Groundwater & Environmental Services, Inc.

63 East Main Street, Unit 3
Pawling, NY 12564

T. 866.839.5195

February 11, 2021

Mr. Michael Squire
Division of Environmental Remediation, Remedial Bureau C
New York State Department of Environmental Conservation
625 Broadway
Albany, New York 12233

Re: Soil Vapor Intrusion Summary
1-45 Orangetown Shopping Center
Orangeburg, New York
Site #C344066

Dear Mr. Squire:

Enclosed is the *Soil Vapor Intrusion Summary Report* for the above referenced site prepared by Groundwater & Environmental Services, Inc. (GES) on behalf of UB Orangeburg, LLC. The report summarizes the results of the soil vapor and indoor air quality investigation performed at at a portion of the Orangetown Shopping Center located at 1-45 Orangetown Road, Orangeburg, New York during the 2020-2021 heating season.

If you have any questions or comments regarding this submittal, please contact Michael DeGloria of GES at (866) 839-5195 at extension 3839.

Sincerely,
Groundwater & Environmental Services, Inc.

Jessica M. Thomas
Staff Remediation Specialist

Michael DeGloria
2021.02.11 17:11:28 -05'00'

Michael DeGloria, P.G.
Principal Project Manager

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UB Orangeburg, LLC

Soil Vapor Intrusion Summary

UB Orangeburg

1-45 Orangetown Shopping Center
NYSDEC Site Number C344066

February 11, 2021

Version 1

Soil Vapor Intrusion Summary

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, NY

Prepared for:
UB Orangeburg, LLC
321 Railroad Avenue
Greenwich, CT 06830

Prepared by:
Groundwater & Environmental Services, Inc.
63 East Main Street, Unit 3
Pawling, New York 12564
TEL: 866-839-5195
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GES Project:
1102741

Date:
February 11, 2021

Jessica M. Thomas
Staff Remediation Specialist

Michael DeGloria
2021.02.11 17:10:54 -05'00'

Michael DeGloria, P.G.
Principal Project Manager

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Acronyms

BCA	Brownfield Cleanup Agreement
BASE	Building Assessment and Survey Evaluation
c12-DCE	cis-1,2-dichloroethylene
DUSR	data usability summary report
11-DCE	1,-dichloroethylene
EPA	Environmental Protection Agency
GES	Groundwater & Environmental Services, Inc.
$\mu g/m^3$	micrograms per cubic meter
NYSDEC	New York State Department of Environmental Conservation
NYSDOH	New York State Department of Health
ppb	parts per billion
PID	photoionization detector
SVI	soil vapor intrusion
SSD	sub-slab depressurization
PCE	tetrachloroethylene
111-TCA	1,1,1-trichloroethane
TCE	trichloroethylene
VOC	volatile organic compound

1 Objective

The objective of this report is to summarize the soil vapor and indoor air quality investigation for volatile organic compounds (VOCs) completed on January 6 and 7, 2021 at a portion of the Orangetown Shopping Center located at 1-45 Orangetown Road, Orangeburg, New York.

The investigation was completed in accordance with the New York State Department of Environmental Conservation (NYSDEC) approved Work Plan submitted to the NYSDEC on Octobr 3, 2017 with subsequent modifications outlined in GES' *Soil Vapor Intrusion Summary Report* dated February 12, 2019. The investigation was also completed in accordance with the New York State Department of Health (NYSDOH) *Indoor Air Sampling and Analysis Guidance*, dated February 1, 2005, the NYSDOH *Guidance for Evaluating Soil Vapor Intrusion in the State of New York*, dated October 2006 and Updates to *Soil Vapor/Indoor Air Decision Matrices*, dated May 2017.

The investigation was conducted at the former Sparkle Cleaners tenant space (currently a Verizon store) located within Building #2 of the Orangetown Shopping Center (the "site"). The other (2) tenant spaces at the site (former Deli Spot and New China House) were not resampled based on previous soil vapor intrusion (SVI) investigation results which recommended *No Further Action* at all sampling locations within those tenant spaces. The NYSDEC and NYSDOH approved conducting the investigation at only the former Sparkle Cleaners tenant space in an email dated June 7, 2019. Correspondence with the NYSDEC and NYSDOH are included as **Appendix A**.

This investigation was conducted for the purpose of evaluating current sub-slab and ambient air quality at the former Sparkle Cleaners tenant space as well as evaluating the potential for soil vapor intrusion in the subject tenant space located within Building #2 in support of permanent removal of the remaining sub-slab depressurization (SSD) systems and cessation of additional sub-slab or ambient air testing.

A site location map and a site map indicating pertinent site features are presented as **Figures 1** and **2**.

1.1 Background Information

The subject site is a 1.2-acre portion of the shopping plaza, located near the southeast corner of the parcel. The shopping plaza is located at the southeast corner of Orangeburg and Dutch Hill Roads in Orangeburg, New York, and is comprised of an 11-acre parcel that contains several commercial buildings. The site has been utilized as farmland, a camp, an amphitheater, and the current retail shopping center. The plaza is situated in a suburban area of mixed land use, and is surrounded predominantly by commercial and residential properties. It is served by a public water supply system. There had previously been a dry cleaner operating at the shopping center since approximately 1966. The Sparkle Cleaners, which operated as a dry cleaning facility within Building #2, is currently a Verizon store. Historical investigations identified the presence of contamination caused by the release of dry cleaning fluids.

In January 2007, JLJ Management Company entered into Brownfield Cleanup Agreement (BCA) #A3-0563-0906BCA with the NYSDEC to remediate a 1.2-acre portion of the 11-acre parcel. This

BCA required the Remedial Party, JLJ Management Group, to investigate and remediate contaminated media at the site.

An environmental easement for the site was executed by the NYSDEC on September 16, 2011. The site is currently managed by GES in accordance with an approved *Site Management Plan*, *Remedial Action Work Plan* and *Final Engineering Report* completed by Kleinfelder, Inc. and approved by the NYSDEC in December of 2011.

A property transfer of the shopping center was completed on March 28, 2012. UB Orangeburg, LLC acquired the property from JLJ Management Company, Inc. at that time.

2 Scope of Work

All activities described in this report were completed in accordance with published NYSDOH guidance for indoor air and vapor intrusion evaluation for a building. This effort was undertaken to determine the actions recommended to address current and potential exposures related to soil vapor intrusion as outlined in the May 2017 Soil Vapor/Indoor Air Matrices A through C. Field activities included pre-sampling inspections of the building slab and building inventory, a chemical inventory, and collection of sub-slab soil vapor and indoor air samples over an 8 hour period from designated sampling points and/or locations within the former Sparkle Cleaners tenant space. The remaining sub-slab depressurization system at the former Sparkle Cleaners has been idled since August 17, 2015. Laboratory analysis and reporting followed these field activities.

3 Pre-Sampling Requirements

3.1 Pre-sampling Inspection

A pre-sampling inspection was conducted on November 30, 2020. In the June 22, 2020 letter (**Attachment A**) from the NYSDEC approving the January 20, 2020 *Soil Vapor Intrusion Summary Report*, it was requested that a pre-sampling inspection and any subsequent needed repairs be conducted prior to collecting sub-slab soil vapor and indoor air samples. Additionally, the pre-sampling inspection was used to confirm the type of structure, floor layout and physical conditions of the building being studied and to identify conditions that may affect or interfere with the planned testing.

During the November 30, 2020 pre-sampling inspection, the GES technician inspected accessible areas of the building slab and the previously installed sampling points. The slab in the vicinity of sampling points VP-5 and VP-6 is covered in carpet and not visible with the exception of the immediate area (between 6 inches and 4.5 feet) around the sampling points. The accessible areas of the building slab and the previously installed sampling points were found to be in good condition and no repairs were needed at the time of the inspection.

3.2 Preparation of Sampling Points and Indoor Air Quality Questionnaire/Building Inventory

On January 6, 2021, GES confirmed the presence and integrity of the sampling points, VP-5 and VP-6. To verify the integrity of the sample vapor points, a tracer gas was used to test the seal. The sub-slab vapor points were first purged of three (3) times the volume of the sampling point using a GILIAN personal air sampling system and a flow module (vacuum pump) set at a maximum flow rate of 0.2 liters per minute. Helium tracer gas was then used to confirm an adequate seal was in place at each vapor point location prior to collection of the soil gas samples.

Prior to sampling on January 7, 2021, the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms (**Appendix B**) was completed by the GES technician and the manager of the tenant space. The NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms summarize information regarding building characteristics, airflow, and occupancy use along with information on sources of potential indoor contamination. GES also utilized a photo-ionization detector (PID) to evaluate and determine any potential interference during the sampling event. Items that were evaluated during the building inventory included but were not limited to the use or storage of chemical products. Potential interferences are noted on the NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms, which is included as **Appendix B**.

3.3 Product Inventories

Because some consumer products contain ingredients, which can contribute to levels of VOCs in the air, a product inventory was completed prior to completion of the air sampling activities on January 7, 2021 to provide an accurate assessment of the potential contribution of noted products. Each room in the former Sparkle Cleaners tenant space was inspected and the products

containing or potentially containing VOCs were listed on the Product Inventory Form (**Appendix B**) along with PID readings obtained near such products. None of the items included on the Product Inventory Form registered a PID reading above 0.0 parts per billion (ppb). The product inventory is included on the attached NYSDOH Indoor Air Quality Questionnaire and Building Inventory Forms (**Appendix B**). Photographic documentation of the products included on the Product Inventory Form are included as **Appendix C**.

4 Soil Vapor Intrusion Investigation

4.1 Sampling Collection

To characterize contaminant concentration trends and potential exposures, indoor air and sub-slab vapor samples were collected over an 8-hour period from the approximate locations shown on the attached **Figure 3** and as summarized below in text and table format:

- Former Sparkle Cleaners (currently a Verizon store): Vapor extraction wells VP-5 and VP-6
- Ambient Outdoor Sample: Sample taken outside the building

Sample Location	Sample Identification	Sample Description
Former Sparkle Cleaners	Sparkle VP-5	Sub-slab
Former Sparkle Cleaners	Sparkle VP-5 Ambient	Indoor Air
Former Sparkle Cleaners	Sparkle VP-6	Sub-slab
Former Sparkle Cleaners	Sparkle VP-6 Ambient	Indoor Air
Outside (East of Building)	Outside Ambient	Ambient

4.2 Quality Assurance/Quality Control

Care was taken during all aspects of the sample collection to ensure that high quality data was obtained. Sub-slab samples were collected from the sub-slab vapor points at the approximate locations shown on **Figure 3**. To verify the quality and integrity of the sample vapor points, a helium tracer test was completed prior to sampling on January 6, 2021 as described in Section 3.2.

4.3 Sub-Slab and Ambient Air Sample Collection

After the helium tracer tests were completed on January 6, 2021 and it was confirmed that each point was adequately sealed, sub-slab vapor and ambient air samples were collected the following day using SUMMA canisters equipped with 8-hour regulators. A total of five (5) air samples were collected on January 7, 2021. Upon completion of the 8-hour sampling period, each sample collection apparatus was stored according to the sample collection method protocol and delivered to SGS-Accutest Laboratories of Dayton, New Jersey under proper chain of custody for analysis of VOCs via Environmental Protection Agency (EPA) Method TO-15.

4.4 Sample Analysis

Laboratory analytical results indicated the presence of individual VOCs above laboratory detection limits and/or above regulatory guidelines in each sub-slab and indoor air samples collected. The analytical data is summarized on **Tables 1** and **2** and the laboratory analytical

report is included as **Appendix D**. In addition, a data usability summary report (DUSR) for all samples was completed by RemVer of Colchester, Connecticut and is provided as **Appendix E**. The DUSR found all results acceptable for use.

The following compounds exceeded regulatory guidelines in one or more samples, based on the upper fence indoor air values in Appendix C of the NYSDOH Soil Vapor Intrusion Guidance document or the 90th percentile indoor air values from the EPA 2001 Building Assessment and Survey Evaluation (BASE) Database:

- cis-1,2-Dichloroethylene (c12-DCE)
- Ethanol
- Ethyl Acetate
- Isopropyl Alcohol
- Tetrachloroethylene (PCE)
- Tetrahydrofuran
- Trichloroethylene (TCE)
- Vinyl Chloride

Laboratory analytical results for the constituents of concern (COCs), carbon tetrachloride, 1,1-Dichloroethylene (11-DCE), c12-DCE, PCE, 1,1,1-trichloroethane (111-TCA), methyl chloride, vinyl chloride, and TCE, were then compared to the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, section 3.4.2, Indoor Air Matrices A, B, and C (attached as **Appendix F**). Based on the comparison, a remedial action of "Identify Source and Resample or Mitigate" at the two (2) sampling locations (VP-5 and VP-6) within the former Sparkle Cleaner tenant space is recommended. Refer to the Constituents of Concern Summary Comparison detailed on **Table 3**. A summary of the COCs and the matrix recommendation are detailed below:

- TCE
  - Sub-slab: 3.0 micrograms per cubic meter (µg/m^3) at sample location VP-6 to 3.5 µg/m^3 at sample location VP-5.
  - Indoor air: 0.70 µg/m^3 at sample location VP-6 to 12 µg/m^3 at sample location VP-5.
  - Recommendation: Identify Source and Resample or Mitigate (Matrix A).
    - Recommendation is a result of the indoor air sample at location VP-5 (12 µg/m^3) being greater than 1 µg/m^3.
- c12-DCE
  - Sub-slab: 0.87 µg/m^3 at sample location VP-6 to 4.4 µg/m^3 at sample location VP-5.
  - Indoor air: 0.52 µg/m^3 at sample location VP-6 to 2.7 µg/m^3 at sample location VP-5.
  - Recommendation: Identify Source and Resample or Mitigate (Matrix A).
    - Recommendation is a result of the indoor air sample at location VP-5 (2.7 µg/m^3) being greater than 1 µg/m^3.

- 11-DCE
  - Sub-slab: Non-detect in all samples.
  - Indoor air: Non-detect in all samples.
  - Recommendation: No Further Action (Matrix A).
- Carbon tetrachloride
  - Sub-slab: Non-detect in all samples.
  - Indoor air: 0.50 µg/m^3 at sample location VP-5 to 0.52 µg/m^3 at sample location VP-6.
  - Recommendation: No Further Action (Matrix A).
- PCE
  - Sub-slab: 11 µg/m^3 at sample location VP-6 to 14 µg/m^3 at sample location VP-5.
  - Indoor air: 6.6 µg/m^3 at sample location VP-5 to 10 µg/m^3 at sample location VP-6.
  - Recommendation: Identify Source and Resample or Mitigate (Matrix B).
    - Recommendation is a result of the indoor air sample at location VP-6 (10 µg/m^3) being greater than or equal to 10 µg/m^3.
- 1,1,1-TCA
  - Sub-slab: Non-detect in all samples.
  - Indoor air: Non-detect in all samples.
  - Recommendation: No Further Action (Matrix B).
- Methylene Chloride
  - Sub-slab: Non-detect to 1.1 µg/m^3 (VP-6).
  - Indoor air: 0.59 µg/m^3 at sample location VP-6 to 0.76 µg/m^3 at sample location VP-5.
  - Recommendation: No Further Action (Matrix B).
- Vinyl Chloride
  - Sub-slab: Non-detect in all samples.
  - Indoor air: Non-detect to 0.56 µg/m^3 (VP-5).
  - Recommendation: Identify Source and Resample or Mitigate (Matrix C)
    - Recommendation is a result of the indoor air sample at location VP-5 (0.56 µg/m^3) being greater than or equal to 0.2 µg/m^3.

5 Conclusions/Recommendations

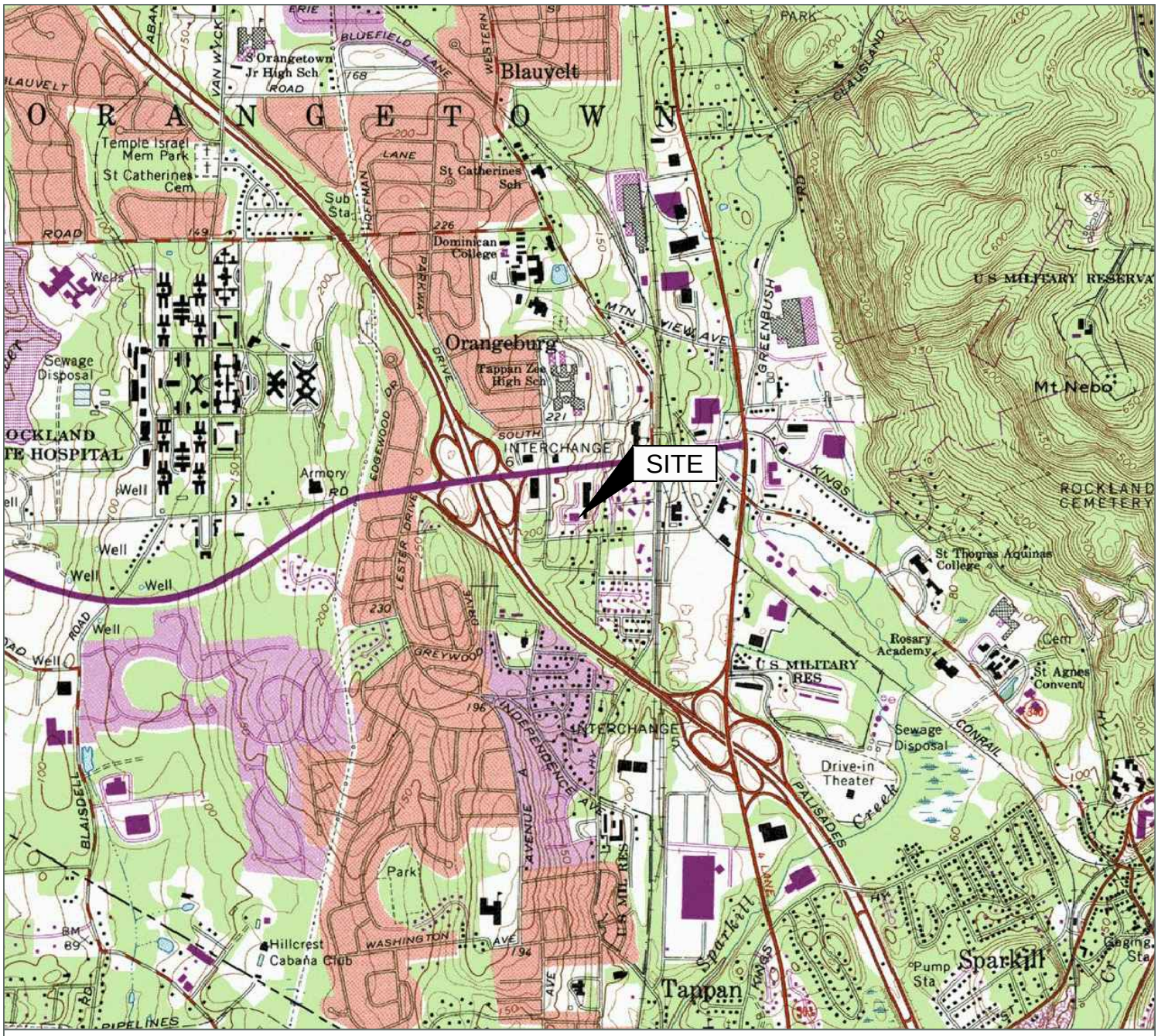
On January 6 and 7, 2021 a SVI investigation was completed at former Sparkle Cleaners tenant space (currently and a Verizon store) located within Building #2 of the Orangetown Shopping Center. This investigation was conducted for the purpose of evaluating current soil vapor and indoor air quality and the potential for soil vapor intrusion in the tenant space located within Building #2.

Based on the NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York, section 3.4.2, Indoor Air Matrices A, B, and C, a recommendation for Identify Source and Resample or Mitigate at the former Sparkle Cleaners is supported by the TCE, c12-DCE, and vinyl chloride concentrations at sample location VP-5 and PCE concentrations at sample location VP-6.

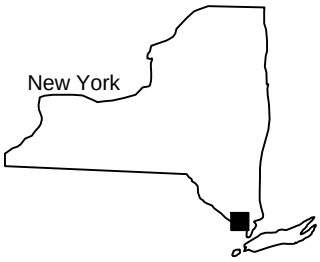
As part of the 2021 SVI investigation, GES completed the product inventory, which did not identity any apparent use or storage of chemical products that could potentially be identified as a source of COC detections in the indoor air samples.

Based on the results of this SVI investigation, GES recommends an additional annual SVI sampling event, targeting the former Sparkle Cleaner tenant space (sample locations Sparkle VP-5 and Sparkle VP-6) during the next heating season (typically November 15th through April 15th).

Figures



Source:
USGS 7.5 Minute Series
Topographic Quadrangle, 1979
Nyack, New York
Contour Interval = 10'



Quadrangle Location

Site Location Map

UB Orangeburg, LLC
1-45 Orangetown Shopping Center
Orangeburg, New York

Drawn
W.G.S.
Designed

Approved
M.C.D

Date
1-23-18
Figure
1

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GES
Groundwater & Environmental Services, Inc.

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LEGEND
PROPERTY BOUNDARY
CHAIN LINK FENCE
CATCH BASIN
UTILITY MANHOLE
UTILITY POLE
LIGHT POLE
FIRE HYDRANT
MONITORING WELL
INJECTION WELL
DESTROYED MONITORING WELL
PIEZOMETER
SOIL VAPOR EXTRACTION WELL
UNDERGROUND SANITARY SEWER LINE
OVERHEAD UTILITIES
BUILDING 1
BUILDING 2
BUILDING 3
BUILDING 4
BUILDING 5 & 6
ASPHALT
PARKING LOT
INJECTION GALLERY
OAK STREET
DITCH
DITCH
MW15A
MW14A
MWD
MW4
MWBA,B
MWE
MW3
MWC
P4,5,6
MW2
MW5
MWF
MW10
MW11A,B
MW1
MW9A,B,C
MW6
MW12A,B,C
MW13A
MW7
VP1
VP2
VP3
VP4
VP5
VP6
VP7
VP8
VP9
MWA
MWB
IP1
IP2
IP3
IP4
INJ1
INJ2
INJ3
INJ4
INJ5
INJ6
INJ7
INJ8
INJ9
OHU
OHL
SS
G
W
Site Map
UB Orangeburg, LLC
1-45 Orangetown Shopping Center
Orangeburg, New York
Drawn
W.G.S.
Designed
Approved
M.C.D
Date
4/14/20
Figure
2
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50
GESM
Groundwater & Environmental Services, Inc.
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SOURCE:

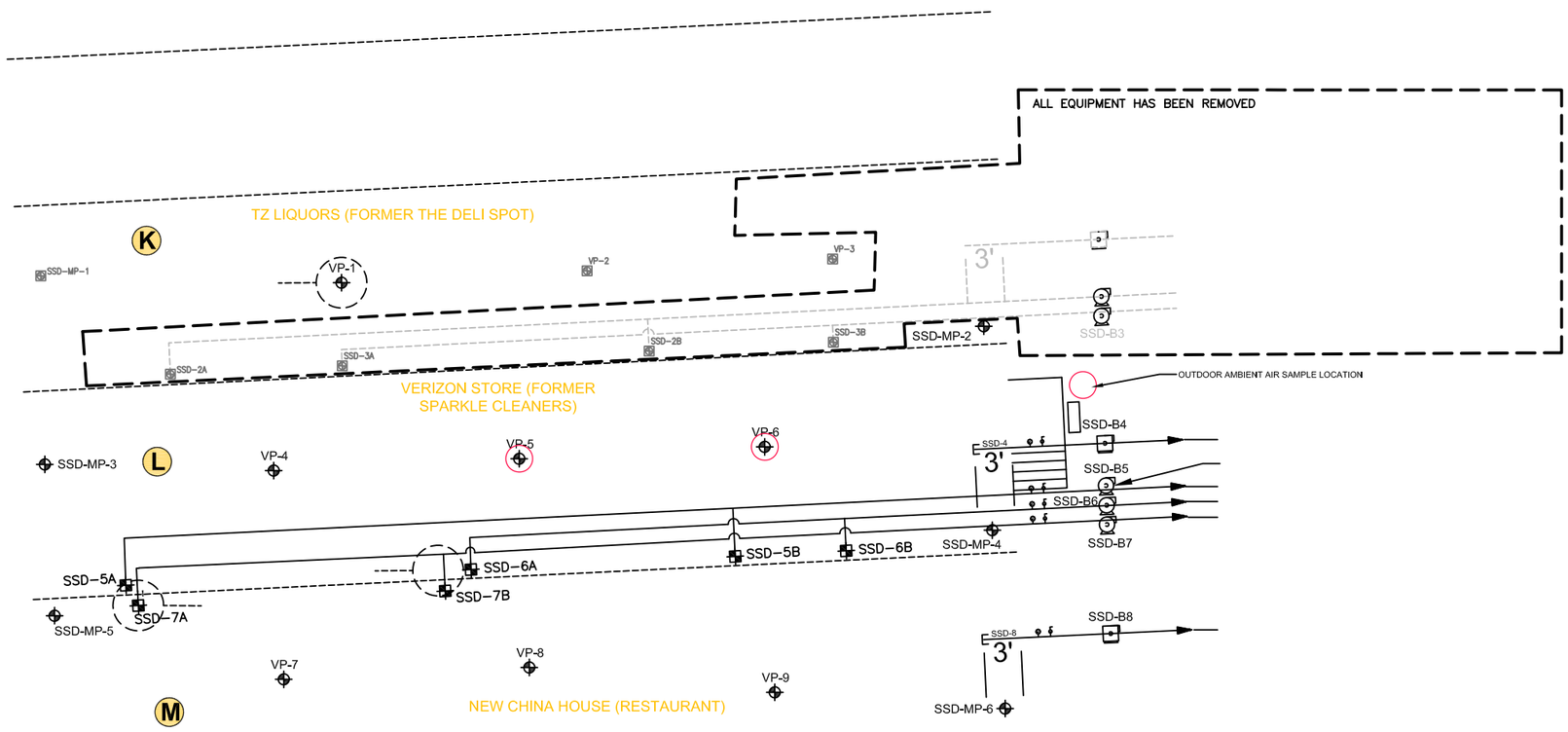
1. LAND LINK SURVEYORS P.C. SURVEY MAP DATED NOVEMBER 4, 2003.
2. SURVEY AMENDED TO SHOW NEW CERTIFICATION JUNE 1, 2005.
3. SURVEY AMENDED WELL LOCATION DECEMBER 19, 2007.
4. ADDITIONAL WELLS MW10, MW12, AND MW13 LOCATED DECEMBER 27, 2007.
5. FIGURE GENERATED FROM KLEINFELDER ENGINEERING FIGURE DATED JULY 15, 2011.

LEGEND

- SSD-MP-6 — SUB-SLAB MONITORING PORT
- SUB-SLAB VAPOR EXTRACTION WELL
- D1 / P5 — DETAIL NUMBER / PLATE NUMBER
- SSD BLOWER (115 SCFM)
- SSD BLOWER (200 SCFM)
- VACUUM GAUGE
- PLUGGED PORT
- ABANDONED/DESTROYED WELL
- Sub-slab and/or Ambient Air Sample Location

COMMERCIAL STORE ID TABLE (BUILDING #2)

- K — TZ LIQUORS (FORMER THE DELI SPOT)
- L — VERIZON STORE (FORMER SPARKLE CLEANERS)
- M — NEW CHINA HOUSE



Sub-Slab and Ambient Air Sampling Map

UB Orangeburg, LLC
1-45 Orangetown Shopping Center
Orangeburg, New York

Drawn: W.G.S.
Designed
Approved: M.C.D
Date: 7/2/19
Figure: 3

Not to Scale

Groundwater & Environmental Services, Inc.

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Tables

Table 1
GC/MS Volatiles (TO-15) - ug/m3

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	VP-6	VP-6	VP-5	VP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JD18853-5	JD18853-3	JD18853-4	JD18853-1	JD18853-2	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
Acetone	12	24.2	24	42.3	19	140	NS	98.9
1,3-Butadiene	ND<(0.49)	ND<(0.44)	ND<(0.35)	ND<(0.44)	ND<(0.35)	NS	NS	<3.0
Benzene	1.3	ND<(0.64)	ND<(0.51)	0.67	ND<(0.51)	29	NS	9.4
Bromodichloromethane	ND<(0.74)	ND<(0.67)	ND<(0.54)	ND<(0.67)	ND<(0.54)	NS	NS	NS
Bromoform	ND<(0.45)	ND<(0.41)	ND<(0.33)	ND<(0.41)	ND<(0.33)	NS	NS	NS
Bromomethane	ND<(0.85)	ND<(0.78)	ND<(0.62)	ND<(0.78)	ND<(0.62)	0.9	NS	<1.7
Bromoethene	ND<(0.96)	ND<(0.87)	ND<(0.70)	ND<(0.87)	ND<(0.70)	NS	NS	NS
Benzyl Chloride	ND<(1.1)	ND<(1.0)	ND<(0.82)	ND<(1.0)	ND<(0.82)	NS	NS	<6.8
Carbon disulfide	ND<(0.69)	ND<(0.62)	ND<(0.50)	ND<(0.62)	ND<(0.50)	NS	NS	4.2
Chlorobenzene	ND<(1.0)	ND<(0.92)	ND<(0.74)	ND<(0.92)	ND<(0.74)	<0.25	NS	<0.9
Chloroethane	ND<(0.58)	ND<(0.53)	ND<(0.42)	ND<(0.53)	ND<(0.42)	0.6	NS	<1.1
Chloroform	ND<(1.1)	ND<(0.98)	ND<(0.78)	ND<(0.98)	ND<(0.78)	4.6	NS	1.1
Chloromethane	2.3	1.1	1.5	0.45	1.4	5.2	NS	3.7
3-Chloropropene	ND<(0.69)	ND<(0.63)	ND<(0.50)	ND<(0.63)	ND<(0.50)	NS	NS	NS
2-Chlorotoluene	ND<(1.1)	ND<(1.0)	ND<(0.83)	ND<(1.0)	ND<(0.83)	NS	NS	NS
Carbon tetrachloride	0.88	ND<(0.25)	0.52	ND<(0.25)	0.50	1.1	NS	<1.3
Cyclohexane	ND<(0.76)	ND<(0.69)	ND<(0.55)	ND<(0.69)	ND<(0.55)	19	NS	NS
1,1-Dichloroethane	ND<(0.89)	ND<(0.81)	ND<(0.65)	ND<(0.81)	ND<(0.65)	<0.25	NS	<0.7
1,1-Dichloroethylene	ND<(0.17)	ND<(0.16)	ND<(0.13)	ND<(0.16)	ND<(0.13)	<0.25	NS	<1.4
1,2-Dibromoethane	ND<(0.85)	ND<(0.77)	ND<(0.61)	ND<(0.77)	ND<(0.61)	<0.25	NS	<1.5
1,2-Dichloroethane	ND<(0.89)	ND<(0.81)	ND<(0.65)	ND<(0.81)	ND<(0.65)	<0.25	NS	<0.9
1,2-Dichloropropane	ND<(1.0)	ND<(0.92)	ND<(0.74)	ND<(0.92)	ND<(0.74)	<0.25	NS	<1.6
1,4-Dioxane	ND<(0.79)	ND<(0.72)	ND<(0.58)	ND<(0.72)	ND<(0.58)	NS	NS	NS
Dichlorodifluoromethane	4.9	3.0	2.7	2.8	2.6	26	NS	16.5
Dibromochloromethane	ND<(0.94)	ND<(0.85)	ND<(0.68)	ND<(0.85)	ND<(0.68)	NS	NS	NS
trans-1,2-Dichloroethylene	ND<(0.87)	ND<(0.79)	ND<(0.63)	ND<(0.79)	ND<(0.63)	NS	NS	NS
cis-1,2-Dichloroethylene	ND<(0.17)	0.87	0.52	**4.4**	**2.7**	**1.2**	NS	<1.9
cis-1,3-Dichloropropene	ND<(1.0)	ND<(0.91)	ND<(0.73)	ND<(0.91)	ND<(0.73)	<0.25	NS	<2.3
m-Dichlorobenzene	ND<(0.66)	ND<(0.60)	ND<(0.48)	ND<(0.60)	ND<(0.48)	1	NS	<2.4
o-Dichlorobenzene	ND<(0.26)	ND<(0.24)	ND<(0.19)	ND<(0.24)	ND<(0.19)	0.9	NS	<1.2
p-Dichlorobenzene	ND<(0.66)	ND<(0.60)	ND<(0.48)	ND<(0.60)	ND<(0.48)	2.6	NS	5.5
trans-1,3-Dichloropropene	ND<(1.0)	ND<(0.91)	ND<(0.73)	ND<(0.91)	ND<(0.73)	<0.25	NS	<1.3
Ethanol	29.0	430 E	1,060 E	405 a	1,280 E	NS	NS	210
Ethylbenzene	ND<(0.96)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	13.0	NS	5.7
Ethyl Acetate	ND<(0.79)	19	1.3	74.9	3.2	NS	NS	5.4
4-Ethyltoluene	ND<(1.1)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	NS	NS	NS
Freon 113	0.84	1.4	ND<(0.61)	ND<(0.77)	ND<(0.61)	NS	NS	3.5
Freon 114	ND<(0.77)	ND<(0.70)	ND<(0.56)	ND<(0.70)	ND<(0.56)	NS	NS	NS
Heptane	ND<(0.90)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	NS	NS	NS
Hexachlorobutadiene	ND<(1.1)	ND<(0.96)	ND<(0.77)	ND<(0.96)	ND<(0.77)	11.0	NS	<6.8
Hexane	1.9	ND<(0.70)	ND<(0.56)	ND<(0.70)	ND<(0.56)	NS	NS	NS
2-Hexanone	ND<(0.90)	ND<(0.82)	ND<(0.65)	ND<(0.82)	ND<(0.65)	NS	NS	NS
Isopropyl Alcohol	8.6	438 E	248 E	216 a	234 E	NS	NS	250
Methylene chloride	10	1.1	0.59	ND<(0.69)	0.76	45.0	60	10
Methyl ethyl ketone	0.80	0.94	ND<(0.47)	29.8	0.53	39.0	NS	NS
Methyl Isobutyl Ketone	ND<(0.90)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	5.3	NS	NS
Methyl Tert Butyl Ether	ND<(0.79)	ND<(0.72)	ND<(0.58)	ND<(0.72)	ND<(0.58)	71.0	NS	11.5
Methylmethacrylate	ND<(0.90)	ND<(0.82)	ND<(0.66)	ND<(0.82)	ND<(0.66)	1.1	NS	NS
Propylene	ND<(0.94)	1.1	1.9	ND<(0.86)	ND<(0.69)	NS	NS	NS
Styrene	ND<(0.94)	ND<(0.85)	ND<(0.68)	ND<(0.85)	ND<(0.68)	2.3	NS	1.9
1,1,1-Trichloroethane	ND<(0.60)	ND<(0.55)	ND<(0.44)	ND<(0.55)	ND<(0.44)	6.9	NS	20.6

Table 1
GC/MS Volatiles (TO-15) - ug/m3

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Client Sample ID:	OUTSIDE	VP-6	VP-6	VP-5	VP-5	REGULATORY GUIDANCE		
Lab Sample ID:	JD18853-5	JD18853-3	JD18853-4	JD18853-1	JD18853-2	NYSDOH 2003 Soil Vapor Indoor 95th Percentile (1)	NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2)	EPA 2001 BASE 90th Percentile (3)
Date Sampled:	1/7/2021	1/7/2021	1/7/2021	1/7/2021	1/7/2021			
Matrix:	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.	Soil Vapor Comp.	Ambient Air Comp.			
1,1,2,2-Tetrachloroethane	ND<(0.76)	ND<(0.69)	ND<(0.55)	ND<(0.69)	ND<(0.55)	<0.25	NS	NS
1,1,2-Trichloroethane	ND<(0.60)	ND<(0.55)	ND<(0.44)	ND<(0.55)	ND<(0.44)	<0.25	NS	<1.5
1,2,4-Trichlorobenzene	ND<(0.82)	ND<(0.74)	ND<(0.59)	ND<(0.74)	ND<(0.59)	6.3	NS	<6.8
1,2,4-Trimethylbenzene	ND<(1.1)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	18	NS	9.5
1,3,5-Trimethylbenzene	ND<(1.1)	ND<(0.98)	ND<(0.79)	ND<(0.98)	ND<(0.79)	6.5	NS	NS
2,2,4-Trimethylpentane	ND<(1.0)	ND<(0.93)	ND<(0.75)	ND<(0.93)	ND<(0.75)	NS	NS	NS
Tertiary Butyl Alcohol	ND<(0.67)	0.61	ND<(0.49)	ND<(0.61)	ND<(0.49)	NS	NS	NS
Tetrachloroethylene	ND<(0.30)	**11**	**10**	**14**	**6.6**	**4.1**	30	15.9
Tetrahydrofuran	ND<(0.65)	ND<(0.59)	ND<(0.47)	**153 a**	ND<(0.47)	**9.4**	NS	NS
Toluene	1.7	ND<(0.75)	0.72	1.1	0.68	110	NS	43
Trichloroethylene	ND<(0.24)	***3.0***	0.70	***3.5***	***12***	**0.8**	*2*	4.2
Trichlorofluoromethane	5.1	1.6	1.7	2.8	1.5	30	NS	18.1
Vinyl chloride	ND<(0.11)	ND<(0.10)	ND<(0.082)	ND<(0.10)	**0.56**	**<0.25**	NS	<1.9
Vinyl Acetate	ND<(0.77)	ND<(0.70)	ND<(0.56)	ND<(0.70)	ND<(0.56)	NS	NS	NS
m,p-Xylene	ND<(0.96)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	21.0	NS	22.2
o-Xylene	ND<(0.96)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	13.0	NS	7.9
Xylenes (total)	ND<(0.96)	ND<(0.87)	ND<(0.69)	ND<(0.87)	ND<(0.69)	NS	NS	NS

Note:
Results and Standards expressed in micrograms per cubic meter (µg/m3)
ND<# = Not detected, less than the laboratory reporting limit
NS = No Standard
E = The concentration indicated for this analyte is an estimated value above the calibration range of the instrument.
a = Result is from run #2.
BOLD = results exceed NYSDOH 2003 Soil Vapor Indoor Upper Fence (1) standard
ITALIC = results exceed NYSDOH 2003 Soil Vapor Intrusion Air Guidance Value (2) standard
"Gray" = results exceed EPA 2001 BASE 90th Percentile (3) standard
BOLD, *ITALIC,* or "Gray" indicators in the Regulatory Guidance columns indicate at least one historic exceedance was observed.
(1) Upper fence indoor air values from "Table C1. NYSDOH 2003: Study of Volatile Organic Chemicals in Air of Fuel Oil Heated Homes', published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)
(2) NYSDOH Air Guideline Values (AGVs) from "Table 3.1 Air guideline values derived by the NYSDOH" presented in the Final Guidance for evaluating Soil Vapor Intrusion in the State of New York, dated October 2006 ("NYSDOH Vapor Intrusion Guidance Document")
(3) 90th percentile indoor air values from "Table C-2. EPA 2001: Building Assessment and Survey Evaluation (BASE) Database, SUMMA canister method" published in the NYSDOH Soil Vapor Intrusion Guidance Document, Appendix C" (October 2006)

Table 2
Constituents of Concern Summary Comparison

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Samples			Chemical Compound								Action Required		
Sample Date	Sample Location	Sample Type	TCE	c12-DCE	11 - DCE	Carbon Tetrachloride	PCE	1,1,1-TCA	Methylene Chrloride	Vinyl Chloride	Matrix A (TCE, c12-DCE, 11-DCE, Carbon Tetrachloride)	Matrix B (PCE, 111-TCA, Methylene Chloride)	Matrix C (Vinyl Chloride)
1/7/2021	VP-6	Indoor Air	0.70	0.52	ND<(0.13)	0.52	10	ND<(0.44)	0.59	ND<(0.082)	No Further Action	Identify Source and Resample or Mitigate	No Further Action
		Sub-slab	3.0	0.87	ND<(0.16)	ND<(0.25)	11	ND<(0.55)	1.1	ND<(0.10)			
1/7/2021	VP-5	Indoor Air	12	2.7	ND<(0.13)	0.50	6.6	ND<(0.44)	0.76	0.56	Identify Source and Resample or Mitigate	No Further Action	Identify Source and Resample or Mitigate
		Sub-slab	3.5	4.4	ND<(0.16)	ND<(0.25)	14	ND<(0.55)	ND<(0.69)	ND<(0.10)			

Notes:
Results and Standards expressed in micrograms per cubic meter (µg/m3)
TCE= Trichloroethene (Trichloroethylene)
c12-DCE= cis-1,2-Dichloroethene
11-DCE= 1,1-Dichloroethene (1,1-dichloroethylene)
PCE= Tetrachloroethene (Tetrachloroethylene)
1,1,1-TCA= 1,1,1-trichloroethane

Appendix A – Correspondences

Jessica Thomas

Subject: FW: Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center

---

From: Squire, Michael H (DEC) <Michael.Squire@dec.ny.gov>
Sent: Friday, June 7, 2019 12:06 PM
To: Michael C. DeGloria <MDeGloria@gesonline.com>
Subject: Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center

Michael,

I've looked over the Q1 2019 Progress Report and 2019 Soil Vapor Intrusion Summary for C344066 Orangeburg Shopping Center. DOH has sent me a letter stating they have no comments for the Q1 2019 report, and I don't either. I concur with the recommendation in the SVI summary to monitor the former Sparkle Cleaners space based on the results for TCE and PCE at VP-6.

Michael Squire
Assistant Engineer
Division of Environmental Remediation, Remedial Bureau C

New York State Department of Environmental Conservation
625 Broadway, Albany, NY 12233
P: (518) 402-9546 | michael.squire@dec.ny.gov

TAKE NOTE: This E-Mail came from outside of GES. Please consider the sender and nature of email before responding back to, clicking on any links or opening any attachments. If it appears suspicious delete it immediately.

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION

Division of Environmental Remediation, Remedial Bureau C
625 Broadway, 12th Floor, Albany, NY 12233-7014
P: (518) 402-9662 I F: (518) 402-9679
www.dec.ny.gov

June 22, 2020

Michael DeGloria, PG
Groundwater & Environmental Services, Inc.
63 E Main Street, Suite 3
Pawling, New York 12564

RE: Soil Vapor Intrusion Summary Report
NYSDEC Site No. C344066
Orangeburg (Orangetown) Shopping Center
Orangeburg, New York

Dear Mr. DeGloria,

The New York State Department of Environmental Conservation (NYSDEC) and Department of Health (NYSDOH) have reviewed the Soil Vapor Intrusion Summary Report (SVIR) for the Orangeburg (Orangetown) Shopping Center site (the site), dated January 20, 2020.

The NYSDEC and NYSDOH agree with the recommendation that an additional annual soil vapor intrusion sampling event take place for the former Sparkle Cleaners during the next heating season.

Section 3.1 of the SVIR describes a floor crack in the vicinity of sample location VP-5 that was filled in the day prior to the 2019 sampling event. A pre-sampling inspection and any subsequent needed repairs should be conducted prior to collecting sub-slab soil vapor and indoor air samples in the future.

Please provide the NYSDEC and NYSDOH with a notice at least 5 business days before starting the soil vapor intrusion sampling event. Should you have any questions, please contact me at michael.squire@dec.ny.gov or at 518-402-9662.

Sincerely,

Michael Squire,
Project Manager,
Remedial Bureau C

Ec: Amen Omorogbe, NYSDEC
Renata Ockerby, NYSDOH
Maureen Schuck, NYSDOH
DECDocs

Appendix B – NYSDOH Indoor Air Quality Questionnaire and Building Inventory Form

NEW YORK STATE DEPARTMENT OF HEALTH
INDOOR AIR QUALITY QUESTIONNAIRE AND BUILDING INVENTORY
CENTER FOR ENVIRONMENTAL HEALTH

This form must be completed for each residence involved in indoor air testing.

Preparer's Name Rich Brown Date/Time Prepared 1-07-2021

Preparer's Affiliation GES Phone No. 866-839-5195

Purpose of Investigation Indoor Air Quality test

1. OCCUPANT:

Interviewed: (Y) **N**

Last Name: Verizon Representative First Name: Leon

Address: I-45 Orangetown Shopping Center

County: Rockland

Home Phone: _____ Office Phone: 845-680-8800

Number of Occupants/persons at this location 1 Age of Occupants <30

2. OWNER OR LANDLORD: (Check if same as occupant ___)

Interviewed: Y (N)

Last Name: _____ First Name: _____

Address: _____

County: _____

Home Phone: _____ Office Phone: _____

3. BUILDING CHARACTERISTICS

Type of Building: (Circle appropriate response)

Residential	School	Commercial/Multi-use
Industrial	Church	Other: _____

If the property is residential, type? (Circle appropriate response)

Ranch	2-Family	3-Family
Raised Ranch	Split Level	Colonial
Cape Cod	Contemporary	Mobile Home
Duplex	Apartment House	Townhouses/Condos
Modular	Log Home	Other:_____

If multiple units, how many? 1

If the property is commercial, type?

Business Type(s) Telecommunications

Does it include residences (i.e., multi-use)? Y / N If yes, how many? _____

Other characteristics:

Number of floors 1 Building age Unknown

Is the building insulated? Y / N How air tight? Tight / Average / Not Tight

4. AIRFLOW

Use air current tubes or tracer smoke to evaluate airflow patterns and qualitatively describe:

Airflow between floors

Not applicable.

Airflow near source

On roof.

Outdoor air infiltration

Infiltrates in through doors.

Infiltration into air ducts

Infiltrates up into the return duct and down around supply vent.

5. BASEMENT AND CONSTRUCTION CHARACTERISTICS (Circle all that apply)

a. Above grade construction:	wood frame	concrete	stone	brick
b. Basement type:	full	crawlspace	slab	other Not applicable
c. Basement floor:	concrete	dirt	stone	other Not applicable
d. Basement floor:	uncovered	covered	covered with Not applicable	
e. Concrete floor:	unsealed	sealed	sealed with Paint and carpet	
f. Foundation walls:	poured	block	stone	other _____
g. Foundation walls:	unsealed	sealed	sealed with Paint	
h. The basement is:	wet	damp	dry	moldy
i. The basement is:	finished	unfinished	partially finished	
j. Sump present?	Y / N			
k. Water in sump?	Y / N / not applicable			

Basement/Lowest level depth below grade: 0 (feet)

Identify potential soil vapor entry points and approximate size (e.g., cracks, utility ports, drains)

Concrete slab is not visible and covered with carpet.

6. HEATING, VENTING and AIR CONDITIONING (Circle all that apply)

Type of heating system(s) used in this building: (circle all that apply – note primary)

Hot air circulation	Heat pump	Hot water baseboard	
Space Heaters	Stream radiation	Radiant floor	
Electric baseboard	Wood stove	Outdoor wood boiler	Other _____

The primary type of fuel used is:

Natural Gas	Fuel Oil	Kerosene
Electric	Propane	Solar
Wood	Coal	

Domestic hot water tank fueled by: National Grid

Boiler/furnace located in:	Basement	Outdoors	Main Floor	Other Roof
Air conditioning:	Central Air	Window units	Open Windows	None

Are there air distribution ducts present? Y / N

Describe the supply and cold air return ductwork, and its condition where visible, including whether there is a cold air return and the tightness of duct joints. Indicate the locations on the floor plan diagram.

Duct work is above drop ceiling and not visible.

7. OCCUPANCY

Is basement/lowest level occupied? Full-time Occasionally Seldom Almost Never

Level	**General Use of Each Floor (e.g., familyroom, bedroom, laundry, workshop, storage)**
Basement	Not applicable
1st Floor	Verizon Wireless Store
2nd Floor	Not applicable
3rd Floor	Not applicable
4th Floor	Not applicable

8. FACTORS THAT MAY INFLUENCE INDOOR AIR QUALITY

a. Is there an attached garage? Y / N

b. Does the garage have a separate heating unit? Y / N / NA

c. Are petroleum-powered machines or vehicles stored in the garage (e.g., lawnmower, atv, car) Y / N / NA
Please specify_____

d. Has the building ever had a fire? Y / N When?_____

e. Is a kerosene or unvented gas space heater present? Y / N Where?_____

f. Is there a workshop or hobby/craft area? Y / N Where & Type? _____

g. Is there smoking in the building? Y / N How frequently? _____

h. Have cleaning products been used recently? Y / N When & Type? _____

i. Have cosmetic products been used recently? Y / N When & Type? _____

j. Has painting/staining been done in the last 6 months? Y / N Where & When? _____

k. Is there new carpet, drapes or other textiles? Y / N Where & When? _____

l. Have air fresheners been used recently? Y / N When & Type? _____

m. Is there a kitchen exhaust fan? Y / N If yes, where vented?_____

n. Is there a bathroom exhaust fan? Y / N If yes, where vented?_____

o. Is there a clothes dryer? Y / N If yes, is it vented outside? Y / N

p. Has there been a pesticide application? Y / N When & Type?_____

Are there odors in the building? Y / N
If yes, please describe: _____

Do any of the building occupants use solvents at work? Y / N
(e.g., chemical manufacturing or laboratory, auto mechanic or auto body shop, painting, fuel oil delivery, boiler mechanic, pesticide application, cosmetologist

If yes, what types of solvents are used? _____

If yes, are their clothes washed at work? Y / N

Do any of the building occupants regularly use or work at a dry-cleaning service? (Circle appropriate response)

Yes, use dry-cleaning regularly (weekly) No
Yes, use dry-cleaning infrequently (monthly or less) Unknown
Yes, work at a dry-cleaning service

Is there a radon mitigation system for the building/structure? Y / N Date of Installation: _____
Is the system active or passive? Active/Passive

9. WATER AND SEWAGE

Water Supply: Public Water Drilled Well Driven Well Dug Well Other: _____

Sewage Disposal: Public Sewer Septic Tank Leach Field Dry Well Other: _____

10. RELOCATION INFORMATION (for oil spill residential emergency)

a. Provide reasons why relocation is recommended: _____

b. Residents choose to: remain in home relocate to friends/family relocate to hotel/motel

c. Responsibility for costs associated with reimbursement explained? Y / N

d. Relocation package provided and explained to residents? Y / N

11. FLOOR PLANS

Draw a plan view sketch of the basement and first floor of the building. Indicate air sampling locations, possible indoor air pollution sources and PID meter readings. If the building does not have a basement, please note.

Basement: Refer to attached Figures for Floor Plans

First Floor: Refer to attached Figures for Floor Plans

12. OUTDOOR PLOT

Draw a sketch of the area surrounding the building being sampled. If applicable, provide information on spill locations, potential air contamination sources (industries, gas stations, repair shops, landfills, etc.), outdoor air sampling location(s) and PID meter readings.

Also indicate compass direction, wind direction and speed during sampling, the locations of the well and septic system, if applicable, and a qualifying statement to help locate the site on a topographic map.

Refer to attached Figures for Outdoor Plot

13. PRODUCT INVENTORY FORM

Make & Model of field instrument used: miniRAE ppbRAE meter

List specific products found in the residence that have the potential to affect indoor air quality.

Location	Product Description	Size (units)	Condition*	Chemical Ingredients	Field Instrument Reading (units)	Photo ** Y / N
Backroom	multi-surface cleaner	24 oz	U		0.0 ppb	Y
	Febreeze	8.8 oz	U		0.0 ppb	Y
	Clorox	1.38 pt	UO		0.0 ppb	Y
	Comet	32 oz	U		0.0 ppb	Y
	Scrubbing Bubbles	32 oz	U		0.0 ppb	Y
	Swiffer Wet	12 pads	U		0.0 ppb	Y
	Valspar Ultra Paint	1 gal	U		0.0 ppb	Y
	Insignia disinfectant spray	1 L	U		0.0 ppb	Y
	Sani professional wipes	90 wipes	U		0.0 ppb	Y
	Windex	1 qt	U		0.0 ppb	Y

* Describe the condition of the product containers as **Unopened (UO), Used (U),** or **Deteriorated (D)**
** Photographs of the **front and back** of product containers can replace the handwritten list of chemical ingredients. However, the photographs must be of good quality and ingredient labels must be legible.

Appendix C – Product Inventory Photographs

Product Inventory Photographs

UB Orangeburg
1-45 Orangetown Shopping Center
Orangeburg, New York

Photo #:
1

Date:
January 7, 2021

Description:
Consumer product with potential VOCs located in tenant space. Field instrument reading as measured with a multiRAE ppbRAE meter was 0.0 ppb.

Photo #:
2

Date:
January 7, 2021

Description:
Consumer product with potential VOCs located in tenant space. Field instrument reading as measured with a multiRAE ppbRAE meter was 0.0 ppb.

Photo #:
3

Date:
January 7, 2021

Description:
Consumer product with potential VOCs located in tenant space. Field instrument reading as measured with a multiRAE ppbRAE meter was 0.0 ppb.

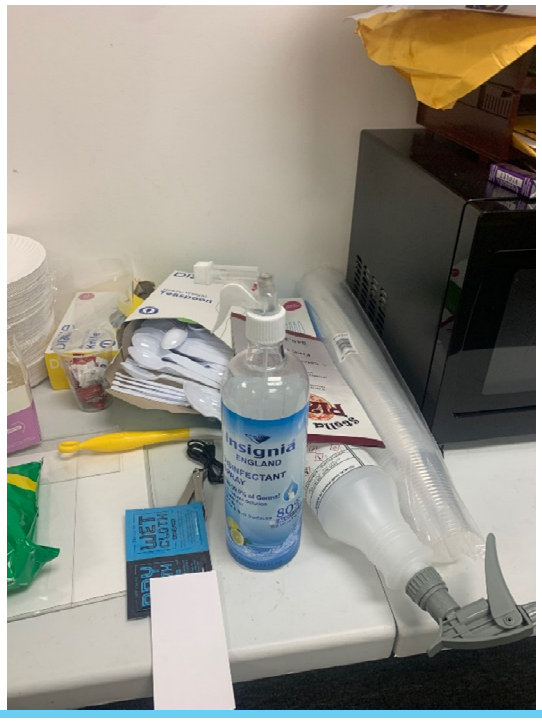

Photo #:
4

Date:
January 7, 2021

Description:
Consumer product with potential VOCs located in tenant space. Field instrument reading as measured with a multiRAE ppbRAE meter was 0.0 ppb.

Appendix D – Laboratory Analytical Results

The results set forth herein are provided by SGS North America Inc.

e-Hardcopy 2.0
Automated Report

Technical Report for

Groundwater & Environmental Services

Orangeburg UB, Orangeburg, NY

1102741-02-210

SGS Job Number: JD18853

Sampling Date: 01/07/21

Report to:

Groundwater & Environmental Services
63 East Street Suite 3
Pawling, NY 12564
MDeGloria@GESOnline.com; jthomas@gesonline.com;
neregion@gesonline.com
ATTN: Michael DeGloria

Total number of pages in report: 334

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Caitlin Brice, M.S.
General Manager

Client Service contact: Beth Wasserman 732-329-0200

Certifications: NJ(12129), NY(10983), CA, CT, FL, IL, IN, KS, KY, LA, MA, MD, ME, MN, NC, OH VAP (CL0056), AK (UST-103), AZ (AZ0786), PA, RI, SC, TX, UT, VA, WV, DoD ELAP (ANAB L2248)

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EHS.US.CustomerCare@sgs.com

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SGS North America Inc.

Sample Summary

Groundwater & Environmental Services

Job No: JD18853

Orangeburg UB, Orangeburg, NY
Project No: 1102741-02-210

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
JD18853-1	01/07/21	16:07	RB	01/11/21	AIR	Soil Vapor Comp.	VP-5 SV
JD18853-2	01/07/21	16:08	RB	01/11/21	AIR	Ambient Air Comp.	VP-5 A
JD18853-3	01/07/21	16:05	RB	01/11/21	AIR	Soil Vapor Comp.	VP-6 SV
JD18853-4	01/07/21	16:06	RB	01/11/21	AIR	Ambient Air Comp.	VP-6 A
JD18853-5	01/07/21	16:17	RB	01/11/21	AIR	Ambient Air Comp.	OUTSIDE AMBIENT

This report contains results reported as ND = Not detected. The following applies:
Organics ND = Not detected above the RL

CASE NARRATIVE / CONFORMANCE SUMMARY

Client:	Groundwater & Environmental Services	**Job No**	JD18853
Site:	Orangeburg UB, Orangeburg, NY	**Report Date**	1/22/2021 9:13:37 AM

On 01/11/2021, 5 Sample(s), 0 Trip Blank(s) and 0 Field Blank(s) were received at SGS North America Inc. A SGS North America Inc. Job Number of JD18853 was assigned to the project. Laboratory sample ID, client sample ID and dates of sample collection are detailed in the report's Results Summary Section.

Specified quality control criteria were achieved for this job except as noted below. For more information, please refer to the analytical results and QC summary pages.

Compounds qualified as out of range in the continuing calibration summary report are acceptable as per method requirements when there is a high bias but the sample result is non-detect.

MS Volatiles By Method TO-15

Matrix: AIR **Batch ID:** V6W882

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD18950-3DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Sample(s) JD18853-2, JD18853-3, JD18853-4 have compounds reported with "E" qualifiers indicating estimated value exceeding calibration range.
- RPD(s) for Duplicate for Styrene are outside control limits for sample JD18950-3DUP. High RPD due to low concentration of hit

Matrix: AIR **Batch ID:** V6W883

- All samples were analyzed within the recommended method holding time.
- Sample(s) JD18873-1DUP were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

SGS North America Inc. certifies that data reported for samples received, listed on the associated custody chain or analytical task order, were produced to specifications meeting the Quality System precision, accuracy and completeness objectives except as noted.

Estimated non-standard method measurement uncertainty data is available on request, based on quality control bias and implicit for standard methods. Acceptable uncertainty requires tested parameter quality control data to meet method criteria.

