1.822	2.215	T 0.972	13.030	8.534	2.659	1.4	6.845	97.710

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	0.144	4846.000	8.405	0.117	4.133	2.156	0.001	0.016	0.424
2	13:00:12	0.150	5069.000	5.622	0.107	3.286	2.216	0.003	0.018	0.120
3	13:00:39	0.130	5385.000	5.124	0.118	2.845	1.397	0.005	0.020	0.319
x		0.141	5100.000	6.383	0.114	3.421	1.923	0.003	0.018	0.288
σ		0.010	270.900	1.768	0.006	0.654	0.457	0.002	0.002	0.154
%RSD		7.423	5.312	27.700	5.459	19.120	23.750	61.940	10.990	53.590

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	0.141	0.116	1.018	1.826	1.129	0.143	0.086	2.709	2.046
2	13:00:12	0.149	0.156	1.138	1.232	1.095	-0.111	0.049	2.165	2.290
3	13:00:39	0.105	0.132	1.046	1.682	1.022	-0.033	0.240	2.404	2.239
x		0.132	0.134	1.067	1.580	1.082	-0.000	0.125	2.426	2.192
σ		0.024	0.020	0.063	0.310	0.055	0.130	0.101	0.273	0.129
%RSD		17.960	15.180	5.869	19.620	5.077	6447000.000	80.920	11.230	5.883

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	0.649	0.162	-1.031	0.053	94.1%	0.072	0.115	0.116	-0.484
2	13:00:12	0.738	0.205	0.049	0.061	95.1%	0.112	0.102	0.116	-0.512
3	13:00:39	0.755	0.180	-0.354	0.049	94.5%	0.119	0.100	0.107	-1.063
x		0.714	0.182	-0.445	0.054	94.6%	0.101	0.106	0.113	-0.686
σ		0.057	0.022	0.546	0.006	0.5%	0.025	0.008	0.005	0.326
%RSD		7.987	11.960	122.700	11.420	0.6	25.140	7.446	4.731	47.510

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	0.004	0.004	0.002	0.006	94.6%	0.300	0.444	0.169	0.133
2	13:00:12	0.003	0.006	0.007	0.013	95.9%	0.294	0.447	0.164	0.155
3	13:00:39	0.008	0.003	0.003	0.003	96.3%	0.336	0.439	0.159	0.145
x		0.005	0.004	0.004	0.007	95.6%	0.310	0.444	0.164	0.144
σ		0.003	0.001	0.003	0.005	0.9%	0.023	0.004	0.005	0.011
%RSD		57.670	27.670	71.870	69.440	0.9	7.437	0.957	3.251	7.389

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	12:59:45	0.065	0.051	99.4%	-0.012	-0.013	0.009	0.004	0.004	120.8%
2	13:00:12	0.049	0.068	100.8%	-0.013	-0.016	0.009	0.007	0.006	126.0%
3	13:00:39	0.064	0.089	101.2%	-0.012	-0.015	0.008	0.005	0.005	126.3%
x		0.059	0.069	100.5%	-0.012	-0.015	0.009	0.005	0.005	124.4%
σ		0.009	0.019	0.9%	0.000	0.002	0.001	0.002	0.001	3.1%
%RSD		14.490	27.280	0.9	3.310	11.750	8.521	30.570	23.160	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	102.5%	95.230	96.430	96.220	9.853	T 1054.000	T 1046.000	1076.000	1082.000
2	13:06:04	102.6%	93.070	92.460	93.470	4.539	T 1043.000	T 1033.000	1059.000	1078.000
3	13:06:31	104.5%	95.420	94.360	95.920	7.400	T 1052.000	T 1045.000	1066.000	1078.000
x		103.2%	94.570	94.420	95.200	7.264	T 1050.000	T 1042.000	1067.000	1079.000
σ		1.1%	1.307	1.986	1.508	2.659	T 6.117	T 7.123	8.368	2.213
%RSD		1.1	1.382	2.103	1.584	36.610	T 0.583	T 0.684	0.784	0.205

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	101.000	T 868.400	T 53480.000	T 998.600	1128.000	1070.000	94.5%	101.600	102.100
2	13:06:04	101.600	T 874.700	T 53520.000	1061.000	1106.000	1075.000	95.2%	99.950	100.600
3	13:06:31	101.600	T 866.000	T 54650.000	T 1007.000	1089.000	1068.000	95.8%	100.400	102.500
x		101.400	T 869.700	T 53880.000	T 1022.000	1108.000	1071.000	95.2%	100.600	101.800
σ		0.365	T 4.500	T 661.800	T 33.990	19.640	3.573	0.7%	0.837	0.973
%RSD		0.360	T 0.518	T 1.228	T 3.325	1.773	0.334	0.7	0.831	0.956

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	99.340	7892.000	1118.000	101.100	T 1063.000	1045.000	100.800	97.820	97.680
2	13:06:04	99.790	8215.000	1112.000	100.600	T 1055.000	1023.000	100.100	96.450	97.480
3	13:06:31	100.400	8985.000	1135.000	101.100	T 1060.000	1034.000	99.610	94.870	99.990
x		99.840	8364.000	1122.000	100.900	T 1059.000	1034.000	100.200	96.380	98.390
σ		0.524	561.700	12.100	0.260	T 3.935	10.700	0.625	1.476	1.395
%RSD		0.525	6.715	1.078	0.257	T 0.371	1.035	0.624	1.532	1.418

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	97.930	102.100	99.240	102.500	101.000	102.500	101.200	2.714	2.225
2	13:06:04	98.120	101.400	99.950	100.500	100.200	101.200	101.600	2.749	3.285
3	13:06:31	97.000	100.000	99.150	102.400	99.510	99.690	100.200	3.287	3.402
x		97.680	101.200	99.450	101.800	100.200	101.100	101.000	2.916	2.971
σ		0.599	1.056	0.440	1.144	0.735	1.433	0.738	0.322	0.649
%RSD		0.613	1.044	0.442	1.124	0.733	1.417	0.731	11.020	21.840

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	459.600	104.100	1.023	102.200	94.7%	97.790	99.610	95.340	100.300
2	13:06:04	455.300	103.700	-0.697	102.300	96.0%	97.460	99.570	96.770	100.700
3	13:06:31	443.400	101.100	-0.313	103.200	96.8%	97.620	100.000	95.830	100.200
x		452.800	103.000	0.004	102.600	95.8%	97.630	99.730	95.980	100.400
σ		8.410	1.606	0.903	0.555	1.1%	0.166	0.238	0.731	0.254
%RSD		1.857	1.559	20640.000	0.541	1.1	0.170	0.239	0.761	0.253

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	104.000	102.600	98.340	94.210	96.3%	98.220	97.220	100.400	95.620
2	13:06:04	104.000	103.800	99.810	96.500	97.0%	99.450	97.680	101.300	95.870
3	13:06:31	104.100	103.600	97.290	95.280	98.4%	97.490	98.120	100.700	95.860
x		104.000	103.300	98.480	95.330	97.2%	98.390	97.680	100.800	95.780
σ		0.039	0.632	1.264	1.145	1.1%	0.993	0.450	0.489	0.141
%RSD		0.037	0.612	1.284	1.201	1.1	1.009	0.461	0.486	0.147

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:05:37	99.420	99.100	99.8%	97.600	104.900	100.300	98.470	101.300	113.9%
2	13:06:04	99.340	99.180	101.7%	99.260	106.100	100.400	98.460	101.200	117.5%
3	13:06:31	98.570	98.220	101.3%	99.790	105.200	100.700	99.760	102.200	119.8%
x		99.110	98.830	101.0%	98.880	105.400	100.500	98.900	101.600	117.1%
σ		0.467	0.535	1.0%	1.144	0.623	0.244	0.746	0.545	3.0%
%RSD		0.471	0.542	1.0	1.157	0.591	0.243	0.754	0.537	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	97.0%	0.008	3.792	3.471	6.355	T 5724.000	T 23660.000	T 23680.000	T 24010.000
2	13:11:56	97.0%	0.017	3.711	3.533	5.087	T 5812.000	T 24320.000	T 24230.000	T 24350.000
3	13:12:23	98.0%	0.021	3.119	3.567	4.649	T 5830.000	T 24170.000	T 23880.000	T 24080.000
x		97.3%	0.015	3.540	3.524	5.364	T 5789.000	T 24050.000	T 23930.000	T 24150.000
σ		0.6%	0.007	0.367	0.049	0.886	T 56.290	T 348.100	T 276.500	T 179.900
%RSD		0.6	44.840	10.370	1.386	16.520	T 0.972	T 1.447	T 1.156	T 0.745
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	T 38.260	TM 16460.000	T 52150.000	T 1628.000	43330.000	T 43260.000	94.0%	5.601	1.313
2	13:11:56	34.850	TM 16560.000	T 52580.000	T 1662.000	43640.000	T 44070.000	93.9%	5.594	1.116
3	13:12:23	T 35.660	TM 16640.000	T 53060.000	T 1655.000	43430.000	T 43840.000	94.6%	6.062	1.212
x		T 36.260	TM 16550.000	T 52600.000	T 1649.000	43460.000	T 43720.000	94.2%	5.752	1.214
σ		T 1.783	TM 86.290	T 455.100	T 17.970	157.800	T 416.600	0.4%	0.268	0.098
%RSD		T 4.917	TM 0.521	T 0.865	T 1.090	0.363	T 0.953	0.4	4.661	8.111
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	0.422	3762.000	T 84080.000	TM 8109.000	T 85520.000	T 82970.000	108.500	9.456	8.941
2	13:11:56	0.393	3949.000	T 86450.000	TM 8222.000	T 85810.000	T 83220.000	107.800	9.457	9.113
3	13:12:23	0.391	3670.000	T 86410.000	TM 8275.000	T 86430.000	T 83530.000	109.000	9.548	8.414
x		0.402	3793.000	T 85650.000	TM 8202.000	T 85920.000	T 83240.000	108.400	9.487	8.823
σ		0.017	142.100	T 1360.000	TM 84.850	T 464.900	T 281.300	0.604	0.053	0.364
%RSD		4.253	3.746	T 1.588	TM 1.034	T 0.541	T 0.338	0.557	0.556	4.127
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	0.673	0.785	21.030	20.790	19.890	1.770	0.396	7.991	9.963
2	13:11:56	0.729	0.771	21.480	20.470	20.100	1.979	0.265	9.737	8.961
3	13:12:23	0.633	0.747	20.360	19.790	19.960	1.579	0.080	9.723	9.728
x		0.678	0.768	20.960	20.350	19.980	1.776	0.247	9.151	9.551
σ		0.048	0.019	0.566	0.512	0.106	0.200	0.159	1.004	0.524
%RSD		7.094	2.479	2.702	2.518	0.532	11.260	64.290	10.970	5.484
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	0.925	0.218	1.083	43.960	93.5%	0.284	0.279	0.342	-0.223
2	13:11:56	1.650	0.380	1.093	44.470	93.3%	0.287	0.344	0.312	0.592
3	13:12:23	0.281	0.095	1.543	44.100	95.4%	0.327	0.299	0.365	0.077
x		0.952	0.231	1.239	44.180	94.1%	0.299	0.308	0.340	0.149
σ		0.685	0.143	0.263	0.266	1.1%	0.024	0.033	0.027	0.412
%RSD		71.940	61.940	21.210	0.603	1.2	8.104	10.810	7.863	276.900
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	0.003	0.004	0.142	0.126	92.7%	0.436	0.593	0.319	0.296
2	13:11:56	0.007	0.006	0.122	0.120	92.5%	0.428	0.545	0.327	0.286
3	13:12:23	0.001	0.008	0.151	0.115	94.2%	0.440	0.579	0.337	0.319
x		0.004	0.006	0.138	0.120	93.1%	0.435	0.572	0.327	0.300
σ		0.003	0.002	0.015	0.005	0.9%	0.006	0.025	0.009	0.017
%RSD		84.700	27.850	10.650	4.366	1.0	1.459	4.301	2.783	5.633
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:11:29	19.040	18.490	97.8%	0.011	0.009	10.300	9.671	9.984	135.6%
2	13:11:56	18.750	18.300	98.4%	0.006	0.002	10.440	9.737	10.070	133.6%
3	13:12:23	19.050	18.470	99.3%	0.005	0.000	10.340	9.696	10.060	130.9%
x		18.950	18.420	98.5%	0.007	0.004	10.360	9.701	10.040	133.4%
σ		0.170	0.107	0.8%	0.003	0.005	0.070	0.033	0.046	2.4%
%RSD		0.898	0.580	0.8	44.020	113.400	0.678	0.344	0.458	1.8

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	98.9%	0.035	295.500	311.700	231.800	T 28450.000	TM 155500.000	TM 159000.000	TM 160200.000
2	13:17:50	100.6%	0.034	289.400	304.000	224.800	T 29010.000	TM 157100.000	TM 158900.000	TM 161100.000
3	13:18:17	103.2%	0.015	292.700	307.100	237.800	T 28950.000	TM 158200.000	TM 161000.000	TM 163800.000
x		100.9%	0.028	292.500	307.600	231.500	T 28800.000	TM 156900.000	TM 159600.000	TM 161700.000
σ		2.2%	0.012	3.055	3.861	6.510	T 307.000	TM 1384.000	TM 1155.000	TM 1865.000
%RSD		2.2	41.440	1.045	1.255	2.812	T 1.066	TM 0.882	TM 0.724	TM 1.154
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	TM 793.000	TM 16410.000	T 60390.000	T 4156.000	TM 327900.000	TM 318200.000	93.8%	82.760	7.160
2	13:17:50	TM 801.000	TM 16330.000	T 60450.000	T 4188.000	TM 330000.000	TM 317800.000	95.2%	73.740	7.160
3	13:18:17	TM 804.800	TM 15970.000	T 61080.000	T 4050.000	TM 329600.000	TM 317100.000	95.0%	74.140	7.108
x		TM 799.600	TM 16240.000	T 60640.000	T 4131.000	TM 329200.000	TM 317700.000	94.6%	76.880	7.142
σ		TM 6.002	TM 233.100	T 382.400	T 72.240	TM 1090.000	TM 578.000	0.8%	5.095	0.030
%RSD		TM 0.751	TM 1.435	T 0.631	T 1.749	TM 0.331	TM 0.182	0.8	6.627	0.420
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	1.893	5044.000	T 7442.000	TM 3176.000	T 7689.000	8404.000	30.120	90.890	82.820
2	13:17:50	1.891	5267.000	T 7415.000	TM 3147.000	T 7706.000	8389.000	30.030	91.380	82.070
3	13:18:17	1.820	5567.000	T 7370.000	TM 3176.000	T 7631.000	8369.000	29.940	88.570	82.210
x		1.868	5293.000	T 7409.000	TM 3167.000	T 7675.000	8387.000	30.030	90.280	82.370
σ		0.042	262.400	T 36.170	TM 16.550	T 39.180	17.870	0.091	1.502	0.400
%RSD		2.241	4.958	T 0.488	TM 0.523	T 0.511	0.213	0.304	1.664	0.485
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	1.671	1.920	5.201	13.860	10.950	0.746	0.530	1019.000	1015.000
2	13:17:50	1.745	1.896	4.995	13.540	11.270	0.821	0.175	996.600	1017.000
3	13:18:17	1.720	1.893	5.039	13.810	10.910	1.175	0.279	1004.000	1012.000
x		1.712	1.903	5.078	13.740	11.040	0.914	0.328	1007.000	1015.000
σ		0.038	0.015	0.108	0.172	0.197	0.229	0.182	11.320	2.316
%RSD		2.203	0.774	2.135	1.251	1.782	25.040	55.640	1.125	0.228
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	5.276	0.248	1.557	TM 1563.000	103.4%	0.400	0.300	0.428	41.590
2	13:17:50	7.476	0.770	0.966	TM 1567.000	104.9%	0.323	0.410	0.408	42.180
3	13:18:17	5.560	0.334	2.131	TM 1560.000	104.6%	0.408	0.401	0.387	44.240
x		6.104	0.451	1.551	TM 1563.000	104.3%	0.377	0.370	0.408	42.670
σ		1.197	0.280	0.583	TM 3.501	0.8%	0.047	0.061	0.020	1.393
%RSD		19.610	62.150	37.560	TM 0.224	0.8	12.390	16.460	5.005	3.266
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	0.031	0.034	0.177	0.164	92.1%	0.708	0.830	0.292	0.284
2	13:17:50	0.031	0.039	0.200	0.178	92.6%	0.617	0.870	0.305	0.312
3	13:18:17	0.033	0.034	0.174	0.164	93.8%	0.648	0.859	0.319	0.279
x		0.032	0.036	0.184	0.169	92.8%	0.657	0.853	0.305	0.292
σ		0.001	0.003	0.014	0.008	0.9%	0.046	0.021	0.013	0.018
%RSD		3.403	7.516	7.515	4.905	1.0	7.023	2.416	4.403	6.183
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:17:22	235.300	234.700	98.6%	0.102	0.108	0.225	0.189	0.196	110.6%
2	13:17:50	237.400	238.500	99.3%	0.111	0.113	0.220	0.189	0.199	112.2%
3	13:18:17	236.300	237.000	99.5%	0.104	0.108	0.206	0.198	0.199	113.2%
x		236.300	236.700	99.2%	0.106	0.109	0.217	0.192	0.198	112.0%
σ		1.035	1.912	0.5%	0.005	0.003	0.010	0.005	0.002	1.3%
%RSD		0.438	0.808	0.5	4.625	2.572	4.447	2.647	0.933	1.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	105.6%	0.039	10.390	11.320	15.110	T 6999.000	T 10030.000	T 9920.000	T 9909.000
2	13:23:43	105.2%	0.023	10.210	10.820	7.181	T 7075.000	T 9976.000	T 9899.000	T 10000.000
3	13:24:10	106.5%	0.040	11.200	10.820	7.282	T 7112.000	T 10090.000	T 9902.000	T 10150.000
x		105.7%	0.034	10.600	10.980	9.857	T 7062.000	T 10030.000	T 9907.000	T 10020.000
σ		0.7%	0.010	0.525	0.288	4.547	T 57.550	T 55.180	T 11.100	T 119.300
%RSD		0.6	28.520	4.954	2.625	46.130	T 0.815	T 0.550	T 0.112	T 1.191

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	TM 1010.000	T 7921.000	T 53940.000	T 9022.000	19150.000	T 19020.000	94.7%	54.340	2.816
2	13:23:43	TM 1005.000	T 7874.000	T 53680.000	T 9150.000	18930.000	T 19050.000	95.6%	52.450	3.145
3	13:24:10	TM 999.600	T 7802.000	T 53810.000	T 9089.000	18990.000	T 19060.000	96.1%	52.030	3.046
x		TM 1005.000	T 7866.000	T 53810.000	T 9087.000	19020.000	T 19050.000	95.4%	52.940	3.002
σ		TM 5.430	T 60.040	T 130.000	T 64.320	114.900	T 19.290	0.7%	1.232	0.169
%RSD		TM 0.540	T 0.763	T 0.242	T 0.708	0.604	T 0.101	0.8	2.327	5.614

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	1.376	9561.000	1208.000	T 325.400	T 1206.000	1204.000	196.000	17.030	16.780
2	13:23:43	1.392	9465.000	T 1172.000	T 323.900	T 1199.000	1204.000	193.900	16.840	16.850
3	13:24:10	1.374	9547.000	1206.000	T 320.500	T 1198.000	1180.000	192.700	16.510	16.830
x		1.381	9524.000	T 1195.000	T 323.300	T 1201.000	1196.000	194.200	16.800	16.820
σ		0.010	51.830	T 20.100	T 2.494	T 4.127	13.830	1.673	0.261	0.038
%RSD		0.732	0.544	T 1.682	T 0.772	T 0.344	1.156	0.862	1.555	0.227

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	3.143	3.285	5.419	10.300	7.981	-0.178	-0.132	43.480	44.540
2	13:23:43	3.100	3.317	5.293	9.171	7.872	0.073	0.131	43.200	43.740
3	13:24:10	3.117	3.207	5.317	9.552	7.913	0.330	-0.135	44.610	44.210
x		3.120	3.270	5.343	9.675	7.922	0.075	-0.045	43.760	44.160
σ		0.022	0.056	0.067	0.575	0.055	0.254	0.153	0.749	0.401
%RSD		0.704	1.727	1.257	5.948	0.690	339.100	335.800	1.712	0.907

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	-0.338	-0.116	-0.460	106.000	97.3%	0.189	0.137	0.157	2.309
2	13:23:43	1.667	0.375	0.574	105.400	98.5%	0.157	0.165	0.173	2.659
3	13:24:10	0.864	0.209	1.806	106.200	98.0%	0.176	0.163	0.182	1.945
x		0.731	0.156	0.640	105.900	97.9%	0.174	0.155	0.171	2.304
σ		1.009	0.250	1.134	0.432	0.6%	0.016	0.015	0.013	0.357
%RSD		138.000	160.100	177.200	0.408	0.6	9.312	9.860	7.613	15.500

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	0.021	0.021	0.207	0.222	97.5%	0.377	0.407	0.096	0.086
2	13:23:43	0.022	0.023	0.202	0.204	99.3%	0.353	0.418	0.095	0.086
3	13:24:10	0.017	0.031	0.227	0.226	100.0%	0.370	0.414	0.122	0.102
x		0.020	0.025	0.212	0.218	98.9%	0.367	0.413	0.104	0.092
σ		0.003	0.005	0.013	0.011	1.3%	0.012	0.005	0.016	0.009
%RSD		14.410	20.740	6.131	5.256	1.3	3.261	1.294	14.970	10.070

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:23:16	85.720	84.640	102.5%	0.089	0.096	0.781	0.546	0.632	122.2%
2	13:23:43	84.760	86.020	101.8%	0.079	0.098	0.656	0.612	0.623	125.3%
3	13:24:10	84.920	84.330	103.6%	0.091	0.082	0.662	0.545	0.618	125.6%
x		85.130	85.000	102.6%	0.087	0.092	0.699	0.568	0.624	124.4%
σ		0.519	0.902	0.9%	0.006	0.009	0.070	0.038	0.007	1.9%
%RSD		0.610	1.061	0.9	7.251	9.525	10.060	6.718	1.138	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	100.3%	0.163	2.098	1.950	9.986	T 4509.000	T 3461.000	T 3457.000	T 3490.000
2	13:29:37	102.1%	0.146	1.909	1.955	7.522	T 4533.000	T 3426.000	T 3429.000	T 3462.000
3	13:30:05	102.8%	0.111	1.893	1.777	9.634	T 4522.000	T 3414.000	T 3401.000	T 3444.000
x		101.8%	0.140	1.967	1.894	9.047	T 4521.000	T 3434.000	T 3429.000	T 3465.000
σ		1.3%	0.026	0.114	0.101	1.332	T 11.610	T 24.110	T 28.170	T 23.100
%RSD		1.3	18.880	5.799	5.343	14.730	T 0.257	T 0.702	T 0.821	T 0.667
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	21.030	T 7104.000	T 52410.000	T 1593.000	5215.000	5283.000	T 97.6%	1.568	1.128
2	13:29:37	20.400	T 6888.000	T 53170.000	T 1571.000	5533.000	5489.000	94.8%	1.616	1.155
3	13:30:05	20.160	T 6943.000	T 53510.000	T 1589.000	5386.000	5416.000	96.1%	1.476	1.484
x		20.530	T 6978.000	T 53030.000	T 1584.000	5378.000	5396.000	T 96.1%	1.553	1.256
σ		0.451	T 112.100	T 563.400	T 11.320	159.100	104.200	T 1.4%	0.071	0.198
%RSD		2.199	T 1.607	T 1.062	T 0.715	2.959	1.931	T 1.5	4.569	15.760
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	0.563	8884.000	T 18770.000	TM 2116.000	T 19000.000	T 18160.000	111.600	1.910	1.507
2	13:29:37	0.552	9134.000	T 19220.000	TM 2220.000	T 19620.000	T 18610.000	113.500	1.662	1.617
3	13:30:05	0.598	8624.000	T 18970.000	TM 2180.000	T 19430.000	T 18360.000	113.200	1.668	1.542
x		0.571	8881.000	T 18990.000	TM 2172.000	T 19350.000	T 18380.000	112.800	1.746	1.555
σ		0.024	254.600	T 225.900	TM 52.200	T 320.300	T 223.700	1.005	0.142	0.056
%RSD		4.167	2.867	T 1.189	TM 2.403	T 1.655	T 1.217	0.891	8.109	3.618
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	0.850	0.981	2.006	5.809	3.717	0.998	0.166	18.140	19.330
2	13:29:37	0.927	0.914	1.801	5.124	3.972	1.315	0.368	20.460	19.590
3	13:30:05	0.876	0.959	2.081	5.518	3.923	1.182	0.140	20.570	19.440
x		0.884	0.952	1.963	5.484	3.871	1.165	0.225	19.720	19.450
σ		0.039	0.034	0.145	0.343	0.135	0.160	0.125	1.374	0.133
%RSD		4.395	3.578	7.376	6.262	3.497	13.700	55.580	6.968	0.685
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	0.885	0.164	-0.472	31.850	97.2%	0.409	0.361	0.391	-0.102
2	13:29:37	0.500	0.118	0.232	32.270	97.0%	0.385	0.390	0.370	0.462
3	13:30:05	0.737	0.188	1.142	31.870	97.7%	0.348	0.387	0.371	0.951
x		0.707	0.157	0.301	32.000	97.3%	0.381	0.380	0.377	0.437
σ		0.194	0.036	0.809	0.236	0.4%	0.030	0.016	0.012	0.527
%RSD		27.410	22.780	269.200	0.737	0.4	8.005	4.223	3.227	120.700
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	0.002	0.006	0.029	0.030	96.6%	0.187	0.238	0.095	0.064
2	13:29:37	0.006	0.007	0.029	0.029	96.4%	0.161	0.273	0.099	0.099
3	13:30:05	0.003	0.004	0.037	0.037	96.9%	0.181	0.200	0.090	0.089
x		0.004	0.005	0.032	0.032	96.6%	0.177	0.237	0.095	0.084
σ		0.002	0.002	0.004	0.005	0.2%	0.014	0.036	0.005	0.018
%RSD		48.050	31.000	13.740	14.200	0.2	7.868	15.310	4.805	21.300
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:29:09	66.350	66.120	101.3%	0.292	0.292	0.053	0.040	0.047	134.0%
2	13:29:37	65.750	66.160	101.2%	0.306	0.299	0.052	0.056	0.049	132.3%
3	13:30:05	67.030	66.880	102.2%	0.300	0.303	0.059	0.051	0.058	130.0%
x		66.380	66.390	101.6%	0.299	0.298	0.055	0.049	0.051	132.1%
σ		0.640	0.423	0.5%	0.007	0.006	0.004	0.008	0.006	2.0%
%RSD		0.964	0.637	0.5	2.340	1.906	7.599	16.360	11.400	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	100.9%	88.300	91.240	92.070	9.789	T 5478.000	T 4400.000	T 4307.000	T 4331.000
2	13:35:31	101.5%	88.910	88.980	92.680	9.517	T 5442.000	T 4384.000	T 4335.000	T 4372.000
3	13:35:58	101.1%	85.470	89.480	89.670	7.169	T 5445.000	T 4375.000	T 4333.000	T 4370.000
x		101.2%	87.560	89.900	91.470	8.825	T 5455.000	T 4386.000	T 4325.000	T 4358.000
σ		0.4%	1.833	1.189	1.590	1.441	T 20.060	T 12.660	T 15.800	T 23.080
%RSD		0.3	2.093	1.322	1.738	16.320	T 0.368	T 0.289	T 0.365	T 0.530
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	146.500	T 7711.000	T 48230.000	T 2559.000	6413.000	6361.000	94.8%	100.200	102.200
2	13:35:31	141.700	T 7573.000	T 47940.000	T 2543.000	6278.000	6214.000	96.7%	100.300	99.270
3	13:35:58	143.000	T 7631.000	T 48260.000	T 2591.000	6564.000	6419.000	94.6%	100.900	102.000
x		143.700	T 7638.000	T 48140.000	T 2565.000	6418.000	6331.000	95.4%	100.500	101.200
σ		2.453	T 69.350	T 178.400	T 24.440	143.000	105.500	1.1%	0.361	1.632
%RSD		1.707	T 0.908	T 0.371	T 0.953	2.228	1.666	1.2	0.359	1.613
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	100.800	7517.000	T 19780.000	TM 2230.000	T 20080.000	T 19110.000	213.500	96.570	98.350
2	13:35:31	97.410	7943.000	T 19650.000	TM 2184.000	T 19570.000	T 18750.000	208.300	95.930	96.240
3	13:35:58	99.980	7843.000	T 19770.000	TM 2253.000	T 20100.000	T 19000.000	212.000	95.200	97.200
x		99.380	7768.000	T 19730.000	TM 2222.000	T 19920.000	T 18960.000	211.300	95.900	97.260
σ		1.753	222.700	T 71.360	TM 34.820	T 303.600	T 185.100	2.670	0.685	1.055
%RSD		1.764	2.868	T 0.362	TM 1.567	T 1.525	T 0.977	1.264	0.714	1.085
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	96.950	99.630	96.860	99.310	97.700	99.520	95.300	18.440	18.280
2	13:35:31	95.300	98.890	98.010	102.000	98.480	96.650	95.560	18.640	18.200
3	13:35:58	93.860	95.070	96.290	100.400	99.640	100.100	94.340	19.040	17.460
x		95.370	97.860	97.050	100.600	98.610	98.740	95.070	18.710	17.980
σ		1.544	2.449	0.881	1.353	0.973	1.834	0.641	0.305	0.453
%RSD		1.619	2.503	0.908	1.345	0.987	1.857	0.675	1.631	2.520
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	423.500	97.000	0.536	132.500	96.2%	96.450	95.310	94.820	99.670
2	13:35:31	413.900	92.940	0.400	132.800	95.9%	96.670	97.440	97.150	97.500
3	13:35:58	424.600	98.990	-0.082	130.100	98.1%	97.180	96.370	95.580	99.290
x		420.600	96.310	0.285	131.800	96.8%	96.770	96.370	95.850	98.820
σ		5.877	3.083	0.325	1.479	1.2%	0.378	1.065	1.188	1.159
%RSD		1.397	3.201	114.100	1.122	1.3	0.391	1.105	1.239	1.173
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	103.000	100.500	95.340	92.720	96.1%	97.580	97.070	98.340	94.860
2	13:35:31	103.000	101.500	97.070	94.270	95.8%	98.500	97.840	100.300	94.230
3	13:35:58	102.300	99.970	96.360	93.780	97.4%	97.040	97.230	99.510	93.630
x		102.800	100.700	96.260	93.590	96.4%	97.710	97.380	99.390	94.240
σ		0.413	0.760	0.872	0.790	0.8%	0.741	0.407	0.996	0.618
%RSD		0.402	0.755	0.906	0.844	0.9	0.759	0.418	1.002	0.656
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:35:04	164.200	163.100	98.2%	98.940	104.100	99.530	98.210	100.700	121.4%
2	13:35:31	165.100	162.700	100.7%	97.650	104.000	99.040	98.350	100.400	123.4%
3	13:35:58	162.200	161.500	102.0%	98.090	103.800	99.000	97.960	100.200	124.7%
x		163.800	162.400	100.3%	98.230	104.000	99.190	98.170	100.400	123.2%
σ		1.485	0.885	1.9%	0.654	0.169	0.297	0.200	0.254	1.7%
%RSD		0.906	0.545	1.9	0.666	0.163	0.300	0.204	0.253	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	99.9%	86.300	87.430	87.890	6.846	T 5225.000	T 4201.000	T 4211.000	T 4260.000
2	13:41:26	101.8%	85.280	89.890	88.200	2.543	T 5367.000	T 4180.000	T 4205.000	T 4262.000
3	13:41:52	103.2%	83.610	83.510	84.860	0.934	T 5251.000	T 4237.000	T 4238.000	T 4286.000
x		101.6%	85.070	86.950	86.980	3.441	T 5281.000	T 4206.000	T 4218.000	T 4269.000
σ		1.7%	1.356	3.217	1.848	3.057	T 75.460	T 28.870	T 17.780	T 14.380
%RSD		1.6	1.594	3.700	2.124	88.840	T 1.429	T 0.686	T 0.422	T 0.337

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	138.700	T 7794.000	T 51870.000	T 2599.000	6079.000	6246.000	97.5%	97.420	98.990
2	13:41:26	137.600	T 7496.000	T 51860.000	T 2531.000	6215.000	6246.000	96.8%	95.870	100.200
3	13:41:52	137.700	T 7394.000	T 52630.000	T 2514.000	6353.000	6311.000	95.0%	98.740	101.500
x		138.000	T 7561.000	T 52120.000	T 2548.000	6216.000	6268.000	96.5%	97.340	100.200
σ		0.629	T 207.900	T 438.500	T 44.930	136.800	37.280	1.3%	1.437	1.265
%RSD		0.456	T 2.750	T 0.841	T 1.763	2.200	0.595	1.3	1.476	1.262

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	95.500	8514.000	T 19110.000	TM 2135.000	T 19380.000	T 18420.000	204.200	94.620	97.240
2	13:41:26	96.500	8849.000	T 19290.000	TM 2172.000	T 19580.000	T 18520.000	208.900	95.660	97.160
3	13:41:52	98.670	8915.000	T 19330.000	TM 2197.000	T 19950.000	T 18930.000	212.200	95.190	97.550
x		96.890	8760.000	T 19250.000	TM 2168.000	T 19640.000	T 18630.000	208.400	95.160	97.320
σ		1.624	215.000	T 117.900	TM 30.950	T 291.500	T 271.900	4.038	0.521	0.206
%RSD		1.676	2.454	T 0.613	TM 1.428	T 1.485	T 1.460	1.937	0.547	0.212

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	93.650	96.550	95.280	99.950	97.280	96.070	91.800	18.530	18.160
2	13:41:26	94.420	96.740	96.490	98.880	97.560	97.380	93.970	18.380	16.780
3	13:41:52	93.250	94.650	95.610	96.740	96.760	97.600	93.660	18.220	18.270
x		93.770	95.980	95.790	98.520	97.200	97.020	93.140	18.380	17.740
σ		0.591	1.157	0.626	1.633	0.407	0.828	1.172	0.156	0.830
%RSD		0.631	1.205	0.654	1.658	0.419	0.854	1.259	0.849	4.678

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	415.500	93.190	0.231	132.300	96.6%	94.050	95.390	92.810	96.650
2	13:41:26	427.800	97.020	-0.197	132.100	97.2%	94.900	95.950	94.820	100.400
3	13:41:52	418.700	97.170	1.680	129.300	98.0%	94.870	95.500	94.810	98.300
x		420.700	95.800	0.572	131.200	97.2%	94.610	95.620	94.150	98.460
σ		6.403	2.256	0.984	1.672	0.7%	0.483	0.296	1.159	1.894
%RSD		1.522	2.355	172.100	1.275	0.7	0.511	0.309	1.231	1.924

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	99.200	98.890	93.970	91.020	97.5%	96.250	95.440	96.950	93.260
2	13:41:26	101.400	99.960	94.730	92.540	97.2%	96.870	96.930	97.760	93.230
3	13:41:52	101.400	99.410	95.300	91.630	97.3%	96.620	96.180	98.300	92.760
x		100.600	99.420	94.670	91.730	97.4%	96.580	96.180	97.670	93.080
σ		1.244	0.538	0.669	0.765	0.2%	0.311	0.747	0.681	0.285
%RSD		1.236	0.541	0.706	0.834	0.2	0.322	0.776	0.697	0.306

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:40:59	160.000	159.500	100.5%	95.450	100.700	96.960	96.520	98.470	124.6%
2	13:41:26	162.700	161.300	101.2%	96.570	101.800	97.870	96.980	98.930	126.5%
3	13:41:52	162.000	160.600	102.2%	96.020	102.500	97.950	96.460	99.300	127.1%
x		161.500	160.500	101.3%	96.010	101.700	97.600	96.650	98.900	126.1%
σ		1.391	0.893	0.9%	0.562	0.929	0.551	0.283	0.415	1.3%
%RSD		0.861	0.557	0.9	0.585	0.914	0.565	0.293	0.419	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	105.5%	0.033	1.142	0.541	-6.873	T 1119.000	T 849.800	852.500	878.400
2	13:47:18	103.4%	0.064	0.315	0.375	-3.047	T 1100.000	T 829.800	838.400	851.500
3	13:47:45	104.0%	0.034	0.533	0.366	-3.007	T 1054.000	T 790.900	814.800	822.700
x		104.3%	0.044	0.663	0.428	-4.309	T 1091.000	T 823.500	835.300	850.900
σ		1.1%	0.018	0.429	0.098	2.220	T 33.580	T 29.970	19.070	27.890
%RSD		1.1	40.710	64.630	23.030	51.530	T 3.078	T 3.639	2.283	3.277

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	5.543	T 1689.000	T 12850.000	379.500	1309.000	1299.000	98.3%	0.463	0.280
2	13:47:18	5.351	T 1666.000	T 12540.000	381.800	1281.000	1274.000	98.8%	0.452	0.426
3	13:47:45	5.226	T 1607.000	T 12230.000	366.700	1224.000	1222.000	100.2%	0.414	0.337
x		5.374	T 1654.000	T 12540.000	376.000	1271.000	1265.000	99.1%	0.443	0.348
σ		0.160	T 42.380	T 309.800	8.134	43.210	39.480	1.0%	0.026	0.074
%RSD		2.968	T 2.563	T 2.471	2.163	3.398	3.120	1.0	5.859	21.210

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	0.189	2314.000	T 4674.000	TM 531.000	T 4832.000	4806.000	27.590	0.467	0.057
2	13:47:18	0.145	2200.000	T 4568.000	TM 513.000	T 4633.000	4639.000	26.790	0.397	0.217
3	13:47:45	0.161	2148.000	T 4387.000	T 498.300	T 4519.000	4392.000	25.590	0.390	0.204
x		0.165	2221.000	T 4543.000	TM 514.100	T 4661.000	4612.000	26.660	0.418	0.159
σ		0.022	85.080	T 145.200	TM 16.410	T 158.800	208.300	1.008	0.043	0.089
%RSD		13.460	3.831	T 3.195	TM 3.192	T 3.407	4.516	3.781	10.200	55.620

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	0.225	0.247	0.428	1.189	0.982	0.504	0.039	4.566	4.291
2	13:47:18	0.168	0.276	0.360	1.324	0.965	0.321	-0.104	4.549	4.528
3	13:47:45	0.197	0.228	0.339	1.084	0.956	0.332	-0.337	4.357	4.800
x		0.197	0.251	0.376	1.199	0.967	0.386	-0.134	4.490	4.539
σ		0.029	0.024	0.046	0.120	0.013	0.103	0.190	0.116	0.255
%RSD		14.690	9.562	12.300	10.030	1.381	26.600	141.500	2.586	5.608

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	2.585	0.597	-0.861	7.559	101.1%	0.187	0.187	0.171	-0.650
2	13:47:18	0.317	0.098	0.438	7.346	101.3%	0.227	0.144	0.178	-0.435
3	13:47:45	1.093	0.261	0.291	7.190	101.5%	0.164	0.193	0.179	-0.539
x		1.332	0.319	-0.044	7.365	101.3%	0.193	0.174	0.176	-0.541
σ		1.153	0.254	0.712	0.185	0.2%	0.032	0.026	0.004	0.107
%RSD		86.540	79.700	1615.000	2.514	0.2	16.410	15.190	2.250	19.850

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	0.000	0.003	0.007	0.008	101.1%	0.134	0.203	0.011	0.008
2	13:47:18	0.001	0.003	0.017	0.007	101.8%	0.130	0.173	0.014	0.005
3	13:47:45	0.001	0.005	0.007	0.011	102.0%	0.135	0.191	0.007	0.006
x		0.001	0.004	0.010	0.008	101.6%	0.133	0.189	0.011	0.006
σ		0.000	0.001	0.006	0.002	0.4%	0.003	0.015	0.003	0.002
%RSD		35.070	24.640	61.260	24.100	0.4	1.947	8.143	32.020	25.260

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:46:51	15.650	15.720	102.7%	0.106	0.106	0.012	0.007	0.011	111.0%
2	13:47:18	15.340	15.160	105.3%	0.101	0.089	0.009	0.010	0.012	111.7%
3	13:47:45	14.850	14.460	104.2%	0.085	0.084	0.018	0.013	0.012	114.2%
x		15.280	15.110	104.1%	0.097	0.093	0.013	0.010	0.012	112.3%
σ		0.405	0.628	1.3%	0.011	0.011	0.005	0.003	0.000	1.7%
%RSD		2.649	4.153	1.2	11.190	12.150	34.670	30.570	3.633	1.5

TJ22039-004A 11/16/2018 13:52:18

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	103.3%	88.990	94.630	93.870	8.823	T 5583.000	T 4402.000	T 4362.000	T 4392.000
2	13:53:13	102.3%	87.160	90.530	94.700	6.468	T 5488.000	T 4392.000	T 4391.000	T 4429.000
3	13:53:40	101.1%	87.390	91.220	92.690	5.618	T 5451.000	T 4396.000	T 4337.000	T 4408.000
x		102.3%	87.850	92.130	93.750	6.969	T 5507.000	T 4397.000	T 4363.000	T 4410.000
σ		1.1%	1.000	2.198	1.007	1.660	T 68.180	T 5.059	T 27.230	T 18.430
%RSD		1.1	1.139	2.386	1.074	23.820	T 1.238	T 0.115	T 0.624	T 0.418

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	T 115.300	T 7904.000	T 51760.000	T 2562.000	6244.000	6334.000	99.1%	99.930	99.470
2	13:53:13	117.800	T 7820.000	T 52190.000	T 2592.000	6493.000	6474.000	97.4%	100.200	99.760
3	13:53:40	117.400	T 7848.000	T 52940.000	T 2617.000	6475.000	6442.000	96.1%	96.480	99.840
x		T 116.900	T 7857.000	T 52300.000	T 2590.000	6404.000	6417.000	97.6%	98.880	99.690
σ		T 1.321	T 43.220	T 598.200	T 27.610	138.500	73.090	1.5%	2.081	0.195
%RSD		T 1.130	T 0.550	T 1.144	T 1.066	2.163	1.139	1.5	2.104	0.196

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	96.740	8421.000	T 19330.000	TM 2179.000	T 19810.000	T 18940.000	213.400	95.720	97.640
2	13:53:13	97.760	9077.000	T 19690.000	TM 2257.000	T 20180.000	T 19170.000	211.600	96.560	93.710
3	13:53:40	97.320	8946.000	T 19740.000	TM 2248.000	T 19990.000	T 19190.000	211.200	95.000	91.680
x		97.270	8815.000	T 19590.000	TM 2228.000	T 20000.000	T 19100.000	212.100	95.760	94.340
σ		0.509	347.100	T 221.300	TM 42.600	T 185.700	T 138.900	1.187	0.782	3.027
%RSD		0.523	3.938	T 1.130	TM 1.912	T 0.929	T 0.727	0.560	0.816	3.209

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	94.280	99.340	96.640	102.500	97.810	95.260	97.370	17.820	19.210
2	13:53:13	95.130	98.110	97.670	99.620	96.080	96.570	94.520	16.930	17.670
3	13:53:40	92.870	93.790	96.000	100.200	97.640	97.510	95.990	18.400	18.540
x		94.090	97.080	96.770	100.800	97.180	96.450	95.960	17.710	18.470
σ		1.141	2.912	0.841	1.497	0.954	1.129	1.427	0.744	0.776
%RSD		1.213	3.000	0.869	1.486	0.982	1.171	1.487	4.201	4.199

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	432.900	96.320	-0.077	135.000	97.3%	97.580	96.610	95.130	99.330
2	13:53:13	421.800	96.200	1.102	131.900	98.4%	95.970	97.460	95.530	96.100
3	13:53:40	414.800	95.710	-0.237	133.000	98.5%	94.480	96.350	96.640	96.340
x		423.200	96.080	0.263	133.300	98.0%	96.010	96.810	95.770	97.260
σ		9.131	0.323	0.731	1.570	0.7%	1.553	0.582	0.782	1.803
%RSD		2.158	0.336	278.200	1.178	0.7	1.617	0.601	0.816	1.854

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	100.700	98.690	95.140	93.290	97.9%	98.050	97.080	94.990	90.900
2	13:53:13	101.600	100.100	96.230	93.430	97.1%	98.180	97.350	96.710	91.000
3	13:53:40	99.680	100.000	96.910	93.600	96.5%	99.640	99.230	96.790	91.200
x		100.600	99.610	96.090	93.440	97.1%	98.620	97.890	96.170	91.030
σ		0.958	0.800	0.890	0.159	0.7%	0.888	1.171	1.015	0.153
%RSD		0.952	0.803	0.926	0.170	0.7	0.900	1.196	1.056	0.168

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:52:46	163.000	164.800	101.6%	97.710	102.900	99.190	97.450	99.930	131.3%
2	13:53:13	166.500	165.600	101.6%	97.210	102.800	98.300	97.540	99.550	129.8%
3	13:53:40	164.100	164.400	102.0%	96.490	102.700	98.420	97.270	99.890	128.4%
x		164.500	164.900	101.7%	97.140	102.800	98.640	97.420	99.790	129.8%
σ		1.769	0.643	0.2%	0.612	0.114	0.481	0.141	0.210	1.4%
%RSD		1.075	0.390	0.2	0.630	0.111	0.488	0.144	0.210	1.1

CCV MW10535 11/16/2018 13:58:14 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	90.6%	295.200	289.400	295.200	4.601	┬61480.000	┬60760.000	┬60260.000	┬61220.000
2	13:59:08	92.6%	294.200	291.300	297.900	3.812	┬62840.000	┬61840.000	┬61320.000	┬61360.000
3	13:59:35	91.4%	291.600	288.000	294.400	4.134	┬62830.000	┬60720.000	┬60690.000	┬61050.000
x		91.6%	97.899%	96.528%	98.608%	4.182	┬103.970%	┬61100.000	┬60760.000	┬102.015%
σ		1.0%	n/a	n/a	n/a	0.396	┬n/a	┬636.700	┬530.200	┬n/a
%RSD		1.1	0.633	0.561	0.613	9.475	┬1.255	┬1.042	┬0.873	┬0.256
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	301.300	┬3167.000	12.710	┬64360.000	62160.000	┬62030.000	93.0%	297.900	┬306.100
2	13:59:08	304.000	┬3129.000	2.948	┬63660.000	61860.000	┬61320.000	94.0%	302.800	┬308.500
3	13:59:35	298.400	┬3150.000	17.550	┬64310.000	62000.000	┬62460.000	92.2%	302.000	┬309.000
x		100.407%	┬104.963%	11.070	┬106.852%	62010.000	┬103.223%	93.1%	100.307%	┬102.625%
σ		n/a	┬n/a	7.437	┬n/a	148.900	┬n/a	0.9%	n/a	┬n/a
%RSD		0.942	┬0.612	67.200	┬0.608	0.240	┬0.931	1.0	0.870	┬0.511
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	306.100	-926.200	┬60730.000	┬289.600	┬61140.000	┬58880.000	┬291.500	293.000	283.500
2	13:59:08	306.000	-1411.000	┬61370.000	┬291.900	┬61730.000	┬59560.000	┬294.200	293.000	280.700
3	13:59:35	310.500	-272.700	┬61880.000	┬298.000	┬62670.000	┬60570.000	┬294.500	287.900	284.900
x		102.512%	-869.900	┬61330.000	┬97.722%	┬61850.000	┬99.450%	┬97.798%	97.097%	283.000
σ		n/a	571.100	┬577.100	┬n/a	┬771.400	┬n/a	┬n/a	n/a	2.109
%RSD		0.836	65.660	┬0.941	┬1.491	┬1.247	┬1.432	┬0.557	1.015	0.745
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	277.700	286.300	282.800	281.400	279.500	298.700	280.200	1.112	0.561
2	13:59:08	274.900	278.700	286.600	282.300	278.900	295.500	278.800	1.039	0.241
3	13:59:35	276.700	282.200	285.300	284.100	283.200	301.500	283.200	1.136	0.957
x		276.400	94.141%	94.975%	282.600	280.500	99.516%	280.700	1.096	0.587
σ		1.435	n/a	n/a	1.387	2.301	n/a	2.281	0.050	0.359
%RSD		0.519	1.341	0.678	0.491	0.820	0.999	0.813	4.578	61.160
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	1296.000	291.800	0.426	┬311.600	92.5%	307.100	309.500	310.800	287.400
2	13:59:08	1257.000	284.300	0.637	┬309.700	94.0%	309.700	312.200	318.700	290.700
3	13:59:35	1275.000	288.900	0.720	┬313.300	92.4%	310.800	312.600	314.700	293.700
x		1276.000	96.110%	0.595	┬103.846%	93.0%	103.065%	103.808%	314.700	290.600
σ		19.340	n/a	0.152	┬n/a	0.9%	n/a	n/a	3.969	3.115
%RSD		1.515	1.314	25.530	┬0.590	1.0	0.610	0.536	1.261	1.072
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	313.600	307.200	288.900	285.300	91.8%	298.100	303.400	317.400	302.500
2	13:59:08	315.900	311.200	290.200	287.800	91.7%	305.300	308.600	321.900	304.100
3	13:59:35	313.500	309.200	293.200	290.000	91.6%	306.400	308.900	322.200	305.700
x		104.774%	309.200	290.800	95.891%	91.7%	101.088%	102.324%	320.500	101.366%
σ		n/a	2.040	2.224	n/a	0.1%	n/a	n/a	2.680	n/a
%RSD		0.425	0.660	0.765	0.824	0.1	1.480	1.003	0.836	0.520
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	13:58:41	303.100	300.400	94.0%	304.600	┬291.600	┬289.000	295.600	┬288.800	95.9%
2	13:59:08	307.000	305.300	95.3%	305.800	┬292.000	┬289.200	298.700	┬290.500	98.8%
3	13:59:35	308.700	305.300	95.1%	304.300	┬292.700	┬292.100	302.600	┬293.400	100.9%
x		102.080%	101.225%	94.8%	304.900	┬97.369%	┬96.702%	99.657%	┬96.970%	98.5%
σ		n/a	n/a	0.7%	0.793	┬n/a	┬n/a	n/a	┬n/a	2.5%
%RSD		0.932	0.936	0.8	0.260	┬0.188	┬0.589	1.172	┬0.811	2.5

CCB IM9061-02 11/16/2018 14:04:09 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	100.1%	0.017	1.541	1.190	-3.837	1.413	0.707	0.585	0.743
2	14:05:03	103.9%	0.007	0.455	0.840	-6.742	1.319	0.645	0.752	0.676
3	14:05:29	102.2%	0.003	0.491	0.790	-7.379	1.403	0.755	0.861	0.799
x		102.1%	0.009	0.829	0.940	-5.986	1.378	0.702	0.733	0.740
σ		1.9%	0.007	0.617	0.218	1.888	0.052	0.055	0.139	0.061
%RSD		1.9	78.480	74.440	23.170	31.540	3.747	7.856	18.960	8.304
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	0.134	1.097	-150.400	4.478	1.632	0.407	94.0%	0.101	-0.090
2	14:05:03	0.139	0.649	-150.200	2.385	1.624	0.151	94.0%	0.075	-0.092
3	14:05:29	0.144	0.337	-146.400	2.602	1.186	0.659	96.1%	0.157	-0.079
x		0.139	0.694	-149.000	3.155	1.481	0.406	94.7%	0.111	-0.087
σ		0.005	0.382	2.280	1.151	0.255	0.254	1.2%	0.042	0.007
%RSD		3.736	55.080	1.530	36.480	17.210	62.560	1.3	37.590	7.854
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	-0.003	-371.400	8.445	0.085	9.577	7.107	0.005	0.004	-0.079
2	14:05:03	-0.012	-395.100	7.269	0.097	7.870	6.670	0.009	0.011	-0.065
3	14:05:29	0.004	-385.300	7.104	0.085	8.527	6.082	0.005	0.004	-0.030
x		-0.004	-384.000	7.606	0.089	8.658	6.619	0.007	0.006	-0.058
σ		0.008	11.910	0.731	0.007	0.861	0.515	0.002	0.004	0.026
%RSD		203.300	3.101	9.614	7.650	9.943	7.773	30.830	58.380	44.060
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	-0.006	0.002	-0.101	-0.271	-0.063	0.147	0.116	0.324	-0.261
2	14:05:03	0.003	-0.011	-0.064	-0.256	-0.044	0.149	0.090	0.256	0.189
3	14:05:29	-0.008	0.011	-0.046	-0.100	-0.076	-0.057	0.482	0.266	0.862
x		-0.004	0.001	-0.070	-0.209	-0.061	0.080	0.230	0.282	0.264
σ		0.006	0.011	0.028	0.094	0.016	0.118	0.219	0.037	0.565
%RSD		163.000	1364.000	39.680	45.180	26.460	148.800	95.610	13.050	214.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	1.963	0.495	-0.085	0.003	98.3%	0.331	0.350	0.341	-0.751
2	14:05:03	1.004	0.256	-0.625	0.002	98.3%	0.256	0.264	0.261	-0.108
3	14:05:29	-0.546	-0.070	1.329	0.003	99.5%	0.236	0.325	0.226	-0.724
x		0.807	0.227	0.206	0.003	98.7%	0.275	0.313	0.276	-0.528
σ		1.266	0.283	1.009	0.001	0.7%	0.050	0.044	0.059	0.364
%RSD		156.800	124.700	488.900	25.120	0.7	18.220	14.120	21.450	68.970
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	0.006	0.009	0.001	0.010	99.1%	0.330	0.486	0.290	0.260
2	14:05:03	0.016	0.008	0.001	0.008	99.0%	0.301	0.456	0.284	0.265
3	14:05:29	0.006	0.011	-0.001	0.005	100.5%	0.303	0.409	0.250	0.246
x		0.009	0.009	0.000	0.008	99.6%	0.311	0.451	0.275	0.257
σ		0.005	0.002	0.001	0.002	0.8%	0.016	0.039	0.021	0.010
%RSD		58.820	19.820	446.000	31.100	0.9	5.167	8.584	7.773	3.842
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:04:36	-0.000	0.010	101.4%	0.009	0.008	0.004	0.003	0.002	96.3%
2	14:05:03	-0.000	0.008	101.7%	0.009	0.006	0.008	0.002	0.005	100.6%
3	14:05:29	0.022	0.014	103.5%	0.012	0.010	0.008	0.006	0.005	103.4%
x		0.007	0.010	102.2%	0.010	0.008	0.007	0.003	0.004	100.1%
σ		0.013	0.003	1.1%	0.002	0.002	0.002	0.002	0.002	3.6%
%RSD		173.800	29.870	1.1	18.060	22.490	31.630	64.680	44.600	3.6

TJ26010-001 11/16/2018 14:10:00

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	104.2%	-0.002	0.178	0.313	8.755	7.187	2.444	2.648	2.414
2	14:10:54	104.2%	0.007	-0.056	-0.039	3.745	7.138	2.512	2.679	2.746
3	14:11:21	105.6%	0.003	0.108	-0.023	0.758	6.687	2.521	2.864	2.313
x		104.7%	0.003	0.076	0.084	4.419	7.004	2.492	2.730	2.491
σ		0.8%	0.004	0.120	0.199	4.041	0.276	0.042	0.117	0.227
%RSD		0.8	153.000	156.600	238.300	91.440	3.937	1.701	4.273	9.093
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	3.599	12.080	┬52640.000	0.204	7.943	11.430	92.5%	0.163	-0.114
2	14:10:54	3.639	12.370	┬51710.000	0.049	7.730	9.903	94.5%	0.160	0.087
3	14:11:21	3.530	12.340	┬51320.000	0.710	9.925	10.260	95.3%	0.116	0.170
x		3.589	12.260	┬51890.000	0.321	8.532	10.530	94.1%	0.146	0.048
σ		0.055	0.162	┬678.200	0.345	1.211	0.797	1.4%	0.026	0.146
%RSD		1.539	1.318	┬1.307	107.500	14.190	7.565	1.5	18.010	305.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	0.330	2781.000	11.630	0.109	10.070	6.415	0.007	0.122	0.391
2	14:10:54	0.352	3089.000	11.340	0.098	7.134	5.169	0.006	0.093	0.439
3	14:11:21	0.332	3262.000	13.300	0.101	7.293	4.414	0.007	0.122	0.388
x		0.338	3044.000	12.090	0.103	8.167	5.332	0.007	0.112	0.406
σ		0.012	243.800	1.055	0.006	1.653	1.011	0.000	0.017	0.028
%RSD		3.651	8.010	8.723	5.538	20.240	18.960	6.359	15.170	6.982
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	0.769	0.718	2.178	2.285	2.086	0.156	-0.116	1.967	2.123
2	14:10:54	0.762	0.687	2.024	2.322	2.001	0.130	-0.041	2.574	2.580
3	14:11:21	0.716	0.755	2.056	1.958	2.087	0.026	-0.030	2.916	2.546
x		0.749	0.720	2.086	2.188	2.058	0.104	-0.062	2.485	2.417
σ		0.029	0.034	0.081	0.200	0.049	0.069	0.047	0.481	0.254
%RSD		3.845	4.764	3.896	9.153	2.402	66.500	74.870	19.350	10.530
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	0.939	0.241	-0.571	0.040	96.9%	0.121	0.104	0.159	-0.553
2	14:10:54	-0.340	-0.040	0.763	0.041	97.4%	0.124	0.083	0.129	-0.390
3	14:11:21	-0.202	-0.016	0.765	0.043	97.2%	0.102	0.123	0.155	-0.883
x		0.132	0.062	0.319	0.041	97.1%	0.116	0.103	0.148	-0.609
σ		0.702	0.156	0.771	0.001	0.3%	0.012	0.020	0.017	0.251
%RSD		530.600	252.700	241.800	3.044	0.3	10.080	19.430	11.170	41.280
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	0.003	0.003	-0.001	0.006	98.5%	0.266	0.408	0.256	0.258
2	14:10:54	0.007	0.002	0.001	0.003	98.5%	0.303	0.420	0.268	0.225
3	14:11:21	0.003	0.006	0.003	0.008	100.0%	0.273	0.406	0.267	0.232
x		0.004	0.004	0.001	0.006	99.0%	0.281	0.411	0.264	0.238
σ		0.003	0.002	0.002	0.002	0.9%	0.020	0.008	0.007	0.017
%RSD		57.260	62.820	142.700	39.880	0.9	6.996	1.841	2.471	7.334
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:10:27	0.082	0.087	102.3%	-0.008	-0.008	0.012	0.002	0.007	129.1%
2	14:10:54	0.113	0.082	103.5%	-0.010	-0.011	0.008	0.010	0.008	131.9%
3	14:11:21	0.081	0.085	103.4%	-0.014	-0.013	0.007	0.006	0.007	132.0%
x		0.092	0.085	103.0%	-0.010	-0.011	0.009	0.006	0.007	131.0%
σ		0.018	0.003	0.7%	0.003	0.003	0.003	0.004	0.001	1.7%
%RSD		19.530	3.132	0.7	30.690	25.120	30.370	60.110	8.848	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	103.1%	-0.002	0.012	-0.066	12.140	174.300	10.570	10.370	10.120
2	14:16:45	106.3%	0.003	-0.202	-0.242	12.160	171.500	10.600	10.910	11.050
3	14:17:12	105.8%	0.008	0.244	-0.092	13.490	176.600	10.790	10.380	10.640
x		105.1%	0.003	0.018	-0.133	12.600	174.100	10.650	10.550	10.610
σ		1.7%	0.005	0.223	0.095	0.775	2.527	0.122	0.309	0.468
%RSD		1.6	152.900	1242.000	70.900	6.156	1.452	1.148	2.930	4.413

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	27.100	45.310	T 51300.000	37.630	92.870	92.320	96.0%	0.566	-0.152
2	14:16:45	26.980	T 41.460	T 51900.000	35.520	85.810	91.030	95.7%	0.476	-0.043
3	14:17:12	27.320	44.850	T 52380.000	35.750	89.900	89.410	95.2%	0.445	0.263
x		27.130	T 43.870	T 51860.000	36.300	89.530	90.920	95.6%	0.496	0.023
σ		0.169	T 2.100	T 544.600	1.159	3.546	1.457	0.4%	0.063	0.215
%RSD		0.622	T 4.787	T 1.050	3.192	3.961	1.603	0.5	12.700	942.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	1.480	3523.000	227.800	2.129	241.500	218.600	0.030	0.319	0.666
2	14:16:45	1.508	3651.000	229.200	2.145	T 236.100	218.700	0.030	0.356	0.278
3	14:17:12	1.449	3638.000	230.600	2.106	T 232.600	214.700	0.030	0.386	0.409
x		1.479	3604.000	229.200	2.127	T 236.700	217.300	0.030	0.353	0.451
σ		0.029	70.190	1.418	0.020	T 4.468	2.260	0.000	0.034	0.197
%RSD		1.987	1.947	0.619	0.926	T 1.887	1.040	1.308	9.481	43.670

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	0.705	0.721	1.460	1.692	1.557	-0.050	-0.240	2.608	3.004
2	14:16:45	0.753	0.699	1.488	1.868	1.343	0.073	0.123	2.283	2.145
3	14:17:12	0.722	0.650	1.385	1.634	1.512	0.004	0.156	2.580	2.642
x		0.726	0.690	1.444	1.731	1.471	0.009	0.013	2.490	2.597
σ		0.024	0.036	0.053	0.122	0.113	0.062	0.220	0.180	0.431
%RSD		3.347	5.280	3.702	7.029	7.689	697.300	1662.000	7.235	16.590

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	0.550	0.140	-0.391	0.245	99.1%	0.572	0.673	0.586	-1.237
2	14:16:45	0.588	0.164	0.452	0.257	98.1%	0.531	0.688	0.634	-0.384
3	14:17:12	-0.381	-0.066	-0.103	0.280	98.6%	0.600	0.569	0.604	-0.390
x		0.252	0.079	-0.014	0.261	98.6%	0.568	0.643	0.608	-0.670
σ		0.549	0.126	0.429	0.017	0.5%	0.035	0.065	0.025	0.491
%RSD		217.400	159.000	3072.000	6.696	0.5	6.079	10.110	4.051	73.210

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	0.000	0.001	-0.002	0.001	98.3%	0.990	1.364	0.157	0.135
2	14:16:45	0.000	0.001	0.005	0.022	99.6%	1.010	1.287	0.170	0.129
3	14:17:12	-0.000	0.003	-0.002	-0.008	100.0%	0.979	1.378	0.175	0.166
x		0.000	0.002	0.000	0.005	99.3%	0.993	1.343	0.167	0.143
σ		0.000	0.001	0.004	0.016	0.9%	0.016	0.049	0.009	0.020
%RSD		129.400	56.430	2137.000	300.900	0.9	1.598	3.628	5.586	13.810

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:16:18	0.150	0.184	102.6%	-0.015	-0.016	0.026	0.035	0.028	127.1%
2	14:16:45	0.229	0.196	104.0%	-0.012	-0.016	0.027	0.024	0.025	129.6%
3	14:17:12	0.210	0.199	103.1%	-0.013	-0.016	0.030	0.027	0.026	129.2%
x		0.196	0.193	103.3%	-0.013	-0.016	0.028	0.029	0.026	128.7%
σ		0.041	0.008	0.7%	0.001	0.000	0.002	0.005	0.002	1.4%
%RSD		20.980	4.112	0.7	10.160	0.710	7.280	18.870	7.144	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	85.3%	0.039	M 1129.000	TM 1234.000	206.900	TM 313700.000	T 8739.000	T 8684.000	T 8819.000
2	14:22:38	86.0%	0.035	M 1135.000	TM 1236.000	204.300	TM 310400.000	T 8571.000	T 8572.000	T 8656.000
3	14:23:05	85.7%	0.029	M 1125.000	TM 1252.000	197.800	TM 310500.000	T 8498.000	T 8539.000	T 8779.000
x		85.7%	0.034	M 1130.000	TM 1241.000	203.000	TM 311600.000	T 8603.000	T 8598.000	T 8751.000
σ		0.3%	0.005	M 5.043	TM 9.620	4.663	TM 1894.000	T 123.500	T 75.900	T 85.380
%RSD		0.4	15.660	M 0.446	TM 0.776	2.298	TM 0.608	T 1.435	T 0.883	T 0.976

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	63.280	T 3207.000	T 21340.000	TM 117400.000	8568.000	8593.000	82.8%	125.500	37.320
2	14:22:38	62.270	T 3181.000	T 21050.000	TM 118200.000	8384.000	8366.000	84.5%	123.800	36.020
3	14:23:05	61.910	T 3157.000	T 20740.000	TM 116600.000	8110.000	8234.000	85.3%	121.800	35.100
x		62.490	T 3182.000	T 21040.000	TM 117400.000	8354.000	8398.000	84.2%	123.700	36.150
σ		0.708	T 24.600	T 299.400	TM 786.700	230.500	181.400	1.3%	1.863	1.116
%RSD		1.133	T 0.773	T 1.423	TM 0.670	2.759	2.160	1.5	1.506	3.087

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	64.580	1877.000	409.200	34.720	T 407.400	391.700	9.818	37.290	42.420
2	14:22:38	62.190	2054.000	407.400	33.630	T 388.900	381.400	9.767	35.750	45.890
3	14:23:05	60.990	2427.000	400.100	33.430	T 386.200	368.600	9.612	35.800	45.670
x		62.590	2119.000	405.600	33.930	T 394.200	380.600	9.733	36.280	44.660
σ		1.830	280.600	4.826	0.697	T 11.560	11.540	0.107	0.873	1.945
%RSD		2.924	13.240	1.190	2.053	T 2.934	3.033	1.103	2.405	4.356

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	15.750	14.760	17.330	17.670	16.840	76.680	1.339	1610.000	1616.000
2	14:22:38	15.350	15.010	16.790	17.750	16.320	74.280	1.433	1609.000	1639.000
3	14:23:05	15.220	14.420	16.070	17.220	16.460	72.870	1.361	1593.000	1604.000
x		15.440	14.730	16.730	17.550	16.540	74.610	1.378	1604.000	1620.000
σ		0.277	0.293	0.634	0.285	0.271	1.927	0.049	9.402	17.730
%RSD		1.794	1.986	3.791	1.621	1.637	2.583	3.546	0.586	1.094

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	10.200	0.728	1.557	71.460	89.0%	16.200	16.490	17.120	40.260
2	14:22:38	10.660	0.789	2.162	72.630	88.6%	16.500	16.460	16.560	39.100
3	14:23:05	15.600	1.975	2.138	71.740	88.8%	16.030	16.400	16.400	37.000
x		12.150	1.164	1.952	71.940	88.8%	16.240	16.450	16.690	38.790
σ		2.995	0.703	0.342	0.612	0.2%	0.238	0.045	0.376	1.653
%RSD		24.650	60.390	17.540	0.851	0.2	1.466	0.274	2.252	4.261

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	0.245	0.038	0.062	0.054	83.2%	11.160	16.210	12.210	11.190
2	14:22:38	0.232	0.045	0.062	0.020	84.1%	11.230	16.280	12.270	11.100
3	14:23:05	0.212	0.037	0.104	0.024	84.3%	11.330	16.000	11.910	11.260
x		0.230	0.040	0.076	0.033	83.9%	11.240	16.160	12.130	11.180
σ		0.017	0.004	0.024	0.019	0.6%	0.086	0.147	0.194	0.079
%RSD		7.230	11.180	31.860	57.280	0.7	0.763	0.910	1.597	0.704

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:22:11	37.070	36.130	91.4%	-0.013	-0.014	0.608	0.514	0.520	102.5%
2	14:22:38	37.010	36.730	91.8%	-0.010	-0.014	0.581	0.512	0.527	102.6%
3	14:23:05	36.410	35.830	91.9%	-0.013	-0.014	0.588	0.518	0.536	103.8%
x		36.830	36.230	91.7%	-0.012	-0.014	0.592	0.515	0.528	103.0%
σ		0.364	0.459	0.3%	0.002	0.000	0.014	0.003	0.008	0.7%
%RSD		0.989	1.266	0.3	15.020	1.050	2.332	0.643	1.520	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	82.8%	0.018	37.150	40.360	-27.790	TM 646600.000	T 1081.000	1095.000	1142.000
2	14:28:32	85.0%	0.010	37.360	39.620	-29.400	TM 638300.000	T 1070.000	1081.000	1139.000
3	14:28:59	85.8%	0.022	35.620	37.620	-28.260	TM 633500.000	T 1065.000	1078.000	1123.000
x		84.5%	0.017	36.710	39.200	-28.490	TM 639500.000	T 1072.000	1085.000	1134.000
σ		1.6%	0.006	0.947	1.414	0.830	TM 6640.000	T 8.071	9.138	10.110
%RSD		1.8	34.920	2.579	3.608	2.913	TM 1.038	T 0.753	0.843	0.892
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	TM 2210.000	T 2926.000	T 89160.000	T 74600.000	M 165900.000	TM 163600.000	79.9%	29.800	9.181
2	14:28:32	TM 2217.000	T 2860.000	T 89390.000	T 72810.000	M 162400.000	TM 163400.000	81.7%	T 35.790	8.820
3	14:28:59	TM 2207.000	T 2806.000	T 88930.000	T 73050.000	TM 167100.000	TM 162300.000	82.8%	17.940	8.531
x		TM 2211.000	T 2864.000	T 89160.000	T 73490.000	TM 165200.000	TM 163100.000	81.5%	T 27.840	8.844
σ		TM 4.803	T 60.010	T 229.000	T 972.800	TM 2458.000	TM 675.800	1.5%	T 9.088	0.326
%RSD		TM 0.217	T 2.095	T 0.257	T 1.324	TM 1.488	TM 0.414	1.8	T 32.640	3.682
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	3.162	3698.000	966.100	70.260	T 1003.000	1284.000	0.615	2.452	44.690
2	14:28:32	3.099	3812.000	956.300	68.810	T 993.600	1257.000	0.626	2.540	40.710
3	14:28:59	3.162	4177.000	941.500	68.260	T 981.900	1245.000	0.606	2.426	40.100
x		3.141	3896.000	954.600	69.110	T 992.900	1262.000	0.616	2.473	41.830
σ		0.037	250.300	12.400	1.036	T 10.550	19.660	0.010	0.060	2.494
%RSD		1.169	6.425	1.298	1.499	T 1.062	1.558	1.676	2.428	5.962
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	9.510	5.244	35.550	38.070	36.970	6.434	1.898	97.840	97.670
2	14:28:32	9.213	5.057	35.140	39.560	37.930	6.249	1.805	99.240	98.370
3	14:28:59	9.110	5.291	35.860	36.460	37.200	5.856	1.784	96.990	98.260
x		9.278	5.197	35.520	38.030	37.370	6.179	1.829	98.020	98.100
σ		0.208	0.124	0.364	1.548	0.500	0.295	0.061	1.135	0.376
%RSD		2.238	2.380	1.024	4.070	1.339	4.780	3.308	1.158	0.383
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	5.093	1.204	1.961	TM 2011.000	85.2%	6.461	6.502	6.854	29.760
2	14:28:32	2.510	0.589	3.008	TM 2006.000	85.5%	6.412	6.815	6.781	37.130
3	14:28:59	3.546	0.827	3.099	TM 2001.000	86.2%	6.736	6.725	6.850	29.940
x		3.716	0.873	2.689	TM 2006.000	85.6%	6.536	6.681	6.829	32.280
σ		1.300	0.310	0.632	TM 5.230	0.5%	0.175	0.161	0.041	4.205
%RSD		34.970	35.500	23.500	TM 0.261	0.6	2.676	2.414	0.598	13.030
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	0.006	0.013	0.044	0.051	82.2%	0.444	0.613	1.276	1.200
2	14:28:32	0.008	0.010	0.040	0.048	82.0%	0.474	0.664	1.258	1.198
3	14:28:59	0.007	0.009	0.017	0.027	82.9%	0.529	0.665	1.241	1.128
x		0.007	0.011	0.033	0.042	82.3%	0.482	0.647	1.258	1.175
σ		0.001	0.002	0.015	0.013	0.5%	0.043	0.030	0.018	0.041
%RSD		16.330	16.870	44.000	31.570	0.6	8.937	4.634	1.407	3.449
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:28:04	149.100	147.800	87.8%	0.002	-0.000	2.531	2.443	2.479	102.9%
2	14:28:32	149.000	149.300	88.4%	0.003	0.002	2.595	2.423	2.498	101.9%
3	14:28:59	149.800	148.900	90.9%	0.005	-0.003	2.493	2.378	2.481	102.3%
x		149.300	148.600	89.0%	0.004	-0.001	2.540	2.415	2.486	102.4%
σ		0.445	0.797	1.7%	0.001	0.002	0.051	0.033	0.010	0.5%
%RSD		0.298	0.536	1.9	39.910	373.400	2.017	1.380	0.406	0.5

TJ29026-002 11/16/2018 14:33:31

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	102.3%	0.094	28.750	31.030	119.100	T 37210.000	T 6461.000	T 6520.000	T 6691.000
2	14:34:26	101.7%	0.123	27.280	30.170	114.200	T 37070.000	T 6454.000	T 6469.000	T 6711.000
3	14:34:53	102.9%	0.106	28.100	29.840	110.300	T 36750.000	T 6398.000	T 6505.000	T 6660.000
x		102.3%	0.107	28.040	30.350	114.500	T 37010.000	T 6438.000	T 6498.000	T 6687.000
σ		0.6%	0.014	0.735	0.614	4.418	T 233.700	T 34.670	T 26.280	T 25.620
%RSD		0.6	13.370	2.622	2.022	3.857	T 0.632	T 0.539	T 0.404	T 0.383

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	TM 3602.000	T 8308.000	T 52180.000	T 30070.000	TM 232900.000	TM 225400.000	94.2%	238.200	24.620
2	14:34:26	TM 3588.000	T 8407.000	T 52400.000	T 30580.000	TM 237400.000	TM 224900.000	93.4%	241.200	24.990
3	14:34:53	TM 3580.000	T 8303.000	T 52530.000	T 30390.000	TM 230000.000	TM 224100.000	95.2%	236.100	24.370
x		TM 3590.000	T 8339.000	T 52370.000	T 30340.000	TM 233400.000	TM 224800.000	94.3%	238.500	24.660
σ		TM 10.990	T 58.920	T 177.200	T 257.900	TM 3719.000	TM 649.700	0.9%	2.600	0.313
%RSD		TM 0.306	T 0.707	T 0.338	T 0.850	TM 1.593	TM 0.289	0.9	1.090	1.271

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	19.770	5055.000	T 5755.000	T 381.600	T 5944.000	6325.000	3.627	14.470	16.550
2	14:34:26	19.820	4974.000	T 5732.000	T 383.900	T 5968.000	6356.000	3.470	14.180	16.200
3	14:34:53	19.520	5013.000	T 5682.000	T 376.000	T 5775.000	6242.000	3.578	13.920	15.570
x		19.710	5014.000	T 5723.000	T 380.500	T 5896.000	6308.000	3.558	14.190	16.110
σ		0.159	40.590	T 37.330	T 4.064	T 104.900	59.050	0.080	0.276	0.498
%RSD		0.807	0.809	T 0.652	T 1.068	T 1.779	0.936	2.256	1.945	3.091

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	53.330	54.270	324.500	296.000	306.600	2.327	0.463	129.300	133.200
2	14:34:26	53.850	55.210	324.800	301.000	308.800	3.148	0.197	132.700	132.300
3	14:34:53	53.260	53.970	320.500	293.200	303.100	2.209	0.808	131.000	129.800
x		53.480	54.480	323.300	296.700	306.200	2.561	0.489	131.000	131.800
σ		0.321	0.646	2.385	3.985	2.897	0.511	0.306	1.715	1.780
%RSD		0.601	1.185	0.738	1.343	0.946	19.970	62.640	1.309	1.351

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	4.233	0.961	2.836	TM 641.900	99.1%	2.562	2.533	2.675	16.490
2	14:34:26	3.426	0.741	1.098	TM 644.500	99.2%	2.486	2.532	2.514	11.200
3	14:34:53	4.602	0.991	0.802	TM 641.400	99.5%	2.589	2.437	2.568	13.730
x		4.087	0.898	1.579	TM 642.600	99.3%	2.546	2.501	2.586	13.810
σ		0.602	0.136	1.099	TM 1.679	0.2%	0.054	0.055	0.082	2.646
%RSD		14.720	15.190	69.590	TM 0.261	0.2	2.103	2.204	3.172	19.160

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	0.036	0.042	0.152	0.168	94.9%	1.286	1.727	1.603	1.489
2	14:34:26	0.035	0.050	0.166	0.155	95.3%	1.334	1.769	1.620	1.496
3	14:34:53	0.042	0.048	0.184	0.168	94.7%	1.391	1.753	1.594	1.473
x		0.038	0.047	0.167	0.164	94.9%	1.337	1.749	1.606	1.486
σ		0.004	0.004	0.016	0.007	0.3%	0.053	0.021	0.013	0.012
%RSD		9.904	9.525	9.456	4.427	0.3	3.962	1.214	0.822	0.800

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:33:58	76.950	75.440	100.7%	0.047	0.045	33.660	31.920	32.940	120.5%
2	14:34:26	76.390	75.600	102.3%	0.049	0.046	33.200	31.580	32.550	120.7%
3	14:34:53	77.010	76.680	102.4%	0.048	0.044	34.030	32.080	33.110	122.3%
x		76.790	75.910	101.8%	0.048	0.045	33.630	31.860	32.870	121.2%
σ		0.341	0.676	1.0%	0.001	0.001	0.413	0.255	0.286	0.9%
%RSD		0.443	0.891	1.0	1.906	2.171	1.227	0.800	0.872	0.8

TQ87940-001 11/16/2018 14:39:26 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	106.9%	-0.002	1.454	1.328	-0.482	38.870	2.669	2.497	2.593
2	14:40:20	107.4%	-0.002	1.023	1.041	-0.559	68.460	3.591	3.523	4.089
3	14:40:47	107.5%	-0.002	1.004	1.044	-2.843	64.690	3.848	3.717	3.559
x		107.3%	-0.002	1.160	1.137	-1.295	57.340	3.369	3.246	3.413
σ		0.3%	0.000	0.254	0.165	1.341	16.110	0.620	0.656	0.759
%RSD		0.3	0.000	21.910	14.480	103.600	28.090	18.400	20.200	22.230
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	2.251	3.659	T 54480.000	7.010	41.540	34.770	95.0%	0.142	0.049
2	14:40:20	2.864	4.341	T 53660.000	12.850	50.070	63.960	96.8%	0.155	0.301
3	14:40:47	2.874	4.632	T 53160.000	10.460	60.370	60.990	T 98.3%	0.136	-0.002
x		2.663	4.211	T 53770.000	10.110	50.660	53.240	T 96.7%	0.144	0.116
σ		0.357	0.499	T 665.000	2.936	9.431	16.060	T 1.7%	0.010	0.162
%RSD		13.400	11.860	T 1.237	29.050	18.620	30.170	T 1.7	6.758	139.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	0.186	7074.000	2.816	0.036	5.555	-0.695	0.003	0.010	0.884
2	14:40:20	0.230	7093.000	3.838	0.066	4.373	0.350	0.001	0.021	1.181
3	14:40:47	0.202	7317.000	3.841	0.081	2.638	-0.223	0.005	0.019	0.580
x		0.206	7161.000	3.498	0.061	4.188	-0.190	0.003	0.017	0.882
σ		0.022	135.200	0.591	0.023	1.467	0.523	0.002	0.005	0.301
%RSD		10.840	1.887	16.900	37.250	35.030	276.200	71.640	32.880	34.120
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	0.183	0.147	0.868	1.463	0.730	0.488	0.124	5.052	4.907
2	14:40:20	0.174	0.134	0.979	1.631	0.862	0.030	0.136	4.995	4.314
3	14:40:47	0.169	0.194	0.985	1.567	0.841	-0.185	0.286	4.495	4.675
x		0.176	0.158	0.944	1.554	0.811	0.111	0.182	4.847	4.632
σ		0.007	0.032	0.066	0.085	0.071	0.344	0.090	0.306	0.298
%RSD		4.020	19.940	6.991	5.449	8.759	309.300	49.550	6.320	6.445
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	0.451	0.112	-0.629	0.082	98.3%	-0.009	0.006	-0.004	-1.170
2	14:40:20	0.837	0.167	-1.452	0.187	98.5%	-0.003	0.028	0.023	-0.564
3	14:40:47	1.140	0.245	0.054	0.198	97.5%	0.009	0.006	0.030	-0.768
x		0.809	0.174	-0.675	0.155	98.1%	-0.001	0.013	0.016	-0.834
σ		0.346	0.067	0.754	0.064	0.5%	0.009	0.013	0.018	0.308
%RSD		42.710	38.430	111.600	41.280	0.5	759.300	96.210	109.900	37.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	0.001	0.001	0.006	0.002	100.0%	0.103	0.145	0.056	0.050
2	14:40:20	0.000	0.004	0.007	0.001	100.3%	0.080	0.154	0.055	0.076
3	14:40:47	0.001	0.004	0.011	-0.002	100.3%	0.090	0.201	0.098	0.074
x		0.001	0.003	0.008	0.001	100.2%	0.091	0.167	0.070	0.067
σ		0.000	0.001	0.003	0.002	0.2%	0.012	0.030	0.025	0.014
%RSD		35.300	50.640	34.740	337.200	0.2	12.630	18.010	35.120	21.580
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:39:53	0.028	0.023	104.0%	-0.016	-0.018	0.006	0.007	0.005	121.6%
2	14:40:20	0.047	0.045	103.8%	-0.015	-0.017	0.015	0.010	0.011	123.3%
3	14:40:47	0.058	0.042	105.7%	-0.017	-0.017	0.012	0.013	0.011	125.5%
x		0.044	0.037	104.5%	-0.016	-0.017	0.011	0.010	0.009	123.4%
σ		0.015	0.012	1.1%	0.001	0.001	0.005	0.003	0.003	2.0%
%RSD		34.450	31.920	1.0	4.460	3.103	44.760	28.790	36.890	1.6

TQ87940-002 11/16/2018 14:45:19 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	104.9%	91.520	91.990	93.260	1.086	T 1059.000	T 1003.000	1013.000	1029.000
2	14:46:12	103.6%	91.080	89.390	88.220	-0.905	T 1041.000	T 989.300	1016.000	1039.000
3	14:46:39	103.3%	89.570	89.440	90.710	-4.633	T 1044.000	T 976.200	1001.000	1018.000
x		103.9%	90.721%	90.270	90.727%	-1.484	T 104.790%	T 989.500	1010.000	102.898%
σ		0.9%	n/a	1.486	n/a	2.903	T n/a	T 13.440	7.593	n/a
%RSD		0.8	1.129	1.646	2.779	195.600	T 0.904	T 1.358	0.752	1.039
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	99.930	T 838.100	T 52380.000	T 982.100	1113.000	1051.000	95.2%	98.140	99.920
2	14:46:12	98.740	T 844.200	T 52350.000	T 1004.000	1089.000	1069.000	95.4%	99.300	98.090
3	14:46:39	96.230	T 847.400	T 51630.000	T 1010.000	1119.000	1043.000	T 97.3%	96.500	97.230
x		98.300%	T 84.325%	T 52120.000	T 99.866%	1107.000	105.432%	T 96.0%	97.982%	98.413%
σ		n/a	T n/a	T 425.700	T n/a	16.040	n/a	T 1.2%	n/a	n/a
%RSD		1.918	T 0.564	T 0.817	T 1.474	1.449	1.248	T 1.2	1.438	1.400
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	98.380	9490.000	1097.000	98.400	T 1036.000	999.000	98.360	92.940	96.350
2	14:46:12	96.790	10030.000	1063.000	96.680	T 1019.000	987.300	95.330	92.110	95.210
3	14:46:39	95.160	9864.000	1047.000	96.070	T 1013.000	981.400	93.970	91.160	90.440
x		96.777%	9795.000	1069.000	97.050%	T 1022.000	98.922%	95.885%	92.072%	94.000
σ		n/a	276.400	25.760	n/a	T 11.850	n/a	n/a	n/a	3.132
%RSD		1.663	2.822	2.410	1.241	T 1.158	0.906	2.344	0.970	3.331
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	94.350	98.980	96.490	100.400	98.330	95.600	99.980	3.942	3.209
2	14:46:12	92.620	95.400	95.890	99.220	97.720	95.410	97.320	3.458	3.298
3	14:46:39	92.770	96.360	96.030	99.700	97.080	94.440	94.320	3.578	3.203
x		93.240	96.914%	96.137%	99.790	97.710	95.149%	97.210	3.659	3.237
σ		0.959	n/a	n/a	0.612	0.627	n/a	2.829	0.252	0.053
%RSD		1.029	1.911	0.328	0.614	0.641	0.655	2.910	6.886	1.641
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	419.000	95.550	2.185	99.190	96.2%	94.580	95.860	91.680	97.730
2	14:46:12	435.100	98.990	0.677	99.900	96.1%	94.120	95.610	91.800	96.900
3	14:46:39	430.200	96.490	-0.172	99.890	96.4%	93.640	95.120	92.430	98.220
x		428.100	97.010%	0.897	99.660	96.2%	94.110	95.532%	91.970	97.620
σ		8.296	n/a	1.194	0.407	0.2%	0.469	n/a	0.399	0.669
%RSD		1.938	1.831	133.100	0.409	0.2	0.498	0.395	0.434	0.686
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	101.000	98.430	95.730	92.410	98.4%	96.090	93.560	97.590	93.190
2	14:46:12	101.500	99.990	97.170	93.810	97.4%	96.990	95.800	98.720	93.500
3	14:46:39	102.300	100.100	95.990	93.380	98.4%	95.250	94.120	98.180	92.690
x		101.590%	99.500	96.300	93.199%	98.1%	96.110	94.496%	98.160	93.127%
σ		n/a	0.924	0.765	n/a	0.6%	0.870	n/a	0.567	n/a
%RSD		0.648	0.929	0.794	0.770	0.6	0.905	1.232	0.578	0.438
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:45:45	97.250	95.330	102.0%	97.020	101.200	97.650	96.210	98.730	115.8%
2	14:46:12	96.940	95.310	101.9%	96.880	102.700	99.820	97.880	100.400	118.4%
3	14:46:39	96.560	96.020	102.7%	96.320	102.200	97.680	96.170	99.260	120.2%
x		96.915%	95.550	102.2%	96.740	102.036%	98.380	96.750	99.464%	118.1%
σ		n/a	0.406	0.5%	0.371	n/a	1.245	0.976	n/a	2.2%
%RSD		0.357	0.425	0.5	0.383	0.769	1.266	1.009	0.856	1.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	104.9%	0.052	4.922	5.620	-7.295	T 747.500	154.500	153.100	157.100
2	14:52:07	103.5%	0.051	6.095	5.271	-8.817	T 743.700	151.000	147.700	153.500
3	14:52:34	106.6%	0.022	5.181	5.530	-11.660	T 739.600	153.800	148.100	151.800
x		105.0%	0.042	5.400	5.474	-9.259	T 743.600	153.100	149.600	154.100
σ		1.6%	0.017	0.616	0.181	2.218	T 3.925	1.858	3.010	2.677
%RSD		1.5	40.350	11.410	3.308	23.960	T 0.528	1.213	2.012	1.737
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	TM 996.700	T 4668.000	T 52270.000	217.600	300.000	331.700	92.5%	T 45.770	2.322
2	14:52:07	TM 975.200	T 4725.000	T 52360.000	T 223.800	313.000	329.700	93.3%	44.140	1.757
3	14:52:34	TM 891.200	T 4724.000	T 52510.000	T 228.700	289.700	326.800	94.5%	T 44.830	2.576
x		TM 954.400	T 4706.000	T 52380.000	T 223.400	300.900	329.400	93.4%	T 44.910	2.218
σ		TM 55.750	T 32.550	T 120.500	T 5.541	11.660	2.451	1.1%	T 0.823	0.419
%RSD		TM 5.842	T 0.692	T 0.230	T 2.481	3.876	0.744	1.1	T 1.832	18.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	2.531	16020.000	T 352.300	2.307	T 352.800	315.300	0.151	1.357	1.904
2	14:52:07	2.335	16610.000	332.600	2.225	T 349.500	331.300	0.130	1.016	1.040
3	14:52:34	2.508	16660.000	T 328.000	2.235	T 352.900	T 319.100	0.125	1.062	1.257
x		2.458	16430.000	T 337.600	2.256	T 351.700	T 321.900	0.135	1.145	1.400
σ		0.107	352.200	T 12.910	0.045	T 1.933	T 8.362	0.014	0.185	0.449
%RSD		4.357	2.144	T 3.823	1.981	T 0.550	T 2.598	10.260	16.190	32.080
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	1.907	2.059	2.041	4.163	2.216	0.178	0.369	3.295	3.091
2	14:52:07	1.973	2.020	1.929	4.752	1.871	0.487	0.335	3.366	4.054
3	14:52:34	1.917	2.115	1.812	4.275	1.981	0.281	0.245	3.675	3.333
x		1.932	2.065	1.927	4.396	2.023	0.315	0.316	3.445	3.492
σ		0.035	0.048	0.115	0.313	0.177	0.157	0.064	0.202	0.501
%RSD		1.835	2.310	5.942	7.115	8.733	49.740	20.390	5.862	14.340
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	1.245	0.323	0.139	3.057	96.2%	0.180	0.145	0.229	-0.474
2	14:52:07	3.183	0.751	-0.423	3.134	96.4%	0.193	0.225	0.187	-0.521
3	14:52:34	0.900	0.282	2.258	3.011	97.4%	0.205	0.240	0.194	-0.768
x		1.776	0.452	0.658	3.067	96.7%	0.193	0.203	0.203	-0.588
σ		1.230	0.260	1.414	0.062	0.6%	0.013	0.051	0.022	0.158
%RSD		69.280	57.540	214.800	2.018	0.7	6.502	25.270	11.020	26.900
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	0.009	0.010	0.009	0.019	96.5%	0.320	0.450	0.080	0.075
2	14:52:07	0.004	0.013	0.014	0.021	99.0%	0.308	0.445	0.099	0.083
3	14:52:34	0.007	0.010	0.012	0.012	99.4%	0.354	0.464	0.103	0.089
x		0.007	0.011	0.012	0.017	98.3%	0.327	0.453	0.094	0.082
σ		0.003	0.002	0.003	0.005	1.5%	0.024	0.010	0.012	0.007
%RSD		41.140	17.880	24.010	28.880	1.6	7.251	2.160	12.980	8.916
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:51:40	4.551	4.432	102.0%	0.009	0.009	0.532	0.536	0.611	132.1%
2	14:52:07	4.419	3.978	103.2%	0.007	0.004	0.588	0.535	0.587	131.9%
3	14:52:34	4.365	4.297	102.7%	0.008	0.001	0.679	0.547	0.584	132.6%
x		4.445	4.236	102.6%	0.008	0.005	0.600	0.539	0.594	132.2%
σ		0.096	0.233	0.6%	0.001	0.004	0.074	0.006	0.015	0.4%
%RSD		2.156	5.504	0.5	12.800	93.940	12.320	1.198	2.478	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	104.4%	0.021	36.670	36.030	1.305	T 3635.000	T 2948.000	T 2930.000	T 2964.000
2	14:58:01	102.4%	0.020	33.720	34.250	-0.852	T 3540.000	T 2902.000	3060.000	T 2910.000
3	14:58:28	103.4%	0.003	36.270	34.880	0.516	T 3571.000	T 2886.000	3036.000	T 2922.000
x		103.4%	0.015	35.550	35.050	0.323	T 3582.000	T 2912.000	T 3009.000	T 2932.000
σ		1.0%	0.010	1.600	0.903	1.092	T 48.510	T 32.060	T 69.090	T 28.260
%RSD		1.0	69.570	4.502	2.576	338.100	T 1.354	T 1.101	T 2.296	T 0.964

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	T 269.600	T 2382.000	T 54420.000	T 1936.000	7540.000	7352.000	92.0%	10.780	1.050
2	14:58:01	T 230.100	T 2426.000	T 53380.000	T 1978.000	7473.000	7377.000	93.0%	7.206	1.020
3	14:58:28	T 237.600	T 2440.000	T 53500.000	T 1991.000	7473.000	7403.000	93.5%	8.287	1.714
x		T 245.800	T 2416.000	T 53770.000	T 1968.000	7496.000	7377.000	92.8%	8.759	1.261
σ		T 21.000	T 30.050	T 566.200	T 28.710	38.730	25.410	0.8%	1.834	0.393
%RSD		T 8.543	T 1.244	T 1.053	T 1.459	0.517	0.345	0.8	20.940	31.130

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	1.024	13200.000	259.400	41.950	T 269.300	T 265.300	0.401	0.844	0.687
2	14:58:01	1.010	12820.000	260.100	42.080	T 273.400	259.400	0.390	0.815	0.773
3	14:58:28	0.991	12300.000	253.700	41.510	T 261.600	257.600	0.387	0.795	0.606
x		1.008	12770.000	257.800	41.850	T 268.100	T 260.800	0.393	0.818	0.689
σ		0.016	450.900	3.546	0.297	T 5.969	T 4.029	0.007	0.025	0.083
%RSD		1.629	3.531	1.376	0.709	T 2.226	T 1.545	1.829	2.996	12.070

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	1.943	1.934	3.055	9.196	6.378	0.358	0.091	7.028	6.772
2	14:58:01	1.894	1.863	3.050	9.061	6.324	0.644	0.108	7.439	7.584
3	14:58:28	1.891	1.894	2.916	8.491	6.214	0.409	0.371	7.282	6.336
x		1.909	1.897	3.007	8.916	6.305	0.470	0.190	7.250	6.897
σ		0.030	0.036	0.079	0.374	0.083	0.153	0.157	0.208	0.633
%RSD		1.548	1.892	2.628	4.194	1.323	32.490	82.740	2.865	9.177

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	1.880	0.538	-0.762	67.220	103.4%	0.144	0.396	0.169	0.779
2	14:58:01	3.699	0.996	0.003	67.810	103.6%	0.134	0.131	0.156	0.837
3	14:58:28	3.141	0.870	0.499	67.630	104.1%	0.132	0.136	0.170	0.423
x		2.907	0.801	-0.087	67.550	103.7%	0.137	0.221	0.165	0.680
σ		0.932	0.237	0.636	0.303	0.3%	0.007	0.152	0.008	0.224
%RSD		32.070	29.530	733.800	0.449	0.3	4.884	68.640	4.718	32.930

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	0.003	0.005	0.083	0.076	96.1%	0.255	0.311	0.094	0.087
2	14:58:01	0.007	0.007	0.085	0.072	98.0%	0.248	0.359	0.106	0.102
3	14:58:28	0.003	0.005	0.076	0.084	97.3%	0.256	0.300	0.102	0.068
x		0.005	0.006	0.081	0.077	97.1%	0.253	0.324	0.101	0.086
σ		0.002	0.001	0.005	0.006	0.9%	0.005	0.031	0.006	0.017
%RSD		45.220	18.180	5.702	7.361	1.0	1.843	9.711	6.035	19.450

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	14:57:35	116.700	115.200	102.7%	0.014	0.011	0.261	0.256	0.253	126.1%
2	14:58:01	115.500	115.000	102.4%	0.011	0.011	0.263	0.262	0.261	128.4%
3	14:58:28	116.200	115.400	101.5%	0.009	0.011	0.257	0.237	0.266	128.3%
x		116.100	115.200	102.2%	0.011	0.011	0.260	0.252	0.260	127.6%
σ		0.588	0.194	0.6%	0.003	0.000	0.003	0.013	0.006	1.3%
%RSD		0.506	0.168	0.6	23.500	3.519	1.074	5.106	2.409	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	104.3%	-0.002	40.610	41.580	2.460	T 3482.000	T 1375.000	1414.000	1433.000
2	15:03:57	105.3%	0.007	42.280	42.290	1.399	T 3378.000	T 1351.000	1395.000	1415.000
3	15:04:24	105.7%	0.025	41.790	40.990	-0.630	T 3396.000	T 1342.000	1371.000	1413.000
x		105.1%	0.010	41.560	41.620	1.076	T 3419.000	T 1356.000	1394.000	1420.000
σ		0.7%	0.013	0.856	0.649	1.570	T 55.650	T 16.860	21.440	11.180
%RSD		0.7	131.200	2.060	1.558	145.900	T 1.628	T 1.243	1.538	0.787
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	T 42.610	T 1651.000	T 53660.000	T 1834.000	15970.000	T 15880.000	93.8%	0.691	0.370
2	15:03:57	T 24.840	T 1621.000	T 52980.000	T 1825.000	15620.000	T 15620.000	95.7%	1.155	0.768
3	15:04:24	T 26.200	T 1605.000	T 53580.000	T 1812.000	15470.000	T 15660.000	95.1%	0.597	0.383
x		T 31.220	T 1626.000	T 53410.000	T 1824.000	15680.000	T 15720.000	94.9%	0.814	0.507
σ		T 9.887	T 23.160	T 372.300	T 11.040	256.200	T 138.000	1.0%	0.298	0.226
%RSD		T 31.670	T 1.425	T 0.697	T 0.605	1.634	T 0.878	1.0	36.670	44.640
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	0.378	8991.000	106.700	9.127	113.000	132.800	0.038	0.375	0.277
2	15:03:57	0.441	8839.000	104.300	8.908	109.400	124.000	0.037	0.429	0.132
3	15:04:24	0.398	9151.000	104.800	8.952	108.400	129.400	0.035	0.439	-0.028
x		0.406	8994.000	105.300	8.995	110.300	128.700	0.036	0.414	0.127
σ		0.032	156.100	1.259	0.116	2.415	4.412	0.002	0.035	0.153
%RSD		7.963	1.736	1.196	1.289	2.190	3.427	4.213	8.338	120.200
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	1.190	1.202	25.820	27.520	25.870	0.341	0.597	5.255	5.100
2	15:03:57	1.215	1.140	25.420	26.440	25.930	0.385	0.950	4.413	5.671
3	15:04:24	1.118	1.166	25.580	26.270	26.200	0.174	0.300	5.176	4.535
x		1.174	1.169	25.610	26.740	26.000	0.300	0.616	4.948	5.102
σ		0.050	0.031	0.202	0.677	0.177	0.111	0.325	0.465	0.568
%RSD		4.259	2.645	0.789	2.531	0.682	37.000	52.860	9.397	11.140
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	4.068	1.050	0.194	T 168.800	101.7%	0.052	0.074	0.038	2.669
2	15:03:57	2.453	0.646	0.839	174.300	101.6%	0.050	0.049	0.036	2.913
3	15:04:24	3.035	0.781	0.745	175.300	100.9%	0.032	0.079	0.062	3.209
x		3.185	0.825	0.593	T 172.800	101.4%	0.045	0.067	0.045	2.930
σ		0.818	0.206	0.349	T 3.534	0.5%	0.011	0.016	0.015	0.270
%RSD		25.670	24.930	58.840	T 2.045	0.5	24.260	24.230	32.270	9.227
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	0.000	0.003	0.050	0.041	99.0%	0.222	0.262	0.078	0.068
2	15:03:57	0.004	0.003	0.050	0.037	99.6%	0.187	0.270	0.104	0.090
3	15:04:24	0.001	0.003	0.043	0.038	98.7%	0.179	0.269	0.094	0.096
x		0.002	0.003	0.047	0.039	99.1%	0.196	0.267	0.092	0.085
σ		0.002	0.000	0.004	0.002	0.5%	0.023	0.004	0.013	0.014
%RSD		143.700	9.706	8.788	5.522	0.5	11.680	1.563	14.090	17.030
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:03:30	28.690	28.250	102.4%	0.008	0.012	0.248	0.239	0.244	126.2%
2	15:03:57	28.160	27.700	103.9%	0.007	0.007	0.235	0.245	0.244	127.9%
3	15:04:24	28.300	28.430	103.2%	0.008	0.006	0.271	0.261	0.262	127.9%
x		28.390	28.130	103.2%	0.008	0.008	0.251	0.249	0.250	127.3%
σ		0.273	0.383	0.7%	0.001	0.003	0.018	0.012	0.011	1.0%
%RSD		0.962	1.363	0.7	12.360	38.160	7.338	4.647	4.307	0.8

CCV MW10535 11/16/2018 15:08:58 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	89.0%	285.000	272.900	278.100	3.883	┬60680.000	┬59550.000	┬59390.000	┬59820.000
2	15:09:52	88.8%	285.200	269.100	281.000	-0.594	┬60770.000	┬59500.000	┬58960.000	┬59750.000
3	15:10:19	91.2%	283.700	282.900	290.700	4.912	┬62190.000	┬60920.000	┬60920.000	┬60700.000
x		89.6%	94.877%	91.656%	94.427%	2.734	┬102.018%	┬59990.000	┬59760.000	┬100.150%
σ		1.3%	n/a	n/a	n/a	2.927	┬n/a	┬805.900	┬1027.000	┬n/a
%RSD		1.5	0.289	2.594	2.338	107.100	┬1.383	┬1.343	┬1.718	┬0.880
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	291.600	┬3099.000	166.600	┬63260.000	59980.000	┬60170.000	92.7%	295.100	┬298.100
2	15:09:52	293.200	┬3121.000	177.400	┬64970.000	61320.000	┬60760.000	92.2%	295.900	┬301.600
3	15:10:19	299.800	┬3068.000	185.700	┬63860.000	61970.000	┬60830.000	91.6%	300.400	┬304.900
x		98.293%	┬103.198%	176.600	┬106.719%	61090.000	┬100.977%	92.2%	99.048%	┬100.516%
σ		n/a	┬n/a	9.583	┬n/a	1016.000	┬n/a	0.6%	n/a	┬n/a
%RSD		1.472	┬0.849	5.427	┬1.357	1.664	┬0.597	0.6	0.952	┬1.126
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	292.300	-896.600	┬58640.000	┬282.200	┬59440.000	┬57420.000	┬277.400	282.800	273.400
2	15:09:52	294.000	-1167.000	┬59790.000	┬287.500	┬59650.000	┬58080.000	┬282.900	278.000	277.700
3	15:10:19	302.500	-617.300	┬60970.000	┬290.000	┬60380.000	┬58410.000	┬283.300	277.900	272.900
x		98.757%	-893.500	┬59800.000	┬95.523%	┬59820.000	┬96.621%	┬93.738%	93.187%	274.600
σ		n/a	274.700	┬1161.000	┬n/a	┬496.400	┬n/a	┬n/a	n/a	2.628
%RSD		1.837	30.740	┬1.941	┬1.395	┬0.830	┬0.868	┬1.182	1.005	0.957
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	270.200	280.800	286.300	278.100	277.500	288.900	277.400	0.767	-0.305
2	15:09:52	266.000	276.700	282.000	283.500	274.900	289.300	277.600	1.675	0.430
3	15:10:19	271.800	279.600	284.200	285.400	278.300	289.700	279.600	1.561	0.192
x		269.300	93.012%	94.716%	282.300	276.900	96.438%	278.200	1.334	0.106
σ		3.023	n/a	n/a	3.743	1.731	n/a	1.202	0.495	0.375
%RSD		1.122	0.764	0.748	1.326	0.625	0.132	0.432	37.060	355.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	1286.000	282.900	1.135	┬312.100	89.7%	307.200	308.900	310.900	292.200
2	15:09:52	1264.000	281.100	0.086	┬312.100	90.4%	308.500	311.800	311.800	290.800
3	15:10:19	1247.000	279.700	0.368	┬313.900	90.7%	308.300	309.500	309.400	288.300
x		1266.000	93.740%	0.530	┬104.231%	90.3%	102.670%	103.362%	310.700	290.500
σ		19.240	n/a	0.543	┬n/a	0.5%	n/a	n/a	1.230	1.986
%RSD		1.520	0.560	102.500	┬0.328	0.5	0.225	0.492	0.396	0.684
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	312.900	309.400	293.800	288.300	88.9%	303.000	307.400	321.200	301.500
2	15:09:52	310.000	307.700	292.900	286.900	90.1%	303.200	303.400	322.300	301.600
3	15:10:19	311.400	305.100	292.100	287.200	90.6%	303.600	305.100	321.600	301.400
x		103.809%	307.400	292.900	95.820%	89.9%	101.087%	101.760%	321.700	100.494%
σ		n/a	2.176	0.831	n/a	0.9%	n/a	n/a	0.555	n/a
%RSD		0.461	0.708	0.284	0.260	1.0	0.097	0.658	0.173	0.032
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:09:25	304.300	301.500	93.2%	306.600	┬290.700	┬290.200	299.800	┬292.300	96.5%
2	15:09:52	303.000	302.200	94.7%	304.700	┬290.100	┬288.900	297.300	┬290.900	99.3%
3	15:10:19	304.900	304.900	95.3%	303.500	┬290.200	┬286.900	298.900	┬290.400	100.8%
x		101.362%	100.949%	94.4%	304.900	┬96.783%	┬96.215%	99.566%	┬97.069%	98.9%
σ		n/a	n/a	1.1%	1.569	┬n/a	┬n/a	n/a	┬n/a	2.2%
%RSD		0.330	0.593	1.2	0.515	┬0.098	┬0.581	0.419	┬0.328	2.2

CCB IM9061-02 11/16/2018 15:14:53 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	97.6%	0.008	1.843	1.719	-8.285	6.748	3.331	3.122	3.527
2	15:15:47	98.7%	0.003	2.083	1.452	-5.595	4.606	2.635	2.424	2.558
3	15:16:14	100.6%	0.022	0.962	1.105	-5.853	3.533	2.157	2.073	2.244
x		99.0%	0.011	1.629	1.425	-6.577	4.962	2.708	2.540	2.776
σ		1.5%	0.010	0.590	0.308	1.484	1.637	0.590	0.534	0.669
%RSD		1.5	88.320	36.230	21.610	22.560	32.990	21.800	21.030	24.100
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.421	0.817	-39.320	7.372	7.142	4.575	92.7%	0.042	-0.094
2	15:15:47	0.368	1.078	-17.030	5.101	4.448	4.091	92.1%	0.068	-0.098
3	15:16:14	0.299	0.274	-35.460	3.366	0.459	3.541	94.8%	0.125	-0.089
x		0.363	0.723	-30.600	5.280	4.016	4.069	93.2%	0.078	-0.094
σ		0.061	0.410	11.910	2.009	3.362	0.517	1.4%	0.043	0.004
%RSD		16.890	56.710	38.930	38.060	83.720	12.710	1.5	54.250	4.734
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.018	-141.200	9.169	0.070	10.740	7.962	0.013	0.017	0.526
2	15:15:47	-0.015	-144.600	9.226	0.060	10.280	7.577	0.009	0.002	0.609
3	15:16:14	-0.010	-200.200	6.962	0.053	7.167	5.476	0.013	0.017	0.375
x		-0.002	-162.000	8.453	0.061	9.396	7.005	0.012	0.012	0.503
σ		0.018	33.140	1.291	0.008	1.944	1.338	0.002	0.008	0.119
%RSD		740.000	20.450	15.280	13.880	20.690	19.100	19.870	69.290	23.630
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.007	0.033	-0.057	-0.055	-0.036	0.040	0.132	0.132	0.404
2	15:15:47	0.015	0.015	-0.100	-0.282	-0.064	0.211	0.020	-0.091	0.746
3	15:16:14	0.019	-0.009	-0.063	-0.227	-0.067	0.196	-0.024	0.259	0.232
x		0.014	0.013	-0.073	-0.188	-0.056	0.149	0.043	0.100	0.461
σ		0.006	0.021	0.023	0.118	0.017	0.095	0.080	0.177	0.262
%RSD		46.710	160.100	31.490	62.840	29.870	63.370	187.900	177.100	56.820
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.408	0.146	0.970	0.024	96.1%	0.307	0.391	0.339	-0.537
2	15:15:47	1.187	0.359	1.315	0.017	97.6%	0.248	0.275	0.261	-0.747
3	15:16:14	1.567	0.409	0.876	0.014	97.8%	0.216	0.227	0.229	-0.264
x		1.054	0.305	1.054	0.018	97.2%	0.257	0.298	0.276	-0.516
σ		0.591	0.139	0.231	0.005	0.9%	0.046	0.084	0.057	0.242
%RSD		56.030	45.720	21.910	26.680	1.0	17.850	28.230	20.490	46.860
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.017	0.024	0.006	0.012	98.0%	0.342	0.483	0.297	0.261
2	15:15:47	0.015	0.013	0.016	0.004	96.7%	0.299	0.474	0.284	0.261
3	15:16:14	0.011	0.009	0.009	0.013	98.4%	0.281	0.466	0.258	0.230
x		0.014	0.015	0.010	0.010	97.7%	0.307	0.474	0.280	0.251
σ		0.003	0.008	0.005	0.005	0.9%	0.032	0.009	0.020	0.018
%RSD		23.320	48.970	50.200	54.340	0.9	10.320	1.830	7.046	7.013
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:15:20	0.017	0.028	99.3%	0.023	0.019	0.021	0.023	0.020	96.8%
2	15:15:47	0.006	0.007	100.9%	0.013	0.012	0.018	0.011	0.012	100.5%
3	15:16:14	0.011	0.008	100.5%	0.018	0.017	0.017	0.006	0.008	102.3%
x		0.012	0.014	100.2%	0.018	0.016	0.019	0.013	0.014	99.9%
σ		0.006	0.012	0.9%	0.005	0.003	0.002	0.009	0.006	2.8%
%RSD		49.930	83.510	0.9	28.700	21.790	13.220	65.410	45.550	2.8

TJ22041-007 11/16/2018 15:20:47

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	100.0%	0.121	16.160	18.010	2.263	┬3759.000	┬967.300	985.100	1004.000
2	15:21:41	100.5%	0.124	17.400	18.680	-0.002	┬3764.000	┬966.100	991.200	1009.000
3	15:22:08	102.3%	0.070	17.440	18.680	0.981	┬3722.000	┬946.000	970.200	994.300
x		100.9%	0.105	17.000	18.460	1.081	┬3749.000	┬959.800	982.200	1003.000
σ		1.2%	0.030	0.732	0.385	1.136	┬23.030	┬11.970	10.770	7.659
%RSD		1.2	28.740	4.303	2.089	105.100	┬0.614	┬1.248	1.097	0.764
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	┬101.800	┬1867.000	┬52250.000	┬2020.000	5852.000	5657.000	91.9%	2.077	0.307
2	15:21:41	┬93.480	┬1884.000	┬52570.000	┬2012.000	5810.000	5823.000	91.8%	1.528	0.517
3	15:22:08	┬100.300	┬1829.000	┬52460.000	┬1990.000	5697.000	5630.000	93.3%	1.856	0.628
x		┬98.500	┬1860.000	┬52430.000	┬2007.000	5786.000	5703.000	92.3%	1.820	0.484
σ		┬4.413	┬28.320	┬160.700	┬15.310	80.410	104.600	0.8%	0.276	0.163
%RSD		┬4.481	┬1.523	┬0.307	┬0.763	1.390	1.834	0.9	15.180	33.680
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	0.547	7060.000	55.740	34.680	┬59.910	57.320	0.950	0.834	1.050
2	15:21:41	0.543	7986.000	54.560	35.180	┬60.140	┬29.690	0.947	0.750	0.907
3	15:22:08	0.566	8410.000	52.990	34.510	50.460	57.350	0.952	0.843	0.924
x		0.552	7819.000	54.430	34.790	┬56.840	┬48.120	0.950	0.809	0.960
σ		0.012	690.500	1.378	0.347	┬5.525	┬15.960	0.003	0.051	0.078
%RSD		2.184	8.831	2.532	0.997	┬9.720	┬33.180	0.292	6.296	8.143
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	1.684	1.702	10.160	12.030	10.950	0.092	0.542	5.216	4.392
2	15:21:41	1.766	1.833	10.070	13.720	11.670	0.257	0.600	4.485	4.813
3	15:22:08	1.744	1.776	10.020	13.530	11.450	0.377	0.383	4.125	4.812
x		1.732	1.770	10.080	13.090	11.350	0.242	0.508	4.609	4.673
σ		0.042	0.066	0.071	0.924	0.371	0.143	0.112	0.556	0.243
%RSD		2.449	3.720	0.699	7.061	3.267	59.010	22.120	12.060	5.199
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	2.842	0.708	-0.596	26.560	97.8%	0.150	0.140	0.134	-0.271
2	15:21:41	3.271	0.827	0.231	27.160	97.5%	0.116	0.160	0.142	-0.071
3	15:22:08	2.529	0.650	0.739	26.840	98.1%	0.108	0.105	0.113	-0.180
x		2.880	0.728	0.125	26.850	97.8%	0.125	0.135	0.129	-0.174
σ		0.373	0.090	0.674	0.299	0.3%	0.022	0.028	0.015	0.100
%RSD		12.940	12.380	540.800	1.112	0.3	17.880	20.390	11.520	57.570
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	0.015	0.019	0.122	0.093	96.0%	0.303	0.419	0.177	0.179
2	15:21:41	0.019	0.016	0.114	0.094	97.8%	0.269	0.387	0.185	0.174
3	15:22:08	0.009	0.012	0.109	0.098	97.9%	0.305	0.385	0.181	0.198
x		0.014	0.016	0.115	0.095	97.2%	0.293	0.397	0.181	0.184
σ		0.005	0.004	0.007	0.003	1.1%	0.020	0.019	0.004	0.012
%RSD		32.740	22.190	5.794	2.837	1.1	6.897	4.812	2.189	6.803
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:21:14	53.540	53.520	101.3%	0.031	0.035	0.168	0.100	0.129	128.6%
2	15:21:41	54.590	54.050	101.9%	0.034	0.029	0.130	0.116	0.132	130.8%
3	15:22:08	53.240	53.550	102.4%	0.019	0.023	0.121	0.173	0.145	130.1%
x		53.790	53.710	101.9%	0.028	0.029	0.140	0.130	0.135	129.8%
σ		0.707	0.294	0.6%	0.008	0.006	0.025	0.038	0.008	1.1%
%RSD		1.314	0.548	0.6	27.540	21.740	17.810	29.570	6.121	0.8

TJ22041-008 11/16/2018 15:26:39

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	102.1%	0.011	8.750	9.677	-2.945	T 7277.000	T 4285.000	T 4268.000	T 4333.000
2	15:27:33	105.6%	0.007	9.718	10.210	-1.340	T 7384.000	T 4330.000	T 4336.000	T 4426.000
3	15:28:00	104.5%	0.003	10.260	10.190	-4.841	T 7319.000	T 4283.000	T 4260.000	T 4342.000
x		104.0%	0.007	9.576	10.030	-3.042	T 7327.000	T 4299.000	T 4288.000	T 4367.000
σ		1.8%	0.004	0.764	0.303	1.752	T 53.740	T 26.420	T 42.090	T 51.590
%RSD		1.7	60.670	7.983	3.025	57.600	T 0.733	T 0.614	T 0.982	T 1.181

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	2.291	T 4399.000	T 51770.000	486.600	67850.000	T 67100.000	93.6%	0.487	3.404
2	15:27:33	2.316	T 4274.000	T 52960.000	479.300	69050.000	T 67950.000	93.5%	0.573	3.544
3	15:28:00	2.270	T 4333.000	T 52290.000	485.700	67970.000	T 67410.000	94.6%	0.499	3.532
x		2.292	T 4335.000	T 52340.000	483.900	68290.000	T 67490.000	93.9%	0.520	3.493
σ		0.023	T 62.600	T 598.500	3.991	658.100	T 432.500	0.6%	0.047	0.077
%RSD		1.000	T 1.444	T 1.143	0.825	0.964	T 0.641	0.6	9.037	2.216

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	0.404	5915.000	7.813	0.053	10.910	138.600	0.043	0.575	-0.215
2	15:27:33	0.408	6232.000	9.332	0.055	11.050	129.500	0.056	0.573	-0.012
3	15:28:00	0.426	6541.000	8.995	0.056	9.476	126.800	0.042	0.480	-0.006
x		0.413	6229.000	8.714	0.055	10.480	131.600	0.047	0.542	-0.077
σ		0.012	313.300	0.798	0.002	0.872	6.142	0.008	0.054	0.119
%RSD		2.903	5.029	9.156	2.964	8.320	4.666	16.130	9.946	153.200

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	0.060	0.077	0.511	1.508	0.647	0.753	1.047	7.753	8.365
2	15:27:33	0.060	0.072	0.493	1.328	0.695	0.806	0.846	7.861	7.367
3	15:28:00	0.027	0.064	0.525	1.346	0.719	0.887	0.849	7.656	7.804
x		0.049	0.071	0.510	1.394	0.687	0.815	0.914	7.757	7.845
σ		0.019	0.007	0.016	0.099	0.036	0.068	0.115	0.103	0.500
%RSD		39.120	9.348	3.143	7.106	5.306	8.285	12.580	1.325	6.377

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	3.016	0.695	-0.986	T 235.000	96.8%	6.731	6.756	6.872	4.419
2	15:27:33	3.142	0.753	-0.034	T 233.800	97.0%	6.759	6.964	6.762	5.529
3	15:28:00	6.855	1.603	0.228	T 236.100	97.1%	6.629	6.873	6.840	3.502
x		4.338	1.017	-0.264	T 235.000	97.0%	6.707	6.864	6.825	4.483
σ		2.181	0.508	0.639	T 1.169	0.2%	0.069	0.104	0.056	1.015
%RSD		50.280	49.960	241.900	T 0.498	0.2	1.023	1.520	0.824	22.650

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	0.008	0.010	0.010	0.024	97.0%	0.192	0.277	0.160	0.182
2	15:27:33	0.004	0.010	0.001	0.010	97.4%	0.166	0.263	0.209	0.183
3	15:28:00	0.004	0.004	0.001	0.016	98.4%	0.160	0.269	0.191	0.186
x		0.005	0.008	0.004	0.016	97.6%	0.173	0.270	0.187	0.184
σ		0.002	0.004	0.005	0.007	0.7%	0.017	0.007	0.025	0.002
%RSD		43.730	46.310	134.900	42.960	0.7	9.762	2.686	13.380	1.189

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:27:06	5.087	5.085	100.9%	0.024	0.023	0.005	0.001	0.005	123.1%
2	15:27:33	4.859	5.166	102.1%	0.019	0.026	0.008	0.006	0.007	125.4%
3	15:28:00	5.300	5.197	102.3%	0.025	0.021	0.002	0.006	0.002	126.2%
x		5.082	5.149	101.8%	0.023	0.023	0.005	0.004	0.005	124.9%
σ		0.221	0.058	0.7%	0.004	0.003	0.003	0.003	0.002	1.6%
%RSD		4.346	1.128	0.7	15.410	11.400	50.350	72.690	46.100	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	98.3%	0.069	24.180	23.930	5.263	T 10070.000	T 614.000	611.400	625.700
2	15:33:24	98.8%	0.083	21.980	23.910	4.389	T 9956.000	T 609.700	623.100	629.900
3	15:33:51	98.5%	0.031	22.470	22.670	-2.359	T 9791.000	T 594.400	596.500	614.400
x		98.5%	0.061	22.880	23.500	2.431	T 9938.000	T 606.000	610.300	623.400
σ		0.2%	0.027	1.157	0.720	4.171	T 138.700	T 10.330	13.340	8.038
%RSD		0.2	44.580	5.058	3.062	171.600	T 1.396	T 1.704	2.185	1.289
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	T 180.000	T 3336.000	T 52590.000	144.600	493.000	520.800	90.2%	2.320	1.237
2	15:33:24	T 180.500	T 3262.000	T 53110.000	139.700	537.100	520.700	89.2%	1.727	0.531
3	15:33:51	T 174.000	T 3300.000	T 52400.000	141.400	496.900	509.900	91.3%	2.206	0.623
x		T 178.200	T 3299.000	T 52700.000	141.900	509.000	517.100	90.2%	2.084	0.797
σ		T 3.598	T 36.930	T 367.100	2.496	24.400	6.260	1.1%	0.315	0.384
%RSD		T 2.019	T 1.119	T 0.697	1.759	4.793	1.211	1.2	15.100	48.230
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	0.592	11030.000	T 5430.000	3.076	T 5584.000	5555.000	0.311	0.294	0.105
2	15:33:24	0.572	11390.000	T 5406.000	3.084	T 5535.000	5492.000	0.331	0.346	0.284
3	15:33:51	0.585	11600.000	T 5348.000	3.012	T 5493.000	5437.000	0.307	0.277	0.128
x		0.583	11340.000	T 5395.000	3.057	T 5537.000	5495.000	0.316	0.306	0.172
σ		0.010	287.000	T 42.080	0.040	T 45.640	58.850	0.013	0.036	0.097
%RSD		1.711	2.531	T 0.780	1.296	T 0.824	1.071	4.046	11.700	56.580
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	0.195	0.223	1.524	3.363	2.180	2.626	-0.065	30.900	31.240
2	15:33:24	0.219	0.249	1.605	3.910	2.134	3.287	0.357	29.960	31.990
3	15:33:51	0.212	0.243	1.555	3.549	2.056	3.022	-0.104	31.600	30.110
x		0.209	0.238	1.561	3.607	2.123	2.978	0.063	30.820	31.110
σ		0.012	0.014	0.041	0.278	0.063	0.333	0.255	0.825	0.947
%RSD		5.922	5.819	2.616	7.709	2.963	11.160	408.200	2.677	3.043
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	0.930	0.233	0.659	4.624	94.1%	0.099	0.086	0.099	-0.474
2	15:33:24	-0.622	-0.147	-0.162	4.583	93.6%	0.099	0.070	0.090	-0.545
3	15:33:51	1.371	0.307	0.106	4.743	93.7%	0.096	0.096	0.078	-0.682
x		0.560	0.131	0.201	4.650	93.8%	0.098	0.084	0.089	-0.567
σ		1.047	0.244	0.419	0.083	0.3%	0.002	0.013	0.010	0.106
%RSD		187.000	185.700	208.300	1.793	0.3	1.947	15.720	11.660	18.710
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	0.006	0.008	0.015	0.007	94.5%	0.177	0.265	0.126	0.104
2	15:33:24	0.011	0.004	0.007	0.005	94.8%	0.207	0.267	0.115	0.093
3	15:33:51	0.004	0.008	0.004	0.011	95.1%	0.211	0.235	0.122	0.099
x		0.007	0.006	0.009	0.007	94.8%	0.198	0.255	0.121	0.099
σ		0.004	0.002	0.006	0.003	0.3%	0.019	0.018	0.006	0.005
%RSD		52.410	35.200	67.740	42.890	0.3	9.355	7.077	4.605	5.523
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:32:57	10.730	10.910	100.4%	0.010	0.012	0.138	0.151	0.152	130.3%
2	15:33:24	10.560	10.490	100.8%	0.019	0.007	0.152	0.140	0.144	128.1%
3	15:33:51	10.880	10.710	101.1%	0.011	0.013	0.146	0.145	0.152	129.6%
x		10.720	10.700	100.7%	0.013	0.011	0.145	0.145	0.149	129.3%
σ		0.159	0.208	0.3%	0.005	0.003	0.007	0.006	0.005	1.1%
%RSD		1.484	1.938	0.3	38.910	26.810	5.049	3.899	3.017	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	97.4%	90.800	110.700	110.700	2.935	T 10620.000	T 1605.000	1641.000	1668.000
2	15:39:17	101.0%	90.700	113.600	113.700	3.289	T 10640.000	T 1597.000	1634.000	1672.000
3	15:39:45	97.4%	89.190	103.300	103.600	7.217	T 10720.000	T 1617.000	1680.000	1726.000
x		98.6%	90.230	109.200	109.300	4.480	T 10660.000	T 1607.000	1652.000	1689.000
σ		2.1%	0.905	5.304	5.192	2.376	T 51.870	T 10.270	24.700	32.370
%RSD		2.1	1.003	4.857	4.749	53.040	T 0.487	T 0.639	1.496	1.917
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	T 434.400	T 4545.000	T 51930.000	T 1164.000	1559.000	1499.000	93.5%	100.800	99.130
2	15:39:17	T 441.500	T 4387.000	T 51180.000	T 1124.000	1534.000	1509.000	94.7%	98.090	99.000
3	15:39:45	T 445.700	T 4523.000	T 52310.000	T 1207.000	1572.000	1513.000	92.2%	96.560	99.410
x		T 440.500	T 4485.000	T 51800.000	T 1165.000	1555.000	1507.000	93.4%	98.470	99.180
σ		T 5.713	T 85.610	T 573.800	T 41.330	19.480	6.771	1.3%	2.137	0.210
%RSD		T 1.297	T 1.909	T 1.108	T 3.548	1.253	0.449	1.4	2.170	0.212
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	96.150	12130.000	T 6305.000	101.000	T 6349.000	6429.000	95.500	90.490	93.900
2	15:39:17	95.850	12000.000	T 6273.000	99.090	T 6231.000	6291.000	93.850	91.530	94.870
3	15:39:45	96.160	14260.000	T 6308.000	102.800	T 6511.000	6387.000	95.090	86.220	91.360
x		96.050	12800.000	T 6295.000	101.000	T 6364.000	6369.000	94.810	89.410	93.370
σ		0.178	1267.000	T 19.460	1.880	T 141.000	70.650	0.862	2.814	1.812
%RSD		0.186	9.905	T 0.309	1.862	T 2.215	1.109	0.910	3.147	1.941
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	92.790	96.060	94.780	97.270	96.310	99.210	93.960	29.730	29.230
2	15:39:17	92.620	96.740	93.410	99.200	96.600	97.310	90.860	29.070	29.270
3	15:39:45	89.560	91.430	95.110	103.200	96.130	101.200	91.210	31.170	29.300
x		91.660	94.740	94.430	99.890	96.350	99.250	92.010	29.990	29.270
σ		1.817	2.888	0.899	3.017	0.240	1.960	1.696	1.077	0.032
%RSD		1.983	3.048	0.952	3.020	0.249	1.975	1.843	3.592	0.110
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	415.200	93.650	0.534	104.700	93.2%	95.330	96.390	93.260	100.400
2	15:39:17	412.200	92.190	0.653	103.700	93.5%	94.000	94.110	92.530	100.700
3	15:39:45	401.000	93.160	0.042	102.700	95.2%	94.210	95.210	92.770	96.380
x		409.500	93.000	0.410	103.700	94.0%	94.520	95.240	92.850	99.170
σ		7.513	0.747	0.324	0.980	1.1%	0.712	1.140	0.370	2.417
%RSD		1.835	0.803	79.170	0.945	1.1	0.753	1.197	0.399	2.437
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	98.770	99.240	94.300	92.450	94.7%	96.510	95.200	99.050	93.430
2	15:39:17	98.630	96.560	94.520	91.860	96.2%	95.500	94.300	96.950	92.520
3	15:39:45	96.940	95.840	96.590	93.840	97.3%	97.230	96.290	103.000	95.960
x		98.120	97.210	95.140	92.720	96.1%	96.410	95.260	99.680	93.970
σ		1.020	1.796	1.263	1.017	1.3%	0.869	0.996	3.093	1.783
%RSD		1.040	1.847	1.328	1.097	1.3	0.901	1.045	3.103	1.897
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:38:50	109.300	108.900	98.5%	97.450	103.400	100.900	98.050	101.000	122.3%
2	15:39:17	107.300	106.200	100.2%	96.020	101.800	99.220	97.770	99.990	122.0%
3	15:39:45	109.100	107.100	102.2%	96.200	102.700	99.800	98.400	100.700	126.5%
x		108.600	107.400	100.3%	96.560	102.600	99.970	98.080	100.500	123.6%
σ		1.139	1.375	1.8%	0.776	0.789	0.857	0.315	0.508	2.5%
%RSD		1.049	1.281	1.8	0.804	0.769	0.857	0.321	0.505	2.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	101.5%	91.160	112.700	115.900	7.041	T 10770.000	T 1622.000	1672.000	1696.000
2	15:45:09	101.2%	89.710	113.400	116.200	8.239	T 10850.000	T 1622.000	1656.000	1692.000
3	15:45:36	101.7%	89.280	111.500	113.500	1.412	T 10790.000	T 1618.000	1664.000	1713.000
x		101.5%	90.050	112.500	115.200	5.564	T 10800.000	T 1621.000	1664.000	1701.000
σ		0.3%	0.980	0.984	1.469	3.645	T 38.730	T 2.598	7.771	10.970
%RSD		0.3	1.088	0.874	1.276	65.520	T 0.358	T 0.160	0.467	0.645
Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	T 450.100	T 4477.000	T 52360.000	T 1134.000	1589.000	1521.000	94.3%	103.400	101.200
2	15:45:09	T 445.800	T 4456.000	T 51740.000	T 1168.000	1603.000	1538.000	95.2%	102.400	100.000
3	15:45:36	T 439.000	T 4440.000	T 53220.000	T 1148.000	1587.000	1540.000	93.3%	101.500	102.300
x		T 445.000	T 4458.000	T 52440.000	T 1150.000	1593.000	1533.000	94.3%	102.400	101.200
σ		T 5.604	T 18.750	T 743.300	T 17.250	8.787	9.963	0.9%	0.975	1.174
%RSD		T 1.259	T 0.421	T 1.417	T 1.500	0.552	0.650	1.0	0.951	1.160
Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	99.280	12380.000	T 6426.000	103.100	T 6527.000	6500.000	97.550	93.990	94.650
2	15:45:09	98.560	12660.000	T 6321.000	101.200	T 6390.000	6393.000	95.630	91.120	92.800
3	15:45:36	99.410	13090.000	T 6463.000	104.500	T 6541.000	6509.000	96.740	93.270	93.380
x		99.090	12710.000	T 6403.000	102.900	T 6486.000	6467.000	96.640	92.800	93.610
σ		0.462	359.700	T 73.930	1.645	T 83.600	64.630	0.965	1.494	0.950
%RSD		0.466	2.830	T 1.155	1.598	T 1.289	0.999	0.999	1.610	1.015
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	94.140	98.190	95.320	99.740	97.740	99.690	94.290	28.570	29.060
2	15:45:09	93.200	97.160	97.800	101.000	97.660	97.620	95.060	30.270	29.720
3	15:45:36	95.280	96.980	95.550	102.800	98.670	102.100	95.510	29.270	29.810
x		94.210	97.440	96.220	101.200	98.020	99.790	94.960	29.370	29.530
σ		1.043	0.650	1.370	1.516	0.560	2.216	0.618	0.857	0.407
%RSD		1.107	0.667	1.424	1.499	0.571	2.221	0.651	2.918	1.379
Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	417.000	94.680	-0.654	106.400	94.8%	94.970	96.910	93.050	97.200
2	15:45:09	423.700	96.420	-0.004	105.100	95.9%	95.770	95.820	93.570	100.600
3	15:45:36	421.700	96.150	1.051	106.100	94.3%	95.560	97.000	94.360	100.300
x		420.800	95.750	0.131	105.900	95.0%	95.430	96.580	93.660	99.370
σ		3.444	0.936	0.860	0.676	0.8%	0.411	0.656	0.663	1.882
%RSD		0.818	0.978	655.700	0.639	0.9	0.430	0.679	0.708	1.894
Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	101.100	100.800	95.980	93.250	96.4%	96.010	96.160	98.950	93.640
2	15:45:09	102.800	100.400	96.180	94.300	96.2%	97.900	97.610	99.560	94.470
3	15:45:36	100.700	100.400	95.640	93.960	96.5%	96.870	96.710	98.650	94.090
x		101.500	100.500	95.930	93.840	96.4%	96.920	96.820	99.050	94.070
σ		1.145	0.205	0.272	0.538	0.1%	0.946	0.736	0.466	0.417
%RSD		1.128	0.204	0.283	0.574	0.1	0.976	0.760	0.470	0.443
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:44:43	108.100	108.800	100.9%	96.750	102.400	99.720	98.130	100.700	123.8%
2	15:45:09	109.500	109.200	100.7%	97.470	102.900	99.920	98.370	101.100	123.7%
3	15:45:36	109.300	108.000	100.7%	98.130	103.100	99.910	98.690	101.000	123.3%
x		109.000	108.700	100.8%	97.450	102.800	99.850	98.400	100.900	123.6%
σ		0.796	0.569	0.1%	0.690	0.374	0.113	0.283	0.199	0.3%
%RSD		0.731	0.524	0.1	0.708	0.364	0.113	0.287	0.197	0.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	103.5%	0.012	6.003	5.710	-4.772	T 2219.000	140.900	136.400	137.100
2	15:51:03	104.3%	0.017	5.628	5.457	-11.020	T 2200.000	140.500	138.900	138.700
3	15:51:30	103.0%	0.007	4.762	5.880	-12.660	T 2122.000	133.800	132.100	135.400
x		103.6%	0.012	5.465	5.682	-9.485	T 2180.000	138.400	135.800	137.100
σ		0.7%	0.005	0.637	0.213	4.163	T 51.310	4.004	3.418	1.643
%RSD		0.6	38.240	11.650	3.746	43.890	T 2.354	2.893	2.517	1.199
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	T 45.110	T 735.300	T 11470.000	28.440	113.000	115.000	95.3%	0.486	0.181
2	15:51:03	39.710	T 728.100	T 11680.000	28.210	120.800	115.500	95.1%	1.457	0.315
3	15:51:30	38.000	T 729.700	T 11000.000	28.320	103.700	112.100	97.5%	0.442	0.074
x		T 40.940	T 731.000	T 11380.000	28.320	112.500	114.200	96.0%	0.795	0.190
σ		T 3.713	T 3.770	T 346.700	0.116	8.564	1.851	1.3%	0.574	0.121
%RSD		T 9.070	T 0.516	T 3.045	0.410	7.614	1.621	1.4	72.170	63.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	0.169	2814.000	1239.000	0.663	T 1243.000	1188.000	0.075	0.060	0.026
2	15:51:03	0.157	2736.000	1250.000	0.676	T 1245.000	1192.000	0.073	0.066	-0.217
3	15:51:30	0.143	2723.000	1190.000	0.625	T 1185.000	1153.000	0.068	0.077	-0.138
x		0.156	2758.000	1226.000	0.655	T 1224.000	1178.000	0.072	0.068	-0.110
σ		0.013	49.140	31.640	0.026	T 34.230	21.010	0.004	0.008	0.124
%RSD		8.232	1.782	2.580	4.037	T 2.797	1.784	5.269	12.210	113.000
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	0.040	0.057	0.310	0.742	0.313	0.753	0.306	7.757	7.345
2	15:51:03	0.065	0.058	0.325	0.535	0.357	0.897	-0.126	6.247	6.695
3	15:51:30	0.079	0.054	0.220	0.691	0.385	0.930	0.044	6.748	6.601
x		0.061	0.056	0.285	0.656	0.352	0.860	0.075	6.917	6.880
σ		0.019	0.002	0.057	0.108	0.036	0.094	0.217	0.769	0.405
%RSD		31.760	3.728	19.880	16.450	10.300	10.960	290.700	11.120	5.884
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	1.139	0.267	-0.490	1.034	98.1%	0.127	0.087	0.107	-0.422
2	15:51:03	0.713	0.207	0.842	1.058	98.6%	0.097	0.076	0.096	-1.100
3	15:51:30	1.476	0.336	-0.406	1.016	99.3%	0.068	0.100	0.101	-1.075
x		1.109	0.270	-0.018	1.036	98.7%	0.097	0.088	0.101	-0.866
σ		0.383	0.065	0.746	0.021	0.6%	0.029	0.012	0.005	0.384
%RSD		34.490	23.980	4131.000	2.030	0.6	30.300	13.990	5.417	44.400
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	-0.001	0.002	0.001	0.010	99.5%	0.165	0.257	0.011	0.012
2	15:51:03	0.003	0.004	0.001	0.003	100.4%	0.141	0.235	0.017	0.018
3	15:51:30	0.003	0.004	0.001	0.001	100.0%	0.136	0.208	0.006	0.021
x		0.002	0.003	0.001	0.005	100.0%	0.147	0.233	0.011	0.017
σ		0.002	0.001	0.000	0.004	0.4%	0.016	0.025	0.005	0.004
%RSD		165.000	34.070	0.867	92.410	0.4	10.860	10.700	45.500	24.680
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:50:36	2.296	2.428	102.4%	0.025	0.022	0.037	0.030	0.034	107.5%
2	15:51:03	2.562	2.326	103.6%	0.016	0.018	0.032	0.036	0.033	109.5%
3	15:51:30	2.345	2.407	103.6%	0.007	0.013	0.042	0.032	0.037	112.8%
x		2.401	2.387	103.2%	0.016	0.018	0.037	0.033	0.035	109.9%
σ		0.142	0.054	0.7%	0.009	0.004	0.005	0.003	0.002	2.7%
%RSD		5.911	2.245	0.7	54.910	25.260	13.600	9.070	6.451	2.4

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	103.2%	88.810	116.600	118.800	5.090	T 10840.000	T 1589.000	1634.000	1659.000
2	15:56:56	102.0%	86.570	113.100	115.300	3.139	T 10630.000	T 1569.000	1594.000	1634.000
3	15:57:23	103.3%	84.010	107.900	112.000	0.113	T 10500.000	T 1522.000	1550.000	1583.000
x		102.8%	86.460	112.500	115.400	2.780	T 10660.000	T 1560.000	1593.000	1625.000
σ		0.7%	2.403	4.379	3.387	2.508	T 169.100	T 34.720	41.880	38.810
%RSD		0.7	2.780	3.891	2.935	90.190	T 1.587	T 2.225	2.630	2.388

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	T 270.400	T 4087.000	T 51550.000	T 1110.000	1551.000	1484.000	96.6%	96.680	97.120
2	15:56:56	T 283.800	T 4130.000	T 51110.000	T 1125.000	1554.000	1513.000	96.1%	98.600	97.080
3	15:57:23	T 262.100	T 4094.000	T 50820.000	T 1120.000	1538.000	1443.000	T 99.1%	94.920	93.380
x		T 272.100	T 4104.000	T 51160.000	T 1118.000	1548.000	1480.000	T 97.3%	96.730	95.860
σ		T 10.920	T 23.450	T 369.400	T 7.912	8.435	34.890	T 1.6%	1.840	2.149
%RSD		T 4.015	T 0.571	T 0.722	T 0.707	0.545	2.357	T 1.6	1.902	2.242

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	93.960	11970.000	T 6240.000	98.570	T 6333.000	6311.000	91.910	89.500	89.710
2	15:56:56	95.520	12270.000	T 6244.000	98.290	T 6292.000	6266.000	93.420	90.580	89.210
3	15:57:23	90.870	12810.000	T 6155.000	96.230	T 6227.000	6268.000	90.920	88.760	88.010
x		93.450	12350.000	T 6213.000	97.700	T 6284.000	6281.000	92.090	89.610	88.970
σ		2.367	430.300	T 50.710	1.275	T 53.210	25.220	1.257	0.914	0.873
%RSD		2.533	3.484	T 0.816	1.305	T 0.847	0.402	1.365	1.020	0.981

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	90.590	95.430	93.520	96.040	93.110	93.900	90.730	30.060	30.160
2	15:56:56	89.580	92.470	94.930	93.640	93.780	95.330	92.160	31.090	29.800
3	15:57:23	88.000	93.560	94.040	93.430	91.740	93.430	87.890	30.150	30.870
x		89.390	93.820	94.160	94.370	92.880	94.220	90.260	30.430	30.280
σ		1.308	1.495	0.712	1.449	1.040	0.988	2.173	0.569	0.540
%RSD		1.463	1.594	0.756	1.535	1.120	1.048	2.408	1.870	1.785

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	411.700	93.600	0.347	101.000	97.2%	91.260	92.390	91.580	92.710
2	15:56:56	415.200	94.720	-0.464	100.500	97.2%	91.910	93.810	93.370	93.730
3	15:57:23	407.900	90.900	-0.353	101.300	97.4%	92.560	93.660	91.940	92.590
x		411.600	93.080	-0.157	100.900	97.3%	91.910	93.290	92.300	93.010
σ		3.654	1.962	0.440	0.400	0.1%	0.651	0.781	0.945	0.629
%RSD		0.888	2.108	280.200	0.396	0.1	0.708	0.837	1.023	0.676

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	97.920	95.530	92.510	89.410	97.3%	93.260	93.420	91.170	86.800
2	15:56:56	96.680	97.860	94.220	90.790	96.3%	94.580	94.730	92.200	86.500
3	15:57:23	96.640	95.420	93.210	90.270	98.0%	95.190	94.420	91.860	86.290
x		97.080	96.270	93.320	90.160	97.2%	94.340	94.190	91.740	86.530
σ		0.727	1.382	0.860	0.693	0.9%	0.988	0.685	0.523	0.257
%RSD		0.749	1.436	0.922	0.768	0.9	1.047	0.727	0.571	0.297

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	15:56:29	105.500	105.400	101.2%	93.290	97.830	95.870	94.210	96.350	127.1%
2	15:56:56	104.600	106.000	101.5%	94.590	99.500	96.370	94.860	97.380	128.3%
3	15:57:23	104.300	102.900	103.9%	93.360	98.920	95.390	93.570	96.030	128.7%
x		104.800	104.700	102.2%	93.750	98.750	95.880	94.210	96.590	128.0%
σ		0.637	1.628	1.5%	0.731	0.849	0.487	0.647	0.704	0.8%
%RSD		0.608	1.555	1.4	0.780	0.860	0.508	0.687	0.729	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	101.4%	0.010	15.000	15.000	-5.810	T 4033.000	T 1353.000	1389.000	1422.000
2	16:02:50	101.0%	-0.002	13.940	14.280	-10.150	T 4006.000	T 1339.000	1395.000	1420.000
3	16:03:17	102.9%	0.014	13.860	14.350	-9.148	T 4019.000	T 1345.000	1378.000	1403.000
x		101.7%	0.007	14.270	14.540	-8.371	T 4019.000	T 1346.000	1387.000	1415.000
σ		1.0%	0.008	0.635	0.395	2.274	T 13.520	T 7.034	8.802	10.430
%RSD		1.0	106.900	4.449	2.719	27.170	T 0.336	T 0.523	0.635	0.737
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	T 151.500	T 5207.000	T 50000.000	776.400	29720.000	T 29720.000	92.5%	4.060	0.485
2	16:02:50	T 154.200	T 5223.000	T 49560.000	783.400	29390.000	T 29110.000	92.9%	4.118	1.070
3	16:03:17	T 148.700	T 5133.000	T 49830.000	784.600	29490.000	T 29520.000	93.6%	T 0.619	0.492
x		T 151.500	T 5188.000	T 49800.000	781.400	29530.000	T 29450.000	93.0%	T 2.933	0.682
σ		T 2.735	T 47.730	T 224.800	4.388	167.200	T 311.400	0.6%	T 2.003	0.336
%RSD		T 1.805	T 0.920	T 0.451	0.562	0.566	T 1.058	0.6	T 68.320	49.240
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	3.351	7251.000	3248.000	2.165	T 3094.000	3108.000	0.238	1.187	0.792
2	16:02:50	3.325	5793.000	3196.000	2.063	T 3096.000	3081.000	0.227	1.109	0.846
3	16:03:17	3.309	5474.000	3190.000	2.130	T 3059.000	3025.000	0.242	1.090	0.824
x		3.328	6172.000	3211.000	2.119	T 3083.000	3071.000	0.236	1.129	0.821
σ		0.021	947.200	31.890	0.052	T 20.710	42.780	0.008	0.051	0.027
%RSD		0.629	15.350	0.993	2.431	T 0.672	1.393	3.411	4.559	3.308
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	0.135	0.135	1.227	2.719	2.104	3.936	0.177	10.950	10.490
2	16:02:50	0.141	0.154	1.153	3.200	1.875	3.324	0.096	11.840	11.760
3	16:03:17	0.154	0.175	1.047	2.390	1.947	3.674	-0.092	11.170	11.470
x		0.143	0.155	1.142	2.770	1.975	3.645	0.060	11.320	11.240
σ		0.009	0.020	0.090	0.408	0.117	0.307	0.138	0.463	0.666
%RSD		6.586	12.730	7.882	14.720	5.920	8.425	228.300	4.089	5.925
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	1.333	0.341	1.340	87.200	94.2%	0.406	0.548	0.453	0.297
2	16:02:50	0.197	0.076	1.484	87.160	94.1%	0.457	0.492	0.490	0.551
3	16:03:17	1.257	0.286	-0.403	86.650	95.7%	0.442	0.478	0.415	1.101
x		0.929	0.234	0.807	87.000	94.7%	0.435	0.506	0.453	0.650
σ		0.635	0.140	1.050	0.307	0.9%	0.026	0.038	0.037	0.411
%RSD		68.340	59.540	130.100	0.353	1.0	5.985	7.424	8.213	63.240
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	0.000	0.004	0.016	0.022	95.4%	0.257	0.355	0.310	0.304
2	16:02:50	0.002	0.002	0.021	0.016	96.7%	0.241	0.362	0.311	0.333
3	16:03:17	0.002	0.009	0.025	0.028	98.0%	0.260	0.414	0.299	0.273
x		0.002	0.005	0.021	0.022	96.7%	0.253	0.377	0.307	0.303
σ		0.001	0.003	0.005	0.006	1.3%	0.010	0.032	0.007	0.030
%RSD		77.680	65.750	22.350	26.710	1.3	3.935	8.417	2.306	9.899
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:02:23	24.210	24.440	99.9%	0.007	0.015	0.150	0.136	0.153	128.8%
2	16:02:50	24.330	23.930	100.8%	0.018	0.010	0.167	0.142	0.146	130.0%
3	16:03:17	24.030	23.500	101.9%	0.021	0.016	0.150	0.151	0.147	130.2%
x		24.190	23.960	100.9%	0.015	0.014	0.156	0.143	0.149	129.7%
σ		0.152	0.470	1.0%	0.008	0.003	0.010	0.008	0.004	0.7%
%RSD		0.630	1.963	1.0	49.980	23.250	6.205	5.460	2.537	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	101.7%	0.084	19.590	20.790	-5.950	T 4141.000	T 490.000	498.000	511.400
2	16:08:45	104.2%	0.088	18.810	20.070	-1.043	T 4087.000	T 492.700	500.500	511.300
3	16:09:11	105.9%	0.091	19.860	20.770	-5.248	T 4105.000	T 490.800	484.800	502.000
x		103.9%	0.088	19.420	20.540	-4.080	T 4111.000	T 491.100	494.400	508.200
σ		2.1%	0.003	0.547	0.408	2.654	T 27.360	T 1.413	8.436	5.409
%RSD		2.0	3.690	2.818	1.988	65.040	T 0.665	T 0.288	1.706	1.064
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	T 100.800	T 4107.000	T 51550.000	333.400	1016.000	1008.000	92.4%	1.389	0.601
2	16:08:45	T 93.700	T 4060.000	T 51070.000	330.300	983.600	988.500	94.3%	1.453	0.694
3	16:09:11	T 94.800	T 3994.000	T 51060.000	321.000	975.100	1001.000	96.2%	2.549	1.154
x		T 96.440	T 4053.000	T 51220.000	328.200	991.700	999.300	94.3%	1.797	0.817
σ		T 3.833	T 57.080	T 278.700	6.467	21.850	9.944	1.9%	0.652	0.296
%RSD		T 3.974	T 1.408	T 0.544	1.970	2.203	0.995	2.1	36.300	36.250
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	0.642	13620.000	765.900	2.982	T 765.100	732.200	0.271	0.291	0.053
2	16:08:45	0.624	14520.000	755.900	2.997	T 758.400	722.900	0.249	0.292	0.004
3	16:09:11	0.684	15200.000	750.100	2.981	T 752.500	717.000	0.236	0.361	-0.050
x		0.650	14450.000	757.300	2.987	T 758.600	724.000	0.252	0.315	0.002
σ		0.031	790.000	7.975	0.009	T 6.283	7.646	0.017	0.040	0.051
%RSD		4.704	5.469	1.053	0.300	T 0.828	1.056	6.856	12.830	2233.000
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	0.228	0.221	1.631	3.714	1.843	1.379	-0.032	23.430	22.630
2	16:08:45	0.199	0.262	1.739	3.969	2.026	0.916	0.014	22.850	22.560
3	16:09:11	0.216	0.283	1.625	3.923	1.983	1.044	0.221	21.610	23.420
x		0.214	0.255	1.665	3.869	1.951	1.113	0.068	22.630	22.870
σ		0.014	0.031	0.064	0.135	0.096	0.239	0.135	0.930	0.478
%RSD		6.640	12.270	3.849	3.501	4.897	21.500	198.800	4.110	2.090
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	0.886	0.212	0.476	6.173	94.8%	0.079	0.128	0.106	-0.842
2	16:08:45	-0.562	-0.140	0.156	6.276	95.5%	0.100	0.114	0.100	-0.387
3	16:09:11	1.847	0.405	-0.067	6.277	97.4%	0.096	0.111	0.098	-0.671
x		0.724	0.159	0.188	6.242	95.9%	0.092	0.117	0.102	-0.634
σ		1.213	0.276	0.273	0.060	1.4%	0.012	0.009	0.004	0.230
%RSD		167.600	173.900	144.700	0.963	1.4	12.570	7.965	4.208	36.290
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	0.001	0.006	0.019	0.015	97.1%	0.160	0.225	0.176	0.168
2	16:08:45	-0.000	0.004	0.009	0.009	98.0%	0.181	0.206	0.171	0.164
3	16:09:11	0.002	0.004	0.009	0.012	99.3%	0.146	0.237	0.161	0.166
x		0.001	0.005	0.012	0.012	98.1%	0.162	0.222	0.169	0.166
σ		0.001	0.001	0.006	0.003	1.1%	0.018	0.016	0.007	0.002
%RSD		164.300	21.280	45.580	23.990	1.1	10.900	7.109	4.267	1.130
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:08:18	5.057	4.968	101.0%	-0.004	-0.004	0.091	0.080	0.088	128.9%
2	16:08:45	4.681	4.965	102.5%	-0.001	-0.004	0.086	0.104	0.095	130.3%
3	16:09:11	5.069	4.882	104.6%	-0.004	-0.003	0.098	0.085	0.092	132.5%
x		4.936	4.938	102.7%	-0.003	-0.004	0.092	0.089	0.092	130.6%
σ		0.221	0.049	1.8%	0.001	0.001	0.006	0.013	0.003	1.8%
%RSD		4.468	0.992	1.8	48.710	13.930	6.505	14.430	3.731	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	102.2%	0.084	20.580	21.830	-2.805	┬11430.000	┬281.700	285.700	292.600
2	16:14:38	103.6%	0.062	19.680	21.640	-4.993	┬11260.000	289.100	278.100	286.600
3	16:15:05	103.4%	0.048	18.430	20.610	-8.332	┬11120.000	282.700	278.700	287.500
x		103.1%	0.065	19.560	21.360	-5.377	┬11270.000	┬284.500	280.900	288.900
σ		0.7%	0.018	1.083	0.657	2.783	┬156.900	┬4.013	4.211	3.272
%RSD		0.7	27.680	5.536	3.076	51.760	┬1.392	┬1.411	1.499	1.133
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	┬363.100	┬5613.000	┬52410.000	419.800	836.700	848.400	92.8%	5.030	0.555
2	16:14:38	┬354.800	┬5553.000	┬51870.000	┬412.100	790.200	822.000	93.7%	5.282	1.528
3	16:15:05	┬354.400	┬5546.000	┬52460.000	422.500	797.900	840.400	92.9%	5.312	0.494
x		┬357.400	┬5571.000	┬52250.000	┬418.100	808.300	836.900	93.1%	5.208	0.859
σ		┬4.909	┬36.790	┬327.800	┬5.428	24.910	13.510	0.5%	0.155	0.580
%RSD		┬1.373	┬0.660	┬0.627	┬1.298	3.081	1.615	0.5	2.977	67.490
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	0.675	16470.000	420.100	3.735	┬436.400	402.300	0.196	0.344	0.368
2	16:14:38	0.672	16630.000	415.900	3.700	┬426.100	399.900	0.215	0.376	-0.048
3	16:15:05	0.677	17610.000	411.300	3.706	┬428.000	395.300	0.175	0.254	-0.060
x		0.675	16900.000	415.800	3.713	┬430.200	399.200	0.195	0.325	0.087
σ		0.002	617.200	4.435	0.019	┬5.458	3.528	0.020	0.064	0.244
%RSD		0.335	3.651	1.067	0.510	┬1.269	0.884	10.330	19.570	281.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	0.480	0.474	2.636	5.018	3.242	0.338	-0.243	16.430	17.140
2	16:14:38	0.412	0.506	2.609	5.780	2.993	0.401	0.088	15.860	16.930
3	16:15:05	0.443	0.500	2.519	5.468	3.233	0.417	0.107	17.370	17.070
x		0.445	0.494	2.588	5.422	3.156	0.385	-0.016	16.550	17.050
σ		0.034	0.017	0.062	0.383	0.141	0.042	0.196	0.761	0.107
%RSD		7.656	3.477	2.384	7.059	4.467	10.850	1223.000	4.598	0.626
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	0.856	0.179	-0.943	6.766	95.4%	0.032	0.044	0.072	-0.012
2	16:14:38	0.857	0.191	0.031	6.944	95.2%	0.020	0.094	0.056	-0.583
3	16:15:05	0.553	0.159	0.976	7.051	95.9%	0.046	0.046	0.055	-0.847
x		0.755	0.176	0.021	6.920	95.5%	0.033	0.061	0.061	-0.481
σ		0.175	0.016	0.959	0.144	0.4%	0.013	0.028	0.009	0.427
%RSD		23.180	9.341	4468.000	2.078	0.4	38.740	46.160	15.510	88.740
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	0.001	0.006	0.017	0.013	97.6%	0.171	0.214	0.148	0.144
2	16:14:38	0.004	0.005	0.021	0.013	97.1%	0.164	0.199	0.161	0.164
3	16:15:05	0.002	0.003	0.024	0.026	99.0%	0.150	0.214	0.173	0.150
x		0.003	0.005	0.021	0.018	97.9%	0.162	0.209	0.161	0.153
σ		0.002	0.002	0.004	0.008	1.0%	0.011	0.009	0.012	0.010
%RSD		60.030	41.770	17.880	43.280	1.0	6.639	4.185	7.650	6.613
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:14:11	10.870	10.880	101.2%	0.007	0.001	0.296	0.251	0.270	127.4%
2	16:14:38	10.940	10.890	101.9%	0.001	-0.002	0.281	0.266	0.275	128.3%
3	16:15:05	11.000	10.770	103.5%	0.002	-0.001	0.279	0.258	0.273	129.5%
x		10.940	10.850	102.2%	0.004	-0.001	0.286	0.258	0.273	128.4%
σ		0.067	0.066	1.2%	0.003	0.001	0.009	0.007	0.003	1.0%
%RSD		0.616	0.606	1.2	86.900	233.700	3.278	2.895	0.960	0.8

CCV MW10535 11/16/2018 16:19:39 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	91.2%	285.200	280.600	288.800	3.163	┬60750.000	┬59790.000	┬59370.000	┬59650.000
2	16:20:32	91.1%	288.200	282.500	294.000	1.630	┬61270.000	┬59560.000	┬60130.000	┬61160.000
3	16:20:59	90.7%	289.100	275.600	280.900	2.753	┬62300.000	┬60150.000	┬60520.000	┬60840.000
x		91.0%	95.825%	93.190%	95.970%	2.515	┬102.402%	┬59830.000	┬60010.000	┬100.917%
σ		0.3%	n/a	n/a	n/a	0.793	┬n/a	┬298.000	┬583.700	┬n/a
%RSD		0.3	0.708	1.268	2.278	31.540	┬1.283	┬0.498	┬0.973	┬1.319
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	294.700	┬3092.000	93.230	┬63360.000	60030.000	┬59910.000	94.2%	293.500	┬298.300
2	16:20:32	297.900	┬3098.000	81.890	┬64030.000	61350.000	┬60740.000	94.3%	292.000	┬303.800
3	16:20:59	298.500	┬3124.000	85.120	┬64560.000	60370.000	┬60730.000	93.8%	288.400	┬297.800
x		99.013%	┬103.482%	86.750	┬106.638%	60590.000	┬100.767%	94.1%	97.098%	┬99.989%
σ		n/a	┬n/a	5.841	┬n/a	687.600	┬n/a	0.3%	n/a	┬n/a
%RSD		0.698	┬0.541	6.734	┬0.936	1.135	┬0.787	0.3	0.884	┬1.115
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	293.600	-273.500	┬58870.000	┬282.900	┬59480.000	┬56550.000	┬277.300	283.200	274.100
2	16:20:32	297.300	-1502.000	┬59390.000	┬283.800	┬59970.000	┬57470.000	┬278.500	281.500	279.100
3	16:20:59	298.200	-1628.000	┬59830.000	┬286.600	┬59940.000	┬57340.000	┬275.100	274.200	270.700
x		98.785%	-1134.000	┬59370.000	┬94.809%	┬59800.000	┬95.204%	┬92.325%	93.216%	274.600
σ		n/a	748.100	┬484.500	┬n/a	┬274.200	┬n/a	┬n/a	n/a	4.233
%RSD		0.821	65.950	┬0.816	┬0.678	┬0.459	┬0.874	┬0.632	1.721	1.542
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	266.900	282.800	281.400	275.600	274.400	285.700	279.200	0.961	0.708
2	16:20:32	268.000	278.800	281.600	280.200	279.400	286.000	280.700	1.555	-0.005
3	16:20:59	267.100	276.100	282.400	277.100	274.700	287.500	279.800	1.793	-0.036
x		267.400	93.077%	93.930%	277.600	276.200	95.472%	279.900	1.436	0.222
σ		0.591	n/a	n/a	2.386	2.805	n/a	0.735	0.429	0.421
%RSD		0.221	1.207	0.187	0.859	1.016	0.322	0.263	29.850	189.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	1272.000	278.400	-0.227	┬311.100	90.7%	309.300	308.400	309.700	292.800
2	16:20:32	1240.000	275.500	-0.005	┬308.700	92.4%	311.500	310.100	310.900	291.800
3	16:20:59	1262.000	281.600	0.285	┬311.400	92.3%	309.000	309.900	311.900	288.500
x		1258.000	92.825%	0.018	┬103.472%	91.8%	103.314%	103.160%	310.800	291.000
σ		16.330	n/a	0.256	┬n/a	1.0%	n/a	n/a	1.109	2.247
%RSD		1.298	1.093	1453.000	┬0.482	1.1	0.447	0.301	0.357	0.772
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	310.700	305.600	291.100	288.400	90.6%	303.100	299.700	318.000	297.100
2	16:20:32	307.600	301.400	288.100	285.400	91.9%	302.300	303.100	321.500	303.700
3	16:20:59	309.800	309.100	292.000	286.000	91.5%	305.800	305.400	324.200	302.100
x		103.121%	305.400	290.400	95.535%	91.3%	101.250%	100.908%	321.200	100.321%
σ		n/a	3.845	2.046	n/a	0.7%	n/a	n/a	3.124	n/a
%RSD		0.525	1.259	0.705	0.554	0.7	0.609	0.938	0.972	1.142
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:20:06	303.200	302.700	94.7%	301.900	┬287.100	┬286.700	293.900	┬288.100	96.6%
2	16:20:32	303.400	300.000	94.6%	306.500	┬290.900	┬290.200	296.900	┬292.600	99.6%
3	16:20:59	301.800	302.000	95.6%	304.000	┬289.100	┬286.000	295.500	┬290.000	102.0%
x		100.945%	100.510%	95.0%	304.100	┬96.340%	┬95.876%	98.483%	┬96.745%	99.4%
σ		n/a	n/a	0.6%	2.278	┬n/a	┬n/a	n/a	┬n/a	2.7%
%RSD		0.285	0.463	0.6	0.749	┬0.664	┬0.781	0.504	┬0.784	2.7

CCB IM9061-02 11/16/2018 16:25:33 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	102.4%	0.003	0.877	1.388	-7.211	2.737	1.687	1.846	1.752
2	16:26:27	103.4%	-0.002	1.173	0.922	-6.044	2.443	1.474	1.703	1.567
3	16:26:54	101.5%	0.003	0.791	0.489	-8.999	2.519	1.336	1.378	1.385
x		102.4%	0.001	0.947	0.933	-7.418	2.566	1.499	1.642	1.568
σ		0.9%	0.003	0.200	0.450	1.488	0.152	0.177	0.240	0.184
%RSD		0.9	174.600	21.150	48.200	20.070	5.935	11.820	14.610	11.720
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	0.272	0.718	-131.400	2.602	0.762	1.580	98.2%	0.169	-0.022
2	16:26:27	0.233	0.267	-106.500	1.921	0.051	1.517	96.3%	0.056	-0.068
3	16:26:54	0.258	0.014	-110.500	5.064	3.356	1.412	T 98.1%	0.071	-0.063
x		0.255	0.333	-116.100	3.196	1.390	1.503	T 97.5%	0.099	-0.051
σ		0.020	0.357	13.360	1.654	1.740	0.085	T 1.0%	0.061	0.025
%RSD		7.694	107.100	11.500	51.740	125.200	5.647	T 1.1	62.090	49.130
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	-0.006	-493.700	8.261	0.050	10.930	8.124	0.006	0.022	0.447
2	16:26:27	-0.012	-436.900	8.697	0.048	8.488	6.572	0.006	-0.002	0.023
3	16:26:54	-0.010	-367.800	6.172	0.046	5.302	2.958	0.005	0.006	-0.020
x		-0.009	-432.800	7.710	0.048	8.239	5.885	0.006	0.009	0.150
σ		0.003	63.080	1.349	0.002	2.821	2.651	0.001	0.012	0.258
%RSD		35.060	14.580	17.500	4.324	34.240	45.050	12.020	141.200	172.200
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	0.003	-0.002	-0.071	-0.336	-0.129	0.164	-0.158	0.390	0.616
2	16:26:27	0.003	0.009	-0.120	-0.290	-0.089	0.149	0.003	0.109	0.403
3	16:26:54	-0.008	-0.023	-0.082	-0.249	-0.103	-0.062	-0.149	0.433	-0.304
x		-0.001	-0.005	-0.091	-0.292	-0.107	0.084	-0.102	0.311	0.238
σ		0.006	0.016	0.025	0.043	0.020	0.126	0.091	0.176	0.482
%RSD		863.500	323.000	27.880	14.860	18.800	150.500	89.300	56.710	202.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	1.001	0.242	-0.461	0.011	100.9%	0.332	0.275	0.345	-0.882
2	16:26:27	1.190	0.293	-0.553	0.006	99.9%	0.314	0.288	0.280	-0.838
3	16:26:54	-0.577	-0.098	0.750	0.004	100.2%	0.326	0.268	0.236	-0.880
x		0.538	0.146	-0.088	0.007	100.4%	0.324	0.277	0.287	-0.867
σ		0.970	0.213	0.727	0.003	0.5%	0.009	0.010	0.055	0.025
%RSD		180.300	146.000	825.600	46.110	0.5	2.871	3.653	19.140	2.845
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	0.015	0.013	0.004	0.003	101.8%	0.333	0.470	0.296	0.272
2	16:26:27	0.012	0.013	0.003	0.007	101.0%	0.295	0.476	0.289	0.243
3	16:26:54	0.011	0.015	0.010	0.008	100.3%	0.277	0.429	0.260	0.292
x		0.013	0.014	0.006	0.006	101.0%	0.301	0.459	0.282	0.269
σ		0.002	0.001	0.004	0.002	0.7%	0.028	0.025	0.019	0.024
%RSD		18.020	7.157	70.690	37.870	0.7	9.410	5.550	6.891	9.067
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:26:00	0.003	0.016	101.6%	0.011	0.009	0.005	0.008	0.007	98.3%
2	16:26:27	0.014	0.011	102.4%	0.012	0.006	0.009	0.002	0.006	102.9%
3	16:26:54	0.017	0.003	104.1%	0.009	0.008	0.010	0.007	0.008	104.8%
x		0.011	0.010	102.7%	0.011	0.007	0.008	0.006	0.007	102.0%
σ		0.007	0.006	1.3%	0.002	0.002	0.002	0.003	0.001	3.3%
%RSD		66.700	64.550	1.2	16.400	21.220	31.160	50.170	15.810	3.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	102.7%	0.105	10.190	10.580	-17.040	T 4779.000	T 354.700	353.500	372.500
2	16:32:22	104.1%	0.075	9.191	9.978	-21.410	T 4664.000	T 345.300	353.600	360.700
3	16:32:49	103.7%	0.095	9.896	10.710	-18.720	T 4813.000	T 355.900	353.800	365.700
x		103.5%	0.092	9.760	10.420	-19.060	T 4752.000	T 352.000	353.600	366.300
σ		0.7%	0.015	0.515	0.391	2.203	T 77.880	T 5.766	0.132	5.923
%RSD		0.7	16.340	5.272	3.754	11.560	T 1.639	T 1.638	0.037	1.617
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	TM 2530.000	T 9824.000	T 49830.000	T 833.300	1597.000	1589.000	93.4%	77.300	3.625
2	16:32:22	TM 2465.000	T 9685.000	T 48660.000	T 768.100	1544.000	1591.000	94.7%	81.870	3.699
3	16:32:49	TM 2408.000	T 9859.000	T 49350.000	T 782.900	1459.000	1580.000	95.4%	T 101.000	3.713
x		TM 2468.000	T 9789.000	T 49280.000	T 794.800	1533.000	1587.000	94.5%	T 86.710	3.679
σ		TM 61.030	T 92.000	T 589.000	T 34.190	69.490	5.760	1.0%	T 12.550	0.047
%RSD		TM 2.473	T 0.940	T 1.195	T 4.302	4.532	0.363	1.1	T 14.470	1.288
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	3.422	11750.000	1083.000	3.285	T 1098.000	1061.000	0.278	0.730	0.676
2	16:32:22	3.342	12390.000	1059.000	3.212	T 1043.000	1028.000	0.264	0.684	0.621
3	16:32:49	3.428	12830.000	1033.000	3.188	T 1060.000	T 992.200	0.245	0.658	0.845
x		3.397	12320.000	1058.000	3.228	T 1067.000	T 1027.000	0.262	0.691	0.714
σ		0.048	542.500	25.100	0.050	T 28.180	T 34.290	0.017	0.037	0.116
%RSD		1.409	4.402	2.372	1.561	T 2.640	T 3.340	6.295	5.311	16.300
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	0.449	0.529	4.096	5.861	4.410	0.067	-0.046	24.730	25.000
2	16:32:22	0.504	0.488	4.171	5.743	4.551	0.358	-0.176	25.000	25.050
3	16:32:49	0.422	0.556	3.967	6.176	4.455	0.195	-0.251	25.410	24.260
x		0.458	0.524	4.078	5.927	4.472	0.207	-0.157	25.040	24.770
σ		0.042	0.034	0.103	0.224	0.072	0.146	0.104	0.341	0.443
%RSD		9.082	6.542	2.526	3.774	1.616	70.420	66.060	1.363	1.788
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	1.654	0.386	0.270	8.891	96.2%	0.206	0.185	0.169	0.098
2	16:32:22	1.853	0.470	1.838	8.887	97.6%	0.191	0.225	0.186	0.271
3	16:32:49	0.074	0.042	1.582	8.813	97.2%	0.173	0.218	0.191	-0.157
x		1.194	0.299	1.230	8.864	97.0%	0.190	0.209	0.182	0.070
σ		0.975	0.227	0.841	0.044	0.7%	0.016	0.021	0.011	0.215
%RSD		81.650	75.780	68.400	0.494	0.7	8.572	10.090	6.261	305.500
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	0.010	0.009	0.016	0.006	97.1%	0.317	0.457	0.221	0.170
2	16:32:22	0.011	0.014	0.014	0.012	98.5%	0.327	0.445	0.245	0.208
3	16:32:49	0.009	0.010	0.014	0.014	99.6%	0.322	0.380	0.212	0.208
x		0.010	0.011	0.015	0.010	98.4%	0.322	0.427	0.226	0.196
σ		0.001	0.003	0.001	0.004	1.2%	0.005	0.041	0.017	0.022
%RSD		10.280	23.060	8.694	40.750	1.3	1.583	9.687	7.617	11.210
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:31:55	12.940	13.370	101.2%	0.025	0.020	0.764	0.777	0.783	131.3%
2	16:32:22	12.990	13.360	103.2%	0.021	0.014	0.842	0.732	0.783	134.2%
3	16:32:49	12.820	12.800	103.5%	0.018	0.017	0.821	0.834	0.808	132.2%
x		12.920	13.180	102.7%	0.021	0.017	0.809	0.781	0.791	132.6%
σ		0.088	0.325	1.2%	0.003	0.003	0.040	0.051	0.014	1.5%
%RSD		0.678	2.466	1.2	16.020	19.460	4.940	6.582	1.805	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	103.2%	0.061	21.400	21.170	-6.296	T 4430.000	T 378.800	389.200	391.700
2	16:38:16	105.3%	0.068	20.210	19.360	-6.677	T 4470.000	404.700	384.600	391.200
3	16:38:43	104.4%	0.048	21.090	20.780	-7.585	T 4531.000	401.400	383.900	390.900
x		104.3%	0.059	20.900	20.440	-6.853	T 4477.000	T 395.000	385.900	391.300
σ		1.0%	0.010	0.616	0.955	0.662	T 50.750	T 14.130	2.881	0.412
%RSD		1.0	16.900	2.948	4.672	9.664	T 1.134	T 3.578	0.747	0.105

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	T 58.270	T 4510.000	T 51420.000	401.600	876.900	938.500	95.0%	0.758	1.001
2	16:38:16	57.160	T 4455.000	T 51310.000	398.400	886.000	919.900	96.4%	0.747	1.078
3	16:38:43	58.010	T 4480.000	T 51720.000	403.400	883.100	916.400	95.7%	0.769	-0.329
x		T 57.810	T 4482.000	T 51480.000	401.100	882.000	925.000	95.7%	0.758	0.583
σ		T 0.584	T 27.490	T 211.200	2.513	4.670	11.850	0.7%	0.011	0.791
%RSD		T 1.011	T 0.613	T 0.410	0.626	0.529	1.281	0.8	1.480	135.600

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	0.649	13360.000	809.700	2.659	T 826.900	782.600	0.223	0.301	0.344
2	16:38:16	0.687	13740.000	811.800	2.595	T 819.200	785.600	0.211	0.302	0.085
3	16:38:43	0.658	14730.000	820.800	2.642	T 824.800	776.400	0.214	0.243	0.421
x		0.665	13940.000	814.100	2.632	T 823.600	781.500	0.216	0.282	0.283
σ		0.020	709.200	5.908	0.033	T 3.983	4.726	0.007	0.034	0.176
%RSD		3.005	5.086	0.726	1.272	T 0.484	0.605	3.069	12.070	62.060

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	0.194	0.219	1.343	3.749	1.443	0.728	0.194	24.460	25.210
2	16:38:16	0.234	0.216	1.367	3.413	1.375	0.751	-0.222	25.770	26.770
3	16:38:43	0.174	0.203	1.399	3.187	1.602	0.596	0.201	24.150	23.870
x		0.201	0.213	1.370	3.450	1.473	0.692	0.058	24.790	25.280
σ		0.030	0.009	0.028	0.283	0.117	0.083	0.242	0.857	1.453
%RSD		15.140	4.081	2.051	8.189	7.906	12.060	419.800	3.456	5.745

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	-0.772	-0.187	-0.214	5.421	98.0%	0.079	0.080	0.075	-0.175
2	16:38:16	-0.250	-0.069	0.027	5.505	98.6%	0.129	0.091	0.081	-0.387
3	16:38:43	0.043	0.004	0.049	5.525	98.1%	0.068	0.059	0.082	-0.793
x		-0.326	-0.084	-0.046	5.484	98.2%	0.092	0.077	0.079	-0.452
σ		0.413	0.096	0.146	0.055	0.3%	0.033	0.016	0.004	0.314
%RSD		126.400	114.800	317.800	1.003	0.3	35.660	21.430	4.801	69.610

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	0.001	0.004	0.007	0.007	99.0%	0.171	0.246	0.133	0.127
2	16:38:16	0.003	0.004	0.005	0.008	99.7%	0.221	0.288	0.168	0.131
3	16:38:43	0.005	0.006	0.011	0.003	100.0%	0.173	0.262	0.169	0.119
x		0.003	0.005	0.008	0.006	99.6%	0.188	0.265	0.157	0.126
σ		0.002	0.001	0.003	0.002	0.5%	0.028	0.021	0.020	0.006
%RSD		64.290	19.600	36.300	38.580	0.5	14.940	7.940	12.890	4.656

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:37:49	6.355	6.262	102.8%	-0.005	-0.003	0.055	0.066	0.054	130.6%
2	16:38:16	6.280	6.244	104.5%	-0.002	-0.002	0.065	0.050	0.054	132.0%
3	16:38:43	6.184	6.244	104.0%	-0.005	-0.002	0.052	0.042	0.054	132.3%
x		6.273	6.250	103.8%	-0.004	-0.002	0.057	0.052	0.054	131.6%
σ		0.085	0.011	0.9%	0.002	0.001	0.007	0.012	0.000	0.9%
%RSD		1.361	0.171	0.8	43.610	42.730	12.200	22.870	0.506	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	106.1%	0.007	0.986	1.344	-1.792	53.240	16.080	16.260	16.560
2	16:44:10	105.7%	0.003	1.142	1.413	0.168	54.980	16.470	16.610	15.930
3	16:44:37	105.5%	-0.002	1.921	1.466	-0.622	54.940	16.390	15.730	16.130
x		105.8%	0.003	1.350	1.408	-0.748	54.390	16.310	16.200	16.210
σ		0.3%	0.004	0.501	0.061	0.986	0.990	0.209	0.441	0.320
%RSD		0.3	149.800	37.100	4.358	131.800	1.820	1.279	2.719	1.977

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	1.973	115.600	T 52360.000	25.460	612.000	628.500	96.9%	0.089	0.399
2	16:44:10	2.004	115.000	T 53540.000	24.920	662.400	634.400	94.6%	0.117	0.298
3	16:44:37	1.978	115.100	T 52870.000	25.170	686.900	628.700	94.7%	0.168	0.173
x		1.985	115.300	T 52920.000	25.180	653.700	630.500	95.4%	0.125	0.290
σ		0.016	0.335	T 589.900	0.267	38.210	3.346	1.3%	0.040	0.114
%RSD		0.826	0.290	T 1.115	1.062	5.845	0.531	1.4	32.080	39.160

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	0.315	13360.000	5.022	0.117	9.156	-0.025	0.000	0.060	-0.335
2	16:44:10	0.358	13430.000	4.955	0.111	T 18.570	-0.792	0.002	0.075	0.056
3	16:44:37	0.355	13690.000	5.243	0.112	9.345	-0.365	0.004	0.063	-0.320
x		0.343	13490.000	5.073	0.113	T 12.360	-0.394	0.002	0.066	-0.200
σ		0.024	174.100	0.151	0.003	T 5.380	0.384	0.002	0.008	0.222
%RSD		6.947	1.290	2.971	2.610	T 43.540	97.480	74.060	11.650	111.100

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	0.058	0.078	1.578	3.031	1.381	0.045	-0.068	2.489	2.171
2	16:44:10	0.053	0.080	1.497	2.935	1.425	-0.170	-0.023	2.317	1.966
3	16:44:37	0.075	0.075	1.465	3.304	1.478	0.008	0.067	1.619	2.555
x		0.062	0.078	1.514	3.090	1.428	-0.039	-0.008	2.142	2.231
σ		0.012	0.003	0.058	0.191	0.049	0.115	0.069	0.461	0.299
%RSD		18.720	3.619	3.855	6.196	3.398	293.400	844.800	21.510	13.410

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	1.190	0.290	1.189	0.880	96.6%	0.051	0.035	0.051	-0.663
2	16:44:10	0.255	0.046	-0.972	0.907	96.1%	0.065	0.043	0.031	-0.614
3	16:44:37	0.113	0.041	0.264	0.910	96.2%	0.033	0.035	0.025	-0.940
x		0.519	0.126	0.160	0.899	96.3%	0.050	0.038	0.036	-0.739
σ		0.585	0.142	1.084	0.016	0.3%	0.016	0.004	0.014	0.176
%RSD		112.700	113.100	676.100	1.831	0.3	32.620	11.840	38.180	23.800

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	-0.001	0.002	0.004	0.002	99.9%	0.097	0.180	0.094	0.080
2	16:44:10	-0.001	0.003	0.004	0.006	99.7%	0.151	0.183	0.102	0.102
3	16:44:37	0.001	0.005	0.002	0.008	98.3%	0.159	0.244	0.107	0.104
x		-0.000	0.003	0.003	0.005	99.3%	0.136	0.202	0.101	0.095
σ		0.001	0.001	0.001	0.003	0.9%	0.033	0.036	0.006	0.014
%RSD		293.500	46.010	34.490	58.730	0.9	24.620	17.780	6.132	14.210

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:43:43	0.983	0.926	102.5%	-0.013	-0.017	0.009	0.013	0.010	129.1%
2	16:44:10	0.910	0.944	102.6%	-0.015	-0.017	0.011	0.005	0.007	129.0%
3	16:44:37	0.888	0.968	103.8%	-0.014	-0.015	0.008	0.010	0.008	130.2%
x		0.927	0.946	103.0%	-0.014	-0.016	0.010	0.010	0.008	129.4%
σ		0.050	0.021	0.7%	0.001	0.001	0.001	0.004	0.001	0.7%
%RSD		5.360	2.208	0.7	6.428	4.160	14.610	42.450	14.320	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	100.1%	0.088	22.300	23.160	133.000	T 5609.000	T 1095.000	1099.000	1118.000
2	16:50:02	104.6%	0.117	22.770	24.350	139.000	T 5749.000	T 1139.000	1145.000	1149.000
3	16:50:29	102.0%	0.101	22.220	23.240	135.000	T 5673.000	T 1116.000	1143.000	1168.000
x		102.2%	0.102	22.430	23.580	135.600	T 5677.000	T 1117.000	1129.000	1145.000
σ		2.3%	0.014	0.296	0.665	3.038	T 70.180	T 22.140	25.800	25.270
%RSD		2.2	13.850	1.318	2.818	2.239	T 1.236	T 1.983	2.285	2.206
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	TM 2621.000	T 7124.000	T 48810.000	T 1175.000	4092.000	4164.000	T 99.1%	15.290	11.930
2	16:50:02	TM 2676.000	T 6815.000	T 50070.000	T 1125.000	4294.000	4255.000	97.3%	15.390	12.460
3	16:50:29	TM 2705.000	T 7076.000	T 50610.000	T 1166.000	4321.000	4292.000	96.3%	17.590	12.290
x		TM 2667.000	T 7005.000	T 49830.000	T 1155.000	4236.000	4237.000	T 97.6%	16.090	12.230
σ		TM 42.710	T 166.000	T 925.500	T 26.490	125.000	65.920	T 1.4%	1.301	0.272
%RSD		TM 1.601	T 2.370	T 1.857	T 2.292	2.951	1.556	T 1.5	8.084	2.223
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	5.009	9013.000	T 48210.000	26.840	T 48690.000	T 47110.000	0.806	1.822	1.837
2	16:50:02	5.130	9747.000	T 49550.000	27.240	T 49480.000	T 47900.000	0.790	1.835	1.667
3	16:50:29	5.329	10560.000	T 49610.000	27.610	T 50450.000	T 48930.000	0.787	1.891	1.309
x		5.156	9772.000	T 49120.000	27.230	T 49540.000	T 47980.000	0.794	1.849	1.605
σ		0.162	772.300	T 792.500	0.390	T 882.100	T 914.100	0.010	0.037	0.270
%RSD		3.135	7.903	T 1.613	1.430	T 1.781	T 1.905	1.299	1.999	16.810
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	5.195	5.171	14.530	18.120	15.640	6.390	0.804	55.070	55.850
2	16:50:02	5.015	5.316	14.870	17.600	15.720	6.390	0.446	54.660	55.020
3	16:50:29	5.121	5.238	14.790	17.240	16.130	6.638	0.317	55.100	57.120
x		5.110	5.242	14.730	17.650	15.830	6.472	0.523	54.940	56.000
σ		0.090	0.073	0.178	0.440	0.262	0.143	0.253	0.242	1.058
%RSD		1.769	1.387	1.206	2.490	1.656	2.210	48.340	0.440	1.890
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	3.101	0.639	-0.002	20.480	98.9%	0.194	0.181	0.205	0.151
2	16:50:02	4.288	0.949	-0.019	20.630	99.7%	0.204	0.224	0.215	0.174
3	16:50:29	4.592	1.014	-0.669	20.810	99.4%	0.246	0.264	0.195	0.063
x		3.994	0.867	-0.230	20.640	99.3%	0.215	0.223	0.205	0.130
σ		0.788	0.201	0.381	0.163	0.4%	0.027	0.041	0.010	0.059
%RSD		19.730	23.130	165.400	0.789	0.4	12.710	18.520	4.839	45.310
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	0.033	0.042	0.160	0.189	96.9%	0.229	0.224	0.297	0.306
2	16:50:02	0.029	0.031	0.177	0.178	98.1%	0.247	0.235	0.320	0.324
3	16:50:29	0.040	0.034	0.179	0.168	96.9%	0.235	0.215	0.328	0.269
x		0.034	0.036	0.172	0.178	97.3%	0.237	0.224	0.315	0.299
σ		0.006	0.006	0.010	0.011	0.7%	0.009	0.010	0.016	0.028
%RSD		16.430	15.680	5.997	5.916	0.7	3.918	4.411	5.101	9.377
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:49:35	57.370	56.780	100.8%	0.020	0.016	6.155	5.605	5.851	139.2%
2	16:50:02	56.620	57.030	101.8%	0.015	0.012	6.163	5.769	5.896	136.9%
3	16:50:29	57.490	56.890	102.8%	0.013	0.015	6.121	5.528	5.820	134.0%
x		57.160	56.900	101.8%	0.016	0.015	6.146	5.634	5.856	136.7%
σ		0.471	0.125	1.0%	0.004	0.002	0.023	0.123	0.038	2.6%
%RSD		0.825	0.220	1.0	23.770	15.390	0.369	2.184	0.651	1.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	105.4%	0.025	27.040	27.210	41.770	T 5723.000	T 843.900	865.500	878.000
2	16:55:55	105.7%	0.020	24.930	26.820	35.070	T 5537.000	T 832.800	845.700	878.500
3	16:56:22	103.8%	0.025	24.150	25.060	32.040	T 5634.000	T 841.200	860.800	864.000
x		105.0%	0.024	25.370	26.360	36.290	T 5631.000	T 839.300	857.400	873.500
σ		1.0%	0.003	1.498	1.149	4.980	T 93.300	T 5.773	10.340	8.244
%RSD		1.0	11.610	5.904	4.357	13.720	T 1.657	T 0.688	1.206	0.944
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	T 307.900	T 4348.000	T 51790.000	T 898.700	3448.000	3425.000	96.2%	2.033	2.282
2	16:55:55	T 306.100	T 4284.000	T 50770.000	942.200	3326.000	3397.000	96.9%	2.084	1.097
3	16:56:22	T 305.000	T 4283.000	T 50990.000	952.700	3354.000	3348.000	T 96.8%	2.070	2.045
x		T 306.300	T 4305.000	T 51180.000	T 931.200	3376.000	3390.000	T 96.6%	2.062	1.808
σ		T 1.457	T 37.470	T 538.000	T 28.640	64.120	39.300	T 0.4%	0.026	0.627
%RSD		T 0.476	T 0.870	T 1.051	T 3.076	1.899	1.159	T 0.4	1.284	34.690
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	1.278	11890.000	T 6254.000	14.930	T 6395.000	6491.000	0.347	0.523	0.122
2	16:55:55	1.246	12690.000	T 6071.000	14.460	T 6188.000	6262.000	0.339	0.412	0.168
3	16:56:22	1.250	12390.000	T 6069.000	14.360	T 6128.000	6105.000	0.310	0.482	0.336
x		1.258	12320.000	T 6132.000	14.580	T 6237.000	6286.000	0.332	0.473	0.209
σ		0.017	402.200	T 106.400	0.306	T 140.300	194.200	0.019	0.056	0.113
%RSD		1.366	3.263	T 1.735	2.097	T 2.249	3.089	5.790	11.830	54.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	0.939	0.992	9.973	12.150	10.610	1.632	-0.128	28.350	28.700
2	16:55:55	0.967	1.056	10.050	11.700	10.700	1.067	0.295	27.390	28.950
3	16:56:22	0.894	0.959	10.410	11.900	10.720	1.253	-0.101	26.920	29.100
x		0.933	1.002	10.140	11.910	10.680	1.318	0.022	27.560	28.920
σ		0.037	0.050	0.232	0.225	0.059	0.288	0.237	0.728	0.201
%RSD		3.981	4.957	2.283	1.884	0.548	21.860	1075.000	2.643	0.694
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	0.200	0.007	-0.743	15.710	97.4%	0.052	0.057	0.052	-0.549
2	16:55:55	2.349	0.505	-0.502	15.470	98.2%	0.036	0.042	0.054	-0.053
3	16:56:22	1.763	0.344	-0.711	15.560	96.2%	0.071	0.077	0.065	-0.329
x		1.437	0.285	-0.652	15.580	97.3%	0.053	0.059	0.057	-0.311
σ		1.111	0.254	0.131	0.124	1.0%	0.017	0.018	0.007	0.249
%RSD		77.300	89.070	20.100	0.793	1.0	32.890	30.550	12.300	80.040
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	0.008	0.008	0.017	0.030	99.5%	0.083	0.128	0.165	0.153
2	16:55:55	0.006	0.009	0.037	0.026	98.5%	0.095	0.101	0.161	0.164
3	16:56:22	0.007	0.010	0.021	0.027	96.4%	0.105	0.131	0.184	0.140
x		0.007	0.009	0.025	0.028	98.1%	0.094	0.120	0.170	0.152
σ		0.001	0.001	0.011	0.002	1.6%	0.011	0.016	0.012	0.012
%RSD		15.990	12.480	43.970	7.720	1.6	12.000	13.510	7.146	8.012
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	16:55:28	22.230	21.390	101.6%	-0.011	-0.010	0.923	0.861	0.872	128.4%
2	16:55:55	21.720	21.370	104.1%	-0.010	-0.008	0.889	0.832	0.861	128.7%
3	16:56:22	22.240	21.550	102.3%	-0.009	-0.009	0.896	0.852	0.876	128.4%
x		22.060	21.440	102.7%	-0.010	-0.009	0.903	0.848	0.870	128.5%
σ		0.301	0.100	1.2%	0.001	0.001	0.018	0.015	0.008	0.1%
%RSD		1.365	0.465	1.2	10.000	11.660	2.008	1.738	0.863	0.1

TQ87733-001 11/16/2018 17:00:54 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	110.7%	-0.002	-0.635	-0.765	-8.967	2.843	2.137	2.138	2.321
2	17:01:49	112.0%	0.011	-0.616	-0.732	-13.250	3.247	2.177	2.094	2.465
3	17:02:16	113.5%	-0.002	-0.646	-0.817	-13.710	3.113	1.993	1.808	1.952
x		112.1%	0.003	-0.633	-0.771	-11.980	3.067	2.102	2.013	2.246
σ		1.4%	0.007	0.015	0.043	2.615	0.206	0.096	0.179	0.265
%RSD		1.2	269.700	2.390	5.524	21.840	6.713	4.588	8.890	11.790
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	2.489	-1.023	T 206000.000	-0.591	4.437	5.521	T 98.2%	0.275	1.069
2	17:01:49	2.759	-1.044	T 210300.000	-0.560	3.457	6.407	95.6%	0.124	2.932
3	17:02:16	2.876	-1.393	T 204900.000	-1.572	4.215	5.562	95.5%	0.183	2.254
x		2.708	-1.153	T 207000.000	-0.908	4.036	5.830	T 96.4%	0.194	2.085
σ		0.199	0.208	T 2861.000	0.575	0.514	0.500	T 1.5%	0.076	0.943
%RSD		7.334	18.020	T 1.382	63.380	12.730	8.582	T 1.6	39.340	45.240
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	0.928	58490.000	17.200	0.042	13.740	3.561	0.001	0.051	-0.316
2	17:01:49	0.884	59520.000	16.350	0.059	15.030	3.160	0.002	0.038	-0.259
3	17:02:16	0.860	59590.000	16.150	0.043	13.830	1.383	0.001	0.019	-0.103
x		0.891	59200.000	16.570	0.048	14.200	2.701	0.001	0.036	-0.226
σ		0.034	616.600	0.560	0.010	0.719	1.159	0.001	0.016	0.110
%RSD		3.869	1.042	3.380	19.830	5.065	42.910	64.330	44.410	48.760
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	-0.004	0.026	0.513	10.550	0.615	-0.010	0.058	29.200	31.100
2	17:01:49	-0.003	0.013	0.384	10.230	0.740	-0.242	0.196	29.110	28.590
3	17:02:16	-0.015	0.006	0.460	9.497	0.556	-0.038	0.346	28.950	29.120
x		-0.007	0.015	0.452	10.090	0.637	-0.097	0.200	29.090	29.610
σ		0.007	0.010	0.065	0.541	0.094	0.127	0.144	0.128	1.324
%RSD		95.390	69.360	14.370	5.365	14.730	131.000	72.160	0.440	4.473
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	-0.360	-0.141	-0.886	0.023	97.3%	0.158	0.158	0.141	-1.003
2	17:01:49	1.294	0.263	-0.883	0.019	97.6%	0.164	0.177	0.169	-1.229
3	17:02:16	1.555	0.371	1.001	0.024	98.0%	0.134	0.149	0.141	-1.301
x		0.830	0.165	-0.256	0.022	97.6%	0.152	0.161	0.150	-1.178
σ		1.038	0.270	1.088	0.003	0.3%	0.016	0.015	0.016	0.156
%RSD		125.100	164.200	424.900	11.240	0.3	10.370	9.152	10.680	13.220
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	0.001	0.008	0.005	0.000	97.6%	3.114	4.695	0.203	0.183
2	17:01:49	0.003	0.010	0.003	-0.006	97.7%	3.245	4.640	0.167	0.167
3	17:02:16	0.007	0.007	-0.001	0.001	98.1%	3.473	4.416	0.146	0.151
x		0.004	0.008	0.003	-0.002	97.8%	3.277	4.584	0.172	0.167
σ		0.003	0.001	0.003	0.004	0.3%	0.182	0.148	0.029	0.016
%RSD		79.470	17.770	111.200	226.000	0.3	5.546	3.223	16.660	9.597
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:01:22	0.037	0.025	104.0%	-0.016	-0.017	-0.003	-0.002	-0.003	138.2%
2	17:01:49	0.008	0.017	104.0%	-0.014	-0.016	-0.003	-0.003	-0.004	134.4%
3	17:02:16	0.020	0.019	105.5%	-0.016	-0.016	-0.003	-0.003	-0.003	134.2%
x		0.022	0.020	104.5%	-0.015	-0.017	-0.003	-0.003	-0.003	135.6%
σ		0.014	0.004	0.9%	0.001	0.000	0.000	0.001	0.000	2.3%
%RSD		66.110	20.700	0.8	8.493	1.280	1.897	18.550	13.030	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	113.1%	174.700	171.200	175.300	-13.720	T 1991.000	T 1987.000	2060.000	2110.000
2	17:07:42	112.7%	171.500	168.300	169.600	-12.540	T 2013.000	T 2015.000	2056.000	2094.000
3	17:08:09	112.7%	171.900	175.100	169.800	-13.730	T 1998.000	T 1978.000	2084.000	2141.000
x		112.8%	172.700	171.500	171.600	-13.330	T 2001.000	T 1993.000	2067.000	2115.000
σ		0.3%	1.777	3.399	3.207	0.683	T 11.140	T 19.430	15.000	23.880
%RSD		0.2	1.029	1.981	1.869	5.122	T 0.557	T 0.975	0.726	1.129
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	202.200	13.710	T 204200.000	T 1877.000	2187.000	2046.000	98.5%	190.900	206.200
2	17:07:42	198.100	13.780	T 204300.000	T 1879.000	2107.000	2042.000	96.9%	194.800	204.100
3	17:08:09	201.200	13.630	T 207700.000	T 1901.000	2171.000	2036.000	96.3%	193.200	T 204.800
x		200.500	13.710	T 205400.000	T 1886.000	2155.000	2041.000	97.2%	193.000	T 205.000
σ		2.156	0.075	T 1962.000	T 13.720	42.410	5.066	1.2%	1.972	T 1.101
%RSD		1.075	0.544	T 0.955	T 0.728	1.968	0.248	1.2	1.022	T 0.537
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	197.700	44810.000	2163.000	198.500	T 2026.000	1991.000	195.600	187.200	181.800
2	17:07:42	193.200	43220.000	2184.000	204.000	T 2055.000	1952.000	192.500	183.600	181.200
3	17:08:09	198.300	39660.000	2224.000	202.200	T 2063.000	2009.000	191.600	183.800	184.600
x		196.400	42560.000	2190.000	201.600	T 2048.000	1984.000	193.200	184.800	182.500
σ		2.808	2636.000	30.980	2.800	T 19.680	29.100	2.074	2.004	1.767
%RSD		1.429	6.192	1.415	1.389	T 0.961	1.466	1.073	1.084	0.968
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	181.900	190.500	183.000	185.800	177.900	180.100	174.300	17.110	17.690
2	17:07:42	179.400	188.200	183.300	187.700	179.600	180.100	175.100	17.570	16.960
3	17:08:09	185.700	188.300	180.400	189.600	182.300	183.800	173.300	17.680	17.150
x		182.300	189.000	182.200	187.700	179.900	181.300	174.200	17.460	17.270
σ		3.177	1.287	1.590	1.941	2.217	2.145	0.895	0.301	0.379
%RSD		1.743	0.681	0.873	1.034	1.232	1.183	0.514	1.724	2.194
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	796.300	177.400	1.713	T 198.400	96.8%	192.400	192.300	190.700	192.000
2	17:07:42	785.400	175.100	-0.408	T 199.500	95.4%	193.300	196.600	192.400	193.900
3	17:08:09	796.500	178.700	0.562	204.300	95.4%	189.600	191.600	187.700	189.000
x		792.700	177.100	0.623	T 200.700	95.8%	191.800	193.500	190.300	191.700
σ		6.361	1.813	1.062	T 3.108	0.8%	1.905	2.721	2.349	2.483
%RSD		0.802	1.024	170.600	T 1.548	0.9	0.994	1.406	1.234	1.296
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	207.700	203.700	184.100	182.500	97.0%	197.800	200.000	195.900	182.800
2	17:07:42	204.900	206.000	188.800	186.300	95.8%	199.400	199.800	196.700	179.700
3	17:08:09	203.900	199.500	186.200	181.600	97.4%	196.800	198.800	196.400	181.400
x		205.500	203.000	186.400	183.500	96.7%	198.000	199.600	196.300	181.300
σ		1.976	3.306	2.339	2.498	0.8%	1.331	0.628	0.399	1.572
%RSD		0.961	1.628	1.255	1.361	0.8	0.672	0.315	0.203	0.867
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:07:15	192.300	193.000	101.8%	197.100	T 190.800	197.800	196.100	T 194.800	129.3%
2	17:07:42	192.800	192.900	102.9%	192.700	T 189.400	197.500	193.300	T 192.000	127.3%
3	17:08:09	192.300	192.700	103.6%	194.500	T 190.000	196.300	193.600	T 192.200	127.0%
x		192.500	192.900	102.8%	194.800	T 190.100	197.200	194.400	T 193.000	127.9%
σ		0.297	0.129	0.9%	2.194	T 0.742	0.813	1.548	T 1.544	1.2%
%RSD		0.154	0.067	0.9	1.126	T 0.390	0.412	0.796	T 0.800	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	111.3%	0.465	10.350	12.060	-66.540	202.400	T 14330.000	T 15200.000	T 16060.000
2	17:13:37	114.6%	0.499	9.894	11.870	-68.170	201.700	T 14410.000	T 15010.000	T 15920.000
3	17:14:04	114.9%	0.478	10.610	12.280	-67.690	200.300	T 14400.000	T 14980.000	T 15880.000
x		113.6%	0.481	10.280	12.070	-67.470	201.500	T 14380.000	T 15060.000	T 15950.000
σ		2.0%	0.017	0.364	0.205	0.839	1.073	T 42.780	T 122.400	T 96.080
%RSD		1.7	3.582	3.538	1.701	1.243	0.533	T 0.297	T 0.813	T 0.602
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	TM 50380.000	T 3742.000	T 141100.000	T 14640.000	16630.000	T 16770.000	101.6%	M 1355.000	152.200
2	17:13:37	TM 50110.000	T 3612.000	T 142000.000	T 13960.000	16140.000	T 16850.000	101.4%	M 1349.000	149.800
3	17:14:04	TM 49960.000	T 3563.000	T 140900.000	T 13970.000	16390.000	T 16830.000	101.1%	M 1327.000	149.000
x		TM 50150.000	T 3639.000	T 141400.000	T 14190.000	16390.000	T 16820.000	101.4%	M 1344.000	150.300
σ		TM 213.400	T 92.340	T 577.600	T 386.600	244.300	T 42.390	0.3%	M 14.520	1.653
%RSD		TM 0.426	T 2.537	T 0.409	T 2.725	1.491	T 0.252	0.3	M 1.080	1.100
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	127.600	18320.000	T 86680.000	TM 1959.000	T 95020.000	T 93090.000	42.830	116.300	89.460
2	17:13:37	125.800	19410.000	T 86990.000	TM 1969.000	T 95720.000	T 92650.000	43.390	116.300	90.070
3	17:14:04	124.500	19370.000	T 86130.000	TM 1943.000	T 94580.000	T 91940.000	42.770	116.700	88.070
x		126.000	19040.000	T 86600.000	TM 1957.000	T 95110.000	T 92560.000	43.000	116.400	89.200
σ		1.572	617.500	T 432.400	TM 13.160	T 577.600	T 581.000	0.340	0.224	1.024
%RSD		1.248	3.244	T 0.499	TM 0.673	T 0.607	T 0.628	0.791	0.192	1.147
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	52.020	36.970	167.800	124.000	118.400	17.760	-0.366	7.092	5.546
2	17:13:37	51.680	36.920	164.300	124.800	118.200	17.950	-0.244	6.562	5.460
3	17:14:04	51.440	36.760	163.100	123.700	117.200	18.450	-0.390	6.321	5.766
x		51.710	36.890	165.100	124.200	117.900	18.060	-0.333	6.658	5.591
σ		0.295	0.108	2.457	0.547	0.649	0.357	0.078	0.395	0.158
%RSD		0.570	0.293	1.489	0.440	0.551	1.978	23.520	5.928	2.825
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	2.253	1.618	6.962	48.600	181.8%	0.363	0.407	0.609	21.030
2	17:13:37	2.695	1.684	4.587	48.660	180.9%	0.387	0.428	0.629	22.140
3	17:14:04	2.837	1.823	7.439	48.440	178.9%	0.370	0.388	0.633	22.300
x		2.595	1.708	6.329	48.570	180.5%	0.373	0.408	0.624	21.820
σ		0.304	0.104	1.528	0.112	1.5%	0.012	0.020	0.013	0.693
%RSD		11.720	6.110	24.140	0.230	0.8	3.331	4.863	2.113	3.175
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	0.246	0.114	0.172	0.170	91.1%	6.524	7.536	0.246	0.208
2	17:13:37	0.239	0.123	0.166	0.135	91.9%	6.464	7.608	0.218	0.211
3	17:14:04	0.266	0.125	0.213	0.127	91.7%	6.496	7.368	0.224	0.203
x		0.250	0.121	0.184	0.144	91.6%	6.495	7.504	0.229	0.207
σ		0.014	0.006	0.026	0.023	0.5%	0.030	0.123	0.015	0.004
%RSD		5.684	4.769	14.030	15.940	0.5	0.465	1.645	6.455	1.914
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:13:10	396.100	397.800	97.5%	0.928	0.916	44.900	39.190	42.190	122.7%
2	17:13:37	394.500	393.000	98.5%	0.871	0.903	44.460	38.760	41.600	121.0%
3	17:14:04	391.000	393.600	98.4%	0.896	0.883	44.620	38.350	41.510	121.6%
x		393.900	394.800	98.1%	0.898	0.901	44.660	38.760	41.760	121.8%
σ		2.609	2.618	0.5%	0.029	0.017	0.223	0.421	0.372	0.8%
%RSD		0.662	0.663	0.5	3.193	1.838	0.499	1.087	0.891	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	113.5%	23.830	56.350	65.260	-71.810	T 1821.000	T 17460.000	T 18390.000	T 19610.000
2	17:19:30	113.1%	23.740	55.080	67.070	-71.070	T 1839.000	T 17670.000	T 18650.000	T 19720.000
3	17:19:57	112.2%	23.300	54.550	63.880	-71.780	T 1806.000	T 17600.000	T 18510.000	T 19650.000
x		112.9%	23.620	55.320	65.400	-71.560	T 1822.000	T 17580.000	T 18520.000	T 19660.000
σ		0.7%	0.289	0.926	1.604	0.418	T 16.460	T 106.000	T 131.000	T 56.940
%RSD		0.6	1.222	1.674	2.452	0.584	T 0.903	T 0.603	T 0.707	T 0.290

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	TM 80010.000	T 3629.000	T 146700.000	T 37990.000	19730.000	T 20310.000	99.1%	M 2927.000	T 444.600
2	17:19:30	TM 79950.000	T 3588.000	T 146600.000	T 38790.000	20050.000	T 20570.000	98.6%	M 2898.000	T 444.500
3	17:19:57	TM 80710.000	T 3727.000	T 146000.000	T 38830.000	19610.000	T 20100.000	99.4%	M 2896.000	T 441.800
x		TM 80230.000	T 3648.000	T 146400.000	T 38540.000	19800.000	T 20330.000	99.0%	M 2907.000	T 443.600
σ		TM 424.400	T 71.450	T 408.400	T 474.100	230.300	T 236.600	0.4%	M 17.520	T 1.594
%RSD		TM 0.529	T 1.959	T 0.279	T 1.230	1.163	T 1.164	0.4	M 0.603	T 0.359

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	T 372.900	21710.000	T 94390.000	TM 2181.000	TM 101600.000	T 99470.000	236.900	314.600	241.400
2	17:19:30	T 368.600	22670.000	T 93990.000	TM 2184.000	TM 102800.000	TM 101100.000	237.800	313.700	242.800
3	17:19:57	T 365.400	21820.000	T 92820.000	TM 2153.000	TM 101900.000	T 99060.000	232.200	310.800	237.800
x		T 369.000	22070.000	T 93730.000	TM 2173.000	TM 102100.000	TM 99870.000	235.600	313.000	240.700
σ		T 3.802	527.400	T 817.200	TM 16.660	TM 631.300	TM 1057.000	3.014	2.002	2.590
%RSD		T 1.031	2.390	T 0.872	TM 0.767	TM 0.618	TM 1.059	1.279	0.640	1.076

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	194.600	140.200	363.800	274.900	264.300	200.700	111.500	6.485	4.892
2	17:19:30	194.700	138.800	365.100	278.500	266.800	203.200	115.400	6.044	4.576
3	17:19:57	191.700	138.000	363.100	274.600	263.100	201.300	113.500	5.775	4.566
x		193.700	139.000	364.000	276.000	264.700	201.700	113.400	6.101	4.678
σ		1.687	1.127	1.010	2.184	1.888	1.340	1.955	0.358	0.185
%RSD		0.871	0.811	0.278	0.791	0.713	0.664	1.723	5.869	3.961

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	479.700	168.800	15.890	T 194.100	170.9%	135.900	142.900	212.200	218.500
2	17:19:30	485.300	171.900	14.230	T 193.300	171.7%	134.000	143.800	212.200	209.800
3	17:19:57	493.600	174.200	16.270	T 192.100	172.1%	133.800	141.500	212.100	218.200
x		486.200	171.700	15.470	T 193.200	171.6%	134.600	142.700	212.200	215.500
σ		7.020	2.716	1.084	T 0.988	0.6%	1.130	1.149	0.076	4.918
%RSD		1.444	1.582	7.012	T 0.511	0.3	0.840	0.805	0.036	2.282

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	217.400	215.200	190.400	203.200	89.5%	220.900	226.000	129.300	123.400
2	17:19:30	217.500	213.000	191.100	200.800	90.7%	221.900	223.200	128.000	122.600
3	17:19:57	214.700	214.200	192.100	200.800	90.2%	223.900	227.000	129.000	122.100
x		216.500	214.100	191.200	201.600	90.1%	222.200	225.400	128.800	122.700
σ		1.590	1.083	0.835	1.354	0.6%	1.565	1.926	0.695	0.667
%RSD		0.734	0.506	0.437	0.672	0.6	0.704	0.854	0.539	0.543

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:19:03	M 935.500	M 953.800	92.4%	225.600	T 221.200	T 264.500	263.900	T 262.300	116.1%
2	17:19:30	M 934.400	M 943.300	92.8%	226.200	T 224.400	T 267.600	266.100	T 264.900	117.2%
3	17:19:57	M 933.300	M 943.300	94.3%	225.700	T 220.200	T 262.400	261.200	T 260.900	117.1%
x		M 934.400	M 946.800	93.2%	225.800	T 221.900	T 264.900	263.700	T 262.700	116.8%
σ		M 1.131	M 6.028	1.0%	0.319	T 2.217	T 2.616	2.408	T 2.013	0.6%
%RSD		M 0.121	M 0.637	1.0	0.141	T 0.999	T 0.988	0.913	T 0.766	0.5

TJ24026-002SD 11/16/2018 17:24:31

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	111.5%	23.320	50.980	60.130	-68.840	T 1740.000	T 16090.000	T 16640.000	T 17600.000
2	17:25:24	111.0%	23.320	51.420	59.980	-68.410	T 1739.000	T 15960.000	T 16690.000	T 17680.000
3	17:25:51	113.0%	22.860	51.560	61.580	-68.940	T 1714.000	T 15610.000	T 16540.000	T 17540.000
x		111.9%	23.170	51.320	60.560	-68.730	T 1731.000	T 15890.000	T 16630.000	T 17610.000
σ		1.1%	0.265	0.307	0.882	0.283	T 14.460	T 246.300	T 75.780	T 68.260
%RSD		0.9	1.144	0.598	1.456	0.411	T 0.835	T 1.550	T 0.456	T 0.388

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	TM 70760.000	T 3302.000	T 153900.000	T 32920.000	18090.000	T 18430.000	96.0%	TM 2671.000	T 408.500
2	17:25:24	TM 70540.000	T 3299.000	T 154100.000	T 33580.000	17750.000	T 18410.000	96.2%	M 2496.000	T 406.800
3	17:25:51	TM 71070.000	T 3284.000	T 153000.000	T 33090.000	17570.000	T 18160.000	97.1%	M 2477.000	T 398.800
x		TM 70790.000	T 3295.000	T 153700.000	T 33200.000	17810.000	T 18340.000	96.4%	TM 2548.000	T 404.700
σ		TM 264.600	T 9.977	T 552.200	T 339.800	261.400	T 149.000	0.6%	TM 106.500	T 5.180
%RSD		TM 0.374	T 0.303	T 0.359	T 1.023	1.468	T 0.813	0.6	TM 4.181	T 1.280

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	T 330.100	22160.000	T 85540.000	TM 2068.000	T 93030.000	T 90140.000	218.300	283.400	222.300
2	17:25:24	T 333.000	20470.000	T 85220.000	TM 2048.000	T 93400.000	T 90900.000	217.900	279.500	227.400
3	17:25:51	T 324.500	22910.000	T 85800.000	TM 2040.000	T 92610.000	T 89240.000	214.900	281.700	223.100
x		T 329.200	21850.000	T 85520.000	TM 2052.000	T 93010.000	T 90090.000	217.000	281.500	224.300
σ		T 4.327	1253.000	T 292.800	TM 14.770	T 394.800	T 830.700	1.832	1.921	2.719
%RSD		T 1.315	5.734	T 0.342	TM 0.720	T 0.425	T 0.922	0.844	0.683	1.212

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	183.700	136.400	331.300	257.700	248.100	190.200	110.400	11.640	10.640
2	17:25:24	182.300	136.300	329.200	260.600	249.000	188.400	108.500	11.760	10.570
3	17:25:51	180.800	134.100	328.400	259.500	246.100	187.200	110.500	11.340	10.590
x		182.300	135.600	329.600	259.300	247.700	188.600	109.800	11.580	10.600
σ		1.432	1.303	1.491	1.444	1.475	1.516	1.099	0.215	0.036
%RSD		0.786	0.961	0.452	0.557	0.595	0.804	1.001	1.859	0.344

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	469.700	161.100	9.696	T 186.300	160.4%	127.400	135.100	194.600	202.200
2	17:25:24	465.200	158.700	10.290	T 187.500	159.6%	126.100	134.900	191.100	199.100
3	17:25:51	469.100	159.500	9.843	T 186.600	160.4%	126.900	133.200	194.000	197.100
x		468.000	159.800	9.942	T 186.800	160.1%	126.800	134.400	193.200	199.400
σ		2.422	1.223	0.308	T 0.668	0.5%	0.656	1.026	1.830	2.582
%RSD		0.517	0.766	3.094	T 0.358	0.3	0.518	0.763	0.947	1.294

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	199.900	198.300	177.700	186.400	88.8%	202.800	206.100	128.200	120.900
2	17:25:24	200.200	195.000	173.500	184.100	89.9%	203.100	204.700	127.100	119.400
3	17:25:51	197.100	196.200	177.400	184.200	89.5%	203.500	205.500	126.200	119.600
x		199.100	196.500	176.200	184.900	89.4%	203.100	205.400	127.100	119.900
σ		1.745	1.652	2.330	1.343	0.6%	0.308	0.712	0.989	0.821
%RSD		0.877	0.841	1.322	0.726	0.6	0.151	0.347	0.778	0.684

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:24:57	M 815.900	M 819.700	93.4%	206.200	T 201.900	247.600	238.200	T 240.300	116.0%
2	17:25:24	M 802.900	M 817.800	94.1%	201.900	T 197.600	T 237.400	235.900	T 235.900	115.3%
3	17:25:51	M 807.200	M 813.100	94.1%	205.100	T 202.200	246.900	237.600	T 239.600	117.1%
x		M 808.600	M 816.900	93.9%	204.400	T 200.600	T 244.000	237.200	T 238.600	116.1%
σ		M 6.632	M 3.402	0.4%	2.194	T 2.560	T 5.711	1.182	T 2.328	0.9%
%RSD		M 0.820	M 0.417	0.4	1.073	T 1.277	T 2.341	0.498	T 0.976	0.8

CCV MW10535 11/16/2018 17:30:25 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	91.2%	284.000	286.600	287.100	2.986	┬60530.000	┬59280.000	┬58860.000	┬59960.000
2	17:31:19	89.2%	283.300	276.700	279.600	3.104	┬59670.000	┬59390.000	┬58910.000	┬59710.000
3	17:31:47	89.1%	276.600	260.800	269.300	-0.078	┬60710.000	┬59540.000	┬58280.000	┬59360.000
x		89.9%	93.768%	91.565%	92.891%	2.004	┬100.504%	┬59400.000	┬58690.000	┬99.458%
σ		1.2%	n/a	n/a	n/a	1.804	┬n/a	┬131.300	┬351.800	┬n/a
%RSD		1.3	1.450	4.743	3.196	90.010	┬0.923	┬0.221	┬0.599	┬0.509
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	300.300	┬2905.000	1191.000	┬59320.000	61070.000	┬60960.000	86.9%	295.800	┬302.200
2	17:31:19	295.900	┬2930.000	1213.000	┬60590.000	61610.000	┬61080.000	85.6%	297.600	┬300.400
3	17:31:47	292.600	┬2946.000	1190.000	┬60930.000	61890.000	┬61680.000	84.8%	295.500	┬302.500
x		98.759%	┬97.568%	1198.000	┬100.463%	61530.000	┬102.069%	85.8%	98.776%	┬100.576%
σ		n/a	┬n/a	12.680	┬n/a	416.200	┬n/a	1.1%	n/a	┬n/a
%RSD		1.303	┬0.720	1.058	┬1.412	0.676	┬0.631	1.3	0.381	┬0.389
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	300.000	520.100	┬60710.000	┬289.900	┬60730.000	┬59020.000	┬285.500	277.600	271.900
2	17:31:19	294.700	1164.000	┬60470.000	┬287.800	┬60360.000	┬58450.000	295.900	268.900	273.500
3	17:31:47	302.000	752.400	┬60470.000	┬291.400	┬61020.000	┬59170.000	297.100	273.000	271.100
x		99.623%	812.000	┬60550.000	┬96.561%	┬60700.000	┬98.135%	┬97.606%	91.059%	272.100
σ		n/a	325.800	┬134.000	┬n/a	┬329.500	┬n/a	┬n/a	n/a	1.220
%RSD		1.263	40.130	┬0.221	┬0.611	┬0.543	┬0.648	┬2.181	1.603	0.449
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	266.600	275.900	280.200	273.500	278.400	290.700	278.200	2.108	0.821
2	17:31:19	263.900	272.000	277.600	280.700	276.700	291.600	269.200	2.262	1.227
3	17:31:47	266.500	275.000	284.700	278.800	280.700	290.800	280.300	3.268	1.091
x		265.600	91.444%	93.615%	277.700	278.600	97.010%	275.900	2.546	1.046
σ		1.546	n/a	n/a	3.751	2.029	n/a	5.938	0.630	0.207
%RSD		0.582	0.742	1.285	1.351	0.728	0.160	2.152	24.750	19.790
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	1226.000	276.400	-0.329	┬308.000	86.6%	300.600	304.100	304.400	293.200
2	17:31:19	1258.000	284.800	0.173	┬306.200	85.8%	301.700	300.400	301.000	284.500
3	17:31:47	1238.000	280.000	2.405	┬310.200	84.7%	306.400	310.500	311.700	293.900
x		1241.000	93.473%	0.750	┬102.707%	85.7%	100.974%	101.667%	305.700	290.500
σ		16.110	n/a	1.455	┬n/a	0.9%	n/a	n/a	5.432	5.241
%RSD		1.299	1.503	194.200	┬0.647	1.1	1.017	1.664	1.777	1.804
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	306.400	301.900	288.300	284.800	85.7%	298.500	301.800	315.100	290.900
2	17:31:19	300.700	298.600	288.300	281.300	86.0%	300.100	300.700	315.200	296.200
3	17:31:47	306.300	303.500	294.800	287.200	85.0%	305.200	304.300	322.000	295.000
x		101.488%	301.300	290.500	94.814%	85.6%	100.418%	100.755%	317.400	98.008%
σ		n/a	2.486	3.763	n/a	0.5%	n/a	n/a	3.973	n/a
%RSD		1.068	0.825	1.296	1.037	0.6	1.160	0.600	1.252	0.934
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:30:52	297.600	298.800	90.9%	298.900	┬284.400	┬281.700	291.200	┬284.500	88.1%
2	17:31:19	297.300	297.000	90.5%	298.300	┬288.900	┬289.400	295.500	┬288.500	90.3%
3	17:31:47	302.800	298.400	91.7%	298.900	┬287.600	┬282.400	291.900	┬285.100	92.3%
x		99.741%	99.350%	91.0%	298.700	┬95.651%	┬94.826%	97.617%	┬95.346%	90.2%
σ		n/a	n/a	0.6%	0.380	┬n/a	┬n/a	n/a	┬n/a	2.1%
%RSD		1.028	0.309	0.7	0.127	┬0.813	┬1.490	0.788	┬0.741	2.3

CCB IM9061-02 11/16/2018 17:36:20 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	103.2%	0.017	2.522	2.280	-6.037	1.666	0.747	0.813	0.661
2	17:37:14	101.9%	0.008	1.689	1.860	-7.365	1.590	0.698	0.836	0.693
3	17:37:41	104.1%	-0.002	1.757	1.782	-11.270	1.180	0.565	0.482	0.665
x		103.1%	0.008	1.989	1.974	-8.225	1.479	0.670	0.710	0.673
σ		1.1%	0.009	0.462	0.268	2.722	0.261	0.094	0.198	0.017
%RSD		1.1	120.000	23.250	13.580	33.090	17.660	14.060	27.840	2.576

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	0.430	-0.693	497.400	-0.934	-0.263	1.105	91.3%	0.245	-0.016
2	17:37:14	0.440	-0.702	480.900	-0.692	0.116	0.731	92.3%	0.207	-0.049
3	17:37:41	0.303	-0.836	480.300	-1.191	2.025	0.624	93.7%	0.135	0.108
x		0.391	-0.744	486.200	-0.939	0.626	0.820	92.4%	0.196	0.014
σ		0.077	0.080	9.692	0.250	1.226	0.253	1.2%	0.056	0.082
%RSD		19.570	10.770	1.993	26.590	195.900	30.810	1.3	28.430	577.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	0.011	-8.930	8.918	0.044	10.360	5.598	0.003	0.011	-0.160
2	17:37:14	0.024	-2.292	6.245	0.029	8.348	5.086	0.002	0.003	0.091
3	17:37:41	0.007	-131.300	6.271	0.020	7.502	3.399	0.001	0.005	-0.047
x		0.014	-47.500	7.145	0.031	8.737	4.694	0.002	0.006	-0.039
σ		0.009	72.640	1.535	0.012	1.470	1.151	0.001	0.005	0.126
%RSD		61.930	152.900	21.490	38.360	16.820	24.520	43.200	74.340	325.600

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	-0.006	-0.005	-0.100	-0.232	-0.106	0.091	0.029	0.404	0.499
2	17:37:14	-0.002	0.040	-0.089	-0.130	-0.069	0.002	0.069	0.467	0.630
3	17:37:41	0.009	0.008	-0.114	-0.281	-0.131	0.096	0.199	0.566	0.368
x		0.000	0.014	-0.101	-0.214	-0.102	0.063	0.099	0.479	0.499
σ		0.008	0.023	0.013	0.077	0.031	0.053	0.089	0.082	0.131
%RSD		2932.000	160.000	12.600	36.030	30.820	84.500	89.840	17.040	26.250

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	0.473	0.170	1.328	0.005	94.7%	0.381	0.370	0.401	-0.411
2	17:37:14	-0.428	-0.072	-0.131	0.005	96.1%	0.356	0.332	0.346	-0.406
3	17:37:41	1.574	0.332	-1.629	0.003	94.9%	0.331	0.342	0.308	-0.812
x		0.540	0.143	-0.144	0.004	95.2%	0.356	0.348	0.352	-0.542
σ		1.003	0.203	1.479	0.001	0.8%	0.025	0.020	0.047	0.233
%RSD		185.800	141.500	1027.000	29.050	0.8	7.025	5.725	13.270	42.930

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	0.007	0.007	0.000	-0.004	95.5%	0.290	0.384	0.363	0.304
2	17:37:14	0.009	0.011	0.001	0.005	95.7%	0.260	0.381	0.298	0.295
3	17:37:41	0.009	0.009	0.005	0.003	96.8%	0.246	0.340	0.309	0.289
x		0.008	0.009	0.002	0.002	96.0%	0.265	0.368	0.323	0.296
σ		0.001	0.002	0.002	0.005	0.7%	0.022	0.025	0.035	0.008
%RSD		13.040	21.050	124.500	305.000	0.7	8.401	6.725	10.820	2.597

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:36:47	0.012	0.008	98.4%	-0.005	0.000	0.011	0.005	0.006	94.8%
2	17:37:14	0.006	0.010	100.1%	0.002	0.002	0.011	0.004	0.007	98.4%
3	17:37:41	0.014	0.005	101.0%	0.005	0.003	0.003	0.002	0.002	102.0%
x		0.011	0.008	99.8%	0.001	0.002	0.009	0.004	0.005	98.4%
σ		0.004	0.003	1.3%	0.005	0.002	0.005	0.002	0.003	3.6%
%RSD		40.620	33.090	1.3	873.700	93.580	55.810	47.830	55.980	3.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	99.2%	0.242	4.700	4.828	-59.450	52.110	T 3760.000	T 3805.000	T 3948.000
2	17:43:08	99.3%	0.333	4.679	4.817	-58.930	51.850	T 3756.000	T 3840.000	T 3987.000
3	17:43:35	103.1%	0.269	4.783	4.823	-59.110	52.030	T 3718.000	T 3794.000	T 3919.000
x		100.5%	0.282	4.721	4.823	-59.160	52.000	T 3745.000	T 3813.000	T 3951.000
σ		2.2%	0.046	0.055	0.006	0.267	0.135	T 23.390	T 23.690	T 33.950
%RSD		2.2	16.450	1.170	0.115	0.452	0.260	T 0.625	T 0.621	T 0.859

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	TM 12480.000	819.000	T 29960.000	T 3061.000	3564.000	3503.000	91.6%	285.700	30.630
2	17:43:08	TM 12670.000	826.200	T 30220.000	T 3027.000	3507.000	3463.000	91.1%	284.300	30.480
3	17:43:35	TM 12460.000	794.200	T 30220.000	T 2939.000	3473.000	3455.000	92.4%	277.800	30.270
x		TM 12540.000	813.100	T 30130.000	T 3009.000	3515.000	3474.000	91.7%	282.600	30.460
σ		TM 117.700	16.760	T 151.400	T 63.100	45.780	26.110	0.7%	4.177	0.182
%RSD		TM 0.939	2.061	T 0.503	T 2.097	1.302	0.752	0.7	1.478	0.597

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	26.490	2951.000	T 19370.000	T 412.900	T 20710.000	T 19810.000	9.125	23.020	22.580
2	17:43:08	26.460	2941.000	T 19500.000	T 412.700	T 20670.000	T 19930.000	9.184	22.970	22.760
3	17:43:35	26.080	2988.000	T 19420.000	T 409.900	T 20640.000	T 19530.000	9.122	22.400	21.700
x		26.340	2960.000	T 19430.000	T 411.800	T 20670.000	T 19760.000	9.144	22.790	22.350
σ		0.231	24.850	T 64.400	T 1.663	T 36.400	T 203.200	0.035	0.346	0.566
%RSD		0.876	0.839	T 0.331	T 0.404	T 0.176	T 1.029	0.385	1.519	2.532

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	13.490	12.630	34.900	32.980	33.380	3.793	0.140	1.882	1.286
2	17:43:08	13.030	12.520	35.200	32.570	32.900	3.825	-0.199	2.017	1.400
3	17:43:35	13.010	12.440	33.990	33.900	33.000	4.236	-0.081	1.681	1.140
x		13.180	12.530	34.690	33.150	33.090	3.951	-0.047	1.860	1.276
σ		0.269	0.097	0.630	0.682	0.250	0.247	0.172	0.169	0.130
%RSD		2.042	0.777	1.817	2.056	0.755	6.249	367.600	9.065	10.210

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	-0.251	0.075	-0.161	15.230	109.0%	0.143	0.174	0.160	4.182
2	17:43:08	0.972	0.456	1.403	15.050	110.3%	0.151	0.134	0.167	3.548
3	17:43:35	2.729	0.891	1.285	15.190	109.9%	0.158	0.150	0.162	2.446
x		1.150	0.474	0.842	15.160	109.7%	0.151	0.153	0.163	3.392
σ		1.498	0.409	0.871	0.095	0.7%	0.008	0.020	0.004	0.878
%RSD		130.300	86.170	103.400	0.624	0.6	5.076	13.330	2.287	25.890

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	0.045	0.027	0.050	0.052	92.2%	1.288	1.534	0.165	0.159
2	17:43:08	0.048	0.029	0.038	0.024	92.5%	1.244	1.467	0.184	0.147
3	17:43:35	0.049	0.024	0.051	0.032	94.5%	1.235	1.554	0.161	0.154
x		0.048	0.027	0.046	0.036	93.0%	1.256	1.518	0.170	0.153
σ		0.002	0.002	0.007	0.015	1.3%	0.028	0.046	0.012	0.006
%RSD		4.189	8.553	15.300	41.540	1.4	2.240	3.009	7.299	3.773

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:42:41	76.550	76.100	97.4%	0.162	0.163	8.866	7.837	8.343	116.8%
2	17:43:08	76.590	75.650	99.2%	0.166	0.162	8.797	7.636	8.181	119.4%
3	17:43:35	74.440	74.930	99.2%	0.166	0.168	8.685	7.790	8.192	120.3%
x		75.860	75.560	98.6%	0.165	0.165	8.783	7.754	8.239	118.8%
σ		1.227	0.590	1.0%	0.003	0.003	0.091	0.105	0.090	1.8%
%RSD		1.618	0.780	1.1	1.518	2.069	1.041	1.356	1.095	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	106.8%	25.730	39.880	44.980	-68.030	T 1110.000	T 14070.000	T 14680.000	T 15530.000
2	17:49:03	108.5%	24.990	38.610	45.310	-66.740	T 1115.000	T 14110.000	T 14760.000	T 15650.000
3	17:49:30	109.0%	25.450	38.920	46.210	-66.740	T 1132.000	T 14130.000	T 14810.000	T 15730.000
x		108.1%	25.390	39.140	45.500	-67.170	T 1119.000	T 14100.000	T 14750.000	T 15640.000
σ		1.2%	0.374	0.662	0.637	0.744	T 11.460	T 34.290	T 65.510	T 101.600
%RSD		1.1	1.473	1.692	1.401	1.108	T 1.024	T 0.243	T 0.444	T 0.650

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	TM 45510.000	T 4853.000	T 126000.000	T 14660.000	16860.000	T 17420.000	95.9%	M 1408.000	T 322.300
2	17:49:03	TM 46100.000	T 4805.000	T 129700.000	T 14600.000	17000.000	T 17280.000	95.2%	M 1423.000	T 325.500
3	17:49:30	TM 46170.000	T 4854.000	T 129100.000	T 14630.000	16900.000	T 17290.000	95.8%	M 1394.000	T 318.900
x		TM 45930.000	T 4837.000	T 128300.000	T 14630.000	16920.000	T 17330.000	95.6%	M 1408.000	T 322.200
σ		TM 360.900	T 27.510	T 1957.000	T 32.150	68.280	T 78.720	0.4%	M 14.590	T 3.262
%RSD		TM 0.786	T 0.569	T 1.526	T 0.220	0.404	T 0.454	0.4	M 1.036	T 1.012

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	305.200	11530.000	T 80480.000	TM 1954.000	T 88350.000	T 85040.000	216.800	281.300	221.900
2	17:49:03	307.600	12370.000	T 80490.000	TM 1967.000	T 89020.000	T 86340.000	217.000	279.000	218.300
3	17:49:30	T 296.500	14510.000	T 80660.000	TM 1940.000	T 88800.000	T 86360.000	215.300	273.900	216.600
x		T 303.100	12800.000	T 80550.000	TM 1954.000	T 88720.000	T 85910.000	216.400	278.100	219.000
σ		T 5.829	1537.000	T 101.600	TM 13.730	T 341.600	T 753.900	0.948	3.788	2.721
%RSD		T 1.923	12.000	T 0.126	TM 0.703	T 0.385	T 0.878	0.438	1.362	1.243

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	186.000	131.700	327.700	248.600	239.500	190.200	113.800	4.464	4.106
2	17:49:03	183.400	130.400	329.000	247.000	238.400	191.000	112.000	4.839	3.518
3	17:49:30	182.700	131.400	323.700	246.400	240.100	190.700	110.900	4.326	3.832
x		184.000	131.200	326.800	247.300	239.400	190.600	112.200	4.543	3.819
σ		1.746	0.707	2.781	1.135	0.869	0.391	1.452	0.266	0.294
%RSD		0.949	0.539	0.851	0.459	0.363	0.205	1.294	5.844	7.697

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	495.800	174.300	5.144	T 155.500	165.7%	127.400	134.800	197.900	184.700
2	17:49:03	472.800	169.500	3.472	T 153.300	168.7%	125.500	133.400	198.000	184.100
3	17:49:30	488.900	172.200	7.425	T 155.900	165.7%	126.700	134.300	192.800	181.200
x		485.900	172.000	5.347	T 154.900	166.7%	126.500	134.200	196.200	183.300
σ		11.810	2.413	1.984	T 1.422	1.8%	0.927	0.731	2.987	1.888
%RSD		2.431	1.403	37.110	T 0.918	1.1	0.733	0.545	1.522	1.030

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	198.000	198.000	174.000	182.500	89.5%	202.600	205.900	195.200	178.700
2	17:49:03	200.800	198.900	174.500	184.000	89.7%	204.400	205.700	197.100	179.700
3	17:49:30	198.100	195.900	173.200	180.900	90.9%	202.000	204.900	196.200	180.100
x		199.000	197.600	173.900	182.500	90.0%	203.000	205.500	196.200	179.500
σ		1.552	1.560	0.663	1.521	0.7%	1.260	0.574	0.920	0.710
%RSD		0.780	0.790	0.381	0.834	0.8	0.621	0.279	0.469	0.395

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:48:36	M 550.500	M 552.500	96.3%	194.800	T 192.100	237.900	229.700	T 230.400	124.4%
2	17:49:03	M 552.200	M 557.800	97.8%	194.300	T 193.200	236.700	228.700	T 229.700	123.2%
3	17:49:30	M 550.100	M 555.100	97.7%	195.700	T 192.700	237.700	228.100	T 230.300	123.0%
x		M 550.900	M 555.100	97.3%	194.900	T 192.700	237.400	228.800	T 230.100	123.5%
σ		M 1.102	M 2.652	0.8%	0.704	T 0.521	0.673	0.797	T 0.395	0.7%
%RSD		M 0.200	M 0.478	0.9	0.361	T 0.270	0.283	0.348	T 0.172	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	106.2%	0.134	4.142	4.182	-16.700	112.200	T 25450.000	T 25540.000	T 26320.000
2	17:54:55	105.7%	0.148	4.614	3.914	-17.910	108.900	T 25000.000	T 25430.000	T 26180.000
3	17:55:22	108.8%	0.183	3.844	4.038	-18.800	107.500	T 24510.000	T 24970.000	T 25680.000
x		106.9%	0.155	4.200	4.045	-17.800	109.500	T 24990.000	T 25310.000	T 26060.000
σ		1.7%	0.025	0.388	0.134	1.054	2.432	T 469.800	T 304.300	T 337.300
%RSD		1.6	16.280	9.246	3.318	5.920	2.221	T 1.880	T 1.202	T 1.295

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	TM 4178.000	T 1415.000	T 203300.000	T 862.900	75090.000	T 74900.000	88.1%	412.600	23.060
2	17:54:55	TM 4104.000	T 1414.000	T 203900.000	904.400	74190.000	T 73500.000	88.8%	410.700	22.740
3	17:55:22	TM 4069.000	T 1342.000	T 202000.000	T 840.800	73090.000	T 72900.000	89.0%	400.100	22.170
x		TM 4117.000	T 1390.000	T 203100.000	T 869.400	74120.000	T 73770.000	88.6%	407.800	22.650
σ		TM 55.720	T 41.850	T 1004.000	T 32.280	1001.000	T 1027.000	0.5%	6.705	0.450
%RSD		TM 1.354	T 3.011	T 0.494	T 3.713	1.351	T 1.393	0.5	1.644	1.988

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	16.690	14360.000	T 11010.000	234.500	T 11600.000	12060.000	3.951	12.130	12.140
2	17:54:55	16.810	14460.000	T 10940.000	234.700	T 11650.000	12080.000	3.857	11.960	11.750
3	17:55:22	16.360	14600.000	T 10870.000	T 223.600	T 11370.000	11720.000	3.749	11.730	12.190
x		16.620	14470.000	T 10940.000	T 230.900	T 11540.000	11950.000	3.853	11.940	12.030
σ		0.231	118.500	T 73.560	T 6.369	T 150.200	201.700	0.101	0.198	0.237
%RSD		1.391	0.819	T 0.672	T 2.758	T 1.302	1.688	2.623	1.657	1.971

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	7.599	7.507	20.370	18.970	19.160	3.301	-0.042	20.970	20.360
2	17:54:55	7.554	7.280	20.160	19.970	18.340	2.982	-0.108	20.030	18.760
3	17:55:22	7.328	7.404	19.660	20.240	18.030	3.688	-0.328	18.480	19.950
x		7.494	7.397	20.060	19.730	18.510	3.324	-0.159	19.820	19.690
σ		0.145	0.114	0.366	0.672	0.585	0.353	0.150	1.259	0.831
%RSD		1.936	1.536	1.825	3.408	3.160	10.630	93.900	6.351	4.222

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	0.416	0.251	0.773	33.520	104.8%	0.826	0.843	0.956	2.848
2	17:54:55	0.381	0.212	-0.421	33.210	105.7%	0.775	0.794	0.896	2.792
3	17:55:22	1.136	0.457	1.214	32.500	106.4%	0.728	0.826	0.811	3.513
x		0.645	0.306	0.522	33.080	105.6%	0.776	0.821	0.888	3.051
σ		0.426	0.131	0.846	0.527	0.8%	0.049	0.025	0.073	0.401
%RSD		66.090	42.810	162.100	1.592	0.7	6.336	2.984	8.201	13.140

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	0.047	0.036	0.039	0.054	89.6%	3.828	5.304	0.522	0.515
2	17:54:55	0.045	0.022	0.055	0.035	89.9%	3.797	5.500	0.487	0.436
3	17:55:22	0.030	0.032	0.051	0.032	89.9%	3.784	4.960	0.473	0.396
x		0.041	0.030	0.048	0.040	89.8%	3.803	5.255	0.494	0.449
σ		0.009	0.007	0.008	0.012	0.2%	0.023	0.273	0.025	0.060
%RSD		23.290	24.560	17.440	29.570	0.2	0.596	5.202	5.122	13.450

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	17:54:28	23.770	23.370	98.6%	0.074	0.071	4.942	4.221	4.504	118.2%
2	17:54:55	22.910	22.940	99.9%	0.075	0.073	4.858	4.129	4.469	118.8%
3	17:55:22	22.680	22.940	100.0%	0.066	0.068	4.779	4.200	4.444	117.9%
x		23.120	23.080	99.5%	0.071	0.071	4.860	4.183	4.472	118.3%
σ		0.575	0.246	0.8%	0.005	0.003	0.081	0.048	0.030	0.5%
%RSD		2.488	1.067	0.8	6.856	3.899	1.675	1.150	0.678	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	102.3%	0.308	7.682	7.884	35.270	74.270	T 3284.000	T 3397.000	T 3507.000
2	18:00:49	106.5%	0.275	7.292	7.974	35.390	75.860	T 3331.000	T 3433.000	T 3549.000
3	18:01:16	105.7%	0.277	7.690	8.722	38.000	74.700	T 3275.000	T 3323.000	T 3494.000
x		104.8%	0.286	7.555	8.193	36.220	74.940	T 3297.000	T 3384.000	T 3517.000
σ		2.2%	0.018	0.227	0.460	1.543	0.825	T 29.900	T 56.070	T 28.830
%RSD		2.1	6.404	3.010	5.614	4.261	1.101	T 0.907	T 1.657	T 0.820
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	TM 14880.000	T 2665.000	T 161200.000	T 3102.000	21230.000	T 21420.000	86.2%	M 539.500	-48.970
2	18:00:49	TM 14980.000	T 2551.000	T 163100.000	T 2987.000	21070.000	T 21450.000	85.9%	M 539.900	-33.390
3	18:01:16	TM 15010.000	T 2542.000	T 160800.000	T 2976.000	20730.000	T 21080.000	87.0%	M 535.700	-55.670
x		TM 14950.000	T 2586.000	T 161700.000	T 3022.000	21010.000	T 21310.000	86.4%	M 538.400	-46.010
σ		TM 69.890	T 68.630	T 1240.000	T 69.600	257.300	T 205.000	0.6%	M 2.348	11.430
%RSD		TM 0.467	T 2.654	T 0.767	T 2.303	1.225	T 0.962	0.7	M 0.436	24.840
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	TM 6086.000	T 84440.000	T 27620.000	TM 644.700	T 26170.000	T 24980.000	9.585	22.560	22.290
2	18:00:49	TM 6163.000	T 75050.000	T 27660.000	TM 654.000	T 26570.000	T 25250.000	9.674	22.370	22.510
3	18:01:16	TM 6046.000	T 90210.000	T 27320.000	TM 639.700	T 26280.000	T 24970.000	9.548	21.680	21.960
x		TM 6098.000	T 83230.000	T 27530.000	TM 646.200	T 26340.000	T 25060.000	9.602	22.210	22.250
σ		TM 59.720	T 7652.000	T 184.900	TM 7.244	T 203.800	T 157.500	0.065	0.462	0.276
%RSD		TM 0.979	T 9.193	T 0.671	TM 1.121	T 0.774	T 0.628	0.675	2.079	1.239
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	23.390	22.050	125.200	120.000	116.600	7.501	0.090	9.347	8.808
2	18:00:49	23.300	21.820	124.700	117.900	117.300	7.956	-0.261	10.280	9.180
3	18:01:16	23.150	22.740	122.500	119.400	116.500	6.812	0.366	10.300	9.584
x		23.280	22.200	124.100	119.100	116.800	7.423	0.065	9.977	9.191
σ		0.120	0.482	1.437	1.074	0.416	0.576	0.315	0.545	0.388
%RSD		0.515	2.171	1.158	0.902	0.356	7.760	482.500	5.466	4.219
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	4.409	1.274	-0.437	39.680	102.5%	0.833	0.884	1.056	3.384
2	18:00:49	3.981	1.206	0.736	40.100	102.9%	0.866	0.821	0.882	4.637
3	18:01:16	5.332	1.536	1.140	39.870	102.5%	0.775	0.882	0.869	3.503
x		4.574	1.339	0.480	39.890	102.6%	0.825	0.862	0.935	3.841
σ		0.691	0.174	0.819	0.209	0.3%	0.046	0.035	0.105	0.692
%RSD		15.100	13.010	170.800	0.524	0.3	5.612	4.094	11.200	18.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	0.077	0.075	0.528	0.499	88.4%	4.282	5.900	0.398	0.406
2	18:00:49	0.078	0.081	0.536	0.493	89.4%	4.279	5.844	0.389	0.354
3	18:01:16	0.080	0.084	0.547	0.549	89.7%	4.363	5.721	0.384	0.365
x		0.078	0.080	0.537	0.514	89.2%	4.308	5.822	0.390	0.375
σ		0.002	0.004	0.009	0.031	0.7%	0.048	0.092	0.007	0.027
%RSD		2.203	5.469	1.731	5.945	0.7	1.112	1.578	1.916	7.313
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:00:22	121.000	120.800	95.0%	0.235	0.228	72.300	69.120	71.250	116.8%
2	18:00:49	120.300	118.700	95.8%	0.222	0.229	71.600	69.210	71.160	119.3%
3	18:01:16	118.300	118.800	95.7%	0.223	0.239	71.150	68.070	70.350	118.3%
x		119.800	119.400	95.5%	0.227	0.232	71.680	68.800	70.920	118.1%
σ		1.426	1.155	0.4%	0.007	0.006	0.579	0.634	0.493	1.3%
%RSD		1.190	0.967	0.5	3.136	2.547	0.807	0.921	0.696	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	110.0%	0.201	2.723	2.635	-19.070	67.750	T 1369.000	1434.000	1505.000
2	18:06:42	109.6%	0.189	2.751	2.514	-20.600	67.180	T 1366.000	1414.000	1475.000
3	18:07:09	111.6%	0.154	2.612	2.678	-20.120	67.460	T 1344.000	1400.000	1468.000
x		110.4%	0.181	2.695	2.609	-19.930	67.470	T 1359.000	1416.000	1483.000
σ		1.1%	0.025	0.074	0.085	0.784	0.286	T 13.580	17.160	19.470
%RSD		1.0	13.520	2.731	3.262	3.936	0.423	T 0.999	1.212	1.313
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	TM 5859.000	T 1537.000	T 160200.000	T 1194.000	1775.000	1747.000	92.6%	386.800	23.780
2	18:06:42	TM 5840.000	T 1543.000	T 162900.000	T 1202.000	1721.000	1727.000	92.8%	378.200	23.230
3	18:07:09	TM 5768.000	T 1499.000	T 164100.000	T 1187.000	1798.000	1713.000	93.3%	378.400	20.540
x		TM 5822.000	T 1526.000	T 162400.000	T 1194.000	1764.000	1729.000	92.9%	381.100	22.520
σ		TM 48.280	T 24.000	T 1985.000	T 7.557	39.310	17.430	0.4%	4.893	1.734
%RSD		TM 0.829	T 1.572	T 1.222	T 0.633	2.228	1.008	0.4	1.284	7.701
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	139.400	21830.000	T 13090.000	181.000	T 13590.000	T 12910.000	3.933	11.240	12.010
2	18:06:42	137.100	22460.000	T 13100.000	177.300	T 13460.000	T 12880.000	3.854	11.260	12.390
3	18:07:09	133.600	24270.000	T 12980.000	177.300	T 13380.000	T 12780.000	3.769	11.030	10.670
x		136.700	22850.000	T 13060.000	178.600	T 13480.000	T 12860.000	3.852	11.180	11.690
σ		2.923	1265.000	T 67.680	2.126	T 105.500	T 70.630	0.082	0.127	0.906
%RSD		2.138	5.534	T 0.518	1.191	T 0.783	T 0.549	2.132	1.133	7.750
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	8.345	8.344	20.480	22.230	19.710	3.695	-0.076	8.196	8.364
2	18:06:42	8.295	8.076	20.360	22.590	19.240	4.012	-0.069	8.485	7.356
3	18:07:09	8.217	8.280	20.310	23.250	19.360	4.619	-0.195	7.898	8.088
x		8.286	8.233	20.380	22.690	19.430	4.108	-0.113	8.193	7.936
σ		0.064	0.140	0.086	0.513	0.244	0.469	0.071	0.294	0.521
%RSD		0.777	1.694	0.423	2.259	1.254	11.420	62.370	3.587	6.564
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	0.773	0.366	1.722	9.911	108.3%	4.777	4.313	5.001	1.890
2	18:06:42	1.643	0.543	-0.161	9.966	108.7%	4.605	4.527	4.980	2.205
3	18:07:09	0.471	0.244	1.200	10.200	105.8%	4.559	4.508	4.968	1.717
x		0.963	0.384	0.921	10.020	107.6%	4.647	4.449	4.983	1.937
σ		0.609	0.150	0.972	0.151	1.6%	0.115	0.119	0.017	0.248
%RSD		63.220	39.180	105.600	1.509	1.5	2.472	2.664	0.336	12.790
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	0.047	0.031	0.049	0.057	93.5%	3.248	4.626	0.190	0.174
2	18:06:42	0.051	0.032	0.051	0.059	93.4%	3.381	4.484	0.200	0.202
3	18:07:09	0.045	0.033	0.061	0.054	93.8%	3.491	4.609	0.203	0.191
x		0.048	0.032	0.054	0.057	93.6%	3.374	4.573	0.198	0.189
σ		0.003	0.001	0.006	0.002	0.2%	0.122	0.078	0.007	0.014
%RSD		6.589	3.647	11.540	4.222	0.3	3.605	1.698	3.503	7.574
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:06:15	30.360	30.400	101.0%	0.056	0.056	7.164	6.270	6.783	123.3%
2	18:06:42	30.720	29.970	102.1%	0.059	0.062	7.018	6.356	6.713	124.1%
3	18:07:09	31.300	30.040	100.7%	0.056	0.055	7.041	6.326	6.829	123.8%
x		30.790	30.130	101.3%	0.057	0.058	7.074	6.317	6.775	123.7%
σ		0.471	0.228	0.7%	0.002	0.003	0.079	0.044	0.058	0.4%
%RSD		1.530	0.757	0.7	3.326	5.828	1.110	0.691	0.862	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	111.4%	0.171	2.046	1.475	-7.930	46.600	T 1031.000	1072.000	1099.000
2	18:12:34	109.9%	0.130	1.869	1.699	-6.669	46.290	T 1026.000	1086.000	1101.000
3	18:13:01	112.3%	0.125	1.541	1.732	-9.650	46.540	T 1039.000	1062.000	1100.000
x		111.2%	0.142	1.819	1.635	-8.083	46.480	T 1032.000	1073.000	1100.000
σ		1.2%	0.025	0.256	0.140	1.496	0.163	T 6.307	11.960	1.005
%RSD		1.1	17.510	14.070	8.553	18.510	0.351	T 0.611	1.115	0.091
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	TM 3409.000	T 1153.000	T 180500.000	726.200	1219.000	1191.000	92.2%	239.900	14.690
2	18:12:34	TM 3432.000	T 1155.000	T 181000.000	744.800	1191.000	1184.000	92.0%	232.200	14.960
3	18:13:01	TM 3420.000	T 1124.000	T 181500.000	721.000	1213.000	1188.000	92.7%	231.100	16.200
x		TM 3421.000	T 1144.000	T 181000.000	730.700	1208.000	1188.000	92.3%	234.400	15.290
σ		TM 11.440	T 17.450	T 522.400	12.540	14.910	3.324	0.4%	4.810	0.804
%RSD		TM 0.335	T 1.525	T 0.289	1.716	1.234	0.280	0.4	2.052	5.263
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	9.362	25810.000	T 7069.000	110.300	T 7454.000	7503.000	2.402	6.324	6.078
2	18:12:34	9.578	25810.000	T 7089.000	111.000	T 7445.000	7379.000	2.394	6.069	6.572
3	18:13:01	9.342	25860.000	T 6983.000	108.800	T 7289.000	7361.000	2.352	6.176	5.882
x		9.427	25830.000	T 7047.000	110.100	T 7396.000	7414.000	2.383	6.190	6.177
σ		0.131	28.090	T 56.160	1.125	T 92.890	77.630	0.027	0.128	0.356
%RSD		1.391	0.109	T 0.797	1.022	T 1.256	1.047	1.127	2.075	5.761
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	4.622	4.383	13.850	16.610	13.900	2.361	-0.265	7.940	8.122
2	18:12:34	4.432	4.339	13.910	16.670	13.480	2.161	0.078	8.831	8.309
3	18:13:01	4.566	4.487	14.050	17.520	13.380	2.197	-0.013	8.057	7.828
x		4.540	4.403	13.930	16.930	13.590	2.240	-0.067	8.276	8.086
σ		0.097	0.076	0.102	0.506	0.280	0.107	0.177	0.484	0.243
%RSD		2.143	1.732	0.728	2.988	2.060	4.761	266.500	5.849	3.001
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	1.946	0.599	0.482	6.957	104.8%	0.292	0.321	0.323	1.487
2	18:12:34	-0.021	0.115	0.723	7.079	105.2%	0.305	0.340	0.329	1.572
3	18:13:01	1.789	0.580	1.354	7.073	105.3%	0.291	0.302	0.313	1.879
x		1.238	0.431	0.853	7.036	105.1%	0.296	0.321	0.322	1.646
σ		1.093	0.274	0.450	0.069	0.3%	0.008	0.019	0.008	0.206
%RSD		88.270	63.540	52.780	0.977	0.3	2.707	5.858	2.518	12.530
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	0.024	0.020	0.024	0.027	92.9%	3.607	4.863	0.152	0.136
2	18:12:34	0.024	0.017	0.024	0.032	94.0%	3.415	4.783	0.136	0.132
3	18:13:01	0.028	0.017	0.024	0.028	94.6%	3.443	4.822	0.130	0.137
x		0.025	0.018	0.024	0.029	93.8%	3.489	4.823	0.139	0.135
σ		0.002	0.002	0.000	0.003	0.8%	0.104	0.040	0.011	0.003
%RSD		9.713	9.552	0.804	9.096	0.9	2.976	0.827	8.132	2.111
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:12:07	15.850	15.750	100.6%	0.046	0.042	3.626	3.095	3.340	124.1%
2	18:12:34	15.780	15.520	101.4%	0.032	0.038	3.612	3.189	3.347	123.6%
3	18:13:01	15.500	15.520	100.9%	0.050	0.046	3.631	3.155	3.317	124.1%
x		15.710	15.590	101.0%	0.043	0.042	3.623	3.146	3.334	123.9%
σ		0.186	0.135	0.4%	0.009	0.004	0.010	0.047	0.015	0.3%
%RSD		1.181	0.866	0.4	21.790	10.520	0.270	1.508	0.457	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	111.6%	0.176	2.373	2.417	-9.194	53.510	T 1312.000	1375.000	1442.000
2	18:18:27	114.7%	0.190	2.157	2.251	-12.820	53.710	T 1296.000	1380.000	1427.000
3	18:18:53	114.2%	0.165	2.208	2.531	-12.300	51.960	T 1276.000	1322.000	1397.000
x		113.5%	0.177	2.246	2.400	-11.440	53.060	T 1294.000	1359.000	1422.000
σ		1.7%	0.012	0.113	0.141	1.960	0.959	T 18.230	31.910	23.020
%RSD		1.5	6.989	5.029	5.855	17.140	1.807	T 1.408	2.348	1.619

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	TM 4764.000	T 1431.000	T 172800.000	T 1055.000	1668.000	1672.000	94.7%	375.100	22.890
2	18:18:27	TM 4767.000	T 1369.000	T 173800.000	T 1020.000	1724.000	1690.000	93.6%	373.800	24.520
3	18:18:53	TM 4750.000	T 1377.000	T 167900.000	T 1016.000	1623.000	1636.000	T 96.4%	362.300	22.800
x		TM 4760.000	T 1392.000	T 171500.000	T 1030.000	1672.000	1666.000	T 94.9%	370.400	23.400
σ		TM 9.098	T 33.980	T 3161.000	T 21.080	50.620	27.440	T 1.4%	7.042	0.967
%RSD		TM 0.191	T 2.440	T 1.843	T 2.046	3.028	1.647	T 1.5	1.901	4.133

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	12.260	23040.000	T 11170.000	208.400	T 11740.000	T 11310.000	3.381	8.488	9.071
2	18:18:27	12.490	22910.000	T 11200.000	T 206.000	T 11780.000	T 11290.000	3.307	8.498	8.836
3	18:18:53	11.980	22960.000	T 10890.000	203.800	T 11360.000	T 10850.000	3.277	8.420	8.937
x		12.240	22970.000	T 11090.000	T 206.100	T 11630.000	T 11150.000	3.322	8.469	8.948
σ		0.256	66.490	T 172.500	T 2.314	T 234.000	T 263.700	0.054	0.043	0.118
%RSD		2.088	0.290	T 1.556	T 1.123	T 2.012	T 2.365	1.613	0.503	1.314

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	6.746	6.465	21.810	23.470	20.500	3.839	0.096	9.014	9.239
2	18:18:27	6.864	6.563	22.020	24.410	20.440	3.258	-0.350	8.612	8.152
3	18:18:53	6.500	6.294	21.920	22.940	19.300	3.420	-0.118	7.070	8.104
x		6.703	6.441	21.910	23.610	20.080	3.506	-0.124	8.232	8.498
σ		0.186	0.136	0.104	0.743	0.680	0.300	0.223	1.026	0.642
%RSD		2.770	2.115	0.472	3.146	3.386	8.556	179.900	12.460	7.555

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	0.078	0.150	0.649	8.973	109.9%	0.342	0.359	0.414	3.676
2	18:18:27	2.467	0.723	-1.430	9.058	109.8%	0.344	0.406	0.363	3.309
3	18:18:53	1.212	0.414	0.663	9.134	109.2%	0.321	0.443	0.411	2.893
x		1.252	0.429	-0.039	9.055	109.6%	0.335	0.403	0.396	3.293
σ		1.195	0.287	1.204	0.080	0.4%	0.013	0.042	0.028	0.392
%RSD		95.420	66.860	3074.000	0.887	0.4	3.853	10.410	7.187	11.900

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	0.031	0.017	0.040	0.068	94.6%	3.596	4.718	0.131	0.112
2	18:18:27	0.031	0.013	0.035	0.049	93.7%	3.603	4.626	0.152	0.138
3	18:18:53	0.041	0.021	0.045	0.071	93.0%	3.500	4.686	0.150	0.157
x		0.034	0.017	0.040	0.062	93.7%	3.567	4.677	0.144	0.136
σ		0.006	0.004	0.005	0.012	0.8%	0.058	0.047	0.012	0.023
%RSD		18.020	23.470	12.160	19.530	0.8	1.613	0.999	7.997	16.640

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:18:00	23.340	23.050	101.2%	0.051	0.053	6.010	5.193	5.581	124.3%
2	18:18:27	23.490	23.000	101.1%	0.058	0.054	5.990	5.225	5.584	124.4%
3	18:18:53	23.530	23.270	100.8%	0.055	0.060	5.832	5.162	5.550	123.5%
x		23.460	23.110	101.0%	0.055	0.056	5.944	5.193	5.572	124.1%
σ		0.099	0.141	0.2%	0.004	0.004	0.097	0.031	0.019	0.5%
%RSD		0.422	0.610	0.2	6.712	6.941	1.640	0.606	0.334	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	113.4%	0.286	5.341	5.952	-46.880	61.120	T 3003.000	T 3089.000	T 3224.000
2	18:24:20	112.5%	0.288	5.334	5.394	-46.660	62.500	T 3059.000	T 3138.000	T 3276.000
3	18:24:46	111.1%	0.268	5.181	5.218	-47.640	63.030	T 3073.000	T 3132.000	T 3307.000
x		112.3%	0.281	5.285	5.521	-47.060	62.220	T 3045.000	T 3120.000	T 3269.000
σ		1.1%	0.011	0.091	0.383	0.512	0.989	T 37.010	T 26.790	T 41.780
%RSD		1.0	3.863	1.713	6.936	1.088	1.589	T 1.215	T 0.859	T 1.278
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	TM 14260.000	T 2461.000	T 155100.000	T 3557.000	2204.000	2138.000	96.5%	M 529.800	42.940
2	18:24:20	TM 14620.000	T 2439.000	T 159000.000	T 3607.000	2178.000	2169.000	93.9%	M 537.900	43.140
3	18:24:46	TM 14680.000	T 2463.000	T 157000.000	T 3541.000	2186.000	2142.000	91.9%	M 535.100	43.000
x		TM 14520.000	T 2454.000	T 157000.000	T 3568.000	2189.000	2149.000	94.1%	M 534.300	43.020
σ		TM 225.700	T 12.910	T 1919.000	T 34.440	13.370	16.650	2.3%	M 4.113	0.102
%RSD		TM 1.554	T 0.526	T 1.222	T 0.965	0.611	0.774	2.4	M 0.770	0.237
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	30.180	22150.000	T 22800.000	T 350.000	T 24020.000	T 23040.000	8.296	25.010	23.350
2	18:24:20	30.390	22830.000	T 22800.000	T 357.800	T 24200.000	T 22960.000	8.443	24.800	23.740
3	18:24:46	30.340	23530.000	T 22710.000	T 356.800	T 24080.000	T 23330.000	8.565	24.770	23.040
x		30.300	22840.000	T 22770.000	T 354.900	T 24100.000	T 23110.000	8.435	24.860	23.380
σ		0.108	690.900	T 49.170	T 4.229	T 89.650	T 193.400	0.135	0.133	0.352
%RSD		0.357	3.025	T 0.216	T 1.192	T 0.372	T 0.837	1.596	0.534	1.506
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	13.300	12.110	47.110	44.540	40.700	7.628	-0.290	7.161	6.659
2	18:24:20	13.600	11.920	46.610	43.470	41.520	7.825	0.083	7.004	6.355
3	18:24:46	13.170	11.650	46.400	41.630	41.080	8.207	-0.240	7.705	7.038
x		13.360	11.890	46.710	43.210	41.100	7.887	-0.149	7.290	6.684
σ		0.217	0.232	0.363	1.473	0.410	0.295	0.203	0.368	0.342
%RSD		1.627	1.953	0.777	3.408	0.998	3.735	135.900	5.047	5.123
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	1.267	0.602	1.264	15.810	124.5%	0.321	0.300	0.379	6.080
2	18:24:20	1.629	0.709	0.179	15.720	124.6%	0.301	0.321	0.365	5.339
3	18:24:46	1.138	0.581	0.243	15.480	123.0%	0.313	0.342	0.389	5.337
x		1.345	0.631	0.562	15.670	124.0%	0.312	0.321	0.378	5.585
σ		0.255	0.069	0.609	0.173	0.9%	0.010	0.021	0.012	0.428
%RSD		18.950	10.870	108.400	1.101	0.7	3.173	6.598	3.166	7.667
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	0.061	0.040	0.088	0.090	93.3%	3.912	5.156	0.138	0.117
2	18:24:20	0.066	0.037	0.091	0.088	92.4%	3.892	5.292	0.152	0.122
3	18:24:46	0.049	0.037	0.102	0.097	92.2%	3.834	5.000	0.120	0.138
x		0.059	0.038	0.094	0.092	92.6%	3.879	5.149	0.136	0.126
σ		0.009	0.002	0.008	0.005	0.6%	0.040	0.146	0.016	0.011
%RSD		15.370	5.044	8.223	5.462	0.6	1.042	2.840	11.720	8.829
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:23:53	80.440	79.910	101.1%	0.173	0.179	10.880	9.885	10.360	124.4%
2	18:24:20	80.890	80.390	101.7%	0.180	0.179	11.030	9.684	10.290	123.6%
3	18:24:46	80.210	78.790	102.3%	0.177	0.175	10.770	9.590	10.100	122.8%
x		80.510	79.700	101.7%	0.177	0.178	10.890	9.720	10.250	123.6%
σ		0.348	0.818	0.6%	0.003	0.003	0.133	0.151	0.138	0.8%
%RSD		0.433	1.026	0.6	1.943	1.469	1.224	1.549	1.341	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	112.2%	0.218	4.592	4.388	-37.080	51.770	T 1874.000	1988.000	T 1999.000
2	18:30:13	109.9%	0.268	4.505	4.266	-39.020	52.690	T 1868.000	1994.000	T 1987.000
3	18:30:39	112.0%	0.232	4.114	4.190	-35.800	50.820	T 1848.000	1974.000	T 1991.000
x		111.4%	0.239	4.404	4.281	-37.300	51.760	T 1863.000	1985.000	T 1992.000
σ		1.3%	0.026	0.255	0.100	1.621	0.936	T 13.530	10.190	T 6.337
%RSD		1.2	10.680	5.779	2.339	4.345	1.809	T 0.726	0.513	T 0.318
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	TM 9890.000	T 2028.000	T 178100.000	T 1952.000	1776.000	1715.000	92.9%	413.200	31.120
2	18:30:13	TM 9831.000	T 2007.000	T 177500.000	T 1962.000	1748.000	1700.000	91.1%	409.800	30.810
3	18:30:39	TM 9660.000	T 1937.000	T 175900.000	T 1902.000	1668.000	1669.000	90.9%	405.400	30.250
x		TM 9794.000	T 1991.000	T 177200.000	T 1939.000	1731.000	1695.000	91.6%	409.400	30.730
σ		TM 119.300	T 47.590	T 1171.000	T 32.600	56.130	23.800	1.1%	3.912	0.440
%RSD		TM 1.218	T 2.391	T 0.661	T 1.682	3.243	1.405	1.2	0.956	1.431
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	20.420	26340.000	T 14710.000	T 447.100	T 15520.000	T 14770.000	5.111	14.420	14.680
2	18:30:13	20.320	27270.000	T 14540.000	T 447.800	T 15540.000	T 14850.000	5.099	13.990	14.660
3	18:30:39	20.010	26970.000	T 14270.000	T 438.100	T 15250.000	T 14570.000	5.113	13.830	14.240
x		20.250	26860.000	T 14510.000	T 444.300	T 15440.000	T 14730.000	5.108	14.080	14.530
σ		0.217	471.700	T 222.200	T 5.407	T 163.300	T 143.900	0.008	0.308	0.249
%RSD		1.070	1.756	T 1.532	T 1.217	T 1.058	T 0.977	0.150	2.185	1.710
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	8.431	7.963	28.740	29.680	25.900	3.911	-0.121	12.530	12.080
2	18:30:13	8.230	7.809	29.300	30.430	26.710	4.327	-0.283	11.900	12.300
3	18:30:39	8.112	7.529	28.720	28.790	25.880	3.929	-0.171	12.060	12.310
x		8.258	7.767	28.920	29.630	26.170	4.056	-0.192	12.160	12.230
σ		0.162	0.220	0.329	0.822	0.472	0.235	0.083	0.325	0.133
%RSD		1.956	2.832	1.137	2.774	1.805	5.797	43.120	2.675	1.083
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	0.218	0.216	-0.082	10.850	114.1%	0.710	0.615	0.789	4.553
2	18:30:13	1.387	0.535	-0.143	10.840	112.5%	0.714	0.731	0.745	3.567
3	18:30:39	0.660	0.399	2.054	10.730	112.2%	0.654	0.597	0.715	3.818
x		0.755	0.383	0.610	10.810	113.0%	0.692	0.648	0.750	3.979
σ		0.590	0.160	1.251	0.069	1.0%	0.034	0.073	0.037	0.512
%RSD		78.210	41.730	205.200	0.637	0.9	4.873	11.240	4.960	12.880
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	0.042	0.024	0.073	0.084	92.1%	3.663	5.113	0.123	0.085
2	18:30:13	0.040	0.023	0.079	0.073	91.6%	3.657	4.856	0.142	0.109
3	18:30:39	0.039	0.028	0.081	0.069	91.7%	3.523	4.974	0.109	0.133
x		0.040	0.025	0.078	0.075	91.8%	3.615	4.981	0.125	0.109
σ		0.002	0.002	0.004	0.008	0.3%	0.079	0.129	0.017	0.024
%RSD		4.126	9.578	5.730	10.240	0.3	2.186	2.580	13.390	21.630
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:29:45	45.730	45.360	100.8%	0.093	0.095	6.640	5.974	6.457	123.0%
2	18:30:13	45.320	44.720	100.6%	0.095	0.086	6.642	5.861	6.418	124.0%
3	18:30:39	44.130	43.820	101.2%	0.092	0.088	6.630	5.773	6.342	122.9%
x		45.060	44.630	100.9%	0.093	0.090	6.637	5.869	6.406	123.3%
σ		0.832	0.775	0.3%	0.002	0.004	0.007	0.101	0.059	0.6%
%RSD		1.847	1.736	0.3	1.759	4.939	0.099	1.714	0.914	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	103.9%	0.255	5.621	6.661	-18.320	256.700	T 11810.000	T 12080.000	T 12530.000
2	18:36:07	104.0%	0.279	6.575	6.515	-20.660	255.900	T 11860.000	T 12070.000	T 12540.000
3	18:36:34	103.6%	0.282	5.939	6.546	-20.560	255.100	T 11730.000	T 12080.000	T 12540.000
x		103.8%	0.272	6.045	6.574	-19.850	255.900	T 11800.000	T 12080.000	T 12540.000
σ		0.2%	0.015	0.486	0.077	1.325	0.801	T 61.690	T 7.323	T 6.127
%RSD		0.2	5.496	8.035	1.168	6.676	0.313	T 0.523	T 0.061	T 0.049
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	TM 10900.000	T 2450.000	T 149600.000	T 3096.000	38670.000	T 38680.000	87.0%	M 535.300	42.540
2	18:36:07	TM 10880.000	T 2426.000	T 151700.000	T 3080.000	38070.000	T 38410.000	86.5%	M 532.700	41.460
3	18:36:34	TM 10920.000	T 2434.000	T 151100.000	T 3042.000	38120.000	T 38720.000	86.6%	M 534.200	41.410
x		TM 10900.000	T 2437.000	T 150800.000	T 3073.000	38290.000	T 38600.000	86.7%	M 534.100	41.800
σ		TM 23.540	T 12.200	T 1049.000	T 27.810	329.000	T 173.100	0.3%	M 1.269	0.636
%RSD		TM 0.216	T 0.501	T 0.695	T 0.905	0.859	T 0.448	0.3	M 0.238	1.522
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	53.210	17820.000	T 21010.000	T 376.000	T 22800.000	T 22000.000	7.500	20.800	19.410
2	18:36:07	53.450	17320.000	T 21110.000	T 379.000	T 22620.000	T 21650.000	7.375	20.240	19.130
3	18:36:34	52.350	17050.000	T 20970.000	T 372.200	T 22220.000	T 21650.000	7.545	19.650	18.920
x		53.000	17400.000	T 21030.000	T 375.700	T 22550.000	T 21770.000	7.473	20.230	19.160
σ		0.579	389.900	T 75.300	T 3.422	T 296.800	T 203.000	0.088	0.574	0.248
%RSD		1.093	2.242	T 0.358	T 0.911	T 1.317	T 0.933	1.178	2.837	1.296
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	13.450	11.500	57.090	53.280	49.390	5.638	-0.073	6.764	5.666
2	18:36:07	13.340	11.480	57.650	51.520	49.020	5.954	-0.078	7.010	4.957
3	18:36:34	12.930	11.640	56.910	51.060	49.940	5.681	-0.431	7.150	5.286
x		13.240	11.540	57.220	51.950	49.450	5.758	-0.194	6.974	5.303
σ		0.273	0.086	0.388	1.171	0.463	0.172	0.205	0.195	0.355
%RSD		2.059	0.743	0.678	2.254	0.937	2.979	105.600	2.802	6.696
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	0.803	0.585	2.204	25.460	120.5%	2.187	2.568	2.692	5.422
2	18:36:07	1.326	0.679	0.406	25.640	119.1%	2.117	2.272	2.793	5.984
3	18:36:34	1.348	0.660	-0.158	25.890	118.5%	2.272	2.218	2.651	5.305
x		1.159	0.641	0.817	25.660	119.4%	2.192	2.352	2.712	5.570
σ		0.308	0.050	1.234	0.218	1.0%	0.078	0.188	0.073	0.363
%RSD		26.610	7.775	151.000	0.851	0.9	3.543	8.002	2.678	6.515
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	0.073	0.051	0.156	0.147	87.4%	3.733	5.035	0.141	0.141
2	18:36:07	0.058	0.041	0.161	0.153	87.8%	3.686	4.857	0.163	0.131
3	18:36:34	0.068	0.038	0.190	0.185	89.0%	3.707	4.741	0.159	0.140
x		0.066	0.043	0.169	0.161	88.1%	3.709	4.878	0.154	0.137
σ		0.008	0.006	0.018	0.020	0.8%	0.024	0.149	0.012	0.006
%RSD		11.440	14.760	10.710	12.570	1.0	0.636	3.044	7.656	4.096
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:35:39	72.570	71.160	96.5%	0.176	0.166	18.000	16.380	17.180	115.7%
2	18:36:07	72.420	70.820	97.9%	0.166	0.162	17.890	16.210	16.980	117.2%
3	18:36:34	72.450	71.050	98.8%	0.157	0.164	17.800	16.130	16.930	119.5%
x		72.480	71.010	97.7%	0.166	0.164	17.900	16.240	17.030	117.4%
σ		0.078	0.175	1.2%	0.009	0.002	0.097	0.126	0.131	1.9%
%RSD		0.108	0.246	1.2	5.571	1.221	0.542	0.775	0.771	1.6

CCV MW10535 11/16/2018 18:41:08 QC Status: PASS (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	89.7%	286.200	280.800	281.300	-0.564	T 60210.000	T 59680.000	T 59080.000	T 59970.000
2	18:42:02	88.3%	281.600	265.300	280.000	-0.342	T 59990.000	T 58940.000	T 58610.000	T 59000.000
3	18:42:29	88.3%	270.000	264.200	271.300	-5.012	T 59650.000	T 58410.000	T 58740.000	T 59350.000
x		88.8%	93.086%	90.034%	92.504%	-1.973	T 99.918%	T 59010.000	T 58810.000	T 99.066%
σ		0.8%	n/a	n/a	n/a	2.634	T n/a	T 638.600	T 244.400	T n/a
%RSD		0.9	2.985	3.439	1.958	133.500	T 0.465	T 1.082	T 0.416	T 0.832

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	294.300	T 2883.000	1225.000	T 59240.000	60920.000	T 60320.000	85.5%	294.200	T 298.800
2	18:42:02	288.500	T 2934.000	1185.000	T 60340.000	60000.000	T 60010.000	85.8%	293.100	T 292.500
3	18:42:29	289.400	T 2883.000	1135.000	T 60800.000	61110.000	T 61760.000	84.8%	289.400	T 297.700
x		96.915%	T 96.668%	1181.000	T 100.210%	60680.000	T 101.157%	85.4%	97.408%	T 98.768%
σ		n/a	T n/a	44.880	T n/a	595.800	T n/a	0.5%	n/a	T n/a
%RSD		1.085	T 1.007	3.799	T 1.331	0.982	T 1.537	0.6	0.846	T 1.133

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	299.000	-412.900	T 59350.000	T 283.600	T 59550.000	T 57120.000	T 278.900	272.000	268.000
2	18:42:02	287.700	1561.000	T 59280.000	T 282.800	T 59280.000	T 57660.000	T 277.300	270.000	273.400
3	18:42:29	293.100	1871.000	T 59840.000	T 291.500	T 60870.000	T 58060.000	T 282.300	269.900	273.700
x		97.756%	1007.000	T 59490.000	T 95.321%	T 59900.000	T 96.026%	T 93.159%	90.216%	271.700
σ		n/a	1239.000	T 302.800	T n/a	T 849.600	T n/a	T n/a	n/a	3.243
%RSD		1.938	123.100	T 0.509	T 1.679	T 1.418	T 0.824	T 0.921	0.423	1.194

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	263.600	278.900	278.500	281.600	276.200	285.600	277.700	1.631	0.955
2	18:42:02	262.300	273.300	276.100	276.300	276.300	280.900	277.800	1.894	0.355
3	18:42:29	265.500	272.200	276.700	276.600	276.100	286.400	278.500	2.116	1.149
x		263.800	91.598%	92.367%	278.100	276.200	94.774%	278.000	1.881	0.820
σ		1.600	n/a	n/a	2.959	0.071	n/a	0.478	0.243	0.414
%RSD		0.607	1.296	0.438	1.064	0.026	1.041	0.172	12.910	50.540

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	1262.000	279.200	-0.348	T 312.200	83.3%	302.600	297.500	299.000	288.700
2	18:42:02	1243.000	275.200	1.992	T 309.300	83.7%	303.300	305.200	302.800	289.900
3	18:42:29	1237.000	277.300	0.105	T 305.900	83.9%	306.900	309.100	305.800	294.000
x		1247.000	92.413%	0.583	T 103.054%	83.6%	101.409%	101.304%	302.500	290.900
σ		13.320	n/a	1.241	T n/a	0.3%	n/a	n/a	3.430	2.804
%RSD		1.068	0.709	212.700	T 1.017	0.4	0.761	1.943	1.134	0.964

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	303.300	300.100	283.800	280.600	84.7%	295.500	294.600	311.700	289.100
2	18:42:02	301.400	298.800	285.900	282.400	84.6%	299.600	299.900	314.000	294.800
3	18:42:29	303.900	299.500	286.600	282.500	84.2%	299.100	302.800	318.000	294.500
x		100.953%	299.500	285.400	93.945%	84.5%	99.351%	99.699%	314.600	97.598%
σ		n/a	0.613	1.428	n/a	0.3%	n/a	n/a	3.222	n/a
%RSD		0.434	0.205	0.501	0.394	0.3	0.758	1.386	1.024	1.099

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:41:35	296.600	293.900	89.3%	296.000	T 285.500	T 284.300	292.500	T 287.000	85.8%
2	18:42:02	298.000	296.600	88.9%	301.300	T 288.100	T 287.000	295.100	T 290.500	89.1%
3	18:42:29	298.900	298.300	89.8%	302.100	T 288.400	T 288.400	295.500	T 291.100	91.0%
x		99.285%	98.758%	89.3%	299.800	T 95.781%	T 95.525%	98.118%	T 96.506%	88.6%
σ		n/a	n/a	0.4%	3.315	T n/a	T n/a	n/a	T n/a	2.7%
%RSD		0.395	0.747	0.5	1.106	T 0.546	T 0.722	0.558	T 0.759	3.0

CCB IM9061-02 11/16/2018 18:47:01 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	97.2%	-0.002	1.259	1.054	-9.872	1.495	0.890	0.895	0.905
2	18:47:55	98.8%	-0.002	0.521	0.538	-6.266	1.467	0.692	0.661	0.698
3	18:48:22	99.5%	0.013	1.057	0.391	-9.473	1.298	0.674	0.695	0.608
x		98.5%	0.003	0.946	0.661	-8.537	1.420	0.752	0.750	0.737
σ		1.2%	0.008	0.382	0.348	1.977	0.107	0.120	0.127	0.152
%RSD		1.2	252.000	40.350	52.660	23.160	7.519	15.940	16.900	20.640
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	0.277	-0.906	573.900	-0.508	-0.622	1.297	86.9%	0.157	-0.160
2	18:47:55	0.304	-0.978	612.800	-1.828	-0.210	0.764	87.3%	0.119	-0.042
3	18:48:22	0.249	-0.853	608.300	-2.348	1.423	0.293	88.1%	0.109	0.122
x		0.277	-0.912	598.300	-1.561	0.197	0.785	87.5%	0.128	-0.027
σ		0.028	0.063	21.280	0.948	1.082	0.503	0.6%	0.025	0.142
%RSD		9.941	6.882	3.557	60.730	549.200	64.060	0.7	19.650	531.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	0.011	430.100	6.852	0.043	7.939	5.022	0.003	0.005	0.018
2	18:47:55	0.014	347.800	6.116	0.030	6.826	3.078	0.002	0.007	0.149
3	18:48:22	-0.005	221.500	6.060	0.050	5.767	3.305	0.001	0.001	0.135
x		0.007	333.100	6.343	0.041	6.844	3.802	0.002	0.004	0.101
σ		0.010	105.100	0.442	0.010	1.086	1.063	0.001	0.003	0.072
%RSD		148.100	31.550	6.972	25.210	15.870	27.960	40.590	78.390	71.080
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	-0.005	0.010	-0.032	-0.058	-0.085	-0.072	-0.352	0.512	0.629
2	18:47:55	-0.025	0.006	-0.073	-0.109	-0.097	0.138	0.290	0.919	0.104
3	18:48:22	-0.003	0.022	-0.104	-0.223	-0.102	0.223	0.443	0.545	0.024
x		-0.011	0.013	-0.070	-0.130	-0.094	0.096	0.127	0.659	0.252
σ		0.012	0.008	0.036	0.085	0.009	0.152	0.422	0.226	0.329
%RSD		111.300	65.930	51.540	65.360	9.173	158.300	331.600	34.310	130.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	1.285	0.306	-0.898	0.004	90.1%	0.368	0.366	0.333	-1.325
2	18:47:55	0.053	0.030	-0.639	0.002	91.1%	0.354	0.324	0.349	-0.878
3	18:48:22	0.590	0.215	1.622	0.004	92.3%	0.313	0.261	0.273	-0.811
x		0.643	0.184	0.028	0.003	91.2%	0.345	0.317	0.318	-1.005
σ		0.618	0.140	1.386	0.001	1.1%	0.029	0.053	0.040	0.280
%RSD		96.060	76.370	4891.000	32.080	1.2	8.287	16.760	12.550	27.830
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	0.009	0.012	0.003	-0.004	92.0%	0.259	0.399	0.355	0.313
2	18:47:55	0.004	0.011	0.003	0.001	92.3%	0.247	0.362	0.351	0.300
3	18:48:22	0.006	0.007	0.011	0.005	93.1%	0.226	0.313	0.297	0.280
x		0.006	0.010	0.005	0.001	92.5%	0.244	0.358	0.334	0.298
σ		0.002	0.003	0.005	0.004	0.6%	0.017	0.043	0.032	0.016
%RSD		36.960	28.770	86.330	714.000	0.6	6.889	12.020	9.707	5.465
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:47:28	0.009	0.002	95.9%	-0.004	-0.005	0.001	0.006	0.004	92.9%
2	18:47:55	0.000	0.007	96.1%	-0.003	-0.005	0.009	0.010	0.007	96.4%
3	18:48:22	0.003	0.015	98.4%	-0.007	-0.004	0.003	0.006	0.003	99.6%
x		0.004	0.008	96.8%	-0.005	-0.005	0.005	0.007	0.005	96.3%
σ		0.005	0.007	1.4%	0.002	0.001	0.004	0.002	0.002	3.4%
%RSD		107.200	82.210	1.4	43.350	11.790	90.670	31.970	49.790	3.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	97.6%	0.311	7.742	8.704	-32.330	132.600	T 15720.000	T 16340.000	T 17040.000
2	18:53:48	99.8%	0.339	8.233	8.759	-32.190	133.700	T 15780.000	T 16520.000	T 17410.000
3	18:54:15	99.3%	0.332	8.051	8.560	-31.260	132.400	T 15690.000	T 16200.000	T 16980.000
x		98.9%	0.328	8.009	8.675	-31.930	132.900	T 15730.000	T 16350.000	T 17140.000
σ		1.1%	0.014	0.248	0.103	0.577	0.700	T 43.050	T 160.100	T 235.500
%RSD		1.1	4.420	3.097	1.187	1.807	0.527	T 0.274	T 0.979	T 1.374

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	TM 15680.000	T 2785.000	T 150500.000	T 4961.000	57870.000	T 58350.000	83.0%	M 710.000	57.530
2	18:53:48	TM 16140.000	T 2742.000	T 152100.000	T 4931.000	59500.000	T 59160.000	82.3%	M 716.100	58.580
3	18:54:15	TM 15500.000	T 2744.000	T 150500.000	T 5028.000	58060.000	T 58280.000	84.2%	M 700.500	57.400
x		TM 15770.000	T 2757.000	T 151000.000	T 4973.000	58480.000	T 58600.000	83.2%	M 708.900	57.840
σ		TM 326.700	T 24.030	T 930.800	T 49.270	895.000	T 486.700	1.0%	M 7.891	0.647
%RSD		TM 2.072	T 0.872	T 0.616	T 0.991	1.531	T 0.831	1.2	M 1.113	1.118

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	68.420	12270.000	T 30090.000	TM 526.900	T 32050.000	T 30830.000	11.250	30.030	30.160
2	18:53:48	69.440	12700.000	T 30340.000	TM 542.200	T 32460.000	T 31060.000	11.230	29.840	29.010
3	18:54:15	67.360	13170.000	T 30030.000	TM 530.500	T 31580.000	T 30640.000	11.120	29.490	29.770
x		68.410	12710.000	T 30150.000	TM 533.200	T 32030.000	T 30840.000	11.200	29.780	29.650
σ		1.040	448.400	T 165.700	TM 8.040	T 439.800	T 210.000	0.068	0.272	0.585
%RSD		1.520	3.527	T 0.550	TM 1.508	T 1.373	T 0.681	0.605	0.914	1.974

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	19.450	16.830	73.630	67.310	64.710	7.426	-0.229	9.623	8.167
2	18:53:48	19.440	16.820	74.020	67.450	66.510	7.436	0.014	8.949	8.372
3	18:54:15	19.360	16.770	73.930	66.450	64.750	7.555	-0.077	8.721	8.249
x		19.420	16.800	73.860	67.070	65.330	7.472	-0.097	9.098	8.263
σ		0.046	0.033	0.204	0.544	1.029	0.072	0.123	0.469	0.103
%RSD		0.238	0.196	0.276	0.811	1.574	0.957	125.700	5.156	1.250

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	2.140	0.893	0.808	44.360	111.8%	3.033	2.971	3.649	8.435
2	18:53:48	1.369	0.740	2.518	43.200	112.5%	3.080	3.131	3.677	6.686
3	18:54:15	1.043	0.587	0.962	43.330	114.0%	2.912	3.111	3.534	6.916
x		1.517	0.740	1.429	43.630	112.8%	3.008	3.071	3.620	7.346
σ		0.563	0.153	0.946	0.633	1.1%	0.087	0.087	0.075	0.950
%RSD		37.110	20.670	66.210	1.450	1.0	2.882	2.842	2.083	12.940

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	0.090	0.060	0.195	0.205	85.2%	3.950	4.952	0.433	0.400
2	18:53:48	0.088	0.061	0.185	0.179	85.1%	3.911	5.086	0.381	0.337
3	18:54:15	0.082	0.068	0.235	0.176	86.0%	4.066	5.087	0.386	0.376
x		0.087	0.063	0.205	0.187	85.4%	3.976	5.042	0.400	0.371
σ		0.005	0.004	0.026	0.016	0.5%	0.081	0.078	0.029	0.032
%RSD		5.261	7.068	12.850	8.651	0.6	2.036	1.538	7.249	8.530