SGS North America Inc. is not responsible for data quality assumptions if partial reports are used and recommends that this report be used in its entirety. Data release is authorized by SGS North America Inc indicated via signature on the report cover

Summary of Hits

Job Number: JD18853
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 01/07/21

3

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
JD18853-1	**VP-5 SV**					
Acetone		17.8	0.20		ppbv	TO-15
Benzene		0.21	0.20		ppbv	TO-15
Chloromethane		0.22	0.20		ppbv	TO-15
Dichlorodifluoromethane		0.56	0.20		ppbv	TO-15
cis-1,2-Dichloroethylene		1.1	0.040		ppbv	TO-15
Ethanol		215	3.0		ppbv	TO-15
Ethyl Acetate		20.8	0.20		ppbv	TO-15
Isopropyl Alcohol		87.9	1.2		ppbv	TO-15
Methyl ethyl ketone		10.1	0.20		ppbv	TO-15
Tetrachloroethylene		2.0	0.040		ppbv	TO-15
Tetrahydrofuran		52.0	1.2		ppbv	TO-15
Toluene		0.28	0.20		ppbv	TO-15
Trichloroethylene		0.66	0.040		ppbv	TO-15
Trichlorofluoromethane		0.49	0.10		ppbv	TO-15
Acetone		42.3	0.48		ug/m3	TO-15
Benzene		0.67	0.64		ug/m3	TO-15
Chloromethane		0.45	0.41		ug/m3	TO-15
Dichlorodifluoromethane		2.8	0.99		ug/m3	TO-15
cis-1,2-Dichloroethylene		4.4	0.16		ug/m3	TO-15
Ethanol		405	5.7		ug/m3	TO-15
Ethyl Acetate		74.9	0.72		ug/m3	TO-15
Isopropyl Alcohol		216	2.9		ug/m3	TO-15
Methyl ethyl ketone		29.8	0.59		ug/m3	TO-15
Tetrachloroethylene		14	0.27		ug/m3	TO-15
Tetrahydrofuran		153	3.5		ug/m3	TO-15
Toluene		1.1	0.75		ug/m3	TO-15
Trichloroethylene		3.5	0.21		ug/m3	TO-15
Trichlorofluoromethane		2.8	0.56		ug/m3	TO-15
JD18853-2	**VP-5 A**					
Acetone		7.9	0.16		ppbv	TO-15
Chloromethane		0.68	0.16		ppbv	TO-15
Carbon tetrachloride		0.079	0.032		ppbv	TO-15
Dichlorodifluoromethane		0.52	0.16		ppbv	TO-15
cis-1,2-Dichloroethylene		0.68	0.032		ppbv	TO-15
Ethanol		681 E	0.40		ppbv	TO-15
Ethyl Acetate		0.89	0.16		ppbv	TO-15
Isopropyl Alcohol		95.0 E	0.16		ppbv	TO-15
Methylene chloride		0.22	0.16		ppbv	TO-15
Methyl ethyl ketone		0.18	0.16		ppbv	TO-15
Tetrachloroethylene		0.97	0.032		ppbv	TO-15
Toluene		0.18	0.16		ppbv	TO-15

Summary of Hits

Job Number: JD18853
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 01/07/21

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Trichloroethylene	2.3	0.032		ppbv	TO-15
Trichlorofluoromethane	0.27	0.080		ppbv	TO-15
Vinyl chloride	0.22	0.032		ppbv	TO-15
Acetone	19	0.38		ug/m3	TO-15
Chloromethane	1.4	0.33		ug/m3	TO-15
Carbon tetrachloride	0.50	0.20		ug/m3	TO-15
Dichlorodifluoromethane	2.6	0.79		ug/m3	TO-15
cis-1,2-Dichloroethylene	2.7	0.13		ug/m3	TO-15
Ethanol	1280 E	0.75		ug/m3	TO-15
Ethyl Acetate	3.2	0.58		ug/m3	TO-15
Isopropyl Alcohol	234 E	0.39		ug/m3	TO-15
Methylene chloride	0.76	0.56		ug/m3	TO-15
Methyl ethyl ketone	0.53	0.47		ug/m3	TO-15
Tetrachloroethylene	6.6	0.22		ug/m3	TO-15
Toluene	0.68	0.60		ug/m3	TO-15
Trichloroethylene	12	0.17		ug/m3	TO-15
Trichlorofluoromethane	1.5	0.45		ug/m3	TO-15
Vinyl chloride	0.56	0.082		ug/m3	TO-15
JD18853-3 VP-6 SV					
Acetone	10.2	0.20		ppbv	TO-15
Chloromethane	0.54	0.20		ppbv	TO-15
Dichlorodifluoromethane	0.61	0.20		ppbv	TO-15
cis-1,2-Dichloroethylene	0.22	0.040		ppbv	TO-15
Ethanol	228 E	0.50		ppbv	TO-15
Ethyl Acetate	5.3	0.20		ppbv	TO-15
Freon 113	0.18	0.10		ppbv	TO-15
Isopropyl Alcohol	178 E	0.20		ppbv	TO-15
Methylene chloride	0.31	0.20		ppbv	TO-15
Methyl ethyl ketone	0.32	0.20		ppbv	TO-15
Propylene	0.62	0.50		ppbv	TO-15
Tetrachloroethylene	1.6	0.040		ppbv	TO-15
Trichloroethylene	0.55	0.040		ppbv	TO-15
Trichlorofluoromethane	0.29	0.10		ppbv	TO-15
Acetone	24.2	0.48		ug/m3	TO-15
Chloromethane	1.1	0.41		ug/m3	TO-15
Dichlorodifluoromethane	3.0	0.99		ug/m3	TO-15
cis-1,2-Dichloroethylene	0.87	0.16		ug/m3	TO-15
Ethanol	430 E	0.94		ug/m3	TO-15
Ethyl Acetate	19	0.72		ug/m3	TO-15
Freon 113	1.4	0.77		ug/m3	TO-15
Isopropyl Alcohol	438 E	0.49		ug/m3	TO-15
Methylene chloride	1.1	0.69		ug/m3	TO-15
Methyl ethyl ketone	0.94	0.59		ug/m3	TO-15

Summary of Hits

Job Number: JD18853
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 01/07/21

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	RL	MDL	Units	Method
Propylene		1.1	0.86		ug/m3	TO-15
Tetrachloroethylene		11	0.27		ug/m3	TO-15
Trichloroethylene		3.0	0.21		ug/m3	TO-15
Trichlorofluoromethane		1.6	0.56		ug/m3	TO-15
JD18853-4	**VP-6 A**					
Acetone		9.9	0.16		ppbv	TO-15
Chloromethane		0.75	0.16		ppbv	TO-15
Carbon tetrachloride		0.082	0.032		ppbv	TO-15
Dichlorodifluoromethane		0.54	0.16		ppbv	TO-15
cis-1,2-Dichloroethylene		0.13	0.032		ppbv	TO-15
Ethanol		564 E	0.40		ppbv	TO-15
Ethyl Acetate		0.37	0.16		ppbv	TO-15
Isopropyl Alcohol		101 E	0.16		ppbv	TO-15
Methylene chloride		0.17	0.16		ppbv	TO-15
Propylene		1.1	0.40		ppbv	TO-15
Tetrachloroethylene		1.5	0.032		ppbv	TO-15
Toluene		0.19	0.16		ppbv	TO-15
Trichloroethylene		0.13	0.032		ppbv	TO-15
Trichlorofluoromethane		0.31	0.080		ppbv	TO-15
Acetone		24	0.38		ug/m3	TO-15
Chloromethane		1.5	0.33		ug/m3	TO-15
Carbon tetrachloride		0.52	0.20		ug/m3	TO-15
Dichlorodifluoromethane		2.7	0.79		ug/m3	TO-15
cis-1,2-Dichloroethylene		0.52	0.13		ug/m3	TO-15
Ethanol		1060 E	0.75		ug/m3	TO-15
Ethyl Acetate		1.3	0.58		ug/m3	TO-15
Isopropyl Alcohol		248 E	0.39		ug/m3	TO-15
Methylene chloride		0.59	0.56		ug/m3	TO-15
Propylene		1.9	0.69		ug/m3	TO-15
Tetrachloroethylene		10	0.22		ug/m3	TO-15
Toluene		0.72	0.60		ug/m3	TO-15
Trichloroethylene		0.70	0.17		ug/m3	TO-15
Trichlorofluoromethane		1.7	0.45		ug/m3	TO-15
JD18853-5	**OUTSIDE AMBIENT**					
Acetone		5.0	0.22		ppbv	TO-15
Benzene		0.41	0.22		ppbv	TO-15
Chloromethane		1.1	0.22		ppbv	TO-15
Carbon tetrachloride		0.14	0.044		ppbv	TO-15
Dichlorodifluoromethane		1.0	0.22		ppbv	TO-15
Ethanol		15.4	0.55		ppbv	TO-15
Freon 113		0.11	0.11		ppbv	TO-15

Summary of Hits

Job Number: JD18853
Account: Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Collected: 01/07/21

Lab Sample ID Client Sample ID Analyte	Result/ Qual	RL	MDL	Units	Method
Hexane	0.53	0.22		ppbv	TO-15
Isopropyl Alcohol	3.5	0.22		ppbv	TO-15
Methylene chloride	2.9	0.22		ppbv	TO-15
Methyl ethyl ketone	0.27	0.22		ppbv	TO-15
Toluene	0.45	0.22		ppbv	TO-15
Trichlorofluoromethane	0.91	0.11		ppbv	TO-15
Acetone	12	0.52		ug/m3	TO-15
Benzene	1.3	0.70		ug/m3	TO-15
Chloromethane	2.3	0.45		ug/m3	TO-15
Carbon tetrachloride	0.88	0.28		ug/m3	TO-15
Dichlorodifluoromethane	4.9	1.1		ug/m3	TO-15
Ethanol	29.0	1.0		ug/m3	TO-15
Freon 113	0.84	0.84		ug/m3	TO-15
Hexane	1.9	0.78		ug/m3	TO-15
Isopropyl Alcohol	8.6	0.54		ug/m3	TO-15
Methylene chloride	10	0.76		ug/m3	TO-15
Methyl ethyl ketone	0.80	0.65		ug/m3	TO-15
Toluene	1.7	0.83		ug/m3	TO-15
Trichlorofluoromethane	5.1	0.62		ug/m3	TO-15

Sample Results

Report of Analysis

SGS North America Inc.

Report of Analysis

Client Sample ID:	VP-5 SV		
Lab Sample ID:	JD18853-1	**Date Sampled:**	01/07/21
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1074	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21001.D	1.48	01/14/21 23:02	TCH	n/a	n/a	V6W882
Run #2	6W21014.D	1.48	01/15/21 15:16	DFT	n/a	n/a	V6W883

	Initial Volume
Run #1	592 ml
Run #2	100 ml

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	17.8	0.20	ppbv		42.3	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	0.21	0.20	ppbv		0.67	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.22	0.20	ppbv		0.45	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.040	ppbv		ND	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.040	ppbv		ND	0.16	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.56	0.20	ppbv		2.8	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	1.1	0.040	ppbv		4.4	0.16	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 SV		
Lab Sample ID:	JD18853-1	**Date Sampled:**	01/07/21
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1074	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	215 [a]	3.0	ppbv		405 [a]	5.7	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	20.8	0.20	ppbv		74.9	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	ND	0.10	ppbv		ND	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	87.9 [a]	1.2	ppbv		216 [a]	2.9	ug/m3
75-09-2	84.94	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	10.1	0.20	ppbv		29.8	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	2.0	0.040	ppbv		14	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	52.0 [a]	1.2	ppbv		153 [a]	3.5	ug/m3
108-88-3	92.14	Toluene	0.28	0.20	ppbv		1.1	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.66	0.040	ppbv		3.5	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.49	0.10	ppbv		2.8	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	96%	86%	65-128%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 SV		
Lab Sample ID:	JD18853-1	**Date Sampled:**	01/07/21
Matrix:	AIR - Soil Vapor Comp. Summa ID: A1074	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units

(a) Result is from Run# 2

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	VP-5 A		
Lab Sample ID:	JD18853-2	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A831	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21002.D	1.48	01/15/21 00:01	TCH	n/a	n/a	V6W882
Run #2							

	Initial Volume
Run #1	740 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	7.9	0.16	ppbv		19	0.38	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.16	ppbv		ND	0.35	ug/m3
71-43-2	78.11	Benzene	ND	0.16	ppbv		ND	0.51	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.080	ppbv		ND	0.54	ug/m3
75-25-2	252.8	Bromoform	ND	0.032	ppbv		ND	0.33	ug/m3
74-83-9	94.94	Bromomethane	ND	0.16	ppbv		ND	0.62	ug/m3
593-60-2	106.9	Bromoethene	ND	0.16	ppbv		ND	0.70	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.16	ppbv		ND	0.82	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.16	ppbv		ND	0.50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.16	ppbv		ND	0.74	ug/m3
75-00-3	64.52	Chloroethane	ND	0.16	ppbv		ND	0.42	ug/m3
67-66-3	119.4	Chloroform	ND	0.16	ppbv		ND	0.78	ug/m3
74-87-3	50.49	Chloromethane	0.68	0.16	ppbv		1.4	0.33	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.16	ppbv		ND	0.50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.16	ppbv		ND	0.83	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.079	0.032	ppbv		0.50	0.20	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.16	ppbv		ND	0.55	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.032	ppbv		ND	0.13	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.080	ppbv		ND	0.61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.16	ppbv		ND	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.16	ppbv		ND	0.58	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.52	0.16	ppbv		2.6	0.79	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.080	ppbv		ND	0.68	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.68	0.032	ppbv		2.7	0.13	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.032	ppbv		ND	0.19	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-5 A		
Lab Sample ID:	JD18853-2	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A831	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	681	0.40	ppbv	E	1280	0.75	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.16	ppbv		ND	0.69	ug/m3
141-78-6	88	Ethyl Acetate	0.89	0.16	ppbv		3.2	0.58	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.16	ppbv		ND	0.79	ug/m3
76-13-1	187.4	Freon 113	ND	0.080	ppbv		ND	0.61	ug/m3
76-14-2	170.9	Freon 114	ND	0.080	ppbv		ND	0.56	ug/m3
142-82-5	100.2	Heptane	ND	0.16	ppbv		ND	0.66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.072	ppbv		ND	0.77	ug/m3
110-54-3	86.17	Hexane	ND	0.16	ppbv		ND	0.56	ug/m3
591-78-6	100	2-Hexanone	ND	0.16	ppbv		ND	0.65	ug/m3
67-63-0	60.1	Isopropyl Alcohol	95.0	0.16	ppbv	E	234	0.39	ug/m3
75-09-2	84.94	Methylene chloride	0.22	0.16	ppbv		0.76	0.56	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.18	0.16	ppbv		0.53	0.47	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.16	ppbv		ND	0.66	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.16	ppbv		ND	0.58	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.16	ppbv		ND	0.66	ug/m3
115-07-1	42	Propylene	ND	0.40	ppbv		ND	0.69	ug/m3
100-42-5	104.1	Styrene	ND	0.16	ppbv		ND	0.68	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.080	ppbv		ND	0.55	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.080	ppbv		ND	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.16	ppbv		ND	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.16	ppbv		ND	0.49	ug/m3
127-18-4	165.8	Tetrachloroethylene	0.97	0.032	ppbv		6.6	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.16	ppbv		ND	0.47	ug/m3
108-88-3	92.14	Toluene	0.18	0.16	ppbv		0.68	0.60	ug/m3
79-01-6	131.4	Trichloroethylene	2.3	0.032	ppbv		12	0.17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.27	0.080	ppbv		1.5	0.45	ug/m3
75-01-4	62.5	Vinyl chloride	0.22	0.032	ppbv		0.56	0.082	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.16	ppbv		ND	0.56	ug/m3
	106.2	m,p-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
95-47-6	106.2	o-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.16	ppbv		ND	0.69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	86%		65-128%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	VP-6 SV		
Lab Sample ID:	JD18853-3	**Date Sampled:**	01/07/21
Matrix:	AIR - Soil Vapor Comp. Summa ID: A768	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21003.D	1	01/15/21 00:55	TCH	n/a	n/a	V6W882
Run #2							

	Initial Volume
Run #1	400 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	10.2	0.20	ppbv		24.2	0.48	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	78.11	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.10	ppbv		ND	0.67	ug/m3
75-25-2	252.8	Bromoform	ND	0.040	ppbv		ND	0.41	ug/m3
74-83-9	94.94	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	106.9	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	64.52	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	119.4	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	50.49	Chloromethane	0.54	0.20	ppbv		1.1	0.41	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	153.8	Carbon tetrachloride	ND	0.040	ppbv		ND	0.25	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.040	ppbv		ND	0.16	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.10	ppbv		ND	0.77	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.61	0.20	ppbv		3.0	0.99	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.10	ppbv		ND	0.85	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.22	0.040	ppbv		0.87	0.16	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.040	ppbv		ND	0.24	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.10	ppbv		ND	0.60	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-6 SV		
Lab Sample ID:	JD18853-3	**Date Sampled:**	01/07/21
Matrix:	AIR - Soil Vapor Comp. Summa ID: A768	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	228	0.50	ppbv	E	430	0.94	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	88	Ethyl Acetate	5.3	0.20	ppbv		19	0.72	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3
76-13-1	187.4	Freon 113	0.18	0.10	ppbv		1.4	0.77	ug/m3
76-14-2	170.9	Freon 114	ND	0.10	ppbv		ND	0.70	ug/m3
142-82-5	100.2	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.090	ppbv		ND	0.96	ug/m3
110-54-3	86.17	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	100	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	60.1	Isopropyl Alcohol	178	0.20	ppbv	E	438	0.49	ug/m3
75-09-2	84.94	Methylene chloride	0.31	0.20	ppbv		1.1	0.69	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.32	0.20	ppbv		0.94	0.59	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	42	Propylene	0.62	0.50	ppbv		1.1	0.86	ug/m3
100-42-5	104.1	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.10	ppbv		ND	0.69	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.10	ppbv		ND	0.55	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.10	ppbv		ND	0.74	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	165.8	Tetrachloroethylene	1.6	0.040	ppbv		11	0.27	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	92.14	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	131.4	Trichloroethylene	0.55	0.040	ppbv		3.0	0.21	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.29	0.10	ppbv		1.6	0.56	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.040	ppbv		ND	0.10	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	106.2	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	106.2	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	88%		65-128%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	VP-6 A		
Lab Sample ID:	JD18853-4	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A300	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21004.D	1.52	01/15/21 01:54	TCH	n/a	n/a	V6W882
Run #2							

	Initial Volume
Run #1	760 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	9.9	0.16	ppbv		24	0.38	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.16	ppbv		ND	0.35	ug/m3
71-43-2	78.11	Benzene	ND	0.16	ppbv		ND	0.51	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.080	ppbv		ND	0.54	ug/m3
75-25-2	252.8	Bromoform	ND	0.032	ppbv		ND	0.33	ug/m3
74-83-9	94.94	Bromomethane	ND	0.16	ppbv		ND	0.62	ug/m3
593-60-2	106.9	Bromoethene	ND	0.16	ppbv		ND	0.70	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.16	ppbv		ND	0.82	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.16	ppbv		ND	0.50	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.16	ppbv		ND	0.74	ug/m3
75-00-3	64.52	Chloroethane	ND	0.16	ppbv		ND	0.42	ug/m3
67-66-3	119.4	Chloroform	ND	0.16	ppbv		ND	0.78	ug/m3
74-87-3	50.49	Chloromethane	0.75	0.16	ppbv		1.5	0.33	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.16	ppbv		ND	0.50	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.16	ppbv		ND	0.83	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.082	0.032	ppbv		0.52	0.20	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.16	ppbv		ND	0.55	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.032	ppbv		ND	0.13	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.080	ppbv		ND	0.61	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.16	ppbv		ND	0.65	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.16	ppbv		ND	0.74	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.16	ppbv		ND	0.58	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	0.54	0.16	ppbv		2.7	0.79	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.080	ppbv		ND	0.68	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.16	ppbv		ND	0.63	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	0.13	0.032	ppbv		0.52	0.13	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.032	ppbv		ND	0.19	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.080	ppbv		ND	0.48	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.16	ppbv		ND	0.73	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	VP-6 A		
Lab Sample ID:	JD18853-4	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A300	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	564	0.40	ppbv	E	1060	0.75	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.16	ppbv		ND	0.69	ug/m3
141-78-6	88	Ethyl Acetate	0.37	0.16	ppbv		1.3	0.58	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.16	ppbv		ND	0.79	ug/m3
76-13-1	187.4	Freon 113	ND	0.080	ppbv		ND	0.61	ug/m3
76-14-2	170.9	Freon 114	ND	0.080	ppbv		ND	0.56	ug/m3
142-82-5	100.2	Heptane	ND	0.16	ppbv		ND	0.66	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.072	ppbv		ND	0.77	ug/m3
110-54-3	86.17	Hexane	ND	0.16	ppbv		ND	0.56	ug/m3
591-78-6	100	2-Hexanone	ND	0.16	ppbv		ND	0.65	ug/m3
67-63-0	60.1	Isopropyl Alcohol	101	0.16	ppbv	E	248	0.39	ug/m3
75-09-2	84.94	Methylene chloride	0.17	0.16	ppbv		0.59	0.56	ug/m3
78-93-3	72.11	Methyl ethyl ketone	ND	0.16	ppbv		ND	0.47	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.16	ppbv		ND	0.66	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.16	ppbv		ND	0.58	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.16	ppbv		ND	0.66	ug/m3
115-07-1	42	Propylene	1.1	0.40	ppbv		1.9	0.69	ug/m3
100-42-5	104.1	Styrene	ND	0.16	ppbv		ND	0.68	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.080	ppbv		ND	0.55	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.080	ppbv		ND	0.44	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.080	ppbv		ND	0.59	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.16	ppbv		ND	0.79	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.16	ppbv		ND	0.75	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.16	ppbv		ND	0.49	ug/m3
127-18-4	165.8	Tetrachloroethylene	1.5	0.032	ppbv		10	0.22	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.16	ppbv		ND	0.47	ug/m3
108-88-3	92.14	Toluene	0.19	0.16	ppbv		0.72	0.60	ug/m3
79-01-6	131.4	Trichloroethylene	0.13	0.032	ppbv		0.70	0.17	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.31	0.080	ppbv		1.7	0.45	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.032	ppbv		ND	0.082	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.16	ppbv		ND	0.56	ug/m3
	106.2	m,p-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
95-47-6	106.2	o-Xylene	ND	0.16	ppbv		ND	0.69	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.16	ppbv		ND	0.69	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	93%		65-128%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

SGS North America Inc.

Report of Analysis

Client Sample ID:	OUTSIDE AMBIENT		
Lab Sample ID:	JD18853-5	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A873	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	6W21005.D	2.21	01/15/21 02:56	TCH	n/a	n/a	V6W882
Run #2							

	Initial Volume
Run #1	800 ml
Run #2	

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	58.08	Acetone	5.0	0.22	ppbv		12	0.52	ug/m3
106-99-0	54.09	1,3-Butadiene	ND	0.22	ppbv		ND	0.49	ug/m3
71-43-2	78.11	Benzene	0.41	0.22	ppbv		1.3	0.70	ug/m3
75-27-4	163.8	Bromodichloromethane	ND	0.11	ppbv		ND	0.74	ug/m3
75-25-2	252.8	Bromoform	ND	0.044	ppbv		ND	0.45	ug/m3
74-83-9	94.94	Bromomethane	ND	0.22	ppbv		ND	0.85	ug/m3
593-60-2	106.9	Bromoethene	ND	0.22	ppbv		ND	0.96	ug/m3
100-44-7	126	Benzyl Chloride	ND	0.22	ppbv		ND	1.1	ug/m3
75-15-0	76.14	Carbon disulfide	ND	0.22	ppbv		ND	0.69	ug/m3
108-90-7	112.6	Chlorobenzene	ND	0.22	ppbv		ND	1.0	ug/m3
75-00-3	64.52	Chloroethane	ND	0.22	ppbv		ND	0.58	ug/m3
67-66-3	119.4	Chloroform	ND	0.22	ppbv		ND	1.1	ug/m3
74-87-3	50.49	Chloromethane	1.1	0.22	ppbv		2.3	0.45	ug/m3
107-05-1	76.53	3-Chloropropene	ND	0.22	ppbv		ND	0.69	ug/m3
95-49-8	126.6	2-Chlorotoluene	ND	0.22	ppbv		ND	1.1	ug/m3
56-23-5	153.8	Carbon tetrachloride	0.14	0.044	ppbv		0.88	0.28	ug/m3
110-82-7	84.16	Cyclohexane	ND	0.22	ppbv		ND	0.76	ug/m3
75-34-3	98.96	1,1-Dichloroethane	ND	0.22	ppbv		ND	0.89	ug/m3
75-35-4	96.94	1,1-Dichloroethylene	ND	0.044	ppbv		ND	0.17	ug/m3
106-93-4	187.9	1,2-Dibromoethane	ND	0.11	ppbv		ND	0.85	ug/m3
107-06-2	98.96	1,2-Dichloroethane	ND	0.22	ppbv		ND	0.89	ug/m3
78-87-5	113	1,2-Dichloropropane	ND	0.22	ppbv		ND	1.0	ug/m3
123-91-1	88.12	1,4-Dioxane	ND	0.22	ppbv		ND	0.79	ug/m3
75-71-8	120.9	Dichlorodifluoromethane	1.0	0.22	ppbv		4.9	1.1	ug/m3
124-48-1	208.3	Dibromochloromethane	ND	0.11	ppbv		ND	0.94	ug/m3
156-60-5	96.94	trans-1,2-Dichloroethylene	ND	0.22	ppbv		ND	0.87	ug/m3
156-59-2	96.94	cis-1,2-Dichloroethylene	ND	0.044	ppbv		ND	0.17	ug/m3
10061-01-5	111	cis-1,3-Dichloropropene	ND	0.22	ppbv		ND	1.0	ug/m3
541-73-1	147	m-Dichlorobenzene	ND	0.11	ppbv		ND	0.66	ug/m3
95-50-1	147	o-Dichlorobenzene	ND	0.044	ppbv		ND	0.26	ug/m3
106-46-7	147	p-Dichlorobenzene	ND	0.11	ppbv		ND	0.66	ug/m3
10061-02-6	111	trans-1,3-Dichloropropene	ND	0.22	ppbv		ND	1.0	ug/m3

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	OUTSIDE AMBIENT		
Lab Sample ID:	JD18853-5	**Date Sampled:**	01/07/21
Matrix:	AIR - Ambient Air Comp. Summa ID: A873	**Date Received:**	01/11/21
Method:	TO-15	**Percent Solids:**	n/a
Project:	Orangeburg UB, Orangeburg, NY		

VOA TO15 List

CAS No.	MW	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	46.07	Ethanol	15.4	0.55	ppbv		29.0	1.0	ug/m3
100-41-4	106.2	Ethylbenzene	ND	0.22	ppbv		ND	0.96	ug/m3
141-78-6	88	Ethyl Acetate	ND	0.22	ppbv		ND	0.79	ug/m3
622-96-8	120.2	4-Ethyltoluene	ND	0.22	ppbv		ND	1.1	ug/m3
76-13-1	187.4	Freon 113	0.11	0.11	ppbv		0.84	0.84	ug/m3
76-14-2	170.9	Freon 114	ND	0.11	ppbv		ND	0.77	ug/m3
142-82-5	100.2	Heptane	ND	0.22	ppbv		ND	0.90	ug/m3
87-68-3	260.8	Hexachlorobutadiene	ND	0.099	ppbv		ND	1.1	ug/m3
110-54-3	86.17	Hexane	0.53	0.22	ppbv		1.9	0.78	ug/m3
591-78-6	100	2-Hexanone	ND	0.22	ppbv		ND	0.90	ug/m3
67-63-0	60.1	Isopropyl Alcohol	3.5	0.22	ppbv		8.6	0.54	ug/m3
75-09-2	84.94	Methylene chloride	2.9	0.22	ppbv		10	0.76	ug/m3
78-93-3	72.11	Methyl ethyl ketone	0.27	0.22	ppbv		0.80	0.65	ug/m3
108-10-1	100.2	Methyl Isobutyl Ketone	ND	0.22	ppbv		ND	0.90	ug/m3
1634-04-4	88.15	Methyl Tert Butyl Ether	ND	0.22	ppbv		ND	0.79	ug/m3
80-62-6	100.12	Methylmethacrylate	ND	0.22	ppbv		ND	0.90	ug/m3
115-07-1	42	Propylene	ND	0.55	ppbv		ND	0.94	ug/m3
100-42-5	104.1	Styrene	ND	0.22	ppbv		ND	0.94	ug/m3
71-55-6	133.4	1,1,1-Trichloroethane	ND	0.11	ppbv		ND	0.60	ug/m3
79-34-5	167.9	1,1,2,2-Tetrachloroethane	ND	0.11	ppbv		ND	0.76	ug/m3
79-00-5	133.4	1,1,2-Trichloroethane	ND	0.11	ppbv		ND	0.60	ug/m3
120-82-1	181.5	1,2,4-Trichlorobenzene	ND	0.11	ppbv		ND	0.82	ug/m3
95-63-6	120.2	1,2,4-Trimethylbenzene	ND	0.22	ppbv		ND	1.1	ug/m3
108-67-8	120.2	1,3,5-Trimethylbenzene	ND	0.22	ppbv		ND	1.1	ug/m3
540-84-1	114.2	2,2,4-Trimethylpentane	ND	0.22	ppbv		ND	1.0	ug/m3
75-65-0	74.12	Tertiary Butyl Alcohol	ND	0.22	ppbv		ND	0.67	ug/m3
127-18-4	165.8	Tetrachloroethylene	ND	0.044	ppbv		ND	0.30	ug/m3
109-99-9	72.11	Tetrahydrofuran	ND	0.22	ppbv		ND	0.65	ug/m3
108-88-3	92.14	Toluene	0.45	0.22	ppbv		1.7	0.83	ug/m3
79-01-6	131.4	Trichloroethylene	ND	0.044	ppbv		ND	0.24	ug/m3
75-69-4	137.4	Trichlorofluoromethane	0.91	0.11	ppbv		5.1	0.62	ug/m3
75-01-4	62.5	Vinyl chloride	ND	0.044	ppbv		ND	0.11	ug/m3
108-05-4	86	Vinyl Acetate	ND	0.22	ppbv		ND	0.77	ug/m3
	106.2	m,p-Xylene	ND	0.22	ppbv		ND	0.96	ug/m3
95-47-6	106.2	o-Xylene	ND	0.22	ppbv		ND	0.96	ug/m3
1330-20-7	106.2	Xylenes (total)	ND	0.22	ppbv		ND	0.96	ug/m3

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	92%		65-128%

ND = Not detected
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody
- Summa Canister and Flow Controller Log
- Sample Tracking Chronicle
- Internal Chain of Custody

AIR CHAIN OF CUSTODY

SGS

SGS North America Inc. - Dayton
2235 Route 130, Dayton, NJ 08810
TEL. 732-329-0200 FAX 732-329-3499
www.sgs.com/ehsusa

PAGE 1 OF 1

FED-EX Tracking #: | Bottle Order Control #:
SGS Quote #: | SGS Job # SD18853

Client / Reporting Information

Company Name: GES
Address: 63 East Main Street
City: Rhinebeck State: NY Zip: 12564
Project Contact: Mike Keskinta E-mail: mkeskinta@gesonline.com
Phone # 866 839 5195 ext 3839 Fax #
Sampler(s) Name(s): Phil Brown

Project Information

Project Name: Carstatt - Orange Lake Shopping Center
Street: I-45 Orange Lake Shopping Ctr
City: Orange Burg State: NY
Project # 102741-02-210
Client Purchase Order #

Weather Parameters

Temperature (Fahrenheit)
Start: 30 Maximum: 40
Stop 40 Minimum: 30

Atmoshpheric Pressure (inches of Hg)
Start: 30.11 Maximum: 30.11
Stop: 30.09 Minimum: 30.09

Other weather comment: Clear Skys

Requested Analysis

Lab Sample #	Field ID / Point of Collection	Air Type: Indoor (I) Soil Vap (SV) Ambient (A)	Canister Serial #	Canister Size 6L or 1L	Flow Controller Serial #	Start Date	Start Time (24hr clock)	Start Canister Pressure ("Hg)	Start Interior Temp (F)	Start Sampler Init.	Stop Date	Stop Time (24hr clock)	Stop Canister Pressure ("Hg)	Stop Interior Temp (F)	Stop Sampler Init.	VOC15NYSUL22 volatile	VOC15 NYL22 volatile		
1	VP-5 SV	SV	A1074	6	FL316	1-7-21	0818	29.5	70	PB	1-7-21	1607	7.5	70	PB	X			
2	VP-5 A	A	A831		FL180		0818	30.0	70			1608	8.0	70			X		
3	VP-6 SV	SV	A768		FL387		0814	29.0	70			1605	8.0	70		X			
4	VP-6 A	A	A300		FL533		0815	30.0	70			1606	9.0	70			X		
5	Outside Ambient	A	A873		FL673		0820	26.5	30			1617	19.0	40			X		

Turnaround Time (Business days)

- [x] Standard - 15 Days
- [ ] 10 Day
- [ ] 5 Day
- [ ] 3 Day
- [ ] 2 Day
- [ ] 1 Day
- [ ] Other

Approved By: _____
Date: _____

Data Deliverable Information

All NJDEP TO-15 is mandatory Full T1

- Comm A
- Comm B
- Reduced T2
- Full T1
- Other:
- DKQP reporting

Comments / Remarks

Send lab report to:
mkeskinta@gesonline.com
SThomas "
NE Region "
Sample inventory is verified upon receipt in the Laboratory

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Laboratory:	Date Time:	Received By:	Relinquished By:	Date Time:	Received By:
1		1 Phil Brown 1630	2 Phil Brown	1-7-21 1800	2 FED EX 1130
3 Fedex	1/11/20 10:00	3 JJ Fox	4		4
5		5			

Custody Seal #

INITIAL ASESSMENT 4B JP

LABEL VERIFICATION_____

Form:SM088-03D (revised 2-12-18)

http://www.sgs.com/en/terms-and-conditions

5.1 5

JD18853: Chain of Custody
Page 1 of 2

SGS Sample Receipt Summary

Job Number: JD18853 **Client:** GROUNDWATER & ENVIRONMENTAL S **Project:** ORANGEBURG UB, ORANGEBURG, NY

Date / Time Received: 1/11/2021 10:30:00 AM **Delivery Method:** _____ **Airbill #'s:** _____

Cooler Temps (Raw Measured) °C:

Cooler Temps (Corrected) °C:

Cooler Security	Y	or	N		Y	or	N
1. Custody Seals Present:	☑		☐	3. COC Present:	☑		☐
2. Custody Seals Intact:	☑		☐	4. Smpl Dates/Time OK	☑		☐

Cooler Temperature	Y	or	N
1. Temp criteria achieved:	☐		☐
2. Cooler temp verification:	N/A		
3. Cooler media:	N/A		
4. No. Coolers:	N/A		

Quality Control Preservation	Y	or	N	N/A
1. Trip Blank present / cooler:	☐		☐	☑
2. Trip Blank listed on COC:	☐		☐	☑
3. Samples preserved properly:	☑		☐	
4. VOCs headspace free:	☐		☐	☑

Sample Integrity - Documentation	Y	or	N
1. Sample labels present on bottles:	☑		☐
2. Container labeling complete:	☑		☐
3. Sample container label / COC agree:	☑		☐

Sample Integrity - Condition	Y	or	N
1. Sample recvd within HT:	☑		☐
2. All containers accounted for:	☑		☐
3. Condition of sample:	Intact		

Sample Integrity - Instructions	Y	or	N	N/A
1. Analysis requested is clear:	☑		☐	
2. Bottles received for unspecified tests	☐		☑	
3. Sufficient volume recvd for analysis:	☑		☐	
4. Compositing instructions clear:	☐		☐	☑
5. Filtering instructions clear:	☐		☐	☑

Test Strip Lot #s: pH 1-12: 212820 pH 12+: 203117A Other: (Specify) _____ _____

Comments

SM089-03
Rev. Date 12/7/17

JD18853: Chain of Custody
Page 2 of 2

Summa Canister and Flow Controller Log

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Received: 01/11/21

SUMMA CANISTERS

Shipping							Receiving						
Summa ID	L	Vac " Hg	Date Out	By	SCC Batch	SCC FileID	Sample Number	Date In	By	Vac " Hg	Pres psig	Final psig	Dil Fact
A1074	6	29.4	12/08/20	JN	CP10963	6W20415.D	JD18853-1	01/12/21	WC	8		1.2	1.48
A831	6	29.4	12/08/20	JN	CP10958	6W20414.D	JD18853-2	01/12/21	WC	8		1.2	1.48
A768	6	29.4	12/08/20	JN	CP10957	6W20313.D	JD18853-3	01/12/21	WC	6.5			1
A300	6	29.4	12/08/20	JN	CP10958	6W20414.D	JD18853-4	01/12/21	WC	8.5		1.3	1.52
A873	6	29.4	12/08/20	JN	CP10957	6W20313.D	JD18853-5	01/12/21	WC	15.5		1	2.22

FLOW CONTROLLERS / OTHER

Shipping					Receiving				
Flow Crtl ID	Date Out	By	cc/ min	Time hrs.	Date In	By	cc/ min	Flow RPD	Equipment Type
FC180	12/08/20	JN	9.4	8	01/12/21	WC	9.6	2.1	Flow Controller
FC316	12/08/20	JN	9.4	8	01/12/21	WC	9.6	2.1	Flow Controller
FC387	12/08/20	JN	9.8	8	01/12/21	WC	10.5	6.9	Flow Controller
FC533	12/08/20	JN	9.4	8	01/12/21	WC	11.3	18.4	Flow Controller
FC637	01/06/21	JN	12.5	1	01/12/21	WC	11.7	6.6	Flow Controller

SGS Bottle Order(s):
BW-01521-199
BW-12320-147

Prep Date	Room Temp(F)	Bar Pres "Hg
12/08/20	70	29.92

Internal Sample Tracking Chronicle

Groundwater & Environmental Services

Job No: JD18853

Orangeburg UB, Orangeburg, NY
Project No: 1102741-02-210

Sample Number	Method	Analyzed	By	Prepped	By	Test Codes
JD18853-1 VP-5 SV	Collected: 07-JAN-21 16:07 By: RB		Received: 11-JAN-21 By: JP			
JD18853-1	TO-15	14-JAN-21 23:02	TCH			VTO15NYSVLL
JD18853-1	TO-15	15-JAN-21 15:16	DFT			VTO15NYSVLL
JD18853-2 VP-5 A	Collected: 07-JAN-21 16:08 By: RB		Received: 11-JAN-21 By: JP			
JD18853-2	TO-15	15-JAN-21 00:01	TCH			VTO15NYLL
JD18853-3 VP-6 SV	Collected: 07-JAN-21 16:05 By: RB		Received: 11-JAN-21 By: JP			
JD18853-3	TO-15	15-JAN-21 00:55	TCH			VTO15NYSVLL
JD18853-4 VP-6 A	Collected: 07-JAN-21 16:06 By: RB		Received: 11-JAN-21 By: JP			
JD18853-4	TO-15	15-JAN-21 01:54	TCH			VTO15NYLL
JD18853-5 OUTSIDE AMBIENT	Collected: 07-JAN-21 16:17 By: RB		Received: 11-JAN-21 By: JP			
JD18853-5	TO-15	15-JAN-21 02:56	TCH			VTO15NYLL

SGS Internal Chain of Custody

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Received: 01/11/21

Sample.Bottle Number	Transfer FROM	Transfer TO	Date/Time	Reason
JD18853-1.1	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-1.1	Air Storage	Thomas Hilbig	01/14/21 17:04	Retrieve from Storage
JD18853-1.1	Thomas Hilbig	GCMS6W	01/14/21 17:04	Load on Instrument
JD18853-1.2	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-2.1	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-2.1	Air Storage	Thomas Hilbig	01/14/21 17:04	Retrieve from Storage
JD18853-2.1	Thomas Hilbig	GCMS6W	01/14/21 17:04	Load on Instrument
JD18853-2.2	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-3.1	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-3.1	Air Storage	Thomas Hilbig	01/14/21 17:04	Retrieve from Storage
JD18853-3.1	Thomas Hilbig	GCMS6W	01/14/21 17:04	Load on Instrument
JD18853-3.2	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-4.1	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-4.1	Air Storage	Thomas Hilbig	01/14/21 17:04	Retrieve from Storage
JD18853-4.1	Thomas Hilbig	GCMS6W	01/14/21 17:04	Load on Instrument
JD18853-4.2	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-5.1	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage
JD18853-5.1	Air Storage	Thomas Hilbig	01/14/21 17:04	Retrieve from Storage
JD18853-5.1	Thomas Hilbig	GCMS6W	01/14/21 17:04	Load on Instrument
JD18853-5.2	Manish Kewalramani	Air Storage	01/11/21 16:21	Return to Storage

MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Instrument Performance Checks (BFB)
- Internal Standard Area Summaries
- Initial Calibration RT/ISTD Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries
- Run Sequence Reports

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-MB	6W20993.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-MB	6W20993.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-MB	6W20993.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	73%	65-128%

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W883-MB	6W21013.D	1	01/15/21	DFT	n/a	n/a	V6W883

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	73%	65-128%

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-MB	6W20311.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-MB	6W20311.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-MB	6W20311.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	91%	65-128%

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-MB	6W20410.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-MB	6W20410.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Method Blank Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-MB	6W20410.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	88%	65-128%

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-BS	6W20990.D	1	01/14/21	TCH	n/a	n/a	V6W882
V6W882-BSD	6W20991.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	9.4	94	8.8	88	7	70-130/30
106-99-0	1,3-Butadiene	10	11.6	116	11.5	115	1	70-130/30
71-43-2	Benzene	10	8.6	86	8.5	85	1	70-130/30
75-27-4	Bromodichloromethane	10	11.0	110	10.4	104	6	70-130/30
75-25-2	Bromoform	10	11.1	111	10.4	104	7	70-130/30
74-83-9	Bromomethane	10	11.0	110	10.7	107	3	70-130/30
593-60-2	Bromoethene	10	10.2	102	9.6	96	6	70-130/30
100-44-7	Benzyl Chloride	10	10.7	107	9.1	91	16	70-130/30
75-15-0	Carbon disulfide	10	9.5	95	9.4	94	1	70-130/30
108-90-7	Chlorobenzene	10	8.1	81	8.1	81	0	70-130/30
75-00-3	Chloroethane	10	11.3	113	11.0	110	3	70-130/30
67-66-3	Chloroform	10	10.3	103	10.0	100	3	70-130/30
74-87-3	Chloromethane	10	11.5	115	12.3	123	7	70-130/30
107-05-1	3-Chloropropene	10	10.0	100	9.9	99	1	70-130/30
95-49-8	2-Chlorotoluene	10	10.0	100	9.4	94	6	70-130/30
56-23-5	Carbon tetrachloride	10	11.3	113	10.8	108	5	70-130/30
110-82-7	Cyclohexane	10	9.4	94	9.2	92	2	70-130/30
75-34-3	1,1-Dichloroethane	10	10.1	101	10.0	100	1	70-130/30
75-35-4	1,1-Dichloroethylene	10	10.8	108	10.4	104	4	70-130/30
106-93-4	1,2-Dibromoethane	10	9.3	93	9.3	93	0	70-130/30
107-06-2	1,2-Dichloroethane	10	12.7	127	12.0	120	6	70-130/30
78-87-5	1,2-Dichloropropane	10	9.5	95	9.8	98	3	70-130/30
123-91-1	1,4-Dioxane	10	9.1	91	8.5	85	7	70-130/30
75-71-8	Dichlorodifluoromethane	10	11.9	119	11.9	119	0	70-130/30
124-48-1	Dibromochloromethane	10	11.3	113	10.8	108	5	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	10.6	106	10.5	105	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	10.4	104	10.3	103	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	10.2	102	10.1	101	1	70-130/30
541-73-1	m-Dichlorobenzene	10	10.9	109	9.6	96	13	70-130/30
95-50-1	o-Dichlorobenzene	10	10.7	107	9.4	94	13	70-130/30
106-46-7	p-Dichlorobenzene	10	10.3	103	9.0	90	13	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.0	110	10.7	107	3	70-130/30
64-17-5	Ethanol	10	10.1	101	9.7	97	4	70-130/30
100-41-4	Ethylbenzene	10	8.8	88	8.3	83	6	70-130/30
141-78-6	Ethyl Acetate	10	10.8	108	10.8	108	0	70-130/30
622-96-8	4-Ethyltoluene	10	10.8	108	10.0	100	8	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-BS	6W20990.D	1	01/14/21	TCH	n/a	n/a	V6W882
V6W882-BSD	6W20991.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	9.3	93	9.1	91	2	70-130/30
76-14-2	Freon 114	10	12.1	121	12.2	122	1	70-130/30
142-82-5	Heptane	10	9.4	94	9.1	91	3	70-130/30
87-68-3	Hexachlorobutadiene	10	11.1	111	9.8	98	12	70-130/30
110-54-3	Hexane	10	9.8	98	9.7	97	1	70-130/30
591-78-6	2-Hexanone	10	10.9	109	11.1	111	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.8	98	9.0	90	9	70-130/30
75-09-2	Methylene chloride	10	8.9	89	8.7	87	2	70-130/30
78-93-3	Methyl ethyl ketone	10	10.1	101	10.4	104	3	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	11.5	115	11.3	113	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	9.8	98	9.7	97	1	70-130/30
80-62-6	Methylmethacrylate	10	10.5	105	10	100	5	70-130/30
115-07-1	Propylene	10	11.2	112	11.3	113	1	70-130/30
100-42-5	Styrene	10	9.5	95	8.9	89	7	70-130/30
71-55-6	1,1,1-Trichloroethane	10	10.4	104	10.1	101	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	9.9	99	9.2	92	7	70-130/30
79-00-5	1,1,2-Trichloroethane	10	9.3	93	9.1	91	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	7.9	79	7.2	72	9	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	11.0	110	9.7	97	13	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	10.1	101	9.3	93	8	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	10	100	9.5	95	5	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	10.9	109	10.5	105	4	70-130/30
127-18-4	Tetrachloroethylene	10	8.9	89	9.1	91	2	70-130/30
109-99-9	Tetrahydrofuran	10	10.4	104	10.4	104	0	70-130/30
108-88-3	Toluene	10	8.5	85	8.4	84	1	70-130/30
79-01-6	Trichloroethylene	10	9.6	96	8.9	89	8	70-130/30
75-69-4	Trichlorofluoromethane	10	12.0	120	11.1	111	8	70-130/30
75-01-4	Vinyl chloride	10	11.7	117	12.2	122	4	70-130/30
108-05-4	Vinyl Acetate	10	11.2	112	11.2	112	0	70-130/30
	m,p-Xylene	20	17.2	86	15.1	76	13	70-130/30
95-47-6	o-Xylene	10	9.4	94	8.9	89	5	70-130/30
1330-20-7	Xylenes (total)	30	26.6	89	23.9	80	11	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W882-BS	6W20990.D	1	01/14/21	TCH	n/a	n/a	V6W882
V6W882-BSD	6W20991.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	109%	104%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W883-BS	6W21010.D	1	01/15/21	DFT	n/a	n/a	V6W883
V6W883-BSD	6W21011.D	1	01/15/21	DFT	n/a	n/a	V6W883

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
64-17-5	Ethanol	10	9.7	97	9.5	95	2	70-130/30
67-63-0	Isopropyl Alcohol	10	9.2	92	9.1	91	1	70-130/30
109-99-9	Tetrahydrofuran	10	10	100	10.3	103	3	70-130/30

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	107%	98%	65-128%

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-BS	6W20308.D	1	11/27/20	DFT	n/a	n/a	V6W854
V6W854-BSD	6W20309.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	40	34.2	86	34.3	86	0	70-130/30
106-99-0	1,3-Butadiene	40	34.3	86	34.6	87	1	70-130/30
71-43-2	Benzene	40	36.3	91	35.9	90	1	70-130/30
75-27-4	Bromodichloromethane	40	42.2	106	42.5	106	1	70-130/30
75-25-2	Bromoform	40	53.8	135* [a]	53.9	135* [a]	0	70-130/30
74-83-9	Bromomethane	40	36.4	91	37.0	93	2	70-130/30
593-60-2	Bromoethene	40	35.0	88	35.4	89	1	70-130/30
100-44-7	Benzyl Chloride	40	49.4	124	51.0	128	3	70-130/30
75-15-0	Carbon disulfide	40	38.6	97	38.7	97	0	70-130/30
108-90-7	Chlorobenzene	40	39.7	99	39.7	99	0	70-130/30
75-00-3	Chloroethane	40	35.7	89	36.5	91	2	70-130/30
67-66-3	Chloroform	40	39.2	98	39.4	99	1	70-130/30
74-87-3	Chloromethane	40	34.4	86	35.8	90	4	70-130/30
107-05-1	3-Chloropropene	40	41.4	104	41.5	104	0	70-130/30
95-49-8	2-Chlorotoluene	40	44.3	111	45.0	113	2	70-130/30
56-23-5	Carbon tetrachloride	40	43.1	108	43.0	108	0	70-130/30
110-82-7	Cyclohexane	40	35.7	89	35.5	89	1	70-130/30
75-34-3	1,1-Dichloroethane	40	37.4	94	37.3	93	0	70-130/30
75-35-4	1,1-Dichloroethylene	40	38.7	97	38.4	96	1	70-130/30
106-93-4	1,2-Dibromoethane	40	41.4	104	43.1	108	4	70-130/30
107-06-2	1,2-Dichloroethane	40	41.1	103	40.9	102	0	70-130/30
78-87-5	1,2-Dichloropropane	40	37.6	94	37.6	94	0	70-130/30
123-91-1	1,4-Dioxane	40	38.1	95	39.0	98	2	70-130/30
75-71-8	Dichlorodifluoromethane	40	41.3	103	42.3	106	2	70-130/30
124-48-1	Dibromochloromethane	40	48.3	121	49.7	124	3	70-130/30
156-60-5	trans-1,2-Dichloroethylene	40	39.1	98	38.8	97	1	70-130/30
156-59-2	cis-1,2-Dichloroethylene	40	38.2	96	37.8	95	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	40	40.4	101	41.4	104	2	70-130/30
541-73-1	m-Dichlorobenzene	40	54.3	136* [a]	55.8	140* [a]	3	70-130/30
95-50-1	o-Dichlorobenzene	40	52.8	132* [a]	53.4	134* [a]	1	70-130/30
106-46-7	p-Dichlorobenzene	40	53.6	134* [a]	55.5	139* [a]	3	70-130/30
10061-02-6	trans-1,3-Dichloropropene	40	42.9	107	43.9	110	2	70-130/30
64-17-5	Ethanol	40	28.4	71	28.0	70	1	70-130/30
100-41-4	Ethylbenzene	40	39.3	98	39.3	98	0	70-130/30
141-78-6	Ethyl Acetate	40	42.3	106	42.0	105	1	70-130/30
622-96-8	4-Ethyltoluene	40	47.3	118	48.2	121	2	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-BS	6W20308.D	1	11/27/20	DFT	n/a	n/a	V6W854
V6W854-BSD	6W20309.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	40	38.2	96	38.2	96	0	70-130/30
76-14-2	Freon 114	40	38.5	96	39.3	98	2	70-130/30
142-82-5	Heptane	40	39.0	98	39.4	99	1	70-130/30
87-68-3	Hexachlorobutadiene	40	50.7	127	50.3	126	1	70-130/30
110-54-3	Hexane	40	36.4	91	35.9	90	1	70-130/30
591-78-6	2-Hexanone	40	43.1	108	45.0	113	4	70-130/30
67-63-0	Isopropyl Alcohol	40	31.6	79	31.1	78	2	70-130/30
75-09-2	Methylene chloride	40	37.6	94	37.3	93	1	70-130/30
78-93-3	Methyl ethyl ketone	40	41.2	103	41.2	103	0	70-130/30
108-10-1	Methyl Isobutyl Ketone	40	43.7	109	44.9	112	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	40	37.5	94	37.4	94	0	70-130/30
80-62-6	Methylmethacrylate	40	42.5	106	43.3	108	2	70-130/30
115-07-1	Propylene	40	35.8	90	37.8	95	5	70-130/30
100-42-5	Styrene	40	43.7	109	44.7	112	2	70-130/30
71-55-6	1,1,1-Trichloroethane	40	39.0	98	38.7	97	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	40	42.2	106	42.5	106	1	70-130/30
79-00-5	1,1,2-Trichloroethane	40	39.6	99	40.7	102	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	40	47.1	118	49.8	125	6	70-130/30
95-63-6	1,2,4-Trimethylbenzene	40	46.6	117	47.7	119	2	70-130/30
108-67-8	1,3,5-Trimethylbenzene	40	42.8	107	43.7	109	2	70-130/30
540-84-1	2,2,4-Trimethylpentane	40	37.6	94	37.8	95	1	70-130/30
75-65-0	Tertiary Butyl Alcohol	40	39.9	100	39.0	98	2	70-130/30
127-18-4	Tetrachloroethylene	40	41.8	105	43.2	108	3	70-130/30
109-99-9	Tetrahydrofuran	40	41.9	105	42.2	106	1	70-130/30
108-88-3	Toluene	40	36.7	92	37.6	94	2	70-130/30
79-01-6	Trichloroethylene	40	39.6	99	40.1	100	1	70-130/30
75-69-4	Trichlorofluoromethane	40	40.4	101	39.9	100	1	70-130/30
75-01-4	Vinyl chloride	40	36.1	90	36.8	92	2	70-130/30
108-05-4	Vinyl Acetate	40	37.4	94	37.2	93	1	70-130/30
	m,p-Xylene	80	75.6	95	72.1	90	5	70-130/30
95-47-6	o-Xylene	40	40.2	101	40.5	101	1	70-130/30
1330-20-7	Xylenes (total)	120	116	97	113	94	3	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-BS	6W20308.D	1	11/27/20	DFT	n/a	n/a	V6W854
V6W854-BSD	6W20309.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here applies to the following samples: **Method:** TO-15

V6W854-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	108%	111%	65-128%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-BS	6W20407.D	1	12/03/20	TCH	n/a	n/a	V6W859
V6W859-BSD	6W20408.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	10	10.4	104	10.7	107	3	70-130/30
106-99-0	1,3-Butadiene	10	11.7	117	12.1	121	3	70-130/30
71-43-2	Benzene	10	10.1	101	10.3	103	2	70-130/30
75-27-4	Bromodichloromethane	10	11.0	110	11.2	112	2	70-130/30
75-25-2	Bromoform	10	11.6	116	11.5	115	1	70-130/30
74-83-9	Bromomethane	10	10.6	106	10.8	108	2	70-130/30
593-60-2	Bromoethene	10	10.3	103	10.4	104	1	70-130/30
100-44-7	Benzyl Chloride	10	13.0	130	13.0	130	0	70-130/30
75-15-0	Carbon disulfide	10	10.9	109	11.0	110	1	70-130/30
108-90-7	Chlorobenzene	10	9.5	95	9.5	95	0	70-130/30
75-00-3	Chloroethane	10	11.7	117	12.0	120	3	70-130/30
67-66-3	Chloroform	10	10.2	102	10.3	103	1	70-130/30
74-87-3	Chloromethane	10	11.8	118	12.1	121	3	70-130/30
107-05-1	3-Chloropropene	10	11.6	116	11.9	119	3	70-130/30
95-49-8	2-Chlorotoluene	10	10.2	102	10.2	102	0	70-130/30
56-23-5	Carbon tetrachloride	10	10.3	103	10.4	104	1	70-130/30
110-82-7	Cyclohexane	10	10.8	108	11.2	112	4	70-130/30
75-34-3	1,1-Dichloroethane	10	11.0	110	11.2	112	2	70-130/30
75-35-4	1,1-Dichloroethylene	10	11.0	110	11.2	112	2	70-130/30
106-93-4	1,2-Dibromoethane	10	11.0	110	11.1	111	1	70-130/30
107-06-2	1,2-Dichloroethane	10	10.8	108	11.1	111	3	70-130/30
78-87-5	1,2-Dichloropropane	10	11.1	111	11.5	115	4	70-130/30
123-91-1	1,4-Dioxane	10	10.5	105	10.7	107	2	70-130/30
75-71-8	Dichlorodifluoromethane	10	10.5	105	10.7	107	2	70-130/30
124-48-1	Dibromochloromethane	10	11.8	118	12.0	120	2	70-130/30
156-60-5	trans-1,2-Dichloroethylene	10	11.3	113	11.6	116	3	70-130/30
156-59-2	cis-1,2-Dichloroethylene	10	11.0	110	11.2	112	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	10	11.3	113	11.5	115	2	70-130/30
541-73-1	m-Dichlorobenzene	10	12.5	125	12.5	125	0	70-130/30
95-50-1	o-Dichlorobenzene	10	11.7	117	11.7	117	0	70-130/30
106-46-7	p-Dichlorobenzene	10	12.5	125	12.4	124	1	70-130/30
10061-02-6	trans-1,3-Dichloropropene	10	11.9	119	12.2	122	2	70-130/30
64-17-5	Ethanol	10	10.5	105	10.6	106	1	70-130/30
100-41-4	Ethylbenzene	10	9.5	95	9.7	97	2	70-130/30
141-78-6	Ethyl Acetate	10	12.5	125	12.7	127	2	70-130/30
622-96-8	4-Ethyltoluene	10	11.2	112	11.2	112	0	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-BS	6W20407.D	1	12/03/20	TCH	n/a	n/a	V6W859
V6W859-BSD	6W20408.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Compound	Spike ppbv	BSP ppbv	BSP %	BSD ppbv	BSD %	RPD	Limits Rec/RPD
76-13-1	Freon 113	10	10.0	100	10.2	102	2	70-130/30
76-14-2	Freon 114	10	11.0	110	11.2	112	2	70-130/30
142-82-5	Heptane	10	10.9	109	11.2	112	3	70-130/30
87-68-3	Hexachlorobutadiene	10	10.2	102	10.1	101	1	70-130/30
110-54-3	Hexane	10	11.0	110	11.3	113	3	70-130/30
591-78-6	2-Hexanone	10	13.6	136* [a]	14.0	140* [a]	3	70-130/30
67-63-0	Isopropyl Alcohol	10	9.9	99	10.1	101	2	70-130/30
75-09-2	Methylene chloride	10	10.4	104	10.5	105	1	70-130/30
78-93-3	Methyl ethyl ketone	10	12.1	121	12.3	123	2	70-130/30
108-10-1	Methyl Isobutyl Ketone	10	13.3	133* [a]	13.6	136* [a]	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	10	10.2	102	10.4	104	2	70-130/30
80-62-6	Methylmethacrylate	10	12.2	122	12.4	124	2	70-130/30
115-07-1	Propylene	10	11.6	116	11.8	118	2	70-130/30
100-42-5	Styrene	10	10.6	106	10.6	106	0	70-130/30
71-55-6	1,1,1-Trichloroethane	10	9.6	96	9.8	98	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	10	10.6	106	10.7	107	1	70-130/30
79-00-5	1,1,2-Trichloroethane	10	10.7	107	10.9	109	2	70-130/30
120-82-1	1,2,4-Trichlorobenzene	10	11.7	117	11.6	116	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	10	10.8	108	10.9	109	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	10	9.9	99	9.9	99	0	70-130/30
540-84-1	2,2,4-Trimethylpentane	10	11.2	112	11.5	115	3	70-130/30
75-65-0	Tertiary Butyl Alcohol	10	11.5	115	11.7	117	2	70-130/30
127-18-4	Tetrachloroethylene	10	9.8	98	10	100	2	70-130/30
109-99-9	Tetrahydrofuran	10	12.1	121	12.4	124	2	70-130/30
108-88-3	Toluene	10	9.9	99	10.1	101	2	70-130/30
79-01-6	Trichloroethylene	10	10.2	102	10.5	105	3	70-130/30
75-69-4	Trichlorofluoromethane	10	9.8	98	9.8	98	0	70-130/30
75-01-4	Vinyl chloride	10	11.8	118	12.0	120	2	70-130/30
108-05-4	Vinyl Acetate	10	11.9	119	12.3	123	3	70-130/30
	m,p-Xylene	20	17.1	86	17.2	86	1	70-130/30
95-47-6	o-Xylene	10	9.6	96	9.7	97	1	70-130/30
1330-20-7	Xylenes (total)	30	26.7	89	26.9	90	1	70-130/30

* = Outside of Control Limits.