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:53:21	111.700	110.100	93.5%	0.243	0.269	22.550	20.180	21.280	119.6%
2	18:53:48	111.000	111.100	93.9%	0.251	0.250	22.370	20.160	21.330	118.0%
3	18:54:15	108.800	109.300	95.8%	0.254	0.262	22.170	20.010	21.090	118.2%
x		110.500	110.200	94.4%	0.249	0.260	22.360	20.120	21.240	118.6%
σ		1.526	0.878	1.2%	0.006	0.010	0.190	0.097	0.130	0.9%
%RSD		1.381	0.796	1.3	2.226	3.800	0.851	0.481	0.610	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	102.5%	0.125	1.628	1.867	624.600	T 1033.000	T 2045.000	2148.000	2203.000
2	18:59:40	102.8%	0.112	1.725	1.414	619.400	T 1020.000	T 2019.000	2090.000	2195.000
3	19:00:07	103.6%	0.136	1.423	1.511	624.500	T 1017.000	T 2046.000	2127.000	2188.000
x		103.0%	0.124	1.592	1.597	622.800	T 1023.000	T 2037.000	2122.000	2195.000
σ		0.5%	0.012	0.155	0.239	2.968	T 8.374	T 15.180	29.130	7.541
%RSD		0.5	9.640	9.703	14.950	0.477	T 0.819	T 0.745	1.373	0.344
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	TM 5493.000	T 866.700	T 257000.000	221.600	M 103700.000	TM 101800.000	83.7%	96.100	-210.900
2	18:59:40	TM 5515.000	T 855.200	T 251300.000	218.300	M 103000.000	TM 100600.000	83.6%	90.100	-201.000
3	19:00:07	TM 5467.000	T 848.100	T 255100.000	217.100	M 101400.000	T 99290.000	83.7%	91.720	-306.500
x		TM 5491.000	T 856.700	T 254500.000	219.000	M 102700.000	TM 100600.000	83.6%	92.640	-239.500
σ		TM 24.110	T 9.393	T 2889.000	2.320	M 1182.000	TM 1249.000	0.1%	3.104	58.290
%RSD		TM 0.439	T 1.097	T 1.135	1.059	M 1.151	TM 1.242	0.1	3.351	24.340
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	TM 17920.000	T 186600.000	T 13170.000	55.100	T 5853.000	6037.000	1.029	13.050	12.310
2	18:59:40	TM 17810.000	T 179800.000	T 12940.000	54.050	T 5869.000	6020.000	1.014	12.450	12.540
3	19:00:07	TM 17430.000	T 249900.000	T 12880.000	53.340	T 5777.000	5884.000	1.045	12.890	12.120
x		TM 17720.000	T 205500.000	T 13000.000	54.160	T 5833.000	5981.000	1.029	12.800	12.320
σ		TM 259.200	T 38670.000	T 149.300	0.884	T 49.430	83.860	0.016	0.314	0.207
%RSD		TM 1.463	T 18.820	T 1.148	1.633	T 0.847	1.402	1.519	2.450	1.678
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	167.500	156.800	TM 1763.000	M 1724.000	M 1859.000	2.784	0.129	30.560	30.820
2	18:59:40	168.400	156.000	TM 1752.000	M 1723.000	M 1842.000	2.911	0.080	30.110	29.590
3	19:00:07	165.200	150.400	TM 1747.000	M 1709.000	M 1838.000	2.410	0.086	29.160	29.110
x		167.000	154.400	TM 1754.000	M 1719.000	M 1846.000	2.701	0.098	29.940	29.840
σ		1.670	3.499	TM 8.217	M 8.716	M 10.720	0.260	0.027	0.715	0.882
%RSD		1.000	2.266	TM 0.468	M 0.507	M 0.581	9.633	27.250	2.389	2.955
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	4.224	1.264	0.401	37.680	101.8%	5.334	5.343	5.747	122.400
2	18:59:40	2.926	0.921	0.981	37.420	100.7%	5.328	5.413	5.640	126.700
3	19:00:07	3.258	1.055	1.989	37.130	102.1%	5.175	5.345	5.664	119.000
x		3.469	1.080	1.123	37.410	101.6%	5.279	5.367	5.684	122.700
σ		0.674	0.173	0.804	0.275	0.7%	0.090	0.040	0.056	3.834
%RSD		19.440	16.000	71.530	0.736	0.7	1.704	0.744	0.983	3.124
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	0.802	0.126	1.628	1.395	87.3%	23.860	33.960	6.587	6.116
2	18:59:40	0.800	0.128	1.555	1.419	87.4%	24.030	33.430	6.528	6.149
3	19:00:07	0.754	0.110	1.694	1.414	88.2%	23.370	32.900	6.585	6.183
x		0.785	0.121	1.625	1.409	87.6%	23.750	33.430	6.566	6.150
σ		0.027	0.010	0.070	0.013	0.5%	0.340	0.529	0.033	0.034
%RSD		3.485	8.126	4.286	0.913	0.5	1.431	1.582	0.509	0.546
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	18:59:13	53.240	52.820	94.7%	0.017	0.027	290.500	279.000	T 278.600	117.7%
2	18:59:40	54.480	52.790	94.4%	0.023	0.020	290.200	276.100	T 277.200	116.7%
3	19:00:07	53.390	53.120	94.8%	0.025	0.019	289.500	276.100	T 276.800	117.1%
x		53.700	52.910	94.7%	0.022	0.022	290.100	277.000	T 277.600	117.1%
σ		0.679	0.178	0.2%	0.005	0.004	0.516	1.690	T 0.906	0.5%
%RSD		1.264	0.337	0.2	21.370	18.800	0.178	0.610	T 0.326	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	102.2%	0.262	3.343	3.228	-27.260	66.860	T 2263.000	T 2298.000	T 2384.000
2	19:05:35	105.2%	0.304	3.537	3.354	-29.790	65.680	T 2242.000	T 2304.000	T 2370.000
3	19:06:01	104.8%	0.245	3.474	3.369	-26.160	66.140	T 2289.000	T 2337.000	T 2411.000
x		104.1%	0.270	3.452	3.317	-27.740	66.230	T 2265.000	T 2313.000	T 2388.000
σ		1.6%	0.030	0.099	0.078	1.857	0.595	T 23.620	T 20.970	T 20.550
%RSD		1.6	11.270	2.868	2.338	6.697	0.899	T 1.043	T 0.906	T 0.860

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	TM 11650.000	T 2302.000	T 150300.000	T 2008.000	7027.000	7147.000	89.0%	495.200	33.800
2	19:05:35	TM 11550.000	T 2228.000	T 147700.000	T 1975.000	7033.000	7074.000	90.9%	489.700	33.110
3	19:06:01	TM 11590.000	T 2233.000	T 149100.000	T 1981.000	7090.000	7035.000	89.1%	489.900	32.650
x		TM 11590.000	T 2254.000	T 149000.000	T 1988.000	7050.000	7086.000	89.7%	491.600	33.190
σ		TM 49.870	T 41.270	T 1278.000	T 17.720	34.590	56.930	1.0%	3.088	0.581
%RSD		TM 0.430	T 1.830	T 0.857	T 0.891	0.491	0.803	1.2	0.628	1.752

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	46.460	20000.000	T 26260.000	TM 846.000	T 27330.000	T 26100.000	9.500	15.980	16.430
2	19:05:35	46.120	20570.000	T 25930.000	TM 836.600	T 26820.000	T 25650.000	9.261	15.820	15.610
3	19:06:01	46.100	21720.000	T 26190.000	TM 844.600	T 26970.000	T 25760.000	9.486	15.880	15.680
x		46.230	20770.000	T 26130.000	TM 842.400	T 27040.000	T 25840.000	9.416	15.890	15.910
σ		0.203	877.000	T 169.400	TM 5.104	T 263.400	T 236.500	0.134	0.078	0.456
%RSD		0.440	4.223	T 0.649	TM 0.606	T 0.974	T 0.915	1.427	0.493	2.864

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	9.518	9.162	43.250	43.680	40.840	3.630	0.054	4.678	4.363
2	19:05:35	9.531	9.158	43.550	44.820	41.030	3.360	-0.138	5.141	4.625
3	19:06:01	9.253	9.086	43.590	44.770	40.910	3.385	0.022	4.888	4.879
x		9.434	9.135	43.470	44.430	40.930	3.459	-0.020	4.902	4.622
σ		0.157	0.043	0.186	0.648	0.096	0.149	0.103	0.232	0.258
%RSD		1.661	0.473	0.427	1.459	0.234	4.307	502.800	4.727	5.585

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	1.105	0.404	-0.104	13.280	103.7%	0.615	0.666	0.689	2.999
2	19:05:35	1.333	0.456	0.387	13.660	104.2%	0.683	0.719	0.696	1.925
3	19:06:01	1.481	0.497	-0.379	13.770	104.2%	0.603	0.650	0.765	2.887
x		1.306	0.452	-0.032	13.570	104.0%	0.634	0.678	0.716	2.604
σ		0.190	0.047	0.388	0.259	0.3%	0.043	0.036	0.042	0.590
%RSD		14.510	10.290	1213.000	1.906	0.2	6.812	5.269	5.871	22.670

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	0.046	0.044	0.114	0.136	88.4%	3.551	4.793	0.156	0.131
2	19:05:35	0.038	0.046	0.185	0.133	89.6%	3.727	4.749	0.145	0.163
3	19:06:01	0.056	0.045	0.103	0.100	88.7%	3.532	4.866	0.174	0.154
x		0.047	0.045	0.134	0.123	88.9%	3.603	4.803	0.158	0.149
σ		0.009	0.001	0.044	0.020	0.6%	0.107	0.060	0.015	0.017
%RSD		19.740	1.711	33.290	16.470	0.7	2.981	1.240	9.417	11.160

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:05:07	98.470	99.540	93.8%	0.163	0.153	10.450	9.129	9.867	118.3%
2	19:05:35	98.150	97.860	97.5%	0.142	0.155	10.260	8.976	9.563	119.3%
3	19:06:01	98.730	97.130	97.9%	0.147	0.148	10.080	9.049	9.568	118.5%
x		98.450	98.180	96.4%	0.150	0.152	10.260	9.051	9.666	118.7%
σ		0.295	1.233	2.3%	0.011	0.003	0.186	0.076	0.174	0.5%
%RSD		0.299	1.256	2.3	7.206	2.250	1.809	0.845	1.801	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	103.4%	0.305	3.522	3.500	8.272	74.000	T 2759.000	T 2847.000	T 2926.000
2	19:11:30	102.8%	0.298	3.468	3.831	7.157	74.020	T 2755.000	T 2834.000	T 2956.000
3	19:11:57	103.4%	0.284	3.624	3.645	7.729	73.930	T 2740.000	T 2843.000	T 2935.000
x		103.2%	0.296	3.538	3.659	7.720	73.980	T 2752.000	T 2841.000	T 2939.000
σ		0.4%	0.011	0.080	0.166	0.558	0.049	T 10.210	T 6.443	T 15.390
%RSD		0.4	3.587	2.249	4.537	7.222	0.066	T 0.371	T 0.227	T 0.524

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	TM 14890.000	T 2300.000	T 149800.000	T 2009.000	12270.000	12450.000	86.4%	M 548.800	-40.840
2	19:11:30	TM 15040.000	T 2291.000	T 148200.000	T 1981.000	12330.000	T 12630.000	85.6%	M 555.000	-41.170
3	19:11:57	TM 14890.000	T 2273.000	T 148900.000	T 1984.000	12170.000	T 12600.000	86.0%	M 552.600	-14.210
x		TM 14940.000	T 2288.000	T 149000.000	T 1991.000	12260.000	T 12560.000	86.0%	M 552.100	-32.070
σ		TM 87.490	T 13.500	T 768.500	T 15.680	76.770	T 92.510	0.4%	M 3.130	15.470
%RSD		TM 0.586	T 0.590	T 0.516	T 0.788	0.626	T 0.737	0.5	M 0.567	48.240

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	TM 2786.000	82100.000	T 31080.000	TM 663.300	T 30770.000	T 29550.000	8.604	19.310	21.140
2	19:11:30	TM 2806.000	83720.000	T 31000.000	TM 666.000	T 31340.000	T 29540.000	8.620	19.470	20.600
3	19:11:57	TM 2772.000	T 65850.000	T 30900.000	TM 659.700	T 30850.000	T 29770.000	8.738	19.460	19.790
x		TM 2788.000	T 77220.000	T 30990.000	TM 663.000	T 30980.000	T 29620.000	8.654	19.410	20.510
σ		TM 17.230	T 9880.000	T 88.420	TM 3.171	T 310.400	T 127.300	0.073	0.086	0.678
%RSD		TM 0.618	T 12.790	T 0.285	TM 0.478	T 1.002	T 0.430	0.849	0.443	3.308

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	21.830	21.030	174.500	166.200	163.200	7.138	0.116	6.641	6.468
2	19:11:30	21.600	21.630	175.300	165.200	162.700	7.438	0.159	6.810	5.353
3	19:11:57	21.180	20.260	177.700	162.900	162.900	7.569	0.277	6.081	5.235
x		21.540	20.970	175.800	164.800	162.900	7.382	0.184	6.511	5.685
σ		0.331	0.689	1.669	1.656	0.267	0.221	0.084	0.382	0.680
%RSD		1.538	3.283	0.950	1.005	0.164	2.995	45.460	5.859	11.970

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	0.674	0.268	0.119	28.310	97.9%	0.818	0.854	0.840	3.816
2	19:11:30	1.513	0.560	2.729	27.620	98.0%	0.715	0.830	0.823	3.125
3	19:11:57	1.165	0.472	2.227	27.600	99.6%	0.771	0.723	0.821	2.574
x		1.117	0.433	1.691	27.840	98.5%	0.768	0.802	0.828	3.172
σ		0.422	0.150	1.385	0.406	0.9%	0.052	0.070	0.011	0.623
%RSD		37.740	34.670	81.880	1.458	1.0	6.716	8.685	1.291	19.630

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	0.071	0.075	0.770	0.753	87.2%	5.262	7.120	0.476	0.447
2	19:11:30	0.083	0.067	0.794	0.704	87.0%	5.322	7.039	0.493	0.434
3	19:11:57	0.078	0.084	0.709	0.691	86.4%	5.361	7.081	0.463	0.456
x		0.077	0.075	0.758	0.716	86.9%	5.315	7.080	0.477	0.445
σ		0.006	0.008	0.044	0.033	0.4%	0.050	0.040	0.015	0.011
%RSD		7.913	11.230	5.792	4.624	0.4	0.937	0.571	3.078	2.439

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:11:03	137.500	136.900	93.6%	0.222	0.208	95.470	88.630	92.980	116.7%
2	19:11:30	136.400	137.300	93.5%	0.228	0.220	94.420	88.190	92.890	116.3%
3	19:11:57	137.000	135.700	95.2%	0.224	0.220	93.380	87.400	91.760	118.2%
x		137.000	136.600	94.1%	0.225	0.216	94.420	88.070	92.540	117.1%
σ		0.563	0.826	0.9%	0.003	0.007	1.046	0.624	0.678	1.0%
%RSD		0.411	0.605	1.0	1.341	3.058	1.108	0.708	0.733	0.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	104.5%	0.367	4.457	4.546	-47.760	83.740	T 4075.000	T 4220.000	T 4406.000
2	19:17:25	107.4%	0.356	3.697	4.292	-49.580	81.130	T 4019.000	T 4167.000	T 4355.000
3	19:17:52	107.7%	0.312	3.958	4.609	-48.110	81.810	T 4021.000	T 4170.000	T 4376.000
x		106.6%	0.345	4.037	4.483	-48.490	82.230	T 4038.000	T 4186.000	T 4379.000
σ		1.8%	0.029	0.386	0.168	0.966	1.355	T 31.770	T 29.590	T 25.810
%RSD		1.6	8.473	9.564	3.743	1.993	1.648	T 0.787	T 0.707	T 0.590

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	TM 21990.000	T 2617.000	T 157600.000	T 4162.000	4865.000	4853.000	89.4%	TM 1154.000	75.870
2	19:17:25	TM 21810.000	T 2515.000	T 153700.000	T 3973.000	4738.000	4789.000	89.9%	M 1046.000	77.770
3	19:17:52	TM 22050.000	T 2499.000	T 155500.000	T 4008.000	4829.000	4781.000	89.9%	M 1034.000	75.530
x		TM 21950.000	T 2544.000	T 155600.000	T 4048.000	4811.000	4808.000	89.7%	TM 1078.000	76.390
σ		TM 120.900	T 64.140	T 1956.000	T 100.800	65.490	39.370	0.3%	TM 65.760	1.207
%RSD		TM 0.551	T 2.522	T 1.258	T 2.490	1.361	0.819	0.3	TM 6.101	1.580

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	50.410	22420.000	T 39550.000	TM 1728.000	T 42000.000	T 40580.000	16.070	35.720	33.860
2	19:17:25	50.850	22140.000	T 39120.000	TM 1737.000	T 41800.000	T 39920.000	15.710	34.610	33.890
3	19:17:52	50.390	22820.000	T 39540.000	TM 1722.000	T 41340.000	T 39440.000	15.670	35.140	32.290
x		50.550	22460.000	T 39400.000	TM 1729.000	T 41710.000	T 39980.000	15.820	35.160	33.340
σ		0.259	344.300	T 245.300	TM 7.744	T 342.200	T 570.000	0.218	0.554	0.916
%RSD		0.512	1.533	T 0.622	TM 0.448	T 0.820	T 1.426	1.376	1.576	2.747

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	16.420	14.750	106.700	95.070	91.050	11.480	-0.045	8.780	6.774
2	19:17:25	16.340	14.720	104.900	92.330	88.460	12.210	-0.070	8.143	7.081
3	19:17:52	16.070	14.790	102.300	91.590	89.490	11.250	0.322	8.583	7.941
x		16.280	14.750	104.600	93.000	89.670	11.650	0.069	8.502	7.265
σ		0.182	0.032	2.204	1.836	1.305	0.502	0.219	0.326	0.605
%RSD		1.118	0.215	2.108	1.974	1.455	4.310	317.700	3.834	8.328

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	3.346	1.276	1.823	18.840	120.6%	0.697	0.725	0.833	5.614
2	19:17:25	3.409	1.252	0.299	18.740	121.6%	0.669	0.762	0.952	5.324
3	19:17:52	3.172	1.232	3.150	18.570	119.2%	0.731	0.707	0.871	6.202
x		3.309	1.253	1.758	18.720	120.5%	0.699	0.732	0.885	5.713
σ		0.123	0.022	1.426	0.133	1.2%	0.031	0.028	0.061	0.448
%RSD		3.709	1.746	81.160	0.712	1.0	4.420	3.827	6.880	7.835

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	0.078	0.065	0.228	0.235	87.1%	4.038	5.207	0.212	0.163
2	19:17:25	0.076	0.065	0.269	0.208	87.9%	3.965	5.121	0.187	0.169
3	19:17:52	0.086	0.060	0.264	0.226	88.0%	3.924	5.065	0.210	0.140
x		0.080	0.063	0.254	0.223	87.7%	3.975	5.131	0.203	0.157
σ		0.005	0.003	0.023	0.014	0.5%	0.058	0.071	0.014	0.015
%RSD		6.614	5.357	8.895	6.056	0.6	1.450	1.390	6.973	9.654

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:16:58	183.300	182.200	96.5%	0.312	0.317	27.180	24.720	25.980	117.3%
2	19:17:25	184.000	181.200	96.7%	0.332	0.327	26.980	24.720	25.890	118.2%
3	19:17:52	181.600	181.300	96.1%	0.317	0.309	27.010	24.530	25.850	116.8%
x		182.900	181.500	96.4%	0.320	0.318	27.060	24.660	25.910	117.4%
σ		1.260	0.538	0.3%	0.011	0.009	0.104	0.110	0.066	0.7%
%RSD		0.689	0.296	0.3	3.334	2.775	0.386	0.445	0.254	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	103.8%	0.396	6.901	7.877	-49.730	93.820	T 6875.000	T 7132.000	T 7590.000
2	19:23:19	105.0%	0.408	6.620	7.489	-51.930	91.930	T 6783.000	T 7059.000	T 7472.000
3	19:23:45	107.7%	0.450	7.079	8.089	-51.070	90.980	T 6721.000	T 7018.000	T 7470.000
x		105.5%	0.418	6.867	7.818	-50.910	92.240	T 6793.000	T 7070.000	T 7511.000
σ		2.0%	0.028	0.232	0.304	1.108	1.447	T 77.760	T 57.710	T 68.890
%RSD		1.9	6.712	3.375	3.893	2.176	1.568	T 1.145	T 0.816	T 0.917

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	TM 31420.000	T 3341.000	T 129400.000	T 7803.000	8220.000	8288.000	89.4%	M 929.700	84.470
2	19:23:19	TM 30790.000	T 3346.000	T 127900.000	T 7713.000	8072.000	8250.000	91.3%	M 925.000	80.630
3	19:23:45	TM 30980.000	T 3181.000	T 129400.000	T 7470.000	8031.000	8135.000	90.7%	M 909.500	76.080
x		TM 31060.000	T 3289.000	T 128900.000	T 7662.000	8108.000	8224.000	90.5%	M 921.400	80.400
σ		TM 324.800	T 93.930	T 900.800	T 172.100	99.400	79.350	0.9%	M 10.550	4.201
%RSD		TM 1.046	T 2.856	T 0.699	T 2.246	1.226	0.965	1.0	M 1.145	5.225

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	TM 1081.000	26810.000	T 58310.000	TM 1524.000	T 62570.000	T 60670.000	33.790	57.850	52.480
2	19:23:19	TM 1061.000	28400.000	T 58310.000	TM 1520.000	T 61640.000	T 59120.000	32.560	56.270	50.760
3	19:23:45	TM 1038.000	31420.000	T 57400.000	TM 1526.000	T 61880.000	T 59600.000	32.570	56.380	49.260
x		TM 1060.000	28880.000	T 58010.000	TM 1523.000	T 62030.000	T 59800.000	32.970	56.830	50.830
σ		TM 21.650	2344.000	T 524.500	TM 3.117	T 483.400	T 797.500	0.705	0.883	1.614
%RSD		TM 2.042	8.116	T 0.904	TM 0.205	T 0.779	T 1.334	2.138	1.554	3.175

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	33.110	27.420	148.800	122.300	122.100	15.550	-0.367	3.857	3.250
2	19:23:19	32.730	27.840	146.400	121.200	119.300	15.310	0.045	3.622	3.080
3	19:23:45	32.970	27.860	147.800	121.900	120.800	15.600	0.155	3.782	2.887
x		32.930	27.710	147.600	121.800	120.700	15.480	-0.056	3.754	3.072
σ		0.191	0.250	1.233	0.562	1.392	0.157	0.275	0.120	0.182
%RSD		0.580	0.903	0.835	0.462	1.153	1.011	492.600	3.200	5.926

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	4.637	1.807	2.153	27.830	129.1%	0.479	0.585	0.747	8.974
2	19:23:19	3.354	1.460	4.465	27.980	129.8%	0.590	0.504	0.730	10.540
3	19:23:45	1.922	0.981	3.756	28.200	127.0%	0.575	0.598	0.723	10.300
x		3.305	1.416	3.458	28.000	128.6%	0.548	0.562	0.733	9.937
σ		1.358	0.414	1.185	0.188	1.5%	0.060	0.051	0.012	0.842
%RSD		41.100	29.260	34.260	0.672	1.2	11.030	8.994	1.659	8.475

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	0.112	0.092	0.341	0.388	87.2%	4.472	5.592	0.239	0.173
2	19:23:19	0.123	0.068	0.342	0.341	88.4%	4.587	5.580	0.235	0.177
3	19:23:45	0.129	0.078	0.386	0.359	87.2%	4.617	5.507	0.209	0.195
x		0.121	0.079	0.356	0.363	87.6%	4.558	5.560	0.228	0.182
σ		0.009	0.012	0.025	0.024	0.7%	0.076	0.046	0.016	0.012
%RSD		7.365	15.030	7.136	6.517	0.8	1.677	0.822	7.089	6.399

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:22:52	211.400	209.600	94.2%	0.477	0.475	50.700	46.270	48.670	114.6%
2	19:23:19	208.300	206.900	96.4%	0.471	0.483	49.820	46.020	48.000	117.1%
3	19:23:45	209.200	207.200	95.7%	0.470	0.455	49.340	45.860	47.680	114.9%
x		209.600	207.900	95.5%	0.473	0.471	49.950	46.050	48.120	115.5%
σ		1.579	1.483	1.1%	0.004	0.014	0.691	0.208	0.504	1.3%
%RSD		0.753	0.714	1.2	0.867	3.017	1.384	0.452	1.046	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	108.2%	0.193	3.195	2.569	-21.520	38.660	T 1407.000	1498.000	1562.000
2	19:29:13	110.0%	0.227	3.342	2.687	-20.600	38.560	T 1421.000	1489.000	1537.000
3	19:29:40	108.8%	0.239	2.695	2.443	-19.970	39.530	T 1406.000	1483.000	1550.000
x		109.0%	0.219	3.077	2.566	-20.700	38.910	T 1411.000	1490.000	1550.000
σ		0.9%	0.024	0.340	0.122	0.779	0.534	T 8.543	7.845	12.290
%RSD		0.8	10.990	11.040	4.759	3.764	1.373	T 0.605	0.527	0.793

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	TM 6711.000	T 1697.000	T 165600.000	T 1217.000	1530.000	1510.000	90.1%	375.100	25.220
2	19:29:13	TM 6617.000	T 1650.000	T 169300.000	T 1185.000	1515.000	1516.000	88.8%	373.600	24.440
3	19:29:40	TM 6571.000	T 1639.000	T 168500.000	T 1212.000	1484.000	1509.000	88.8%	371.900	23.930
x		TM 6633.000	T 1662.000	T 167800.000	T 1204.000	1510.000	1512.000	89.2%	373.600	24.530
σ		TM 71.060	T 30.460	T 1940.000	T 17.060	23.530	3.544	0.7%	1.605	0.651
%RSD		TM 1.071	T 1.833	T 1.156	T 1.416	1.558	0.234	0.8	0.429	2.655

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	14.980	23590.000	T 11670.000	169.600	T 12270.000	T 11640.000	3.426	9.222	9.725
2	19:29:13	15.030	25110.000	T 11660.000	170.900	T 12280.000	12610.000	3.430	9.614	9.660
3	19:29:40	14.980	25090.000	T 11660.000	171.500	T 12230.000	12490.000	3.414	9.237	8.850
x		15.000	24600.000	T 11660.000	170.700	T 12260.000	T 12250.000	3.424	9.358	9.412
σ		0.031	871.300	T 4.332	0.939	T 22.450	T 525.600	0.008	0.222	0.488
%RSD		0.204	3.543	T 0.037	0.550	T 0.183	T 4.292	0.239	2.373	5.179

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	5.268	5.048	21.880	23.500	20.100	2.900	-0.378	6.742	6.969
2	19:29:13	5.221	5.043	21.690	24.460	20.560	2.687	-0.129	6.721	6.135
3	19:29:40	5.207	5.076	21.900	23.820	20.510	3.152	-0.352	6.318	6.146
x		5.232	5.056	21.830	23.930	20.390	2.913	-0.286	6.594	6.417
σ		0.032	0.017	0.115	0.486	0.251	0.233	0.137	0.239	0.478
%RSD		0.607	0.344	0.528	2.030	1.231	7.996	47.860	3.628	7.453

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	0.622	0.297	0.329	8.801	105.9%	0.270	0.382	0.334	2.556
2	19:29:13	1.044	0.436	1.001	8.730	105.4%	0.274	0.262	0.278	2.342
3	19:29:40	0.396	0.248	0.364	8.782	105.2%	0.238	0.311	0.303	2.786
x		0.688	0.327	0.565	8.771	105.5%	0.260	0.318	0.305	2.561
σ		0.329	0.097	0.378	0.037	0.4%	0.020	0.061	0.028	0.222
%RSD		47.830	29.710	66.970	0.423	0.4	7.631	19.070	9.232	8.667

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	0.041	0.023	0.052	0.044	90.9%	3.537	4.890	0.111	0.090
2	19:29:13	0.033	0.023	0.051	0.035	89.5%	3.703	4.931	0.106	0.090
3	19:29:40	0.036	0.023	0.045	0.041	90.5%	3.598	4.857	0.104	0.078
x		0.036	0.023	0.049	0.040	90.3%	3.613	4.893	0.107	0.086
σ		0.004	0.000	0.004	0.005	0.8%	0.084	0.037	0.003	0.007
%RSD		11.070	1.734	8.350	12.240	0.8	2.325	0.753	3.205	7.640

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:28:45	32.900	32.600	98.7%	0.053	0.054	5.388	4.726	5.028	121.7%
2	19:29:13	32.700	32.440	97.4%	0.057	0.055	5.277	4.745	5.049	121.6%
3	19:29:40	32.760	31.880	100.3%	0.060	0.055	5.216	4.501	4.879	122.1%
x		32.780	32.310	98.8%	0.057	0.055	5.294	4.658	4.985	121.8%
σ		0.102	0.380	1.5%	0.004	0.001	0.087	0.136	0.092	0.2%
%RSD		0.312	1.176	1.5	6.831	0.987	1.650	2.909	1.853	0.2

TJ24026-019 11/16/2018 19:34:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	94.1%	0.319	6.244	6.499	96.850	107.400	T 4396.000	T 4480.000	T 4644.000
2	19:35:07	96.5%	0.322	6.538	6.636	91.340	103.500	T 4286.000	T 4355.000	T 4521.000
3	19:35:35	97.2%	0.308	6.396	6.364	95.350	105.400	T 4300.000	T 4397.000	T 4583.000
x		95.9%	0.316	6.393	6.499	94.510	105.400	T 4327.000	T 4411.000	T 4583.000
σ		1.6%	0.008	0.147	0.136	2.846	1.996	T 59.500	T 64.000	T 61.310
%RSD		1.7	2.388	2.304	2.094	3.012	1.893	T 1.375	T 1.451	T 1.338
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	TM 18210.000	T 2795.000	T 153300.000	T 2657.000	47350.000	T 48380.000	80.9%	M 520.800	-319.800
2	19:35:07	TM 17610.000	T 2731.000	T 151300.000	T 2616.000	46290.000	T 46940.000	83.1%	M 504.600	-422.000
3	19:35:35	TM 17830.000	T 2686.000	T 152300.000	T 2547.000	46970.000	T 47520.000	81.5%	M 502.200	-372.900
x		TM 17890.000	T 2737.000	T 152300.000	T 2607.000	46870.000	T 47620.000	81.8%	M 509.200	-371.600
σ		TM 303.100	T 54.740	T 985.600	T 55.650	540.000	T 727.900	1.2%	M 10.110	51.080
%RSD		TM 1.694	T 2.000	T 0.647	T 2.135	1.152	T 1.529	1.4	M 1.986	13.750
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	TM 25310.000	T 278000.000	T 43450.000	TM 1014.000	T 34860.000	T 33060.000	9.871	24.180	24.100
2	19:35:07	TM 24690.000	T 344900.000	T 42190.000	TM 982.200	T 33740.000	T 32450.000	9.704	23.250	21.770
3	19:35:35	TM 24680.000	T 312500.000	T 42210.000	TM 990.900	T 33950.000	T 32860.000	9.420	22.790	22.480
x		TM 24900.000	T 311800.000	T 42610.000	TM 995.700	T 34190.000	T 32790.000	9.665	23.410	22.780
σ		TM 362.200	T 33470.000	T 722.300	TM 16.530	T 593.500	T 308.400	0.228	0.709	1.195
%RSD		TM 1.455	T 10.730	T 1.695	TM 1.660	T 1.736	T 0.940	2.358	3.028	5.246
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	120.100	104.500	TM 2257.000	M 2135.000	M 2288.000	6.821	-0.011	7.005	6.331
2	19:35:07	117.400	105.200	TM 2235.000	M 2089.000	M 2247.000	7.447	0.121	6.505	5.283
3	19:35:35	116.300	102.700	TM 2217.000	M 2092.000	M 2248.000	7.213	-0.215	6.318	5.983
x		117.900	104.100	TM 2236.000	M 2106.000	M 2261.000	7.161	-0.035	6.609	5.866
σ		1.938	1.301	TM 19.850	M 25.880	M 23.760	0.316	0.169	0.355	0.534
%RSD		1.643	1.250	TM 0.888	M 1.229	M 1.051	4.416	482.200	5.375	9.107
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	2.296	0.903	0.923	75.920	106.0%	1.789	1.812	2.207	16.700
2	19:35:07	3.297	1.200	2.816	75.180	106.4%	1.801	1.980	2.034	16.970
3	19:35:35	3.495	1.206	0.280	75.180	105.7%	1.749	1.902	2.063	16.570
x		3.029	1.103	1.340	75.430	106.1%	1.780	1.898	2.102	16.750
σ		0.643	0.173	1.319	0.426	0.4%	0.028	0.084	0.093	0.204
%RSD		21.210	15.710	98.410	0.565	0.3	1.553	4.430	4.402	1.221
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	0.150	0.081	1.175	1.162	84.1%	5.654	7.471	0.535	0.474
2	19:35:07	0.145	0.096	1.148	1.127	85.0%	5.650	7.339	0.477	0.504
3	19:35:35	0.161	0.105	1.241	1.120	84.5%	5.630	7.255	0.503	0.463
x		0.152	0.094	1.188	1.136	84.5%	5.645	7.355	0.505	0.480
σ		0.008	0.012	0.048	0.022	0.4%	0.013	0.109	0.029	0.022
%RSD		5.519	12.610	4.027	1.963	0.5	0.225	1.481	5.731	4.478
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:34:40	115.600	115.900	89.2%	0.180	0.186	92.620	87.830	90.870	111.4%
2	19:35:07	115.400	115.500	90.9%	0.199	0.190	89.460	85.780	88.660	112.1%
3	19:35:35	114.900	113.000	91.0%	0.184	0.188	89.030	83.680	87.150	111.8%
x		115.300	114.800	90.4%	0.188	0.188	90.370	85.760	88.890	111.7%
σ		0.376	1.570	1.0%	0.010	0.002	1.957	2.072	1.869	0.4%
%RSD		0.326	1.368	1.1	5.325	1.030	2.166	2.416	2.103	0.3

TJ24026-020 11/16/2018 19:40:08

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	106.4%	0.241	2.353	2.242	-18.310	51.190	T 1695.000	1810.000	1902.000
2	19:41:02	108.2%	0.266	2.541	2.064	-17.900	50.430	T 1660.000	1777.000	1851.000
3	19:41:30	107.0%	0.225	2.017	2.105	-18.730	49.080	T 1625.000	1734.000	1817.000
x		107.2%	0.244	2.304	2.137	-18.310	50.230	T 1660.000	1773.000	1856.000
σ		0.9%	0.021	0.265	0.093	0.416	1.069	T 34.680	38.240	42.860
%RSD		0.9	8.523	11.510	4.370	2.272	2.129	T 2.089	2.156	2.309

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	TM 13340.000	T 2123.000	T 180200.000	T 1144.000	2847.000	2830.000	88.8%	M 596.000	27.950
2	19:41:02	TM 13040.000	T 2025.000	T 177400.000	T 1093.000	2775.000	2768.000	89.3%	M 577.300	29.720
3	19:41:30	TM 12700.000	T 2014.000	T 174400.000	T 1091.000	2691.000	2705.000	89.6%	M 566.500	27.740
x		TM 13030.000	T 2054.000	T 177300.000	T 1109.000	2771.000	2768.000	89.2%	M 579.900	28.470
σ		TM 317.400	T 59.850	T 2939.000	T 30.010	78.460	62.560	0.4%	M 14.940	1.085
%RSD		TM 2.437	T 2.913	T 1.657	T 2.705	2.832	2.260	0.4	M 2.576	3.811

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	43.730	28370.000	T 13660.000	193.900	T 13960.000	T 13530.000	4.634	13.540	14.110
2	19:41:02	42.590	28200.000	T 13090.000	189.800	T 13590.000	T 13020.000	4.489	12.700	13.340
3	19:41:30	41.790	29490.000	T 12950.000	185.700	T 13380.000	T 12850.000	4.396	12.730	13.170
x		42.700	28690.000	T 13230.000	189.800	T 13640.000	T 13130.000	4.506	12.990	13.540
σ		0.978	701.600	T 376.700	4.104	T 295.500	T 356.800	0.120	0.480	0.502
%RSD		2.289	2.446	T 2.847	2.162	T 2.166	T 2.716	2.671	3.697	3.708

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	6.182	6.294	86.260	83.210	79.180	2.974	-0.065	8.736	9.109
2	19:41:02	5.674	5.799	83.740	81.360	77.840	3.269	0.128	8.686	8.707
3	19:41:30	5.647	5.833	82.530	79.560	75.490	3.522	-0.003	7.756	8.435
x		5.834	5.975	84.180	81.380	77.500	3.255	0.020	8.393	8.750
σ		0.301	0.277	1.902	1.823	1.870	0.274	0.099	0.552	0.339
%RSD		5.161	4.632	2.259	2.240	2.412	8.417	498.500	6.576	3.877

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	-0.060	0.075	0.624	10.460	98.5%	0.538	0.463	0.543	2.686
2	19:41:02	2.005	0.570	0.348	10.350	98.5%	0.437	0.512	0.506	2.789
3	19:41:30	1.825	0.520	-0.226	10.220	99.3%	0.467	0.477	0.504	2.716
x		1.257	0.389	0.248	10.340	98.8%	0.481	0.484	0.518	2.730
σ		1.144	0.272	0.433	0.121	0.5%	0.052	0.025	0.022	0.053
%RSD		91.030	70.110	174.500	1.174	0.5	10.830	5.207	4.256	1.934

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	0.035	0.029	0.128	0.110	87.5%	3.794	5.126	0.121	0.116
2	19:41:02	0.045	0.025	0.108	0.108	89.2%	3.539	4.922	0.116	0.103
3	19:41:30	0.050	0.041	0.119	0.102	88.3%	3.684	4.940	0.130	0.105
x		0.043	0.032	0.119	0.107	88.4%	3.672	4.996	0.122	0.108
σ		0.008	0.008	0.010	0.004	0.9%	0.128	0.113	0.007	0.007
%RSD		17.810	25.840	8.588	3.622	1.0	3.481	2.260	5.736	6.579

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:40:35	58.460	58.500	95.9%	0.102	0.111	10.190	9.107	9.630	118.7%
2	19:41:02	57.200	57.190	94.7%	0.112	0.101	10.060	8.942	9.530	118.1%
3	19:41:30	56.290	56.500	97.8%	0.117	0.098	9.807	8.785	9.245	118.4%
x		57.320	57.400	96.1%	0.110	0.103	10.020	8.945	9.468	118.4%
σ		1.093	1.015	1.5%	0.008	0.007	0.196	0.161	0.200	0.3%
%RSD		1.907	1.769	1.6	7.184	6.460	1.952	1.804	2.110	0.3

CCV MW10535 11/16/2018 19:46:03 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	82.6%	277.100	273.400	278.000	-0.271	T 59140.000	T 58800.000	T 58220.000	T 58780.000
2	19:46:57	82.8%	273.200	274.800	284.300	-0.525	T 58030.000	T 58390.000	T 58350.000	T 58790.000
3	19:47:24	84.2%	281.300	275.900	283.900	1.522	T 60010.000	T 58840.000	T 58590.000	T 58970.000
x		83.2%	92.400%	91.568%	94.012%	0.242	T 98.433%	T 58680.000	T 58390.000	T 98.080%
σ		0.9%	n/a	n/a	n/a	1.116	T n/a	T 248.700	T 185.700	T n/a
%RSD		1.0	1.467	0.449	1.247	460.700	T 1.684	T 0.424	T 0.318	T 0.185

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	288.000	T 2947.000	1263.000	T 59600.000	60490.000	T 59570.000	80.5%	296.100	T 304.100
2	19:46:57	286.700	T 2895.000	1267.000	T 59100.000	61090.000	T 61180.000	79.2%	295.200	T 303.900
3	19:47:24	290.600	T 2857.000	1277.000	T 58490.000	61640.000	T 60780.000	78.9%	297.200	T 303.400
x		96.132%	T 96.652%	1269.000	T 98.438%	61070.000	T 100.845%	79.5%	98.720%	T 101.273%
σ		n/a	T n/a	7.041	T n/a	575.100	T n/a	0.9%	n/a	T n/a
%RSD		0.691	T 1.565	0.555	T 0.945	0.942	T 1.387	1.1	0.323	T 0.124

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	296.200	1691.000	T 60310.000	T 286.800	T 60080.000	T 58390.000	T 284.900	277.300	272.600
2	19:46:57	299.700	1625.000	T 59860.000	T 288.500	T 61080.000	T 58620.000	291.100	274.200	276.600
3	19:47:24	304.000	974.700	T 60680.000	T 288.900	T 61320.000	T 58760.000	298.100	267.000	277.100
x		99.985%	1430.000	T 60280.000	T 96.013%	T 60830.000	T 97.651%	T 97.113%	90.947%	275.400
σ		n/a	396.100	T 410.500	T n/a	T 660.300	T n/a	T n/a	n/a	2.496
%RSD		1.301	27.690	T 0.681	T 0.393	T 1.086	T 0.322	T 2.267	1.938	0.906

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	267.200	279.000	278.400	273.600	274.200	284.300	278.100	2.132	0.462
2	19:46:57	269.800	277.400	279.400	277.400	277.400	287.800	280.100	2.278	0.568
3	19:47:24	265.900	274.500	276.500	283.200	277.700	291.000	276.000	1.879	0.133
x		267.600	92.327%	92.698%	278.100	276.400	95.896%	278.000	2.096	0.388
σ		1.956	n/a	n/a	4.830	1.944	n/a	2.035	0.202	0.227
%RSD		0.731	0.823	0.536	1.737	0.703	1.173	0.732	9.626	58.480

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	1265.000	281.900	-0.475	T 309.300	79.1%	299.400	300.800	299.900	297.100
2	19:46:57	1260.000	282.300	0.574	T 305.400	78.3%	304.700	302.300	301.700	292.400
3	19:47:24	1237.000	279.900	3.889	T 308.800	78.9%	303.000	304.300	297.800	287.700
x		1254.000	93.782%	1.329	T 102.616%	78.8%	100.794%	100.830%	299.800	292.400
σ		15.050	n/a	2.278	T n/a	0.4%	n/a	n/a	1.957	4.715
%RSD		1.200	0.459	171.400	T 0.685	0.5	0.893	0.576	0.653	1.612

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	305.200	300.300	288.100	286.300	79.4%	299.400	299.800	312.800	283.500
2	19:46:57	304.800	301.600	288.600	282.400	78.7%	301.000	300.300	315.400	290.700
3	19:47:24	300.300	295.700	283.300	278.500	80.7%	297.000	297.700	310.500	287.700
x		101.132%	299.200	286.700	94.137%	79.6%	99.705%	99.759%	312.900	95.769%
σ		n/a	3.091	2.887	n/a	1.0%	n/a	n/a	2.459	n/a
%RSD		0.897	1.033	1.007	1.391	1.3	0.659	0.451	0.786	1.257

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:46:30	298.700	296.300	86.4%	299.800	T 285.300	296.900	293.800	T 290.000	84.6%
2	19:46:57	300.000	299.900	84.4%	302.900	T 290.400	T 289.500	296.900	T 293.100	86.3%
3	19:47:24	297.000	296.600	86.2%	301.800	T 289.600	T 286.900	292.700	T 288.100	87.7%
x		99.519%	99.199%	85.7%	301.500	T 96.147%	T 97.040%	98.161%	T 96.806%	86.2%
σ		n/a	n/a	1.1%	1.532	T n/a	T n/a	n/a	T n/a	1.5%
%RSD		0.504	0.660	1.3	0.508	T 0.942	T 1.785	0.739	T 0.868	1.8

CCB IM9061-02 11/16/2018 19:51:57 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	90.7%	0.025	1.074	0.790	-1.745	7.224	6.627	6.566	6.488
2	19:52:51	91.9%	0.024	0.967	0.438	-1.443	5.554	4.688	4.797	4.865
3	19:53:18	91.0%	0.014	0.050	0.256	-8.890	4.695	4.050	4.056	3.835
x		91.2%	0.021	0.697	0.495	-4.026	5.824	5.122	5.140	5.063
σ		0.6%	0.006	0.563	0.271	4.215	1.286	1.342	1.290	1.338
%RSD		0.7	28.760	80.800	54.870	104.700	22.080	26.200	25.100	26.420
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.501	-0.390	677.600	4.231	8.492	7.376	80.0%	0.142	0.434
2	19:52:51	0.420	-0.625	671.500	1.781	3.434	4.904	81.4%	0.198	0.063
3	19:53:18	0.493	-0.341	719.100	1.912	2.585	4.136	80.6%	0.160	-0.182
x		0.471	-0.452	689.400	2.642	4.837	5.472	80.7%	0.167	0.105
σ		0.045	0.152	25.890	1.378	3.193	1.693	0.7%	0.029	0.310
%RSD		9.536	33.560	3.755	52.180	66.020	30.940	0.9	17.230	294.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.139	1369.000	13.760	0.068	12.710	11.950	0.039	0.030	0.467
2	19:52:51	0.139	1523.000	12.040	0.051	10.150	9.978	0.020	0.032	0.254
3	19:53:18	0.113	1545.000	10.910	0.060	9.284	10.250	0.016	0.020	0.077
x		0.130	1479.000	12.240	0.060	10.720	10.730	0.025	0.028	0.266
σ		0.015	96.140	1.434	0.009	1.782	1.070	0.012	0.007	0.195
%RSD		11.730	6.500	11.720	14.560	16.630	9.973	49.650	23.530	73.370
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.018	0.058	-0.067	0.104	0.029	0.014	0.586	0.355	-0.168
2	19:52:51	0.039	0.014	-0.045	0.111	0.013	0.241	0.225	0.185	0.083
3	19:53:18	0.020	0.020	-0.057	0.096	0.003	0.153	0.059	0.882	0.060
x		0.026	0.031	-0.057	0.104	0.015	0.136	0.290	0.474	-0.008
σ		0.012	0.024	0.011	0.008	0.013	0.114	0.270	0.363	0.139
%RSD		45.490	77.980	19.400	7.346	90.170	84.100	93.050	76.670	1728.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.438	0.136	0.355	0.032	82.6%	0.388	0.333	0.339	-0.923
2	19:52:51	-0.595	-0.136	-0.986	0.019	84.2%	0.358	0.254	0.298	-1.147
3	19:53:18	0.517	0.180	0.896	0.016	84.5%	0.305	0.285	0.247	-0.744
x		0.120	0.060	0.088	0.022	83.8%	0.350	0.291	0.295	-0.938
σ		0.621	0.171	0.969	0.008	1.0%	0.042	0.040	0.046	0.202
%RSD		517.100	284.900	1100.000	37.650	1.2	12.040	13.780	15.650	21.520
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.026	0.042	0.025	0.035	85.9%	0.285	0.396	0.376	0.320
2	19:52:51	0.024	0.036	0.031	0.018	86.7%	0.251	0.336	0.374	0.302
3	19:53:18	0.019	0.028	0.012	0.010	87.3%	0.246	0.333	0.332	0.280
x		0.023	0.035	0.022	0.021	86.6%	0.261	0.355	0.361	0.301
σ		0.004	0.007	0.010	0.013	0.7%	0.021	0.036	0.025	0.020
%RSD		16.210	20.440	43.370	60.940	0.8	8.117	10.020	6.813	6.657
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:52:24	0.033	0.033	91.4%	0.029	0.021	0.034	0.037	0.033	89.7%
2	19:52:51	0.035	0.043	93.4%	0.013	0.011	0.030	0.024	0.025	93.6%
3	19:53:18	0.042	0.025	92.6%	0.008	0.013	0.021	0.022	0.018	96.6%
x		0.037	0.034	92.5%	0.017	0.015	0.029	0.028	0.026	93.3%
σ		0.005	0.009	1.0%	0.011	0.005	0.007	0.008	0.007	3.5%
%RSD		12.510	26.240	1.1	66.220	35.630	23.180	30.630	29.290	3.7

TQ88009-001 11/16/2018 19:57:51 QC Status: PASS (Initial: UNKNOWN)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	97.9%	-0.002	-0.784	-0.696	-0.272	2.195	2.256	2.373	2.541
2	19:58:45	100.1%	0.003	-0.205	-0.651	-3.416	2.502	2.586	3.062	2.669
3	19:59:13	101.0%	0.003	-0.701	-0.713	-1.641	2.480	2.740	2.903	2.735
x		99.6%	0.002	-0.563	-0.687	-1.776	2.392	2.527	2.779	2.648
σ		1.6%	0.003	0.313	0.032	1.576	0.172	0.247	0.361	0.099
%RSD		1.6	165.200	55.530	4.672	88.740	7.174	9.786	12.980	3.721
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	3.479	-1.074	T 199000.000	1.503	4.783	6.581	80.9%	0.309	0.509
2	19:58:45	3.731	-1.757	T 199100.000	0.517	4.320	7.370	81.1%	0.337	1.056
3	19:59:13	3.848	-1.722	T 194900.000	0.860	4.657	7.388	82.6%	0.341	0.536
x		3.686	-1.518	T 197600.000	0.960	4.587	7.113	81.5%	0.329	0.700
σ		0.188	0.385	T 2402.000	0.500	0.239	0.461	0.9%	0.018	0.308
%RSD		5.111	25.360	T 1.215	52.120	5.216	6.476	1.1	5.371	44.010
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	0.943	20550.000	16.890	0.056	10.120	8.865	0.008	0.057	-0.101
2	19:58:45	1.091	20580.000	17.990	0.067	10.210	6.792	0.005	0.066	0.111
3	19:59:13	0.977	20100.000	16.840	0.062	7.842	6.510	0.008	0.061	-0.152
x		1.004	20410.000	17.240	0.061	9.390	7.389	0.007	0.061	-0.047
σ		0.077	270.600	0.648	0.005	1.341	1.286	0.002	0.005	0.139
%RSD		7.717	1.326	3.757	8.745	14.280	17.400	29.440	7.565	296.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	0.015	0.035	0.648	3.747	0.704	0.797	-0.096	14.560	15.500
2	19:58:45	0.017	0.008	0.680	3.703	0.762	0.082	0.087	13.790	15.730
3	19:59:13	0.010	0.008	0.625	3.344	0.754	0.047	-0.011	14.790	14.310
x		0.014	0.017	0.651	3.598	0.740	0.308	-0.007	14.380	15.180
σ		0.004	0.015	0.028	0.221	0.031	0.423	0.091	0.524	0.764
%RSD		26.970	88.810	4.274	6.152	4.228	137.200	1378.000	3.644	5.030
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	2.211	0.507	-0.136	0.013	82.7%	0.263	0.229	0.261	-1.503
2	19:58:45	0.230	0.056	-0.172	0.011	83.6%	0.258	0.226	0.212	-0.782
3	19:59:13	-0.097	-0.045	-0.651	0.016	83.4%	0.189	0.183	0.219	-0.969
x		0.782	0.173	-0.320	0.013	83.2%	0.237	0.212	0.231	-1.085
σ		1.249	0.294	0.288	0.003	0.4%	0.041	0.026	0.027	0.374
%RSD		159.800	170.500	89.970	19.740	0.5	17.350	12.210	11.500	34.500
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	0.004	0.004	0.001	-0.012	86.3%	3.766	5.521	0.255	0.241
2	19:58:45	0.001	0.007	0.006	0.003	86.7%	3.687	5.632	0.284	0.229
3	19:59:13	0.006	0.010	-0.001	-0.003	86.4%	3.824	5.475	0.225	0.224
x		0.004	0.007	0.002	-0.004	86.5%	3.759	5.543	0.254	0.231
σ		0.002	0.003	0.003	0.008	0.2%	0.069	0.081	0.029	0.009
%RSD		67.040	42.830	166.100	177.600	0.2	1.832	1.460	11.570	3.845
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	19:58:17	0.026	0.015	92.7%	-0.013	-0.016	0.006	0.003	0.004	122.4%
2	19:58:45	0.020	0.018	93.3%	-0.014	-0.016	0.005	0.003	0.001	118.7%
3	19:59:13	0.016	0.015	94.6%	-0.014	-0.015	0.007	-0.003	0.003	118.8%
x		0.021	0.016	93.5%	-0.014	-0.016	0.006	0.001	0.003	120.0%
σ		0.005	0.002	1.0%	0.000	0.001	0.001	0.003	0.002	2.1%
%RSD		23.990	12.840	1.0	2.866	6.382	18.660	314.000	60.770	1.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	99.2%	181.400	174.100	178.900	-6.638	T 2056.000	T 2060.000	2116.000	2159.000
2	20:04:40	100.2%	180.600	181.200	179.300	-8.101	T 2039.000	T 2076.000	2137.000	2195.000
3	20:05:07	98.5%	179.300	173.200	174.300	-8.258	T 2064.000	T 2059.000	2119.000	2177.000
x		99.3%	180.400	176.200	177.500	-7.666	T 2053.000	T 2065.000	2124.000	2177.000
σ		0.8%	1.026	4.364	2.777	0.893	T 12.690	T 9.570	11.060	17.980
%RSD		0.8	0.569	2.478	1.565	11.650	T 0.618	T 0.464	0.521	0.826
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	206.300	4.337	T 184600.000	T 1868.000	2277.000	2123.000	83.2%	201.700	211.800
2	20:04:40	207.000	4.128	T 186500.000	T 1848.000	2248.000	2130.000	82.9%	204.200	212.000
3	20:05:07	206.300	4.242	T 186200.000	T 1893.000	2233.000	2127.000	82.1%	201.700	209.300
x		206.500	4.236	T 185800.000	T 1870.000	2253.000	2127.000	82.7%	202.500	211.000
σ		0.413	0.105	T 1047.000	T 22.550	21.980	3.245	0.5%	1.435	1.490
%RSD		0.200	2.470	T 0.564	T 1.206	0.976	0.153	0.7	0.709	0.706
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	205.300	20230.000	2278.000	211.000	T 2186.000	2122.000	203.900	186.100	191.500
2	20:04:40	206.900	19590.000	2279.000	210.000	T 2153.000	2106.000	200.200	182.700	190.900
3	20:05:07	203.500	21940.000	2290.000	207.800	T 2122.000	2098.000	199.800	185.800	194.000
x		205.200	20590.000	2282.000	209.600	T 2154.000	2109.000	201.300	184.900	192.100
σ		1.693	1218.000	6.790	1.634	T 32.120	11.850	2.263	1.892	1.615
%RSD		0.825	5.918	0.297	0.780	T 1.491	0.562	1.124	1.024	0.840
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	194.600	195.100	188.300	194.300	189.800	195.300	183.800	11.810	12.510
2	20:04:40	191.300	197.800	185.400	195.600	189.800	190.400	182.300	10.420	10.900
3	20:05:07	189.900	191.900	188.200	197.900	191.400	193.900	182.800	11.090	11.400
x		191.900	194.900	187.300	195.900	190.300	193.200	182.900	11.110	11.600
σ		2.392	2.928	1.626	1.833	0.940	2.522	0.752	0.692	0.820
%RSD		1.246	1.502	0.868	0.935	0.494	1.305	0.411	6.232	7.065
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	840.200	191.900	-0.211	T 203.200	84.2%	195.600	199.200	195.800	195.600
2	20:04:40	831.700	189.600	0.444	208.400	83.7%	198.000	197.100	190.800	198.200
3	20:05:07	851.800	194.500	-0.636	212.100	83.1%	197.200	199.200	193.100	199.200
x		841.200	192.000	-0.135	T 207.900	83.6%	196.900	198.500	193.200	197.700
σ		10.090	2.460	0.544	T 4.477	0.5%	1.235	1.209	2.522	1.837
%RSD		1.199	1.281	404.700	T 2.154	0.7	0.627	0.609	1.305	0.929
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	208.500	208.700	195.200	188.900	86.0%	205.300	207.100	205.500	187.300
2	20:04:40	208.600	205.300	194.100	189.500	86.9%	205.000	204.800	204.300	187.400
3	20:05:07	207.600	206.200	194.200	191.200	86.1%	206.200	206.900	206.800	189.200
x		208.200	206.700	194.500	189.800	86.3%	205.500	206.300	205.500	187.900
σ		0.542	1.793	0.596	1.223	0.5%	0.652	1.273	1.275	1.049
%RSD		0.260	0.868	0.306	0.644	0.6	0.317	0.617	0.620	0.558
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:04:13	201.200	200.400	93.3%	202.100	T 201.500	208.300	203.400	T 202.800	116.9%
2	20:04:40	200.800	197.700	94.1%	201.200	T 198.000	207.000	205.100	T 204.400	116.4%
3	20:05:07	200.800	197.400	93.2%	202.100	T 200.400	208.100	205.400	T 203.700	116.7%
x		200.900	198.500	93.6%	201.800	T 199.900	207.800	204.600	T 203.700	116.7%
σ		0.225	1.641	0.5%	0.482	T 1.792	0.674	1.075	T 0.802	0.3%
%RSD		0.112	0.827	0.5	0.239	T 0.896	0.325	0.525	T 0.394	0.2

TJ25041-001 11/16/2018 20:09:40

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	100.8%	0.168	7.307	7.971	34.260	120.000	T 1205.000	1259.000	1287.000
2	20:10:33	104.7%	0.199	7.339	7.676	28.440	117.500	T 1185.000	1231.000	1291.000
3	20:11:00	101.9%	0.184	7.627	7.725	32.130	116.700	T 1194.000	1245.000	1307.000
x		102.5%	0.184	7.424	7.791	31.610	118.100	T 1195.000	1245.000	1295.000
σ		2.0%	0.016	0.176	0.158	2.945	1.683	T 10.080	13.650	10.420
%RSD		2.0	8.598	2.374	2.028	9.316	1.426	T 0.844	1.097	0.805
Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	TM 17350.000	T 2365.000	T 147500.000	T 993.800	25100.000	T 24930.000	84.8%	404.500	21.290
2	20:10:33	TM 17180.000	T 2314.000	T 149100.000	T 964.100	24620.000	T 24920.000	85.5%	407.300	20.870
3	20:11:00	TM 17270.000	T 2349.000	T 149100.000	T 996.300	24740.000	T 25040.000	84.7%	398.600	21.340
x		TM 17270.000	T 2343.000	T 148600.000	T 984.800	24820.000	T 24970.000	85.0%	403.500	21.160
σ		TM 87.470	T 25.810	T 927.500	T 17.910	249.100	T 67.470	0.4%	4.448	0.256
%RSD		TM 0.507	T 1.102	T 0.624	T 1.819	1.004	T 0.270	0.5	1.102	1.209
Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	22.950	24430.000	T 7449.000	189.100	T 7726.000	7889.000	1.282	6.377	6.880
2	20:10:33	22.380	24790.000	T 7408.000	189.200	T 7720.000	7822.000	1.198	6.282	6.343
3	20:11:00	22.580	24550.000	T 7336.000	187.200	T 7724.000	7763.000	1.214	6.079	6.258
x		22.640	24590.000	T 7398.000	188.500	T 7723.000	7824.000	1.232	6.246	6.494
σ		0.290	183.400	T 57.350	1.089	T 3.249	63.400	0.044	0.153	0.337
%RSD		1.282	0.746	T 0.775	0.578	T 0.042	0.810	3.612	2.445	5.196
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	16.750	15.700	39.830	40.650	36.700	7.252	0.157	7.281	5.648
2	20:10:33	16.220	15.560	39.260	41.090	36.940	7.111	0.291	6.879	6.490
3	20:11:00	16.550	15.330	39.460	40.080	37.170	6.607	0.336	7.626	6.624
x		16.510	15.530	39.520	40.600	36.930	6.990	0.261	7.262	6.254
σ		0.269	0.185	0.290	0.510	0.235	0.339	0.093	0.374	0.529
%RSD		1.632	1.190	0.733	1.256	0.637	4.852	35.580	5.147	8.466
Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	3.345	1.012	0.315	59.620	100.3%	0.524	0.537	0.563	1.799
2	20:10:33	2.358	0.773	1.237	59.790	100.6%	0.491	0.442	0.547	2.123
3	20:11:00	1.996	0.696	1.823	59.550	99.8%	0.463	0.477	0.523	2.358
x		2.566	0.827	1.125	59.660	100.2%	0.492	0.485	0.544	2.093
σ		0.698	0.165	0.760	0.124	0.4%	0.031	0.048	0.020	0.281
%RSD		27.210	19.960	67.580	0.207	0.4	6.203	9.861	3.747	13.420
Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	0.071	0.076	0.198	0.139	87.7%	4.213	5.212	0.315	0.297
2	20:10:33	0.063	0.070	0.183	0.132	89.1%	4.194	5.136	0.295	0.244
3	20:11:00	0.067	0.066	0.145	0.153	87.4%	4.199	5.105	0.315	0.266
x		0.067	0.071	0.175	0.141	88.1%	4.202	5.151	0.308	0.269
σ		0.004	0.005	0.027	0.011	0.9%	0.010	0.055	0.012	0.026
%RSD		5.428	6.918	15.570	7.571	1.0	0.234	1.068	3.769	9.746
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:10:07	47.140	45.700	94.5%	0.186	0.187	46.370	42.950	45.140	119.5%
2	20:10:33	45.770	46.020	97.0%	0.202	0.182	45.780	41.740	44.190	118.1%
3	20:11:00	46.750	46.060	96.7%	0.178	0.184	46.130	42.090	44.370	119.5%
x		46.550	45.920	96.0%	0.189	0.184	46.090	42.260	44.570	119.1%
σ		0.705	0.198	1.4%	0.012	0.003	0.293	0.624	0.505	0.8%
%RSD		1.515	0.432	1.4	6.393	1.456	0.637	1.477	1.132	0.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	106.8%	0.129	3.678	3.676	1.713	79.770	T 721.400	740.700	766.000
2	20:16:27	108.0%	0.088	3.663	3.626	1.260	80.250	T 725.100	730.000	763.200
3	20:16:53	105.7%	0.107	3.605	3.442	-2.856	77.480	T 687.800	712.600	738.500
x		106.8%	0.108	3.648	3.581	0.039	79.170	T 711.400	727.800	755.900
σ		1.2%	0.020	0.038	0.124	2.517	1.480	T 20.550	14.170	15.160
%RSD		1.1	18.950	1.050	3.448	6482.000	1.870	T 2.888	1.947	2.005

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	TM 15100.000	T 2138.000	T 168300.000	610.700	3533.000	3535.000	88.9%	330.300	15.740
2	20:16:27	TM 15070.000	T 2089.000	T 169200.000	591.100	3530.000	3501.000	88.8%	325.000	13.510
3	20:16:53	TM 14450.000	T 2103.000	T 161900.000	610.900	3463.000	3390.000	T 91.3%	312.400	13.560
x		TM 14870.000	T 2110.000	T 166500.000	604.300	3509.000	3475.000	T 89.7%	322.600	14.270
σ		TM 365.400	T 25.420	T 3996.000	11.380	39.810	75.830	T 1.4%	9.169	1.274
%RSD		TM 2.458	T 1.204	T 2.400	1.883	1.135	2.182	T 1.6	2.842	8.927

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	19.420	29060.000	4155.000	37.210	T 4024.000	3981.000	0.492	2.663	3.463
2	20:16:27	19.260	30070.000	4015.000	37.150	T 3986.000	3941.000	0.512	2.675	2.890
3	20:16:53	18.600	29060.000	3938.000	35.880	T 3848.000	3824.000	0.472	2.667	3.378
x		19.090	29400.000	4036.000	36.750	T 3952.000	3915.000	0.492	2.668	3.244
σ		0.432	579.000	109.600	0.755	T 92.300	81.540	0.020	0.006	0.309
%RSD		2.264	1.970	2.716	2.054	T 2.335	2.083	4.133	0.242	9.540

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	3.184	3.161	9.798	14.340	9.541	3.253	-0.006	12.290	11.450
2	20:16:27	3.164	3.194	9.868	13.650	9.685	3.613	0.070	12.400	11.760
3	20:16:53	2.974	3.142	9.918	13.000	9.487	3.270	0.268	11.710	10.940
x		3.107	3.166	9.861	13.660	9.571	3.379	0.111	12.130	11.380
σ		0.116	0.026	0.060	0.669	0.103	0.203	0.141	0.369	0.417
%RSD		3.737	0.826	0.608	4.896	1.073	6.014	127.500	3.042	3.662

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	2.264	0.713	1.689	16.120	101.6%	0.325	0.291	0.345	0.611
2	20:16:27	0.377	0.238	1.682	16.030	101.8%	0.316	0.315	0.318	0.927
3	20:16:53	2.486	0.694	-0.062	15.780	102.0%	0.308	0.318	0.303	0.310
x		1.709	0.548	1.103	15.970	101.8%	0.316	0.308	0.322	0.616
σ		1.159	0.269	1.009	0.179	0.2%	0.008	0.015	0.021	0.309
%RSD		67.800	49.030	91.430	1.118	0.2	2.663	4.856	6.571	50.100

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	0.021	0.031	0.019	-0.007	90.7%	3.684	4.476	0.147	0.110
2	20:16:27	0.037	0.041	0.015	0.027	91.2%	3.599	4.498	0.143	0.119
3	20:16:53	0.029	0.040	0.021	0.014	90.7%	3.569	4.497	0.131	0.118
x		0.029	0.037	0.018	0.011	90.9%	3.617	4.490	0.140	0.115
σ		0.008	0.006	0.003	0.017	0.3%	0.059	0.013	0.009	0.005
%RSD		26.970	15.230	17.150	150.700	0.3	1.642	0.283	6.087	4.454

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:15:59	22.400	22.050	98.3%	0.087	0.080	15.090	14.040	14.770	122.5%
2	20:16:27	22.120	21.980	99.9%	0.086	0.077	15.060	13.720	14.640	123.2%
3	20:16:53	22.260	21.820	100.0%	0.084	0.080	14.920	13.850	14.510	123.5%
x		22.260	21.950	99.4%	0.086	0.079	15.030	13.870	14.640	123.0%
σ		0.140	0.120	0.9%	0.001	0.002	0.094	0.160	0.128	0.5%
%RSD		0.629	0.545	0.9	1.670	2.136	0.623	1.156	0.875	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	106.0%	0.156	5.262	5.351	14.570	352.600	T 1351.000	1401.000	1450.000
2	20:22:22	105.3%	0.124	5.864	5.400	16.060	343.500	T 1328.000	1407.000	1455.000
3	20:22:50	106.8%	0.158	5.281	5.370	12.910	345.400	T 1334.000	1398.000	1464.000
x		106.0%	0.146	5.469	5.374	14.510	347.200	T 1338.000	1402.000	1456.000
σ		0.7%	0.019	0.342	0.025	1.577	4.819	T 11.950	4.365	7.141
%RSD		0.7	12.980	6.256	0.459	10.870	1.388	T 0.893	0.311	0.490
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	TM 17500.000	T 2601.000	T 150500.000	T 1328.000	8652.000	8715.000	89.6%	392.900	26.010
2	20:22:22	TM 17620.000	T 2616.000	T 153100.000	T 1334.000	8708.000	8799.000	88.7%	390.200	24.460
3	20:22:50	TM 17500.000	T 2523.000	T 150400.000	T 1312.000	8882.000	8782.000	88.2%	387.500	25.710
x		TM 17540.000	T 2580.000	T 151300.000	T 1324.000	8747.000	8766.000	88.8%	390.200	25.390
σ		TM 70.040	T 50.330	T 1534.000	T 11.370	119.700	44.420	0.7%	2.683	0.821
%RSD		TM 0.399	T 1.951	T 1.014	T 0.859	1.368	0.507	0.8	0.688	3.235
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	25.130	26060.000	T 6867.000	127.300	T 7080.000	7138.000	1.058	4.910	5.054
2	20:22:22	24.840	27660.000	T 6885.000	129.600	T 7176.000	7043.000	0.975	4.688	5.652
3	20:22:50	24.670	27440.000	T 6790.000	126.600	T 7001.000	7113.000	1.042	5.015	4.999
x		24.880	27050.000	T 6847.000	127.800	T 7086.000	7098.000	1.025	4.871	5.235
σ		0.235	865.700	T 50.440	1.591	T 87.680	49.140	0.044	0.167	0.362
%RSD		0.946	3.200	T 0.737	1.245	T 1.237	0.692	4.317	3.436	6.911
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	17.090	16.760	21.360	24.760	20.770	16.680	0.039	6.259	6.493
2	20:22:22	16.950	16.900	21.880	24.070	21.290	17.010	0.052	7.015	6.225
3	20:22:50	17.020	16.480	21.050	25.160	21.050	17.230	-0.215	6.242	5.957
x		17.020	16.710	21.430	24.660	21.030	16.970	-0.041	6.505	6.225
σ		0.074	0.211	0.419	0.554	0.261	0.276	0.150	0.441	0.268
%RSD		0.438	1.263	1.957	2.248	1.238	1.627	364.600	6.786	4.306
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	2.156	0.571	-0.868	40.480	98.2%	0.508	0.522	0.592	2.136
2	20:22:22	2.283	0.693	1.979	39.760	98.6%	0.536	0.584	0.573	1.122
3	20:22:50	2.316	0.685	1.329	39.550	98.1%	0.542	0.445	0.563	1.746
x		2.252	0.650	0.813	39.930	98.3%	0.529	0.517	0.576	1.668
σ		0.084	0.068	1.492	0.485	0.3%	0.018	0.069	0.015	0.511
%RSD		3.741	10.480	183.400	1.213	0.3	3.374	13.390	2.578	30.650
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	0.041	0.043	0.063	0.053	89.7%	3.853	4.742	0.109	0.092
2	20:22:22	0.050	0.035	0.082	0.045	90.6%	3.808	4.774	0.131	0.115
3	20:22:50	0.041	0.048	0.074	0.040	90.6%	3.779	4.701	0.134	0.098
x		0.044	0.042	0.073	0.046	90.3%	3.813	4.739	0.125	0.102
σ		0.005	0.006	0.010	0.007	0.5%	0.037	0.037	0.014	0.012
%RSD		11.890	15.330	13.460	14.250	0.6	0.974	0.773	10.860	11.960
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:21:55	42.940	42.540	98.5%	0.119	0.114	17.480	15.900	16.780	124.7%
2	20:22:22	43.430	41.790	99.6%	0.122	0.123	17.320	15.940	16.660	122.2%
3	20:22:50	42.170	41.940	99.8%	0.127	0.110	17.050	15.710	16.560	123.5%
x		42.850	42.090	99.3%	0.123	0.116	17.280	15.850	16.670	123.5%
σ		0.637	0.395	0.7%	0.004	0.006	0.216	0.120	0.112	1.2%
%RSD		1.486	0.938	0.7	3.368	5.536	1.252	0.756	0.673	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	107.1%	0.318	3.314	3.806	56.690	68.100	T 1216.000	1265.000	1323.000
2	20:28:17	109.2%	0.311	4.022	3.920	53.560	68.820	T 1181.000	1224.000	1279.000
3	20:28:44	107.6%	0.282	2.934	3.944	53.270	68.860	T 1201.000	1237.000	1288.000
x		108.0%	0.304	3.423	3.890	54.500	68.590	T 1199.000	1242.000	1297.000
σ		1.1%	0.019	0.552	0.074	1.897	0.431	T 17.870	20.900	23.240
%RSD		1.0	6.219	16.130	1.892	3.481	0.628	T 1.490	1.683	1.792

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	TM 19020.000	T 2463.000	T 175100.000	T 802.600	14160.000	T 14180.000	87.4%	441.300	21.850
2	20:28:17	TM 18480.000	T 2372.000	T 171900.000	810.400	13790.000	T 14060.000	88.2%	426.300	20.560
3	20:28:44	TM 18390.000	T 2383.000	T 172700.000	816.500	14100.000	T 14170.000	86.9%	425.300	21.640
x		TM 18630.000	T 2406.000	T 173200.000	T 809.800	14020.000	T 14140.000	87.5%	431.000	21.350
σ		TM 342.900	T 49.560	T 1692.000	T 6.986	198.000	T 70.470	0.7%	8.970	0.695
%RSD		TM 1.841	T 2.060	T 0.977	T 0.863	1.412	T 0.499	0.8	2.081	3.256

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	22.010	30150.000	T 11670.000	TM 576.200	T 12290.000	T 11810.000	1.723	7.149	7.258
2	20:28:17	21.480	30920.000	T 11470.000	TM 562.500	T 12090.000	12480.000	1.691	7.156	7.995
3	20:28:44	22.090	31240.000	T 11530.000	TM 570.100	T 12290.000	T 11600.000	1.669	7.144	7.622
x		21.860	30770.000	T 11560.000	TM 569.600	T 12220.000	T 11960.000	1.694	7.150	7.625
σ		0.331	559.100	T 105.300	TM 6.855	T 113.500	T 457.700	0.027	0.006	0.368
%RSD		1.516	1.817	T 0.911	TM 1.204	T 0.928	T 3.827	1.619	0.087	4.829

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	14.370	13.650	121.200	116.100	113.000	5.659	0.320	8.006	7.650
2	20:28:17	14.190	13.450	119.200	119.200	111.900	4.428	0.297	8.210	6.853
3	20:28:44	14.120	13.750	119.100	114.600	112.500	4.727	0.534	7.109	7.035
x		14.230	13.620	119.900	116.600	112.400	4.938	0.384	7.775	7.180
σ		0.127	0.155	1.176	2.380	0.543	0.642	0.131	0.586	0.418
%RSD		0.896	1.138	0.981	2.040	0.483	13.000	34.040	7.535	5.816

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	2.280	0.737	-0.116	57.460	104.5%	0.377	0.401	0.448	3.036
2	20:28:17	0.871	0.372	0.971	57.160	103.1%	0.361	0.394	0.449	2.935
3	20:28:44	1.678	0.640	2.418	57.400	103.3%	0.363	0.388	0.423	3.134
x		1.610	0.583	1.091	57.340	103.6%	0.367	0.394	0.440	3.035
σ		0.707	0.189	1.272	0.157	0.8%	0.009	0.006	0.015	0.099
%RSD		43.900	32.400	116.600	0.274	0.7	2.449	1.614	3.404	3.274

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	0.101	0.104	0.265	0.226	89.9%	10.840	14.720	0.297	0.237
2	20:28:17	0.087	0.092	0.231	0.261	90.3%	10.870	14.590	0.289	0.241
3	20:28:44	0.093	0.086	0.244	0.232	90.6%	10.700	14.250	0.270	0.223
x		0.094	0.094	0.246	0.240	90.3%	10.800	14.520	0.285	0.234
σ		0.007	0.009	0.017	0.019	0.4%	0.087	0.243	0.014	0.009
%RSD		7.235	9.780	7.061	7.866	0.4	0.809	1.675	4.863	3.998

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:27:50	120.400	119.900	99.6%	0.131	0.126	181.900	166.600	T 171.200	123.1%
2	20:28:17	119.000	117.600	99.1%	0.136	0.146	179.300	163.300	T 169.900	121.3%
3	20:28:44	116.800	116.300	100.3%	0.128	0.128	176.000	162.400	T 166.800	T 115.7%
x		118.700	117.900	99.6%	0.132	0.133	179.100	164.100	T 169.300	T 120.1%
σ		1.813	1.819	0.6%	0.004	0.011	2.970	2.211	T 2.285	T 3.9%
%RSD		1.526	1.543	0.6	3.132	8.152	1.659	1.348	T 1.350	T 3.2

TJ25041-007S 11/16/2018 20:33:18

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	103.4%	103.600	104.600	108.100	20.390	T 1884.000	T 2962.000	T 3008.000	T 3092.000
2	20:34:14	103.8%	103.700	106.200	108.900	20.950	T 1874.000	T 2980.000	T 3010.000	T 3122.000
3	20:34:41	103.8%	105.500	109.400	110.800	20.210	T 1889.000	T 2961.000	T 3016.000	T 3146.000
x		103.6%	104.200	106.700	109.300	20.520	T 1883.000	T 2968.000	T 3011.000	T 3120.000
σ		0.2%	1.089	2.451	1.392	0.385	T 7.492	T 10.730	T 4.421	T 27.350
%RSD		0.2	1.045	2.296	1.274	1.876	T 0.398	T 0.362	T 0.147	T 0.877

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	TM 22050.000	T 3286.000	T 158200.000	T 4624.000	18590.000	T 18710.000	87.8%	M 932.800	237.600
2	20:34:14	TM 22150.000	T 3235.000	T 161200.000	T 4532.000	18600.000	T 18760.000	86.8%	M 929.200	237.600
3	20:34:41	TM 22470.000	T 3258.000	T 161300.000	T 4489.000	18260.000	T 18570.000	87.0%	M 920.100	T 230.700
x		TM 22220.000	T 3260.000	T 160300.000	T 4548.000	18480.000	T 18680.000	87.2%	M 927.400	T 235.300
σ		TM 220.400	T 25.220	T 1738.000	T 68.570	191.200	T 97.060	0.5%	M 6.551	T 3.954
%RSD		TM 0.992	T 0.774	T 1.084	T 1.508	1.034	T 0.520	0.6	M 0.706	T 1.681

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	225.200	26420.000	T 14250.000	TM 796.100	T 14970.000	T 14420.000	197.900	191.100	181.000
2	20:34:14	225.900	26500.000	T 14380.000	TM 792.700	T 14990.000	T 14300.000	195.000	189.100	176.000
3	20:34:41	222.500	28410.000	T 14150.000	TM 789.200	T 14990.000	T 14340.000	197.200	187.300	175.800
x		224.500	27110.000	T 14260.000	TM 792.700	T 14980.000	T 14350.000	196.700	189.200	177.600
σ		1.822	1125.000	T 115.900	TM 3.429	T 10.240	T 57.610	1.508	1.867	2.982
%RSD		0.811	4.149	T 0.813	TM 0.433	T 0.068	T 0.401	0.767	0.987	1.679

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	179.700	163.300	266.000	245.900	241.000	185.100	154.500	7.682	7.271
2	20:34:14	178.600	161.200	262.800	246.400	242.300	187.200	151.200	7.879	6.197
3	20:34:41	177.400	162.100	263.700	243.800	239.500	186.200	152.400	7.574	7.167
x		178.600	162.200	264.100	245.400	240.900	186.200	152.700	7.712	6.878
σ		1.133	1.097	1.633	1.420	1.432	1.085	1.657	0.155	0.593
%RSD		0.635	0.676	0.618	0.579	0.594	0.583	1.085	2.005	8.616

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	674.900	180.100	2.086	T 234.000	107.0%	163.000	167.100	187.400	187.800
2	20:34:14	672.700	180.900	0.702	T 236.800	106.9%	160.900	164.700	184.300	192.200
3	20:34:41	673.400	179.900	2.520	T 235.800	106.2%	160.500	164.400	184.300	190.600
x		673.700	180.300	1.769	T 235.500	106.7%	161.500	165.400	185.300	190.200
σ		1.128	0.516	0.950	T 1.436	0.4%	1.301	1.462	1.804	2.219
%RSD		0.168	0.286	53.660	T 0.610	0.4	0.805	0.884	0.974	1.167

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	208.100	204.200	190.900	189.800	89.0%	206.000	205.500	187.000	170.700
2	20:34:14	205.400	203.100	187.400	190.900	88.8%	204.900	205.700	187.400	168.900
3	20:34:41	203.400	202.400	187.100	188.900	88.6%	204.200	204.400	186.600	168.600
x		205.600	203.300	188.500	189.900	88.8%	205.000	205.200	187.000	169.400
σ		2.356	0.876	2.069	0.982	0.2%	0.916	0.681	0.367	1.144
%RSD		1.146	0.431	1.098	0.517	0.3	0.447	0.332	0.196	0.675

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:33:46	362.000	362.400	97.5%	201.900	T 196.200	T 359.100	T 345.000	T 351.200	118.9%
2	20:34:14	358.300	360.600	98.3%	199.500	T 194.500	T 355.700	361.900	T 352.200	118.3%
3	20:34:41	363.700	361.300	97.5%	199.900	T 193.900	T 351.100	T 338.500	T 345.000	117.4%
x		361.300	361.400	97.7%	200.400	T 194.900	T 355.300	T 348.500	T 349.400	118.2%
σ		2.769	0.926	0.5%	1.261	T 1.159	T 4.017	T 12.090	T 3.858	0.7%
%RSD		0.766	0.256	0.5	0.629	T 0.595	T 1.131	T 3.470	T 1.104	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	103.3%	108.200	110.500	117.100	17.730	T 1878.000	T 2917.000	T 2943.000	T 3045.000
2	20:40:09	103.3%	104.300	102.100	109.300	12.710	T 1855.000	T 2873.000	T 2882.000	T 2968.000
3	20:40:36	104.2%	106.000	111.700	113.800	14.870	T 1873.000	T 2896.000	T 2962.000	T 3061.000
x		103.6%	106.100	108.100	113.400	15.100	T 1869.000	T 2895.000	T 2929.000	T 3025.000
σ		0.5%	1.949	5.215	3.938	2.519	T 12.050	T 21.730	T 41.470	T 49.570
%RSD		0.5	1.836	4.824	3.472	16.680	T 0.645	T 0.751	T 1.416	T 1.639

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	TM 20230.000	T 3089.000	T 144300.000	T 4479.000	18760.000	T 18920.000	88.7%	M 900.800	233.800
2	20:40:09	TM 20060.000	T 3042.000	T 142900.000	T 4423.000	18760.000	T 19130.000	87.5%	M 899.500	229.800
3	20:40:36	TM 20380.000	T 2971.000	T 146000.000	T 4356.000	18960.000	T 19200.000	87.2%	M 895.900	T 224.400
x		TM 20220.000	T 3034.000	T 144400.000	T 4419.000	18830.000	T 19080.000	87.8%	M 898.800	T 229.300
σ		TM 162.100	T 59.370	T 1525.000	T 61.300	112.700	T 142.000	0.8%	M 2.558	T 4.751
%RSD		TM 0.802	T 1.957	T 1.056	T 1.387	0.599	T 0.744	0.9	M 0.285	T 2.072

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	219.100	23820.000	T 15040.000	TM 703.900	T 15670.000	T 15060.000	192.700	186.100	175.800
2	20:40:09	218.900	24930.000	T 15080.000	TM 714.800	T 15800.000	T 15230.000	194.900	186.600	178.200
3	20:40:36	217.700	25340.000	T 15070.000	TM 703.100	T 15670.000	T 15150.000	192.500	182.600	176.700
x		218.600	24700.000	T 15060.000	TM 707.300	T 15710.000	T 15140.000	193.400	185.100	176.900
σ		0.750	784.400	T 21.820	TM 6.560	T 73.540	T 85.310	1.291	2.166	1.223
%RSD		0.343	3.176	T 0.145	TM 0.927	T 0.468	T 0.563	0.667	1.170	0.691

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	176.500	165.700	253.000	241.400	235.400	182.400	153.100	5.654	5.997
2	20:40:09	176.800	163.100	258.700	242.200	236.000	185.600	152.700	5.516	5.661
3	20:40:36	175.300	163.000	250.300	240.900	231.500	183.600	152.400	5.777	5.135
x		176.200	164.000	254.000	241.500	234.300	183.900	152.700	5.649	5.597
σ		0.779	1.514	4.292	0.689	2.422	1.578	0.380	0.130	0.434
%RSD		0.442	0.923	1.690	0.285	1.033	0.858	0.249	2.304	7.760

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	690.800	180.200	1.518	T 238.700	105.3%	160.100	164.400	179.300	186.600
2	20:40:09	682.100	179.900	0.889	T 236.600	105.3%	162.200	165.400	185.500	185.700
3	20:40:36	692.700	182.600	0.650	T 238.800	104.8%	160.400	162.900	181.100	187.600
x		688.500	180.900	1.019	T 238.000	105.1%	160.900	164.200	182.000	186.600
σ		5.629	1.466	0.448	T 1.235	0.3%	1.094	1.257	3.173	0.931
%RSD		0.818	0.810	43.990	T 0.519	0.3	0.680	0.765	1.744	0.499

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	200.500	198.000	184.100	184.900	90.7%	200.600	197.400	184.300	168.600
2	20:40:09	202.000	201.800	189.200	189.200	88.9%	201.300	201.500	185.500	165.900
3	20:40:36	200.800	199.000	183.900	184.000	89.2%	201.300	200.200	183.700	167.400
x		201.100	199.600	185.700	186.000	89.6%	201.100	199.700	184.500	167.300
σ		0.762	1.965	2.997	2.762	1.0%	0.399	2.123	0.879	1.340
%RSD		0.379	0.985	1.613	1.485	1.1	0.198	1.063	0.477	0.801

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:39:43	343.800	344.600	97.8%	197.000	T 194.200	T 342.100	344.200	T 336.200	121.5%
2	20:40:09	344.800	344.200	99.1%	194.400	T 191.700	T 338.200	338.200	T 331.100	120.4%
3	20:40:36	346.000	344.200	97.2%	197.400	T 191.400	T 340.000	342.900	T 334.400	118.9%
x		344.900	344.300	98.0%	196.200	T 192.400	T 340.100	341.800	T 333.900	120.2%
σ		1.082	0.228	1.0%	1.608	T 1.509	T 1.909	3.150	T 2.594	1.3%
%RSD		0.314	0.066	1.0	0.820	T 0.784	T 0.561	0.922	T 0.777	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	100.0%	0.114	1.731	1.516	14.510	16.470	291.300	279.600	282.100
2	20:46:04	100.9%	0.090	0.775	1.122	8.589	16.600	278.400	272.900	275.800
3	20:46:31	100.2%	0.096	1.301	1.040	11.470	15.710	280.000	273.800	281.400
x		100.4%	0.100	1.269	1.226	11.520	16.260	283.200	275.400	279.800
σ		0.5%	0.012	0.479	0.254	2.961	0.477	7.038	3.639	3.468
%RSD		0.5	12.290	37.730	20.740	25.700	2.936	2.485	1.321	1.240

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	TM 4061.000	T 490.300	T 36510.000	159.600	2704.000	2619.000	87.6%	82.180	4.336
2	20:46:04	TM 4052.000	T 477.800	T 36200.000	154.500	2683.000	2590.000	86.7%	80.960	4.250
3	20:46:31	TM 4047.000	T 475.500	T 35980.000	154.600	2630.000	2564.000	87.0%	81.810	4.086
x		TM 4053.000	T 481.200	T 36230.000	156.200	2672.000	2591.000	87.1%	81.650	4.224
σ		TM 7.052	T 7.955	T 262.300	2.936	38.130	27.470	0.5%	0.625	0.127
%RSD		TM 0.174	T 1.653	T 0.724	1.879	1.427	1.060	0.5	0.766	3.009

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	4.161	8567.000	2379.000	108.500	T 2326.000	2264.000	0.370	1.300	1.266
2	20:46:04	4.214	8608.000	2331.000	107.700	T 2308.000	2232.000	0.362	1.439	1.189
3	20:46:31	4.266	8665.000	2352.000	107.100	T 2295.000	2226.000	0.370	1.311	1.375
x		4.214	8613.000	2354.000	107.800	T 2310.000	2241.000	0.367	1.350	1.277
σ		0.052	49.040	24.010	0.710	T 15.930	20.860	0.005	0.077	0.094
%RSD		1.241	0.569	1.020	0.658	T 0.690	0.931	1.303	5.741	7.327

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	3.115	3.005	23.080	22.720	23.530	1.097	0.069	1.634	2.140
2	20:46:04	2.950	3.019	23.320	23.740	22.960	1.293	-0.235	1.586	1.438
3	20:46:31	2.960	3.044	22.070	22.940	23.180	1.083	-0.188	1.800	1.315
x		3.008	3.023	22.820	23.130	23.220	1.158	-0.118	1.673	1.631
σ		0.092	0.020	0.663	0.539	0.288	0.118	0.164	0.112	0.445
%RSD		3.070	0.660	2.906	2.329	1.241	10.170	138.800	6.705	27.260

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	0.405	0.149	0.140	12.090	93.4%	0.225	0.183	0.233	0.142
2	20:46:04	1.936	0.476	-1.243	11.990	92.0%	0.253	0.824	0.238	0.221
3	20:46:31	0.929	0.270	0.516	11.950	91.4%	0.213	0.231	0.207	-0.140
x		1.090	0.298	-0.196	12.010	92.3%	0.230	0.413	0.226	0.074
σ		0.778	0.165	0.926	0.069	1.0%	0.020	0.357	0.017	0.189
%RSD		71.420	55.360	472.900	0.575	1.1	8.874	86.660	7.339	255.700

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	0.042	0.048	0.070	0.074	93.7%	2.051	2.775	0.059	0.061
2	20:46:04	0.051	0.053	0.068	0.104	90.7%	2.077	2.867	0.076	0.064
3	20:46:31	0.034	0.039	0.061	0.091	92.7%	1.947	2.845	0.063	0.071
x		0.042	0.046	0.066	0.090	92.4%	2.025	2.829	0.066	0.066
σ		0.008	0.007	0.005	0.015	1.5%	0.069	0.048	0.009	0.005
%RSD		20.180	15.450	7.156	16.710	1.7	3.401	1.709	13.800	7.445

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:45:37	21.870	22.220	99.5%	0.129	0.121	33.190	31.190	32.070	113.2%
2	20:46:04	21.840	22.320	98.7%	0.122	0.127	32.880	30.520	31.710	112.8%
3	20:46:31	22.070	21.450	99.7%	0.099	0.108	32.470	30.370	31.370	115.2%
x		21.930	22.000	99.3%	0.117	0.119	32.850	30.690	31.720	113.7%
σ		0.124	0.478	0.5%	0.016	0.010	0.363	0.435	0.349	1.3%
%RSD		0.564	2.171	0.5	13.740	8.195	1.105	1.415	1.101	1.1

TJ25041-007A 11/16/2018 20:51:05

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	106.4%	110.500	118.500	119.900	42.280	T 1605.000	T 2602.000	T 2644.000	T 2701.000
2	20:52:00	105.4%	111.800	119.300	119.700	38.420	T 1610.000	T 2638.000	T 2674.000	T 2746.000
3	20:52:27	107.0%	111.300	115.800	120.000	42.460	T 1630.000	T 2649.000	T 2671.000	T 2751.000
x		106.2%	111.200	117.900	119.900	41.050	T 1615.000	T 2630.000	T 2663.000	T 2733.000
σ		0.8%	0.645	1.808	0.186	2.285	T 13.340	T 24.870	T 16.480	T 27.890
%RSD		0.8	0.580	1.534	0.155	5.566	T 0.826	T 0.946	T 0.619	T 1.021

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	TM 16200.000	T 3686.000	T 148700.000	T 2527.000	13930.000	T 13880.000	90.8%	M 551.700	T 212.000
2	20:52:00	TM 16350.000	T 3719.000	T 151600.000	T 2586.000	13940.000	T 14070.000	90.1%	M 552.800	218.900
3	20:52:27	TM 16300.000	T 3657.000	T 154000.000	T 2540.000	13920.000	T 14130.000	89.3%	M 551.800	219.200
x		TM 16280.000	T 3688.000	T 151500.000	T 2551.000	13930.000	T 14030.000	90.1%	M 552.100	T 216.700
σ		TM 75.690	T 30.990	T 2642.000	T 30.830	12.630	T 128.100	0.8%	M 0.602	T 4.084
%RSD		TM 0.465	T 0.840	T 1.744	T 1.209	0.091	T 0.914	0.9	M 0.109	T 1.885

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	209.400	23830.000	T 11680.000	TM 659.300	T 12070.000	12480.000	187.900	185.600	173.900
2	20:52:00	211.400	24670.000	T 11790.000	TM 671.600	T 12320.000	T 11710.000	187.400	185.200	174.000
3	20:52:27	207.900	25370.000	T 11710.000	TM 665.400	T 12200.000	T 11710.000	187.100	182.800	172.900
x		209.600	24620.000	T 11730.000	TM 665.400	T 12200.000	T 11970.000	187.500	184.500	173.600
σ		1.788	771.400	T 60.270	TM 6.146	T 123.700	T 445.800	0.381	1.549	0.590
%RSD		0.853	3.133	T 0.514	TM 0.924	T 1.014	T 3.726	0.203	0.840	0.340

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	181.200	170.400	290.900	264.300	263.300	188.400	164.700	5.498	4.787
2	20:52:00	180.300	171.200	292.400	271.500	268.400	189.700	166.800	5.015	5.126
3	20:52:27	179.400	171.000	289.100	271.400	268.200	191.100	163.100	5.087	5.102
x		180.300	170.900	290.800	269.000	266.700	189.800	164.900	5.200	5.005
σ		0.909	0.395	1.632	4.111	2.882	1.346	1.827	0.260	0.189
%RSD		0.504	0.231	0.561	1.528	1.081	0.710	1.108	5.005	3.779

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	723.100	181.100	0.706	T 219.600	102.6%	171.900	174.100	190.600	185.300
2	20:52:00	724.800	183.100	0.703	T 224.600	102.9%	169.800	173.600	190.000	187.700
3	20:52:27	755.000	190.800	1.140	T 223.000	102.0%	170.400	172.500	188.700	182.300
x		734.300	185.000	0.849	T 222.400	102.5%	170.700	173.400	189.800	185.100
σ		17.920	5.135	0.251	T 2.524	0.4%	1.106	0.822	0.961	2.688
%RSD		2.441	2.775	29.600	T 1.135	0.4	0.648	0.474	0.506	1.452

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	201.600	198.600	187.400	187.600	89.9%	206.100	210.600	198.600	180.100
2	20:52:00	201.000	199.700	188.400	187.400	90.5%	206.500	209.500	197.000	177.200
3	20:52:27	200.600	200.200	188.400	188.100	89.2%	207.900	209.500	201.400	180.000
x		201.100	199.500	188.100	187.700	89.9%	206.800	209.900	199.000	179.100
σ		0.474	0.812	0.583	0.362	0.7%	0.973	0.640	2.211	1.631
%RSD		0.236	0.407	0.310	0.193	0.7	0.470	0.305	1.111	0.911

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:51:33	301.900	300.800	98.5%	195.700	T 191.000	T 343.600	T 330.600	T 333.900	126.3%
2	20:52:00	295.100	300.300	100.3%	194.500	T 188.600	T 340.600	T 326.100	T 332.200	125.9%
3	20:52:27	303.600	302.700	98.7%	195.900	T 190.900	T 345.700	T 332.400	T 337.800	123.3%
x		300.200	301.300	99.2%	195.400	T 190.200	T 343.300	T 329.700	T 334.600	125.2%
σ		4.472	1.239	1.0%	0.785	T 1.373	T 2.577	T 3.238	T 2.910	1.6%
%RSD		1.490	0.411	1.0	0.402	T 0.722	T 0.751	T 0.982	T 0.870	1.3

CCV MW10535 11/16/2018 20:57:02 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	87.2%	276.700	270.900	280.700	-0.604	T 57950.000	T 57820.000	T 57890.000	T 58170.000
2	20:57:56	87.4%	280.200	272.200	284.800	2.334	T 60340.000	T 59960.000	T 59190.000	T 59970.000
3	20:58:23	87.4%	272.900	270.800	272.800	-2.728	T 58040.000	T 57990.000	T 58230.000	T 58480.000
x		87.3%	92.204%	90.437%	93.144%	-0.333	T 97.956%	T 58590.000	T 58440.000	T 98.120%
σ		0.1%	n/a	n/a	n/a	2.542	T n/a	T 1194.000	T 674.700	T n/a
%RSD		0.1	1.319	0.297	2.192	764.300	T 2.302	T 2.037	T 1.155	T 1.629

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	285.400	T 2960.000	1026.000	T 59530.000	60230.000	T 59690.000	85.5%	292.100	T 297.200
2	20:57:56	295.700	T 3009.000	1082.000	T 60030.000	61690.000	T 60610.000	85.1%	292.200	T 304.000
3	20:58:23	290.900	T 2928.000	1100.000	T 58460.000	59380.000	T 60470.000	84.0%	293.300	T 304.800
x		96.885%	T 98.856%	1069.000	T 98.898%	60430.000	T 100.427%	84.8%	97.513%	T 100.671%
σ		n/a	T n/a	39.000	T n/a	1169.000	T n/a	0.8%	n/a	T n/a
%RSD		1.774	T 1.378	3.647	T 1.346	1.934	T 0.826	0.9	0.224	T 1.377

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	292.700	1328.000	T 59910.000	T 286.100	T 59610.000	T 57320.000	T 282.400	283.000	277.300
2	20:57:56	296.200	-26.400	T 60020.000	T 285.400	T 60200.000	T 58000.000	T 281.400	273.800	272.300
3	20:58:23	295.600	596.800	T 59200.000	T 285.800	T 60110.000	T 57830.000	287.100	270.300	271.100
x		98.270%	632.900	T 59710.000	T 95.252%	T 59970.000	T 96.193%	T 94.544%	91.901%	273.500
σ		n/a	678.100	T 442.900	T n/a	T 313.700	T n/a	T n/a	n/a	3.291
%RSD		0.642	107.100	T 0.742	T 0.120	T 0.523	T 0.610	T 1.075	2.383	1.203

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	265.500	275.100	280.700	279.100	274.600	289.300	277.300	1.393	0.295
2	20:57:56	261.700	275.700	279.700	278.600	278.600	282.800	282.000	1.895	0.224
3	20:58:23	262.800	274.700	272.300	272.600	273.100	289.000	272.900	1.360	0.185
x		263.400	91.717%	92.527%	276.800	275.400	95.671%	277.400	1.549	0.234
σ		1.965	n/a	n/a	3.651	2.841	n/a	4.596	0.300	0.056
%RSD		0.746	0.176	1.661	1.319	1.032	1.272	1.657	19.380	23.940

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	1257.000	278.000	-0.506	T 306.600	83.3%	299.900	302.200	302.700	292.900
2	20:57:56	1243.000	275.900	0.290	T 308.700	83.2%	303.400	308.400	305.100	295.900
3	20:58:23	1248.000	280.800	0.129	T 303.800	83.5%	302.600	304.400	299.300	286.100
x		1249.000	92.741%	-0.029	T 102.118%	83.3%	100.650%	101.666%	302.400	291.600
σ		6.836	n/a	0.421	T n/a	0.1%	n/a	n/a	2.915	5.016
%RSD		0.547	0.877	1462.000	T 0.799	0.1	0.612	1.038	0.964	1.720

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	305.800	304.200	288.300	284.200	82.7%	299.100	302.900	315.900	296.100
2	20:57:56	303.000	300.000	285.900	283.600	84.2%	298.700	301.400	318.300	295.300
3	20:58:23	296.400	296.600	283.700	278.000	84.7%	295.200	296.600	313.300	289.900
x		100.575%	300.300	285.900	93.967%	83.9%	99.223%	100.111%	315.800	97.921%
σ		n/a	3.807	2.298	n/a	1.0%	n/a	n/a	2.527	n/a
%RSD		1.590	1.268	0.803	1.214	1.2	0.718	1.094	0.800	1.144

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	20:57:29	302.900	300.700	87.7%	298.300	T 285.300	296.000	292.800	T 290.300	88.3%
2	20:57:56	296.700	297.200	89.2%	299.200	T 287.800	T 287.900	294.000	T 288.600	91.1%
3	20:58:23	295.400	293.100	90.1%	295.100	T 283.200	T 282.100	288.700	T 284.100	93.4%
x		99.451%	98.997%	89.0%	297.500	T 95.143%	T 96.223%	97.275%	T 95.885%	90.9%
σ		n/a	n/a	1.2%	2.152	T n/a	T n/a	n/a	T n/a	2.6%
%RSD		1.346	1.283	1.3	0.723	T 0.801	T 2.427	0.960	T 1.118	2.8

CCB IM9061-02 11/16/2018 21:02:58 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	95.5%	-0.002	0.491	1.273	-3.716	2.069	1.231	1.194	1.266
2	21:03:53	94.0%	0.019	0.520	0.747	-1.315	2.447	1.128	1.147	1.322
3	21:04:20	94.0%	0.029	0.931	0.669	-0.839	1.832	1.074	1.281	1.057
x		94.5%	0.015	0.647	0.896	-1.957	2.116	1.144	1.208	1.215
σ		0.9%	0.015	0.246	0.328	1.542	0.310	0.080	0.068	0.140
%RSD		0.9	100.800	38.020	36.640	78.800	14.670	6.999	5.620	11.530

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	1.199	0.636	758.100	0.597	4.046	2.557	85.5%	0.197	-0.024
2	21:03:53	1.229	0.342	819.500	1.302	1.987	1.761	84.1%	0.181	-0.118
3	21:04:20	1.300	-0.126	846.100	1.076	0.674	2.058	85.1%	0.132	-0.104
x		1.243	0.284	807.900	0.992	2.236	2.125	84.9%	0.170	-0.082
σ		0.052	0.384	45.120	0.360	1.700	0.402	0.7%	0.034	0.051
%RSD		4.161	135.300	5.585	36.340	76.020	18.930	0.8	19.950	62.070

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	0.046	754.500	9.741	0.070	8.621	7.462	0.016	0.017	0.343
2	21:03:53	0.059	860.700	7.648	0.069	7.247	5.492	0.010	0.012	0.115
3	21:04:20	0.071	812.600	8.091	0.078	6.072	5.858	0.011	0.028	0.107
x		0.059	809.300	8.493	0.072	7.313	6.271	0.012	0.019	0.188
σ		0.012	53.220	1.103	0.005	1.276	1.048	0.003	0.008	0.134
%RSD		20.900	6.576	12.990	6.887	17.440	16.710	28.560	42.800	71.100

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	0.039	0.028	-0.084	-0.016	-0.039	0.131	0.325	0.225	0.210
2	21:03:53	0.024	0.012	-0.049	-0.129	0.044	0.148	0.368	0.035	0.001
3	21:04:20	0.027	0.038	-0.047	-0.114	-0.071	-0.029	0.036	0.509	-0.256
x		0.030	0.026	-0.060	-0.087	-0.022	0.083	0.243	0.257	-0.015
σ		0.008	0.013	0.021	0.061	0.059	0.098	0.180	0.239	0.233
%RSD		26.470	51.390	34.640	70.620	273.600	117.000	74.150	93.110	1561.000

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	0.775	0.197	-0.384	0.018	88.3%	0.396	0.385	0.353	-0.768
2	21:03:53	-0.600	-0.090	0.355	0.018	88.8%	0.298	0.275	0.343	-0.802
3	21:04:20	-0.445	-0.057	0.661	0.019	88.5%	0.297	0.289	0.294	-0.942
x		-0.090	0.017	0.210	0.018	88.6%	0.330	0.316	0.330	-0.838
σ		0.753	0.157	0.537	0.001	0.2%	0.057	0.060	0.031	0.092
%RSD		837.800	939.600	255.400	4.192	0.3	17.130	19.020	9.527	11.020

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	0.019	0.018	0.003	0.010	90.3%	0.329	0.450	0.348	0.307
2	21:03:53	0.018	0.019	0.003	0.006	90.6%	0.325	0.435	0.349	0.318
3	21:04:20	0.020	0.017	0.017	0.016	90.8%	0.266	0.371	0.306	0.309
x		0.019	0.018	0.008	0.011	90.6%	0.306	0.419	0.334	0.311
σ		0.001	0.001	0.008	0.005	0.2%	0.035	0.042	0.025	0.006
%RSD		6.839	5.801	109.800	45.760	0.2	11.520	10.090	7.343	1.930

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:03:26	0.025	0.035	95.4%	0.004	0.007	0.024	0.015	0.022	89.6%
2	21:03:53	0.010	0.024	95.1%	0.004	0.008	0.018	0.020	0.020	92.6%
3	21:04:20	0.025	0.014	95.1%	0.005	0.008	0.019	0.017	0.022	96.4%
x		0.020	0.024	95.2%	0.005	0.007	0.020	0.018	0.021	92.9%
σ		0.009	0.010	0.2%	0.000	0.001	0.003	0.003	0.001	3.4%
%RSD		44.570	42.230	0.2	8.292	9.766	15.530	15.310	5.808	3.7

TQ87913-001 11/16/2018 21:08:53 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	96.1%	0.013	0.183	-0.151	2.002	16.430	4.028	4.144	4.176
2	21:09:48	95.6%	0.023	0.011	-0.212	3.150	16.600	4.313	4.267	4.758
3	21:10:15	98.1%	0.042	-0.199	-0.255	2.028	16.430	4.308	4.478	4.527
x		96.6%	0.026	-0.002	-0.206	2.393	16.490	4.216	4.296	4.487
σ		1.3%	0.015	0.192	0.052	0.655	0.097	0.163	0.169	0.293
%RSD		1.4	56.720	10530.000	25.310	27.370	0.589	3.859	3.924	6.526

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	5.346	7.723	T 52340.000	4.885	50.650	50.090	83.2%	0.319	0.147
2	21:09:48	6.235	8.131	T 53520.000	4.483	53.770	52.270	84.4%	0.295	0.169
3	21:10:15	6.807	7.576	T 52990.000	3.045	66.010	50.590	85.8%	0.224	-0.021
x		6.129	7.810	T 52950.000	4.138	56.810	50.980	84.4%	0.279	0.098
σ		0.736	0.288	T 592.800	0.967	8.117	1.142	1.3%	0.049	0.104
%RSD		12.010	3.685	T 1.119	23.370	14.290	2.240	1.5	17.560	105.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	0.280	5061.000	8.797	0.260	8.283	4.412	0.033	0.017	0.278
2	21:09:48	0.298	5052.000	9.050	0.316	7.656	6.226	0.039	0.047	0.156
3	21:10:15	0.307	5207.000	8.432	0.303	6.909	4.925	0.028	0.026	0.182
x		0.295	5106.000	8.760	0.293	7.616	5.188	0.034	0.030	0.205
σ		0.014	86.730	0.311	0.029	0.688	0.935	0.006	0.015	0.064
%RSD		4.765	1.699	3.546	9.963	9.033	18.030	16.800	51.600	31.230

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	0.240	0.228	1.694	2.110	1.615	0.149	0.002	2.190	2.336
2	21:09:48	0.253	0.243	1.700	2.147	1.694	0.386	0.257	2.258	2.337
3	21:10:15	0.242	0.266	1.564	1.895	1.690	-0.099	0.183	2.529	1.642
x		0.245	0.246	1.653	2.051	1.666	0.145	0.147	2.326	2.105
σ		0.007	0.019	0.077	0.136	0.045	0.243	0.132	0.179	0.401
%RSD		2.780	7.788	4.651	6.628	2.675	167.200	89.160	7.712	19.060

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	-0.794	-0.144	0.996	0.087	85.1%	0.110	0.119	0.140	-0.795
2	21:09:48	0.694	0.148	-1.392	0.087	86.9%	0.172	0.173	0.146	-0.887
3	21:10:15	0.021	0.047	0.975	0.100	88.1%	0.142	0.144	0.113	-0.515
x		-0.026	0.017	0.193	0.092	86.7%	0.141	0.145	0.133	-0.732
σ		0.745	0.149	1.373	0.008	1.5%	0.031	0.027	0.018	0.194
%RSD		2814.000	872.700	710.400	8.298	1.7	21.920	18.650	13.240	26.440

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	0.028	0.034	0.028	0.022	89.7%	0.275	0.341	0.203	0.167
2	21:09:48	0.029	0.032	0.039	0.039	89.8%	0.239	0.410	0.194	0.215
3	21:10:15	0.028	0.038	0.024	0.028	91.8%	0.254	0.364	0.201	0.182
x		0.028	0.035	0.030	0.030	90.4%	0.256	0.372	0.199	0.188
σ		0.001	0.003	0.008	0.009	1.1%	0.018	0.035	0.005	0.024
%RSD		2.984	8.675	24.990	28.830	1.3	6.915	9.417	2.362	12.930

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:09:21	0.074	0.075	95.4%	0.023	0.020	0.059	0.054	0.052	116.7%
2	21:09:48	0.095	0.106	97.3%	0.029	0.026	0.062	0.060	0.063	117.4%
3	21:10:15	0.112	0.087	96.5%	0.028	0.021	0.085	0.066	0.072	118.9%
x		0.094	0.089	96.4%	0.027	0.023	0.069	0.060	0.062	117.7%
σ		0.019	0.016	1.0%	0.003	0.003	0.015	0.006	0.010	1.1%
%RSD		20.220	17.900	1.0	11.300	14.010	21.190	10.010	16.570	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	98.2%	93.610	91.860	93.430	2.593	T 1043.000	T 1025.000	1048.000	1064.000
2	21:15:44	99.3%	89.420	85.050	87.100	0.576	T 1036.000	T 1007.000	1029.000	1060.000
3	21:16:11	96.7%	93.980	94.340	92.420	4.435	T 1057.000	T 1034.000	1053.000	1062.000
x		98.1%	92.340	90.420	90.980	2.535	T 1045.000	T 1022.000	1043.000	1062.000
σ		1.4%	2.531	4.808	3.402	1.930	T 10.360	T 14.000	12.590	2.217
%RSD		1.4	2.741	5.317	3.739	76.160	T 0.991	T 1.370	1.207	0.209
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	108.000	T 855.100	T 52480.000	1010.000	1187.000	1086.000	87.9%	98.480	101.500
2	21:15:44	107.800	T 833.100	T 52500.000	T 952.500	1166.000	1090.000	85.8%	98.260	101.000
3	21:16:11	108.700	T 850.500	T 53120.000	1025.000	1138.000	1072.000	86.9%	101.100	101.100
x		108.200	T 846.200	T 52700.000	T 996.000	1163.000	1083.000	86.9%	99.270	101.200
σ		0.493	T 11.590	T 364.500	T 38.450	24.470	9.355	1.1%	1.565	0.235
%RSD		0.455	T 1.369	T 0.692	T 3.860	2.103	0.864	1.2	1.576	0.233
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	99.510	7009.000	1101.000	99.820	T 1049.000	1019.000	97.730	92.210	95.860
2	21:15:44	99.410	8115.000	1116.000	101.500	T 1050.000	1027.000	99.770	91.320	96.080
3	21:16:11	99.220	8189.000	1119.000	100.500	T 1050.000	1001.000	96.510	92.070	97.180
x		99.380	7771.000	1112.000	100.600	T 1050.000	1016.000	98.000	91.870	96.380
σ		0.145	660.800	9.459	0.861	T 0.719	13.200	1.649	0.479	0.709
%RSD		0.146	8.504	0.851	0.856	T 0.068	1.300	1.682	0.521	0.736
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	94.680	98.300	96.600	101.200	99.900	98.760	99.950	1.989	2.007
2	21:15:44	95.690	97.860	97.010	103.500	101.500	101.500	98.290	2.510	1.958
3	21:16:11	94.730	96.600	99.550	103.100	101.700	100.300	99.290	2.665	2.298
x		95.040	97.590	97.720	102.600	101.000	100.200	99.180	2.388	2.088
σ		0.567	0.886	1.596	1.259	0.982	1.379	0.834	0.354	0.184
%RSD		0.597	0.907	1.633	1.227	0.972	1.377	0.841	14.830	8.822
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	428.100	96.610	-0.527	100.700	87.7%	96.160	97.010	93.310	97.450
2	21:15:44	446.100	102.100	1.184	102.000	87.0%	96.160	97.150	93.560	98.650
3	21:16:11	447.900	102.100	0.534	100.100	87.7%	95.730	95.940	93.670	99.360
x		440.700	100.300	0.397	100.900	87.5%	96.020	96.700	93.510	98.480
σ		10.970	3.171	0.864	0.946	0.4%	0.247	0.659	0.183	0.963
%RSD		2.490	3.163	217.500	0.938	0.5	0.257	0.681	0.196	0.978
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	101.000	100.700	96.220	94.230	92.0%	96.370	95.350	99.780	94.000
2	21:15:44	101.000	102.100	98.480	94.690	90.8%	99.330	97.210	100.800	92.920
3	21:16:11	102.200	102.100	98.100	95.030	90.1%	98.650	98.170	101.700	93.800
x		101.400	101.600	97.600	94.650	91.0%	98.120	96.910	100.700	93.580
σ		0.686	0.787	1.209	0.404	0.9%	1.549	1.434	0.954	0.572
%RSD		0.676	0.775	1.238	0.427	1.0	1.579	1.480	0.947	0.611
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:15:17	99.220	97.800	96.7%	97.180	103.200	100.100	98.030	101.500	112.0%
2	21:15:44	98.520	99.480	97.1%	97.930	104.400	101.100	99.460	101.600	113.4%
3	21:16:11	100.600	98.840	97.6%	98.190	103.800	99.370	98.930	100.900	114.6%
x		99.440	98.710	97.1%	97.770	103.800	100.200	98.810	101.300	113.4%
σ		1.049	0.849	0.5%	0.522	0.599	0.842	0.719	0.360	1.3%
%RSD		1.054	0.860	0.5	0.533	0.577	0.840	0.728	0.355	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	90.1%	0.008	191.900	197.600	17.450	TM 165400.000	T 13410.000	T 13440.000	T 13550.000
2	21:21:39	92.5%	0.003	183.600	188.100	12.050	TM 164500.000	T 13310.000	T 13260.000	T 13600.000
3	21:22:06	90.2%	0.024	194.400	192.500	12.530	TM 168500.000	T 13530.000	T 13600.000	T 13760.000
x		91.0%	0.012	190.000	192.700	14.010	TM 166100.000	T 13420.000	T 13430.000	T 13640.000
σ		1.3%	0.011	5.674	4.765	2.990	TM 2057.000	T 111.900	T 170.500	T 107.100
%RSD		1.5	89.130	2.987	2.472	21.350	TM 1.238	T 0.834	T 1.269	T 0.786
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	11.780	T 3292.000	T 58590.000	T 6723.000	M 103800.000	TM 102900.000	81.8%	0.599	0.582
2	21:21:39	11.360	T 3279.000	T 58690.000	T 6734.000	M 104500.000	TM 102900.000	82.8%	0.757	0.434
3	21:22:06	12.500	T 3364.000	T 59550.000	T 6968.000	M 105700.000	TM 102100.000	83.2%	0.762	0.323
x		11.880	T 3312.000	T 58940.000	T 6808.000	M 104700.000	TM 102700.000	82.6%	0.706	0.446
σ		0.577	T 45.400	T 527.500	T 138.500	M 999.700	TM 482.400	0.7%	0.093	0.130
%RSD		4.860	T 1.371	T 0.895	T 2.035	M 0.955	TM 0.470	0.8	13.150	29.050
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	0.486	3834.000	180.800	T 400.700	198.200	382.800	0.281	1.219	2.592
2	21:21:39	0.509	4295.000	176.800	T 401.900	197.600	363.500	0.310	1.178	3.146
3	21:22:06	0.491	4577.000	183.000	T 400.100	194.100	357.000	0.266	1.159	2.386
x		0.495	4235.000	180.200	T 400.900	196.600	367.700	0.286	1.186	2.708
σ		0.012	375.200	3.108	T 0.940	2.201	13.430	0.022	0.030	0.393
%RSD		2.366	8.857	1.725	T 0.235	1.119	3.653	7.847	2.549	14.510
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	1.146	0.925	1.802	4.988	3.829	0.641	0.282	20.530	20.210
2	21:21:39	1.132	0.880	1.772	5.135	3.987	0.982	0.467	20.850	20.900
3	21:22:06	1.093	0.914	1.727	5.159	4.091	0.776	0.291	20.920	21.850
x		1.124	0.906	1.767	5.094	3.969	0.800	0.347	20.770	20.990
σ		0.028	0.024	0.038	0.093	0.132	0.172	0.104	0.209	0.826
%RSD		2.480	2.632	2.138	1.822	3.322	21.490	30.010	1.008	3.936
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	2.275	0.536	0.429	T 283.200	84.2%	2.652	2.675	2.625	5.193
2	21:21:39	2.281	0.544	-0.146	T 281.900	86.5%	2.582	2.723	2.580	6.261
3	21:22:06	1.820	0.477	2.011	T 286.200	86.3%	2.638	2.618	2.505	5.042
x		2.125	0.519	0.765	T 283.800	85.7%	2.624	2.672	2.570	5.499
σ		0.264	0.037	1.117	T 2.202	1.3%	0.037	0.053	0.061	0.665
%RSD		12.430	7.074	146.000	T 0.776	1.5	1.400	1.975	2.359	12.090
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	0.016	0.015	0.356	0.360	84.1%	0.361	0.484	0.917	0.792
2	21:21:39	0.008	0.011	0.384	0.320	86.6%	0.414	0.468	0.851	0.775
3	21:22:06	0.008	0.014	0.300	0.390	87.0%	0.444	0.414	0.914	0.854
x		0.011	0.013	0.347	0.357	85.9%	0.406	0.455	0.894	0.807
σ		0.005	0.002	0.043	0.035	1.6%	0.042	0.036	0.038	0.041
%RSD		43.630	15.780	12.280	9.752	1.8	10.350	7.956	4.209	5.141
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:21:12	81.410	80.560	91.2%	0.034	0.036	0.047	0.035	0.040	107.9%
2	21:21:39	79.860	79.370	94.9%	0.027	0.019	0.039	0.028	0.033	111.1%
3	21:22:06	81.900	80.780	93.8%	0.031	0.023	0.033	0.035	0.036	111.2%
x		81.060	80.240	93.3%	0.031	0.026	0.040	0.032	0.036	110.1%
σ		1.064	0.756	1.9%	0.004	0.008	0.007	0.004	0.004	1.9%
%RSD		1.312	0.942	2.1	11.950	32.630	17.820	12.250	10.010	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	91.8%	0.021	135.800	141.400	-14.260	TM 161300.000	T 15550.000	T 15570.000	T 15980.000
2	21:27:34	89.2%	0.002	125.500	133.000	-14.540	TM 160300.000	T 15310.000	T 15490.000	T 15940.000
3	21:28:01	89.8%	0.005	129.000	129.600	-19.870	TM 161300.000	T 15400.000	T 15410.000	T 15870.000
x		90.3%	0.009	130.100	134.700	-16.220	TM 161000.000	T 15420.000	T 15490.000	T 15930.000
σ		1.4%	0.010	5.239	6.076	3.160	TM 594.800	T 118.700	T 79.610	T 56.500
%RSD		1.5	112.300	4.026	4.511	19.480	TM 0.370	T 0.770	T 0.514	T 0.355
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	5.195	T 8943.000	T 56920.000	T 5448.000	M 139800.000	TM 137700.000	81.8%	1.403	0.111
2	21:27:34	5.261	T 9193.000	T 55330.000	T 5608.000	M 138900.000	TM 136700.000	82.8%	1.164	0.539
3	21:28:01	5.398	T 9225.000	T 55230.000	T 5627.000	M 136800.000	TM 135700.000	83.8%	1.245	0.192
x		5.285	T 9121.000	T 55830.000	T 5561.000	M 138500.000	TM 136700.000	82.8%	1.271	0.281
σ		0.104	T 154.400	T 949.800	T 98.190	M 1545.000	TM 1035.000	1.0%	0.122	0.227
%RSD		1.960	T 1.692	T 1.701	T 1.766	M 1.115	TM 0.757	1.2	9.592	80.960
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	3.456	4863.000	3818.000	TM 2698.000	T 3759.000	3928.000	2.094	4.107	14.500
2	21:27:34	3.372	4653.000	3811.000	TM 2671.000	T 3674.000	3872.000	2.015	4.010	15.700
3	21:28:01	3.361	4820.000	3819.000	TM 2657.000	T 3681.000	3831.000	2.060	3.847	16.030
x		3.396	4779.000	3816.000	TM 2675.000	T 3705.000	3877.000	2.056	3.988	15.410
σ		0.052	111.100	4.320	TM 21.160	T 47.140	48.610	0.040	0.132	0.807
%RSD		1.525	2.326	0.113	TM 0.791	T 1.272	1.254	1.923	3.301	5.239
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	1.133	0.368	86.200	89.260	90.590	4.299	0.021	34.820	35.030
2	21:27:34	1.203	0.322	86.470	88.600	89.160	4.385	0.334	32.990	33.260
3	21:28:01	1.207	0.323	85.950	88.860	88.020	4.247	0.234	33.710	32.470
x		1.181	0.338	86.210	88.910	89.260	4.310	0.196	33.840	33.590
σ		0.042	0.026	0.259	0.333	1.286	0.069	0.160	0.923	1.311
%RSD		3.522	7.814	0.300	0.375	1.441	1.612	81.640	2.728	3.904
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	3.270	0.769	1.562	T 383.700	83.6%	1.338	1.145	1.195	4.005
2	21:27:34	0.318	0.060	0.071	T 383.100	85.0%	1.241	1.196	1.218	4.025
3	21:28:01	2.922	0.643	-0.749	T 376.900	86.0%	1.226	1.254	1.205	3.598
x		2.170	0.491	0.295	T 381.200	84.9%	1.269	1.198	1.206	3.876
σ		1.613	0.378	1.172	T 3.774	1.2%	0.061	0.054	0.011	0.241
%RSD		74.360	77.140	397.500	T 0.990	1.4	4.793	4.524	0.939	6.222
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	0.008	0.011	0.020	0.020	83.9%	0.188	0.276	0.155	0.150
2	21:27:34	0.010	0.014	0.019	0.023	85.3%	0.180	0.305	0.169	0.153
3	21:28:01	0.008	0.015	0.019	0.019	86.3%	0.210	0.289	0.164	0.165
x		0.009	0.013	0.019	0.021	85.2%	0.193	0.290	0.163	0.156
σ		0.001	0.002	0.000	0.002	1.2%	0.015	0.014	0.007	0.008
%RSD		14.430	15.480	1.870	9.043	1.4	8.043	4.903	4.361	5.036
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:27:07	153.000	151.400	90.4%	0.027	0.025	0.111	0.107	0.097	109.5%
2	21:27:34	151.600	150.800	92.0%	0.018	0.019	0.111	0.083	0.100	111.3%
3	21:28:01	151.900	149.700	93.6%	0.025	0.023	0.110	0.095	0.099	110.8%
x		152.200	150.700	92.0%	0.023	0.022	0.110	0.095	0.098	110.5%
σ		0.740	0.879	1.6%	0.005	0.003	0.001	0.012	0.002	0.9%
%RSD		0.486	0.583	1.7	21.250	14.700	0.598	12.270	1.589	0.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	96.0%	0.008	39.920	40.190	2.606	T 33900.000	T 2720.000	2830.000	2885.000
2	21:33:30	99.0%	0.003	39.960	39.800	-1.366	T 33810.000	T 2705.000	2826.000	T 2735.000
3	21:33:57	99.3%	-0.002	39.620	40.940	0.579	T 34190.000	T 2738.000	2837.000	2913.000
x		98.1%	0.003	39.830	40.310	0.607	T 33960.000	T 2721.000	2831.000	T 2844.000
σ		1.8%	0.005	0.185	0.581	1.986	T 198.200	T 16.980	5.777	T 95.770
%RSD		1.8	145.400	0.465	1.440	327.400	T 0.584	T 0.624	0.204	T 3.367

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	3.386	696.900	T 11640.000	T 1373.000	20350.000	T 20210.000	88.8%	0.144	0.117
2	21:33:30	3.400	662.100	T 11830.000	T 1325.000	20470.000	T 20330.000	87.1%	0.202	0.085
3	21:33:57	3.589	658.600	T 11870.000	T 1335.000	20420.000	T 20270.000	87.6%	0.110	0.036
x		3.458	672.500	T 11780.000	T 1344.000	20410.000	T 20270.000	87.8%	0.152	0.079
σ		0.114	21.150	T 126.500	T 25.140	63.650	T 63.940	0.9%	0.047	0.041
%RSD		3.282	3.145	T 1.074	T 1.870	0.312	T 0.315	1.0	30.880	51.560

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	0.173	1991.000	35.370	78.740	40.990	75.880	0.071	0.315	1.774
2	21:33:30	0.168	2088.000	36.760	79.090	41.870	72.270	0.060	0.331	1.622
3	21:33:57	0.159	2024.000	37.180	77.960	41.550	73.350	0.055	0.348	1.706
x		0.167	2034.000	36.440	78.600	41.470	73.830	0.062	0.331	1.700
σ		0.007	49.670	0.945	0.576	0.444	1.853	0.008	0.016	0.076
%RSD		4.106	2.441	2.594	0.733	1.070	2.510	13.200	4.943	4.486

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	0.298	0.234	0.780	1.514	1.188	0.201	0.002	4.348	4.299
2	21:33:30	0.321	0.197	0.679	1.611	1.127	0.170	0.438	4.075	4.245
3	21:33:57	0.297	0.263	0.622	1.941	1.148	0.418	0.392	3.918	3.964
x		0.305	0.231	0.694	1.689	1.154	0.263	0.277	4.114	4.169
σ		0.014	0.033	0.080	0.224	0.031	0.135	0.240	0.217	0.180
%RSD		4.479	14.440	11.570	13.260	2.684	51.340	86.500	5.281	4.315

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	-0.401	-0.072	0.223	53.790	91.1%	0.508	0.525	0.524	0.351
2	21:33:30	0.840	0.223	0.283	54.820	90.0%	0.456	0.576	0.465	0.231
3	21:33:57	0.835	0.190	-0.899	55.170	90.0%	0.451	0.519	0.462	-0.360
x		0.425	0.114	-0.131	54.590	90.4%	0.472	0.540	0.484	0.074
σ		0.715	0.161	0.666	0.719	0.7%	0.032	0.031	0.035	0.381
%RSD		168.400	142.000	507.900	1.316	0.7	6.763	5.743	7.171	514.700

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	0.000	0.003	0.068	0.064	92.3%	0.073	0.066	0.175	0.154
2	21:33:30	0.003	0.004	0.083	0.078	91.7%	0.102	0.058	0.196	0.163
3	21:33:57	0.001	0.006	0.078	0.066	92.5%	0.048	0.069	0.199	0.185
x		0.001	0.005	0.076	0.069	92.2%	0.074	0.064	0.190	0.168
σ		0.001	0.002	0.008	0.008	0.4%	0.027	0.006	0.013	0.016
%RSD		86.270	31.780	9.922	11.360	0.4	36.440	9.391	7.036	9.552

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:33:02	15.740	15.470	98.1%	-0.002	-0.005	0.012	0.010	0.010	98.1%
2	21:33:30	15.410	15.590	97.9%	-0.000	-0.003	0.009	0.010	0.009	100.7%
3	21:33:57	15.720	15.380	96.7%	-0.005	-0.000	0.019	0.016	0.015	102.7%
x		15.620	15.480	97.6%	-0.002	-0.003	0.013	0.012	0.011	100.5%
σ		0.183	0.107	0.8%	0.002	0.002	0.005	0.004	0.003	2.3%
%RSD		1.169	0.689	0.8	113.300	84.430	38.570	30.200	24.850	2.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	99.3%	0.006	8.722	8.634	-16.820	T 6408.000	T 1444.000	1482.000	1513.000
2	21:39:25	98.1%	-0.002	9.211	8.899	-11.880	T 6535.000	T 1437.000	1496.000	1520.000
3	21:39:51	99.1%	0.003	8.553	8.914	-14.600	T 6526.000	T 1439.000	1499.000	1551.000
x		98.8%	0.002	8.829	8.815	-14.440	T 6490.000	T 1440.000	1493.000	1528.000
σ		0.6%	0.004	0.341	0.158	2.473	T 70.770	T 3.615	9.180	20.290
%RSD		0.6	159.500	3.867	1.788	17.130	T 1.090	T 0.251	0.615	1.328

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	1.866	T 2230.000	T 10310.000	337.300	17530.000	T 17600.000	89.5%	0.295	0.744
2	21:39:25	1.781	T 2227.000	T 10470.000	344.400	17260.000	T 17590.000	88.6%	0.352	0.919
3	21:39:51	1.825	T 2189.000	T 10660.000	333.700	17520.000	T 17590.000	87.6%	0.311	1.086
x		1.824	T 2215.000	T 10480.000	338.500	17440.000	T 17600.000	88.6%	0.320	0.916
σ		0.043	T 23.020	T 178.500	5.455	157.000	T 7.207	0.9%	0.030	0.171
%RSD		2.341	T 1.039	T 1.703	1.612	0.900	T 0.041	1.1	9.239	18.670

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	1.389	2155.000	1.682	11.280	2.193	31.000	0.065	1.041	1.459
2	21:39:25	1.339	2205.000	2.192	11.250	2.644	30.720	0.057	1.230	1.312
3	21:39:51	1.411	2177.000	2.591	11.290	2.907	33.150	0.060	0.974	1.167
x		1.379	2179.000	2.155	11.270	2.581	31.630	0.061	1.081	1.312
σ		0.037	25.230	0.455	0.020	0.361	1.332	0.004	0.133	0.146
%RSD		2.684	1.158	21.130	0.182	13.990	4.211	6.258	12.280	11.110

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	0.149	0.121	148.500	143.600	150.100	0.149	0.573	0.812	0.725
2	21:39:25	0.142	0.125	145.500	146.400	150.300	0.133	0.367	1.076	1.404
3	21:39:51	0.150	0.141	147.000	145.100	150.000	0.160	0.540	0.771	0.930
x		0.147	0.129	147.000	145.000	150.100	0.147	0.493	0.887	1.020
σ		0.005	0.010	1.503	1.410	0.129	0.014	0.111	0.166	0.348
%RSD		3.118	8.107	1.023	0.972	0.086	9.478	22.390	18.690	34.160

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	2.185	0.524	-0.256	44.830	92.2%	0.463	0.351	0.376	0.034
2	21:39:25	2.600	0.598	-0.471	44.900	90.2%	0.378	0.413	0.363	-0.262
3	21:39:51	2.269	0.593	1.402	45.120	91.0%	0.392	0.461	0.359	-0.313
x		2.351	0.571	0.225	44.950	91.2%	0.411	0.408	0.366	-0.181
σ		0.220	0.041	1.025	0.148	1.0%	0.046	0.055	0.009	0.188
%RSD		9.350	7.248	455.100	0.329	1.1	11.160	13.460	2.446	103.900

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	-0.002	0.001	0.014	0.008	94.1%	0.021	0.054	0.266	0.235
2	21:39:25	-0.001	-0.000	0.030	0.013	94.9%	0.051	0.055	0.250	0.240
3	21:39:51	-0.001	0.004	0.010	0.015	93.9%	0.038	0.055	0.282	0.252
x		-0.001	0.002	0.018	0.012	94.3%	0.037	0.055	0.266	0.242
σ		0.001	0.002	0.010	0.004	0.5%	0.015	0.001	0.016	0.009
%RSD		52.330	120.900	56.510	30.550	0.6	40.760	1.464	6.016	3.707

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:38:58	13.490	13.390	100.3%	-0.012	-0.007	0.013	0.010	0.007	102.7%
2	21:39:25	13.320	13.130	99.5%	-0.006	-0.009	0.013	0.003	0.009	105.4%
3	21:39:51	13.270	12.860	99.1%	-0.007	-0.009	0.009	0.004	0.005	105.1%
x		13.360	13.130	99.6%	-0.008	-0.008	0.012	0.006	0.007	104.4%
σ		0.117	0.266	0.6%	0.003	0.001	0.002	0.004	0.002	1.5%
%RSD		0.877	2.030	0.6	40.750	12.800	16.500	61.400	24.940	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	97.2%	0.012	37.140	37.310	-4.476	T 39730.000	T 3745.000	T 3732.000	T 3752.000
2	21:45:20	95.2%	0.003	37.190	35.220	-7.508	T 38820.000	T 3669.000	T 3663.000	T 3755.000
3	21:45:47	96.3%	0.003	34.630	35.480	-11.280	T 38800.000	T 3669.000	T 3644.000	T 3678.000
x		96.2%	0.006	36.320	36.000	-7.754	T 39120.000	T 3694.000	T 3680.000	T 3728.000
σ		1.0%	0.005	1.467	1.139	3.406	T 532.600	T 43.720	T 46.480	T 43.780
%RSD		1.1	89.180	4.038	3.165	43.930	T 1.362	T 1.184	T 1.263	T 1.174

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	1.923	T 1701.000	T 11160.000	T 1085.000	27340.000	T 27500.000	86.4%	0.167	-0.140
2	21:45:20	2.100	T 1759.000	T 11310.000	T 1127.000	27440.000	T 27110.000	87.4%	0.275	-0.143
3	21:45:47	2.098	T 1736.000	T 11100.000	T 1095.000	26940.000	T 27060.000	88.3%	0.263	0.147
x		2.041	T 1732.000	T 11190.000	T 1102.000	27240.000	T 27220.000	87.4%	0.235	-0.046
σ		0.102	T 28.880	T 108.900	T 21.880	264.600	T 242.600	1.0%	0.059	0.166
%RSD		4.980	T 1.668	T 0.973	T 1.985	0.971	T 0.891	1.1	25.170	364.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	0.729	1523.000	735.200	TM 539.400	T 747.600	766.000	0.417	0.995	1.825
2	21:45:20	0.674	1512.000	749.100	TM 532.600	T 739.300	757.700	0.425	0.878	1.482
3	21:45:47	0.670	1335.000	720.000	TM 520.200	T 732.200	746.900	0.415	0.859	1.195
x		0.691	1457.000	734.700	TM 530.700	T 739.700	756.800	0.419	0.911	1.501
σ		0.033	105.300	14.540	TM 9.705	T 7.689	9.567	0.005	0.073	0.315
%RSD		4.747	7.232	1.979	TM 1.829	T 1.039	1.264	1.312	8.053	21.000

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	0.176	0.079	18.610	18.640	19.370	0.739	0.253	6.692	5.944
2	21:45:20	0.198	0.104	18.730	18.530	19.490	1.059	-0.006	5.932	5.648
3	21:45:47	0.171	0.087	18.090	18.990	19.130	0.699	0.232	6.490	6.160
x		0.182	0.090	18.470	18.720	19.330	0.833	0.160	6.371	5.917
σ		0.015	0.013	0.341	0.241	0.183	0.197	0.144	0.394	0.257
%RSD		8.004	13.930	1.848	1.286	0.946	23.700	90.020	6.183	4.343

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	1.202	0.315	0.937	72.880	88.8%	0.261	0.210	0.207	1.113
2	21:45:20	2.212	0.501	-0.880	73.470	89.4%	0.226	0.240	0.257	1.019
3	21:45:47	-0.066	-0.014	-0.316	73.030	90.0%	0.243	0.284	0.221	0.541
x		1.116	0.267	-0.086	73.120	89.4%	0.243	0.245	0.229	0.891
σ		1.141	0.261	0.930	0.309	0.6%	0.017	0.037	0.026	0.307
%RSD		102.200	97.640	1080.000	0.423	0.7	7.159	15.240	11.170	34.400

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	-0.000	0.005	0.011	0.009	91.2%	0.009	0.025	0.041	0.020
2	21:45:20	0.003	0.002	-0.001	0.003	90.7%	0.033	0.046	0.034	0.024
3	21:45:47	0.000	0.001	0.009	0.003	91.5%	0.025	0.028	0.030	0.030
x		0.001	0.003	0.007	0.005	91.1%	0.022	0.033	0.035	0.025
σ		0.002	0.002	0.007	0.004	0.4%	0.012	0.012	0.006	0.005
%RSD		160.600	72.950	100.600	74.520	0.4	55.680	34.970	16.160	20.240

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:44:53	29.770	28.760	96.6%	-0.007	-0.005	0.026	0.019	0.020	98.2%
2	21:45:20	29.360	28.930	97.2%	-0.000	-0.006	0.023	0.017	0.021	101.4%
3	21:45:47	28.790	28.940	98.0%	-0.002	-0.006	0.023	0.017	0.019	102.2%
x		29.310	28.880	97.3%	-0.003	-0.006	0.024	0.018	0.020	100.6%
σ		0.489	0.102	0.7%	0.003	0.000	0.002	0.002	0.001	2.1%
%RSD		1.670	0.352	0.7	111.900	8.751	7.878	9.280	6.192	2.1

TJ23010-011(5) 11/16/2018 21:50:21

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	94.3%	0.003	30.940	33.500	6.215	T 33970.000	T 3837.000	T 3830.000	T 3904.000
2	21:51:16	93.1%	0.007	33.310	31.950	4.984	T 33560.000	T 3829.000	T 3796.000	T 3791.000
3	21:51:43	94.1%	0.007	33.350	33.030	5.787	T 33730.000	T 3821.000	T 3828.000	T 3860.000
x		93.8%	0.006	32.530	32.830	5.662	T 33760.000	T 3829.000	T 3818.000	T 3852.000
σ		0.6%	0.002	1.381	0.794	0.625	T 209.600	T 8.286	T 19.010	T 56.610
%RSD		0.7	43.260	4.246	2.419	11.040	T 0.621	T 0.216	T 0.498	T 1.470

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	16.740	T 1897.000	T 11330.000	T 1146.000	21560.000	T 21770.000	86.7%	0.805	0.456
2	21:51:16	16.450	T 1914.000	T 11200.000	T 1173.000	21240.000	T 21590.000	88.0%	0.783	-0.903
3	21:51:43	16.410	T 1878.000	T 11410.000	T 1177.000	21360.000	T 21520.000	87.9%	0.785	0.061
x		16.540	T 1896.000	T 11310.000	T 1166.000	21390.000	T 21630.000	87.5%	0.791	-0.129
σ		0.180	T 17.650	T 105.400	T 16.990	158.100	T 130.300	0.7%	0.012	0.699
%RSD		1.091	T 0.931	T 0.931	T 1.457	0.739	T 0.603	0.8	1.520	542.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	217.300	1156.000	2084.000	T 321.700	T 1972.000	1954.000	0.139	0.466	1.620
2	21:51:16	213.000	2156.000	2056.000	T 316.700	T 1930.000	1937.000	0.132	0.457	1.256
3	21:51:43	217.100	1537.000	2083.000	T 321.700	T 1944.000	1951.000	0.131	0.488	1.404
x		215.800	1616.000	2074.000	T 320.000	T 1949.000	1947.000	0.134	0.470	1.427
σ		2.396	504.700	15.740	T 2.892	T 21.410	9.470	0.004	0.016	0.183
%RSD		1.110	31.230	0.759	T 0.904	T 1.098	0.486	3.240	3.380	12.810

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	1.790	1.735	2.345	3.731	3.082	1.726	0.232	17.070	16.620
2	21:51:16	1.737	1.747	2.141	3.357	3.124	1.240	0.193	15.530	15.030
3	21:51:43	1.758	1.713	2.327	3.373	3.339	1.443	-0.103	14.760	16.310
x		1.762	1.732	2.271	3.487	3.182	1.470	0.107	15.790	15.990
σ		0.027	0.017	0.113	0.211	0.138	0.244	0.183	1.177	0.844
%RSD		1.517	1.000	4.974	6.062	4.329	16.620	170.700	7.456	5.278

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	2.589	0.623	1.409	68.680	88.3%	0.066	0.109	0.077	1.378
2	21:51:16	0.418	0.103	0.608	68.090	89.2%	0.088	0.060	0.068	1.098
3	21:51:43	0.234	0.079	1.009	67.450	90.1%	0.113	0.098	0.090	0.264
x		1.080	0.269	1.009	68.070	89.2%	0.089	0.089	0.078	0.913
σ		1.310	0.307	0.400	0.617	0.9%	0.023	0.026	0.011	0.580
%RSD		121.300	114.500	39.700	0.907	1.0	26.240	28.770	13.810	63.490

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	0.001	0.001	0.035	0.041	89.6%	0.168	0.234	0.117	0.093
2	21:51:16	-0.001	0.004	0.028	0.032	90.0%	0.194	0.189	0.091	0.098
3	21:51:43	-0.002	-0.001	0.036	0.035	90.3%	0.178	0.252	0.098	0.097
x		-0.001	0.001	0.033	0.036	90.0%	0.180	0.225	0.102	0.096
σ		0.002	0.002	0.004	0.004	0.3%	0.014	0.032	0.014	0.002
%RSD		253.600	137.700	12.660	12.410	0.3	7.509	14.430	13.280	2.412

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:50:48	29.280	28.550	93.8%	-0.011	-0.009	1.564	1.440	1.499	100.4%
2	21:51:16	28.610	28.280	95.3%	-0.008	-0.007	1.522	1.463	1.473	103.0%
3	21:51:43	29.080	28.340	95.9%	-0.009	-0.011	1.558	1.402	1.454	104.1%
x		28.990	28.390	95.0%	-0.009	-0.009	1.548	1.435	1.475	102.5%
σ		0.346	0.141	1.1%	0.001	0.002	0.023	0.031	0.023	1.9%
%RSD		1.193	0.496	1.1	13.690	19.660	1.462	2.147	1.549	1.9

TJ23010-007(10) 11/16/2018 21:56:17

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	91.2%	-0.002	10.920	10.910	-5.955	T 90130.000	T 8946.000	T 8886.000	T 8983.000
2	21:57:11	94.5%	0.003	9.072	9.619	-11.680	T 83950.000	T 8310.000	T 8163.000	T 8290.000
3	21:57:38	90.4%	0.003	8.739	7.889	-5.664	T 84060.000	T 7984.000	T 7912.000	T 8186.000
x		92.0%	0.001	9.577	9.472	-7.768	T 86040.000	T 8413.000	T 8320.000	T 8486.000
σ		2.2%	0.003	1.175	1.515	3.395	T 3535.000	T 489.200	T 505.800	T 433.400
%RSD		2.4	181.000	12.270	16.000	43.700	T 4.109	T 5.815	T 6.079	T 5.107

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	2.298	860.500	T 9707.000	630.000	23380.000	T 23610.000	86.3%	0.297	0.275
2	21:57:11	2.442	791.200	T 9407.000	591.600	22020.000	T 22150.000	86.7%	0.120	0.249
3	21:57:38	2.223	779.900	T 9068.000	623.800	21260.000	T 21330.000	85.8%	0.206	0.335
x		2.321	810.500	T 9394.000	615.100	22220.000	T 22360.000	86.2%	0.208	0.286
σ		0.111	43.660	T 319.900	20.630	1071.000	T 1156.000	0.4%	0.089	0.044
%RSD		4.801	5.386	T 3.405	3.354	4.821	T 5.169	0.5	42.710	15.460

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	0.567	1432.000	10.160	18.710	13.380	61.120	0.050	0.668	2.031
2	21:57:11	0.652	1458.000	13.140	17.670	16.980	59.360	0.038	0.782	2.660
3	21:57:38	0.654	1808.000	15.790	16.640	16.690	53.950	0.049	0.629	2.533
x		0.624	1566.000	13.030	17.680	15.680	58.140	0.046	0.693	2.408
σ		0.050	210.100	2.820	1.035	2.002	3.738	0.007	0.080	0.332
%RSD		7.995	13.420	21.640	5.854	12.760	6.429	14.640	11.490	13.800

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	0.433	0.230	0.459	0.914	0.786	0.173	-0.044	6.444	6.632
2	21:57:11	0.430	0.176	0.430	0.695	0.844	0.120	0.447	5.869	6.241
3	21:57:38	0.413	0.193	0.367	1.257	0.864	0.227	0.054	6.334	5.484
x		0.425	0.200	0.419	0.955	0.831	0.173	0.152	6.216	6.119
σ		0.011	0.027	0.047	0.284	0.041	0.053	0.260	0.305	0.584
%RSD		2.508	13.720	11.160	29.680	4.887	30.900	170.500	4.912	9.537

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	0.489	0.117	-0.066	46.430	87.7%	0.512	0.567	0.500	0.799
2	21:57:11	0.464	0.115	0.060	43.910	88.3%	0.434	0.498	0.505	0.982
3	21:57:38	0.560	0.169	0.300	41.400	89.8%	0.524	0.479	0.441	-0.383
x		0.504	0.134	0.098	43.910	88.6%	0.490	0.515	0.482	0.466
σ		0.050	0.031	0.186	2.514	1.1%	0.049	0.046	0.035	0.741
%RSD		9.842	22.970	189.200	5.724	1.2	10.040	9.016	7.348	158.900

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	-0.000	0.002	0.017	0.019	88.0%	0.018	0.042	0.012	0.013
2	21:57:11	0.004	0.003	0.021	0.020	88.7%	0.012	0.009	0.017	0.017
3	21:57:38	0.002	-0.001	0.011	0.013	89.5%	-0.001	0.036	0.015	0.017
x		0.002	0.001	0.016	0.017	88.7%	0.010	0.029	0.014	0.016
σ		0.002	0.002	0.005	0.004	0.8%	0.010	0.017	0.003	0.002
%RSD		91.580	134.700	31.970	21.090	0.9	101.900	59.440	17.570	14.580

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	21:56:45	14.590	14.840	93.2%	-0.008	-0.004	0.007	0.009	0.008	88.7%
2	21:57:11	13.940	13.780	93.2%	-0.003	-0.004	0.008	0.005	0.007	91.8%
3	21:57:38	13.230	13.120	98.1%	-0.005	-0.003	0.008	0.008	0.008	99.3%
x		13.920	13.910	94.9%	-0.005	-0.004	0.008	0.007	0.008	93.3%
σ		0.680	0.871	2.8%	0.002	0.001	0.001	0.002	0.000	5.4%
%RSD		4.887	6.262	3.0	47.790	20.290	10.440	30.240	3.438	5.8

TJ23010-005(5) 11/16/2018 22:02:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	92.4%	0.007	22.450	24.160	4.059	T 39580.000	T 4199.000	T 4192.000	T 4257.000
2	22:03:07	93.4%	0.007	24.630	25.110	4.972	T 39880.000	T 4154.000	T 4135.000	T 4261.000
3	22:03:34	94.7%	0.007	24.420	24.520	6.091	T 39280.000	T 4177.000	T 4195.000	T 4221.000
x		93.5%	0.007	23.840	24.600	5.041	T 39580.000	T 4176.000	T 4174.000	T 4247.000
σ		1.1%	0.000	1.203	0.478	1.018	T 297.800	T 22.290	T 34.170	T 21.870
%RSD		1.2	0.594	5.048	1.943	20.190	T 0.752	T 0.534	T 0.819	T 0.515

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	9.897	T 1663.000	T 12030.000	T 1386.000	25290.000	T 24930.000	86.6%	0.481	-0.939
2	22:03:07	10.230	T 1656.000	T 12250.000	T 1344.000	25010.000	T 25200.000	85.7%	0.505	-0.209
3	22:03:34	9.869	T 1604.000	T 12000.000	T 1329.000	24940.000	T 24870.000	86.7%	0.528	-0.341
x		9.999	T 1641.000	T 12090.000	T 1353.000	25080.000	T 25000.000	86.3%	0.505	-0.496
σ		0.201	T 32.250	T 136.700	T 29.360	186.400	T 175.500	0.5%	0.023	0.389
%RSD		2.009	T 1.965	T 1.130	T 2.170	0.743	T 0.702	0.6	4.568	78.430

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	115.200	2242.000	252.000	T 460.500	219.700	247.300	0.225	0.591	1.604
2	22:03:07	115.900	1865.000	253.700	T 467.600	221.700	252.800	0.229	0.570	1.313
3	22:03:34	114.700	1950.000	252.800	T 456.700	216.800	247.100	0.239	0.589	1.744
x		115.300	2019.000	252.900	T 461.600	219.400	249.100	0.231	0.583	1.553
σ		0.599	197.800	0.852	T 5.514	2.469	3.196	0.007	0.011	0.220
%RSD		0.519	9.795	0.337	T 1.195	1.125	1.283	3.146	1.932	14.150

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	5.654	5.825	66.010	66.210	65.900	0.697	-0.272	15.680	17.180
2	22:03:07	5.557	5.734	67.130	63.820	66.710	0.479	-0.093	16.340	17.600
3	22:03:34	5.818	5.659	66.270	65.930	65.380	0.484	-0.068	17.580	16.900
x		5.676	5.739	66.470	65.320	66.000	0.553	-0.144	16.530	17.230
σ		0.132	0.083	0.585	1.307	0.671	0.124	0.111	0.961	0.355
%RSD		2.328	1.449	0.881	2.000	1.016	22.410	77.190	5.815	2.062

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	1.821	0.450	1.400	87.140	88.5%	0.201	0.235	0.228	1.269
2	22:03:07	2.544	0.668	2.556	85.930	89.2%	0.218	0.229	0.195	2.348
3	22:03:34	1.884	0.422	0.252	87.490	87.3%	0.163	0.208	0.199	2.245
x		2.083	0.513	1.403	86.850	88.3%	0.194	0.224	0.208	1.954
σ		0.400	0.135	1.152	0.818	1.0%	0.028	0.014	0.018	0.595
%RSD		19.220	26.320	82.130	0.942	1.1	14.410	6.409	8.785	30.470

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	-0.002	0.003	0.491	0.456	89.3%	0.168	0.060	0.109	0.103
2	22:03:07	0.002	0.003	0.521	0.491	88.1%	0.189	0.065	0.097	0.103
3	22:03:34	0.002	0.005	0.518	0.520	88.1%	0.190	0.100	0.111	0.088
x		0.001	0.004	0.510	0.489	88.5%	0.182	0.075	0.106	0.098
σ		0.002	0.001	0.017	0.032	0.7%	0.013	0.022	0.008	0.009
%RSD		365.700	25.520	3.275	6.589	0.8	6.871	28.760	7.215	8.743

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:02:40	41.790	40.990	94.2%	-0.004	-0.007	1.499	1.425	1.493	97.2%
2	22:03:07	40.900	41.340	94.4%	-0.003	-0.007	1.501	1.390	1.457	99.1%
3	22:03:34	41.080	41.180	94.1%	-0.009	-0.007	1.509	1.424	1.465	99.5%
x		41.250	41.170	94.2%	-0.005	-0.007	1.503	1.413	1.472	98.6%
σ		0.470	0.174	0.1%	0.003	0.000	0.005	0.020	0.019	1.2%
%RSD		1.139	0.421	0.1	59.390	5.470	0.338	1.419	1.280	1.2

CCV MW10535 11/16/2018 22:08:09 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	82.3%	295.300	279.100	300.100	11.470	┬59690.000	┬59970.000	┬59690.000	┬59320.000
2	22:09:03	82.3%	292.700	280.900	283.300	5.873	┬59420.000	┬59070.000	┬59310.000	┬58990.000
3	22:09:30	81.3%	298.600	292.600	295.700	10.080	┬59320.000	┬60290.000	┬59950.000	┬60550.000
x		82.0%	98.516%	94.742%	97.672%	9.142	┬99.123%	┬59780.000	┬59650.000	┬99.367%
σ		0.6%	n/a	n/a	n/a	2.915	┬n/a	┬627.900	┬321.100	┬n/a
%RSD		0.7	1.002	2.584	2.967	31.890	┬0.326	┬1.050	┬0.538	┬1.373
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	291.700	┬3098.000	340.000	┬59080.000	58850.000	┬58210.000	86.2%	286.100	┬293.000
2	22:09:03	290.500	┬3059.000	377.900	┬59060.000	59110.000	┬59580.000	84.7%	292.500	┬293.400
3	22:09:30	295.300	┬3117.000	419.700	┬60680.000	60490.000	┬59830.000	84.1%	291.300	┬298.600
x		97.505%	┬103.046%	379.200	┬99.344%	59480.000	┬98.674%	85.0%	96.643%	┬98.327%
σ		n/a	┬n/a	39.870	┬n/a	879.000	┬n/a	1.1%	n/a	┬n/a
%RSD		0.860	┬0.966	10.520	┬1.560	1.478	┬1.472	1.3	1.171	┬1.054
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	290.200	-898.700	┬57220.000	┬272.800	┬57960.000	┬55610.000	283.100	277.000	271.100
2	22:09:03	288.800	498.700	┬58720.000	┬283.500	┬58660.000	┬56880.000	┬274.700	275.800	274.200
3	22:09:30	293.500	-542.900	┬59440.000	┬284.700	┬59350.000	┬57620.000	┬277.900	272.800	275.300
x		96.941%	-314.300	┬58460.000	┬93.439%	┬58660.000	┬94.502%	┬92.858%	91.732%	273.500
σ		n/a	726.200	┬1135.000	┬n/a	┬698.900	┬n/a	┬n/a	n/a	2.146
%RSD		0.818	231.100	┬1.941	┬2.327	┬1.191	┬1.792	┬1.533	0.784	0.785
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	264.500	279.200	279.800	274.300	276.100	281.700	281.200	0.820	-0.228
2	22:09:03	263.100	275.700	283.400	277.500	276.900	289.500	277.700	1.072	-0.011
3	22:09:30	262.900	273.700	284.100	277.200	275.000	290.100	276.800	1.033	-0.167
x		263.500	92.062%	94.156%	276.300	276.000	95.704%	278.600	0.975	-0.135
σ		0.850	n/a	n/a	1.806	0.986	n/a	2.360	0.135	0.112
%RSD		0.322	1.011	0.818	0.654	0.357	1.633	0.847	13.870	82.720
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	1244.000	269.600	0.023	┬305.800	81.9%	302.800	307.700	305.800	288.800
2	22:09:03	1230.000	272.600	-0.163	┬305.300	82.8%	307.000	306.900	307.000	286.100
3	22:09:30	1236.000	276.300	-0.323	┬306.200	82.9%	308.600	306.300	305.200	284.700
x		1237.000	90.950%	-0.155	┬101.922%	82.5%	102.043%	102.321%	306.000	286.500
σ		7.353	n/a	0.173	┬n/a	0.5%	n/a	n/a	0.923	2.120
%RSD		0.595	1.238	112.200	┬0.149	0.6	0.982	0.236	0.302	0.740
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	304.900	301.500	288.200	283.000	82.2%	299.400	302.000	319.400	299.800
2	22:09:03	306.000	298.800	290.100	285.800	82.4%	300.500	302.700	320.100	299.800
3	22:09:30	304.900	298.700	288.700	287.100	83.0%	300.900	301.300	321.200	298.800
x		101.756%	299.700	289.000	95.099%	82.5%	100.089%	100.673%	320.200	99.823%
σ		n/a	1.595	0.977	n/a	0.4%	n/a	n/a	0.913	n/a
%RSD		0.203	0.532	0.338	0.730	0.5	0.266	0.230	0.285	0.195
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:08:36	301.000	300.200	86.0%	298.400	┬287.300	297.700	294.700	┬291.900	89.6%
2	22:09:03	297.500	299.200	87.4%	298.400	┬284.700	┬282.000	293.800	┬286.000	91.4%
3	22:09:30	298.300	299.600	87.5%	297.100	┬286.000	┬285.800	292.400	┬287.300	93.2%
x		99.636%	99.892%	87.0%	298.000	┬95.331%	┬96.168%	97.884%	┬96.133%	91.4%
σ		n/a	n/a	0.9%	0.775	┬n/a	┬n/a	n/a	┬n/a	1.8%
%RSD		0.618	0.169	1.0	0.260	┬0.448	┬2.851	0.398	┬1.073	2.0

CCB IM9061-02 11/16/2018 22:14:06 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	90.8%	0.003	0.950	1.046	-2.289	1.994	0.924	0.750	1.083
2	22:14:59	93.0%	0.008	1.243	0.909	-0.420	2.093	0.812	0.801	0.726
3	22:15:26	92.7%	-0.002	1.484	1.033	1.053	2.033	0.770	0.761	0.822
x		92.2%	0.003	1.225	0.996	-0.552	2.040	0.835	0.771	0.877
σ		1.2%	0.005	0.268	0.076	1.675	0.050	0.079	0.027	0.185
%RSD		1.3	143.700	21.830	7.629	303.500	2.463	9.500	3.453	21.090
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	0.684	0.246	304.700	-0.731	1.484	1.188	86.3%	0.074	-0.028
2	22:14:59	0.657	0.389	311.800	-0.947	-0.205	0.853	87.1%	0.156	-0.073
3	22:15:26	0.704	-0.230	311.000	-0.378	0.626	0.456	87.2%	0.101	0.042
x		0.682	0.135	309.200	-0.685	0.635	0.833	86.8%	0.110	-0.020
σ		0.023	0.324	3.865	0.287	0.845	0.366	0.5%	0.042	0.058
%RSD		3.441	240.100	1.250	41.890	133.000	44.020	0.6	37.910	294.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	0.023	-73.220	7.771	0.044	7.038	7.242	0.005	0.017	0.456
2	22:14:59	0.034	-35.510	7.468	0.032	5.848	7.439	0.006	0.010	0.586
3	22:15:26	0.035	-54.780	6.398	0.036	5.412	6.860	0.010	0.012	0.493
x		0.031	-54.500	7.212	0.037	6.099	7.180	0.007	0.013	0.512
σ		0.007	18.860	0.722	0.006	0.842	0.294	0.002	0.004	0.067
%RSD		21.650	34.600	10.010	16.130	13.810	4.098	31.770	27.510	13.060
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	0.036	0.037	-0.060	-0.004	-0.108	0.001	0.081	0.121	0.572
2	22:14:59	0.042	0.006	-0.095	-0.220	-0.044	0.168	-0.072	0.181	-0.255
3	22:15:26	0.012	0.010	-0.083	-0.204	-0.086	0.201	-0.126	-0.205	-0.142
x		0.030	0.018	-0.080	-0.143	-0.079	0.124	-0.039	0.032	0.059
σ		0.016	0.017	0.018	0.120	0.032	0.107	0.107	0.208	0.448
%RSD		51.670	98.510	22.550	84.360	40.650	86.950	277.700	643.800	764.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	1.805	0.438	-0.109	0.010	88.8%	0.354	0.358	0.292	-0.271
2	22:14:59	0.793	0.249	1.111	0.009	91.1%	0.320	0.274	0.271	-0.137
3	22:15:26	0.801	0.230	0.390	0.008	90.9%	0.276	0.240	0.256	-0.539
x		1.133	0.306	0.464	0.009	90.3%	0.317	0.290	0.273	-0.316
σ		0.582	0.115	0.614	0.001	1.3%	0.039	0.061	0.018	0.205
%RSD		51.370	37.550	132.200	7.244	1.4	12.350	20.890	6.558	64.830
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	0.008	0.011	0.003	0.003	91.0%	0.271	0.436	0.284	0.264
2	22:14:59	0.010	0.013	0.003	0.006	91.1%	0.299	0.390	0.269	0.261
3	22:15:26	0.013	0.013	0.003	0.008	92.8%	0.252	0.382	0.275	0.234
x		0.010	0.012	0.003	0.006	91.6%	0.274	0.403	0.276	0.253
σ		0.002	0.001	0.000	0.002	1.0%	0.024	0.029	0.008	0.016
%RSD		20.140	11.760	1.168	37.230	1.1	8.646	7.177	2.790	6.506
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:14:32	0.010	0.014	93.8%	-0.001	-0.002	0.008	0.005	0.007	89.2%
2	22:14:59	0.016	0.014	96.0%	-0.004	-0.002	0.013	0.009	0.008	93.8%
3	22:15:26	0.000	0.016	96.0%	0.003	-0.000	0.011	0.009	0.009	96.3%
x		0.009	0.015	95.2%	-0.001	-0.001	0.010	0.008	0.008	93.1%
σ		0.008	0.001	1.3%	0.004	0.001	0.003	0.003	0.001	3.6%
%RSD		90.140	5.625	1.4	630.300	85.670	24.540	35.130	11.960	3.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	90.9%	0.012	40.800	40.530	5.411	T 28800.000	T 2579.000	2671.000	2740.000
2	22:20:54	88.1%	0.017	41.860	41.140	1.724	T 28890.000	T 2614.000	2754.000	2777.000
3	22:21:21	88.8%	0.003	38.230	40.000	0.021	T 28650.000	T 2588.000	2695.000	2754.000
x		89.3%	0.011	40.300	40.550	2.385	T 28780.000	T 2594.000	2707.000	2757.000
σ		1.5%	0.007	1.868	0.572	2.756	T 123.400	T 18.180	42.650	18.830
%RSD		1.6	66.610	4.636	1.409	115.500	T 0.429	T 0.701	1.576	0.683
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	11.970	T 1677.000	T 10350.000	903.900	15430.000	T 15550.000	81.8%	0.393	-0.613
2	22:20:54	12.000	T 1761.000	T 10520.000	943.100	15450.000	T 15790.000	81.5%	0.296	-0.279
3	22:21:21	11.780	T 1735.000	T 10290.000	945.600	15570.000	T 15400.000	83.3%	0.338	-0.437
x		11.920	T 1724.000	T 10390.000	930.800	15480.000	T 15580.000	82.2%	0.342	-0.443
σ		0.117	T 42.760	T 120.300	23.350	74.100	T 196.100	0.9%	0.049	0.167
%RSD		0.982	T 2.480	T 1.158	2.509	0.479	T 1.259	1.1	14.200	37.620
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	91.440	1146.000	134.800	163.700	93.180	119.200	0.129	0.665	1.721
2	22:20:54	91.140	1051.000	129.600	162.300	94.740	120.900	0.144	0.627	1.838
3	22:21:21	88.800	1258.000	126.800	160.400	91.260	114.700	0.128	0.614	1.625
x		90.460	1152.000	130.400	162.100	93.060	118.300	0.134	0.635	1.728
σ		1.446	103.700	4.099	1.638	1.744	3.192	0.009	0.026	0.107
%RSD		1.598	9.004	3.143	1.010	1.874	2.698	6.709	4.121	6.181
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	3.896	4.006	206.400	197.000	207.800	0.672	-0.148	10.460	10.790
2	22:20:54	3.776	3.853	206.000	203.200	211.900	0.799	0.087	10.470	10.710
3	22:21:21	3.774	3.796	205.600	194.600	205.100	0.744	0.004	11.250	11.540
x		3.815	3.885	206.000	198.300	208.200	0.739	-0.019	10.730	11.010
σ		0.070	0.109	0.370	4.437	3.435	0.064	0.119	0.454	0.460
%RSD		1.825	2.792	0.179	2.238	1.649	8.618	617.400	4.231	4.174
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	0.654	0.166	-0.067	48.520	84.7%	0.165	0.191	0.192	1.045
2	22:20:54	1.114	0.297	0.543	48.120	85.1%	0.178	0.196	0.160	0.623
3	22:21:21	0.905	0.219	-0.123	48.090	85.9%	0.141	0.260	0.168	0.767
x		0.891	0.227	0.118	48.250	85.2%	0.161	0.216	0.174	0.812
σ		0.231	0.066	0.370	0.239	0.6%	0.019	0.039	0.017	0.214
%RSD		25.880	28.850	314.400	0.495	0.7	11.540	17.960	9.635	26.420
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	0.008	0.006	0.511	0.482	87.2%	0.286	0.192	0.200	0.176
2	22:20:54	0.008	0.006	0.434	0.475	87.2%	0.319	0.204	0.202	0.161
3	22:21:21	0.005	0.006	0.521	0.511	87.5%	0.290	0.225	0.194	0.172
x		0.007	0.006	0.489	0.489	87.3%	0.298	0.207	0.199	0.169
σ		0.002	0.000	0.047	0.019	0.2%	0.018	0.016	0.004	0.008
%RSD		23.830	0.300	9.678	3.895	0.3	6.195	7.919	1.919	4.539
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:20:27	13.040	12.980	91.7%	-0.003	-0.003	0.901	0.905	0.918	93.3%
2	22:20:54	13.460	12.920	92.6%	-0.002	-0.004	0.926	0.884	0.910	96.3%
3	22:21:21	13.310	12.950	93.9%	-0.005	-0.008	0.963	0.861	0.903	98.9%
x		13.270	12.950	92.7%	-0.003	-0.005	0.930	0.884	0.911	96.2%
σ		0.213	0.031	1.1%	0.001	0.003	0.031	0.022	0.008	2.8%
%RSD		1.602	0.237	1.2	44.860	55.150	3.349	2.477	0.836	2.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	86.6%	0.009	35.590	38.740	8.657	T 72810.000	T 2051.000	2100.000	2143.000
2	22:26:49	86.7%	0.008	39.120	38.950	8.385	T 73390.000	T 2076.000	2113.000	2117.000
3	22:27:16	87.8%	-0.002	37.670	38.910	9.100	T 73580.000	T 2030.000	2088.000	2109.000
x		87.0%	0.005	37.460	38.870	8.714	T 73260.000	T 2052.000	2100.000	2123.000
σ		0.6%	0.006	1.775	0.109	0.361	T 398.500	T 22.840	12.340	17.740
%RSD		0.7	111.600	4.738	0.280	4.144	T 0.544	T 1.113	0.588	0.836

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	2.054	T 2050.000	T 11910.000	T 1308.000	9804.000	9866.000	85.1%	0.688	0.330
2	22:26:49	2.166	T 2074.000	T 12030.000	T 1323.000	9677.000	9774.000	84.7%	0.569	-0.054
3	22:27:16	2.137	T 2015.000	T 12150.000	T 1295.000	9775.000	9730.000	85.4%	0.883	0.198
x		2.119	T 2046.000	T 12030.000	T 1308.000	9752.000	9790.000	85.1%	0.713	0.158
σ		0.058	T 30.010	T 117.400	T 14.080	66.630	69.030	0.4%	0.159	0.196
%RSD		2.733	T 1.466	T 0.976	T 1.077	0.683	0.705	0.4	22.230	123.700

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	0.305	841.300	3083.000	137.600	T 2959.000	2938.000	0.225	0.238	2.528
2	22:26:49	0.265	1053.000	3115.000	141.600	T 3016.000	2972.000	0.247	0.190	2.681
3	22:27:16	0.252	1005.000	3058.000	137.500	T 2980.000	2944.000	0.245	0.188	2.646
x		0.274	966.300	3085.000	138.900	T 2985.000	2952.000	0.239	0.205	2.618
σ		0.028	110.900	28.290	2.353	T 28.930	18.080	0.012	0.028	0.080
%RSD		10.240	11.470	0.917	1.694	T 0.969	0.613	5.211	13.800	3.062

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	0.272	0.074	0.223	1.126	0.836	3.837	0.429	11.320	11.150
2	22:26:49	0.285	0.057	0.282	1.011	0.947	3.825	-0.061	11.670	11.950
3	22:27:16	0.291	0.068	0.211	1.254	0.819	3.620	0.335	12.720	11.960
x		0.283	0.066	0.239	1.130	0.868	3.761	0.235	11.900	11.690
σ		0.010	0.009	0.038	0.122	0.070	0.122	0.260	0.726	0.463
%RSD		3.414	13.440	15.830	10.780	8.011	3.255	110.900	6.103	3.965

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	0.754	0.194	1.431	37.890	85.4%	0.559	0.470	0.483	0.332
2	22:26:49	0.663	0.220	2.224	37.770	87.6%	0.558	0.468	0.491	0.114
3	22:27:16	3.246	0.751	1.265	37.950	85.5%	0.481	0.476	0.536	0.463
x		1.554	0.388	1.640	37.870	86.2%	0.533	0.471	0.503	0.303
σ		1.466	0.315	0.513	0.090	1.2%	0.045	0.004	0.028	0.177
%RSD		94.300	81.040	31.250	0.237	1.4	8.386	0.856	5.643	58.270

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	-0.002	0.005	-0.002	0.006	85.9%	0.114	0.154	0.080	0.076
2	22:26:49	-0.001	-0.001	-0.002	0.005	86.8%	0.085	0.145	0.077	0.058
3	22:27:16	0.000	0.001	0.007	-0.002	85.7%	0.079	0.154	0.088	0.081
x		-0.001	0.002	0.001	0.003	86.1%	0.093	0.151	0.082	0.072
σ		0.001	0.003	0.005	0.004	0.6%	0.019	0.005	0.005	0.012
%RSD		106.800	176.700	492.900	152.300	0.7	20.160	3.605	6.475	16.990

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:26:22	19.940	19.780	92.0%	-0.015	-0.015	0.012	-0.000	0.003	95.1%
2	22:26:49	20.220	20.140	92.6%	-0.011	-0.015	0.002	0.005	0.003	97.6%
3	22:27:16	20.150	20.230	90.8%	-0.014	-0.014	0.003	0.000	0.005	97.7%
x		20.110	20.050	91.8%	-0.013	-0.015	0.006	0.002	0.004	96.8%
σ		0.149	0.238	0.9%	0.002	0.001	0.006	0.003	0.001	1.5%
%RSD		0.739	1.189	1.0	15.200	4.660	95.610	180.600	31.240	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	85.1%	18.370	50.070	54.750	8.884	T 70430.000	T 2209.000	2255.000	2285.000
2	22:32:45	86.0%	18.270	53.830	52.670	7.000	T 70950.000	T 2179.000	2270.000	2311.000
3	22:33:12	86.4%	18.060	54.200	54.470	7.400	T 71230.000	T 2187.000	2232.000	2282.000
x		85.8%	18.230	52.700	53.960	7.761	T 70870.000	T 2192.000	2252.000	2293.000
σ		0.7%	0.157	2.283	1.130	0.993	T 407.300	T 15.330	19.410	15.990
%RSD		0.8	0.862	4.331	2.094	12.800	T 0.575	T 0.700	0.862	0.698

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	20.470	T 2180.000	T 11450.000	T 1464.000	9799.000	9660.000	84.0%	20.920	19.710
2	22:32:45	20.270	T 2139.000	T 11460.000	T 1463.000	9826.000	9739.000	83.1%	20.190	19.270
3	22:33:12	20.580	T 2099.000	T 11570.000	T 1472.000	9879.000	9816.000	82.9%	20.090	19.600
x		20.440	T 2139.000	T 11490.000	T 1466.000	9834.000	9738.000	83.3%	20.400	19.530
σ		0.157	T 40.390	T 67.320	T 5.085	40.560	77.630	0.6%	0.454	0.228
%RSD		0.766	T 1.888	T 0.586	T 0.347	0.412	0.797	0.7	2.225	1.166

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	19.110	724.400	3218.000	152.500	T 3105.000	3069.000	18.580	18.510	22.120
2	22:32:45	19.250	1294.000	3216.000	156.800	T 3170.000	3113.000	18.600	17.730	21.820
3	22:33:12	18.910	1079.000	3220.000	156.300	T 3160.000	3104.000	18.510	18.240	21.550
x		19.090	1032.000	3218.000	155.200	T 3145.000	3095.000	18.560	18.160	21.830
σ		0.171	287.500	2.198	2.356	T 34.660	23.320	0.044	0.396	0.287
%RSD		0.898	27.850	0.068	1.519	T 1.102	0.754	0.240	2.181	1.315

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	18.390	18.470	19.690	19.260	19.610	22.160	18.990	12.570	13.430
2	22:32:45	17.940	18.390	18.180	20.380	19.010	23.390	18.530	11.450	10.830
3	22:33:12	18.050	18.720	18.960	19.080	19.400	23.070	19.480	12.100	12.070
x		18.130	18.530	18.940	19.570	19.340	22.870	19.000	12.040	12.110
σ		0.235	0.173	0.757	0.703	0.305	0.638	0.479	0.566	1.301
%RSD		1.296	0.932	3.997	3.590	1.578	2.788	2.520	4.700	10.740

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	81.960	18.700	2.891	55.980	84.6%	19.670	19.550	18.860	19.340
2	22:32:45	91.790	21.400	-0.286	55.760	86.1%	18.850	19.430	18.660	18.540
3	22:33:12	75.940	17.520	0.546	56.690	84.8%	18.900	18.900	19.170	20.990
x		83.230	19.210	1.050	56.140	85.2%	19.140	19.300	18.900	19.620
σ		7.999	1.987	1.647	0.489	0.8%	0.460	0.345	0.258	1.249
%RSD		9.611	10.350	156.800	0.871	1.0	2.403	1.788	1.366	6.367

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	19.050	18.880	18.720	18.380	84.0%	18.450	18.190	19.530	18.240
2	22:32:45	18.640	18.320	18.940	17.930	86.2%	18.590	18.110	19.300	18.190
3	22:33:12	18.570	18.580	18.970	18.270	84.5%	18.510	18.240	19.920	18.280
x		18.760	18.590	18.880	18.190	84.9%	18.520	18.180	19.580	18.240
σ		0.262	0.276	0.137	0.235	1.1%	0.071	0.066	0.314	0.050
%RSD		1.395	1.483	0.727	1.290	1.3	0.383	0.361	1.601	0.271

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:32:18	39.070	38.290	89.7%	17.750	18.320	18.720	18.220	18.470	90.2%
2	22:32:45	38.010	38.590	91.7%	17.710	18.200	18.410	18.120	18.370	95.3%
3	22:33:12	38.640	38.650	90.8%	17.630	18.040	18.230	18.160	18.310	95.3%
x		38.570	38.510	90.7%	17.690	18.180	18.450	18.170	18.380	93.6%
σ		0.529	0.192	1.0%	0.061	0.141	0.246	0.049	0.081	2.9%
%RSD		1.370	0.498	1.1	0.345	0.775	1.335	0.271	0.439	3.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	86.2%	18.380	51.940	54.410	9.464	T 71050.000	T 2188.000	2243.000	2291.000
2	22:38:41	86.8%	17.700	55.200	57.070	13.860	T 71200.000	T 2192.000	2267.000	2303.000
3	22:39:08	89.1%	17.910	52.850	55.150	6.463	T 69970.000	T 2154.000	2212.000	2247.000
x		87.4%	17.990	53.330	55.540	9.931	T 70740.000	T 2178.000	2240.000	2280.000
σ		1.5%	0.350	1.684	1.376	3.723	T 669.500	T 20.780	27.530	29.220
%RSD		1.7	1.943	3.158	2.478	37.490	T 0.946	T 0.954	1.229	1.282
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	20.900	T 2169.000	T 11540.000	T 1448.000	9651.000	9697.000	84.2%	20.390	20.110
2	22:38:41	21.090	T 2106.000	T 11560.000	T 1440.000	9540.000	9764.000	84.0%	19.980	19.900
3	22:39:08	20.740	T 2066.000	T 11600.000	T 1452.000	9693.000	9672.000	85.8%	19.790	19.790
x		20.910	T 2114.000	T 11570.000	T 1446.000	9628.000	9711.000	84.7%	20.060	19.940
σ		0.178	T 51.940	T 29.400	T 6.068	78.640	47.390	1.0%	0.306	0.162
%RSD		0.852	T 2.457	T 0.254	T 0.420	0.817	0.488	1.2	1.525	0.811
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	19.440	762.100	3273.000	155.500	T 3093.000	3094.000	18.870	18.240	21.350
2	22:38:41	19.040	911.100	3193.000	155.000	T 3125.000	3086.000	18.790	18.390	20.830
3	22:39:08	19.170	994.400	3223.000	153.800	T 3076.000	3010.000	18.400	18.030	22.230
x		19.220	889.200	3230.000	154.800	T 3098.000	3063.000	18.690	18.220	21.470
σ		0.203	117.700	40.270	0.851	T 25.010	46.600	0.255	0.181	0.711
%RSD		1.055	13.240	1.247	0.550	T 0.807	1.521	1.363	0.995	3.310
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	18.300	18.560	18.820	20.220	19.830	23.250	18.140	10.720	11.310
2	22:38:41	18.090	18.560	18.890	20.290	19.830	23.400	19.340	11.780	12.120
3	22:39:08	18.310	18.490	18.420	19.970	19.060	22.330	18.660	11.320	11.580
x		18.230	18.540	18.710	20.160	19.570	22.990	18.710	11.270	11.670
σ		0.127	0.042	0.256	0.169	0.442	0.577	0.598	0.532	0.416
%RSD		0.696	0.229	1.369	0.840	2.258	2.510	3.198	4.724	3.563
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	83.380	19.080	0.824	56.740	85.3%	19.370	19.340	19.350	18.140
2	22:38:41	86.510	19.790	1.774	56.460	85.0%	19.310	19.700	18.970	19.370
3	22:39:08	86.660	19.570	0.482	55.800	85.7%	19.590	19.600	19.030	19.320
x		85.520	19.480	1.027	56.330	85.3%	19.420	19.550	19.120	18.940
σ		1.853	0.361	0.669	0.482	0.4%	0.149	0.185	0.207	0.695
%RSD		2.167	1.855	65.210	0.855	0.4	0.769	0.948	1.084	3.667
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	18.900	18.710	18.540	17.800	85.9%	18.460	18.080	19.330	18.190
2	22:38:41	18.710	18.440	18.700	17.960	86.3%	18.040	17.780	19.310	17.960
3	22:39:08	18.460	18.680	18.500	18.350	86.6%	18.740	18.400	19.730	17.820
x		18.690	18.610	18.580	18.040	86.3%	18.410	18.090	19.460	17.990
σ		0.220	0.151	0.106	0.280	0.3%	0.351	0.311	0.234	0.186
%RSD		1.179	0.811	0.568	1.550	0.4	1.909	1.719	1.203	1.036
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:38:14	38.650	37.960	92.5%	17.970	18.220	18.220	17.950	18.080	92.5%
2	22:38:41	38.190	38.020	91.5%	17.990	18.540	18.710	18.530	18.580	93.4%
3	22:39:08	39.290	38.630	92.7%	17.830	18.020	18.100	17.900	18.270	96.8%
x		38.710	38.200	92.2%	17.930	18.260	18.340	18.130	18.310	94.2%
σ		0.552	0.370	0.6%	0.088	0.261	0.324	0.352	0.254	2.3%
%RSD		1.427	0.970	0.7	0.492	1.430	1.768	1.940	1.388	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	91.4%	-0.002	6.951	7.273	-12.230	T 14980.000	457.900	437.200	438.000
2	22:44:35	91.0%	-0.002	6.536	6.855	-12.170	T 14970.000	455.000	433.100	440.300
3	22:45:02	91.3%	-0.002	6.177	7.263	-13.430	T 14680.000	443.800	419.700	432.900
x		91.2%	-0.002	6.554	7.130	-12.610	T 14880.000	452.200	430.000	437.000
σ		0.2%	0.000	0.388	0.239	0.711	T 169.200	7.484	9.171	3.757
%RSD		0.2	0.000	5.912	3.344	5.639	T 1.138	1.655	2.133	0.860

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	1.122	410.000	2003.000	251.400	2064.000	1980.000	84.0%	0.105	0.100
2	22:44:35	1.142	397.900	2004.000	249.300	2002.000	1955.000	85.4%	0.103	0.076
3	22:45:02	1.139	389.300	1999.000	246.400	1918.000	1899.000	86.4%	0.176	-0.067
x		1.134	399.000	2002.000	249.000	1995.000	1945.000	85.2%	0.128	0.037
σ		0.011	10.400	2.744	2.462	73.170	41.410	1.2%	0.042	0.090
%RSD		0.957	2.607	0.137	0.989	3.668	2.130	1.4	32.380	246.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	0.053	240.800	641.500	28.850	T 642.200	623.900	0.042	0.031	0.945
2	22:44:35	0.052	253.600	606.500	27.720	T 620.900	594.100	0.043	0.072	1.546
3	22:45:02	0.042	256.900	600.600	27.220	T 602.000	588.900	0.043	0.055	0.644
x		0.049	250.400	616.200	27.930	T 621.700	602.300	0.042	0.053	1.045
σ		0.006	8.479	22.100	0.836	T 20.110	18.880	0.000	0.021	0.459
%RSD		12.500	3.386	3.587	2.994	T 3.235	3.135	1.061	39.300	43.930

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	0.069	-0.003	-0.003	0.189	0.137	0.801	0.015	2.220	2.397
2	22:44:35	0.092	-0.010	-0.021	0.162	0.177	0.832	0.218	2.210	1.968
3	22:45:02	0.070	-0.002	-0.031	0.126	0.143	0.786	-0.004	2.159	2.760
x		0.077	-0.005	-0.019	0.159	0.153	0.807	0.076	2.196	2.375
σ		0.013	0.004	0.014	0.032	0.022	0.023	0.123	0.032	0.397
%RSD		16.870	80.600	76.730	19.940	14.300	2.875	161.500	1.476	16.700

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	0.052	0.017	-1.106	7.672	87.6%	0.167	0.163	0.110	-0.540
2	22:44:35	-0.453	-0.063	0.649	7.529	88.7%	0.141	0.172	0.114	-0.266
3	22:45:02	0.747	0.207	0.637	7.379	88.8%	0.125	0.163	0.119	-0.893
x		0.116	0.054	0.060	7.527	88.4%	0.144	0.166	0.114	-0.566
σ		0.603	0.139	1.010	0.146	0.7%	0.021	0.005	0.005	0.314
%RSD		521.700	257.300	1677.000	1.943	0.8	14.600	3.174	4.121	55.540

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	-0.002	0.001	0.002	-0.002	90.4%	0.058	0.105	0.018	-0.000
2	22:44:35	-0.001	0.000	-0.000	0.003	90.7%	0.047	0.065	0.007	0.005
3	22:45:02	0.001	-0.001	0.002	0.002	91.6%	0.048	0.085	0.015	0.011
x		-0.000	0.000	0.001	0.001	90.9%	0.051	0.085	0.013	0.005
σ		0.002	0.001	0.001	0.003	0.6%	0.006	0.020	0.006	0.006
%RSD		363.400	278.500	126.600	368.700	0.7	11.690	23.990	45.490	110.600

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:44:09	4.027	4.000	95.3%	-0.007	-0.007	0.002	-0.003	-0.001	81.1%
2	22:44:35	4.044	3.962	95.6%	-0.004	-0.008	0.007	-0.002	0.001	85.2%
3	22:45:02	3.777	3.855	96.2%	-0.010	-0.007	0.002	0.000	-0.000	87.1%
x		3.949	3.939	95.7%	-0.007	-0.008	0.004	-0.001	-0.000	84.5%
σ		0.150	0.075	0.4%	0.003	0.000	0.003	0.002	0.001	3.1%
%RSD		3.789	1.910	0.5	39.200	5.401	84.960	104.900	813.500	3.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	85.6%	0.003	115.000	121.700	2.734	T 76890.000	T 1041.000	1066.000	1093.000
2	22:50:32	85.7%	-0.002	118.000	123.700	-1.080	T 78290.000	T 1069.000	1075.000	1094.000
3	22:51:00	86.9%	0.003	116.800	123.800	6.421	T 76960.000	T 1052.000	1085.000	1103.000
x		86.1%	0.002	116.600	123.100	2.691	T 77380.000	T 1054.000	1075.000	1097.000
σ		0.7%	0.003	1.515	1.219	3.751	T 791.200	T 13.720	9.716	5.319
%RSD		0.8	160.900	1.299	0.991	139.400	T 1.023	T 1.302	0.903	0.485
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	1.548	624.800	6060.000	456.300	5634.000	5626.000	82.1%	0.304	0.141
2	22:50:32	1.775	628.400	T 6568.000	459.700	5619.000	5609.000	82.6%	0.185	0.249
3	22:51:00	1.730	628.300	T 6509.000	448.800	5643.000	5588.000	83.6%	0.212	0.034
x		1.684	627.100	T 6379.000	454.900	5632.000	5608.000	82.8%	0.233	0.142
σ		0.120	2.049	T 278.000	5.582	12.180	18.980	0.8%	0.062	0.107
%RSD		7.121	0.327	T 4.358	1.227	0.216	0.339	0.9	26.640	75.770
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	0.284	632.500	177.600	7.931	191.600	187.900	0.117	0.471	3.774
2	22:50:32	0.261	659.800	181.700	7.899	191.400	189.800	0.141	0.441	4.699
3	22:51:00	0.312	758.300	177.100	7.836	191.400	181.400	0.126	0.456	4.705
x		0.286	683.500	178.800	7.889	191.500	186.400	0.128	0.456	4.393
σ		0.025	66.160	2.567	0.049	0.130	4.417	0.013	0.015	0.536
%RSD		8.869	9.680	1.436	0.618	0.068	2.370	9.821	3.301	12.200
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	0.390	0.135	0.481	0.717	0.714	0.400	0.591	13.780	13.180
2	22:50:32	0.413	0.124	0.609	0.494	0.634	0.378	0.070	14.160	14.240
3	22:51:00	0.448	0.131	0.643	0.917	0.623	0.175	0.087	13.310	13.750
x		0.417	0.130	0.578	0.709	0.657	0.317	0.250	13.750	13.720
σ		0.029	0.006	0.085	0.211	0.049	0.124	0.296	0.427	0.528
%RSD		7.055	4.618	14.760	29.800	7.512	38.980	118.700	3.105	3.851
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	0.795	0.226	1.165	37.640	85.1%	0.317	0.285	0.275	0.123
2	22:50:32	1.433	0.346	0.392	38.160	84.8%	0.289	0.310	0.337	-0.147
3	22:51:00	0.582	0.183	1.716	38.250	86.0%	0.292	0.331	0.316	-0.398
x		0.937	0.252	1.091	38.020	85.3%	0.299	0.309	0.309	-0.141
σ		0.443	0.085	0.665	0.328	0.6%	0.016	0.023	0.032	0.261
%RSD		47.290	33.650	60.990	0.863	0.7	5.192	7.518	10.250	185.300
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	-0.001	0.001	0.003	0.004	85.6%	0.050	0.080	0.024	0.021
2	22:50:32	-0.001	-0.001	-0.001	0.003	84.9%	0.053	0.053	0.031	0.031
3	22:51:00	-0.001	-0.001	0.003	0.003	85.7%	0.056	0.040	0.021	0.034
x		-0.001	-0.000	0.002	0.003	85.4%	0.053	0.058	0.025	0.029
σ		0.000	0.001	0.003	0.001	0.5%	0.003	0.021	0.005	0.007
%RSD		1.457	635.800	150.400	23.120	0.5	5.567	35.790	20.270	24.970
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:50:05	5.528	5.139	91.6%	-0.010	-0.008	0.007	0.009	0.004	87.2%
2	22:50:32	5.238	5.492	90.9%	-0.012	-0.010	0.005	0.009	0.006	89.7%
3	22:51:00	5.268	5.229	91.9%	-0.010	-0.012	0.006	0.006	0.005	91.6%
x		5.345	5.287	91.5%	-0.011	-0.010	0.006	0.008	0.005	89.5%
σ		0.160	0.184	0.5%	0.001	0.002	0.001	0.002	0.001	2.2%
%RSD		2.985	3.474	0.5	12.090	19.570	15.810	23.390	17.990	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	94.8%	0.003	14.680	15.380	0.741	┬21010.000	┬28680.000	┬28250.000	┬28930.000
2	22:56:29	94.6%	0.003	13.440	14.950	-0.617	┬20580.000	┬28160.000	┬28030.000	┬28400.000
3	22:56:55	96.8%	-0.002	14.030	14.730	-1.065	┬20930.000	┬28450.000	┬28440.000	┬28950.000
x		95.4%	0.001	14.050	15.020	-0.314	┬20840.000	┬28430.000	┬28240.000	┬28760.000
σ		1.2%	0.002	0.619	0.328	0.940	┬226.700	┬257.500	┬204.100	┬313.800
%RSD		1.3	190.900	4.406	2.182	299.800	┬1.088	┬0.906	┬0.723	┬1.091
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	5.460	┬5132.000	┬50250.000	┬1238.000	95670.000	┬94390.000	87.5%	0.633	0.370
2	22:56:29	5.461	┬5095.000	┬49600.000	┬1251.000	95810.000	┬94270.000	88.3%	0.599	0.056
3	22:56:55	5.488	┬5030.000	┬50420.000	┬1247.000	94710.000	┬93810.000	88.6%	0.624	0.444
x		5.469	┬5086.000	┬50090.000	┬1245.000	95400.000	┬94160.000	88.1%	0.619	0.290
σ		0.016	┬51.270	┬433.200	┬6.871	597.600	┬308.100	0.6%	0.018	0.206
%RSD		0.286	┬1.008	┬0.865	┬0.552	0.626	┬0.327	0.7	2.836	71.050
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	1.048	4673.000	7.023	0.275	11.970	216.400	0.094	0.816	0.793
2	22:56:29	1.072	5176.000	8.114	0.261	10.720	204.900	0.077	0.878	1.013
3	22:56:55	1.079	5133.000	7.286	0.248	10.570	196.500	0.091	0.770	0.628
x		1.066	4994.000	7.474	0.261	11.090	205.900	0.087	0.821	0.811
σ		0.016	278.500	0.569	0.013	0.766	10.010	0.009	0.055	0.193
%RSD		1.543	5.576	7.616	5.118	6.912	4.859	10.360	6.644	23.820
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	0.324	0.346	1.117	4.783	3.479	0.347	-0.054	6.693	6.018
2	22:56:29	0.324	0.289	1.018	4.343	3.312	0.563	-0.016	6.639	6.674
3	22:56:55	0.321	0.367	1.109	4.464	3.327	0.441	-0.135	5.440	6.360
x		0.323	0.334	1.081	4.530	3.373	0.450	-0.068	6.258	6.351
σ		0.002	0.040	0.055	0.228	0.092	0.109	0.061	0.708	0.328
%RSD		0.562	12.020	5.056	5.027	2.742	24.090	88.990	11.320	5.168
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	0.398	0.102	-0.153	90.340	89.8%	0.253	0.264	0.290	1.157
2	22:56:29	2.482	0.618	1.905	90.490	89.8%	0.263	0.211	0.255	1.310
3	22:56:55	0.264	0.034	-1.026	91.430	89.2%	0.223	0.274	0.264	1.144
x		1.048	0.252	0.242	90.760	89.6%	0.247	0.250	0.270	1.203
σ		1.244	0.319	1.505	0.592	0.4%	0.021	0.034	0.018	0.092
%RSD		118.700	127.000	621.500	0.652	0.4	8.412	13.620	6.609	7.670
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	0.000	0.002	0.001	0.012	90.3%	0.150	0.208	0.094	0.051
2	22:56:29	-0.001	0.001	0.003	0.010	91.2%	0.162	0.250	0.085	0.063
3	22:56:55	-0.002	0.002	0.013	0.010	90.4%	0.164	0.230	0.117	0.075
x		-0.001	0.002	0.006	0.011	90.6%	0.159	0.229	0.098	0.063
σ		0.001	0.001	0.007	0.001	0.5%	0.007	0.021	0.016	0.012
%RSD		159.200	26.410	114.100	9.813	0.5	4.634	9.244	16.620	18.460
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	22:56:01	74.190	73.190	95.3%	-0.010	-0.012	0.013	0.005	0.006	116.6%
2	22:56:29	75.140	74.610	95.4%	-0.010	-0.011	0.007	0.009	0.007	117.4%
3	22:56:55	75.030	73.340	96.2%	-0.012	-0.012	0.004	0.004	0.005	117.1%
x		74.790	73.720	95.6%	-0.011	-0.012	0.008	0.006	0.006	117.0%
σ		0.521	0.778	0.5%	0.001	0.000	0.005	0.003	0.001	0.4%
%RSD		0.696	1.055	0.5	9.454	3.680	58.170	43.990	22.990	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	94.8%	0.012	23.510	24.350	-27.900	T 19840.000	T 22890.000	T 23110.000	T 23710.000
2	23:02:24	94.4%	0.009	23.220	24.640	-29.030	T 19830.000	T 22730.000	T 23070.000	T 23840.000
3	23:02:51	95.5%	0.004	23.850	23.600	-31.160	T 19590.000	T 22360.000	T 22660.000	T 23500.000
x		94.9%	0.008	23.530	24.200	-29.360	T 19750.000	T 22660.000	T 22950.000	T 23680.000
σ		0.5%	0.004	0.317	0.541	1.655	T 140.700	T 271.900	T 249.800	T 174.200
%RSD		0.6	50.500	1.346	2.236	5.638	T 0.713	T 1.200	T 1.088	T 0.736
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	118.500	T 6679.000	T 44490.000	T 1606.000	M 150400.000	TM 146400.000	86.7%	5.941	0.437
2	23:02:24	120.100	T 6699.000	T 45570.000	T 1631.000	M 149800.000	TM 148000.000	86.3%	5.028	0.158
3	23:02:51	118.500	T 6693.000	T 45800.000	T 1638.000	M 147300.000	TM 144400.000	87.7%	4.821	0.361
x		119.000	T 6691.000	T 45290.000	T 1625.000	M 149200.000	TM 146300.000	86.9%	5.263	0.319
σ		0.952	T 10.130	T 701.800	T 16.830	M 1651.000	TM 1821.000	0.7%	0.596	0.144
%RSD		0.800	T 0.151	T 1.550	T 1.036	M 1.106	TM 1.245	0.8	11.330	45.330
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	0.922	5717.000	1001.000	37.540	T 997.000	1257.000	0.295	1.409	0.854
2	23:02:24	0.974	5990.000	1015.000	38.500	T 1004.000	1249.000	0.318	1.491	0.344
3	23:02:51	0.969	5961.000	991.500	37.550	T 1008.000	1267.000	0.320	1.533	0.712
x		0.955	5889.000	1003.000	37.860	T 1003.000	1258.000	0.311	1.478	0.637
σ		0.028	149.900	11.950	0.550	T 5.561	8.845	0.014	0.063	0.264
%RSD		2.970	2.546	1.192	1.453	T 0.554	0.703	4.489	4.279	41.420
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	0.389	0.532	4.882	6.256	5.726	4.329	-0.088	8.919	9.028
2	23:02:24	0.448	0.519	4.864	5.291	5.715	3.799	-0.038	9.004	8.977
3	23:02:51	0.422	0.489	4.932	6.267	5.464	3.585	0.016	8.484	9.146
x		0.419	0.513	4.893	5.938	5.635	3.904	-0.036	8.802	9.050
σ		0.029	0.022	0.035	0.560	0.148	0.383	0.052	0.279	0.087
%RSD		7.017	4.266	0.724	9.434	2.629	9.804	142.800	3.168	0.958
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	1.711	0.412	0.991	TM 1862.000	87.6%	1.305	1.405	1.374	41.090
2	23:02:24	1.337	0.330	0.176	TM 1857.000	89.1%	1.330	1.419	1.306	41.690
3	23:02:51	0.847	0.213	0.438	TM 1860.000	89.7%	1.372	1.280	1.310	35.630
x		1.298	0.318	0.535	TM 1859.000	88.8%	1.336	1.368	1.330	39.470
σ		0.434	0.100	0.416	TM 2.531	1.1%	0.034	0.077	0.038	3.340
%RSD		33.400	31.360	77.740	TM 0.136	1.2	2.564	5.593	2.875	8.462
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	0.002	0.002	0.008	0.005	87.3%	0.218	0.302	0.098	0.079
2	23:02:24	0.001	0.001	0.007	0.008	89.6%	0.227	0.312	0.093	0.083
3	23:02:51	0.003	0.001	0.001	0.014	90.5%	0.201	0.318	0.101	0.074
x		0.002	0.001	0.005	0.009	89.2%	0.215	0.311	0.097	0.079
σ		0.001	0.000	0.004	0.005	1.6%	0.013	0.008	0.004	0.005
%RSD		34.050	23.290	67.220	50.940	1.8	5.969	2.476	4.401	5.975
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:01:57	30.780	30.250	95.7%	-0.009	-0.010	0.148	0.101	0.132	110.5%
2	23:02:24	30.650	30.250	97.0%	-0.009	-0.009	0.133	0.111	0.128	112.8%
3	23:02:51	30.170	29.970	97.2%	-0.010	-0.007	0.147	0.119	0.131	114.1%
x		30.530	30.150	96.6%	-0.010	-0.009	0.143	0.111	0.130	112.4%
σ		0.322	0.160	0.8%	0.001	0.001	0.008	0.009	0.002	1.8%
%RSD		1.054	0.532	0.8	8.281	17.080	5.901	8.135	1.736	1.6

TJ24030-003 11/16/2018 23:07:26

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	94.5%	-0.002	23.450	25.460	-19.180	T 13220.000	T 24000.000	T 24200.000	T 24990.000
2	23:08:20	95.5%	0.002	22.970	24.430	-20.830	T 13010.000	T 23850.000	T 24040.000	T 24710.000
3	23:08:47	96.1%	-0.002	23.810	24.250	-22.150	T 12830.000	T 23530.000	T 23870.000	T 24200.000
x		95.4%	-0.000	23.410	24.710	-20.720	T 13020.000	T 23790.000	T 24040.000	T 24630.000
σ		0.8%	0.002	0.422	0.650	1.485	T 191.400	T 241.300	T 165.900	T 403.100
%RSD		0.9	480.600	1.805	2.632	7.170	T 1.470	T 1.014	T 0.690	T 1.636

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	30.550	T 6787.000	T 47470.000	T 1404.000	M 121200.000	TM 116500.000	85.2%	1.601	0.204
2	23:08:20	29.720	T 6718.000	T 46900.000	T 1392.000	M 118100.000	TM 116400.000	87.2%	1.453	-0.040
3	23:08:47	29.300	T 6678.000	T 46980.000	T 1391.000	M 118700.000	TM 115500.000	87.5%	1.394	0.238
x		29.860	T 6728.000	T 47120.000	T 1396.000	M 119400.000	TM 116200.000	86.6%	1.483	0.134
σ		0.636	T 55.340	T 309.500	T 7.055	M 1662.000	TM 558.600	1.3%	0.107	0.152
%RSD		2.129	T 0.823	T 0.657	T 0.506	M 1.393	TM 0.481	1.4	7.204	113.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	0.663	6744.000	863.200	32.350	T 863.000	1073.000	0.311	1.085	0.256
2	23:08:20	0.635	6748.000	839.300	31.620	T 849.800	1046.000	0.310	1.013	0.246
3	23:08:47	0.606	6743.000	844.100	31.300	T 835.500	1029.000	0.306	0.921	0.246
x		0.635	6745.000	848.800	31.760	T 849.500	1049.000	0.309	1.006	0.249
σ		0.029	2.679	12.640	0.534	T 13.760	22.310	0.003	0.082	0.006
%RSD		4.490	0.040	1.489	1.682	T 1.620	2.126	0.811	8.142	2.291

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	0.168	0.288	1.739	2.898	2.484	7.298	0.226	7.688	8.466
2	23:08:20	0.165	0.211	1.810	3.461	2.489	6.589	0.245	8.441	8.103
3	23:08:47	0.163	0.267	1.837	3.076	2.442	7.003	0.078	8.411	8.121
x		0.165	0.255	1.795	3.145	2.472	6.963	0.183	8.180	8.230
σ		0.003	0.040	0.050	0.288	0.026	0.356	0.091	0.427	0.204
%RSD		1.541	15.480	2.809	9.155	1.042	5.117	49.880	5.215	2.482

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	0.353	0.135	1.766	TM 4038.000	87.5%	2.015	2.069	1.927	84.680
2	23:08:20	2.286	0.557	1.560	TM 4009.000	88.2%	1.914	2.028	1.965	90.320
3	23:08:47	0.630	0.135	-0.075	TM 4016.000	87.8%	2.110	1.921	1.948	84.670
x		1.090	0.276	1.084	TM 4021.000	87.8%	2.013	2.006	1.947	86.560
σ		1.045	0.244	1.009	TM 14.820	0.3%	0.098	0.077	0.019	3.257
%RSD		95.960	88.390	93.110	TM 0.368	0.4	4.863	3.827	0.977	3.763

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	0.001	0.001	-0.005	0.004	89.3%	0.136	0.227	0.091	0.115
2	23:08:20	-0.001	0.001	-0.001	0.011	89.7%	0.160	0.211	0.102	0.105
3	23:08:47	0.003	0.000	0.001	-0.000	89.4%	0.139	0.217	0.102	0.103
x		0.001	0.001	-0.002	0.005	89.5%	0.145	0.218	0.098	0.108
σ		0.002	0.000	0.003	0.006	0.2%	0.013	0.008	0.006	0.007
%RSD		217.500	36.440	172.400	111.600	0.2	9.152	3.718	6.150	6.082

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:07:53	27.400	26.950	95.2%	-0.009	-0.009	0.040	0.040	0.037	113.0%
2	23:08:20	27.990	27.160	96.1%	-0.011	-0.006	0.036	0.031	0.034	114.9%
3	23:08:47	27.880	27.100	98.0%	-0.011	-0.009	0.041	0.041	0.038	115.3%
x		27.760	27.070	96.4%	-0.010	-0.008	0.039	0.038	0.036	114.4%
σ		0.311	0.107	1.4%	0.001	0.002	0.003	0.005	0.002	1.2%
%RSD		1.120	0.396	1.5	13.190	22.870	6.437	14.250	6.511	1.1

TJ24030-004 11/16/2018 23:13:21

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	91.6%	0.007	150.000	152.400	-0.253	T 88170.000	T 31110.000	T 30970.000	T 31640.000
2	23:14:15	94.6%	0.002	150.700	158.700	-0.026	T 86650.000	T 30510.000	T 30580.000	T 30940.000
3	23:14:43	95.7%	0.003	155.200	161.600	-0.965	T 87250.000	T 30870.000	T 30630.000	T 31080.000
x		94.0%	0.004	152.000	157.500	-0.415	T 87360.000	T 30830.000	T 30720.000	T 31220.000
σ		2.1%	0.002	2.855	4.707	0.490	T 767.100	T 299.000	T 214.800	T 373.500
%RSD		2.2	62.000	1.879	2.988	118.100	T 0.878	T 0.970	T 0.699	T 1.196
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	9.155	T 5203.000	T 50880.000	T 1525.000	M 117300.000	TM 114600.000	85.8%	0.945	0.553
2	23:14:15	8.800	T 4970.000	T 51710.000	T 1480.000	M 116100.000	TM 112900.000	85.8%	0.935	0.310
3	23:14:43	9.286	T 5022.000	T 51020.000	T 1462.000	M 115600.000	TM 114500.000	87.2%	0.708	0.325
x		9.080	T 5065.000	T 51200.000	T 1489.000	M 116300.000	TM 114000.000	86.3%	0.863	0.396
σ		0.251	T 122.500	T 445.000	T 32.450	M 845.600	TM 980.800	0.8%	0.134	0.136
%RSD		2.768	T 2.418	T 0.869	T 2.180	M 0.727	TM 0.861	0.9	15.530	34.370
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	3.730	4877.000	21.160	1.375	22.820	258.000	0.228	1.081	0.364
2	23:14:15	3.629	4982.000	20.490	1.398	22.460	249.300	0.225	1.128	0.264
3	23:14:43	3.649	5061.000	19.820	1.393	23.380	245.300	0.233	1.035	0.277
x		3.670	4974.000	20.490	1.389	22.890	250.900	0.229	1.081	0.302
σ		0.054	92.480	0.669	0.012	0.461	6.505	0.004	0.046	0.054
%RSD		1.459	1.859	3.266	0.857	2.016	2.593	1.574	4.269	17.930
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	1.450	1.426	2.633	4.950	3.911	0.572	0.173	12.630	12.750
2	23:14:15	1.374	1.449	2.603	4.555	3.958	0.093	0.567	13.050	12.850
3	23:14:43	1.351	1.462	2.529	4.821	3.899	-0.026	0.172	12.280	13.520
x		1.392	1.446	2.588	4.775	3.923	0.213	0.304	12.650	13.040
σ		0.052	0.018	0.054	0.201	0.031	0.317	0.228	0.388	0.420
%RSD		3.711	1.273	2.071	4.209	0.791	148.800	75.000	3.068	3.220
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	3.136	0.712	-0.188	106.800	87.1%	0.196	0.143	0.218	1.391
2	23:14:15	2.793	0.665	0.848	105.600	87.6%	0.181	0.250	0.196	1.412
3	23:14:43	1.827	0.423	0.508	106.700	88.2%	0.254	0.138	0.241	1.200
x		2.586	0.600	0.389	106.400	87.6%	0.210	0.177	0.219	1.334
σ		0.679	0.155	0.528	0.655	0.6%	0.038	0.064	0.023	0.117
%RSD		26.250	25.790	135.600	0.616	0.7	18.260	36.000	10.450	8.739
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	-0.001	0.003	0.029	0.022	88.1%	0.158	0.208	0.088	0.089
2	23:14:15	-0.002	0.002	0.027	0.016	87.4%	0.174	0.206	0.118	0.094
3	23:14:43	-0.002	0.000	0.014	0.016	88.6%	0.142	0.247	0.116	0.092
x		-0.001	0.002	0.023	0.018	88.0%	0.158	0.220	0.107	0.091
σ		0.000	0.001	0.008	0.004	0.6%	0.016	0.023	0.017	0.002
%RSD		21.230	68.020	35.270	19.930	0.7	10.100	10.470	15.540	2.598
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:13:48	51.900	51.620	95.4%	-0.013	-0.017	0.031	0.024	0.022	109.6%
2	23:14:15	52.290	51.730	95.4%	-0.012	-0.016	0.017	0.014	0.017	110.5%
3	23:14:43	51.980	50.920	96.2%	-0.015	-0.015	0.021	0.021	0.020	110.7%
x		52.060	51.430	95.6%	-0.014	-0.016	0.023	0.020	0.020	110.3%
σ		0.205	0.443	0.4%	0.002	0.001	0.007	0.005	0.003	0.6%
%RSD		0.394	0.861	0.5	11.160	6.385	32.340	25.440	13.900	0.5

CCV MW10535 11/16/2018 23:19:18 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	83.2%	302.100	291.700	290.800	7.420	┬58090.000	┬59590.000	┬59130.000	┬59050.000
2	23:20:12	82.3%	298.200	294.000	293.400	6.783	┬58920.000	┬60200.000	┬60290.000	┬60170.000
3	23:20:39	82.4%	291.700	272.100	286.600	7.518	┬58450.000	┬59320.000	┬59220.000	┬59600.000
x		82.6%	99.117%	95.308%	96.758%	7.240	┬97.475%	┬59700.000	┬59550.000	┬99.344%
σ		0.5%	n/a	n/a	n/a	0.399	┬n/a	┬453.900	┬645.300	┬n/a
%RSD		0.6	1.777	4.199	1.174	5.511	┬0.711	┬0.760	┬1.084	┬0.943
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	286.900	┬3117.000	309.700	┬58660.000	58720.000	┬58540.000	88.6%	278.900	301.400
2	23:20:12	295.000	┬3146.000	345.300	┬59540.000	60040.000	┬59870.000	86.4%	290.600	┬299.000
3	23:20:39	294.800	┬3132.000	345.200	┬59810.000	60620.000	┬59310.000	86.3%	290.200	┬293.400
x		97.417%	┬104.388%	333.400	┬98.893%	59790.000	┬98.733%	87.1%	95.517%	┬99.301%
σ		n/a	┬n/a	20.550	┬n/a	971.500	┬n/a	1.3%	n/a	┬n/a
%RSD		1.585	┬0.462	6.162	┬1.007	1.625	┬1.126	1.5	2.305	┬1.377
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	291.100	-250.100	┬57680.000	┬273.200	┬57560.000	┬55480.000	┬274.000	279.800	274.900
2	23:20:12	296.900	-1224.000	┬58550.000	┬280.300	┬59040.000	┬56940.000	┬277.500	281.400	274.300
3	23:20:39	295.100	-771.800	┬58550.000	┬279.200	┬58950.000	┬56780.000	┬276.800	275.800	272.300
x		98.119%	-748.600	┬58260.000	┬92.514%	┬58520.000	┬94.004%	┬92.027%	92.994%	273.800
σ		n/a	487.300	┬502.000	┬n/a	┬833.900	┬n/a	┬n/a	n/a	1.345
%RSD		1.011	65.100	┬0.862	┬1.379	┬1.425	┬1.423	┬0.665	1.027	0.491
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	267.000	279.600	281.200	272.500	272.200	283.000	274.800	0.737	-0.305
2	23:20:12	266.000	273.300	281.700	274.900	274.400	285.000	273.300	1.058	0.180
3	23:20:39	263.300	275.500	281.700	276.900	274.200	281.500	275.700	1.230	-0.239
x		265.400	92.042%	93.842%	274.800	273.600	94.392%	274.600	1.008	-0.121
σ		1.921	n/a	n/a	2.202	1.211	n/a	1.223	0.250	0.263
%RSD		0.724	1.153	0.104	0.801	0.443	0.628	0.445	24.810	217.100
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	1267.000	275.000	-0.099	┬308.100	84.4%	304.800	303.400	304.000	288.700
2	23:20:12	1251.000	278.100	0.372	┬305.100	84.7%	303.400	309.200	313.500	288.900
3	23:20:39	1213.000	268.200	1.496	┬312.300	84.0%	307.900	309.700	307.100	285.400
x		1244.000	91.250%	0.590	┬102.838%	84.4%	101.789%	102.479%	308.200	287.700
σ		27.660	n/a	0.820	┬n/a	0.3%	n/a	n/a	4.856	1.980
%RSD		2.223	1.857	139.000	┬1.171	0.4	0.750	1.145	1.576	0.688
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	306.700	306.000	288.800	286.700	84.2%	298.500	299.300	315.000	296.800
2	23:20:12	307.800	305.100	292.100	286.100	83.5%	303.700	303.700	323.000	297.200
3	23:20:39	302.300	302.100	289.000	284.000	84.4%	298.300	300.200	320.200	299.300
x		101.875%	304.400	290.000	95.196%	84.0%	100.058%	100.347%	319.400	99.262%
σ		n/a	2.054	1.872	n/a	0.5%	n/a	n/a	4.046	n/a
%RSD		0.953	0.675	0.646	0.503	0.6	1.006	0.768	1.267	0.449
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:19:45	299.900	298.800	88.7%	296.000	┬284.700	┬284.000	292.800	┬286.900	90.5%
2	23:20:12	302.000	302.000	89.4%	298.000	┬285.600	296.200	293.600	┬289.500	93.2%
3	23:20:39	299.600	299.100	89.3%	302.000	┬285.100	295.900	293.700	┬290.900	95.3%
x		100.169%	99.997%	89.1%	298.700	┬95.039%	┬97.335%	97.791%	┬96.363%	93.0%
σ		n/a	n/a	0.4%	3.091	┬n/a	┬n/a	n/a	┬n/a	2.4%
%RSD		0.431	0.588	0.4	1.035	┬0.166	┬2.379	0.164	┬0.699	2.6

CCB IM9061-02 11/16/2018 23:25:15 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	90.5%	0.018	2.000	1.918	0.888	2.103	1.008	1.003	1.034
2	23:26:09	91.2%	0.009	1.722	1.781	-1.296	1.800	0.920	0.937	0.958
3	23:26:36	93.1%	0.003	1.944	1.382	-0.439	1.920	0.778	0.965	0.833
x		91.6%	0.010	1.888	1.694	-0.282	1.941	0.902	0.968	0.942
σ		1.4%	0.008	0.147	0.279	1.100	0.152	0.116	0.033	0.102
%RSD		1.5	74.740	7.790	16.440	390.000	7.847	12.850	3.402	10.780
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	0.725	-0.114	164.700	-0.949	1.887	1.264	86.7%	0.111	0.048
2	23:26:09	0.643	0.310	171.500	-0.552	1.452	0.719	87.4%	0.110	-0.048
3	23:26:36	0.689	0.057	179.500	-1.173	3.157	0.910	86.4%	0.083	-0.003
x		0.685	0.084	171.900	-0.891	2.166	0.965	86.8%	0.101	-0.001
σ		0.041	0.213	7.441	0.315	0.886	0.277	0.5%	0.016	0.048
%RSD		5.959	253.300	4.328	35.290	40.900	28.700	0.6	15.330	4375.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	0.021	112.400	6.833	0.038	6.885	7.855	0.011	0.005	0.576
2	23:26:09	0.037	233.000	7.386	0.056	5.592	4.952	0.008	0.019	0.075
3	23:26:36	0.033	201.800	8.882	0.037	5.965	4.865	0.008	0.012	0.437
x		0.030	182.400	7.700	0.043	6.147	5.891	0.009	0.012	0.363
σ		0.009	62.600	1.060	0.010	0.665	1.702	0.002	0.007	0.258
%RSD		28.300	34.320	13.760	24.070	10.820	28.890	20.650	55.470	71.290
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	0.032	-0.000	-0.085	-0.103	-0.133	0.231	0.292	-0.240	-0.443
2	23:26:09	0.012	0.002	-0.112	-0.139	-0.072	0.187	-0.386	-0.201	0.325
3	23:26:36	0.029	0.011	-0.059	-0.248	-0.059	0.039	0.103	0.172	-0.285
x		0.024	0.004	-0.085	-0.163	-0.088	0.152	0.003	-0.090	-0.135
σ		0.011	0.006	0.026	0.076	0.040	0.101	0.350	0.227	0.405
%RSD		45.660	138.000	30.940	46.340	45.100	65.990	11640.000	253.800	301.200
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	1.798	0.460	1.078	0.016	88.9%	0.303	0.304	0.304	-0.905
2	23:26:09	0.969	0.283	1.291	0.010	90.4%	0.290	0.305	0.265	-0.430
3	23:26:36	0.429	0.140	0.619	0.010	89.2%	0.238	0.261	0.238	-0.802
x		1.065	0.294	0.996	0.012	89.5%	0.277	0.290	0.269	-0.713
σ		0.689	0.160	0.343	0.003	0.8%	0.034	0.025	0.033	0.250
%RSD		64.700	54.500	34.480	27.180	0.9	12.380	8.598	12.280	35.070
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	0.012	0.010	0.009	0.014	91.1%	0.374	0.490	0.281	0.282
2	23:26:09	0.016	0.013	-0.001	0.007	92.0%	0.317	0.434	0.299	0.280
3	23:26:36	0.009	0.015	0.009	0.009	91.7%	0.287	0.423	0.268	0.259
x		0.012	0.013	0.006	0.010	91.6%	0.326	0.449	0.283	0.274
σ		0.003	0.003	0.006	0.004	0.5%	0.044	0.036	0.016	0.013
%RSD		28.000	22.200	101.600	34.280	0.5	13.630	8.026	5.524	4.693
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:25:41	0.013	0.016	94.0%	0.007	0.005	0.010	0.004	0.007	90.5%
2	23:26:09	0.019	0.000	94.8%	0.003	0.004	0.010	0.011	0.009	94.6%
3	23:26:36	0.013	0.014	95.1%	0.001	0.006	0.011	0.011	0.008	96.2%
x		0.015	0.010	94.7%	0.004	0.005	0.011	0.009	0.008	93.8%
σ		0.003	0.008	0.6%	0.003	0.001	0.000	0.004	0.001	2.9%
%RSD		23.640	84.160	0.6	78.740	20.290	4.276	46.410	14.560	3.1

TJ24030-006 11/16/2018 23:31:11

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	95.5%	0.002	14.880	16.320	-4.859	T 4390.000	T 32350.000	T 32240.000	T 32850.000
2	23:32:05	94.7%	0.002	17.340	16.490	-3.180	T 4487.000	T 32990.000	T 33020.000	T 33510.000
3	23:32:32	97.1%	0.002	16.780	16.640	-7.428	T 4389.000	T 32420.000	T 32590.000	T 33180.000
x		95.8%	0.002	16.330	16.480	-5.156	T 4422.000	T 32590.000	T 32620.000	T 33180.000
σ		1.3%	0.000	1.289	0.161	2.139	T 56.500	T 352.700	T 389.300	T 325.900
%RSD		1.3	1.602	7.890	0.974	41.490	T 1.278	T 1.082	T 1.193	T 0.982
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	5.122	T 6458.000	T 47400.000	835.700	M 122200.000	TM 120000.000	88.7%	0.877	0.124
2	23:32:05	5.203	T 6533.000	T 48970.000	866.200	M 124800.000	TM 122900.000	87.3%	0.919	0.079
3	23:32:32	5.183	T 6323.000	T 47640.000	840.300	M 123100.000	TM 121300.000	88.7%	0.823	0.240
x		5.169	T 6438.000	T 48000.000	847.400	M 123400.000	TM 121400.000	88.2%	0.873	0.148
σ		0.042	T 106.400	T 845.000	16.420	M 1343.000	TM 1436.000	0.8%	0.048	0.083
%RSD		0.812	T 1.653	T 1.760	1.938	M 1.088	TM 1.182	0.9	5.511	56.070
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	1.232	4847.000	16.800	1.455	21.910	275.400	0.119	1.220	0.185
2	23:32:05	1.318	5108.000	16.490	1.526	20.620	256.300	0.143	1.181	0.028
3	23:32:32	1.297	5138.000	15.730	1.553	21.320	265.300	0.111	1.190	0.043
x		1.282	5031.000	16.340	1.512	21.290	265.700	0.124	1.197	0.086
σ		0.045	160.300	0.554	0.050	0.644	9.555	0.017	0.021	0.087
%RSD		3.492	3.186	3.392	3.337	3.026	3.597	13.780	1.715	101.300
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	0.357	0.449	1.567	3.994	3.696	0.534	0.388	5.856	4.972
2	23:32:05	0.396	0.534	1.537	4.700	3.767	0.335	0.284	6.175	5.641
3	23:32:32	0.358	0.490	1.664	4.627	3.538	0.057	0.070	5.761	6.874
x		0.370	0.491	1.590	4.440	3.667	0.309	0.248	5.931	5.829
σ		0.022	0.043	0.066	0.388	0.117	0.239	0.162	0.217	0.965
%RSD		6.051	8.667	4.180	8.735	3.202	77.550	65.420	3.653	16.550
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	2.727	0.627	-0.483	120.300	90.6%	0.380	0.320	0.354	1.436
2	23:32:05	2.740	0.673	0.401	120.100	90.6%	0.325	0.335	0.328	2.183
3	23:32:32	0.922	0.247	0.802	119.300	91.2%	0.328	0.311	0.336	2.916
x		2.130	0.516	0.240	119.900	90.8%	0.344	0.322	0.339	2.179
σ		1.046	0.234	0.657	0.514	0.4%	0.031	0.012	0.013	0.740
%RSD		49.110	45.300	274.200	0.428	0.4	8.979	3.808	3.890	33.970
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	0.001	0.005	0.023	0.006	90.6%	0.311	0.452	0.210	0.201
2	23:32:05	0.004	0.003	0.013	0.012	91.3%	0.290	0.449	0.210	0.205
3	23:32:32	0.002	0.010	0.013	0.016	91.9%	0.324	0.475	0.208	0.215
x		0.003	0.006	0.016	0.011	91.3%	0.308	0.458	0.209	0.207
σ		0.002	0.004	0.006	0.005	0.6%	0.017	0.014	0.001	0.007
%RSD		56.470	60.110	36.300	42.410	0.7	5.566	3.107	0.614	3.509
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:31:38	67.070	67.010	96.2%	-0.007	-0.012	0.014	0.014	0.013	114.5%
2	23:32:05	66.560	66.010	98.5%	-0.013	-0.013	0.009	0.018	0.010	116.6%
3	23:32:32	66.310	65.990	97.0%	-0.005	-0.012	0.013	0.012	0.012	116.6%
x		66.650	66.340	97.2%	-0.008	-0.012	0.012	0.015	0.011	115.9%
σ		0.388	0.583	1.2%	0.004	0.000	0.003	0.003	0.001	1.2%
%RSD		0.582	0.879	1.2	52.330	2.132	23.990	21.360	13.290	1.1

TJ24030-007 11/16/2018 23:37:06

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	97.6%	0.011	15.220	15.180	0.181	T 12170.000	T 27820.000	T 27810.000	T 28080.000
2	23:38:00	99.7%	0.003	15.200	15.790	-0.866	T 12060.000	T 28080.000	T 27890.000	T 28120.000
3	23:38:27	99.7%	0.002	14.910	14.700	1.588	T 11980.000	T 27510.000	T 27620.000	T 27990.000
x		99.0%	0.005	15.110	15.220	0.301	T 12070.000	T 27800.000	T 27770.000	T 28060.000
σ		1.2%	0.005	0.175	0.548	1.231	T 90.840	T 286.500	T 139.200	T 63.320
%RSD		1.2	89.810	1.159	3.597	408.900	T 0.753	T 1.031	T 0.501	T 0.226
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	25.520	T 5405.000	T 49320.000	1050.000	86290.000	T 86090.000	89.5%	1.298	0.518
2	23:38:00	25.200	T 5357.000	T 50180.000	T 1027.000	87070.000	T 86100.000	90.6%	1.150	0.347
3	23:38:27	24.950	T 5354.000	T 49420.000	T 1027.000	86500.000	T 86040.000	91.3%	1.141	0.152
x		25.220	T 5372.000	T 49640.000	T 1035.000	86620.000	T 86080.000	90.5%	1.196	0.339
σ		0.288	T 28.610	T 474.400	T 13.570	403.600	T 32.520	0.9%	0.088	0.183
%RSD		1.143	T 0.532	T 0.956	T 1.311	0.466	T 0.038	1.0	7.389	54.020
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	0.866	5429.000	46.350	0.855	50.970	232.600	0.105	0.765	-0.055
2	23:38:00	0.867	5460.000	44.610	0.856	49.910	227.000	0.097	0.786	0.056
3	23:38:27	0.869	5649.000	45.150	0.795	48.680	211.200	0.100	0.674	-0.091
x		0.867	5513.000	45.370	0.835	49.850	223.600	0.101	0.742	-0.030
σ		0.002	118.900	0.888	0.035	1.150	11.100	0.004	0.060	0.076
%RSD		0.215	2.157	1.957	4.208	2.306	4.961	4.397	8.037	253.400
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	0.237	0.272	1.048	3.770	2.696	0.372	-0.113	4.282	4.592
2	23:38:00	0.208	0.286	1.118	3.395	2.834	0.284	0.209	4.985	4.840
3	23:38:27	0.215	0.337	1.039	3.326	2.525	0.680	0.008	4.717	5.223
x		0.220	0.298	1.068	3.497	2.685	0.445	0.034	4.661	4.885
σ		0.015	0.034	0.043	0.239	0.155	0.208	0.163	0.355	0.318
%RSD		6.781	11.530	4.041	6.832	5.772	46.730	471.800	7.609	6.507
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	0.183	0.049	-0.072	73.940	91.1%	0.254	0.264	0.209	0.273
2	23:38:00	1.191	0.310	1.647	73.710	91.4%	0.259	0.263	0.258	1.345
3	23:38:27	1.135	0.261	-0.135	73.510	92.5%	0.239	0.228	0.263	0.675
x		0.836	0.207	0.480	73.720	91.7%	0.251	0.252	0.243	0.764
σ		0.567	0.139	1.011	0.215	0.7%	0.010	0.021	0.030	0.542
%RSD		67.760	67.140	210.600	0.291	0.8	4.160	8.183	12.330	70.870
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	0.002	0.003	0.009	0.010	90.0%	0.188	0.248	0.187	0.165
2	23:38:00	-0.000	0.000	0.009	0.009	92.6%	0.193	0.287	0.183	0.178
3	23:38:27	0.002	0.000	0.003	0.013	93.0%	0.226	0.276	0.165	0.179
x		0.001	0.001	0.007	0.010	91.9%	0.202	0.270	0.178	0.174
σ		0.001	0.001	0.004	0.002	1.6%	0.021	0.020	0.011	0.008
%RSD		102.000	108.600	50.500	20.110	1.7	10.170	7.390	6.296	4.480
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:37:33	49.950	49.680	95.2%	-0.011	-0.016	0.038	0.035	0.037	113.4%
2	23:38:00	50.440	50.170	97.4%	-0.014	-0.014	0.039	0.035	0.037	115.7%
3	23:38:27	49.800	49.410	97.9%	-0.015	-0.014	0.051	0.041	0.043	117.4%
x		50.070	49.750	96.8%	-0.013	-0.014	0.043	0.037	0.039	115.5%
σ		0.336	0.387	1.4%	0.002	0.001	0.007	0.003	0.003	2.0%
%RSD		0.671	0.778	1.4	13.450	7.502	16.740	8.972	8.149	1.8

TJ24030-008 11/16/2018 23:43:03

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	97.3%	0.006	19.080	20.110	-7.667	T 3170.000	T 36460.000	T 36290.000	T 37800.000
2	23:43:57	97.5%	0.002	18.270	18.860	-5.923	T 3181.000	T 36990.000	T 36900.000	T 37710.000
3	23:44:24	98.0%	-0.002	18.620	19.240	-10.260	T 3170.000	T 36640.000	T 36930.000	T 37220.000
x		97.6%	0.002	18.650	19.400	-7.950	T 3174.000	T 36700.000	T 36710.000	T 37570.000
σ		0.3%	0.004	0.407	0.640	2.182	T 6.099	T 268.500	T 361.700	T 312.300
%RSD		0.4	168.700	2.179	3.299	27.450	T 0.192	T 0.732	T 0.986	T 0.831
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	5.967	T 6836.000	T 47350.000	840.400	M 131500.000	TM 129000.000	T 90.5%	0.894	0.567
2	23:43:57	6.042	T 6858.000	T 47690.000	851.400	M 133900.000	TM 130100.000	88.5%	0.833	-0.004
3	23:44:24	6.044	T 6785.000	T 47590.000	858.300	M 132800.000	TM 130100.000	89.8%	0.786	0.447
x		6.018	T 6826.000	T 47550.000	850.000	M 132700.000	TM 129700.000	T 89.6%	0.838	0.337
σ		0.044	T 37.800	T 173.500	9.035	M 1204.000	TM 652.000	T 1.0%	0.055	0.301
%RSD		0.729	T 0.554	T 0.365	1.063	M 0.907	TM 0.503	T 1.1	6.511	89.290
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	0.951	4761.000	10.950	0.501	17.100	290.400	0.110	1.293	0.152
2	23:43:57	0.912	5216.000	10.800	0.495	16.400	280.400	0.123	1.150	-0.149
3	23:44:24	0.981	5020.000	9.326	0.513	16.200	280.000	0.111	1.128	-0.125
x		0.948	4999.000	10.360	0.503	16.570	283.600	0.115	1.190	-0.041
σ		0.035	228.500	0.900	0.009	0.473	5.859	0.008	0.090	0.167
%RSD		3.688	4.571	8.683	1.855	2.852	2.066	6.587	7.546	410.400
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	0.440	0.599	2.252	5.467	3.970	0.093	0.069	5.265	5.972
2	23:43:57	0.457	0.601	2.115	4.972	4.091	0.065	0.052	6.052	6.988
3	23:44:24	0.442	0.621	2.041	5.183	3.895	0.314	0.093	5.457	5.364
x		0.446	0.607	2.136	5.208	3.986	0.157	0.071	5.591	6.108
σ		0.010	0.013	0.107	0.249	0.099	0.137	0.021	0.411	0.821
%RSD		2.130	2.075	5.011	4.773	2.480	87.060	29.130	7.344	13.430
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	1.373	0.334	1.250	116.900	90.7%	0.190	0.192	0.204	2.305
2	23:43:57	1.580	0.393	1.162	117.100	89.9%	0.201	0.224	0.207	1.560
3	23:44:24	1.288	0.261	-0.893	116.800	89.5%	0.212	0.248	0.207	1.827
x		1.414	0.329	0.507	116.900	90.0%	0.201	0.221	0.206	1.897
σ		0.150	0.066	1.213	0.176	0.6%	0.011	0.028	0.002	0.377
%RSD		10.620	20.000	239.500	0.151	0.7	5.515	12.530	0.872	19.890
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	0.001	0.002	0.015	0.010	91.3%	0.165	0.230	0.101	0.112
2	23:43:57	0.000	0.002	0.013	0.014	92.0%	0.194	0.229	0.134	0.106
3	23:44:24	0.000	0.003	0.018	0.010	90.9%	0.150	0.253	0.105	0.100
x		0.001	0.003	0.015	0.011	91.4%	0.170	0.237	0.113	0.106
σ		0.000	0.000	0.002	0.003	0.6%	0.022	0.014	0.018	0.006
%RSD		57.420	11.800	13.700	23.330	0.6	13.050	5.806	15.870	5.425
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:43:30	68.300	67.900	95.2%	-0.013	-0.014	0.010	0.013	0.010	113.1%
2	23:43:57	67.580	67.810	96.2%	-0.011	-0.012	0.017	0.015	0.016	115.1%
3	23:44:24	68.790	68.180	97.8%	-0.009	-0.015	0.007	0.017	0.011	116.2%
x		68.220	67.960	96.4%	-0.011	-0.014	0.011	0.015	0.012	114.8%
σ		0.610	0.192	1.3%	0.002	0.002	0.005	0.002	0.003	1.6%
%RSD		0.894	0.283	1.4	16.970	11.950	45.040	13.310	25.410	1.4

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	95.2%	75.750	91.640	92.080	-3.777	T 3984.000	T 36800.000	T 37000.000	T 37870.000
2	23:49:52	98.0%	72.250	94.000	95.480	-8.955	T 3939.000	T 36750.000	T 36690.000	T 37260.000
3	23:50:19	99.2%	73.340	94.390	96.780	-9.809	T 3972.000	T 36840.000	T 37240.000	T 37640.000
x		97.5%	73.780	93.340	94.780	-7.514	T 3965.000	T 36790.000	T 36980.000	T 37590.000
σ		2.1%	1.791	1.489	2.430	3.264	T 23.350	T 44.700	T 273.200	T 304.900
%RSD		2.1	2.427	1.595	2.564	43.440	T 0.589	T 0.122	T 0.739	T 0.811
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	97.090	T 7657.000	T 47120.000	T 1815.000	M 130300.000	TM 128600.000	89.0%	102.700	104.200
2	23:49:52	97.180	T 7513.000	T 48050.000	T 1757.000	M 131700.000	TM 128900.000	89.1%	103.300	102.500
3	23:50:19	97.790	T 7458.000	T 47710.000	T 1768.000	M 130600.000	TM 128600.000	89.9%	104.600	103.500
x		97.350	T 7543.000	T 47630.000	T 1780.000	M 130900.000	TM 128700.000	89.3%	103.500	103.400
σ		0.383	T 102.400	T 472.300	T 30.660	M 741.500	TM 171.300	0.5%	0.972	0.863
%RSD		0.393	T 1.358	T 0.992	T 1.723	M 0.567	TM 0.133	0.5	0.939	0.835
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	101.300	5373.000	1103.000	99.310	T 1050.000	1277.000	94.540	90.890	89.780
2	23:49:52	99.810	6147.000	1109.000	99.520	T 1061.000	1295.000	96.340	92.330	90.950
3	23:50:19	99.350	5789.000	1103.000	99.050	T 1054.000	1289.000	96.240	91.640	91.800
x		100.200	5770.000	1105.000	99.290	T 1055.000	1287.000	95.710	91.620	90.840
σ		1.011	387.200	3.479	0.234	T 5.467	9.548	1.012	0.722	1.013
%RSD		1.010	6.712	0.315	0.236	T 0.518	0.742	1.058	0.788	1.115
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	90.670	94.350	92.670	97.990	95.480	100.500	96.490	5.429	5.398
2	23:49:52	91.560	94.490	93.740	99.220	95.570	99.180	95.200	5.518	6.184
3	23:50:19	89.670	93.470	92.930	96.100	94.800	98.940	94.910	5.256	6.202
x		90.640	94.100	93.120	97.770	95.280	99.520	95.530	5.401	5.928
σ		0.944	0.551	0.559	1.573	0.421	0.815	0.842	0.133	0.459
%RSD		1.041	0.586	0.600	1.609	0.441	0.819	0.881	2.464	7.750
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	421.700	95.570	0.894	T 215.200	89.2%	100.500	101.400	99.490	97.450
2	23:49:52	420.700	95.080	1.796	T 219.200	89.0%	101.500	103.000	100.200	98.070
3	23:50:19	427.400	96.800	0.995	T 218.100	90.0%	101.500	102.800	101.500	102.200
x		423.300	95.820	1.228	T 217.500	89.4%	101.200	102.400	100.400	99.220
σ		3.593	0.887	0.494	T 2.060	0.6%	0.544	0.865	1.035	2.555
%RSD		0.849	0.925	40.230	T 0.947	0.6	0.538	0.845	1.030	2.575
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	99.460	98.030	96.030	93.550	90.7%	100.200	99.040	102.100	95.380
2	23:49:52	99.370	99.910	97.140	93.970	90.3%	99.730	99.850	102.100	95.290
3	23:50:19	100.600	100.200	97.670	93.570	90.8%	99.720	98.680	102.500	94.360
x		99.800	99.380	96.950	93.690	90.6%	99.870	99.190	102.200	95.010
σ		0.658	1.174	0.836	0.235	0.3%	0.261	0.600	0.222	0.566
%RSD		0.659	1.181	0.863	0.251	0.3	0.261	0.604	0.217	0.595
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:49:25	169.800	168.000	97.0%	96.370	102.100	95.960	94.820	97.070	105.9%
2	23:49:52	169.600	167.900	96.5%	96.440	102.100	96.430	95.350	97.600	106.5%
3	23:50:19	170.500	168.400	97.8%	98.080	103.600	96.260	95.650	97.770	110.0%
x		170.000	168.100	97.1%	96.960	102.600	96.220	95.270	97.480	107.5%
σ		0.465	0.282	0.7%	0.969	0.864	0.239	0.418	0.362	2.2%
%RSD		0.273	0.168	0.7	0.999	0.842	0.248	0.439	0.371	2.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	98.4%	0.006	20.340	20.630	-10.520	T 3137.000	T 36880.000	T 37420.000	T 38000.000
2	23:55:46	99.6%	0.006	20.300	21.490	-9.702	T 3164.000	T 37420.000	T 37830.000	T 38710.000
3	23:56:13	102.3%	-0.002	18.730	19.440	-8.653	T 3164.000	T 37280.000	T 37500.000	T 38440.000
x		100.1%	0.003	19.790	20.520	-9.625	T 3155.000	T 37200.000	T 37580.000	T 38380.000
σ		2.0%	0.004	0.919	1.030	0.937	T 15.220	T 278.900	T 217.600	T 353.900
%RSD		2.0	125.900	4.645	5.022	9.734	T 0.482	T 0.750	T 0.579	T 0.922

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	6.139	T 6883.000	T 47940.000	887.800	M 136200.000	TM 133800.000	88.6%	0.951	0.441
2	23:55:46	6.267	T 6892.000	T 48850.000	883.400	M 139200.000	TM 134100.000	88.6%	0.778	0.488
3	23:56:13	6.314	T 6749.000	T 49170.000	861.500	M 139100.000	TM 136000.000	88.0%	0.738	0.252
x		6.240	T 6841.000	T 48650.000	877.600	M 138200.000	TM 134600.000	88.4%	0.822	0.394
σ		0.091	T 80.260	T 636.400	14.090	M 1716.000	TM 1184.000	0.3%	0.113	0.125
%RSD		1.452	T 1.173	T 1.308	1.606	M 1.242	TM 0.879	0.4	13.730	31.770

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	0.954	4575.000	11.420	0.506	18.930	283.700	0.124	1.231	0.049
2	23:55:46	0.964	4652.000	10.860	0.509	17.070	278.500	0.103	1.218	0.100
3	23:56:13	0.944	4936.000	12.700	0.504	16.590	266.400	0.101	1.118	-0.074
x		0.954	4721.000	11.660	0.507	17.530	276.200	0.109	1.189	0.025
σ		0.010	190.500	0.944	0.002	1.238	8.856	0.013	0.062	0.090
%RSD		1.055	4.035	8.101	0.489	7.065	3.206	11.980	5.177	362.300

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	0.394	0.595	1.940	3.970	3.828	0.386	0.099	4.721	4.970
2	23:55:46	0.409	0.566	1.875	5.124	4.060	0.465	0.324	5.866	5.071
3	23:56:13	0.405	0.513	1.957	5.055	3.922	0.438	0.170	5.712	5.715
x		0.403	0.558	1.924	4.716	3.936	0.430	0.198	5.433	5.252
σ		0.008	0.042	0.043	0.647	0.117	0.040	0.115	0.621	0.404
%RSD		1.917	7.454	2.233	13.720	2.965	9.269	58.310	11.430	7.693

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	0.959	0.261	1.281	119.400	90.4%	0.250	0.260	0.254	2.344
2	23:55:46	1.745	0.398	-0.151	121.200	89.5%	0.204	0.285	0.316	1.810
3	23:56:13	2.543	0.628	0.512	119.900	91.3%	0.238	0.200	0.218	2.302
x		1.749	0.429	0.547	120.200	90.4%	0.231	0.248	0.263	2.152
σ		0.792	0.186	0.717	0.898	0.9%	0.024	0.043	0.050	0.297
%RSD		45.270	43.290	131.000	0.748	1.0	10.440	17.490	18.860	13.800

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	-0.000	0.001	0.015	0.007	90.3%	0.306	0.382	0.189	0.137
2	23:55:46	0.001	0.005	0.011	0.009	92.1%	0.242	0.387	0.192	0.148
3	23:56:13	-0.000	0.002	0.011	0.014	93.3%	0.222	0.327	0.175	0.148
x		0.000	0.003	0.012	0.010	91.9%	0.257	0.366	0.186	0.144
σ		0.001	0.002	0.003	0.004	1.5%	0.044	0.033	0.009	0.006
%RSD		365.600	79.920	20.430	39.910	1.6	17.190	9.131	4.800	4.201

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	23:55:19	69.880	69.420	97.6%	-0.001	-0.003	0.019	0.016	0.017	114.9%
2	23:55:46	69.820	68.720	98.6%	-0.006	-0.006	0.022	0.019	0.020	117.5%
3	23:56:13	70.860	69.080	100.6%	-0.009	-0.009	0.015	0.019	0.018	119.1%
x		70.190	69.080	98.9%	-0.005	-0.006	0.019	0.018	0.018	117.2%
σ		0.586	0.351	1.5%	0.004	0.003	0.003	0.002	0.001	2.2%
%RSD		0.834	0.508	1.5	73.970	48.500	17.980	8.665	7.207	1.8

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	100.4%	-0.002	25.230	26.870	1.340	T 6479.000	T 33800.000	T 34380.000	T 34740.000
2	00:01:44	101.9%	0.003	26.150	26.860	-1.107	T 6472.000	T 34040.000	T 34390.000	T 34980.000
3	00:02:11	101.7%	0.003	27.470	27.610	1.420	T 6607.000	T 34840.000	T 34540.000	T 35140.000
x		101.3%	0.001	26.280	27.110	0.551	T 6519.000	T 34230.000	T 34430.000	T 34960.000
σ		0.8%	0.002	1.127	0.432	1.437	T 76.050	T 545.100	T 87.600	T 201.200
%RSD		0.8	191.300	4.287	1.593	260.800	T 1.167	T 1.593	T 0.254	T 0.576
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	9.020	T 5234.000	T 49540.000	T 1253.000	M 109800.000	TM 107900.000	90.3%	0.870	0.264
2	00:01:44	9.072	T 5139.000	T 49300.000	T 1250.000	M 110300.000	TM 108500.000	90.5%	0.815	0.020
3	00:02:11	9.403	T 5162.000	T 50290.000	T 1261.000	M 112000.000	TM 108800.000	90.3%	1.003	0.151
x		9.165	T 5178.000	T 49710.000	T 1255.000	M 110700.000	TM 108400.000	90.3%	0.896	0.145
σ		0.208	T 49.140	T 518.300	T 5.769	M 1157.000	TM 424.800	0.1%	0.097	0.122
%RSD		2.268	T 0.949	T 1.043	T 0.460	M 1.045	TM 0.392	0.1	10.780	84.400
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	0.894	4884.000	23.280	1.435	28.020	249.700	0.099	0.975	-0.213
2	00:01:44	0.906	5130.000	22.760	1.463	26.740	241.400	0.108	0.975	0.056
3	00:02:11	0.910	5023.000	22.150	1.475	26.120	240.000	0.092	0.938	-0.325
x		0.903	5012.000	22.730	1.458	26.960	243.700	0.100	0.962	-0.161
σ		0.008	123.200	0.564	0.020	0.966	5.255	0.008	0.022	0.196
%RSD		0.886	2.459	2.482	1.398	3.582	2.157	7.953	2.244	121.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	0.228	0.328	1.329	3.738	2.753	0.423	-0.117	5.959	6.118
2	00:01:44	0.268	0.351	1.365	3.673	3.023	0.079	-0.084	6.030	5.622
3	00:02:11	0.249	0.362	1.371	4.168	2.768	0.279	0.176	5.884	5.954
x		0.248	0.347	1.355	3.860	2.848	0.260	-0.008	5.958	5.898
σ		0.020	0.017	0.023	0.269	0.152	0.173	0.160	0.073	0.253
%RSD		8.095	4.910	1.684	6.968	5.320	66.440	1906.000	1.224	4.288
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	0.179	0.063	0.940	89.890	91.1%	0.135	0.178	0.108	1.331
2	00:01:44	0.888	0.225	0.767	90.120	91.7%	0.127	0.168	0.144	1.809
3	00:02:11	0.414	0.112	0.153	90.290	92.6%	0.084	0.117	0.124	2.069
x		0.493	0.133	0.620	90.100	91.8%	0.115	0.154	0.125	1.736
σ		0.361	0.083	0.414	0.200	0.8%	0.027	0.033	0.018	0.374
%RSD		73.160	62.260	66.670	0.222	0.8	23.780	21.110	14.280	21.540
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	0.000	0.001	0.040	0.022	91.7%	0.303	0.399	0.098	0.090
2	00:01:44	-0.003	0.001	0.029	0.028	92.2%	0.326	0.397	0.107	0.090
3	00:02:11	0.001	0.001	0.037	0.024	93.8%	0.306	0.411	0.107	0.091
x		-0.000	0.001	0.035	0.025	92.6%	0.312	0.402	0.104	0.091
σ		0.002	0.000	0.005	0.003	1.1%	0.013	0.008	0.005	0.001
%RSD		546.200	24.990	15.090	12.780	1.2	4.051	1.957	5.156	0.584
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:01:17	50.430	49.100	97.4%	-0.010	-0.012	0.031	0.038	0.034	115.4%
2	00:01:44	50.630	49.840	99.2%	-0.008	-0.010	0.037	0.043	0.034	115.9%
3	00:02:11	49.710	49.830	100.8%	-0.012	-0.012	0.032	0.029	0.029	117.8%
x		50.250	49.590	99.1%	-0.010	-0.011	0.033	0.036	0.032	116.4%
σ		0.483	0.426	1.7%	0.002	0.001	0.003	0.007	0.003	1.3%
%RSD		0.961	0.858	1.7	17.660	12.240	10.030	19.770	9.840	1.1

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	98.0%	0.007	16.300	16.680	3.985	T 5934.000	T 31990.000	T 32190.000	T 32240.000
2	00:07:40	98.5%	0.007	17.370	16.720	1.282	T 5934.000	T 32160.000	T 32220.000	T 32500.000
3	00:08:07	99.8%	0.003	16.220	17.330	2.526	T 5988.000	T 31840.000	T 32020.000	T 32770.000
x		98.8%	0.005	16.630	16.910	2.597	T 5952.000	T 32000.000	T 32150.000	T 32500.000
σ		1.0%	0.002	0.642	0.363	1.353	T 31.060	T 157.400	T 109.700	T 265.400
%RSD		1.0	43.270	3.860	2.148	52.090	T 0.522	T 0.492	T 0.341	T 0.817
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	19.100	T 5429.000	T 50220.000	T 1116.000	99430.000	T 98130.000	88.1%	0.838	0.580
2	00:07:40	19.950	T 5420.000	T 50670.000	T 1113.000	98810.000	T 98310.000	88.7%	1.003	0.322
3	00:08:07	19.560	T 5365.000	T 50650.000	T 1112.000	99660.000	T 97390.000	89.3%	0.898	0.388
x		19.540	T 5404.000	T 50510.000	T 1114.000	99300.000	T 97940.000	88.7%	0.913	0.430
σ		0.425	T 34.670	T 252.400	T 2.171	438.200	T 486.600	0.6%	0.084	0.134
%RSD		2.177	T 0.642	T 0.500	T 0.195	0.441	T 0.497	0.7	9.180	31.180
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	1.031	5052.000	28.920	1.178	35.330	227.900	0.099	0.845	0.105
2	00:07:40	0.977	5264.000	29.190	1.201	32.370	214.300	0.087	0.752	-0.198
3	00:08:07	1.011	5342.000	27.850	1.149	32.730	217.700	0.091	0.882	-0.398
x		1.007	5219.000	28.660	1.176	33.480	220.000	0.092	0.826	-0.164
σ		0.027	150.000	0.708	0.026	1.615	7.088	0.006	0.067	0.253
%RSD		2.722	2.875	2.470	2.228	4.825	3.222	6.520	8.063	154.900
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	0.540	0.659	1.320	3.255	2.561	0.069	0.189	8.316	8.263
2	00:07:40	0.534	0.699	1.410	3.191	2.776	0.376	0.226	7.670	7.196
3	00:08:07	0.540	0.673	1.326	3.281	2.421	0.097	-0.041	7.591	7.343
x		0.538	0.677	1.352	3.242	2.586	0.181	0.125	7.859	7.601
σ		0.003	0.020	0.051	0.046	0.179	0.169	0.144	0.397	0.578
%RSD		0.628	2.976	3.741	1.421	6.910	93.600	115.800	5.057	7.608
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	0.258	0.089	1.189	75.480	89.4%	0.142	0.220	0.157	1.483
2	00:07:40	1.111	0.263	0.113	74.460	90.3%	0.130	0.152	0.188	1.068
3	00:08:07	1.455	0.310	-0.439	75.720	89.2%	0.149	0.160	0.185	1.338
x		0.942	0.221	0.288	75.220	89.6%	0.140	0.177	0.177	1.296
σ		0.616	0.116	0.828	0.670	0.6%	0.010	0.037	0.017	0.211
%RSD		65.440	52.570	287.600	0.890	0.6	7.053	21.030	9.698	16.240
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	-0.000	-0.001	0.036	0.037	91.2%	0.160	0.269	0.074	0.068
2	00:07:40	-0.000	0.002	0.032	0.026	91.3%	0.156	0.259	0.071	0.065
3	00:08:07	0.001	0.002	0.038	0.036	90.8%	0.224	0.287	0.085	0.084
x		0.000	0.001	0.035	0.033	91.1%	0.180	0.272	0.077	0.072
σ		0.001	0.001	0.003	0.006	0.2%	0.038	0.014	0.008	0.010
%RSD		245.400	130.700	9.161	17.150	0.3	21.180	5.192	9.875	14.200
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:07:13	41.780	41.920	96.1%	-0.013	-0.011	0.049	0.050	0.053	114.8%
2	00:07:40	41.190	41.160	98.3%	-0.012	-0.011	0.061	0.054	0.059	117.0%
3	00:08:07	42.110	41.100	98.1%	-0.008	-0.012	0.056	0.049	0.054	118.3%
x		41.690	41.390	97.5%	-0.011	-0.012	0.055	0.051	0.056	116.7%
σ		0.462	0.455	1.2%	0.002	0.000	0.006	0.003	0.003	1.7%
%RSD		1.108	1.099	1.2	22.760	4.150	10.540	5.569	5.928	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	95.8%	0.007	24.740	25.890	1.998	T 88320.000	T 32590.000	T 32480.000	T 32800.000
2	00:13:35	95.1%	-0.002	25.700	25.810	1.897	T 87430.000	T 32180.000	T 32420.000	T 33110.000
3	00:14:02	96.5%	-0.002	24.890	26.150	-2.580	T 87620.000	T 32160.000	T 32030.000	T 32670.000
x		95.8%	0.001	25.110	25.950	0.439	T 87790.000	T 32310.000	T 32310.000	T 32860.000
σ		0.7%	0.005	0.514	0.177	2.614	T 468.600	T 241.300	T 242.000	T 226.900
%RSD		0.8	389.400	2.048	0.681	596.300	T 0.534	T 0.747	T 0.749	T 0.691
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	38.060	T 4706.000	T 53500.000	T 1660.000	96670.000	T 96040.000	88.3%	1.308	0.693
2	00:13:35	T 38.090	T 4619.000	T 53400.000	T 1691.000	96740.000	T 95460.000	87.0%	1.309	0.697
3	00:14:02	38.150	T 4555.000	T 53960.000	T 1647.000	96780.000	T 95650.000	86.8%	1.321	0.689
x		T 38.100	T 4626.000	T 53620.000	T 1666.000	96730.000	T 95720.000	87.4%	1.313	0.693
σ		T 0.043	T 76.000	T 295.600	T 22.660	58.780	T 295.500	0.8%	0.007	0.004
%RSD		T 0.114	T 1.643	T 0.551	T 1.360	0.061	T 0.309	0.9	0.559	0.606
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	1.014	4883.000	69.490	1.704	76.530	271.800	0.161	0.956	-0.206
2	00:13:35	0.972	4995.000	73.050	1.774	77.860	259.800	0.156	1.061	0.090
3	00:14:02	0.953	5054.000	71.460	1.766	75.140	250.000	0.167	0.991	0.448
x		0.980	4977.000	71.330	1.748	76.510	260.500	0.161	1.003	0.111
σ		0.031	86.700	1.781	0.038	1.357	10.910	0.005	0.053	0.327
%RSD		3.190	1.742	2.497	2.176	1.774	4.186	3.340	5.331	295.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	0.460	0.432	10.650	14.830	13.410	0.084	0.942	14.330	13.690
2	00:13:35	0.499	0.395	11.120	13.680	13.190	-0.060	0.472	13.910	14.350
3	00:14:02	0.423	0.445	11.080	13.440	13.180	0.111	0.155	12.880	14.400
x		0.461	0.424	10.950	13.980	13.260	0.045	0.523	13.700	14.150
σ		0.038	0.026	0.260	0.745	0.132	0.092	0.396	0.747	0.395
%RSD		8.292	6.154	2.377	5.329	0.993	203.100	75.750	5.451	2.793
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	1.469	0.286	-1.764	127.400	89.1%	0.299	0.285	0.287	1.937
2	00:13:35	2.735	0.641	0.805	126.200	88.3%	0.284	0.343	0.282	1.628
3	00:14:02	1.288	0.258	-0.795	127.900	86.9%	0.251	0.312	0.273	1.090
x		1.831	0.395	-0.585	127.200	88.1%	0.278	0.313	0.281	1.551
σ		0.789	0.214	1.298	0.898	1.1%	0.025	0.029	0.007	0.429
%RSD		43.070	54.090	221.900	0.706	1.3	8.847	9.300	2.630	27.630
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	0.003	0.000	0.007	0.016	90.5%	0.208	0.275	0.112	0.100
2	00:13:35	0.003	0.002	0.020	0.015	88.4%	0.238	0.260	0.108	0.102
3	00:14:02	0.003	0.003	0.014	0.010	87.7%	0.205	0.290	0.122	0.106
x		0.003	0.002	0.014	0.013	88.9%	0.217	0.275	0.114	0.103
σ		0.000	0.001	0.006	0.003	1.5%	0.018	0.015	0.007	0.003
%RSD		17.060	70.310	46.980	25.440	1.6	8.402	5.347	6.001	3.023
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:13:08	87.220	87.600	96.3%	-0.003	-0.008	0.075	0.048	0.064	111.7%
2	00:13:35	88.830	87.810	95.7%	-0.005	-0.003	0.075	0.055	0.066	111.8%
3	00:14:02	87.050	88.390	96.4%	-0.004	-0.004	0.065	0.061	0.062	111.9%
x		87.700	87.930	96.1%	-0.004	-0.005	0.072	0.054	0.064	111.8%
σ		0.980	0.406	0.4%	0.001	0.003	0.005	0.007	0.002	0.1%
%RSD		1.118	0.462	0.4	30.870	51.260	7.426	12.150	3.294	0.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	99.1%	-0.002	17.640	19.230	7.438	T 11040.000	T 14990.000	T 14880.000	T 15050.000
2	00:19:31	101.7%	-0.002	19.320	19.650	8.391	T 10860.000	T 14960.000	T 15080.000	T 15300.000
3	00:19:58	102.2%	0.007	18.220	18.840	2.353	T 10760.000	T 14690.000	T 14780.000	T 14930.000
x		101.0%	0.001	18.390	19.240	6.061	T 10890.000	T 14880.000	T 14910.000	T 15090.000
σ		1.7%	0.005	0.852	0.403	3.246	T 140.400	T 169.200	T 153.700	T 187.400
%RSD		1.7	371.400	4.633	2.093	53.560	T 1.290	T 1.137	T 1.030	T 1.242
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	60.750	T 3834.000	T 49510.000	762.800	54970.000	T 54070.000	90.5%	1.789	0.293
2	00:19:31	62.750	T 3705.000	T 50250.000	738.800	54390.000	T 54140.000	89.7%	1.637	0.316
3	00:19:58	T 59.420	T 3767.000	T 49160.000	748.500	53710.000	T 53250.000	T 92.6%	1.671	0.252
x		T 60.970	T 3768.000	T 49640.000	750.000	54360.000	T 53820.000	T 90.9%	1.699	0.287
σ		T 1.675	T 64.530	T 559.900	12.070	627.800	T 494.400	T 1.5%	0.080	0.032
%RSD		T 2.748	T 1.713	T 1.128	1.609	1.155	T 0.919	T 1.7	4.706	11.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	1.224	5792.000	78.820	2.419	83.270	183.300	0.083	0.503	-0.234
2	00:19:31	1.198	5833.000	79.430	2.497	83.930	180.500	0.083	0.566	-0.110
3	00:19:58	1.186	5831.000	78.280	2.408	81.480	174.400	0.108	0.534	-0.227
x		1.203	5819.000	78.840	2.441	82.890	179.400	0.091	0.535	-0.190
σ		0.019	23.190	0.574	0.049	1.266	4.509	0.014	0.032	0.069
%RSD		1.593	0.399	0.728	1.994	1.527	2.513	15.620	5.927	36.410
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	0.422	0.400	1.794	2.449	2.204	0.558	-0.077	6.929	6.436
2	00:19:31	0.414	0.474	1.928	3.247	2.322	0.070	0.118	6.356	6.271
3	00:19:58	0.410	0.505	1.856	2.965	2.319	0.280	0.030	6.491	6.128
x		0.415	0.459	1.859	2.887	2.281	0.302	0.024	6.592	6.279
σ		0.006	0.054	0.067	0.405	0.067	0.245	0.098	0.300	0.154
%RSD		1.535	11.690	3.612	14.020	2.948	80.920	415.000	4.544	2.457
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	1.306	0.316	0.460	48.000	92.1%	0.101	0.078	0.070	0.406
2	00:19:31	0.980	0.218	0.130	48.510	89.7%	0.031	0.062	0.062	1.334
3	00:19:58	2.823	0.605	0.072	48.980	90.7%	0.062	0.068	0.051	0.172
x		1.703	0.380	0.221	48.500	90.8%	0.065	0.069	0.061	0.637
σ		0.983	0.201	0.209	0.492	1.2%	0.035	0.008	0.010	0.615
%RSD		57.740	53.000	94.830	1.013	1.3	53.930	11.790	15.710	96.420
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	-0.001	0.001	0.004	0.008	92.4%	0.134	0.149	0.074	0.077
2	00:19:31	0.003	0.000	0.006	0.002	91.3%	0.129	0.170	0.082	0.077
3	00:19:58	0.000	0.001	0.002	0.005	93.2%	0.120	0.149	0.072	0.057
x		0.001	0.001	0.004	0.005	92.3%	0.128	0.156	0.076	0.070
σ		0.002	0.000	0.002	0.003	1.0%	0.007	0.012	0.005	0.011
%RSD		316.800	53.140	53.430	68.360	1.0	5.547	7.910	6.384	16.170
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:19:04	13.370	13.430	98.4%	-0.011	-0.011	0.084	0.092	0.084	117.7%
2	00:19:31	13.640	13.580	98.7%	-0.015	-0.014	0.098	0.089	0.089	119.5%
3	00:19:58	13.090	13.460	100.3%	-0.012	-0.012	0.102	0.079	0.084	119.8%
x		13.370	13.490	99.1%	-0.013	-0.013	0.095	0.086	0.086	119.0%
σ		0.272	0.083	1.0%	0.002	0.001	0.009	0.007	0.003	1.2%
%RSD		2.031	0.613	1.0	13.260	10.890	9.761	7.924	3.381	1.0

TJ24030-017 11/17/2018 00:24:33

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	98.6%	0.006	10.790	11.200	-4.157	T 4979.000	T 27950.000	T 27840.000	T 28210.000
2	00:25:28	98.8%	0.013	10.860	10.630	-7.192	T 5014.000	T 27640.000	T 27890.000	T 28360.000
3	00:25:56	100.7%	0.002	10.190	10.140	-10.130	T 4872.000	T 27160.000	T 27340.000	T 27990.000
x		99.4%	0.007	10.610	10.660	-7.158	T 4955.000	T 27580.000	T 27690.000	T 28190.000
σ		1.2%	0.006	0.367	0.530	2.984	T 74.020	T 395.200	T 303.700	T 189.300
%RSD		1.2	78.790	3.462	4.976	41.690	T 1.494	T 1.433	T 1.097	T 0.672

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	50.450	T 7242.000	T 48450.000	T 1186.000	76770.000	T 75940.000	89.9%	2.418	0.121
2	00:25:28	49.070	T 7205.000	T 49390.000	T 1208.000	77520.000	T 76970.000	90.2%	1.955	0.394
3	00:25:56	48.730	T 7028.000	T 48510.000	T 1161.000	77390.000	T 76510.000	89.7%	2.207	0.335
x		49.420	T 7159.000	T 48780.000	T 1185.000	77230.000	T 76480.000	90.0%	2.193	0.283
σ		0.907	T 114.200	T 528.500	T 23.240	401.000	T 517.500	0.3%	0.232	0.144
%RSD		1.836	T 1.596	T 1.083	T 1.961	0.519	T 0.677	0.3	10.560	50.740

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	0.639	6363.000	439.800	59.150	T 453.000	573.400	0.218	0.893	0.199
2	00:25:28	0.602	6310.000	444.600	59.600	T 455.300	581.000	0.211	0.829	0.026
3	00:25:56	0.607	6542.000	445.500	58.380	T 449.600	574.000	0.206	0.778	-0.054
x		0.616	6405.000	443.300	59.040	T 452.600	576.200	0.212	0.833	0.057
σ		0.020	121.500	3.051	0.618	T 2.893	4.221	0.006	0.057	0.129
%RSD		3.229	1.896	0.688	1.046	T 0.639	0.733	3.031	6.885	226.300

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	0.201	0.286	1.121	4.602	3.522	1.148	0.005	6.149	8.132
2	00:25:28	0.210	0.265	1.166	4.312	3.378	1.910	-0.225	6.436	7.254
3	00:25:56	0.225	0.311	1.170	4.175	3.384	1.695	-0.258	7.041	6.381
x		0.212	0.287	1.152	4.363	3.428	1.584	-0.159	6.542	7.256
σ		0.012	0.023	0.027	0.218	0.081	0.393	0.143	0.456	0.876
%RSD		5.585	8.058	2.381	4.995	2.377	24.810	90.110	6.963	12.070

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	-0.709	-0.171	-0.519	T 314.800	91.4%	1.450	1.392	1.419	6.577
2	00:25:28	1.607	0.360	-0.683	T 313.600	91.9%	1.435	1.536	1.430	7.498
3	00:25:56	1.241	0.311	1.267	T 320.400	90.5%	1.358	1.485	1.389	6.076
x		0.713	0.167	0.022	T 316.300	91.3%	1.414	1.471	1.413	6.717
σ		1.245	0.293	1.081	T 3.634	0.7%	0.049	0.073	0.022	0.722
%RSD		174.600	175.900	4955.000	T 1.149	0.8	3.497	4.982	1.525	10.740

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	0.001	0.001	0.001	0.008	91.6%	0.182	0.260	0.046	0.060
2	00:25:28	-0.001	-0.001	0.009	0.002	92.4%	0.160	0.240	0.079	0.059
3	00:25:56	-0.002	0.001	0.001	0.002	93.0%	0.141	0.276	0.071	0.057
x		-0.000	0.001	0.003	0.004	92.3%	0.161	0.259	0.065	0.059
σ		0.002	0.001	0.005	0.003	0.7%	0.020	0.018	0.017	0.001
%RSD		442.900	175.900	135.200	85.440	0.8	12.650	6.895	26.510	1.968

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:25:00	78.920	77.800	98.3%	-0.015	-0.015	0.056	0.058	0.059	116.8%
2	00:25:28	79.540	79.330	97.9%	-0.014	-0.015	0.075	0.063	0.064	118.1%
3	00:25:56	79.490	80.180	99.1%	-0.016	-0.017	0.066	0.062	0.062	118.5%
x		79.320	79.100	98.4%	-0.015	-0.016	0.065	0.061	0.062	117.8%
σ		0.342	1.207	0.6%	0.001	0.001	0.009	0.002	0.002	0.9%
%RSD		0.431	1.526	0.7	6.171	6.556	14.250	4.064	3.529	0.8

CCV MW10535 11/17/2018 00:30:31 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	82.9%	296.900	289.900	294.000	11.670	┬57910.000	┬59040.000	┬58040.000	┬58370.000
2	00:31:25	85.1%	296.700	278.500	292.200	12.130	┬59170.000	┬59830.000	┬59270.000	┬60230.000
3	00:31:51	84.1%	297.200	286.100	291.600	7.946	┬58640.000	┬59840.000	┬59080.000	┬59900.000
x		84.0%	98.972%	94.951%	97.526%	10.580	┬97.622%	┬59570.000	┬58800.000	┬99.162%
σ		1.1%	n/a	n/a	n/a	2.295	┬n/a	┬461.100	┬661.400	┬n/a
%RSD		1.3	0.099	2.030	0.436	21.680	┬1.077	┬0.774	┬1.125	┬1.670
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	287.500	┬3143.000	299.800	┬59790.000	59180.000	┬58660.000	88.5%	285.300	┬292.200
2	00:31:25	297.500	┬3070.000	318.700	┬58640.000	60590.000	┬59330.000	87.1%	295.800	┬300.100
3	00:31:51	297.100	┬3137.000	336.000	┬59580.000	61390.000	┬59910.000	87.4%	293.200	┬297.700
x		98.016%	┬103.891%	318.100	┬98.891%	60390.000	┬98.838%	87.7%	97.149%	┬98.884%
σ		n/a	┬n/a	18.140	┬n/a	1116.000	┬n/a	0.7%	n/a	┬n/a
%RSD		1.931	┬1.300	5.701	┬1.033	1.848	┬1.053	0.8	1.888	┬1.359
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	288.400	-553.300	┬57920.000	┬276.800	┬57950.000	┬55550.000	286.300	279.900	268.100
2	00:31:25	298.200	-727.200	┬58990.000	┬279.900	┬58870.000	┬56520.000	288.900	280.100	270.200
3	00:31:51	295.400	-317.200	┬59160.000	┬283.000	┬59170.000	┬57160.000	┬277.500	276.100	272.000
x		98.009%	-532.500	┬58690.000	┬93.294%	┬58660.000	┬94.018%	┬94.749%	92.896%	270.100
σ		n/a	205.800	┬672.500	┬n/a	┬636.100	┬n/a	┬n/a	n/a	1.946
%RSD		1.716	38.640	┬1.146	┬1.115	┬1.084	┬1.437	┬2.103	0.803	0.720
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	262.200	278.600	281.900	273.900	274.400	282.600	274.300	0.659	-0.458
2	00:31:25	268.500	278.800	283.100	276.600	279.100	288.900	279.700	0.730	-0.072
3	00:31:51	265.400	272.600	279.900	280.300	276.100	288.600	274.700	0.593	-0.279
x		265.400	92.228%	93.882%	276.900	276.600	95.560%	276.200	0.661	-0.269
σ		3.178	n/a	n/a	3.194	2.388	n/a	3.011	0.069	0.193
%RSD		1.198	1.270	0.571	1.153	0.863	1.248	1.090	10.430	71.700
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	1257.000	273.400	3.472	┬308.600	84.5%	306.200	308.200	306.000	291.400
2	00:31:25	1245.000	276.200	2.814	┬308.100	85.2%	308.500	310.000	310.400	286.200
3	00:31:51	1218.000	272.400	0.444	┬306.000	86.3%	309.900	309.000	306.500	291.500
x		1240.000	91.331%	2.243	┬102.517%	85.3%	102.737%	103.022%	307.600	289.700
σ		19.950	n/a	1.593	┬n/a	0.9%	n/a	n/a	2.385	3.038
%RSD		1.609	0.723	71.000	┬0.437	1.1	0.597	0.292	0.775	1.049
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	307.600	305.500	290.700	285.800	83.8%	298.900	299.700	319.300	300.700
2	00:31:25	311.900	308.800	291.800	285.800	84.2%	301.400	303.300	322.800	298.000
3	00:31:51	304.300	299.700	287.900	285.300	86.2%	301.500	300.700	319.900	300.900
x		102.634%	304.700	290.200	95.212%	84.7%	100.193%	100.410%	320.700	99.954%
σ		n/a	4.565	2.013	n/a	1.3%	n/a	n/a	1.859	n/a
%RSD		1.240	1.498	0.694	0.113	1.5	0.490	0.629	0.580	0.538
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:30:57	305.100	302.200	87.8%	300.200	┬286.100	299.800	296.300	┬290.900	89.5%
2	00:31:25	304.700	303.400	89.2%	297.500	┬283.900	┬283.700	290.700	┬285.700	92.0%
3	00:31:51	300.600	297.600	90.1%	297.900	┬287.100	297.200	293.700	┬291.400	95.4%
x		101.156%	100.356%	89.0%	298.500	┬95.226%	┬97.849%	97.854%	┬96.443%	92.3%
σ		n/a	n/a	1.1%	1.496	┬n/a	┬n/a	n/a	┬n/a	3.0%
%RSD		0.818	1.012	1.3	0.501	┬0.575	┬2.948	0.954	┬1.085	3.2

CCB IM9061-02 11/17/2018 00:36:26 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	92.5%	0.014	1.558	1.606	6.772	1.490	0.987	0.868	1.050
2	00:37:20	93.2%	-0.002	1.361	1.244	-1.156	1.268	0.886	1.046	0.848
3	00:37:47	93.3%	0.018	0.965	0.925	0.521	1.304	0.835	1.117	0.862
x		93.0%	0.010	1.295	1.258	2.046	1.354	0.903	1.011	0.920
σ		0.4%	0.010	0.302	0.341	4.178	0.119	0.077	0.128	0.113
%RSD		0.5	102.100	23.310	27.100	204.200	8.793	8.582	12.690	12.280
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	0.688	0.368	108.900	1.172	3.131	0.736	87.0%	0.064	-0.038
2	00:37:20	0.659	-0.157	111.700	0.869	0.607	0.813	87.9%	0.146	-0.120
3	00:37:47	0.662	0.005	120.600	0.195	3.896	0.490	88.1%	0.118	-0.010
x		0.670	0.072	113.800	0.745	2.545	0.679	87.7%	0.109	-0.056
σ		0.016	0.269	6.104	0.500	1.721	0.169	0.6%	0.041	0.057
%RSD		2.354	374.000	5.366	67.110	67.640	24.840	0.7	37.850	102.100
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	0.044	2.469	9.399	0.054	9.586	9.919	0.012	0.001	0.013
2	00:37:20	0.031	51.090	7.850	0.035	7.803	8.271	0.011	0.016	-0.062
3	00:37:47	0.056	-0.374	7.170	0.041	6.203	6.607	0.006	0.019	-0.044
x		0.044	17.730	8.140	0.043	7.864	8.266	0.010	0.012	-0.031
σ		0.012	28.930	1.142	0.010	1.692	1.656	0.003	0.010	0.039
%RSD		28.450	163.200	14.030	22.330	21.520	20.040	34.640	81.970	125.500
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	0.001	0.033	-0.105	-0.124	-0.013	0.263	0.012	-0.095	-0.308
2	00:37:20	0.011	0.020	-0.083	-0.128	-0.108	0.124	0.144	-0.328	-0.003
3	00:37:47	0.007	0.009	-0.061	-0.079	-0.056	0.051	0.143	0.010	-0.015
x		0.007	0.021	-0.083	-0.110	-0.059	0.146	0.100	-0.138	-0.109
σ		0.005	0.012	0.022	0.027	0.048	0.108	0.076	0.173	0.173
%RSD		74.730	56.440	26.340	24.550	80.910	73.930	75.830	125.300	158.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	2.568	0.671	1.258	0.010	91.1%	0.326	0.332	0.357	-0.234
2	00:37:20	0.746	0.203	-0.386	0.010	92.1%	0.347	0.273	0.308	-0.706
3	00:37:47	0.631	0.187	0.514	0.009	91.3%	0.282	0.244	0.269	-0.133
x		1.315	0.354	0.462	0.010	91.5%	0.318	0.283	0.312	-0.357
σ		1.087	0.275	0.823	0.001	0.5%	0.033	0.045	0.044	0.306
%RSD		82.630	77.660	178.100	5.197	0.6	10.380	15.860	14.110	85.580
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	0.014	0.016	0.009	0.006	92.3%	0.341	0.443	0.322	0.274
2	00:37:20	0.013	0.015	0.003	0.003	92.3%	0.250	0.428	0.286	0.265
3	00:37:47	0.012	0.017	0.001	-0.002	92.8%	0.279	0.427	0.267	0.274
x		0.013	0.016	0.004	0.002	92.5%	0.290	0.433	0.292	0.271
σ		0.001	0.001	0.004	0.004	0.3%	0.046	0.009	0.028	0.005
%RSD		6.154	4.472	96.320	193.900	0.3	15.960	2.174	9.453	1.958
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:36:53	0.013	0.011	94.6%	0.007	0.002	0.013	0.005	0.008	90.7%
2	00:37:20	0.019	0.019	95.6%	0.002	0.003	0.006	0.012	0.008	94.0%
3	00:37:47	0.024	0.017	97.1%	0.005	-0.001	0.007	0.007	0.007	97.1%
x		0.018	0.016	95.8%	0.004	0.001	0.008	0.008	0.008	94.0%
σ		0.006	0.004	1.2%	0.002	0.002	0.004	0.004	0.001	3.2%
%RSD		31.800	28.360	1.3	53.340	190.200	43.810	45.840	6.795	3.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	91.7%	0.017	14.240	14.890	-4.872	TM 192900.000	T 31110.000	T 31150.000	T 31630.000
2	00:43:15	90.7%	0.002	13.360	14.330	-8.811	TM 192700.000	T 30780.000	T 31100.000	T 31740.000
3	00:43:42	93.0%	0.002	13.910	14.120	-8.565	TM 193500.000	T 31190.000	T 31740.000	T 32000.000
x		91.8%	0.007	13.840	14.450	-7.416	TM 193000.000	T 31030.000	T 31330.000	T 31790.000
σ		1.1%	0.009	0.442	0.398	2.206	TM 421.900	T 216.600	T 359.500	T 188.800
%RSD		1.2	120.100	3.195	2.756	29.750	TM 0.219	T 0.698	T 1.148	T 0.594

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	13.450	T 5252.000	T 58170.000	T 1957.000	M 125700.000	TM 124400.000	87.0%	1.217	0.720
2	00:43:15	13.450	T 5356.000	T 57990.000	T 2005.000	M 127100.000	TM 125100.000	87.2%	1.168	0.494
3	00:43:42	13.780	T 5234.000	T 59310.000	T 1965.000	M 125900.000	TM 124000.000	86.6%	1.130	0.692
x		13.560	T 5281.000	T 58490.000	T 1976.000	M 126300.000	TM 124500.000	86.9%	1.172	0.635
σ		0.191	T 66.000	T 714.400	T 25.530	M 758.000	TM 578.300	0.3%	0.043	0.123
%RSD		1.407	T 1.250	T 1.221	T 1.292	M 0.600	TM 0.465	0.3	3.706	19.430

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	0.917	4848.000	36.210	1.023	39.700	308.600	0.123	1.148	1.761
2	00:43:15	0.927	5324.000	34.600	1.079	38.490	292.400	0.122	1.072	1.497
3	00:43:42	0.925	5561.000	35.060	1.065	T 48.540	285.600	0.121	1.064	1.620
x		0.923	5244.000	35.290	1.056	T 42.240	295.500	0.122	1.095	1.626
σ		0.005	363.400	0.828	0.029	T 5.488	11.840	0.001	0.047	0.132
%RSD		0.579	6.930	2.345	2.777	T 12.990	4.006	0.822	4.256	8.108

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	0.731	0.462	1.046	5.830	4.211	-0.125	0.166	20.170	19.750
2	00:43:15	0.684	0.423	1.066	5.750	4.139	0.633	-0.190	19.820	19.590
3	00:43:42	0.774	0.474	1.030	5.939	4.352	0.117	0.602	20.450	20.740
x		0.730	0.453	1.047	5.840	4.234	0.209	0.193	20.150	20.030
σ		0.045	0.026	0.018	0.095	0.108	0.387	0.397	0.316	0.622
%RSD		6.154	5.838	1.721	1.622	2.552	185.500	205.700	1.566	3.106

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	0.175	0.055	1.281	180.900	87.8%	0.272	0.366	0.316	3.142
2	00:43:15	2.417	0.577	1.391	T 177.600	88.5%	0.325	0.293	0.337	3.280
3	00:43:42	0.612	0.153	0.805	180.600	88.4%	0.318	0.243	0.273	2.391
x		1.068	0.261	1.159	T 179.700	88.2%	0.305	0.301	0.309	2.938
σ		1.188	0.277	0.311	T 1.831	0.4%	0.029	0.062	0.032	0.479
%RSD		111.300	106.100	26.870	T 1.019	0.4	9.419	20.490	10.500	16.290

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	0.003	0.011	0.007	0.008	87.7%	0.263	0.394	0.210	0.189
2	00:43:15	0.002	0.012	0.009	0.014	87.7%	0.259	0.394	0.197	0.171
3	00:43:42	0.005	0.005	0.012	0.018	86.8%	0.266	0.374	0.202	0.213
x		0.003	0.009	0.009	0.013	87.4%	0.263	0.387	0.203	0.191
σ		0.002	0.004	0.002	0.005	0.5%	0.003	0.012	0.006	0.021
%RSD		46.970	38.500	23.810	38.860	0.6	1.280	2.983	3.083	11.050

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:42:48	113.100	110.600	93.0%	-0.011	-0.013	0.045	0.042	0.038	110.3%
2	00:43:15	114.500	112.000	93.9%	-0.012	-0.013	0.038	0.034	0.032	111.3%
3	00:43:42	114.300	112.500	93.4%	-0.011	-0.014	0.034	0.035	0.035	110.7%
x		114.000	111.700	93.4%	-0.012	-0.013	0.039	0.037	0.035	110.8%
σ		0.751	1.016	0.4%	0.001	0.001	0.006	0.004	0.003	0.5%
%RSD		0.659	0.910	0.5	5.861	4.606	14.830	10.750	7.624	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	90.1%	70.390	82.960	85.090	-8.219	TM 193600.000	T 32290.000	T 32400.000	T 32400.000
2	00:49:10	91.8%	72.190	83.590	86.230	-6.843	TM 192500.000	T 31980.000	T 31350.000	T 32200.000
3	00:49:37	90.9%	68.670	83.060	84.380	-4.507	TM 189400.000	T 31350.000	T 31450.000	T 31850.000
x		90.9%	70.420	83.200	85.230	-6.523	TM 191800.000	T 31870.000	T 31730.000	T 32150.000
σ		0.8%	1.763	0.339	0.934	1.876	TM 2175.000	T 477.200	T 577.600	T 274.900
%RSD		0.9	2.504	0.407	1.096	28.770	TM 1.134	T 1.497	T 1.820	T 0.855
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	111.800	T 6226.000	T 58740.000	T 2939.000	M 124900.000	TM 122000.000	86.8%	106.100	106.500
2	00:49:10	112.100	T 6162.000	T 57840.000	T 2872.000	M 124400.000	TM 123500.000	88.0%	101.400	103.800
3	00:49:37	111.200	T 6249.000	T 58170.000	T 2909.000	M 124700.000	TM 125500.000	87.9%	103.500	104.500
x		111.700	T 6213.000	T 58250.000	T 2907.000	M 124700.000	TM 123700.000	87.5%	103.700	104.900
σ		0.483	T 45.220	T 450.800	T 33.880	M 225.200	TM 1771.000	0.7%	2.369	1.356
%RSD		0.433	T 0.728	T 0.774	T 1.166	M 0.181	TM 1.432	0.8	2.285	1.292
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	99.360	5794.000	1102.000	97.580	T 1066.000	1302.000	95.520	92.630	94.850
2	00:49:10	98.970	5923.000	1090.000	96.080	T 1047.000	1279.000	94.010	90.650	91.670
3	00:49:37	98.660	5925.000	1091.000	96.370	T 1050.000	1282.000	94.330	92.210	92.870
x		99.000	5880.000	1095.000	96.680	T 1054.000	1288.000	94.620	91.830	93.130
σ		0.351	75.050	6.610	0.795	T 10.060	12.310	0.793	1.043	1.604
%RSD		0.355	1.276	0.604	0.822	T 0.954	0.956	0.838	1.136	1.722
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	89.100	91.440	92.400	96.360	92.430	98.760	88.490	20.500	21.860
2	00:49:10	89.230	92.500	91.200	95.400	92.630	95.220	91.990	20.630	22.240
3	00:49:37	87.500	90.900	90.310	95.740	93.440	98.170	90.110	20.660	20.440
x		88.610	91.610	91.310	95.830	92.830	97.380	90.200	20.600	21.510
σ		0.961	0.815	1.050	0.489	0.535	1.893	1.749	0.082	0.945
%RSD		1.084	0.890	1.149	0.510	0.577	1.944	1.940	0.399	4.394
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	402.600	91.560	1.308	T 277.500	87.3%	102.600	103.700	102.200	96.950
2	00:49:10	397.700	89.260	1.759	T 280.500	87.2%	101.200	103.300	102.300	98.550
3	00:49:37	416.600	94.300	0.663	T 282.500	88.0%	102.100	103.500	102.700	98.450
x		405.600	91.710	1.243	T 280.200	87.5%	102.000	103.500	102.400	97.990
σ		9.809	2.526	0.551	T 2.476	0.4%	0.689	0.174	0.294	0.897
%RSD		2.418	2.754	44.290	T 0.884	0.5	0.676	0.168	0.288	0.915
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	95.320	94.140	93.480	90.210	86.0%	98.740	99.310	101.900	93.750
2	00:49:10	95.180	94.250	92.720	91.200	86.8%	98.850	99.960	102.700	95.970
3	00:49:37	95.390	94.870	93.310	89.510	87.3%	98.570	98.750	101.700	95.150
x		95.300	94.420	93.170	90.310	86.7%	98.720	99.340	102.100	94.960
σ		0.108	0.392	0.399	0.851	0.7%	0.146	0.602	0.539	1.126
%RSD		0.113	0.415	0.428	0.942	0.8	0.148	0.606	0.528	1.186
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:48:43	214.000	212.200	92.5%	91.190	97.220	92.620	91.090	93.440	102.2%
2	00:49:10	215.400	213.600	92.1%	93.900	98.290	93.510	92.520	94.420	103.7%
3	00:49:37	215.000	213.300	92.9%	95.150	99.460	94.860	93.430	95.420	104.8%
x		214.800	213.000	92.5%	93.410	98.320	93.660	92.350	94.430	103.6%
σ		0.721	0.738	0.4%	2.025	1.119	1.125	1.180	0.989	1.3%
%RSD		0.336	0.346	0.4	2.168	1.138	1.201	1.278	1.048	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	88.3%	69.760	80.760	83.810	-3.019	TM 191900.000	T 31420.000	T 31530.000	T 32270.000
2	00:55:07	89.7%	70.180	81.070	84.560	-3.749	TM 195800.000	T 32070.000	T 32110.000	T 32660.000
3	00:55:34	89.2%	67.870	84.240	85.180	-4.202	TM 191100.000	T 31730.000	T 31940.000	T 32310.000
x		89.1%	69.270	82.020	84.510	-3.657	TM 192900.000	T 31740.000	T 31860.000	T 32420.000
σ		0.7%	1.230	1.924	0.685	0.597	TM 2555.000	T 323.900	T 298.300	T 214.100
%RSD		0.8	1.776	2.345	0.811	16.330	TM 1.324	T 1.021	T 0.936	T 0.661
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	108.000	T 6267.000	T 56540.000	T 2946.000	M 124700.000	TM 121900.000	86.0%	100.200	103.400
2	00:55:07	109.900	T 6229.000	T 56960.000	T 2917.000	M 123800.000	TM 123500.000	87.1%	100.800	101.200
3	00:55:34	106.700	T 6161.000	T 57560.000	T 2923.000	M 126300.000	TM 124700.000	85.4%	101.400	103.900
x		108.200	T 6219.000	T 57020.000	T 2929.000	M 125000.000	TM 123400.000	86.2%	100.800	102.800
σ		1.609	T 53.720	T 511.400	T 15.310	M 1236.000	TM 1377.000	0.9%	0.590	1.429
%RSD		1.487	T 0.864	T 0.897	T 0.523	M 0.989	TM 1.116	1.0	0.586	1.389
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	96.800	5386.000	1067.000	94.600	T 1032.000	1265.000	93.020	89.570	89.310
2	00:55:07	96.360	5990.000	1074.000	93.940	T 1030.000	1260.000	92.860	89.230	91.850
3	00:55:34	96.650	6073.000	1068.000	96.390	T 1050.000	1241.000	91.070	87.440	90.490
x		96.600	5817.000	1070.000	94.980	T 1038.000	1255.000	92.320	88.740	90.550
σ		0.224	375.100	3.605	1.271	T 10.990	12.880	1.084	1.143	1.272
%RSD		0.232	6.448	0.337	1.338	T 1.059	1.026	1.174	1.288	1.405
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	87.230	91.050	90.280	96.370	91.260	97.060	86.620	22.170	23.200
2	00:55:07	86.010	89.630	89.130	94.080	92.160	99.160	86.450	22.300	23.270
3	00:55:34	86.720	88.960	90.410	95.650	93.340	98.040	88.390	23.660	23.010
x		86.650	89.880	89.940	95.370	92.250	98.090	87.150	22.710	23.160
σ		0.613	1.065	0.706	1.169	1.044	1.048	1.075	0.827	0.136
%RSD		0.707	1.185	0.785	1.225	1.132	1.068	1.234	3.643	0.587
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	411.800	93.170	1.077	T 277.700	86.1%	99.640	101.600	99.690	97.340
2	00:55:07	401.100	90.010	1.818	T 278.800	86.3%	99.690	100.900	100.900	95.480
3	00:55:34	402.400	91.740	-0.613	T 276.700	86.3%	100.900	101.300	98.770	97.650
x		405.100	91.640	0.761	T 277.700	86.2%	100.100	101.300	99.770	96.820
σ		5.842	1.581	1.246	T 1.048	0.1%	0.739	0.341	1.045	1.170
%RSD		1.442	1.725	163.800	T 0.377	0.2	0.738	0.336	1.047	1.208
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	93.730	92.850	90.960	89.340	85.3%	96.780	97.370	101.000	94.270
2	00:55:07	93.830	92.090	92.150	88.990	86.6%	95.520	96.320	101.200	93.590
3	00:55:34	92.790	91.530	91.940	88.790	86.0%	95.680	98.310	100.700	92.930
x		93.450	92.160	91.690	89.040	86.0%	95.990	97.330	101.000	93.600
σ		0.574	0.665	0.635	0.282	0.7%	0.686	0.993	0.266	0.669
%RSD		0.614	0.722	0.693	0.316	0.8	0.714	1.020	0.264	0.714
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	00:54:40	210.900	210.000	91.0%	91.190	95.750	91.280	90.700	92.860	102.2%
2	00:55:07	212.400	211.800	92.9%	90.860	96.380	91.580	90.430	92.870	103.6%
3	00:55:34	213.500	211.600	92.7%	90.810	95.040	92.010	90.370	91.900	103.0%
x		212.300	211.200	92.2%	90.950	95.720	91.630	90.500	92.540	102.9%
σ		1.267	0.972	1.0%	0.209	0.673	0.366	0.176	0.560	0.7%
%RSD		0.597	0.460	1.1	0.230	0.703	0.399	0.195	0.605	0.7