Blank Spike/Blank Spike Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-BS	6W20407.D	1	12/03/20	TCH	n/a	n/a	V6W859
V6W859-BSD	6W20408.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here applies to the following samples: **Method:** TO-15

V6W859-SCC

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
460-00-4	4-Bromofluorobenzene	104%	104%	65-128%

(a) High percent recovery and no associated positive reported in the QC batch.

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD18950-3DUP	6W20997.D	1	01/14/21	TCH	n/a	n/a	V6W882
JD18950-3	6W20996.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	JD18950-3 ppbv	Q	DUP ppbv	Q	RPD	Limits
67-64-1	Acetone	18.1		16.9		7	25
106-99-0	1,3-Butadiene	ND		ND		nc	25
71-43-2	Benzene	2.2		2.1		5	25
75-27-4	Bromodichloromethane	ND		ND		nc	25
75-25-2	Bromoform	ND		ND		nc	25
74-83-9	Bromomethane	ND		ND		nc	25
593-60-2	Bromoethene	ND		ND		nc	25
100-44-7	Benzyl Chloride	ND		ND		nc	25
75-15-0	Carbon disulfide	ND		ND		nc	25
108-90-7	Chlorobenzene	ND		ND		nc	25
75-00-3	Chloroethane	ND		ND		nc	25
67-66-3	Chloroform	ND		ND		nc	25
74-87-3	Chloromethane	ND		ND		nc	25
107-05-1	3-Chloropropene	ND		ND		nc	25
95-49-8	2-Chlorotoluene	ND		ND		nc	25
56-23-5	Carbon tetrachloride	ND		ND		nc	25
110-82-7	Cyclohexane	2.7		2.5		8	25
75-34-3	1,1-Dichloroethane	ND		ND		nc	25
75-35-4	1,1-Dichloroethylene	ND		ND		nc	25
106-93-4	1,2-Dibromoethane	ND		ND		nc	25
107-06-2	1,2-Dichloroethane	ND		ND		nc	25
78-87-5	1,2-Dichloropropane	ND		ND		nc	25
123-91-1	1,4-Dioxane	ND		ND		nc	25
75-71-8	Dichlorodifluoromethane	0.57	J	0.54	J	5	25
124-48-1	Dibromochloromethane	ND		ND		nc	25
156-60-5	trans-1,2-Dichloroethylene	ND		ND		nc	25
156-59-2	cis-1,2-Dichloroethylene	ND		ND		nc	25
10061-01-5	cis-1,3-Dichloropropene	ND		ND		nc	25
541-73-1	m-Dichlorobenzene	ND		ND		nc	25
95-50-1	o-Dichlorobenzene	ND		ND		nc	25
106-46-7	p-Dichlorobenzene	ND		ND		nc	25
10061-02-6	trans-1,3-Dichloropropene	ND		ND		nc	25
64-17-5	Ethanol	176	E	165	E	6	25
100-41-4	Ethylbenzene	12.7		12.7		0	25
141-78-6	Ethyl Acetate	3.1		3.3		6	25
622-96-8	4-Ethyltoluene	7.8		7.3		7	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD18950-3DUP	6W20997.D	1	01/14/21	TCH	n/a	n/a	V6W882
JD18950-3	6W20996.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Compound	JD18950-3 ppbv	Q	DUP ppbv	Q	RPD	Limits
76-13-1	Freon 113	ND		ND		nc	25
76-14-2	Freon 114	ND		ND		nc	25
142-82-5	Heptane	5.6		6.0		7	25
87-68-3	Hexachlorobutadiene	ND		ND		nc	25
110-54-3	Hexane	8.1		8.5		5	25
591-78-6	2-Hexanone	ND		ND		nc	25
67-63-0	Isopropyl Alcohol	3.0		2.8		7	25
75-09-2	Methylene chloride	ND		ND		nc	25
78-93-3	Methyl ethyl ketone	17.3		17.6		2	25
108-10-1	Methyl Isobutyl Ketone	1.7		1.9		11	25
1634-04-4	Methyl Tert Butyl Ether	ND		ND		nc	25
80-62-6	Methylmethacrylate	ND		ND		nc	25
115-07-1	Propylene	ND		ND		nc	25
100-42-5	Styrene	0.41	J	ND		200* [a]	25
71-55-6	1,1,1-Trichloroethane	ND		ND		nc	25
79-34-5	1,1,2,2-Tetrachloroethane	ND		ND		nc	25
79-00-5	1,1,2-Trichloroethane	ND		ND		nc	25
120-82-1	1,2,4-Trichlorobenzene	ND		ND		nc	25
95-63-6	1,2,4-Trimethylbenzene	29.7		27.8		7	25
108-67-8	1,3,5-Trimethylbenzene	8.0		7.5		6	25
540-84-1	2,2,4-Trimethylpentane	4.0		4.4		10	25
75-65-0	Tertiary Butyl Alcohol	0.43	J	0.38	J	12	25
127-18-4	Tetrachloroethylene	9.3		9.8		5	25
109-99-9	Tetrahydrofuran	9.6		9.7		1	25
108-88-3	Toluene	46.5		46.4		0	25
79-01-6	Trichloroethylene	0.22		0.24		9	25
75-69-4	Trichlorofluoromethane	ND		ND		nc	25
75-01-4	Vinyl chloride	ND		ND		nc	25
108-05-4	Vinyl Acetate	ND		ND		nc	25
	m,p-Xylene	49.9		49.1		2	25
95-47-6	o-Xylene	23.9		22.5		6	25
1330-20-7	Xylenes (total)	73.8		71.6		3	25

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD18950-3DUP	6W20997.D	1	01/14/21	TCH	n/a	n/a	V6W882
JD18950-3	6W20996.D	1	01/14/21	TCH	n/a	n/a	V6W882

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1, JD18853-2, JD18853-3, JD18853-4, JD18853-5

CAS No.	Surrogate Recoveries	DUP	JD18950-3	Limits
460-00-4	4-Bromofluorobenzene	96%	101%	65-128%

(a) High RPD due to low concentration of hit

* = Outside of Control Limits.

Duplicate Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
JD18873-1DUP	6W21016.D	1	01/15/21	DFT	n/a	n/a	V6W883
JD18873-1	6W21015.D	1	01/15/21	DFT	n/a	n/a	V6W883

The QC reported here applies to the following samples: **Method:** TO-15

JD18853-1

CAS No.	Compound	JD18873-1 ppbv	Q	DUP ppbv	Q	RPD	Limits
64-17-5	Ethanol	53.9		51.2		5	25
67-63-0	Isopropyl Alcohol	4.0		4.3		7	25
109-99-9	Tetrahydrofuran	ND		ND		nc	25

CAS No.	Surrogate Recoveries	DUP	JD18873-1	Limits
460-00-4	4-Bromofluorobenzene	81%	79%	65-128%

* = Outside of Control Limits.

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-SCC	6W20313.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here (Summa A004) applies to the following samples: **Method:** TO-15

Batch CP10957 cleaned 11/21/20: JD18853-3(A768), JD18853-5(A873)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-SCC	6W20313.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here (Summa A004) applies to the following samples: **Method:** TO-15

Batch CP10957 cleaned 11/21/20: JD18853-3(A768), JD18853-5(A873)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W854-SCC	6W20313.D	1	11/27/20	DFT	n/a	n/a	V6W854

The QC reported here (Summa A004) applies to the following samples: **Method:** TO-15

Batch CP10957 cleaned 11/21/20: JD18853-3(A768), JD18853-5(A873)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	87%	65-128%

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20414.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa M167) applies to the following samples: **Method:** TO-15

Batch CP10958 cleaned 11/21/20: JD18853-2(A831), JD18853-4(A300)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20414.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa M167) applies to the following samples: **Method:** TO-15

Batch CP10958 cleaned 11/21/20: JD18853-2(A831), JD18853-4(A300)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20414.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa M167) applies to the following samples: **Method:** TO-15

Batch CP10958 cleaned 11/21/20: JD18853-2(A831), JD18853-4(A300)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	86%	65-128%

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20415.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa A758) applies to the following samples: **Method:** TO-15

Batch CP10963 cleaned 11/22/20: JD18853-1(A1074)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
67-64-1	Acetone	ND	0.20	ppbv		ND	0.48	ug/m3
106-99-0	1,3-Butadiene	ND	0.20	ppbv		ND	0.44	ug/m3
71-43-2	Benzene	ND	0.20	ppbv		ND	0.64	ug/m3
75-27-4	Bromodichloromethane	ND	0.20	ppbv		ND	1.3	ug/m3
75-25-2	Bromoform	ND	0.20	ppbv		ND	2.1	ug/m3
74-83-9	Bromomethane	ND	0.20	ppbv		ND	0.78	ug/m3
593-60-2	Bromoethene	ND	0.20	ppbv		ND	0.87	ug/m3
100-44-7	Benzyl Chloride	ND	0.20	ppbv		ND	1.0	ug/m3
75-15-0	Carbon disulfide	ND	0.20	ppbv		ND	0.62	ug/m3
108-90-7	Chlorobenzene	ND	0.20	ppbv		ND	0.92	ug/m3
75-00-3	Chloroethane	ND	0.20	ppbv		ND	0.53	ug/m3
67-66-3	Chloroform	ND	0.20	ppbv		ND	0.98	ug/m3
74-87-3	Chloromethane	ND	0.20	ppbv		ND	0.41	ug/m3
107-05-1	3-Chloropropene	ND	0.20	ppbv		ND	0.63	ug/m3
95-49-8	2-Chlorotoluene	ND	0.20	ppbv		ND	1.0	ug/m3
56-23-5	Carbon tetrachloride	ND	0.20	ppbv		ND	1.3	ug/m3
110-82-7	Cyclohexane	ND	0.20	ppbv		ND	0.69	ug/m3
75-34-3	1,1-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
75-35-4	1,1-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
106-93-4	1,2-Dibromoethane	ND	0.20	ppbv		ND	1.5	ug/m3
107-06-2	1,2-Dichloroethane	ND	0.20	ppbv		ND	0.81	ug/m3
78-87-5	1,2-Dichloropropane	ND	0.20	ppbv		ND	0.92	ug/m3
123-91-1	1,4-Dioxane	ND	0.20	ppbv		ND	0.72	ug/m3
75-71-8	Dichlorodifluoromethane	ND	0.20	ppbv		ND	0.99	ug/m3
124-48-1	Dibromochloromethane	ND	0.20	ppbv		ND	1.7	ug/m3
156-60-5	trans-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
156-59-2	cis-1,2-Dichloroethylene	ND	0.20	ppbv		ND	0.79	ug/m3
10061-01-5	cis-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
541-73-1	m-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
95-50-1	o-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
106-46-7	p-Dichlorobenzene	ND	0.20	ppbv		ND	1.2	ug/m3
10061-02-6	trans-1,3-Dichloropropene	ND	0.20	ppbv		ND	0.91	ug/m3
64-17-5	Ethanol	ND	0.50	ppbv		ND	0.94	ug/m3
100-41-4	Ethylbenzene	ND	0.20	ppbv		ND	0.87	ug/m3
141-78-6	Ethyl Acetate	ND	0.20	ppbv		ND	0.72	ug/m3
622-96-8	4-Ethyltoluene	ND	0.20	ppbv		ND	0.98	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20415.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa A758) applies to the following samples: **Method:** TO-15

Batch CP10963 cleaned 11/22/20: JD18853-1(A1074)

CAS No.	Compound	Result	RL	Units	Q	Result	RL	Units
76-13-1	Freon 113	ND	0.20	ppbv		ND	1.5	ug/m3
76-14-2	Freon 114	ND	0.20	ppbv		ND	1.4	ug/m3
142-82-5	Heptane	ND	0.20	ppbv		ND	0.82	ug/m3
87-68-3	Hexachlorobutadiene	ND	0.20	ppbv		ND	2.1	ug/m3
110-54-3	Hexane	ND	0.20	ppbv		ND	0.70	ug/m3
591-78-6	2-Hexanone	ND	0.20	ppbv		ND	0.82	ug/m3
67-63-0	Isopropyl Alcohol	ND	0.20	ppbv		ND	0.49	ug/m3
75-09-2	Methylene chloride	ND	0.20	ppbv		ND	0.69	ug/m3
78-93-3	Methyl ethyl ketone	ND	0.20	ppbv		ND	0.59	ug/m3
108-10-1	Methyl Isobutyl Ketone	ND	0.20	ppbv		ND	0.82	ug/m3
1634-04-4	Methyl Tert Butyl Ether	ND	0.20	ppbv		ND	0.72	ug/m3
80-62-6	Methylmethacrylate	ND	0.20	ppbv		ND	0.82	ug/m3
115-07-1	Propylene	ND	0.50	ppbv		ND	0.86	ug/m3
100-42-5	Styrene	ND	0.20	ppbv		ND	0.85	ug/m3
71-55-6	1,1,1-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.20	ppbv		ND	1.4	ug/m3
79-00-5	1,1,2-Trichloroethane	ND	0.20	ppbv		ND	1.1	ug/m3
120-82-1	1,2,4-Trichlorobenzene	ND	0.20	ppbv		ND	1.5	ug/m3
95-63-6	1,2,4-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
108-67-8	1,3,5-Trimethylbenzene	ND	0.20	ppbv		ND	0.98	ug/m3
540-84-1	2,2,4-Trimethylpentane	ND	0.20	ppbv		ND	0.93	ug/m3
75-65-0	Tertiary Butyl Alcohol	ND	0.20	ppbv		ND	0.61	ug/m3
127-18-4	Tetrachloroethylene	ND	0.040	ppbv		ND	0.27	ug/m3
109-99-9	Tetrahydrofuran	ND	0.20	ppbv		ND	0.59	ug/m3
108-88-3	Toluene	ND	0.20	ppbv		ND	0.75	ug/m3
79-01-6	Trichloroethylene	ND	0.040	ppbv		ND	0.21	ug/m3
75-69-4	Trichlorofluoromethane	ND	0.20	ppbv		ND	1.1	ug/m3
75-01-4	Vinyl chloride	ND	0.20	ppbv		ND	0.51	ug/m3
108-05-4	Vinyl Acetate	ND	0.20	ppbv		ND	0.70	ug/m3
	m,p-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
95-47-6	o-Xylene	ND	0.20	ppbv		ND	0.87	ug/m3
1330-20-7	Xylenes (total)	ND	0.20	ppbv		ND	0.87	ug/m3

Summa Cleaning Certification

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
V6W859-SCC	6W20415.D	1	12/03/20	TCH	n/a	n/a	V6W859

The QC reported here (Summa A758) applies to the following samples: **Method:** TO-15

Batch CP10963 cleaned 11/22/20: JD18853-1(A1074)

CAS No.	Surrogate Recoveries		Limits
460-00-4	4-Bromofluorobenzene	87%	65-128%

Instrument Performance Check (BFB)

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W848-BFB
Lab File ID: 6W20155.D
Instrument ID: GCMS6W
Injection Date: 11/18/20
Injection Time: 13:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	22069	14.0		Pass
75	30.0 - 66.0% of mass 95	67475	42.7		Pass
95	Base peak, 100% relative abundance	157995	100.0		Pass
96	5.0 - 9.0% of mass 95	10546	6.67		Pass
173	Less than 2.0% of mass 174	408	0.26	(0.29) [a]	Pass
174	50.0 - 120.0% of mass 95	142781	90.4		Pass
175	4.0 - 9.0% of mass 174	10339	6.54	(7.24) [a]	Pass
176	93.0 - 101.0% of mass 174	138891	87.9	(97.3) [a]	Pass
177	5.0 - 9.0% of mass 176	9297	5.88	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W848-IC848	6W20156.D	11/18/20	14:11	00:48	Initial cal 0.04
V6W848-IC848	6W20157.D	11/18/20	14:58	01:35	Initial cal 0.1
V6W848-IC848	6W20158.D	11/18/20	15:44	02:21	Initial cal 0.2
V6W848-IC848	6W20159.D	11/18/20	16:33	03:10	Initial cal 0.5
V6W848-IC848	6W20160.D	11/18/20	17:19	03:56	Initial cal 5
V6W848-ICC848	6W20161.D	11/18/20	18:05	04:42	Initial cal 10
V6W848-IC848	6W20164.D	11/18/20	20:35	07:12	Initial cal 40
V6W848-IC848	6W20167.D	11/19/20	09:23	20:00	Initial cal 20
V6W848-ICV848	6W20169.D	11/19/20	11:15	21:52	Initial cal verification 10

Instrument Performance Check (BFB)

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W854-BFB
Lab File ID: 6W20306.D
Instrument ID: GCMS6W
Injection Date: 11/27/20
Injection Time: 15:23

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	13757	15.4		Pass
75	30.0 - 66.0% of mass 95	40312	45.0		Pass
95	Base peak, 100% relative abundance	89517	100.0		Pass
96	5.0 - 9.0% of mass 95	5956	6.65		Pass
173	Less than 2.0% of mass 174	757	0.85	(0.90) [a]	Pass
174	50.0 - 120.0% of mass 95	84496	94.4		Pass
175	4.0 - 9.0% of mass 174	6087	6.80	(7.20) [a]	Pass
176	93.0 - 101.0% of mass 174	82336	92.0	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	5510	6.16	(6.69) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W854-CC848	6W20307.D	11/27/20	16:03	00:40	Continuing cal 10
V6W854-BS	6W20308.D	11/27/20	16:42	01:19	Blank Spike
V6W854-BSD	6W20309.D	11/27/20	17:29	02:06	Blank Spike Duplicate
V6W854-MB	6W20311.D	11/27/20	19:09	03:46	Method Blank
V6W854-SCC	6W20312.D	11/27/20	20:02	04:39	Summa Cleaning Certification
V6W854-SCC	6W20313.D	11/27/20	20:54	05:31	Summa Cleaning Certification
V6W854-SCC	6W20314.D	11/27/20	21:46	06:23	Summa Cleaning Certification
V6W854-SCC	6W20315.D	11/27/20	22:39	07:16	Summa Cleaning Certification
V6W854-SCC	6W20316.D	11/27/20	23:31	08:08	Summa Cleaning Certification
V6W854-SCC	6W20317.D	11/28/20	00:19	08:56	Summa Cleaning Certification
V6W854-SCC	6W20318.D	11/28/20	01:06	09:43	Summa Cleaning Certification
V6W854-SCC	6W20319.D	11/28/20	01:54	10:31	Summa Cleaning Certification

Instrument Performance Check (BFB)

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W859-BFB
Lab File ID: 6W20404.D
Instrument ID: GCMS6W
Injection Date: 12/03/20
Injection Time: 09:33

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	22259	16.2		Pass
75	30.0 - 66.0% of mass 95	61123	44.4		Pass
95	Base peak, 100% relative abundance	137619	100.0		Pass
96	5.0 - 9.0% of mass 95	8901	6.47		Pass
173	Less than 2.0% of mass 174	1038	0.75	(0.84) [a]	Pass
174	50.0 - 120.0% of mass 95	123600	89.8		Pass
175	4.0 - 9.0% of mass 174	8990	6.53	(7.27) [a]	Pass
176	93.0 - 101.0% of mass 174	120411	87.5	(97.4) [a]	Pass
177	5.0 - 9.0% of mass 176	7877	5.72	(6.54) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W859-CC848	6W20406.D	12/03/20	11:21	01:48	Continuing cal 10
V6W859-BS	6W20407.D	12/03/20	12:09	02:36	Blank Spike
V6W859-BSD	6W20408.D	12/03/20	12:56	03:23	Blank Spike Duplicate
V6W859-MB	6W20410.D	12/03/20	14:41	05:08	Method Blank
ZZZZZZ	6W20411.D	12/03/20	15:46	06:13	(unrelated sample)
V6W859-SCC	6W20414.D	12/03/20	18:23	08:50	Summa Cleaning Certification
V6W859-SCC	6W20415.D	12/03/20	19:16	09:43	Summa Cleaning Certification
JD16493-1	6W20418.D	12/03/20	22:00	12:27	(used for QC only; not part of job JD18853)
JD16493-1DUP	6W20419.D	12/03/20	22:48	13:15	Duplicate
ZZZZZZ	6W20423.D	12/04/20	01:57	16:24	(unrelated sample)
ZZZZZZ	6W20424.D	12/04/20	02:45	17:12	(unrelated sample)
ZZZZZZ	6W20425.D	12/04/20	03:33	18:00	(unrelated sample)
ZZZZZZ	6W20426.D	12/04/20	04:21	18:48	(unrelated sample)
ZZZZZZ	6W20427.D	12/04/20	05:09	19:36	(unrelated sample)
ZZZZZZ	6W20428.D	12/04/20	05:56	20:23	(unrelated sample)
ZZZZZZ	6W20429.D	12/04/20	06:44	21:11	(unrelated sample)

Instrument Performance Check (BFB)

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W882-BFB
Lab File ID: 6W20988.D
Instrument ID: GCMS6W
Injection Date: 01/14/21
Injection Time: 12:20

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	24824	19.3		Pass
75	30.0 - 66.0% of mass 95	64784	50.3		Pass
95	Base peak, 100% relative abundance	128779	100.0		Pass
96	5.0 - 9.0% of mass 95	8668	6.73		Pass
173	Less than 2.0% of mass 174	824	0.64	(0.72) [a]	Pass
174	50.0 - 120.0% of mass 95	114304	88.8		Pass
175	4.0 - 9.0% of mass 174	8184	6.36	(7.16) [a]	Pass
176	93.0 - 101.0% of mass 174	109963	85.4	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	7167	5.57	(6.52) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W882-CC848	6W20989.D	01/14/21	13:07	00:47	Continuing cal 10
V6W882-BS	6W20990.D	01/14/21	13:55	01:35	Blank Spike
V6W882-BSD	6W20991.D	01/14/21	14:42	02:22	Blank Spike Duplicate
V6W882-MB	6W20993.D	01/14/21	16:22	04:02	Method Blank
ZZZZZZ	6W20994.D	01/14/21	17:10	04:50	(unrelated sample)
ZZZZZZ	6W20995.D	01/14/21	17:58	05:38	(unrelated sample)
JD18950-3	6W20996.D	01/14/21	18:45	06:25	(used for QC only; not part of job JD18853)
JD18950-3DUP	6W20997.D	01/14/21	19:32	07:12	Duplicate
ZZZZZZ	6W20998.D	01/14/21	20:24	08:04	(unrelated sample)
ZZZZZZ	6W20999.D	01/14/21	21:12	08:52	(unrelated sample)
ZZZZZZ	6W21000.D	01/14/21	22:06	09:46	(unrelated sample)
JD18853-1	6W21001.D	01/14/21	23:02	10:42	VP-5 SV
JD18853-2	6W21002.D	01/15/21	00:01	11:41	VP-5 A
JD18853-3	6W21003.D	01/15/21	00:55	12:35	VP-6 SV
JD18853-4	6W21004.D	01/15/21	01:54	13:34	VP-6 A
JD18853-5	6W21005.D	01/15/21	02:56	14:36	OUTSIDE AMBIENT
V6W882-ECC848	6W21007.D	01/15/21	04:31	16:11	Ending cal 10

Instrument Performance Check (BFB)

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample: V6W883-BFB
Lab File ID: 6W21008.D
Instrument ID: GCMS6W
Injection Date: 01/15/21
Injection Time: 09:45

m/e	Ion Abundance Criteria	Raw Abundance	% Relative Abundance		Pass/Fail
50	8.0 - 40.0% of mass 95	26512	19.5		Pass
75	30.0 - 66.0% of mass 95	69443	51.0		Pass
95	Base peak, 100% relative abundance	136184	100.0		Pass
96	5.0 - 9.0% of mass 95	8829	6.48		Pass
173	Less than 2.0% of mass 174	476	0.35	(0.41) [a]	Pass
174	50.0 - 120.0% of mass 95	116064	85.2		Pass
175	4.0 - 9.0% of mass 174	8772	6.44	(7.56) [a]	Pass
176	93.0 - 101.0% of mass 174	111597	81.9	(96.2) [a]	Pass
177	5.0 - 9.0% of mass 176	7506	5.51	(6.73) [b]	Pass

(a) Value is % of mass 174
(b) Value is % of mass 176

This check applies to the following Samples, MS, MSD, Blanks, and Standards:

Lab Sample ID	Lab File ID	Date Analyzed	Time Analyzed	Hours Lapsed	Client Sample ID
V6W883-CC848	6W21009.D	01/15/21	10:32	00:47	Continuing cal 10
V6W883-BS	6W21010.D	01/15/21	11:36	01:51	Blank Spike
V6W883-BSD	6W21011.D	01/15/21	12:24	02:39	Blank Spike Duplicate
V6W883-MB	6W21013.D	01/15/21	14:14	04:29	Method Blank
JD18853-1	6W21014.D	01/15/21	15:16	05:31	VP-5 SV
JD18873-1	6W21015.D	01/15/21	16:03	06:18	(used for QC only; not part of job JD18853)
JD18873-1DUP	6W21016.D	01/15/21	16:51	07:06	Duplicate
ZZZZZZ	6W21025.D	01/16/21	00:25	14:40	(unrelated sample)
ZZZZZZ	6W21026.D	01/16/21	01:18	15:33	(unrelated sample)
ZZZZZZ	6W21027.D	01/16/21	02:12	16:27	(unrelated sample)
ZZZZZZ	6W21029.D	01/16/21	04:00	18:15	(unrelated sample)
ZZZZZZ	6W21030.D	01/16/21	04:58	19:13	(unrelated sample)
ZZZZZZ	6W21031.D	01/16/21	05:52	20:07	(unrelated sample)
ZZZZZZ	6W21032.D	01/16/21	06:47	21:02	(unrelated sample)

Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std:	V6W854-CC848	**Injection Date:**	11/27/20
Lab File ID:	6W20307.D	**Injection Time:**	16:03
Instrument ID:	GCMS6W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	178920	8.08	669832	10.26	296451	15.79
Upper Limit [a]	250488	8.41	937765	10.59	415031	16.12
Lower Limit [b]	107352	7.75	401899	9.93	177871	15.46

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W854-BS	172348	8.08	643855	10.26	281489	15.79
V6W854-BSD	173973	8.08	644628	10.26	292995	15.79
V6W854-MB	173198	8.08	633949	10.26	239223	15.79
V6W854-SCC	165653	8.08	605309	10.26	227827	15.79
V6W854-SCC	162202	8.08	589321	10.26	222197	15.79
V6W854-SCC	156778	8.08	569323	10.26	215208	15.79
V6W854-SCC	154352	8.08	558440	10.26	212122	15.79
V6W854-SCC	151729	8.08	544415	10.26	206810	15.79
V6W854-SCC	151122	8.08	546704	10.26	206973	15.79
V6W854-SCC	150673	8.08	540312	10.26	204261	15.79
V6W854-SCC	148267	8.08	533596	10.26	201597	15.79

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std:	V6W859-CC848	**Injection Date:**	12/03/20
Lab File ID:	6W20406.D	**Injection Time:**	11:21
Instrument ID:	GCMS6W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	302470	8.07	1135226	10.26	538110	15.78
Upper Limit [a]	423458	8.40	1589316	10.59	753354	16.11
Lower Limit [b]	181482	7.74	681136	9.93	322866	15.45

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W859-BS	306956	8.08	1165196	10.26	559626	15.78
V6W859-BSD	310661	8.08	1173121	10.26	572002	15.78
V6W859-MB	298286	8.08	1134542	10.26	453184	15.78
ZZZZZZ	268867	8.07	1012447	10.26	432126	15.78
V6W859-SCC	267410	8.08	1003701	10.26	396967	15.78
V6W859-SCC	264427	8.08	988603	10.26	393763	15.78
JD16493-1	290736	8.08	1096024	10.26	471402	15.78
JD16493-1DUP	273923	8.08	1011157	10.26	434126	15.78
ZZZZZZ	255281	8.09	918339	10.26	384968	15.78
ZZZZZZ	264656	8.08	985533	10.26	389152	15.78
ZZZZZZ	263605	8.08	975882	10.26	383434	15.78
ZZZZZZ	252195	8.08	908505	10.26	378411	15.78
ZZZZZZ	257043	8.08	937627	10.26	374720	15.78
ZZZZZZ	247555	8.08	904825	10.26	374096	15.78
ZZZZZZ	236046	8.08	840898	10.26	352757	15.78

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std:	V6W882-CC848	**Injection Date:**	01/14/21
Lab File ID:	6W20989.D	**Injection Time:**	13:07
Instrument ID:	GCMS6W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	258622	8.06	961438	10.24	471646	15.76
Upper Limit [a]	362071	8.39	1346013	10.57	660304	16.09
Lower Limit [b]	155173	7.73	576863	9.91	282988	15.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W882-BS	267740	8.06	1008828	10.24	484669	15.77
V6W882-BSD	299943	8.06	1091005	10.24	548471	15.76
V6W882-MB	253395	8.06	932763	10.24	350637	15.76
ZZZZZZ	261522	8.06	931888	10.24	401402	15.76
ZZZZZZ	256982	8.07	933725	10.24	395560	15.76
JD18950-3	250693	8.06	919670	10.24	383761	15.76
JD18950-3DUP	266393	8.06	886485	10.24	401532	15.76
ZZZZZZ	282972	8.06	1059942	10.24	461298	15.76
ZZZZZZ	282420	8.06	1054964	10.24	454389	15.76
ZZZZZZ	271372	8.06	909500	10.24	386277	15.76
JD18853-1	243394	8.06	882080	10.24	376327	15.76
JD18853-2	293760	8.06	1039471	10.24	399820	15.76
JD18853-3	252316	8.06	929058	10.24	372651	15.76
JD18853-4	254099	8.06	929766	10.24	391263	15.76
JD18853-5	263078	8.06	936521	10.24	403862	15.76
V6W882-ECC848	261872	8.06	971378	10.24	484124	15.76

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Check Std:	V6W883-CC848	**Injection Date:**	01/15/21
Lab File ID:	6W21009.D	**Injection Time:**	10:32
Instrument ID:	GCMS6W	**Method:**	TO-15

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Check Std	262387	8.06	974181	10.24	477060	15.76
Upper Limit [a]	367342	8.39	1363853	10.57	667884	16.09
Lower Limit [b]	157432	7.73	584509	9.91	286236	15.43

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
V6W883-BS	274112	8.06	1031584	10.24	480469	15.76
V6W883-BSD	279746	8.06	938502	10.24	499715	15.76
V6W883-MB	232869	8.06	852377	10.24	322189	15.76
JD18853-1	210431	8.06	734794	10.24	305203	15.76
JD18873-1	227247	8.07	806201	10.24	324546	15.76
JD18873-1DUP	216429	8.07	761897	10.24	304756	15.76
ZZZZZZ	204281	8.06	718687	10.24	292242	15.76
ZZZZZZ	206433	8.07	741908	10.24	294294	15.76
ZZZZZZ	208462	8.06	746135	10.24	309777	15.76
ZZZZZZ	202484	8.06	710369	10.24	292811	15.76
ZZZZZZ	208160	8.06	750962	10.24	304802	15.76
ZZZZZZ	206076	8.06	732673	10.24	293635	15.76
ZZZZZZ	207630	8.06	748876	10.24	306764	15.76

IS 1 = Bromochloromethane
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5

(a) Upper Limit = + 40% of check standard area; Retention time + 0.33 minutes.
(b) Lower Limit = -40% of check standard area; Retention time -0.33 minutes.

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.08	0.637	ok	0.635	0.575-0.695
Benzene	9.84	8.08	1.218	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.26	1.077	ok	1.077	1.017-1.137
Bromoform	16.75	15.79	1.061	ok	1.060	1.000-1.120
Bromomethane	4.48	8.08	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.38	15.79	1.291	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.22	8.08	0.770	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorotrifluoroethene	3.80	8.08	0.470	ok	0.470	0.410-0.530
Chloroform	8.23	8.08	1.019	ok	1.017	0.957-1.077
Chloromethane	3.98	8.08	0.493	ok	0.492	0.432-0.552
3-Chloropropene	6.05	8.08	0.749	ok	0.748	0.688-0.808
2-Chlorotoluene	18.98	15.79	1.202	ok	1.202	1.142-1.262
Carbon tetrachloride	10.01	8.08	1.239	ok	1.238	1.178-1.298
Cyclohexane	10.13	8.08	1.254	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.28	10.26	1.392	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.04	8.08	1.119	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.81	10.26	1.054	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.46	10.26	1.312	ok	1.311	1.251-1.371
1,4-Dioxane	11.22	10.26	1.094	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dibromochloromethane	13.96	10.26	1.361	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.83	8.08	0.845	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.08	0.979	ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.19	10.26	1.188	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.20	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.30	15.79	1.286	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.88	10.26	1.255	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.16	8.08	1.010	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.08	8.08	1.124	ok	1.124	1.064-1.184

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
4-Ethyltoluene	19.29	15.79	1.222	ok	1.221	1.161-1.281
Freon 113	6.18	8.08	0.765	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.08	0.623	ok	0.622	0.562-0.682
Freon 123A	5.07	8.08	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.12	8.08	1.005	ok	1.004	0.944-1.064
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.37	8.08	0.665	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.61	15.79	1.305	ok	1.305	1.245-1.365
Methyl Tert Butyl Ether	7.15	8.08	0.885	ok	0.880	0.820-0.940
Methylmethacrylate	11.43	10.26	1.114	ok	1.110	1.050-1.170
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.56	8.08	0.688	ok	0.688	0.628-0.748
n-Propylbenzene	19.06	15.79	1.207	ok	1.207	1.147-1.267
Styrene	17.21	15.79	1.090	ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.31	8.08	1.152	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.36	15.79	1.099	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.06	10.26	1.273	ok	1.272	1.212-1.332
1,2,3-Trichloropropane	17.56	15.79	1.112	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	20.00	15.79	1.267	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.41	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.94	8.08	0.735	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Toluene	13.41	10.26	1.307	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	273510	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	1044761	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	399013	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.15	8.09	0.637	ok	0.635	0.575-0.695
Acrolein	5.02	8.09	0.621	ok	0.619	0.559-0.679
Acrylonitrile	5.56	8.09	0.687	ok	0.685	0.625-0.745
1,3-Butadiene	4.26	8.09	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.09	1.215	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.26	1.077	ok	1.077	1.017-1.137
Bromoform	16.75	15.79	1.061	ok	1.060	1.000-1.120
Bromomethane	4.48	8.09	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.09	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.09	0.530	ok	0.531	0.471-0.591
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.22	8.09	0.769	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.09	0.466	ok	0.466	0.406-0.526
Chloroethane	4.62	8.09	0.571	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.09	0.470	ok	0.470	0.410-0.530
Chloroform	8.22	8.09	1.016	ok	1.017	0.957-1.077
Chloromethane	3.98	8.09	0.492	ok	0.492	0.432-0.552
3-Chloropropene	6.05	8.09	0.748	ok	0.748	0.688-0.808
2-Chlorotoluene	18.98	15.79	1.202	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.09	1.236	ok	1.238	1.178-1.298
Cyclohexane	10.14	8.09	1.253	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.04	8.09	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.09	0.719	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.28	10.26	1.392	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.05	8.09	1.119	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.81	10.26	1.054	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.46	10.26	1.312	ok	1.311	1.251-1.371
1,4-Dioxane	11.20	10.26	1.092	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.09	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.09	0.578	ok	0.579	0.519-0.639
Dibromochloromethane	13.96	10.26	1.361	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.84	8.09	0.845	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.09	0.978	ok	0.978	0.918-1.038
cis-1,3-Dichloropropene	12.18	10.26	1.187	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.29	15.79	1.285	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.87	10.26	1.254	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.15	8.09	1.007	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.09	1.289	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.09	8.09	1.124	ok	1.124	1.064-1.184
Ethylbenzene	16.41	15.79	1.039	ok	1.039	0.979-1.099
4-Ethyltoluene	19.29	15.79	1.222	ok	1.221	1.161-1.281
Freon 113	6.18	8.09	0.764	ok	0.764	0.704-0.824
Freon 114	4.05	8.09	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.09	0.622	ok	0.622	0.562-0.682
Freon 123A	5.07	8.09	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.09	0.489	ok	0.490	0.430-0.550
Freon 152A	3.74	8.09	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.54	15.79	1.491	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.12	8.09	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.87	10.26	1.352	ok	1.346	1.286-1.406
Iodomethane	5.75	8.09	0.711	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.37	8.09	0.664	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.94	8.09	0.734	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.53	8.09	0.931	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.29	10.26	1.198	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.14	8.09	0.883	ok	0.880	0.820-0.940
Methylmethacrylate	11.41	10.26	1.112	ok	1.110	1.050-1.170
Naphthalene	23.10	15.79	1.463	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.56	8.09	0.687	ok	0.688	0.628-0.748
n-Propylbenzene	19.06	15.79	1.207	ok	1.207	1.147-1.267
Propylene	3.80	8.09	0.470	ok	0.469	0.409-0.529
Styrene	17.20	15.79	1.089	ok	1.089	1.029-1.149
1,1,1-Trichloroethane	9.30	8.09	1.150	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.84	10.26	1.544	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.35	15.79	1.099	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.06	10.26	1.273	ok	1.272	1.212-1.332
1,2,3-Trichloropropane	17.55	15.79	1.111	ok	1.111	1.051-1.171

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	20.00	15.79	1.267	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.41	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.93	8.09	0.733	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.76	8.09	1.083	ok	1.076	1.016-1.136
Toluene	13.41	10.26	1.307	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.09	0.649	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.09	0.513	ok	0.513	0.453-0.573
Vinyl Acetate	7.23	8.09	0.894	ok	0.891	0.831-0.951
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.09	ok	8.08	7.75-8.41	262490	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	1009111	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	393092	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.14	8.08	0.636	ok	0.635	0.575-0.695
Acrolein	5.02	8.08	0.621	ok	0.619	0.559-0.679
Acrylonitrile	5.55	8.08	0.687	ok	0.685	0.625-0.745
Acetonitrile	4.92	8.08	0.609	ok	0.607	0.547-0.667
1,3-Butadiene	4.26	8.08	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.08	1.217	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.26	1.077	ok	1.077	1.017-1.137
Bromoform	16.74	15.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.48	8.08	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
Benzyl Chloride	20.19	15.79	1.279	ok	1.278	1.218-1.338
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.22	8.08	0.770	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.08	0.467	ok	0.466	0.406-0.526
Chloroethane	4.61	8.08	0.571	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.08	0.470	ok	0.470	0.410-0.530
Chloroform	8.22	8.08	1.017	ok	1.017	0.957-1.077
Chloromethane	3.98	8.08	0.493	ok	0.492	0.432-0.552
3-Chloropropene	6.04	8.08	0.748	ok	0.748	0.688-0.808
2-Chlorotoluene	18.98	15.79	1.202	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.08	1.238	ok	1.238	1.178-1.298
Cyclohexane	10.14	8.08	1.255	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.28	10.26	1.392	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.04	8.08	1.119	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.81	10.26	1.054	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.46	10.26	1.312	ok	1.311	1.251-1.371
1,4-Dioxane	11.19	10.26	1.091	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.08	0.579	ok	0.579	0.519-0.639
Dibromochloromethane	13.96	10.26	1.361	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.84	8.08	0.847	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.08	0.979	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.18	10.26	1.187	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.29	15.79	1.285	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.86	10.26	1.253	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.15	8.08	1.009	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.09	8.08	1.125	ok	1.124	1.064-1.184
Ethanol	4.73	8.08	0.585	ok	0.584	0.524-0.644
Ethylbenzene	16.41	15.79	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	8.21	8.08	1.016	ok	1.011	0.951-1.071
Ethyl Acrylate	10.89	10.26	1.061	ok	1.058	0.998-1.118
4-Ethyltoluene	19.29	15.79	1.222	ok	1.221	1.161-1.281
Freon 113	6.18	8.08	0.765	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.08	0.623	ok	0.622	0.562-0.682
Freon 123A	5.08	8.08	0.629	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.54	15.79	1.491	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.11	8.08	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.85	10.26	1.350	ok	1.346	1.286-1.406
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.36	8.08	0.663	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.94	8.08	0.735	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.52	8.08	0.931	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.28	10.26	1.197	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.13	8.08	0.882	ok	0.880	0.820-0.940
Methylmethacrylate	11.41	10.26	1.112	ok	1.110	1.050-1.170
Naphthalene	23.10	15.79	1.463	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.56	8.08	0.688	ok	0.688	0.628-0.748
n-Propylbenzene	19.05	15.79	1.206	ok	1.207	1.147-1.267
Propylene	3.80	8.08	0.470	ok	0.469	0.409-0.529
Styrene	17.20	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.31	8.08	1.152	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.35	15.79	1.099	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.06	10.26	1.273	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.98	15.79	1.455	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.54	15.79	1.111	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	20.00	15.79	1.267	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.40	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.92	8.08	0.733	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.75	8.08	1.083	ok	1.076	1.016-1.136
Toluene	13.41	10.26	1.307	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
Vinyl Acetate	7.22	8.08	0.894	ok	0.891	0.831-0.951
m,p-Xylene	16.65	15.79	1.054	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.55	15.79	0.351	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	260791	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	998760	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	387833	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.14	8.08	0.636	ok	0.635	0.575-0.695
Acrolein	5.01	8.08	0.620	ok	0.619	0.559-0.679
Acrylonitrile	5.55	8.08	0.687	ok	0.685	0.625-0.745
Acetonitrile	4.92	8.08	0.609	ok	0.607	0.547-0.667
1,3-Butadiene	4.26	8.08	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.08	1.217	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.26	1.077	ok	1.077	1.017-1.137
Bromoform	16.74	15.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.48	8.08	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
Benzyl Chloride	20.18	15.79	1.278	ok	1.278	1.218-1.338
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.21	8.08	0.769	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.08	0.467	ok	0.466	0.406-0.526
Chloroethane	4.61	8.08	0.571	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.08	0.470	ok	0.470	0.410-0.530
Chloroform	8.22	8.08	1.017	ok	1.017	0.957-1.077
Chloromethane	3.98	8.08	0.493	ok	0.492	0.432-0.552
3-Chloropropene	6.05	8.08	0.749	ok	0.748	0.688-0.808
2-Chlorotoluene	18.98	15.79	1.202	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.08	1.238	ok	1.238	1.178-1.298
Cyclohexane	10.13	8.08	1.254	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.28	10.26	1.392	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.03	8.08	1.118	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.80	10.26	1.053	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.46	10.26	1.312	ok	1.311	1.251-1.371
1,4-Dioxane	11.17	10.26	1.089	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.08	0.579	ok	0.579	0.519-0.639
Dibromochloromethane	13.96	10.26	1.361	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.83	8.08	0.845	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.08	0.979	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.17	10.26	1.186	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.29	15.79	1.285	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.86	10.26	1.253	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.14	8.08	1.007	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.08	8.08	1.124	ok	1.124	1.064-1.184
Ethanol	4.73	8.08	0.585	ok	0.584	0.524-0.644
Ethylbenzene	16.40	15.79	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	8.19	8.08	1.014	ok	1.011	0.951-1.071
Ethyl Acrylate	10.87	10.26	1.059	ok	1.058	0.998-1.118
4-Ethyltoluene	19.28	15.79	1.221	ok	1.221	1.161-1.281
Freon 113	6.17	8.08	0.764	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.08	0.623	ok	0.622	0.562-0.682
Freon 123A	5.07	8.08	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.54	15.79	1.491	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.12	8.08	1.005	ok	1.004	0.944-1.064
2-Hexanone	13.83	10.26	1.348	ok	1.346	1.286-1.406
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.36	8.08	0.663	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.94	8.08	0.735	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.50	8.08	0.928	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.26	10.26	1.195	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.12	8.08	0.881	ok	0.880	0.820-0.940
Methylmethacrylate	11.39	10.26	1.110	ok	1.110	1.050-1.170
Naphthalene	23.10	15.79	1.463	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.56	8.08	0.688	ok	0.688	0.628-0.748
n-Propylbenzene	19.05	15.79	1.206	ok	1.207	1.147-1.267
Propylene	3.80	8.08	0.470	ok	0.469	0.409-0.529
Styrene	17.19	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.31	8.08	1.152	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.35	15.79	1.099	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.06	10.26	1.273	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.98	15.79	1.455	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.54	15.79	1.111	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	19.99	15.79	1.266	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.40	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.91	8.08	0.731	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.72	8.08	1.079	ok	1.076	1.016-1.136
Toluene	13.40	10.26	1.306	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
Vinyl Acetate	7.21	8.08	0.892	ok	0.891	0.831-0.951
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.56	15.79	0.352	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	255044	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	980543	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	385771	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	Reporting this level
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.12	8.08	0.634	ok	0.635	0.575-0.695
Acrolein	5.00	8.08	0.619	ok	0.619	0.559-0.679
Acrylonitrile	5.52	8.08	0.683	ok	0.685	0.625-0.745
Acetonitrile	4.90	8.08	0.606	ok	0.607	0.547-0.667
1,3-Butadiene	4.26	8.08	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.08	1.217	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.04	10.26	1.076	ok	1.077	1.017-1.137
Bromoform	16.74	15.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.48	8.08	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
Benzyl Chloride	20.17	15.79	1.277	ok	1.278	1.218-1.338
n-Butylbenzene	21.17	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.21	8.08	0.769	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.08	0.467	ok	0.466	0.406-0.526
Chloroethane	4.61	8.08	0.571	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.08	0.470	ok	0.470	0.410-0.530
Chloroform	8.22	8.08	1.017	ok	1.017	0.957-1.077
Chloromethane	3.97	8.08	0.491	ok	0.492	0.432-0.552
3-Chloropropene	6.04	8.08	0.748	ok	0.748	0.688-0.808
2-Chlorotoluene	18.97	15.79	1.201	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.08	1.238	ok	1.238	1.178-1.298
Cyclohexane	10.13	8.08	1.254	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.27	10.26	1.391	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.03	8.08	1.118	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.80	10.26	1.053	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.44	10.26	1.310	ok	1.311	1.251-1.371
1,4-Dioxane	11.12	10.26	1.084	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.08	0.579	ok	0.579	0.519-0.639
Dibromochloromethane	13.95	10.26	1.360	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.83	8.08	0.845	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.08	0.979	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	Reporting this level
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.17	10.26	1.186	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.28	15.79	1.284	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.26	1.251	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.12	8.08	1.005	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.08	8.08	1.124	ok	1.124	1.064-1.184
Ethanol	4.71	8.08	0.583	ok	0.584	0.524-0.644
Ethylbenzene	16.39	15.79	1.038	ok	1.039	0.979-1.099
Ethyl Acetate	8.16	8.08	1.010	ok	1.011	0.951-1.071
Ethyl Acrylate	10.84	10.26	1.057	ok	1.058	0.998-1.118
4-Ethyltoluene	19.28	15.79	1.221	ok	1.221	1.161-1.281
Freon 113	6.17	8.08	0.764	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.08	0.623	ok	0.622	0.562-0.682
Freon 123A	5.07	8.08	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.53	15.79	1.490	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.11	8.08	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.79	10.26	1.344	ok	1.346	1.286-1.406
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.33	8.08	0.660	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.94	8.08	0.735	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.45	8.08	0.922	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.23	10.26	1.192	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.10	8.08	0.879	ok	0.880	0.820-0.940
Methylmethacrylate	11.37	10.26	1.108	ok	1.110	1.050-1.170
Naphthalene	23.09	15.79	1.462	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.56	8.08	0.688	ok	0.688	0.628-0.748
n-Propylbenzene	19.05	15.79	1.206	ok	1.207	1.147-1.267
Propylene	3.79	8.08	0.469	ok	0.469	0.409-0.529
Styrene	17.19	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	Reporting this level
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.30	8.08	1.151	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.34	15.79	1.098	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.26	1.272	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.96	15.79	1.454	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.54	15.79	1.111	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	19.99	15.79	1.266	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.40	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.87	8.08	0.726	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.68	8.08	1.074	ok	1.076	1.016-1.136
Toluene	13.40	10.26	1.306	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
Vinyl Acetate	7.19	8.08	0.890	ok	0.891	0.831-0.951
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.55	15.79	0.351	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	256610	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	985299	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	426169	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.11	8.08	0.632	ok	0.635	0.575-0.695
Acrolein	5.00	8.08	0.619	ok	0.619	0.559-0.679
Acrylonitrile	5.52	8.08	0.683	ok	0.685	0.625-0.745
Acetonitrile	4.90	8.08	0.606	ok	0.607	0.547-0.667
1,3-Butadiene	4.25	8.08	0.526	ok	0.527	0.467-0.587
Benzene	9.83	8.08	1.217	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.04	10.26	1.076	ok	1.077	1.017-1.137
Bromoform	16.74	15.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.47	8.08	0.553	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
Benzyl Chloride	20.17	15.79	1.277	ok	1.278	1.218-1.338
n-Butylbenzene	21.17	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.21	8.08	0.769	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.76	8.08	0.465	ok	0.466	0.406-0.526
Chloroethane	4.60	8.08	0.569	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.79	8.08	0.469	ok	0.470	0.410-0.530
Chloroform	8.22	8.08	1.017	ok	1.017	0.957-1.077
Chloromethane	3.97	8.08	0.491	ok	0.492	0.432-0.552
3-Chloropropene	6.04	8.08	0.748	ok	0.748	0.688-0.808
2-Chlorotoluene	18.97	15.79	1.201	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.08	1.238	ok	1.238	1.178-1.298
Cyclohexane	10.13	8.08	1.254	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.27	10.26	1.391	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.03	8.08	1.118	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.80	10.26	1.053	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.44	10.26	1.310	ok	1.311	1.251-1.371
1,4-Dioxane	11.11	10.26	1.083	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.08	0.579	ok	0.579	0.519-0.639
Dibromochloromethane	13.95	10.26	1.360	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.26	1.051	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.83	8.08	0.845	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.90	8.08	0.978	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.17	10.26	1.186	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.28	15.79	1.284	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.26	1.251	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.12	8.08	1.005	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.08	8.08	1.124	ok	1.124	1.064-1.184
Ethanol	4.71	8.08	0.583	ok	0.584	0.524-0.644
Ethylbenzene	16.39	15.79	1.038	ok	1.039	0.979-1.099
Ethyl Acetate	8.16	8.08	1.010	ok	1.011	0.951-1.071
Ethyl Acrylate	10.84	10.26	1.057	ok	1.058	0.998-1.118
4-Ethyltoluene	19.28	15.79	1.221	ok	1.221	1.161-1.281
Freon 113	6.17	8.08	0.764	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.02	8.08	0.621	ok	0.622	0.562-0.682
Freon 123A	5.07	8.08	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.53	15.79	1.490	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.11	8.08	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.79	10.26	1.344	ok	1.346	1.286-1.406
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.33	8.08	0.660	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.93	8.08	0.734	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.45	8.08	0.922	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.22	10.26	1.191	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.09	8.08	0.877	ok	0.880	0.820-0.940
Methylmethacrylate	11.37	10.26	1.108	ok	1.110	1.050-1.170
Naphthalene	23.09	15.79	1.462	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.55	8.08	0.687	ok	0.688	0.628-0.748
n-Propylbenzene	19.05	15.79	1.206	ok	1.207	1.147-1.267
Propylene	3.78	8.08	0.468	ok	0.469	0.409-0.529
Styrene	17.19	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.30	8.08	1.151	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.34	15.79	1.098	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.26	1.272	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.96	15.79	1.454	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.54	15.79	1.111	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	19.99	15.79	1.266	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.40	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.12	10.26	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.86	8.08	0.725	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.67	8.08	1.073	ok	1.076	1.016-1.136
Toluene	13.40	10.26	1.306	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
Vinyl Acetate	7.19	8.08	0.890	ok	0.891	0.831-0.951
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.55	15.79	0.351	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	265262	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	1026480	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	461985	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.11	8.09	0.632	ok	0.635	0.575-0.695
Acrolein	5.00	8.09	0.618	ok	0.619	0.559-0.679
Acrylonitrile	5.52	8.09	0.682	ok	0.685	0.625-0.745
Acetonitrile	4.90	8.09	0.606	ok	0.607	0.547-0.667
1,3-Butadiene	4.26	8.09	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.09	1.215	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.05	10.27	1.076	ok	1.077	1.017-1.137
Bromoform	16.75	15.79	1.061	ok	1.060	1.000-1.120
Bromomethane	4.48	8.09	0.554	ok	0.554	0.494-0.614
Bromoethene	4.90	8.09	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.09	0.530	ok	0.531	0.471-0.591
Benzyl Chloride	20.18	15.79	1.278	ok	1.278	1.218-1.338
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.38	15.79	1.291	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.21	8.09	0.768	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.09	0.466	ok	0.466	0.406-0.526
Chloroethane	4.61	8.09	0.570	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.09	0.470	ok	0.470	0.410-0.530
Chloroform	8.23	8.09	1.017	ok	1.017	0.957-1.077
Chloromethane	3.97	8.09	0.491	ok	0.492	0.432-0.552
3-Chloropropene	6.04	8.09	0.747	ok	0.748	0.688-0.808
2-Chlorotoluene	18.98	15.79	1.202	ok	1.202	1.142-1.262
Carbon tetrachloride	10.01	8.09	1.237	ok	1.238	1.178-1.298
Cyclohexane	10.14	8.09	1.253	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.09	0.869	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.09	0.719	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.28	10.27	1.390	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.03	8.09	1.116	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.80	10.27	1.052	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.45	10.27	1.310	ok	1.311	1.251-1.371
1,4-Dioxane	11.11	10.27	1.082	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.09	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.09	0.578	ok	0.579	0.519-0.639
Dibromochloromethane	13.96	10.27	1.359	ok	1.360	1.300-1.420
Dibromomethane	10.78	10.27	1.050	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.83	8.09	0.844	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.91	8.09	0.978	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.17	10.27	1.185	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.29	15.79	1.285	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.27	1.250	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.12	8.09	1.004	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.09	1.289	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.09	8.09	1.124	ok	1.124	1.064-1.184
Ethanol	4.71	8.09	0.582	ok	0.584	0.524-0.644
Ethylbenzene	16.40	15.79	1.039	ok	1.039	0.979-1.099
Ethyl Acetate	8.16	8.09	1.009	ok	1.011	0.951-1.071
Ethyl Acrylate	10.84	10.27	1.056	ok	1.058	0.998-1.118
4-Ethyltoluene	19.29	15.79	1.222	ok	1.221	1.161-1.281
Freon 113	6.17	8.09	0.763	ok	0.764	0.704-0.824
Freon 114	4.05	8.09	0.501	ok	0.501	0.441-0.561
Freon 123	5.03	8.09	0.622	ok	0.622	0.562-0.682
Freon 123A	5.07	8.09	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.09	0.489	ok	0.490	0.430-0.550
Freon 152A	3.73	8.09	0.461	ok	0.462	0.402-0.522
Heptane	11.46	10.27	1.116	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.54	15.79	1.491	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.12	8.09	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.79	10.27	1.343	ok	1.346	1.286-1.406
Iodomethane	5.75	8.09	0.711	ok	0.711	0.651-0.771
Isopropylbenzene	18.26	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.33	8.09	0.659	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.61	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.94	8.09	0.734	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.45	8.09	0.921	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.22	10.27	1.190	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.09	8.09	0.876	ok	0.880	0.820-0.940
Methylmethacrylate	11.37	10.27	1.107	ok	1.110	1.050-1.170
Naphthalene	23.09	15.79	1.462	ok	1.463	1.403-1.523
Nonane	17.74	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.76	10.27	1.437	ok	1.438	1.378-1.498
Pentane	5.56	8.09	0.687	ok	0.688	0.628-0.748
n-Propylbenzene	19.06	15.79	1.207	ok	1.207	1.147-1.267
Propylene	3.79	8.09	0.468	ok	0.469	0.409-0.529
Styrene	17.19	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	Reporting this level
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.31	8.09	1.151	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.84	10.27	1.542	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.35	15.79	1.099	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.27	1.271	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.97	15.79	1.455	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.54	15.79	1.111	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.59	15.79	1.304	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	20.00	15.79	1.267	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.41	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.13	10.27	1.084	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.86	8.09	0.724	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.27	1.452	ok	1.453	1.393-1.513
Tetrahydrofuran	8.66	8.09	1.070	ok	1.076	1.016-1.136
Toluene	13.41	10.27	1.306	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.27	1.080	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.09	0.649	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.09	0.513	ok	0.513	0.453-0.573
Vinyl Acetate	7.19	8.09	0.889	ok	0.891	0.831-0.951
m,p-Xylene	16.68	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.35	15.79	1.099	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.55	15.79	0.351	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.09	ok	8.08	7.75-8.41	273967	ok	265084	159050-371118
1,4-Difluorobenzene	10.27	ok	10.26	9.93-10.59	1057898	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	557828	ok	440214	264128-616300

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
Acetone	5.11	8.08	0.632	ok	0.635	0.575-0.695
Acrolein	5.00	8.08	0.619	ok	0.619	0.559-0.679
Acrylonitrile	5.52	8.08	0.683	ok	0.685	0.625-0.745
Acetonitrile	4.89	8.08	0.605	ok	0.607	0.547-0.667
1,3-Butadiene	4.26	8.08	0.527	ok	0.527	0.467-0.587
Benzene	9.83	8.08	1.217	ok	1.216	1.156-1.276
Bromobenzene	18.36	15.79	1.163	ok	1.163	1.103-1.223
Bromodichloromethane	11.04	10.26	1.076	ok	1.077	1.017-1.137
Bromoform	16.74	15.79	1.060	ok	1.060	1.000-1.120
Bromomethane	4.47	8.08	0.553	ok	0.554	0.494-0.614
Bromoethene	4.90	8.08	0.606	ok	0.606	0.546-0.666
n-Butane	4.29	8.08	0.531	ok	0.531	0.471-0.591
Benzyl Chloride	20.17	15.79	1.277	ok	1.278	1.218-1.338
n-Butylbenzene	21.18	15.79	1.341	ok	1.341	1.281-1.401
sec-Butylbenzene	20.37	15.79	1.290	ok	1.290	1.230-1.350
tert-Butylbenzene	19.98	15.79	1.265	ok	1.265	1.205-1.325
Carbon disulfide	6.21	8.08	0.769	ok	0.769	0.709-0.829
Chlorobenzene	15.85	15.79	1.004	ok	1.004	0.944-1.064
Chlorodifluoromethane	3.77	8.08	0.467	ok	0.466	0.406-0.526
Chloroethane	4.61	8.08	0.571	ok	0.570	0.510-0.630
Chlorotrifluoroethene	3.80	8.08	0.470	ok	0.470	0.410-0.530
Chloroform	8.22	8.08	1.017	ok	1.017	0.957-1.077
Chloromethane	3.97	8.08	0.491	ok	0.492	0.432-0.552
3-Chloropropene	6.04	8.08	0.748	ok	0.748	0.688-0.808
2-Chlorotoluene	18.97	15.79	1.201	ok	1.202	1.142-1.262
Carbon tetrachloride	10.00	8.08	1.238	ok	1.238	1.178-1.298
Cyclohexane	10.13	8.08	1.254	ok	1.254	1.194-1.314
1,1-Dichloroethane	7.03	8.08	0.870	ok	0.870	0.810-0.930
1,1-Dichloroethylene	5.82	8.08	0.720	ok	0.720	0.660-0.780
1,2-Dibromoethane	14.27	10.26	1.391	ok	1.391	1.331-1.451
1,2-Dichloroethane	9.03	8.08	1.118	ok	1.118	1.058-1.178
1,2-Dichloropropane	10.80	10.26	1.053	ok	1.053	0.993-1.113
1,3-Dichloropropane	13.44	10.26	1.310	ok	1.311	1.251-1.371
1,4-Dioxane	11.10	10.26	1.082	ok	1.087	1.027-1.147
Dichlorodifluoromethane	3.85	8.08	0.476	ok	0.476	0.416-0.536
Dichlorofluoromethane	4.68	8.08	0.579	ok	0.579	0.519-0.639
Dibromochloromethane	13.95	10.26	1.360	ok	1.360	1.300-1.420
Dibromomethane	10.77	10.26	1.050	ok	1.050	0.990-1.110
trans-1,2-Dichloroethylene	6.82	8.08	0.844	ok	0.845	0.785-0.905
cis-1,2-Dichloroethylene	7.90	8.08	0.978	ok	0.978	0.918-1.038

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
cis-1,3-Dichloropropene	12.16	10.26	1.185	ok	1.186	1.126-1.246
m-Dichlorobenzene	20.19	15.79	1.279	ok	1.279	1.219-1.339
o-Dichlorobenzene	20.75	15.79	1.314	ok	1.314	1.254-1.374
p-Dichlorobenzene	20.28	15.79	1.284	ok	1.285	1.225-1.345
trans-1,3-Dichloropropene	12.84	10.26	1.251	ok	1.253	1.193-1.313
Di-Isopropyl ether	8.12	8.08	1.005	ok	1.006	0.946-1.066
2,3-Dimethylpentane	10.43	8.08	1.291	ok	1.290	1.230-1.350
2,4-Dimethylpentane	9.08	8.08	1.124	ok	1.124	1.064-1.184
Ethanol	4.71	8.08	0.583	ok	0.584	0.524-0.644
Ethylbenzene	16.39	15.79	1.038	ok	1.039	0.979-1.099
Ethyl Acetate	8.15	8.08	1.009	ok	1.011	0.951-1.071
Ethyl Acrylate	10.84	10.26	1.057	ok	1.058	0.998-1.118
4-Ethyltoluene	19.28	15.79	1.221	ok	1.221	1.161-1.281
Freon 113	6.17	8.08	0.764	ok	0.764	0.704-0.824
Freon 114	4.05	8.08	0.501	ok	0.501	0.441-0.561
Freon 123	5.02	8.08	0.621	ok	0.622	0.562-0.682
Freon 123A	5.07	8.08	0.627	ok	0.627	0.567-0.687
Freon 142B	3.96	8.08	0.490	ok	0.490	0.430-0.550
Freon 152A	3.73	8.08	0.462	ok	0.462	0.402-0.522
Heptane	11.46	10.26	1.117	ok	1.117	1.057-1.177
Hexachlorobutadiene	23.53	15.79	1.490	ok	1.491	1.431-1.551
Hexachloroethane	21.64	15.79	1.370	ok	1.370	1.310-1.430
Hexane	8.11	8.08	1.004	ok	1.004	0.944-1.064
2-Hexanone	13.78	10.26	1.343	ok	1.346	1.286-1.406
Iodomethane	5.75	8.08	0.712	ok	0.711	0.651-0.771
Isopropylbenzene	18.25	15.79	1.156	ok	1.156	1.096-1.216
Isopropyl Alcohol	5.32	8.08	0.658	ok	0.661	0.601-0.721
p-Isopropyltoluene	20.60	15.79	1.305	ok	1.305	1.245-1.365
Methylene chloride	5.93	8.08	0.734	ok	0.735	0.675-0.795
Methyl ethyl ketone	7.44	8.08	0.921	ok	0.925	0.865-0.985
Methyl Isobutyl Ketone	12.21	10.26	1.190	ok	1.193	1.133-1.253
Methyl Tert Butyl Ether	7.09	8.08	0.877	ok	0.880	0.820-0.940
Methylmethacrylate	11.36	10.26	1.107	ok	1.110	1.050-1.170
Naphthalene	23.09	15.79	1.462	ok	1.463	1.403-1.523
Nonane	17.73	15.79	1.123	ok	1.123	1.063-1.183
Octane	14.75	10.26	1.438	ok	1.438	1.378-1.498
Pentane	5.55	8.08	0.687	ok	0.688	0.628-0.748
n-Propylbenzene	19.05	15.79	1.206	ok	1.207	1.147-1.267
Propylene	3.79	8.08	0.469	ok	0.469	0.409-0.529
Styrene	17.19	15.79	1.089	ok	1.089	1.029-1.149

Initial Calibration Retention Time/Internal Standard Area Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Sample Number	Lab File ID	Injected	By	Level	Inst ID	Method	
V6W848-IC848	6W20156.D	11/18/20 14:11	TCH	0.04	GCMS6W	TO-15	
V6W848-IC848	6W20157.D	11/18/20 14:58	TCH	0.1	GCMS6W	TO-15	
V6W848-IC848	6W20158.D	11/18/20 15:44	TCH	0.2	GCMS6W	TO-15	
V6W848-IC848	6W20159.D	11/18/20 16:33	TCH	0.5	GCMS6W	TO-15	
V6W848-IC848	6W20160.D	11/18/20 17:19	TCH	5	GCMS6W	TO-15	
V6W848-ICC848	6W20161.D	11/18/20 18:05	TCH	10	GCMS6W	TO-15	
V6W848-IC848	6W20164.D	11/18/20 20:35	TCH	40	GCMS6W	TO-15	
V6W848-IC848	6W20167.D	11/19/20 09:23	TCH	20	GCMS6W	TO-15	Reporting this level

Target Compound	RT (min.)	Istd RT (min.)	Rel RT		Mean Rel RT	Rel RT Range (+ /- .06)
1,1,1-Trichloroethane	9.30	8.08	1.151	ok	1.151	1.091-1.211
1,1,1,2-Tetrachloroethane	15.83	10.26	1.543	ok	1.543	1.483-1.603
1,1,2,2-Tetrachloroethane	17.34	15.79	1.098	ok	1.099	1.039-1.159
1,1,2-Trichloroethane	13.05	10.26	1.272	ok	1.272	1.212-1.332
1,2,4-Trichlorobenzene	22.96	15.79	1.454	ok	1.455	1.395-1.515
1,2,3-Trichloropropane	17.53	15.79	1.110	ok	1.111	1.051-1.171
1,2,3-Trimethylbenzene	20.58	15.79	1.303	ok	1.303	1.243-1.363
1,2,4-Trimethylbenzene	20.00	15.79	1.267	ok	1.266	1.206-1.326
1,3,5-Trimethylbenzene	19.40	15.79	1.229	ok	1.229	1.169-1.289
2,2,4-Trimethylpentane	11.11	10.26	1.083	ok	1.084	1.024-1.144
Tertiary Butyl Alcohol	5.86	8.08	0.725	ok	0.729	0.669-0.789
Tetrachloroethylene	14.91	10.26	1.453	ok	1.453	1.393-1.513
Tetrahydrofuran	8.66	8.08	1.072	ok	1.076	1.016-1.136
Toluene	13.40	10.26	1.306	ok	1.306	1.246-1.366
Trichloroethylene	11.09	10.26	1.081	ok	1.081	1.021-1.141
Trichlorofluoromethane	5.25	8.08	0.650	ok	0.650	0.590-0.710
Vinyl chloride	4.15	8.08	0.514	ok	0.513	0.453-0.573
Vinyl Acetate	7.19	8.08	0.890	ok	0.891	0.831-0.951
m,p-Xylene	16.67	15.79	1.056	ok	1.056	0.996-1.116
o-Xylene	17.34	15.79	1.098	ok	1.098	1.038-1.158
TVHC As Equiv Pentane	5.55	15.79	0.351	ok	0.352	0.292-0.412

Internal Standard	RT (min.)		Mean RT(min.)	RT Range (+ /- 0.33)	Area		Mean Area	Area Range (+ /- 40 %)
Bromochloromethane	8.08	ok	8.08	7.75-8.41	272997	ok	265084	159050-371118
1,4-Difluorobenzene	10.26	ok	10.26	9.93-10.59	1047738	ok	1018824	611294-1426354
Chlorobenzene-D5	15.79	ok	15.79	15.46-16.12	510022	ok	440214	264128-616300

Surrogate Recovery Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Method: TO-15 **Matrix:** AIR

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1
JD18853-1	6W21001.D	96
JD18853-1	6W21014.D	86
JD18853-2	6W21002.D	86
JD18853-3	6W21003.D	88
JD18853-4	6W21004.D	93
JD18853-5	6W21005.D	92
JD18873-1DUP	6W21016.D	81
JD18950-3DUP	6W20997.D	96
V6W854-SCC	6W20313.D	87
V6W859-SCC	6W20414.D	86
V6W859-SCC	6W20415.D	87
V6W882-BS	6W20990.D	109
V6W882-BSD	6W20991.D	104
V6W882-MB	6W20993.D	73
V6W883-BS	6W21010.D	107
V6W883-BSD	6W21011.D	98
V6W883-MB	6W21013.D	73
V6W854-BS	6W20308.D	108
V6W854-BSD	6W20309.D	111
V6W854-MB	6W20311.D	91
V6W859-BS	6W20407.D	104
V6W859-BSD	6W20408.D	104
V6W859-MB	6W20410.D	88

Surrogate Compounds	Recovery Limits
S1 = 4-Bromofluorobenzene	65-128%

Initial Calibration Summary

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY
Sample: V6W848-ICC848
Lab FileID: 6W20161.D

Response Factor Report GCMS6W

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode
Last Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Calibration Files
20 =6W20167.D 0.5 =6W20159.D 0.2 =6W20158.D 0.1 =6W20157.D
0.04=6W20156.D 10 =6W20161.D 5 =6W20160.D 40 =6W20164.D
= =

Compound	20	0.5	0.2	0.1	0.04	10	5	40	Avg	%RSD
1) I Bromochloromethane	----------ISTD----------									
2) Freon 152A	0.618	0.633	0.625	0.721	0.799	0.635	0.678	0.594	0.663	10.20
3) Chlorodifluoromethane	0.241	0.243	0.247	0.261		0.252	0.268	0.233	0.249	4.80
4) Propene	0.722	0.807	0.960	1.253		0.756	0.830	0.688	0.860	22.65
5) Chlorotrifluoroethene	1.493	1.570	1.632	1.840	2.132	1.576	1.663	1.435	1.668	13.40
6) Dichlorodifluoromethane	2.484	2.602	2.716	3.037	3.581	2.598	2.759	2.365	2.768	13.90
7) 1-Chloro-1,1-difluoroethane	1.708	1.792	1.925	2.204	2.535	1.788	1.921	1.627	1.938	15.36
8) Chloromethane	0.777	0.849	0.902	1.005	1.306	0.810	0.870	0.733	0.906	20.01
9) Dichlorotetrafluoroethane	2.414	2.577	2.714	3.205	3.785	2.540	2.744	2.232	2.777	17.90
10) Vinyl Chloride	0.933	0.982	0.995	1.143	1.247	0.976	1.036	0.896	1.026	11.27
11) 1,3-Butadiene	0.690	0.743	0.807	1.012		0.724	0.778	0.661	0.773	15.02
12) n-Butane	0.180	0.198	0.234	0.235	0.262	0.190	0.202	0.171	0.209	15.14
13) Bromomethane	0.877	0.936	1.004	1.146	1.468	0.929	0.986	0.842	1.023	19.72
14) Acrolein	0.458	0.470	0.482	0.604		0.477	0.501	0.454	0.492	10.50
15) Chloroethane	0.476	0.502	0.534	0.608		0.506	0.539	0.464	0.518	9.27
16) Dichlorofluoromethane	2.015	2.344	2.620	3.782		2.133	2.297	1.925	2.445	25.88
17) Acetonitrile	0.741	1.161	1.372			0.730	0.802	0.749	0.926	29.52
18) Freon 123	2.412	2.546	2.700	3.055	3.640	2.525	2.679	2.338	2.737	15.54
19) Freon 123A	1.422	1.499	1.561	1.737	1.971	1.484	1.567	1.398	1.580	11.99
20) Bromoethene	0.980	1.041	1.093	1.186	1.449	0.989	1.128	0.999	1.108	14.05
21) Trichlorofluoromethane	2.468	2.581	2.675	2.983	3.576	2.593	2.752	2.408	2.754	13.66
22) Acetone	0.474	0.555	0.577	0.662	0.735	0.480	0.505	0.461	0.556	17.70
23) Pentane										

Initial Calibration Summary

Job Number: JD18853 **Sample:** V6W848-ICC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20161.D
Project: Orangeburg UB, Orangeburg, NY

	0.278	0.287	0.302	0.341	0.436	0.285	0.302	0.273		0.313	17.28
24)	Iodomethane										
	2.970	3.055	3.162	3.537	4.154	3.120	3.290	2.854		3.268	12.65
25)	Isopropyl Alcohol										
	1.758	2.432	2.561	2.752	3.287	1.772	1.858	1.705		2.266	25.72
26)	1,1-Dichloroethene										
	1.611	1.636	1.720	1.907	2.050	1.668	1.766	1.573		1.741	9.34
27)	Freon 113										
	2.324	2.386	2.524	2.793	3.137	2.425	2.570	2.265		2.553	11.27
28)	Methylene Chloride										
	0.971	1.026	1.154	1.388		1.011	1.072	0.956		1.083	13.89
29)	Carbon Disulfide										
	3.222	3.246	3.343	3.601	4.104	3.312	3.532	3.148		3.438	9.01
30)	Ethanol										
	0.333	0.727	0.556			0.352	0.381	0.313		0.443	36.98
31)	Acrylonitrile										
	0.814	0.795	0.743	0.765		0.830	0.871	0.806		0.803	5.21
32)	3-Chloropropene										
	0.531	0.507	0.509	0.536	0.461	0.541	0.567	0.524		0.522	5.97
33)	trans-1,2-Dichloroethene										
	1.543	1.482	1.483	1.625	1.759	1.567	1.649	1.515		1.578	6.03
34)	tert-Butyl Alcohol										
	2.171	2.138	2.174	2.408	2.688	2.208	2.284	2.118		2.274	8.43
35)	Methyl tert-Butyl Ether										
	3.071	3.044	3.141	3.674	4.518	3.164	3.320	3.015		3.368	15.18
36)	Vinyl Acetate										
	2.757	2.578	2.930	3.328		2.736	2.839	2.702		2.839	8.53
37)	1,1-Dichloroethane										
	1.859	1.878	1.928	2.115	2.416	1.916	2.027	1.820		1.995	9.77
38)	2-Butanone										
	0.542	0.550	0.470	0.405		0.547	0.568	0.539		0.517	11.24
39)	Hexane										
	1.683	1.705	1.746	1.999	2.359	1.730	1.830	1.620		1.834	13.14
40)	cis-1,2-Dichloroethene										
	1.438	1.414	1.468	1.551	1.858	1.468	1.552	1.415		1.520	9.65
41)	Di-isopropyl Ether										
	1.006	0.995	1.026	1.175	1.308	1.036	1.089	0.988		1.078	10.35
42)	Ethyl Acetate										
	0.374	0.350	0.268			0.383	0.403	0.362		0.357	13.14
43)	Methyl Acrylate										
	1.965	1.963	1.786			2.020	2.117	1.905		1.959	5.65
44)	Chloroform										
	2.233	2.257	2.347	2.668	3.162	2.318	2.453	2.170		2.451	13.31
45)	2,4-Dimethylpentane										
	2.000	1.996	2.079	2.386	2.778	2.039	2.161	1.955		2.174	12.85
46)	Tetrahydrofuran										
	0.545	0.498	0.462	0.391		0.551	0.576	0.539		0.509	12.62
47)	1,1,1-Trichloroethane										
	2.233	2.246	2.401	2.682	3.201	2.289	2.415	2.185		2.457	13.81
48)	1,2-Dichloroethane										
	1.307	1.262	1.302	1.378	1.409	1.351	1.426	1.290		1.341	4.43
49)	Benzene										
	3.453	3.550	3.730	4.157	5.051	3.566	3.784	3.389		3.835	14.26
50)	Carbon Tetrachloride										
	2.364	2.195	2.276	2.442	2.722	2.391	2.475	2.321		2.398	6.61
51)	Cyclohexane										
	1.719	1.759	1.830	2.053	2.377	1.757	1.859	1.692		1.881	12.24
52)	2,3-Dimethylpentane										
	0.798	0.794	0.813	0.896	1.040	0.812	0.857	0.783		0.849	10.10

Initial Calibration Summary

Job Number: JD18853 **Sample:** V6W848-ICC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20161.D
Project: Orangeburg UB, Orangeburg, NY

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53) I   1,4-Difluorobenzene   ----------------ISTD--------------------
54)  2,2,4-Trimethylpentane
           1.443 1.471 1.538 1.655 1.988 1.468 1.568 1.364         1.562   12.36
55)  Heptane
           0.325 0.317 0.325 0.348 0.423 0.330 0.350 0.320         0.342   10.17
56)  Trichloroethene
           0.405 0.400 0.412 0.442 0.536 0.419 0.443 0.392         0.431   10.72
57)  1,2-Dichloropropane
           0.337 0.331 0.350 0.374 0.445 0.340 0.363 0.328         0.359   10.68
58)  Dibromomethane
           0.415 0.406 0.419 0.454 0.558 0.424 0.450 0.399         0.441   11.57
59)  Ethyl Acrylate
           0.645 0.611 0.599             0.639 0.661 0.632         0.631    3.58
60)  Methyl Methacrylate
           0.348 0.314 0.305 0.307 0.279 0.350 0.365 0.337         0.326    8.90
61)  1,4-Dioxane
           0.209 0.254 0.243 0.251 0.197 0.209 0.219 0.202         0.223   10.28
62)  Bromodichloromethane
           0.645 0.598 0.604 0.654 0.740 0.648 0.681 0.628         0.650    6.99
63)  cis-1,3-Dichloropropene
           0.541 0.477 0.488 0.524 0.567 0.540 0.564 0.533         0.529    6.14
64)  4-Methyl-2-pentanone
           0.274 0.236 0.218 0.177       0.268 0.279 0.270         0.246   15.44
65)  trans-1,3-Dichloropropene
           0.480 0.409 0.392 0.398 0.394 0.474 0.486 0.475         0.439    9.94
66)  Toluene
           1.093 1.068 1.135 1.319 1.729 1.104 1.176 1.065         1.211   18.58
67)  1,1,2-Trichloroethane
           0.382 0.351 0.356 0.386 0.437 0.384 0.403 0.375         0.384    7.04
68)  1,3-Dichloropropane
           0.526 0.474 0.471 0.507 0.536 0.527 0.551 0.516         0.514    5.56
69)  2-Hexanone
           0.357 0.326 0.264 0.185       0.341 0.345 0.354         0.310   20.55
70)  Ethyl Methacrylate
           0.564 0.475 0.469 0.476 0.501 0.557 0.576 0.558         0.522    8.78
71)  Dibromochloromethane
           0.694 0.526 0.508 0.550 0.594 0.675 0.682 0.674         0.613   12.61
72)  Tetrachloroethene
           0.589 0.562 0.580 0.632 0.742 0.594 0.623 0.566         0.611    9.57
73)  1,2-Dibromoethane
           0.581 0.515 0.509 0.535 0.561 0.578 0.597 0.566         0.555    5.79
74)  Octane
           0.664 0.658 0.686 0.778 1.027 0.676 0.719 0.639         0.731   17.38
75)  1,1,1,2-Tetrachloroethane
           0.495 0.448 0.446 0.484 0.538 0.497 0.516 0.473         0.487    6.50

76) I   Chlorobenzene-d5      ----------------ISTD--------------------
77)  Chlorobenzene
           1.821 1.953 2.001 2.241 2.609 1.958 2.089 1.628         2.038   14.37
78)  Ethylbenzene
           2.873 3.330 3.529 4.233       3.100 3.375 2.587         3.289   15.98
79)  m,p-Xylene
           2.185 2.635 2.684 3.235 4.583 2.480 2.676 1.980         2.807   28.80
80)  Styrene
           1.724 1.510 1.427 1.622 1.868 1.770 1.843 1.580         1.668    9.53
81)  Nonane
           1.390 1.496 1.488 1.698 2.293 1.514 1.652 1.225         1.594   19.95
82)  o-Xylene
           2.221 2.687 2.797 3.304       2.423 2.678 1.939         2.578   17.03
83)  Bromoform
```

Initial Calibration Summary

Job Number: JD18853 **Sample:** V6W848-ICC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20161.D
Project: Orangeburg UB, Orangeburg, NY

```
            1.373 1.028 0.939 0.961 1.009 1.389 1.391 1.249         1.168   17.35
 84)  1,1,2,2-Tetrachloroethane
            1.610 1.660 1.720 1.809 2.175 1.710 1.838 1.409         1.741   12.62
 85)  1,2,3-Trichloropropane
            1.200 1.160 1.138 1.282 1.284 1.256 1.328 1.101         1.219    6.63
 86)  Isopropylbenzene
            3.311 3.721 3.684 4.048 4.962 3.605 3.938 2.924         3.774   15.80
 87)  Bromobenzene
            1.022 0.911 0.826 0.935 0.962 1.050 1.088 0.937         0.966    8.72
 88)  2-Chlorotoluene
            0.806 0.783 0.733 0.809 0.897 0.856 0.911 0.734         0.816    8.31
 89)  n-Propylbenzene
            0.896 0.765 0.750 0.783 0.899 0.943 0.990 0.812         0.855   10.44
 90)  4-Bromofluorobenzene
            1.203 1.094 0.997 0.982 0.995 1.195 1.177 1.142         1.098    8.63
 91)  4-Ethyltoluene
            2.987 2.571 2.486 2.688 3.173 3.083 3.198 2.687         2.859    9.91
 92)  1,3,5-Trimethylbenzene
            2.622 2.832 2.800 3.090 3.760 2.799 3.038 2.330         2.909   14.35
 93)  alpha-Methylstyrene
            1.306 0.968 0.897 0.924 1.056 1.307 1.343 1.202         1.125   16.51
 94)  tert-Butylbenzene
            0.655 0.761 0.755 0.849 0.878 0.717 0.793 0.555         0.745   14.01
 95)  1,2,4-Trimethylbenzene
            2.542 2.448 2.436 2.637 3.172 2.687 2.868 2.168         2.620   11.59
 96)  1,3-Dichlorobenzene
            1.502 1.017 0.956 0.965 1.049 1.427 1.416 1.361         1.212   19.37
 97)  Benzyl Chloride
            1.777 0.976 0.836             1.586 1.482 1.698         1.392   28.18
 98)  1,4-Dichlorobenzene
            1.450 0.981 0.923 0.955 0.931 1.348 1.333 1.365         1.161   19.93
 99)  sec-Butylbenzene
            0.814 0.836 0.820 0.905 1.054 0.868 0.950 0.717         0.871   11.65
100)  1,2,3-Trimethylbenzene
            2.581 2.677 2.673 2.906 3.473 2.766 2.976 2.228         2.785   12.88
101)  p-Isopropyltoluene
            0.844 0.837 0.821 0.866 1.031 0.918 0.973 0.723         0.877   10.91
102)  1,2-Dichlorobenzene
            1.459 1.118 1.045 1.067 1.189 1.414 1.452 1.341         1.261   13.91
103)  n-Butylbenzene
            0.720 0.490 0.449 0.439 0.452 0.709 0.702 0.667         0.578   22.66
104)  Hexachloroethane
            1.104 0.952 0.871 0.845 0.813 1.165 1.214 0.955         0.990   15.42
105)  1,2,4-Trichlorobenzene
            0.681 0.371 0.246             0.604 0.528 0.692         0.520   34.39
106)  Naphthalene
            1.662 1.232 1.024 0.885       1.497 1.337 1.654         1.327   22.70
107)  Hexachlorobutadiene
            1.115 1.096 1.121 1.203       1.147 1.133 0.998         1.116    5.56

108) I   Bromochloromethane (A ----------------ISTD---------------------
109)  TVHC as equiv Pentane
            6.447 6.450 6.663             6.618 7.030 6.292         6.583    3.89
 ------------------------------------------------------------------------------
 (#) = Out of Range  ###  Number of calibration levels exceeded format  ###

           m6w848.M          Thu Nov 19 12:32:49 2020
```

Initial Calibration Verification

Job Number: JD18853 **Sample:** V6W848-ICV848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20169.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W20169.D Vial: 4
Acq On : 19 Nov 2020 11:15 am Operator: thomash
Sample : icv848-10 Inst : GCMS6W
Misc : MS47175,V6W848,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode
Last Update : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	101	0.00	8.09
2	Freon 152A	0.663	0.656	1.1	104	0.00	3.73
3	Chlorodifluoromethane	0.249	0.250	-0.4	99	0.00	3.77
4	Propene	0.860	0.772	10.2	103	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.604	3.8	102	0.00	3.80
6	Dichlorodifluoromethane	2.768	2.656	4.0	103	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	1.829	5.6	103	0.00	3.96
8	Chloromethane	0.906	0.827	8.7	103	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	2.570	7.5	102	0.00	4.05
10	Vinyl Chloride	1.026	0.973	5.2	100	0.00	4.15
11	1,3-Butadiene	0.773	0.714	7.6	99	0.00	4.26
12	n-Butane	0.209	0.185	11.5	98	0.00	4.29
13	Bromomethane	1.023	0.925	9.6	100	0.00	4.48
14	Acrolein	0.492	0.320	35.0#	67	0.00	5.00
15	Chloroethane	0.518	0.506	2.3	101	0.00	4.61
16	Dichlorofluoromethane	2.445	2.089	14.6	98	0.00	4.68
17	Acetonitrile	0.926	0.751	18.9	103	0.00	4.90
18	Freon 123	2.737	2.612	4.6	104	0.00	5.03
19	Freon 123A	1.580	1.628	-3.0	110	0.00	5.07
20	Bromoethene	1.108	1.074	3.1	109	0.00	4.90
21	Trichlorofluoromethane	2.754	2.601	5.6	101	0.00	5.25
22	Acetone	0.556	0.499	10.3	104	0.00	5.11
23	Pentane	0.313	0.289	7.7	102	0.00	5.56
24	Iodomethane	3.268	3.103	5.0	100	0.00	5.75
25	Isopropyl Alcohol	2.266	1.810	20.1	103	0.00	5.33
26	1,1-Dichloroethene	1.741	1.667	4.3	101	0.00	5.82
27	Freon 113	2.553	2.382	6.7	99	0.00	6.17
28	Methylene Chloride	1.083	0.989	8.7	98	0.00	5.94
29	Carbon Disulfide	3.438	3.145	8.5	95	0.00	6.21
30	Ethanol	0.443	0.372	16.0	106	0.00	4.71
31	Acrylonitrile	0.803	0.821	-2.2	99	0.00	5.52
32	3-Chloropropene	0.522	0.547	-4.8	102	0.00	6.04
33	trans-1,2-Dichloroethene	1.578	1.535	2.7	99	0.00	6.83
34	tert-Butyl Alcohol	2.274	2.027	10.9	92	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.169	5.9	101	0.00	7.09
36	Vinyl Acetate	2.839	2.700	4.9	99	0.00	7.19
37	1,1-Dichloroethane	1.995	1.941	2.7	102	0.00	7.03
38	2-Butanone	0.517	0.558	-7.9	103	0.00	7.45
39	Hexane	1.834	1.779	3.0	103	0.00	8.11
40	cis-1,2-Dichloroethene	1.520	1.477	2.8	101	0.00	7.90
41	Di-isopropyl Ether	1.078	1.043	3.2	101	0.00	8.12
42	Ethyl Acetate	0.357	0.386	-8.1	101	0.00	8.16

Initial Calibration Verification

Job Number: JD18853 **Sample:** V6W848-ICV848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20169.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.001	-2.1	100	0.00	8.15
44		Chloroform	2.451	2.270	7.4	98	0.00	8.22
45		2,4-Dimethylpentane	2.174	2.083	4.2	103	0.00	9.08
46		Tetrahydrofuran	0.509	0.545	-7.1	99	0.00	8.67
47		1,1,1-Trichloroethane	2.457	2.277	7.3	100	0.00	9.30
48		1,2-Dichloroethane	1.341	1.345	-0.3	100	0.00	9.03
49		Benzene	3.835	3.582	6.6	101	0.00	9.83
50		Carbon Tetrachloride	2.398	2.408	-0.4	101	0.00	10.00
51		Cyclohexane	1.881	1.788	4.9	102	0.00	10.13
52		2,3-Dimethylpentane	0.849	0.827	2.6	102	0.00	10.43
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	99	0.00	10.26
54		2,2,4-Trimethylpentane	1.562	1.520	2.7	102	0.00	11.12
55		Heptane	0.342	0.342	0.0	102	0.00	11.46
56		Trichloroethene	0.431	0.427	0.9	101	0.00	11.09
57		1,2-Dichloropropane	0.359	0.350	2.5	102	0.00	10.80
58		Dibromomethane	0.441	0.435	1.4	102	0.00	10.78
59		Ethyl Acrylate	0.631	0.650	-3.0	101	0.00	10.84
60		Methyl Methacrylate	0.326	0.356	-9.2	101	0.00	11.37
61		1,4-Dioxane	0.223	0.215	3.6	102	0.00	11.11
62		Bromodichloromethane	0.650	0.658	-1.2	100	0.00	11.04
63		cis-1,3-Dichloropropene	0.529	0.580	-9.6	106	0.00	12.17
64		4-Methyl-2-pentanone	0.246	0.282	-14.6	104	0.00	12.22
65		trans-1,3-Dichloropropene	0.439	0.471	-7.3	98	0.00	12.84
66		Toluene	1.211	1.130	6.7	101	0.00	13.40
67		1,1,2-Trichloroethane	0.384	0.388	-1.0	100	0.00	13.05
68		1,3-Dichloropropane	0.514	0.535	-4.1	100	0.00	13.44
69		2-Hexanone	0.310	0.356	-14.8	103	0.00	13.79
70		Ethyl Methacrylate	0.522	0.561	-7.5	100	0.00	13.82
71		Dibromochloromethane	0.613	0.667	-8.8	98	0.00	13.95
72		Tetrachloroethene	0.611	0.615	-0.7	102	0.00	14.91
73		1,2-Dibromoethane	0.555	0.584	-5.2	100	0.00	14.27
74		Octane	0.731	0.699	4.4	102	0.00	14.75
75		1,1,1,2-Tetrachloroethane	0.487	0.505	-3.7	101	0.00	15.83
76	I	Chlorobenzene-d5	1.000	1.000	0.0	100	0.00	15.79
77		Chlorobenzene	2.038	1.967	3.5	101	0.00	15.85
78		Ethylbenzene	3.289	3.102	5.7	100	0.00	16.39
79		m,p-Xylene	2.807	2.477	11.8	100	0.00	16.67
80		Styrene	1.668	1.791	-7.4	101	0.00	17.19
81		Nonane	1.594	1.544	3.1	102	0.00	17.73
82		o-Xylene	2.578	2.447	5.1	101	0.00	17.34
83		Bromoform	1.168	1.270	-8.7	92	0.00	16.74
84		1,1,2,2-Tetrachloroethane	1.741	1.711	1.7	100	0.00	17.34
85		1,2,3-Trichloropropane	1.219	1.242	-1.9	99	0.00	17.54
86		Isopropylbenzene	3.774	3.574	5.3	99	0.00	18.25
87		Bromobenzene	0.966	1.042	-7.9	99	0.00	18.36
88		2-Chlorotoluene	0.816	0.836	-2.5	98	0.00	18.97
89		n-Propylbenzene	0.855	0.942	-10.2	100	0.00	19.05
90	S	4-Bromofluorobenzene	1.098	1.194	-8.7	100	0.00	18.03
91		4-Ethyltoluene	2.859	3.141	-9.9	102	0.00	19.28
92		1,3,5-Trimethylbenzene	2.909	2.816	3.2	101	0.00	19.40
93		alpha-Methylstyrene	1.125	1.299	-15.5	100	0.00	19.64
94		tert-Butylbenzene	0.745	0.716	3.9	100	0.00	19.98
95		1,2,4-Trimethylbenzene	2.620	2.724	-4.0	102	0.00	19.99
96		1,3-Dichlorobenzene	1.212	1.495	-23.3	105	0.00	20.19
97		Benzyl Chloride	1.392	1.351	2.9	85	0.00	20.17
98		1,4-Dichlorobenzene	1.161	1.444	-24.4	107	0.00	20.28
99		sec-Butylbenzene	0.871	0.873	-0.2	101	0.00	20.37
100		1,2,3-Trimethylbenzene	2.785	2.733	1.9	99	0.00	20.58

Initial Calibration Verification

Job Number: JD18853 **Sample:** V6W848-ICV848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20169.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.892	-1.7	97	0.00	20.60
102		1,2-Dichlorobenzene	1.261	1.444	-14.5	102	0.00	20.75
103		n-Butylbenzene	0.578	0.701	-21.3	99	0.00	21.17
104		Hexachloroethane	0.990	1.062	-7.3	91	0.00	21.64
105		1,2,4-Trichlorobenzene	0.520	0.540	-3.8	90	0.00	22.96
106		Naphthalene	1.327	1.243	6.3	83	0.00	23.09
107		Hexachlorobutadiene	1.116	1.008	9.7	88	0.00	23.53
108	I	Bromochloromethane (A)	1.000	1.000	0.0	101	0.00	8.09
109		TVHC as equiv Pentane	6.583	6.631	-0.7	101	0.00	5.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Thu Nov 19 12:33:22 2020

6.9.2

6

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W854-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20307.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W20307.D Vial: 2
Acq On : 27 Nov 2020 4:03 pm Operator: danat
Sample : cc848-10 Inst : GCMS6W
Misc : MS47250,V6W854,100,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode
Last Update : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	67	0.00	8.08
2	Freon 152A	0.663	0.590	11.0	63	0.00	3.73
3	Chlorodifluoromethane	0.249	0.248	0.4	66	0.00	3.77
4	Propene	0.860	0.696	19.1	62	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.481	11.2	63	0.00	3.80
6	Dichlorodifluoromethane	2.768	2.570	7.2	67	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	1.998	-3.1	75	0.00	3.96
8	Chloromethane	0.906	0.758	16.3	63	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	2.541	8.5	67	0.00	4.05
10	Vinyl Chloride	1.026	0.909	11.4	63	0.00	4.15
11	1,3-Butadiene	0.773	0.663	14.2	62	0.00	4.26
12	n-Butane	0.209	0.177	15.3	63	0.00	4.29
13	Bromomethane	1.023	0.913	10.8	66	0.00	4.48
14	Acrolein	0.492	0.354	28.0	50#	0.00	5.00
15	Chloroethane	0.518	0.467	9.8	62	0.00	4.61
16	Dichlorofluoromethane	2.445	2.152	12.0	68	0.00	4.68
17	Acetonitrile	0.926	0.661	28.6	61	0.00	4.90
18	Freon 123	2.737	2.246	17.9	60#	0.00	5.02
19	Freon 123A	1.580	1.467	7.2	67	0.00	5.07
20	Bromoethene	1.108	0.945	14.7	64	0.00	4.90
21	Trichlorofluoromethane	2.754	2.753	0.0	72	0.00	5.25
22	Acetone	0.556	0.491	11.7	69	0.00	5.11
23	Pentane	0.313	0.284	9.3	67	0.00	5.55
24	Iodomethane	3.268	3.137	4.0	68	0.00	5.75
25	Isopropyl Alcohol	2.266	1.816	19.9	69	0.00	5.33
26	1,1-Dichloroethene	1.741	1.704	2.1	69	0.00	5.82
27	Freon 113	2.553	2.432	4.7	68	0.00	6.17
28	Methylene Chloride	1.083	1.020	5.8	68	0.00	5.93
29	Carbon Disulfide	3.438	3.371	1.9	69	0.00	6.21
30	Ethanol	0.443	0.318	28.2	61	0.00	4.71
31	Acrylonitrile	0.803	0.831	-3.5	68	0.00	5.52
32	3-Chloropropene	0.522	0.542	-3.8	68	0.00	6.04
33	trans-1,2-Dichloroethene	1.578	1.563	1.0	67	0.00	6.83
34	tert-Butyl Alcohol	2.274	2.250	1.1	69	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.127	7.2	67	0.00	7.09
36	Vinyl Acetate	2.839	2.729	3.9	67	0.00	7.19
37	1,1-Dichloroethane	1.995	1.905	4.5	67	0.00	7.03
38	2-Butanone	0.517	0.530	-2.5	65	0.00	7.45
39	Hexane	1.834	1.696	7.5	66	0.00	8.11
40	cis-1,2-Dichloroethene	1.520	1.452	4.5	67	0.00	7.90
41	Di-isopropyl Ether	1.078	1.005	6.8	65	0.00	8.12
42	Ethyl Acetate	0.357	0.380	-6.4	67	0.00	8.16

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W854-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20307.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.009	-2.6	67	0.00	8.15
44		Chloroform	2.451	2.396	2.2	70	0.00	8.22
45		2,4-Dimethylpentane	2.174	1.980	8.9	66	0.00	9.08
46		Tetrahydrofuran	0.509	0.530	-4.1	65	0.00	8.67
47		1,1,1-Trichloroethane	2.457	2.344	4.6	69	0.00	9.30
48		1,2-Dichloroethane	1.341	1.373	-2.4	69	0.00	9.03
49		Benzene	3.835	3.468	9.6	66	0.00	9.83
50		Carbon Tetrachloride	2.398	2.540	-5.9	72	0.00	10.00
51		Cyclohexane	1.881	1.700	9.6	65	0.00	10.13
52		2,3-Dimethylpentane	0.849	0.774	8.8	64	0.00	10.43
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	65	0.00	10.26
54		2,2,4-Trimethylpentane	1.562	1.482	5.1	66	0.00	11.12
55		Heptane	0.342	0.331	3.2	65	0.00	11.46
56		Trichloroethene	0.431	0.422	2.1	66	0.00	11.09
57		1,2-Dichloropropane	0.359	0.339	5.6	65	0.00	10.80
58		Dibromomethane	0.441	0.436	1.1	67	0.00	10.78
59		Ethyl Acrylate	0.631	0.631	0.0	64	0.00	10.84
60		Methyl Methacrylate	0.326	0.341	-4.6	64	0.00	11.37
61		1,4-Dioxane	0.223	0.208	6.7	65	0.00	11.11
62		Bromodichloromethane	0.650	0.678	-4.3	68	0.00	11.05
63		cis-1,3-Dichloropropene	0.529	0.528	0.2	64	0.00	12.17
64		4-Methyl-2-pentanone	0.246	0.266	-8.1	65	0.00	12.23
65		trans-1,3-Dichloropropene	0.439	0.456	-3.9	63	0.00	12.84
66		Toluene	1.211	1.100	9.2	65	0.00	13.40
67		1,1,2-Trichloroethane	0.384	0.378	1.6	64	0.00	13.05
68		1,3-Dichloropropane	0.514	0.525	-2.1	65	0.00	13.44
69		2-Hexanone	0.310	0.336	-8.4	64	0.00	13.79
70		Ethyl Methacrylate	0.522	0.549	-5.2	64	0.00	13.82
71		Dibromochloromethane	0.613	0.713	-16.3	69	0.00	13.95
72		Tetrachloroethene	0.611	0.613	-0.3	67	0.00	14.91
73		1,2-Dibromoethane	0.555	0.555	0.0	63	0.00	14.27
74		Octane	0.731	0.669	8.5	65	0.00	14.75
75		1,1,1,2-Tetrachloroethane	0.487	0.505	-3.7	66	0.00	15.83
76	I	Chlorobenzene-d5	1.000	1.000	0.0	64	0.00	15.79
77		Chlorobenzene	2.038	1.924	5.6	63	0.00	15.85
78		Ethylbenzene	3.289	3.062	6.9	63	0.00	16.39
79		m,p-Xylene	2.807	2.361	15.9	61	0.00	16.67
80		Styrene	1.668	1.668	0.0	60	0.00	17.19
81		Nonane	1.594	1.486	6.8	63	0.00	17.73
82		o-Xylene	2.578	2.431	5.7	64	0.00	17.34
83		Bromoform	1.168	1.456	-24.7	67	0.00	16.74
84		1,1,2,2-Tetrachloroethane	1.741	1.718	1.3	64	0.00	17.34
85		1,2,3-Trichloropropane	1.219	1.217	0.2	62	0.00	17.54
86		Isopropylbenzene	3.774	3.537	6.3	63	0.00	18.25
87		Bromobenzene	0.966	1.023	-5.9	62	0.00	18.35
88		2-Chlorotoluene	0.816	0.828	-1.5	62	0.00	18.97
89		n-Propylbenzene	0.855	0.924	-8.1	63	0.00	19.05
90	S	4-Bromofluorobenzene	1.098	1.136	-3.5	61	0.00	18.03
91		4-Ethyltoluene	2.859	3.070	-7.4	64	0.00	19.29
92		1,3,5-Trimethylbenzene	2.909	2.919	-0.3	67	0.01	19.41
93		alpha-Methylstyrene	1.125	1.290	-14.7	63	0.02	19.66
94		tert-Butylbenzene	0.745	0.765	-2.7	68	0.04	20.01
95		1,2,4-Trimethylbenzene	2.620	2.883	-10.0	69	0.04	20.03
96		1,3-Dichlorobenzene	1.212	1.451	-19.7	65	0.04	20.23
97		Benzyl Chloride	1.392	1.601	-15.0	65	0.04	20.22
98		1,4-Dichlorobenzene	1.161	1.354	-16.6	64	0.05	20.33
99		sec-Butylbenzene	0.871	0.938	-7.7	69	0.05	20.42
100		1,2,3-Trimethylbenzene	2.785	2.982	-7.1	69	0.06	20.64

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W854-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20307.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.993	-13.2	69	0.06	20.66
102		1,2-Dichlorobenzene	1.261	1.509	-19.7	69	0.07	20.82
103		n-Butylbenzene	0.578	0.748	-29.4	68	0.09	21.26
104		Hexachloroethane	0.990	1.274	-28.7	70	0.10	21.73
105		1,2,4-Trichlorobenzene	0.520	0.499	4.0	53#	0.09	23.05
106		Naphthalene	1.327	1.166	12.1	50#	0.09	23.17
107		Hexachlorobutadiene	1.116	1.144	-2.5	64	0.09	23.62
108	I	Bromochloromethane (A)	1.000	1.000	0.0	67	0.00	8.08
109		TVHC as equiv Pentane	6.583	6.734	-2.3	69	0.00	5.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Tue Dec 15 16:25:02 2020

6.9.3

6

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W859-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20406.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\6W20406.D                    Vial: 2
Acq On    :  3 Dec 2020  11:21 am                     Operator: thomash
Sample    : cc848-10                                  Inst    : GCMS6W
Misc      : MS47355,V6W859,,,,,1                      Multiplr: 1.00
MS Integration Params: Rteint.p

Method       : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title        : TO-15 Full Scan Mode
Last Update  : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  60%  Max. R.T. Dev  0.33min
Max. RRF Dev :  30%     Max. Rel. Area : 140%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	114	0.00	8.07
2	Freon 152A	0.663	0.729	-10.0	131	0.00	3.73
3	Chlorodifluoromethane	0.249	0.267	-7.2	121	0.00	3.77
4	Propene	0.860	0.925	-7.6	139	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.610	3.5	117	0.00	3.80
6	Dichlorodifluoromethane	2.768	2.747	0.8	121	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	2.032	-4.9	130	0.00	3.96
8	Chloromethane	0.906	1.000	-10.4	141#	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	2.938	-5.8	132	0.00	4.05
10	Vinyl Chloride	1.026	1.141	-11.2	133	0.00	4.15
11	1,3-Butadiene	0.773	0.852	-10.2	134	0.00	4.26
12	n-Butane	0.209	0.221	-5.7	133	0.00	4.29
13	Bromomethane	1.023	1.049	-2.5	129	0.00	4.48
14	Acrolein	0.492	0.516	-4.9	123	0.00	5.00
15	Chloroethane	0.518	0.581	-12.2	131	0.00	4.61
16	Dichlorofluoromethane	2.445	2.431	0.6	130	0.00	4.68
17	Acetonitrile	0.926	0.962	-3.9	150#	0.00	4.89
18	Freon 123	2.737	2.671	2.4	121	0.00	5.02
19	Freon 123A	1.580	1.486	5.9	114	0.00	5.07
20	Bromoethene	1.108	1.100	0.7	127	0.00	4.90
21	Trichlorofluoromethane	2.754	2.608	5.3	115	0.00	5.25
22	Acetone	0.556	0.552	0.7	131	0.00	5.11
23	Pentane	0.313	0.321	-2.6	128	0.00	5.55
24	Iodomethane	3.268	3.107	4.9	114	0.00	5.75
25	Isopropyl Alcohol	2.266	2.113	6.8	136	0.00	5.32
26	1,1-Dichloroethene	1.741	1.826	-4.9	125	0.00	5.82
27	Freon 113	2.553	2.481	2.8	117	0.00	6.16
28	Methylene Chloride	1.083	1.085	-0.2	122	0.00	5.93
29	Carbon Disulfide	3.438	3.612	-5.1	124	0.00	6.21
30	Ethanol	0.443	0.441	0.5	143#	0.00	4.71
31	Acrylonitrile	0.803	0.946	-17.8	130	0.00	5.52
32	3-Chloropropene	0.522	0.588	-12.6	124	0.00	6.04
33	trans-1,2-Dichloroethene	1.578	1.726	-9.4	126	0.00	6.82
34	tert-Butyl Alcohol	2.274	2.494	-9.7	129	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.320	1.4	120	0.00	7.09
36	Vinyl Acetate	2.839	3.222	-13.5	134	0.00	7.19
37	1,1-Dichloroethane	1.995	2.093	-4.9	125	0.00	7.03
38	2-Butanone	0.517	0.602	-16.4	126	0.00	7.44
39	Hexane	1.834	1.932	-5.3	127	0.00	8.11
40	cis-1,2-Dichloroethene	1.520	1.602	-5.4	124	0.00	7.90
41	Di-isopropyl Ether	1.078	1.066	1.1	117	0.00	8.11
42	Ethyl Acetate	0.357	0.434	-21.6	129	0.00	8.15

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W859-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20406.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.281	-16.4	129	0.00	8.13
44		Chloroform	2.451	2.415	1.5	119	0.00	8.21
45		2,4-Dimethylpentane	2.174	2.266	-4.2	127	0.00	9.08
46		Tetrahydrofuran	0.509	0.596	-17.1	123	-0.01	8.66
47		1,1,1-Trichloroethane	2.457	2.294	6.6	114	0.00	9.30
48		1,2-Dichloroethane	1.341	1.407	-4.9	119	0.00	9.02
49		Benzene	3.835	3.730	2.7	119	0.00	9.83
50		Carbon Tetrachloride	2.398	2.401	-0.1	114	0.00	9.99
51		Cyclohexane	1.881	1.942	-3.2	126	0.00	10.13
52		2,3-Dimethylpentane	0.849	0.860	-1.3	121	0.00	10.42
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	111	0.00	10.26
54		2,2,4-Trimethylpentane	1.562	1.683	-7.7	127	0.00	11.11
55		Heptane	0.342	0.363	-6.1	122	0.00	11.45
56		Trichloroethene	0.431	0.433	-0.5	114	0.00	11.08
57		1,2-Dichloropropane	0.359	0.386	-7.5	126	0.00	10.79
58		Dibromomethane	0.441	0.420	4.8	109	0.00	10.77
59		Ethyl Acrylate	0.631	0.737	-16.8	128	0.00	10.83
60		Methyl Methacrylate	0.326	0.382	-17.2	121	0.00	11.36
61		1,4-Dioxane	0.223	0.228	-2.2	120	0.00	11.11
62		Bromodichloromethane	0.650	0.696	-7.1	119	0.00	11.03
63		cis-1,3-Dichloropropene	0.529	0.582	-10.0	119	0.00	12.16
64		4-Methyl-2-pentanone	0.246	0.316	-28.5	130	0.00	12.21
65		trans-1,3-Dichloropropene	0.439	0.507	-15.5	118	0.00	12.84
66		Toluene	1.211	1.168	3.6	117	0.00	13.40
67		1,1,2-Trichloroethane	0.384	0.401	-4.4	115	0.00	13.05
68		1,3-Dichloropropane	0.514	0.579	-12.6	121	0.00	13.44
69		2-Hexanone	0.310	0.414	-33.5#	134	0.00	13.78
70		Ethyl Methacrylate	0.522	0.628	-20.3	125	0.00	13.81
71		Dibromochloromethane	0.613	0.714	-16.5	117	0.00	13.95
72		Tetrachloroethene	0.611	0.594	2.8	111	0.00	14.90
73		1,2-Dibromoethane	0.555	0.597	-7.6	114	0.00	14.26
74		Octane	0.731	0.813	-11.2	133	0.00	14.75
75		1,1,1,2-Tetrachloroethane	0.487	0.509	-4.5	113	0.00	15.82
76	I	Chlorobenzene-d5	1.000	1.000	0.0	116	0.00	15.78
77		Chlorobenzene	2.038	1.921	5.7	114	0.00	15.84
78		Ethylbenzene	3.289	3.100	5.7	116	0.00	16.39
79		m,p-Xylene	2.807	2.376	15.4	112	0.00	16.66
80		Styrene	1.668	1.753	-5.1	115	0.00	17.18
81		Nonane	1.594	1.764	-10.7	136	0.00	17.73
82		o-Xylene	2.578	2.436	5.5	117	0.00	17.34
83		Bromoform	1.168	1.359	-16.4	114	0.00	16.73
84		1,1,2,2-Tetrachloroethane	1.741	1.819	-4.5	124	0.00	17.34
85		1,2,3-Trichloropropane	1.219	1.319	-8.2	122	0.00	17.53
86		Isopropylbenzene	3.774	3.564	5.6	115	0.00	18.25
87		Bromobenzene	0.966	1.012	-4.8	112	0.00	18.35
88		2-Chlorotoluene	0.816	0.827	-1.3	113	0.00	18.97
89		n-Propylbenzene	0.855	0.927	-8.4	114	0.00	19.05
90	S	4-Bromofluorobenzene	1.098	1.133	-3.2	110	0.00	18.03
91		4-Ethyltoluene	2.859	3.141	-9.9	119	0.00	19.27
92		1,3,5-Trimethylbenzene	2.909	2.829	2.8	118	0.00	19.40
93		alpha-Methylstyrene	1.125	1.316	-17.0	117	0.00	19.64
94		tert-Butylbenzene	0.745	0.709	4.8	115	0.00	19.98
95		1,2,4-Trimethylbenzene	2.620	2.792	-6.6	121	0.00	19.99
96		1,3-Dichlorobenzene	1.212	1.501	-23.8	123	0.00	20.18
97		Benzyl Chloride	1.392	1.751	-25.8	129	0.00	20.17
98		1,4-Dichlorobenzene	1.161	1.422	-22.5	123	0.00	20.28
99		sec-Butylbenzene	0.871	0.866	0.6	116	0.00	20.36
100		1,2,3-Trimethylbenzene	2.785	2.852	-2.4	120	0.00	20.58

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W859-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20406.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.913	-4.1	116	0.00	20.60
102		1,2-Dichlorobenzene	1.261	1.441	-14.3	119	0.00	20.75
103		n-Butylbenzene	0.578	0.710	-22.8	117	0.00	21.17
104		Hexachloroethane	0.990	1.153	-16.5	115	0.00	21.64
105		1,2,4-Trichlorobenzene	0.520	0.618	-18.8	119	0.00	22.96
106		Naphthalene	1.327	1.612	-21.5	125	0.00	23.09
107		Hexachlorobutadiene	1.116	1.166	-4.5	118	0.00	23.53
108	I	Bromochloromethane (A)	1.000	1.000	0.0	114	0.00	8.07
109		TVHC as equiv Pentane	6.583	7.654	-16.3	132	0.00	5.55

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Thu Dec 03 15:18:31 2020

6.9.4

6

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20989.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

Data File : C:\msdchem\1\data\6W20989.D Vial: 2
Acq On : 14 Jan 2021 1:07 pm Operator: thomash
Sample : cc848-10 Inst : GCMS6W
Misc : MS48309,V6W882,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode
Last Update : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 60% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 140%

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	97	-0.02	8.06
2	Freon 152A	0.663	0.657	0.9	101	0.00	3.73
3	Chlorodifluoromethane	0.249	0.336	-34.9#	130	0.00	3.77
4	Propene	0.860	0.914	-6.3	118	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.502	10.0	93	0.00	3.80
6	Dichlorodifluoromethane	2.768	3.042	-9.9	114	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	2.625	-35.4#	143#	0.00	3.96
8	Chloromethane	0.906	0.981	-8.3	118	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	3.141	-13.1	121	0.00	4.05
10	Vinyl Chloride	1.026	1.127	-9.8	113	0.00	4.15
11	1,3-Butadiene	0.773	0.864	-11.8	116	0.00	4.25
12	n-Butane	0.209	0.221	-5.7	114	0.00	4.29
13	Bromomethane	1.023	1.088	-6.4	114	0.00	4.47
14	Acrolein	0.492	0.481	2.2	98	0.00	4.99
15	Chloroethane	0.518	0.575	-11.0	111	0.00	4.60
16	Dichlorofluoromethane	2.445	2.742	-12.1	125	0.00	4.68
17	Acetonitrile	0.926	0.922	0.4	123	-0.01	4.89
18	Freon 123	2.737	2.674	2.3	103	0.00	5.01
19	Freon 123A	1.580	1.553	1.7	102	0.00	5.06
20	Bromoethene	1.108	1.102	0.5	109	0.00	4.89
21	Trichlorofluoromethane	2.754	3.338	-21.2	125	0.00	5.24
22	Acetone	0.556	0.515	7.4	105	0.00	5.11
23	Pentane	0.313	0.290	7.3	99	-0.01	5.54
24	Iodomethane	3.268	2.847	12.9	89	0.00	5.74
25	Isopropyl Alcohol	2.266	2.226	1.8	122	-0.01	5.31
26	1,1-Dichloroethene	1.741	1.875	-7.7	110	-0.01	5.80
27	Freon 113	2.553	2.379	6.8	96	-0.02	6.15
28	Methylene Chloride	1.083	0.962	11.2	93	-0.01	5.92
29	Carbon Disulfide	3.438	3.302	4.0	97	-0.01	6.19
30	Ethanol	0.443	0.453	-2.3	126	0.00	4.70
31	Acrylonitrile	0.803	0.866	-7.8	102	-0.01	5.51
32	3-Chloropropene	0.522	0.518	0.8	93	-0.01	6.03
33	trans-1,2-Dichloroethene	1.578	1.681	-6.5	105	-0.02	6.81
34	tert-Butyl Alcohol	2.274	2.492	-9.6	110	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.301	2.0	102	-0.01	7.08
36	Vinyl Acetate	2.839	3.211	-13.1	114	-0.02	7.17
37	1,1-Dichloroethane	1.995	2.015	-1.0	103	-0.02	7.01
38	2-Butanone	0.517	0.525	-1.5	94	-0.01	7.44
39	Hexane	1.834	1.773	3.3	100	-0.02	8.09
40	cis-1,2-Dichloroethene	1.520	1.565	-3.0	104	-0.02	7.88
41	Di-isopropyl Ether	1.078	0.973	9.7	92	-0.01	8.10
42	Ethyl Acetate	0.357	0.371	-3.9	94	-0.02	8.14

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20989.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.115	-8.0	102	-0.01	8.13
44		Chloroform	2.451	2.510	-2.4	106	-0.02	8.20
45		2,4-Dimethylpentane	2.174	2.061	5.2	99	-0.02	9.06
46		Tetrahydrofuran	0.509	0.522	-2.6	92	-0.02	8.65
47		1,1,1-Trichloroethane	2.457	2.602	-5.9	111	-0.02	9.28
48		1,2-Dichloroethane	1.341	1.701	-26.8	123	-0.02	9.01
49		Benzene	3.835	3.354	12.5	92	-0.02	9.81
50		Carbon Tetrachloride	2.398	2.788	-16.3	114	-0.02	9.98
51		Cyclohexane	1.881	1.772	5.8	98	-0.02	10.12
52		2,3-Dimethylpentane	0.849	0.764	10.0	92	-0.02	10.41
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	94	-0.02	10.24
54		2,2,4-Trimethylpentane	1.562	1.582	-1.3	101	-0.02	11.10
55		Heptane	0.342	0.326	4.7	92	-0.02	11.44
56		Trichloroethene	0.431	0.418	3.0	93	-0.02	11.06
57		1,2-Dichloropropane	0.359	0.348	3.1	96	-0.02	10.78
58		Dibromomethane	0.441	0.397	10.0	88	-0.02	10.75
59		Ethyl Acrylate	0.631	0.682	-8.1	100	-0.02	10.82
60		Methyl Methacrylate	0.326	0.342	-4.9	92	-0.02	11.35
61		1,4-Dioxane	0.223	0.204	8.5	92	-0.02	11.10
62		Bromodichloromethane	0.650	0.737	-13.4	107	-0.02	11.02
63		cis-1,3-Dichloropropene	0.529	0.543	-2.6	94	-0.02	12.15
64		4-Methyl-2-pentanone	0.246	0.287	-16.7	100	-0.02	12.20
65		trans-1,3-Dichloropropene	0.439	0.482	-9.8	95	-0.02	12.82
66		Toluene	1.211	1.061	12.4	90	-0.02	13.38
67		1,1,2-Trichloroethane	0.384	0.362	5.7	88	-0.02	13.03
68		1,3-Dichloropropane	0.514	0.527	-2.5	94	-0.02	13.43
69		2-Hexanone	0.310	0.350	-12.9	96	-0.02	13.77
70		Ethyl Methacrylate	0.522	0.557	-6.7	94	-0.02	13.79
71		Dibromochloromethane	0.613	0.715	-16.6	99	-0.02	13.93
72		Tetrachloroethene	0.611	0.566	7.4	89	-0.02	14.88
73		1,2-Dibromoethane	0.555	0.536	3.4	87	-0.02	14.25
74		Octane	0.731	0.791	-8.2	110	-0.02	14.73
75		1,1,1,2-Tetrachloroethane	0.487	0.508	-4.3	96	-0.02	15.81
76	I	Chlorobenzene-d5	1.000	1.000	0.0	102	-0.02	15.76
77		Chlorobenzene	2.038	1.650	19.0	86	-0.02	15.82
78		Ethylbenzene	3.289	2.737	16.8	90	-0.02	16.37
79		m,p-Xylene	2.807	2.161	23.0	89	-0.02	16.65
80		Styrene	1.668	1.450	13.1	84	-0.02	17.16
81		Nonane	1.594	1.704	-6.9	115	-0.02	17.71
82		o-Xylene	2.578	2.295	11.0	97	-0.02	17.32
83		Bromoform	1.168	1.278	-9.4	94	-0.02	16.72
84		1,1,2,2-Tetrachloroethane	1.741	1.578	9.4	94	-0.02	17.32
85		1,2,3-Trichloropropane	1.219	1.212	0.6	99	-0.02	17.51
86		Isopropylbenzene	3.774	3.351	11.2	95	-0.02	18.23
87		Bromobenzene	0.966	0.863	10.7	84	-0.02	18.33
88		2-Chlorotoluene	0.816	0.728	10.8	87	-0.02	18.96
89		n-Propylbenzene	0.855	0.830	2.9	90	-0.02	19.03
90	S	4-Bromofluorobenzene	1.098	1.099	-0.1	94	-0.02	18.01
91		4-Ethyltoluene	2.859	2.820	1.4	93	-0.02	19.26
92		1,3,5-Trimethylbenzene	2.909	2.710	6.8	99	-0.02	19.38
93		alpha-Methylstyrene	1.125	1.125	0.0	88	-0.02	19.62
94		tert-Butylbenzene	0.745	0.668	10.3	95	-0.02	19.96
95		1,2,4-Trimethylbenzene	2.620	2.650	-1.1	101	-0.02	19.97
96		1,3-Dichlorobenzene	1.212	1.219	-0.6	87	-0.02	20.17
97		Benzyl Chloride	1.392	1.322	5.0	85	-0.02	20.16
98		1,4-Dichlorobenzene	1.161	1.098	5.4	83	-0.02	20.27
99		sec-Butylbenzene	0.871	0.814	6.5	96	-0.02	20.35
100		1,2,3-Trimethylbenzene	2.785	2.752	1.2	102	-0.02	20.57

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W20989.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.857	2.3	95	-0.02	20.58
102		1,2-Dichlorobenzene	1.261	1.242	1.5	90	-0.02	20.73
103		n-Butylbenzene	0.578	0.604	-4.5	87	-0.01	21.16
104		Hexachloroethane	0.990	1.208	-22.0	106	-0.01	21.62
105		1,2,4-Trichlorobenzene	0.520	0.375	27.9	63	-0.01	22.95
106		Naphthalene	1.327	0.902	32.0#	62	-0.01	23.07
107		Hexachlorobutadiene	1.116	1.175	-5.3	105	-0.01	23.52
108	I	Bromochloromethane (A)	1.000	1.000	0.0	97	-0.02	8.06
109		TVHC as equiv Pentane	6.583	7.547	-14.6	111	-0.01	5.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Thu Jan 14 16:29:46 2021

6.9.5

6

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-ECC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21007.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\6W21007.D                    Vial: 2
Acq On    : 15 Jan 2021   4:31 am                     Operator: thomash
Sample    : ecc848-10                                 Inst    : GCMS6W
Misc      : MS48294,V6W882,,,,,1                      Multiplr: 1.00
MS Integration Params: Rteint.p

Method       : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title        : TO-15 Full Scan Mode
Last Update  : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  60%  Max. R.T. Dev  0.33min
Max. RRF Dev :  30%     Max. Rel. Area : 140%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	99	-0.02	8.06
2	Freon 152A	0.663	0.762	-14.9	118	0.00	3.73
3	Chlorodifluoromethane	0.249	0.360	-44.6#	141#	0.00	3.77
4	Propene	0.860	1.066	-24.0	139	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.713	-2.7	107	0.00	3.80
6	Dichlorodifluoromethane	2.768	3.370	-21.7	128	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	2.687	-38.6#	148#	0.00	3.96
8	Chloromethane	0.906	1.013	-11.8	123	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	3.119	-12.3	121	0.00	4.05
10	Vinyl Chloride	1.026	1.121	-9.3	113	0.00	4.15
11	1,3-Butadiene	0.773	0.841	-8.8	115	0.00	4.25
12	n-Butane	0.209	0.215	-2.9	112	0.00	4.29
13	Bromomethane	1.023	1.096	-7.1	116	0.00	4.47
14	Acrolein	0.492	0.474	3.7	98	0.00	4.99
15	Chloroethane	0.518	0.575	-11.0	112	0.00	4.60
16	Dichlorofluoromethane	2.445	2.684	-9.8	124	0.00	4.68
17	Acetonitrile	0.926	0.900	2.8	122	-0.01	4.89
18	Freon 123	2.737	2.651	3.1	104	0.00	5.01
19	Freon 123A	1.580	1.573	0.4	105	0.00	5.06
20	Bromoethene	1.108	1.109	-0.1	111	0.00	4.89
21	Trichlorofluoromethane	2.754	3.312	-20.3	126	0.00	5.24
22	Acetone	0.556	0.510	8.3	105	0.00	5.11
23	Pentane	0.313	0.298	4.8	103	-0.01	5.54
24	Iodomethane	3.268	2.905	11.1	92	0.00	5.74
25	Isopropyl Alcohol	2.266	2.147	5.3	120	-0.01	5.31
26	1,1-Dichloroethene	1.741	1.859	-6.8	110	-0.01	5.80
27	Freon 113	2.553	2.373	7.1	97	-0.02	6.15
28	Methylene Chloride	1.083	0.957	11.6	93	-0.01	5.92
29	Carbon Disulfide	3.438	3.218	6.4	96	-0.01	6.19
30	Ethanol	0.443	0.440	0.7	123	0.00	4.70
31	Acrylonitrile	0.803	0.866	-7.8	103	-0.01	5.51
32	3-Chloropropene	0.522	0.510	2.3	93	-0.01	6.03
33	trans-1,2-Dichloroethene	1.578	1.649	-4.5	104	-0.02	6.81
34	tert-Butyl Alcohol	2.274	2.420	-6.4	108	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.287	2.4	103	-0.01	7.08
36	Vinyl Acetate	2.839	3.088	-8.8	111	-0.02	7.17
37	1,1-Dichloroethane	1.995	1.981	0.7	102	-0.02	7.01
38	2-Butanone	0.517	0.505	2.3	91	-0.01	7.44
39	Hexane	1.834	1.748	4.7	100	-0.02	8.09
40	cis-1,2-Dichloroethene	1.520	1.557	-2.4	105	-0.02	7.88
41	Di-isopropyl Ether	1.078	0.974	9.6	93	-0.01	8.10
42	Ethyl Acetate	0.357	0.378	-5.9	98	-0.02	8.14

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-ECC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21007.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.079	-6.1	102	-0.01	8.13
44		Chloroform	2.451	2.511	-2.4	107	-0.02	8.20
45		2,4-Dimethylpentane	2.174	2.037	6.3	99	-0.02	9.06
46		Tetrahydrofuran	0.509	0.525	-3.1	94	-0.02	8.65
47		1,1,1-Trichloroethane	2.457	2.562	-4.3	111	-0.02	9.28
48		1,2-Dichloroethane	1.341	1.675	-24.9	122	-0.02	9.01
49		Benzene	3.835	3.342	12.9	93	-0.02	9.81
50		Carbon Tetrachloride	2.398	2.771	-15.6	114	-0.02	9.98
51		Cyclohexane	1.881	1.738	7.6	98	-0.02	10.11
52		2,3-Dimethylpentane	0.849	0.760	10.5	92	-0.02	10.41
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	95	-0.02	10.24
54		2,2,4-Trimethylpentane	1.562	1.568	-0.4	101	-0.02	11.10
55		Heptane	0.342	0.325	5.0	93	-0.02	11.44
56		Trichloroethene	0.431	0.415	3.7	94	-0.02	11.06
57		1,2-Dichloropropane	0.359	0.345	3.9	96	-0.02	10.78
58		Dibromomethane	0.441	0.405	8.2	90	-0.02	10.75
59		Ethyl Acrylate	0.631	0.672	-6.5	100	-0.02	10.82
60		Methyl Methacrylate	0.326	0.339	-4.0	92	-0.02	11.35
61		1,4-Dioxane	0.223	0.206	7.6	93	-0.02	11.09
62		Bromodichloromethane	0.650	0.733	-12.8	107	-0.02	11.02
63		cis-1,3-Dichloropropene	0.529	0.539	-1.9	94	-0.02	12.14
64		4-Methyl-2-pentanone	0.246	0.282	-14.6	99	-0.02	12.20
65		trans-1,3-Dichloropropene	0.439	0.481	-9.6	96	-0.02	12.82
66		Toluene	1.211	1.070	11.6	92	-0.02	13.38
67		1,1,2-Trichloroethane	0.384	0.369	3.9	91	-0.02	13.03
68		1,3-Dichloropropane	0.514	0.534	-3.9	96	-0.02	13.42
69		2-Hexanone	0.310	0.346	-11.6	96	-0.02	13.76
70		Ethyl Methacrylate	0.522	0.559	-7.1	95	-0.02	13.79
71		Dibromochloromethane	0.613	0.720	-17.5	101	-0.02	13.93
72		Tetrachloroethene	0.611	0.590	3.4	94	-0.02	14.88
73		1,2-Dibromoethane	0.555	0.534	3.8	88	-0.02	14.25
74		Octane	0.731	0.775	-6.0	108	-0.02	14.73
75		1,1,1,2-Tetrachloroethane	0.487	0.523	-7.4	100	-0.02	15.81
76	I	Chlorobenzene-d5	1.000	1.000	0.0	105	-0.02	15.76
77		Chlorobenzene	2.038	1.671	18.0	89	-0.02	15.82
78		Ethylbenzene	3.289	2.748	16.4	93	-0.02	16.37
79		m,p-Xylene	2.807	2.166	22.8	92	-0.02	16.64
80		Styrene	1.668	1.483	11.1	88	-0.02	17.16
81		Nonane	1.594	1.676	-5.1	116	-0.02	17.71
82		o-Xylene	2.578	2.311	10.4	100	-0.02	17.32
83		Bromoform	1.168	1.269	-8.6	96	-0.02	16.71
84		1,1,2,2-Tetrachloroethane	1.741	1.590	8.7	97	-0.02	17.32
85		1,2,3-Trichloropropane	1.219	1.217	0.2	102	-0.02	17.51
86		Isopropylbenzene	3.774	3.497	7.3	102	-0.02	18.22
87		Bromobenzene	0.966	0.917	5.1	92	-0.02	18.33
88		2-Chlorotoluene	0.816	0.814	0.2	100	-0.02	18.95
89		n-Propylbenzene	0.855	0.924	-8.1	103	-0.02	19.03
90	S	4-Bromofluorobenzene	1.098	1.125	-2.5	99	-0.02	18.01
91		4-Ethyltoluene	2.859	3.018	-5.6	103	-0.02	19.26
92		1,3,5-Trimethylbenzene	2.909	2.873	1.2	108	-0.02	19.38
93		alpha-Methylstyrene	1.125	1.215	-8.0	97	-0.02	19.62
94		tert-Butylbenzene	0.745	0.712	4.4	104	-0.02	19.96
95		1,2,4-Trimethylbenzene	2.620	2.790	-6.5	109	-0.02	19.97
96		1,3-Dichlorobenzene	1.212	1.270	-4.8	93	-0.02	20.16
97		Benzyl Chloride	1.392	1.372	1.4	91	-0.02	20.16
98		1,4-Dichlorobenzene	1.161	1.148	1.1	89	-0.02	20.27
99		sec-Butylbenzene	0.871	0.878	-0.8	106	-0.02	20.35
100		1,2,3-Trimethylbenzene	2.785	2.871	-3.1	109	-0.02	20.57

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W882-ECC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21007.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.921	-5.0	105	-0.02	20.58
102		1,2-Dichlorobenzene	1.261	1.291	-2.4	96	-0.02	20.73
103		n-Butylbenzene	0.578	0.639	-10.6	94	-0.01	21.16
104		Hexachloroethane	0.990	1.215	-22.7	109	-0.02	21.62
105		1,2,4-Trichlorobenzene	0.520	0.382	26.5	66	-0.01	22.95
106		Naphthalene	1.327	0.927	30.1#	65	-0.01	23.07
107		Hexachlorobutadiene	1.116	1.184	-6.1	108	-0.01	23.52
108	I	Bromochloromethane (A)	1.000	1.000	0.0	99	-0.02	8.06
109		TVHC as equiv Pentane	6.583	7.469	-13.5	111	-0.01	5.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Thu Jan 21 11:48:29 2021

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W883-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21009.D
Project: Orangeburg UB, Orangeburg, NY

Evaluate Continuing Calibration Report