TJ24030-018L(5) 11/17/2018 01:00:09

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	97.1%	0.003	4.864	4.205	6.243	T 44490.000	T 7095.000	T 7098.000	T 7117.000
2	01:01:03	100.1%	-0.002	3.672	4.374	3.109	T 44140.000	T 7104.000	T 7021.000	T 7086.000
3	01:01:31	99.8%	-0.002	3.517	3.837	-2.159	T 43540.000	T 6972.000	T 6819.000	T 6895.000
x		99.0%	-0.000	4.018	4.138	2.398	T 44060.000	T 7057.000	T 6979.000	T 7033.000
σ		1.6%	0.003	0.737	0.275	4.246	T 481.800	T 73.900	T 143.900	T 120.300
%RSD		1.7	141500.000	18.340	6.633	177.100	T 1.094	T 1.047	T 2.061	T 1.711

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	4.071	T 1008.000	T 11980.000	395.100	24700.000	T 24710.000	90.4%	0.274	0.135
2	01:01:03	3.877	T 994.700	T 12210.000	387.400	24510.000	T 24590.000	91.8%	0.357	0.133
3	01:01:31	3.908	T 1005.000	T 11770.000	397.100	24040.000	T 23680.000	T 95.4%	0.393	0.177
x		3.952	T 1003.000	T 11990.000	393.200	24420.000	T 24330.000	T 92.5%	0.342	0.148
σ		0.104	T 7.009	T 223.700	5.116	341.400	T 562.600	T 2.6%	0.061	0.025
%RSD		2.630	T 0.699	T 1.866	1.301	1.398	T 2.313	T 2.8	17.900	16.660

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	0.226	2364.000	7.686	0.214	10.540	59.290	0.025	0.260	0.912
2	01:01:03	0.253	2291.000	7.592	0.191	11.070	61.490	0.022	0.231	0.534
3	01:01:31	0.212	1991.000	7.632	0.184	9.602	55.640	0.031	0.196	0.535
x		0.230	2215.000	7.637	0.196	10.400	58.800	0.026	0.229	0.661
σ		0.020	197.700	0.047	0.016	0.744	2.956	0.005	0.032	0.218
%RSD		8.851	8.925	0.619	8.166	7.151	5.026	17.110	14.090	32.980

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	0.255	0.205	0.967	2.214	1.714	-0.149	0.057	4.576	4.668
2	01:01:03	0.285	0.269	0.974	2.242	1.696	0.122	-0.102	3.822	3.973
3	01:01:31	0.289	0.227	0.983	2.306	1.606	0.027	0.210	3.626	4.370
x		0.277	0.233	0.975	2.254	1.672	-0.000	0.055	4.008	4.337
σ		0.019	0.032	0.008	0.047	0.058	0.138	0.156	0.501	0.349
%RSD		6.740	13.850	0.854	2.102	3.470	35960.000	283.800	12.510	8.037

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	0.860	0.233	1.024	33.730	92.3%	0.141	0.134	0.144	0.395
2	01:01:03	1.197	0.321	1.204	33.610	94.2%	0.161	0.173	0.148	0.345
3	01:01:31	0.450	0.124	1.584	34.030	94.5%	0.138	0.124	0.115	-0.219
x		0.835	0.226	1.271	33.790	93.7%	0.146	0.144	0.136	0.174
σ		0.374	0.099	0.286	0.218	1.2%	0.012	0.026	0.018	0.341
%RSD		44.780	43.590	22.490	0.644	1.2	8.491	17.990	13.210	196.200

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	-0.000	0.002	0.005	-0.002	92.6%	0.183	0.279	0.020	0.019
2	01:01:03	0.002	0.001	0.001	-0.003	93.7%	0.197	0.259	0.037	0.026
3	01:01:31	0.004	0.001	0.003	0.007	95.5%	0.185	0.254	0.012	0.021
x		0.002	0.002	0.003	0.001	94.0%	0.188	0.264	0.023	0.022
σ		0.002	0.000	0.002	0.006	1.4%	0.008	0.013	0.013	0.004
%RSD		108.600	20.570	58.700	681.100	1.5	4.150	4.985	57.170	17.640

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:00:36	21.870	21.890	96.7%	0.000	-0.001	0.021	0.019	0.020	95.8%
2	01:01:03	22.260	21.610	98.5%	-0.002	-0.001	0.020	0.027	0.020	98.1%
3	01:01:31	22.270	22.110	99.0%	0.003	-0.004	0.024	0.020	0.022	101.2%
x		22.130	21.870	98.1%	0.000	-0.002	0.022	0.022	0.021	98.4%
σ		0.226	0.249	1.2%	0.003	0.002	0.002	0.004	0.001	2.7%
%RSD		1.020	1.137	1.2	815.300	101.800	8.022	19.080	6.476	2.8

TJ24030-020 11/17/2018 01:06:06

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	97.3%	0.003	18.900	18.920	7.309	T 75160.000	T 19250.000	T 18970.000	T 19100.000
2	01:07:00	96.7%	-0.002	18.170	18.710	6.415	T 74860.000	T 19070.000	T 19120.000	T 19590.000
3	01:07:27	98.8%	-0.002	18.360	19.960	3.526	T 75440.000	T 19270.000	T 18930.000	T 19400.000
x		97.6%	-0.000	18.480	19.200	5.750	T 75150.000	T 19200.000	T 19010.000	T 19360.000
σ		1.1%	0.002	0.379	0.668	1.977	T 293.000	T 111.100	T 101.500	T 248.500
%RSD		1.1	2542.000	2.049	3.480	34.390	T 0.390	T 0.579	T 0.534	T 1.283

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	10.020	T 4299.000	T 51190.000	T 1261.000	56870.000	T 56200.000	88.4%	0.698	0.421
2	01:07:00	9.801	T 4358.000	T 51730.000	T 1285.000	56950.000	T 56800.000	88.9%	0.911	0.333
3	01:07:27	10.630	T 4296.000	T 52800.000	T 1279.000	57150.000	T 56790.000	89.1%	0.665	0.623
x		10.150	T 4318.000	T 51910.000	T 1275.000	56990.000	T 56600.000	88.8%	0.758	0.459
σ		0.429	T 35.240	T 821.700	T 12.580	143.900	T 340.700	0.4%	0.133	0.148
%RSD		4.221	T 0.816	T 1.583	T 0.986	0.253	T 0.602	0.4	17.550	32.300

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	0.662	5402.000	14.380	0.247	16.650	128.300	0.065	0.599	0.555
2	01:07:00	0.657	5523.000	14.230	0.284	15.900	128.600	0.069	0.494	0.565
3	01:07:27	0.684	5540.000	14.460	0.281	16.770	123.700	0.067	0.634	0.222
x		0.668	5488.000	14.360	0.271	16.440	126.900	0.067	0.576	0.447
σ		0.014	75.410	0.118	0.021	0.467	2.766	0.002	0.073	0.195
%RSD		2.099	1.374	0.823	7.668	2.841	2.180	3.096	12.610	43.650

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	0.989	0.872	1.179	2.617	2.117	0.094	0.436	8.760	9.733
2	01:07:00	0.949	0.949	1.155	2.844	1.899	0.126	0.146	8.603	9.567
3	01:07:27	0.939	0.875	1.176	2.751	1.804	0.061	-0.060	9.078	9.650
x		0.959	0.898	1.170	2.738	1.940	0.094	0.174	8.814	9.650
σ		0.026	0.044	0.013	0.114	0.161	0.033	0.249	0.242	0.083
%RSD		2.761	4.877	1.123	4.172	8.288	34.710	143.200	2.746	0.862

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	1.929	0.409	-1.017	73.330	88.9%	0.388	0.475	0.401	0.979
2	01:07:00	0.495	0.115	-0.201	72.160	90.8%	0.375	0.403	0.407	1.893
3	01:07:27	1.057	0.279	1.079	72.410	91.4%	0.406	0.365	0.345	0.632
x		1.160	0.268	-0.046	72.630	90.4%	0.390	0.414	0.384	1.168
σ		0.723	0.147	1.057	0.613	1.3%	0.016	0.056	0.034	0.652
%RSD		62.290	54.980	2277.000	0.845	1.4	4.064	13.520	8.922	55.800

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	0.001	-0.000	0.005	-0.000	90.4%	0.211	0.291	0.120	0.102
2	01:07:00	-0.001	-0.001	0.001	0.004	91.1%	0.195	0.300	0.115	0.109
3	01:07:27	-0.000	0.002	0.011	0.013	91.7%	0.173	0.227	0.127	0.128
x		0.000	0.000	0.005	0.006	91.1%	0.193	0.273	0.120	0.113
σ		0.001	0.001	0.005	0.006	0.6%	0.019	0.040	0.006	0.013
%RSD		3044.000	302.200	97.540	115.100	0.7	9.944	14.500	4.693	11.630

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:06:33	26.400	26.100	96.4%	-0.009	-0.009	0.012	0.009	0.009	115.9%
2	01:07:00	26.160	25.940	96.8%	-0.009	-0.008	0.017	0.017	0.011	116.8%
3	01:07:27	26.010	25.460	97.6%	-0.009	-0.010	0.011	0.007	0.007	116.3%
x		26.190	25.840	96.9%	-0.009	-0.009	0.013	0.011	0.009	116.3%
σ		0.197	0.335	0.6%	0.000	0.001	0.003	0.005	0.002	0.4%
%RSD		0.750	1.297	0.6	2.301	11.100	25.230	50.100	25.650	0.4

TJ24030-021 11/17/2018 01:12:02

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	97.3%	0.020	35.050	38.060	-36.380	T 10900.000	T 23790.000	T 23900.000	T 24850.000
2	01:12:57	97.3%	0.013	34.320	36.670	-36.270	T 10850.000	T 23610.000	T 24170.000	T 24700.000
3	01:13:25	97.9%	0.015	35.350	37.270	-35.330	T 10890.000	T 23660.000	T 24110.000	T 24670.000
x		97.5%	0.016	34.910	37.330	-35.990	T 10880.000	T 23690.000	T 24060.000	T 24740.000
σ		0.3%	0.004	0.534	0.697	0.577	T 28.590	T 89.120	T 145.400	T 97.640
%RSD		0.3	22.790	1.530	1.868	1.603	T 0.263	T 0.376	T 0.604	T 0.395

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	TM 512.300	T 8861.000	T 43220.000	T 4679.000	M 134200.000	TM 131800.000	88.2%	24.770	1.216
2	01:12:57	TM 513.100	T 8973.000	T 42540.000	T 4778.000	M 133600.000	TM 129800.000	90.7%	25.230	1.350
3	01:13:25	TM 508.200	T 8894.000	T 42900.000	T 4754.000	M 132500.000	TM 129400.000	90.7%	24.760	1.126
x		TM 511.200	T 8909.000	T 42890.000	T 4737.000	M 133400.000	TM 130300.000	89.8%	24.920	1.231
σ		TM 2.625	T 57.830	T 342.100	T 51.910	M 848.600	TM 1290.000	1.5%	0.267	0.113
%RSD		TM 0.513	T 0.649	T 0.798	T 1.096	M 0.636	TM 0.990	1.6	1.073	9.173

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	2.069	6743.000	3027.000	46.470	T 2915.000	3165.000	0.671	1.790	1.080
2	01:12:57	2.062	6560.000	2978.000	46.070	T 2882.000	3066.000	0.634	1.741	1.337
3	01:13:25	1.988	6751.000	2969.000	45.800	T 2860.000	3067.000	0.668	1.726	0.776
x		2.040	6685.000	2992.000	46.110	T 2886.000	3100.000	0.657	1.752	1.064
σ		0.045	107.700	31.410	0.340	T 27.380	56.900	0.021	0.034	0.281
%RSD		2.190	1.611	1.050	0.737	T 0.949	1.836	3.149	1.913	26.380

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	1.386	1.398	3.704	5.787	4.221	2.403	0.354	10.460	10.400
2	01:12:57	1.298	1.480	3.623	5.076	4.061	2.326	0.003	10.070	10.210
3	01:13:25	1.267	1.568	3.515	5.810	4.309	2.205	-0.185	10.190	10.310
x		1.317	1.482	3.614	5.558	4.197	2.311	0.057	10.240	10.310
σ		0.062	0.085	0.095	0.417	0.126	0.099	0.274	0.202	0.095
%RSD		4.674	5.752	2.620	7.511	2.994	4.303	478.300	1.969	0.918

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	0.490	0.124	-0.207	TM 1408.000	91.1%	1.638	1.582	1.609	34.410
2	01:12:57	1.116	0.274	0.276	TM 1403.000	93.1%	1.565	1.658	1.553	29.550
3	01:13:25	-0.728	-0.150	0.754	TM 1412.000	91.9%	1.584	1.726	1.629	30.230
x		0.293	0.082	0.274	TM 1407.000	92.0%	1.596	1.655	1.597	31.400
σ		0.938	0.215	0.481	TM 4.569	1.0%	0.038	0.072	0.040	2.634
%RSD		320.500	260.300	175.100	TM 0.325	1.1	2.376	4.339	2.480	8.389

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	0.078	0.085	0.043	0.044	90.9%	0.338	0.485	0.072	0.077
2	01:12:57	0.088	0.082	0.042	0.049	93.2%	0.371	0.448	0.097	0.091
3	01:13:25	0.080	0.087	0.030	0.049	91.9%	0.343	0.450	0.086	0.070
x		0.082	0.085	0.038	0.047	92.0%	0.351	0.461	0.085	0.079
σ		0.005	0.003	0.007	0.003	1.2%	0.018	0.021	0.013	0.011
%RSD		6.137	3.028	18.490	6.075	1.3	5.094	4.565	14.780	13.460

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:12:29	30.080	30.790	96.9%	-0.007	-0.007	0.458	0.423	0.454	115.6%
2	01:12:57	30.810	29.810	99.2%	-0.007	-0.006	0.484	0.465	0.474	118.9%
3	01:13:25	31.030	30.580	100.5%	-0.007	-0.008	0.472	0.411	0.439	119.3%
x		30.640	30.390	98.9%	-0.007	-0.007	0.471	0.433	0.456	117.9%
σ		0.501	0.513	1.8%	0.000	0.001	0.013	0.028	0.018	2.0%
%RSD		1.636	1.689	1.8	3.888	12.410	2.776	6.539	3.863	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	97.9%	-0.002	18.420	18.510	-9.871	T 13020.000	T 26040.000	T 26100.000	T 26680.000
2	01:18:53	99.2%	-0.002	18.460	17.710	-8.860	T 12940.000	T 25980.000	T 25630.000	T 26150.000
3	01:19:20	97.6%	0.002	17.810	17.960	-12.630	T 12780.000	T 25780.000	T 25730.000	T 26330.000
x		98.2%	-0.000	18.230	18.060	-10.450	T 12910.000	T 25930.000	T 25820.000	T 26390.000
σ		0.9%	0.002	0.366	0.407	1.951	T 118.300	T 139.300	T 245.300	T 267.700
%RSD		0.9	721.300	2.010	2.251	18.670	T 0.917	T 0.537	T 0.950	T 1.015

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	37.140	T 6222.000	T 50490.000	T 1406.000	93620.000	T 91050.000	88.1%	2.204	0.039
2	01:18:53	37.530	T 6123.000	T 49470.000	T 1377.000	92620.000	T 90530.000	89.9%	2.204	0.557
3	01:19:20	37.200	T 6228.000	T 50990.000	T 1418.000	93070.000	T 91240.000	88.4%	2.059	0.195
x		37.290	T 6191.000	T 50310.000	T 1401.000	93100.000	T 90940.000	88.8%	2.156	0.264
σ		0.209	T 59.010	T 774.100	T 21.190	503.100	T 366.800	1.0%	0.084	0.266
%RSD		0.562	T 0.953	T 1.538	T 1.513	0.540	T 0.403	1.1	3.895	100.800

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	0.608	6496.000	468.800	55.370	T 470.100	639.000	0.196	0.887	0.206
2	01:18:53	0.567	6008.000	456.300	54.380	T 463.000	615.400	0.196	0.901	0.317
3	01:19:20	0.591	6437.000	460.400	54.580	T 471.100	621.700	0.198	0.854	0.371
x		0.589	6314.000	461.800	54.780	T 468.100	625.400	0.197	0.881	0.298
σ		0.020	266.600	6.357	0.524	T 4.409	12.240	0.001	0.024	0.084
%RSD		3.468	4.223	1.376	0.957	T 0.942	1.958	0.506	2.744	28.260

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	0.472	0.607	1.110	5.025	3.773	1.383	0.223	11.350	11.570
2	01:18:53	0.477	0.479	1.096	5.272	4.027	0.660	-0.197	10.860	10.830
3	01:19:20	0.463	0.549	1.070	5.203	3.885	0.976	0.290	11.060	10.830
x		0.471	0.545	1.092	5.167	3.895	1.006	0.105	11.090	11.080
σ		0.007	0.064	0.020	0.128	0.127	0.363	0.264	0.248	0.424
%RSD		1.593	11.830	1.868	2.469	3.263	36.050	251.000	2.239	3.826

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	-0.086	0.003	0.539	TM 614.200	90.7%	1.286	1.162	1.277	14.440
2	01:18:53	0.731	0.177	0.035	TM 614.300	92.0%	1.272	1.291	1.248	10.280
3	01:19:20	1.390	0.321	-0.341	TM 621.900	90.7%	1.242	1.366	1.318	11.420
x		0.678	0.167	0.078	TM 616.800	91.2%	1.267	1.273	1.281	12.050
σ		0.740	0.159	0.442	TM 4.391	0.8%	0.023	0.103	0.035	2.149
%RSD		109.000	95.330	566.500	TM 0.712	0.8	1.809	8.068	2.712	17.840

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	-0.001	0.000	0.003	0.000	92.0%	0.199	0.278	0.060	0.046
2	01:18:53	-0.000	0.000	0.003	0.004	92.6%	0.164	0.250	0.077	0.063
3	01:19:20	0.000	0.001	-0.003	0.010	92.3%	0.180	0.245	0.093	0.067
x		-0.000	0.001	0.001	0.005	92.3%	0.181	0.258	0.077	0.059
σ		0.001	0.000	0.004	0.005	0.3%	0.017	0.018	0.017	0.011
%RSD		210.700	48.760	298.900	108.800	0.3	9.650	7.028	21.490	19.420

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:18:26	96.920	96.050	97.4%	-0.009	-0.013	0.052	0.041	0.045	113.5%
2	01:18:53	96.240	95.100	100.1%	-0.011	-0.015	0.042	0.042	0.038	115.7%
3	01:19:20	96.190	96.570	98.7%	-0.010	-0.014	0.047	0.045	0.042	116.4%
x		96.450	95.910	98.7%	-0.010	-0.014	0.047	0.042	0.042	115.2%
σ		0.410	0.744	1.3%	0.001	0.001	0.005	0.002	0.003	1.5%
%RSD		0.425	0.776	1.4	7.304	7.214	11.050	4.829	7.671	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	103.5%	-0.002	-0.502	-0.279	7.567	2.053	1.392	1.252	1.257
2	01:24:49	104.0%	0.003	-0.573	-0.734	3.168	1.558	1.334	1.393	1.461
3	01:25:16	103.1%	-0.002	-0.557	-0.453	6.763	1.798	1.293	1.216	1.309
x		103.6%	-0.000	-0.544	-0.489	5.833	1.803	1.340	1.287	1.342
σ		0.4%	0.003	0.037	0.230	2.342	0.247	0.050	0.094	0.106
%RSD		0.4	6157.000	6.865	46.990	40.160	13.720	3.700	7.289	7.877
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	1.563	1.605	T 50440.000	-4.181	4.411	4.488	92.6%	0.059	0.121
2	01:24:49	1.439	1.809	T 50360.000	-4.304	2.062	4.515	92.4%	0.016	-0.009
3	01:25:16	1.465	1.991	T 51570.000	-4.045	4.434	4.335	92.2%	0.129	0.200
x		1.489	1.801	T 50790.000	-4.177	3.636	4.446	92.4%	0.068	0.104
σ		0.065	0.193	T 675.200	0.129	1.363	0.097	0.2%	0.057	0.106
%RSD		4.376	10.710	T 1.329	3.094	37.480	2.186	0.2	83.900	101.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	0.255	10460.000	3.653	-0.011	3.474	-0.852	-0.003	0.013	-0.048
2	01:24:49	0.266	10650.000	3.354	-0.010	4.224	-0.642	-0.003	0.013	-0.162
3	01:25:16	0.271	10580.000	2.968	-0.012	2.728	-0.878	-0.002	0.005	-0.240
x		0.264	10560.000	3.325	-0.011	3.475	-0.791	-0.003	0.010	-0.150
σ		0.008	94.050	0.344	0.001	0.748	0.130	0.001	0.005	0.097
%RSD		2.943	0.890	10.330	10.400	21.520	16.420	32.830	47.750	64.490
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	0.012	0.020	0.525	2.084	0.564	-0.338	-0.287	3.084	2.847
2	01:24:49	0.012	0.021	0.468	1.635	0.537	0.147	-0.077	3.408	2.928
3	01:25:16	0.022	0.014	0.434	1.761	0.672	-0.046	-0.201	2.939	3.004
x		0.015	0.018	0.476	1.827	0.591	-0.079	-0.188	3.143	2.926
σ		0.005	0.004	0.046	0.232	0.071	0.244	0.106	0.240	0.079
%RSD		35.330	20.610	9.761	12.700	12.090	308.900	56.010	7.640	2.685
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	-0.931	-0.227	-0.894	0.011	93.8%	-0.003	-0.007	0.004	-0.898
2	01:24:49	-0.057	-0.020	-0.453	0.007	93.3%	0.012	0.012	-0.002	-0.541
3	01:25:16	0.758	0.185	-0.211	0.008	94.5%	-0.002	0.003	0.009	-0.992
x		-0.077	-0.021	-0.519	0.009	93.8%	0.002	0.003	0.004	-0.811
σ		0.845	0.206	0.346	0.002	0.6%	0.008	0.009	0.005	0.238
%RSD		1098.000	997.100	66.630	20.680	0.6	387.800	349.100	146.800	29.330
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	-0.001	-0.000	0.006	-0.001	95.8%	0.088	0.166	0.024	0.036
2	01:24:49	-0.001	0.000	0.004	0.003	96.1%	0.108	0.144	0.045	0.030
3	01:25:16	-0.002	0.001	-0.000	0.005	95.9%	0.110	0.128	0.053	0.039
x		-0.001	0.000	0.003	0.003	95.9%	0.102	0.146	0.041	0.035
σ		0.000	0.000	0.003	0.003	0.2%	0.012	0.019	0.015	0.004
%RSD		37.590	131.000	92.500	129.300	0.2	11.570	13.310	36.610	12.810
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:24:23	0.015	-0.002	100.7%	-0.014	-0.018	-0.001	-0.004	-0.003	120.7%
2	01:24:49	0.009	0.005	101.0%	-0.017	-0.016	0.001	-0.003	-0.003	121.4%
3	01:25:16	0.000	0.000	101.9%	-0.015	-0.017	-0.001	-0.003	-0.003	123.5%
x		0.008	0.001	101.2%	-0.015	-0.017	-0.000	-0.003	-0.003	121.9%
σ		0.007	0.003	0.6%	0.001	0.001	0.001	0.001	0.000	1.4%
%RSD		93.640	290.500	0.6	9.298	6.175	285.200	25.390	3.029	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	98.4%	95.480	92.110	94.020	13.470	T 999.300	T 1014.000	1040.000	1057.000
2	01:30:46	98.1%	95.310	91.640	92.910	13.500	T 995.500	T 1009.000	1036.000	1054.000
3	01:31:14	99.4%	94.260	91.360	92.810	9.464	T 988.800	T 1008.000	1029.000	1060.000
x		98.6%	95.010	91.700	93.250	12.150	T 994.500	T 1010.000	1035.000	1057.000
σ		0.7%	0.658	0.378	0.674	2.324	T 5.306	T 3.139	5.590	3.365
%RSD		0.7	0.693	0.412	0.723	19.130	T 0.533	T 0.311	0.540	0.318
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	100.400	T 858.900	T 49820.000	T 963.700	1112.000	1034.000	90.6%	97.410	100.600
2	01:30:46	100.100	927.500	T 49750.000	T 979.100	1095.000	1041.000	91.0%	97.680	99.420
3	01:31:14	102.200	T 857.000	T 50570.000	T 961.500	1088.000	1039.000	90.1%	101.200	101.200
x		100.900	T 881.100	T 50050.000	T 968.100	1098.000	1038.000	90.5%	98.760	100.400
σ		1.148	T 40.180	T 454.300	T 9.606	12.650	3.708	0.4%	2.108	0.899
%RSD		1.138	T 4.561	T 0.908	T 0.992	1.152	0.357	0.5	2.135	0.895
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	98.720	11460.000	1075.000	98.460	T 1018.000	995.500	96.440	91.920	96.240
2	01:30:46	96.850	12110.000	1082.000	98.920	T 1012.000	990.200	95.890	94.530	93.550
3	01:31:14	99.430	12240.000	1098.000	99.780	T 1040.000	1030.000	98.190	90.730	94.630
x		98.330	11940.000	1085.000	99.050	T 1023.000	1005.000	96.840	92.390	94.800
σ		1.336	421.600	11.900	0.673	T 15.080	21.400	1.200	1.941	1.350
%RSD		1.358	3.532	1.097	0.679	T 1.473	2.130	1.239	2.100	1.424
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	93.430	97.610	97.090	101.000	98.850	99.030	100.700	3.223	2.509
2	01:30:46	93.710	96.960	96.830	100.300	97.370	97.090	99.830	2.816	3.189
3	01:31:14	95.650	97.700	95.890	99.000	98.130	101.200	96.280	3.067	2.863
x		94.260	97.420	96.600	100.100	98.120	99.110	98.950	3.035	2.854
σ		1.213	0.402	0.632	1.021	0.739	2.051	2.356	0.206	0.340
%RSD		1.286	0.412	0.654	1.020	0.753	2.070	2.381	6.773	11.920
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	438.300	98.320	-0.905	101.300	89.7%	96.960	95.760	93.220	98.800
2	01:30:46	426.700	96.200	0.229	101.800	90.6%	97.130	97.120	93.110	100.500
3	01:31:14	434.900	98.820	0.529	101.800	90.6%	96.870	96.630	92.910	94.910
x		433.300	97.780	-0.049	101.600	90.3%	96.990	96.500	93.080	98.050
σ		5.945	1.390	0.757	0.284	0.5%	0.135	0.690	0.156	2.846
%RSD		1.372	1.421	1542.000	0.279	0.6	0.139	0.715	0.168	2.902
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	101.700	100.100	97.190	94.550	93.2%	97.080	95.870	100.200	95.070
2	01:30:46	102.500	101.700	97.600	95.380	93.0%	97.680	97.310	100.500	95.120
3	01:31:14	102.500	101.800	97.550	93.630	94.0%	98.220	96.500	100.200	92.920
x		102.200	101.200	97.450	94.520	93.4%	97.660	96.560	100.300	94.370
σ		0.467	0.928	0.225	0.875	0.5%	0.569	0.723	0.195	1.252
%RSD		0.457	0.917	0.231	0.925	0.6	0.583	0.748	0.194	1.327
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:30:19	98.080	97.410	97.6%	97.870	102.400	99.740	97.690	101.000	112.1%
2	01:30:46	98.790	97.110	98.2%	98.210	103.400	99.740	98.770	100.900	113.8%
3	01:31:14	99.100	97.020	99.3%	97.420	103.200	98.690	97.730	100.200	115.8%
x		98.660	97.180	98.4%	97.830	103.000	99.390	98.060	100.700	113.9%
σ		0.526	0.200	0.9%	0.395	0.540	0.605	0.611	0.425	1.9%
%RSD		0.533	0.206	0.9	0.404	0.525	0.609	0.623	0.422	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	86.2%	0.020	235.400	254.700	53.680	TM 238000.000	T 12360.000	T 12270.000	T 12490.000
2	01:36:43	86.6%	0.003	236.700	241.900	48.200	TM 237300.000	T 12190.000	T 12180.000	T 12380.000
3	01:37:09	89.0%	0.011	231.300	249.000	50.510	TM 237900.000	T 12300.000	T 12240.000	T 12430.000
x		87.3%	0.012	234.500	248.500	50.800	TM 237700.000	T 12290.000	T 12230.000	T 12430.000
σ		1.5%	0.009	2.814	6.446	2.753	TM 396.300	T 87.670	T 46.890	T 52.600
%RSD		1.7	76.710	1.200	2.594	5.420	TM 0.167	T 0.714	T 0.383	T 0.423
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	26.030	TM 19700.000	T 52410.000	T 14160.000	64710.000	T 64960.000	86.2%	13.760	1.111
2	01:36:43	25.230	TM 19870.000	T 53380.000	T 14150.000	64760.000	T 64630.000	86.6%	13.870	0.591
3	01:37:09	25.100	TM 18990.000	T 53590.000	T 13820.000	64860.000	T 65160.000	85.6%	14.060	0.825
x		25.460	TM 19520.000	T 53130.000	T 14040.000	64770.000	T 64910.000	86.1%	13.900	0.842
σ		0.504	TM 468.500	T 628.700	T 196.200	75.950	T 266.600	0.5%	0.153	0.260
%RSD		1.981	TM 2.400	T 1.183	T 1.397	0.117	T 0.411	0.5	1.103	30.920
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	6.500	7553.000	T 11920.000	TM 623.200	T 12330.000	T 11900.000	0.760	0.720	7.169
2	01:36:43	6.476	7696.000	T 12070.000	TM 623.700	T 12290.000	T 12070.000	0.774	0.713	7.158
3	01:37:09	6.583	7387.000	T 12080.000	TM 632.500	T 12280.000	12760.000	0.755	0.722	8.736
x		6.520	7546.000	T 12020.000	TM 626.500	T 12300.000	T 12240.000	0.763	0.718	7.688
σ		0.056	154.600	T 89.030	TM 5.222	T 26.990	T 452.400	0.010	0.005	0.908
%RSD		0.861	2.049	T 0.741	TM 0.834	T 0.219	T 3.695	1.278	0.702	11.810
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	0.966	0.230	1.458	6.827	5.001	1.407	0.422	105.600	106.900
2	01:36:43	1.015	0.233	1.440	7.345	5.010	1.390	0.303	104.600	106.400
3	01:37:09	1.055	0.244	1.475	7.619	5.038	1.674	0.052	105.700	103.300
x		1.012	0.236	1.458	7.264	5.016	1.490	0.259	105.300	105.500
σ		0.045	0.008	0.017	0.402	0.019	0.160	0.189	0.611	1.936
%RSD		4.417	3.299	1.177	5.538	0.386	10.710	72.900	0.580	1.835
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	1.564	0.245	0.995	T 243.200	84.7%	0.214	0.159	0.195	4.604
2	01:36:43	0.558	0.011	0.155	T 243.500	86.0%	0.162	0.178	0.182	3.931
3	01:37:09	2.140	0.386	0.484	T 240.600	85.7%	0.186	0.172	0.228	3.305
x		1.420	0.214	0.545	T 242.400	85.5%	0.188	0.170	0.202	3.947
σ		0.801	0.189	0.423	T 1.586	0.7%	0.026	0.010	0.024	0.650
%RSD		56.380	88.390	77.660	T 0.654	0.8	13.920	5.917	11.890	16.470
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	0.006	0.004	0.010	0.006	83.7%	0.396	0.572	0.134	0.133
2	01:36:43	0.001	0.004	0.010	0.006	85.1%	0.405	0.578	0.137	0.109
3	01:37:09	-0.001	0.003	0.012	0.004	83.4%	0.363	0.589	0.143	0.139
x		0.002	0.004	0.011	0.005	84.1%	0.388	0.580	0.138	0.127
σ		0.004	0.001	0.001	0.001	0.9%	0.022	0.009	0.005	0.016
%RSD		201.300	23.900	11.410	25.000	1.1	5.741	1.470	3.294	12.200
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:36:15	122.700	122.900	92.0%	-0.004	-0.005	0.055	0.040	0.044	116.6%
2	01:36:43	124.400	123.500	93.0%	-0.009	-0.010	0.046	0.043	0.042	116.0%
3	01:37:09	122.300	123.300	91.5%	-0.010	-0.011	0.034	0.037	0.034	111.8%
x		123.100	123.200	92.1%	-0.008	-0.009	0.045	0.040	0.040	114.8%
σ		1.107	0.270	0.8%	0.003	0.003	0.011	0.003	0.005	2.6%
%RSD		0.899	0.219	0.8	39.470	39.860	24.200	7.015	12.050	2.3

CCV MW10535 11/17/2018 01:41:46 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	85.0%	301.000	283.700	298.400	8.924	┬58760.000	┬60030.000	┬59020.000	┬59880.000
2	01:42:40	85.0%	295.800	285.300	291.000	8.592	┬59130.000	┬60210.000	┬59410.000	┬59000.000
3	01:43:07	84.4%	285.300	280.400	292.600	5.222	┬58060.000	┬58950.000	┬58860.000	┬58210.000
x		84.8%	98.008%	94.379%	98.004%	7.579	┬97.747%	┬59730.000	┬59100.000	┬98.382%
σ		0.4%	n/a	n/a	n/a	2.048	┬n/a	┬684.100	┬281.800	┬n/a
%RSD		0.4	2.713	0.880	1.331	27.020	┬0.926	┬1.145	┬0.477	┬1.421

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	293.700	┬3163.000	242.900	┬61040.000	60070.000	┬58520.000	91.2%	291.700	┬294.600
2	01:42:40	293.300	┬3203.000	238.300	┬61380.000	59250.000	┬59210.000	91.7%	294.700	┬297.400
3	01:43:07	286.000	┬3239.000	237.100	┬62690.000	60580.000	┬60060.000	90.5%	292.300	┬298.400
x		97.005%	┬106.720%	239.400	┬102.843%	59970.000	┬98.772%	91.1%	97.632%	┬98.923%
σ		n/a	┬n/a	3.034	┬n/a	668.600	┬n/a	0.6%	n/a	┬n/a
%RSD		1.502	┬1.185	1.267	┬1.410	1.115	┬1.295	0.7	0.534	┬0.663

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	295.000	-1242.000	┬58770.000	┬277.900	┬58440.000	┬55670.000	287.000	285.100	277.300
2	01:42:40	293.300	-1673.000	┬58910.000	┬276.900	┬58440.000	┬56250.000	┬279.300	286.400	272.700
3	01:43:07	294.900	-1715.000	┬59160.000	┬281.300	┬58860.000	┬56180.000	┬276.900	278.000	275.000
x		98.127%	-1543.000	┬58950.000	┬92.905%	┬58580.000	┬93.389%	┬93.685%	94.395%	275.000
σ		n/a	261.800	┬201.800	┬n/a	┬242.600	┬n/a	┬n/a	n/a	2.335
%RSD		0.309	16.970	┬0.342	┬0.817	┬0.414	┬0.571	┬1.875	1.590	0.849

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	268.000	283.000	281.600	278.300	276.900	288.200	283.600	1.680	0.575
2	01:42:40	265.700	282.800	281.900	279.900	274.400	281.300	279.300	1.555	0.449
3	01:43:07	266.000	275.000	279.800	274.700	272.400	288.900	277.800	1.967	0.367
x		266.500	93.423%	93.694%	277.600	274.600	95.377%	280.300	1.734	0.464
σ		1.235	n/a	n/a	2.645	2.276	n/a	3.033	0.211	0.105
%RSD		0.463	1.616	0.413	0.953	0.829	1.457	1.082	12.180	22.610

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	1257.000	275.000	-0.094	┬306.100	87.7%	304.600	302.800	305.700	289.500
2	01:42:40	1204.000	262.800	-0.110	┬313.100	88.0%	307.000	307.100	311.000	294.500
3	01:43:07	1255.000	280.000	-1.326	┬309.100	89.0%	310.100	308.000	311.900	284.200
x		1239.000	90.867%	-0.510	┬103.142%	88.2%	102.418%	101.987%	309.500	289.400
σ		30.110	n/a	0.707	┬n/a	0.7%	n/a	n/a	3.352	5.115
%RSD		2.431	3.233	138.600	┬1.143	0.8	0.897	0.918	1.083	1.767

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	309.200	304.500	292.200	287.200	86.7%	300.800	301.300	321.400	298.800
2	01:42:40	310.300	307.300	292.800	286.600	87.7%	299.400	303.600	320.700	299.700
3	01:43:07	306.900	304.300	287.600	288.700	88.2%	302.800	303.400	322.800	300.200
x		102.938%	305.300	290.800	95.831%	87.5%	100.335%	100.920%	321.600	99.861%
σ		n/a	1.673	2.846	n/a	0.8%	n/a	n/a	1.064	n/a
%RSD		0.552	0.548	0.978	0.371	0.9	0.572	0.422	0.331	0.237

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:42:13	302.900	301.900	90.9%	301.100	┬286.100	296.600	294.200	┬289.500	92.6%
2	01:42:40	304.100	305.300	92.5%	301.900	┬285.800	┬284.800	296.100	┬286.900	95.8%
3	01:43:07	304.100	303.200	92.2%	299.900	┬287.200	┬284.500	293.500	┬285.300	97.0%
x		101.233%	101.169%	91.9%	300.900	┬95.457%	┬96.206%	98.203%	┬95.741%	95.1%
σ		n/a	n/a	0.8%	1.015	┬n/a	┬n/a	n/a	┬n/a	2.3%
%RSD		0.225	0.564	0.9	0.337	┬0.269	┬2.396	0.444	┬0.737	2.4

CCB IM9061-02 11/17/2018 01:47:41 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	95.3%	0.003	2.588	2.089	-1.891	4.405	1.588	1.611	1.549
2	01:48:35	94.3%	0.013	1.892	1.773	5.669	3.764	1.476	1.267	1.426
3	01:49:03	93.8%	0.013	1.827	1.582	3.554	4.003	1.424	1.386	1.170
x		94.5%	0.010	2.102	1.815	2.444	4.058	1.496	1.421	1.382
σ		0.8%	0.006	0.422	0.256	3.900	0.324	0.084	0.175	0.193
%RSD		0.8	57.050	20.070	14.100	159.600	7.978	5.610	12.310	13.970

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	0.711	0.476	30.320	2.524	1.379	2.147	89.6%	0.026	-0.097
2	01:48:35	0.683	0.224	40.610	2.247	0.973	2.359	89.7%	0.124	0.036
3	01:49:03	0.682	0.645	43.860	1.566	0.151	2.073	90.5%	0.123	0.022
x		0.692	0.448	38.260	2.112	0.834	2.193	89.9%	0.091	-0.013
σ		0.016	0.212	7.070	0.493	0.625	0.148	0.5%	0.056	0.073
%RSD		2.324	47.200	18.480	23.340	74.970	6.761	0.5	61.930	560.200

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	0.023	41.630	9.620	0.053	10.180	11.060	0.010	0.011	1.068
2	01:48:35	0.027	54.240	8.588	0.062	8.030	8.209	0.004	0.018	1.188
3	01:49:03	0.014	96.840	8.713	0.036	8.181	7.038	0.008	0.011	1.348
x		0.021	64.240	8.974	0.050	8.798	8.769	0.007	0.013	1.201
σ		0.007	28.930	0.563	0.014	1.202	2.069	0.003	0.004	0.141
%RSD		31.130	45.030	6.278	26.910	13.660	23.590	39.760	29.270	11.710

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	0.060	-0.009	-0.122	-0.258	-0.090	0.170	0.171	0.019	-0.084
2	01:48:35	0.048	-0.002	-0.109	0.130	-0.056	0.160	0.034	0.145	-0.049
3	01:49:03	0.064	0.017	-0.113	-0.106	-0.091	0.074	0.359	0.206	0.275
x		0.058	0.002	-0.115	-0.078	-0.079	0.134	0.188	0.123	0.047
σ		0.008	0.013	0.007	0.196	0.020	0.053	0.163	0.095	0.198
%RSD		14.280	713.400	5.792	251.200	25.090	39.340	86.630	77.490	417.600

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	1.266	0.326	-0.005	0.013	93.1%	0.343	0.346	0.304	-0.931
2	01:48:35	1.121	0.298	0.279	0.014	93.1%	0.293	0.254	0.284	-0.736
3	01:49:03	0.083	0.076	1.239	0.013	93.8%	0.230	0.264	0.259	-0.484
x		0.823	0.234	0.504	0.013	93.3%	0.289	0.288	0.282	-0.717
σ		0.645	0.137	0.652	0.000	0.4%	0.057	0.051	0.022	0.224
%RSD		78.370	58.600	129.300	3.246	0.4	19.610	17.530	7.951	31.260

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	0.010	0.023	0.007	0.009	95.5%	0.316	0.496	0.288	0.269
2	01:48:35	0.014	0.020	0.009	0.014	94.8%	0.321	0.427	0.248	0.262
3	01:49:03	0.011	0.017	0.005	0.013	96.4%	0.285	0.460	0.276	0.261
x		0.011	0.020	0.007	0.012	95.6%	0.307	0.461	0.270	0.264
σ		0.002	0.003	0.002	0.002	0.8%	0.020	0.035	0.021	0.005
%RSD		18.450	16.150	29.140	19.240	0.9	6.407	7.490	7.657	1.813

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:48:08	0.024	0.017	96.6%	0.013	0.006	0.013	0.009	0.012	91.4%
2	01:48:35	0.030	0.012	97.9%	0.005	0.006	0.015	0.013	0.013	96.6%
3	01:49:03	0.023	0.025	98.5%	0.014	0.005	0.012	0.009	0.009	99.8%
x		0.026	0.018	97.7%	0.010	0.005	0.013	0.010	0.011	95.9%
σ		0.004	0.007	1.0%	0.005	0.001	0.001	0.002	0.002	4.2%
%RSD		13.630	36.640	1.0	48.660	10.890	9.547	17.640	17.280	4.4

TJ25084-002 11/17/2018 01:53:37

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	82.2%	0.007	232.100	241.200	7.656	TM 520400.000	T 41490.000	T 41700.000	T 42840.000
2	01:54:30	83.9%	0.019	227.100	234.300	4.092	TM 521900.000	T 41400.000	T 41760.000	T 42110.000
3	01:54:57	83.8%	0.003	236.900	241.600	6.135	TM 517500.000	T 41230.000	T 41920.000	T 42510.000
x		83.3%	0.009	232.000	239.100	5.961	TM 520000.000	T 41370.000	T 41790.000	T 42480.000
σ		1.0%	0.008	4.942	4.096	1.789	TM 2249.000	T 129.400	T 112.800	T 364.600
%RSD		1.2	89.210	2.130	1.713	30.000	TM 0.433	T 0.313	T 0.270	T 0.858
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	9.452	T 6808.000	T 78350.000	T 17250.000	TM 317300.000	TM 302100.000	79.7%	0.988	2.329
2	01:54:30	T 9.962	T 6726.000	T 79990.000	T 17010.000	TM 317500.000	TM 305400.000	79.4%	1.112	2.558
3	01:54:57	9.520	T 6738.000	T 79920.000	T 17140.000	TM 315800.000	TM 304000.000	80.3%	1.030	2.572
x		T 9.645	T 6757.000	T 79420.000	T 17130.000	TM 316900.000	TM 303800.000	79.8%	1.043	2.486
σ		T 0.277	T 44.010	T 929.200	T 115.700	TM 930.000	TM 1684.000	0.5%	0.064	0.136
%RSD		T 2.871	T 0.651	T 1.170	T 0.675	TM 0.294	TM 0.554	0.6	6.093	5.486
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	1.716	4282.000	998.600	TM 2581.000	T 1022.000	1625.000	1.371	3.418	29.140
2	01:54:30	1.707	4452.000	996.500	TM 2612.000	T 1038.000	1630.000	1.331	3.582	31.410
3	01:54:57	1.714	4478.000	996.600	TM 2577.000	T 1018.000	1607.000	1.365	3.459	29.950
x		1.712	4404.000	997.200	TM 2590.000	T 1026.000	1621.000	1.356	3.486	30.170
σ		0.004	106.400	1.205	TM 19.080	T 10.360	11.760	0.022	0.086	1.151
%RSD		0.256	2.417	0.121	TM 0.737	T 1.009	0.726	1.615	2.453	3.815
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	4.982	2.524	11.040	21.050	17.580	1.368	0.091	74.070	73.270
2	01:54:30	5.267	2.564	11.390	20.080	17.340	1.347	0.313	71.420	71.820
3	01:54:57	5.138	2.549	11.340	19.550	17.330	1.713	0.708	74.370	74.460
x		5.129	2.546	11.250	20.220	17.420	1.476	0.371	73.280	73.180
σ		0.143	0.020	0.189	0.761	0.142	0.206	0.313	1.625	1.321
%RSD		2.789	0.787	1.680	3.761	0.816	13.930	84.430	2.217	1.805
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	2.109	0.528	2.465	TM 1673.000	84.7%	2.352	2.465	2.423	33.850
2	01:54:30	3.048	0.725	0.879	TM 1668.000	85.0%	2.405	2.400	2.419	34.220
3	01:54:57	1.283	0.346	3.208	TM 1687.000	85.2%	2.343	2.379	2.463	33.270
x		2.147	0.533	2.184	TM 1676.000	85.0%	2.366	2.415	2.435	33.780
σ		0.883	0.190	1.190	TM 10.080	0.2%	0.034	0.045	0.024	0.479
%RSD		41.150	35.620	54.480	TM 0.602	0.3	1.421	1.853	0.986	1.419
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	0.028	0.035	0.373	0.386	81.5%	0.458	0.443	0.385	0.361
2	01:54:30	0.039	0.032	0.394	0.386	81.9%	0.437	0.426	0.388	0.377
3	01:54:57	0.025	0.032	0.405	0.386	82.3%	0.450	0.480	0.444	0.407
x		0.031	0.033	0.391	0.386	81.9%	0.448	0.450	0.406	0.382
σ		0.008	0.002	0.016	0.000	0.4%	0.011	0.027	0.033	0.024
%RSD		24.810	4.669	4.110	0.015	0.5	2.359	6.064	8.169	6.209
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	01:54:03	254.400	250.500	87.9%	0.074	0.074	0.060	0.059	0.064	107.4%
2	01:54:30	251.100	252.900	88.6%	0.071	0.069	0.060	0.052	0.058	106.3%
3	01:54:57	252.000	250.700	88.7%	0.083	0.069	0.066	0.061	0.062	104.8%
x		252.500	251.400	88.4%	0.076	0.071	0.062	0.057	0.061	106.2%
σ		1.732	1.303	0.4%	0.006	0.003	0.003	0.005	0.003	1.3%
%RSD		0.686	0.518	0.5	8.203	3.901	5.460	9.099	5.199	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	90.1%	-0.002	102.500	108.800	6.826	TM 207000.000	T 7115.000	T 7101.000	T 7169.000
2	02:00:27	90.9%	-0.002	97.320	102.900	5.860	TM 206400.000	T 7080.000	T 7110.000	T 7209.000
3	02:00:54	90.1%	0.003	96.860	102.800	5.410	TM 207200.000	T 7089.000	T 7055.000	T 7180.000
x		90.4%	-0.000	98.890	104.800	6.032	TM 206900.000	T 7095.000	T 7089.000	T 7186.000
σ		0.5%	0.002	3.117	3.426	0.723	TM 403.600	T 18.070	T 29.360	T 20.530
%RSD		0.5	1578.000	3.152	3.269	11.990	TM 0.195	T 0.255	T 0.414	T 0.286
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	5.004	T 8063.000	T 50970.000	T 4373.000	35770.000	T 35980.000	88.3%	1.027	0.119
2	02:00:27	4.975	T 8013.000	T 51090.000	T 4373.000	35900.000	T 35840.000	87.8%	0.822	0.716
3	02:00:54	5.007	T 7964.000	T 51410.000	T 4446.000	35640.000	T 36390.000	87.4%	1.082	0.311
x		4.995	T 8013.000	T 51160.000	T 4397.000	35770.000	T 36070.000	87.8%	0.977	0.382
σ		0.018	T 49.570	T 226.700	T 42.060	128.800	T 288.600	0.4%	0.137	0.305
%RSD		0.358	T 0.619	T 0.443	T 0.956	0.360	T 0.800	0.5	14.040	79.810
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	0.411	7708.000	3706.000	70.880	T 3568.000	3570.000	0.645	3.927	13.420
2	02:00:27	0.423	7612.000	3716.000	71.050	T 3531.000	3518.000	0.659	4.041	13.540
3	02:00:54	0.440	7845.000	3617.000	70.100	T 3565.000	3577.000	0.667	3.837	14.350
x		0.425	7721.000	3679.000	70.680	T 3555.000	3555.000	0.657	3.935	13.770
σ		0.015	116.900	54.570	0.505	T 20.650	32.070	0.011	0.102	0.507
%RSD		3.438	1.514	1.483	0.715	T 0.581	0.902	1.694	2.601	3.681
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	1.037	0.171	1.640	5.251	3.437	35.910	0.151	23.730	24.280
2	02:00:27	1.095	0.181	1.658	5.161	3.255	35.410	0.025	23.130	25.740
3	02:00:54	1.109	0.171	1.843	5.159	3.496	35.600	0.122	24.200	24.170
x		1.080	0.174	1.714	5.190	3.396	35.640	0.100	23.690	24.730
σ		0.038	0.006	0.113	0.053	0.125	0.248	0.066	0.536	0.877
%RSD		3.557	3.411	6.575	1.013	3.687	0.697	66.290	2.261	3.547
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	1.134	0.227	-0.898	156.900	89.9%	4.601	4.827	4.699	3.719
2	02:00:27	0.872	0.232	2.096	159.400	89.1%	4.685	5.025	4.680	3.103
3	02:00:54	0.598	0.121	0.043	157.200	88.6%	4.717	4.782	4.785	2.841
x		0.868	0.194	0.414	157.900	89.2%	4.668	4.878	4.721	3.221
σ		0.268	0.063	1.531	1.380	0.7%	0.060	0.129	0.056	0.451
%RSD		30.920	32.370	370.000	0.874	0.7	1.276	2.652	1.180	13.990
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	-0.002	-0.000	-0.005	0.000	88.1%	0.216	0.246	0.150	0.124
2	02:00:27	0.000	0.004	-0.005	0.005	88.3%	0.196	0.271	0.123	0.138
3	02:00:54	-0.000	0.004	-0.007	0.004	88.4%	0.157	0.305	0.136	0.123
x		-0.000	0.002	-0.006	0.003	88.3%	0.190	0.274	0.137	0.129
σ		0.001	0.002	0.001	0.002	0.1%	0.030	0.030	0.014	0.008
%RSD		283.800	87.630	24.530	78.920	0.2	15.770	10.860	10.110	6.553
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:00:00	61.870	61.280	94.3%	0.011	0.006	0.005	0.005	0.005	109.6%
2	02:00:27	61.760	60.630	94.8%	0.015	0.008	0.011	0.008	0.007	112.0%
3	02:00:54	62.240	61.210	95.0%	0.008	0.006	0.004	0.005	0.006	111.0%
x		61.960	61.040	94.7%	0.012	0.007	0.007	0.006	0.006	110.9%
σ		0.252	0.354	0.3%	0.003	0.001	0.004	0.002	0.001	1.2%
%RSD		0.406	0.580	0.4	29.110	20.740	54.020	32.910	16.580	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	98.2%	0.003	19.890	20.130	7.528	T 19040.000	T 23050.000	T 23040.000	T 23180.000
2	02:06:22	101.2%	-0.002	19.270	20.720	7.749	T 18900.000	T 23250.000	T 22840.000	T 23190.000
3	02:06:50	100.0%	0.003	19.940	19.740	7.460	T 18850.000	T 22630.000	T 22910.000	T 22900.000
x		99.8%	0.001	19.700	20.200	7.579	T 18930.000	T 22980.000	T 22930.000	T 23090.000
σ		1.5%	0.002	0.370	0.493	0.151	T 100.100	T 320.200	T 103.300	T 163.700
%RSD		1.5	186.000	1.877	2.440	1.993	T 0.529	T 1.394	T 0.451	T 0.709
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	7.712	T 4411.000	T 50860.000	T 1288.000	75270.000	T 74430.000	92.3%	0.737	0.083
2	02:06:22	7.627	T 4288.000	T 51960.000	T 1267.000	74560.000	T 73310.000	93.1%	0.748	0.305
3	02:06:50	7.679	T 4364.000	T 50580.000	T 1293.000	74120.000	T 73180.000	94.0%	0.630	0.339
x		7.673	T 4354.000	T 51140.000	T 1282.000	74650.000	T 73640.000	93.1%	0.705	0.243
σ		0.043	T 61.930	T 729.700	T 13.710	577.900	T 684.000	0.8%	0.065	0.139
%RSD		0.562	T 1.422	T 1.427	T 1.069	0.774	T 0.929	0.9	9.236	57.370
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	0.491	6300.000	53.320	8.032	57.470	204.200	0.077	0.594	1.837
2	02:06:22	0.464	6287.000	52.680	7.944	56.970	205.200	0.087	0.761	1.630
3	02:06:50	0.448	6243.000	51.590	7.782	56.100	196.900	0.075	0.616	1.622
x		0.467	6276.000	52.530	7.919	56.850	202.100	0.079	0.657	1.696
σ		0.022	29.550	0.874	0.127	0.696	4.532	0.007	0.091	0.122
%RSD		4.715	0.471	1.664	1.601	1.224	2.243	8.382	13.810	7.182
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	0.413	0.397	1.206	2.775	2.143	0.861	0.318	14.210	14.340
2	02:06:22	0.452	0.434	1.135	2.443	2.004	0.634	0.245	13.220	14.460
3	02:06:50	0.433	0.378	1.227	3.306	2.193	0.554	-0.034	13.710	14.540
x		0.433	0.403	1.190	2.841	2.113	0.683	0.176	13.710	14.450
σ		0.019	0.029	0.048	0.436	0.098	0.159	0.186	0.495	0.103
%RSD		4.434	7.140	4.048	15.330	4.635	23.310	105.500	3.610	0.716
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	1.316	0.342	1.460	118.500	94.7%	0.394	0.442	0.395	2.669
2	02:06:22	1.023	0.243	0.473	119.400	94.7%	0.354	0.353	0.400	2.161
3	02:06:50	2.538	0.567	-0.390	118.400	95.3%	0.406	0.404	0.396	2.778
x		1.626	0.384	0.514	118.800	94.9%	0.384	0.400	0.397	2.536
σ		0.804	0.166	0.925	0.573	0.4%	0.027	0.045	0.003	0.329
%RSD		49.440	43.220	180.000	0.482	0.4	7.070	11.150	0.664	12.980
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	-0.000	0.000	0.000	0.012	95.0%	0.148	0.186	0.118	0.099
2	02:06:22	-0.001	0.002	0.012	0.004	94.6%	0.144	0.187	0.136	0.101
3	02:06:50	-0.001	0.001	0.010	0.004	96.6%	0.127	0.193	0.115	0.124
x		-0.001	0.001	0.008	0.007	95.4%	0.140	0.189	0.123	0.108
σ		0.000	0.001	0.006	0.005	1.1%	0.011	0.004	0.011	0.014
%RSD		64.340	73.650	82.530	67.380	1.1	7.908	2.121	9.328	12.830
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:05:55	30.000	28.940	99.4%	-0.013	-0.014	0.022	0.029	0.020	115.8%
2	02:06:22	29.780	28.970	99.4%	-0.011	-0.013	0.020	0.014	0.016	116.3%
3	02:06:50	29.580	28.900	100.6%	-0.012	-0.013	0.024	0.019	0.020	118.6%
x		29.790	28.940	99.8%	-0.012	-0.013	0.022	0.021	0.019	116.9%
σ		0.211	0.035	0.7%	0.001	0.001	0.002	0.007	0.003	1.5%
%RSD		0.707	0.122	0.7	6.131	4.481	8.981	35.720	14.510	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	88.7%	0.011	225.300	240.600	13.680	TM 114900.000	T 9733.000	T 9679.000	T 9884.000
2	02:12:20	91.0%	-0.002	234.400	235.300	17.450	TM 116500.000	T 9885.000	T 9969.000	T 10000.000
3	02:12:47	92.2%	0.011	216.900	224.700	11.960	TM 116500.000	T 9790.000	T 9658.000	T 9837.000
x		90.6%	0.007	225.500	233.500	14.360	TM 116000.000	T 9803.000	T 9769.000	T 9908.000
σ		1.8%	0.007	8.758	8.122	2.807	TM 940.000	T 77.000	T 173.500	T 85.670
%RSD		2.0	105.800	3.884	3.478	19.550	TM 0.811	T 0.786	T 1.776	T 0.865

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	T 131.300	T 6591.000	T 50700.000	T 10950.000	68060.000	T 67870.000	T 89.8%	5.842	1.099
2	02:12:20	T 131.000	T 6514.000	T 52410.000	T 10860.000	70890.000	T 69880.000	87.8%	5.837	1.494
3	02:12:47	129.000	T 6496.000	T 52600.000	T 10860.000	70280.000	T 70090.000	89.3%	5.842	1.344
x		T 130.500	T 6534.000	T 51910.000	T 10890.000	69740.000	T 69280.000	T 89.0%	5.840	1.312
σ		T 1.223	T 50.310	T 1050.000	T 55.990	1489.000	T 1224.000	T 1.0%	0.003	0.200
%RSD		T 0.937	T 0.770	T 2.023	T 0.514	2.135	T 1.767	T 1.1	0.051	15.220

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	2.421	5747.000	T 10150.000	T 480.000	T 10370.000	10750.000	0.370	0.873	7.363
2	02:12:20	2.392	5357.000	T 10570.000	T 498.500	T 10680.000	11150.000	0.337	0.775	7.646
3	02:12:47	2.390	5331.000	T 10340.000	T 493.600	T 10680.000	11130.000	0.333	0.704	8.167
x		2.401	5478.000	T 10360.000	T 490.700	T 10580.000	11010.000	0.347	0.784	7.725
σ		0.018	232.700	T 210.300	T 9.569	T 178.000	223.600	0.021	0.085	0.407
%RSD		0.738	4.248	T 2.031	T 1.950	T 1.682	2.031	5.969	10.790	5.274

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	1.073	0.659	1.413	5.618	4.127	1.301	0.529	25.890	25.760
2	02:12:20	1.147	0.646	1.460	5.637	3.981	1.838	0.692	24.660	24.070
3	02:12:47	1.193	0.648	1.472	5.351	4.146	1.863	0.550	24.650	25.540
x		1.138	0.651	1.448	5.535	4.085	1.668	0.590	25.070	25.120
σ		0.060	0.007	0.031	0.160	0.090	0.318	0.088	0.714	0.920
%RSD		5.308	1.141	2.133	2.891	2.211	19.060	14.990	2.847	3.661

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	0.421	0.041	-0.722	T 272.600	88.8%	2.916	2.754	2.826	4.852
2	02:12:20	3.834	0.894	0.878	T 274.000	89.7%	2.755	2.768	2.882	4.916
3	02:12:47	1.532	0.327	-0.344	T 275.700	90.7%	2.780	2.821	2.653	3.832
x		1.929	0.421	-0.063	T 274.100	89.7%	2.817	2.781	2.787	4.533
σ		1.741	0.434	0.837	T 1.552	1.0%	0.087	0.036	0.120	0.608
%RSD		90.260	103.200	1334.000	T 0.566	1.1	3.079	1.280	4.291	13.410

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	0.001	-0.001	-0.002	0.008	88.0%	0.185	0.237	1.598	1.532
2	02:12:20	-0.001	0.001	-0.009	0.000	88.7%	0.142	0.234	1.757	1.574
3	02:12:47	-0.003	0.002	0.002	0.008	90.2%	0.150	0.253	1.651	1.590
x		-0.001	0.001	-0.003	0.005	88.9%	0.159	0.241	1.669	1.565
σ		0.002	0.001	0.006	0.004	1.1%	0.023	0.010	0.081	0.030
%RSD		251.800	157.300	194.700	81.530	1.3	14.440	4.173	4.851	1.920

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:11:54	91.890	91.810	94.0%	-0.016	-0.017	0.228	0.227	0.229	117.6%
2	02:12:20	92.900	92.650	96.9%	-0.016	-0.017	0.251	0.228	0.241	118.1%
3	02:12:47	93.630	91.180	98.1%	-0.013	-0.018	0.226	0.215	0.231	118.4%
x		92.810	91.880	96.3%	-0.015	-0.017	0.235	0.223	0.234	118.0%
σ		0.876	0.736	2.1%	0.002	0.000	0.014	0.007	0.006	0.4%
%RSD		0.944	0.801	2.2	11.510	1.866	5.936	3.317	2.761	0.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	99.8%	-0.002	19.400	20.410	13.420	T 18850.000	T 22350.000	T 22120.000	T 22450.000
2	02:18:16	101.5%	0.007	20.890	21.170	11.500	T 18990.000	T 22060.000	T 22080.000	T 22290.000
3	02:18:43	100.6%	0.003	20.290	20.470	5.903	T 18900.000	T 22010.000	T 21920.000	T 22080.000
x		100.6%	0.003	20.190	20.690	10.270	T 18910.000	T 22140.000	T 22040.000	T 22270.000
σ		0.9%	0.004	0.750	0.421	3.904	T 69.200	T 186.900	T 107.700	T 186.100
%RSD		0.9	157.300	3.716	2.035	38.000	T 0.366	T 0.844	T 0.489	T 0.836

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	5.527	T 4161.000	T 50700.000	T 1264.000	72440.000	T 71500.000	93.2%	0.497	0.167
2	02:18:16	5.763	T 4119.000	T 51610.000	T 1247.000	72000.000	T 72370.000	91.9%	0.531	0.119
3	02:18:43	5.743	T 4187.000	T 52440.000	T 1278.000	71910.000	T 71380.000	93.5%	0.651	0.482
x		5.677	T 4156.000	T 51580.000	T 1263.000	72120.000	T 71750.000	92.9%	0.560	0.256
σ		0.131	T 34.050	T 866.700	T 15.070	285.600	T 539.600	0.9%	0.080	0.197
%RSD		2.304	T 0.819	T 1.680	T 1.193	0.396	T 0.752	0.9	14.360	76.980

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	0.472	6619.000	52.800	8.029	57.150	193.500	0.079	0.689	1.104
2	02:18:16	0.498	6714.000	54.210	8.239	58.800	195.100	0.071	0.629	0.982
3	02:18:43	0.498	6569.000	51.950	7.914	56.060	189.600	0.064	0.648	0.929
x		0.489	6634.000	52.980	8.061	57.340	192.700	0.071	0.655	1.005
σ		0.015	73.700	1.139	0.165	1.381	2.814	0.007	0.031	0.090
%RSD		3.023	1.111	2.150	2.044	2.409	1.460	10.340	4.728	8.954

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	0.439	0.334	0.899	2.841	1.674	0.537	0.372	11.440	11.010
2	02:18:16	0.418	0.375	0.900	2.936	1.853	0.956	0.120	11.980	12.260
3	02:18:43	0.351	0.378	0.773	2.740	1.803	1.062	0.217	11.740	12.070
x		0.402	0.363	0.858	2.839	1.777	0.852	0.236	11.720	11.780
σ		0.046	0.025	0.073	0.098	0.092	0.277	0.127	0.271	0.672
%RSD		11.410	6.872	8.504	3.445	5.195	32.570	53.860	2.311	5.702

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	0.331	0.096	1.051	117.900	94.3%	0.358	0.359	0.366	2.816
2	02:18:16	0.501	0.153	1.508	117.900	93.8%	0.347	0.330	0.368	1.431
3	02:18:43	2.673	0.629	0.438	118.000	95.5%	0.376	0.369	0.354	1.147
x		1.168	0.293	0.999	118.000	94.5%	0.360	0.353	0.363	1.798
σ		1.306	0.292	0.537	0.041	0.9%	0.015	0.020	0.007	0.893
%RSD		111.800	99.890	53.740	0.035	0.9	4.034	5.797	1.994	49.690

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	-0.001	0.002	0.006	0.006	95.1%	0.119	0.177	0.095	0.070
2	02:18:16	-0.000	-0.000	0.003	0.005	94.4%	0.147	0.151	0.099	0.079
3	02:18:43	-0.002	0.002	0.005	0.010	94.7%	0.162	0.175	0.096	0.080
x		-0.001	0.001	0.004	0.007	94.7%	0.143	0.168	0.097	0.076
σ		0.001	0.001	0.002	0.003	0.3%	0.022	0.015	0.002	0.005
%RSD		80.330	94.520	43.130	41.180	0.4	15.310	8.758	2.466	6.788

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:17:49	28.920	28.350	99.5%	-0.009	-0.014	0.016	0.006	0.011	117.0%
2	02:18:16	29.100	28.570	98.6%	-0.012	-0.015	0.014	0.010	0.009	117.4%
3	02:18:43	28.730	28.530	101.2%	-0.010	-0.013	0.005	0.006	0.005	119.5%
x		28.920	28.480	99.7%	-0.010	-0.014	0.012	0.007	0.008	118.0%
σ		0.182	0.119	1.3%	0.001	0.001	0.006	0.003	0.003	1.3%
%RSD		0.631	0.417	1.3	14.030	7.617	51.140	35.530	39.780	1.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	90.9%	0.007	126.100	133.300	7.950	TM 140000.000	T 10160.000	T 10050.000	T 10210.000
2	02:24:13	91.3%	0.003	125.700	128.800	11.470	TM 139800.000	T 10170.000	T 10100.000	T 10420.000
3	02:24:40	89.9%	0.007	124.600	131.300	11.880	TM 139000.000	T 10150.000	T 10130.000	T 10270.000
x		90.7%	0.005	125.500	131.100	10.430	TM 139600.000	T 10160.000	T 10090.000	T 10300.000
σ		0.7%	0.002	0.794	2.291	2.160	TM 518.900	T 14.040	T 44.030	T 105.800
%RSD		0.8	44.740	0.633	1.747	20.700	TM 0.372	T 0.138	T 0.436	T 1.027
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	12.550	T 7919.000	T 49620.000	T 9425.000	78990.000	T 78770.000	89.2%	1.502	1.129
2	02:24:13	12.740	T 7947.000	T 51080.000	T 9370.000	78580.000	T 78520.000	88.2%	1.510	1.065
3	02:24:40	12.480	T 8126.000	T 51240.000	T 9821.000	78110.000	T 77710.000	89.8%	1.643	0.784
x		12.590	T 7997.000	T 50650.000	T 9539.000	78560.000	T 78330.000	89.0%	1.552	0.993
σ		0.133	T 112.300	T 891.700	T 246.100	440.900	T 550.800	0.8%	0.080	0.184
%RSD		1.052	T 1.405	T 1.761	T 2.579	0.561	T 0.703	0.9	5.123	18.500
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	1.059	4841.000	T 5631.000	TM 1004.000	T 5761.000	5947.000	1.453	1.799	7.289
2	02:24:13	1.088	4801.000	T 5749.000	TM 1022.000	T 5805.000	6017.000	1.484	1.696	8.976
3	02:24:40	1.092	4887.000	T 5683.000	TM 999.400	T 5758.000	5905.000	1.480	1.713	8.433
x		1.080	4843.000	T 5688.000	TM 1008.000	T 5774.000	5956.000	1.472	1.736	8.233
σ		0.018	42.970	T 58.950	TM 11.730	T 26.300	56.900	0.017	0.055	0.861
%RSD		1.688	0.887	T 1.036	TM 1.163	T 0.456	0.955	1.137	3.166	10.460
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	1.352	0.851	11.390	13.850	13.090	4.778	0.001	25.440	27.420
2	02:24:13	1.400	0.877	10.860	13.710	13.170	5.044	0.034	26.590	27.190
3	02:24:40	1.363	0.795	11.550	14.170	12.980	4.931	0.222	26.910	28.260
x		1.372	0.841	11.270	13.910	13.080	4.918	0.086	26.310	27.620
σ		0.025	0.042	0.359	0.234	0.095	0.133	0.119	0.775	0.564
%RSD		1.842	4.945	3.190	1.678	0.729	2.711	138.800	2.946	2.043
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	0.854	0.155	-0.441	T 284.800	89.3%	2.620	2.416	2.433	4.653
2	02:24:13	2.061	0.462	0.453	T 289.800	89.3%	2.548	2.674	2.563	4.289
3	02:24:40	1.893	0.399	0.292	T 291.000	89.3%	2.544	2.672	2.599	4.736
x		1.602	0.338	0.102	T 288.500	89.3%	2.571	2.587	2.532	4.560
σ		0.654	0.162	0.476	T 3.323	0.0%	0.043	0.148	0.087	0.238
%RSD		40.810	47.990	469.400	T 1.152	0.0	1.672	5.735	3.445	5.215
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	0.004	0.002	0.028	0.037	89.1%	0.175	0.218	0.186	0.166
2	02:24:13	0.003	0.002	0.015	0.032	89.9%	0.155	0.197	0.178	0.177
3	02:24:40	0.002	0.000	0.024	0.043	88.5%	0.147	0.212	0.205	0.154
x		0.003	0.002	0.022	0.037	89.2%	0.159	0.209	0.190	0.166
σ		0.001	0.001	0.007	0.006	0.7%	0.014	0.011	0.013	0.012
%RSD		44.780	58.580	29.850	14.810	0.8	8.963	5.081	7.096	7.102
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:23:47	65.630	64.540	93.7%	-0.001	-0.003	0.222	0.216	0.227	115.6%
2	02:24:13	65.640	64.210	95.3%	-0.005	-0.004	0.231	0.216	0.218	114.4%
3	02:24:40	64.710	65.300	96.1%	-0.001	-0.005	0.230	0.214	0.218	116.7%
x		65.320	64.680	95.1%	-0.002	-0.004	0.227	0.216	0.221	115.6%
σ		0.535	0.561	1.2%	0.002	0.001	0.005	0.001	0.005	1.1%
%RSD		0.819	0.867	1.3	101.500	32.080	2.086	0.668	2.303	1.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	100.0%	0.003	20.400	21.640	9.364	T 19010.000	T 22690.000	T 22450.000	T 22830.000
2	02:30:10	98.5%	-0.002	19.650	20.450	6.337	T 18790.000	T 22140.000	T 21740.000	T 22320.000
3	02:30:38	99.6%	0.003	19.470	19.090	8.817	T 19160.000	T 22580.000	T 22490.000	T 22500.000
x		99.4%	0.001	19.840	20.400	8.173	T 18990.000	T 22470.000	T 22230.000	T 22550.000
σ		0.8%	0.002	0.493	1.276	1.613	T 184.600	T 293.300	T 421.600	T 255.100
%RSD		0.8	186.100	2.483	6.254	19.740	T 0.972	T 1.305	T 1.897	T 1.131
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	23.880	T 4255.000	T 51480.000	T 1304.000	73420.000	T 73170.000	91.8%	0.829	0.347
2	02:30:10	23.180	T 4308.000	T 50550.000	T 1345.000	73530.000	T 72760.000	93.2%	0.540	0.198
3	02:30:38	23.010	T 4249.000	T 51340.000	T 1340.000	73550.000	T 72570.000	93.6%	0.538	0.322
x		23.360	T 4271.000	T 51130.000	T 1330.000	73500.000	T 72830.000	92.9%	0.636	0.289
σ		0.461	T 32.150	T 506.200	T 22.490	70.090	T 309.200	0.9%	0.167	0.080
%RSD		1.975	T 0.753	T 0.990	T 1.691	0.095	T 0.425	1.0	26.280	27.590
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	0.473	5826.000	56.390	9.084	60.740	202.100	0.081	0.682	0.631
2	02:30:10	0.463	5931.000	55.130	8.981	58.250	194.900	0.086	0.748	0.448
3	02:30:38	0.503	5772.000	52.720	8.958	56.980	191.300	0.081	0.649	0.545
x		0.480	5843.000	54.740	9.008	58.650	196.100	0.083	0.693	0.541
σ		0.021	80.850	1.866	0.067	1.913	5.495	0.003	0.051	0.092
%RSD		4.387	1.384	3.408	0.748	3.261	2.802	3.701	7.300	16.990
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	0.463	0.442	1.241	2.764	2.136	0.848	0.361	12.820	12.420
2	02:30:10	0.392	0.439	1.226	2.738	2.161	1.037	0.132	11.880	12.700
3	02:30:38	0.377	0.418	1.204	2.955	2.156	0.960	0.010	12.890	12.610
x		0.411	0.433	1.224	2.819	2.151	0.949	0.168	12.530	12.580
σ		0.046	0.013	0.019	0.119	0.013	0.095	0.178	0.564	0.145
%RSD		11.320	3.001	1.519	4.216	0.624	9.990	106.300	4.502	1.150
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	1.388	0.315	-0.021	123.300	93.2%	0.332	0.377	0.371	1.447
2	02:30:10	1.672	0.399	0.146	121.200	95.9%	0.427	0.382	0.363	1.976
3	02:30:38	2.224	0.488	-1.377	122.300	96.0%	0.363	0.389	0.407	2.796
x		1.761	0.401	-0.417	122.300	95.0%	0.374	0.383	0.380	2.073
σ		0.425	0.086	0.835	1.055	1.6%	0.048	0.006	0.023	0.680
%RSD		24.140	21.520	200.200	0.863	1.7	12.930	1.615	6.129	32.790
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	-0.002	0.000	0.003	0.007	94.3%	0.110	0.103	0.095	0.062
2	02:30:10	-0.001	-0.001	0.004	0.007	95.9%	0.084	0.134	0.083	0.080
3	02:30:38	-0.002	0.002	0.002	0.006	95.9%	0.057	0.123	0.080	0.076
x		-0.002	0.000	0.003	0.007	95.4%	0.084	0.120	0.086	0.073
σ		0.001	0.001	0.001	0.001	0.9%	0.026	0.016	0.008	0.009
%RSD		45.830	384.500	37.280	12.340	1.0	31.260	13.120	9.395	12.550
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:29:43	29.340	29.320	98.7%	-0.014	-0.013	0.018	0.019	0.013	115.4%
2	02:30:10	28.550	29.420	101.3%	-0.015	-0.013	0.021	0.012	0.015	119.3%
3	02:30:38	29.310	29.130	101.6%	-0.013	-0.013	0.014	0.011	0.014	120.2%
x		29.070	29.290	100.5%	-0.014	-0.013	0.017	0.014	0.014	118.3%
σ		0.450	0.148	1.6%	0.001	0.000	0.004	0.005	0.001	2.6%
%RSD		1.548	0.506	1.6	7.464	3.278	21.180	33.470	7.909	2.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	96.2%	-0.002	104.900	110.300	-13.440	T 9670.000	T 7450.000	T 7425.000	T 7630.000
2	02:36:07	97.5%	0.002	106.100	109.800	-12.210	T 9577.000	T 7393.000	T 7478.000	T 7620.000
3	02:36:33	95.5%	-0.002	109.300	111.300	-11.720	T 9730.000	T 7424.000	T 7491.000	T 7602.000
x		96.4%	-0.000	106.800	110.400	-12.460	T 9659.000	T 7422.000	T 7465.000	T 7617.000
σ		1.0%	0.002	2.288	0.772	0.882	T 76.870	T 28.310	T 34.870	T 14.580
%RSD		1.1	499.500	2.142	0.699	7.077	T 0.796	T 0.382	T 0.467	T 0.191
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	2.410	TM 11650.000	T 46790.000	T 7688.000	M 103100.000	TM 102500.000	89.5%	1.864	0.827
2	02:36:07	2.398	TM 11390.000	T 46820.000	T 7615.000	M 105500.000	TM 102200.000	88.8%	1.816	0.686
3	02:36:33	2.487	TM 11780.000	T 46850.000	T 7984.000	M 104800.000	TM 102500.000	90.2%	1.857	0.741
x		2.431	TM 11610.000	T 46820.000	T 7762.000	M 104500.000	TM 102400.000	89.5%	1.846	0.751
σ		0.048	TM 198.500	T 32.920	T 195.500	M 1270.000	TM 197.100	0.7%	0.026	0.071
%RSD		1.990	TM 1.710	T 0.070	T 2.519	M 1.215	TM 0.192	0.8	1.413	9.480
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	3.894	5245.000	3248.000	TM 547.700	T 3040.000	3242.000	0.364	1.183	0.919
2	02:36:07	3.952	5307.000	3242.000	TM 559.200	T 3143.000	3315.000	0.338	1.071	0.951
3	02:36:33	4.041	5117.000	3229.000	TM 559.000	T 3115.000	3267.000	0.357	1.049	0.864
x		3.962	5223.000	3240.000	TM 555.300	T 3099.000	3275.000	0.353	1.101	0.911
σ		0.074	96.670	9.952	TM 6.554	T 53.330	37.270	0.014	0.072	0.044
%RSD		1.868	1.851	0.307	TM 1.180	T 1.721	1.138	3.891	6.494	4.862
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	0.393	0.438	9.283	12.170	10.900	1.967	0.078	7.608	7.602
2	02:36:07	0.346	0.438	9.407	11.940	11.460	1.429	0.234	7.879	7.938
3	02:36:33	0.399	0.439	9.282	11.940	10.880	1.956	0.310	7.470	7.963
x		0.379	0.439	9.324	12.020	11.080	1.784	0.207	7.652	7.834
σ		0.029	0.001	0.072	0.130	0.328	0.308	0.119	0.208	0.202
%RSD		7.616	0.134	0.768	1.079	2.960	17.240	57.240	2.717	2.574
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	-0.209	-0.065	-0.456	T 242.900	89.7%	1.824	1.903	1.767	4.931
2	02:36:07	2.220	0.528	1.351	T 243.600	89.0%	1.880	1.816	1.682	4.322
3	02:36:33	0.908	0.215	0.354	T 239.500	91.2%	1.825	1.736	1.768	2.705
x		0.973	0.226	0.416	T 242.000	90.0%	1.843	1.818	1.739	3.986
σ		1.216	0.296	0.905	T 2.157	1.1%	0.032	0.083	0.050	1.150
%RSD		125.000	131.200	217.300	T 0.891	1.3	1.735	4.570	2.858	28.860
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	-0.001	-0.001	0.067	0.062	92.4%	0.089	0.125	0.184	0.162
2	02:36:07	-0.001	0.000	0.062	0.061	92.8%	0.081	0.100	0.187	0.193
3	02:36:33	-0.001	0.002	0.070	0.060	94.5%	0.105	0.114	0.193	0.167
x		-0.001	0.001	0.066	0.061	93.2%	0.092	0.113	0.188	0.174
σ		0.000	0.001	0.004	0.001	1.1%	0.012	0.013	0.004	0.017
%RSD		29.260	216.500	6.363	1.046	1.2	13.030	11.320	2.379	9.507
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:35:40	51.880	52.080	97.2%	-0.005	-0.005	0.010	0.010	0.009	119.2%
2	02:36:07	52.140	51.460	97.0%	-0.001	-0.004	0.010	0.010	0.009	120.7%
3	02:36:33	51.930	51.100	99.8%	-0.007	-0.004	0.009	0.006	0.007	123.0%
x		51.980	51.550	98.0%	-0.005	-0.004	0.010	0.009	0.008	121.0%
σ		0.136	0.495	1.5%	0.003	0.001	0.001	0.002	0.001	1.9%
%RSD		0.262	0.960	1.6	64.660	16.540	7.279	28.610	11.660	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	103.3%	0.006	29.770	30.520	23.580	T 20800.000	T 21210.000	T 21370.000	T 21590.000
2	02:42:04	103.6%	0.006	29.860	31.930	20.090	T 21220.000	T 21620.000	T 21480.000	T 21750.000
3	02:42:31	104.5%	-0.002	29.980	31.970	21.840	T 21040.000	T 21400.000	T 21320.000	T 21670.000
x		103.8%	0.004	29.870	31.470	21.840	T 21020.000	T 21410.000	T 21390.000	T 21670.000
σ		0.6%	0.005	0.106	0.827	1.747	T 210.100	T 203.400	T 81.970	T 81.980
%RSD		0.6	121.900	0.353	2.626	8.001	T 0.999	T 0.950	T 0.383	T 0.378
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	13.610	T 192.700	T 51730.000	T 3283.000	71740.000	T 70770.000	95.3%	0.748	0.279
2	02:42:04	13.790	T 196.500	T 52350.000	T 3243.000	71650.000	T 70460.000	96.2%	0.665	0.459
3	02:42:31	13.740	193.800	T 51720.000	T 3259.000	70210.000	T 69170.000	98.0%	0.669	0.504
x		13.710	T 194.300	T 51930.000	T 3262.000	71200.000	T 70130.000	96.5%	0.694	0.414
σ		0.097	T 1.950	T 362.200	T 20.210	862.100	T 848.200	1.4%	0.046	0.119
%RSD		0.705	T 1.003	T 0.698	T 0.620	1.211	T 1.209	1.4	6.688	28.810
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	0.541	5245.000	104.400	20.990	113.100	252.500	0.140	0.973	0.405
2	02:42:04	0.566	5016.000	99.260	21.170	111.900	239.500	0.142	0.911	0.426
3	02:42:31	0.516	5023.000	98.310	20.500	109.000	226.800	0.137	0.924	0.335
x		0.541	5094.000	100.700	20.890	111.300	239.600	0.140	0.936	0.389
σ		0.025	130.200	3.305	0.348	2.092	12.850	0.003	0.033	0.048
%RSD		4.622	2.556	3.283	1.668	1.879	5.361	1.790	3.488	12.360
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	0.512	0.492	0.941	2.761	2.514	0.680	0.263	27.180	28.570
2	02:42:04	0.461	0.530	0.925	3.211	2.106	0.619	0.394	27.060	29.530
3	02:42:31	0.448	0.498	0.959	2.648	2.148	0.858	0.247	27.470	26.930
x		0.474	0.507	0.942	2.874	2.256	0.719	0.301	27.240	28.350
σ		0.034	0.020	0.017	0.298	0.224	0.125	0.081	0.209	1.316
%RSD		7.111	3.997	1.814	10.360	9.944	17.320	26.810	0.766	4.643
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	1.332	0.318	1.327	T 235.400	96.8%	0.624	0.598	0.525	6.447
2	02:42:04	1.244	0.279	0.158	T 234.600	98.7%	0.528	0.562	0.608	4.728
3	02:42:31	1.612	0.340	-0.406	T 233.100	99.2%	0.542	0.599	0.521	4.963
x		1.396	0.312	0.360	T 234.400	98.3%	0.565	0.587	0.551	5.379
σ		0.192	0.031	0.884	T 1.169	1.2%	0.052	0.021	0.049	0.932
%RSD		13.760	9.795	245.600	T 0.499	1.3	9.182	3.580	8.861	17.330
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	0.001	-0.000	-0.002	0.005	96.9%	0.083	0.090	0.122	0.093
2	02:42:04	-0.001	0.001	0.003	0.001	96.7%	0.076	0.094	0.129	0.106
3	02:42:31	-0.001	0.003	-0.000	0.002	97.4%	0.079	0.125	0.114	0.124
x		-0.000	0.001	0.000	0.003	97.0%	0.079	0.103	0.121	0.107
σ		0.001	0.001	0.003	0.002	0.3%	0.004	0.019	0.007	0.016
%RSD		348.000	126.600	581.100	71.560	0.4	4.887	18.220	5.982	14.690
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:41:37	43.900	42.660	100.8%	-0.016	-0.016	0.135	0.127	0.136	119.9%
2	02:42:04	43.450	43.480	102.9%	-0.017	-0.016	0.139	0.141	0.135	121.2%
3	02:42:31	42.990	43.370	105.0%	-0.016	-0.017	0.145	0.130	0.137	124.0%
x		43.450	43.170	102.9%	-0.016	-0.016	0.140	0.133	0.136	121.7%
σ		0.452	0.449	2.1%	0.001	0.000	0.005	0.007	0.001	2.1%
%RSD		1.041	1.040	2.1	4.905	2.776	3.623	5.527	0.706	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	98.5%	81.850	106.500	105.900	22.790	T 21350.000	T 21580.000	T 21800.000	T 22050.000
2	02:48:00	99.3%	79.750	109.200	110.100	21.000	T 21270.000	T 21590.000	T 21540.000	T 21790.000
3	02:48:26	100.2%	81.230	112.800	110.700	20.920	T 21130.000	T 21650.000	T 22090.000	T 22240.000
x		99.3%	80.940	109.500	108.900	21.570	T 21250.000	T 21600.000	T 21810.000	T 22030.000
σ		0.8%	1.077	3.171	2.635	1.056	T 109.500	T 36.090	T 275.300	T 224.800
%RSD		0.8	1.331	2.897	2.419	4.893	T 0.516	T 0.167	T 1.262	T 1.021

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	109.600	T 1206.000	T 49090.000	T 4216.000	69330.000	T 68000.000	94.2%	98.540	98.420
2	02:48:00	110.100	T 1205.000	T 49670.000	T 4180.000	69080.000	T 68870.000	94.4%	96.410	99.040
3	02:48:26	111.000	T 1190.000	T 49530.000	T 4199.000	69530.000	T 68110.000	T 95.1%	96.650	95.920
x		110.200	T 1200.000	T 49430.000	T 4198.000	69310.000	T 68330.000	T 94.6%	97.200	97.790
σ		0.721	T 9.064	T 298.800	T 17.620	229.800	T 474.400	T 0.5%	1.167	1.654
%RSD		0.654	T 0.755	T 0.604	T 0.420	0.332	T 0.694	T 0.5	1.201	1.692

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	94.460	6240.000	1131.000	115.400	T 1081.000	1201.000	92.300	91.020	90.600
2	02:48:00	93.710	5735.000	1132.000	115.200	T 1078.000	1186.000	92.230	88.920	90.630
3	02:48:26	92.350	6713.000	1132.000	114.100	T 1056.000	1165.000	90.640	90.990	89.540
x		93.510	6229.000	1132.000	114.900	T 1071.000	1184.000	91.720	90.310	90.260
σ		1.068	489.100	0.936	0.704	T 13.680	18.410	0.939	1.203	0.621
%RSD		1.142	7.852	0.083	0.613	T 1.277	1.555	1.024	1.332	0.688

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	88.950	91.440	90.690	92.080	91.640	97.070	89.560	22.560	23.030
2	02:48:00	87.500	90.390	91.770	93.960	90.620	97.400	91.180	21.900	21.340
3	02:48:26	86.840	90.200	90.610	90.710	90.700	95.450	91.060	23.060	22.990
x		87.760	90.680	91.020	92.250	90.990	96.640	90.600	22.510	22.460
σ		1.074	0.668	0.649	1.629	0.567	1.043	0.901	0.581	0.968
%RSD		1.224	0.737	0.713	1.766	0.623	1.080	0.994	2.579	4.310

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	402.900	91.840	-0.249	T 327.300	95.2%	95.320	95.250	95.730	97.010
2	02:48:00	413.900	94.030	1.851	T 326.100	94.9%	95.730	97.520	95.330	97.000
3	02:48:26	393.800	88.210	0.344	T 328.000	94.1%	96.210	98.200	95.310	97.810
x		403.500	91.360	0.649	T 327.100	94.7%	95.750	96.990	95.460	97.270
σ		10.070	2.937	1.083	T 0.926	0.5%	0.444	1.544	0.237	0.466
%RSD		2.494	3.215	166.900	T 0.283	0.6	0.463	1.592	0.248	0.479

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	96.020	95.200	93.650	90.480	94.7%	94.500	93.590	98.900	93.120
2	02:48:00	96.630	95.090	92.590	90.220	94.6%	94.070	94.260	99.060	92.920
3	02:48:26	97.850	95.850	93.220	90.850	93.8%	94.280	94.870	99.800	91.840
x		96.830	95.380	93.160	90.510	94.4%	94.280	94.240	99.260	92.630
σ		0.936	0.411	0.532	0.315	0.5%	0.213	0.637	0.480	0.688
%RSD		0.967	0.431	0.571	0.348	0.5	0.226	0.676	0.484	0.743

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:47:33	140.200	138.100	99.3%	93.090	97.140	93.540	91.610	94.350	115.2%
2	02:48:00	139.300	138.900	100.1%	92.240	97.760	93.120	92.140	94.360	115.5%
3	02:48:26	139.800	138.700	100.9%	91.980	97.080	92.580	91.950	93.960	116.9%
x		139.700	138.600	100.1%	92.440	97.330	93.080	91.900	94.220	115.9%
σ		0.450	0.434	0.8%	0.583	0.377	0.481	0.267	0.228	0.9%
%RSD		0.322	0.313	0.8	0.631	0.387	0.517	0.290	0.242	0.8

CCV MW10535 11/17/2018 02:53:02 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	83.4%	297.500	290.000	288.300	9.776	┬58270.000	┬58880.000	┬58670.000	┬58560.000
2	02:53:56	83.9%	294.500	284.200	297.400	11.630	┬59330.000	┬59290.000	┬58910.000	┬59530.000
3	02:54:23	85.5%	295.700	292.100	300.000	9.007	┬60460.000	┬60250.000	┬59610.000	┬60250.000
x		84.3%	98.638%	96.266%	98.409%	10.140	┬98.918%	┬59470.000	┬59060.000	┬99.073%
σ		1.1%	n/a	n/a	n/a	1.346	┬n/a	┬701.500	┬491.300	┬n/a
%RSD		1.3	0.514	1.416	2.067	13.280	┬1.846	┬1.180	┬0.832	┬1.430
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	289.000	┬3177.000	213.400	┬61080.000	57020.000	┬57100.000	91.6%	287.500	300.600
2	02:53:56	295.800	┬3184.000	243.800	┬62490.000	59990.000	┬59120.000	89.5%	291.700	┬295.700
3	02:54:23	296.500	┬3081.000	251.100	┬61330.000	60670.000	┬60240.000	88.5%	293.700	┬301.500
x		97.920%	┬104.920%	236.100	┬102.718%	59230.000	┬98.028%	89.9%	96.978%	┬99.752%
σ		n/a	┬n/a	19.990	┬n/a	1941.000	┬n/a	1.6%	n/a	┬n/a
%RSD		1.414	┬1.827	8.468	┬1.217	3.278	┬2.707	1.8	1.088	┬1.050
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	283.500	-44.910	┬57090.000	┬269.800	┬56330.000	┬54940.000	┬271.400	276.500	272.700
2	02:53:56	291.800	-1449.000	┬58020.000	┬276.300	┬59140.000	┬56640.000	┬276.800	273.900	272.800
3	02:54:23	299.700	-1412.000	┬59780.000	┬284.900	┬59150.000	┬57090.000	┬280.200	275.400	272.600
x		97.230%	-968.700	┬58300.000	┬92.334%	┬58210.000	┬93.705%	┬92.045%	91.757%	272.700
σ		n/a	800.200	┬1368.000	┬n/a	┬1623.000	┬n/a	┬n/a	n/a	0.110
%RSD		2.774	82.610	┬2.346	┬2.727	┬2.788	┬2.021	┬1.617	0.469	0.040
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	264.200	284.000	282.100	281.900	272.200	277.100	281.700	1.340	0.224
2	02:53:56	264.100	272.400	279.000	277.300	273.400	291.000	273.800	1.455	-0.255
3	02:54:23	264.900	278.600	278.900	277.000	278.800	291.500	275.400	1.495	0.462
x		264.400	92.774%	93.324%	278.700	274.800	95.513%	277.000	1.430	0.144
σ		0.416	n/a	n/a	2.770	3.525	n/a	4.201	0.081	0.365
%RSD		0.157	2.084	0.646	0.994	1.283	2.850	1.517	5.638	254.300
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	1273.000	273.000	-0.183	┬307.600	86.1%	303.000	306.900	304.300	285.000
2	02:53:56	1264.000	282.000	-0.400	┬303.700	88.1%	305.800	306.600	303.600	287.400
3	02:54:23	1221.000	271.600	0.715	┬307.600	86.8%	309.900	310.300	307.600	288.800
x		1252.000	91.847%	0.044	┬102.087%	87.0%	102.083%	102.646%	305.100	287.100
σ		27.790	n/a	0.591	┬n/a	1.0%	n/a	n/a	2.151	1.920
%RSD		2.219	2.052	1344.000	┬0.729	1.2	1.147	0.667	0.705	0.669
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	305.000	303.500	290.300	283.800	86.9%	298.500	301.400	317.900	297.600
2	02:53:56	302.800	298.900	285.700	281.300	88.4%	297.400	299.500	317.000	297.400
3	02:54:23	305.900	302.600	288.500	282.400	88.1%	302.700	303.500	322.000	302.000
x		101.529%	301.600	288.200	94.176%	87.8%	99.849%	100.494%	319.000	99.662%
σ		n/a	2.432	2.316	n/a	0.8%	n/a	n/a	2.656	n/a
%RSD		0.522	0.806	0.804	0.447	0.9	0.940	0.656	0.833	0.869
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:53:29	299.400	298.800	91.3%	299.000	┬283.900	296.200	290.400	┬286.500	93.8%
2	02:53:56	303.800	300.300	92.1%	301.700	┬286.100	┬284.900	296.000	┬288.900	97.7%
3	02:54:23	301.400	299.900	91.4%	299.800	┬287.900	┬287.500	296.900	┬289.900	98.2%
x		100.523%	99.893%	91.6%	300.200	┬95.326%	┬96.504%	98.145%	┬96.134%	96.6%
σ		n/a	n/a	0.4%	1.425	┬n/a	┬n/a	n/a	┬n/a	2.4%
%RSD		0.730	0.258	0.5	0.475	┬0.699	┬2.041	1.198	┬0.603	2.5

CCB IM9061-02 11/17/2018 02:58:58 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	96.0%	0.018	2.249	1.897	1.977	1.816	1.026	1.098	1.199
2	02:59:52	94.5%	0.008	1.496	1.473	0.159	1.581	1.002	0.955	1.060
3	03:00:19	96.5%	0.008	1.303	1.575	-0.364	1.651	0.836	0.835	0.809
x		95.7%	0.011	1.683	1.648	0.591	1.683	0.955	0.963	1.022
σ		1.0%	0.006	0.500	0.221	1.229	0.121	0.103	0.132	0.198
%RSD		1.1	48.580	29.710	13.410	208.100	7.190	10.830	13.680	19.360
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	0.692	0.564	1.543	1.382	1.746	0.617	90.7%	0.105	-0.022
2	02:59:52	0.686	0.432	-4.853	2.000	0.556	0.660	90.3%	0.123	-0.116
3	03:00:19	0.716	0.063	-29.860	1.030	0.506	1.068	92.6%	0.198	0.070
x		0.698	0.353	-11.060	1.471	0.936	0.782	91.2%	0.142	-0.022
σ		0.015	0.260	16.590	0.491	0.702	0.249	1.3%	0.049	0.093
%RSD		2.201	73.510	150.100	33.390	74.970	31.820	1.4	34.520	412.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	0.022	-174.200	8.718	0.040	9.220	7.275	0.004	0.011	0.249
2	02:59:52	0.017	-89.000	8.170	0.063	9.370	8.553	0.002	0.002	0.396
3	03:00:19	0.028	-180.400	8.287	0.062	7.089	7.459	0.002	0.008	-0.092
x		0.022	-147.800	8.392	0.055	8.560	7.763	0.003	0.007	0.185
σ		0.005	51.050	0.289	0.013	1.276	0.691	0.001	0.005	0.251
%RSD		23.560	34.530	3.442	23.710	14.910	8.897	46.390	61.880	135.800
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	0.009	-0.004	-0.057	-0.277	-0.102	0.029	-0.096	-0.069	0.379
2	02:59:52	0.015	0.017	-0.103	-0.216	-0.056	0.200	-0.136	-0.044	-0.067
3	03:00:19	0.021	0.012	-0.115	-0.177	-0.119	0.209	0.393	-0.208	-0.250
x		0.015	0.008	-0.092	-0.223	-0.092	0.146	0.054	-0.107	0.021
σ		0.006	0.011	0.030	0.050	0.033	0.102	0.295	0.088	0.323
%RSD		37.950	137.900	33.250	22.400	35.280	69.630	550.600	82.670	1567.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	1.206	0.338	1.072	0.010	94.3%	0.344	0.351	0.339	-0.430
2	02:59:52	2.152	0.572	0.745	0.008	95.4%	0.281	0.342	0.270	-0.482
3	03:00:19	1.486	0.399	0.518	0.009	97.0%	0.302	0.346	0.278	-1.000
x		1.615	0.436	0.778	0.009	95.6%	0.309	0.346	0.296	-0.638
σ		0.486	0.121	0.278	0.001	1.4%	0.032	0.004	0.038	0.315
%RSD		30.090	27.830	35.730	8.397	1.4	10.400	1.220	12.890	49.430
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	0.015	0.020	0.001	0.004	95.5%	0.347	0.541	0.285	0.278
2	02:59:52	0.017	0.016	0.005	0.008	97.5%	0.350	0.487	0.284	0.275
3	03:00:19	0.016	0.016	0.008	0.012	98.8%	0.333	0.472	0.273	0.253
x		0.016	0.017	0.005	0.008	97.3%	0.344	0.500	0.281	0.268
σ		0.001	0.002	0.004	0.004	1.7%	0.009	0.036	0.007	0.014
%RSD		4.889	13.720	84.100	46.400	1.7	2.583	7.232	2.399	5.043
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	02:59:26	0.009	0.015	98.4%	0.007	0.003	0.013	0.010	0.009	93.8%
2	02:59:52	0.017	0.008	99.3%	-0.001	0.002	0.005	0.011	0.007	97.0%
3	03:00:19	0.006	0.019	101.5%	0.001	0.005	0.008	0.008	0.007	100.7%
x		0.011	0.014	99.7%	0.002	0.003	0.008	0.010	0.007	97.1%
σ		0.006	0.006	1.6%	0.004	0.001	0.004	0.001	0.001	3.4%
%RSD		56.700	39.150	1.6	178.900	33.020	49.020	14.750	14.750	3.5

TJ25084-013SD 11/17/2018 03:04:55

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	98.2%	82.850	115.300	116.900	25.210	┬21540.000	┬22050.000	┬22080.000	┬22090.000
2	03:05:49	98.0%	81.180	113.200	116.900	22.360	┬21450.000	┬21930.000	┬21880.000	┬21990.000
3	03:06:16	98.4%	82.010	109.100	113.800	22.460	┬21410.000	┬22060.000	┬22070.000	┬22300.000
x		98.2%	82.010	112.500	115.900	23.340	┬21470.000	┬22010.000	┬22010.000	┬22120.000
σ		0.2%	0.838	3.157	1.795	1.618	┬64.780	┬71.060	┬112.500	┬159.900
%RSD		0.2	1.022	2.805	1.550	6.932	┬0.302	┬0.323	┬0.511	┬0.723

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	113.300	┬1259.000	┬50880.000	┬4206.000	69920.000	┬69110.000	96.0%	100.400	101.700
2	03:05:49	110.400	┬1271.000	┬49990.000	┬4318.000	70120.000	┬68930.000	96.3%	100.100	101.800
3	03:06:16	111.900	┬1253.000	┬50760.000	┬4328.000	72020.000	┬70070.000	95.3%	102.000	103.200
x		111.900	┬1261.000	┬50540.000	┬4284.000	70690.000	┬69370.000	95.9%	100.900	102.200
σ		1.460	┬8.858	┬483.100	┬67.590	1161.000	┬616.000	0.5%	0.997	0.844
%RSD		1.305	┬0.702	┬0.956	┬1.578	1.642	┬0.888	0.5	0.989	0.826

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	98.070	4798.000	1175.000	117.500	┬1121.000	1245.000	96.570	94.230	92.470
2	03:05:49	97.820	5521.000	1171.000	118.800	┬1121.000	1238.000	93.470	90.550	91.050
3	03:06:16	98.030	6065.000	1176.000	118.700	┬1132.000	1233.000	95.450	92.550	93.240
x		97.970	5461.000	1174.000	118.300	┬1125.000	1239.000	95.160	92.440	92.260
σ		0.133	635.200	2.685	0.730	┬6.685	6.057	1.570	1.841	1.110
%RSD		0.136	11.630	0.229	0.617	┬0.594	0.489	1.650	1.992	1.204

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	90.780	93.920	93.100	93.820	91.980	100.400	95.050	24.040	23.890
2	03:05:49	90.860	93.810	90.620	95.390	91.810	99.620	91.750	23.320	24.450
3	03:06:16	91.240	92.900	91.540	95.800	93.380	101.700	92.790	23.470	25.500
x		90.960	93.550	91.750	95.000	92.390	100.600	93.200	23.610	24.610
σ		0.243	0.561	1.255	1.043	0.859	1.049	1.685	0.383	0.820
%RSD		0.267	0.600	1.368	1.098	0.930	1.043	1.809	1.621	3.330

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	429.500	98.250	1.300	┬329.100	97.3%	98.000	99.300	100.100	99.310
2	03:05:49	416.600	95.350	-0.619	┬330.800	97.7%	98.410	98.600	97.110	101.900
3	03:06:16	434.800	99.490	-0.171	┬329.300	96.7%	98.490	99.390	96.920	98.920
x		427.000	97.700	0.170	┬329.700	97.2%	98.300	99.100	98.040	100.100
σ		9.341	2.121	1.004	┬0.961	0.5%	0.265	0.436	1.790	1.645
%RSD		2.188	2.171	590.000	┬0.292	0.5	0.270	0.440	1.826	1.644

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	98.550	98.410	94.440	91.180	95.2%	96.520	97.360	98.720	93.800
2	03:05:49	96.500	95.380	93.010	90.540	97.8%	94.710	94.410	98.610	94.240
3	03:06:16	97.400	95.840	93.890	91.490	96.9%	96.710	96.490	99.950	94.580
x		97.490	96.540	93.780	91.070	96.6%	95.980	96.090	99.090	94.210
σ		1.028	1.638	0.723	0.486	1.3%	1.104	1.519	0.746	0.394
%RSD		1.054	1.696	0.771	0.533	1.4	1.151	1.581	0.753	0.418

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:05:22	141.500	140.900	99.8%	93.380	99.190	94.360	92.350	94.870	118.0%
2	03:05:49	140.100	139.800	101.7%	92.950	98.560	94.390	92.440	95.070	120.4%
3	03:06:16	141.200	139.600	101.2%	93.840	99.320	93.720	92.560	94.950	120.2%
x		141.000	140.100	100.9%	93.390	99.020	94.150	92.450	94.960	119.6%
σ		0.734	0.679	1.0%	0.445	0.407	0.379	0.105	0.104	1.4%
%RSD		0.521	0.485	1.0	0.477	0.411	0.402	0.113	0.109	1.1

TJ25084-013L(5) 11/17/2018 03:10:51

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	99.6%	0.003	7.335	7.702	0.175	T 4715.000	T 4923.000	T 4906.000	T 4907.000
2	03:11:45	100.2%	-0.002	8.036	7.793	-4.470	T 4635.000	T 4773.000	T 4776.000	T 4821.000
3	03:12:12	103.8%	-0.002	7.020	7.361	-8.743	T 4526.000	T 4617.000	T 4591.000	T 4666.000
x		101.2%	-0.000	7.464	7.619	-4.346	T 4625.000	T 4771.000	T 4758.000	T 4798.000
σ		2.3%	0.003	0.520	0.228	4.460	T 94.780	T 153.200	T 158.200	T 122.500
%RSD		2.2	996700.000	6.963	2.993	102.600	T 2.049	T 3.211	T 3.324	T 2.552

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	3.635	39.420	T 10650.000	703.800	14780.000	T 14830.000	94.7%	0.142	-0.032
2	03:11:45	3.522	40.400	T 10590.000	708.500	14480.000	T 14620.000	97.1%	0.188	0.017
3	03:12:12	3.452	36.760	T 10600.000	685.800	14080.000	T 14370.000	T 98.8%	0.136	0.164
x		3.536	38.860	T 10620.000	699.400	14450.000	T 14610.000	T 96.9%	0.155	0.050
σ		0.093	1.885	T 33.840	11.990	354.900	T 226.200	T 2.0%	0.028	0.102
%RSD		2.620	4.851	T 0.319	1.714	2.456	T 1.548	T 2.1	18.360	205.100

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	0.144	1615.000	19.960	4.519	28.530	52.170	0.034	0.169	0.006
2	03:11:45	0.122	1634.000	18.390	4.452	27.850	51.150	0.027	0.191	0.072
3	03:12:12	0.113	1537.000	18.680	4.304	26.730	53.310	0.024	0.184	-0.027
x		0.126	1595.000	19.010	4.425	27.700	52.210	0.028	0.181	0.017
σ		0.016	51.240	0.835	0.110	0.907	1.079	0.005	0.011	0.050
%RSD		12.790	3.212	4.391	2.489	3.274	2.067	19.070	6.159	292.400

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	0.101	0.129	0.093	0.572	0.417	0.060	0.249	4.912	4.715
2	03:11:45	0.099	0.134	0.176	0.617	0.412	0.324	-0.079	5.334	5.910
3	03:12:12	0.113	0.125	0.130	0.648	0.383	0.324	0.007	5.533	5.715
x		0.104	0.129	0.133	0.612	0.404	0.236	0.059	5.260	5.447
σ		0.008	0.005	0.042	0.038	0.018	0.152	0.170	0.317	0.641
%RSD		7.389	3.756	31.280	6.186	4.476	64.500	287.600	6.033	11.760

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	-0.827	-0.150	0.244	47.000	100.2%	0.224	0.236	0.250	1.559
2	03:11:45	1.312	0.327	0.234	47.090	100.1%	0.230	0.265	0.218	0.502
3	03:12:12	1.945	0.428	-1.110	47.000	100.5%	0.179	0.224	0.171	0.603
x		0.810	0.202	-0.211	47.030	100.3%	0.211	0.242	0.213	0.888
σ		1.452	0.309	0.779	0.051	0.2%	0.028	0.021	0.040	0.583
%RSD		179.300	153.200	369.400	0.109	0.2	13.230	8.580	18.610	65.680

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	0.002	0.001	0.003	0.003	100.5%	0.155	0.277	0.070	0.055
2	03:11:45	-0.000	0.002	-0.001	0.001	101.9%	0.164	0.265	0.053	0.047
3	03:12:12	0.001	0.003	0.001	0.002	101.6%	0.153	0.274	0.060	0.052
x		0.001	0.002	0.001	0.002	101.3%	0.157	0.272	0.061	0.051
σ		0.001	0.001	0.002	0.001	0.7%	0.006	0.006	0.008	0.004
%RSD		95.690	47.860	172.600	51.670	0.7	3.842	2.281	13.470	7.831

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:11:18	9.233	8.839	101.0%	-0.010	-0.012	0.027	0.019	0.027	92.1%
2	03:11:45	8.867	8.827	102.6%	-0.012	-0.014	0.028	0.022	0.025	95.6%
3	03:12:12	8.591	8.746	102.7%	-0.012	-0.014	0.026	0.028	0.028	97.7%
x		8.897	8.804	102.1%	-0.011	-0.013	0.027	0.023	0.027	95.1%
σ		0.322	0.051	1.0%	0.001	0.001	0.001	0.005	0.002	2.8%
%RSD		3.618	0.580	1.0	8.833	6.697	4.864	21.040	5.637	2.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	95.1%	-0.002	291.700	310.500	23.610	T 8215.000	T 13530.000	T 13330.000	T 13660.000
2	03:17:42	93.3%	0.020	284.400	292.100	19.630	T 8182.000	T 13410.000	T 13330.000	T 13490.000
3	03:18:09	95.7%	0.016	290.900	303.400	15.530	T 8133.000	T 13350.000	T 13510.000	T 13630.000
x		94.7%	0.012	289.000	302.000	19.590	T 8177.000	T 13430.000	T 13390.000	T 13590.000
σ		1.3%	0.011	4.040	9.277	4.041	T 41.190	T 89.880	T 105.600	T 91.160
%RSD		1.3	99.720	1.398	3.072	20.630	T 0.504	T 0.669	T 0.789	T 0.671

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	67.930	T 6766.000	T 50570.000	T 8008.000	M 143100.000	TM 137100.000	88.6%	2.751	1.438
2	03:17:42	T 65.660	T 6844.000	T 50800.000	T 8177.000	M 140800.000	TM 135300.000	88.0%	2.570	1.155
3	03:18:09	67.910	T 6635.000	T 50310.000	T 7950.000	M 141400.000	TM 137800.000	87.7%	2.654	1.758
x		T 67.160	T 6748.000	T 50560.000	T 8045.000	M 141800.000	TM 136700.000	88.1%	2.658	1.450
σ		T 1.307	T 105.500	T 243.300	T 117.900	M 1222.000	TM 1313.000	0.5%	0.091	0.302
%RSD		T 1.945	T 1.563	T 0.481	T 1.466	M 0.862	TM 0.961	0.6	3.409	20.810

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	4.408	6190.000	528.200	TM 1148.000	T 526.000	783.800	0.675	2.168	1.203
2	03:17:42	4.359	6512.000	524.300	TM 1134.000	T 539.100	781.200	0.719	2.068	1.407
3	03:18:09	4.310	6401.000	529.400	TM 1143.000	T 535.500	777.300	0.714	1.958	1.259
x		4.359	6368.000	527.300	TM 1142.000	T 533.600	780.800	0.703	2.065	1.289
σ		0.049	163.500	2.654	TM 7.096	T 6.749	3.312	0.024	0.105	0.105
%RSD		1.118	2.568	0.503	TM 0.622	T 1.265	0.424	3.459	5.083	8.161

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	3.019	3.107	2.519	4.815	3.594	11.910	0.019	25.780	24.860
2	03:17:42	2.973	3.143	2.296	4.778	3.569	12.520	0.384	27.000	25.070
3	03:18:09	3.085	3.119	2.553	3.931	3.775	12.330	-0.088	26.890	25.190
x		3.026	3.123	2.456	4.508	3.646	12.250	0.105	26.560	25.040
σ		0.057	0.018	0.139	0.500	0.112	0.309	0.247	0.677	0.164
%RSD		1.870	0.587	5.674	11.100	3.078	2.523	234.700	2.548	0.654

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	0.457	0.109	0.052	T 235.000	91.8%	0.643	0.623	0.613	5.416
2	03:17:42	1.527	0.411	2.419	T 237.500	91.0%	0.628	0.634	0.646	4.817
3	03:18:09	1.827	0.424	-0.200	T 236.100	91.0%	0.616	0.627	0.582	6.495
x		1.270	0.315	0.757	T 236.200	91.3%	0.629	0.628	0.614	5.576
σ		0.720	0.179	1.445	T 1.276	0.5%	0.013	0.006	0.032	0.850
%RSD		56.700	56.750	191.000	T 0.540	0.5	2.097	0.883	5.206	15.250

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	0.027	0.026	0.016	0.007	92.0%	0.321	0.453	0.646	0.595
2	03:17:42	0.021	0.026	0.002	0.008	91.5%	0.336	0.462	0.639	0.567
3	03:18:09	0.021	0.014	0.002	0.009	92.2%	0.310	0.400	0.638	0.585
x		0.023	0.022	0.006	0.008	91.9%	0.322	0.439	0.641	0.582
σ		0.003	0.007	0.008	0.001	0.4%	0.013	0.033	0.004	0.015
%RSD		15.000	30.260	126.600	8.481	0.4	4.032	7.607	0.700	2.508

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:17:15	40.840	39.790	98.8%	-0.012	-0.014	0.347	0.356	0.350	122.4%
2	03:17:42	40.740	40.800	97.5%	-0.013	-0.015	0.368	0.345	0.360	121.5%
3	03:18:09	41.790	40.970	98.6%	-0.013	-0.014	0.364	0.338	0.359	121.9%
x		41.120	40.520	98.3%	-0.013	-0.014	0.360	0.346	0.357	121.9%
σ		0.580	0.638	0.7%	0.001	0.000	0.011	0.009	0.006	0.4%
%RSD		1.411	1.574	0.7	5.582	1.888	3.097	2.596	1.554	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	86.9%	-0.002	297.600	319.100	48.170	TM 166000.000	T 13230.000	T 13020.000	T 13170.000
2	03:23:39	86.6%	0.020	298.200	316.700	50.250	TM 167200.000	T 13540.000	T 13290.000	T 13340.000
3	03:24:06	87.7%	0.015	309.000	323.200	49.400	TM 170000.000	T 13450.000	T 13370.000	T 13500.000
x		87.1%	0.011	301.600	319.700	49.270	TM 167800.000	T 13410.000	T 13220.000	T 13340.000
σ		0.6%	0.011	6.430	3.325	1.043	TM 2062.000	T 159.000	T 183.100	T 163.600
%RSD		0.7	101.400	2.132	1.040	2.117	TM 1.229	T 1.186	T 1.384	T 1.227

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	28.170	T 4202.000	T 53360.000	T 4048.000	86620.000	T 85870.000	86.7%	1.128	1.254
2	03:23:39	28.510	T 4211.000	T 54140.000	T 4065.000	88650.000	T 87390.000	85.3%	1.392	1.001
3	03:24:06	28.430	T 4176.000	T 53930.000	T 4063.000	87620.000	T 85430.000	86.7%	1.341	1.201
x		28.370	T 4196.000	T 53810.000	T 4059.000	87630.000	T 86230.000	86.2%	1.287	1.152
σ		0.180	T 18.380	T 400.300	T 9.219	1015.000	T 1031.000	0.8%	0.140	0.134
%RSD		0.635	T 0.438	T 0.744	T 0.227	1.158	T 1.196	1.0	10.890	11.590

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	4.613	4347.000	T 14580.000	TM 2183.000	T 14920.000	T 14560.000	0.898	0.752	7.002
2	03:23:39	4.601	4359.000	T 14640.000	TM 2204.000	T 14950.000	T 14650.000	0.906	0.655	8.782
3	03:24:06	4.501	3958.000	T 14750.000	TM 2219.000	T 15090.000	T 14420.000	0.899	0.684	9.869
x		4.572	4221.000	T 14650.000	TM 2202.000	T 14990.000	T 14540.000	0.901	0.697	8.551
σ		0.061	228.500	T 85.010	TM 18.170	T 93.060	T 114.700	0.005	0.050	1.447
%RSD		1.344	5.413	T 0.580	TM 0.825	T 0.621	T 0.789	0.514	7.176	16.920

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	0.746	0.154	1.255	4.943	3.448	5.131	0.277	38.530	39.300
2	03:23:39	0.768	0.195	1.179	4.700	3.360	5.232	0.366	36.570	37.560
3	03:24:06	0.822	0.166	1.193	5.004	3.595	5.077	0.398	37.220	38.010
x		0.779	0.172	1.209	4.882	3.468	5.146	0.347	37.440	38.290
σ		0.039	0.021	0.040	0.161	0.119	0.079	0.063	0.999	0.905
%RSD		5.015	12.270	3.344	3.298	3.430	1.534	18.010	2.668	2.364

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	3.411	0.741	0.098	T 401.600	87.4%	1.591	1.648	1.624	7.275
2	03:23:39	1.722	0.379	-0.059	T 397.700	87.7%	1.563	1.629	1.695	6.056
3	03:24:06	0.149	0.063	2.290	T 396.900	88.6%	1.567	1.652	1.605	6.566
x		1.761	0.394	0.776	T 398.700	87.9%	1.573	1.643	1.641	6.633
σ		1.632	0.339	1.313	T 2.476	0.6%	0.015	0.013	0.048	0.612
%RSD		92.680	86.060	169.100	T 0.621	0.7	0.967	0.770	2.910	9.231

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	0.004	0.003	0.000	0.003	88.3%	0.185	0.233	0.136	0.095
2	03:23:39	0.001	0.002	-0.004	-0.003	86.9%	0.175	0.219	0.116	0.090
3	03:24:06	-0.002	0.002	0.002	0.005	88.6%	0.136	0.214	0.140	0.107
x		0.001	0.002	-0.001	0.002	87.9%	0.165	0.222	0.131	0.097
σ		0.003	0.001	0.003	0.004	0.9%	0.026	0.010	0.013	0.009
%RSD		238.200	31.350	583.500	251.300	1.0	15.590	4.430	10.130	9.103

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:23:12	81.490	79.720	94.0%	-0.017	-0.015	0.057	0.057	0.061	118.0%
2	03:23:39	80.510	79.570	95.3%	-0.014	-0.015	0.072	0.069	0.064	116.8%
3	03:24:06	80.790	80.540	94.8%	-0.014	-0.016	0.068	0.053	0.064	117.6%
x		80.930	79.940	94.7%	-0.015	-0.015	0.066	0.060	0.063	117.5%
σ		0.502	0.525	0.7%	0.002	0.000	0.008	0.008	0.002	0.6%
%RSD		0.621	0.656	0.7	10.890	1.778	11.490	13.710	2.946	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	89.3%	0.014	295.100	314.600	51.200	TM 170000.000	T 13100.000	T 13000.000	T 12990.000
2	03:29:34	91.0%	0.014	291.000	311.200	47.940	TM 172300.000	T 12980.000	T 12890.000	T 12940.000
3	03:30:01	88.4%	0.019	298.500	310.500	46.350	TM 173000.000	T 13130.000	T 12990.000	T 13110.000
x		89.6%	0.015	294.900	312.100	48.500	TM 171700.000	T 13070.000	T 12960.000	T 13010.000
σ		1.3%	0.003	3.758	2.182	2.471	TM 1567.000	T 82.930	T 61.480	T 85.340
%RSD		1.5	18.930	1.274	0.699	5.096	TM 0.912	T 0.635	T 0.474	T 0.656

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	27.280	T 4127.000	T 51510.000	T 3982.000	85780.000	T 84810.000	88.4%	1.307	1.097
2	03:29:34	27.230	T 4058.000	T 51650.000	T 3963.000	85940.000	T 85380.000	89.0%	1.298	0.815
3	03:30:01	27.800	T 4138.000	T 53210.000	T 4044.000	87410.000	T 85890.000	86.3%	1.329	1.376
x		27.440	T 4107.000	T 52120.000	T 3996.000	86380.000	T 85360.000	87.9%	1.311	1.096
σ		0.318	T 43.440	T 942.900	T 42.570	894.900	T 540.700	1.4%	0.016	0.280
%RSD		1.159	T 1.058	T 1.809	T 1.065	1.036	T 0.633	1.6	1.207	25.570

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	4.555	3199.000	T 14230.000	TM 2199.000	T 14340.000	T 14000.000	0.922	0.820	9.055
2	03:29:34	4.569	3234.000	T 13950.000	TM 2177.000	T 14530.000	T 13980.000	0.946	0.790	10.570
3	03:30:01	4.772	3176.000	T 14350.000	TM 2250.000	T 14830.000	T 14230.000	0.977	0.749	9.457
x		4.632	3203.000	T 14180.000	TM 2209.000	T 14570.000	T 14070.000	0.948	0.786	9.692
σ		0.122	29.050	T 204.200	TM 37.810	T 247.800	T 142.500	0.028	0.036	0.782
%RSD		2.625	0.907	T 1.440	TM 1.712	T 1.701	T 1.013	2.919	4.520	8.070

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	0.833	0.162	0.730	3.506	3.039	5.176	0.683	39.900	37.570
2	03:29:34	0.827	0.163	0.715	3.754	3.017	5.430	0.304	36.520	37.390
3	03:30:01	0.892	0.161	0.675	4.081	2.808	5.361	0.393	37.230	38.330
x		0.851	0.162	0.707	3.780	2.954	5.322	0.460	37.890	37.760
σ		0.036	0.001	0.028	0.288	0.128	0.131	0.198	1.777	0.502
%RSD		4.226	0.581	3.965	7.626	4.315	2.468	43.010	4.691	1.329

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	1.009	0.236	1.635	T 393.400	89.3%	1.536	1.674	1.591	7.374
2	03:29:34	3.074	0.673	0.282	T 391.200	89.7%	1.679	1.716	1.703	4.736
3	03:30:01	3.008	0.679	0.036	T 394.100	88.9%	1.688	1.695	1.724	7.566
x		2.364	0.529	0.651	T 392.900	89.3%	1.634	1.695	1.673	6.559
σ		1.174	0.254	0.861	T 1.498	0.4%	0.085	0.021	0.072	1.581
%RSD		49.660	48.050	132.300	T 0.381	0.4	5.232	1.210	4.278	24.110

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	0.001	0.002	0.000	0.000	88.9%	0.148	0.179	0.111	0.109
2	03:29:34	-0.000	0.000	-0.004	0.001	88.6%	0.136	0.224	0.109	0.109
3	03:30:01	-0.000	0.000	0.004	0.004	88.2%	0.107	0.214	0.152	0.110
x		0.000	0.001	-0.000	0.002	88.5%	0.130	0.206	0.124	0.109
σ		0.001	0.001	0.004	0.002	0.4%	0.021	0.023	0.024	0.001
%RSD		186.400	88.830	91050.000	123.400	0.4	16.330	11.350	19.350	0.634

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:29:07	78.500	79.240	94.4%	-0.013	-0.017	0.054	0.053	0.057	118.0%
2	03:29:34	79.610	78.800	94.9%	-0.017	-0.018	0.054	0.044	0.050	116.7%
3	03:30:01	79.850	78.780	94.3%	-0.017	-0.015	0.055	0.055	0.051	114.5%
x		79.320	78.940	94.5%	-0.015	-0.017	0.054	0.051	0.053	116.4%
σ		0.716	0.259	0.3%	0.002	0.001	0.001	0.006	0.004	1.7%
%RSD		0.903	0.328	0.3	14.080	7.153	1.209	11.810	7.423	1.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	88.7%	95.370	394.900	411.400	55.690	TM 169800.000	T 13880.000	T 13790.000	T 13960.000
2	03:35:32	89.7%	94.460	377.500	407.300	51.440	TM 169300.000	T 13660.000	T 13550.000	T 13580.000
3	03:35:59	89.7%	95.630	394.900	414.000	50.980	TM 172200.000	T 14160.000	T 13910.000	T 13940.000
x		89.4%	95.150	389.100	410.900	52.700	TM 170400.000	T 13900.000	T 13750.000	T 13830.000
σ		0.6%	0.615	10.050	3.366	2.598	TM 1528.000	T 250.500	T 178.900	T 214.400
%RSD		0.6	0.646	2.582	0.819	4.929	TM 0.897	T 1.802	T 1.301	T 1.551
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	130.500	T 5070.000	T 54120.000	T 4976.000	84810.000	T 82760.000	90.5%	100.800	103.000
2	03:35:32	126.500	T 5146.000	T 53500.000	T 4985.000	84730.000	T 84440.000	92.0%	97.520	99.830
3	03:35:59	130.000	T 4992.000	T 54610.000	T 4953.000	86370.000	T 84090.000	89.1%	99.200	102.600
x		129.000	T 5069.000	T 54070.000	T 4971.000	85300.000	T 83760.000	90.5%	99.170	101.800
σ		2.205	T 76.940	T 556.400	T 16.410	923.700	T 886.000	1.5%	1.636	1.729
%RSD		1.709	T 1.518	T 1.029	T 0.330	1.083	T 1.058	1.6	1.650	1.698
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	100.100	2911.000	T 14950.000	TM 2242.000	T 15040.000	T 14590.000	94.610	92.850	99.870
2	03:35:32	99.120	3160.000	T 14700.000	TM 2236.000	T 14980.000	T 14560.000	93.660	91.830	98.060
3	03:35:59	99.670	3384.000	T 14770.000	TM 2274.000	T 15220.000	T 14690.000	92.110	89.030	97.870
x		99.640	3152.000	T 14810.000	TM 2251.000	T 15080.000	T 14610.000	93.460	91.240	98.600
σ		0.500	236.800	T 126.800	TM 20.640	T 124.200	T 65.960	1.260	1.979	1.104
%RSD		0.502	7.515	T 0.857	TM 0.917	T 0.823	T 0.451	1.349	2.169	1.120
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	89.380	90.370	91.900	92.440	89.130	104.600	90.830	38.560	40.640
2	03:35:32	88.380	91.380	91.070	92.630	92.400	101.800	88.330	41.090	39.960
3	03:35:59	88.440	88.830	90.410	91.770	91.210	102.500	91.170	39.490	42.190
x		88.730	90.190	91.130	92.280	90.910	103.000	90.110	39.710	40.930
σ		0.558	1.285	0.748	0.453	1.654	1.465	1.553	1.282	1.147
%RSD		0.628	1.424	0.820	0.491	1.819	1.423	1.724	3.228	2.802
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	406.900	93.110	-0.535	T 481.000	91.8%	99.600	100.400	101.100	99.140
2	03:35:32	416.700	93.230	0.210	T 488.500	90.9%	102.000	102.900	101.000	99.140
3	03:35:59	397.600	90.080	-0.293	T 488.100	89.3%	101.800	102.900	102.000	99.250
x		407.100	92.140	-0.206	T 485.900	90.7%	101.100	102.100	101.400	99.180
σ		9.549	1.786	0.380	T 4.194	1.3%	1.343	1.442	0.566	0.068
%RSD		2.346	1.939	184.600	T 0.863	1.4	1.328	1.412	0.558	0.069
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	96.030	94.700	92.420	89.560	89.1%	97.240	98.010	100.700	94.680
2	03:35:32	94.310	93.710	93.840	89.610	90.4%	98.120	98.920	101.800	94.890
3	03:35:59	95.140	93.810	93.130	91.010	89.3%	96.480	97.480	101.500	93.860
x		95.160	94.070	93.130	90.060	89.6%	97.280	98.140	101.300	94.480
σ		0.859	0.548	0.712	0.823	0.7%	0.819	0.729	0.534	0.542
%RSD		0.903	0.582	0.765	0.913	0.8	0.842	0.742	0.527	0.574
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:35:05	178.100	177.400	94.3%	92.470	97.650	94.370	92.780	95.430	112.7%
2	03:35:32	176.300	177.000	96.2%	92.770	97.880	93.490	91.890	94.250	112.8%
3	03:35:59	177.000	178.400	95.6%	93.090	96.790	93.480	92.310	94.420	111.5%
x		177.100	177.600	95.4%	92.780	97.440	93.780	92.330	94.700	112.3%
σ		0.905	0.724	1.0%	0.310	0.578	0.509	0.443	0.639	0.7%
%RSD		0.511	0.408	1.0	0.334	0.593	0.543	0.479	0.675	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	84.4%	0.003	160.100	167.500	21.200	TM 298400.000	T 14510.000	T 14540.000	T 14640.000
2	03:41:30	86.9%	0.010	158.100	163.900	17.750	TM 296700.000	T 14500.000	T 14460.000	T 14700.000
3	03:41:58	86.4%	0.007	156.900	163.000	21.710	TM 300900.000	T 14760.000	T 14630.000	T 14630.000
x		85.9%	0.007	158.400	164.800	20.220	TM 298700.000	T 14590.000	T 14540.000	T 14660.000
σ		1.3%	0.004	1.627	2.419	2.156	TM 2096.000	T 150.900	T 82.450	T 36.820
%RSD		1.5	60.360	1.027	1.468	10.670	TM 0.702	T 1.035	T 0.567	T 0.251
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	9.955	TM 12500.000	T 59560.000	T 6424.000	83060.000	T 82620.000	84.2%	3.528	0.857
2	03:41:30	9.566	TM 12270.000	T 60010.000	T 6303.000	81230.000	T 81180.000	85.0%	2.956	0.694
3	03:41:58	9.902	TM 12380.000	T 60500.000	T 6373.000	81770.000	T 81950.000	84.7%	3.203	0.633
x		9.808	TM 12380.000	T 60020.000	T 6367.000	82020.000	T 81920.000	84.6%	3.229	0.728
σ		0.211	TM 119.200	T 470.500	T 60.620	940.100	T 716.900	0.4%	0.287	0.116
%RSD		2.149	TM 0.963	T 0.784	T 0.952	1.146	T 0.875	0.5	8.888	15.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	0.944	4948.000	2562.000	TM 503.600	T 2520.000	2612.000	0.300	0.969	12.420
2	03:41:30	1.010	5234.000	2554.000	T 496.100	T 2520.000	2625.000	0.281	0.868	10.960
3	03:41:58	1.066	5596.000	2546.000	TM 500.300	T 2525.000	2589.000	0.266	0.907	11.900
x		1.007	5259.000	2554.000	TM 500.000	T 2522.000	2608.000	0.282	0.915	11.760
σ		0.061	324.800	8.322	TM 3.750	T 2.805	18.110	0.017	0.051	0.740
%RSD		6.102	6.176	0.326	TM 0.750	T 0.111	0.694	6.015	5.568	6.293
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	1.585	0.514	4.656	11.650	9.946	3.125	0.214	51.290	50.000
2	03:41:30	1.527	0.423	4.744	11.590	9.745	3.118	0.632	49.240	51.630
3	03:41:58	1.548	0.520	4.800	12.100	10.030	2.923	0.193	47.670	47.080
x		1.554	0.486	4.733	11.780	9.906	3.055	0.346	49.400	49.570
σ		0.029	0.054	0.072	0.279	0.145	0.115	0.248	1.817	2.310
%RSD		1.873	11.130	1.528	2.371	1.464	3.756	71.490	3.677	4.660
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	2.239	0.549	2.421	T 302.400	86.9%	0.367	0.431	0.432	5.902
2	03:41:30	0.533	0.116	1.347	T 305.600	86.9%	0.370	0.437	0.426	4.006
3	03:41:58	2.175	0.513	1.143	T 302.100	88.0%	0.424	0.390	0.429	4.798
x		1.649	0.393	1.637	T 303.400	87.3%	0.387	0.419	0.429	4.902
σ		0.967	0.240	0.686	T 1.970	0.6%	0.032	0.025	0.003	0.953
%RSD		58.620	61.140	41.930	T 0.649	0.7	8.287	6.069	0.738	19.430
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	0.000	0.001	0.077	0.047	86.1%	0.202	0.310	0.080	0.094
2	03:41:30	0.000	-0.001	0.056	0.056	86.5%	0.249	0.321	0.090	0.086
3	03:41:58	0.002	0.003	0.054	0.046	86.3%	0.222	0.294	0.112	0.112
x		0.001	0.001	0.062	0.050	86.3%	0.224	0.308	0.094	0.097
σ		0.001	0.002	0.013	0.006	0.2%	0.023	0.014	0.017	0.014
%RSD		161.800	150.900	21.050	11.480	0.3	10.440	4.433	17.650	13.940
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:41:02	178.800	174.800	91.8%	-0.007	-0.011	0.047	0.037	0.041	108.0%
2	03:41:30	179.700	178.400	92.8%	-0.009	-0.011	0.045	0.035	0.039	108.8%
3	03:41:58	178.800	176.400	93.2%	-0.010	-0.013	0.047	0.031	0.041	109.0%
x		179.100	176.500	92.6%	-0.009	-0.012	0.046	0.034	0.040	108.6%
σ		0.522	1.825	0.7%	0.002	0.001	0.001	0.003	0.001	0.5%
%RSD		0.292	1.034	0.8	20.750	11.280	2.332	8.855	2.837	0.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	87.8%	0.005	228.500	233.500	2.655	TM 164100.000	T 9048.000	T 9140.000	T 9209.000
2	03:47:29	88.4%	0.012	218.500	231.300	1.955	TM 163500.000	T 8857.000	T 8827.000	T 9057.000
3	03:47:56	91.8%	0.012	225.400	235.600	-0.656	TM 163000.000	T 8922.000	T 8977.000	T 9207.000
x		89.4%	0.010	224.100	233.500	1.318	TM 163500.000	T 8943.000	T 8981.000	T 9158.000
σ		2.1%	0.004	5.142	2.159	1.745	TM 578.800	T 97.240	T 156.500	T 87.130
%RSD		2.4	39.060	2.294	0.925	132.400	TM 0.354	T 1.087	T 1.742	T 0.952
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	6.392	TM 10620.000	T 50650.000	T 8720.000	78850.000	T 78760.000	86.9%	5.695	1.140
2	03:47:29	6.520	TM 10620.000	T 50840.000	T 8863.000	78400.000	T 77100.000	88.4%	4.783	1.565
3	03:47:56	6.551	TM 10070.000	T 51600.000	T 8444.000	78100.000	T 78570.000	87.5%	5.116	1.262
x		6.487	TM 10440.000	T 51030.000	T 8676.000	78450.000	T 78150.000	87.6%	5.198	1.322
σ		0.084	TM 319.000	T 504.000	T 212.900	379.500	T 907.500	0.7%	0.462	0.219
%RSD		1.298	TM 3.056	T 0.988	T 2.453	0.484	T 1.161	0.8	8.880	16.550
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	2.026	5361.000	2130.000	TM 695.400	T 2090.000	2225.000	0.223	0.812	5.139
2	03:47:29	2.032	5222.000	2141.000	TM 684.800	T 2088.000	2205.000	0.225	0.804	5.398
3	03:47:56	1.939	5386.000	2119.000	TM 680.100	T 2084.000	2194.000	0.231	0.886	5.171
x		1.999	5323.000	2130.000	TM 686.800	T 2087.000	2208.000	0.226	0.834	5.236
σ		0.052	88.430	10.760	TM 7.876	T 3.263	15.800	0.004	0.045	0.141
%RSD		2.602	1.661	0.505	TM 1.147	T 0.156	0.715	1.763	5.437	2.701
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	0.662	0.119	1.318	4.105	3.092	3.331	0.413	31.040	31.960
2	03:47:29	0.639	0.149	1.264	4.083	3.330	3.115	0.095	32.010	31.450
3	03:47:56	0.678	0.169	1.352	4.293	3.119	2.938	0.400	33.170	31.730
x		0.660	0.146	1.311	4.160	3.180	3.128	0.303	32.080	31.710
σ		0.020	0.025	0.044	0.115	0.130	0.197	0.180	1.067	0.259
%RSD		3.034	17.300	3.368	2.764	4.095	6.291	59.580	3.326	0.816
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	1.444	0.341	0.584	T 275.600	89.9%	0.949	0.962	0.937	6.430
2	03:47:29	1.432	0.317	0.427	T 274.300	89.9%	0.969	1.019	0.939	3.213
3	03:47:56	1.036	0.237	0.922	T 275.700	88.9%	0.881	0.953	0.949	5.481
x		1.304	0.298	0.644	T 275.200	89.5%	0.933	0.978	0.942	5.041
σ		0.233	0.055	0.253	T 0.832	0.6%	0.046	0.036	0.007	1.653
%RSD		17.830	18.360	39.310	T 0.302	0.6	4.929	3.689	0.701	32.790
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	-0.001	-0.000	0.001	0.001	89.2%	0.179	0.249	0.108	0.112
2	03:47:29	-0.000	0.001	0.003	0.006	89.6%	0.170	0.234	0.122	0.095
3	03:47:56	-0.002	0.001	-0.004	0.006	88.5%	0.172	0.239	0.132	0.120
x		-0.001	0.001	-0.000	0.004	89.1%	0.174	0.241	0.121	0.109
σ		0.001	0.001	0.003	0.003	0.5%	0.005	0.008	0.012	0.012
%RSD		102.000	95.790	3617.000	73.200	0.6	2.984	3.256	9.935	11.430
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:47:02	63.000	62.190	94.7%	-0.015	-0.017	0.195	0.175	0.179	111.6%
2	03:47:29	61.950	62.380	96.9%	-0.015	-0.016	0.203	0.193	0.195	112.5%
3	03:47:56	63.360	62.320	95.6%	-0.014	-0.015	0.194	0.180	0.187	111.8%
x		62.770	62.300	95.8%	-0.015	-0.016	0.197	0.183	0.187	112.0%
σ		0.730	0.095	1.1%	0.000	0.001	0.005	0.009	0.008	0.5%
%RSD		1.162	0.152	1.2	1.523	5.382	2.440	5.003	4.274	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	95.5%	0.003	110.600	114.400	16.850	T 74570.000	T 21180.000	T 21110.000	T 21290.000
2	03:53:25	93.3%	0.003	106.300	105.700	12.270	T 73880.000	T 20750.000	T 20620.000	T 21140.000
3	03:53:52	94.8%	-0.002	108.200	109.400	15.760	T 74330.000	T 20920.000	T 20810.000	T 21140.000
x		94.6%	0.001	108.300	109.900	14.960	T 74260.000	T 20950.000	T 20840.000	T 21190.000
σ		1.1%	0.002	2.166	4.368	2.393	T 350.000	T 217.600	T 244.600	T 86.200
%RSD		1.2	181.100	2.000	3.976	16.000	T 0.471	T 1.039	T 1.173	T 0.407
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	4.685	T 6421.000	T 51930.000	T 28560.000	M 114300.000	TM 111700.000	89.0%	0.810	0.440
2	03:53:25	T 6.336	T 6647.000	T 51150.000	T 29810.000	M 113800.000	TM 111000.000	90.3%	0.772	0.994
3	03:53:52	4.746	T 6552.000	T 52430.000	T 29400.000	M 113600.000	TM 111200.000	90.3%	0.718	0.969
x		T 5.255	T 6540.000	T 51840.000	T 29260.000	M 113900.000	TM 111300.000	89.9%	0.767	0.801
σ		T 0.936	T 113.700	T 642.300	T 638.000	M 364.000	TM 353.700	0.7%	0.046	0.313
%RSD		T 17.810	T 1.738	T 1.239	T 2.181	M 0.320	TM 0.318	0.8	6.032	39.050
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	7.219	4528.000	12.980	14.520	13.700	235.500	0.154	1.114	1.209
2	03:53:25	7.364	4155.000	12.780	14.160	11.870	222.200	0.160	1.049	0.999
3	03:53:52	7.300	4195.000	12.570	14.100	10.740	217.500	0.166	1.079	0.724
x		7.294	4293.000	12.780	14.260	12.100	225.100	0.160	1.080	0.978
σ		0.073	204.700	0.208	0.224	1.495	9.351	0.006	0.033	0.243
%RSD		0.999	4.769	1.627	1.573	12.350	4.155	3.802	3.027	24.860
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	2.452	2.568	3.511	6.726	5.846	0.745	2.879	20.330	20.320
2	03:53:25	2.417	2.665	3.669	7.124	6.114	0.355	2.216	19.490	21.340
3	03:53:52	2.395	2.371	3.452	6.705	5.716	-0.030	2.871	21.040	20.040
x		2.421	2.535	3.544	6.852	5.892	0.357	2.655	20.290	20.570
σ		0.029	0.150	0.112	0.236	0.203	0.388	0.381	0.773	0.684
%RSD		1.198	5.924	3.161	3.440	3.446	108.700	14.340	3.812	3.328
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	10.810	2.520	0.039	T 235.000	92.1%	1.320	1.202	1.245	3.841
2	03:53:25	13.120	3.080	1.708	T 235.300	93.0%	1.246	1.202	1.343	4.454
3	03:53:52	13.210	3.071	-0.015	T 233.400	93.3%	1.328	1.198	1.351	4.049
x		12.380	2.890	0.578	T 234.600	92.8%	1.298	1.201	1.313	4.115
σ		1.362	0.321	0.980	T 1.049	0.6%	0.045	0.002	0.059	0.312
%RSD		11.000	11.110	169.700	T 0.447	0.7	3.465	0.206	4.487	7.580
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	0.001	0.002	0.044	0.058	91.6%	0.131	0.161	0.397	0.372
2	03:53:25	0.000	0.002	0.063	0.066	92.4%	0.132	0.144	0.400	0.396
3	03:53:52	-0.000	0.003	0.066	0.053	93.3%	0.154	0.144	0.417	0.382
x		0.000	0.002	0.057	0.059	92.4%	0.139	0.149	0.405	0.383
σ		0.001	0.000	0.012	0.007	0.8%	0.013	0.010	0.011	0.012
%RSD		168.800	19.370	21.120	11.290	0.9	9.388	6.452	2.710	3.107
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:52:58	80.850	80.100	97.3%	-0.014	-0.010	0.008	0.006	0.005	112.5%
2	03:53:25	81.050	80.230	99.4%	-0.008	-0.011	0.002	0.003	0.003	114.6%
3	03:53:52	79.820	79.370	100.4%	-0.010	-0.012	0.001	0.003	0.005	116.2%
x		80.570	79.900	99.0%	-0.011	-0.011	0.003	0.004	0.004	114.4%
σ		0.657	0.459	1.6%	0.003	0.001	0.004	0.002	0.001	1.8%
%RSD		0.815	0.575	1.6	28.990	8.319	121.400	45.030	28.320	1.6

TJ25084-020 11/17/2018 03:58:26

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	84.3%	0.027	375.400	406.500	65.700	TM 325100.000	T 9989.000	T 9860.000	T 10060.000
2	03:59:20	85.5%	0.019	393.000	407.100	61.890	TM 330300.000	T 10110.000	T 10030.000	T 10330.000
3	03:59:47	86.0%	0.031	381.700	407.000	65.800	TM 330600.000	T 9977.000	T 9995.000	T 10130.000
x		85.3%	0.026	383.400	406.900	64.460	TM 328600.000	T 10020.000	T 9960.000	T 10170.000
σ		0.8%	0.006	8.932	0.312	2.226	TM 3084.000	T 72.100	T 88.190	T 139.400
%RSD		1.0	22.870	2.330	0.077	3.454	TM 0.939	T 0.719	T 0.885	T 1.371
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	109.400	TM 13350.000	T 57800.000	T 22900.000	39450.000	T 39890.000	87.2%	18.110	2.097
2	03:59:20	111.000	TM 12930.000	T 58650.000	T 22730.000	39870.000	T 40130.000	86.4%	18.000	2.118
3	03:59:47	112.200	TM 12960.000	T 59690.000	T 22650.000	40060.000	T 40590.000	85.4%	18.470	1.810
x		110.900	TM 13080.000	T 58710.000	T 22760.000	39790.000	T 40200.000	86.3%	18.190	2.008
σ		1.402	TM 229.900	T 945.400	T 122.700	315.600	T 353.800	0.9%	0.243	0.173
%RSD		1.264	TM 1.758	T 1.610	T 0.539	0.793	T 0.880	1.0	1.336	8.591
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	4.921	7297.000	T 11470.000	T 372.600	T 11680.000	12200.000	1.093	0.823	20.750
2	03:59:20	4.909	7240.000	T 11710.000	T 383.100	T 11880.000	12220.000	1.085	0.776	21.480
3	03:59:47	4.947	7334.000	T 11650.000	T 386.100	T 12050.000	T 11630.000	1.107	0.716	22.230
x		4.926	7290.000	T 11610.000	T 380.600	T 11870.000	T 12020.000	1.095	0.772	21.490
σ		0.019	47.610	T 125.300	T 7.116	T 184.300	T 334.900	0.011	0.054	0.741
%RSD		0.389	0.653	T 1.079	T 1.870	T 1.553	T 2.787	1.007	6.946	3.448
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	2.038	0.326	6.205	10.250	8.698	4.151	0.942	128.700	128.700
2	03:59:20	2.115	0.339	6.388	10.500	8.830	4.350	0.859	127.300	127.800
3	03:59:47	2.275	0.401	6.265	9.984	8.649	4.152	0.467	123.500	124.100
x		2.143	0.355	6.286	10.250	8.726	4.218	0.756	126.500	126.900
σ		0.121	0.040	0.094	0.259	0.094	0.115	0.254	2.717	2.424
%RSD		5.627	11.310	1.488	2.530	1.078	2.725	33.550	2.147	1.911
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	3.922	0.760	0.889	213.300	86.6%	0.198	0.230	0.166	4.325
2	03:59:20	2.195	0.394	1.013	T 208.900	87.3%	0.191	0.185	0.167	2.621
3	03:59:47	3.099	0.616	0.545	212.200	87.7%	0.168	0.213	0.185	3.155
x		3.072	0.590	0.816	T 211.500	87.2%	0.186	0.210	0.173	3.367
σ		0.864	0.184	0.242	T 2.265	0.6%	0.016	0.023	0.011	0.872
%RSD		28.130	31.230	29.670	T 1.071	0.7	8.355	10.750	6.213	25.880
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	0.000	0.002	0.147	0.155	84.5%	0.226	0.203	0.092	0.076
2	03:59:20	0.001	0.001	0.130	0.149	84.3%	0.227	0.226	0.092	0.088
3	03:59:47	0.003	0.001	0.147	0.157	84.4%	0.198	0.204	0.076	0.066
x		0.001	0.001	0.141	0.154	84.4%	0.217	0.211	0.087	0.077
σ		0.001	0.001	0.010	0.004	0.1%	0.017	0.013	0.009	0.011
%RSD		117.900	67.790	7.023	2.798	0.1	7.664	6.099	10.370	14.340
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	03:58:53	95.760	94.510	91.2%	-0.015	-0.017	0.135	0.118	0.123	115.5%
2	03:59:20	95.000	93.180	93.2%	-0.015	-0.017	0.109	0.113	0.114	114.1%
3	03:59:47	95.720	93.870	93.0%	-0.014	-0.018	0.125	0.114	0.116	109.4%
x		95.500	93.850	92.5%	-0.015	-0.017	0.123	0.115	0.117	113.0%
σ		0.428	0.666	1.1%	0.001	0.000	0.013	0.003	0.005	3.2%
%RSD		0.448	0.710	1.2	3.876	2.751	10.880	2.261	3.941	2.8

CCV MW10535 11/17/2018 04:04:22 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	84.4%	296.900	287.900	298.400	11.480	┬59120.000	┬58980.000	┬58360.000	┬59420.000
2	04:05:15	85.9%	297.000	292.000	298.700	13.570	┬59090.000	┬59810.000	┬59320.000	┬60340.000
3	04:05:42	84.2%	306.800	306.200	313.300	12.610	┬61290.000	┬60970.000	┬60460.000	┬60690.000
x		84.9%	100.080%	98.445%	101.153%	12.560	┬99.716%	┬59920.000	┬59380.000	┬100.250%
σ		0.9%	n/a	n/a	n/a	1.044	┬n/a	┬996.100	┬1051.000	┬n/a
%RSD		1.1	1.897	3.249	2.802	8.317	┬2.110	┬1.662	┬1.770	┬1.086
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	292.300	┬3186.000	205.500	┬62220.000	58410.000	┬58430.000	92.4%	289.200	┬293.900
2	04:05:15	297.000	┬3163.000	208.900	┬62230.000	59930.000	┬59400.000	91.7%	286.200	┬293.000
3	04:05:42	300.300	┬3236.000	244.200	┬64020.000	60810.000	┬60250.000	90.8%	297.800	┬303.400
x		98.842%	┬106.495%	219.500	┬104.703%	59720.000	┬98.939%	91.6%	97.020%	┬98.917%
σ		n/a	┬n/a	21.430	┬n/a	1211.000	┬n/a	0.8%	n/a	┬n/a
%RSD		1.354	┬1.172	9.763	┬1.651	2.028	┬1.532	0.9	2.072	┬1.941
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	293.100	-780.900	┬57970.000	┬274.000	┬57610.000	┬55860.000	291.600	285.600	274.900
2	04:05:15	293.000	-1753.000	┬58080.000	┬275.100	┬58210.000	┬55690.000	287.200	283.600	276.300
3	04:05:42	295.100	-1132.000	┬59260.000	┬283.700	┬59900.000	┬57320.000	┬281.000	278.400	275.900
x		97.909%	-1222.000	┬58440.000	┬92.526%	┬58570.000	┬93.818%	┬95.526%	94.188%	275.700
σ		n/a	492.400	┬716.900	┬n/a	┬1188.000	┬n/a	┬n/a	n/a	0.707
%RSD		0.410	40.290	┬1.227	┬1.919	┬2.029	┬1.594	┬1.864	1.319	0.257
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	266.100	281.700	283.100	272.600	274.900	288.100	279.400	2.124	0.691
2	04:05:15	266.500	273.800	284.900	275.900	276.300	287.200	277.600	1.473	0.293
3	04:05:42	265.300	273.600	281.600	276.100	275.000	294.100	274.200	1.577	1.109
x		265.900	92.127%	94.395%	274.900	275.400	96.601%	277.100	1.725	0.698
σ		0.610	n/a	n/a	1.960	0.779	n/a	2.633	0.350	0.408
%RSD		0.229	1.681	0.583	0.713	0.283	1.292	0.950	20.290	58.460
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	1280.000	278.500	1.067	┬306.300	88.2%	306.000	310.900	312.200	292.400
2	04:05:15	1243.000	276.100	-0.619	┬308.100	89.8%	304.200	309.000	310.600	291.400
3	04:05:42	1256.000	282.800	0.245	┬307.800	90.3%	306.800	309.000	312.400	290.400
x		1260.000	93.049%	0.231	┬102.466%	89.4%	101.901%	103.212%	311.700	291.400
σ		18.630	n/a	0.843	┬n/a	1.1%	n/a	n/a	0.992	0.973
%RSD		1.479	1.210	365.400	┬0.326	1.2	0.432	0.359	0.318	0.334
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	311.500	306.000	289.700	284.300	87.9%	301.300	301.400	318.100	301.600
2	04:05:15	313.500	308.400	292.100	289.400	88.3%	304.700	306.500	324.400	304.700
3	04:05:42	307.100	305.100	288.000	284.500	89.2%	304.900	303.300	324.400	304.200
x		103.566%	306.500	290.000	95.354%	88.5%	101.209%	101.245%	322.300	101.161%
σ		n/a	1.694	2.053	n/a	0.7%	n/a	n/a	3.609	n/a
%RSD		1.063	0.553	0.708	1.005	0.8	0.654	0.843	1.120	0.544
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:04:48	305.100	302.500	91.2%	298.600	┬284.900	┬283.600	297.200	┬288.300	93.5%
2	04:05:15	303.600	303.600	92.1%	302.500	┬287.900	┬285.500	296.500	┬289.200	95.7%
3	04:05:42	300.400	303.700	93.4%	300.300	┬284.900	┬282.300	292.200	┬285.500	98.3%
x		101.015%	101.083%	92.3%	300.400	┬95.295%	┬94.597%	98.429%	┬95.890%	95.8%
σ		n/a	n/a	1.1%	1.966	┬n/a	┬n/a	n/a	┬n/a	2.4%
%RSD		0.787	0.225	1.2	0.654	┬0.602	┬0.569	0.913	┬0.677	2.5

CCB IM9061-02 11/17/2018 04:10:17 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	94.1%	0.013	3.918	3.870	6.512	3.886	1.072	1.148	1.071
2	04:11:11	95.2%	-0.002	2.813	3.454	3.876	3.443	0.877	0.831	0.909
3	04:11:39	96.4%	0.003	3.620	2.926	4.465	3.553	0.893	0.891	0.981
x		95.2%	0.005	3.450	3.417	4.951	3.627	0.948	0.957	0.987
σ		1.1%	0.007	0.571	0.473	1.384	0.231	0.109	0.168	0.081
%RSD		1.2	148.100	16.560	13.840	27.950	6.362	11.450	17.590	8.232
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	0.728	0.726	25.470	3.562	1.338	1.644	90.9%	0.158	-0.021
2	04:11:11	0.712	0.895	36.840	4.422	1.321	1.215	91.5%	0.095	0.043
3	04:11:39	0.646	-0.007	45.400	3.006	-0.284	1.131	93.3%	0.093	0.050
x		0.695	0.538	35.900	3.663	0.792	1.330	91.9%	0.115	0.024
σ		0.044	0.480	9.999	0.713	0.931	0.275	1.3%	0.037	0.039
%RSD		6.275	89.100	27.850	19.470	117.700	20.660	1.4	31.840	164.700
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	0.052	-19.220	10.480	0.076	9.764	10.470	0.005	0.013	1.281
2	04:11:11	0.063	-72.970	7.555	0.058	8.458	7.945	0.009	0.009	0.921
3	04:11:39	0.032	-65.250	8.415	0.054	7.275	8.126	0.008	0.009	0.748
x		0.049	-52.480	8.817	0.063	8.499	8.846	0.008	0.010	0.983
σ		0.016	29.060	1.504	0.011	1.245	1.406	0.002	0.002	0.272
%RSD		31.740	55.380	17.060	18.210	14.640	15.900	26.170	23.430	27.620
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	0.084	0.003	-0.111	-0.052	-0.081	0.160	0.476	0.149	0.144
2	04:11:11	0.037	0.009	-0.107	-0.189	-0.082	0.184	0.173	0.588	0.012
3	04:11:39	0.056	-0.010	-0.082	-0.084	-0.095	0.150	0.232	0.148	0.415
x		0.059	0.000	-0.100	-0.109	-0.086	0.165	0.294	0.295	0.190
σ		0.024	0.010	0.016	0.072	0.008	0.018	0.161	0.253	0.206
%RSD		40.060	2218.000	15.660	66.130	8.937	10.760	54.660	85.890	108.100
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	-0.857	-0.111	1.782	0.011	96.7%	0.365	0.284	0.298	-0.193
2	04:11:11	-0.154	-0.030	-1.518	0.008	96.5%	0.326	0.281	0.255	-0.324
3	04:11:39	1.450	0.369	1.173	0.006	94.6%	0.254	0.261	0.236	-1.124
x		0.146	0.076	0.479	0.008	95.9%	0.315	0.275	0.263	-0.547
σ		1.182	0.257	1.756	0.002	1.1%	0.057	0.012	0.032	0.504
%RSD		808.000	338.900	366.400	29.310	1.2	17.930	4.508	12.110	92.190
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	0.009	0.016	0.008	0.006	97.7%	0.317	0.441	0.267	0.289
2	04:11:11	0.017	0.018	0.005	0.007	96.8%	0.305	0.435	0.276	0.271
3	04:11:39	0.013	0.012	0.007	0.008	97.4%	0.243	0.357	0.274	0.258
x		0.013	0.015	0.007	0.007	97.3%	0.289	0.411	0.272	0.273
σ		0.004	0.003	0.002	0.001	0.5%	0.040	0.047	0.004	0.016
%RSD		27.840	21.200	27.060	16.570	0.5	13.690	11.460	1.640	5.816
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:10:44	0.012	0.010	99.9%	0.003	0.000	0.008	0.011	0.009	93.2%
2	04:11:11	0.020	0.021	98.5%	0.001	0.003	0.010	0.008	0.010	96.2%
3	04:11:39	0.003	0.015	99.3%	0.004	-0.003	0.014	0.006	0.007	98.2%
x		0.012	0.015	99.2%	0.002	0.000	0.011	0.008	0.008	95.9%
σ		0.009	0.006	0.7%	0.002	0.003	0.003	0.002	0.002	2.5%
%RSD		75.010	38.160	0.7	68.770	1411.000	24.970	26.240	18.340	2.6

TJ25084-024 11/17/2018 04:16:13

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	86.6%	-0.002	101.500	105.200	-24.280	TM 117000.000	T 6001.000	T 5927.000	T 6185.000
2	04:17:07	86.1%	0.001	97.170	101.900	-26.710	TM 118100.000	T 6026.000	T 6011.000	T 6191.000
3	04:17:34	90.0%	-0.002	102.200	105.800	-25.430	TM 119100.000	T 6092.000	T 6115.000	T 6226.000
x		87.6%	-0.001	100.300	104.300	-25.470	TM 118100.000	T 6040.000	T 6018.000	T 6200.000
σ		2.1%	0.002	2.731	2.109	1.215	TM 1040.000	T 47.140	T 94.040	T 22.130
%RSD		2.4	279.900	2.723	2.022	4.770	TM 0.881	T 0.781	T 1.563	T 0.357

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	33.140	T 9970.000	T 47380.000	T 3092.000	56230.000	T 55510.000	85.4%	2.575	0.723
2	04:17:07	32.630	T 9869.000	T 47920.000	T 3146.000	55910.000	T 56710.000	84.5%	2.450	0.787
3	04:17:34	32.570	T 9646.000	T 48420.000	T 3027.000	56260.000	T 56930.000	86.0%	2.380	0.914
x		32.780	T 9829.000	T 47910.000	T 3088.000	56130.000	T 56390.000	85.3%	2.468	0.808
σ		0.312	T 165.900	T 522.400	T 59.610	196.800	T 764.700	0.7%	0.099	0.097
%RSD		0.953	T 1.688	T 1.090	T 1.930	0.351	T 1.356	0.9	3.996	12.010

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	0.566	3904.000	3757.000	T 407.800	T 3573.000	3606.000	1.261	2.281	6.624
2	04:17:07	0.577	4247.000	3737.000	T 410.500	T 3574.000	3668.000	1.260	2.319	6.559
3	04:17:34	0.636	4343.000	3751.000	T 409.600	T 3588.000	3663.000	1.243	2.378	6.420
x		0.593	4165.000	3749.000	T 409.300	T 3578.000	3646.000	1.255	2.326	6.534
σ		0.038	231.000	10.160	T 1.385	T 8.676	34.540	0.010	0.049	0.104
%RSD		6.326	5.546	0.271	T 0.338	T 0.243	0.947	0.809	2.101	1.592

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	0.708	0.255	2.859	4.212	3.625	27.950	-0.025	17.200	16.690
2	04:17:07	0.697	0.252	2.664	4.375	3.776	28.490	0.326	15.820	17.810
3	04:17:34	0.684	0.213	2.708	4.308	3.750	28.020	0.038	16.960	15.890
x		0.696	0.240	2.744	4.298	3.717	28.150	0.113	16.660	16.800
σ		0.012	0.023	0.102	0.082	0.080	0.293	0.187	0.740	0.965
%RSD		1.760	9.746	3.730	1.908	2.165	1.039	165.500	4.444	5.743

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	1.671	0.435	1.399	T 408.800	88.7%	2.289	2.340	2.202	6.335
2	04:17:07	1.572	0.391	0.547	T 411.500	87.8%	2.174	2.218	2.225	6.796
3	04:17:34	1.543	0.346	-0.529	T 414.600	88.1%	2.238	2.107	2.280	7.231
x		1.595	0.391	0.472	T 411.600	88.2%	2.234	2.222	2.236	6.788
σ		0.067	0.045	0.967	T 2.860	0.4%	0.058	0.117	0.040	0.448
%RSD		4.229	11.410	204.700	T 0.695	0.5	2.583	5.257	1.800	6.597

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	0.004	0.005	0.000	0.005	87.8%	0.315	0.455	0.175	0.194
2	04:17:07	0.000	0.003	-0.002	0.006	88.5%	0.314	0.446	0.200	0.194
3	04:17:34	0.004	0.006	-0.000	0.000	88.7%	0.310	0.484	0.211	0.177
x		0.003	0.005	-0.001	0.004	88.3%	0.313	0.462	0.195	0.188
σ		0.002	0.001	0.001	0.003	0.4%	0.003	0.020	0.018	0.010
%RSD		70.440	29.580	167.000	85.850	0.5	0.863	4.251	9.376	5.182

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:16:40	33.920	32.740	94.2%	-0.013	-0.012	0.038	0.030	0.033	118.1%
2	04:17:07	33.370	33.390	95.3%	-0.010	-0.014	0.049	0.033	0.040	117.6%
3	04:17:34	34.200	33.350	96.6%	-0.012	-0.013	0.039	0.037	0.035	117.2%
x		33.830	33.160	95.4%	-0.012	-0.013	0.042	0.033	0.036	117.6%
σ		0.424	0.364	1.2%	0.002	0.001	0.006	0.004	0.004	0.4%
%RSD		1.254	1.096	1.2	14.130	6.930	14.230	11.490	10.470	0.4

TJ25018-001 11/17/2018 04:22:10

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	95.1%	0.044	62.250	67.400	57.810	T 7734.000	T 2979.000	T 2979.000	T 3041.000
2	04:23:04	94.6%	0.031	63.570	67.110	59.100	T 8002.000	T 3095.000	3228.000	T 3060.000
3	04:23:31	95.9%	0.036	61.320	64.920	62.560	T 7879.000	T 3034.000	3187.000	T 3037.000
x		95.2%	0.037	62.380	66.480	59.830	T 7872.000	T 3036.000	T 3131.000	T 3046.000
σ		0.7%	0.006	1.129	1.358	2.455	T 134.100	T 58.220	T 133.700	T 12.570
%RSD		0.7	17.320	1.810	2.042	4.104	T 1.704	T 1.918	T 4.270	T 0.413
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	250.600	T 2297.000	T 50440.000	T 2965.000	55550.000	T 54780.000	91.9%	2.660	1.794
2	04:23:04	250.700	T 2249.000	T 51660.000	T 2914.000	56320.000	T 55170.000	88.7%	2.850	1.483
3	04:23:31	252.200	T 2233.000	T 51270.000	T 2928.000	55140.000	T 55040.000	90.0%	2.744	1.577
x		251.100	T 2260.000	T 51120.000	T 2936.000	55670.000	T 54990.000	90.2%	2.751	1.618
σ		0.895	T 33.440	T 621.200	T 26.520	595.300	T 200.100	1.6%	0.095	0.160
%RSD		0.356	T 1.480	T 1.215	T 0.903	1.069	T 0.364	1.8	3.456	9.878
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	1.380	5551.000	1290.000	91.110	T 1268.000	1361.000	0.275	0.949	1.776
2	04:23:04	1.428	6284.000	1320.000	91.610	T 1298.000	1390.000	0.279	1.018	1.704
3	04:23:31	1.378	6244.000	1293.000	91.140	T 1274.000	1361.000	0.298	0.814	2.155
x		1.395	6026.000	1301.000	91.290	T 1280.000	1371.000	0.284	0.927	1.878
σ		0.028	412.400	16.420	0.282	T 16.150	16.670	0.012	0.104	0.242
%RSD		2.036	6.844	1.262	0.308	T 1.261	1.216	4.345	11.170	12.900
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	0.547	0.527	1.306	2.468	1.840	3.240	-0.063	41.870	41.970
2	04:23:04	0.543	0.510	1.360	2.663	1.823	3.166	0.500	39.720	41.740
3	04:23:31	0.516	0.554	1.405	2.712	2.089	3.052	0.650	40.750	38.720
x		0.535	0.530	1.357	2.614	1.918	3.153	0.363	40.780	40.810
σ		0.017	0.022	0.050	0.129	0.149	0.095	0.376	1.078	1.814
%RSD		3.095	4.203	3.660	4.935	7.753	3.000	103.700	2.643	4.445
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	2.333	0.508	-0.204	T 224.600	94.3%	0.651	0.637	0.616	4.164
2	04:23:04	1.407	0.307	-0.863	T 222.100	93.4%	0.663	0.642	0.633	3.857
3	04:23:31	2.824	0.681	1.394	T 224.600	93.6%	0.685	0.680	0.690	3.752
x		2.188	0.499	0.109	T 223.800	93.8%	0.666	0.653	0.646	3.924
σ		0.719	0.187	1.160	T 1.439	0.5%	0.017	0.024	0.039	0.214
%RSD		32.870	37.460	1065.000	T 0.643	0.5	2.598	3.623	5.984	5.456
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	0.004	0.000	0.005	0.019	94.6%	0.187	0.243	0.223	0.182
2	04:23:04	0.004	0.006	0.021	0.013	94.6%	0.205	0.272	0.232	0.215
3	04:23:31	0.005	0.004	0.019	0.013	94.8%	0.178	0.258	0.234	0.201
x		0.004	0.003	0.015	0.015	94.7%	0.190	0.258	0.230	0.199
σ		0.001	0.003	0.008	0.003	0.1%	0.013	0.015	0.006	0.017
%RSD		14.060	79.840	55.680	23.320	0.1	7.058	5.797	2.415	8.298
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:22:37	15.980	16.080	100.7%	-0.007	-0.008	0.239	0.208	0.225	126.3%
2	04:23:04	15.790	15.950	100.0%	-0.002	-0.004	0.228	0.211	0.219	124.7%
3	04:23:31	16.530	16.230	99.9%	-0.006	-0.005	0.220	0.226	0.221	125.9%
x		16.100	16.090	100.2%	-0.005	-0.006	0.229	0.215	0.222	125.6%
σ		0.386	0.141	0.5%	0.003	0.002	0.009	0.010	0.003	0.8%
%RSD		2.395	0.877	0.5	50.630	39.730	4.040	4.523	1.402	0.6

TJ25018-002 11/17/2018 04:28:08

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	94.8%	0.017	61.490	63.420	61.910	T 7613.000	T 2903.000	3093.000	T 2971.000
2	04:29:03	94.1%	0.032	63.510	64.630	61.030	T 7848.000	T 3015.000	3142.000	T 3004.000
3	04:29:30	96.4%	0.022	60.080	63.850	55.840	T 7654.000	T 2920.000	3040.000	T 2925.000
x		95.1%	0.024	61.690	63.970	59.590	T 7705.000	T 2946.000	3092.000	T 2967.000
σ		1.2%	0.008	1.726	0.616	3.283	T 125.300	T 60.080	51.190	T 39.380
%RSD		1.3	32.190	2.797	0.963	5.509	T 1.626	T 2.039	1.656	T 1.327
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	249.400	T 2192.000	T 50570.000	T 2806.000	54590.000	T 53640.000	88.4%	2.586	1.683
2	04:29:03	T 242.500	T 2204.000	T 51330.000	T 2861.000	54870.000	T 53390.000	88.1%	2.476	1.389
3	04:29:30	T 239.400	T 2135.000	T 50960.000	T 2774.000	54310.000	T 53410.000	88.5%	2.337	1.736
x		T 243.800	T 2177.000	T 50950.000	T 2814.000	54590.000	T 53480.000	88.3%	2.467	1.603
σ		T 5.113	T 36.900	T 381.700	T 43.770	276.200	T 139.600	0.2%	0.125	0.187
%RSD		T 2.097	T 1.695	T 0.749	T 1.556	0.506	T 0.261	0.2	5.054	11.670
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	1.425	6356.000	1286.000	89.300	T 1260.000	1313.000	0.289	0.974	1.243
2	04:29:03	1.412	6605.000	1291.000	90.910	T 1274.000	1362.000	0.280	0.853	1.122
3	04:29:30	1.408	6484.000	1267.000	88.630	T 1243.000	1308.000	0.289	0.851	0.622
x		1.415	6482.000	1281.000	89.610	T 1259.000	1328.000	0.286	0.893	0.996
σ		0.009	124.600	12.540	1.171	T 15.750	29.820	0.005	0.071	0.330
%RSD		0.636	1.922	0.979	1.307	T 1.250	2.246	1.830	7.916	33.100
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	0.504	0.501	1.691	2.945	2.018	3.319	0.322	38.580	38.980
2	04:29:03	0.549	0.583	1.648	2.781	2.012	2.895	0.330	38.360	37.270
3	04:29:30	0.490	0.536	1.569	3.066	2.067	3.063	0.058	37.520	40.010
x		0.514	0.540	1.636	2.931	2.032	3.092	0.237	38.150	38.750
σ		0.031	0.041	0.062	0.143	0.030	0.213	0.155	0.560	1.380
%RSD		6.017	7.636	3.794	4.871	1.487	6.892	65.240	1.467	3.561
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	1.439	0.342	0.303	T 216.900	92.8%	0.676	0.545	0.620	4.712
2	04:29:03	0.468	0.115	0.642	T 219.300	91.7%	0.645	0.673	0.633	3.288
3	04:29:30	1.181	0.254	-0.388	T 218.600	92.0%	0.586	0.600	0.569	3.729
x		1.029	0.237	0.186	T 218.300	92.2%	0.636	0.606	0.607	3.910
σ		0.503	0.114	0.525	T 1.229	0.6%	0.046	0.064	0.034	0.729
%RSD		48.840	48.250	282.700	T 0.563	0.6	7.183	10.630	5.581	18.650
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	0.001	0.002	0.011	0.008	93.9%	0.172	0.210	0.176	0.198
2	04:29:03	-0.001	0.001	0.013	0.013	93.1%	0.180	0.218	0.194	0.196
3	04:29:30	-0.000	-0.000	0.014	0.013	93.4%	0.151	0.235	0.202	0.196
x		-0.000	0.001	0.013	0.011	93.5%	0.168	0.221	0.190	0.197
σ		0.001	0.001	0.001	0.003	0.4%	0.015	0.013	0.014	0.001
%RSD		407.200	109.300	9.679	28.600	0.4	8.767	5.673	7.097	0.431
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:28:35	15.810	15.320	97.9%	-0.004	-0.006	0.210	0.219	0.221	124.9%
2	04:29:03	16.350	15.580	99.6%	-0.002	-0.010	0.251	0.205	0.226	124.5%
3	04:29:30	16.030	15.510	98.3%	-0.005	-0.008	0.237	0.208	0.220	124.5%
x		16.060	15.470	98.6%	-0.004	-0.008	0.233	0.211	0.222	124.6%
σ		0.272	0.133	0.9%	0.002	0.002	0.021	0.008	0.003	0.2%
%RSD		1.693	0.862	0.9	46.290	22.220	9.072	3.654	1.496	0.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	96.4%	-0.002	2.412	2.383	13.710	12.320	2.524	2.496	2.682
2	04:34:59	98.3%	0.008	2.774	2.723	10.470	12.660	2.791	2.713	2.787
3	04:35:26	101.3%	0.013	2.856	2.154	11.170	12.530	2.589	2.867	2.765
x		98.7%	0.006	2.681	2.420	11.790	12.500	2.635	2.692	2.745
σ		2.5%	0.007	0.237	0.286	1.705	0.175	0.139	0.187	0.055
%RSD		2.5	112.700	8.822	11.830	14.460	1.397	5.279	6.928	2.020

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	2.161	4.474	T 51860.000	9.056	30.420	28.880	90.9%	0.078	0.032
2	04:34:59	2.186	4.002	T 52560.000	9.009	33.310	30.100	90.7%	0.105	0.197
3	04:35:26	2.279	3.379	T 53340.000	6.718	30.450	30.380	89.6%	0.124	-0.138
x		2.208	3.952	T 52590.000	8.261	31.390	29.790	90.4%	0.103	0.030
σ		0.062	0.549	T 736.400	1.337	1.659	0.798	0.7%	0.023	0.168
%RSD		2.814	13.890	T 1.400	16.180	5.286	2.679	0.8	22.580	552.700

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	0.179	8520.000	7.423	0.055	5.456	4.491	0.000	0.018	0.067
2	04:34:59	0.193	8632.000	6.588	0.035	6.049	4.195	-0.002	0.011	0.311
3	04:35:26	0.186	9069.000	6.734	0.042	5.425	3.798	-0.002	0.005	0.569
x		0.186	8740.000	6.915	0.044	5.644	4.161	-0.001	0.011	0.316
σ		0.007	290.300	0.446	0.010	0.352	0.348	0.001	0.006	0.251
%RSD		3.853	3.321	6.450	22.460	6.234	8.352	124.900	56.910	79.630

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	0.137	0.163	0.770	1.930	0.732	-0.141	0.168	3.521	4.577
2	04:34:59	0.145	0.127	0.823	2.017	0.826	-0.045	0.057	4.349	3.070
3	04:35:26	0.172	0.140	0.775	1.873	0.905	0.066	0.022	3.920	3.979
x		0.151	0.144	0.789	1.940	0.821	-0.040	0.082	3.930	3.875
σ		0.019	0.018	0.029	0.073	0.087	0.103	0.076	0.415	0.759
%RSD		12.370	12.740	3.714	3.737	10.600	259.800	92.640	10.550	19.590

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	0.340	0.107	0.076	0.044	94.5%	0.036	0.029	0.014	-0.858
2	04:34:59	1.363	0.327	-0.608	0.035	93.9%	0.042	-0.012	0.019	-1.003
3	04:35:26	-0.176	-0.006	0.425	0.037	93.1%	0.006	0.017	0.018	-0.741
x		0.509	0.143	-0.035	0.039	93.8%	0.028	0.012	0.017	-0.867
σ		0.783	0.169	0.525	0.005	0.7%	0.019	0.021	0.003	0.131
%RSD		153.900	118.600	1481.000	12.120	0.8	69.970	185.800	16.780	15.130

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	0.000	0.001	0.002	0.003	95.9%	0.124	0.175	0.051	0.037
2	04:34:59	-0.001	0.000	0.008	0.001	95.4%	0.110	0.146	0.053	0.040
3	04:35:26	-0.001	0.000	-0.000	0.005	94.8%	0.153	0.119	0.056	0.048
x		-0.000	0.001	0.003	0.003	95.4%	0.129	0.147	0.054	0.042
σ		0.001	0.001	0.004	0.002	0.6%	0.022	0.028	0.003	0.006
%RSD		115.600	78.810	127.500	63.670	0.6	17.190	19.120	4.876	13.540

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:34:32	0.023	0.013	99.9%	-0.017	-0.018	0.011	0.004	0.004	118.7%
2	04:34:59	0.018	0.021	101.0%	-0.016	-0.016	0.005	0.001	0.006	121.2%
3	04:35:26	0.012	0.025	99.6%	-0.016	-0.018	0.004	0.000	0.004	121.7%
x		0.018	0.020	100.2%	-0.016	-0.017	0.007	0.002	0.005	120.5%
σ		0.006	0.006	0.7%	0.001	0.001	0.004	0.002	0.001	1.6%
%RSD		32.660	30.230	0.7	3.371	6.846	61.150	117.200	18.550	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	94.1%	95.080	94.320	95.350	12.860	T 1017.000	T 1000.000	1023.000	1056.000
2	04:40:58	95.7%	93.650	94.490	94.070	8.921	T 1022.000	T 1002.000	1026.000	1071.000
3	04:41:25	96.6%	94.440	94.640	95.210	10.330	T 1027.000	T 1017.000	1027.000	1051.000
x		95.5%	94.390	94.480	94.870	10.710	T 1022.000	T 1006.000	1025.000	1059.000
σ		1.2%	0.717	0.159	0.703	1.998	T 4.902	T 9.465	1.741	10.330
%RSD		1.3	0.759	0.169	0.741	18.660	T 0.480	T 0.941	0.170	0.976
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	106.300	966.000	T 50060.000	1057.000	1137.000	1067.000	90.3%	96.630	98.350
2	04:40:58	106.700	933.400	T 51610.000	1045.000	1115.000	1078.000	89.2%	99.170	99.600
3	04:41:25	106.100	T 847.900	T 51070.000	1045.000	1108.000	1078.000	90.0%	97.560	97.740
x		106.400	T 915.800	T 50910.000	1049.000	1120.000	1074.000	89.8%	97.790	98.560
σ		0.297	T 61.030	T 783.000	6.848	15.070	6.535	0.5%	1.286	0.945
%RSD		0.279	T 6.664	T 1.538	0.653	1.345	0.608	0.6	1.315	0.959
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	96.390	9928.000	1077.000	96.780	T 1020.000	1008.000	97.390	92.430	93.380
2	04:40:58	97.270	10200.000	1100.000	98.070	T 1016.000	997.900	96.480	91.210	95.950
3	04:41:25	96.840	10020.000	1074.000	98.690	T 1018.000	995.700	96.360	90.970	93.820
x		96.830	10050.000	1084.000	97.850	T 1018.000	1001.000	96.740	91.540	94.380
σ		0.442	138.700	14.470	0.978	T 1.739	6.773	0.564	0.785	1.374
%RSD		0.456	1.381	1.335	0.999	T 0.171	0.677	0.583	0.858	1.456
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	93.780	97.300	97.010	100.800	99.530	99.210	98.670	3.813	3.337
2	04:40:58	95.100	98.810	96.340	101.100	99.260	100.300	98.030	3.267	4.064
3	04:41:25	93.280	96.210	96.420	101.800	96.720	98.660	96.470	3.513	3.570
x		94.050	97.440	96.590	101.300	98.510	99.380	97.720	3.531	3.657
σ		0.937	1.304	0.366	0.518	1.551	0.818	1.132	0.273	0.371
%RSD		0.996	1.339	0.379	0.511	1.574	0.823	1.158	7.740	10.160
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	440.100	99.950	0.084	100.500	90.7%	95.390	96.530	92.840	98.560
2	04:40:58	455.600	103.300	0.437	101.500	89.5%	95.020	96.380	92.720	99.050
3	04:41:25	450.300	102.300	-1.218	100.800	90.5%	96.300	96.570	93.640	99.480
x		448.700	101.800	-0.232	100.900	90.3%	95.570	96.490	93.070	99.030
σ		7.903	1.710	0.872	0.500	0.7%	0.661	0.099	0.504	0.461
%RSD		1.761	1.678	375.200	0.496	0.7	0.691	0.103	0.541	0.466
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	100.600	98.800	96.750	93.870	93.7%	97.070	95.360	98.680	94.690
2	04:40:58	101.200	100.100	97.980	93.940	93.3%	97.860	96.170	99.790	93.190
3	04:41:25	101.900	102.100	98.560	94.980	93.6%	97.830	96.950	100.600	94.650
x		101.300	100.300	97.760	94.270	93.5%	97.580	96.160	99.710	94.180
σ		0.634	1.651	0.925	0.623	0.2%	0.447	0.794	0.985	0.858
%RSD		0.626	1.645	0.946	0.661	0.2	0.458	0.825	0.988	0.911
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:40:31	96.860	98.670	98.0%	96.960	102.800	99.720	97.080	100.300	111.2%
2	04:40:58	96.560	96.870	99.5%	95.740	101.900	98.200	96.900	99.400	111.8%
3	04:41:25	98.770	97.110	99.1%	98.420	104.100	99.430	97.880	100.300	115.7%
x		97.400	97.550	98.9%	97.040	102.900	99.120	97.290	100.000	112.9%
σ		1.197	0.979	0.8%	1.345	1.110	0.806	0.523	0.523	2.4%
%RSD		1.229	1.003	0.8	1.386	1.078	0.814	0.537	0.523	2.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	89.1%	0.018	27.780	26.970	1501.000	T 59530.000	T 2926.000	3097.000	3187.000
2	04:46:55	90.7%	0.013	25.670	27.010	1505.000	T 59540.000	T 2954.000	3101.000	3226.000
3	04:47:22	90.7%	0.012	24.720	25.900	1428.000	T 58760.000	T 2845.000	3010.000	3106.000
x		90.1%	0.014	26.060	26.630	1478.000	T 59270.000	T 2908.000	3070.000	3173.000
σ		0.9%	0.003	1.562	0.631	43.580	T 448.700	T 56.680	51.230	60.800
%RSD		1.0	20.480	5.995	2.368	2.948	T 0.757	T 1.949	1.669	1.916
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	T 337.700	T 4639.000	T 59010.000	T 12760.000	19820.000	T 19620.000	73.9%	22.180	0.800
2	04:46:55	360.500	T 4552.000	T 58260.000	T 12780.000	19640.000	T 19640.000	75.2%	T 29.630	0.787
3	04:47:22	T 333.600	T 4546.000	T 57250.000	T 12830.000	19140.000	T 19220.000	76.8%	21.640	1.537
x		T 343.900	T 4579.000	T 58180.000	T 12790.000	19530.000	T 19490.000	75.3%	T 24.480	1.041
σ		T 14.490	T 52.070	T 882.100	T 36.670	352.900	T 238.700	1.5%	T 4.464	0.430
%RSD		T 4.213	T 1.137	T 1.516	T 0.287	1.807	T 1.225	1.9	T 18.240	41.260
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	10.030	9251.000	727.400	28.940	T 726.200	740.500	0.360	6.120	6.693
2	04:46:55	9.917	9733.000	713.400	28.560	T 730.200	746.300	0.344	6.650	6.386
3	04:47:22	9.869	9761.000	695.200	27.910	T 712.400	709.500	0.334	6.355	7.364
x		9.938	9582.000	712.000	28.470	T 722.900	732.100	0.346	6.375	6.815
σ		0.081	286.700	16.110	0.523	T 9.352	19.790	0.013	0.266	0.500
%RSD		0.815	2.992	2.263	1.837	T 1.294	2.703	3.823	4.165	7.341
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	23.940	23.010	330.500	339.400	348.800	0.428	0.808	41.690	42.140
2	04:46:55	23.380	21.350	329.600	329.200	341.800	0.469	1.072	41.630	41.220
3	04:47:22	22.940	22.090	328.900	325.000	336.900	0.331	0.688	39.870	41.250
x		23.420	22.150	329.600	331.200	342.500	0.409	0.856	41.060	41.540
σ		0.504	0.830	0.812	7.412	6.003	0.071	0.196	1.034	0.525
%RSD		2.154	3.749	0.246	2.238	1.753	17.310	22.940	2.519	1.263
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	4.445	1.241	0.380	53.340	86.7%	2.399	2.269	2.303	-0.141
2	04:46:55	2.744	0.795	-0.007	53.590	88.3%	2.245	2.356	2.291	0.623
3	04:47:22	3.150	0.918	1.629	53.160	88.8%	2.320	2.395	2.361	0.553
x		3.446	0.985	0.667	53.360	88.0%	2.321	2.340	2.318	0.345
σ		0.889	0.230	0.855	0.214	1.1%	0.077	0.065	0.038	0.422
%RSD		25.790	23.390	128.100	0.402	1.2	3.320	2.758	1.622	122.300
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	0.030	0.027	0.084	0.092	87.4%	0.321	0.419	0.726	0.708
2	04:46:55	0.046	0.025	0.088	0.093	87.7%	0.317	0.411	0.736	0.645
3	04:47:22	0.031	0.031	0.110	0.087	88.6%	0.295	0.420	0.759	0.705
x		0.036	0.028	0.094	0.091	87.9%	0.311	0.417	0.740	0.686
σ		0.009	0.003	0.014	0.003	0.6%	0.014	0.005	0.017	0.036
%RSD		24.740	11.990	14.610	3.666	0.7	4.581	1.207	2.263	5.199
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:46:28	21.350	21.310	95.9%	-0.003	0.001	4.082	3.708	3.834	118.8%
2	04:46:55	21.250	21.120	98.0%	-0.004	-0.002	3.943	3.677	3.813	119.6%
3	04:47:22	21.850	21.230	98.4%	-0.002	-0.003	4.035	3.674	3.852	118.8%
x		21.480	21.220	97.4%	-0.003	-0.001	4.020	3.686	3.833	119.1%
σ		0.325	0.097	1.3%	0.001	0.002	0.071	0.019	0.020	0.4%
%RSD		1.511	0.457	1.3	29.960	175.000	1.759	0.504	0.515	0.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	89.2%	86.440	107.900	108.200	1463.000	T 57330.000	T 3709.000	T 3689.000	T 3812.000
2	04:52:53	89.9%	86.470	109.300	112.500	1456.000	T 57970.000	T 3778.000	T 3726.000	T 3778.000
3	04:53:20	91.5%	87.300	111.700	111.900	1433.000	T 56640.000	T 3737.000	T 3769.000	T 3790.000
x		90.2%	86.740	109.700	110.900	1451.000	T 57310.000	T 3741.000	T 3728.000	T 3794.000
σ		1.2%	0.484	1.941	2.298	15.790	T 663.600	T 34.880	T 39.770	T 17.390
%RSD		1.3	0.558	1.770	2.073	1.089	T 1.158	T 0.932	T 1.067	T 0.459

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	T 432.900	T 5473.000	T 54440.000	T 13630.000	18870.000	T 18990.000	81.2%	T 82.890	107.600
2	04:52:53	T 440.100	T 5408.000	T 55490.000	T 13330.000	18840.000	T 18960.000	79.9%	83.980	108.200
3	04:53:20	T 433.900	T 5200.000	T 54720.000	T 13210.000	19370.000	T 19000.000	80.2%	87.760	105.300
x		T 435.700	T 5361.000	T 54880.000	T 13390.000	19030.000	T 18990.000	80.5%	T 84.880	107.000
σ		T 3.908	T 142.600	T 541.700	T 215.200	300.600	T 20.430	0.7%	T 2.558	1.576
%RSD		T 0.897	T 2.660	T 0.987	T 1.607	1.580	T 0.108	0.9	T 3.014	1.472

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	109.100	9664.000	1578.000	128.300	T 1550.000	1557.000	97.840	94.160	97.420
2	04:52:53	111.700	9753.000	1581.000	129.300	T 1568.000	1582.000	99.210	93.260	99.110
3	04:53:20	109.700	10340.000	1620.000	128.200	T 1580.000	1544.000	96.810	91.810	97.240
x		110.200	9918.000	1593.000	128.600	T 1566.000	1561.000	97.950	93.080	97.930
σ		1.338	365.800	23.260	0.595	T 15.140	19.430	1.202	1.185	1.031
%RSD		1.214	3.689	1.460	0.463	T 0.967	1.245	1.228	1.273	1.052

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	113.400	111.800	417.600	409.900	423.100	106.200	96.500	40.190	40.680
2	04:52:53	115.500	113.800	416.300	413.700	419.000	105.600	98.350	42.730	41.480
3	04:53:20	114.600	110.800	413.500	408.800	418.500	104.900	98.220	39.260	39.400
x		114.500	112.100	415.800	410.800	420.200	105.600	97.690	40.730	40.520
σ		1.039	1.502	2.077	2.609	2.494	0.643	1.034	1.799	1.046
%RSD		0.908	1.340	0.500	0.635	0.593	0.609	1.058	4.418	2.581

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	423.900	102.400	0.114	154.300	87.9%	94.930	95.580	95.170	99.080
2	04:52:53	426.500	103.100	-0.436	155.200	86.6%	94.650	96.920	94.350	99.480
3	04:53:20	418.300	101.700	0.136	153.400	87.6%	93.410	93.790	92.280	95.710
x		422.900	102.400	-0.062	154.300	87.3%	94.330	95.430	93.940	98.090
σ		4.209	0.684	0.324	0.947	0.7%	0.812	1.567	1.488	2.068
%RSD		0.995	0.668	524.900	0.614	0.8	0.861	1.642	1.584	2.108

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	97.140	95.780	95.610	93.290	87.4%	46.270	23.620	98.780	90.500
2	04:52:53	96.740	95.830	94.620	92.150	87.5%	47.230	23.910	99.470	90.520
3	04:53:20	96.520	95.300	95.400	92.890	87.6%	50.950	31.100	98.670	90.610
x		96.800	95.640	95.210	92.780	87.5%	48.150	26.210	98.980	90.540
σ		0.318	0.294	0.520	0.578	0.1%	2.477	4.237	0.435	0.060
%RSD		0.329	0.307	0.546	0.623	0.1	5.144	16.160	0.439	0.066

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:52:26	119.500	118.600	95.1%	92.890	98.840	99.220	97.770	100.300	116.9%
2	04:52:53	118.600	119.000	94.7%	93.750	98.660	99.760	97.750	100.500	114.3%
3	04:53:20	117.900	117.500	96.3%	91.610	96.820	98.320	96.090	99.130	114.3%
x		118.600	118.400	95.4%	92.750	98.110	99.100	97.200	99.990	115.2%
σ		0.824	0.752	0.8%	1.076	1.119	0.725	0.961	0.755	1.5%
%RSD		0.695	0.636	0.9	1.161	1.141	0.732	0.989	0.755	1.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	89.3%	87.290	111.300	111.600	1484.000	┬57940.000	┬3780.000	┬3746.000	┬3844.000
2	04:58:52	91.6%	85.170	109.600	111.000	1459.000	┬57800.000	┬3747.000	┬3717.000	┬3746.000
3	04:59:19	92.9%	86.750	113.200	114.800	1530.000	┬58210.000	┬3764.000	┬3738.000	┬3809.000
x		91.3%	86.410	111.300	112.500	1491.000	┬57980.000	┬3764.000	┬3734.000	┬3800.000
σ		1.8%	1.106	1.796	2.044	35.940	┬208.700	┬16.790	┬14.990	┬49.680
%RSD		2.0	1.280	1.613	1.817	2.410	┬0.360	┬0.446	┬0.401	┬1.307

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	┬438.300	┬5506.000	┬53130.000	┬13610.000	18930.000	┬18660.000	82.2%	80.400	107.200
2	04:58:52	┬426.900	┬5359.000	┬54290.000	┬13350.000	18810.000	┬19040.000	82.1%	78.710	105.400
3	04:59:19	┬437.300	┬5262.000	┬53880.000	┬13100.000	18990.000	┬19050.000	81.8%	92.660	106.200
x		┬434.200	┬5376.000	┬53770.000	┬13360.000	18910.000	┬18920.000	82.0%	83.920	106.300
σ		┬6.294	┬123.000	┬585.000	┬254.900	94.360	┬219.400	0.2%	7.616	0.920
%RSD		┬1.450	┬2.288	┬1.088	┬1.908	0.499	┬1.160	0.2	9.075	0.866

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	┬107.400	10380.000	1605.000	129.900	┬1543.000	1533.000	98.870	95.790	99.450
2	04:58:52	┬108.000	10100.000	1575.000	128.800	┬1541.000	1535.000	99.160	93.510	99.990
3	04:59:19	108.400	10390.000	1633.000	128.200	┬1533.000	1524.000	98.600	95.900	103.200
x		┬108.000	10290.000	1604.000	128.900	┬1539.000	1531.000	98.880	95.060	100.900
σ		┬0.493	164.300	28.990	0.871	┬5.282	5.857	0.276	1.351	1.999
%RSD		┬0.457	1.597	1.807	0.676	┬0.343	0.383	0.279	1.421	1.982

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	115.500	113.200	417.700	409.600	419.600	106.600	96.510	40.550	40.320
2	04:58:52	112.400	110.700	414.100	403.000	420.700	107.100	93.980	40.350	40.770
3	04:59:19	114.000	115.000	420.900	411.400	424.600	104.000	96.420	42.920	41.350
x		114.000	113.000	417.600	408.000	421.600	105.900	95.640	41.270	40.810
σ		1.560	2.161	3.404	4.417	2.611	1.657	1.434	1.432	0.518
%RSD		1.369	1.913	0.815	1.083	0.619	1.565	1.500	3.470	1.268

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	433.100	104.600	-0.384	154.100	88.9%	94.870	95.520	93.260	93.910
2	04:58:52	444.100	107.700	-0.847	154.100	89.3%	95.470	94.860	95.060	94.830
3	04:59:19	437.000	104.200	-0.777	156.000	87.2%	95.780	97.760	94.670	101.000
x		438.100	105.500	-0.669	154.700	88.5%	95.380	96.050	94.330	96.570
σ		5.572	1.941	0.250	1.108	1.1%	0.461	1.517	0.950	3.834
%RSD		1.272	1.840	37.310	0.716	1.3	0.484	1.579	1.007	3.970

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	96.400	96.510	96.410	92.730	88.5%	46.170	23.160	98.560	91.050
2	04:58:52	96.660	95.320	94.760	92.490	89.0%	44.980	22.810	98.470	88.850
3	04:59:19	96.790	95.370	96.180	93.070	87.5%	51.310	30.300	99.680	89.840
x		96.620	95.730	95.780	92.770	88.4%	47.490	25.420	98.900	89.910
σ		0.198	0.676	0.897	0.295	0.8%	3.366	4.229	0.675	1.103
%RSD		0.205	0.706	0.936	0.318	0.9	7.089	16.630	0.683	1.227

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	04:58:25	119.100	118.100	96.3%	91.920	97.460	99.150	96.670	99.290	114.9%
2	04:58:52	117.000	117.200	98.2%	91.770	96.530	96.970	95.500	98.250	115.7%
3	04:59:19	120.300	119.900	96.3%	92.510	97.740	98.810	96.800	99.010	114.4%
x		118.800	118.400	96.9%	92.070	97.240	98.310	96.320	98.850	115.0%
σ		1.691	1.393	1.1%	0.392	0.638	1.173	0.719	0.539	0.7%
%RSD		1.424	1.176	1.2	0.426	0.656	1.193	0.747	0.546	0.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	93.0%	-0.002	6.810	6.963	322.300	T 11820.000	T 584.900	598.000	605.400
2	05:04:50	94.8%	0.003	6.117	6.418	313.500	T 11660.000	T 581.700	592.300	601.600
3	05:05:17	92.6%	0.003	6.079	6.156	300.000	T 11670.000	T 579.400	586.400	602.100
x		93.5%	0.002	6.336	6.512	312.000	T 11720.000	T 582.000	592.200	603.000
σ		1.2%	0.003	0.412	0.412	11.240	T 90.760	T 2.764	5.804	2.075
%RSD		1.2	163.200	6.495	6.318	3.603	T 0.775	T 0.475	0.980	0.344

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	68.860	T 904.600	T 10820.000	T 2492.000	3537.000	3481.000	84.4%	5.219	0.188
2	05:04:50	68.120	T 880.200	T 10860.000	T 2426.000	3508.000	3511.000	84.4%	4.871	0.338
3	05:05:17	69.170	T 897.600	T 11090.000	T 2479.000	3518.000	3464.000	82.6%	3.351	0.296
x		68.720	T 894.100	T 10920.000	T 2466.000	3521.000	3485.000	83.8%	4.480	0.274
σ		0.541	T 12.580	T 143.500	T 34.870	14.890	23.940	1.0%	0.993	0.077
%RSD		0.788	T 1.407	T 1.314	T 1.414	0.423	0.687	1.2	22.170	28.240

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	1.874	3885.000	133.400	5.280	140.800	133.500	0.063	1.322	1.364
2	05:04:50	1.918	3929.000	128.900	5.210	137.900	129.600	0.059	1.187	1.340
3	05:05:17	1.930	4022.000	131.100	5.231	T 147.700	136.000	0.058	1.405	1.358
x		1.907	3945.000	131.100	5.241	T 142.100	133.000	0.060	1.305	1.354
σ		0.030	70.260	2.263	0.036	T 5.041	3.220	0.003	0.110	0.013
%RSD		1.554	1.781	1.726	0.679	T 3.546	2.421	4.847	8.430	0.937

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	4.588	4.463	64.290	64.520	67.470	0.121	0.239	8.771	7.871
2	05:04:50	4.526	4.509	65.090	64.430	66.520	0.329	0.361	8.073	7.318
3	05:05:17	4.485	4.374	64.990	66.710	66.900	0.237	0.009	7.221	7.546
x		4.533	4.449	64.790	65.220	66.960	0.229	0.203	8.022	7.578
σ		0.052	0.068	0.435	1.294	0.478	0.104	0.179	0.776	0.278
%RSD		1.143	1.535	0.671	1.984	0.715	45.490	88.040	9.672	3.669

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	-0.420	-0.020	0.624	10.160	92.7%	0.519	0.452	0.541	-0.058
2	05:04:50	1.439	0.426	-0.275	10.300	93.7%	0.456	0.584	0.562	-0.320
3	05:05:17	-0.094	0.071	0.520	10.200	92.1%	0.550	0.465	0.518	-0.547
x		0.308	0.159	0.290	10.220	92.8%	0.508	0.500	0.541	-0.308
σ		0.993	0.236	0.492	0.073	0.8%	0.048	0.072	0.022	0.245
%RSD		322.300	148.100	169.900	0.717	0.8	9.439	14.470	4.055	79.460

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	0.004	0.014	0.027	0.018	95.0%	-0.006	0.023	0.117	0.108
2	05:04:50	0.003	0.010	0.018	0.014	93.6%	0.002	0.010	0.113	0.116
3	05:05:17	0.009	0.012	0.026	0.017	93.3%	0.005	0.022	0.118	0.096
x		0.005	0.012	0.023	0.016	94.0%	-0.000	0.018	0.116	0.107
σ		0.003	0.002	0.005	0.002	0.9%	0.006	0.007	0.002	0.010
%RSD		64.430	17.790	22.050	11.010	1.0	26050.000	37.480	1.917	9.309

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:04:22	4.058	4.062	99.0%	-0.002	-0.005	0.783	0.705	0.759	101.9%
2	05:04:50	4.297	4.109	98.9%	-0.003	-0.007	0.804	0.736	0.765	104.9%
3	05:05:17	4.055	4.132	98.5%	-0.001	-0.005	0.790	0.711	0.754	105.1%
x		4.137	4.101	98.8%	-0.002	-0.006	0.792	0.717	0.759	104.0%
σ		0.139	0.035	0.2%	0.001	0.001	0.010	0.016	0.005	1.8%
%RSD		3.352	0.863	0.3	71.540	16.050	1.315	2.289	0.692	1.7

TK02044-001 11/17/2018 05:09:53

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	90.1%	0.011	299.000	302.700	84.540	T 81500.000	T 2757.000	2857.000	T 2822.000
2	05:10:46	91.6%	0.015	275.200	288.500	82.940	T 79980.000	T 2697.000	2844.000	T 2784.000
3	05:11:13	90.8%	0.003	277.000	291.400	84.950	T 79570.000	T 2713.000	2868.000	2993.000
x		90.8%	0.010	283.700	294.200	84.150	T 80350.000	T 2723.000	2856.000	T 2866.000
σ		0.8%	0.006	13.280	7.514	1.062	T 1015.000	T 31.070	11.670	T 111.200
%RSD		0.8	65.050	4.681	2.554	1.262	T 1.263	T 1.141	0.409	T 3.880
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	119.600	T 6800.000	T 55450.000	T 18320.000	12200.000	12450.000	79.8%	8.574	0.100
2	05:10:46	117.900	T 6679.000	T 54090.000	T 18120.000	12190.000	12370.000	81.5%	8.461	1.309
3	05:11:13	119.900	T 6736.000	T 54530.000	T 18430.000	12330.000	12490.000	79.9%	8.230	1.030
x		119.200	T 6739.000	T 54690.000	T 18290.000	12240.000	12440.000	80.4%	8.422	0.813
σ		1.080	T 60.370	T 692.400	T 156.700	73.780	57.940	0.9%	0.175	0.633
%RSD		0.906	T 0.896	T 1.266	T 0.856	0.603	0.466	1.2	2.082	77.850
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	2.487	13780.000	699.600	22.430	T 704.300	696.700	1.114	18.680	20.650
2	05:10:46	2.463	13430.000	696.300	22.430	T 705.000	701.800	1.141	18.740	19.240
3	05:11:13	2.501	13990.000	716.100	22.900	T 708.700	710.800	1.162	17.970	21.640
x		2.483	13730.000	704.000	22.590	T 706.000	703.100	1.139	18.460	20.510
σ		0.019	279.700	10.610	0.272	T 2.363	7.128	0.024	0.424	1.206
%RSD		0.759	2.037	1.507	1.206	T 0.335	1.014	2.077	2.299	5.878
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	36.390	35.980	95.340	97.370	97.200	5.289	0.294	1116.000	1131.000
2	05:10:46	36.080	35.340	95.600	97.370	97.670	5.195	-0.157	1115.000	1118.000
3	05:11:13	35.870	35.670	95.090	96.710	98.760	5.740	0.810	1117.000	1139.000
x		36.120	35.660	95.340	97.150	97.880	5.408	0.316	1116.000	1129.000
σ		0.261	0.324	0.253	0.384	0.798	0.291	0.484	1.188	11.010
%RSD		0.721	0.909	0.265	0.395	0.815	5.388	153.200	0.107	0.975
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	8.009	0.735	-0.007	64.330	87.4%	M 803.800	M 799.800	TM 758.800	-0.163
2	05:10:46	6.329	0.308	-0.964	63.510	88.4%	M 807.300	M 810.200	TM 759.600	1.018
3	05:11:13	7.786	0.688	0.272	64.450	88.0%	M 808.200	M 803.500	TM 755.000	0.434
x		7.375	0.577	-0.233	64.100	87.9%	M 806.400	M 804.500	TM 757.800	0.430
σ		0.912	0.234	0.648	0.508	0.5%	M 2.288	M 5.284	TM 2.471	0.590
%RSD		12.370	40.610	278.000	0.792	0.6	M 0.284	M 0.657	TM 0.326	137.400
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	0.013	0.020	-1.865	0.055	87.9%	0.546	0.227	0.631	0.650
2	05:10:46	0.027	0.020	-1.774	0.062	89.8%	0.516	0.225	0.625	0.563
3	05:11:13	0.016	0.018	-1.894	0.013	89.1%	0.448	0.268	0.621	0.566
x		0.019	0.019	-1.844	0.044	88.9%	0.503	0.240	0.626	0.593
σ		0.007	0.001	0.062	0.027	0.9%	0.051	0.025	0.005	0.049
%RSD		37.260	5.553	3.381	60.960	1.1	10.050	10.230	0.843	8.327
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:10:19	22.870	22.430	95.8%	-0.009	-0.004	0.765	0.766	0.788	124.5%
2	05:10:46	22.780	22.090	97.2%	-0.003	-0.007	0.812	0.762	0.792	125.5%
3	05:11:13	22.710	22.540	98.0%	-0.003	-0.004	0.778	0.760	0.778	125.8%
x		22.790	22.350	97.0%	-0.005	-0.005	0.785	0.763	0.786	125.2%
σ		0.080	0.238	1.1%	0.003	0.002	0.024	0.003	0.007	0.7%
%RSD		0.349	1.064	1.1	70.420	33.110	3.093	0.418	0.942	0.5

CCV MW10535 11/17/2018 05:15:48 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	85.5%	293.400	284.400	287.700	6.333	T 57670.000	T 57390.000	T 56670.000	T 57360.000
2	05:16:42	85.4%	283.800	281.100	286.000	11.210	T 57820.000	T 57750.000	T 58360.000	T 58090.000
3	05:17:10	85.9%	286.000	275.900	289.600	4.942	T 59040.000	T 58450.000	T 58360.000	T 58810.000
x		85.6%	95.903%	93.484%	95.925%	7.495	T 96.965%	T 57860.000	T 57800.000	T 96.813%
σ		0.3%	n/a	n/a	n/a	3.292	T n/a	T 537.100	T 975.800	T n/a
%RSD		0.3	1.754	1.524	0.625	43.920	T 1.295	T 0.928	T 1.688	T 1.251
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	282.700	T 3058.000	-0.991	T 61470.000	56070.000	T 55950.000	94.7%	268.500	T 270.000
2	05:16:42	284.300	T 2983.000	35.020	T 61580.000	57120.000	T 57680.000	90.3%	278.500	T 282.400
3	05:17:10	289.900	T 3048.000	29.430	T 61660.000	58610.000	T 58060.000	90.3%	281.300	T 285.300
x		95.209%	T 100.992%	21.150	T 102.620%	57260.000	T 95.385%	91.8%	92.047%	T 93.079%
σ		n/a	T n/a	19.380	T n/a	1277.000	T n/a	2.5%	n/a	T n/a
%RSD		1.327	T 1.341	91.610	T 0.157	2.230	T 1.973	2.7	2.440	T 2.914
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	275.200	-1413.000	T 55380.000	T 260.900	T 54300.000	T 53050.000	T 257.700	266.900	259.300
2	05:16:42	278.800	-958.800	T 56160.000	T 267.900	T 57220.000	T 54470.000	T 268.100	265.700	258.300
3	05:17:10	284.200	-1418.000	T 56680.000	T 271.600	T 56260.000	T 55230.000	T 265.900	266.400	263.300
x		93.141%	-1263.000	T 56070.000	T 88.928%	T 55930.000	T 90.418%	T 87.965%	88.774%	260.300
σ		n/a	263.600	T 653.800	T n/a	T 1486.000	T n/a	T n/a	n/a	2.659
%RSD		1.623	20.870	T 1.166	T 2.025	T 2.657	T 2.040	T 2.072	0.217	1.022
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	254.000	271.800	271.300	269.400	266.200	268.300	276.000	11.530	10.540
2	05:16:42	254.300	269.300	271.500	270.400	269.400	279.900	269.800	10.480	9.504
3	05:17:10	256.800	267.500	271.900	269.700	270.200	279.300	270.800	9.436	8.633
x		255.100	89.845%	90.511%	269.900	268.600	91.939%	272.200	10.480	9.558
σ		1.542	n/a	n/a	0.517	2.140	n/a	3.337	1.047	0.954
%RSD		0.605	0.800	0.110	0.192	0.797	2.368	1.226	9.991	9.982
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	1237.000	262.400	0.777	T 300.000	87.8%	301.900	300.500	298.900	288.100
2	05:16:42	1241.000	270.500	0.568	T 302.700	86.5%	301.500	302.800	303.600	290.900
3	05:17:10	1202.000	266.900	-0.265	T 300.500	88.4%	303.200	304.700	304.000	279.700
x		1227.000	88.858%	0.360	T 100.360%	87.5%	100.738%	100.898%	302.200	286.200
σ		21.200	n/a	0.551	T n/a	1.0%	n/a	n/a	2.851	5.818
%RSD		1.728	1.528	153.100	T 0.481	1.1	0.300	0.692	0.943	2.033
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	300.700	301.000	285.200	279.900	89.0%	293.000	294.500	315.200	298.000
2	05:16:42	302.600	296.100	284.300	282.500	87.2%	298.200	295.700	317.200	298.600
3	05:17:10	306.900	298.800	285.100	283.100	88.2%	294.300	296.700	317.300	294.500
x		101.137%	298.600	284.900	93.955%	88.1%	98.388%	98.546%	316.600	99.014%
σ		n/a	2.477	0.467	n/a	0.9%	n/a	n/a	1.162	n/a
%RSD		1.044	0.830	0.164	0.606	1.0	0.922	0.369	0.367	0.736
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:16:15	298.900	299.500	91.9%	298.200	T 282.600	T 279.700	293.300	T 284.500	95.5%
2	05:16:42	300.000	295.000	90.6%	301.400	T 283.500	T 281.900	295.600	T 287.100	96.4%
3	05:17:10	300.000	296.800	93.0%	295.600	T 281.700	T 276.800	291.400	T 282.600	98.2%
x		99.878%	99.029%	91.8%	298.400	T 94.198%	T 93.154%	97.812%	T 94.912%	96.7%
σ		n/a	n/a	1.2%	2.885	T n/a	T n/a	n/a	T n/a	1.4%
%RSD		0.207	0.779	1.3	0.967	T 0.326	T 0.923	0.712	T 0.795	1.4

CCB IM9061-02 11/17/2018 05:21:46 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	T 150.1%	-0.002	0.057	0.086	-62.340	-0.325	0.106	0.136	0.125
2	05:22:41	152.1%	0.002	0.343	-0.013	-61.500	-0.118	0.062	0.072	0.128
3	05:23:08	153.7%	0.005	0.403	-0.019	-61.310	-0.225	0.050	0.009	0.121
x		T 152.0%	0.002	0.268	0.018	-61.720	-0.223	0.073	0.072	0.125
σ		T 1.8%	0.003	0.185	0.059	0.551	0.103	0.029	0.064	0.003
%RSD		T 1.2	194.300	68.980	325.800	0.893	46.350	40.310	88.060	2.612
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	0.035	-8.071	-319.600	-14.280	0.272	-1.345	T 147.1%	0.112	-0.120
2	05:22:41	0.110	-7.076	-274.800	-14.930	0.492	-1.346	T 149.6%	0.115	-0.153
3	05:23:08	0.005	-8.734	-256.900	-15.740	-0.157	-1.486	T 139.8%	0.130	-0.136
x		0.050	-7.960	-283.800	-14.980	0.202	-1.392	T 145.5%	0.119	-0.136
σ		0.054	0.834	32.300	0.729	0.330	0.081	T 5.1%	0.010	0.017
%RSD		107.300	10.480	11.380	4.868	163.300	5.820	T 3.5	8.172	12.380
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	-0.086	-486.600	-0.938	0.006	-8.858	-0.184	-0.001	-0.002	-0.090
2	05:22:41	-0.104	-420.300	-0.811	0.004	-9.930	-1.931	-0.001	-0.000	0.036
3	05:23:08	-0.077	-361.200	-1.516	0.003	-8.874	-1.476	-0.002	0.003	0.013
x		-0.089	-422.700	-1.088	0.004	-9.221	-1.197	-0.001	0.000	-0.013
σ		0.014	62.750	0.376	0.001	0.614	0.906	0.000	0.003	0.067
%RSD		15.320	14.840	34.510	32.420	6.662	75.720	16.290	841.000	497.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	-0.022	-0.014	-0.110	-0.217	-0.128	-0.070	-0.482	0.633	-0.733
2	05:22:41	-0.013	-0.001	-0.105	-0.327	-0.130	-0.050	-0.576	1.079	-0.213
3	05:23:08	-0.008	-0.019	-0.105	-0.226	-0.108	-0.137	-0.599	0.591	-0.346
x		-0.014	-0.012	-0.107	-0.257	-0.122	-0.086	-0.552	0.768	-0.431
σ		0.007	0.009	0.003	0.061	0.012	0.045	0.062	0.271	0.270
%RSD		48.640	77.990	2.835	23.840	9.782	52.860	11.290	35.240	62.670
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	-2.670	-0.641	-2.355	0.000	157.0%	0.492	0.520	0.448	-1.074
2	05:22:41	-2.188	-0.540	-2.031	0.001	150.5%	0.595	0.566	0.576	-1.257
3	05:23:08	-2.817	-0.682	-2.832	0.000	153.7%	0.430	0.454	0.434	-0.963
x		-2.558	-0.621	-2.406	0.001	153.7%	0.505	0.514	0.486	-1.098
σ		0.329	0.073	0.403	0.000	3.2%	0.083	0.056	0.078	0.149
%RSD		12.850	11.800	16.750	90.440	2.1	16.460	10.960	16.110	13.520
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	0.002	0.002	-0.002	0.003	165.5%	0.289	0.432	0.305	0.321
2	05:22:41	0.003	0.005	0.000	-0.002	158.0%	0.351	0.494	0.366	0.375
3	05:23:08	-0.000	0.002	-0.000	0.003	159.6%	0.323	0.422	0.351	0.317
x		0.002	0.003	-0.001	0.001	161.0%	0.321	0.449	0.341	0.338
σ		0.002	0.001	0.001	0.003	4.0%	0.031	0.039	0.032	0.032
%RSD		98.610	49.160	143.300	228.700	2.5	9.681	8.721	9.294	9.551
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:22:13	-0.001	0.007	T 171.2%	-0.003	-0.005	-0.000	0.001	-0.000	180.3%
2	05:22:41	-0.000	0.002	T 164.6%	0.002	-0.002	-0.000	0.002	0.000	202.7%
3	05:23:08	-0.006	0.001	T 168.3%	-0.004	-0.004	0.003	0.001	0.002	184.5%
x		-0.002	0.003	T 168.0%	-0.002	-0.004	0.001	0.001	0.001	189.2%
σ		0.003	0.003	T 3.3%	0.003	0.001	0.002	0.000	0.001	11.9%
%RSD		133.600	89.620	T 2.0	183.100	31.790	207.000	25.950	190.200	6.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	T 140.6%	-0.002	-0.589	-0.455	-56.810	-0.785	0.059	0.087	0.022
2	05:28:39	T 155.2%	-0.002	-0.709	-0.766	-63.340	-0.966	-0.012	0.047	0.032
3	05:29:06	159.8%	-0.002	-0.713	-0.994	-63.680	-0.993	-0.010	0.037	-0.004
x		T 151.9%	-0.002	-0.670	-0.738	-61.270	-0.915	0.013	0.057	0.017
σ		T 10.0%	0.000	0.070	0.271	3.874	0.113	0.040	0.026	0.019
%RSD		T 6.6	0.000	10.450	36.650	6.322	12.380	320.700	45.610	111.800
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	-0.008	-7.139	-349.400	-12.630	-0.948	-1.434	T 144.2%	0.065	-0.002
2	05:28:39	-0.026	-8.504	-360.200	-15.620	-0.486	-1.512	T 150.0%	0.019	-0.159
3	05:29:06	-0.043	-8.958	-351.400	-16.200	-0.733	-1.426	T 151.1%	0.013	-0.105
x		-0.026	-8.200	-353.700	-14.820	-0.722	-1.457	T 148.4%	0.032	-0.089
σ		0.017	0.946	5.746	1.914	0.231	0.047	T 3.7%	0.028	0.080
%RSD		67.500	11.540	1.625	12.920	32.000	3.257	T 2.5	88.100	89.760
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	-0.083	-481.400	-5.508	-0.011	-11.790	-5.762	-0.002	-0.007	-0.241
2	05:28:39	-0.093	-442.900	-6.218	-0.009	-13.520	-5.965	-0.003	-0.002	-0.161
3	05:29:06	-0.102	-458.500	-7.400	-0.009	-14.360	-6.712	-0.002	0.000	-0.336
x		-0.093	-460.900	-6.375	-0.010	-13.220	-6.146	-0.002	-0.003	-0.246
σ		0.009	19.350	0.956	0.001	1.310	0.500	0.001	0.004	0.087
%RSD		10.160	4.198	14.990	13.470	9.905	8.141	27.210	135.100	35.490
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	-0.031	-0.020	-0.103	-0.275	-0.111	-0.061	-0.521	0.588	-0.079
2	05:28:39	-0.031	-0.008	-0.088	-0.267	-0.136	-0.031	-0.467	0.332	-1.035
3	05:29:06	-0.028	-0.016	-0.109	-0.244	-0.108	-0.015	-0.656	-0.007	-1.091
x		-0.030	-0.015	-0.100	-0.262	-0.118	-0.036	-0.548	0.304	-0.735
σ		0.002	0.006	0.011	0.016	0.015	0.023	0.097	0.298	0.569
%RSD		5.287	39.520	10.660	6.057	12.920	64.290	17.710	97.980	77.360
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	-2.437	-0.589	-2.093	0.001	149.2%	0.192	0.176	0.180	-1.389
2	05:28:39	-2.257	-0.552	-2.627	0.001	158.6%	0.121	0.156	0.159	-1.320
3	05:29:06	-2.791	-0.671	-2.499	0.002	162.8%	0.158	0.214	0.152	-0.887
x		-2.495	-0.604	-2.406	0.001	156.9%	0.157	0.182	0.164	-1.199
σ		0.272	0.061	0.279	0.000	7.0%	0.036	0.029	0.015	0.272
%RSD		10.890	10.070	11.600	23.030	4.4	22.700	16.160	8.921	22.680
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	0.004	0.005	-0.001	0.002	154.7%	0.153	0.180	0.129	0.132
2	05:28:39	0.001	0.003	0.001	0.001	164.2%	0.119	0.151	0.106	0.093
3	05:29:06	0.000	0.001	-0.001	0.001	165.4%	0.086	0.143	0.098	0.099
x		0.002	0.003	-0.000	0.001	161.4%	0.119	0.158	0.111	0.108
σ		0.002	0.002	0.001	0.001	5.8%	0.033	0.019	0.016	0.021
%RSD		133.600	69.780	277.800	48.010	3.6	27.810	12.240	14.740	19.160
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:28:12	0.002	0.004	T 157.3%	-0.004	-0.003	0.005	-0.001	-0.001	188.2%
2	05:28:39	-0.004	-0.003	T 169.0%	-0.007	-0.008	-0.000	-0.000	-0.001	195.9%
3	05:29:06	-0.001	0.001	T 171.9%	-0.007	-0.008	0.000	-0.001	-0.001	197.9%
x		-0.001	0.001	T 166.1%	-0.006	-0.006	0.001	-0.001	-0.001	194.0%
σ		0.003	0.004	T 7.7%	0.002	0.003	0.003	0.001	0.000	5.1%
%RSD		278.100	443.900	T 4.7	28.300	46.100	181.900	74.610	23.090	2.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	91.1%	0.001	5.160	5.675	-10.330	T 4163.000	T 823.700	862.900	898.700
2	05:34:37	93.8%	0.003	4.774	5.533	-10.530	T 4252.000	T 824.400	866.500	911.600
3	05:35:04	92.5%	0.005	5.508	6.090	-12.050	T 4294.000	T 847.100	884.700	927.700
x		92.5%	0.003	5.148	5.766	-10.970	T 4236.000	T 831.800	871.400	912.700
σ		1.4%	0.002	0.367	0.290	0.942	T 66.950	T 13.300	11.680	14.560
%RSD		1.5	76.440	7.130	5.023	8.586	T 1.580	T 1.599	1.340	1.596
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	26.040	T 7087.000	T 36890.000	T 4934.000	12500.000	T 12740.000	99.5%	11.970	0.115
2	05:34:37	26.630	T 6864.000	T 38590.000	T 4857.000	12920.000	T 13200.000	96.9%	12.450	0.289
3	05:35:04	27.320	T 6856.000	T 39980.000	T 4900.000	13260.000	T 13520.000	92.6%	11.980	-0.048
x		26.660	T 6936.000	T 38480.000	T 4897.000	12890.000	T 13150.000	96.3%	12.130	0.119
σ		0.640	T 131.100	T 1545.000	T 38.750	383.500	T 392.400	3.5%	0.275	0.168
%RSD		2.402	T 1.891	T 4.015	T 0.791	2.974	T 2.983	3.6	2.263	141.900
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	0.713	9554.000	2315.000	97.250	T 2209.000	2196.000	0.450	18.060	17.420
2	05:34:37	0.740	11380.000	2411.000	99.940	T 2270.000	2239.000	0.445	18.370	18.980
3	05:35:04	0.779	12840.000	2469.000	103.300	T 2362.000	2356.000	0.478	17.950	18.060
x		0.744	11260.000	2398.000	100.200	T 2280.000	2264.000	0.458	18.130	18.160
σ		0.033	1646.000	77.850	3.050	T 76.750	82.780	0.018	0.221	0.784
%RSD		4.465	14.620	3.246	3.045	T 3.366	3.657	3.894	1.218	4.319
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	2.376	2.750	25.070	25.270	24.200	6.016	-0.190	11.510	11.770
2	05:34:37	2.499	2.753	25.350	25.340	25.230	6.106	-0.115	12.580	12.240
3	05:35:04	2.447	2.605	24.890	25.670	25.480	6.306	-0.311	12.250	12.060
x		2.441	2.703	25.100	25.430	24.970	6.143	-0.205	12.110	12.030
σ		0.062	0.085	0.234	0.216	0.679	0.148	0.099	0.549	0.240
%RSD		2.530	3.139	0.934	0.849	2.720	2.416	48.140	4.531	1.993
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	1.308	0.194	0.330	40.340	90.5%	TM 4073.000	TM 4522.000	TM 4017.000	364.800
2	05:34:37	1.651	0.259	-0.938	40.920	89.9%	TM 4141.000	TM 4663.000	TM 4122.000	352.400
3	05:35:04	1.017	0.182	0.465	41.370	88.4%	TM 4147.000	TM 4597.000	TM 4086.000	354.900
x		1.326	0.212	-0.048	40.880	89.6%	TM 4120.000	TM 4594.000	TM 4075.000	357.400
σ		0.317	0.041	0.774	0.518	1.1%	TM 41.190	TM 70.160	TM 53.220	6.543
%RSD		23.930	19.610	1621.000	1.268	1.2	TM 1.000	TM 1.527	TM 1.306	1.831
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	2.015	0.142	-9.768	-0.004	93.2%	2.016	0.469	3.061	2.938
2	05:34:37	2.037	0.137	-10.320	-0.209	92.6%	1.981	0.454	3.119	2.900
3	05:35:04	2.066	0.122	-10.110	-0.116	92.1%	2.003	0.405	3.014	2.966
x		2.039	0.133	-10.060	-0.109	92.6%	2.000	0.443	3.065	2.935
σ		0.026	0.010	0.276	0.103	0.6%	0.018	0.033	0.052	0.033
%RSD		1.256	7.448	2.744	93.840	0.6	0.893	7.463	1.711	1.130
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:34:10	10.730	10.860	97.3%	-0.014	-0.015	0.106	0.091	0.104	T 287.5%
2	05:34:37	11.190	10.960	97.3%	-0.013	-0.016	0.105	0.079	0.092	236.7%
3	05:35:04	10.980	10.800	98.7%	-0.013	-0.015	0.102	0.099	0.093	189.8%
x		10.970	10.880	97.8%	-0.014	-0.015	0.104	0.089	0.096	T 238.0%
σ		0.227	0.082	0.8%	0.001	0.000	0.002	0.010	0.006	T 48.9%
%RSD		2.071	0.750	0.9	6.698	2.717	1.731	11.290	6.581	T 20.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	82.3%	0.001	TM 2752.000	TM 2829.000	-42.150	TM 226600.000	124.700	128.200	131.800
2	05:40:34	84.7%	-0.002	TM 2661.000	TM 2726.000	-42.430	TM 226900.000	124.100	125.000	129.600
3	05:41:01	84.5%	-0.002	TM 2701.000	TM 2740.000	-41.550	TM 220600.000	123.600	123.500	127.200
x		83.8%	-0.001	TM 2705.000	TM 2765.000	-42.050	TM 224700.000	124.100	125.600	129.500
σ		1.3%	0.001	TM 45.590	TM 55.830	0.448	TM 3545.000	0.576	2.423	2.289
%RSD		1.6	226.900	TM 1.685	TM 2.019	1.065	TM 1.578	0.464	1.930	1.768
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	3.958	216.200	T 20090.000	T 3163.000	19270.000	T 19630.000	82.4%	0.273	-0.054
2	05:40:34	3.866	213.300	T 20330.000	T 3096.000	19090.000	T 19490.000	83.7%	0.288	-0.068
3	05:41:01	3.975	210.600	T 20390.000	T 3085.000	19080.000	T 19410.000	83.1%	0.290	-0.115
x		3.933	213.400	T 20270.000	T 3115.000	19140.000	T 19510.000	83.1%	0.284	-0.079
σ		0.059	2.795	T 156.200	T 42.120	106.700	T 110.800	0.6%	0.009	0.032
%RSD		1.488	1.310	T 0.771	T 1.352	0.557	T 0.568	0.8	3.243	40.550
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	0.125	2938.000	58.930	3.870	62.460	95.660	0.014	0.202	18.170
2	05:40:34	0.155	2852.000	58.930	3.747	62.140	97.270	0.025	0.242	17.180
3	05:41:01	0.149	2817.000	61.200	3.812	61.420	89.870	0.022	0.221	15.600
x		0.143	2869.000	59.690	3.810	62.000	94.270	0.020	0.222	16.980
σ		0.016	62.160	1.313	0.061	0.534	3.892	0.006	0.020	1.298
%RSD		10.960	2.167	2.199	1.611	0.861	4.128	29.300	9.022	7.642
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	5.611	4.346	6.674	6.220	6.912	0.916	0.358	290.400	292.400
2	05:40:34	5.650	4.204	6.597	6.706	6.656	0.759	-0.244	293.700	293.100
3	05:41:01	5.517	4.273	6.818	7.194	6.743	1.021	0.262	295.200	299.500
x		5.593	4.274	6.696	6.707	6.770	0.899	0.125	293.100	295.000
σ		0.068	0.071	0.113	0.487	0.130	0.132	0.324	2.467	3.925
%RSD		1.220	1.662	1.681	7.261	1.925	14.640	258.200	0.842	1.330
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	1.523	0.076	0.178	T 305.000	86.2%	13.430	12.940	13.290	6.487
2	05:40:34	1.181	-0.029	-0.459	T 304.900	86.5%	10.190	10.610	10.490	4.386
3	05:41:01	2.912	0.383	0.014	T 302.100	86.3%	8.705	8.681	8.887	3.446
x		1.872	0.143	-0.089	T 304.000	86.3%	10.780	10.740	10.890	4.773
σ		0.917	0.214	0.331	T 1.637	0.2%	2.416	2.131	2.229	1.557
%RSD		48.970	149.300	370.700	T 0.539	0.2	22.420	19.830	20.470	32.610
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	0.010	0.001	-0.020	-0.004	85.9%	13.000	18.540	0.213	0.195
2	05:40:34	0.003	0.003	-0.024	0.007	87.1%	13.200	18.950	0.218	0.187
3	05:41:01	0.002	-0.001	-0.018	0.030	85.8%	13.170	18.830	0.227	0.215
x		0.005	0.001	-0.021	0.011	86.3%	13.120	18.770	0.219	0.199
σ		0.004	0.002	0.003	0.017	0.7%	0.103	0.212	0.007	0.014
%RSD		87.860	150.200	15.740	153.900	0.8	0.787	1.129	3.028	7.181
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:40:07	0.810	0.769	92.4%	0.016	0.012	2.133	1.998	2.089	118.6%
2	05:40:34	0.778	0.749	94.2%	0.010	0.011	2.188	2.052	2.085	116.4%
3	05:41:01	0.718	0.741	94.1%	0.012	0.010	2.175	1.944	2.060	112.8%
x		0.769	0.753	93.5%	0.012	0.011	2.165	1.998	2.078	115.9%
σ		0.047	0.014	1.0%	0.003	0.001	0.029	0.054	0.016	2.9%
%RSD		6.080	1.909	1.1	21.660	9.319	1.326	2.681	0.761	2.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	T 152.3%	-0.002	21.660	22.250	-63.170	32.570	0.116	0.203	0.191
2	05:46:30	T 151.6%	-0.002	19.750	19.130	-65.240	9.449	-0.042	-0.019	-0.044
3	05:46:57	160.7%	-0.002	17.260	16.480	-63.580	1.159	-0.044	-0.040	-0.054
x		T 154.9%	-0.002	19.560	19.290	-63.990	14.390	0.010	0.048	0.031
σ		T 5.1%	0.000	2.203	2.892	1.097	16.280	0.092	0.134	0.139
%RSD		T 3.3	0.000	11.270	14.990	1.714	113.100	925.300	279.900	448.700
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	-0.001	-8.195	-290.100	-15.260	2.041	1.767	T 145.2%	0.020	0.012
2	05:46:30	-0.029	-9.039	-300.300	-15.880	0.258	-0.755	T 148.4%	-0.013	-0.116
3	05:46:57	-0.041	-9.527	-306.500	-17.890	-0.008	-1.576	T 150.6%	0.008	-0.071
x		-0.024	-8.920	-299.000	-16.340	0.764	-0.188	T 148.1%	0.005	-0.058
σ		0.020	0.674	8.258	1.376	1.114	1.742	T 2.7%	0.017	0.065
%RSD		86.300	7.557	2.762	8.423	145.900	928.200	T 1.8	351.700	111.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	-0.082	127.800	-7.362	0.021	-15.590	-9.384	-0.003	0.002	0.516
2	05:46:30	-0.086	156.600	-8.157	0.010	-16.110	-9.589	-0.004	0.000	0.453
3	05:46:57	-0.082	99.140	-9.653	0.005	-16.890	-10.350	-0.005	0.002	0.111
x		-0.084	127.800	-8.391	0.012	-16.200	-9.773	-0.004	0.001	0.360
σ		0.002	28.730	1.163	0.008	0.657	0.507	0.001	0.001	0.218
%RSD		2.291	22.470	13.860	67.830	4.058	5.186	27.250	57.100	60.450
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	0.013	0.007	-0.126	-0.194	-0.099	-0.040	-0.480	1.390	0.480
2	05:46:30	-0.003	-0.010	-0.130	-0.210	-0.117	-0.100	-0.468	0.532	-0.421
3	05:46:57	0.012	-0.009	-0.110	-0.195	-0.126	-0.172	-0.521	0.114	-0.910
x		0.007	-0.004	-0.122	-0.200	-0.114	-0.104	-0.490	0.679	-0.284
σ		0.009	0.009	0.010	0.009	0.014	0.066	0.027	0.650	0.705
%RSD		123.600	231.800	8.298	4.466	11.910	63.730	5.615	95.830	248.300
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	-1.174	-0.278	-2.075	0.032	155.0%	1.511	1.553	1.518	-1.063
2	05:46:30	-2.507	-0.626	-3.295	0.011	158.1%	1.075	0.948	1.027	-1.101
3	05:46:57	-2.856	-0.708	-3.218	0.003	159.1%	0.895	0.999	0.957	-1.477
x		-2.179	-0.537	-2.863	0.015	157.4%	1.160	1.167	1.167	-1.214
σ		0.888	0.228	0.683	0.015	2.1%	0.317	0.336	0.306	0.229
%RSD		40.740	42.470	23.870	94.750	1.4	27.270	28.770	26.210	18.860
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	-0.002	-0.001	-0.003	0.003	162.4%	0.067	0.124	0.007	0.013
2	05:46:30	-0.001	-0.001	-0.004	0.000	165.7%	0.074	0.090	0.015	0.006
3	05:46:57	-0.001	-0.000	-0.000	0.003	167.6%	0.073	0.103	0.011	0.018
x		-0.001	-0.001	-0.003	0.002	165.2%	0.071	0.106	0.011	0.012
σ		0.001	0.000	0.002	0.002	2.6%	0.004	0.017	0.004	0.006
%RSD		48.860	52.830	77.340	77.950	1.6	5.491	16.350	33.910	50.150
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:46:03	-0.001	0.008	T 172.1%	-0.009	-0.010	-0.002	-0.000	-0.002	207.1%
2	05:46:30	-0.001	-0.002	T 173.4%	-0.011	-0.011	0.003	-0.003	-0.001	206.9%
3	05:46:57	0.003	0.004	T 173.8%	-0.011	-0.010	-0.002	-0.001	-0.002	213.0%
x		0.000	0.003	T 173.1%	-0.010	-0.010	-0.000	-0.001	-0.002	209.0%
σ		0.002	0.005	T 0.9%	0.001	0.001	0.003	0.001	0.000	3.5%
%RSD		403.800	155.100	T 0.5	13.550	7.507	2237.000	101.300	21.410	1.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	160.3%	-0.002	6.624	6.220	-63.210	7.255	0.074	0.120	0.127
2	05:52:26	164.4%	-0.002	6.028	6.096	-60.440	32.610	0.456	0.451	0.489
3	05:52:53	144.6%	0.002	84.090	83.690	-55.650	T24460.000	3.863	4.039	3.705
x		156.4%	-0.000	32.250	32.000	-59.770	T8165.000	1.464	1.537	1.440
σ		10.4%	0.002	44.900	44.760	3.822	T14110.000	2.086	2.174	1.969
%RSD		6.7	377.400	139.200	139.900	6.396	T172.800	142.500	141.400	136.700

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	-0.022	-9.031	-388.200	-16.920	0.252	0.013	T149.0%	0.024	-0.136
2	05:52:26	0.050	-6.998	-382.600	-16.360	4.219	3.879	T160.4%	0.031	-0.084
3	05:52:53	0.387	5.674	367.700	T644.200	406.100	383.200	T152.2%	0.050	-0.121
x		0.139	-3.452	-134.400	T203.700	136.900	129.000	T153.9%	0.035	-0.113
σ		0.218	7.968	434.800	T381.600	233.200	220.100	T5.8%	0.013	0.027
%RSD		157.600	230.800	323.600	T187.400	170.400	170.600	T3.8	37.470	23.460

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	-0.090	-74.750	-9.081	0.010	-16.400	-9.427	-0.003	0.008	-0.183
2	05:52:26	-0.106	-129.400	-3.977	0.011	-16.430	-9.521	-0.003	-0.001	0.039
3	05:52:53	-0.082	-175.100	11.380	0.206	-7.306	0.299	-0.001	0.021	0.306
x		-0.093	-126.400	-0.561	0.076	-13.380	-6.217	-0.002	0.010	0.054
σ		0.012	50.230	10.650	0.113	5.260	5.642	0.001	0.011	0.245
%RSD		13.360	39.730	1900.000	148.600	39.310	90.770	53.410	117.700	453.500

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	-0.012	-0.004	-0.110	-0.232	-0.101	0.020	-0.613	-0.195	-1.489
2	05:52:26	-0.026	-0.020	-0.077	-0.215	-0.071	-0.006	-0.693	0.300	-0.361
3	05:52:53	0.154	0.142	0.245	0.104	0.277	0.178	-0.342	6.285	6.034
x		0.039	0.039	0.019	-0.114	0.035	0.064	-0.549	2.130	1.394
σ		0.100	0.089	0.196	0.189	0.210	0.100	0.184	3.607	4.057
%RSD		257.900	227.700	1027.000	165.700	596.500	155.100	33.540	169.300	291.000

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	-1.694	-0.411	-2.816	0.011	161.7%	0.706	0.692	0.725	-1.244
2	05:52:26	-0.541	-0.160	-1.670	0.041	160.5%	1.289	1.298	1.277	-1.312
3	05:52:53	0.867	0.134	-0.528	6.542	145.4%	3.379	3.140	2.922	-1.392
x		-0.456	-0.146	-1.671	2.198	155.9%	1.791	1.710	1.641	-1.316
σ		1.283	0.273	1.144	3.762	9.1%	1.406	1.275	1.143	0.074
%RSD		281.300	187.300	68.450	171.200	5.8	78.470	74.540	69.630	5.640

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	-0.003	0.001	-0.002	-0.001	165.8%	0.001	0.027	0.016	0.000
2	05:52:26	-0.002	0.001	0.003	0.004	167.0%	0.046	0.045	0.014	0.015
3	05:52:53	0.003	0.002	-0.006	-0.003	153.7%	0.069	0.113	0.089	0.081
x		-0.001	0.001	-0.002	0.000	162.2%	0.038	0.062	0.040	0.032
σ		0.003	0.001	0.005	0.004	7.4%	0.035	0.046	0.043	0.043
%RSD		358.100	51.050	284.000	1199.000	4.5	90.490	74.140	107.900	134.400

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:51:59	0.006	-0.003	T172.6%	-0.008	-0.006	0.002	-0.002	-0.002	221.1%
2	05:52:26	0.014	0.016	T172.8%	-0.003	0.001	0.000	-0.003	-0.002	244.0%
3	05:52:53	0.047	0.057	T157.0%	0.010	0.009	0.003	0.005	0.003	T267.5%
x		0.023	0.023	T167.5%	0.000	0.001	0.002	-0.000	-0.000	T244.2%
σ		0.022	0.031	T9.1%	0.009	0.007	0.002	0.005	0.003	T23.2%
%RSD		96.570	131.200	T5.4	30310.000	674.600	89.290	2777.000	1047.000	T9.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	164.4%	-0.002	4.294	4.261	-65.370	T 152.000	0.340	0.347	0.428
2	05:58:23	161.5%	-0.002	3.799	3.749	-66.280	38.230	0.039	0.055	0.101
3	05:58:50	T 156.7%	0.004	3.866	4.617	-63.320	T 1577.000	4.112	3.807	4.281
x		T 160.9%	0.000	3.986	4.209	-64.990	T 589.000	1.497	1.403	1.604
σ		T 3.9%	0.003	0.269	0.436	1.516	T 857.300	2.269	2.087	2.325
%RSD		T 2.4	765.600	6.742	10.360	2.332	T 145.600	151.600	148.700	145.000

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	0.112	-7.174	-363.000	-12.750	31.750	28.220	T 157.6%	-0.014	-0.118
2	05:58:23	-0.008	-8.974	-384.400	-16.020	8.291	7.295	T 152.7%	0.023	-0.100
3	05:58:50	1.666	19.440	-210.800	40.340	365.700	339.300	T 153.6%	-0.003	-0.029
x		0.590	1.098	-319.400	3.855	135.300	124.900	T 154.6%	0.002	-0.082
σ		0.934	15.910	94.640	31.640	200.000	185.900	T 2.6%	0.019	0.047
%RSD		158.300	1449.000	29.630	820.600	147.800	148.800	T 1.7	886.600	57.070

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	-0.073	-182.600	-9.601	0.018	-17.260	-9.882	0.037	0.088	0.008
2	05:58:23	-0.088	-184.500	-10.470	0.019	-17.590	-10.350	0.004	0.018	0.075
3	05:58:50	0.223	-179.100	-6.832	0.203	-16.800	-9.085	0.417	1.049	1.433
x		0.020	-182.000	-8.968	0.080	-17.210	-9.773	0.153	0.385	0.505
σ		0.176	2.721	1.900	0.106	0.400	0.641	0.230	0.576	0.804
%RSD		864.300	1.495	21.190	133.300	2.321	6.553	150.400	149.600	159.200

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	-0.013	-0.028	-0.106	-0.277	-0.089	-0.045	-0.606	1.684	0.772
2	05:58:23	-0.013	-0.012	-0.116	-0.178	-0.129	-0.143	-0.683	0.568	-0.642
3	05:58:50	-0.002	0.001	-0.012	-0.075	-0.025	0.050	-0.629	7.069	7.052
x		-0.009	-0.013	-0.078	-0.177	-0.081	-0.046	-0.639	3.107	2.394
σ		0.007	0.014	0.057	0.101	0.052	0.097	0.039	3.476	4.096
%RSD		70.470	111.700	73.740	57.010	64.620	209.900	6.158	111.900	171.100

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	-1.984	-0.495	-2.600	0.514	164.0%	0.334	0.339	0.296	-0.947
2	05:58:23	-2.686	-0.641	-1.879	0.156	158.7%	0.295	0.307	0.264	-1.352
3	05:58:50	-1.881	-0.450	-1.765	6.401	162.7%	T 0.721	T 0.861	T 0.913	-1.077
x		-2.184	-0.529	-2.081	2.357	161.8%	T 0.450	T 0.502	T 0.491	-1.125
σ		0.439	0.100	0.453	3.507	2.8%	T 0.236	T 0.311	T 0.366	0.207
%RSD		20.080	18.850	21.750	148.800	1.7	T 52.340	T 61.900	T 74.540	18.360

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	-0.001	-0.000	-0.001	0.000	171.4%	-0.015	-0.023	-0.004	-0.003
2	05:58:23	-0.002	-0.001	0.000	-0.001	166.2%	-0.005	-0.020	0.004	-0.007
3	05:58:50	-0.001	-0.000	0.001	0.004	172.2%	0.004	0.005	0.012	0.011
x		-0.001	-0.000	-0.000	0.001	169.9%	-0.006	-0.013	0.004	0.001
σ		0.001	0.000	0.001	0.002	3.3%	0.009	0.016	0.008	0.009
%RSD		54.030	113.300	2449.000	297.500	1.9	168.600	122.000	184.300	1777.000

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	05:57:56	0.006	0.001	T 175.9%	-0.009	-0.013	0.002	-0.002	-0.001	216.0%
2	05:58:23	0.001	0.001	T 175.4%	-0.009	-0.011	-0.001	-0.002	-0.003	214.8%
3	05:58:50	0.050	0.060	T 177.6%	-0.008	-0.011	0.004	-0.000	0.002	228.2%
x		0.019	0.021	T 176.3%	-0.008	-0.011	0.002	-0.001	-0.001	219.7%
σ		0.027	0.034	T 1.2%	0.001	0.001	0.002	0.001	0.002	7.4%
%RSD		142.700	166.600	T 0.7	8.711	8.396	147.200	84.180	310.800	3.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	103.1%	0.007	M 646.200	TM 704.000	-5.854	TM 134200.000	T 1376.000	T 1357.000	T 1356.000
2	06:04:19	84.2%	-0.002	M 2412.000	TM 2557.000	9.641	TM 107200.000	T 1096.000	1117.000	1152.000
3	06:04:46	85.9%	-0.002	M 2474.000	TM 2651.000	13.670	TM 108900.000	T 1088.000	1121.000	1147.000
x		91.1%	0.001	M 1844.000	TM 1971.000	5.819	TM 116700.000	T 1187.000	T 1198.000	T 1218.000
σ		10.4%	0.005	M 1038.000	TM 1098.000	10.310	TM 15130.000	T 163.800	T 137.600	T 119.300
%RSD		11.5	389.100	M 56.280	TM 55.720	177.100	TM 12.960	T 13.800	T 11.480	T 9.792

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	T 161.700	T 1563.000	T 19420.000	T 96740.000	10290.000	T 10250.000	T 134.0%	3.473	0.972
2	06:04:19	307.400	T 1372.000	T 52120.000	TM 358900.000	39590.000	T 39720.000	84.7%	0.644	0.783
3	06:04:46	309.300	T 1370.000	T 54360.000	TM 360000.000	40640.000	T 40420.000	83.7%	0.384	0.812
x		T 259.500	T 1435.000	T 41970.000	TM 271900.000	30170.000	T 30130.000	T 100.8%	1.500	0.856
σ		T 84.650	T 110.500	T 19560.000	TM 151700.000	17230.000	T 17220.000	T 28.7%	1.713	0.101
%RSD		T 32.620	T 7.697	T 46.600	TM 55.790	57.100	T 57.150	T 28.5	114.200	11.850

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	3.282	848.400	169.400	8.026	T 136.300	151.700	0.347	2.536	5.367
2	06:04:19	6.170	1800.000	21.830	14.780	17.560	91.760	0.236	6.292	9.465
3	06:04:46	6.485	1685.000	22.590	15.130	18.330	95.190	0.273	5.938	9.359
x		5.312	1445.000	71.270	12.650	T 57.390	112.900	0.285	4.922	8.064
σ		1.765	519.400	84.980	4.005	T 68.330	33.650	0.056	2.074	2.336
%RSD		33.230	35.960	119.200	31.670	T 119.100	29.810	19.770	42.130	28.970

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	18.190	21.600	73.480	61.420	64.060	0.412	0.193	85.510	89.760
2	06:04:19	5.263	5.536	87.990	82.580	84.870	0.350	3.003	210.800	211.400
3	06:04:46	5.427	5.413	86.930	83.010	85.580	0.335	3.117	223.200	220.200
x		9.627	10.850	82.800	75.670	78.170	0.365	2.104	173.200	173.800
σ		7.418	9.309	8.089	12.340	12.220	0.041	1.657	76.150	72.880
%RSD		77.050	85.800	9.769	16.310	15.640	11.120	78.720	43.980	41.940

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	5.655	0.814	4.116	34.020	102.1%	5.632	5.459	T 6.082	0.667
2	06:04:19	0.633	-0.074	0.384	40.350	84.7%	1.687	1.732	1.678	1.055
3	06:04:46	1.046	0.033	0.326	40.320	86.1%	1.662	1.579	1.563	0.362
x		2.445	0.258	1.609	38.230	91.0%	2.994	2.923	T 3.107	0.695
σ		2.788	0.485	2.171	3.648	9.7%	2.285	2.197	T 2.577	0.347
%RSD		114.000	188.000	135.000	9.541	10.7	76.330	75.160	T 82.910	50.020

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	0.022	0.015	0.022	0.032	102.8%	0.160	0.227	79.840	72.870
2	06:04:19	0.005	0.002	0.002	0.003	84.7%	0.229	0.299	0.722	0.696
3	06:04:46	0.002	0.002	0.003	0.005	86.3%	0.221	0.283	0.659	0.579
x		0.010	0.006	0.009	0.013	91.3%	0.203	0.270	27.070	24.720
σ		0.011	0.007	0.011	0.016	10.0%	0.038	0.038	45.700	41.710
%RSD		108.500	119.800	124.300	123.600	11.0	18.580	13.980	168.800	168.700

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:03:52	8.238	8.128	114.6%	0.003	-0.001	0.260	0.266	0.261	T 318.1%
2	06:04:19	1.060	1.104	93.5%	-0.015	-0.014	0.010	0.006	0.009	176.3%
3	06:04:46	1.024	1.124	94.6%	-0.013	-0.015	0.011	0.009	0.008	143.5%
x		3.441	3.452	100.9%	-0.008	-0.010	0.094	0.093	0.093	T 212.6%
σ		4.155	4.050	11.9%	0.010	0.007	0.144	0.149	0.146	T 92.8%
%RSD		120.800	117.300	11.8	118.900	76.740	153.400	159.800	157.000	T 43.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	161.2%	-0.002	9.474	9.459	-64.570	147.400	0.786	0.833	0.798
2	06:10:16	T 153.3%	0.005	9.727	9.306	-65.240	T 282.900	1.718	1.715	1.812
3	06:10:43	T 156.8%	-0.002	8.476	7.750	-63.530	T 167.000	1.056	1.078	1.095
x		T 157.1%	0.001	9.225	8.838	-64.450	T 199.100	1.187	1.208	1.235
σ		T 4.0%	0.003	0.661	0.945	0.861	T 73.230	0.480	0.455	0.521
%RSD		T 2.5	692.100	7.169	10.690	1.336	T 36.780	40.420	37.670	42.220
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	0.066	-7.691	-295.100	18.560	14.880	10.240	T 146.5%	0.014	-0.113
2	06:10:16	0.205	-5.687	-302.300	52.070	22.340	23.130	T 151.2%	0.002	-0.100
3	06:10:43	0.100	-7.168	-313.500	29.400	13.600	13.950	T 149.2%	0.013	-0.030
x		0.123	-6.849	-303.600	33.350	16.940	15.770	T 149.0%	0.010	-0.081
σ		0.073	1.040	9.289	17.100	4.719	6.632	T 2.3%	0.007	0.045
%RSD		58.770	15.180	3.059	51.280	27.860	42.050	T 1.6	65.480	55.050
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	-0.090	-441.200	-9.591	0.018	-16.770	-10.660	0.007	0.016	0.086
2	06:10:16	-0.083	-464.000	-9.786	0.048	-17.010	-9.776	0.009	0.050	0.112
3	06:10:43	-0.090	-501.500	-7.588	0.035	-16.880	-10.510	0.003	0.027	0.271
x		-0.088	-468.900	-8.988	0.034	-16.890	-10.310	0.006	0.031	0.156
σ		0.004	30.450	1.217	0.015	0.116	0.472	0.003	0.018	0.100
%RSD		4.732	6.495	13.530	44.300	0.688	4.572	50.720	57.050	64.190
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	0.015	0.006	-0.074	-0.348	-0.073	-0.018	-0.344	1.839	0.636
2	06:10:16	0.003	0.018	-0.034	-0.185	-0.016	-0.022	-0.410	1.911	0.700
3	06:10:43	-0.002	0.009	-0.054	-0.160	-0.031	0.008	-0.353	1.817	1.126
x		0.005	0.011	-0.054	-0.231	-0.040	-0.011	-0.369	1.855	0.821
σ		0.009	0.006	0.020	0.102	0.029	0.017	0.036	0.049	0.266
%RSD		169.300	57.820	37.450	44.240	73.550	154.200	9.722	2.645	32.410
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	-2.413	-0.606	-3.459	0.142	157.3%	0.337	0.335	0.281	-0.935
2	06:10:16	-2.084	-0.521	-2.792	0.283	158.0%	0.485	0.467	0.447	-1.493
3	06:10:43	-1.865	-0.445	-2.406	0.163	162.0%	0.310	0.350	T 0.546	-1.712
x		-2.120	-0.524	-2.886	0.196	159.1%	0.378	0.384	T 0.425	-1.380
σ		0.276	0.081	0.533	0.076	2.5%	0.094	0.072	T 0.134	0.401
%RSD		13.010	15.400	18.460	38.910	1.6	24.990	18.780	T 31.460	29.040
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	-0.002	0.000	-0.001	0.000	165.2%	-0.038	-0.041	0.024	0.016
2	06:10:16	-0.002	-0.001	-0.001	0.000	166.2%	-0.023	-0.038	0.073	0.069
3	06:10:43	-0.002	0.000	-0.002	0.001	169.4%	-0.032	-0.037	0.042	0.046
x		-0.002	-0.000	-0.001	0.000	167.0%	-0.031	-0.039	0.046	0.044
σ		0.000	0.000	0.001	0.000	2.2%	0.007	0.002	0.025	0.027
%RSD		7.510	637.500	61.720	109.200	1.3	24.060	5.279	53.620	61.460
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:09:49	0.004	0.005	T 172.0%	-0.009	-0.010	0.001	-0.003	-0.002	202.5%
2	06:10:16	0.026	0.014	T 173.6%	-0.007	-0.011	-0.001	-0.002	-0.001	217.0%
3	06:10:43	0.004	0.010	T 178.0%	-0.009	-0.011	-0.003	0.001	-0.002	207.1%
x		0.012	0.010	T 174.5%	-0.008	-0.011	-0.001	-0.001	-0.002	208.9%
σ		0.013	0.005	T 3.1%	0.002	0.001	0.002	0.002	0.000	7.4%
%RSD		109.000	48.980	T 1.8	18.280	5.489	243.800	149.100	25.270	3.5

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	T 184.1%	-0.001	18.400	24.330	-86.510	T 350.900	9.583	9.969	10.860
2	06:16:13	167.8%	-0.002	13.820	16.330	-85.730	87.210	2.141	2.401	2.496
3	06:16:40	165.4%	-0.002	15.930	17.610	-83.980	38.690	0.989	1.194	1.176
x		T 172.5%	-0.001	16.050	19.420	-85.410	T 158.900	4.238	4.521	4.843
σ		T 10.2%	0.000	2.294	4.297	1.293	T 168.000	4.665	4.756	5.251
%RSD		T 5.9	8.898	14.290	22.120	1.513	T 105.700	110.100	105.200	108.400
Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	T 50.790	32.800	-391.800	-4.526	44.930	39.070	T 146.3%	2.652	0.125
2	06:16:13	11.650	1.027	-435.000	-14.300	11.740	7.895	T 146.7%	0.752	-0.101
3	06:16:40	5.931	-4.588	-444.200	-15.800	8.677	3.381	T 150.8%	0.550	0.000
x		T 22.790	9.746	-423.600	-11.540	21.780	16.780	T 147.9%	1.318	0.008
σ		T 24.420	20.160	27.950	6.123	20.100	19.440	T 2.5%	1.159	0.113
%RSD		T 107.100	206.900	6.598	53.040	92.290	115.800	T 1.7	87.950	1410.000
Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	0.244	-25.770	27.730	1.190	22.480	27.470	0.033	0.209	0.219
2	06:16:13	-0.013	23.480	1.236	0.287	-4.921	0.538	0.007	0.050	0.038
3	06:16:40	-0.057	-67.250	-2.925	0.140	-9.872	-3.844	0.000	0.031	-0.392
x		0.058	-23.180	8.679	0.539	2.563	8.054	0.013	0.097	-0.045
σ		0.163	45.420	16.630	0.569	17.430	16.950	0.018	0.098	0.314
%RSD		280.400	196.000	191.600	105.500	679.900	210.500	131.100	101.200	698.800
Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	0.263	0.298	2.103	2.182	2.351	-0.016	-0.582	39.230	38.830
2	06:16:13	0.046	0.031	0.447	0.317	0.500	-0.058	-0.715	13.200	11.670
3	06:16:40	0.006	0.028	0.158	0.106	0.178	-0.060	-0.527	7.506	6.212
x		0.105	0.119	0.903	0.868	1.010	-0.045	-0.608	19.980	18.900
σ		0.139	0.155	1.049	1.143	1.173	0.025	0.097	16.910	17.470
%RSD		131.900	130.300	116.300	131.600	116.100	54.950	15.880	84.650	92.420
Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	-1.134	-0.304	-2.830	0.526	164.3%	0.776	0.788	0.837	-1.207
2	06:16:13	-1.596	-0.412	-3.389	0.135	160.9%	0.370	0.394	0.393	-1.321
3	06:16:40	-2.439	-0.602	-2.640	0.065	160.0%	0.285	0.284	0.283	-1.221
x		-1.723	-0.439	-2.953	0.242	161.7%	0.477	0.489	0.504	-1.250
σ		0.662	0.151	0.389	0.249	2.2%	0.263	0.265	0.293	0.062
%RSD		38.430	34.460	13.190	102.700	1.4	55.070	54.300	58.190	4.957
Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	-0.001	0.002	-0.002	-0.000	167.8%	-0.025	-0.039	0.012	0.000
2	06:16:13	-0.002	0.001	-0.000	-0.000	167.8%	-0.031	-0.031	0.003	-0.004
3	06:16:40	-0.003	-0.000	-0.001	0.000	168.3%	-0.031	-0.043	-0.006	-0.007
x		-0.002	0.001	-0.001	-0.000	168.0%	-0.029	-0.038	0.003	-0.004
σ		0.001	0.001	0.001	0.000	0.3%	0.003	0.006	0.009	0.004
%RSD		35.530	145.500	72.020	382.400	0.2	11.010	16.450	291.000	96.980
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:15:46	1.710	1.700	T 177.6%	-0.010	-0.010	0.018	0.016	0.016	199.7%
2	06:16:13	0.411	0.421	T 174.5%	-0.007	-0.009	0.003	-0.003	0.001	200.9%
3	06:16:40	0.183	0.198	T 178.1%	-0.009	-0.009	0.002	-0.000	-0.000	206.8%
x		0.768	0.773	T 176.7%	-0.009	-0.009	0.008	0.004	0.006	202.4%
σ		0.823	0.811	T 1.9%	0.001	0.000	0.009	0.010	0.009	3.8%
%RSD		107.200	104.900	T 1.1	13.740	5.029	122.400	235.700	168.800	1.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	┬181.9%	-0.002	8.248	10.770	-86.720	┬259.700	6.896	7.497	7.800
2	06:22:10	┬214.9%	-0.001	32.140	┬45.260	-82.960	┬11330.000	┬983.500	┬1030.000	┬1105.000
3	06:22:37	┬121.2%	-0.001	20.690	┬27.800	-74.240	┬1499.000	┬48.000	49.970	54.260
x		┬172.6%	-0.001	20.360	┬27.940	-81.310	┬4364.000	┬346.100	┬362.500	┬389.000
σ		┬47.5%	0.000	11.950	┬17.240	6.402	┬6068.000	┬552.400	┬578.500	┬620.500
%RSD		┬27.5	20.000	58.690	┬61.710	7.873	┬139.000	┬159.600	┬159.600	┬159.500
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	36.790	25.190	-492.500	0.666	34.090	32.510	┬161.0%	1.691	-0.123
2	06:22:10	┬164.200	┬1120.000	┬5798.000	┬890.900	9646.000	┬10060.000	┬163.9%	7.012	0.330
3	06:22:37	┬84.590	106.000	┬32360.000	┬244.100	448.600	442.900	┬90.9%	3.423	-0.160
x		┬95.190	┬417.000	┬12560.000	┬378.600	3376.000	┬3512.000	┬138.6%	4.042	0.016
σ		┬64.360	┬609.900	┬17440.000	┬460.100	5434.000	┬5675.000	┬41.3%	2.714	0.273
%RSD		┬67.610	┬146.300	┬138.900	┬121.500	160.900	┬161.600	┬29.8	67.150	1757.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	0.132	-197.800	15.800	0.825	8.402	13.800	0.023	0.166	-0.168
2	06:22:10	1.236	804.900	170.500	48.560	┬133.800	150.000	0.602	2.112	1.782
3	06:22:37	1.021	7218.000	58.010	3.168	┬59.600	49.100	0.121	0.628	1.000
x		0.796	2608.000	81.440	17.520	┬67.260	70.970	0.249	0.969	0.871
σ		0.586	4023.000	79.970	26.910	┬63.040	70.680	0.310	1.017	0.981
%RSD		73.530	154.300	98.200	153.600	┬93.720	99.600	124.700	105.000	112.600
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	0.187	0.194	1.673	1.698	1.813	-0.113	-0.964	24.700	23.820
2	06:22:10	1.882	2.307	12.780	11.560	12.530	0.351	-0.269	232.100	234.000
3	06:22:37	0.599	0.670	4.902	5.660	5.247	0.109	-0.066	121.700	122.100
x		0.889	1.057	6.453	6.306	6.529	0.116	-0.433	126.200	126.600
σ		0.884	1.108	5.716	4.963	5.470	0.232	0.471	103.800	105.200
%RSD		99.400	104.900	88.570	78.700	83.790	200.300	108.800	82.260	83.050
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	-2.680	-0.671	-2.263	0.456	170.3%	1.175	1.335	2.354	-0.830
2	06:22:10	6.132	0.665	3.233	┬68.840	117.0%	10.080	11.530	9.833	0.884
3	06:22:37	1.516	0.314	1.643	3.035	96.7%	2.820	2.870	2.763	-0.660
x		1.656	0.103	0.871	┬24.110	128.0%	4.691	5.245	4.983	-0.202
σ		4.408	0.693	2.828	┬38.760	38.0%	4.738	5.497	4.205	0.944
%RSD		266.200	672.500	324.600	┬160.800	29.7	101.000	104.800	84.380	468.000
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	-0.002	-0.000	-0.005	0.002	175.1%	-0.039	-0.054	0.024	0.013
2	06:22:10	0.017	0.016	-0.007	0.007	129.7%	0.137	0.127	0.944	0.949
3	06:22:37	0.005	0.006	0.001	0.005	99.1%	0.110	0.153	0.327	0.268
x		0.007	0.008	-0.004	0.005	134.6%	0.069	0.075	0.432	0.410
σ		0.009	0.008	0.004	0.002	38.3%	0.094	0.113	0.469	0.484
%RSD		137.100	109.000	111.600	47.790	28.4	136.000	149.600	108.600	118.000
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:21:43	1.344	1.286	┬180.6%	-0.007	-0.006	0.021	0.015	0.014	227.9%
2	06:22:10	15.240	15.000	┬128.0%	0.063	0.057	0.144	0.125	0.139	┬485.7%
3	06:22:37	2.526	2.801	104.6%	-0.012	-0.011	0.034	0.035	0.033	┬274.8%
x		6.369	6.361	┬137.7%	0.015	0.013	0.066	0.058	0.062	┬329.5%
σ		7.703	7.516	┬38.9%	0.042	0.038	0.067	0.059	0.067	┬137.3%
%RSD		120.900	118.200	┬28.3	289.900	291.000	101.900	100.700	108.500	┬41.7

CCV MW10535 11/17/2018 06:27:12 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	┬167.9%	-0.002	4.589	5.878	-85.520	┬268.000	7.286	7.529	7.909
2	06:28:06	┬166.7%	5.875	30.330	┬42.770	-82.180	┬11260.000	┬9708.000	┬10410.000	┬11200.000
3	06:28:33	82.1%	176.800	183.700	184.800	-25.810	┬41780.000	┬42050.000	┬42470.000	┬43380.000
x		┬138.9%	20.293%	24.287%	┬25.941%	-64.500	┬29.613%	┬17260.000	┬17630.000	┬30.330%
σ		┬49.2%	n/a	n/a	┬n/a	33.550	┬n/a	┬22010.000	┬22140.000	┬n/a
%RSD		┬35.4	164.900	132.900	┬121.400	52.020	┬121.000	┬127.600	┬125.500	┬123.700
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	19.350	15.500	33.950	32.290	59.500	58.350	┬157.4%	0.751	0.053
2	06:28:06	┬184.200	┬1146.000	4.404	┬21920.000	22040.000	┬22420.000	┬149.9%	111.400	┬108.600
3	06:28:33	215.600	┬3023.000	-184.000	┬63840.000	51430.000	┬50990.000	97.8%	244.800	┬248.100
x		┬46.579%	┬46.496%	-48.550	┬47.664%	24510.000	┬40.817%	┬135.0%	39.665%	┬39.634%
σ		┬n/a	┬n/a	118.200	┬n/a	25770.000	┬n/a	┬32.5%	n/a	┬n/a
%RSD		┬75.450	┬108.900	243.500	┬113.400	105.200	┬104.300	┬24.0	102.700	┬104.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	0.045	-38.540	10.730	0.635	-2.451	2.713	0.023	0.134	-0.180
2	06:28:06	107.600	252.800	┬24670.000	┬111.000	┬22230.000	┬21440.000	103.900	156.300	120.700
3	06:28:33	246.700	-1418.000	┬51440.000	┬241.700	┬50030.000	┬48010.000	238.500	253.600	230.300
x		39.366%	-401.200	┬25370.000	┬39.266%	┬24090.000	┬38.586%	38.048%	45.552%	116.900
σ		n/a	892.400	┬25720.000	┬n/a	┬25070.000	┬n/a	n/a	n/a	115.300
%RSD		104.700	222.400	┬101.400	┬102.500	┬104.100	┬103.900	104.800	93.560	98.590
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	0.107	0.117	0.875	0.820	1.007	0.013	-0.722	16.560	16.330
2	06:28:06	118.700	156.100	175.300	143.300	142.800	109.100	139.400	168.700	171.800
3	06:28:33	229.400	252.700	272.400	253.300	254.100	250.100	260.800	25.140	26.700
x		116.100	45.439%	49.834%	132.500	132.600	39.905%	133.200	70.140	71.610
σ		114.600	n/a	n/a	126.600	126.900	n/a	130.900	85.480	86.920
%RSD		98.790	93.510	92.020	95.560	95.650	104.700	98.280	121.900	121.400
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	-0.834	-0.210	-1.223	0.614	164.0%	0.591	0.718	0.667	-1.088
2	06:28:06	663.400	102.100	4.572	┬189.200	96.6%	167.900	169.000	167.400	184.100
3	06:28:33	1204.000	244.800	0.376	┬298.200	86.3%	280.900	280.700	280.500	288.700
x		622.200	38.526%	1.242	┬54.220%	115.6%	49.934%	50.044%	149.500	157.200
σ		603.400	n/a	2.993	┬n/a	42.2%	n/a	n/a	140.800	146.700
%RSD		96.990	106.500	241.000	┬92.550	36.5	94.140	93.880	94.140	93.330
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	-0.001	0.000	-0.000	-0.001	170.0%	-0.032	-0.041	0.043	0.042
2	06:28:06	178.200	178.900	177.400	172.000	95.5%	176.500	172.900	165.500	155.400
3	06:28:33	298.400	296.400	288.400	284.100	85.8%	296.300	293.600	316.000	285.600
x		52.947%	158.400	155.300	50.682%	117.1%	52.534%	51.825%	160.500	49.011%
σ		n/a	149.300	145.500	n/a	46.1%	n/a	n/a	158.000	n/a
%RSD		94.510	94.200	93.690	94.120	39.4	94.590	94.930	98.450	97.240
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:27:39	0.905	0.920	┬176.1%	-0.008	-0.010	0.004	0.007	0.006	┬199.1%
2	06:28:06	197.400	195.500	┬101.5%	180.700	┬180.400	┬178.900	180.700	┬179.800	┬215.0%
3	06:28:33	296.500	296.100	94.6%	291.400	┬276.600	┬277.000	286.500	┬279.600	121.5%
x		54.985%	54.723%	┬124.1%	157.400	┬50.778%	┬50.655%	51.912%	┬51.050%	┬178.5%
σ		n/a	n/a	┬45.2%	147.100	┬n/a	┬n/a	n/a	┬n/a	┬50.0%
%RSD		91.220	91.410	┬36.4	93.470	┬92.180	┬92.420	93.010	┬92.530	┬28.0

CCB IM9061-02 11/17/2018 06:33:07 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	T 156.3%	0.037	4.864	5.192	-76.970	38.590	12.940	13.390	14.200
2	06:34:02	T 156.5%	0.043	2.662	3.074	-83.080	T 93.420	17.940	18.090	19.350
3	06:34:29	165.4%	0.007	6.235	6.680	-70.490	10.070	2.622	2.646	3.002
x		T 159.4%	0.029	4.587	4.982	-76.840	T 47.360	11.170	11.380	12.180
σ		T 5.2%	0.019	1.803	1.812	6.296	T 42.360	7.812	7.918	8.357
%RSD		T 3.3	66.210	39.300	36.370	8.193	T 89.450	69.940	69.610	68.600
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	1.656	-6.880	-479.900	5.750	23.030	17.430	T 146.8%	0.216	-0.058
2	06:34:02	5.057	-2.019	-499.400	30.140	35.600	38.550	T 152.0%	0.472	0.021
3	06:34:29	0.563	-8.848	-472.200	-14.200	0.400	2.410	T 154.4%	0.106	-0.015
x		2.426	-5.916	-483.800	7.230	19.680	19.470	T 151.1%	0.265	-0.017
σ		2.344	3.515	14.050	22.210	17.840	18.160	T 3.9%	0.188	0.040
%RSD		96.630	59.420	2.903	307.200	90.660	93.270	T 2.6	70.970	229.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	-0.006	-616.600	19.750	0.120	13.410	18.620	0.074	0.073	-0.208
2	06:34:02	0.047	-645.000	32.350	0.259	26.810	30.640	0.143	0.150	-0.170
3	06:34:29	-0.087	-699.800	1.560	0.027	-7.711	-1.510	0.010	0.011	-0.254
x		-0.015	-653.800	17.880	0.135	10.840	15.910	0.076	0.078	-0.211
σ		0.068	42.310	15.480	0.116	17.410	16.240	0.066	0.070	0.042
%RSD		436.300	6.471	86.540	85.940	160.600	102.100	87.390	89.410	20.020
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	0.055	0.048	0.026	-0.160	0.048	0.016	-0.313	1.534	1.200
2	06:34:02	0.133	0.148	0.251	0.009	0.272	0.001	-0.220	3.573	3.093
3	06:34:29	-0.004	-0.004	-0.080	-0.293	-0.112	-0.088	-0.715	0.661	-0.100
x		0.061	0.064	0.065	-0.148	0.069	-0.023	-0.416	1.923	1.398
σ		0.069	0.077	0.169	0.151	0.193	0.056	0.263	1.495	1.605
%RSD		112.500	120.800	257.700	102.300	278.900	239.900	63.270	77.740	114.900
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	-2.055	-0.501	-3.324	0.099	165.1%	1.244	1.221	1.263	-1.070
2	06:34:02	-2.372	-0.568	-2.084	0.286	162.2%	1.229	1.218	1.146	-1.133
3	06:34:29	-2.305	-0.557	-2.350	0.025	163.8%	0.591	0.571	T 1.925	-1.228
x		-2.244	-0.542	-2.586	0.137	163.7%	1.022	1.003	T 1.445	-1.144
σ		0.167	0.036	0.653	0.134	1.5%	0.373	0.375	T 0.420	0.080
%RSD		7.457	6.634	25.260	98.190	0.9	36.490	37.340	T 29.070	6.961
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	0.077	0.084	0.054	0.063	168.7%	0.389	0.525	1.025	1.006
2	06:34:02	0.127	0.142	0.149	0.135	170.2%	0.424	0.528	0.881	0.833
3	06:34:29	0.019	0.017	0.005	0.016	172.3%	0.252	0.412	0.547	0.524
x		0.074	0.081	0.070	0.071	170.4%	0.355	0.488	0.818	0.788
σ		0.054	0.062	0.074	0.060	1.8%	0.091	0.066	0.245	0.244
%RSD		72.580	77.310	105.900	84.340	1.0	25.580	13.570	30.010	30.990
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:33:35	0.087	0.111	T 175.8%	0.077	0.073	0.088	0.083	0.084	210.7%
2	06:34:02	0.320	0.324	T 177.6%	0.139	0.143	0.156	0.150	0.148	214.2%
3	06:34:29	0.026	0.030	T 181.7%	0.010	0.007	0.010	0.011	0.008	212.7%
x		0.144	0.155	T 178.4%	0.075	0.074	0.085	0.081	0.080	212.5%
σ		0.155	0.152	T 3.0%	0.065	0.068	0.073	0.070	0.070	1.7%
%RSD		107.300	97.750	T 1.7	85.900	92.160	86.540	85.770	87.270	0.8

TK02073-003 11/17/2018 06:39:04

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	85.3%	-0.002	153.900	167.600	-11.690	TM 222400.000	T 19110.000	T 19260.000	T 19970.000
2	06:39:58	86.1%	0.007	152.600	160.900	-11.880	TM 223900.000	T 19260.000	T 19420.000	T 20030.000
3	06:40:25	87.1%	0.001	140.100	151.300	-14.730	TM 215300.000	T 18780.000	T 19150.000	T 19640.000
x		86.2%	0.002	148.900	159.900	-12.760	TM 220500.000	T 19050.000	T 19280.000	T 19880.000
σ		0.9%	0.004	7.641	8.185	1.704	TM 4623.000	T 245.000	T 135.900	T 211.100
%RSD		1.0	202.800	5.133	5.118	13.350	TM 2.097	T 1.286	T 0.705	T 1.062
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	7.037	TM 12210.000	T 54090.000	T 10900.000	M 176600.000	TM 171500.000	86.5%	2.942	1.678
2	06:39:58	7.268	TM 12080.000	T 55130.000	T 10990.000	M 179600.000	TM 175000.000	86.0%	3.357	1.976
3	06:40:25	T 6.925	TM 12100.000	T 55080.000	T 10830.000	TM 177900.000	TM 173500.000	86.5%	2.793	1.940
x		T 7.077	TM 12130.000	T 54770.000	T 10910.000	TM 178000.000	TM 173300.000	86.3%	3.031	1.865
σ		T 0.175	TM 70.930	T 585.400	T 77.260	TM 1500.000	TM 1731.000	0.2%	0.293	0.163
%RSD		T 2.477	TM 0.585	T 1.069	T 0.709	TM 0.843	TM 0.998	0.3	9.654	8.746
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	16.220	3006.000	5597.000	T 444.800	T 5312.000	5638.000	0.791	1.891	8.384
2	06:39:58	16.250	3206.000	5662.000	T 454.500	T 5396.000	5681.000	0.742	1.953	8.720
3	06:40:25	16.240	3357.000	T 5211.000	T 447.100	T 5340.000	5645.000	0.750	1.882	9.054
x		16.230	3190.000	T 5490.000	T 448.800	T 5349.000	5655.000	0.761	1.908	8.719
σ		0.015	176.400	T 243.800	T 5.052	T 42.400	23.240	0.026	0.038	0.335
%RSD		0.092	5.529	T 4.441	T 1.126	T 0.793	0.411	3.474	2.016	3.846
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	1.762	1.126	1.473	10.870	8.609	1.625	0.094	102.000	100.300
2	06:39:58	1.783	1.103	1.564	11.700	8.938	1.660	0.437	100.700	101.200
3	06:40:25	1.799	1.093	1.439	12.090	8.638	1.619	0.471	98.300	100.500
x		1.781	1.107	1.492	11.560	8.728	1.635	0.334	100.300	100.700
σ		0.019	0.017	0.065	0.621	0.182	0.022	0.208	1.871	0.473
%RSD		1.062	1.534	4.333	5.376	2.087	1.354	62.450	1.865	0.470
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	2.911	0.569	-0.229	TM 512.000	88.0%	2.425	2.422	2.406	9.701
2	06:39:58	2.598	0.540	1.265	TM 514.400	88.3%	2.326	2.537	2.476	7.976
3	06:40:25	1.665	0.324	1.245	TM 515.100	88.6%	2.398	2.350	2.418	8.663
x		2.392	0.478	0.760	TM 513.800	88.3%	2.383	2.436	2.433	8.780
σ		0.648	0.134	0.857	TM 1.590	0.3%	0.051	0.094	0.037	0.869
%RSD		27.100	28.100	112.700	TM 0.310	0.3	2.139	3.866	1.539	9.894
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	0.008	0.006	0.006	0.011	88.0%	0.308	0.417	0.575	0.524
2	06:39:58	0.006	0.005	0.001	0.009	87.2%	0.281	0.391	0.576	0.499
3	06:40:25	0.004	0.002	0.016	0.009	87.9%	0.238	0.385	0.514	0.544
x		0.006	0.004	0.008	0.009	87.7%	0.275	0.398	0.555	0.522
σ		0.002	0.002	0.008	0.001	0.4%	0.035	0.017	0.035	0.023
%RSD		34.400	45.730	98.940	15.410	0.5	12.780	4.233	6.366	4.397
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:39:31	261.900	260.200	93.8%	-0.014	-0.015	0.075	0.064	0.067	168.2%
2	06:39:58	260.100	261.400	94.8%	-0.010	-0.013	0.062	0.067	0.063	150.4%
3	06:40:25	264.100	261.600	95.1%	-0.015	-0.016	0.071	0.061	0.060	139.6%
x		262.000	261.100	94.6%	-0.013	-0.015	0.069	0.064	0.064	152.7%
σ		1.992	0.802	0.7%	0.003	0.002	0.007	0.003	0.004	14.5%
%RSD		0.760	0.307	0.7	19.280	11.750	9.533	5.010	5.630	9.5

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	172.1%	0.001	3.027	3.957	-85.900	T 446.800	25.590	26.710	28.570
2	06:45:55	178.3%	0.001	4.595	6.086	-86.260	T 538.800	24.410	25.460	26.990
3	06:46:22	T 159.2%	0.001	3.357	3.177	-80.150	60.320	3.207	3.315	3.367
x		T 169.9%	0.001	3.660	4.407	-84.100	T 348.700	17.730	18.490	19.650
σ		T 9.7%	0.000	0.826	1.506	3.429	T 253.900	12.590	13.160	14.120
%RSD		T 5.7	28.040	22.580	34.170	4.077	T 72.820	71.020	71.160	71.870
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	16.110	25.220	-249.800	56.070	281.600	278.300	T 155.0%	0.530	-0.080
2	06:45:55	26.760	32.980	-263.900	90.290	254.700	236.800	T 157.4%	1.011	0.034
3	06:46:22	2.825	-5.229	-319.500	-7.248	28.010	25.030	T 151.0%	0.146	0.011
x		15.230	17.660	-277.800	46.370	188.100	180.000	T 154.5%	0.562	-0.012
σ		11.990	20.200	36.830	49.490	139.300	135.800	T 3.2%	0.433	0.060
%RSD		78.720	114.400	13.260	106.700	74.050	75.450	T 2.1	77.070	508.400
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	0.054	-157.300	15.190	1.051	8.562	14.150	0.043	0.137	0.104
2	06:45:55	0.111	-224.900	22.090	1.207	16.030	20.670	0.073	0.230	0.122
3	06:46:22	-0.074	-290.200	-2.771	0.118	-11.320	-5.167	0.006	0.013	0.033
x		0.030	-224.100	11.500	0.792	4.425	9.883	0.041	0.127	0.086
σ		0.095	66.480	12.840	0.589	14.140	13.440	0.034	0.109	0.047
%RSD		312.900	29.660	111.600	74.390	319.500	135.900	82.510	85.800	53.990
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	0.122	0.102	0.758	0.514	0.861	-0.044	-0.536	10.910	10.990
2	06:45:55	0.215	0.238	1.380	1.432	1.422	-0.072	-0.386	18.270	18.390
3	06:46:22	0.000	0.008	0.032	-0.163	0.009	-0.079	-0.425	2.539	1.146
x		0.113	0.116	0.723	0.594	0.764	-0.065	-0.449	10.570	10.180
σ		0.108	0.116	0.675	0.800	0.711	0.018	0.078	7.870	8.651
%RSD		95.690	99.840	93.300	134.700	93.080	28.120	17.280	74.430	85.020
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	-1.631	-0.410	-2.173	1.145	162.3%	0.513	0.554	0.510	-1.270
2	06:45:55	-2.309	-0.561	-1.380	1.282	163.6%	0.758	0.707	0.740	-1.129
3	06:46:22	-2.134	-0.487	-1.446	0.121	163.7%	0.211	0.201	0.216	-1.345
x		-2.025	-0.486	-1.666	0.849	163.2%	0.494	0.487	0.489	-1.248
σ		0.352	0.075	0.440	0.635	0.8%	0.274	0.260	0.263	0.109
%RSD		17.370	15.520	26.420	74.730	0.5	55.440	53.250	53.740	8.753
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	0.017	0.020	0.020	0.022	168.8%	0.032	0.048	0.139	0.138
2	06:45:55	0.028	0.038	0.034	0.039	169.5%	0.050	0.075	0.202	0.206
3	06:46:22	-0.000	0.003	0.008	0.004	172.3%	0.016	0.006	0.061	0.052
x		0.015	0.021	0.021	0.022	170.2%	0.033	0.043	0.134	0.132
σ		0.014	0.018	0.013	0.018	1.9%	0.017	0.035	0.071	0.077
%RSD		95.490	85.970	64.100	81.780	1.1	52.150	80.420	52.660	58.390
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:45:28	1.007	0.992	T 176.3%	0.009	0.009	0.019	0.027	0.023	206.1%
2	06:45:55	1.308	1.317	T 173.2%	0.023	0.023	0.044	0.041	0.043	211.1%
3	06:46:22	0.120	0.110	T 177.5%	-0.006	-0.008	0.004	0.002	0.002	187.0%
x		0.812	0.806	T 175.7%	0.008	0.008	0.022	0.023	0.022	201.4%
σ		0.618	0.625	T 2.2%	0.014	0.016	0.020	0.020	0.020	12.7%
%RSD		76.140	77.460	T 1.3	171.400	198.600	91.700	85.490	91.000	6.3

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	88.2%	49.080	73.370	75.170	136.700	TM 148600.000	T 3200.000	T 3240.000	T 3343.000
2	06:51:51	88.0%	48.510	71.390	74.470	141.100	TM 153200.000	T 3268.000	T 3311.000	T 3413.000
3	06:52:18	89.3%	42.930	62.240	67.050	116.100	TM 145600.000	T 3120.000	T 3159.000	T 3253.000
x		88.5%	46.840	69.000	72.230	131.300	TM 149100.000	T 3196.000	T 3237.000	T 3336.000
σ		0.7%	3.397	5.935	4.501	13.310	TM 3838.000	T 74.410	T 75.810	T 79.830
%RSD		0.8	7.252	8.602	6.232	10.140	TM 2.574	T 2.328	T 2.342	T 2.393
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	220.800	T 6309.000	T 45620.000	T 37950.000	64280.000	T 63450.000	93.9%	99.480	90.910
2	06:51:51	221.400	T 6330.000	T 47230.000	T 38630.000	67710.000	T 67210.000	91.2%	99.910	94.520
3	06:52:18	213.800	T 6294.000	T 47200.000	T 38390.000	67490.000	T 66920.000	90.4%	102.800	97.530
x		218.700	T 6311.000	T 46680.000	T 38320.000	66490.000	T 65860.000	91.8%	100.700	94.320
σ		4.204	T 17.880	T 917.400	T 345.100	1923.000	T 2091.000	1.8%	1.818	3.318
%RSD		1.923	T 0.283	T 1.965	T 0.901	2.892	T 3.175	2.0	1.804	3.518
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	90.470	3564.000	3645.000	T 311.700	T 3413.000	3539.000	86.030	101.300	104.000
2	06:51:51	92.230	4159.000	3788.000	T 326.500	T 3561.000	3643.000	86.560	101.100	108.100
3	06:52:18	94.280	3358.000	3802.000	T 328.900	T 3601.000	3711.000	88.580	101.800	105.800
x		92.330	3694.000	3745.000	T 322.400	T 3525.000	3631.000	87.060	101.400	106.000
σ		1.906	415.700	86.610	T 9.309	T 99.280	86.540	1.345	0.349	2.024
%RSD		2.065	11.250	2.313	T 2.888	T 2.816	2.384	1.545	0.344	1.910
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	140.900	149.300	279.400	260.500	262.500	89.260	84.760	108.100	109.100
2	06:51:51	143.300	148.700	279.000	261.800	270.000	92.950	86.220	108.100	108.300
3	06:52:18	141.900	145.800	279.100	264.300	269.100	95.230	87.450	106.200	106.700
x		142.000	147.900	279.200	262.200	267.200	92.480	86.140	107.500	108.000
σ		1.252	1.855	0.194	1.968	4.085	3.010	1.346	1.103	1.260
%RSD		0.882	1.254	0.069	0.751	1.529	3.255	1.562	1.026	1.167
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	387.700	84.390	-0.488	161.500	89.9%	97.600	97.330	99.500	94.180
2	06:51:51	389.700	87.160	-0.044	161.800	90.2%	99.940	100.400	97.550	93.510
3	06:52:18	373.900	86.010	1.453	161.400	92.4%	97.430	99.330	101.000	90.860
x		383.800	85.850	0.307	161.500	90.8%	98.320	99.010	99.340	92.850
σ		8.584	1.393	1.017	0.220	1.3%	1.404	1.539	1.716	1.752
%RSD		2.237	1.623	331.400	0.136	1.5	1.428	1.554	1.727	1.887
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	90.450	89.520	89.350	86.180	88.8%	93.430	93.840	100.000	90.680
2	06:51:51	89.840	88.880	90.590	87.300	89.7%	94.130	93.840	99.110	91.290
3	06:52:18	89.670	89.280	90.070	87.670	89.6%	93.690	94.460	99.670	89.820
x		89.980	89.230	90.000	87.050	89.4%	93.750	94.040	99.600	90.600
σ		0.411	0.323	0.622	0.776	0.5%	0.357	0.357	0.461	0.739
%RSD		0.456	0.362	0.691	0.891	0.5	0.381	0.380	0.462	0.815
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:51:24	103.300	103.500	96.2%	87.350	92.590	90.130	89.460	91.380	199.1%
2	06:51:51	102.600	103.200	97.6%	87.840	92.800	89.510	88.660	90.790	166.9%
3	06:52:18	103.800	103.300	98.4%	88.070	93.740	90.760	89.260	91.170	151.0%
x		103.200	103.300	97.4%	87.760	93.040	90.130	89.120	91.110	172.3%
σ		0.618	0.116	1.2%	0.368	0.612	0.624	0.416	0.300	24.5%
%RSD		0.599	0.113	1.2	0.420	0.658	0.692	0.467	0.330	14.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	T 157.1%	0.002	2.367	2.681	-79.080	T 61.340	1.829	1.939	1.832
2	06:57:47	T 152.8%	-0.002	3.953	4.184	-66.510	5.254	0.143	0.153	0.064
3	06:58:15	T 155.2%	-0.002	4.577	4.124	-64.320	2.644	0.059	0.088	0.042
x		T 155.0%	-0.000	3.632	3.663	-69.970	T 23.080	0.677	0.727	0.646
σ		T 2.1%	0.002	1.139	0.851	7.962	T 33.160	0.998	1.051	1.027
%RSD		T 1.4	462.800	31.370	23.230	11.380	T 143.700	147.500	144.700	158.900

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	2.571	-5.318	-306.000	-3.382	17.230	15.470	T 151.9%	0.256	-0.104
2	06:57:47	0.194	-8.903	-245.600	-14.150	-0.487	-0.017	T 149.2%	0.100	-0.100
3	06:58:15	0.074	-9.212	-249.200	-15.040	-0.020	-0.938	T 151.5%	0.029	-0.114
x		0.946	-7.811	-266.900	-10.860	5.574	4.838	T 150.9%	0.128	-0.106
σ		1.408	2.165	33.860	6.490	10.100	9.218	T 1.5%	0.116	0.007
%RSD		148.900	27.710	12.680	59.770	181.100	190.500	T 1.0	90.670	6.973

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	-0.074	-136.500	-5.324	0.095	-12.320	-5.731	0.006	0.022	0.049
2	06:57:47	-0.095	-172.500	-8.523	0.014	-15.440	-8.818	-0.001	0.005	-0.058
3	06:58:15	-0.088	-164.800	-9.318	0.011	-15.930	-9.112	-0.003	-0.003	-0.030
x		-0.086	-157.900	-7.722	0.040	-14.560	-7.887	0.001	0.008	-0.013
σ		0.010	18.990	2.114	0.047	1.958	1.873	0.005	0.013	0.056
%RSD		12.130	12.030	27.380	119.000	13.450	23.750	613.100	163.900	418.300

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	0.010	0.045	0.038	-0.050	0.061	-0.036	-0.705	1.747	0.605
2	06:57:47	-0.002	-0.024	-0.122	-0.196	-0.145	-0.103	-0.510	0.550	-0.582
3	06:58:15	-0.009	-0.019	-0.079	-0.245	-0.124	-0.038	-0.606	0.434	-0.879
x		-0.000	0.001	-0.054	-0.164	-0.069	-0.059	-0.607	0.910	-0.286
σ		0.010	0.038	0.082	0.101	0.114	0.038	0.098	0.727	0.785
%RSD		2097.000	4771.000	151.600	61.930	164.200	64.850	16.090	79.840	275.000