```
Data File : C:\msdchem\1\data\6W21009.D                    Vial: 2
Acq On    : 15 Jan 2021  10:32 am                     Operator: danat
Sample    : cc848-10                                  Inst    : GCMS6W
Misc      : MS48294,V6W883,,,,,1                      Multiplr: 1.00
MS Integration Params: Rteint.p

Method       : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title        : TO-15 Full Scan Mode
Last Update  : Thu Nov 19 10:03:02 2020
Response via : Single Level Calibration

Min. RRF     :   0.000  Min. Rel. Area :  60%  Max. R.T. Dev  0.33min
Max. RRF Dev :  30%     Max. Rel. Area : 140%
```

	Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)	R.T.
1 I	Bromochloromethane	1.000	1.000	0.0	99	-0.02	8.06
2	Freon 152A	0.663	0.652	1.7	101	0.00	3.74
3	Chlorodifluoromethane	0.249	0.327	-31.3#	128	0.00	3.77
4	Propene	0.860	0.887	-3.1	116	0.00	3.79
5	Chlorotrifluoroethene	1.668	1.533	8.1	96	0.00	3.80
6	Dichlorodifluoromethane	2.768	3.062	-10.6	117	0.00	3.85
7	1-Chloro-1,1-difluoroetha	1.938	2.606	-34.5#	144#	0.00	3.96
8	Chloromethane	0.906	0.961	-6.1	117	0.00	3.97
9	Dichlorotetrafluoroethane	2.777	3.095	-11.5	121	0.00	4.05
10	Vinyl Chloride	1.026	1.114	-8.6	113	0.00	4.15
11	1,3-Butadiene	0.773	0.850	-10.0	116	0.00	4.26
12	n-Butane	0.209	0.216	-3.3	113	0.00	4.29
13	Bromomethane	1.023	1.100	-7.5	117	0.00	4.47
14	Acrolein	0.492	0.479	2.6	99	0.00	4.99
15	Chloroethane	0.518	0.568	-9.7	111	0.00	4.60
16	Dichlorofluoromethane	2.445	2.704	-10.6	125	0.00	4.68
17	Acetonitrile	0.926	0.902	2.6	122	0.00	4.89
18	Freon 123	2.737	2.681	2.0	105	0.00	5.01
19	Freon 123A	1.580	1.581	-0.1	105	0.00	5.06
20	Bromoethene	1.108	1.115	-0.6	112	0.00	4.89
21	Trichlorofluoromethane	2.754	3.357	-21.9	128	0.00	5.24
22	Acetone	0.556	0.518	6.8	107	0.00	5.11
23	Pentane	0.313	0.287	8.3	100	-0.01	5.54
24	Iodomethane	3.268	2.920	10.6	93	0.00	5.74
25	Isopropyl Alcohol	2.266	2.182	3.7	122	-0.01	5.31
26	1,1-Dichloroethene	1.741	1.887	-8.4	112	-0.01	5.80
27	Freon 113	2.553	2.396	6.1	98	-0.01	6.16
28	Methylene Chloride	1.083	0.968	10.6	95	0.00	5.93
29	Carbon Disulfide	3.438	3.281	4.6	98	-0.01	6.19
30	Ethanol	0.443	0.447	-0.9	126	0.00	4.70
31	Acrylonitrile	0.803	0.866	-7.8	103	-0.01	5.51
32	3-Chloropropene	0.522	0.524	-0.4	96	-0.01	6.03
33	trans-1,2-Dichloroethene	1.578	1.680	-6.5	106	-0.02	6.81
34	tert-Butyl Alcohol	2.274	2.452	-7.8	110	0.00	5.86
35	Methyl tert-Butyl Ether	3.368	3.318	1.5	104	-0.01	7.08
36	Vinyl Acetate	2.839	3.126	-10.1	113	-0.02	7.17
37	1,1-Dichloroethane	1.995	2.027	-1.6	105	-0.02	7.01
38	2-Butanone	0.517	0.527	-1.9	95	-0.01	7.44
39	Hexane	1.834	1.756	4.3	100	-0.02	8.09
40	cis-1,2-Dichloroethene	1.520	1.576	-3.7	106	-0.02	7.88
41	Di-isopropyl Ether	1.078	0.990	8.2	95	-0.01	8.10
42	Ethyl Acetate	0.357	0.376	-5.3	97	-0.02	8.14

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W883-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21009.D
Project: Orangeburg UB, Orangeburg, NY

43		Methyl Acrylate	1.959	2.110	-7.7	103	-0.01	8.13
44		Chloroform	2.451	2.549	-4.0	109	-0.02	8.20
45		2,4-Dimethylpentane	2.174	2.062	5.2	100	-0.02	9.06
46		Tetrahydrofuran	0.509	0.514	-1.0	92	-0.02	8.65
47		1,1,1-Trichloroethane	2.457	2.614	-6.4	113	-0.02	9.28
48		1,2-Dichloroethane	1.341	1.704	-27.1	125	-0.02	9.01
49		Benzene	3.835	3.408	11.1	95	-0.02	9.81
50		Carbon Tetrachloride	2.398	2.837	-18.3	117	-0.02	9.98
51		Cyclohexane	1.881	1.767	6.1	100	-0.02	10.12
52		2,3-Dimethylpentane	0.849	0.770	9.3	94	-0.02	10.41
53	I	1,4-Difluorobenzene	1.000	1.000	0.0	95	-0.02	10.24
54		2,2,4-Trimethylpentane	1.562	1.587	-1.6	103	-0.02	11.09
55		Heptane	0.342	0.332	2.9	95	-0.02	11.44
56		Trichloroethene	0.431	0.425	1.4	96	-0.02	11.06
57		1,2-Dichloropropane	0.359	0.352	1.9	98	-0.02	10.78
58		Dibromomethane	0.441	0.406	7.9	91	-0.02	10.75
59		Ethyl Acrylate	0.631	0.678	-7.4	101	-0.02	10.82
60		Methyl Methacrylate	0.326	0.348	-6.7	94	-0.02	11.35
61		1,4-Dioxane	0.223	0.207	7.2	94	-0.02	11.09
62		Bromodichloromethane	0.650	0.744	-14.5	109	-0.02	11.02
63		cis-1,3-Dichloropropene	0.529	0.550	-4.0	97	-0.02	12.15
64		4-Methyl-2-pentanone	0.246	0.286	-16.3	101	-0.02	12.20
65		trans-1,3-Dichloropropene	0.439	0.490	-11.6	98	-0.02	12.82
66		Toluene	1.211	1.070	11.6	92	-0.02	13.38
67		1,1,2-Trichloroethane	0.384	0.370	3.6	91	-0.02	13.03
68		1,3-Dichloropropane	0.514	0.535	-4.1	96	-0.02	13.43
69		2-Hexanone	0.310	0.345	-11.3	96	-0.02	13.77
70		Ethyl Methacrylate	0.522	0.560	-7.3	95	-0.02	13.79
71		Dibromochloromethane	0.613	0.719	-17.3	101	-0.02	13.93
72		Tetrachloroethene	0.611	0.585	4.3	93	-0.02	14.88
73		1,2-Dibromoethane	0.555	0.536	3.4	88	-0.02	14.25
74		Octane	0.731	0.772	-5.6	108	-0.02	14.73
75		1,1,1,2-Tetrachloroethane	0.487	0.521	-7.0	99	-0.02	15.81
76	I	Chlorobenzene-d5	1.000	1.000	0.0	103	-0.02	15.76
77		Chlorobenzene	2.038	1.681	17.5	89	-0.02	15.82
78		Ethylbenzene	3.289	2.766	15.9	92	-0.02	16.37
79		m,p-Xylene	2.807	2.178	22.4	91	-0.02	16.64
80		Styrene	1.668	1.472	11.8	86	-0.02	17.16
81		Nonane	1.594	1.679	-5.3	114	-0.02	17.71
82		o-Xylene	2.578	2.314	10.2	99	-0.02	17.32
83		Bromoform	1.168	1.288	-10.3	96	-0.02	16.72
84		1,1,2,2-Tetrachloroethane	1.741	1.581	9.2	95	-0.02	17.32
85		1,2,3-Trichloropropane	1.219	1.205	1.1	99	-0.02	17.51
86		Isopropylbenzene	3.774	3.367	10.8	96	-0.02	18.22
87		Bromobenzene	0.966	0.882	8.7	87	-0.02	18.33
88		2-Chlorotoluene	0.816	0.742	9.1	90	-0.02	18.96
89		n-Propylbenzene	0.855	0.828	3.2	91	-0.02	19.03
90	S	4-Bromofluorobenzene	1.098	1.105	-0.6	95	-0.02	18.01
91		4-Ethyltoluene	2.859	2.811	1.7	94	-0.02	19.26
92		1,3,5-Trimethylbenzene	2.909	2.693	7.4	99	-0.02	19.38
93		alpha-Methylstyrene	1.125	1.108	1.5	88	-0.02	19.62
94		tert-Butylbenzene	0.745	0.676	9.3	97	-0.02	19.96
95		1,2,4-Trimethylbenzene	2.620	2.635	-0.6	101	-0.02	19.97
96		1,3-Dichlorobenzene	1.212	1.179	2.7	85	-0.02	20.16
97		Benzyl Chloride	1.392	1.261	9.4	82	-0.02	20.16
98		1,4-Dichlorobenzene	1.161	1.055	9.1	81	-0.02	20.27
99		sec-Butylbenzene	0.871	0.819	6.0	97	-0.02	20.35
100		1,2,3-Trimethylbenzene	2.785	2.729	2.0	102	-0.02	20.57

Continuing Calibration Summary

Job Number: JD18853 **Sample:** V6W883-CC848
Account: GESNYP Groundwater & Environmental Services **Lab FileID:** 6W21009.D
Project: Orangeburg UB, Orangeburg, NY

101		p-Isopropyltoluene	0.877	0.864	1.5	97	-0.02	20.58
102		1,2-Dichlorobenzene	1.261	1.213	3.8	89	-0.02	20.73
103		n-Butylbenzene	0.578	0.602	-4.2	88	-0.01	21.16
104		Hexachloroethane	0.990	1.188	-20.0	105	-0.01	21.62
105		1,2,4-Trichlorobenzene	0.520	0.374	28.1	64	-0.01	22.95
106		Naphthalene	1.327	0.893	32.7#	62	-0.01	23.07
107		Hexachlorobutadiene	1.116	1.186	-6.3	107	-0.01	23.52
108	I	Bromochloromethane (A)	1.000	1.000	0.0	99	-0.02	8.06
109		TVHC as equiv Pentane	6.583	7.485	-13.7	112	-0.01	5.54

(#) = Out of Range SPCC's out = 0 CCC's out = 0
6W20161.D m6w848.M Fri Jan 15 13:55:23 2021

Run Sequence Report

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Run ID: V6W848 **Method:** TO-15 **Instrument ID:** GCMS6W

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W848-BFB	6W20155.D	11/18/20 13:23	n/a	BFB Tune
V6W848-IC848	6W20156.D	11/18/20 14:11	n/a	Initial cal 0.04
V6W848-IC848	6W20157.D	11/18/20 14:58	n/a	Initial cal 0.1
V6W848-IC848	6W20158.D	11/18/20 15:44	n/a	Initial cal 0.2
V6W848-IC848	6W20159.D	11/18/20 16:33	n/a	Initial cal 0.5
V6W848-IC848	6W20160.D	11/18/20 17:19	n/a	Initial cal 5
V6W848-ICC848	6W20161.D	11/18/20 18:05	n/a	Initial cal 10
V6W848-IC848	6W20164.D	11/18/20 20:35	n/a	Initial cal 40
V6W848-IC848	6W20167.D	11/19/20 09:23	n/a	Initial cal 20
V6W848-ICV848	6W20169.D	11/19/20 11:15	n/a	Initial cal verification 10

Run Sequence Report

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Run ID: V6W854 **Method:** TO-15 **Instrument ID:** GCMS6W

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W854-BFB	6W20306.D	11/27/20 15:23	n/a	BFB Tune
V6W854-CC848	6W20307.D	11/27/20 16:03	n/a	Continuing cal 10
V6W854-BS	6W20308.D	11/27/20 16:42	n/a	Blank Spike
V6W854-BSD	6W20309.D	11/27/20 17:29	n/a	Blank Spike Duplicate
V6W854-MB	6W20311.D	11/27/20 19:09	n/a	Method Blank
V6W854-SCC	6W20312.D	11/27/20 20:02	n/a	Summa Cleaning Certification
V6W854-SCC	6W20313.D	11/27/20 20:54	n/a	Summa Cleaning Certification
V6W854-SCC	6W20314.D	11/27/20 21:46	n/a	Summa Cleaning Certification
V6W854-SCC	6W20315.D	11/27/20 22:39	n/a	Summa Cleaning Certification
V6W854-SCC	6W20316.D	11/27/20 23:31	n/a	Summa Cleaning Certification
V6W854-SCC	6W20317.D	11/28/20 00:19	n/a	Summa Cleaning Certification
V6W854-SCC	6W20318.D	11/28/20 01:06	n/a	Summa Cleaning Certification
V6W854-SCC	6W20319.D	11/28/20 01:54	n/a	Summa Cleaning Certification

Run Sequence Report

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Run ID: V6W859 **Method:** TO-15 **Instrument ID:** GCMS6W

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W859-BFB	6W20404.D	12/03/20 09:33	n/a	BFB Tune
V6W859-CC848	6W20406.D	12/03/20 11:21	n/a	Continuing cal 10
V6W859-BS	6W20407.D	12/03/20 12:09	n/a	Blank Spike
V6W859-BSD	6W20408.D	12/03/20 12:56	n/a	Blank Spike Duplicate
V6W859-MB	6W20410.D	12/03/20 14:41	n/a	Method Blank
ZZZZZZ	6W20411.D	12/03/20 15:46	n/a	(unrelated sample)
V6W859-SCC	6W20414.D	12/03/20 18:23	n/a	Summa Cleaning Certification
V6W859-SCC	6W20415.D	12/03/20 19:16	n/a	Summa Cleaning Certification
JD16493-1	6W20418.D	12/03/20 22:00	n/a	(used for QC only; not part of job JD18853)
JD16493-1DUP	6W20419.D	12/03/20 22:48	n/a	Duplicate
ZZZZZZ	6W20423.D	12/04/20 01:57	n/a	(unrelated sample)
ZZZZZZ	6W20424.D	12/04/20 02:45	n/a	(unrelated sample)
ZZZZZZ	6W20425.D	12/04/20 03:33	n/a	(unrelated sample)
ZZZZZZ	6W20426.D	12/04/20 04:21	n/a	(unrelated sample)
ZZZZZZ	6W20427.D	12/04/20 05:09	n/a	(unrelated sample)
ZZZZZZ	6W20428.D	12/04/20 05:56	n/a	(unrelated sample)
ZZZZZZ	6W20429.D	12/04/20 06:44	n/a	(unrelated sample)

Run Sequence Report

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Run ID: V6W882 **Method:** TO-15 **Instrument ID:** GCMS6W

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W882-BFB	6W20988.D	01/14/21 12:20	n/a	BFB Tune
V6W882-CC848	6W20989.D	01/14/21 13:07	n/a	Continuing cal 10
V6W882-BS	6W20990.D	01/14/21 13:55	n/a	Blank Spike
V6W882-BSD	6W20991.D	01/14/21 14:42	n/a	Blank Spike Duplicate
V6W882-MB	6W20993.D	01/14/21 16:22	n/a	Method Blank
ZZZZZZ	6W20994.D	01/14/21 17:10	n/a	(unrelated sample)
ZZZZZZ	6W20995.D	01/14/21 17:58	n/a	(unrelated sample)
JD18950-3	6W20996.D	01/14/21 18:45	n/a	(used for QC only; not part of job JD18853)
JD18950-3DUP	6W20997.D	01/14/21 19:32	n/a	Duplicate
ZZZZZZ	6W20998.D	01/14/21 20:24	n/a	(unrelated sample)
ZZZZZZ	6W20999.D	01/14/21 21:12	n/a	(unrelated sample)
ZZZZZZ	6W21000.D	01/14/21 22:06	n/a	(unrelated sample)
JD18853-1	6W21001.D	01/14/21 23:02	n/a	VP-5 SV
JD18853-2	6W21002.D	01/15/21 00:01	n/a	VP-5 A
JD18853-3	6W21003.D	01/15/21 00:55	n/a	VP-6 SV
JD18853-4	6W21004.D	01/15/21 01:54	n/a	VP-6 A
JD18853-5	6W21005.D	01/15/21 02:56	n/a	OUTSIDE AMBIENT
V6W882-ECC848	6W21007.D	01/15/21 04:31	n/a	Ending cal 10

Run Sequence Report

Job Number: JD18853
Account: GESNYP Groundwater & Environmental Services
Project: Orangeburg UB, Orangeburg, NY

Run ID: V6W883 **Method:** TO-15 **Instrument ID:** GCMS6W

Lab Sample ID	Lab File ID	Date/Time Analyzed	Prep QC Batch	Client Sample ID
V6W883-BFB	6W21008.D	01/15/21 09:45	n/a	BFB Tune
V6W883-CC848	6W21009.D	01/15/21 10:32	n/a	Continuing cal 10
V6W883-BS	6W21010.D	01/15/21 11:36	n/a	Blank Spike
V6W883-BSD	6W21011.D	01/15/21 12:24	n/a	Blank Spike Duplicate
V6W883-MB	6W21013.D	01/15/21 14:14	n/a	Method Blank
JD18853-1	6W21014.D	01/15/21 15:16	n/a	VP-5 SV
JD18873-1	6W21015.D	01/15/21 16:03	n/a	(used for QC only; not part of job JD18853)
JD18873-1DUP	6W21016.D	01/15/21 16:51	n/a	Duplicate
ZZZZZZ	6W21025.D	01/16/21 00:25	n/a	(unrelated sample)
ZZZZZZ	6W21026.D	01/16/21 01:18	n/a	(unrelated sample)
ZZZZZZ	6W21027.D	01/16/21 02:12	n/a	(unrelated sample)
ZZZZZZ	6W21029.D	01/16/21 04:00	n/a	(unrelated sample)
ZZZZZZ	6W21030.D	01/16/21 04:58	n/a	(unrelated sample)
ZZZZZZ	6W21031.D	01/16/21 05:52	n/a	(unrelated sample)
ZZZZZZ	6W21032.D	01/16/21 06:47	n/a	(unrelated sample)

MS Volatiles

Raw Data

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21001.D
Acq On : 14 Jan 2021 11:02 pm
Operator : thomash
Sample : jd18853-1
Misc : MS48294,V6W882,592,,,,1.48
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 21 11:07:30 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

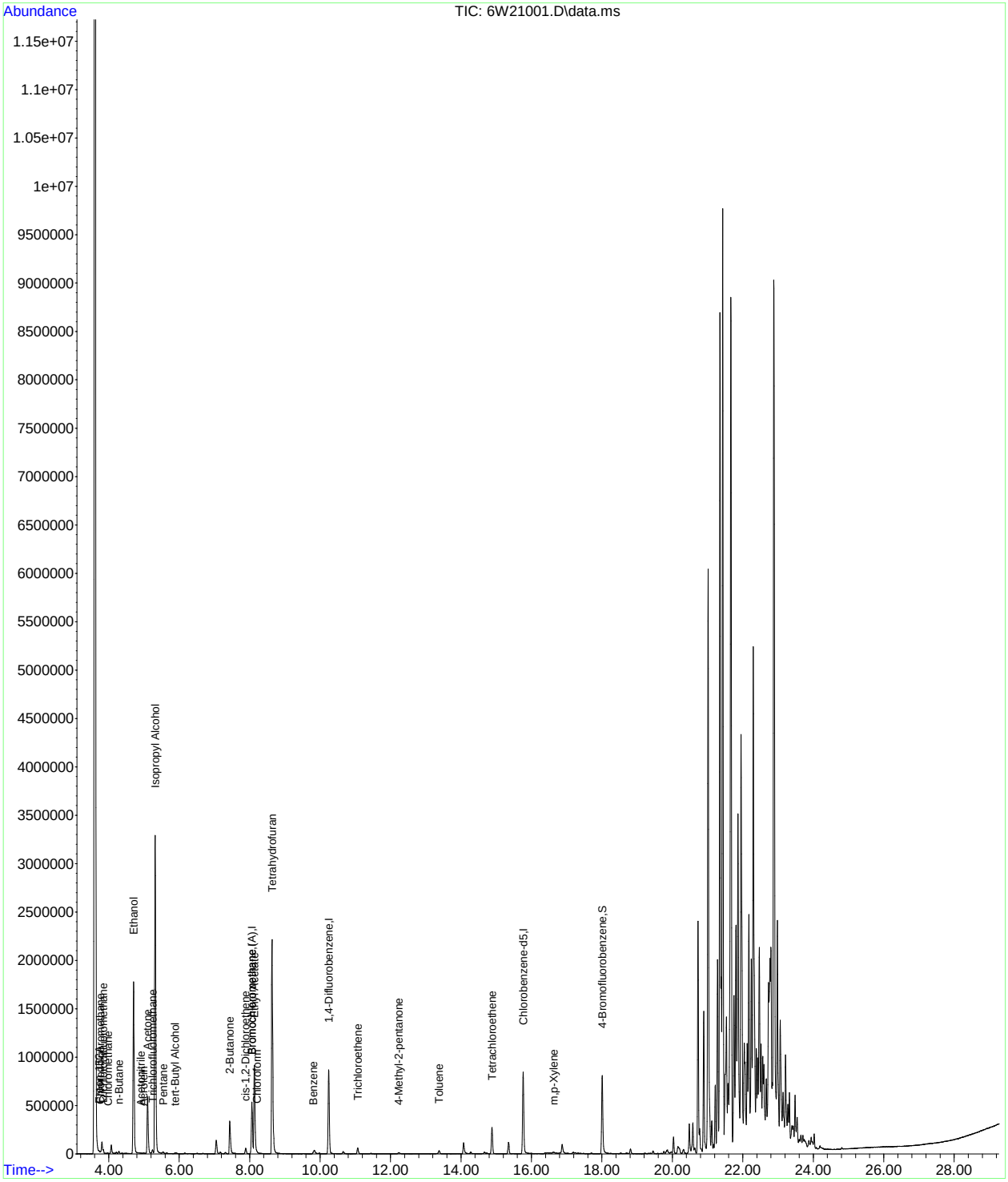