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	-1.826	-0.430	-2.283	0.083	165.8%	0.213	0.255	0.243	-1.129
2	06:57:47	-1.778	-0.447	-3.394	0.006	161.7%	0.102	0.102	0.140	-1.086
3	06:58:15	-1.885	-0.464	-2.995	0.005	163.5%	0.081	0.085	0.083	-1.446
x		-1.830	-0.447	-2.891	0.031	163.7%	0.132	0.147	0.155	-1.220
σ		0.053	0.017	0.563	0.045	2.1%	0.071	0.094	0.081	0.197
%RSD		2.921	3.872	19.460	144.500	1.3	53.990	63.500	52.250	16.110

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	0.008	0.011	0.007	0.010	169.6%	0.048	0.052	0.014	0.016
2	06:57:47	-0.002	0.001	0.001	-0.002	171.3%	0.027	0.055	0.001	0.006
3	06:58:15	-0.003	0.001	-0.000	0.001	169.2%	0.036	0.048	0.005	0.001
x		0.001	0.004	0.002	0.003	170.0%	0.037	0.052	0.007	0.008
σ		0.006	0.006	0.004	0.006	1.1%	0.011	0.004	0.006	0.007
%RSD		452.800	130.900	165.200	228.100	0.7	28.730	7.226	94.210	95.580

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	06:57:20	0.084	0.058	T 179.8%	0.003	-0.001	0.010	0.006	0.007	193.1%
2	06:57:47	0.002	0.008	T 178.2%	-0.009	-0.010	-0.001	-0.001	-0.001	197.8%
3	06:58:15	-0.001	0.004	T 176.7%	-0.009	-0.007	0.000	-0.002	-0.001	196.2%
x		0.029	0.024	T 178.2%	-0.005	-0.006	0.003	0.001	0.002	195.7%
σ		0.048	0.030	T 1.5%	0.007	0.005	0.006	0.004	0.005	2.4%
%RSD		168.200	127.700	T 0.9	130.400	77.040	205.500	363.200	282.900	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	87.0%	0.002	19.020	22.450	-48.930	TM 234200.000	T 1422.000	T 1471.000	T 1565.000
2	07:03:44	94.0%	0.002	67.330	69.450	21.280	TM 101400.000	T 1173.000	1192.000	1230.000
3	07:04:11	93.3%	0.008	66.790	66.790	23.550	T 98170.000	T 1153.000	1200.000	1231.000
x		91.4%	0.004	51.050	52.900	-1.364	TM 144600.000	T 1249.000	T 1288.000	T 1342.000
σ		3.8%	0.003	27.730	26.400	41.210	TM 77620.000	T 150.000	T 159.100	T 193.100
%RSD		4.2	84.080	54.330	49.920	3021.000	TM 53.680	T 12.010	T 12.360	T 14.380

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	T 109.500	T 9584.000	T 70060.000	T 14280.000	11920.000	T 12480.000	82.2%	8.345	0.891
2	07:03:44	T 144.700	T 9712.000	T 53780.000	T 12490.000	6398.000	6491.000	90.9%	7.413	0.788
3	07:04:11	134.600	T 9713.000	T 51860.000	T 12940.000	6399.000	6442.000	92.6%	7.644	0.680
x		T 129.600	T 9670.000	T 58560.000	T 13240.000	8238.000	T 8472.000	88.6%	7.800	0.786
σ		T 18.130	T 74.430	T 10000.000	T 930.200	3186.000	T 3475.000	5.6%	0.485	0.106
%RSD		T 13.990	T 0.770	T 17.080	T 7.027	38.670	T 41.010	6.3	6.220	13.420

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	20.260	5789.000	928.600	43.660	T 937.600	918.800	0.981	19.630	96.160
2	07:03:44	20.190	9946.000	915.500	40.430	T 916.200	896.300	0.959	20.270	45.920
3	07:04:11	19.650	12270.000	931.400	39.930	T 899.600	873.300	0.978	19.700	36.900
x		20.030	9334.000	925.200	41.340	T 917.800	896.100	0.973	19.860	59.660
σ		0.330	3282.000	8.499	2.026	T 19.080	22.760	0.012	0.349	31.930
%RSD		1.648	35.160	0.919	4.902	T 2.078	2.539	1.255	1.759	53.510

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	34.810	28.180	353.900	327.700	345.200	0.508	0.532	207.100	211.700
2	07:03:44	26.990	26.630	307.300	289.400	296.300	0.789	0.537	69.470	70.220
3	07:04:11	26.190	26.460	303.400	287.400	298.200	0.690	0.560	55.880	56.580
x		29.330	27.090	321.500	301.500	313.200	0.662	0.543	110.800	112.800
σ		4.763	0.950	28.070	22.680	27.720	0.142	0.015	83.670	85.920
%RSD		16.240	3.507	8.729	7.522	8.850	21.470	2.774	75.500	76.140

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	2.589	0.587	5.441	63.780	89.2%	2.447	2.579	2.316	-0.033
2	07:03:44	2.281	0.495	1.283	37.550	92.8%	2.049	2.066	1.960	0.305
3	07:04:11	3.441	0.741	1.145	37.300	92.4%	1.939	1.941	1.928	0.242
x		2.770	0.608	2.623	46.210	91.5%	2.145	2.195	2.068	0.171
σ		0.601	0.125	2.441	15.220	2.0%	0.267	0.338	0.215	0.180
%RSD		21.680	20.500	93.070	32.930	2.2	12.460	15.400	10.420	105.000

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	0.032	0.036	0.049	0.043	86.5%	0.417	0.593	0.869	0.774
2	07:03:44	0.009	0.006	0.029	0.026	92.4%	0.422	0.588	0.711	0.663
3	07:04:11	0.018	0.007	0.021	0.028	93.0%	0.409	0.541	0.684	0.615
x		0.020	0.016	0.033	0.032	90.6%	0.416	0.574	0.754	0.684
σ		0.012	0.017	0.014	0.009	3.6%	0.006	0.029	0.100	0.082
%RSD		59.790	101.000	44.450	27.710	4.0	1.530	5.030	13.220	11.930

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:03:17	32.670	32.210	95.2%	0.075	0.077	1.168	1.153	1.157	127.1%
2	07:03:44	24.310	23.660	100.5%	0.031	0.033	1.219	1.132	1.170	116.3%
3	07:04:11	23.810	23.770	100.2%	0.021	0.019	1.184	1.228	1.182	115.9%
x		26.930	26.550	98.7%	0.043	0.043	1.191	1.171	1.170	119.8%
σ		4.980	4.904	3.0%	0.029	0.030	0.026	0.051	0.012	6.3%
%RSD		18.490	18.470	3.0	67.320	69.890	2.180	4.339	1.046	5.3

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	T 151.3%	-0.002	2.692	2.222	-69.520	T 204.600	1.384	1.383	1.596
2	07:09:41	168.2%	0.003	1.333	1.387	-82.520	T 1057.000	6.589	6.526	7.317
3	07:10:08	T 224.1%	0.015	16.790	T 23.320	-84.610	T 16760.000	T 127.400	137.500	T 150.600
x		T 181.2%	0.005	6.939	T 8.977	-78.880	T 6009.000	T 45.120	48.470	T 53.180
σ		T 38.1%	0.008	8.561	T 12.430	8.172	T 9325.000	T 71.290	77.140	T 84.450
%RSD		T 21.0	150.700	123.400	T 138.500	10.360	T 155.200	T 158.000	159.200	T 158.800

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	0.724	-4.034	-127.900	-6.344	4.387	6.171	T 146.8%	0.030	0.184
2	07:09:41	4.865	11.900	-175.800	30.520	47.360	51.450	T 156.8%	0.258	-0.146
3	07:10:08	T 106.600	T 219.600	T 1713.000	T 624.300	1378.000	T 1460.000	T 187.7%	4.064	0.428
x		T 37.400	T 75.830	T 469.600	T 216.200	476.500	T 505.700	T 163.8%	1.451	0.155
σ		T 59.980	T 124.800	T 1077.000	T 354.000	780.700	T 826.300	T 21.3%	2.266	0.288
%RSD		T 160.400	T 164.600	T 229.300	T 163.700	163.900	T 163.400	T 13.0	156.200	185.600

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	-0.067	613.000	-8.299	0.020	-15.600	-8.711	-0.001	0.010	1.577
2	07:09:41	-0.001	555.600	-4.065	0.250	-10.660	-3.942	0.016	0.084	1.548
3	07:10:08	0.967	287.500	142.800	7.406	T 110.400	112.100	0.457	1.440	2.482
x		0.299	485.400	43.470	2.559	T 28.030	33.140	0.158	0.511	1.869
σ		0.579	173.700	86.020	4.199	T 71.340	68.400	0.260	0.805	0.531
%RSD		193.200	35.800	197.900	164.100	T 254.500	206.400	164.900	157.500	28.420

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	0.073	0.002	0.097	-0.021	0.063	-0.041	-0.486	0.971	-0.617
2	07:09:41	0.134	0.090	0.974	0.850	0.901	-0.069	-0.431	2.804	1.886
3	07:10:08	1.664	1.940	13.380	12.300	12.910	0.469	-0.246	95.330	97.140
x		0.624	0.677	4.819	4.376	4.624	0.120	-0.388	33.030	32.800
σ		0.901	1.094	7.431	6.875	7.187	0.303	0.125	53.960	55.730
%RSD		144.500	161.600	154.200	157.100	155.400	252.800	32.350	163.300	169.900

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	-1.901	-0.462	-2.615	0.035	157.7%	0.069	0.059	0.079	-1.268
2	07:09:41	-2.719	-0.675	-2.920	0.316	163.6%	0.129	0.143	0.143	-1.317
3	07:10:08	5.241	0.841	4.903	11.040	152.2%	4.441	4.540	3.591	-0.545
x		0.207	-0.098	-0.211	3.798	157.8%	1.546	1.581	1.271	-1.044
σ		4.379	0.821	4.431	6.277	5.7%	2.507	2.563	2.010	0.432
%RSD		2117.000	835.200	2105.000	165.200	3.6	162.200	162.100	158.100	41.400

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	-0.001	0.002	-0.000	0.002	161.6%	-0.021	-0.033	0.000	-0.009
2	07:09:41	0.007	0.010	0.013	0.011	170.7%	-0.012	-0.017	0.024	0.022
3	07:10:08	0.320	0.311	0.301	0.308	160.7%	0.367	0.434	0.817	0.820
x		0.109	0.108	0.104	0.107	164.3%	0.111	0.128	0.281	0.278
σ		0.183	0.176	0.170	0.174	5.5%	0.222	0.265	0.465	0.470
%RSD		168.700	163.400	163.200	162.800	3.4	198.900	207.400	165.600	169.400

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:09:14	0.030	0.028	T 172.8%	-0.010	-0.012	-0.001	-0.002	-0.002	186.0%
2	07:09:41	0.263	0.248	T 177.2%	0.002	0.002	0.013	0.011	0.012	194.3%
3	07:10:08	8.792	8.417	T 161.4%	0.404	0.396	0.401	0.410	0.400	T 340.8%
x		3.028	2.898	T 170.5%	0.132	0.129	0.138	0.139	0.137	T 240.4%
σ		4.993	4.781	T 8.1%	0.236	0.231	0.228	0.234	0.228	T 87.1%
%RSD		164.900	165.000	T 4.8	178.600	179.900	165.500	168.200	167.200	T 36.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	T 161.6%	-0.002	1.701	2.166	-69.570	T 132.100	3.289	3.367	3.385
2	07:15:37	170.2%	0.000	0.951	1.100	-81.930	T 773.700	10.560	10.980	11.590
3	07:16:04	T 164.8%	-0.001	1.152	1.127	-82.280	T 813.500	7.629	7.951	8.433
x		T 165.6%	-0.001	1.268	1.465	-77.930	T 573.100	7.160	7.433	7.802
σ		T 4.4%	0.001	0.388	0.608	7.237	T 382.500	3.659	3.833	4.138
%RSD		T 2.6	108.500	30.630	41.500	9.287	T 66.730	51.110	51.560	53.040

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	0.769	-5.096	-249.900	-12.440	19.820	16.810	T 161.5%	0.056	-0.171
2	07:15:37	4.114	8.249	-240.700	10.130	82.530	85.230	T 162.8%	0.139	0.019
3	07:16:04	3.957	3.328	-271.700	10.980	61.390	60.460	T 160.9%	0.136	-0.103
x		2.947	2.160	-254.100	2.893	54.580	54.170	T 161.7%	0.110	-0.085
σ		1.888	6.749	15.960	13.280	31.910	34.640	T 1.0%	0.047	0.096
%RSD		64.050	312.400	6.281	459.100	58.460	63.960	T 0.6	42.810	113.200

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	-0.080	208.200	-9.508	0.135	-15.290	-9.306	-0.002	0.008	0.332
2	07:15:37	-0.046	56.160	-4.112	0.593	-11.970	-4.676	0.015	0.051	0.241
3	07:16:04	-0.072	109.700	-4.692	0.382	-12.800	-6.123	0.011	0.027	0.360
x		-0.066	124.700	-6.104	0.370	-13.350	-6.702	0.008	0.029	0.311
σ		0.017	77.120	2.962	0.230	1.729	2.369	0.009	0.021	0.062
%RSD		26.400	61.860	48.530	62.060	12.950	35.340	109.000	73.990	20.030

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	0.018	0.001	-0.039	-0.107	-0.072	-0.071	-0.572	0.141	-0.751
2	07:15:37	0.051	0.043	0.303	0.193	0.348	-0.030	-0.741	2.431	1.154
3	07:16:04	0.062	0.045	0.300	0.163	0.301	0.018	-0.513	2.220	1.073
x		0.044	0.030	0.188	0.083	0.192	-0.028	-0.609	1.597	0.492
σ		0.023	0.025	0.197	0.165	0.230	0.045	0.118	1.265	1.077
%RSD		52.920	83.970	104.600	198.300	119.900	160.900	19.420	79.230	218.900

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	-2.455	-0.594	-2.513	0.083	172.3%	0.067	0.058	0.048	-1.405
2	07:15:37	-2.363	-0.569	-2.028	0.471	170.0%	0.123	0.120	0.093	-0.965
3	07:16:04	-2.124	-0.519	-2.496	0.325	170.2%	0.127	0.106	0.099	-1.262
x		-2.314	-0.561	-2.346	0.293	170.8%	0.106	0.095	0.080	-1.211
σ		0.171	0.038	0.275	0.196	1.3%	0.033	0.033	0.028	0.224
%RSD		7.393	6.769	11.740	66.720	0.7	31.450	34.350	34.840	18.530

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	-0.000	0.002	0.001	0.004	175.9%	-0.033	-0.042	-0.006	-0.005
2	07:15:37	0.003	0.010	0.012	0.014	175.6%	-0.018	-0.035	0.026	0.012
3	07:16:04	0.006	0.008	0.008	0.011	174.3%	-0.030	-0.043	0.013	0.012
x		0.003	0.007	0.007	0.010	175.3%	-0.027	-0.040	0.011	0.006
σ		0.003	0.004	0.006	0.005	0.9%	0.008	0.004	0.016	0.010
%RSD		107.000	64.350	81.520	55.690	0.5	28.190	11.010	150.100	156.800

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:15:10	0.050	0.054	T 180.8%	-0.012	-0.011	-0.003	-0.003	-0.004	200.0%
2	07:15:37	0.324	0.303	T 181.9%	0.001	-0.002	0.008	0.005	0.006	203.6%
3	07:16:04	0.216	0.234	T 180.3%	0.000	0.000	0.011	0.005	0.006	204.4%
x		0.197	0.197	T 181.0%	-0.004	-0.004	0.006	0.002	0.003	202.7%
σ		0.138	0.129	T 0.8%	0.007	0.006	0.007	0.005	0.006	2.4%
%RSD		70.140	65.160	T 0.4	204.600	135.500	132.400	199.100	196.400	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	166.4%	-0.001	0.982	0.965	-80.550	T 651.500	10.120	9.988	10.930
2	07:21:34	T 159.9%	-0.002	1.578	1.438	-73.040	T 229.500	3.663	3.555	3.781
3	07:22:01	T 164.3%	0.002	0.916	1.070	-78.120	T 373.600	4.492	4.694	4.897
x		T 163.5%	0.000	1.158	1.158	-77.240	T 418.200	6.092	6.079	6.537
σ		T 3.3%	0.002	0.365	0.249	3.834	T 214.500	3.514	3.433	3.847
%RSD		T 2.0	1705.000	31.510	21.480	4.965	T 51.300	57.670	56.470	58.860
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	3.996	6.259	-286.700	4.922	56.430	60.880	T 155.2%	0.142	-0.159
2	07:21:34	1.259	-4.665	-341.000	-8.866	19.970	15.620	T 157.7%	0.063	-0.088
3	07:22:01	2.123	-2.837	-362.700	-6.064	22.800	25.270	T 162.8%	0.104	-0.065
x		2.459	-0.414	-330.100	-3.336	33.060	33.920	T 158.6%	0.103	-0.104
σ		1.399	5.851	39.150	7.288	20.280	23.840	T 3.9%	0.039	0.049
%RSD		56.880	1412.000	11.860	218.400	61.340	70.280	T 2.5	38.370	47.310
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	-0.048	78.310	-6.571	0.531	-13.480	-7.678	0.011	0.043	-0.202
2	07:21:34	-0.096	13.910	-9.512	0.164	-16.000	-9.848	0.003	0.012	-0.254
3	07:22:01	-0.077	-59.910	-7.281	0.205	-15.630	-9.783	0.004	0.014	-0.183
x		-0.073	10.770	-7.788	0.300	-15.040	-9.103	0.006	0.023	-0.213
σ		0.024	69.160	1.535	0.201	1.359	1.234	0.005	0.017	0.037
%RSD		32.680	642.000	19.710	67.010	9.040	13.560	77.500	74.500	17.240
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	0.041	0.030	0.243	0.192	0.229	-0.104	-0.739	1.970	0.580
2	07:21:34	0.005	0.002	0.001	-0.067	0.006	-0.049	-0.508	0.379	-0.480
3	07:22:01	0.003	0.017	0.038	-0.089	-0.011	-0.053	-0.517	0.549	-0.032
x		0.016	0.017	0.094	0.012	0.075	-0.069	-0.588	0.966	0.023
σ		0.021	0.014	0.130	0.156	0.134	0.031	0.131	0.874	0.532
%RSD		129.900	86.930	138.600	1313.000	178.800	45.040	22.300	90.400	2330.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	-2.544	-0.620	-2.418	0.333	162.2%	0.098	0.100	0.097	-1.305
2	07:21:34	-2.487	-0.622	-3.174	0.106	165.6%	0.036	0.035	0.022	-1.158
3	07:22:01	-1.888	-0.449	-1.716	0.148	170.0%	0.071	0.265	0.082	-1.126
x		-2.306	-0.564	-2.436	0.195	165.9%	0.069	0.133	0.067	-1.197
σ		0.363	0.099	0.729	0.121	3.9%	0.031	0.119	0.039	0.096
%RSD		15.740	17.590	29.940	61.890	2.3	45.140	88.820	58.860	7.984
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	0.004	0.005	0.015	0.004	168.2%	-0.034	-0.049	0.007	0.005
2	07:21:34	0.001	0.001	0.002	0.004	171.8%	-0.036	-0.053	-0.008	-0.002
3	07:22:01	0.000	0.005	0.002	0.006	173.1%	-0.031	-0.043	-0.001	-0.000
x		0.002	0.004	0.006	0.005	171.0%	-0.034	-0.049	-0.001	0.001
σ		0.002	0.003	0.008	0.001	2.5%	0.002	0.005	0.008	0.004
%RSD		111.900	68.240	119.800	27.830	1.5	6.833	10.530	1277.000	451.000
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:21:07	0.285	0.266	T 174.0%	-0.001	-0.007	0.003	0.005	0.005	206.5%
2	07:21:34	0.113	0.086	T 177.4%	-0.004	-0.010	0.002	0.001	-0.001	209.0%
3	07:22:01	0.136	0.130	T 180.6%	-0.007	-0.007	-0.002	-0.001	-0.001	212.9%
x		0.178	0.161	T 177.3%	-0.004	-0.008	0.001	0.002	0.001	209.5%
σ		0.093	0.094	T 3.3%	0.003	0.002	0.002	0.003	0.003	3.3%
%RSD		52.480	58.740	T 1.9	65.450	19.490	265.300	166.300	322.800	1.6

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	154.0%	0.004	1.709	1.859	-63.200	111.100	188.600	187.400	191.900
2	07:27:30	T 156.2%	0.004	1.923	1.928	-64.520	32.600	59.120	59.230	59.840
3	07:27:57	T 160.2%	-0.002	2.153	1.764	-65.160	13.970	25.850	26.030	26.000
x		T 156.8%	0.002	1.928	1.851	-64.290	52.550	91.180	90.880	92.590
σ		T 3.2%	0.003	0.222	0.082	0.998	51.530	85.970	85.200	87.670
%RSD		T 2.0	142.500	11.510	4.445	1.553	98.070	94.290	93.750	94.690

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	27.490	245.000	317.700	59.460	1647.000	1545.000	T 149.9%	0.067	-0.016
2	07:27:30	8.522	72.240	-133.100	7.222	506.700	491.800	T 153.7%	0.039	-0.096
3	07:27:57	3.688	25.330	-273.200	-6.344	234.700	212.800	T 159.4%	0.016	-0.073
x		13.230	114.200	-29.500	20.110	796.000	749.900	T 154.4%	0.041	-0.062
σ		12.580	115.700	308.800	34.740	749.100	702.600	T 4.8%	0.025	0.041
%RSD		95.060	101.300	1047.000	172.700	94.100	93.700	T 3.1	62.170	66.380

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	-0.074	280.900	-7.396	13.250	-14.680	-4.879	0.094	0.770	0.623
2	07:27:30	-0.085	83.020	-9.402	4.191	-15.320	-8.663	0.029	0.258	0.323
3	07:27:57	-0.085	-10.720	-10.300	1.794	-16.860	-9.751	0.010	0.120	-0.096
x		-0.082	117.700	-9.033	6.411	-15.620	-7.765	0.044	0.383	0.283
σ		0.006	148.900	1.488	6.042	1.124	2.557	0.044	0.342	0.361
%RSD		7.532	126.400	16.470	94.240	7.198	32.940	99.270	89.500	127.400

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	-0.006	0.001	0.797	0.697	0.777	-0.054	-0.530	0.388	-0.650
2	07:27:30	-0.003	-0.009	0.136	-0.015	0.230	-0.090	-0.498	-0.001	-0.885
3	07:27:57	-0.016	-0.008	0.012	-0.151	0.001	-0.140	-0.479	-0.305	-1.162
x		-0.008	-0.005	0.315	0.177	0.336	-0.095	-0.502	0.027	-0.899
σ		0.007	0.006	0.422	0.455	0.399	0.043	0.025	0.348	0.256
%RSD		82.770	107.000	134.000	257.100	118.600	45.750	5.058	1265.000	28.480

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	-2.284	-0.556	-2.819	5.810	162.0%	0.043	0.031	0.030	-1.236
2	07:27:30	-2.719	-0.670	-3.083	1.861	164.2%	0.011	0.014	0.035	-1.284
3	07:27:57	-2.181	-0.521	-1.997	0.814	167.7%	-0.000	0.011	0.018	-1.241
x		-2.395	-0.582	-2.633	2.828	164.6%	0.018	0.019	0.027	-1.254
σ		0.285	0.078	0.566	2.635	2.8%	0.023	0.011	0.009	0.027
%RSD		11.920	13.410	21.510	93.160	1.7	126.400	59.740	31.340	2.126

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	-0.001	0.001	0.010	0.008	169.1%	-0.027	-0.055	-0.004	-0.010
2	07:27:30	-0.003	-0.001	0.003	0.002	170.8%	-0.047	-0.057	-0.007	-0.010
3	07:27:57	-0.002	-0.000	-0.000	0.002	174.0%	-0.029	-0.057	-0.007	-0.014
x		-0.002	0.000	0.004	0.004	171.3%	-0.034	-0.056	-0.006	-0.011
σ		0.001	0.001	0.005	0.004	2.5%	0.011	0.001	0.002	0.002
%RSD		50.710	554.700	117.400	87.640	1.5	32.970	2.142	29.550	20.390

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:27:03	0.503	0.463	T 177.6%	-0.007	-0.014	-0.002	-0.003	-0.004	228.8%
2	07:27:30	0.123	0.167	T 177.3%	-0.007	-0.010	-0.002	-0.005	-0.004	215.2%
3	07:27:57	0.081	0.076	T 179.1%	-0.009	-0.010	-0.002	-0.003	-0.003	216.7%
x		0.236	0.236	T 178.0%	-0.008	-0.011	-0.002	-0.004	-0.004	220.2%
σ		0.233	0.203	T 1.0%	0.001	0.002	0.000	0.001	0.000	7.5%
%RSD		98.510	86.070	T 0.5	13.940	17.550	21.550	33.620	10.040	3.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	T157.7%	0.001	1.941	1.634	-63.790	115.100	T216.800	218.000	225.700
2	07:33:28	T210.8%	0.026	25.870	T33.120	-82.660	T28380.000	T575.800	T609.600	T653.200
3	07:33:55	T107.8%	5.299	14.790	18.840	-77.660	T10720.000	T530.100	569.800	611.700
x		T158.7%	1.775	14.200	T17.870	-74.700	T13070.000	T440.900	T465.800	T496.900
σ		T51.5%	3.051	11.970	T15.770	9.778	T14280.000	T195.400	T215.500	T235.800
%RSD		T32.5	171.900	84.330	T88.250	13.090	T109.200	T44.330	T46.260	T47.450
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	32.730	T295.800	393.300	71.120	1901.000	1842.000	T160.7%	0.076	0.227
2	07:33:28	T221.300	T1707.000	T8371.000	T1634.000	9945.000	T9945.000	T159.5%	6.795	0.108
3	07:33:55	T100.100	T7427.000	T24480.000	T6431.000	11000.000	T11390.000	T121.4%	70.080	62.700
x		T118.100	T3143.000	T11080.000	T2712.000	7614.000	T7724.000	T147.2%	25.650	21.010
σ		T95.580	T3776.000	T12270.000	T3314.000	4975.000	T5145.000	T22.3%	38.630	36.100
%RSD		T80.950	T120.100	T110.700	T122.200	65.340	T66.610	T15.2	150.600	171.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	-0.087	-114.600	-5.913	15.550	-12.570	-2.760	0.107	0.940	1.003
2	07:33:28	44.280	1644.000	263.500	T62.580	T207.400	220.200	1.109	7.961	7.250
3	07:33:55	T356.000	10900.000	1133.000	73.030	T879.500	892.900	65.770	85.980	77.880
x		T133.400	4144.000	463.500	T50.380	T358.100	370.100	22.330	31.630	28.710
σ		T194.000	5919.000	595.200	T30.620	T464.700	466.300	37.620	47.200	42.700
%RSD		T145.500	142.800	128.400	T60.770	T129.800	126.000	168.500	149.200	148.700
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	0.005	0.010	0.900	0.959	1.105	0.110	-0.747	0.235	-0.636
2	07:33:28	4.327	5.181	38.120	32.640	33.790	0.872	0.164	147.800	153.000
3	07:33:55	80.910	97.700	156.200	139.400	141.100	67.460	79.480	58.030	57.900
x		28.410	34.300	65.060	57.660	58.650	22.820	26.300	68.690	70.090
σ		45.510	54.970	81.060	72.530	73.210	38.670	46.060	74.360	77.540
%RSD		160.200	160.300	124.600	125.800	124.800	169.500	175.100	108.300	110.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	-2.672	-0.649	-2.485	7.149	168.9%	T3.001	T6.656	T16.370	-1.237
2	07:33:28	5.926	0.794	3.098	56.210	121.8%	T82.570	T96.530	T78.060	1.087
3	07:33:55	365.000	66.180	0.617	135.500	94.2%	356.300	361.600	357.200	92.410
x		122.700	22.110	0.410	66.300	128.3%	T147.300	T154.900	T150.500	30.750
σ		209.800	38.170	2.797	64.780	37.8%	T185.300	T184.500	T181.600	53.410
%RSD		170.900	172.700	682.100	97.710	29.4	T125.800	T119.100	T120.600	173.700
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	-0.002	-0.000	-0.045	0.001	176.7%	-0.013	-0.025	-0.003	0.013
2	07:33:28	0.531	0.541	0.502	0.587	121.5%	1.020	1.206	1.582	1.478
3	07:33:55	90.000	88.780	89.070	85.950	96.0%	90.590	90.150	94.710	87.450
x		30.180	29.770	29.840	28.850	131.4%	30.530	30.440	32.090	29.650
σ		51.810	51.100	51.300	49.460	41.2%	52.010	51.710	54.230	50.060
%RSD		171.700	171.600	171.900	171.400	31.4	170.400	169.900	169.000	168.900
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:33:01	0.647	0.604	T179.6%	-0.005	-0.010	-0.001	-0.006	-0.005	249.1%
2	07:33:28	21.370	20.910	T127.1%	0.630	0.635	3.390	3.167	3.255	T520.0%
3	07:33:55	123.300	123.400	102.6%	82.950	87.900	106.500	104.600	107.000	T236.8%
x		48.450	48.320	T136.4%	27.860	29.510	36.630	35.920	36.760	T335.3%
σ		65.680	65.850	T39.4%	47.710	50.570	60.540	59.510	60.880	T160.1%
%RSD		135.600	136.300	T28.9	171.300	171.400	165.300	165.600	165.600	T47.7

CCV MW10535 11/17/2018 07:38:29 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	167.9%	0.028	1.478	1.535	-66.920	31.090	0.696	0.598	0.622
2	07:39:23	165.8%	0.001	1.436	1.213	-65.030	4.749	0.070	0.082	0.052
3	07:39:50	T 154.9%	0.010	1.334	1.242	-66.090	22.930	0.485	0.516	0.459
x		T 162.9%	0.004%	0.472%	0.443%	-66.010	0.033%	0.417	0.399	0.001%
σ		T 7.0%	n/a	n/a	n/a	0.951	n/a	0.319	0.277	n/a
%RSD		T 4.3	104.700	5.207	13.390	1.440	68.840	76.460	69.550	77.720

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	0.153	-6.274	-387.800	-14.360	7.307	5.054	T 156.9%	0.083	0.015
2	07:39:23	-0.011	-8.862	-398.300	-16.800	0.397	-0.307	T 156.9%	0.022	-0.118
3	07:39:50	0.114	-6.594	-393.200	-13.550	5.883	3.521	T 153.0%	0.049	-0.135
x		0.028%	-0.241%	-393.100	-0.025%	4.529	0.005%	T 155.6%	0.017%	-0.027%
σ		n/a	n/a	5.294	n/a	3.648	n/a	T 2.3%	n/a	n/a
%RSD		100.900	19.480	1.347	11.350	80.560	100.200	T 1.4	59.510	103.500

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	0.084	68.900	-9.604	0.053	-16.120	-9.739	0.025	0.035	-0.262
2	07:39:23	-0.068	116.700	-10.760	0.030	-17.200	-10.900	0.001	0.001	-0.158
3	07:39:50	0.040	166.600	-9.890	0.061	-16.570	-10.380	0.021	0.012	-0.185
x		0.006%	117.400	-10.080	0.016%	-16.630	-0.017%	0.005%	0.005%	-0.202
σ		n/a	48.880	0.600	n/a	0.543	n/a	n/a	n/a	0.054
%RSD		419.400	41.620	5.951	33.920	3.264	5.631	82.520	105.400	26.880

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	0.017	0.019	-0.040	-0.182	-0.057	-0.026	-0.607	-0.055	-1.353
2	07:39:23	-0.016	-0.001	-0.069	-0.234	-0.088	0.004	-0.472	-0.416	-1.434
3	07:39:50	0.007	0.014	-0.083	-0.219	-0.060	0.019	-0.470	-0.415	-1.418
x		0.003	0.004%	-0.021%	-0.212	-0.068	-0.000%	-0.516	-0.295	-1.402
σ		0.017	n/a	n/a	0.027	0.017	n/a	0.078	0.208	0.043
%RSD		663.100	94.930	33.780	12.640	24.460	1766.000	15.160	70.580	3.068

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	-2.494	-0.606	-2.622	0.050	166.9%	0.361	2.428	0.367	-1.368
2	07:39:23	-2.327	-0.563	-2.456	0.008	166.2%	0.201	0.211	0.189	-1.304
3	07:39:50	-1.880	-0.469	-2.991	0.036	162.7%	0.331	0.268	0.332	-1.470
x		-2.234	-0.182%	-2.690	0.010%	165.3%	0.099%	0.323%	0.296	-1.381
σ		0.318	n/a	0.274	n/a	2.3%	n/a	n/a	0.094	0.084
%RSD		14.230	12.870	10.190	69.140	1.4	28.520	130.400	31.860	6.067

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	0.038	0.029	0.029	0.027	172.6%	0.069	0.086	0.017	0.015
2	07:39:23	0.003	0.005	0.008	0.005	172.6%	0.040	0.056	-0.008	-0.006
3	07:39:50	0.019	0.026	0.027	0.024	169.7%	0.047	0.084	0.017	0.006
x		0.007%	0.020	0.021	0.006%	171.6%	0.017%	0.025%	0.009	0.002%
σ		n/a	0.013	0.012	n/a	1.7%	n/a	n/a	0.014	n/a
%RSD		87.290	64.130	54.600	63.890	1.0	29.540	22.100	163.400	203.000

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:38:56	0.038	0.046	T 180.2%	0.021	0.022	0.036	0.034	0.038	211.4%
2	07:39:23	0.001	0.009	T 180.0%	-0.004	-0.003	0.006	0.002	0.004	212.5%
3	07:39:50	0.042	0.038	T 178.1%	0.017	0.019	0.030	0.029	0.029	208.6%
x		0.009%	0.010%	T 179.4%	0.011	0.004%	0.008%	0.007%	0.008%	210.8%
σ		n/a	n/a	T 1.2%	0.014	n/a	n/a	n/a	n/a	2.0%
%RSD		84.460	63.210	T 0.7	120.600	105.400	66.410	78.370	75.550	1.0

CCB IM9061-02 11/17/2018 07:44:24 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	T 159.8%	0.081	0.690	0.576	-71.340	T 176.800	2.411	2.459	2.700
2	07:45:19	T 157.0%	0.012	1.017	0.718	-65.920	26.380	0.322	0.338	0.323
3	07:45:46	T 156.2%	0.001	1.196	0.884	-64.780	2.357	0.026	0.019	0.051
x		T 157.7%	0.032	0.968	0.726	-67.350	T 68.510	0.920	0.939	1.025
σ		T 1.9%	0.043	0.256	0.154	3.503	T 94.540	1.300	1.326	1.457
%RSD		T 1.2	137.400	26.490	21.240	5.202	T 138.000	141.400	141.300	142.200
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	0.906	2.389	-452.500	-4.252	25.580	19.720	T 161.2%	0.091	-0.074
2	07:45:19	0.114	-8.089	-457.800	-13.770	2.670	1.212	T 158.1%	0.022	-0.028
3	07:45:46	0.077	T -6.776	-456.600	-15.420	-0.531	-1.231	T 157.5%	0.007	-0.071
x		0.366	T -4.158	-455.600	-11.150	9.239	6.566	T 158.9%	0.040	-0.058
σ		0.468	T 5.708	2.791	6.027	14.240	11.460	T 2.0%	0.045	0.026
%RSD		128.000	T 137.300	0.613	54.070	154.100	174.500	T 1.3	112.700	44.540
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	0.368	-86.910	-7.792	0.130	-14.930	-8.709	0.087	0.082	-0.235
2	07:45:19	-0.031	-97.970	-10.640	0.025	-17.070	-10.900	0.006	0.015	-0.480
3	07:45:46	-0.077	-75.090	-10.170	0.002	-16.970	-10.880	-0.002	-0.001	-0.325
x		0.087	-86.660	-9.534	0.052	-16.330	-10.160	0.030	0.032	-0.346
σ		0.245	11.440	1.527	0.068	1.208	1.259	0.049	0.044	0.124
%RSD		282.400	13.200	16.020	130.600	7.398	12.390	162.300	136.900	35.760
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	0.073	0.072	0.122	-0.061	0.114	-0.048	-0.783	0.019	-1.076
2	07:45:19	-0.016	0.000	-0.066	-0.148	-0.098	-0.027	-0.586	-0.360	-1.394
3	07:45:46	-0.016	-0.013	-0.097	-0.288	-0.130	0.003	-0.663	-0.421	-1.750
x		0.014	0.020	-0.014	-0.166	-0.038	-0.024	-0.677	-0.254	-1.407
σ		0.051	0.046	0.118	0.115	0.133	0.026	0.099	0.238	0.337
%RSD		376.200	229.600	873.300	69.260	347.900	107.800	14.680	93.730	23.960
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	-2.440	-0.599	-2.729	0.174	169.9%	T 0.858	0.941	0.827	-1.207
2	07:45:19	-2.334	-0.580	-3.021	0.025	166.8%	0.217	0.248	0.189	-1.485
3	07:45:46	-1.931	-0.455	-1.908	0.005	167.2%	T 0.786	1.480	T 1.627	-1.352
x		-2.235	-0.544	-2.553	0.068	168.0%	T 0.620	0.890	T 0.881	-1.348
σ		0.268	0.078	0.577	0.093	1.7%	T 0.351	0.618	T 0.720	0.139
%RSD		12.000	14.320	22.610	135.900	1.0	T 56.650	69.450	T 81.770	10.330
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	0.089	0.087	0.072	0.087	176.9%	0.045	0.062	0.078	0.081
2	07:45:19	0.008	0.013	0.004	0.011	175.1%	0.001	-0.009	-0.001	-0.001
3	07:45:46	0.000	0.001	-0.003	-0.002	171.7%	-0.014	-0.006	-0.011	-0.014
x		0.032	0.033	0.024	0.032	174.6%	0.010	0.016	0.022	0.022
σ		0.049	0.047	0.042	0.048	2.6%	0.030	0.041	0.049	0.051
%RSD		151.300	139.700	171.400	150.700	1.5	290.400	257.600	223.900	231.800
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:44:52	0.183	0.145	T 178.4%	0.107	0.097	0.111	0.102	0.104	227.6%
2	07:45:19	0.018	0.023	T 179.7%	0.003	0.005	0.011	0.015	0.010	228.2%
3	07:45:46	0.006	-0.000	T 181.3%	-0.005	-0.006	0.000	-0.001	-0.002	223.3%
x		0.069	0.056	T 179.8%	0.035	0.032	0.041	0.039	0.037	226.3%
σ		0.099	0.078	T 1.5%	0.062	0.056	0.061	0.055	0.058	2.7%
%RSD		143.500	139.500	T 0.8	177.200	176.700	149.500	142.700	155.800	1.2

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	165.9%	0.026	0.767	0.350	-65.580	57.350	0.792	0.960	0.866
2	07:51:13	T 158.2%	0.021	0.796	0.431	-69.230	T 99.550	0.951	1.091	1.000
3	07:51:40	166.2%	-0.002	0.638	0.823	-66.090	12.580	0.096	0.110	0.174
x		T 163.4%	0.015	0.734	0.534	-66.960	T 56.490	0.613	0.720	0.680
σ		T 4.6%	0.015	0.085	0.253	1.975	T 43.490	0.455	0.532	0.444
%RSD		T 2.8	96.390	11.530	47.280	2.950	T 76.990	74.180	73.970	65.230
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	0.308	-6.616	-491.300	-13.620	6.441	4.949	T 160.0%	0.051	-0.083
2	07:51:13	0.482	-6.189	-487.500	-11.350	5.765	5.572	T 159.3%	0.042	-0.153
3	07:51:40	0.018	-9.316	-482.700	-16.300	1.321	-0.772	T 156.8%	0.007	-0.113
x		0.269	-7.374	-487.200	-13.760	4.509	3.250	T 158.7%	0.033	-0.116
σ		0.234	1.695	4.315	2.476	2.782	3.497	T 1.7%	0.023	0.035
%RSD		86.920	22.990	0.886	18.000	61.690	107.600	T 1.0	70.460	30.370
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	0.038	-235.500	-8.963	0.037	-16.740	-10.130	0.016	0.023	-0.352
2	07:51:13	0.012	-195.400	-9.798	0.043	-16.490	-9.881	0.018	0.016	-0.277
3	07:51:40	-0.093	-199.400	-11.240	-0.003	-17.460	-10.770	-0.001	0.004	-0.424
x		-0.015	-210.100	-10.000	0.026	-16.900	-10.260	0.011	0.014	-0.351
σ		0.069	22.060	1.152	0.025	0.501	0.459	0.010	0.010	0.073
%RSD		477.700	10.500	11.520	98.830	2.965	4.473	93.840	67.760	20.870
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	0.004	0.005	-0.046	-0.195	-0.041	-0.096	-0.709	-0.467	-1.799
2	07:51:13	0.003	0.004	-0.053	-0.127	-0.051	-0.039	-0.567	-0.305	-1.456
3	07:51:40	-0.033	-0.021	-0.087	-0.269	-0.103	-0.065	-0.649	-0.620	-1.742
x		-0.008	-0.004	-0.062	-0.197	-0.065	-0.066	-0.642	-0.464	-1.666
σ		0.021	0.015	0.022	0.071	0.033	0.029	0.071	0.157	0.184
%RSD		248.600	375.400	35.210	36.270	51.290	42.980	11.050	33.940	11.040
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	-2.021	-0.495	-2.473	0.045	167.7%	0.455	0.495	0.457	-1.433
2	07:51:13	-2.595	-0.620	-2.254	0.045	169.7%	0.202	0.260	0.198	-0.953
3	07:51:40	-2.166	-0.530	-2.697	0.007	166.4%	0.074	0.099	0.067	-1.233
x		-2.261	-0.548	-2.475	0.033	167.9%	0.243	0.285	0.241	-1.206
σ		0.298	0.065	0.222	0.022	1.7%	0.194	0.199	0.199	0.241
%RSD		13.190	11.800	8.957	66.990	1.0	79.730	70.020	82.390	19.980
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	0.024	0.023	0.019	0.025	174.1%	-0.018	-0.025	0.012	0.011
2	07:51:13	0.016	0.017	0.013	0.013	173.1%	-0.016	-0.028	0.016	-0.002
3	07:51:40	0.002	0.002	0.002	0.001	171.2%	-0.027	-0.033	-0.013	-0.013
x		0.014	0.014	0.011	0.013	172.8%	-0.020	-0.029	0.005	-0.001
σ		0.011	0.011	0.008	0.012	1.5%	0.006	0.004	0.016	0.012
%RSD		78.000	79.780	75.730	91.890	0.9	27.590	14.710	323.400	829.600
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:50:46	0.049	0.045	T 179.4%	0.017	0.018	0.030	0.028	0.026	230.0%
2	07:51:13	0.018	0.032	T 181.0%	0.017	0.016	0.021	0.018	0.020	231.4%
3	07:51:40	0.012	0.005	T 178.9%	-0.003	-0.003	0.001	0.001	-0.000	229.8%
x		0.027	0.027	T 179.8%	0.010	0.010	0.018	0.016	0.015	230.4%
σ		0.020	0.020	T 1.1%	0.011	0.012	0.015	0.013	0.014	0.9%
%RSD		74.250	73.750	T 0.6	110.800	112.500	83.270	84.720	90.710	0.4

TK08070-001L(5) 11/17/2018 07:56:15

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	T 174.4%	0.008	5.378	6.838	-85.210	T 6477.000	52.380	54.580	59.230
2	07:57:10	T 180.3%	0.083	16.560	22.870	-82.070	T 20850.000	T 224.900	241.400	256.100
3	07:57:38	98.4%	0.058	8.327	8.303	-39.600	T 2099.000	79.010	78.340	81.580
x		T 151.1%	0.050	10.090	12.670	-68.960	T 9808.000	T 118.800	124.800	132.300
σ		T 45.7%	0.038	5.793	8.861	25.480	T 9809.000	T 92.890	101.700	107.800
%RSD		T 30.2	76.090	57.430	69.940	36.950	T 100.000	T 78.210	81.500	81.480
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	37.260	104.300	144.900	254.600	601.500	592.700	T 161.2%	1.385	0.122
2	07:57:10	T 116.100	T 686.000	T 3500.000	T 1106.000	2715.000	2760.000	T 152.1%	5.824	1.440
3	07:57:38	11.590	T 1664.000	T 7896.000	T 1352.000	2990.000	2982.000	93.3%	0.712	-0.096
x		T 54.980	T 818.000	T 3847.000	T 904.300	2102.000	2112.000	T 135.5%	2.640	0.489
σ		T 54.450	T 788.000	T 3887.000	T 576.000	1307.000	1320.000	T 36.8%	2.777	0.831
%RSD		T 99.040	T 96.330	T 101.000	T 63.690	62.170	62.520	T 27.2	105.200	170.200
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	1.137	-224.500	43.430	3.394	27.320	32.150	0.241	0.487	0.488
2	07:57:10	26.590	433.600	306.500	11.190	T 248.900	247.100	1.609	3.397	3.079
3	07:57:38	91.150	2315.000	87.540	0.966	T 58.950	55.370	0.030	1.147	1.546
x		39.620	841.300	145.800	5.182	T 111.700	111.500	0.626	1.677	1.704
σ		46.400	1318.000	140.900	5.341	T 119.800	118.000	0.857	1.526	1.303
%RSD		117.100	156.600	96.620	103.100	T 107.300	105.800	136.900	90.980	76.440
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	0.649	0.685	4.453	3.941	4.589	0.269	-0.433	25.360	23.540
2	07:57:10	3.822	4.346	20.700	18.700	19.530	1.587	1.062	97.900	100.800
3	07:57:38	2.902	2.833	15.310	15.250	15.640	0.228	0.164	12.660	13.100
x		2.458	2.621	13.490	12.630	13.250	0.695	0.264	45.310	45.820
σ		1.632	1.840	8.275	7.719	7.753	0.773	0.753	45.990	47.910
%RSD		66.420	70.190	61.340	61.130	58.490	111.200	284.800	101.500	104.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	0.611	0.133	0.044	3.198	164.7%	T 10.270	T 3.263	1.986	-0.710
2	07:57:10	12.850	2.308	6.829	16.290	123.1%	26.890	26.860	T 24.840	0.860
3	07:57:38	1.023	0.239	-1.154	8.259	98.0%	60.080	61.050	58.660	-0.499
x		4.827	0.893	1.906	9.249	128.6%	T 32.410	T 30.390	T 28.500	-0.116
σ		6.949	1.227	4.305	6.602	33.6%	T 25.360	T 29.060	T 28.520	0.852
%RSD		144.000	137.300	225.900	71.380	26.2	T 78.250	T 95.600	T 100.100	732.300
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	0.159	0.167	0.194	0.167	168.0%	0.186	0.165	0.336	0.300
2	07:57:10	1.737	1.654	1.595	1.534	128.6%	1.852	1.882	2.101	1.984
3	07:57:38	0.025	0.024	-0.135	0.027	101.3%	0.427	0.521	0.288	0.291
x		0.640	0.615	0.551	0.576	132.6%	0.822	0.856	0.908	0.859
σ		0.953	0.903	0.919	0.833	33.5%	0.901	0.906	1.034	0.975
%RSD		148.700	146.800	166.600	144.600	25.3	109.600	105.800	113.800	113.500
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	07:56:42	2.322	2.354	T 177.1%	0.378	0.378	0.208	0.201	0.215	T 247.8%
2	07:57:10	12.100	12.230	T 133.8%	1.819	1.839	3.151	3.028	3.050	T 330.9%
3	07:57:38	6.576	6.537	105.3%	0.146	0.148	3.721	3.544	3.623	171.0%
x		7.001	7.040	T 138.7%	0.781	0.788	2.360	2.257	2.296	T 249.9%
σ		4.905	4.957	T 36.1%	0.906	0.917	1.885	1.800	1.825	T 80.0%
%RSD		70.060	70.410	T 26.1	116.000	116.400	79.870	79.730	79.480	T 32.0

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	T 157.4%	0.007	1.136	0.997	-72.690	T 162.900	2.114	2.157	2.340
2	08:03:07	T 159.5%	0.009	0.475	0.444	-79.790	T 579.600	8.055	8.496	8.813
3	08:03:34	T 184.1%	0.067	6.980	9.809	-85.340	T 8981.000	T 125.200	129.600	140.100
x		T 167.0%	0.027	2.864	3.750	-79.270	T 3241.000	T 45.120	46.750	50.430
σ		T 14.8%	0.034	3.580	5.254	6.338	T 4975.000	T 69.400	71.810	77.760
%RSD		T 8.9	125.000	125.000	140.100	7.996	T 153.500	T 153.800	153.600	154.200
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	0.761	-7.135	-469.800	-10.960	10.750	7.860	T 155.1%	0.033	-0.062
2	08:03:07	3.036	1.122	-472.600	8.351	50.910	46.280	T 155.8%	0.100	0.047
3	08:03:34	T 51.530	T 183.400	T 567.200	T 490.700	1000.000	956.000	T 175.2%	2.779	1.074
x		T 18.440	T 59.120	T -125.100	T 162.700	354.000	336.700	T 162.0%	0.971	0.353
σ		T 28.680	T 107.700	T 599.500	T 284.200	560.200	536.600	T 11.4%	1.567	0.627
%RSD		T 155.500	T 182.100	T 479.300	T 174.700	158.200	159.400	T 7.1	161.400	177.600
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	-0.028	-251.600	-8.157	0.053	-14.850	-9.002	0.005	0.022	-0.437
2	08:03:07	0.156	-315.100	-0.394	0.272	-7.770	-2.323	0.052	0.063	-0.316
3	08:03:34	3.898	-325.800	182.800	5.382	T 156.700	166.600	1.130	1.704	1.215
x		1.342	-297.500	58.100	1.902	T 44.680	51.770	0.396	0.596	0.154
σ		2.215	40.070	108.100	3.016	T 97.050	99.530	0.637	0.959	0.921
%RSD		165.100	13.470	186.100	158.500	T 217.200	192.300	160.800	160.900	598.400
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	-0.002	0.017	-0.043	-0.181	-0.022	0.000	-0.598	-0.003	-1.166
2	08:03:07	0.073	0.073	0.199	0.209	0.236	0.039	-0.646	1.490	0.153
3	08:03:34	1.752	1.979	7.363	7.226	7.252	1.161	0.569	38.350	36.990
x		0.608	0.690	2.506	2.418	2.489	0.400	-0.225	13.280	11.990
σ		0.992	1.117	4.208	4.169	4.127	0.659	0.688	21.730	21.660
%RSD		163.200	162.000	167.900	172.400	165.800	164.900	306.100	163.600	180.600
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	-1.929	-0.481	-3.261	0.051	167.4%	0.303	0.313	0.287	-1.290
2	08:03:07	-1.024	-0.227	-1.411	0.263	166.1%	0.456	0.843	0.448	-1.255
3	08:03:34	4.878	0.992	2.111	5.971	163.2%	5.312	T 6.125	T 7.643	-0.294
x		0.642	0.095	-0.854	2.095	165.6%	2.024	T 2.427	T 2.793	-0.946
σ		3.697	0.787	2.729	3.358	2.1%	2.849	T 3.214	T 4.201	0.565
%RSD		575.900	832.000	319.800	160.300	1.3	140.800	T 132.400	T 150.400	59.750
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	0.007	0.011	0.008	0.008	170.1%	-0.028	-0.050	-0.005	-0.010
2	08:03:07	0.051	0.048	0.045	0.055	175.4%	0.012	-0.026	0.037	0.024
3	08:03:34	1.046	1.151	1.170	1.113	169.1%	1.094	1.118	1.204	1.166
x		0.368	0.404	0.408	0.392	171.5%	0.359	0.347	0.412	0.393
σ		0.588	0.648	0.661	0.625	3.4%	0.637	0.668	0.686	0.669
%RSD		159.600	160.500	162.100	159.400	2.0	177.100	192.400	166.700	170.100
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:02:40	0.017	0.030	T 179.8%	0.002	-0.001	0.011	0.011	0.007	221.8%
2	08:03:07	0.194	0.227	T 180.2%	0.050	0.038	0.054	0.061	0.058	226.1%
3	08:03:34	5.276	4.993	T 173.7%	1.252	1.285	1.533	1.469	1.471	T 330.3%
x		1.829	1.750	T 177.9%	0.434	0.441	0.533	0.514	0.512	T 259.4%
σ		2.986	2.811	T 3.6%	0.708	0.731	0.866	0.828	0.831	T 61.4%
%RSD		163.300	160.600	T 2.0	163.100	166.000	162.700	161.100	162.300	T 23.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	159.8%	0.001	1.234	1.020	-64.440	T 147.700	2.485	2.153	2.307
2	08:09:04	162.0%	-0.002	1.163	0.931	-64.790	7.056	0.097	0.170	0.125
3	08:09:31	T 152.9%	-0.002	1.246	0.954	-64.790	T 371.600	5.977	6.125	6.097
x		T 158.2%	-0.001	1.214	0.968	-64.680	T 175.500	2.853	2.816	2.843
σ		T 4.8%	0.002	0.045	0.046	0.204	T 183.800	2.957	3.032	3.022
%RSD		T 3.0	300.900	3.696	4.790	0.315	T 104.800	103.600	107.700	106.300

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	0.330	T -5.809	-450.300	-9.708	17.460	11.380	T 151.3%	0.024	-0.205
2	08:09:04	-0.024	-9.597	-473.400	-16.880	0.428	-1.244	T 154.5%	0.023	-0.082
3	08:09:31	0.866	-2.797	-445.000	4.093	33.390	31.800	T 153.6%	0.018	-0.017
x		0.391	T -6.067	-456.200	-7.499	17.090	13.980	T 153.1%	0.021	-0.101
σ		0.448	T 3.407	15.090	10.660	16.480	16.680	T 1.6%	0.003	0.096
%RSD		114.600	T 56.160	3.307	142.200	96.440	119.300	T 1.1	14.740	94.460

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	-0.094	-148.900	-9.045	0.039	-17.020	-9.967	-0.002	0.000	0.116
2	08:09:04	-0.094	-224.800	-10.540	0.016	-17.950	-10.700	-0.003	0.000	0.148
3	08:09:31	-0.085	-247.900	-8.947	0.063	-16.540	-9.398	-0.000	0.017	-0.154
x		-0.091	-207.200	-9.511	0.039	-17.170	-10.020	-0.002	0.006	0.037
σ		0.005	51.780	0.894	0.023	0.718	0.653	0.001	0.010	0.166
%RSD		5.882	24.990	9.395	59.030	4.180	6.517	69.640	163.900	450.800

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	-0.009	0.002	-0.069	-0.189	-0.017	-0.065	-0.375	-0.378	-1.447
2	08:09:04	-0.012	-0.022	-0.087	-0.113	-0.098	-0.079	-0.593	-0.542	-1.545
3	08:09:31	0.000	0.001	-0.018	-0.126	0.022	0.017	-0.636	-0.425	-1.780
x		-0.007	-0.006	-0.058	-0.143	-0.031	-0.043	-0.534	-0.448	-1.590
σ		0.007	0.014	0.036	0.041	0.061	0.052	0.140	0.085	0.171
%RSD		93.720	220.200	61.190	28.570	198.000	122.200	26.240	18.900	10.750

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	-2.537	-0.617	-2.738	0.033	162.0%	5.938	6.183	5.642	-1.004
2	08:09:04	-2.547	-0.620	-2.586	0.004	162.8%	2.207	2.173	2.163	-1.253
3	08:09:31	-2.947	-0.728	-3.058	0.109	159.9%	6.108	6.152	5.866	-1.618
x		-2.677	-0.655	-2.794	0.049	161.6%	4.751	4.836	4.557	-1.292
σ		0.234	0.063	0.241	0.054	1.5%	2.205	2.306	2.077	0.309
%RSD		8.749	9.640	8.628	111.700	0.9	46.410	47.690	45.570	23.890

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	-0.001	0.001	-0.012	-0.002	166.2%	-0.044	-0.053	-0.011	-0.012
2	08:09:04	-0.003	0.000	-0.006	0.003	171.2%	-0.045	-0.062	-0.013	-0.015
3	08:09:31	-0.000	0.002	-0.014	-0.000	169.1%	-0.041	-0.065	-0.013	-0.013
x		-0.001	0.001	-0.011	0.000	168.8%	-0.043	-0.060	-0.012	-0.013
σ		0.001	0.001	0.004	0.003	2.5%	0.002	0.006	0.001	0.002
%RSD		84.210	87.180	40.290	558.700	1.5	5.103	10.170	10.880	11.970

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:08:37	0.013	0.018	T 174.4%	-0.006	-0.009	-0.001	-0.004	-0.003	206.8%
2	08:09:04	0.002	-0.000	T 178.8%	-0.003	-0.009	-0.001	-0.002	-0.003	212.0%
3	08:09:31	0.021	0.035	T 177.3%	-0.005	-0.005	0.002	0.002	0.000	211.7%
x		0.012	0.017	T 176.9%	-0.005	-0.008	-0.000	-0.001	-0.002	210.2%
σ		0.009	0.018	T 2.2%	0.001	0.002	0.002	0.003	0.002	2.9%
%RSD		76.480	100.500	T 1.3	24.530	30.150	1173.000	237.100	90.100	1.4

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	T 198.3%	0.157	24.120	T 35.520	-82.780	T 39350.000	T 611.200	T 643.000	T 681.600
2	08:15:04	98.5%	0.029	10.150	11.770	-60.210	T 4740.000	T 1161.000	1241.000	1333.000
3	08:15:31	97.9%	-0.002	29.480	29.420	4.123	T 5971.000	T 1935.000	2014.000	2104.000
x		T 131.6%	0.062	21.250	T 25.570	-46.290	T 16690.000	T 1236.000	T 1299.000	T 1373.000
σ		T 57.8%	0.084	9.979	T 12.340	45.090	T 19640.000	T 665.100	T 687.400	T 712.100
%RSD		T 43.9	136.700	46.960	T 48.240	97.420	T 117.700	T 53.820	T 52.900	T 51.870
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	T 149.800	T 995.300	T 6051.000	T 2909.000	6639.000	T 6879.000	T 164.8%	8.706	8.476
2	08:15:04	44.200	T 2642.000	T 36130.000	T 2439.000	5141.000	5247.000	91.6%	2.118	0.467
3	08:15:31	56.030	T 2683.000	T 45790.000	T 2376.000	5186.000	5059.000	93.4%	1.381	0.967
x		T 83.350	T 2107.000	T 29330.000	T 2575.000	5655.000	T 5728.000	T 116.6%	4.068	3.303
σ		T 57.880	T 963.000	T 20730.000	T 291.000	852.200	T 1001.000	T 41.7%	4.033	4.487
%RSD		T 69.430	T 45.700	T 70.680	T 11.300	15.070	T 17.480	T 35.8	99.130	135.800
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	11.910	564.100	563.200	16.410	T 489.100	498.900	3.192	8.951	9.277
2	08:15:04	0.884	7173.000	378.600	38.960	T 382.300	373.200	0.216	0.570	1.719
3	08:15:31	0.408	8862.000	354.500	37.470	T 353.800	350.000	0.079	0.429	0.516
x		4.401	5533.000	432.100	30.940	T 408.400	407.300	1.162	3.317	3.837
σ		6.508	4385.000	114.200	12.610	T 71.330	80.100	1.759	4.880	4.749
%RSD		147.900	79.260	26.420	40.750	T 17.470	19.660	151.400	147.100	123.800
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	5.992	6.688	31.450	26.680	27.060	11.490	2.622	141.400	145.400
2	08:15:04	0.782	0.640	2.285	3.589	2.896	0.575	0.213	31.280	31.860
3	08:15:31	0.541	0.433	1.546	3.628	2.001	0.369	0.336	22.560	23.260
x		2.438	2.587	11.760	11.300	10.650	4.143	1.057	65.080	66.860
σ		3.080	3.553	17.060	13.320	14.220	6.360	1.356	66.230	68.200
%RSD		126.300	137.300	145.000	117.900	133.500	153.500	128.300	101.800	102.000
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	16.780	2.647	2.847	37.020	122.2%	TM 649.600	TM 733.500	TM 657.900	3.927
2	08:15:04	3.156	0.777	0.656	65.900	97.2%	31.220	31.070	30.510	-0.129
3	08:15:31	-0.300	-0.094	-0.971	66.540	96.3%	10.520	10.430	10.020	0.043
x		6.544	1.110	0.844	56.490	105.2%	TM 230.500	TM 258.300	TM 232.800	1.280
σ		9.029	1.401	1.916	16.860	14.7%	TM 363.200	TM 411.700	TM 368.300	2.294
%RSD		138.000	126.200	226.900	29.850	14.0	TM 157.600	TM 159.300	TM 158.200	179.100
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	3.860	3.927	2.161	3.538	122.8%	4.272	3.916	4.611	4.286
2	08:15:04	0.108	0.115	0.041	0.125	98.9%	0.285	0.357	0.470	0.429
3	08:15:31	0.001	0.005	-0.008	-0.000	98.5%	0.090	0.121	0.175	0.161
x		1.323	1.349	0.732	1.221	106.7%	1.549	1.464	1.752	1.625
σ		2.198	2.233	1.239	2.008	13.9%	2.360	2.126	2.480	2.308
%RSD		166.100	165.600	169.300	164.500	13.0	152.300	145.200	141.600	142.000
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:14:36	17.960	17.930	T 132.8%	4.322	4.328	4.504	4.526	4.544	T 475.5%
2	08:15:04	17.240	16.820	105.1%	0.228	0.206	0.185	0.190	0.188	T 293.2%
3	08:15:31	16.820	16.740	105.2%	0.056	0.056	0.068	0.060	0.062	245.3%
x		17.340	17.160	T 114.4%	1.535	1.530	1.586	1.592	1.598	T 338.0%
σ		0.577	0.665	T 16.0%	2.415	2.424	2.528	2.542	2.552	T 121.5%
%RSD		3.325	3.874	T 14.0	157.300	158.500	159.400	159.700	159.700	T 35.9

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	89.2%	0.005	TM 2744.000	TM 2804.000	-42.910	TM 140000.000	137.800	137.600	143.200
2	08:21:01	89.5%	-0.002	TM 2751.000	TM 2850.000	-45.020	TM 139900.000	137.400	134.000	141.500
3	08:21:27	90.7%	-0.002	TM 2752.000	TM 2844.000	-43.250	TM 138500.000	134.700	134.700	141.500
x		89.8%	0.001	TM 2749.000	TM 2833.000	-43.730	TM 139500.000	136.600	135.400	142.100
σ		0.8%	0.004	TM 4.225	TM 24.760	1.135	TM 837.900	1.709	1.905	0.993
%RSD		0.9	497.400	TM 0.154	TM 0.874	2.597	TM 0.601	1.251	1.406	0.699
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	6.162	261.900	T 14140.000	T 2964.000	17170.000	T 17290.000	91.4%	0.227	0.021
2	08:21:01	6.132	258.300	T 14220.000	T 2990.000	16890.000	T 17210.000	91.7%	0.375	-0.178
3	08:21:27	6.185	254.300	T 14300.000	T 2954.000	17040.000	T 17180.000	91.1%	0.201	0.157
x		6.160	258.200	T 14220.000	T 2969.000	17030.000	T 17230.000	91.4%	0.268	0.000
σ		0.027	3.811	T 76.950	T 18.800	137.100	T 55.570	0.3%	0.094	0.168
%RSD		0.437	1.476	T 0.541	T 0.633	0.805	T 0.323	0.3	34.980	121600.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	0.091	2230.000	34.040	2.524	33.780	67.700	0.017	0.231	4.590
2	08:21:01	0.111	2242.000	33.130	2.523	34.650	68.610	0.010	0.233	5.019
3	08:21:27	0.120	2093.000	32.590	2.512	34.440	67.570	0.015	0.183	4.539
x		0.107	2188.000	33.250	2.519	34.290	67.960	0.014	0.216	4.716
σ		0.015	82.870	0.733	0.007	0.455	0.570	0.003	0.028	0.264
%RSD		14.170	3.787	2.205	0.264	1.327	0.839	24.200	13.150	5.588
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	5.341	5.110	5.820	5.156	5.164	0.750	-0.112	334.600	337.700
2	08:21:01	5.381	4.982	5.394	5.795	5.234	0.610	0.212	329.200	341.500
3	08:21:27	5.408	5.007	5.566	5.845	5.228	0.729	0.087	330.100	333.500
x		5.377	5.033	5.594	5.599	5.209	0.696	0.062	331.300	337.600
σ		0.034	0.068	0.214	0.384	0.039	0.076	0.163	2.907	3.988
%RSD		0.627	1.341	3.833	6.858	0.741	10.850	261.300	0.878	1.181
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	4.125	0.592	-0.303	T 255.200	93.2%	2.432	2.416	2.400	3.501
2	08:21:01	1.921	0.118	1.075	T 251.800	94.0%	2.136	2.178	2.199	4.300
3	08:21:27	2.138	0.172	1.142	T 251.400	92.7%	2.231	2.162	2.039	4.159
x		2.728	0.294	0.638	T 252.800	93.3%	2.266	2.252	2.213	3.987
σ		1.215	0.259	0.815	T 2.063	0.7%	0.151	0.142	0.181	0.427
%RSD		44.540	88.130	127.800	T 0.816	0.7	6.661	6.295	8.165	10.700
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	-0.001	0.001	-0.007	0.006	90.9%	0.297	0.460	0.169	0.151
2	08:21:01	-0.000	0.002	0.006	0.000	93.0%	0.295	0.431	0.170	0.174
3	08:21:27	0.003	0.002	-0.008	0.004	93.3%	0.287	0.438	0.171	0.141
x		0.000	0.002	-0.003	0.003	92.4%	0.293	0.443	0.170	0.155
σ		0.002	0.001	0.007	0.003	1.3%	0.006	0.015	0.001	0.017
%RSD		445.900	41.670	251.200	92.260	1.4	1.918	3.412	0.646	10.930
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:20:34	0.299	0.277	98.2%	0.041	0.037	1.911	1.797	1.862	130.6%
2	08:21:01	0.254	0.261	98.0%	0.035	0.038	2.002	1.807	1.882	127.9%
3	08:21:27	0.358	0.269	99.3%	0.028	0.037	1.889	1.754	1.842	125.3%
x		0.304	0.269	98.5%	0.035	0.037	1.934	1.786	1.862	127.9%
σ		0.052	0.008	0.7%	0.007	0.001	0.060	0.028	0.020	2.7%
%RSD		17.270	3.035	0.7	19.230	2.031	3.085	1.583	1.073	2.1

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	72.5%	-0.002	M 2651.000	TM 2915.000	-38.990	TM 1002000.000	57.560	58.080	61.790
2	08:26:59	72.5%	0.001	M 2556.000	TM 2834.000	-37.900	TM 984200.000	57.180	57.330	60.250
3	08:27:26	73.6%	0.001	M 2558.000	TM 2791.000	-39.690	TM 976200.000	55.870	57.250	59.260
x		72.9%	0.000	M 2588.000	TM 2847.000	-38.860	TM 987600.000	56.870	57.550	60.430
σ		0.6%	0.002	M 54.240	TM 62.800	0.903	TM 13480.000	0.887	0.458	1.273
%RSD		0.9	363.100	M 2.096	TM 2.206	2.325	TM 1.365	1.560	0.795	2.107
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	1.147	333.100	T 53760.000	T 72210.000	10160.000	10290.000	74.4%	2.256	-0.152
2	08:26:59	1.134	327.500	T 53350.000	T 70630.000	10050.000	10180.000	74.2%	2.123	-0.013
3	08:27:26	1.119	316.700	T 52920.000	T 69970.000	9847.000	9995.000	74.3%	1.805	0.030
x		1.133	325.700	T 53340.000	T 70940.000	10020.000	10150.000	74.3%	2.061	-0.045
σ		0.014	8.339	T 421.900	T 1149.000	158.700	147.200	0.1%	0.232	0.095
%RSD		1.245	2.560	T 0.791	T 1.619	1.584	1.450	0.2	11.240	213.300
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	0.248	2402.000	311.100	11.790	336.500	320.200	0.027	0.171	80.480
2	08:26:59	0.247	2347.000	306.900	11.820	332.300	319.800	0.034	0.178	69.310
3	08:27:26	0.277	2261.000	297.100	11.120	326.900	313.100	0.022	0.136	68.670
x		0.257	2337.000	305.000	11.580	331.900	317.700	0.028	0.162	72.820
σ		0.017	70.810	7.184	0.397	4.792	4.024	0.006	0.022	6.644
%RSD		6.512	3.030	2.355	3.429	1.444	1.267	22.060	13.780	9.124
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	17.370	9.416	8.157	6.985	7.655	6.862	0.748	352.100	355.200
2	08:26:59	16.200	8.927	7.647	7.542	7.688	6.765	1.208	346.100	354.000
3	08:27:26	15.350	8.670	7.632	7.463	7.363	6.696	0.957	341.500	342.700
x		16.310	9.004	7.812	7.330	7.569	6.774	0.971	346.600	350.700
σ		1.013	0.379	0.299	0.301	0.179	0.083	0.230	5.300	6.875
%RSD		6.214	4.205	3.829	4.113	2.366	1.230	23.710	1.529	1.961
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	5.658	1.030	1.792	174.800	78.5%	6.874	6.977	7.151	1.499
2	08:26:59	6.187	1.218	4.174	172.000	78.4%	6.975	7.117	6.721	2.166
3	08:27:26	4.342	0.765	2.041	167.200	79.8%	6.522	6.703	6.694	1.121
x		5.396	1.004	2.669	171.400	78.9%	6.790	6.932	6.855	1.595
σ		0.950	0.228	1.309	3.828	0.8%	0.238	0.211	0.256	0.529
%RSD		17.610	22.690	49.060	2.234	1.0	3.500	3.040	3.740	33.180
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	-0.001	0.000	-0.017	0.003	76.3%	0.059	0.086	2.323	1.985
2	08:26:59	-0.001	0.002	-0.011	0.008	76.8%	0.050	0.069	2.211	1.940
3	08:27:26	-0.000	0.001	-0.011	-0.003	77.4%	0.068	0.098	2.200	1.930
x		-0.001	0.001	-0.013	0.003	76.8%	0.059	0.084	2.245	1.952
σ		0.001	0.001	0.004	0.006	0.5%	0.009	0.015	0.068	0.029
%RSD		85.150	81.190	28.490	226.200	0.7	15.120	17.570	3.043	1.494
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:26:32	0.443	0.449	86.0%	0.013	0.011	0.017	0.017	0.021	124.1%
2	08:26:59	0.523	0.448	85.5%	0.008	0.010	0.035	0.025	0.028	114.8%
3	08:27:26	0.501	0.416	87.7%	0.002	0.009	0.018	0.033	0.022	111.1%
x		0.489	0.438	86.4%	0.008	0.010	0.023	0.025	0.024	116.7%
σ		0.042	0.019	1.1%	0.005	0.001	0.010	0.008	0.004	6.7%
%RSD		8.532	4.287	1.3	67.720	11.590	44.580	32.570	16.470	5.7

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User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	93.2%	0.007	44.710	46.660	-15.420	T 78240.000	T 1780.000	1900.000	1987.000
2	08:32:56	93.7%	0.023	42.620	44.510	-16.320	T 76820.000	T 1755.000	1890.000	1995.000
3	08:33:23	94.6%	0.018	39.620	43.080	-16.570	T 77120.000	T 1769.000	1923.000	T 1918.000
x		93.8%	0.016	42.320	44.750	-16.100	T 77390.000	T 1768.000	1904.000	T 1967.000
σ		0.7%	0.008	2.561	1.803	0.606	T 745.900	T 12.360	16.810	T 42.070
%RSD		0.8	49.600	6.052	4.028	3.762	T 0.964	T 0.699	0.883	T 2.139

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	TM 5279.000	T 3491.000	T 42740.000	T 9787.000	23450.000	T 23760.000	88.6%	1.502	0.888
2	08:32:56	TM 5381.000	T 3516.000	T 43190.000	T 10050.000	23890.000	T 23950.000	88.9%	1.704	0.296
3	08:33:23	TM 5403.000	T 3415.000	T 43170.000	T 9836.000	23570.000	T 23820.000	88.2%	1.482	1.092
x		TM 5354.000	T 3474.000	T 43030.000	T 9891.000	23640.000	T 23840.000	88.6%	1.563	0.759
σ		TM 65.970	T 52.790	T 250.900	T 140.500	225.100	T 101.800	0.4%	0.123	0.414
%RSD		TM 1.232	T 1.520	T 0.583	T 1.421	0.952	T 0.427	0.4	7.883	54.520

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	14.600	6245.000	1032.000	35.050	T 1015.000	1032.000	73.800	5.177	12.180
2	08:32:56	14.550	6540.000	1036.000	35.320	T 1018.000	1024.000	73.560	5.096	10.710
3	08:33:23	14.600	6374.000	1022.000	35.120	T 1024.000	1029.000	72.990	5.355	11.500
x		14.580	6386.000	1030.000	35.160	T 1019.000	1028.000	73.450	5.209	11.460
σ		0.029	147.500	7.291	0.141	T 4.659	4.409	0.417	0.132	0.739
%RSD		0.197	2.309	0.708	0.400	T 0.457	0.429	0.568	2.541	6.449

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	30.930	30.990	375.300	350.400	362.700	0.394	0.308	253.800	259.000
2	08:32:56	30.690	31.390	374.900	351.200	364.700	0.424	0.031	259.700	260.300
3	08:33:23	30.850	31.360	371.900	353.700	365.800	0.399	0.512	255.100	260.800
x		30.820	31.240	374.000	351.800	364.400	0.406	0.284	256.200	260.000
σ		0.127	0.222	1.857	1.770	1.574	0.016	0.242	3.080	0.918
%RSD		0.412	0.711	0.496	0.503	0.432	3.996	85.140	1.202	0.353

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	2.941	0.460	1.204	74.410	91.9%	1.331	1.350	1.481	0.865
2	08:32:56	2.500	0.338	0.625	74.550	91.9%	1.385	1.328	1.355	0.143
3	08:33:23	1.646	0.133	0.211	73.910	91.5%	1.305	1.392	1.315	0.885
x		2.362	0.310	0.680	74.290	91.8%	1.340	1.357	1.384	0.631
σ		0.658	0.165	0.499	0.335	0.2%	0.041	0.032	0.087	0.423
%RSD		27.870	53.210	73.410	0.452	0.2	3.048	2.389	6.269	67.030

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	0.004	0.008	0.258	0.265	90.6%	0.163	0.111	57.180	51.490
2	08:32:56	0.005	0.004	0.283	0.266	91.3%	0.143	0.102	57.380	52.270
3	08:33:23	0.007	0.009	0.314	0.283	91.2%	0.134	0.107	57.070	51.070
x		0.005	0.007	0.285	0.272	91.0%	0.147	0.106	57.210	51.610
σ		0.001	0.002	0.028	0.010	0.4%	0.015	0.004	0.158	0.612
%RSD		27.500	30.840	9.810	3.705	0.4	9.935	4.205	0.276	1.185

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:32:29	41.760	41.260	100.2%	0.029	0.022	0.579	0.582	0.575	178.7%
2	08:32:56	42.420	42.430	102.1%	0.022	0.026	0.593	0.550	0.570	162.5%
3	08:33:23	42.390	41.400	101.8%	0.018	0.025	0.618	0.588	0.598	154.2%
x		42.190	41.700	101.4%	0.023	0.024	0.597	0.573	0.581	165.2%
σ		0.374	0.637	1.0%	0.005	0.002	0.020	0.020	0.015	12.5%
%RSD		0.886	1.527	1.0	23.570	9.317	3.368	3.570	2.576	7.6

CCV MW10535 11/17/2018 08:37:59 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	86.5%	249.100	270.100	269.800	-7.172	T 52640.000	T 52250.000	T 51720.000	T 52050.000
2	08:38:53	86.7%	252.900	264.400	268.800	-2.858	T 54370.000	T 53980.000	T 53660.000	T 54260.000
3	08:39:20	87.6%	259.600	273.300	274.100	-2.140	T 55370.000	T 55130.000	T 54750.000	T 54840.000
x		86.9%	84.625%	89.752%	90.311%	-4.056	T 90.212%	T 53780.000	T 53380.000	T 89.529%
σ		0.6%	n/a	n/a	n/a	2.722	T n/a	T 1449.000	T 1537.000	T n/a
%RSD		0.7	2.081	1.684	1.032	67.100	T 2.549	T 2.694	T 2.880	T 2.739
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	258.100	T 3017.000	-40.690	T 60950.000	54710.000	T 54390.000	96.9%	263.500	T 267.200
2	08:38:53	266.800	T 3043.000	-40.540	T 61400.000	56860.000	T 56500.000	92.8%	274.400	T 274.200
3	08:39:20	270.600	T 3047.000	-50.120	T 60880.000	57260.000	T 57460.000	92.1%	279.900	T 282.400
x		88.384%	T 101.191%	-43.780	T 101.794%	56270.000	T 93.525%	94.0%	90.864%	T 91.527%
σ		n/a	T n/a	5.487	T n/a	1369.000	T n/a	2.6%	n/a	T n/a
%RSD		2.409	T 0.526	12.530	T 0.460	2.433	T 2.800	2.8	3.062	T 2.760
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	267.200	-1199.000	T 54010.000	T 257.100	T 53440.000	T 51740.000	260.900	259.200	252.000
2	08:38:53	276.200	-122.500	T 55320.000	T 267.400	T 55880.000	T 54110.000	T 258.100	260.300	257.800
3	08:39:20	279.600	22.740	T 56490.000	T 271.700	T 56520.000	T 54630.000	T 265.300	258.700	264.700
x		91.436%	-433.100	T 55270.000	T 88.465%	T 55280.000	T 89.157%	T 87.148%	86.466%	258.200
σ		n/a	667.700	T 1239.000	T n/a	T 1627.000	T n/a	T n/a	n/a	6.347
%RSD		2.335	154.200	T 2.242	T 2.814	T 2.944	T 2.881	T 1.401	0.314	2.458
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	244.700	262.400	269.700	258.900	262.200	265.400	268.900	12.960	12.080
2	08:38:53	251.200	265.100	272.200	270.000	267.000	278.300	270.400	11.960	12.210
3	08:39:20	250.500	261.600	268.100	268.800	269.800	280.300	273.600	10.790	11.210
x		248.800	87.680%	90.000%	265.900	266.300	91.565%	271.000	11.900	11.830
σ		3.546	n/a	n/a	6.119	3.840	n/a	2.370	1.087	0.540
%RSD		1.425	0.692	0.767	2.301	1.442	2.947	0.875	9.131	4.567
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	1211.000	259.000	-0.101	T 300.100	90.8%	296.500	295.400	296.800	286.500
2	08:38:53	1230.000	270.900	0.978	T 302.200	89.9%	303.400	303.000	301.900	290.200
3	08:39:20	1227.000	275.000	0.054	T 302.400	91.2%	299.500	302.500	305.400	283.700
x		1223.000	89.434%	0.310	T 100.525%	90.6%	99.934%	100.108%	301.400	286.800
σ		10.250	n/a	0.583	T n/a	0.6%	n/a	n/a	4.335	3.262
%RSD		0.838	3.094	187.900	T 0.421	0.7	1.166	1.419	1.438	1.137
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	301.500	295.400	285.900	283.100	90.8%	299.200	299.600	314.000	294.000
2	08:38:53	305.800	302.100	288.100	285.300	90.1%	300.700	301.400	321.000	294.500
3	08:39:20	303.000	299.500	287.000	283.100	91.1%	298.000	300.500	321.500	298.800
x		101.145%	299.000	287.000	94.615%	90.7%	99.767%	100.168%	318.900	98.592%
σ		n/a	3.354	1.106	n/a	0.5%	n/a	n/a	4.200	n/a
%RSD		0.730	1.122	0.385	0.448	0.6	0.455	0.299	1.317	0.897
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:38:26	297.100	297.500	96.0%	294.700	T 280.400	T 279.800	290.200	T 282.000	121.3%
2	08:38:53	299.100	297.400	97.1%	295.900	T 281.000	T 277.700	290.800	T 281.000	118.4%
3	08:39:20	297.600	298.600	96.0%	299.600	T 283.600	T 282.700	294.100	T 286.400	117.2%
x		99.306%	99.287%	96.4%	296.700	T 93.892%	T 93.359%	97.232%	T 94.381%	118.9%
σ		n/a	n/a	0.7%	2.562	T n/a	T n/a	n/a	T n/a	2.1%
%RSD		0.344	0.220	0.7	0.863	T 0.603	T 0.911	0.711	T 1.027	1.8

CCB IM9061-02 11/17/2018 08:43:55 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	93.6%	0.021	15.460	16.910	-3.978	32.900	4.009	4.030	4.252
2	08:44:49	95.6%	0.016	16.410	16.020	-6.318	33.630	4.404	4.180	4.584
3	08:45:16	96.2%	0.012	14.070	15.160	-5.524	35.250	4.985	4.846	5.175
x		95.1%	0.016	15.310	16.030	-5.273	33.930	4.466	4.352	4.670
σ		1.3%	0.005	1.179	0.880	1.190	1.202	0.491	0.434	0.467
%RSD		1.4	28.350	7.701	5.488	22.560	3.543	10.990	9.981	10.010
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	0.257	1.007	-206.400	8.308	6.534	5.191	90.4%	0.159	-0.057
2	08:44:49	0.214	0.542	-208.700	7.620	6.734	5.448	92.6%	0.198	-0.049
3	08:45:16	0.276	0.306	-199.600	7.828	5.590	6.549	T 92.2%	0.199	-0.190
x		0.249	0.618	-204.900	7.919	6.286	5.729	T 91.7%	0.185	-0.098
σ		0.032	0.357	4.703	0.353	0.611	0.721	T 1.2%	0.023	0.079
%RSD		12.770	57.710	2.296	4.454	9.718	12.590	T 1.3	12.310	80.360
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	0.009	26.370	14.090	0.038	13.830	13.440	0.021	0.017	2.339
2	08:44:49	0.004	43.080	13.800	0.040	12.780	11.510	0.026	0.002	2.224
3	08:45:16	0.016	127.800	12.340	0.040	11.640	12.580	0.022	0.038	2.455
x		0.010	65.760	13.410	0.039	12.750	12.510	0.023	0.019	2.339
σ		0.006	54.400	0.936	0.001	1.097	0.966	0.002	0.018	0.116
%RSD		60.960	82.720	6.975	1.705	8.601	7.722	9.567	93.530	4.939
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	0.098	0.006	-0.099	-0.047	-0.082	0.066	0.246	7.830	6.929
2	08:44:49	0.116	0.041	-0.045	-0.103	-0.054	0.091	0.247	7.210	8.264
3	08:45:16	0.092	0.017	-0.069	-0.207	-0.073	0.126	0.450	6.678	7.333
x		0.102	0.021	-0.071	-0.119	-0.070	0.094	0.314	7.239	7.509
σ		0.012	0.018	0.027	0.081	0.014	0.030	0.118	0.577	0.684
%RSD		12.060	82.040	38.270	68.430	20.750	31.540	37.430	7.963	9.114
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	-0.948	-0.211	-0.775	0.029	94.9%	1.742	1.591	1.731	-0.897
2	08:44:49	1.340	0.371	1.058	0.031	97.2%	1.318	1.350	1.408	-0.758
3	08:45:16	0.104	0.088	1.347	0.040	96.9%	1.125	1.166	1.088	-0.942
x		0.165	0.083	0.544	0.033	96.3%	1.395	1.369	1.409	-0.866
σ		1.145	0.291	1.151	0.006	1.3%	0.316	0.213	0.322	0.096
%RSD		692.400	351.100	211.700	17.850	1.3	22.620	15.560	22.820	11.060
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	0.036	0.029	0.005	0.022	96.5%	0.514	0.673	0.845	0.794
2	08:44:49	0.028	0.034	0.008	0.028	98.8%	0.461	0.719	0.723	0.698
3	08:45:16	0.032	0.042	0.020	0.026	98.2%	0.415	0.596	0.638	0.619
x		0.032	0.035	0.011	0.025	97.8%	0.463	0.662	0.735	0.704
σ		0.004	0.006	0.008	0.003	1.2%	0.049	0.062	0.104	0.088
%RSD		12.170	18.210	74.030	12.850	1.2	10.670	9.392	14.160	12.450
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:44:22	0.017	0.044	100.3%	0.035	0.032	0.028	0.026	0.026	127.4%
2	08:44:49	0.023	0.021	101.9%	0.031	0.035	0.022	0.025	0.024	127.6%
3	08:45:16	0.034	0.027	101.6%	0.036	0.031	0.022	0.021	0.023	125.9%
x		0.025	0.031	101.3%	0.034	0.033	0.024	0.024	0.024	127.0%
σ		0.009	0.012	0.8%	0.003	0.002	0.003	0.002	0.001	0.9%
%RSD		34.620	39.130	0.8	8.368	6.189	12.530	10.140	4.860	0.7

IS MW10570 11/17/2018 08:49:50

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	96.9%	0.017	11.780	12.430	4.470	8.887	2.753	2.506	2.534
2	08:50:45	97.5%	0.013	11.620	11.830	9.786	8.588	2.754	2.727	2.799
3	08:51:12	98.9%	0.018	11.500	12.320	4.894	10.510	2.838	2.593	2.721
4	08:51:39	98.3%	0.017	11.190	12.410	6.736	18.780	2.880	2.887	2.931
5	08:52:06	98.0%	0.008	11.890	11.870	6.210	14.230	2.807	2.639	3.041
6	08:52:33	98.1%	0.017	10.890	11.360	6.329	16.720	2.866	3.076	2.835
x		97.9%	0.015	11.480	12.040	6.404	12.950	2.816	2.738	2.810
σ		0.7%	0.004	0.377	0.425	1.877	4.274	0.055	0.210	0.175
%RSD		0.7	26.640	3.285	3.527	29.310	33.000	1.936	7.683	6.223
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	1.061	1.355	-297.100	4.426	4.390	4.548	93.0%	0.145	-0.114
2	08:50:45	1.051	0.558	-288.300	4.026	2.368	3.985	95.0%	0.015	-0.022
3	08:51:12	1.084	0.743	-277.000	4.027	8.175	4.498	94.3%	0.075	0.003
4	08:51:39	1.133	0.918	-283.600	5.260	2.684	4.644	96.6%	0.073	-0.035
5	08:52:06	1.076	0.509	-269.600	4.644	4.268	3.906	95.1%	0.175	-0.150
6	08:52:33	1.150	0.733	-260.600	3.649	6.697	4.589	93.4%	0.059	-0.030
x		1.093	0.803	-279.400	4.338	4.764	4.362	94.6%	0.090	-0.058
σ		0.040	0.308	13.140	0.569	2.273	0.327	1.3%	0.059	0.060
%RSD		3.663	38.320	4.703	13.120	47.710	7.494	1.4	65.470	103.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	0.016	-39.660	4.405	0.037	6.643	6.198	0.022	0.121	1.496
2	08:50:45	0.011	-64.390	4.284	0.031	5.221	4.448	0.020	0.102	1.237
3	08:51:12	0.024	-63.830	5.392	0.036	4.891	4.718	0.027	0.100	1.303
4	08:51:39	0.012	-111.300	4.721	0.021	4.213	4.686	0.023	0.115	1.254
5	08:52:06	-0.003	-41.770	4.660	0.040	3.964	2.716	0.021	0.099	1.513
6	08:52:33	0.009	-116.400	4.924	0.038	5.394	3.947	0.025	0.107	1.594
x		0.011	-72.890	4.731	0.034	5.054	4.452	0.023	0.108	1.400
σ		0.009	33.450	0.396	0.007	0.958	1.135	0.003	0.009	0.153
%RSD		77.760	45.890	8.377	20.450	18.950	25.500	11.980	8.012	10.940
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	0.120	0.088	0.127	0.100	0.111	-0.004	0.019	3.594	4.387
2	08:50:45	0.158	0.076	0.172	0.250	0.112	0.193	0.095	4.402	4.481
3	08:51:12	0.139	0.110	0.138	0.184	0.192	0.105	0.244	4.376	3.853
4	08:51:39	0.122	0.101	0.081	0.100	0.115	0.182	-0.053	4.163	3.854
5	08:52:06	0.147	0.100	0.127	0.045	0.098	0.083	0.137	4.275	3.921
6	08:52:33	0.137	0.081	0.177	0.096	0.048	0.164	0.361	3.617	3.656
x		0.137	0.093	0.137	0.129	0.112	0.121	0.134	4.071	4.025
σ		0.015	0.013	0.035	0.074	0.046	0.075	0.150	0.371	0.330
%RSD		10.580	13.860	25.500	57.720	41.180	62.000	112.300	9.109	8.201
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	-1.063	-0.236	-1.181	0.018	99.1%	0.236	0.281	0.269	-0.536
2	08:50:45	1.728	0.440	-0.289	0.019	100.2%	0.248	0.215	0.224	-0.908
3	08:51:12	1.106	0.294	-0.114	0.019	99.1%	0.218	0.165	0.224	-0.396
4	08:51:39	1.446	0.364	0.101	0.020	100.2%	0.205	0.239	0.188	0.038
5	08:52:06	0.228	0.089	-0.308	0.015	100.8%	0.217	0.134	0.172	-1.079
6	08:52:33	1.476	0.433	1.053	0.019	100.2%	0.221	0.190	0.156	-0.965
x		0.820	0.231	-0.123	0.018	99.9%	0.224	0.204	0.206	-0.641
σ		1.061	0.262	0.723	0.002	0.7%	0.015	0.053	0.041	0.424
%RSD		129.300	113.800	587.700	8.726	0.7	6.862	25.940	20.130	66.180
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	0.014	0.016	0.032	0.016	99.8%	0.148	0.204	0.152	0.136
2	08:50:45	0.015	0.017	0.019	0.028	101.2%	0.129	0.184	0.139	0.141
3	08:51:12	0.016	0.026	0.021	0.029	101.2%	0.125	0.228	0.159	0.136
4	08:51:39	0.012	0.016	0.023	0.015	102.6%	0.139	0.204	0.138	0.134
5	08:52:06	0.013	0.018	0.010	0.015	104.0%	0.100	0.164	0.136	0.122
6	08:52:33	0.020	0.021	0.019	0.024	102.1%	0.127	0.173	0.125	0.127
x		0.015	0.019	0.021	0.021	101.8%	0.128	0.193	0.141	0.132
σ		0.003	0.004	0.007	0.006	1.5%	0.016	0.024	0.012	0.007

%RSD		19.010	20.850	34.440	30.360	1.4	12.720	12.230	8.655	5.386
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:50:18	0.042	0.057	102.2%	0.015	0.017	0.029	0.027	0.024	96.9%
2	08:50:45	0.086	0.065	103.5%	0.018	0.020	0.020	0.020	0.021	102.5%
3	08:51:12	0.039	0.058	103.2%	0.018	0.015	0.021	0.024	0.023	104.2%
4	08:51:39	0.063	0.072	104.7%	0.019	0.020	0.018	0.025	0.019	108.5%
5	08:52:06	0.078	0.086	105.8%	0.017	0.016	0.023	0.014	0.020	110.9%
6	08:52:33	0.066	0.057	104.3%	0.015	0.013	0.021	0.019	0.022	111.9%
x		0.062	0.066	103.9%	0.017	0.017	0.022	0.021	0.022	105.8%
σ		0.019	0.012	1.2%	0.002	0.003	0.004	0.005	0.002	5.7%
%RSD		30.320	17.830	1.2	8.906	15.880	17.030	22.710	9.209	5.4

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	98.8%	0.017	9.309	8.566	8.057	10.260	2.669	2.696	2.411
2	08:58:01	96.8%	0.027	8.633	8.680	6.420	11.140	2.624	2.686	2.728
3	08:58:28	97.7%	0.012	8.796	8.043	1.283	21.030	2.855	3.072	3.073
x		97.8%	0.019	8.913	8.430	5.253	14.140	2.716	2.818	2.738
σ		1.0%	0.008	0.353	0.340	3.535	5.980	0.123	0.220	0.331
%RSD		1.0	41.130	3.959	4.029	67.290	42.280	4.513	7.813	12.090

Run	Time	27Al	28Si	35Cl	39K	43Ca	44Ca	45Sc	47Ti	51V
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	1.108	0.691	-348.700	3.060	3.645	4.627	92.4%	0.120	0.081
2	08:58:01	1.149	0.554	-338.500	5.277	9.276	4.614	91.2%	0.078	-0.054
3	08:58:28	1.306	0.084	-343.900	5.736	5.532	4.987	93.2%	0.067	-0.121
x		1.188	0.443	-343.700	4.691	6.151	4.742	92.3%	0.088	-0.032
σ		0.105	0.318	5.144	1.431	2.866	0.212	1.0%	0.028	0.103
%RSD		8.822	71.800	1.497	30.510	46.600	4.462	1.1	31.610	325.800

Run	Time	52Cr	53Cl O	54Fe	55Mn	56Fe	57Fe	59Co	60Ni	62Ni
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	0.009	-245.300	3.510	0.044	5.504	4.081	0.024	0.094	1.094
2	08:58:01	0.029	-147.200	4.109	0.040	4.130	3.491	0.026	0.108	0.982
3	08:58:28	-0.001	-93.880	2.790	0.044	3.166	1.454	0.012	0.114	1.091
x		0.013	-162.100	3.470	0.043	4.267	3.009	0.021	0.105	1.056
σ		0.015	76.800	0.660	0.002	1.175	1.379	0.007	0.010	0.064
%RSD		119.200	47.370	19.030	4.989	27.540	45.810	34.860	9.658	6.054

Run	Time	63Cu	65Cu	66Zn	67Zn	68Zn	75As	78Se	79Br	81Br
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	0.111	0.084	0.110	-0.045	0.117	-0.024	0.291	2.130	2.597
2	08:58:01	0.095	0.079	0.114	0.048	0.106	0.107	0.326	2.851	2.904
3	08:58:28	0.110	0.084	0.117	-0.030	0.124	0.208	0.097	2.622	2.530
x		0.105	0.082	0.114	-0.009	0.116	0.097	0.238	2.534	2.677
σ		0.009	0.003	0.003	0.050	0.009	0.117	0.124	0.369	0.199
%RSD		8.339	3.651	2.956	561.200	7.670	120.300	51.980	14.540	7.444

Run	Time	82Kr	82Se	83Kr	88Sr	89Y	95Mo	97Mo	98Mo	106Cd
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	-0.636	-0.078	0.998	0.027	98.6%	0.117	0.148	0.135	-0.649
2	08:58:01	-0.350	-0.011	0.608	0.016	98.4%	0.117	0.059	0.131	-0.607
3	08:58:28	1.605	0.381	-1.136	0.025	97.3%	0.165	0.166	0.122	-0.037
x		0.206	0.097	0.157	0.023	98.1%	0.133	0.124	0.129	-0.431
σ		1.220	0.248	1.136	0.006	0.7%	0.028	0.058	0.007	0.342
%RSD		591.500	254.700	725.200	26.200	0.7	20.730	46.360	5.051	79.400

Run	Time	107Ag	109Ag	111Cd	114Cd	115In	116Sn	118Sn	121Sb	123Sb
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	0.016	0.013	0.029	0.024	101.4%	0.044	0.080	0.059	0.064
2	08:58:01	0.015	0.016	0.022	0.020	100.3%	0.059	0.052	0.075	0.061
3	08:58:28	0.015	0.021	0.027	0.021	100.2%	0.019	0.088	0.061	0.040
x		0.015	0.017	0.026	0.022	100.6%	0.041	0.073	0.065	0.055
σ		0.001	0.004	0.004	0.002	0.7%	0.020	0.019	0.009	0.013
%RSD		6.087	25.090	14.460	9.668	0.7	49.660	25.630	13.580	23.600

Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	08:57:34	0.067	0.065	103.1%	0.021	0.012	0.029	0.023	0.027	98.0%
2	08:58:01	0.048	0.064	102.8%	0.022	0.018	0.024	0.028	0.023	101.4%
3	08:58:28	0.036	0.062	104.1%	0.021	0.020	0.017	0.024	0.020	104.5%
x		0.050	0.064	103.3%	0.022	0.017	0.023	0.025	0.023	101.3%
σ		0.015	0.002	0.7%	0.001	0.004	0.006	0.003	0.004	3.2%
%RSD		30.750	2.389	0.7	2.833	25.790	27.180	10.070	15.310	3.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	97.1%	0.003	6.969	6.528	5.139	20.030	2.926	2.825	2.901
2	09:03:56	98.8%	0.008	6.214	6.815	6.629	19.790	3.069	2.846	2.971
3	09:04:23	97.5%	0.008	5.952	6.896	7.073	24.840	3.201	3.395	3.276
x		97.8%	0.006	6.379	6.747	6.280	21.550	3.066	3.022	3.049
σ		0.9%	0.003	0.528	0.193	1.013	2.850	0.138	0.323	0.199
%RSD		0.9	43.470	8.277	2.862	16.130	13.220	4.502	10.700	6.527
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	1.324	0.658	-416.600	5.088	2.820	4.991	93.2%	0.059	0.016
2	09:03:56	1.310	0.706	-407.200	4.712	4.751	4.537	93.4%	0.084	-0.129
3	09:04:23	1.469	0.447	-405.700	6.055	4.240	5.400	95.5%	0.023	-0.156
x		1.368	0.604	-409.800	5.285	3.937	4.976	94.0%	0.055	-0.090
σ		0.088	0.138	5.910	0.693	1.000	0.431	1.3%	0.031	0.092
%RSD		6.424	22.880	1.442	13.110	25.410	8.672	1.4	55.350	103.000
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	0.008	-262.200	3.215	0.045	4.559	3.614	0.019	0.115	0.554
2	09:03:56	0.029	-212.600	3.148	0.047	4.010	2.930	0.016	0.153	0.801
3	09:04:23	0.020	-193.600	2.719	0.054	1.910	3.113	0.021	0.117	0.634
x		0.019	-222.800	3.027	0.049	3.493	3.219	0.019	0.128	0.663
σ		0.010	35.420	0.269	0.005	1.398	0.354	0.002	0.022	0.126
%RSD		54.000	15.890	8.881	9.622	40.020	11.000	12.670	16.850	18.930
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	0.108	0.077	0.095	0.128	0.078	0.146	0.102	2.266	1.613
2	09:03:56	0.118	0.059	0.136	-0.024	0.123	0.181	0.222	1.606	2.228
3	09:04:23	0.101	0.055	0.145	-0.086	0.066	0.164	0.127	2.472	2.401
x		0.109	0.064	0.125	0.006	0.089	0.164	0.150	2.115	2.080
σ		0.008	0.012	0.027	0.110	0.030	0.018	0.063	0.452	0.414
%RSD		7.667	18.510	21.360	1869.000	33.840	10.680	42.050	21.380	19.920
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	1.234	0.353	0.279	0.023	99.5%	0.110	0.120	0.121	-0.467
2	09:03:56	1.581	0.463	0.891	0.026	100.8%	0.117	0.139	0.094	-0.259
3	09:04:23	1.847	0.447	-1.093	0.026	100.4%	0.130	0.159	0.104	-0.937
x		1.554	0.421	0.026	0.025	100.3%	0.119	0.139	0.106	-0.554
σ		0.308	0.059	1.016	0.001	0.7%	0.010	0.020	0.014	0.348
%RSD		19.790	14.060	3943.000	5.757	0.7	8.547	14.310	13.020	62.720
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	0.013	0.016	0.021	0.028	101.2%	0.011	0.047	0.038	0.040
2	09:03:56	0.014	0.014	0.034	0.028	102.9%	0.015	0.052	0.043	0.057
3	09:04:23	0.017	0.019	0.010	0.026	102.9%	0.021	0.026	0.032	0.035
x		0.015	0.016	0.022	0.027	102.3%	0.016	0.042	0.038	0.044
σ		0.002	0.003	0.012	0.001	0.9%	0.005	0.014	0.006	0.011
%RSD		14.660	18.070	53.500	4.645	0.9	32.440	32.730	14.650	25.990
Run	**Time**	**135Ba**	**137Ba**	**159Tb**	**203Tl**	**205Tl**	**206Pb**	**207Pb**	**208Pb**	**209Bi**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:03:28	0.083	0.067	103.0%	0.020	0.019	0.019	0.024	0.021	98.3%
2	09:03:56	0.057	0.046	104.1%	0.024	0.025	0.029	0.024	0.025	102.7%
3	09:04:23	0.068	0.058	106.6%	0.012	0.019	0.023	0.022	0.021	106.9%
x		0.069	0.057	104.6%	0.019	0.021	0.024	0.023	0.022	102.7%
σ		0.013	0.011	1.8%	0.006	0.003	0.005	0.001	0.002	4.3%
%RSD		18.790	18.470	1.8	33.870	16.580	19.900	5.878	9.928	4.2

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Run	Time	6Li	9Be	10B	11B	13C	23Na	24Mg	25Mg	26Mg
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	96.5%	0.008	4.785	6.043	6.533	20.150	3.082	3.008	2.739
2	09:09:50	96.8%	0.012	5.548	5.973	0.547	20.930	2.963	3.304	3.243
3	09:10:17	96.8%	0.008	6.035	5.516	5.228	19.420	2.993	2.932	3.117
4	09:10:44	100.1%	0.012	5.524	5.962	5.518	16.540	2.853	2.763	3.016
5	09:11:11	99.3%	0.034	5.586	6.052	2.860	16.510	2.858	2.755	2.939
6	09:11:38	99.6%	0.016	5.863	5.816	0.070	17.340	2.857	2.918	3.019
x		98.2%	0.015	5.557	5.894	3.459	18.480	2.934	2.946	3.012
σ		1.6%	0.010	0.429	0.203	2.725	1.930	0.094	0.202	0.170
%RSD		1.7	66.490	7.719	3.452	78.780	10.440	3.213	6.843	5.639
Run	**Time**	**27Al**	**28Si**	**35Cl**	**39K**	**43Ca**	**44Ca**	**45Sc**	**47Ti**	**51V**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	1.377	0.995	-429.300	6.619	7.111	4.731	93.0%	0.093	0.024
2	09:09:50	1.469	0.506	-426.100	6.962	6.631	5.055	94.0%	0.067	-0.140
3	09:10:17	1.521	0.519	-418.800	5.808	6.320	4.164	93.2%	0.033	0.013
4	09:10:44	1.274	0.612	-413.200	4.991	4.955	4.492	96.2%	0.065	-0.028
5	09:11:11	1.235	-0.048	-409.100	4.662	6.120	5.339	95.6%	0.082	-0.088
6	09:11:38	1.349	0.268	-409.400	4.740	8.695	5.388	96.3%	0.048	-0.064
x		1.371	0.475	-417.600	5.630	6.639	4.862	94.7%	0.065	-0.047
σ		0.110	0.349	8.612	0.992	1.238	0.486	1.5%	0.022	0.063
%RSD		8.028	73.380	2.062	17.620	18.640	10.000	1.6	34.070	133.100
Run	**Time**	**52Cr**	**53Cl O**	**54Fe**	**55Mn**	**56Fe**	**57Fe**	**59Co**	**60Ni**	**62Ni**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	0.011	-265.900	3.872	0.037	3.982	3.392	0.023	0.074	0.911
2	09:09:50	0.033	-207.000	3.072	0.047	3.141	2.061	0.020	0.115	0.477
3	09:10:17	0.019	-274.300	2.119	0.047	2.524	1.568	0.027	0.094	0.508
4	09:10:44	-0.000	-284.600	2.317	0.041	2.062	0.975	0.022	0.090	0.628
5	09:11:11	0.006	-278.100	3.069	0.038	1.864	1.928	0.016	0.107	0.282
6	09:11:38	0.013	-237.300	2.696	0.041	1.609	1.463	0.027	0.101	0.535
x		0.014	-257.900	2.858	0.042	2.530	1.898	0.022	0.097	0.557
σ		0.012	29.900	0.630	0.004	0.894	0.826	0.004	0.014	0.207
%RSD		84.700	11.600	22.030	10.390	35.320	43.510	18.780	14.800	37.240
Run	**Time**	**63Cu**	**65Cu**	**66Zn**	**67Zn**	**68Zn**	**75As**	**78Se**	**79Br**	**81Br**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	0.120	0.097	0.108	0.087	0.151	-0.031	0.561	1.167	1.628
2	09:09:50	0.102	0.099	0.101	-0.050	0.145	0.123	0.378	2.071	1.796
3	09:10:17	0.106	0.083	0.111	-0.021	0.103	0.259	-0.123	1.930	1.888
4	09:10:44	0.087	0.108	0.144	0.058	0.119	0.009	0.230	1.971	1.983
5	09:11:11	0.086	0.076	0.136	0.205	0.171	0.020	0.131	1.976	1.974
6	09:11:38	0.091	0.058	0.119	-0.100	0.153	0.031	0.029	1.964	2.262
x		0.099	0.087	0.120	0.030	0.140	0.068	0.201	1.847	1.922
σ		0.013	0.018	0.017	0.110	0.025	0.106	0.245	0.336	0.212
%RSD		13.250	20.810	14.120	370.200	17.730	155.200	122.100	18.210	11.050
Run	**Time**	**82Kr**	**82Se**	**83Kr**	**88Sr**	**89Y**	**95Mo**	**97Mo**	**98Mo**	**106Cd**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	-1.184	-0.262	-1.028	0.026	98.4%	0.126	0.116	0.123	-0.555
2	09:09:50	1.525	0.387	-0.509	0.031	98.9%	0.114	0.126	0.113	-0.742
3	09:10:17	1.483	0.404	-0.273	0.025	100.0%	0.107	0.104	0.108	-0.610
4	09:10:44	-0.832	-0.165	-0.028	0.023	100.1%	0.120	0.119	0.098	-0.804
5	09:11:11	-0.156	-0.012	-0.421	0.025	100.1%	0.115	0.076	0.093	-0.665
6	09:11:38	-0.128	-0.010	0.011	0.022	99.0%	0.116	0.118	0.119	-0.447
x		0.118	0.057	-0.375	0.025	99.4%	0.116	0.110	0.109	-0.637
σ		1.147	0.279	0.381	0.003	0.7%	0.006	0.018	0.012	0.129
%RSD		971.800	490.700	101.800	12.480	0.7	5.335	16.370	10.830	20.230
Run	**Time**	**107Ag**	**109Ag**	**111Cd**	**114Cd**	**115In**	**116Sn**	**118Sn**	**121Sb**	**123Sb**
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	0.018	0.021	0.027	0.018	100.7%	0.015	0.021	0.028	0.023
2	09:09:50	0.009	0.021	0.023	0.029	100.8%	0.027	0.033	0.025	0.024
3	09:10:17	0.013	0.017	0.020	0.027	101.7%	0.022	0.008	0.025	0.045
4	09:10:44	0.008	0.011	0.016	0.022	101.3%	0.020	0.013	0.024	0.029
5	09:11:11	0.015	0.015	0.010	0.023	102.8%	0.008	-0.003	0.041	0.035
6	09:11:38	0.014	0.019	0.012	0.020	100.7%	0.026	0.014	0.036	0.019
x		0.013	0.017	0.018	0.023	101.3%	0.020	0.014	0.030	0.029
σ		0.004	0.004	0.006	0.004	0.8%	0.007	0.012	0.007	0.010

%RSD		29.540	23.230	35.380	17.720	0.8	35.660	83.940	23.480	33.010
Run	Time	135Ba	137Ba	159Tb	203Tl	205Tl	206Pb	207Pb	208Pb	209Bi
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
1	09:09:23	0.047	0.075	102.3%	0.021	0.022	0.024	0.023	0.022	97.8%
2	09:09:50	0.072	0.056	103.0%	0.009	0.019	0.017	0.024	0.019	100.7%
3	09:10:17	0.075	0.051	103.8%	0.023	0.021	0.025	0.017	0.020	104.7%
4	09:10:44	0.058	0.052	105.5%	0.016	0.021	0.022	0.020	0.021	107.2%
5	09:11:11	0.068	0.049	104.1%	0.019	0.024	0.019	0.025	0.020	109.3%
6	09:11:38	0.083	0.078	104.2%	0.021	0.023	0.020	0.022	0.019	109.8%
x		0.067	0.060	103.8%	0.018	0.022	0.021	0.022	0.020	104.9%
σ		0.013	0.013	1.1%	0.005	0.002	0.003	0.003	0.001	4.9%
%RSD		19.000	21.230	1.1	27.950	9.482	15.090	13.520	6.755	4.6

Performance Report

Raw Supportive Data

Analyst: SLS **Level 2 Analyst:** CJZ

Status: Level 2 review released

Matrix: Aqueous

Printed: 11/21/18 1602

Prep Batch: 86791

3005A Draper 3 - Total Recoverable Acid Digestion (ICP-MS)

Start Date: 10/17/2018 1629

End Date: 10/17/2018 2229

Digestion Cup ID: 18-1540

Ext Solvent: 1:1 HNO3/1:1 HCl

Reagents Vol. (mL): 1.0, 0.5

Chem ID: IM9014-01 (1/16/19), IM8942-01 (12/11/18)

Hot Block ID: Hot Block # 10

Start Temperature (°C): 93

Thermometer ID: 1172

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
TQ86791-001	MB	PBW	1	6020B	50		0.0	50			LCS/MS/MSD pipette 315
TQ86791-002	LCS	LCS	1	6020B	50	18-1379Q (7/17/19)	0.5	50			
TJ13026-001	Sample	16C1	1	6020B	50		0.0	50	04/09/2019 1200	10/31/2018	
TJ13026-002	Sample	16MW8	1	6020B	50		0.0	50	04/09/2019 0815	10/31/2018	
TJ13026-003	Sample	16MW9	1	6020B	50		0.0	50	04/09/2019 1115	10/31/2018	
TJ13026-004	Sample	16WC1A	1	6020B	50		0.0	50	04/09/2019 1000	10/31/2018	
TJ13026-004MS	MS	16WC1AS	1	6020B	50	18-1379Q (7/17/19)	0.5	50			
TJ13026-004MD	MSD	16WC1ASD	1	6020B	50	18-1379Q (7/17/19)	0.5	50			
TJ13026-005	Sample	16WDUP	1	6020B	50		0.0	50	04/09/2019 1010	10/31/2018	
TJ13026-006	Sample	16WC1B	1	6020B	50		0.0	50	04/09/2019 0910	10/31/2018	
TJ13026-007	Sample	16-2	1	6020B	50		0.0	50	04/09/2019 1135	10/31/2018	
TJ13026-008	Sample	16-3	1	6020B	50		0.0	50	04/07/2019 1345	10/31/2018	
TJ13026-009	Sample	16-5	1	6020B	50		0.0	50	04/08/2019 0945	10/31/2018	
TJ13026-010	Sample	16WC2B	1	6020B	50		0.0	50	04/08/2019 1050	10/31/2018	
TJ13026-011	Sample	16SPRING	1	6020B	50		0.0	50	04/08/2019 0955	10/31/2018	

(end of report) **Total Samples: 11**

Mercury

- COVER PAGE -
INORGANIC ANALYSIS DATA PACKAGE

Client: Draper Aden Associates

SDG No.: TJ13026 **Method Type:** _____ **SOW No.:** _____

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** _____ **SAS No.:** _____

Lab Sample ID	Client Sample ID	QC Description
TJ13026-001	16C1	
TJ13026-002	16MW8	
TJ13026-003	16MW9	
TJ13026-004	16WC1A	
TJ13026-004S	16WC1AS	Matrix Spike
TJ13026-004SD	16WC1ASD	Matrix Spike Duplicate
TJ13026-005	16WDUP	
TJ13026-006	16WC1B	
TJ13026-007	16-2	
TJ13026-008	16-3	
TJ13026-009	16-5	
TJ13026-010	16WC2B	
TJ13026-011	16SPRING	

Were ICP interelement corrections applied? Yes/No Yes _____

Were ICP background corrections applied? Yes/No Yes _____
If yes - were raw data generated before applications of background corrections? Yes/No No _____

Comments:_____

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in the computer-readable data submitted on diskette has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature.

Signature: _____ Name: _____

Date: _____ Title: _____

- 2a -

INITIAL AND CONTINUING CALIBRATION VERIFICATION

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Initial Calibration Source: VHG

Continuing Calibration Source: Inorganic VenturesInorganic Ventu

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Acceptance Window (%R)	M	Analysis Date	Analysis Time	Run Number
ICV1	Mercury	1.967200	2.000000	98	90.0 - 110.0	CV	10/18/2018	10:47	HG4101818
CCV1	Mercury	1.976700	2.000000	99	80.0 - 120.0	CV	10/18/2018	10:54	HG4101818
CCV2	Mercury	1.989300	2.000000	99	80.0 - 120.0	CV	10/18/2018	11:51	HG4101818
CCV3	Mercury	1.959400	2.000000	98	80.0 - 120.0	CV	10/18/2018	12:19	HG4101818
CCV4	Mercury	1.957200	2.000000	98	80.0 - 120.0	CV	10/18/2018	12:47	HG4101818

- 2b -
CRDL STANDARD FOR AA & ICP

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No:** **SAS No.:**

AA CRDL Standard Source:

ICP CRDL Standard Source:

Sample ID	Analyte	Result ug/L	True Value ug/L	% Recovery	Advisory Limits (%R)	M	Analysis Date	Analysis Time	Run Number
LLCCV									
	Mercury	0.194500	0.200000	97	50 - 150	CV	10/18/2018	10:52	HG4101818

- 3a -

INITIAL AND CONTINUING CALIBRATION BLANK SUMMARY

Client: Draper Aden Associates **SDG No.:** TJ13026

Contract: RAAP HWMU16 **Lab Code:** SHEALY **Case No.:** **SAS No.:**

Sample ID	Analyte	Result ug/L	Acceptance Limit	Conc Qual	LOQ	LOQ	M	Analysis Date	Analysis Time	Run
ICB1	Mercury	-0.033900	+/-2.000000	U	2.000000	2.000000	CV	10/18/2018	10:49	HG4101818
CCB1	Mercury	-0.027200	+/-2.000000	U	2.000000	2.000000	CV	10/18/2018	10:56	HG4101818
CCB2	Mercury	-0.042700	+/-2.000000	U	2.000000	2.000000	CV	10/18/2018	11:53	HG4101818
CCB3	Mercury	-0.015300	+/-2.000000	U	2.000000	2.000000	CV	10/18/2018	12:21	HG4101818
CCB4	Mercury	-0.035100	+/-2.000000	U	2.000000	2.000000	CV	10/18/2018	12:50	HG4101818

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: Hg4 Run Number: HG4101818

Start Date: 10/18/2018 End Date: 10/18/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
BLANK 10/18/18	1.00	1033																X									
STD 0.1- 18HG1373	1.00	1035																X									
STD 0.2- 18HG1372	1.00	1038																X									
STD 1.0- 18HG1371	1.00	1040																X									
STD 2.0- 18HG1370	1.00	1042																X									
STD 5.0- 18HG1369	1.00	1045																X									
ICV1	1.00	1047																X									
ICB1	1.00	1049																X									
LLCCV	1.00	1052																X									
CCV1	1.00	1054																X									
CCB1	1.00	1056																X									
ZZZZZZ	1.00	1059																										
ZZZZZZ	1.00	1101																										
ZZZZZZ	1.00	1104																										
ZZZZZZ	1.00	1106																										
ZZZZZZ	1.00	1108																										
ZZZZZZ	1.00	1111																										
ZZZZZZ	1.00	1113																										
ZZZZZZ	1.00	1115																										
ZZZZZZ	1.00	1118																										
ZZZZZZ	1.00	1120																										
ZZZZZZ	1.00	1122																										
ZZZZZZ	1.00	1125																										
ZZZZZZ	1.00	1127																										
ZZZZZZ	1.00	1130																										
ZZZZZZ	1.00	1132																										
ZZZZZZ	1.00	1134																										
ZZZZZZ	1.00	1137																										
ZZZZZZ	1.00	1139																										
ZZZZZZ	1.00	1141																										
ZZZZZZ	1.00	1144																										
ZZZZZZ	1.00	1146																										
ZZZZZZ	1.00	1148																										
CCV2	1.00	1151																X									
CCB2	1.00	1153																X									
ZZZZZZ	1.00	1155																										

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: Hg4 Run Number: HG4101818

Start Date: 10/18/2018 End Date: 10/18/2018

EPA Sample No.	D/F	Time	% R	Analytes																								
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1158																										
ZZZZZZ	1.00	1200																										
ZZZZZZ	1.00	1203																										
ZZZZZZ	1.00	1205																										
TO86774-001	1.00	1207																X										
TO86774-002	1.00	1210																X										
TJ13026-001	1.00	1212																X										
TJ13026-002	1.00	1214																X										
TJ13026-003	1.00	1217																X										
CCV3	1.00	1219																X										
CCB3	1.00	1221																X										
TJ13026-004	1.00	1224																X										
TJ13026-004S	1.00	1226																X										
TJ13026-004SD	1.00	1228																X										
TJ13026-005	1.00	1231																X										
TJ13026-006	1.00	1233																X										
TJ13026-007	1.00	1236																X										
TJ13026-008	1.00	1238																X										
TJ13026-009	1.00	1240																X										
TJ13026-010	1.00	1243																X										
TJ13026-011	1.00	1245																X										
CCV4	1.00	1247																X										
CCB4	1.00	1250																X										
ZZZZZZ	1.00	1252																										
ZZZZZZ	1.00	1255																										
ZZZZZZ	1.00	1257																										
ZZZZZZ	1.00	1259																										
ZZZZZZ	1.00	1302																										
ZZZZZZ	1.00	1304																										
ZZZZZZ	1.00	1306																										
ZZZZZZ	1.00	1309																										
ZZZZZZ	1.00	1311																										
ZZZZZZ	1.00	1313																										
ZZZZZZ	1.00	1316																										
ZZZZZZ	1.00	1441																										
ZZZZZZ	1.00	1444																										

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ANALYSIS RUN LOG

Client: Draper Aden Associates Contract: RAAP HWMU16

Lab Code: SHEALY Case No.: SAS No.: SDG No.: TJ13026

Instrument ID Number: Hg4 Run Number: HG4101818

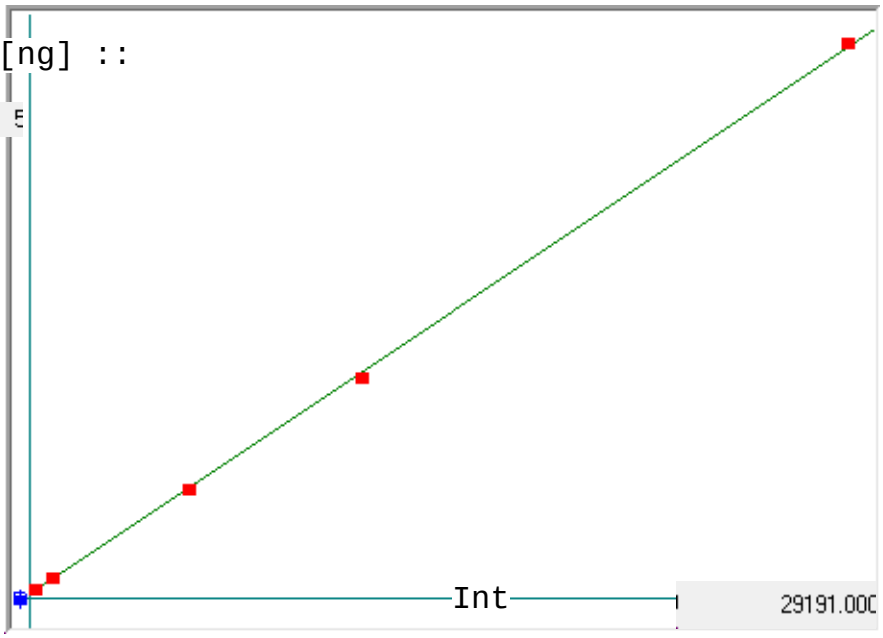
Start Date: 10/18/2018 End Date: 10/18/2018

EPA Sample No.	D/F	Time	% R	Analytes																										
				AL	SB	AS	BA	BE	CD	CA	CR	CO	CU	FE	PB	MG	MN	HG	NI	K	SE	AG	NA	TL	V	ZN	CN
ZZZZZZ	1.00	1446																												
ZZZZZZ	1.00	1448																												
ZZZZZZ	1.00	1451																												
ZZZZZZ	1.00	1453																												
ZZZZZZ	1.00	1455																												
ZZZZZZ	1.00	1458																												
ZZZZZZ	1.00	1500																												
ZZZZZZ	1.00	1502																												
ZZZZZZ	1.00	1505																												
ZZZZZZ	1.00	1507																												
ZZZZZZ	1.00	1509																												
ZZZZZZ	1.00	1512																												
ZZZZZZ	1.00	1514																												
ZZZZZZ	1.00	1517																												
ZZZZZZ	1.00	1519																												
ZZZZZZ	1.00	1521																												
ZZZZZZ	1.00	1524																												
ZZZZZZ	1.00	1526																												
ZZZZZZ	1.00	1528																												
ZZZZZZ	20.00	1531																												
ZZZZZZ	20.00	1533																												
ZZZZZZ	20.00	1535																												
ZZZZZZ	1.00	1538																												
ZZZZZZ	1.00	1540																												
ZZZZZZ	1.00	1542																												
ZZZZZZ	1.00	1545																												
ZZZZZZ	1.00	1547																												

Raw Sample Data

7470A/245.1

Linear



A= 0.0000e+000

B= 1.6899e-004

C= 4.5152e-002

Rho= 0.9999036

Accept= Accepted

Accepted Date=

10/18/18 10:47

Std ID	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3
BLANK 10/18/18	0.000	-0.022	-0.022	-395	0.000	-395		
STD 0.1 18HG1373 10/18/18	0.100	0.089	-0.011	257	0.0 %	257		
STD 0.2 18HG1372 10/18/18	0.200	0.195	-0.005	888	0.0 %	888		
STD 1.0 18HG1371 10/18/18	1.000	1.011	0.011	5717	0.0 %	5717		
STD 2.0 18HG1370 10/18/18	2.000	2.048	0.048	11855	0.0 %	11855		
STD 5.0 18HG1369 10/18/18	5.000	4.978	-0.022	29191	0.0 %	29191		

HG4101818

Method: 7470A/245.1 Operator: SLS Date of Analysis: 18 Oct 2018 10:13:15

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
BLANK 10/18/18 - 1		-	ppb	-395	18 Oct 2018 10:33:23
STD 0.1 18HG1373 10/18/18 - 1		-	ppb	257	18 Oct 2018 10:35:43
STD 0.2 18HG1372 10/18/18 - 1		-	ppb	888	18 Oct 2018 10:38:06
STD 1.0 18HG1371 10/18/18 - 1		-	ppb	5717	18 Oct 2018 10:40:29
STD 2.0 18HG1370 10/18/18 - 1		-	ppb	11855	18 Oct 2018 10:42:51
STD 5.0 18HG1369 10/18/18 - 1		-	ppb	29191	18 Oct 2018 10:45:12
ICV 18HG1375 10/18/18 - 1		98.4% 1.9672	ppb	11374	18 Oct 2018 10:47:34
ICB 10/18/18 - 1		-0.0339	ppb	-468	18 Oct 2018 10:49:54
LLCCV 18HG1372 10/18/18 - 1		97.3% 0.1945	ppb	884	18 Oct 2018 10:52:15
CCV 18HG1370 10/18/18 - 1		98.8% 1.9767	ppb	11430	18 Oct 2018 10:54:38
CCB 10/18/18 - 1		-0.0272	ppb	-428	18 Oct 2018 10:56:59
SnCl2 - 1	IM9020-01	-0.0206	ppb	-389	18 Oct 2018 10:59:21
TQ86772001 - 1	PBW	-0.0017	ppb	-277	18 Oct 2018 11:01:42
TQ86772002 - 1	LCS	1.9922	ppb	11522	18 Oct 2018 11:04:03
TJ16044006 - 1	WW-Pipe 001	-0.0118	ppb	-337	18 Oct 2018 11:06:24
TJ16053001 - 1	PC Influent	0.1170	ppb	425	18 Oct 2018 11:08:45
TJ13013001DIS - 1	WI1810121345 SP-1	23.2740	ppb	137459	18 Oct 2018 11:11:05
TJ13013002DIS - 1	WI1810121345 SP-6	-1.7184	ppb	-10436	18 Oct 2018 11:13:26
TJ13013001 - 1	WI1810121345 SP-1	28.7985	ppb	170151	18 Oct 2018 11:15:48
TJ13013001MS - 1	WI1810121345 SP-1S	28.1758	ppb	166466	18 Oct 2018 11:18:09
TJ13013001MD - 1	WI1810121345 SP-1SD	27.1510	ppb	160402	18 Oct 2018 11:20:31
CCV 18HG1370 10/18/18 - 1		(L)-7.3% -0.1465	ppb	-1134	18 Oct 2018 11:22:54
CCB 10/18/18 - 1		(L)-0.2524	ppb	-1761	18 Oct 2018 11:25:15
TJ13013002 - 1	WI1810121345 SP-6	4.7661	ppb	27937	18 Oct 2018 11:27:37
TQ86809001 - 1	PBW	-0.4006	ppb	-2638	18 Oct 2018 11:30:00
TQ86809002 - 1	LCS	1.9409	ppb	11218	18 Oct 2018 11:32:23
TJ17015001 - 1	LEACHATE	-0.0747	ppb	-709	18 Oct 2018 11:34:43
TJ17015001MS - 1	LEACHATES	1.8312	ppb	10569	18 Oct 2018 11:37:04
TJ17015001MD - 1	LEACHATESD	1.8297	ppb	10560	18 Oct 2018 11:39:25
TJ17016001 - 1	Concept Pack Rideway	-0.0566	ppb	-602	18 Oct 2018 11:41:46
TJ17017001 - 1	Concept Pack	-0.0067	ppb	-307	18 Oct 2018 11:44:07
TQ86775001TC - 1	PBW	-0.0164	ppb	-364	18 Oct 2018 11:46:29
TQ86775002TC - 1	LCS	1.9544	ppb	11298	18 Oct 2018 11:48:51
CCV 18HG1370 10/18/18 - 1		99.5% 1.9893	ppb	11505	18 Oct 2018 11:51:12
CCB 10/18/18 - 1		-0.0427	ppb	-520	18 Oct 2018 11:53:33
TJ11020004TC - 1	JTCLP101018	-0.0120	ppb	-338	18 Oct 2018 11:55:55
TJ11020004MSTC - 1	JTCLP101018S	1.9501	ppb	11273	18 Oct 2018 11:58:17
TJ11020004MDTC - 1	JTCLP101018SD	1.8645	ppb	10766	18 Oct 2018 12:00:40
TJ11020005TC - 1	BSTCLP101018	-0.0245	ppb	-412	18 Oct 2018 12:03:02
TJ12059001TC - 1	SLUDGE	-0.0160	ppb	-362	18 Oct 2018 12:05:25
TQ86774001 - 1	PBW	-0.0106	ppb	-330	18 Oct 2018 12:07:47
TQ86774002 - 1	LCS	1.9165	ppb	11074	18 Oct 2018 12:10:08
TJ13026001 - 1	16C1	-0.0302	ppb	-446	18 Oct 2018 12:12:29
TJ13026002 - 1	16MW8	0.0010	ppb	-261	18 Oct 2018 12:14:50
TJ13026003 - 1	16MW9	-0.0052	ppb	-298	18 Oct 2018 12:17:12
CCV 18HG1370 10/18/18 - 1		98.0% 1.9594	ppb	11328	18 Oct 2018 12:19:33
CCB 10/18/18 - 1		-0.0153	ppb	-358	18 Oct 2018 12:21:54
TJ13026004 - 1	16WC1A	-0.0133	ppb	-346	18 Oct 2018 12:24:16
TJ13026004MS - 1	16WC1AS	1.9353	ppb	11185	18 Oct 2018 12:26:37
TJ13026004MD - 1	16WC1ASD	1.8533	ppb	10700	18 Oct 2018 12:28:59
TJ13026005 - 1	16WDUP	-0.0360	ppb	-480	18 Oct 2018 12:31:21
TJ13026006 - 1	16WC1B	0.3272	ppb	1669	18 Oct 2018 12:33:43
TJ13026007 - 1	16-2	-0.0094	ppb	-323	18 Oct 2018 12:36:05
TJ13026008 - 1	16-3	-0.0059	ppb	-302	18 Oct 2018 12:38:28
TJ13026009 - 1	16-5	-0.0104	ppb	-329	18 Oct 2018 12:40:50
TJ13026010 - 1	16WC2B	-0.0081	ppb	-315	18 Oct 2018 12:43:11
TJ13026011 - 1	16SPRING	-0.0030	ppb	-285	18 Oct 2018 12:45:33
CCV 18HG1370 10/18/18 - 1		97.9% 1.9572	ppb	11315	18 Oct 2018 12:47:55
CCB 10/18/18 - 1		-0.0351	ppb	-475	18 Oct 2018 12:50:16
TQ86773001 - 1	PBW	-0.0128	ppb	-343	18 Oct 2018 12:52:38
TQ86773002 - 1	LCS	2.0573	ppb	11907	18 Oct 2018 12:55:00
TJ11001001 - 1	13MW4	-0.0260	ppb	-421	18 Oct 2018 12:57:21
TJ11001002 - 1	13MWDUP	-0.0023	ppb	-281	18 Oct 2018 12:59:43
TJ11001003 - 1	13MW5	0.0012	ppb	-260	18 Oct 2018 13:02:04
TJ11001003MS - 1	13MW5S	1.9686	ppb	11382	18 Oct 2018 13:04:26
TJ11001003MD - 1	13MW5SD	1.9283	ppb	11144	18 Oct 2018 13:06:49
TJ11001004 - 1	13MW6	-0.0137	ppb	-348	18 Oct 2018 13:09:12
TJ11001005 - 1	13MW7	-0.0159	ppb	-361	18 Oct 2018 13:11:35
CCV 18HG1370 10/18/18 - 1		99.8% 1.9970	ppb	11550	18 Oct 2018 13:13:56
CCB 10/18/18 - 1		-0.0170	ppb	-368	18 Oct 2018 13:16:17
CCV 18HG1370 10/18/18 - 1		98.3% 1.9662	ppb	11368	18 Oct 2018 14:41:42
CCB 10/18/18 - 1		-0.0262	ppb	-422	18 Oct 2018 14:44:02
SnCl2 - 1	IM9020-01	0.0186	ppb	-157	18 Oct 2018 14:46:24
TQ86772001 - 1	PBW	0.0009	ppb	-262	18 Oct 2018 14:48:45
TQ86772002 - 1	LCS	2.0066	ppb	11607	18 Oct 2018 14:51:06
TJ16044006 - 1	WW-Pipe 001	-0.0159	ppb	-361	18 Oct 2018 14:53:27
TJ16053001 - 1	PC Influent	0.1033	ppb	344	18 Oct 2018 14:55:48
TQ86809001 - 1	PBW	-0.0057	ppb	-301	18 Oct 2018 14:58:09
TQ86809002 - 1	LCS	2.0208	ppb	11691	18 Oct 2018 15:00:30
TJ17015001 - 1	LEACHATE	-0.0226	ppb	-401	18 Oct 2018 15:02:52

HG4101818

Method: 7470A/245.1 Operator: SLS Date of Analysis: 18 Oct 2018 10:13:15

Sample ID	Extended ID	Conc.	Units	µ Abs.	Date
TJ17015001MS - 1	LEACHATES	1.8847	ppb	10886	18 Oct 2018 15:05:13
TJ17015001MD - 1	LEACHATESD	1.8984	ppb	10967	18 Oct 2018 15:07:35
CCV 18HG1370 10/18/18 - 1		99.7% 1.9932	ppb	11528	18 Oct 2018 15:09:58
CCB 10/18/18 - 1		-0.0208	ppb	-390	18 Oct 2018 15:12:18
TJ17016001 - 1	Concept Pack Rideway	-0.0013	ppb	-275	18 Oct 2018 15:14:40
TJ17017001 - 1	Concept Pack	-0.0091	ppb	-321	18 Oct 2018 15:17:03
TQ86775001TC - 1	PBW	-0.0196	ppb	-383	18 Oct 2018 15:19:26
TQ86775002TC - 1	LCS	1.9892	ppb	11504	18 Oct 2018 15:21:46
TJ13026006 - 1	16WC1B	0.3218	ppb	1637	18 Oct 2018 15:24:08
TJ13013001DIS(10) - 1	WI1810121345 SP-1	3.7529	ppb	21941	18 Oct 2018 15:26:29
TJ13013002DIS - 1	WI1810121345 SP-6	0.2584	ppb	1262	18 Oct 2018 15:28:50
TJ13013001(20) - 1	WI1810121345 SP-1	2.1087	ppb	12211	18 Oct 2018 15:31:11
TJ13013001MS(20) - 1	WI1810121345 SP-1S	2.1463	ppb	12434	18 Oct 2018 15:33:32
TJ13013001MD(20) - 1	WI1810121345 SP-1SD	2.1690	ppb	12568	18 Oct 2018 15:35:53
CCV 18HG1370 10/18/18 - 1		96.8% 1.9351	ppb	11184	18 Oct 2018 15:38:15
CCB 10/18/18 - 1		-0.0243	ppb	-411	18 Oct 2018 15:40:35
TJ13013002 - 1	WI1810121345 SP-6	5.1158	ppb	30006	18 Oct 2018 15:42:57
CCV 18HG1370 10/18/18 - 1		86.1% 1.7222	ppb	9924	18 Oct 2018 15:45:20
CCB 10/18/18 - 1		-0.0400	ppb	-504	18 Oct 2018 15:47:40

Raw Supportive Data

Analyst: JMH **Level 2 Analyst:** CJZ

Status: Level 2 review released

Matrix: ERROR

Prep Batch: 86810

7470A-P - Mercury Preparation Linked: 7470A,245.1

Printed: 11/21/18 1604

Start Date: 10/17/2018 1639

End Date: 10/17/2018 1839

Digestion Cup ID: 18-2028

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 6

Chem ID: 18-1657, IM9014-01, IM9003-01, IM8997-01, IM9022-01

Start Temperature (°C): 96

Thermometer ID: 1132

End Temperature (°C): 95

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
TQ86810-004	Standard	Conc = 0.0 mg/L	1	245.1	40.000		0.0	50			CAL 0
TQ86810-104	Standard	Conc = 0.0050 mg/L	1	245.1	40.000	18HG1369	0.0	50			10/18/18
TQ86810-204	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	18HG1370	0.0	50			10/18/18
TQ86810-304	Standard	Conc = 0.0010 mg/L	1	245.1	40.000	18HG1371	0.0	50			10/18/18
TQ86810-404	Standard	Conc = 0.00020 mg/L	1	245.1	40.000	18HG1372	0.0	50			10/18/18
TQ86810-504	Standard	Conc = 0.00010 mg/L	1	245.1	40.000	18HG1373	0.0	50			10/18/18
TQ86810-604	Standard	Conc = 0.0 mg/L	1	245.1	40.000		0.0	50			CCB
TQ86810-704	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	18HG1370	0.0	50			CCV
TQ86810-804	Standard	Conc = 0.0 mg/L	1	245.1	40.000		0.0	50			ICB
TQ86810-904	Standard	Conc = 0.0020 mg/L	1	245.1	40.000	18HG1375	0.0	50			ICV

(end of report) **Total Samples: 0**

Analyst: JMH **Level 2 Analyst:** CJZ

Status: Level 2 review released

Matrix: Aqueous

Prep Batch: 86774
7470A-P Draper - Mercury Preparation

Printed: 11/21/18 1603

Start Date: 10/17/2018 1351

End Date: 10/17/2018 1551

Digestion Cup ID: 18-1955

Ext Solvent: H2SO4/1:1HNO3/KMnO4/K2S2O8/NaCl-NH2OH-HCl

Reagents Vol. (mL): 2.0, 2.0, 6.0, 3.2, 2.4

Hot Block ID: Hot Block # 6

Chem ID: 18-1657, IM9014-01, IM9003-01, IM8997-01,IM9022-01

Start Temperature (°C): 93

Thermometer ID:1132

Sample ID	QC Code	Client Sample ID	Run	Analysis Method	Initial Vol. (mL)	Spike ID	Spike Vol. (mL)	Final Vol. (mL)	Holding Time Expires	Analytical Due Date	Comments
TQ86774-001	MB	PBW	1	7470A	40.000		0.0	50			LCS/MS/MSD Pipet ID: 315
TQ86774-002	LCS	LCS	1	7470A	40.000	18HG1360 (11/13/18)	1.0	50			
TJ13026-001	Sample	16C1	1	7470A	40.000		0.0	50	11/08/2018 1200	10/31/2018	
TJ13026-002	Sample	16MW8	1	7470A	40.000		0.0	50	11/08/2018 0815	10/31/2018	
TJ13026-003	Sample	16MW9	1	7470A	40.000		0.0	50	11/08/2018 1115	10/31/2018	
TJ13026-004	Sample	16WC1A	1	7470A	40.000		0.0	50	11/08/2018 1000	10/31/2018	
TJ13026-004MS	MS	16WC1AS	1	7470A	40.000	18HG1360 (11/13/18)	1.0	50			
TJ13026-004MD	MSD	16WC1ASD	1	7470A	40.000	18HG1360 (11/13/18)	1.0	50			
TJ13026-005	Sample	16WDUP	1	7470A	40.000		0.0	50	11/08/2018 1010	10/31/2018	
TJ13026-006	Sample	16WC1B	1	7470A	40.000		0.0	50	11/08/2018 0910	10/31/2018	
TJ13026-007	Sample	16-2	1	7470A	40.000		0.0	50	11/08/2018 1135	10/31/2018	
TJ13026-008	Sample	16-3	1	7470A	40.000		0.0	50	11/06/2018 1345	10/31/2018	
TJ13026-009	Sample	16-5	1	7470A	40.000		0.0	50	11/07/2018 0945	10/31/2018	
TJ13026-010	Sample	16WC2B	1	7470A	40.000		0.0	50	11/07/2018 1050	10/31/2018	
TJ13026-011	Sample	16SPRING	1	7470A	40.000		0.0	50	11/07/2018 0955	10/31/2018	
TQ86774-004	Standard	Conc = 0.0 mg/L	1	7470A	40.000		0.0	50			PB 86810

(end of report) **Total Samples: 11**

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460182
Eurofins Lancaster Laboratories Environmental, LLC

2425 New Holland Pike
Lancaster, PA 17601

Owner: EUROFINS SCIENTIFIC
Responsible Official: DUANE LUCKENBILL

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 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: **June 15, 2018**
Expiration Date: **June 14, 2019**
Certificate # 9756