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	243394	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.238	114	882080	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	376327	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	243394	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	396030	9.58	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 95.80%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	7051	0.44	ppb(v	85
3) Chlorodifluoromethane	3.760	67	2386	0.39	ppb(v	90
6) Dichlorodifluoromethane	3.845	85	37624	0.56	ppb(v	99
8) Chloromethane	3.974	50	4927	0.22	ppb(v	92
12) n-Butane	4.292	58	2558	0.50	ppb(v#	78
14) Acrolein	4.989	56	3585	0.30	ppb(v#	92
17) Acetonitrile	4.910	41	2738	0.12	ppb(v#	73
21) Trichlorofluoromethane	5.240	101	32968	0.49	ppb(v	99
22) Acetone	5.100	58	240384	17.76	ppb(v	91
23) Pentane	5.546	57	1726	0.23	ppb(v	58
25) Isopropyl Alcohol	5.320	45	4872736	88.36	ppb(v	98
30) Ethanol	4.702	45	2358039	218.46	ppb(v	99
34) tert-Butyl Alcohol	5.883	59	9773	0.18	ppb(v#	82
38) 2-Butanone	7.430	72	126600	10.06	ppb(v	87
40) cis-1,2-Dichloroethene	7.883	61	42322	1.14	ppb(v	89
42) Ethyl Acetate	8.134	61	180909	20.84	ppb(v	96
44) Chloroform	8.207	83	5967	0.10	ppb(v	91
46) Tetrahydrofuran	8.636	72	717958	57.97	ppb(v	91
49) Benzene	9.810	78	19912	0.21	ppb(v	96
56) Trichloroethene	11.070	95	25219	0.66	ppb(v	94
64) 4-Methyl-2-pentanone	12.233	58	3956	0.18	ppb(v	82
66) Toluene	13.377	91	30353	0.28	ppb(v	100
72) Tetrachloroethene	14.882	166	107156	1.99	ppb(v	99
79) m,p-Xylene	16.631	91	14151	0.13	ppb(v	88

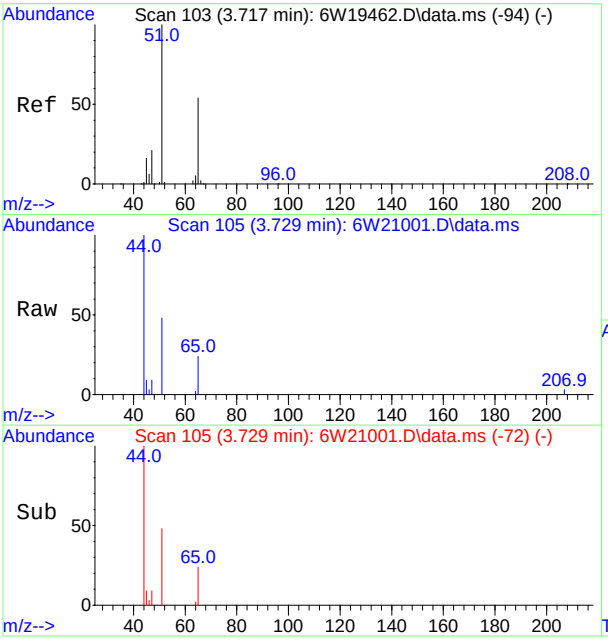
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21001.D
Acq On : 14 Jan 2021 11:02 pm
Operator : thomash
Sample : jd18853-1
Misc : MS48294,V6W882,592,,,,1.48
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jan 21 11:07:30 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

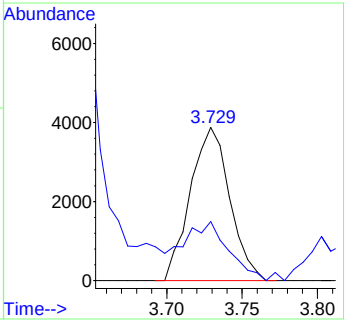


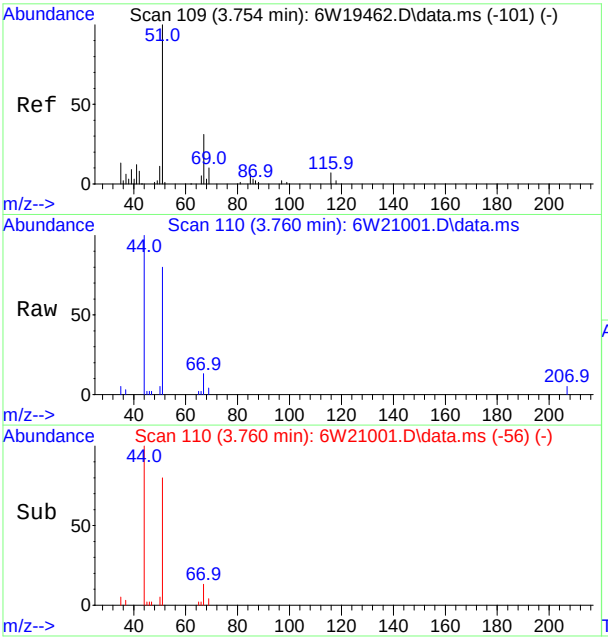


#2
Freon 152A
Concen: 0.44 ppb(v)
RT: 3.729 min Scan# 105
Delta R.T. 0.000 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 65 Resp: 7051

Ion	Ratio	Lower	Upper
65	100		
45	38.5	21.3	39.6

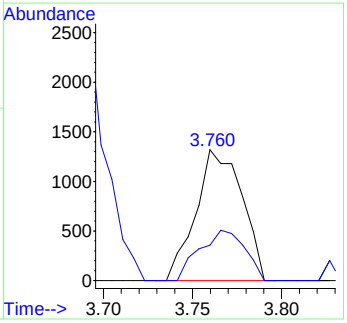


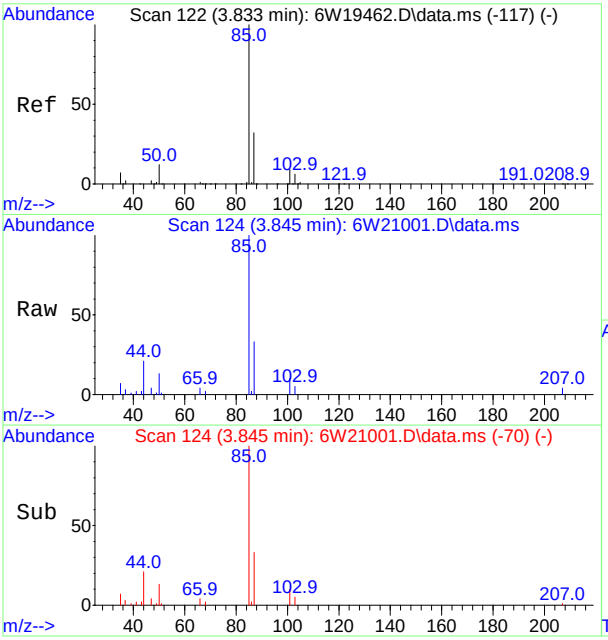


#3
Chlorodifluoromethane
Concen: 0.39 ppb(v)
RT: 3.760 min Scan# 110
Delta R.T. 0.000 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 67 Resp: 2386

Ion	Ratio	Lower	Upper
67	100		
69	27.1	22.9	42.5

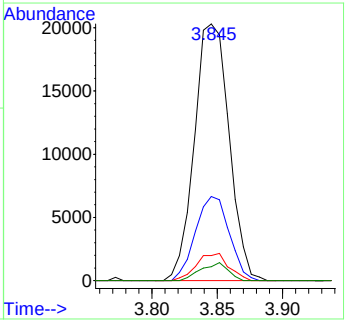


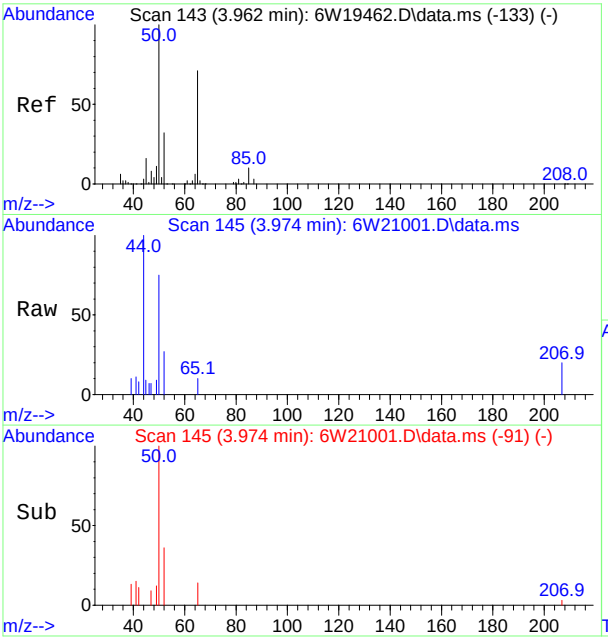


#6
Dichlorodifluoromethane
Concen: 0.56 ppb(v)
RT: 3.845 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 85 Resp: 37624

Ion	Ratio	Lower	Upper
85	100		
87	32.8	22.7	42.1
101	9.8	6.3	11.7
103	5.5	4.1	7.5

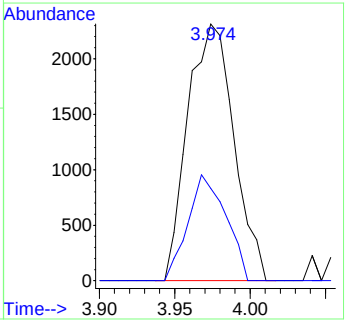


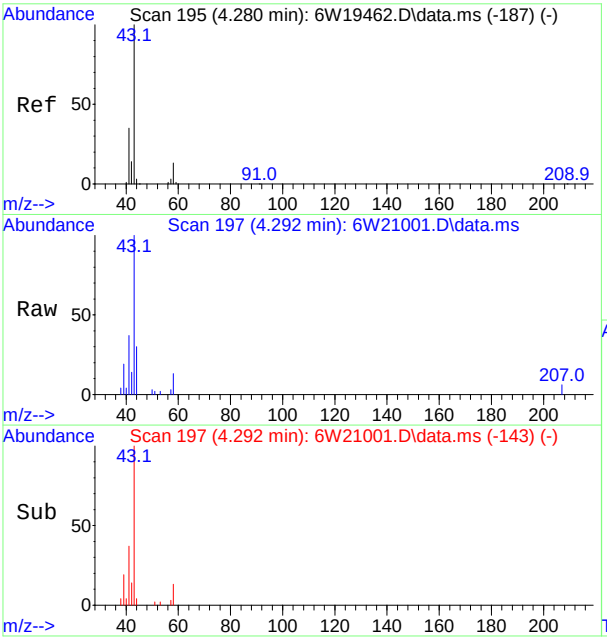


#8
Chloromethane
Concen: 0.22 ppb(v)
RT: 3.974 min Scan# 145
Delta R.T. 0.000 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 50 Resp: 4927

Ion	Ratio	Lower	Upper
50	100		
52	35.9	22.2	41.2

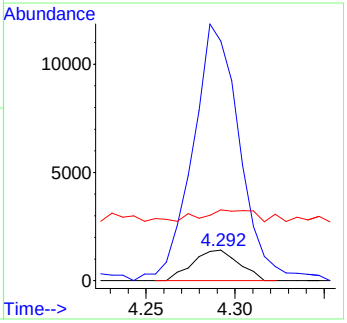


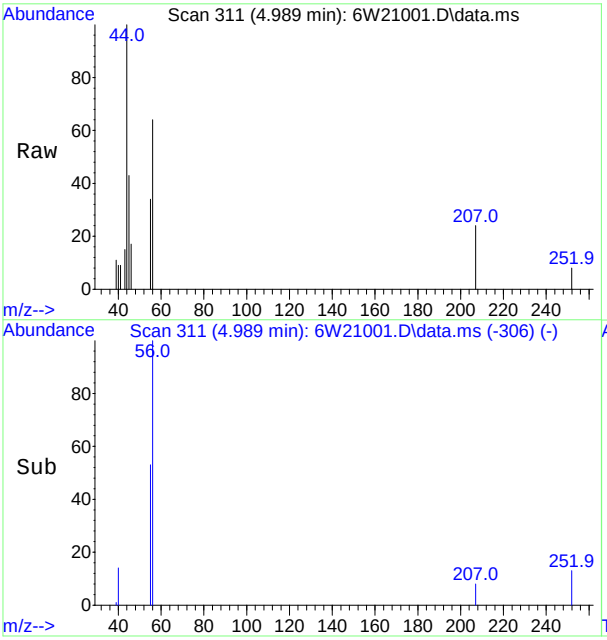


#12
n-Butane
Concen: 0.50 ppb(v)
RT: 4.292 min Scan# 197
Delta R.T. 0.000 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 58 Resp: 2558

Ion	Ratio	Lower	Upper
58	100		
43	785.9	530.8	985.8
44	232.0	22.3	41.5#

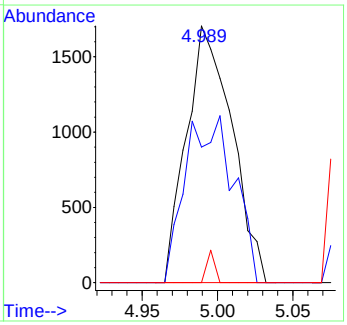


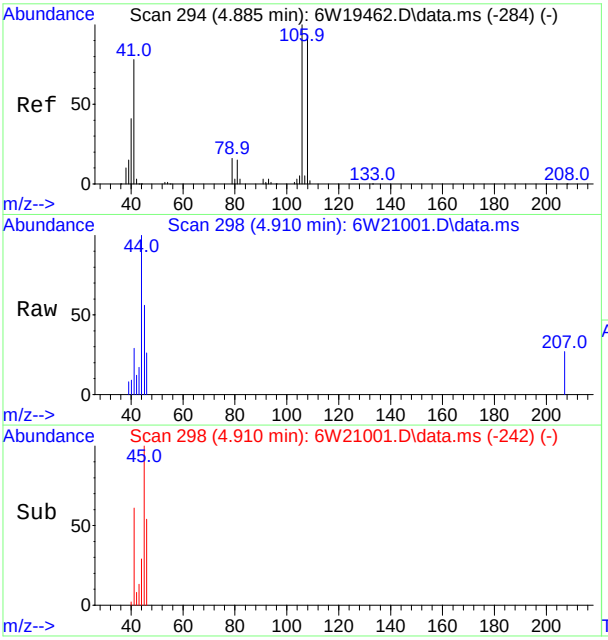


#14
Acrolein
Concen: 0.30 ppb(v)
RT: 4.989 min Scan# 311
Delta R.T. -0.006 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 56 Resp: 3585

Ion	Ratio	Lower	Upper
56	100		
55	68.8	56.9	85.3
37	0.0	11.8	17.6#

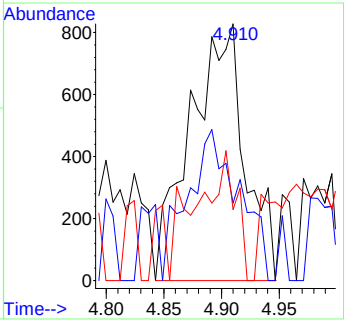


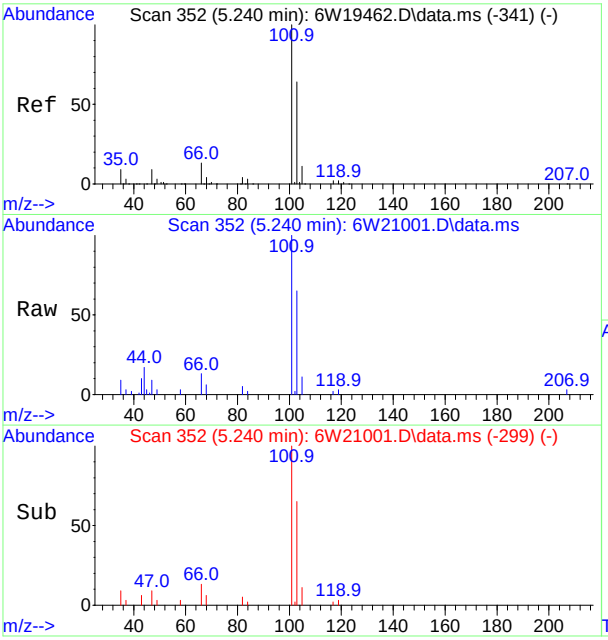


#17
Acetonitrile
Concen: 0.12 ppb(v)
RT: 4.910 min Scan# 298
Delta R.T. 0.012 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 41 Resp: 2738

Ion	Ratio	Lower	Upper
41	100		
40	30.2	36.6	68.0#
39	27.7	13.9	25.9#

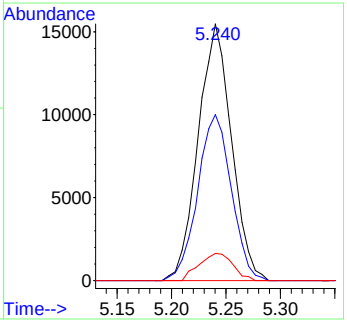


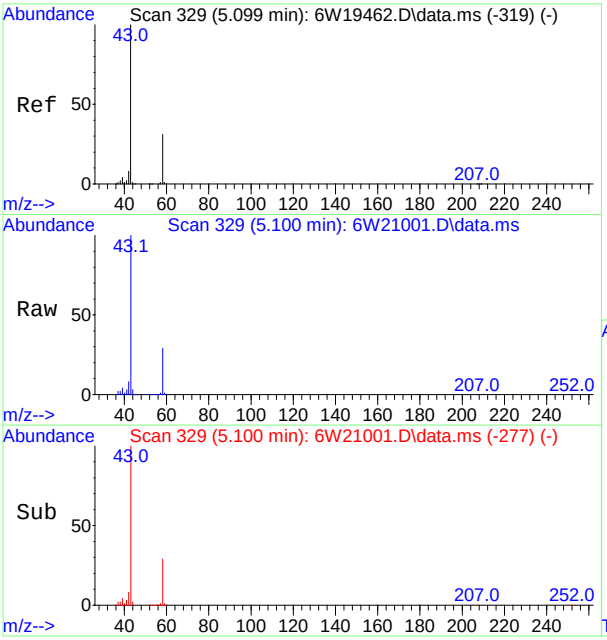


#21
Trichlorofluoromethane
Concen: 0.49 ppb(v)
RT: 5.240 min Scan# 352
Delta R.T. -0.006 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion:101 Resp: 32968

Ion	Ratio	Lower	Upper
101	100		
103	64.6	44.7	83.1
105	10.6	7.3	13.7

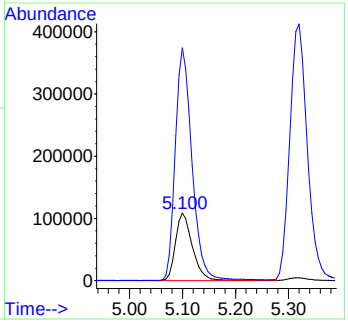


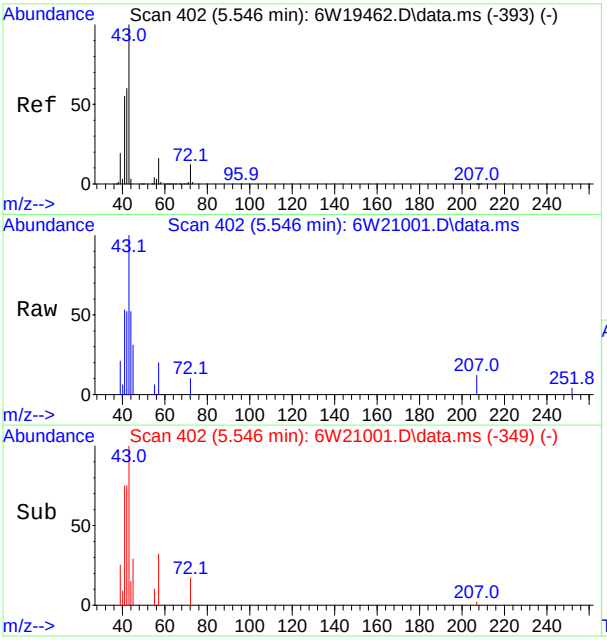


#22
Acetone
Concen: 17.76 ppb(v)
RT: 5.100 min Scan# 329
Delta R.T. -0.012 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 58 Resp: 240384

Ion	Ratio	Lower	Upper
58	100		
43	344.3	228.2	423.8

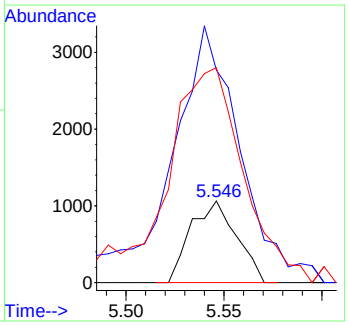


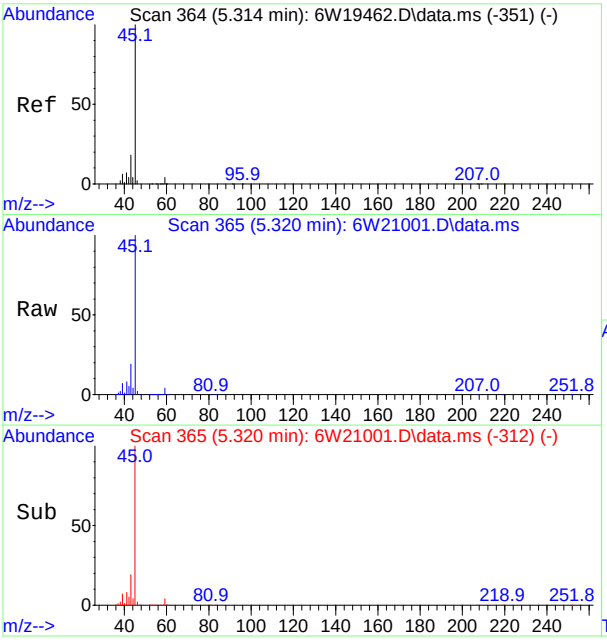


#23
Pentane
Concen: 0.23 ppb(v)
RT: 5.546 min Scan# 402
Delta R.T. -0.006 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 57 Resp: 1726

Ion	Ratio	Lower	Upper
57	100		
42	260.3	256.8	477.0
41	263.3	238.4	442.8

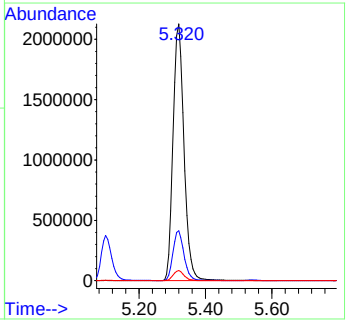


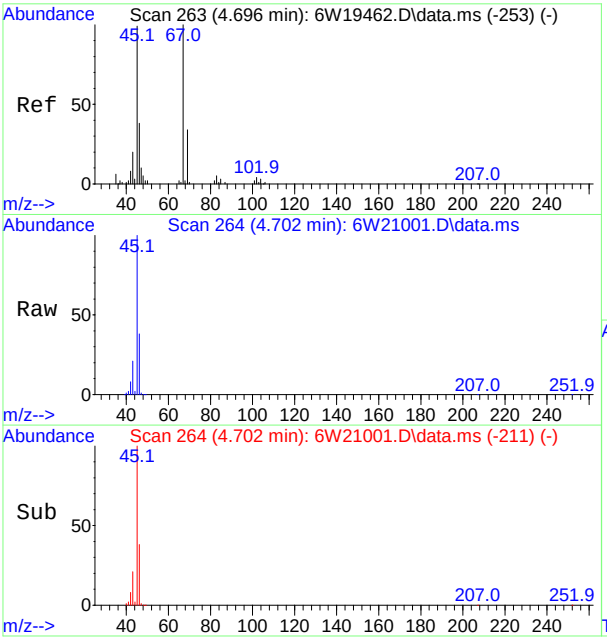


#25
Isopropyl Alcohol
Concen: 88.36 ppb(v)
RT: 5.320 min Scan# 365
Delta R.T. -0.006 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 45 Resp: 4872736

Ion	Ratio	Lower	Upper
45	100		
43	19.4	13.0	24.2
59	4.0	2.9	5.3

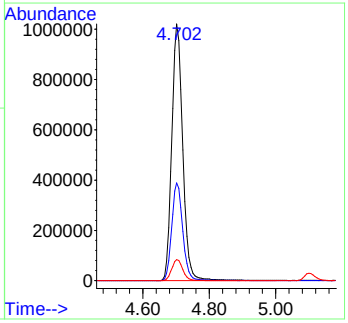


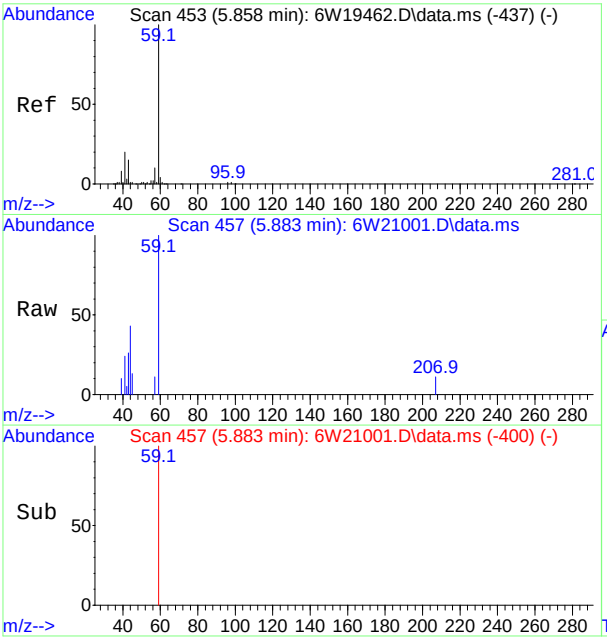


#30
Ethanol
Concen: 218.46 ppb(v)
RT: 4.702 min Scan# 264
Delta R.T. -0.006 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 45 Resp: 2358039

Ion	Ratio	Lower	Upper
45	100		
46	38.1	26.9	50.1
42	8.2	6.0	11.2

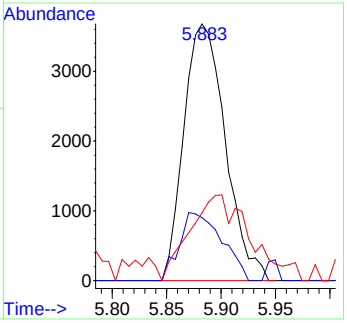


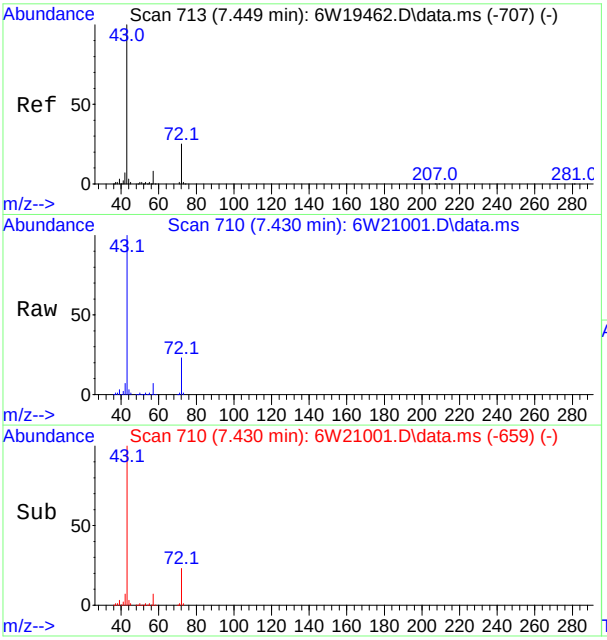


#34
tert-Butyl Alcohol
Concen: 0.18 ppb(v)
RT: 5.883 min Scan# 457
Delta R.T. 0.018 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 59 Resp: 9773

Ion	Ratio	Lower	Upper
59	100		
41	24.5	13.8	25.6
43	26.4	10.4	19.2#

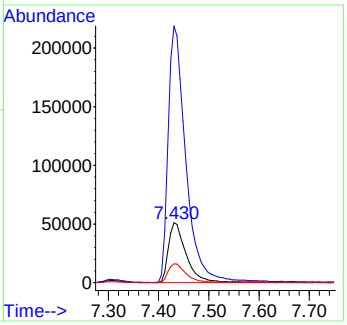


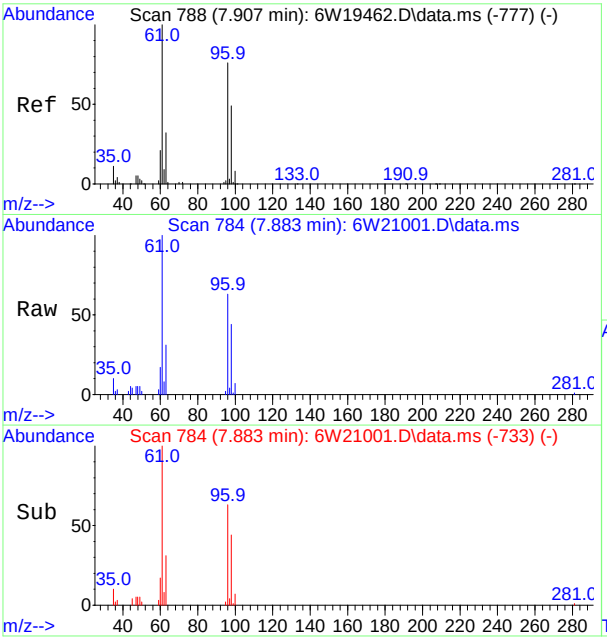


#38
2-Butanone
Concen: 10.06 ppb(v)
RT: 7.430 min Scan# 710
Delta R.T. -0.018 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 72 Resp: 126600

Ion	Ratio	Lower	Upper
72	100		
43	429.2	277.8	516.0
57	31.4	22.3	41.5

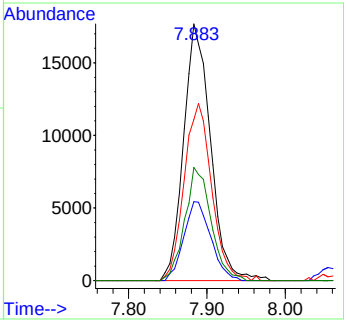


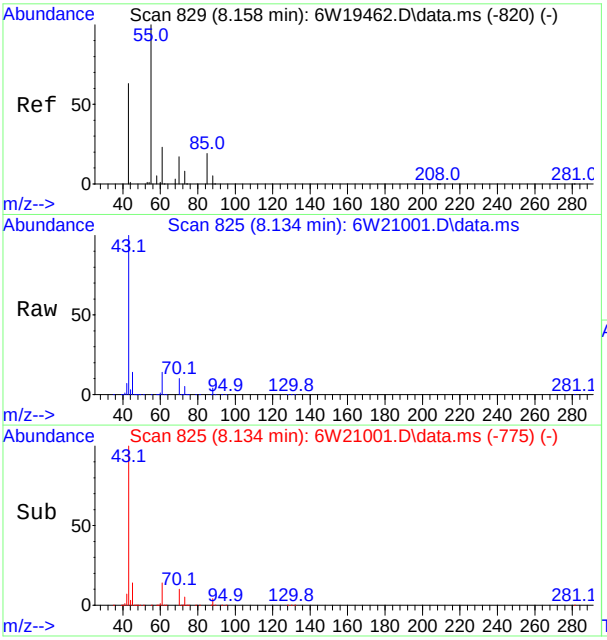


#40
cis-1,2-Dichloroethene
Concen: 1.14 ppb(v)
RT: 7.883 min Scan# 784
Delta R.T. -0.018 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 61 Resp: 42322

Ion	Ratio	Lower	Upper
61	100		
63	30.7	22.6	42.0
96	62.8	53.6	99.6
98	44.1	34.6	64.3

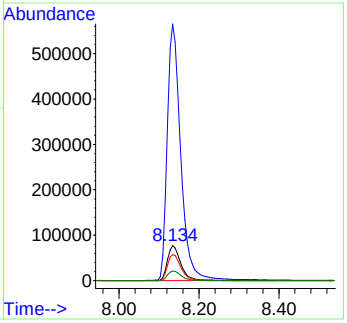


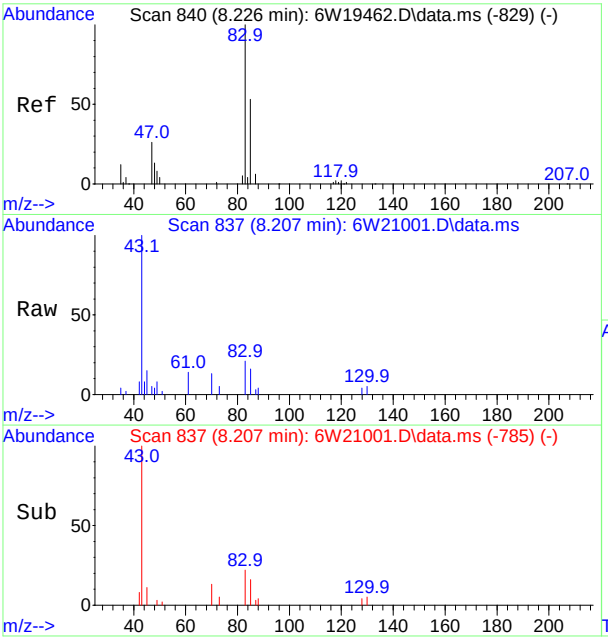


#42
Ethyl Acetate
Concen: 20.84 ppb(v)
RT: 8.134 min Scan# 825
Delta R.T. -0.024 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 61 Resp: 180909

Ion	Ratio	Lower	Upper
61	100		
43	728.4	518.2	962.4
70	73.5	55.3	102.7
88	27.3	21.8	40.6

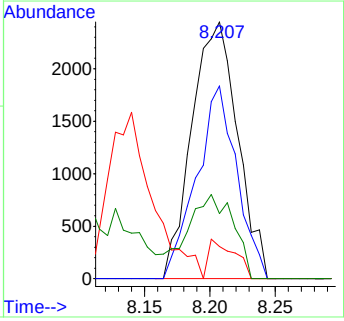


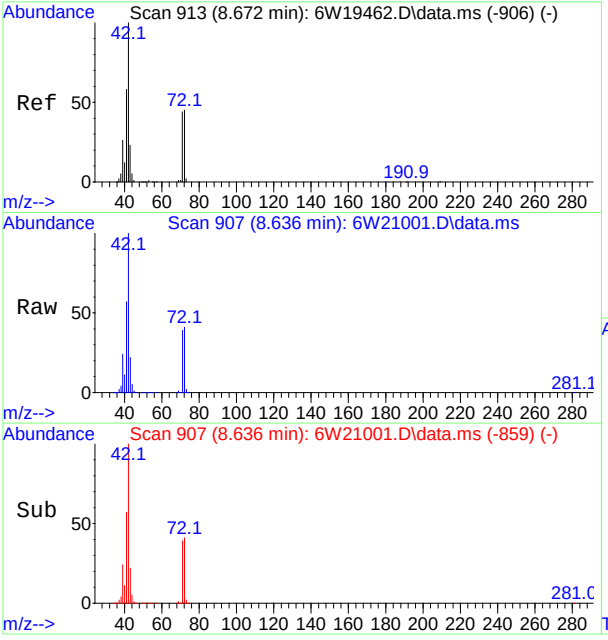


#44
Chloroform
Concen: 0.10 ppb(v)
RT: 8.207 min Scan# 837
Delta R.T. -0.012 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 83 Resp: 5967

Ion	Ratio	Lower	Upper
83	100		
85	75.1	45.8	85.0
87	12.6	7.3	13.7
47	25.4	18.0	33.4

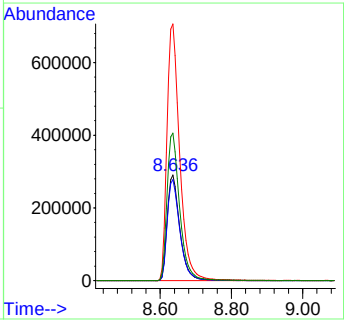


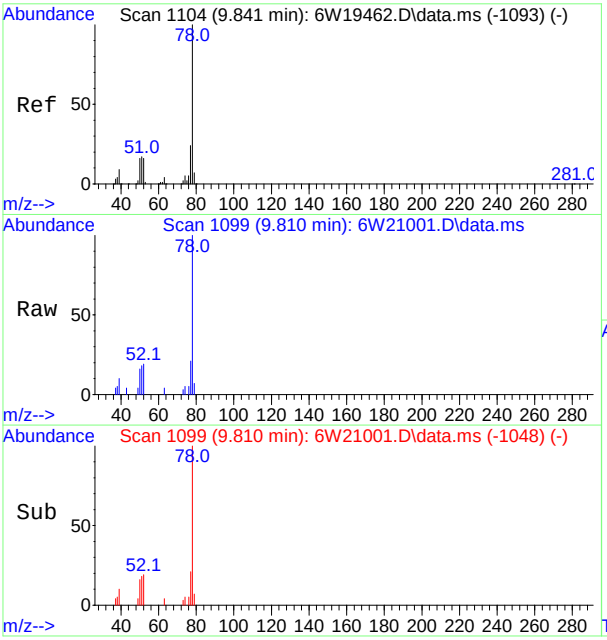


#46
Tetrahydrofuran
Concen: 57.97 ppb(v)
RT: 8.636 min Scan# 907
Delta R.T. -0.037 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 72 Resp: 717958

Ion	Ratio	Lower	Upper
72	100		
71	95.7	68.3	126.9
42	243.0	155.6	289.0
41	139.6	90.4	167.8

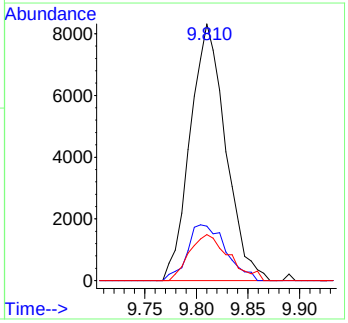


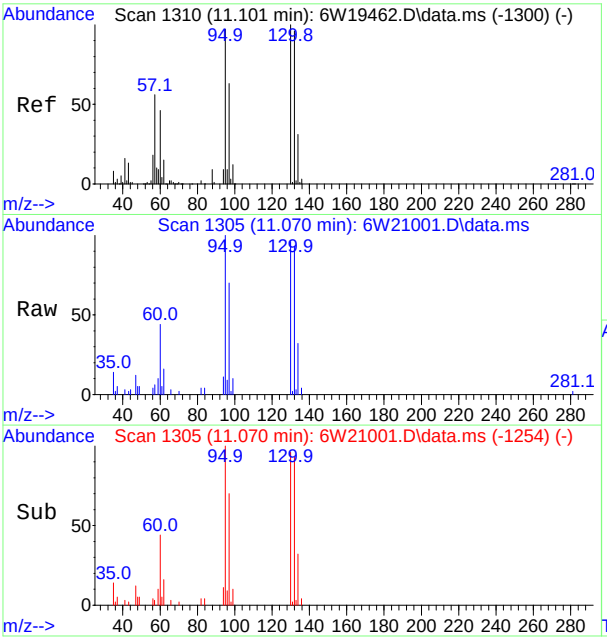


#49
Benzene
Concen: 0.21 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 78 Resp: 19912

Ion	Ratio	Lower	Upper
78	100		
77	21.2	16.7	30.9
51	17.9	12.2	22.6

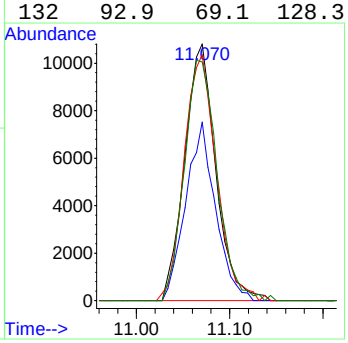


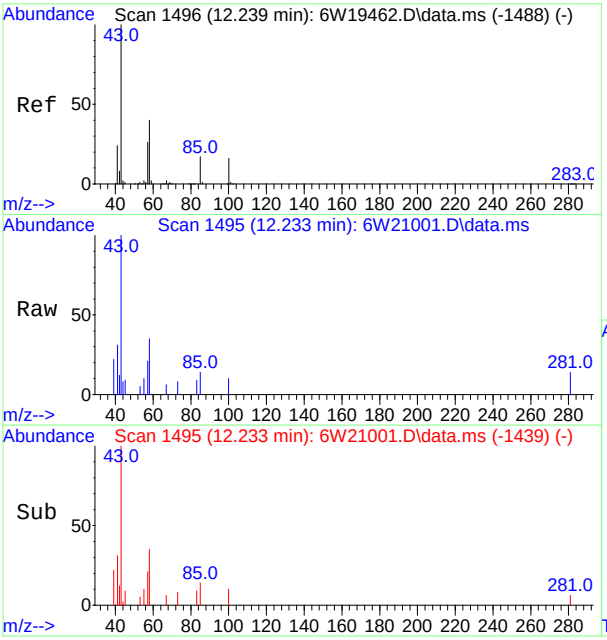


#56
Trichloroethene
Concen: 0.66 ppb(v)
RT: 11.070 min Scan# 1305
Delta R.T. -0.018 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 95 Resp: 25219

Ion	Ratio	Lower	Upper
95	100		
97	69.6	45.5	84.5
130	95.8	72.3	134.3
132	92.9	69.1	128.3

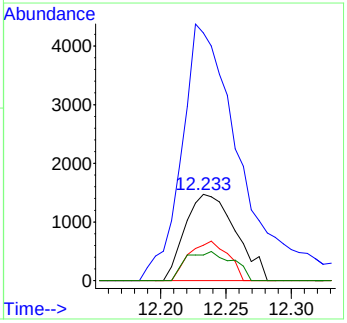


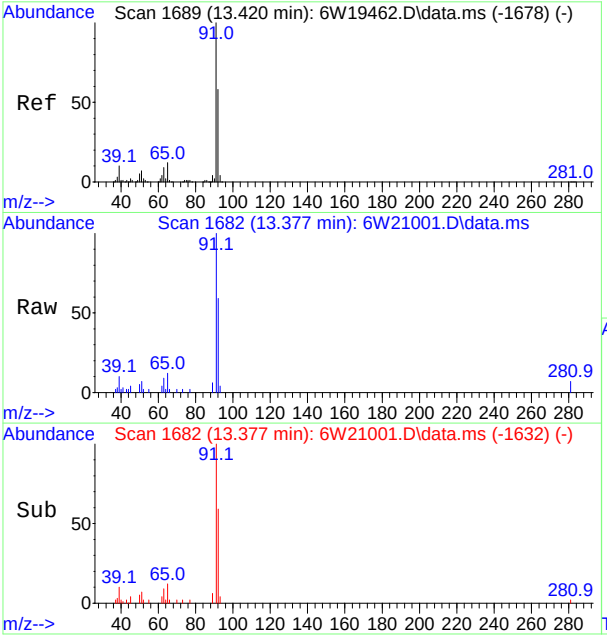


#64
4-Methyl-2-pentanone
Concen: 0.18 ppb(v)
RT: 12.233 min Scan# 1495
Delta R.T. 0.012 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 58 Resp: 3956

Ion	Ratio	Lower	Upper
58	100		
43	287.3	176.5	327.7
85	41.2	31.5	58.5
100	29.7	27.9	51.7

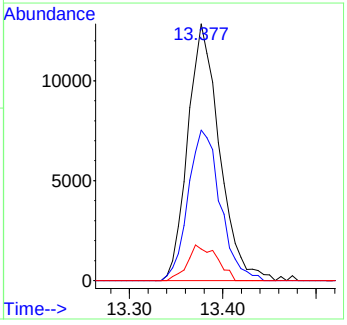


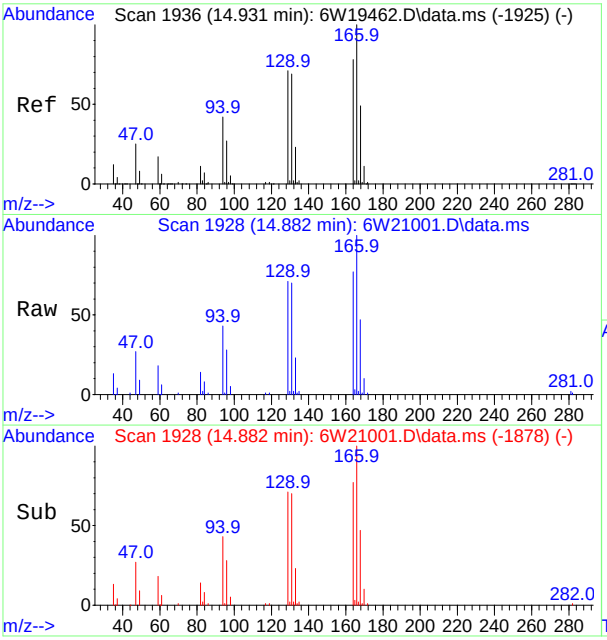


#66
Toluene
Concen: 0.28 ppb(v)
RT: 13.377 min Scan# 1682
Delta R.T. -0.024 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 91 Resp: 30353

Ion	Ratio	Lower	Upper
91	100		
92	58.6	40.9	75.9
65	12.3	8.3	15.3

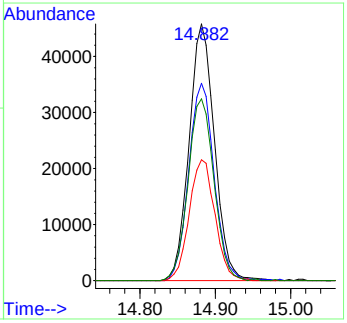


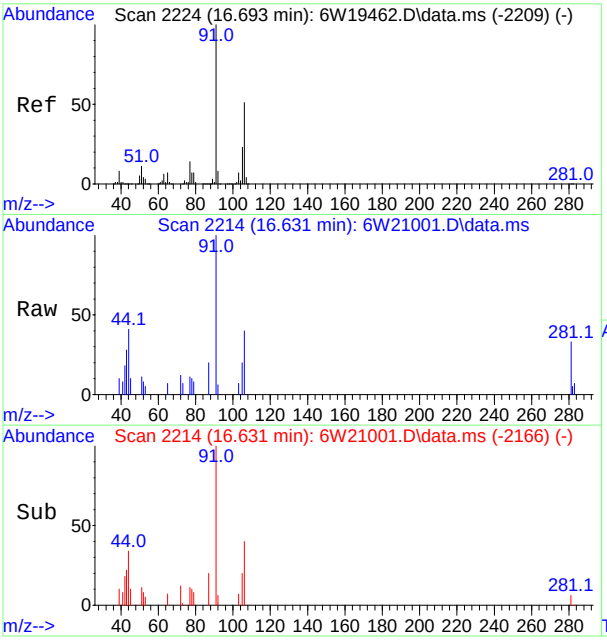


#72
Tetrachloroethene
Concen: 1.99 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion:166 Resp: 107156

Ion	Ratio	Lower	Upper
166	100		
164	76.9	54.7	101.7
168	47.0	34.1	63.3
129	70.9	50.0	92.8

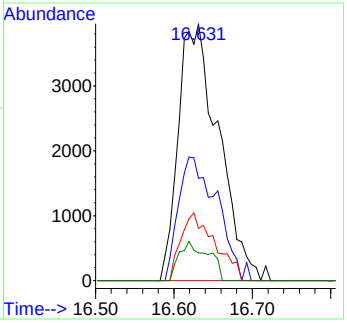




#79
m,p-Xylene
Concen: 0.13 ppb(v)
RT: 16.631 min Scan# 2214
Delta R.T. -0.037 min
Lab File: 6W21001.D
Acq: 14 Jan 2021 11:02 pm

Tgt Ion: 91 Resp: 14151

Ion	Ratio	Lower	Upper
91	100		
106	39.9	35.4	65.7
105	20.3	16.2	30.0
77	10.8	9.7	18.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21014.D
Acq On : 15 Jan 2021 3:16 pm
Operator : danat
Sample : jd18853-1
Misc : MS48350,V6W883,100,,,,1.48
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 19 12:01:55 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	210431	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.238	114	734794	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	305203	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	210431	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	288367	8.60	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 86.00%			
Target Compounds						Qvalue
6) Dichlorodifluoromethane	3.845	85	5930	0.10	ppb(v	93
14) Acrolein	5.002	56	546	0.05	ppb(v#	37
22) Acetone	5.112	58	35397	3.03	ppb(v	95
25) Isopropyl Alcohol	5.314	45	707619	14.84	ppb(v	95
30) Ethanol	4.702	45	339400	36.37	ppb(v	100
38) 2-Butanone	7.449	72	16196	1.49	ppb(v	92
40) cis-1,2-Dichloroethene	7.889	61	5555	0.17	ppb(v	86
42) Ethyl Acetate	8.146	61	23428	3.12	ppb(v	97
46) Tetrahydrofuran	8.654	72	94046	8.78	ppb(v	89
56) Trichloroethene	11.070	95	3602	0.11	ppb(v	82
72) Tetrachloroethene	14.882	166	14597	0.33	ppb(v	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

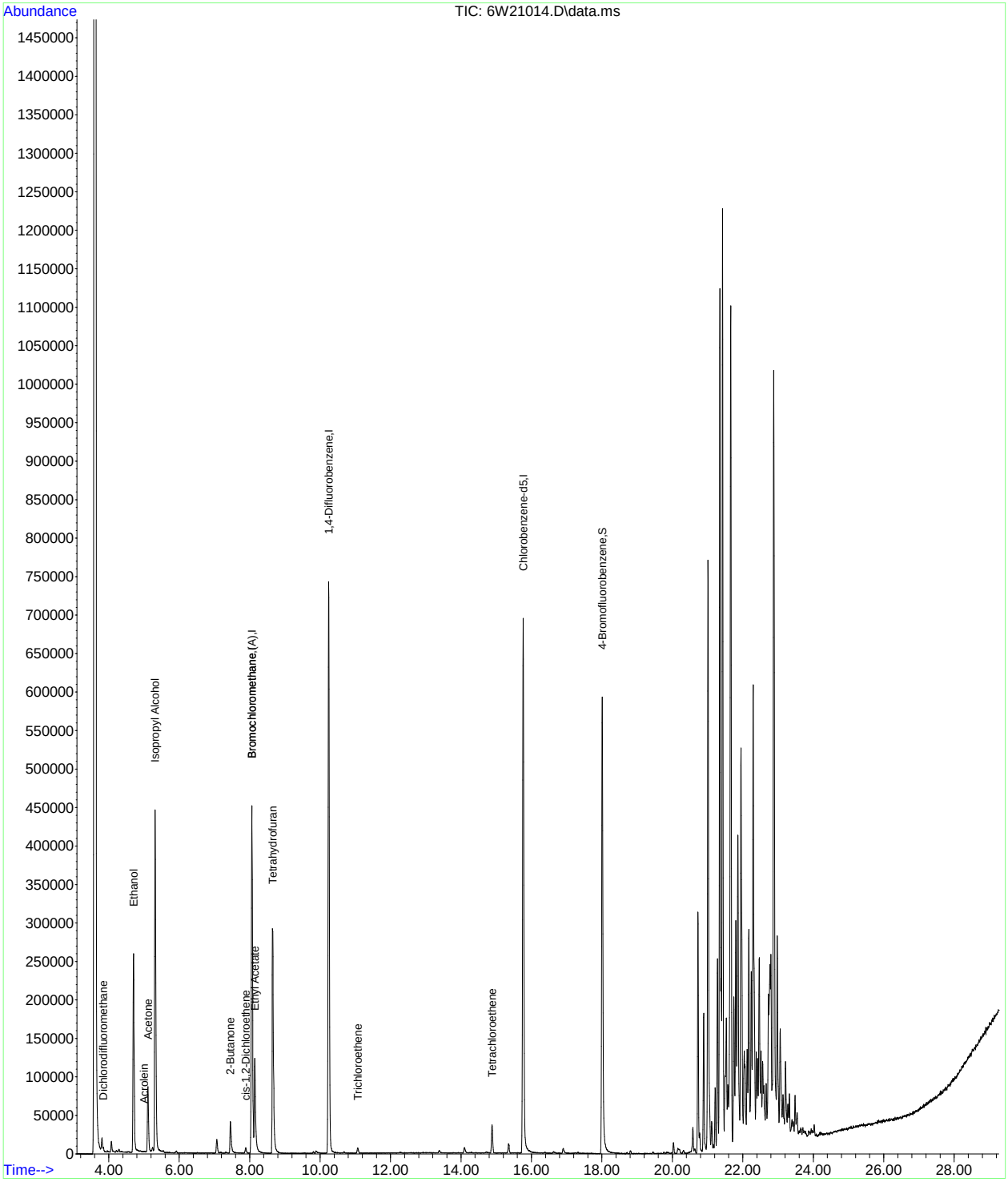
7.1.2

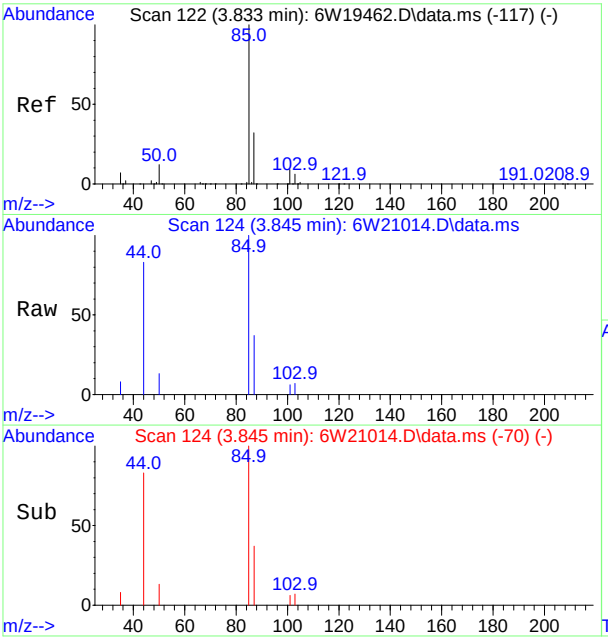
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21014.D
Acq On : 15 Jan 2021 3:16 pm
Operator : danat
Sample : jd18853-1
Misc : MS48350,V6W883,100,,,,1.48
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jan 19 12:01:55 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

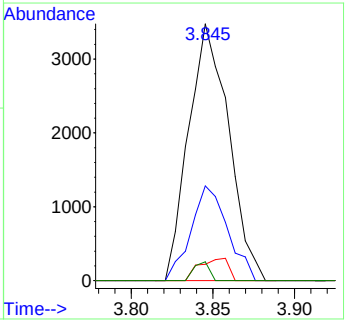


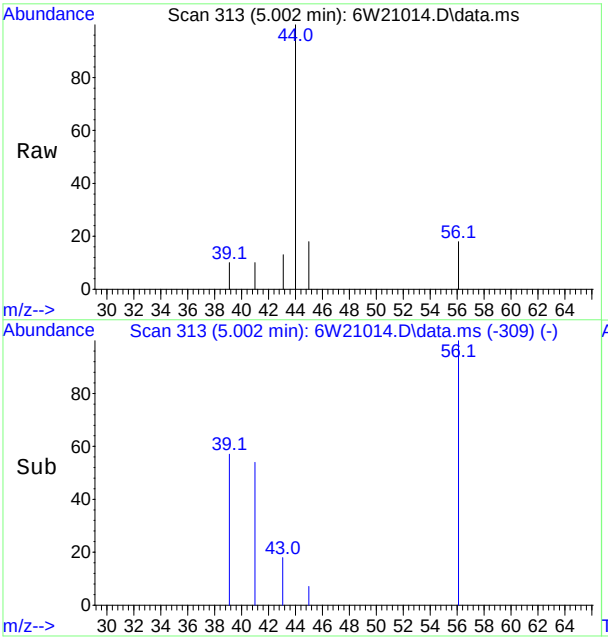


#6
Dichlorodifluoromethane
Concen: 0.10 ppb(v)
RT: 3.845 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 85 Resp: 5930

Ion	Ratio	Lower	Upper
85	100		
87	37.0	22.7	42.1
101	6.4	6.3	11.7
103	7.4	4.1	7.5

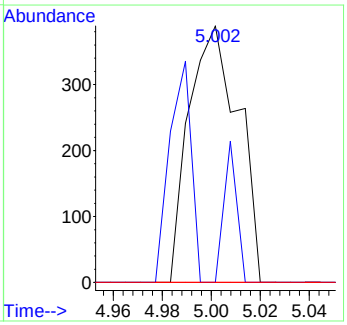


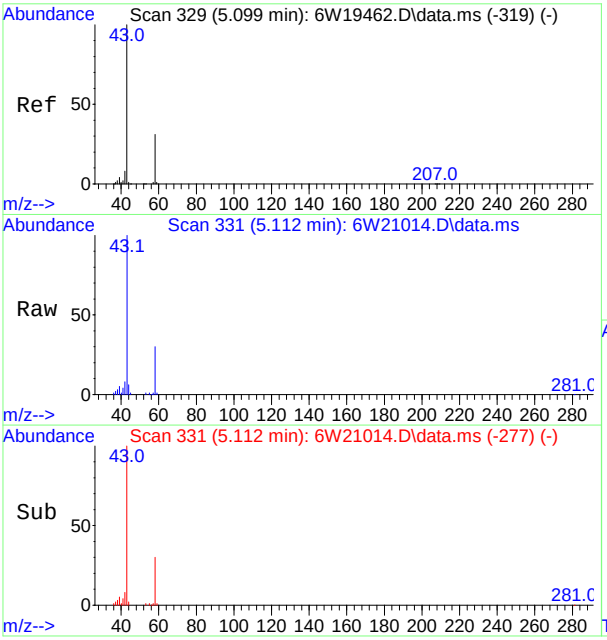


#14
Acrolein
Concen: 0.05 ppb(v)
RT: 5.002 min Scan# 313
Delta R.T. 0.006 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 56 Resp: 546

Ion	Ratio	Lower	Upper
56	100		
55	14.5	56.9	85.3#
37	0.0	11.8	17.6#

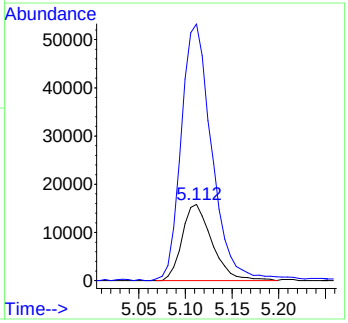


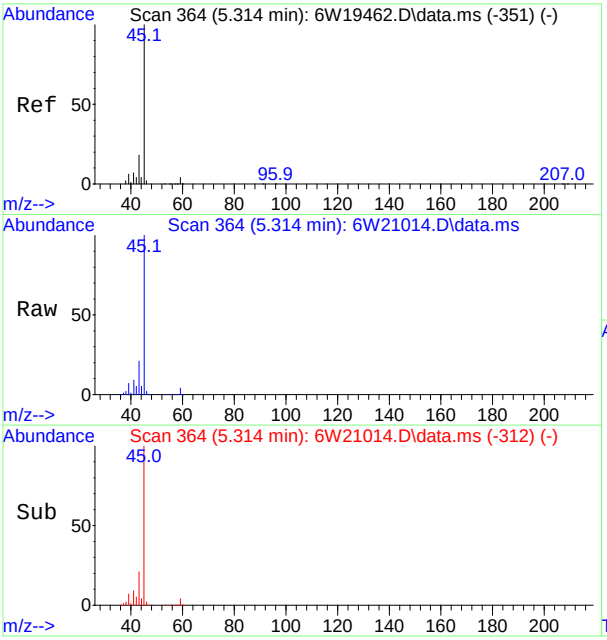


#22
Acetone
Concen: 3.03 ppb(v)
RT: 5.112 min Scan# 331
Delta R.T. 0.000 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 58 Resp: 35397

Ion	Ratio	Lower	Upper
58	100		
43	336.2	228.2	423.8

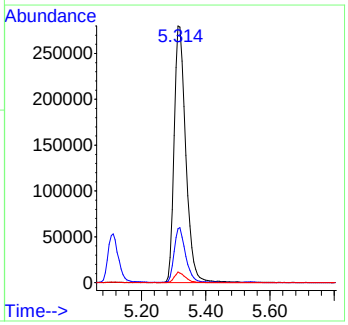


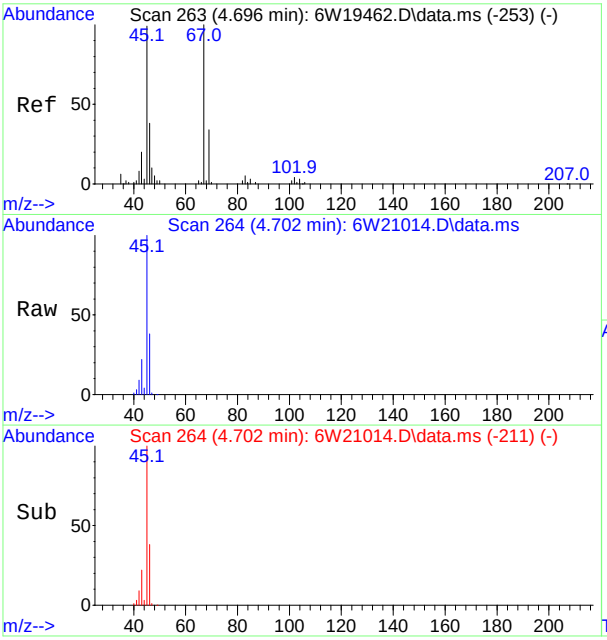


#25
Isopropyl Alcohol
Concen: 14.84 ppb(v)
RT: 5.314 min Scan# 364
Delta R.T. -0.012 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 45 Resp: 707619

Ion	Ratio	Lower	Upper
45	100		
43	21.1	13.0	24.2
59	4.1	2.9	5.3

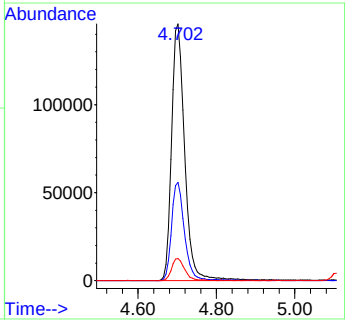


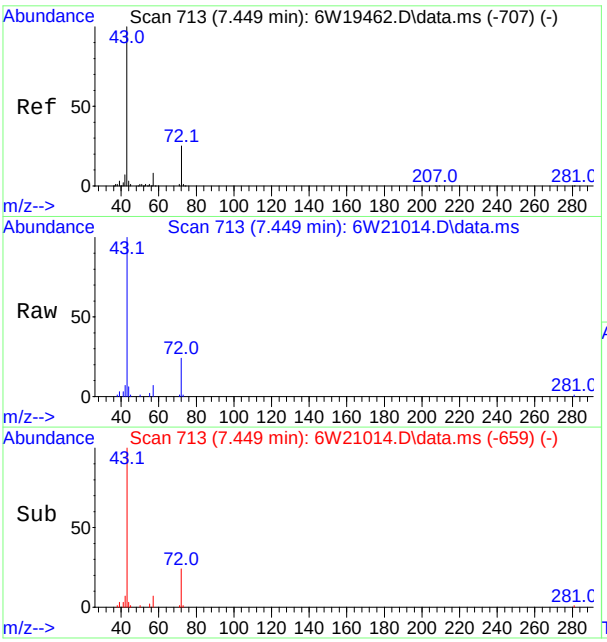


#30
Ethanol
Concen: 36.37 ppb(v)
RT: 4.702 min Scan# 264
Delta R.T. -0.006 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 45 Resp: 339400

Ion	Ratio	Lower	Upper
45	100		
46	38.3	26.9	50.1
42	8.6	6.0	11.2

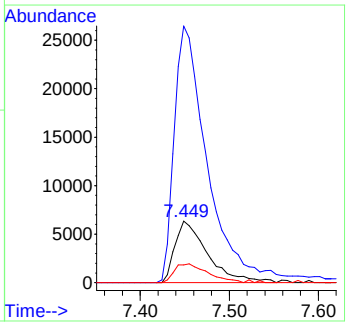


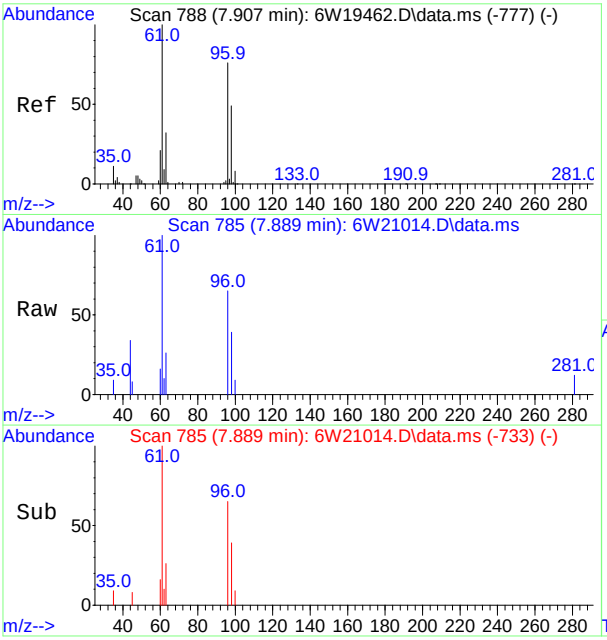


#38
2-Butanone
Concen: 1.49 ppb(v)
RT: 7.449 min Scan# 713
Delta R.T. 0.000 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 72 Resp: 16196

Ion	Ratio	Lower	Upper
72	100		
43	417.0	277.8	516.0
57	28.7	22.3	41.5

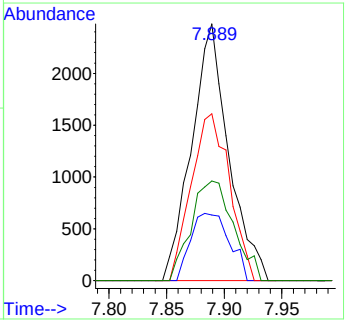