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

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.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 18	TOTAL GASEOUS ORGANIC COMPOUNDS	LA DEQ	EPA 25	TOTAL GASEOUS NONMETHANE ORGANIC COMPOUNDS (TGNMO)	LA DEQ
EPA TO-14A 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-14A 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	LA DEQ	EPA TO-14A 2nd Ed.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-14A 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ	EPA TO-14A 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	LA DEQ	EPA TO-14A 2nd Ed.	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-14A 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-14A 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ
EPA TO-14A 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ	EPA TO-14A 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-14A 2nd Ed.	BENZENE	LA DEQ	EPA TO-14A 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-14A 2nd Ed.	CARBON TETRACHLORIDE	LA DEQ	EPA TO-14A 2nd Ed.	CHLOROBENZENE	LA DEQ
EPA TO-14A 2nd Ed.	CHLOROETHANE (ETHYL CHLORIDE)	LA DEQ	EPA TO-14A 2nd Ed.	CHLOROFORM	LA DEQ
EPA TO-14A 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ	EPA TO-14A 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ
EPA TO-14A 2nd Ed.	ETHYLBENZENE	LA DEQ	EPA TO-14A 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ
EPA TO-14A 2nd Ed.	M+P-XYLENE	LA DEQ	EPA TO-14A 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-14A 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-14A 2nd Ed.	O-XYLENE	LA DEQ	EPA TO-14A 2nd Ed.	STYRENE	LA DEQ
EPA TO-14A 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ	EPA TO-14A 2nd Ed.	TOLUENE	LA DEQ
EPA TO-14A 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ	EPA TO-14A 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ
EPA TO-14A 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ	EPA TO-14A 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	LA DEQ
EPA TO-14A 2nd Ed.	VINYL CHLORIDE (CHLOROETHENE)	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	BROMODICHLOROMETHANE	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	CARBON DISULFIDE	LA DEQ
EPA TO-14A 2nd Ed. - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-14A 2nd Ed. - EXTENDED	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed.	1,1,1-TRICHLOROETHANE	LA DEQ	EPA TO-15 2nd Ed.	1,1,2,2-TETRACHLOROETHANE	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.	1,1,2-TRICHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	1,1-DICHLOROETHANE	LA DEQ	EPA TO-15 2nd Ed.	1,1-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	1,2,4-TRICHLOROBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,2,4-TRIMETHYLBENZENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
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-DICHLOROETHANE (ETHYLENE DICHLORIDE)	LA DEQ	EPA TO-15 2nd Ed.	1,2-DICHLOROPROPANE	LA DEQ
EPA TO-15 2nd Ed.	1,3,5-TRIMETHYLBENZENE	LA DEQ	EPA TO-15 2nd Ed.	1,3-BUTADIENE	LA DEQ
EPA TO-15 2nd Ed.	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	LA DEQ	EPA TO-15 2nd Ed.	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	LA DEQ
EPA TO-15 2nd Ed.	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	LA DEQ	EPA TO-15 2nd Ed.	2-BUTANONE (METHYL ETHYL KETONE, MEK)	LA DEQ
EPA TO-15 2nd Ed.	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	LA DEQ	EPA TO-15 2nd Ed.	ACETONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ACROLEIN (PROPENAL)	LA DEQ	EPA TO-15 2nd Ed.	ACRYLONITRILE	LA DEQ
EPA TO-15 2nd Ed.	ALLYL CHLORIDE (3-CHLOROPROPENE)	LA DEQ	EPA TO-15 2nd Ed.	BENZENE	LA DEQ
EPA TO-15 2nd Ed.	BROMODICHLOROMETHANE	LA DEQ	EPA TO-15 2nd Ed.	BROMOFORM	LA DEQ
EPA TO-15 2nd Ed.	CARBON DISULFIDE	LA DEQ	EPA TO-15 2nd Ed.	CARBON TETRACHLORIDE	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.	CHLOROFORM	LA DEQ	EPA TO-15 2nd Ed.	CIS-1,2-DICHLOROETHYLENE	LA DEQ
EPA TO-15 2nd Ed.	CIS-1,3-DICHLOROPROPENE	LA DEQ	EPA TO-15 2nd Ed.	CYCLOHEXANE	LA DEQ
EPA TO-15 2nd Ed.	ETHYL ACRYLATE	LA DEQ	EPA TO-15 2nd Ed.	ETHYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	LA DEQ	EPA TO-15 2nd Ed.	HEXACHLOROETHANE	LA DEQ
EPA TO-15 2nd Ed.	IODOMETHANE (METHYL IODIDE)	LA DEQ	EPA TO-15 2nd Ed.	ISOPROPYLBENZENE	LA DEQ
EPA TO-15 2nd Ed.	M+P-XYLENE	LA DEQ	EPA TO-15 2nd Ed.	METHYL BROMIDE (BROMOMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	METHYL CHLORIDE (CHLOROMETHANE)	LA DEQ	EPA TO-15 2nd Ed.	METHYL METHACRYLATE	LA DEQ
EPA TO-15 2nd Ed.	METHYL TERT-BUTYL ETHER (MTBE)	LA DEQ	EPA TO-15 2nd Ed.	METHYLENE CHLORIDE (DICHLOROMETHANE)	LA DEQ
EPA TO-15 2nd Ed.	O-XYLENE	LA DEQ	EPA TO-15 2nd Ed.	PROPYLENE (PROPENE)	LA DEQ
EPA TO-15 2nd Ed.	STYRENE	LA DEQ	EPA TO-15 2nd Ed.	TETRACHLOROETHENE (PERCHLOROETHENE)	LA DEQ
EPA TO-15 2nd Ed.	TOLUENE	LA DEQ	EPA TO-15 2nd Ed.	TRANS-1,2-DICHLOROETHENE	LA DEQ
EPA TO-15 2nd Ed.	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	LA DEQ	EPA TO-15 2nd Ed.	TRICHLOROETHENE (TRICHLOROETHYLENE)	LA DEQ
EPA TO-15 2nd Ed.	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	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.	XYLENE (TOTAL)	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	2-CHLOROTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	2-HEXANONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	4-ETHYLTOLUENE	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	ACETONE	LA DEQ
EPA TO-15 2nd Ed. - EXTENDED	CHLORODIFLUOROMETHANE (FREON-22)	LA DEQ	EPA TO-15 2nd Ed. - EXTENDED	NAPHTHALENE	LA DEQ

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

AIR

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA TO-15 2nd Ed. - EXTENDED	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	LA DEQ			

DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA	EPA 200.7 REV 4.4	COPPER	PA
EPA 200.7 REV 4.4	IRON	PA	EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MANGANESE	PA	EPA 200.7 REV 4.4	NICKEL	PA
EPA 200.7 REV 4.4	SILVER	PA	EPA 200.7 REV 4.4	SODIUM	PA
EPA 200.7 REV 4.4	ZINC	PA	EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	ARSENIC	PA	EPA 200.8 REV 5.4	BERYLLIUM	PA
EPA 200.8 REV 5.4	CADMIUM	PA	EPA 200.8 REV 5.4	CHROMIUM	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	SELENIUM	PA
EPA 200.8 REV 5.4	THALLIUM	PA	EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	CHLORIDE	PA	EPA 300.0 REV 2.1	FLUORIDE	PA
EPA 300.0 REV 2.1	NITRATE AS N	PA	EPA 300.0 REV 2.1	NITRITE AS N	PA
EPA 300.0 REV 2.1	SULFATE	PA	EPA 335.4 REV 1.0	CYANIDE	PA
EPA 353.2 REV 2	NITRATE AS N	PA	EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 353.2 REV 2	NITRITE AS N	PA	EPA 504.1 REV 1.1	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 504.1 REV 1.1	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 524.2 REV 4.1	1,1,1-TRICHLOROETHANE	PA
EPA 524.2 REV 4.1	1,1,2-TRICHLOROETHANE	PA	EPA 524.2 REV 4.1	1,1-DICHLOROETHYLENE	PA
EPA 524.2 REV 4.1	1,2,4-TRICHLOROBENZENE	PA	EPA 524.2 REV 4.1	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 524.2 REV 4.1	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 524.2 REV 4.1	1,2-DICHLOROPROPANE	PA
EPA 524.2 REV 4.1	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 524.2 REV 4.1	BENZENE	PA
EPA 524.2 REV 4.1	BROMODICHLOROMETHANE	PA	EPA 524.2 REV 4.1	BROMOFORM	PA
EPA 524.2 REV 4.1	CARBON TETRACHLORIDE	PA	EPA 524.2 REV 4.1	CHLOROBENZENE	PA
EPA 524.2 REV 4.1	CHLORODIBROMOMETHANE	PA	EPA 524.2 REV 4.1	CHLOROFORM	PA
EPA 524.2 REV 4.1	CIS-1,2-DICHLOROETHYLENE	PA	EPA 524.2 REV 4.1	ETHYLBENZENE	PA
EPA 524.2 REV 4.1	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 524.2 REV 4.1	STYRENE	PA
EPA 524.2 REV 4.1	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 524.2 REV 4.1	TOLUENE	PA
EPA 524.2 REV 4.1	TOTAL TRIHALOMETHANES (TTHMS)	PA	EPA 524.2 REV 4.1	TRANS-1,2-DICHLOROETHENE	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
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Virginia Laboratory ID: 460182
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Expiration Date: June 14, 2019

DRINKING WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 524.2 REV 4.1	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 524.2 REV 4.1	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 524.2 REV 4.1	XYLENE (TOTAL)	PA	EPA 525.2 REV 2	ALACHLOR	PA
EPA 525.2 REV 2	ATRAZINE	PA	EPA 525.2 REV 2	BENZO(A)PYRENE	PA
EPA 525.2 REV 2	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 525.2 REV 2	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA
EPA 525.2 REV 2	ENDRIN	PA	EPA 525.2 REV 2	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA
EPA 525.2 REV 2	HEPTACHLOR	PA	EPA 525.2 REV 2	HEPTACHLOR EPOXIDE	PA
EPA 525.2 REV 2	HEXACHLOROBENZENE	PA	EPA 525.2 REV 2	HEXACHLOROCYCLOPENTADIENE	PA
EPA 525.2 REV 2	METHOXYCHLOR	PA	EPA 525.2 REV 2	SIMAZINE	PA
EPA 531.1 REV 3.1	CARBOFURAN (FURADEN)	PA	EPA 531.1 REV 3.1	OXAMYL	PA
SM 2130 B-2011	TURBIDITY	PA	SM 2320 B-2011	ALKALINITY AS CACO3	PA
SM 2510 B-2011	CONDUCTIVITY	PA	SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	PA
SM 4500-F⁻ C-2011	FLUORIDE	PA	SM 4500-H+ B-2011	PH	PA
SM 4500-P E-2011	ORTHOPHOSPHATE AS P	PA	SM 5540 C-2011	SURFACTANTS - MBAS	PA
SM 9215 B-2004	HETEROTROPHIC PLATE COUNT	PA	SM 9223 COLILERT P/A	ESCHERICHIA COLI	PA
SM 9223 COLILERT P/A	TOTAL COLIFORMS	PA			

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	PA	EPA 160.4	RESIDUE-VOLATILE	PA
EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA	EPA 1613 B	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	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	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	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-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	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-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	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-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	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-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 1613 B	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA	EPA 1613 B	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 1613 B	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA	EPA 1613 B	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 1613 B	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA	EPA 1631 E	MERCURY	PA

Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1664 A	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA	EPA 1664 A	TOTAL PETROLEUM HYDROCARBONS (TPH) (AS NONPOLAR MATERIAL, SGT-HEM)	PA
EPA 1666 A	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 1666 A	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA
EPA 1666 A	ETHYL ACETATE	PA	EPA 1666 A	ISOBUTYRALDEHYDE	PA
EPA 1666 A	ISOPROPYL ACETATE	PA	EPA 1666 A	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 1666 A	METHYL FORMATE	PA	EPA 1666 A	N-AMYL ACETATE	PA
EPA 1666 A	N-AMYL ALCOHOL	PA	EPA 1666 A	N-BUTYL-ACETATE	PA
EPA 1666 A	N-HEPTANE	PA	EPA 1666 A	N-HEXANE	PA
EPA 1666 A	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA	EPA 1666 A	TETRAHYDROFURAN (THF)	PA
EPA 1666 A	XYLENE (TOTAL)	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',5,5'-OCTACHLOROBIPHENYL (BZ-194)	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',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	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',5-HEPTACHLOROBIPHENYL (BZ-170)	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',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	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'-OCTACHLOROBIPHENYL (BZ-199)	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',6-OCTACHLOROBIPHENYL (BZ-198)	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'-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	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',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA

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EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA

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NON-POTABLE WATER

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EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA

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EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA

Commonwealth of Virginia

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Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 1671 A	2-METHOXYETHANOL (METHYL CELLOSOLVE)	PA	EPA 1671 A	ACETONITRILE	PA
EPA 1671 A	DIETHYLAMINE	PA	EPA 1671 A	DIMETHYL SULFOXIDE	PA
EPA 1671 A	ETHANOL	PA	EPA 1671 A	METHANOL	PA
EPA 1671 A	N-PROPANOL (1-PROPANOL)	PA	EPA 1671 A	TRIETHYLAMINE	PA
EPA 180.1 REV 2	TURBIDITY	PA	EPA 200.2 REV 2.8	PREP: SAMPLE PREPARATION PROCEDURE FOR SPECTROCHEMICAL DETERMINATION OF TOTAL RECOVERABLE ELEMENTS	PA
EPA 200.7 REV 4.4	ALUMINUM	PA	EPA 200.7 REV 4.4	ANTIMONY	PA
EPA 200.7 REV 4.4	ARSENIC	PA	EPA 200.7 REV 4.4	BARIUM	PA
EPA 200.7 REV 4.4	BERYLLIUM	PA	EPA 200.7 REV 4.4	BORON	PA
EPA 200.7 REV 4.4	CADMIUM	PA	EPA 200.7 REV 4.4	CALCIUM	PA
EPA 200.7 REV 4.4	CHROMIUM	PA	EPA 200.7 REV 4.4	COBALT	PA
EPA 200.7 REV 4.4	COPPER	PA	EPA 200.7 REV 4.4	IRON	PA
EPA 200.7 REV 4.4	LEAD	PA	EPA 200.7 REV 4.4	MAGNESIUM	PA
EPA 200.7 REV 4.4	MANGANESE	PA	EPA 200.7 REV 4.4	MOLYBDENUM	PA
EPA 200.7 REV 4.4	NICKEL	PA	EPA 200.7 REV 4.4	POTASSIUM	PA
EPA 200.7 REV 4.4	SELENIUM	PA	EPA 200.7 REV 4.4	SILVER	PA
EPA 200.7 REV 4.4	SODIUM	PA	EPA 200.7 REV 4.4	THALLIUM	PA
EPA 200.7 REV 4.4	TIN	PA	EPA 200.7 REV 4.4	TITANIUM	PA
EPA 200.7 REV 4.4	VANADIUM	PA	EPA 200.7 REV 4.4	ZINC	PA
EPA 200.8 REV 5.4	ALUMINUM	PA	EPA 200.8 REV 5.4	ANTIMONY	PA
EPA 200.8 REV 5.4	ARSENIC	PA	EPA 200.8 REV 5.4	BARIUM	PA
EPA 200.8 REV 5.4	BERYLLIUM	PA	EPA 200.8 REV 5.4	CADMIUM	PA
EPA 200.8 REV 5.4	CHROMIUM	PA	EPA 200.8 REV 5.4	COBALT	PA
EPA 200.8 REV 5.4	COPPER	PA			

Commonwealth of Virginia

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Scope of Accreditation

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Eurofins Lancaster Laboratories Environmental, LLC
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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 200.8 REV 5.4	LEAD	PA	EPA 200.8 REV 5.4	MANGANESE	PA
EPA 200.8 REV 5.4	MOLYBDENUM	PA	EPA 200.8 REV 5.4	NICKEL	PA
EPA 200.8 REV 5.4	SELENIUM	PA	EPA 200.8 REV 5.4	SILVER	PA
EPA 200.8 REV 5.4	THALLIUM	PA	EPA 200.8 REV 5.4	VANADIUM	PA
EPA 200.8 REV 5.4	ZINC	PA	EPA 200.8 REV 5.4 - EXTENDED	BORON	PA
EPA 200.8 REV 5.4 - EXTENDED	CALCIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	IRON	PA
EPA 200.8 REV 5.4 - EXTENDED	MAGNESIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	POTASSIUM	PA
EPA 200.8 REV 5.4 - EXTENDED	SODIUM	PA	EPA 200.8 REV 5.4 - EXTENDED	TIN	PA
EPA 200.8 REV 5.4 - EXTENDED	TITANIUM	PA	EPA 245.1 REV 3	MERCURY	PA
EPA 300.0 REV 2.1	BROMIDE	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 3005 A	PREP: ACID DIGESTION OF WATERS FOR TOTAL RECOVERABLE OR DISSOLVED METALS	PA	EPA 3010 A	PREP: ACID DIGESTION OF AQUEOUS SAMPLES AND EXTRACTS FOR TOTAL 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 3510 C	PREP: LIQUID-LIQUID EXTRACTION	PA
EPA 3511	PREP: ORGANIC EXTRACTION AND SAMPLE PREPARATION	PA	EPA 3520 C	PREP: CONTINUOUS LIQUID-LIQUID EXTRACTION	PA
EPA 353.2 REV 2	NITRATE AS N	PA	EPA 353.2 REV 2	NITRATE/NITRITE	PA
EPA 353.2 REV 2	NITRITE AS N	PA	EPA 3620 B	PREP: FLORISIL CLEANUP	PA
EPA 3630 C	PREP: SILICA GEL CLEANUP	PA	EPA 365.1 REV 2	PHOSPHORUS, TOTAL	PA
EPA 365.3	ORTHOPHOSPHATE AS P	PA	EPA 410.4 REV 2	CHEMICAL OXYGEN DEMAND (COD)	PA
EPA 420.4 REV 1	TOTAL PHENOLICS	PA	EPA 5030	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 6010 B	ALUMINUM	PA	EPA 6010 B	ANTIMONY	PA
EPA 6010 B	ARSENIC	PA	EPA 6010 B	BARIUM	PA
EPA 6010 B	BERYLLIUM	PA	EPA 6010 B	BORON	PA
EPA 6010 B	CADMIUM	PA	EPA 6010 B	CALCIUM	PA
EPA 6010 B	CHROMIUM	PA	EPA 6010 B	COBALT	PA
EPA 6010 B	COPPER	PA	EPA 6010 B	IRON	PA
EPA 6010 B	LEAD	PA	EPA 6010 B	LITHIUM	PA
EPA 6010 B	MAGNESIUM	PA	EPA 6010 B	MANGANESE	PA
EPA 6010 B	MOLYBDENUM	PA	EPA 6010 B	NICKEL	PA
EPA 6010 B	POTASSIUM	PA	EPA 6010 B	SELENIUM	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6010 B	SILVER	PA	EPA 6010 B	SODIUM	PA
EPA 6010 B	STRONTIUM	PA	EPA 6010 B	THALLIUM	PA
EPA 6010 B	TIN	PA	EPA 6010 B	TITANIUM	PA
EPA 6010 B	VANADIUM	PA	EPA 6010 B	ZINC	PA
EPA 6010 B - EXTENDED	ZIRCONIUM	PA	EPA 6010 C	ALUMINUM	PA
EPA 6010 C	ANTIMONY	PA	EPA 6010 C	ARSENIC	PA
EPA 6010 C	BARIUM	PA	EPA 6010 C	BERYLLIUM	PA
EPA 6010 C	BORON	PA	EPA 6010 C	CADMIUM	PA
EPA 6010 C	CALCIUM	PA	EPA 6010 C	CHROMIUM	PA
EPA 6010 C	COBALT	PA	EPA 6010 C	COPPER	PA
EPA 6010 C	IRON	PA	EPA 6010 C	LEAD	PA
EPA 6010 C	LITHIUM	PA	EPA 6010 C	MAGNESIUM	PA
EPA 6010 C	MANGANESE	PA	EPA 6010 C	MOLYBDENUM	PA
EPA 6010 C	NICKEL	PA	EPA 6010 C	POTASSIUM	PA
EPA 6010 C	SELENIUM	PA	EPA 6010 C	SILVER	PA
EPA 6010 C	SODIUM	PA	EPA 6010 C	STRONTIUM	PA
EPA 6010 C	THALLIUM	PA	EPA 6010 C	TIN	PA
EPA 6010 C	TITANIUM	PA	EPA 6010 C	VANADIUM	PA
EPA 6010 C	ZINC	PA	EPA 6010 C - EXTENDED	ZIRCONIUM	PA
EPA 602	BENZENE	PA	EPA 602	ETHYLBENZENE	PA
EPA 602	TOLUENE	PA	EPA 602	XYLENE (TOTAL)	PA
EPA 6020 A	ALUMINUM	PA	EPA 6020 A	ANTIMONY	PA
EPA 6020 A	ARSENIC	PA	EPA 6020 A	BARIUM	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA	EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	TITANIUM	PA	EPA 608	4,4'-DDD	PA
EPA 608	4,4'-DDE	PA	EPA 608	4,4'-DDT	PA
EPA 608	ALDRIN	PA	EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 608	AROCLOR-1016 (PCB-1016)	PA	EPA 608	AROCLOR-1221 (PCB-1221)	PA
EPA 608	AROCLOR-1232 (PCB-1232)	PA	EPA 608	AROCLOR-1242 (PCB-1242)	PA
EPA 608	AROCLOR-1248 (PCB-1248)	PA	EPA 608	AROCLOR-1254 (PCB-1254)	PA
EPA 608	AROCLOR-1260 (PCB-1260)	PA	EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA
EPA 608	CHLORDANE (TECH.)	PA	EPA 608	DELTA-BHC	PA
EPA 608	DIELDRIN	PA	EPA 608	ENDOSULFAN I	PA
EPA 608	ENDOSULFAN II	PA	EPA 608	ENDOSULFAN SULFATE	PA
EPA 608	ENDRIN	PA	EPA 608	ENDRIN ALDEHYDE	PA
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 608	HEPTACHLOR	PA
EPA 608	HEPTACHLOR EPOXIDE	PA	EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 622	AZINPHOS-METHYL (GUTHION)	PA	EPA 622	BOLSTAR (SULPROFOS)	PA
EPA 622	CHLORPYRIFOS	PA	EPA 622	DEMETON-O	PA
EPA 622	DEMETON-S	PA	EPA 622	DIAZINON	PA
EPA 622	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 622	DISULFOTON	PA
EPA 622	ETHOPROP	PA	EPA 622	FENSULFOTHION	PA
EPA 622	FENTHION	PA	EPA 622	MERPHOS	PA
EPA 622	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 622	MEVINPHOS	PA
EPA 622	NALED	PA	EPA 622	PHORATE	PA
EPA 622	STIROFOS (TETRACHLORVINPOS, GARDONA) (MIXED ISOMERS)	PA	EPA 624	1,1,1-TRICHLOROETHANE	PA
EPA 624	1,1,2,2-TETRACHLOROETHANE	PA	EPA 624	1,1,2-TRICHLOROETHANE	PA
EPA 624	1,1-DICHLOROETHANE	PA	EPA 624	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 624	1,2-DICHLOROPROPANE	PA
EPA 624	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA	EPA 624	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 624	2-CHLOROETHYL VINYL ETHER	PA	EPA 624	ACROLEIN (PROPENAL)	PA
EPA 624	ACRYLONITRILE	PA	EPA 624	BENZENE	PA
EPA 624	BROMODICHLOROMETHANE	PA	EPA 624	BROMOFORM	PA
EPA 624	CARBON TETRACHLORIDE	PA	EPA 624	CHLOROBENZENE	PA
EPA 624	CHLORODIBROMOMETHANE	PA	EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 624	CHLOROFORM	PA	EPA 624	CIS-1,3-DICHLOROPROPENE	PA
EPA 624	ETHYLBENZENE	PA	EPA 624	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	PA			

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EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 624	TOLUENE	PA	EPA 624	TRANS-1,2-DICHLOROETHENE	PA
EPA 624	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA	EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 624	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	PA	EPA 625	1,2,4-TRICHLOROBENZENE	PA
EPA 625	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 625	2,4,6-TRICHLOROPHENOL	PA
EPA 625	2,4-DICHLOROPHENOL	PA	EPA 625	2,4-DIMETHYLPHENOL	PA
EPA 625	2,4-DINITROPHENOL	PA	EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 625	2-CHLORONAPHTHALENE	PA
EPA 625	2-CHLOROPHENOL	PA	EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 625	2-METHYLPHENOL (O-CRESOL)	PA	EPA 625	2-NITROPHENOL	PA
EPA 625	3,3'-DICHLOROBENZIDINE	PA	EPA 625	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 625	4-CHLORO-3-METHYLPHENOL	PA	EPA 625	4-CHLOROPHENYL PHENYLETHER	PA
EPA 625	4-NITROPHENOL	PA	EPA 625	ACENAPHTHENE	PA
EPA 625	ACENAPHTHYLENE	PA	EPA 625	ANTHRACENE	PA
EPA 625	BENZIDINE	PA	EPA 625	BENZO(A)ANTHRACENE	PA
EPA 625	BENZO(A)PYRENE	PA	EPA 625	BENZO(B)FLUORANTHENE	PA
EPA 625	BENZO(G,H,I)PERYLENE	PA	EPA 625	BENZO(K)FLUORANTHENE	PA
EPA 625	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 625	BIS(2-CHLOROETHYL) ETHER	PA
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 625	BUTYL BENZYL PHTHALATE	PA
EPA 625	CHRYSENE	PA	EPA 625	DI-N-BUTYL PHTHALATE	PA
EPA 625	DI-N-OCTYL PHTHALATE	PA	EPA 625	DIBENZO(A,H) ANTHRACENE	PA
EPA 625	DIETHYL PHTHALATE	PA	EPA 625	DIMETHYL PHTHALATE	PA
EPA 625	FLUORANTHENE	PA	EPA 625	FLUORENE	PA
EPA 625	HEXACHLOROBENZENE	PA	EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 625	HEXACHLOROCYCLOPENTADIENE	PA	EPA 625	HEXACHLOROETHANE	PA
EPA 625	INDENO(1,2,3-CD) PYRENE	PA	EPA 625	ISOPHORONE	PA
EPA 625	N-NITROSODI-N-PROPYLAMINE	PA	EPA 625	N-NITROSODIMETHYLAMINE	PA
EPA 625	N-NITROSODIPHENYLAMINE	PA	EPA 625	NAPHTHALENE	PA
EPA 625	NITROBENZENE	PA	EPA 625	PENTACHLOROPHENOL	PA
EPA 625	PHENANTHRENE	PA	EPA 625	PHENOL	PA
EPA 625	PYRENE	PA	EPA 625 - EXTENDED	1,2-DIPHENYLHYDRAZINE	PA
EPA 625 - EXTENDED	4-METHYLPHENOL (P-CRESOL)	PA	EPA 625 - EXTENDED	ACETOPHENONE	PA

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VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
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Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 625 - EXTENDED	ANILINE	PA	EPA 625 - EXTENDED	CARBAZOLE	PA
EPA 625 - EXTENDED	N-DECANE	PA	EPA 625 - EXTENDED	N-OCTADECANE	PA
EPA 625 - EXTENDED	PYRIDINE	PA	EPA 6850	PERCHLORATE	PA
EPA 7196 A	CHROMIUM VI	PA	EPA 7199	CHROMIUM VI	PA
EPA 7470 A	MERCURY	PA	EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHANOL	PA	EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 B	METHANOL	PA	EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 C	ETHANOL	PA	EPA 8015 C	ETHYLENE GLYCOL	PA
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	METHANOL	PA	EPA 8015 C - EXTENDED	PROPYLENE GLYCOL	PA
EPA 8015 C - EXTENDED	TRIETHYLENE GLYCOL	PA	EPA 8021 B	BENZENE	PA
EPA 8021 B	ETHYLBENZENE	PA	EPA 8021 B	ISOPROPYLBENZENE	PA
EPA 8021 B	M+P-XYLENE	PA	EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	O-XYLENE	PA	EPA 8021 B	TOLUENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA	EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDD	PA	EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	4,4'-DDT	PA	EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	CHLORDANE (TECH.)	PA
EPA 8081 A	DELTA-BHC	PA	EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN I	PA	EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA	EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA	EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR	PA	EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	METHOXYCHLOR	PA	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 A - EXTENDED	KEPONE	PA	EPA 8081 B	4,4'-DDD	PA
EPA 8081 B	4,4'-DDE	PA	EPA 8081 B	4,4'-DDT	PA
EPA 8081 B	ALDRIN	PA			

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EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	CHLORDANE (TECH.)	PA
EPA 8081 B	DELTA-BHC	PA	EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN I	PA	EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA	EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA	EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR	PA	EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	METHOXYCHLOR	PA	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	KEPONE	PA	EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA
EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA	EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA
EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA	EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA
EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA	EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA
EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA	EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA
EPA 8141 A	ATRAZINE	PA	EPA 8141 A	BOLSTAR (SULPROFOS)	PA
EPA 8141 A	CHLORPYRIFOS	PA	EPA 8141 A	COUMAPHOS	PA
EPA 8141 A	DEMETON-O	PA	EPA 8141 A	DEMETON-S	PA
EPA 8141 A	DIAZINON	PA	EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 A	DISULFOTON	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	AZINPHOS-METHYL (GUTHION)	PA
EPA 8141 B	BOLSTAR (SULPROFOS)	PA	EPA 8141 B	CHLORPYRIFOS	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA
EPA 8141 B	DISULFOTON	PA			

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	2-NITROPROPANE	PA
EPA 8260 B	4-CHLOROTOLUENE	PA	EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 8260 B	ACETONE	PA
EPA 8260 B	ACETONITRILE	PA	EPA 8260 B	ACROLEIN (PROPENAL)	PA
EPA 8260 B	ACRYLONITRILE	PA	EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 B	BENZENE	PA	EPA 8260 B	BENZYL CHLORIDE	PA
EPA 8260 B	BROMOBENZENE	PA	EPA 8260 B	BROMOCHLOROMETHANE	PA
EPA 8260 B	BROMODICHLOROMETHANE	PA	EPA 8260 B	BROMOFORM	PA
EPA 8260 B	CARBON DISULFIDE	PA	EPA 8260 B	CARBON TETRACHLORIDE	PA
EPA 8260 B	CHLOROBENZENE	PA	EPA 8260 B	CHLORODIBROMOMETHANE	PA
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 B	CHLOROFORM	PA
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 B	DIETHYL ETHER	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 B	ETHANOL	PA
EPA 8260 B	ETHYL ACETATE	PA	EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLAMINE	PA	EPA 8260 B	N-PROPYLBENZENE	PA
EPA 8260 B	NAPHTHALENE	PA	EPA 8260 B	O-XYLENE	PA
EPA 8260 B	PENTACHLOROETHANE	PA	EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 B	SEC-BUTYLBENZENE	PA	EPA 8260 B	STYRENE	PA
EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA	EPA 8260 B	TERT-BUTYLBENZENE	PA
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA	EPA 8260 B	TOLUENE	PA
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA	EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA	EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA

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EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA	EPA 8260 B	VINYL ACETATE	PA
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	PA	EPA 8260 B	XYLENE (TOTAL)	PA
EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA	EPA 8260 B - EXTENDED	CYCLOHEXANE	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA	EPA 8260 B - EXTENDED	N-HEXANE	PA
EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA	EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,1-TRICHLOROETHANE	PA	EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA
EPA 8260 C	1,1,2-TRICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHYLENE	PA	EPA 8260 C	1,1-DICHLOROPROPENE	PA
EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA	EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA
EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA	EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA
EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA	EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA
EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA	EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA
EPA 8260 C	1,2-DICHLOROPROPANE	PA	EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA
EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA	EPA 8260 C	1,3-DICHLOROPROPANE	PA
EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA
EPA 8260 C	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	2-NITROPROPANE	PA	EPA 8260 C	4-CHLOROTOLUENE	PA
EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 C	ACETONE	PA	EPA 8260 C	ACETONITRILE	PA
EPA 8260 C	ACROLEIN (PROPENAL)	PA	EPA 8260 C	ACRYLONITRILE	PA
EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 C	BENZENE	PA
EPA 8260 C	BENZYL CHLORIDE	PA	EPA 8260 C	BROMOBENZENE	PA
EPA 8260 C	BROMOCHLOROMETHANE	PA	EPA 8260 C	BROMODICHLOROMETHANE	PA
EPA 8260 C	BROMOFORM	PA	EPA 8260 C	CARBON DISULFIDE	PA
EPA 8260 C	CARBON TETRACHLORIDE	PA	EPA 8260 C	CHLOROBENZENE	PA

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EPA 8260 C	CHLORODIBROMOMETHANE	PA	EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 C	CHLOROFORM	PA	EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 C	CYCLOHEXANE	PA	EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA
EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA	EPA 8260 C	DIETHYL ETHER	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	HEXACHLOROETHANE	PA
EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 C	ISOPROPYLBENZENE	PA
EPA 8260 C	METHACRYLONITRILE	PA	EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA
EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA	EPA 8260 C	METHYL METHACRYLATE	PA
EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA	EPA 8260 C	METHYLCYCLOHEXANE	PA
EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 C	N-BUTYLBENZENE	PA
EPA 8260 C	N-PROPYLBENZENE	PA	EPA 8260 C	NAPHTHALENE	PA
EPA 8260 C	PENTACHLOROETHANE	PA	EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA
EPA 8260 C	SEC-BUTYLBENZENE	PA	EPA 8260 C	STYRENE	PA
EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 C	TERT-BUTYLBENZENE	PA	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TOLUENE	PA	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL ACETATE	PA	EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 C	XYLENE (TOTAL)	PA	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	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA

Commonwealth of Virginia

Department of General Services
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Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C - EXTENDED	DIMETHYL ETHER	PA	EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA	EPA 8260 C - EXTENDED	N-HEPTANE	PA
EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA	EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA	EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA	EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA	EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA	EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA	EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA	EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROANILINE	PA	EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA	EPA 8270 C	3-METHYLCHOLANTHRENE	PA
EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA	EPA 8270 C	3-NITROANILINE	PA
EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA	EPA 8270 C	4-AMINOBIPHENYL	PA
EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA	EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA
EPA 8270 C	4-CHLOROANILINE	PA	EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA
EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA	EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA
EPA 8270 C	4-NITROANILINE	PA	EPA 8270 C	4-NITROPHENOL	PA
EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA	EPA 8270 C	5-NITRO-O-TOLUIDINE	PA
EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA	EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA
EPA 8270 C	ACENAPHTHENE	PA	EPA 8270 C	ACENAPHTHYLENE	PA
EPA 8270 C	ACETOPHENONE	PA	EPA 8270 C	ANILINE	PA
EPA 8270 C	ANTHRACENE	PA	EPA 8270 C	ARAMITE	PA
EPA 8270 C	BENZIDINE	PA	EPA 8270 C	BENZO(A)ANTHRACENE	PA
EPA 8270 C	BENZO(A)PYRENE	PA	EPA 8270 C	BENZO(B)FLUORANTHENE	PA

Commonwealth of Virginia

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Eurofins Lancaster Laboratories Environmental, LLC
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Virginia Laboratory ID: 460182
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Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C	BENZO(K)FLUORANTHENE	PA
EPA 8270 C	BENZOIC ACID	PA	EPA 8270 C	BENZYL ALCOHOL	PA
EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 C	BUTYL BENZYL PHTHALATE	PA
EPA 8270 C	CHLOROBENZILATE	PA	EPA 8270 C	CHRYSENE	PA
EPA 8270 C	DI-N-BUTYL PHTHALATE	PA	EPA 8270 C	DI-N-OCTYL PHTHALATE	PA
EPA 8270 C	DIALLATE	PA	EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 C	DIBENZOFURAN	PA
EPA 8270 C	DIETHYL PHTHALATE	PA	EPA 8270 C	DIMETHOATE	PA
EPA 8270 C	DIMETHYL PHTHALATE	PA	EPA 8270 C	DIPHENYLAMINE	PA
EPA 8270 C	DISULFOTON	PA	EPA 8270 C	ETHYL METHANESULFONATE	PA
EPA 8270 C	FAMPHUR	PA	EPA 8270 C	FLUORANTHENE	PA
EPA 8270 C	FLUORENE	PA	EPA 8270 C	HEXACHLOROBENZENE	PA
EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA
EPA 8270 C	HEXACHLOROETHANE	PA	EPA 8270 C	HEXACHLOROPROPENE	PA
EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C	ISODRIN	PA
EPA 8270 C	ISOPHORONE	PA	EPA 8270 C	ISOSAFROLE	PA
EPA 8270 C	KEPONE	PA	EPA 8270 C	METHAPYRILENE	PA
EPA 8270 C	METHYL METHANESULFONATE	PA	EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA
EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA	EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA
EPA 8270 C	N-NITROSODIETHYLAMINE	PA	EPA 8270 C	N-NITROSODIMETHYLAMINE	PA
EPA 8270 C	N-NITROSODIPHENYLAMINE	PA	EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA
EPA 8270 C	N-NITROSOMORPHOLINE	PA	EPA 8270 C	N-NITROSOPIPERIDINE	PA
EPA 8270 C	N-NITROSOPYRROLIDINE	PA	EPA 8270 C	NAPHTHALENE	PA
EPA 8270 C	NITROBENZENE	PA	EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA
EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA	EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA
EPA 8270 C	PENTACHLOROBENZENE	PA	EPA 8270 C	PENTACHLORONITROBENZENE	PA
EPA 8270 C	PENTACHLOROPHENOL	PA	EPA 8270 C	PHENACETIN	PA
EPA 8270 C	PHENANTHRENE	PA	EPA 8270 C	PHENOL	PA
EPA 8270 C	PHORATE	PA	EPA 8270 C	PHTHALIC ANHYDRIDE	PA
EPA 8270 C	PRONAMIDE (KERB)	PA	EPA 8270 C	PYRENE	PA
EPA 8270 C	PYRIDINE	PA	EPA 8270 C	SAFROLE	PA
EPA 8270 C	THIONAZIN (ZINOPHOS)	PA	EPA 8270 C	THIOPHENOL (BENZENETHIOL)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHENE	PA	EPA 8270 C SIM	ACENAPHTHYLENE	PA

Commonwealth of Virginia

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Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
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Virginia Laboratory ID: 460182
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Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C SIM	ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA	EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	CHRYSENE	PA	EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA	EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA	EPA 8270 C SIM	PYRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA	EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA	EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA	EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA
EPA 8270 D	1,4-NAPHTHOQUINONE	PA	EPA 8270 D	1,4-PHENYLENEDIAMINE	PA
EPA 8270 D	1-CHLORONAPHTHALENE	PA	EPA 8270 D	1-NAPHTHYLAMINE	PA
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA	EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA
EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA	EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA
EPA 8270 D	2,4-DICHLOROPHENOL	PA	EPA 8270 D	2,4-DIMETHYLPHENOL	PA
EPA 8270 D	2,4-DINITROPHENOL	PA	EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8270 D	2,6-DICHLOROPHENOL	PA	EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8270 D	2-ACETYLAMINOFLUORENE	PA	EPA 8270 D	2-CHLORONAPHTHALENE	PA
EPA 8270 D	2-CHLOROPHENOL	PA	EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA
EPA 8270 D	2-METHYLNAPHTHALENE	PA	EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA
EPA 8270 D	2-NAPHTHYLAMINE	PA	EPA 8270 D	2-NITROANILINE	PA
EPA 8270 D	2-NITROPHENOL	PA	EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA
EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA	EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	3-NITROANILINE	PA	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 D	4-AMINOBIPHENYL	PA	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA			

Scope of Accreditation

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	ACENAPHTHENE	PA	EPA 8270 D	ACENAPHTHYLENE	PA
EPA 8270 D	ACETOPHENONE	PA	EPA 8270 D	ANILINE	PA
EPA 8270 D	ANTHRACENE	PA	EPA 8270 D	ARAMITE	PA
EPA 8270 D	BENZIDINE	PA	EPA 8270 D	BENZO(A)ANTHRACENE	PA
EPA 8270 D	BENZO(A)PYRENE	PA	EPA 8270 D	BENZO(B)FLUORANTHENE	PA
EPA 8270 D	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D	BENZO(K)FLUORANTHENE	PA
EPA 8270 D	BENZOIC ACID	PA	EPA 8270 D	BENZYL ALCOHOL	PA
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA	EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA	EPA 8270 D	BUTYL BENZYL PHTHALATE	PA
EPA 8270 D	CHLOROBENZILATE	PA	EPA 8270 D	CHRYSENE	PA
EPA 8270 D	DI-N-BUTYL PHTHALATE	PA	EPA 8270 D	DI-N-OCTYL PHTHALATE	PA
EPA 8270 D	DIALLATE	PA	EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D	DIBENZOFURAN	PA
EPA 8270 D	DIETHYL PHTHALATE	PA	EPA 8270 D	DIMETHOATE	PA
EPA 8270 D	DIMETHYL PHTHALATE	PA	EPA 8270 D	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA
EPA 8270 D	DIPHENYLAMINE	PA	EPA 8270 D	DISULFOTON	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA	EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORANTHENE	PA	EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA	EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D	ISODRIN	PA	EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	ISOSAFROLE	PA	EPA 8270 D	KEPONE	PA
EPA 8270 D	METHAPYRILENE	PA	EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA	EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA	EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NAPHTHALENE	PA	EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENACETIN	PA	EPA 8270 D	PHENANTHRENE	PA

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	PHENOL	PA	EPA 8270 D	PHORATE	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA	EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	PYRENE	PA	EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA	EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA	EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	CAPROLACTAM	PA	EPA 8270 D - EXTENDED	CARBAZOLE	PA
EPA 8270 D - EXTENDED	PYRIDINE	PA	EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 D SIM	ACENAPHTHENE	PA	EPA 8270 D SIM	ACENAPHTHYLENE	PA
EPA 8270 D SIM	ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)PYRENE	PA	EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 D SIM	CHRYSENE	PA	EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA	EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA	EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM	PYRENE	PA	EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	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	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	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-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	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-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	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-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	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-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA	EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA
EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA	EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA	EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA
EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA
EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA	EPA 8330 A	2-NITROTOLUENE	PA
EPA 8330 A	3-NITROTOLUENE	PA	EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 A	4-NITROTOLUENE	PA	EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 A	NITROBENZENE	PA	EPA 8330 A	NITROGLYCERIN	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA	EPA 8330 B	3-NITROTOLUENE	PA
EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA	EPA 8330 B	4-NITROTOLUENE	PA
EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA	EPA 8330 B	NITROBENZENE	PA
EPA 8330 B	NITROGLYCERIN	PA	EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA
EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA	EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 9012 A	TOTAL CYANIDE	PA	EPA 9012 B	TOTAL CYANIDE	PA
EPA 9040 C	PH	PA	EPA 9050 A	CONDUCTIVITY	PA
EPA 9056 A	BROMIDE	PA	EPA 9056 A	CHLORIDE	PA
EPA 9056 A	FLUORIDE	PA	EPA 9056 A	NITRATE AS N	PA
EPA 9056 A	NITRITE AS N	PA	EPA 9056 A	SULFATE	PA
EPA 9066	TOTAL PHENOLICS	PA	OIA-1677-09	AMENABLE CYANIDE	PA
OIA-1677-09	FREE CYANIDE	PA	RSK-175	ETHANE	PA
RSK-175	ETHENE (ETHYLENE)	PA	RSK-175	METHANE	PA
SM 2120 B-2001	COLOR	PA	SM 2320 B-1997	ALKALINITY AS CACO3	PA
SM 2340 C-1997	TOTAL HARDNESS AS CACO3	PA	SM 2510 B-1997	CONDUCTIVITY	PA
SM 2540 B-1997	RESIDUE-TOTAL (TS)	PA	SM 2540 C-1997	RESIDUE-FILTERABLE (TDS)	PA
SM 2540 D-1997	RESIDUE-NONFILTERABLE (TSS)	PA	SM 2540 F-1997	RESIDUE-SETTLEABLE	PA
SM 3500-CR B-2009	CHROMIUM VI	PA	SM 4500-F^- B-1997	FLUORIDE	PA
SM 4500-F^- C-1997	FLUORIDE	PA	SM 4500-NH3 B-1997	AMMONIA AS N	PA
SM 4500-NH3 D-1997	AMMONIA AS N	PA	SM 4500-P E-1999	ORTHOPHOSPHATE AS P	PA
SM 4500-P F-1999	PHOSPHORUS, TOTAL	PA	SM 4500-$S2^-$ D-2000	SULFIDE	PA
SM 4500-SIO2 C-1997	SILICA AS SIO2	PA			

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
SM 5210 B-2001	BIOCHEMICAL OXYGEN DEMAND (BOD)	PA	SM 5310 C-2000	TOTAL ORGANIC CARBON (TOC)	PA
SM 5540 C-2000	SURFACTANTS - MBAS	PA			

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	PA	EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	PA
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	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',5,5'-OCTACHLOROBIPHENYL (BZ-194)	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',5,6,6'-NONACHLOROBIPHENYL (BZ-207)	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',5-HEPTACHLOROBIPHENYL (BZ-170)	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',6-HEPTACHLOROBIPHENYL (BZ-171)	PA	EPA 1668 A	2,2',3,3',4,4'-HEXACHLOROBIPHENYL (BZ-128)	PA
EPA 1668 A	2,2',3,3',4,5',6'-HEPTACHLOROBIPHENYL (BZ-177)	PA	EPA 1668 A	2,2',3,3',4,5',6,6'-OCTACHLOROBIPHENYL (BZ-201)	PA
EPA 1668 A	2,2',3,3',4,5',6-HEPTACHLOROBIPHENYL (BZ-175)	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'-OCTACHLOROBIPHENYL (BZ-199)	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',6-OCTACHLOROBIPHENYL (BZ-198)	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'-HEPTACHLOROBIPHENYL (BZ-174)	PA	EPA 1668 A	2,2',3,3',4,5,6,6'-OCTACHLOROBIPHENYL (BZ-200)	PA
EPA 1668 A	2,2',3,3',4,5,6-HEPTACHLOROBIPHENYL (BZ-173)	PA	EPA 1668 A	2,2',3,3',4,5-HEXACHLOROBIPHENYL (BZ-129)	PA
EPA 1668 A	2,2',3,3',4,6'-HEXACHLOROBIPHENYL (BZ-132)	PA	EPA 1668 A	2,2',3,3',4,6,6'-HEPTACHLOROBIPHENYL (BZ-176)	PA
EPA 1668 A	2,2',3,3',4,6-HEXACHLOROBIPHENYL (BZ-131)	PA	EPA 1668 A	2,2',3,3',4-PENTACHLOROBIPHENYL (BZ-82)	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',6-HEPTACHLOROBIPHENYL (BZ-178)	PA
EPA 1668 A	2,2',3,3',5,5'-HEXACHLOROBIPHENYL (BZ-133)	PA	EPA 1668 A	2,2',3,3',5,6'-HEXACHLOROBIPHENYL (BZ-135)	PA
EPA 1668 A	2,2',3,3',5,6,6'-HEPTACHLOROBIPHENYL (BZ-179)	PA	EPA 1668 A	2,2',3,3',5,6-HEXACHLOROBIPHENYL (BZ-134)	PA
EPA 1668 A	2,2',3,3',5-PENTACHLOROBIPHENYL (BZ-83)	PA	EPA 1668 A	2,2',3,3',6,6'-HEXACHLOROBIPHENYL (BZ-136)	PA
EPA 1668 A	2,2',3,3',6-PENTACHLOROBIPHENYL (BZ-84)	PA	EPA 1668 A	2,2',3,3'-TETRACHLOROBIPHENYL (BZ-40)	PA
EPA 1668 A	2,2',3,4',5',6-HEXACHLOROBIPHENYL (BZ-149)	PA	EPA 1668 A	2,2',3,4',5'-PENTACHLOROBIPHENYL (BZ-97)	PA
EPA 1668 A	2,2',3,4',5,5',6-HEPTACHLOROBIPHENYL (BZ-187)	PA	EPA 1668 A	2,2',3,4',5,5'-HEXACHLOROBIPHENYL (BZ-146)	PA

Commonwealth of Virginia

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',3,4',5,6'-HEXACHLOROBIPHENYL (BZ-148)	PA	EPA 1668 A	2,2',3,4',5,6,6'-HEPTACHLOROBIPHENYL (BZ-188)	PA
EPA 1668 A	2,2',3,4',5,6-HEXACHLOROBIPHENYL (BZ-147)	PA	EPA 1668 A	2,2',3,4',5-PENTACHLOROBIPHENYL (BZ-90)	PA
EPA 1668 A	2,2',3,4',6'-PENTACHLOROBIPHENYL (BZ-98)	PA	EPA 1668 A	2,2',3,4',6,6'-HEXACHLOROBIPHENYL (BZ-150)	PA
EPA 1668 A	2,2',3,4',6-PENTACHLOROBIPHENYL (BZ-91)	PA	EPA 1668 A	2,2',3,4'-TETRACHLOROBIPHENYL (BZ-42)	PA
EPA 1668 A	2,2',3,4,4',5',6-HEPTACHLOROBIPHENYL (BZ-183)	PA	EPA 1668 A	2,2',3,4,4',5'-HEXACHLOROBIPHENYL (BZ-138)	PA
EPA 1668 A	2,2',3,4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-203)	PA	EPA 1668 A	2,2',3,4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-180)	PA
EPA 1668 A	2,2',3,4,4',5,6'-HEPTACHLOROBIPHENYL (BZ-182)	PA	EPA 1668 A	2,2',3,4,4',5,6,6'-OCTACHLOROBIPHENYL (BZ-204)	PA
EPA 1668 A	2,2',3,4,4',5,6-HEPTACHLOROBIPHENYL (BZ-181)	PA	EPA 1668 A	2,2',3,4,4',5-HEXACHLOROBIPHENYL (BZ-137)	PA
EPA 1668 A	2,2',3,4,4',6'-HEXACHLOROBIPHENYL (BZ-140)	PA	EPA 1668 A	2,2',3,4,4',6,6'-HEPTACHLOROBIPHENYL (BZ-184)	PA
EPA 1668 A	2,2',3,4,4',6-HEXACHLOROBIPHENYL (BZ-139)	PA	EPA 1668 A	2,2',3,4,4'-PENTACHLOROBIPHENYL (BZ-85)	PA
EPA 1668 A	2,2',3,4,5',6-HEXACHLOROBIPHENYL (BZ-144)	PA	EPA 1668 A	2,2',3,4,5'-PENTACHLOROBIPHENYL (BZ-87)	PA
EPA 1668 A	2,2',3,4,5,5',6-HEPTACHLOROBIPHENYL (BZ-185)	PA	EPA 1668 A	2,2',3,4,5,5'-HEXACHLOROBIPHENYL (BZ-141)	PA
EPA 1668 A	2,2',3,4,5,6'-HEXACHLOROBIPHENYL (BZ-143)	PA	EPA 1668 A	2,2',3,4,5,6,6'-HEPTACHLOROBIPHENYL (BZ-186)	PA
EPA 1668 A	2,2',3,4,5,6-HEXACHLOROBIPHENYL (BZ-142)	PA	EPA 1668 A	2,2',3,4,5-PENTACHLOROBIPHENYL (BZ-86)	PA
EPA 1668 A	2,2',3,4,6'-PENTACHLOROBIPHENYL (BZ-89)	PA	EPA 1668 A	2,2',3,4,6,6'-HEXACHLOROBIPHENYL (BZ-145)	PA
EPA 1668 A	2,2',3,4,6-PENTACHLOROBIPHENYL (BZ-88)	PA	EPA 1668 A	2,2',3,4-TETRACHLOROBIPHENYL (BZ-41)	PA
EPA 1668 A	2,2',3,5',6-PENTACHLOROBIPHENYL (BZ-95)	PA	EPA 1668 A	2,2',3,5'-TETRACHLOROBIPHENYL (BZ-44)	PA
EPA 1668 A	2,2',3,5,5',6-HEXACHLOROBIPHENYL (BZ-151)	PA	EPA 1668 A	2,2',3,5,5'-PENTACHLOROBIPHENYL (BZ-92)	PA
EPA 1668 A	2,2',3,5,6'-PENTACHLOROBIPHENYL (BZ-94)	PA	EPA 1668 A	2,2',3,5,6,6'-HEXACHLOROBIPHENYL (BZ-152)	PA
EPA 1668 A	2,2',3,5,6-PENTACHLOROBIPHENYL (BZ-93)	PA	EPA 1668 A	2,2',3,5-TETRACHLOROBIPHENYL (BZ-43)	PA
EPA 1668 A	2,2',3,6'-TETRACHLOROBIPHENYL (BZ-46)	PA	EPA 1668 A	2,2',3,6,6'-PENTACHLOROBIPHENYL (BZ-96)	PA
EPA 1668 A	2,2',3,6-TETRACHLOROBIPHENYL (BZ-45)	PA	EPA 1668 A	2,2',3-TRICHLOROBIPHENYL (BZ-16)	PA
EPA 1668 A	2,2',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-153)	PA	EPA 1668 A	2,2',4,4',5,6'-HEXACHLOROBIPHENYL (BZ-154)	PA
EPA 1668 A	2,2',4,4',5-PENTACHLOROBIPHENYL (BZ-99)	PA	EPA 1668 A	2,2',4,4',6,6'-HEXACHLOROBIPHENYL (BZ-155)	PA
EPA 1668 A	2,2',4,4',6-PENTACHLOROBIPHENYL (BZ-100)	PA	EPA 1668 A	2,2',4,4'-TETRACHLOROBIPHENYL (BZ-47)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,2',4,5',6-PENTACHLOROBIPHENYL (BZ-103)	PA	EPA 1668 A	2,2',4,5'-TETRACHLOROBIPHENYL (BZ-49)	PA
EPA 1668 A	2,2',4,5,5'-PENTACHLOROBIPHENYL (BZ-101)	PA	EPA 1668 A	2,2',4,5,6'-PENTACHLOROBIPHENYL (BZ-102)	PA
EPA 1668 A	2,2',4,5-TETRACHLOROBIPHENYL (BZ-48)	PA	EPA 1668 A	2,2',4,6'-TETRACHLOROBIPHENYL (BZ-51)	PA
EPA 1668 A	2,2',4,6,6'-PENTACHLOROBIPHENYL (BZ-104)	PA	EPA 1668 A	2,2',4,6-TETRACHLOROBIPHENYL (BZ-50)	PA
EPA 1668 A	2,2',4-TRICHLOROBIPHENYL (BZ-17)	PA	EPA 1668 A	2,2',5,5'-TETRACHLOROBIPHENYL (BZ-52)	PA
EPA 1668 A	2,2',5,6'-TETRACHLOROBIPHENYL (BZ-53)	PA	EPA 1668 A	2,2',5-TRICHLOROBIPHENYL (BZ-18)	PA
EPA 1668 A	2,2',6,6'-TETRACHLOROBIPHENYL (BZ-54)	PA	EPA 1668 A	2,2',6-TRICHLOROBIPHENYL (BZ-19)	PA
EPA 1668 A	2,2'-DICHLOROBIPHENYL (BZ-4)	PA	EPA 1668 A	2,3',4',5',6-PENTACHLOROBIPHENYL (BZ-125)	PA
EPA 1668 A	2,3',4',5'-TETRACHLOROBIPHENYL (BZ-76)	PA	EPA 1668 A	2,3',4',5,5'-PENTACHLOROBIPHENYL (BZ-124)	PA
EPA 1668 A	2,3',4',5-TETRACHLOROBIPHENYL (BZ-70)	PA	EPA 1668 A	2,3',4',6-TETRACHLOROBIPHENYL (BZ-71)	PA
EPA 1668 A	2,3',4'-TRICHLOROBIPHENYL (BZ-33)	PA	EPA 1668 A	2,3',4,4',5',6-HEXACHLOROBIPHENYL (BZ-168)	PA
EPA 1668 A	2,3',4,4',5'-PENTACHLOROBIPHENYL (BZ-123)	PA	EPA 1668 A	2,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-167)	PA
EPA 1668 A	2,3',4,4',5-PENTACHLOROBIPHENYL (BZ-118)	PA	EPA 1668 A	2,3',4,4',6-PENTACHLOROBIPHENYL (BZ-119)	PA
EPA 1668 A	2,3',4,4'-TETRACHLOROBIPHENYL (BZ-66)	PA	EPA 1668 A	2,3',4,5',6-PENTACHLOROBIPHENYL (BZ-121)	PA
EPA 1668 A	2,3',4,5'-TETRACHLOROBIPHENYL (BZ-68)	PA	EPA 1668 A	2,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-120)	PA
EPA 1668 A	2,3',4,5-TETRACHLOROBIPHENYL (BZ-67)	PA	EPA 1668 A	2,3',4,6-TETRACHLOROBIPHENYL (BZ-69)	PA
EPA 1668 A	2,3',4-TRICHLOROBIPHENYL (BZ-25)	PA	EPA 1668 A	2,3',5',6-TETRACHLOROBIPHENYL (BZ-73)	PA
EPA 1668 A	2,3',5'-TRICHLOROBIPHENYL (BZ-34)	PA	EPA 1668 A	2,3',5,5'-TETRACHLOROBIPHENYL (BZ-72)	PA
EPA 1668 A	2,3',5-TRICHLOROBIPHENYL (BZ-26)	PA	EPA 1668 A	2,3',6-TRICHLOROBIPHENYL (BZ-27)	PA
EPA 1668 A	2,3'-DICHLOROBIPHENYL (BZ-6)	PA	EPA 1668 A	2,3,3',4',5',6-HEXACHLOROBIPHENYL (BZ-164)	PA
EPA 1668 A	2,3,3',4',5'-PENTACHLOROBIPHENYL (BZ-122)	PA	EPA 1668 A	2,3,3',4',5,5',6-HEPTACHLOROBIPHENYL (BZ-193)	PA
EPA 1668 A	2,3,3',4',5,5'-HEXACHLOROBIPHENYL (BZ-162)	PA	EPA 1668 A	2,3,3',4',5,6-HEXACHLOROBIPHENYL (BZ-163)	PA
EPA 1668 A	2,3,3',4',5-PENTACHLOROBIPHENYL (BZ-107)	PA	EPA 1668 A	2,3,3',4',6-PENTACHLOROBIPHENYL (BZ-110)	PA
EPA 1668 A	2,3,3',4'-TETRACHLOROBIPHENYL (BZ-56)	PA	EPA 1668 A	2,3,3',4,4',5',6-HEPTACHLOROBIPHENYL (BZ-191)	PA
EPA 1668 A	2,3,3',4,4',5'-HEXACHLOROBIPHENYL (BZ-157)	PA	EPA 1668 A	2,3,3',4,4',5,5',6-OCTACHLOROBIPHENYL (BZ-205)	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	2,3,3',4,4',5,5'-HEPTACHLOROBIPHENYL (BZ-189)	PA	EPA 1668 A	2,3,3',4,4',5,6-HEPTACHLOROBIPHENYL (BZ-190)	PA
EPA 1668 A	2,3,3',4,4',5-HEXACHLOROBIPHENYL (BZ-156)	PA	EPA 1668 A	2,3,3',4,4',6-HEXACHLOROBIPHENYL (BZ-158)	PA
EPA 1668 A	2,3,3',4,4'-PENTACHLOROBIPHENYL (BZ-105)	PA	EPA 1668 A	2,3,3',4,5',6-HEXACHLOROBIPHENYL (BZ-161)	PA
EPA 1668 A	2,3,3',4,5'-PENTACHLOROBIPHENYL (BZ-108)	PA	EPA 1668 A	2,3,3',4,5,5',6-HEPTACHLOROBIPHENYL (BZ-192)	PA
EPA 1668 A	2,3,3',4,5,5'-HEXACHLOROBIPHENYL (BZ-159)	PA	EPA 1668 A	2,3,3',4,5,6-HEXACHLOROBIPHENYL (BZ-160)	PA
EPA 1668 A	2,3,3',4,5-PENTACHLOROBIPHENYL (BZ-106)	PA	EPA 1668 A	2,3,3',4,6-PENTACHLOROBIPHENYL (BZ-109)	PA
EPA 1668 A	2,3,3',4-TETRACHLOROBIPHENYL (BZ-55)	PA	EPA 1668 A	2,3,3',5',6-PENTACHLOROBIPHENYL (BZ-113)	PA
EPA 1668 A	2,3,3',5'-TETRACHLOROBIPHENYL (BZ-58)	PA	EPA 1668 A	2,3,3',5,5',6-HEXACHLOROBIPHENYL (BZ-165)	PA
EPA 1668 A	2,3,3',5,5'-PENTACHLOROBIPHENYL (BZ-111)	PA	EPA 1668 A	2,3,3',5,6-PENTACHLOROBIPHENYL (BZ-112)	PA
EPA 1668 A	2,3,3',5-TETRACHLOROBIPHENYL (BZ-57)	PA	EPA 1668 A	2,3,3',6-TETRACHLOROBIPHENYL (BZ-59)	PA
EPA 1668 A	2,3,3'-TRICHLOROBIPHENYL (BZ-20)	PA	EPA 1668 A	2,3,4',5,6-PENTACHLOROBIPHENYL (BZ-117)	PA
EPA 1668 A	2,3,4',5-TETRACHLOROBIPHENYL (BZ-63)	PA	EPA 1668 A	2,3,4',6-TETRACHLOROBIPHENYL (BZ-64)	PA
EPA 1668 A	2,3,4'-TRICHLOROBIPHENYL (BZ-22)	PA	EPA 1668 A	2,3,4,4',5,6-HEXACHLOROBIPHENYL (BZ-166)	PA
EPA 1668 A	2,3,4,4',5-PENTACHLOROBIPHENYL (BZ-114)	PA	EPA 1668 A	2,3,4,4',6-PENTACHLOROBIPHENYL (BZ-115)	PA
EPA 1668 A	2,3,4,4'-TETRACHLOROBIPHENYL (BZ-60)	PA	EPA 1668 A	2,3,4,5,6-PENTACHLOROBIPHENYL (BZ-116)	PA
EPA 1668 A	2,3,4,5-TETRACHLOROBIPHENYL (BZ-61)	PA	EPA 1668 A	2,3,4,6-TETRACHLOROBIPHENYL (BZ-62)	PA
EPA 1668 A	2,3,4-TRICHLOROBIPHENYL (BZ-21)	PA	EPA 1668 A	2,3,5,6-TETRACHLOROBIPHENYL (BZ-65)	PA
EPA 1668 A	2,3,5-TRICHLOROBIPHENYL (BZ-23)	PA	EPA 1668 A	2,3,6-TRICHLOROBIPHENYL (BZ-24)	PA
EPA 1668 A	2,3-DICHLOROBIPHENYL (BZ-5)	PA	EPA 1668 A	2,4',5-TRICHLOROBIPHENYL (BZ-31)	PA
EPA 1668 A	2,4',6-TRICHLOROBIPHENYL (BZ-32)	PA	EPA 1668 A	2,4'-DICHLOROBIPHENYL (BZ-8)	PA
EPA 1668 A	2,4,4',5-TETRACHLOROBIPHENYL (BZ-74)	PA	EPA 1668 A	2,4,4',6-TETRACHLOROBIPHENYL (BZ-75)	PA
EPA 1668 A	2,4,4'-TRICHLOROBIPHENYL (BZ-28)	PA	EPA 1668 A	2,4,5-TRICHLOROBIPHENYL (BZ-29)	PA
EPA 1668 A	2,4,6-TRICHLOROBIPHENYL (BZ-30)	PA	EPA 1668 A	2,4-DICHLOROBIPHENYL (BZ-7)	PA
EPA 1668 A	2,5-DICHLOROBIPHENYL (BZ-9)	PA	EPA 1668 A	2,6-DICHLOROBIPHENYL (BZ-10)	PA
EPA 1668 A	2-CHLOROBIPHENYL (BZ-1)	PA	EPA 1668 A	3,3',4,4',5,5'-HEXACHLOROBIPHENYL (BZ-169)	PA
EPA 1668 A	3,3',4,4',5-PENTACHLOROBIPHENYL (BZ-126)	PA	EPA 1668 A	3,3',4,4'-TETRACHLOROBIPHENYL (BZ-77)	PA
EPA 1668 A	3,3',4,5'-TETRACHLOROBIPHENYL (BZ-79)	PA	EPA 1668 A	3,3',4,5,5'-PENTACHLOROBIPHENYL (BZ-127)	PA

Commonwealth of Virginia

Department of General Services
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Virginia Laboratory ID: 460182
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 1668 A	3,3',4,5-TETRACHLOROBIPHENYL (BZ-78)	PA	EPA 1668 A	3,3',4-TRICHLOROBIPHENYL (BZ-35)	PA
EPA 1668 A	3,3',5,5'-TETRACHLOROBIPHENYL (BZ-80)	PA	EPA 1668 A	3,3',5-TRICHLOROBIPHENYL (BZ-36)	PA
EPA 1668 A	3,3'-DICHLOROBIPHENYL (BZ-11)	PA	EPA 1668 A	3,4',5-TRICHLOROBIPHENYL (BZ-39)	PA
EPA 1668 A	3,4'-DICHLOROBIPHENYL (BZ-13)	PA	EPA 1668 A	3,4,4',5-TETRACHLOROBIPHENYL (BZ-81)	PA
EPA 1668 A	3,4,4'-TRICHLOROBIPHENYL (BZ-37)	PA	EPA 1668 A	3,4,5-TRICHLOROBIPHENYL (BZ-38)	PA
EPA 1668 A	3,4-DICHLOROBIPHENYL (BZ-12)	PA	EPA 1668 A	3,5-DICHLOROBIPHENYL (BZ-14)	PA
EPA 1668 A	3-CHLOROBIPHENYL (BZ-2)	PA	EPA 1668 A	4,4'-DICHLOROBIPHENYL (BZ-15)	PA
EPA 1668 A	4-CHLOROBIPHENYL (BZ-3)	PA	EPA 1668 A	DECACHLOROBIPHENYL (BZ-209)	PA
EPA 300.0 REV 2.1	BROMIDE	PA	EPA 300.0 REV 2.1	CHLORIDE	PA
EPA 300.0 REV 2.1	FLUORIDE	PA	EPA 300.0 REV 2.1	NITRATE AS N	PA
EPA 300.0 REV 2.1	NITRITE AS N	PA	EPA 300.0 REV 2.1	SULFATE	PA
EPA 3050 B	PREP: ACID DIGESTION OF SEDIMENTS, SLUDGES, AND SOILS	PA	EPA 3540 C	PREP: SOXHLET EXTRACTION	PA
EPA 3546	PREP: MICROWAVE EXTRACTION	PA	EPA 3550 B	PREP: ULTRASONIC EXTRACTION	PA
EPA 3620 B	PREP: FLORISIL CLEANUP	PA	EPA 3630 C	PREP: SILICA GEL CLEANUP	PA
EPA 3640 A	PREP: GEL PERMEATION CLEANUP	PA	EPA 3660 B	PREP: SULFUR CLEANUP	PA
EPA 3665 A	SULFURIC ACID/PERMANGANATE CLEAN-UP	PA	EPA 5030 B	PREP: PURGE AND TRAP FOR AQUEOUS SAMPLES	PA
EPA 5035	PREP: CLOSED-SYSTEM PURGE AND TRAP AND EXTRACTION	PA	EPA 6010 B	ALUMINUM	PA
EPA 6010 B	ANTIMONY	PA	EPA 6010 B	ARSENIC	PA
EPA 6010 B	BARIUM	PA	EPA 6010 B	BERYLLIUM	PA
EPA 6010 B	BORON	PA	EPA 6010 B	CADMIUM	PA
EPA 6010 B	CALCIUM	PA	EPA 6010 B	CHROMIUM	PA
EPA 6010 B	COBALT	PA	EPA 6010 B	COPPER	PA
EPA 6010 B	IRON	PA	EPA 6010 B	LEAD	PA
EPA 6010 B	LITHIUM	PA	EPA 6010 B	MAGNESIUM	PA
EPA 6010 B	MANGANESE	PA	EPA 6010 B	MOLYBDENUM	PA
EPA 6010 B	NICKEL	PA	EPA 6010 B	POTASSIUM	PA
EPA 6010 B	SELENIUM	PA	EPA 6010 B	SILVER	PA
EPA 6010 B	SODIUM	PA	EPA 6010 B	STRONTIUM	PA
EPA 6010 B	THALLIUM	PA	EPA 6010 B	TIN	PA
EPA 6010 B	TITANIUM	PA	EPA 6010 B	VANADIUM	PA
EPA 6010 B	ZINC	PA	EPA 6010 B - EXTENDED	SULFUR	PA
EPA 6010 B - EXTENDED	THORIUM	PA	EPA 6010 B - EXTENDED	ZIRCONIUM	PA
EPA 6010 C	ALUMINUM	PA	EPA 6010 C	ANTIMONY	PA
EPA 6010 C	ARSENIC	PA	EPA 6010 C	BARIUM	PA
EPA 6010 C	BERYLLIUM	PA	EPA 6010 C	BORON	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6010 C	CADMIUM	PA	EPA 6010 C	CALCIUM	PA
EPA 6010 C	CHROMIUM	PA	EPA 6010 C	COBALT	PA
EPA 6010 C	COPPER	PA	EPA 6010 C	IRON	PA
EPA 6010 C	LEAD	PA	EPA 6010 C	LITHIUM	PA
EPA 6010 C	MAGNESIUM	PA	EPA 6010 C	MANGANESE	PA
EPA 6010 C	MOLYBDENUM	PA	EPA 6010 C	NICKEL	PA
EPA 6010 C	POTASSIUM	PA	EPA 6010 C	SELENIUM	PA
EPA 6010 C	SILVER	PA	EPA 6010 C	SODIUM	PA
EPA 6010 C	STRONTIUM	PA	EPA 6010 C	THALLIUM	PA
EPA 6010 C	TIN	PA	EPA 6010 C	TITANIUM	PA
EPA 6010 C	VANADIUM	PA	EPA 6010 C	ZINC	PA
EPA 6010 C - EXTENDED	SULFUR	PA	EPA 6010 C - EXTENDED	THORIUM	PA
EPA 6010 C - EXTENDED	ZIRCONIUM	PA	EPA 6020	BARIUM	PA
EPA 6020 - EXTENDED	MOLYBDENUM	PA	EPA 6020 - EXTENDED	URANIUM	PA
EPA 6020 A	ALUMINUM	PA	EPA 6020 A	ANTIMONY	PA
EPA 6020 A	ARSENIC	PA	EPA 6020 A	BARIUM	PA
EPA 6020 A	BERYLLIUM	PA	EPA 6020 A	CADMIUM	PA
EPA 6020 A	CALCIUM	PA	EPA 6020 A	CHROMIUM	PA
EPA 6020 A	COBALT	PA	EPA 6020 A	COPPER	PA
EPA 6020 A	IRON	PA	EPA 6020 A	LEAD	PA
EPA 6020 A	MAGNESIUM	PA	EPA 6020 A	MANGANESE	PA
EPA 6020 A	NICKEL	PA	EPA 6020 A	POTASSIUM	PA
EPA 6020 A	SELENIUM	PA	EPA 6020 A	SILVER	PA
EPA 6020 A	SODIUM	PA	EPA 6020 A	THALLIUM	PA
EPA 6020 A	VANADIUM	PA	EPA 6020 A	ZINC	PA
EPA 6020 A - EXTENDED	BORON	PA	EPA 6020 A - EXTENDED	MOLYBDENUM	PA
EPA 6020 A - EXTENDED	STRONTIUM	PA	EPA 6020 A - EXTENDED	TIN	PA
EPA 6020 A - EXTENDED	TITANIUM	PA	EPA 6020 A - EXTENDED	URANIUM	PA
EPA 6850	PERCHLORATE	PA	EPA 7196 A	CHROMIUM VI	PA
EPA 7199	CHROMIUM VI	PA	EPA 7471 A	MERCURY	PA
EPA 7471 B	MERCURY	PA	EPA 8015 B	DIESEL RANGE ORGANICS (DRO)	PA
EPA 8015 B	ETHANOL	PA	EPA 8015 B	ETHYLENE GLYCOL	PA
EPA 8015 B	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8015 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 B	METHANOL	PA	EPA 8015 C	ETHANOL	PA
EPA 8015 C	ETHYLENE GLYCOL	PA	EPA 8015 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8015 C	METHANOL	PA	EPA 8021 B	BENZENE	PA
EPA 8021 B	ETHYLBENZENE	PA	EPA 8021 B	ISOPROPYLBENZENE	PA

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EPA 8021 B	M+P-XYLENE	PA	EPA 8021 B	NAPHTHALENE	PA
EPA 8021 B	O-XYLENE	PA	EPA 8021 B	TOLUENE	PA
EPA 8021 B	XYLENE (TOTAL)	PA	EPA 8021 B - EXTENDED	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8081 A	4,4'-DDD	PA	EPA 8081 A	4,4'-DDE	PA
EPA 8081 A	4,4'-DDT	PA	EPA 8081 A	ALDRIN	PA
EPA 8081 A	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 A	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	CHLORDANE (TECH.)	PA
EPA 8081 A	DELTA-BHC	PA	EPA 8081 A	DIELDRIN	PA
EPA 8081 A	ENDOSULFAN I	PA	EPA 8081 A	ENDOSULFAN II	PA
EPA 8081 A	ENDOSULFAN SULFATE	PA	EPA 8081 A	ENDRIN	PA
EPA 8081 A	ENDRIN ALDEHYDE	PA	EPA 8081 A	ENDRIN KETONE	PA
EPA 8081 A	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 A	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 A	HEPTACHLOR	PA	EPA 8081 A	HEPTACHLOR EPOXIDE	PA
EPA 8081 A	METHOXYCHLOR	PA	EPA 8081 A	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B	4,4'-DDD	PA	EPA 8081 B	4,4'-DDE	PA
EPA 8081 B	4,4'-DDT	PA	EPA 8081 B	ALDRIN	PA
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	PA
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	CHLORDANE (TECH.)	PA
EPA 8081 B	DELTA-BHC	PA	EPA 8081 B	DIELDRIN	PA
EPA 8081 B	ENDOSULFAN I	PA	EPA 8081 B	ENDOSULFAN II	PA
EPA 8081 B	ENDOSULFAN SULFATE	PA	EPA 8081 B	ENDRIN	PA
EPA 8081 B	ENDRIN ALDEHYDE	PA	EPA 8081 B	ENDRIN KETONE	PA
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	PA	EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	PA
EPA 8081 B	HEPTACHLOR	PA	EPA 8081 B	HEPTACHLOR EPOXIDE	PA
EPA 8081 B	METHOXYCHLOR	PA	EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	PA
EPA 8081 B - EXTENDED	KEPONE	PA	EPA 8081 B - EXTENDED	MIREX	PA
EPA 8082 A	AROCLOR-1016 (PCB-1016)	PA	EPA 8082 A	AROCLOR-1221 (PCB-1221)	PA
EPA 8082 A	AROCLOR-1232 (PCB-1232)	PA	EPA 8082 A	AROCLOR-1242 (PCB-1242)	PA
EPA 8082 A	AROCLOR-1248 (PCB-1248)	PA	EPA 8082 A	AROCLOR-1254 (PCB-1254)	PA

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EPA 8082 A	AROCLOR-1260 (PCB-1260)	PA	EPA 8082 A - EXTENDED	AROCLOR-1262 (PCB-1262)	PA
EPA 8082 A - EXTENDED	AROCLOR-1268 (PCB-1268)	PA	EPA 8141 A	ATRAZINE	PA
EPA 8141 A	BOLSTAR (SULPROFOS)	PA	EPA 8141 A	CHLORPYRIFOS	PA
EPA 8141 A	COUMAPHOS	PA	EPA 8141 A	DEMETON-O	PA
EPA 8141 A	DEMETON-S	PA	EPA 8141 A	DIAZINON	PA
EPA 8141 A	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 A	DISULFOTON	PA
EPA 8141 A	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 A	ETHION	PA
EPA 8141 A	ETHOPROP	PA	EPA 8141 A	FAMPHUR	PA
EPA 8141 A	FENSULFOTHION	PA	EPA 8141 A	FENTHION	PA
EPA 8141 A	MALATHION	PA	EPA 8141 A	MERPHOS	PA
EPA 8141 A	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 A	MEVINPHOS	PA
EPA 8141 A	NALED	PA	EPA 8141 A	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 A	PHORATE	PA	EPA 8141 A	RONNEL	PA
EPA 8141 A	SIMAZINE	PA	EPA 8141 A	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 A	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 A	TRICHLORONATE	PA
EPA 8141 B	ATRAZINE	PA	EPA 8141 B	BOLSTAR (SULPROFOS)	PA
EPA 8141 B	COUMAPHOS	PA	EPA 8141 B	DEMETON-O	PA
EPA 8141 B	DEMETON-S	PA	EPA 8141 B	DIAZINON	PA
EPA 8141 B	DICHLOROVOS (DDVP, DICHLORVOS)	PA	EPA 8141 B	DISULFOTON	PA
EPA 8141 B	EPN (PHOSPHONOTHIOIC ACID, PHENYL-, O-ETHYL O-(P-NITROPHENYL) ESTER)	PA	EPA 8141 B	ETHION	PA
EPA 8141 B	ETHOPROP	PA	EPA 8141 B	FAMPHUR	PA
EPA 8141 B	FENSULFOTHION	PA	EPA 8141 B	FENTHION	PA
EPA 8141 B	MALATHION	PA	EPA 8141 B	MERPHOS	PA
EPA 8141 B	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8141 B	MEVINPHOS	PA
EPA 8141 B	NALED	PA	EPA 8141 B	PARATHION (PARATHION - ETHYL)	PA
EPA 8141 B	PHORATE	PA	EPA 8141 B	RONNEL	PA
EPA 8141 B	SIMAZINE	PA	EPA 8141 B	TETRACHLORVINPHOS (STIROPHOS, GARDONA) Z-ISOMER	PA
EPA 8141 B	TOKUTHION (PROTHIOPHOS)	PA	EPA 8141 B	TRICHLORONATE	PA
EPA 8151 A	2,4,5-T	PA	EPA 8151 A	2,4-D	PA
EPA 8151 A	2,4-DB	PA	EPA 8151 A	DALAPON	PA
EPA 8151 A	DICAMBA	PA	EPA 8151 A	DICHLOROPROP (DICHLORPROP)	PA

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EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	PA	EPA 8151 A	MCPA	PA
EPA 8151 A	MCPP	PA	EPA 8151 A	PENTACHLOROPHENOL	PA
EPA 8151 A	PICLORAM	PA	EPA 8151 A	SILVEX (2,4,5-TP)	PA
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,1-TRICHLOROETHANE	PA
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 B	1,1,2-TRICHLOROETHANE	PA
EPA 8260 B	1,1-DICHLOROETHANE	PA	EPA 8260 B	1,1-DICHLOROETHYLENE	PA
EPA 8260 B	1,1-DICHLOROPROPENE	PA	EPA 8260 B	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 B	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 B	1,2-DICHLOROPROPANE	PA
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 B	1,3-DICHLOROPROPANE	PA	EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 B	1-BUTANOL (N-BUTANOL, N-BUTYL ALCOHOL)	PA
EPA 8260 B	2,2-DICHLOROPROPANE	PA	EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	PA	EPA 8260 B	2-CHLOROTOLUENE	PA
EPA 8260 B	2-HEXANONE	PA	EPA 8260 B	4-CHLOROTOLUENE	PA
EPA 8260 B	4-ISOPROPYLTOLUENE (P-CYMENE)	PA	EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA
EPA 8260 B	ACETONE	PA	EPA 8260 B	ACETONITRILE	PA
EPA 8260 B	ACROLEIN (PROPENAL)	PA	EPA 8260 B	ACRYLONITRILE	PA
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA	EPA 8260 B	BENZENE	PA
EPA 8260 B	BENZYL CHLORIDE	PA	EPA 8260 B	BROMOBENZENE	PA
EPA 8260 B	BROMOCHLOROMETHANE	PA	EPA 8260 B	BROMODICHLOROMETHANE	PA
EPA 8260 B	BROMOFORM	PA	EPA 8260 B	CARBON DISULFIDE	PA
EPA 8260 B	CARBON TETRACHLORIDE	PA	EPA 8260 B	CHLOROBENZENE	PA
EPA 8260 B	CHLORODIBROMOMETHANE	PA	EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	PA
EPA 8260 B	CHLOROFORM	PA	EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	PA	EPA 8260 B	CIS-1,3-DICHLOROPROPENE	PA
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 B	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 B	ETHANOL	PA

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METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 B	ETHYL ACETATE	PA	EPA 8260 B	ETHYL METHACRYLATE	PA
EPA 8260 B	ETHYLBENZENE	PA	EPA 8260 B	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	PA	EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA
EPA 8260 B	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA	EPA 8260 B	ISOPROPYLBENZENE	PA
EPA 8260 B	M+P-XYLENE	PA	EPA 8260 B	METHACRYLONITRILE	PA
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 B	METHYL METHACRYLATE	PA	EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	PA
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA	EPA 8260 B	N-BUTYLBENZENE	PA
EPA 8260 B	N-PROPYLBENZENE	PA	EPA 8260 B	NAPHTHALENE	PA
EPA 8260 B	O-XYLENE	PA	EPA 8260 B	PENTACHLOROETHANE	PA
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 B	SEC-BUTYLBENZENE	PA
EPA 8260 B	STYRENE	PA	EPA 8260 B	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA
EPA 8260 B	TERT-BUTYLBENZENE	PA	EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 B	TOLUENE	PA	EPA 8260 B	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA	EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 B	VINYL ACETATE	PA	EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 B	XYLENE (TOTAL)	PA	EPA 8260 B - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 B - EXTENDED	CYCLOHEXANE	PA	EPA 8260 B - EXTENDED	CYCLOHEXANONE	PA
EPA 8260 B - EXTENDED	DI-ISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 B - EXTENDED	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA
EPA 8260 B - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA	EPA 8260 B - EXTENDED	METHYL ACETATE	PA
EPA 8260 B - EXTENDED	METHYLCYCLOHEXANE	PA	EPA 8260 B - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 B - EXTENDED	T-AMYLMETHYLETHER (TAME)	PA	EPA 8260 B - EXTENDED	TETRAHYDROFURAN (THF)	PA
EPA 8260 C	1,1,1,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,1-TRICHLOROETHANE	PA
EPA 8260 C	1,1,2,2-TETRACHLOROETHANE	PA	EPA 8260 C	1,1,2-TRICHLOROETHANE	PA
EPA 8260 C	1,1-DICHLOROETHANE	PA	EPA 8260 C	1,1-DICHLOROETHYLENE	PA
EPA 8260 C	1,1-DICHLOROPROPENE	PA	EPA 8260 C	1,2,3-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,3-TRICHLOROPROPANE	PA	EPA 8260 C	1,2,4-TRICHLOROBENZENE	PA
EPA 8260 C	1,2,4-TRIMETHYLBENZENE	PA	EPA 8260 C	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	PA

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	PA	EPA 8260 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8260 C	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	PA	EPA 8260 C	1,2-DICHLOROPROPANE	PA
EPA 8260 C	1,3,5-TRIMETHYLBENZENE	PA	EPA 8260 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8260 C	1,3-DICHLOROPROPANE	PA	EPA 8260 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8260 C	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	PA	EPA 8260 C	2,2-DICHLOROPROPANE	PA
EPA 8260 C	2-BUTANONE (METHYL ETHYL KETONE, MEK)	PA	EPA 8260 C	2-CHLOROETHYL VINYL ETHER	PA
EPA 8260 C	2-CHLOROTOLUENE	PA	EPA 8260 C	2-HEXANONE	PA
EPA 8260 C	4-CHLOROTOLUENE	PA	EPA 8260 C	4-ISOPROPYLTOLUENE (P-CYMENE)	PA
EPA 8260 C	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	PA	EPA 8260 C	ACETONE	PA
EPA 8260 C	ACETONITRILE	PA	EPA 8260 C	ACROLEIN (PROPENAL)	PA
EPA 8260 C	ACRYLONITRILE	PA	EPA 8260 C	ALLYL CHLORIDE (3-CHLOROPROPENE)	PA
EPA 8260 C	BENZENE	PA	EPA 8260 C	BENZYL CHLORIDE	PA
EPA 8260 C	BROMOBENZENE	PA	EPA 8260 C	BROMOCHLOROMETHANE	PA
EPA 8260 C	BROMODICHLOROMETHANE	PA	EPA 8260 C	BROMOFORM	PA
EPA 8260 C	CARBON DISULFIDE	PA	EPA 8260 C	CARBON TETRACHLORIDE	PA
EPA 8260 C	CHLOROBENZENE	PA	EPA 8260 C	CHLORODIBROMOMETHANE	PA
EPA 8260 C	CHLOROETHANE (ETHYL CHLORIDE)	PA	EPA 8260 C	CHLOROFORM	PA
EPA 8260 C	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	PA	EPA 8260 C	CIS-1,2-DICHLOROETHYLENE	PA
EPA 8260 C	CIS-1,3-DICHLOROPROPENE	PA	EPA 8260 C	CYCLOHEXANE	PA
EPA 8260 C	DIBROMOMETHANE (METHYLENE BROMIDE)	PA	EPA 8260 C	DICHLORODIFLUOROMETHANE (FREON-12)	PA
EPA 8260 C	EPICHLOROHYDRIN (1-CHLORO-2,3-EPOXYPROPANE)	PA	EPA 8260 C	ETHANOL	PA
EPA 8260 C	ETHYL ACETATE	PA	EPA 8260 C	ETHYL METHACRYLATE	PA
EPA 8260 C	ETHYL-T-BUTYLETHER (2-ETHOXY-2-METHYLPROPANE, ETBE)	PA	EPA 8260 C	ETHYLBENZENE	PA
EPA 8260 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA	EPA 8260 C	IODOMETHANE (METHYL IODIDE)	PA
EPA 8260 C	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	PA	EPA 8260 C	ISOPROPYL ALCOHOL (2-PROPANOL, ISOPROPANOL)	PA
EPA 8260 C	ISOPROPYLBENZENE	PA	EPA 8260 C	METHACRYLONITRILE	PA
EPA 8260 C	METHYL BROMIDE (BROMOMETHANE)	PA	EPA 8260 C	METHYL CHLORIDE (CHLOROMETHANE)	PA
EPA 8260 C	METHYL METHACRYLATE	PA	EPA 8260 C	METHYL TERT-BUTYL ETHER (MTBE)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

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Virginia Laboratory ID: 460182
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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8260 C	METHYLCYCLOHEXANE	PA	EPA 8260 C	METHYLENE CHLORIDE (DICHLOROMETHANE)	PA
EPA 8260 C	N-BUTYLBENZENE	PA	EPA 8260 C	N-PROPYLBENZENE	PA
EPA 8260 C	NAPHTHALENE	PA	EPA 8260 C	PENTACHLOROETHANE	PA
EPA 8260 C	PROPIONITRILE (ETHYL CYANIDE)	PA	EPA 8260 C	SEC-BUTYLBENZENE	PA
EPA 8260 C	STYRENE	PA	EPA 8260 C	T-AMYLMETHYLETHER (TAME)	PA
EPA 8260 C	TERT-BUTYL ALCOHOL (2-METHYL-2-PROPANOL)	PA	EPA 8260 C	TETRACHLOROETHENE (PERCHLOROETHENE)	PA
EPA 8260 C	TOLUENE	PA	EPA 8260 C	TRANS-1,2-DICHLOROETHENE	PA
EPA 8260 C	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	PA	EPA 8260 C	TRANS-1,4-DICHLORO-2-BUTENE	PA
EPA 8260 C	TRICHLOROETHENE (TRICHLOROETHYLENE)	PA	EPA 8260 C	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	PA
EPA 8260 C	VINYL ACETATE	PA	EPA 8260 C	VINYL CHLORIDE (CHLOROETHENE)	PA
EPA 8260 C	XYLENE (TOTAL)	PA	EPA 8260 C - EXTENDED	1,1,2-TRICHLORO-1,2,2-TRIFLUORO ETHANE (FREON 113)	PA
EPA 8260 C - EXTENDED	DIISOPROPYLETHER (DIPE, ISOPROPYL ETHER)	PA	EPA 8260 C - EXTENDED	GASOLINE RANGE ORGANICS (GRO)	PA
EPA 8260 C - EXTENDED	METHYL ACETATE	PA	EPA 8260 C - EXTENDED	T-AMYL ALCOHOL (TAA)	PA
EPA 8260 C - EXTENDED	TETRAHYDROFURAN (THF)	PA	EPA 8270 C	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 C	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 C	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 C	1,2-DINITROBENZENE (1,2-DNB)	PA	EPA 8270 C	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 C	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 C	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 C	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 C	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 C	1,4-DINITROBENZENE (1,4-DNB)	PA	EPA 8270 C	1,4-NAPHTHOQUINONE	PA
EPA 8270 C	1,4-PHENYLENEDIAMINE	PA	EPA 8270 C	1-CHLORONAPHTHALENE	PA
EPA 8270 C	1-NAPHTHYLAMINE	PA	EPA 8270 C	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 C	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 C	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 C	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 C	2,4-DICHLOROPHENOL	PA
EPA 8270 C	2,4-DIMETHYLPHENOL	PA	EPA 8270 C	2,4-DINITROPHENOL	PA
EPA 8270 C	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 C	2,6-DICHLOROPHENOL	PA
EPA 8270 C	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 C	2-ACETYLAMINOFLUORENE	PA
EPA 8270 C	2-CHLORONAPHTHALENE	PA	EPA 8270 C	2-CHLOROPHENOL	PA
EPA 8270 C	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 C	2-METHYLNAPHTHALENE	PA
EPA 8270 C	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 C	2-NAPHTHYLAMINE	PA
EPA 8270 C	2-NITROANILINE	PA	EPA 8270 C	2-NITROPHENOL	PA
EPA 8270 C	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 C	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 C	3,3'-DIMETHOXYBENZIDINE	PA	EPA 8270 C	3,3'-DIMETHYLBENZIDINE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	3-METHYLCHOLANTHRENE	PA	EPA 8270 C	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 C	3-NITROANILINE	PA	EPA 8270 C	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 C	4-AMINOBIPHENYL	PA	EPA 8270 C	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 C	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 C	4-CHLOROANILINE	PA
EPA 8270 C	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 C	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 C	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 C	4-NITROANILINE	PA
EPA 8270 C	4-NITROPHENOL	PA	EPA 8270 C	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 C	5-NITRO-O-TOLUIDINE	PA	EPA 8270 C	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 C	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 C	ACENAPHTHENE	PA
EPA 8270 C	ACENAPHTHYLENE	PA	EPA 8270 C	ACETOPHENONE	PA
EPA 8270 C	ANILINE	PA	EPA 8270 C	ANTHRACENE	PA
EPA 8270 C	ARAMITE	PA	EPA 8270 C	BENZIDINE	PA
EPA 8270 C	BENZO(A)ANTHRACENE	PA	EPA 8270 C	BENZO(A)PYRENE	PA
EPA 8270 C	BENZO(B)FLUORANTHENE	PA	EPA 8270 C	BENZO(G,H,I)PERYLENE	PA
EPA 8270 C	BENZO(K)FLUORANTHENE	PA	EPA 8270 C	BENZOIC ACID	PA
EPA 8270 C	BENZYL ALCOHOL	PA	EPA 8270 C	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 C	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 C	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 C	BUTYL BENZYL PHTHALATE	PA	EPA 8270 C	CHLOROBENZILATE	PA
EPA 8270 C	CHRYSENE	PA	EPA 8270 C	DI-N-BUTYL PHTHALATE	PA
EPA 8270 C	DI-N-OCTYL PHTHALATE	PA	EPA 8270 C	DIALLATE	PA
EPA 8270 C	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 C	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C	DIBENZOFURAN	PA	EPA 8270 C	DIETHYL PHTHALATE	PA
EPA 8270 C	DIMETHOATE	PA	EPA 8270 C	DIMETHYL PHTHALATE	PA
EPA 8270 C	DIPHENYLAMINE	PA	EPA 8270 C	DISULFOTON	PA
EPA 8270 C	ETHYL METHANESULFONATE	PA	EPA 8270 C	FAMPHUR	PA
EPA 8270 C	FLUORANTHENE	PA	EPA 8270 C	FLUORENE	PA
EPA 8270 C	HEXACHLOROBENZENE	PA	EPA 8270 C	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 C	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 C	HEXACHLOROETHANE	PA
EPA 8270 C	HEXACHLOROPROPENE	PA	EPA 8270 C	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 C	ISODRIN	PA	EPA 8270 C	ISOPHORONE	PA
EPA 8270 C	ISOSAFROLE	PA	EPA 8270 C	KEPONE	PA
EPA 8270 C	METHAPYRILENE	PA	EPA 8270 C	METHYL METHANESULFONATE	PA
EPA 8270 C	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 C	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 C	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 C	N-NITROSODIETHYLAMINE	PA

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 C	N-NITROSODIMETHYLAMINE	PA	EPA 8270 C	N-NITROSODIPHENYLAMINE	PA
EPA 8270 C	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 C	N-NITROSOMORPHOLINE	PA
EPA 8270 C	N-NITROSOPIPERIDINE	PA	EPA 8270 C	N-NITROSOPYRROLIDINE	PA
EPA 8270 C	NAPHTHALENE	PA	EPA 8270 C	NITROBENZENE	PA
EPA 8270 C	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 C	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 C	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 C	PENTACHLOROBENZENE	PA
EPA 8270 C	PENTACHLORONITROBENZENE	PA	EPA 8270 C	PENTACHLOROPHENOL	PA
EPA 8270 C	PHENACETIN	PA	EPA 8270 C	PHENANTHRENE	PA
EPA 8270 C	PHENOL	PA	EPA 8270 C	PHORATE	PA
EPA 8270 C	PHTHALIC ANHYDRIDE	PA	EPA 8270 C	PRONAMIDE (KERB)	PA
EPA 8270 C	PYRENE	PA	EPA 8270 C	PYRIDINE	PA
EPA 8270 C	SAFROLE	PA	EPA 8270 C	THIONAZIN (ZINOPHOS)	PA
EPA 8270 C	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA	EPA 8270 C SIM	2-METHYLNAPHTHALENE	PA
EPA 8270 C SIM	ACENAPHTHENE	PA	EPA 8270 C SIM	ACENAPHTHYLENE	PA
EPA 8270 C SIM	ANTHRACENE	PA	EPA 8270 C SIM	BENZO(A)ANTHRACENE	PA
EPA 8270 C SIM	BENZO(A)PYRENE	PA	EPA 8270 C SIM	BENZO(B)FLUORANTHENE	PA
EPA 8270 C SIM	BENZO(G,H,I)PERYLENE	PA	EPA 8270 C SIM	BENZO(K)FLUORANTHENE	PA
EPA 8270 C SIM	CHRYSENE	PA	EPA 8270 C SIM	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 C SIM	FLUORANTHENE	PA	EPA 8270 C SIM	FLUORENE	PA
EPA 8270 C SIM	INDENO(1,2,3-CD) PYRENE	PA	EPA 8270 C SIM	NAPHTHALENE	PA
EPA 8270 C SIM	PHENANTHRENE	PA	EPA 8270 C SIM	PYRENE	PA
EPA 8270 C SIM - EXTENDED	1-METHYLNAPHTHALENE	PA	EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	PA
EPA 8270 D	1,2,4-TRICHLOROBENZENE	PA	EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	PA
EPA 8270 D	1,2-DINITROBENZENE (1,2-DNB)	PA	EPA 8270 D	1,2-DIPHENYLHYDRAZINE	PA
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	PA
EPA 8270 D	1,3-DINITROBENZENE (1,3-DNB)	PA	EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	PA
EPA 8270 D	1,4-DINITROBENZENE (1,4-DNB)	PA	EPA 8270 D	1,4-NAPHTHOQUINONE	PA
EPA 8270 D	1,4-PHENYLENEDIAMINE	PA	EPA 8270 D	1-CHLORONAPHTHALENE	PA
EPA 8270 D	1-NAPHTHYLAMINE	PA	EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	PA
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	PA	EPA 8270 D	2,4,5-TRICHLOROPHENOL	PA
EPA 8270 D	2,4,6-TRICHLOROPHENOL	PA	EPA 8270 D	2,4-DICHLOROPHENOL	PA
EPA 8270 D	2,4-DIMETHYLPHENOL	PA	EPA 8270 D	2,4-DINITROPHENOL	PA
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	PA	EPA 8270 D	2,6-DICHLOROPHENOL	PA
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8270 D	2-ACETYLAMINOFLUORENE	PA
EPA 8270 D	2-CHLORONAPHTHALENE	PA	EPA 8270 D	2-CHLOROPHENOL	PA

Scope of Accreditation

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SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	PA	EPA 8270 D	2-METHYLNAPHTHALENE	PA
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	PA	EPA 8270 D	2-NAPHTHYLAMINE	PA
EPA 8270 D	2-NITROANILINE	PA	EPA 8270 D	2-NITROPHENOL	PA
EPA 8270 D	2-PICOLINE (2-METHYLPYRIDINE)	PA	EPA 8270 D	3,3'-DICHLOROBENZIDINE	PA
EPA 8270 D	3,3'-DIMETHOXYBENZIDINE	PA	EPA 8270 D	3,3'-DIMETHYLBENZIDINE	PA
EPA 8270 D	3-METHYLCHOLANTHRENE	PA	EPA 8270 D	3-METHYLPHENOL (M-CRESOL)	PA
EPA 8270 D	3-NITROANILINE	PA	EPA 8270 D	4,4'-METHYLENEBIS(2-CHLOROANILINE)	PA
EPA 8270 D	4-AMINOBIPHENYL	PA	EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	PA
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	PA	EPA 8270 D	4-CHLOROANILINE	PA
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	PA	EPA 8270 D	4-DIMETHYL AMINOAZOBENZENE	PA
EPA 8270 D	4-METHYLPHENOL (P-CRESOL)	PA	EPA 8270 D	4-NITROANILINE	PA
EPA 8270 D	4-NITROPHENOL	PA	EPA 8270 D	4-NITROQUINOLINE-1-OXIDE	PA
EPA 8270 D	5-NITRO-O-TOLUIDINE	PA	EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	PA
EPA 8270 D	A-A-DIMETHYLPHENETHYLAMINE	PA	EPA 8270 D	ACENAPHTHENE	PA
EPA 8270 D	ACENAPHTHYLENE	PA	EPA 8270 D	ACETOPHENONE	PA
EPA 8270 D	ANILINE	PA	EPA 8270 D	ANTHRACENE	PA
EPA 8270 D	ARAMITE	PA	EPA 8270 D	BENZIDINE	PA
EPA 8270 D	BENZO(A)ANTHRACENE	PA	EPA 8270 D	BENZO(A)PYRENE	PA
EPA 8270 D	BENZO(B)FLUORANTHENE	PA	EPA 8270 D	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D	BENZO(K)FLUORANTHENE	PA	EPA 8270 D	BENZOIC ACID	PA
EPA 8270 D	BENZYL ALCOHOL	PA	EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	PA
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	PA	EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	PA
EPA 8270 D	BUTYL BENZYL PHTHALATE	PA	EPA 8270 D	CHLOROBENZILATE	PA
EPA 8270 D	CHRYSENE	PA	EPA 8270 D	DI-N-BUTYL PHTHALATE	PA
EPA 8270 D	DI-N-OCTYL PHTHALATE	PA	EPA 8270 D	DIALLATE	PA
EPA 8270 D	DIBENZ(A, J) ACRIDINE	PA	EPA 8270 D	DIBENZO(A,H) ANTHRACENE	PA
EPA 8270 D	DIBENZOFURAN	PA	EPA 8270 D	DIETHYL PHTHALATE	PA
EPA 8270 D	DIMETHOATE	PA	EPA 8270 D	DIMETHYL PHTHALATE	PA
EPA 8270 D	DIPHENYLAMINE	PA	EPA 8270 D	DISULFOTON	PA
EPA 8270 D	ETHYL METHANESULFONATE	PA	EPA 8270 D	FAMPHUR	PA
EPA 8270 D	FLUORANTHENE	PA	EPA 8270 D	FLUORENE	PA
EPA 8270 D	HEXACHLOROBENZENE	PA	EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	PA
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	PA	EPA 8270 D	HEXACHLOROETHANE	PA
EPA 8270 D	HEXACHLOROPROPENE	PA	EPA 8270 D	INDENO(1,2,3-CD) PYRENE	PA

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8270 D	ISODRIN	PA	EPA 8270 D	ISOPHORONE	PA
EPA 8270 D	ISOSAFROLE	PA	EPA 8270 D	KEPONE	PA
EPA 8270 D	METHAPYRILENE	PA	EPA 8270 D	METHYL METHANESULFONATE	PA
EPA 8270 D	METHYL PARATHION (PARATHION, METHYL)	PA	EPA 8270 D	N-NITROSO-DI-N-BUTYLAMINE	PA
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	PA	EPA 8270 D	N-NITROSODIETHYLAMINE	PA
EPA 8270 D	N-NITROSODIMETHYLAMINE	PA	EPA 8270 D	N-NITROSODIPHENYLAMINE	PA
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	PA	EPA 8270 D	N-NITROSOMORPHOLINE	PA
EPA 8270 D	N-NITROSOPIPERIDINE	PA	EPA 8270 D	N-NITROSOPYRROLIDINE	PA
EPA 8270 D	NAPHTHALENE	PA	EPA 8270 D	NITROBENZENE	PA
EPA 8270 D	O,O,O-TRIETHYL PHOSPHOROTHIOATE	PA	EPA 8270 D	O-TOLUIDINE (2-METHYLANILINE)	PA
EPA 8270 D	PARATHION (PARATHION - ETHYL)	PA	EPA 8270 D	PENTACHLOROBENZENE	PA
EPA 8270 D	PENTACHLORONITROBENZENE	PA	EPA 8270 D	PENTACHLOROPHENOL	PA
EPA 8270 D	PHENACETIN	PA	EPA 8270 D	PHENANTHRENE	PA
EPA 8270 D	PHENOL	PA	EPA 8270 D	PHORATE	PA
EPA 8270 D	PHTHALIC ANHYDRIDE	PA	EPA 8270 D	PRONAMIDE (KERB)	PA
EPA 8270 D	PYRENE	PA	EPA 8270 D	SAFROLE	PA
EPA 8270 D	THIONAZIN (ZINOPHOS)	PA	EPA 8270 D	TRIS-(2,3-DIBROMOPROPYL) PHOSPHATE (TRIS-BP)	PA
EPA 8270 D - EXTENDED	1,1'-BIPHENYL (BZ-0)	PA	EPA 8270 D - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8270 D - EXTENDED	ATRAZINE	PA	EPA 8270 D - EXTENDED	BENZALDEHYDE	PA
EPA 8270 D - EXTENDED	BIS(2-ETHYLHEXYL)ADIPATE (DI(2-ETHYLHEXYL)ADIPATE)	PA	EPA 8270 D - EXTENDED	CAPROLACTAM	PA
EPA 8270 D - EXTENDED	CARBAZOLE	PA	EPA 8270 D - EXTENDED	PYRIDINE	PA
EPA 8270 D SIM	2-METHYLNAPHTHALENE	PA	EPA 8270 D SIM	ACENAPHTHENE	PA
EPA 8270 D SIM	ACENAPHTHYLENE	PA	EPA 8270 D SIM	ANTHRACENE	PA
EPA 8270 D SIM	BENZO(A)ANTHRACENE	PA	EPA 8270 D SIM	BENZO(A)PYRENE	PA
EPA 8270 D SIM	BENZO(B)FLUORANTHENE	PA	EPA 8270 D SIM	BENZO(G,H,I)PERYLENE	PA
EPA 8270 D SIM	BENZO(K)FLUORANTHENE	PA	EPA 8270 D SIM	CHRYSENE	PA
EPA 8270 D SIM	DIBENZO(A,H) ANTHRACENE	PA	EPA 8270 D SIM	FLUORANTHENE	PA
EPA 8270 D SIM	FLUORENE	PA	EPA 8270 D SIM	INDENO(1,2,3-CD) PYRENE	PA
EPA 8270 D SIM	NAPHTHALENE	PA	EPA 8270 D SIM	PHENANTHRENE	PA
EPA 8270 D SIM	PYRENE	PA	EPA 8270 D SIM - EXTENDED	1-METHYLNAPHTHALENE	PA
EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZO-P-DIOXIN (OCDD)	PA	EPA 8290 A	1,2,3,4,6,7,8,9-OCTACHLORODIBENZOFURAN (OCDF)	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	1,2,3,4,6,7,8-HEPTACHLORODIBENZOFURAN (1,2,3,4,6,7,8-HPCDF)	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-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,4,7,8-HXCDD)	PA
EPA 8290 A	1,2,3,4,7,8-HEXACHLORODIBENZOFURAN (1,2,3,4,7,8-HXCDF)	PA			

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZO-P-DIOXIN(1,2,3,6,7,8-HXCDD)	PA	EPA 8290 A	1,2,3,6,7,8-HEXACHLORODIBENZOFURAN (1,2,3,6,7,8-HXCDF)	PA
EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZO-P-DIOXIN (1,2,3,7,8,9-HXCDD)	PA	EPA 8290 A	1,2,3,7,8,9-HEXACHLORODIBENZOFURAN (1,2,3,7,8,9-HXCDF)	PA
EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZO-P-DIOXIN (1,2,3,7,8-PECDD)	PA	EPA 8290 A	1,2,3,7,8-PENTACHLORODIBENZOFURAN (1,2,3,7,8-PECDF)	PA
EPA 8290 A	2,3,4,6,7,8-HEXACHLORODIBENZOFURAN (2,3,4,6,7,8-HXCDF)	PA	EPA 8290 A	2,3,4,7,8-PENTACHLORODIBENZOFURAN	PA
EPA 8290 A	2,3,7,8-TETRACHLORODIBENZO-P-DIOXIN (2,3,7,8-TCDD)	PA	EPA 8290 A	2,3,7,8-TETRACHLORODIBENZOFURAN (2,3,7,8-TCDF)	PA
EPA 8315 A	2,5-DIMETHYLBENZALDEHYDE	PA	EPA 8315 A	ACETALDEHYDE	PA
EPA 8315 A	BENZALDEHYDE	PA	EPA 8315 A	BUTYLALDEHYDE (BUTANAL)	PA
EPA 8315 A	CROTONALDEHYDE	PA	EPA 8315 A	FORMALDEHYDE	PA
EPA 8315 A	HEXANALDEHYDE (HEXANAL)	PA	EPA 8315 A	ISOVALERALDEHYDE	PA
EPA 8315 A	M-TOLUALDEHYDE (1,3-TOLUALDEHYDE)	PA	EPA 8315 A	O-TOLUALDEHYDE (1,2-TOLUALDEHYDE)	PA
EPA 8315 A	P-TOLUALDEHYDE (1,4-TOLUALDEHYDE)	PA	EPA 8315 A	PENTANAL (VALERALDEHYDE)	PA
EPA 8315 A	PROPIONALDEHYDE (PROPANAL)	PA	EPA 8330	NITROGLYCERIN	PA
EPA 8330 A	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 A	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 A	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 A	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 A	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 A	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 A	2-NITROTOLUENE	PA	EPA 8330 A	3-NITROTOLUENE	PA
EPA 8330 A	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA	EPA 8330 A	4-NITROTOLUENE	PA
EPA 8330 A	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA	EPA 8330 A	NITROBENZENE	PA
EPA 8330 A	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 A	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA
EPA 8330 B	1,3,5-TRINITROBENZENE (1,3,5-TNB)	PA	EPA 8330 B	1,3-DINITROBENZENE (1,3-DNB)	PA
EPA 8330 B	2,4,6-TRINITROTOLUENE (2,4,6-TNT)	PA	EPA 8330 B	2,4-DINITROTOLUENE (2,4-DNT)	PA
EPA 8330 B	2,6-DINITROTOLUENE (2,6-DNT)	PA	EPA 8330 B	2-AMINO-4,6-DINITROTOLUENE (2-AM-DNT)	PA
EPA 8330 B	2-NITROTOLUENE	PA	EPA 8330 B	3,5-DINITROANILINE	PA
EPA 8330 B	3-NITROTOLUENE	PA	EPA 8330 B	4-AMINO-2,6-DINITROTOLUENE (4-AM-DNT)	PA
EPA 8330 B	4-NITROTOLUENE	PA	EPA 8330 B	METHYL-2,4,6-TRINITROPHENYLNITRAMINE (TETRYL)	PA
EPA 8330 B	NITROBENZENE	PA	EPA 8330 B	NITROGLYCERIN	PA
EPA 8330 B	OCTAHYDRO-1,3,5,7-TETRANITRO-1,3,5,7-TETRAZOCINE (HMX)	PA	EPA 8330 B	PENTAERYTHRITOLTETRANITRATE (PETN)	PA

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9756

Eurofins Lancaster Laboratories Environmental, LLC
2425 New Holland Pike
Lancaster, PA 17601

Virginia Laboratory ID: 460182
Effective Date: June 15, 2018
Expiration Date: June 14, 2019

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 8330 B	RDX (HEXAHYDRO-1,3,5-TRINITRO-1,3,5-TRIAZINE)	PA	EPA 9012 A	CYANIDE	PA
EPA 9045 C	PH	PA	EPA 9045 D	PH	PA
EPA 9050 A	CONDUCTIVITY	PA	EPA 9060	TOTAL ORGANIC CARBON (TOC)	PA
EPA 9066	TOTAL PHENOLICS	PA	EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	PA
EPA 9081	CATION EXCHANGE CAPACITY	PA	EPA 9095 B	FREE LIQUID	PA

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF GENERAL SERVICES
DIVISION OF CONSOLIDATED LABORATORY SERVICES

Certifies that

VA Laboratory ID#: 460193
Shealy Environmental Services, Inc.

106 Vantage Point Drive
Columbia, SC 29172

Owner: DAN WRIGHT
Responsible Official: DANIEL J. WRIGHT

Having met the requirements of 1 VAC 30-46 and
having been found compliant with the 2009 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: **September 15, 2018**
Expiration Date: **September 14, 2019**
Certificate # 9920

Denise M. Toney, Ph.D., HCLD
DGS Deputy Director for Laboratories

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.: 9920

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2018
Expiration Date: September 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 1010	FLASHPOINT	FL
EPA 1631 E	MERCURY	FL
EPA 180.1 REV 2	TURBIDITY	FL
EPA 200.7 REV 4.4	ANTIMONY	FL
EPA 200.7 REV 4.4	BARIUM	FL
EPA 200.7 REV 4.4	BORON	FL
EPA 200.7 REV 4.4	CALCIUM	FL
EPA 200.7 REV 4.4	COBALT	FL
EPA 200.7 REV 4.4	IRON	FL
EPA 200.7 REV 4.4	MAGNESIUM	FL
EPA 200.7 REV 4.4	MOLYBDENUM	FL
EPA 200.7 REV 4.4	POTASSIUM	FL
EPA 200.7 REV 4.4	SILVER	FL
EPA 200.7 REV 4.4	THALLIUM	FL
EPA 200.7 REV 4.4	VANADIUM	FL
EPA 200.8 REV 5.4	ALUMINUM	FL
EPA 200.8 REV 5.4	ARSENIC	FL
EPA 200.8 REV 5.4	BERYLLIUM	FL
EPA 200.8 REV 5.4	CHROMIUM	FL
EPA 200.8 REV 5.4	COPPER	FL
EPA 200.8 REV 5.4	MANGANESE	FL
EPA 200.8 REV 5.4	NICKEL	FL
EPA 200.8 REV 5.4	SILVER	FL
EPA 200.8 REV 5.4	VANADIUM	FL
EPA 245.1 REV 3	MERCURY	FL
EPA 300.0 REV 2.1	CHLORIDE	FL
EPA 300.0 REV 2.1	NITRATE AS N	FL
EPA 300.0 REV 2.1	SULFATE	FL
EPA 350.1 REV 2	AMMONIA AS N	FL
EPA 353.2 REV 2	NITRATE AS N	FL
EPA 353.2 REV 2	NITRITE AS N	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL
EPA 6010 C	COPPER	FL

METHOD	ANALYTE	PRIMARY
EPA 120.1	CONDUCTIVITY	FL
EPA 1664 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL
EPA 200.7 REV 4.4	ALUMINUM	FL
EPA 200.7 REV 4.4	ARSENIC	FL
EPA 200.7 REV 4.4	BERYLLIUM	FL
EPA 200.7 REV 4.4	CADMIUM	FL
EPA 200.7 REV 4.4	CHROMIUM	FL
EPA 200.7 REV 4.4	COPPER	FL
EPA 200.7 REV 4.4	LEAD	FL
EPA 200.7 REV 4.4	MANGANESE	FL
EPA 200.7 REV 4.4	NICKEL	FL
EPA 200.7 REV 4.4	SELENIUM	FL
EPA 200.7 REV 4.4	SODIUM	FL
EPA 200.7 REV 4.4	TIN	FL
EPA 200.7 REV 4.4	ZINC	FL
EPA 200.8 REV 5.4	ANTIMONY	FL
EPA 200.8 REV 5.4	BARIUM	FL
EPA 200.8 REV 5.4	CADMIUM	FL
EPA 200.8 REV 5.4	COBALT	FL
EPA 200.8 REV 5.4	LEAD	FL
EPA 200.8 REV 5.4	MOLYBDENUM	FL
EPA 200.8 REV 5.4	SELENIUM	FL
EPA 200.8 REV 5.4	THALLIUM	FL
EPA 200.8 REV 5.4	ZINC	FL
EPA 300.0 REV 2.1	BROMIDE	FL
EPA 300.0 REV 2.1	FLUORIDE	FL
EPA 300.0 REV 2.1	NITRITE AS N	FL
EPA 335.4 REV 1.0	CYANIDE	FL
EPA 351.2 REV 2	KJELDAHL NITROGEN - TOTAL (TKN)	FL
EPA 353.2 REV 2	NITRATE/NITRITE	FL
EPA 420.4 REV 1	TOTAL PHENOLICS	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 6010 C	IRON	FL

Commonwealth of Virginia

Department of General Services
Division of Consolidated Laboratory Services

Scope of Accreditation

VELAP Certificate No.: 9920

Shealy Environmental Services, Inc.
106 Vantage Point Drive
Columbia, SC 29172

Virginia Laboratory ID: 460193
Effective Date: September 15, 2018
Expiration Date: September 14, 2019

NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY	METHOD	ANALYTE	PRIMARY
EPA 6010 C	LEAD	FL	EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MANGANESE	FL	EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	NICKEL	FL	EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SELENIUM	FL	EPA 6010 C	SILVER	FL
EPA 6010 C	SODIUM	FL	EPA 6010 C	THALLIUM	FL
EPA 6010 C	TIN	FL	EPA 6010 C	TITANIUM	FL
EPA 6010 C	VANADIUM	FL	EPA 6010 C	ZINC	FL
EPA 6010 D	ALUMINUM	FL	EPA 6010 D	ANTIMONY	FL
EPA 6010 D	ARSENIC	FL	EPA 6010 D	BARIUM	FL
EPA 6010 D	BERYLLIUM	FL	EPA 6010 D	BORON	FL
EPA 6010 D	CADMIUM	FL	EPA 6010 D	CALCIUM	FL
EPA 6010 D	CHROMIUM	FL	EPA 6010 D	COBALT	FL
EPA 6010 D	COPPER	FL	EPA 6010 D	IRON	FL
EPA 6010 D	LEAD	FL	EPA 6010 D	MAGNESIUM	FL
EPA 6010 D	MANGANESE	FL	EPA 6010 D	MOLYBDENUM	FL
EPA 6010 D	NICKEL	FL	EPA 6010 D	POTASSIUM	FL
EPA 6010 D	SELENIUM	FL	EPA 6010 D	SILVER	FL
EPA 6010 D	SODIUM	FL	EPA 6010 D	THALLIUM	FL
EPA 6010 D	TIN	FL	EPA 6010 D	TITANIUM	FL
EPA 6010 D	VANADIUM	FL	EPA 6010 D	ZINC	FL
EPA 6020 A	ALUMINUM	FL	EPA 6020 A	ANTIMONY	FL
EPA 6020 A	ARSENIC	FL	EPA 6020 A	BARIUM	FL
EPA 6020 A	BERYLLIUM	FL	EPA 6020 A	CADMIUM	FL
EPA 6020 A	CALCIUM	FL	EPA 6020 A	CHROMIUM	FL
EPA 6020 A	COBALT	FL	EPA 6020 A	COPPER	FL
EPA 6020 A	IRON	FL	EPA 6020 A	LEAD	FL
EPA 6020 A	MAGNESIUM	FL	EPA 6020 A	MANGANESE	FL
EPA 6020 A	NICKEL	FL	EPA 6020 A	POTASSIUM	FL
EPA 6020 A	SELENIUM	FL	EPA 6020 A	SILVER	FL
EPA 6020 A	SODIUM	FL	EPA 6020 A	THALLIUM	FL
EPA 6020 A	VANADIUM	FL	EPA 6020 A	ZINC	FL
EPA 6020 A - EXTENDED	BORON	FL	EPA 6020 A - EXTENDED	MOLYBDENUM	FL
EPA 6020 A - EXTENDED	TIN	FL	EPA 6020 A - EXTENDED	TITANIUM	FL
EPA 6020 B	ALUMINUM	FL	EPA 6020 B	ANTIMONY	FL
EPA 6020 B	ARSENIC	FL	EPA 6020 B	BARIUM	FL
EPA 6020 B	BERYLLIUM	FL	EPA 6020 B	CADMIUM	FL
EPA 6020 B	CALCIUM	FL	EPA 6020 B	CHROMIUM	FL
EPA 6020 B	COBALT	FL	EPA 6020 B	COPPER	FL

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NON-POTABLE WATER

METHOD	ANALYTE	PRIMARY
EPA 6020 B	IRON	FL
EPA 6020 B	MAGNESIUM	FL
EPA 6020 B	NICKEL	FL
EPA 6020 B	SELENIUM	FL
EPA 6020 B	SODIUM	FL
EPA 6020 B	TIN	FL
EPA 6020 B	ZINC	FL
EPA 6020 B - EXTENDED	TITANIUM	FL
EPA 608	4,4'-DDE	FL
EPA 608	ALDRIN	FL
EPA 608	AROCLOR-1016 (PCB-1016)	FL
EPA 608	AROCLOR-1232 (PCB-1232)	FL
EPA 608	AROCLOR-1248 (PCB-1248)	FL
EPA 608	AROCLOR-1260 (PCB-1260)	FL
EPA 608	CHLORDANE (TECH.)	FL
EPA 608	DIELDRIN	FL
EPA 608	ENDOSULFAN II	FL
EPA 608	ENDRIN	FL
EPA 608	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	HEPTACHLOR EPOXIDE	FL
EPA 624	1,1,1-TRICHLOROETHANE	FL
EPA 624	1,1,2-TRICHLOROETHANE	FL
EPA 624	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 624	1,2-DICHLOROPROPANE	FL
EPA 624	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 624	BENZENE	FL
EPA 624	BROMOFORM	FL
EPA 624	CHLOROBENZENE	FL
EPA 624	CHLOROFORM	FL
EPA 624	ETHYLBENZENE	FL
EPA 624	METHYL CHLORIDE (CHLOROMETHANE)	FL

METHOD	ANALYTE	PRIMARY
EPA 6020 B	LEAD	FL
EPA 6020 B	MANGANESE	FL
EPA 6020 B	POTASSIUM	FL
EPA 6020 B	SILVER	FL
EPA 6020 B	THALLIUM	FL
EPA 6020 B	VANADIUM	FL
EPA 6020 B - EXTENDED	BORON	FL
EPA 608	4,4'-DDD	FL
EPA 608	4,4'-DDT	FL
EPA 608	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	AROCLOR-1221 (PCB-1221)	FL
EPA 608	AROCLOR-1242 (PCB-1242)	FL
EPA 608	AROCLOR-1254 (PCB-1254)	FL
EPA 608	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 608	DELTA-BHC	FL
EPA 608	ENDOSULFAN I	FL
EPA 608	ENDOSULFAN SULFATE	FL
EPA 608	ENDRIN ALDEHYDE	FL
EPA 608	HEPTACHLOR	FL
EPA 608	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 624	1,1,2,2-TETRACHLOROETHANE	FL
EPA 624	1,1-DICHLOROETHANE	FL
EPA 624	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 624	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 624	2-CHLOROETHYL VINYL ETHER	FL
EPA 624	BROMODICHLOROMETHANE	FL
EPA 624	CARBON TETRACHLORIDE	FL
EPA 624	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 624	CIS-1,3-DICHLOROPROPENE	FL
EPA 624	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 624	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL

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METHOD	ANALYTE	PRIMARY
EPA 624	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 624	TRANS-1,2-DICHLOROETHENE	FL
EPA 624	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 624	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 624 - EXTENDED	XYLENE (TOTAL)	FL
EPA 625	2,4,6-TRICHLOROPHENOL	FL
EPA 625	2,4-DIMETHYLPHENOL	FL
EPA 625	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 625	2-CHLORONAPHTHALENE	FL
EPA 625	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 625	3,3'-DICHLOROBENZIDINE	FL
EPA 625	4-CHLORO-3-METHYLPHENOL	FL
EPA 625	4-NITROPHENOL	FL
EPA 625	ACENAPHTHYLENE	FL
EPA 625	BENZIDINE	FL
EPA 625	BENZO(A)PYRENE	FL
EPA 625	BENZO(G,H,I)PERYLENE	FL
EPA 625	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 625	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 625	CHRYSENE	FL
EPA 625	DI-N-OCTYL PHTHALATE	FL
EPA 625	DIETHYL PHTHALATE	FL
EPA 625	FLUORANTHENE	FL
EPA 625	HEXACHLOROBENZENE	FL
EPA 625	HEXACHLOROCYCLOPENTADIENE	FL
EPA 625	INDENO(1,2,3-CD) PYRENE	FL
EPA 625	N-NITROSODI-N-PROPYLAMINE	FL
EPA 625	N-NITROSODIPHENYLAMINE	FL
EPA 625	NITROBENZENE	FL
EPA 625	PHENANTHRENE	FL
EPA 625	PYRENE	FL
EPA 7470 A	MERCURY	FL
EPA 624	TOLUENE	FL
EPA 624	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 624	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 624 - EXTENDED	1,1-DICHLOROETHYLENE	FL
EPA 625	1,2,4-TRICHLOROBENZENE	FL
EPA 625	2,4-DICHLOROPHENOL	FL
EPA 625	2,4-DINITROPHENOL	FL
EPA 625	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 625	2-CHLOROPHENOL	FL
EPA 625	2-NITROPHENOL	FL
EPA 625	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 625	4-CHLOROPHENYL PHENYLETHER	FL
EPA 625	ACENAPHTHENE	FL
EPA 625	ANTHRACENE	FL
EPA 625	BENZO(A)ANTHRACENE	FL
EPA 625	BENZO(B)FLUORANTHENE	FL
EPA 625	BENZO(K)FLUORANTHENE	FL
EPA 625	BIS(2-CHLOROETHYL) ETHER	FL
EPA 625	BUTYL BENZYL PHTHALATE	FL
EPA 625	DI-N-BUTYL PHTHALATE	FL
EPA 625	DIBENZO(A,H) ANTHRACENE	FL
EPA 625	DIMETHYL PHTHALATE	FL
EPA 625	FLUORENE	FL
EPA 625	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 625	HEXACHLOROETHANE	FL
EPA 625	ISOPHORONE	FL
EPA 625	N-NITROSODIMETHYLAMINE	FL
EPA 625	NAPHTHALENE	FL
EPA 625	PENTACHLOROPHENOL	FL
EPA 625	PHENOL	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8011	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL

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METHOD	ANALYTE	PRIMARY
EPA 8011	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL
EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	2,4-DB	FL
EPA 8151 A	DICHLOROPROP (DICHLORPROP)	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	DICAMBA	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL

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EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	4-METHYL-2-PENTANONE (METHYL ISOBUTYL KETONE, MIBK)	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	1,4-DIOXANE (P-DIOXANE /1,4-DIETHYLENEOXIDE)	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLORODIBROMOMETHANE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL

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EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL
EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANILINE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8260 C	ETHYLBENZENE	FL
EPA 8270 D	1,2,4-TRICHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,3,4,6-TETRACHLOROPHENOL	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL

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EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	HEXACHLOROPROPENE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSODIMETHYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9040 C	PH	FL
EPA 9056 A	CHLORIDE	FL
EPA 9056 A	NITRATE AS N	FL
EPA 9056 A	SULFATE	FL
SM 2120 B-2011	COLOR	FL
SM 2340 C-2011	TOTAL HARDNESS AS CACO3	FL
SM 2540 C-2011	RESIDUE-FILTERABLE (TDS)	FL
SM 3500-CR B-2011	CHROMIUM VI	FL
SM 5210 B-2011	BIOCHEMICAL OXYGEN DEMAND (BOD)	FL
SM 5220 D-2011	CHEMICAL OXYGEN DEMAND (COD)	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	KEPONE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9012 B	TOTAL CYANIDE	FL
EPA 9056 A	BROMIDE	FL
EPA 9056 A	FLUORIDE	FL
EPA 9056 A	NITRITE AS N	FL
EPA 9065	TOTAL PHENOLICS	FL
SM 2320 B-2011	ALKALINITY AS CACO3	FL
SM 2540 B-2011	RESIDUE-TOTAL (TS)	FL
SM 2540 D-2011	RESIDUE-NONFILTERABLE (TSS)	FL
SM 4500-$S2^-$ F-2011	SULFIDE	FL
SM 5210 B-2011	CARBONACEOUS BOD (CBOD)	FL
SM 5310 C-2011	TOTAL ORGANIC CARBON (TOC)	FL

SOLID AND CHEMICAL MATERIALS

METHOD	ANALYTE	PRIMARY
EPA 1010 A	FLASHPOINT	FL
EPA 1312	PREP: SYNTHETIC PRECIPITATION LEACHING PROCEDURE	FL
EPA 6010 C	ANTIMONY	FL
EPA 6010 C	BARIUM	FL
EPA 6010 C	BORON	FL
EPA 6010 C	CALCIUM	FL
EPA 6010 C	COBALT	FL
EPA 1311	PREP: TOXICITY CHARACTERISTIC LEACHING PROCEDURE	FL
EPA 6010 C	ALUMINUM	FL
EPA 6010 C	ARSENIC	FL
EPA 6010 C	BERYLLIUM	FL
EPA 6010 C	CADMIUM	FL
EPA 6010 C	CHROMIUM	FL

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EPA 6010 C	COPPER	FL
EPA 6010 C	LEAD	FL
EPA 6010 C	MANGANESE	FL
EPA 6010 C	NICKEL	FL
EPA 6010 C	SELENIUM	FL
EPA 6010 C	SODIUM	FL
EPA 6010 C	TIN	FL
EPA 6010 C	VANADIUM	FL
EPA 6010 D	ALUMINUM	FL
EPA 6010 D	ARSENIC	FL
EPA 6010 D	BERYLLIUM	FL
EPA 6010 D	CADMIUM	FL
EPA 6010 D	CHROMIUM	FL
EPA 6010 D	COPPER	FL
EPA 6010 D	LEAD	FL
EPA 6010 D	MANGANESE	FL
EPA 6010 D	NICKEL	FL
EPA 6010 D	SELENIUM	FL
EPA 6010 D	SODIUM	FL
EPA 6010 D	TIN	FL
EPA 6010 D	VANADIUM	FL
EPA 6020 B	ALUMINUM	FL
EPA 6020 B	ARSENIC	FL
EPA 6020 B	BERYLLIUM	FL
EPA 6020 B	CALCIUM	FL
EPA 6020 B	COBALT	FL
EPA 6020 B	IRON	FL
EPA 6020 B	MAGNESIUM	FL
EPA 6020 B	NICKEL	FL
EPA 6020 B	SELENIUM	FL
EPA 6020 B	SODIUM	FL
EPA 6020 B	VANADIUM	FL
EPA 7196 A	CHROMIUM VI	FL
EPA 8015 C	DIESEL RANGE ORGANICS (DRO)	FL
EPA 8081 B	4,4'-DDD	FL
EPA 8081 B	4,4'-DDT	FL
EPA 8081 B	ALPHA-BHC (ALPHA-HEXACHLOROCYCLOHEXANE)	FL

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EPA 6010 C	IRON	FL
EPA 6010 C	MAGNESIUM	FL
EPA 6010 C	MOLYBDENUM	FL
EPA 6010 C	POTASSIUM	FL
EPA 6010 C	SILVER	FL
EPA 6010 C	THALLIUM	FL
EPA 6010 C	TITANIUM	FL
EPA 6010 C	ZINC	FL
EPA 6010 D	ANTIMONY	FL
EPA 6010 D	BARIUM	FL
EPA 6010 D	BORON	FL
EPA 6010 D	CALCIUM	FL
EPA 6010 D	COBALT	FL
EPA 6010 D	IRON	FL
EPA 6010 D	MAGNESIUM	FL
EPA 6010 D	MOLYBDENUM	FL
EPA 6010 D	POTASSIUM	FL
EPA 6010 D	SILVER	FL
EPA 6010 D	THALLIUM	FL
EPA 6010 D	TITANIUM	FL
EPA 6010 D	ZINC	FL
EPA 6020 B	ANTIMONY	FL
EPA 6020 B	BARIUM	FL
EPA 6020 B	CADMIUM	FL
EPA 6020 B	CHROMIUM	FL
EPA 6020 B	COPPER	FL
EPA 6020 B	LEAD	FL
EPA 6020 B	MANGANESE	FL
EPA 6020 B	POTASSIUM	FL
EPA 6020 B	SILVER	FL
EPA 6020 B	THALLIUM	FL
EPA 6020 B	ZINC	FL
EPA 7471 B	MERCURY	FL
EPA 8015 C	GASOLINE RANGE ORGANICS (GRO)	FL
EPA 8081 B	4,4'-DDE	FL
EPA 8081 B	ALDRIN	FL
EPA 8081 B	ALPHA-CHLORDANE (CIS-CHLORDANE)	FL

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EPA 8081 B	BETA-BHC (BETA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	DELTA-BHC	FL
EPA 8081 B	ENDOSULFAN I	FL
EPA 8081 B	ENDOSULFAN SULFATE	FL
EPA 8081 B	ENDRIN ALDEHYDE	FL
EPA 8081 B	GAMMA-BHC (LINDANE, GAMMA-HEXACHLOROCYCLOHEXANE)	FL
EPA 8081 B	HEPTACHLOR	FL
EPA 8081 B	METHOXYCHLOR	FL
EPA 8082 A	AROCLOR-1016 (PCB-1016)	FL
EPA 8082 A	AROCLOR-1232 (PCB-1232)	FL
EPA 8082 A	AROCLOR-1248 (PCB-1248)	FL
EPA 8082 A	AROCLOR-1260 (PCB-1260)	FL
EPA 8151 A	2,4-D	FL
EPA 8151 A	PENTACHLOROPHENOL	FL
EPA 8260 B	1,1,1,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1,2,2-TETRACHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROPROPENE	FL
EPA 8260 B	1,2,3-TRICHLOROPROPANE	FL
EPA 8260 B	1,2,4-TRIMETHYLBENZENE	FL
EPA 8260 B	1,2-DIBROMOETHANE (EDB, ETHYLENE DIBROMIDE)	FL
EPA 8260 B	1,2-DICHLOROETHANE (ETHYLENE DICHLORIDE)	FL
EPA 8260 B	1,3,5-TRIMETHYLBENZENE	FL
EPA 8260 B	1,3-DICHLOROPROPANE	FL
EPA 8260 B	2,2-DICHLOROPROPANE	FL
EPA 8260 B	2-CHLOROETHYL VINYL ETHER	FL
EPA 8260 B	2-HEXANONE	FL
EPA 8260 B	ACETONE	FL
EPA 8260 B	ACROLEIN (PROPENAL)	FL
EPA 8260 B	ALLYL CHLORIDE (3-CHLOROPROPENE)	FL
EPA 8081 B	CHLORDANE (TECH.)	FL
EPA 8081 B	DIELDRIN	FL
EPA 8081 B	ENDOSULFAN II	FL
EPA 8081 B	ENDRIN	FL
EPA 8081 B	ENDRIN KETONE	FL
EPA 8081 B	GAMMA-CHLORDANE (BETA-CHLORDANE, TRANS-CHLORDANE)	FL
EPA 8081 B	HEPTACHLOR EPOXIDE	FL
EPA 8081 B	TOXAPHENE (CHLORINATED CAMPHENE)	FL
EPA 8082 A	AROCLOR-1221 (PCB-1221)	FL
EPA 8082 A	AROCLOR-1242 (PCB-1242)	FL
EPA 8082 A	AROCLOR-1254 (PCB-1254)	FL
EPA 8151 A	2,4,5-T	FL
EPA 8151 A	DINOSEB (2-SEC-BUTYL-4,6-DINITROPHENOL, DNBP)	FL
EPA 8151 A	SILVEX (2,4,5-TP)	FL
EPA 8260 B	1,1,1-TRICHLOROETHANE	FL
EPA 8260 B	1,1,2-TRICHLOROETHANE	FL
EPA 8260 B	1,1-DICHLOROETHYLENE	FL
EPA 8260 B	1,2,3-TRICHLOROBENZENE	FL
EPA 8260 B	1,2,4-TRICHLOROBENZENE	FL
EPA 8260 B	1,2-DIBROMO-3-CHLOROPROPANE (DBCP)	FL
EPA 8260 B	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8260 B	1,2-DICHLOROPROPANE	FL
EPA 8260 B	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8260 B	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8260 B	2-BUTANONE (METHYL ETHYL KETONE, MEK)	FL
EPA 8260 B	2-CHLOROTOLUENE	FL
EPA 8260 B	4-CHLOROTOLUENE	FL
EPA 8260 B	ACETONITRILE	FL
EPA 8260 B	ACRYLONITRILE	FL
EPA 8260 B	BENZENE	FL

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METHOD	ANALYTE	PRIMARY
EPA 8260 B	BENZYL CHLORIDE	FL
EPA 8260 B	BROMOCHLOROMETHANE	FL
EPA 8260 B	BROMOFORM	FL
EPA 8260 B	CARBON TETRACHLORIDE	FL
EPA 8260 B	CHLOROETHANE (ETHYL CHLORIDE)	FL
EPA 8260 B	CHLOROPRENE (2-CHLORO-1,3-BUTADIENE)	FL
EPA 8260 B	CIS-1,3-DICHLOROPROPENE	FL
EPA 8260 B	DICHLORODIFLUOROMETHANE (FREON-12)	FL
EPA 8260 B	ETHYL METHACRYLATE	FL
EPA 8260 B	IODOMETHANE (METHYL IODIDE)	FL
EPA 8260 B	ISOPROPYLBENZENE	FL
EPA 8260 B	METHYL BROMIDE (BROMOMETHANE)	FL
EPA 8260 B	METHYL METHACRYLATE	FL
EPA 8260 B	METHYLENE CHLORIDE (DICHLOROMETHANE)	FL
EPA 8260 B	N-PROPYLBENZENE	FL
EPA 8260 B	PROPIONITRILE (ETHYL CYANIDE)	FL
EPA 8260 B	STYRENE	FL
EPA 8260 B	TETRACHLOROETHENE (PERCHLOROETHENE)	FL
EPA 8260 B	TRANS-1,2-DICHLOROETHENE	FL
EPA 8260 B	TRANS-1,4-DICHLORO-2-BUTENE	FL
EPA 8260 B	TRICHLOROFLUOROMETHANE (FLUOROTRICHLOROMETHANE, FREON 11)	FL
EPA 8260 B	VINYL CHLORIDE (CHLOROETHENE)	FL
EPA 8270 D	1,2,4,5-TETRACHLOROBENZENE	FL
EPA 8270 D	1,3,5-TRINITROBENZENE (1,3,5-TNB)	FL
EPA 8270 D	1,4-DICHLOROBENZENE (P-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-PHENYLENEDIAMINE	FL
EPA 8270 D	2,4,5-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DICHLOROPHENOL	FL
EPA 8270 D	2,4-DINITROPHENOL	FL

METHOD	ANALYTE	PRIMARY
EPA 8260 B	BROMOBENZENE	FL
EPA 8260 B	BROMODICHLOROMETHANE	FL
EPA 8260 B	CARBON DISULFIDE	FL
EPA 8260 B	CHLOROBENZENE	FL
EPA 8260 B	CHLOROFORM	FL
EPA 8260 B	CIS-1,2-DICHLOROETHYLENE	FL
EPA 8260 B	DIBROMOMETHANE (METHYLENE BROMIDE)	FL
EPA 8260 B	DIETHYL ETHER	FL
EPA 8260 B	ETHYLBENZENE	FL
EPA 8260 B	ISOBUTYL ALCOHOL (2-METHYL-1-PROPANOL)	FL
EPA 8260 B	METHACRYLONITRILE	FL
EPA 8260 B	METHYL CHLORIDE (CHLOROMETHANE)	FL
EPA 8260 B	METHYL TERT-BUTYL ETHER (MTBE)	FL
EPA 8260 B	N-BUTYLBENZENE	FL
EPA 8260 B	NAPHTHALENE	FL
EPA 8260 B	SEC-BUTYLBENZENE	FL
EPA 8260 B	TERT-BUTYLBENZENE	FL
EPA 8260 B	TOLUENE	FL
EPA 8260 B	TRANS-1,3-DICHLOROPROPENE (TRANS-1,3-DICHLOROPROPYLENE)	FL
EPA 8260 B	TRICHLOROETHENE (TRICHLOROETHYLENE)	FL
EPA 8260 B	VINYL ACETATE	FL
EPA 8260 B	XYLENE (TOTAL)	FL
EPA 8270 D	1,2-DICHLOROBENZENE (O-DICHLOROBENZENE)	FL
EPA 8270 D	1,3-DICHLOROBENZENE (M-DICHLOROBENZENE)	FL
EPA 8270 D	1,4-NAPHTHOQUINONE	FL
EPA 8270 D	2,2'-OXYBIS(1-CHLOROPROPANE)	FL
EPA 8270 D	2,4,6-TRICHLOROPHENOL	FL
EPA 8270 D	2,4-DIMETHYLPHENOL	FL
EPA 8270 D	2,4-DINITROTOLUENE (2,4-DNT)	FL

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EPA 8270 D	2,6-DICHLOROPHENOL	FL
EPA 8270 D	2-ACETYLAMINOFLUORENE	FL
EPA 8270 D	2-CHLOROPHENOL	FL
EPA 8270 D	2-METHYLNAPHTHALENE	FL
EPA 8270 D	2-NITROANILINE	FL
EPA 8270 D	3,3'-DICHLOROBENZIDINE	FL
EPA 8270 D	3-NITROANILINE	FL
EPA 8270 D	4-CHLORO-3-METHYLPHENOL	FL
EPA 8270 D	4-CHLOROPHENYL PHENYLETHER	FL
EPA 8270 D	4-NITROPHENOL	FL
EPA 8270 D	7,12-DIMETHYLBENZ(A) ANTHRACENE	FL
EPA 8270 D	ACENAPHTHYLENE	FL
EPA 8270 D	ANTHRACENE	FL
EPA 8270 D	BENZO(A)ANTHRACENE	FL
EPA 8270 D	BENZO(B)FLUORANTHENE	FL
EPA 8270 D	BENZO(K)FLUORANTHENE	FL
EPA 8270 D	BENZYL ALCOHOL	FL
EPA 8270 D	BIS(2-CHLOROETHYL) ETHER	FL
EPA 8270 D	BUTYL BENZYL PHTHALATE	FL
EPA 8270 D	CHRYSENE	FL
EPA 8270 D	DI-N-OCTYL PHTHALATE	FL
EPA 8270 D	DIBENZO(A,H) ANTHRACENE	FL
EPA 8270 D	DIETHYL PHTHALATE	FL
EPA 8270 D	ETHYL METHANESULFONATE	FL
EPA 8270 D	FLUORENE	FL
EPA 8270 D	HEXACHLOROBUTADIENE (1,3-HEXACHLOROBUTADIENE)	FL
EPA 8270 D	HEXACHLOROETHANE	FL
EPA 8270 D	ISODRIN	FL
EPA 8270 D	ISOSAFROLE	FL
EPA 8270 D	N-NITROSODI-N-PROPYLAMINE	FL
EPA 8270 D	N-NITROSOMETHYLETHYLAMINE	FL
EPA 8270 D	NITROBENZENE	FL
EPA 8270 D	PENTACHLORONITROBENZENE	FL
EPA 8270 D	PHENACETIN	FL
EPA 8270 D	PHENOL	FL
EPA 8270 D	2,6-DINITROTOLUENE (2,6-DNT)	FL
EPA 8270 D	2-CHLORONAPHTHALENE	FL
EPA 8270 D	2-METHYL-4,6-DINITROPHENOL (4,6-DINITRO-2-METHYLPHENOL)	FL
EPA 8270 D	2-METHYLPHENOL (O-CRESOL)	FL
EPA 8270 D	2-NITROPHENOL	FL
EPA 8270 D	3,3'-DIMETHYLBENZIDINE	FL
EPA 8270 D	4-BROMOPHENYL PHENYL ETHER (BDE-3)	FL
EPA 8270 D	4-CHLOROANILINE	FL
EPA 8270 D	4-NITROANILINE	FL
EPA 8270 D	5-NITRO-O-TOLUIDINE	FL
EPA 8270 D	ACENAPHTHENE	FL
EPA 8270 D	ACETOPHENONE	FL
EPA 8270 D	BENZIDINE	FL
EPA 8270 D	BENZO(A)PYRENE	FL
EPA 8270 D	BENZO(G,H,I)PERYLENE	FL
EPA 8270 D	BENZOIC ACID	FL
EPA 8270 D	BIS(2-CHLOROETHOXY)METHANE	FL
EPA 8270 D	BIS(2-ETHYLHEXYL) PHTHALATE (DI(2-ETHYLHEXYL)PHTHALATE), (DEHP)	FL
EPA 8270 D	CHLOROBENZILATE	FL
EPA 8270 D	DI-N-BUTYL PHTHALATE	FL
EPA 8270 D	DIALLATE	FL
EPA 8270 D	DIBENZOFURAN	FL
EPA 8270 D	DIMETHYL PHTHALATE	FL
EPA 8270 D	FLUORANTHENE	FL
EPA 8270 D	HEXACHLOROBENZENE	FL
EPA 8270 D	HEXACHLOROCYCLOPENTADIENE	FL
EPA 8270 D	INDENO(1,2,3-CD) PYRENE	FL
EPA 8270 D	ISOPHORONE	FL
EPA 8270 D	METHYL METHANESULFONATE	FL
EPA 8270 D	N-NITROSODIPHENYLAMINE	FL
EPA 8270 D	NAPHTHALENE	FL
EPA 8270 D	PENTACHLOROBENZENE	FL
EPA 8270 D	PENTACHLOROPHENOL	FL
EPA 8270 D	PHENANTHRENE	FL
EPA 8270 D	PRONAMIDE (KERB)	FL

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EPA 8270 D	PYRENE	FL
EPA 8270 D - EXTENDED	3+4-METHYLPHENOL (M+P CRESOL)	FL
EPA 8270 D - EXTENDED	CARBAZOLE	FL
EPA 9045 C	PH	FL
EPA 9071 B	OIL AND GREASE (AS N-HEXANE EXTRACTABLE MATERIAL (HEM))	FL
EPA 8270 D	SAFROLE	FL
EPA 8270 D - EXTENDED	CAPROLACTAM	FL
EPA 8270 D - EXTENDED	PYRIDINE	FL
EPA 9045 D	PH	FL