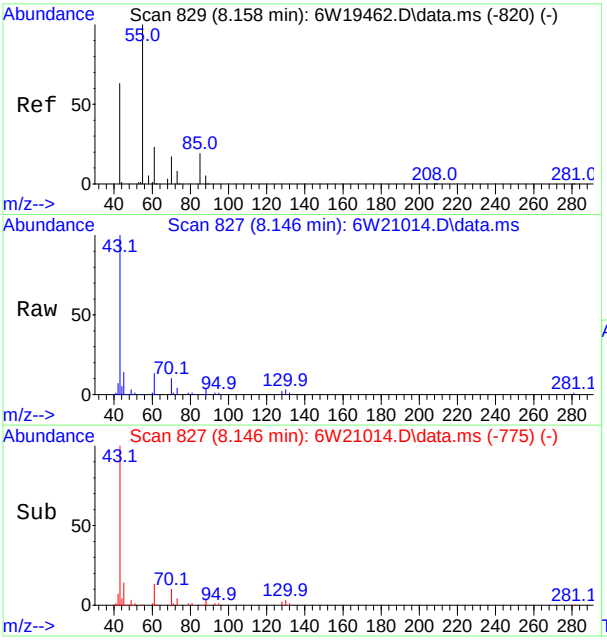


#40
cis-1,2-Dichloroethene
Concen: 0.17 ppb(v)
RT: 7.889 min Scan# 785
Delta R.T. -0.012 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 61 Resp: 5555

Ion	Ratio	Lower	Upper
61	100		
63	25.5	22.6	42.0
96	65.0	53.6	99.6
98	38.8	34.6	64.3

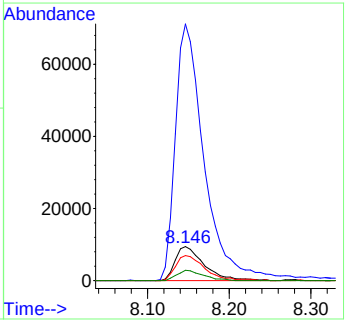


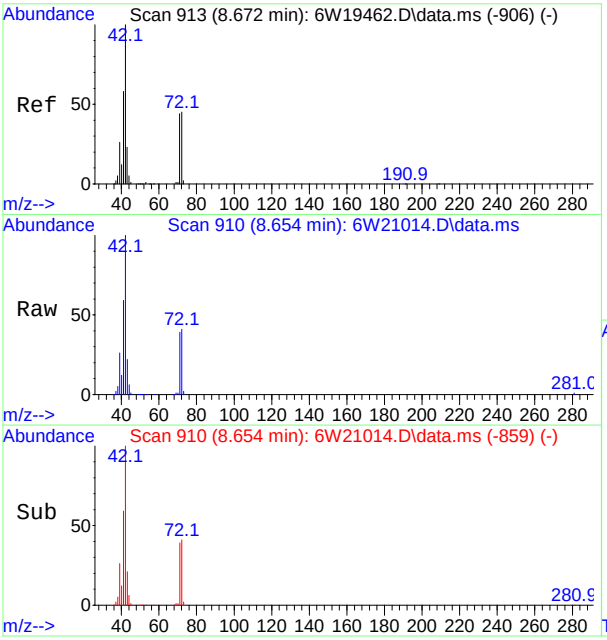


#42
Ethyl Acetate
Concen: 3.12 ppb(v)
RT: 8.146 min Scan# 827
Delta R.T. -0.012 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 61 Resp: 23428

Ion	Ratio	Lower	Upper
61	100		
43	751.6	518.2	962.4
70	73.6	55.3	102.7
88	30.8	21.8	40.6

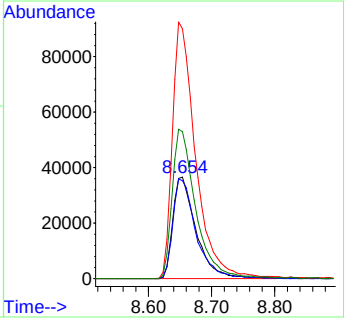


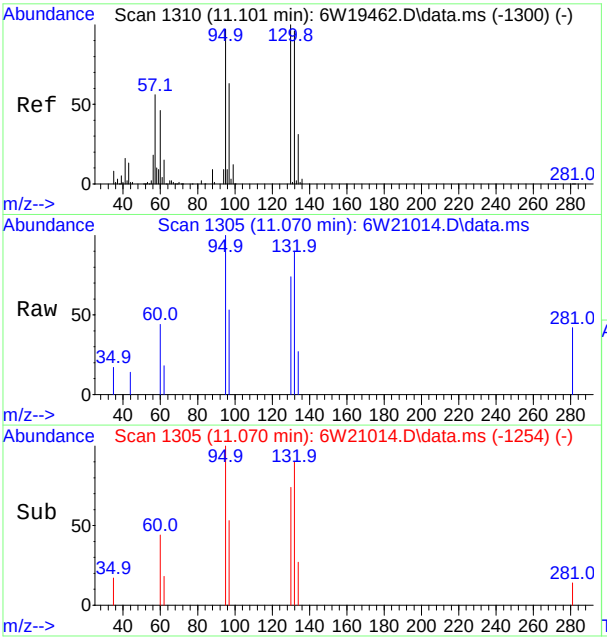


#46
Tetrahydrofuran
Concen: 8.78 ppb(v)
RT: 8.654 min Scan# 910
Delta R.T. -0.018 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 72 Resp: 94046

Ion	Ratio	Lower	Upper
72	100		
71	96.4	68.3	126.9
42	245.9	155.6	289.0
41	144.8	90.4	167.8

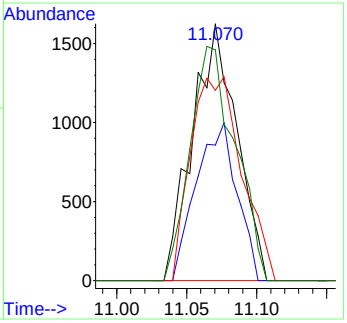


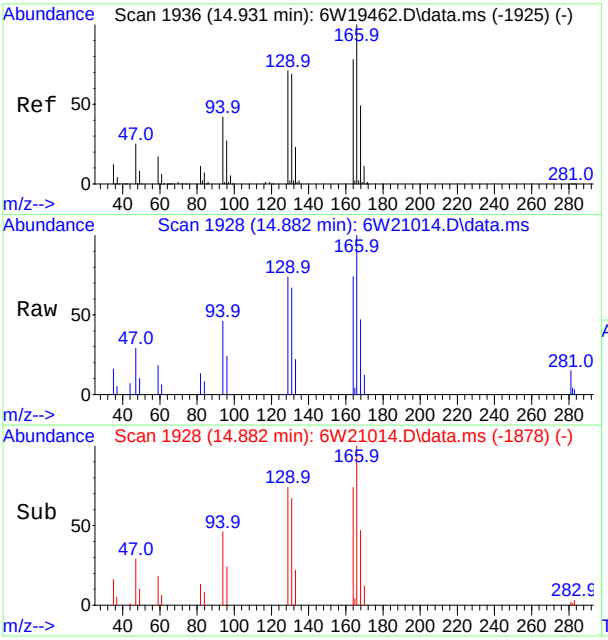


#56
Trichloroethene
Concen: 0.11 ppb(v)
RT: 11.070 min Scan# 1305
Delta R.T. -0.018 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion: 95 Resp: 3602

Ion	Ratio	Lower	Upper
95	100		
97	52.8	45.5	84.5
130	74.1	72.3	134.3
132	89.8	69.1	128.3

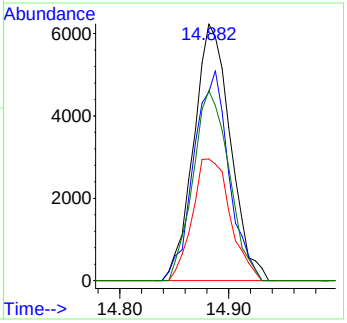




#72
Tetrachloroethene
Concen: 0.33 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W21014.D
Acq: 15 Jan 2021 3:16 pm

Tgt Ion:166 Resp: 14597

Ion	Ratio	Lower	Upper
166	100		
164	73.5	54.7	101.7
168	47.3	34.1	63.3
129	74.0	50.0	92.8



7.1.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21002.D
Acq On : 15 Jan 2021 12:01 am
Operator : thomash
Sample : jd18853-2
Misc : MS48294,V6W882,740,,,,1.48
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 21 11:13:01 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

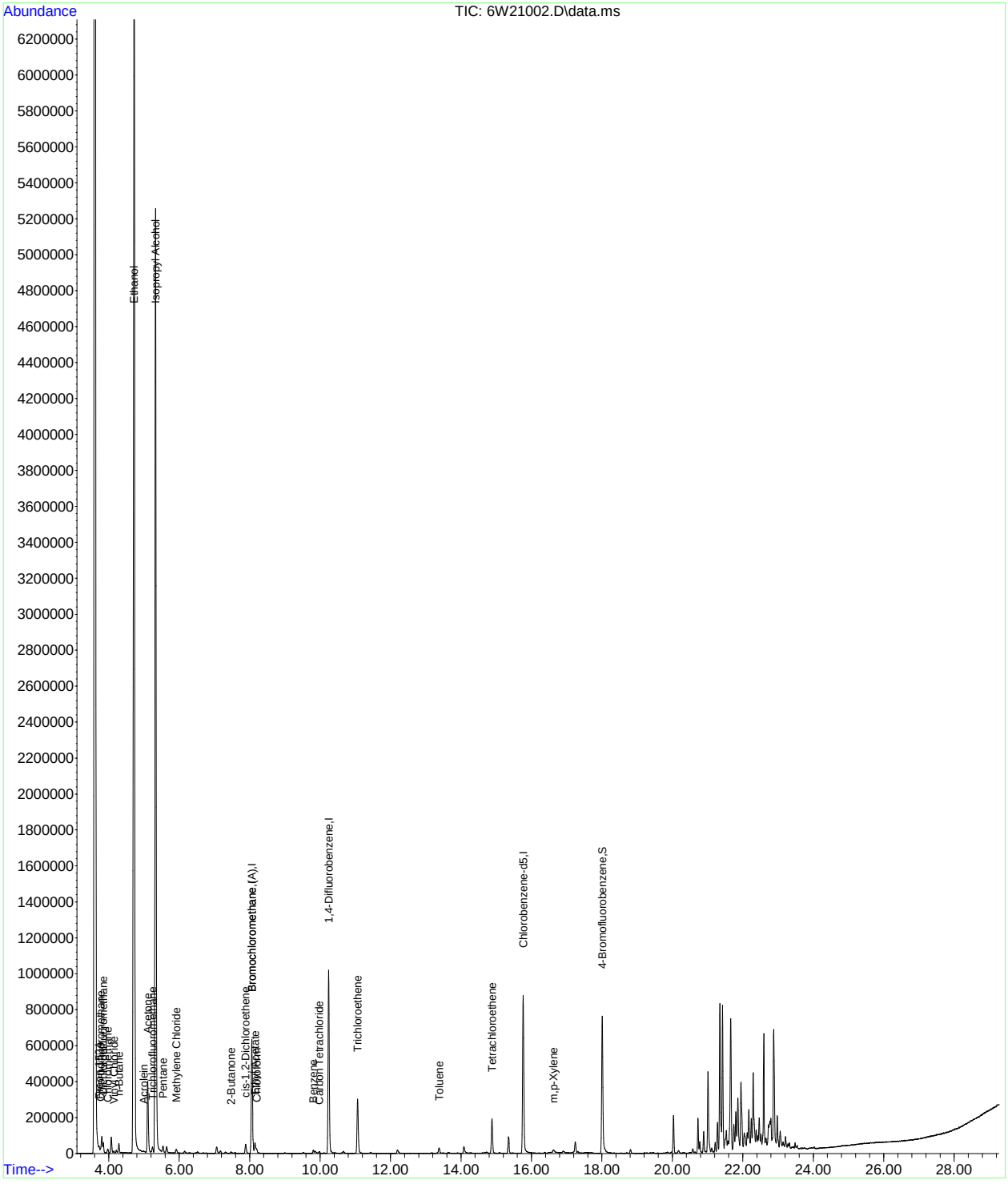
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	293760	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.239	114	1039471	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	399820	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	293760	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	379355	8.64	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery	=	86.40%	
Target Compounds						Qvalue
2) Freon 152A	3.729	65	13527	0.69	ppb(v	92
3) Chlorodifluoromethane	3.766	67	3430	0.47	ppb(v	98
6) Dichlorodifluoromethane	3.846	85	52607	0.65	ppb(v	97
8) Chloromethane	3.968	50	22578	0.85	ppb(v	94
10) Vinyl Chloride	4.145	62	8306	0.28	ppb(v#	96
12) n-Butane	4.292	58	6639	1.08	ppb(v#	90
14) Acrolein	4.996	56	3804	0.26	ppb(v#	84
21) Trichlorofluoromethane	5.240	101	27091	0.33	ppb(v	96
22) Acetone	5.106	58	161335	9.88	ppb(v	96
23) Pentane	5.540	57	3948	0.43	ppb(v	85
25) Isopropyl Alcohol	5.332	45	7900121	118.70	ppb(v	100
28) Methylene Chloride	5.919	84	8901	0.28	ppb(v	98
30) Ethanol	4.720	45	11093252	851.54	ppb(v	98
38) 2-Butanone	7.467	72	3450	0.23	ppb(v	93
40) cis-1,2-Dichloroethene	7.883	61	38161	0.85	ppb(v	94
42) Ethyl Acetate	8.152	61	11698	1.12	ppb(v	80
44) Chloroform	8.201	83	13764	0.19	ppb(v	98
49) Benzene	9.810	78	20001	0.18	ppb(v	97
50) Carbon Tetrachloride	9.975	117	6995	0.10	ppb(v	92
56) Trichloroethene	11.064	95	128391	2.86	ppb(v	99
66) Toluene	13.383	91	28873	0.23	ppb(v	98
72) Tetrachloroethene	14.882	166	76951	1.21	ppb(v	97
79) m,p-Xylene	16.625	91	17425	0.16	ppb(v	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

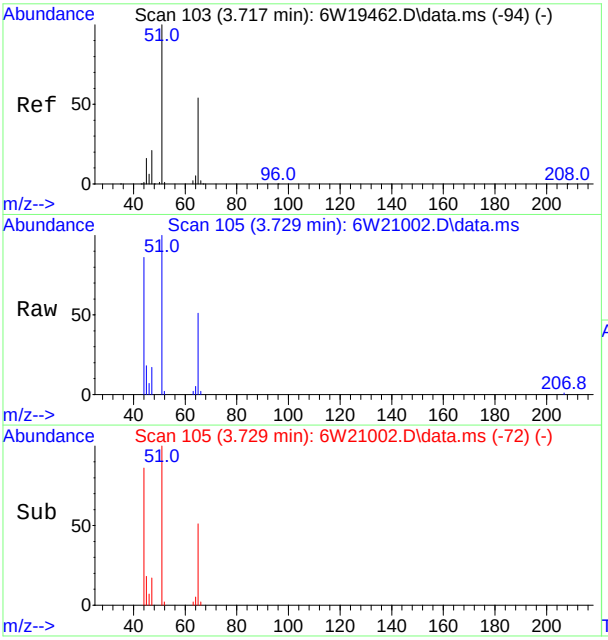
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21002.D
Acq On : 15 Jan 2021 12:01 am
Operator : thomash
Sample : jd18853-2
Misc : MS48294,V6W882,740,,,,1.48
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jan 21 11:13:01 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



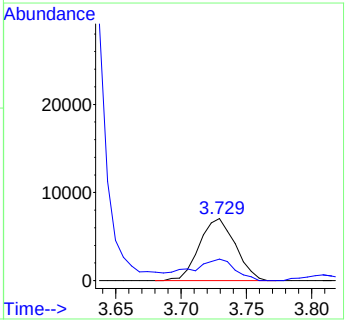
m6w848.M Thu Jan 21 11:45:47 2021 Page: 2

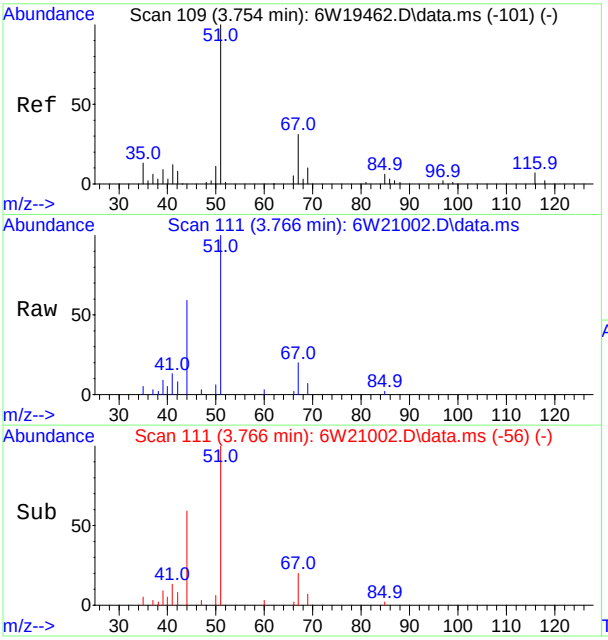


#2
Freon 152A
Concen: 0.69 ppb(v)
RT: 3.729 min Scan# 105
Delta R.T. 0.000 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 65 Resp: 13527

Ion	Ratio	Lower	Upper
65	100		
45	34.8	21.3	39.6

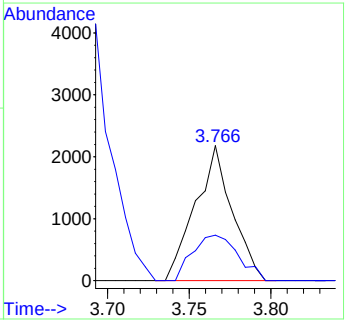


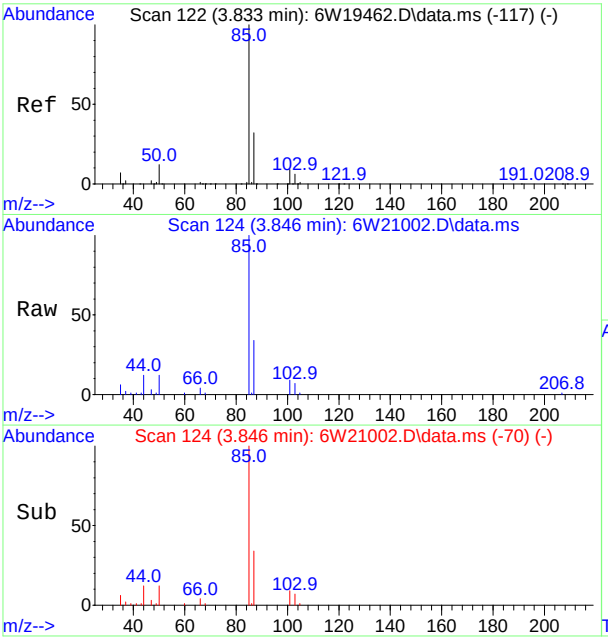


#3
Chlorodifluoromethane
Concen: 0.47 ppb(v)
RT: 3.766 min Scan# 111
Delta R.T. 0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 67 Resp: 3430

Ion	Ratio	Lower	Upper
67	100		
69	33.6	22.9	42.5

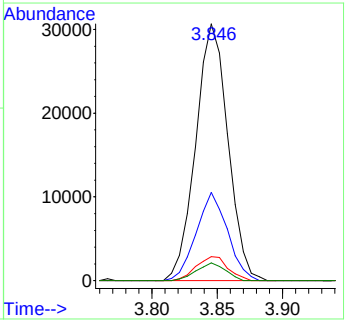


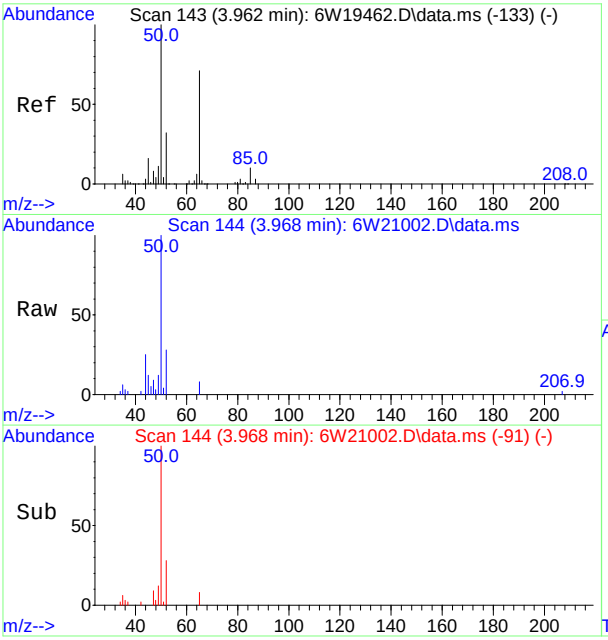


#6
Dichlorodifluoromethane
Concen: 0.65 ppb(v)
RT: 3.846 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 85 Resp: 52607

Ion	Ratio	Lower	Upper
85	100		
87	34.3	22.7	42.1
101	9.4	6.3	11.7
103	6.9	4.1	7.5

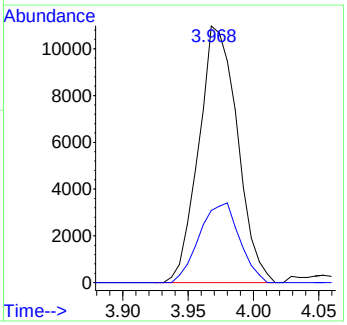


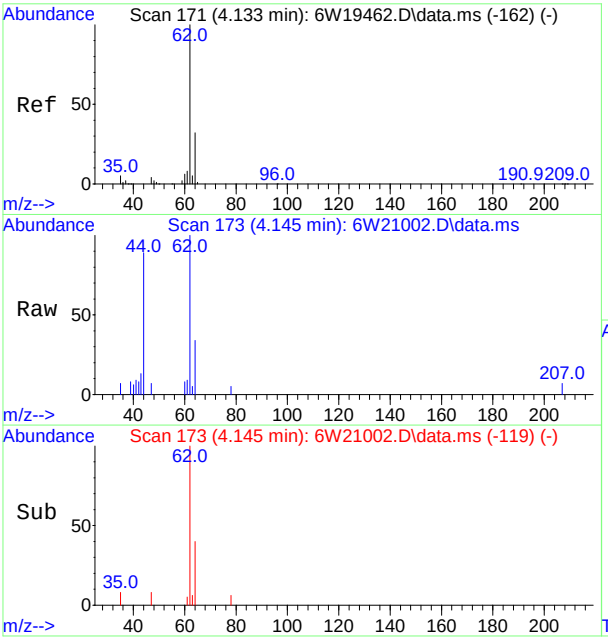


#8
Chloromethane
Concen: 0.85 ppb(v)
RT: 3.968 min Scan# 144
Delta R.T. -0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 50 Resp: 22578

Ion	Ratio	Lower	Upper
50	100		
52	28.1	22.2	41.2

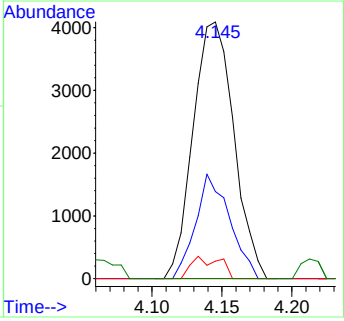


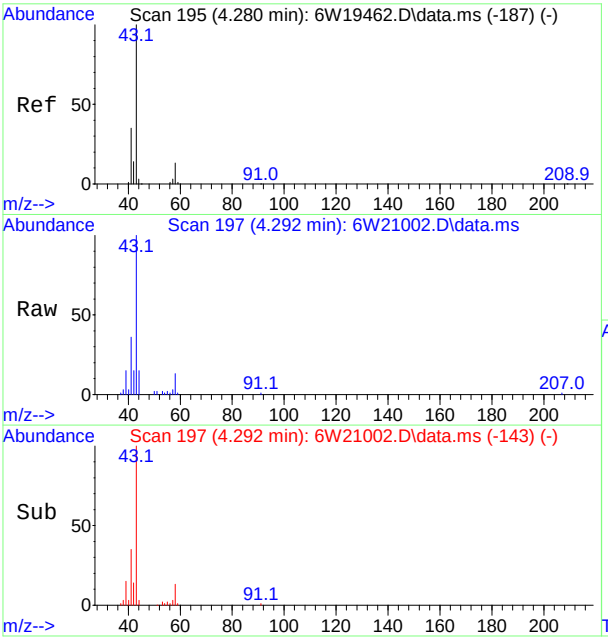


#10
Vinyl Chloride
Concen: 0.28 ppb(v)
RT: 4.145 min Scan# 173
Delta R.T. 0.000 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 62 Resp: 8306

Ion	Ratio	Lower	Upper
62	100		
64	34.0	22.5	41.7
35	6.8	3.1	5.8#
37	0.0	1.1	2.1#

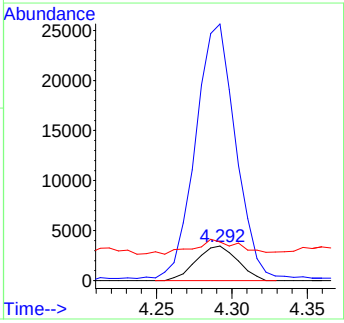


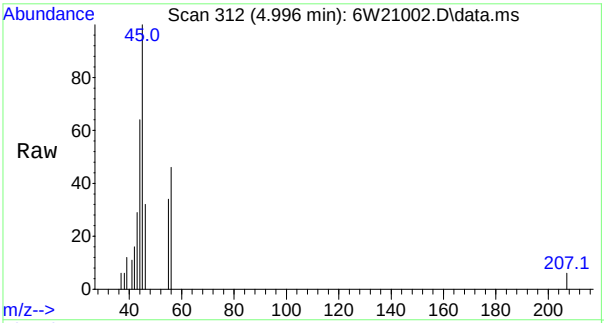


#12
n-Butane
Concen: 1.08 ppb(v)
RT: 4.292 min Scan# 197
Delta R.T. 0.000 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 58 Resp: 6639

Ion	Ratio	Lower	Upper
58	100		
43	743.9	530.8	985.8
44	111.9	22.3	41.5#

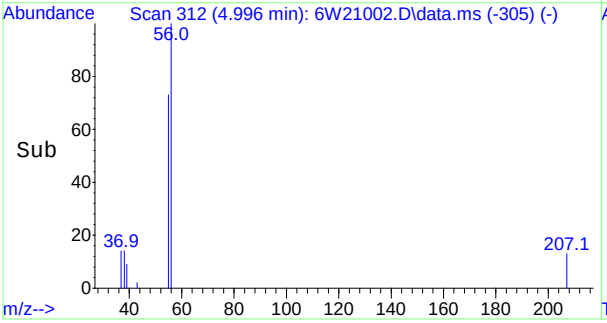


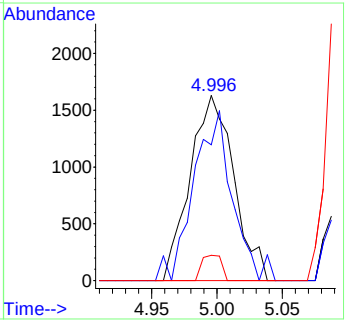


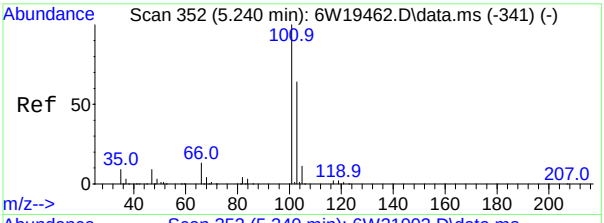
#14
Acrolein
Concen: 0.26 ppb(v)
RT: 4.996 min Scan# 312
Delta R.T. 0.000 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 56 Resp: 3804

Ion	Ratio	Lower	Upper
56	100		
55	80.9	56.9	85.3
37	0.0	11.8	17.6#



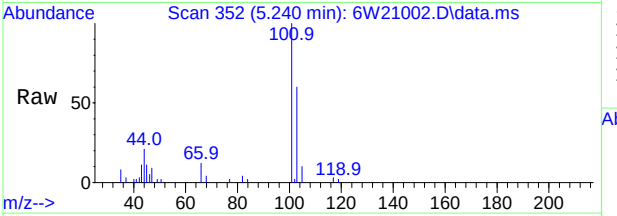


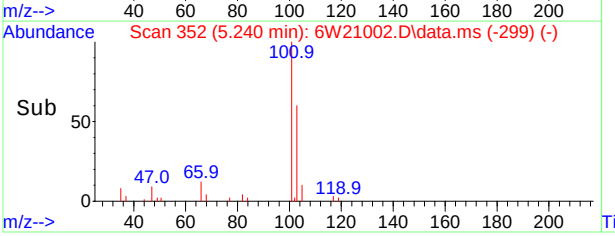


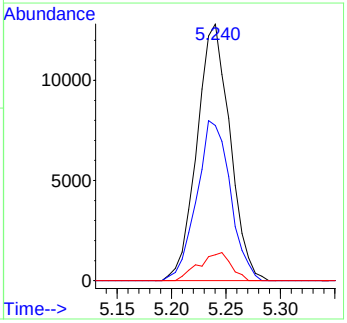
#21
Trichlorofluoromethane
Concen: 0.33 ppb(v)
RT: 5.240 min Scan# 352
Delta R.T. -0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

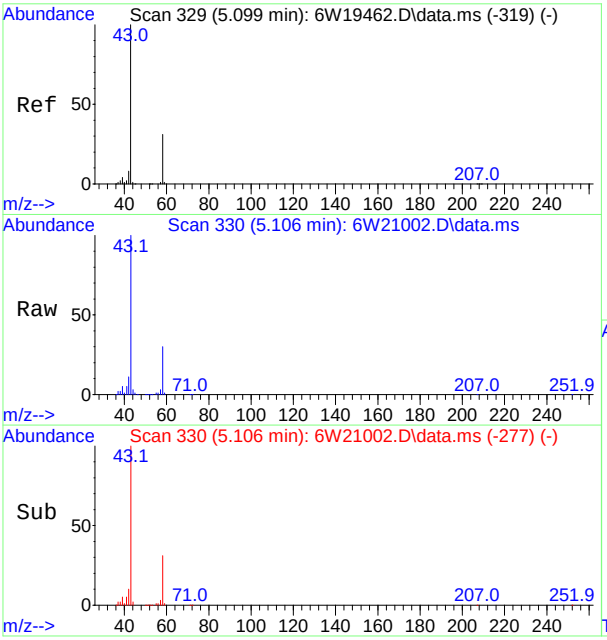
Tgt Ion:101 Resp: 27091

Ion	Ratio	Lower	Upper
101	100		
103	60.4	44.7	83.1
105	10.1	7.3	13.7





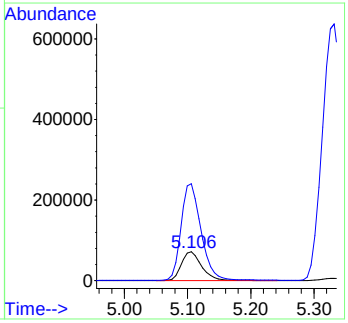


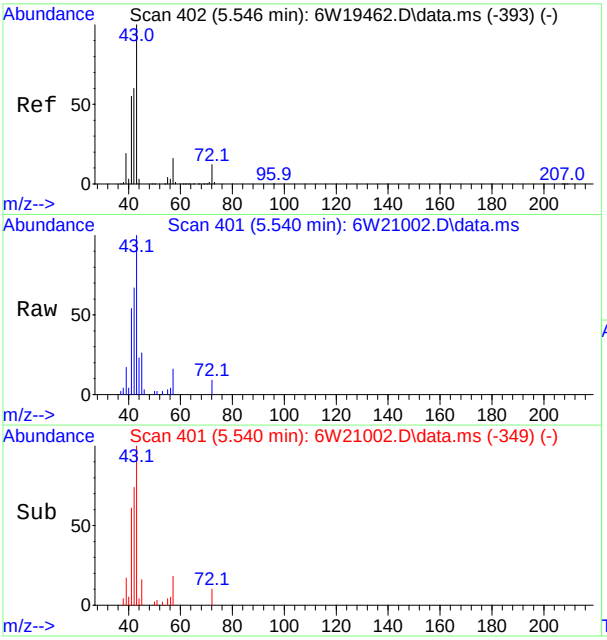


#22
Acetone
Concen: 9.88 ppb(v)
RT: 5.106 min Scan# 330
Delta R.T. -0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 58 Resp: 161335

Ion	Ratio	Lower	Upper
58	100		
43	334.6	228.2	423.8

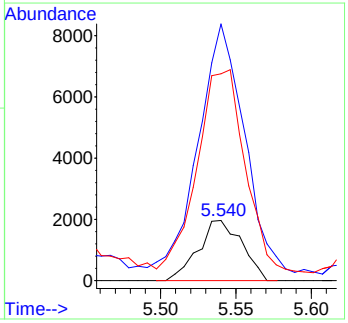


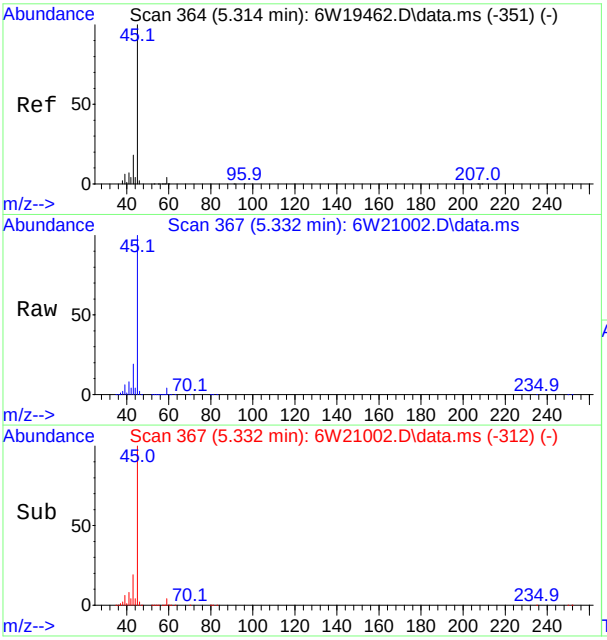


#23
Pentane
Concen: 0.43 ppb(v)
RT: 5.540 min Scan# 401
Delta R.T. -0.012 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 57 Resp: 3948

Ion	Ratio	Lower	Upper
57	100		
42	427.1	256.8	477.0
41	344.2	238.4	442.8

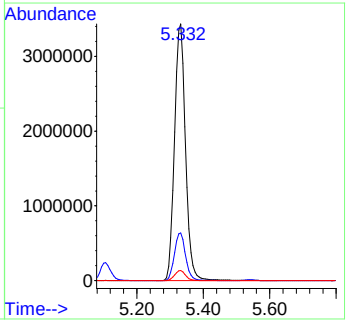


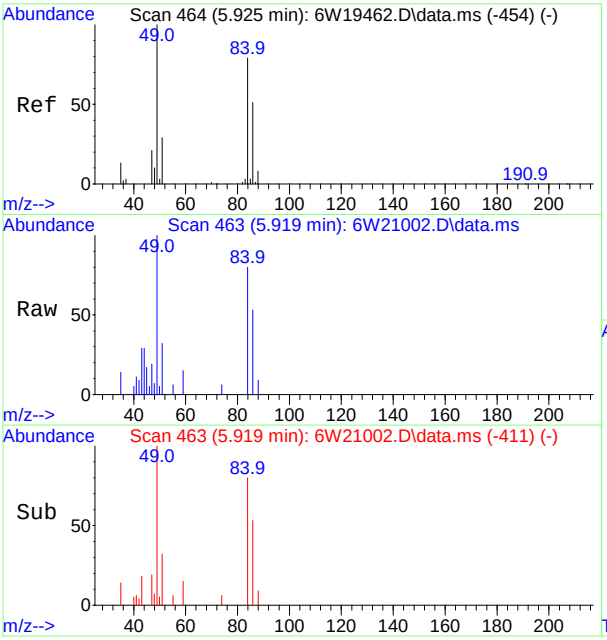


#25
Isopropyl Alcohol
Concen: 118.70 ppb(v)
RT: 5.332 min Scan# 367
Delta R.T. 0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 45 Resp: 7900121

Ion	Ratio	Lower	Upper
45	100		
43	18.6	13.0	24.2
59	4.0	2.9	5.3

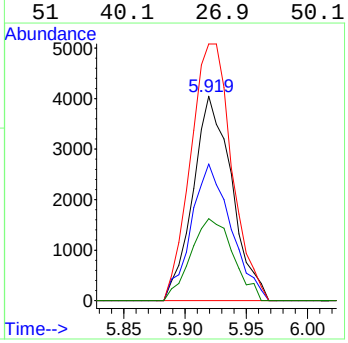


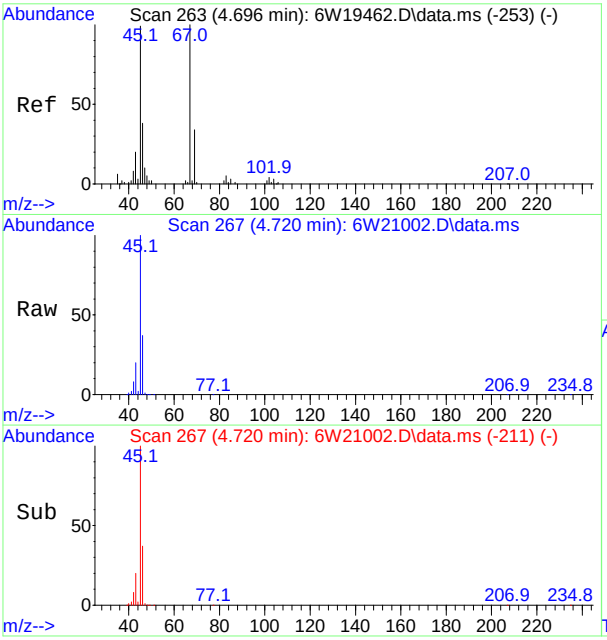


#28
Methylene Chloride
Concen: 0.28 ppb(v)
RT: 5.919 min Scan# 463
Delta R.T. -0.012 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 84 Resp: 8901

Ion	Ratio	Lower	Upper
84	100		
86	66.8	44.9	83.3
49	125.6	89.0	165.2
51	40.1	26.9	50.1

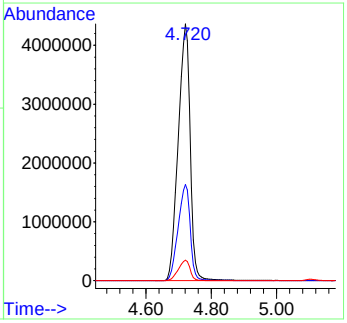


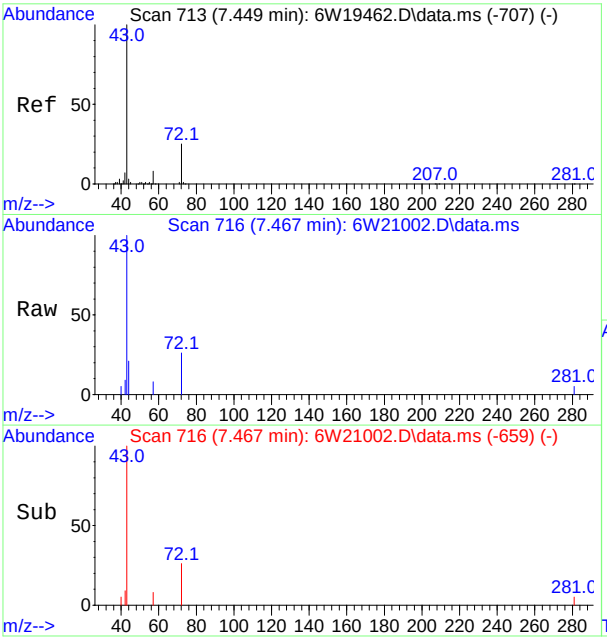


#30
Ethanol
Concen: 851.54 ppb(v)
RT: 4.720 min Scan# 267
Delta R.T. 0.012 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 45 Resp:11093252

Ion	Ratio	Lower	Upper
45	100		
46	37.4	26.9	50.1
42	8.0	6.0	11.2

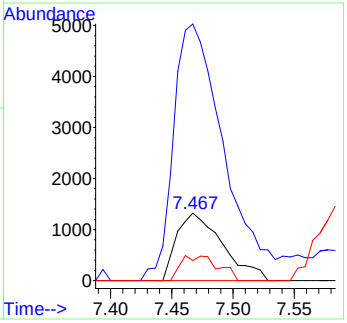


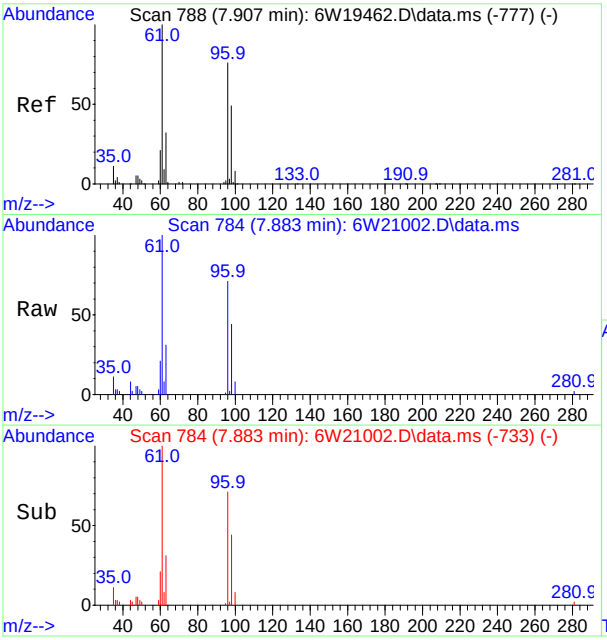


#38
2-Butanone
Concen: 0.23 ppb(v)
RT: 7.467 min Scan# 716
Delta R.T. 0.019 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 72 Resp: 3450

Ion	Ratio	Lower	Upper
72	100		
43	380.7	277.8	516.0
57	30.1	22.3	41.5

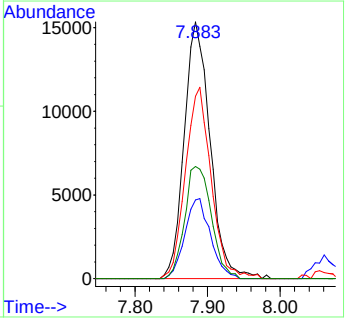


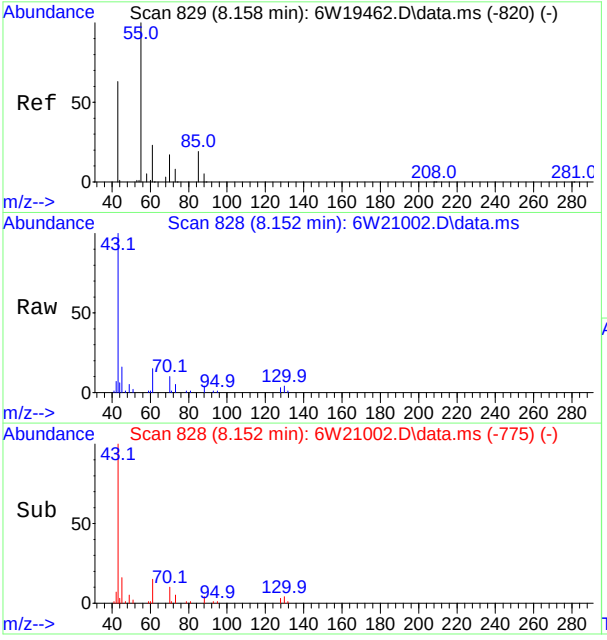


#40
cis-1,2-Dichloroethene
Concen: 0.85 ppb(v)
RT: 7.883 min Scan# 784
Delta R.T. -0.018 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 61 Resp: 38161

Ion	Ratio	Lower	Upper
61	100		
63	30.6	22.6	42.0
96	71.0	53.6	99.6
98	43.7	34.6	64.3

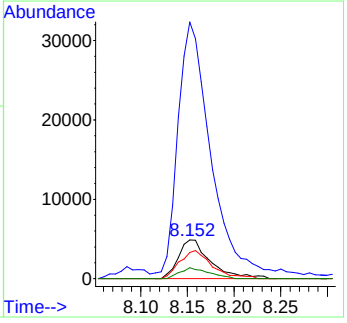


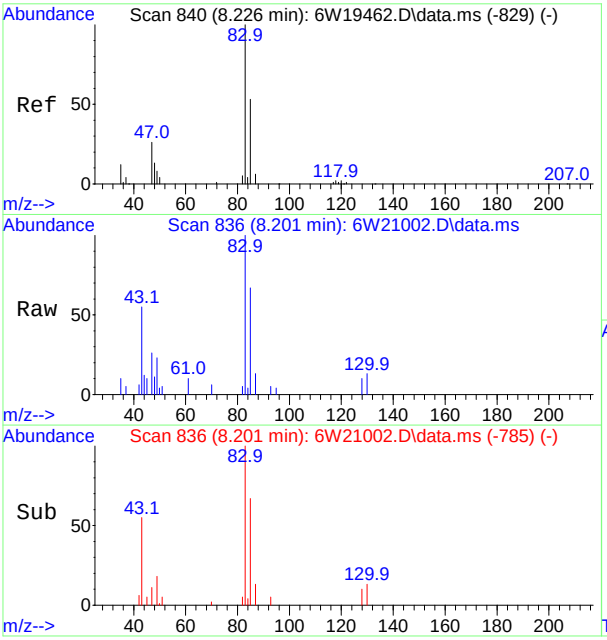


#42
Ethyl Acetate
Concen: 1.12 ppb(v)
RT: 8.152 min Scan# 828
Delta R.T. -0.006 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 61 Resp: 11698

Ion	Ratio	Lower	Upper
61	100		
43	662.7	518.2	962.4
70	67.3	55.3	102.7
88	28.2	21.8	40.6

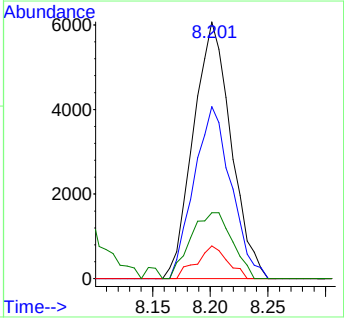


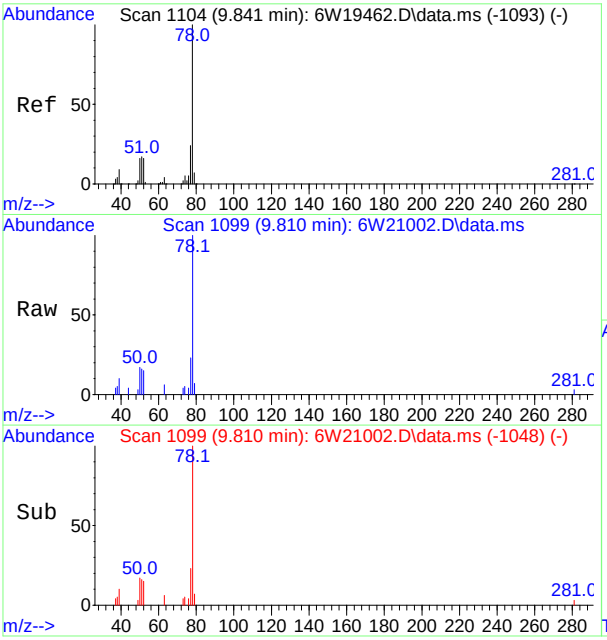


#44
Chloroform
Concen: 0.19 ppb(v)
RT: 8.201 min Scan# 836
Delta R.T. -0.018 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 83 Resp: 13764

Ion	Ratio	Lower	Upper
83	100		
85	67.0	45.8	85.0
87	12.8	7.3	13.7
47	25.7	18.0	33.4

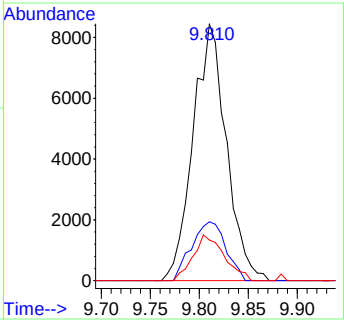


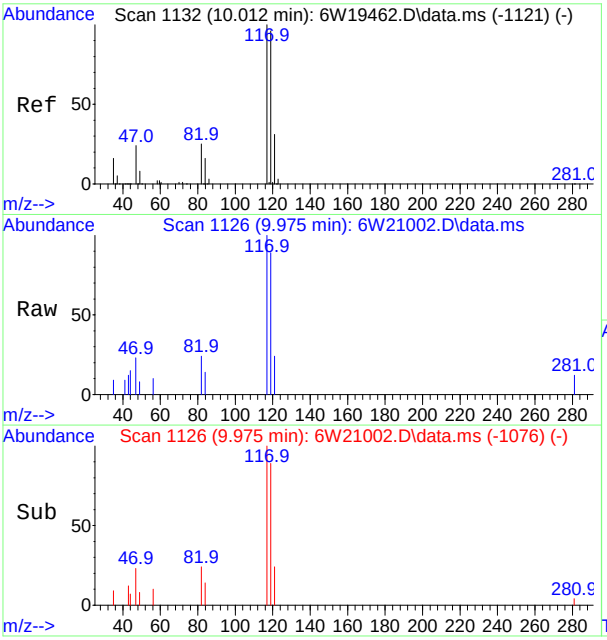


#49
Benzene
Concen: 0.18 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 78 Resp: 20001

Ion	Ratio	Lower	Upper
78	100		
77	22.9	16.7	30.9
51	15.8	12.2	22.6

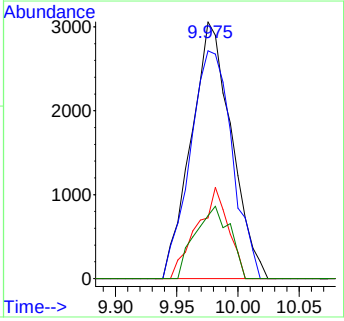


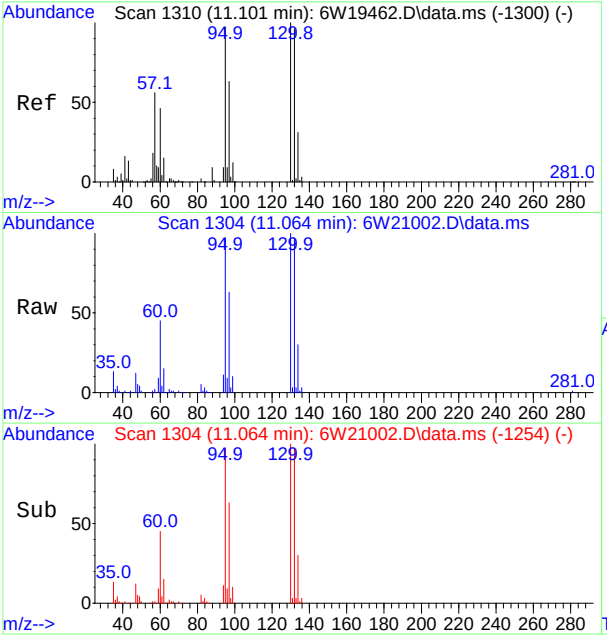


#50
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 9.975 min Scan# 1126
Delta R.T. -0.024 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion:117 Resp: 6995

Ion	Ratio	Lower	Upper
117	100		
119	88.7	67.4	125.2
121	23.6	21.6	40.0
82	24.5	17.4	32.4

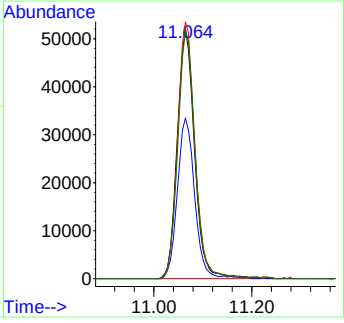


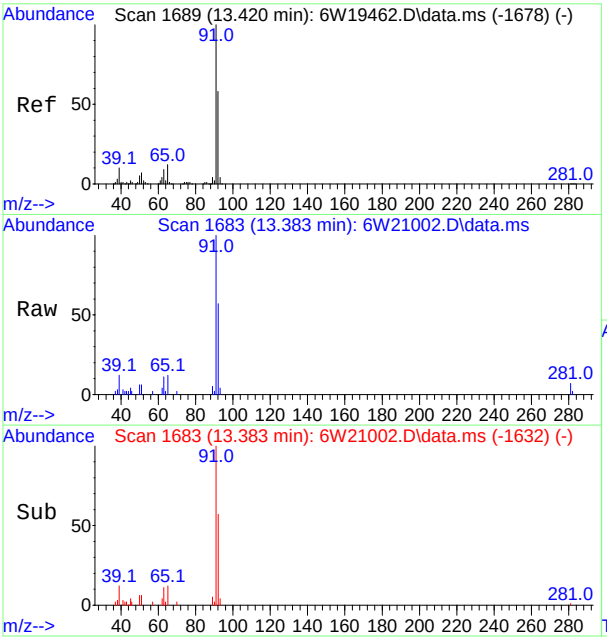


#56
Trichloroethene
Concen: 2.86 ppb(v)
RT: 11.064 min Scan# 1304
Delta R.T. -0.024 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 95 Resp: 128391

Ion	Ratio	Lower	Upper
95	100		
97	64.4	45.5	84.5
130	102.8	72.3	134.3
132	99.8	69.1	128.3

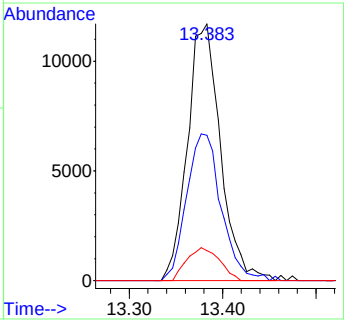


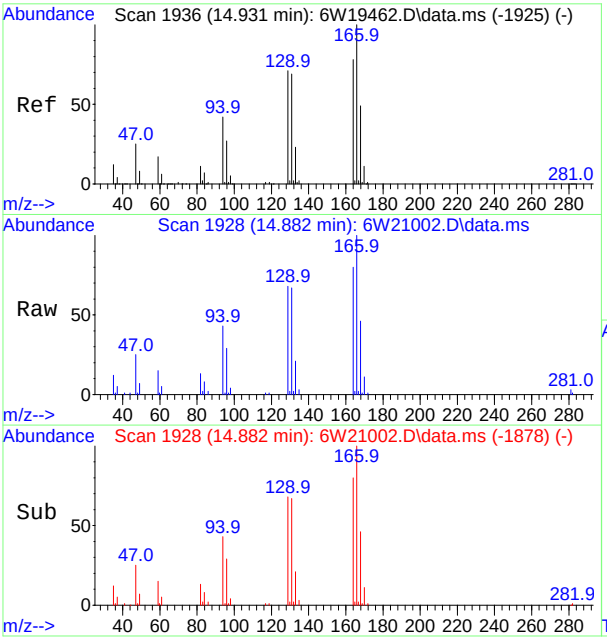


#66
Toluene
Concen: 0.23 ppb(v)
RT: 13.383 min Scan# 1683
Delta R.T. -0.018 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 91 Resp: 28873

Ion	Ratio	Lower	Upper
91	100		
92	56.6	40.9	75.9
65	11.7	8.3	15.3

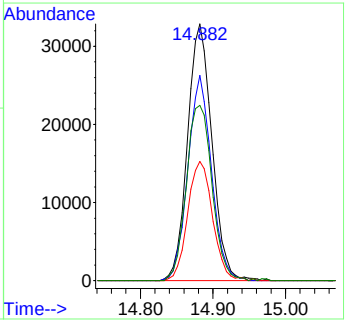


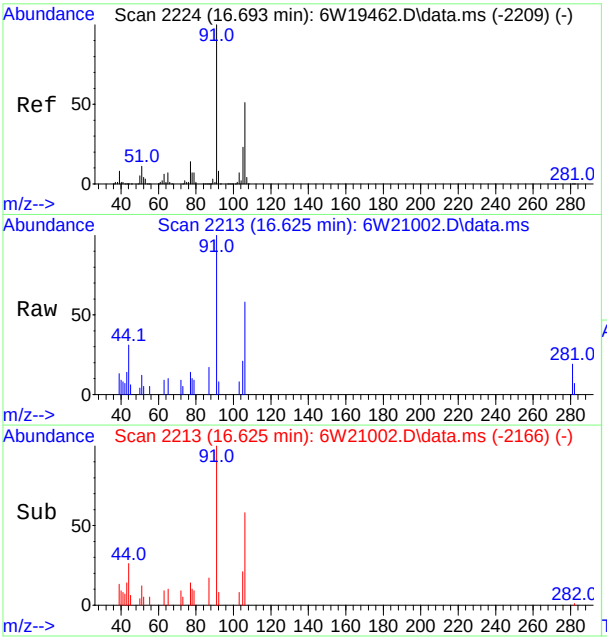


#72
Tetrachloroethene
Concen: 1.21 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion:166 Resp: 76951

Ion	Ratio	Lower	Upper
166	100		
164	79.9	54.7	101.7
168	46.5	34.1	63.3
129	68.3	50.0	92.8

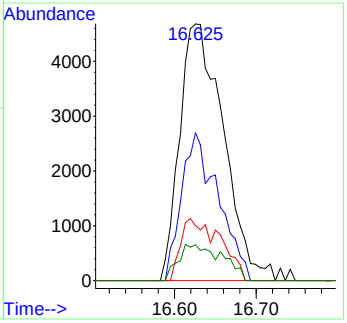




#79
m,p-Xylene
Concen: 0.16 ppb(v)
RT: 16.625 min Scan# 2213
Delta R.T. -0.043 min
Lab File: 6W21002.D
Acq: 15 Jan 2021 12:01 am

Tgt Ion: 91 Resp: 17425

Ion	Ratio	Lower	Upper
91	100		
106	57.5	35.4	65.7
105	21.4	16.2	30.0
77	13.9	9.7	18.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21003.D
Acq On : 15 Jan 2021 12:55 am
Operator : thomash
Sample : jd18853-3
Misc : MS48294,V6W882,400,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 21 11:22:56 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	252316	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.238	114	929058	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	372651	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	252316	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	361039	8.82	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 88.20%			
Target Compounds						Qvalue
2) Freon 152A	3.735	65	9267	0.55	ppb(v	85
3) Chlorodifluoromethane	3.772	67	2377	0.38	ppb(v#	64
4) Propene	3.796	41	13453	0.62	ppb(v	87
6) Dichlorodifluoromethane	3.852	85	42598	0.61	ppb(v	99
8) Chloromethane	3.980	50	12371	0.54	ppb(v	92
12) n-Butane	4.292	58	2814	0.53	ppb(v#	70
14) Acrolein	4.996	56	3673	0.30	ppb(v#	83
17) Acetonitrile	4.892	41	3627	0.16	ppb(v#	89
21) Trichlorofluoromethane	5.240	101	19903	0.29	ppb(v	99
22) Acetone	5.106	58	143585	10.24	ppb(v	87
23) Pentane	5.546	57	2777	0.35	ppb(v	90
25) Isopropyl Alcohol	5.326	45	10198571	178.41	ppb(v	99
27) Freon 113	6.158	101	11701	0.18	ppb(v	97
28) Methylene Chloride	5.932	84	8394	0.31	ppb(v	95
30) Ethanol	4.708	45	2547583	227.68	ppb(v	100
34) tert-Butyl Alcohol	5.883	59	8871	0.15	ppb(v#	80
36) Vinyl Acetate	7.173	43	13521	0.19	ppb(v	94
38) 2-Butanone	7.461	72	4164	0.32	ppb(v	95
40) cis-1,2-Dichloroethene	7.889	61	8251	0.22	ppb(v	84
42) Ethyl Acetate	8.140	61	47793	5.31	ppb(v	94
44) Chloroform	8.201	83	7624	0.12	ppb(v	96
46) Tetrahydrofuran	8.703	72	1573	0.12	ppb(v	81
49) Benzene	9.810	78	15177	0.16	ppb(v	97
56) Trichloroethene	11.070	95	22130	0.55	ppb(v	97
64) 4-Methyl-2-pentanone	12.233	58	2503	0.11	ppb(v	98
66) Toluene	13.377	91	19783	0.18	ppb(v	99
72) Tetrachloroethene	14.882	166	92193	1.62	ppb(v	97
79) m,p-Xylene	16.625	91	11040	0.11	ppb(v	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

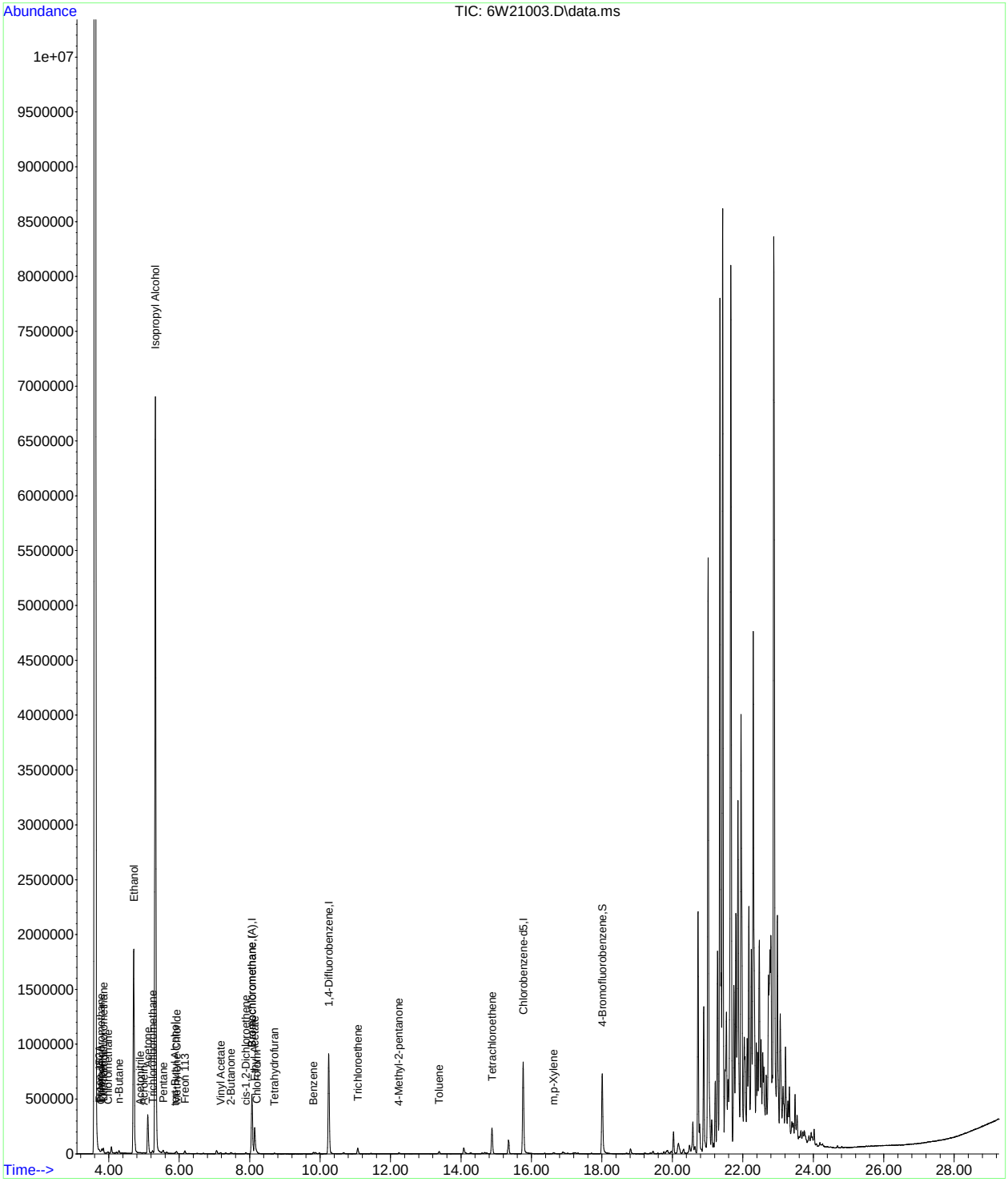
7.1.4

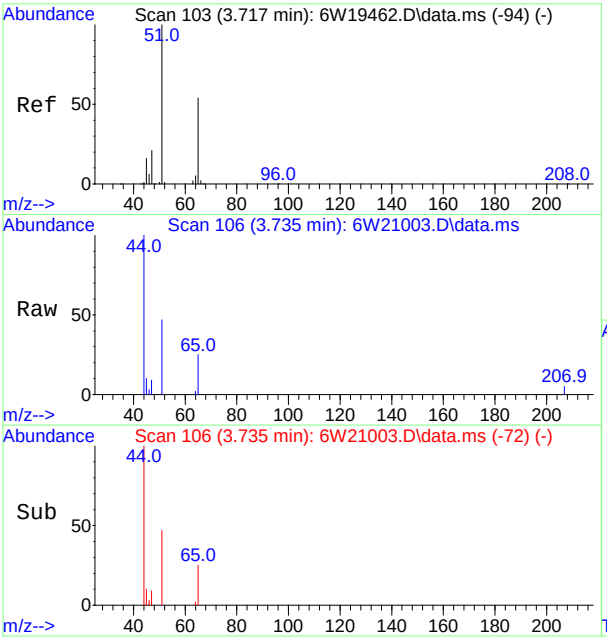
7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21003.D
Acq On : 15 Jan 2021 12:55 am
Operator : thomash
Sample : jd18853-3
Misc : MS48294,V6W882,400,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 21 11:22:56 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

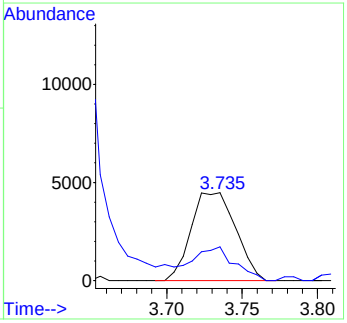


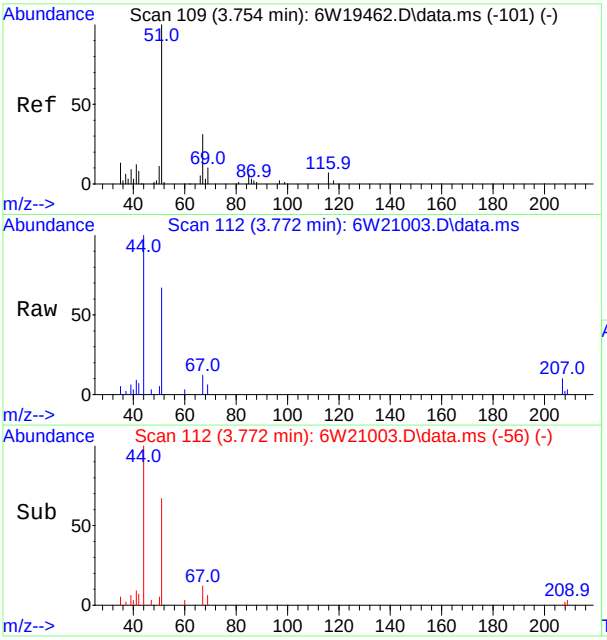


#2
Freon 152A
Concen: 0.55 ppb(v)
RT: 3.735 min Scan# 106
Delta R.T. 0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 65 Resp: 9267

Ion	Ratio	Lower	Upper
65	100		
45	38.4	21.3	39.6

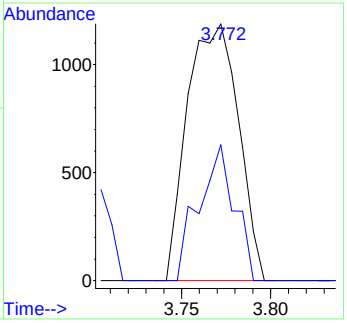


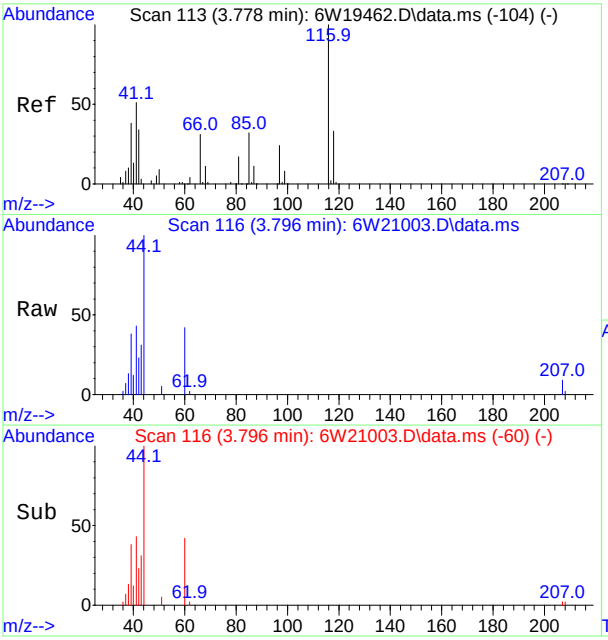


#3
Chlorodifluoromethane
Concen: 0.38 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. 0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 67 Resp: 2377

Ion	Ratio	Lower	Upper
67	100		
69	52.9	22.9	42.5#

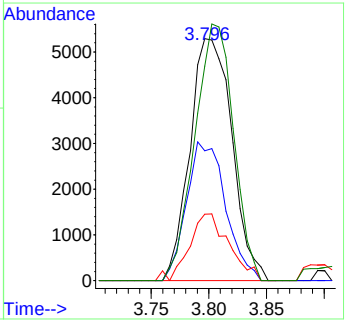


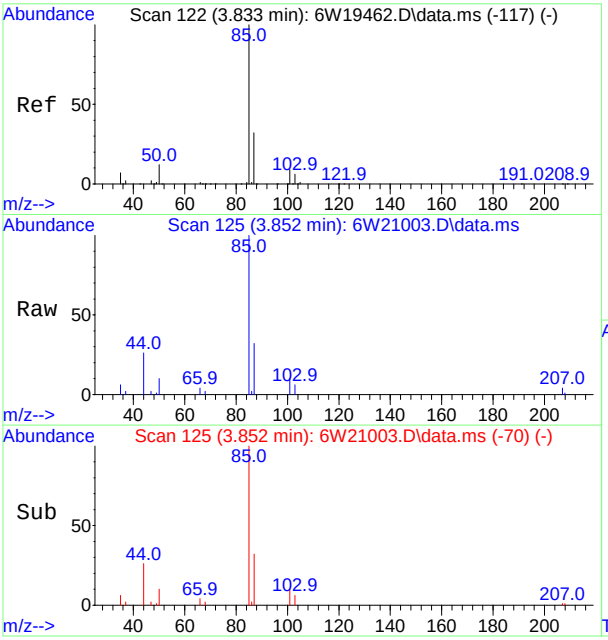


#4
Propene
Concen: 0.62 ppb(v)
RT: 3.796 min Scan# 116
Delta R.T. 0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 41 Resp: 13453

Ion	Ratio	Lower	Upper
41	100		
42	53.7	46.3	85.9
40	27.5	18.3	34.1
39	88.6	52.8	98.2

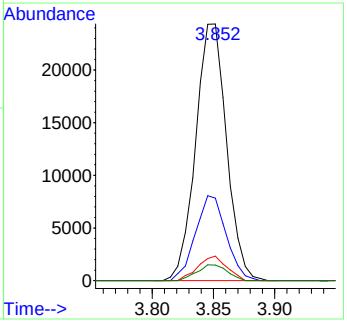


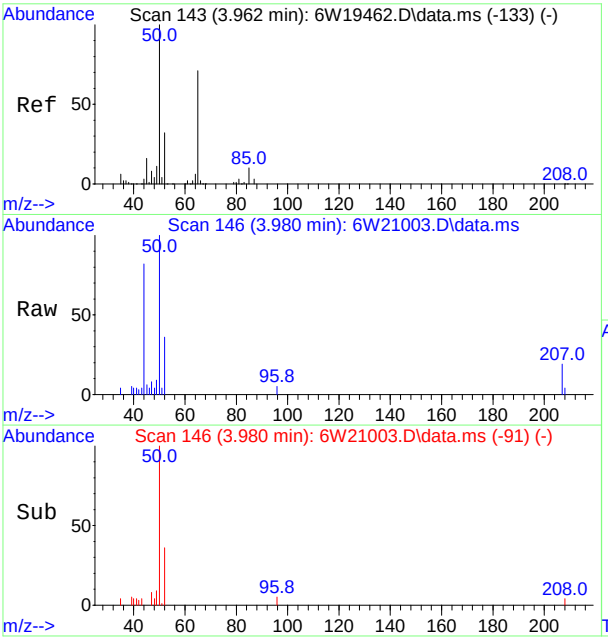


#6
Dichlorodifluoromethane
Concen: 0.61 ppb(v)
RT: 3.852 min Scan# 125
Delta R.T. 0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 85 Resp: 42598

Ion	Ratio	Lower	Upper
85	100		
87	32.2	22.7	42.1
101	9.6	6.3	11.7
103	6.1	4.1	7.5

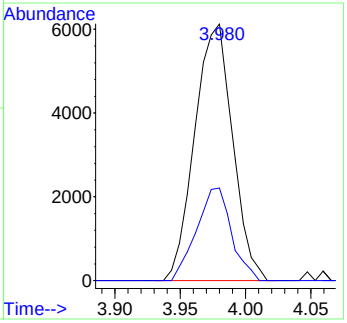


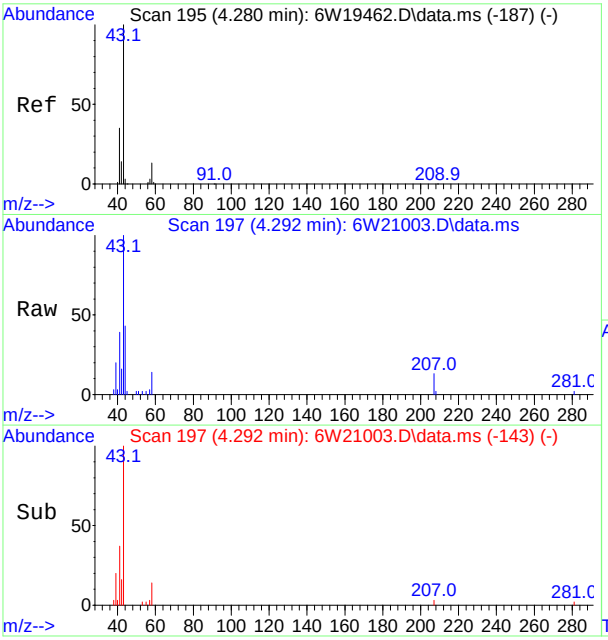


#8
Chloromethane
Concen: 0.54 ppb(v)
RT: 3.980 min Scan# 146
Delta R.T. 0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 50 Resp: 12371

Ion	Ratio	Lower	Upper
50	100		
52	36.0	22.2	41.2

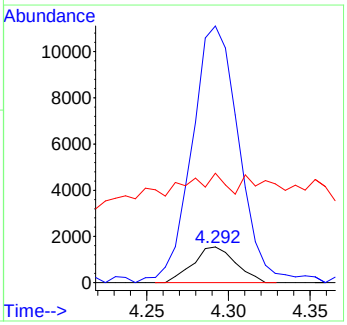


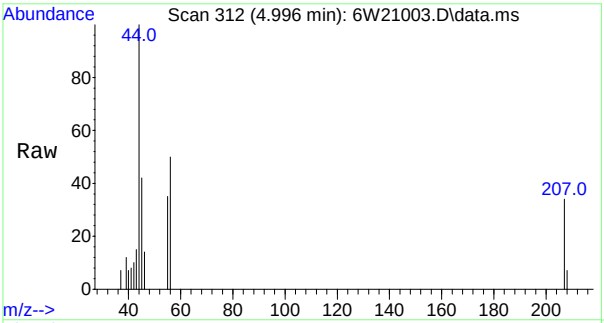


#12
n-Butane
Concen: 0.53 ppb(v)
RT: 4.292 min Scan# 197
Delta R.T. 0.000 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 58 Resp: 2814

Ion	Ratio	Lower	Upper
58	100		
43	718.8	530.8	985.8
44	306.6	22.3	41.5#

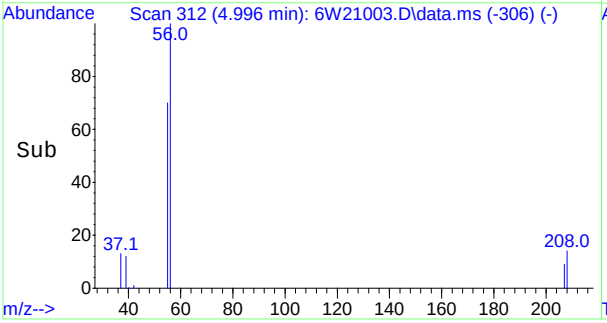


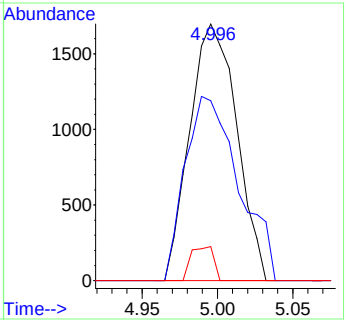


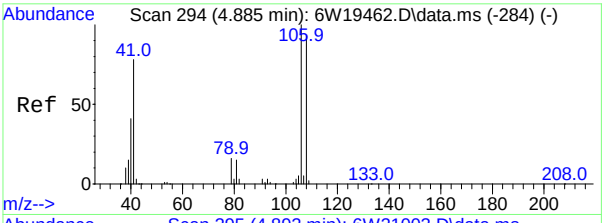
#14
Acrolein
Concen: 0.30 ppb(v)
RT: 4.996 min Scan# 312
Delta R.T. 0.000 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 56 Resp: 3673

Ion	Ratio	Lower	Upper
56	100		
55	82.1	56.9	85.3
37	0.0	11.8	17.6#



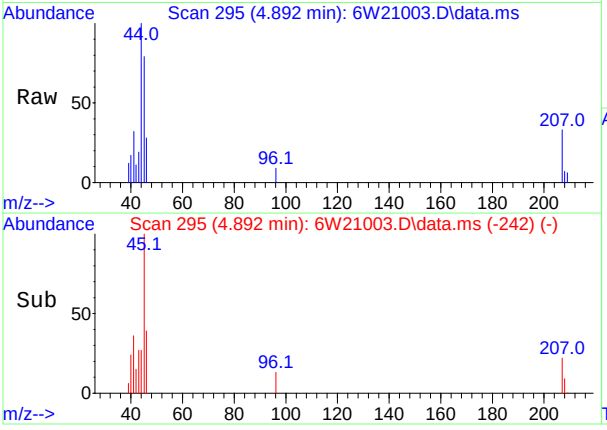


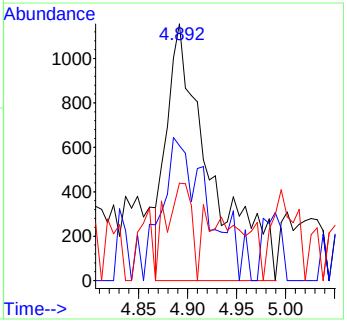


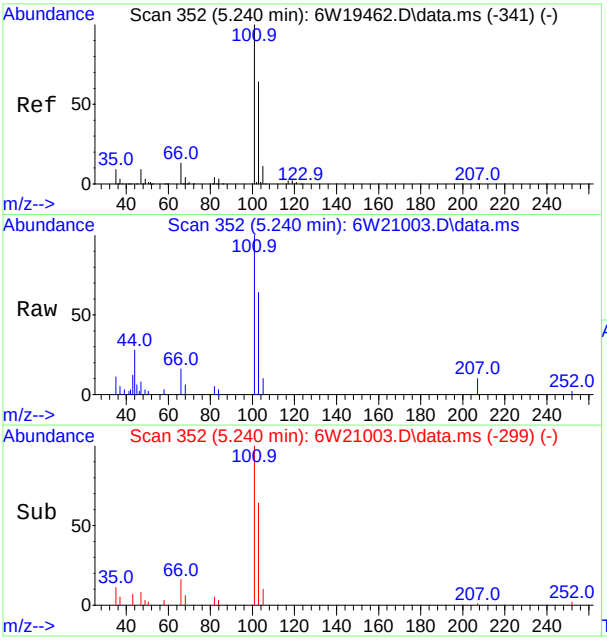
#17
Acetonitrile
Concen: 0.16 ppb(v)
RT: 4.892 min Scan# 295
Delta R.T. -0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 41 Resp: 3627

Ion	Ratio	Lower	Upper
41	100		
40	52.6	36.6	68.0
39	38.0	13.9	25.9#



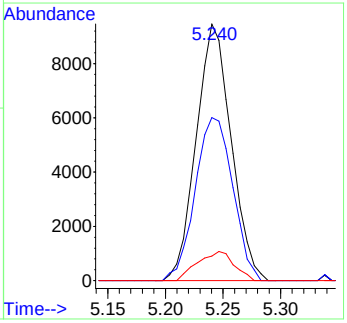


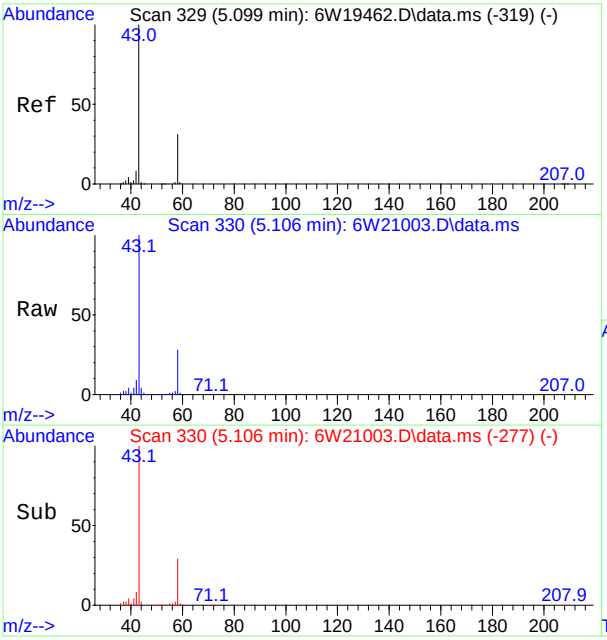


#21
Trichlorofluoromethane
Concen: 0.29 ppb(v)
RT: 5.240 min Scan# 352
Delta R.T. -0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion:101 Resp: 19903

Ion	Ratio	Lower	Upper
101	100		
103	63.5	44.7	83.1
105	9.6	7.3	13.7

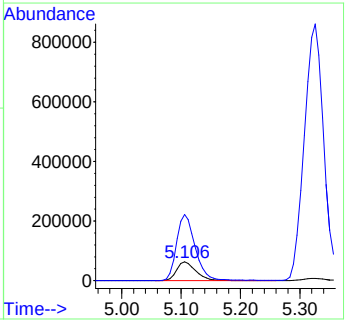


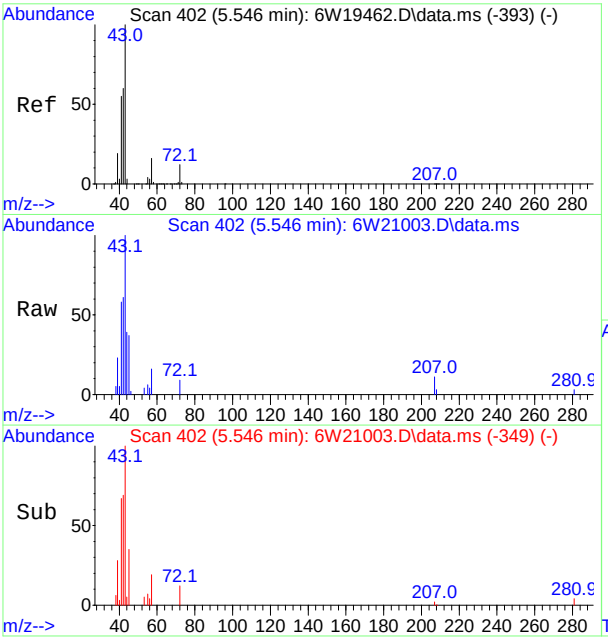


#22
Acetone
Concen: 10.24 ppb(v)
RT: 5.106 min Scan# 330
Delta R.T. -0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 58 Resp: 143585

Ion	Ratio	Lower	Upper
58	100		
43	353.0	228.2	423.8

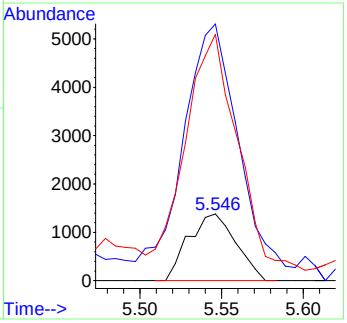


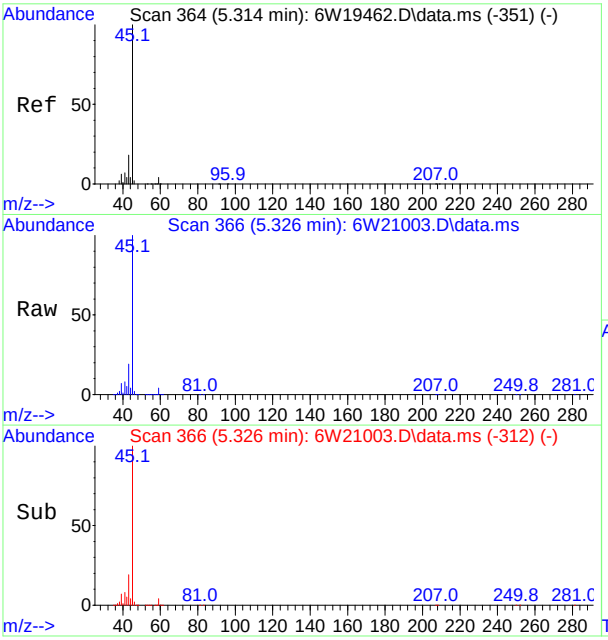


#23
Pentane
Concen: 0.35 ppb(v)
RT: 5.546 min Scan# 402
Delta R.T. -0.006 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 57 Resp: 2777

Ion	Ratio	Lower	Upper
57	100		
42	384.1	256.8	477.0
41	368.4	238.4	442.8

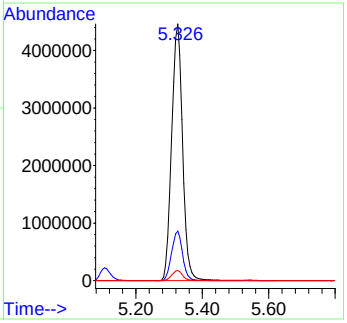


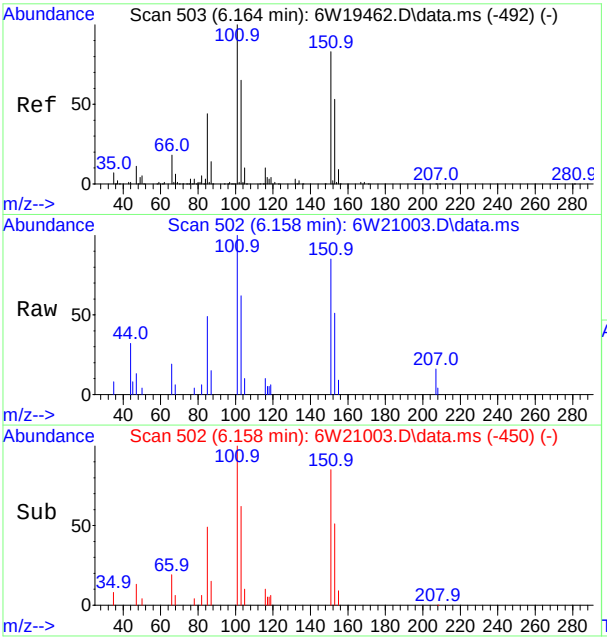


#25
Isopropyl Alcohol
Concen: 178.41 ppb(v)
RT: 5.326 min Scan# 366
Delta R.T. 0.000 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 45 Resp:10198571

Ion	Ratio	Lower	Upper
45	100		
43	19.3	13.0	24.2
59	4.0	2.9	5.3

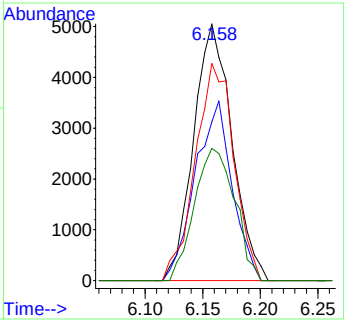


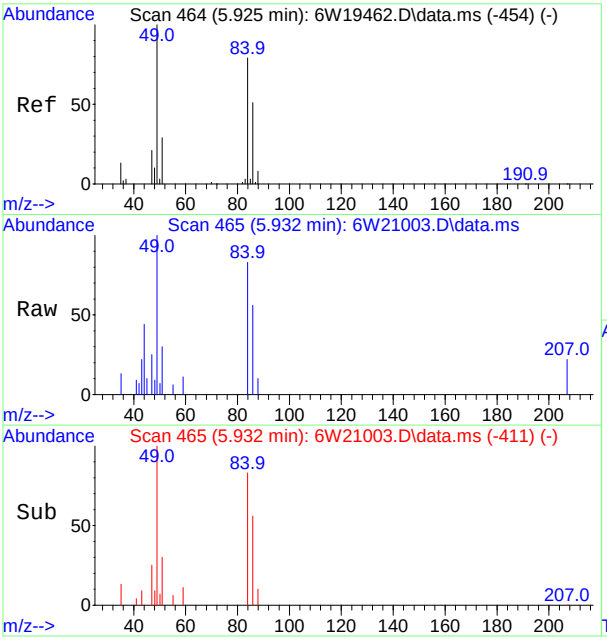


#27
Freon 113
Concen: 0.18 ppb(v)
RT: 6.158 min Scan# 502
Delta R.T. -0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion:101 Resp: 11701

Ion	Ratio	Lower	Upper
101	100		
103	61.8	45.3	84.1
151	84.6	57.9	107.5
153	51.5	37.5	69.6

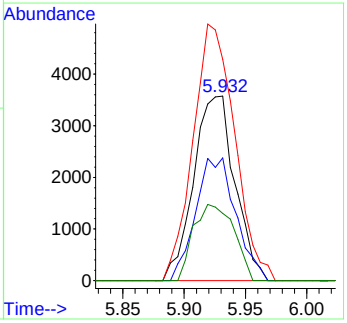


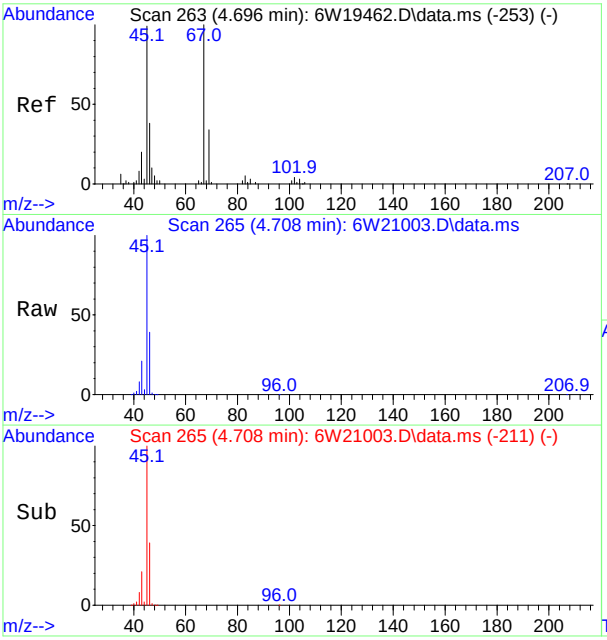


#28
Methylene Chloride
Concen: 0.31 ppb(v)
RT: 5.932 min Scan# 465
Delta R.T. 0.000 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 84 Resp: 8394

Ion	Ratio	Lower	Upper
84	100		
86	66.6	44.9	83.3
49	120.0	89.0	165.2
51	36.5	26.9	50.1

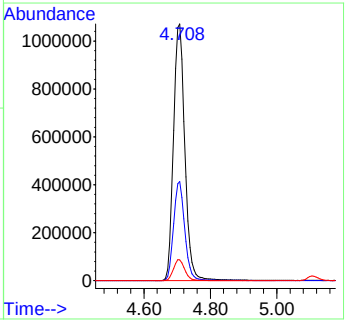


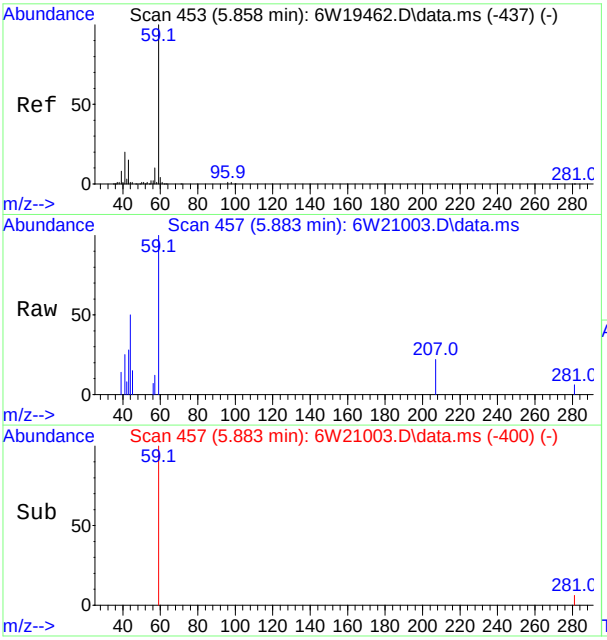


#30
Ethanol
Concen: 227.68 ppb(v)
RT: 4.708 min Scan# 265
Delta R.T. 0.000 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 45 Resp: 2547583

Ion	Ratio	Lower	Upper
45	100		
46	38.6	26.9	50.1
42	8.1	6.0	11.2

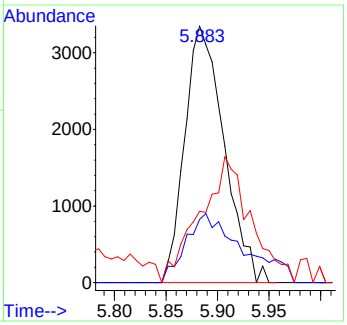


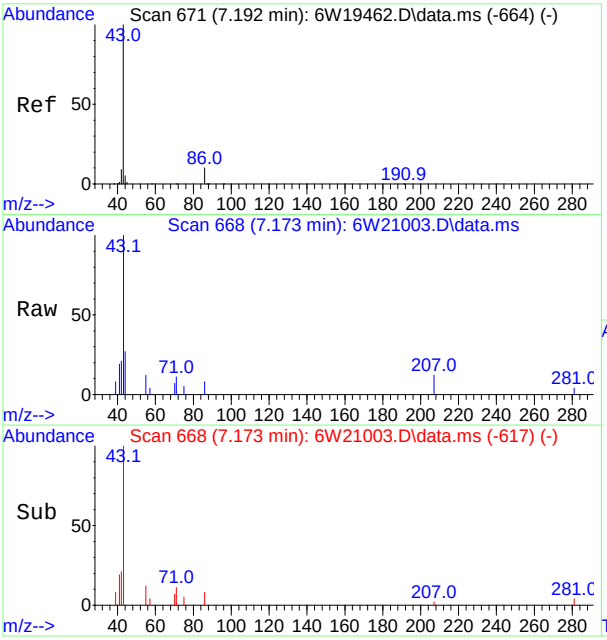


#34
tert-Butyl Alcohol
Concen: 0.15 ppb(v)
RT: 5.883 min Scan# 457
Delta R.T. 0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 59 Resp: 8871

Ion	Ratio	Lower	Upper
59	100		
41	24.6	13.8	25.6
43	27.8	10.4	19.2#

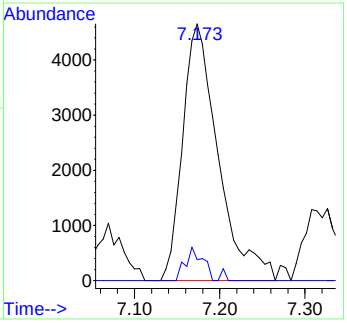


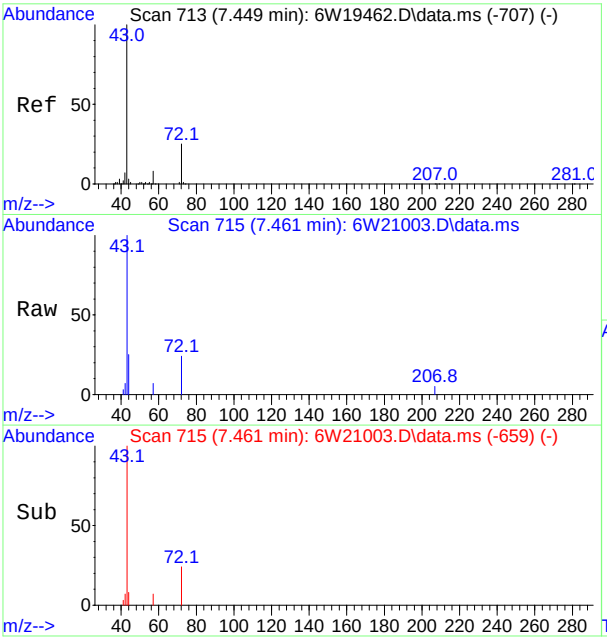


#36
Vinyl Acetate
Concen: 0.19 ppb(v)
RT: 7.173 min Scan# 668
Delta R.T. -0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 43 Resp: 13521

Ion	Ratio	Lower	Upper
43	100		
86	8.1	7.2	13.4

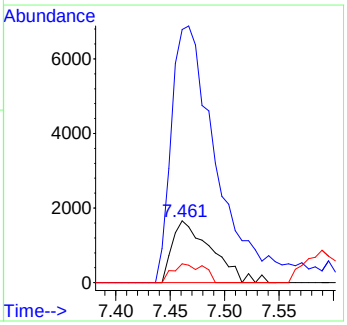


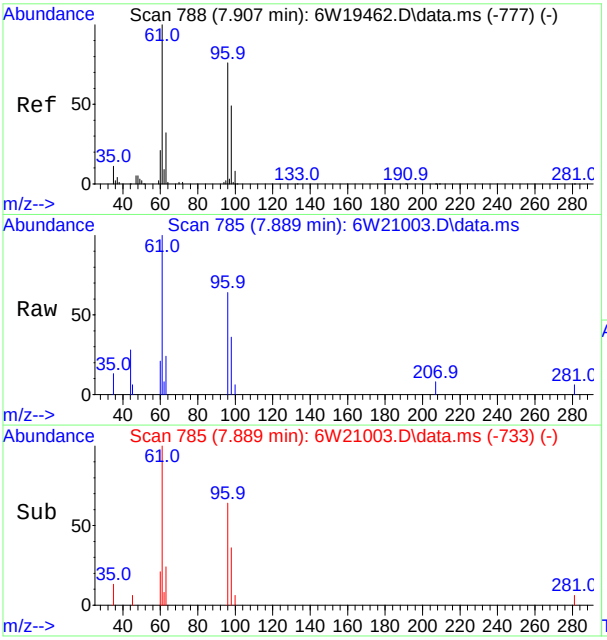


#38
2-Butanone
Concen: 0.32 ppb(v)
RT: 7.461 min Scan# 715
Delta R.T. 0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 72 Resp: 4164

Ion	Ratio	Lower	Upper
72	100		
43	410.0	277.8	516.0
57	30.3	22.3	41.5

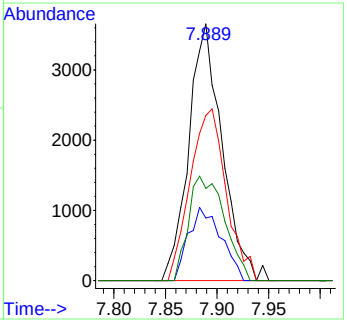


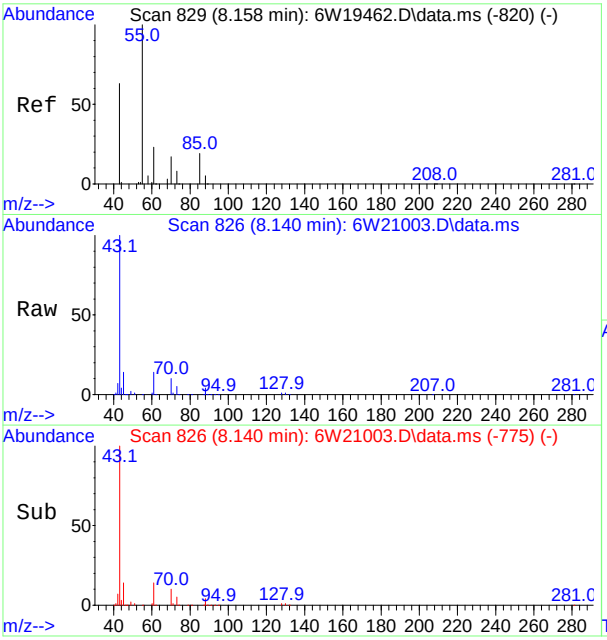


#40
cis-1,2-Dichloroethene
Concen: 0.22 ppb(v)
RT: 7.889 min Scan# 785
Delta R.T. -0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 61 Resp: 8251

Ion	Ratio	Lower	Upper
61	100		
63	24.3	22.6	42.0
96	64.4	53.6	99.6
98	35.9	34.6	64.3

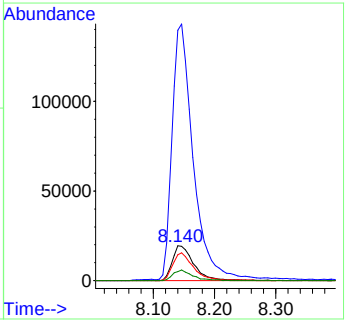


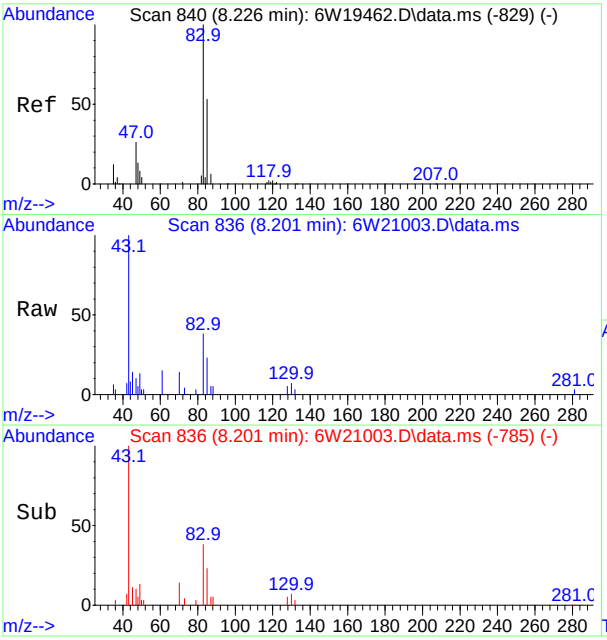


#42
Ethyl Acetate
Concen: 5.31 ppb(v)
RT: 8.140 min Scan# 826
Delta R.T. -0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 61 Resp: 47793

Ion	Ratio	Lower	Upper
61	100		
43	720.1	518.2	962.4
70	74.9	55.3	102.7
88	26.1	21.8	40.6

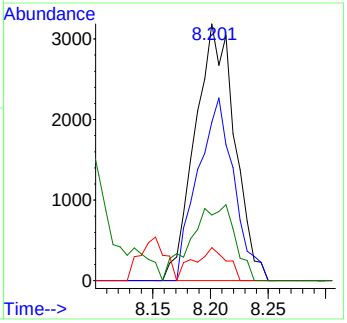


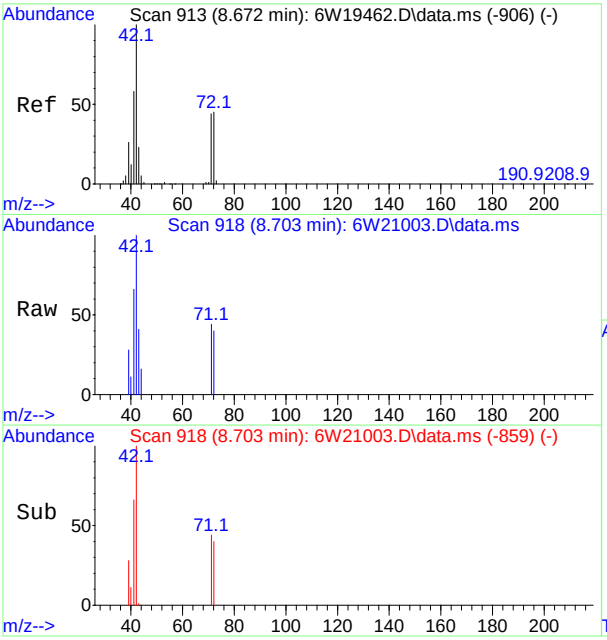


#44
Chloroform
Concen: 0.12 ppb(v)
RT: 8.201 min Scan# 836
Delta R.T. -0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 83 Resp: 7624

Ion	Ratio	Lower	Upper
83	100		
85	61.7	45.8	85.0
87	12.9	7.3	13.7
47	25.5	18.0	33.4

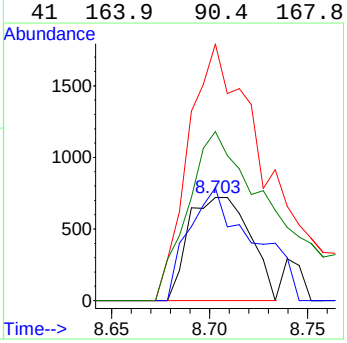


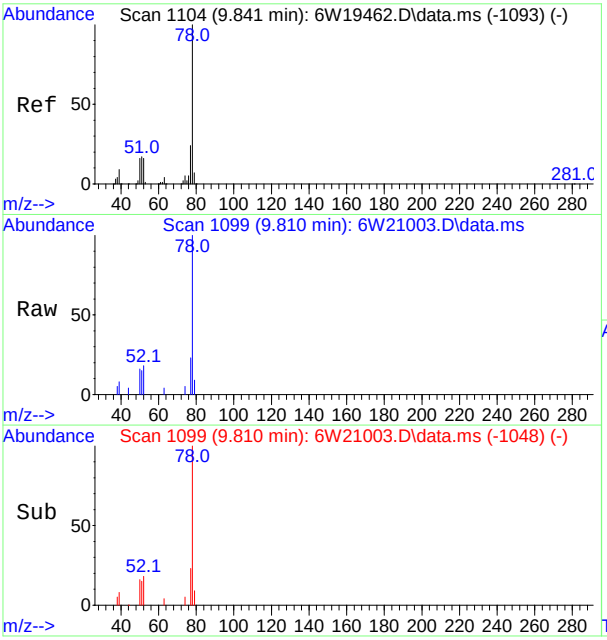


#46
Tetrahydrofuran
Concen: 0.12 ppb(v)
RT: 8.703 min Scan# 918
Delta R.T. 0.031 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 72 Resp: 1573

Ion	Ratio	Lower	Upper
72	100		
71	109.2	68.3	126.9
42	249.0	155.6	289.0
41	163.9	90.4	167.8

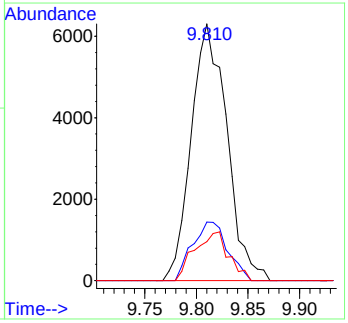


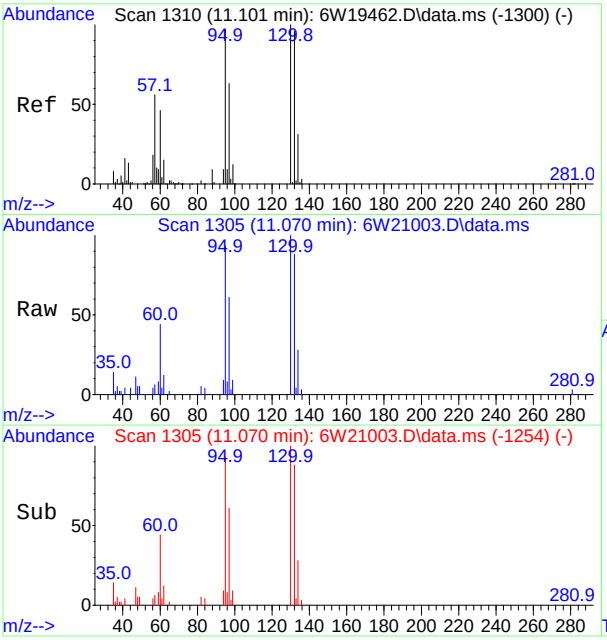


#49
Benzene
Concen: 0.16 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 78 Resp: 15177

Ion	Ratio	Lower	Upper
78	100		
77	22.8	16.7	30.9
51	15.2	12.2	22.6

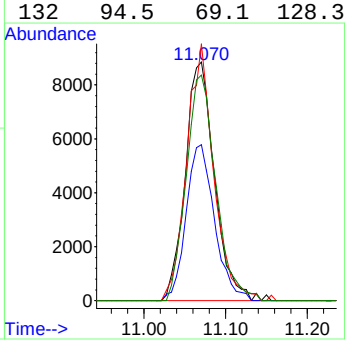


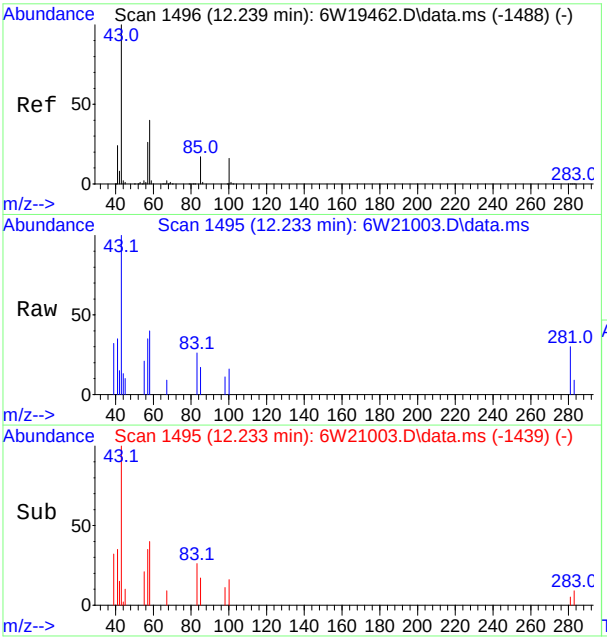


#56
Trichloroethene
Concen: 0.55 ppb(v)
RT: 11.070 min Scan# 1305
Delta R.T. -0.018 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 95 Resp: 22130

Ion	Ratio	Lower	Upper
95	100		
97	65.4	45.5	84.5
130	107.6	72.3	134.3
132	94.5	69.1	128.3

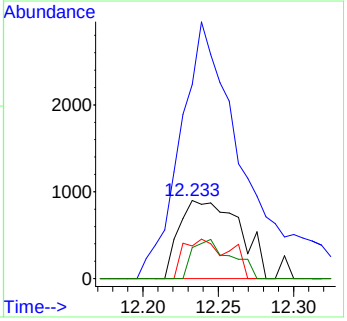


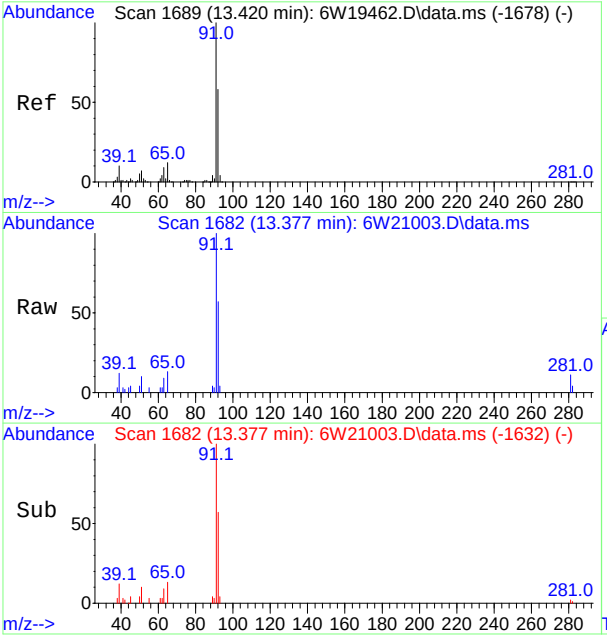


#64
4-Methyl-2-pentanone
Concen: 0.11 ppb(v)
RT: 12.233 min Scan# 1495
Delta R.T. 0.012 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 58 Resp: 2503

Ion	Ratio	Lower	Upper
58	100		
43	248.8	176.5	327.7
85	41.8	31.5	58.5
100	40.0	27.9	51.7

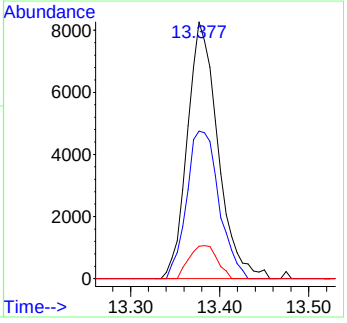


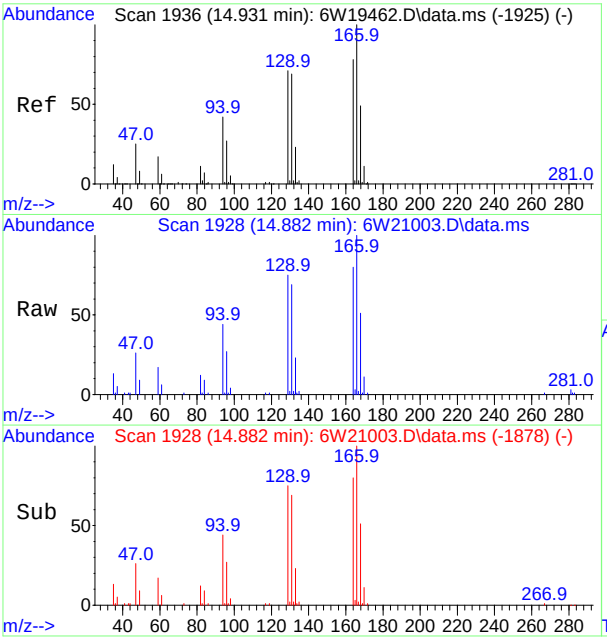


#66
Toluene
Concen: 0.18 ppb(v)
RT: 13.377 min Scan# 1682
Delta R.T. -0.024 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 91 Resp: 19783

Ion	Ratio	Lower	Upper
91	100		
92	57.5	40.9	75.9
65	12.6	8.3	15.3

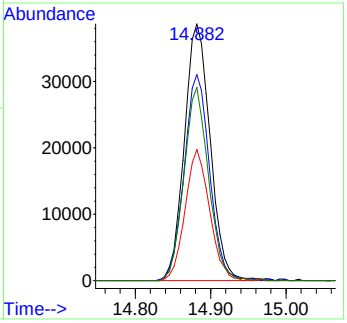


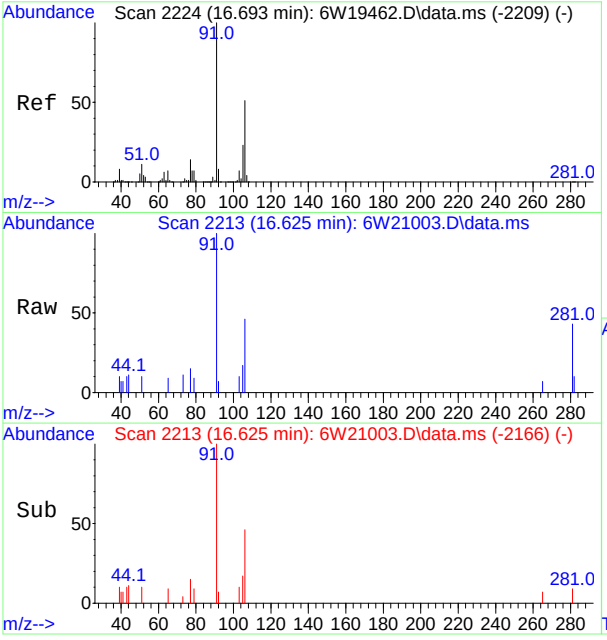


#72
Tetrachloroethene
Concen: 1.62 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion:166 Resp: 92193

Ion	Ratio	Lower	Upper
166	100		
164	80.2	54.7	101.7
168	51.1	34.1	63.3
129	75.3	50.0	92.8

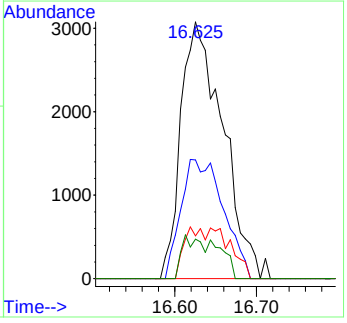




#79
m,p-Xylene
Concen: 0.11 ppb(v)
RT: 16.625 min Scan# 2213
Delta R.T. -0.043 min
Lab File: 6W21003.D
Acq: 15 Jan 2021 12:55 am

Tgt Ion: 91 Resp: 11040

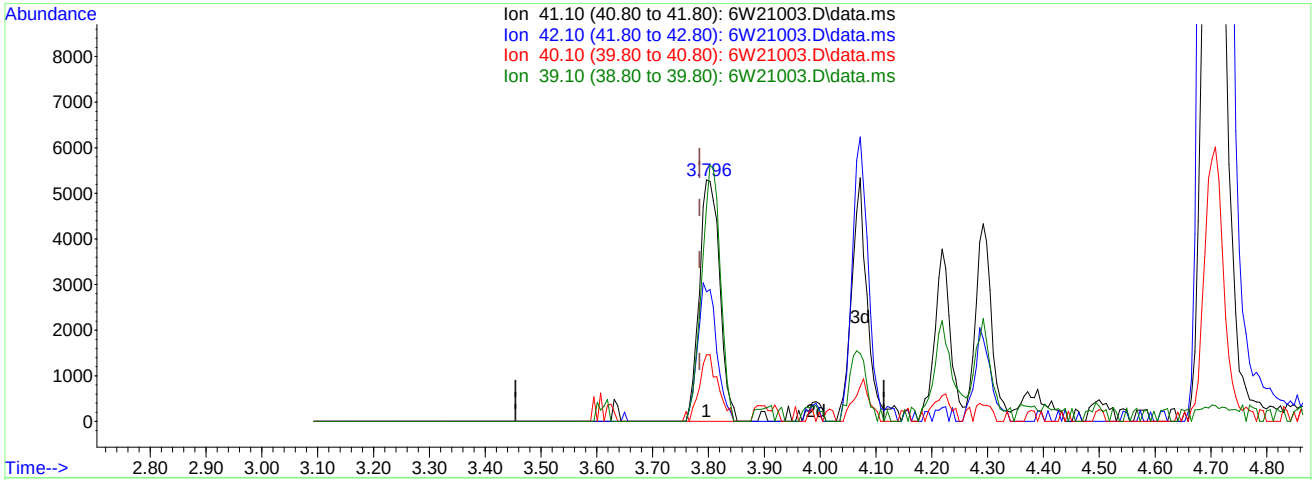
Ion	Ratio	Lower	Upper
91	100		
106	46.3	35.4	65.7
105	16.7	16.2	30.0
77	15.4	9.7	18.1

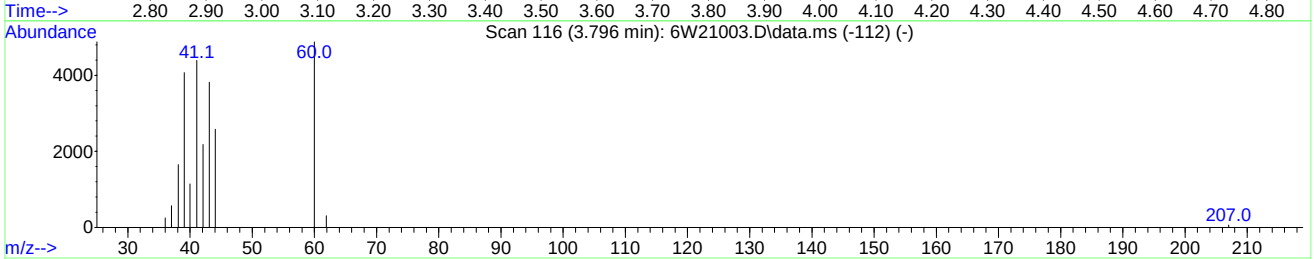


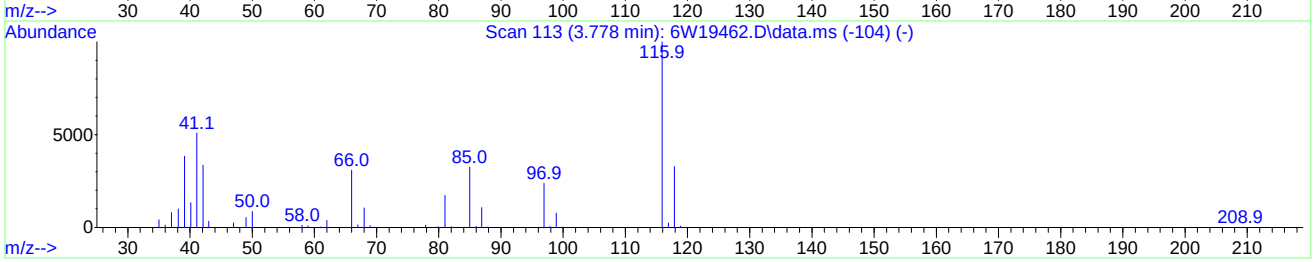
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W21003.D
Acq On : 15 Jan 2021 12:55 am
Operator : thomash
Sample : jd18853-3
Misc : MS48294,V6W882,400,,,,1
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jan 15 09:15:17 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration







TIC: 6W21003.D\data.ms

(4) Propene

3.796min (+0.012) 0.62ppb(v)

response 13453

Ion	Exp%	Act%
41.10	100	100
42.10	66.10	53.69
40.10	26.20	27.50
39.10	75.50	88.62

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21004.D
Acq On : 15 Jan 2021 1:54 am
Operator : thomash
Sample : jd18853-4
Misc : MS48294,V6W882,760,,,,1.52
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jan 21 11:32:30 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

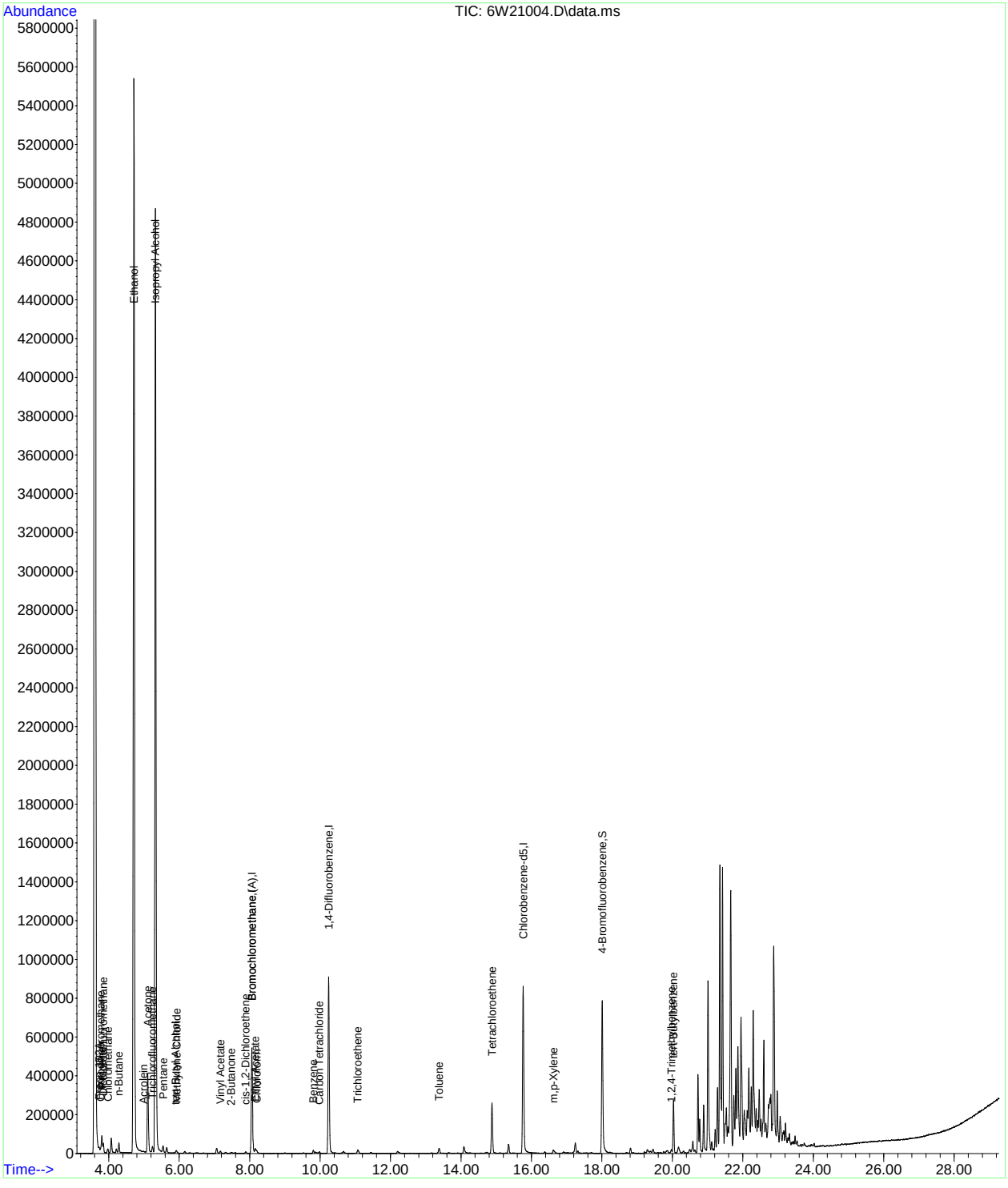
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.060	130	254099	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.238	114	929766	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	391263	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	254099	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	400204	9.31	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery	=	93.10%	
Target Compounds						Qvalue
2) Freon 152A	3.729	65	9947	0.59	ppb(v	96
3) Chlorodifluoromethane	3.766	67	2906	0.46	ppb(v	97
4) Propene	3.802	41	30130	1.38	ppb(v#	78
6) Dichlorodifluoromethane	3.845	85	47462	0.67	ppb(v	96
8) Chloromethane	3.974	50	21674	0.94	ppb(v	97
12) n-Butane	4.286	58	6428	1.21	ppb(v#	68
14) Acrolein	4.989	56	3175	0.25	ppb(v#	80
21) Trichlorofluoromethane	5.234	101	27001	0.39	ppb(v	89
22) Acetone	5.106	58	174446	12.35	ppb(v	99
23) Pentane	5.546	57	3794	0.48	ppb(v	81
25) Isopropyl Alcohol	5.326	45	7233798	125.65	ppb(v	99
28) Methylene Chloride	5.925	84	5701	0.21	ppb(v	93
30) Ethanol	4.714	45	7940283	704.65	ppb(v	99
34) tert-Butyl Alcohol	5.895	59	5632	0.10	ppb(v#	60
36) Vinyl Acetate	7.167	43	13168	0.18	ppb(v	98
38) 2-Butanone	7.467	72	2224	0.17	ppb(v	85
40) cis-1,2-Dichloroethene	7.883	61	6058	0.16	ppb(v	92
42) Ethyl Acetate	8.158	61	4206	0.46	ppb(v	87
44) Chloroform	8.201	83	7648	0.12	ppb(v	92
49) Benzene	9.810	78	17512	0.18	ppb(v	92
50) Carbon Tetrachloride	9.975	117	6211	0.10	ppb(v	93
56) Trichloroethene	11.064	95	6656	0.17	ppb(v	97
66) Toluene	13.377	91	26487	0.24	ppb(v	99
72) Tetrachloroethene	14.882	166	103286	1.82	ppb(v	98
79) m,p-Xylene	16.625	91	20240	0.18	ppb(v#	92
94) tert-Butylbenzene	20.027	134	1402	0.05	ppb(v#	1
95) 1,2,4-Trimethylbenzene	19.972	105	11614	0.11	ppb(v#	74

(#) = qualifier out of range (m) = manual integration (+) = signals summed

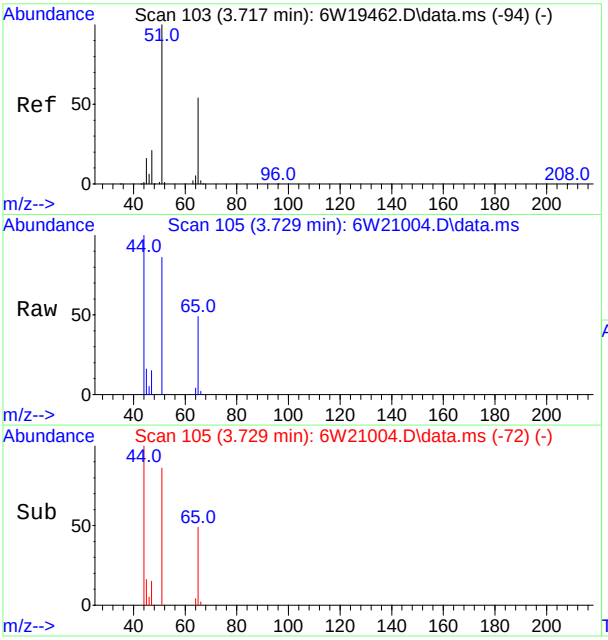
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21004.D
Acq On : 15 Jan 2021 1:54 am
Operator : thomash
Sample : jd18853-4
Misc : MS48294,V6W882,760,,,,1.52
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jan 21 11:32:30 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



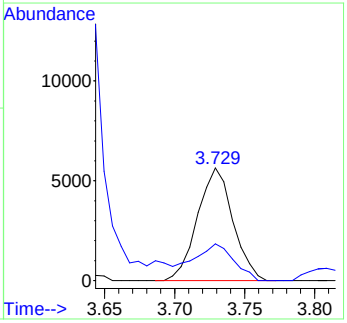
m6w848.M Thu Jan 21 11:45:53 2021 Page: 2

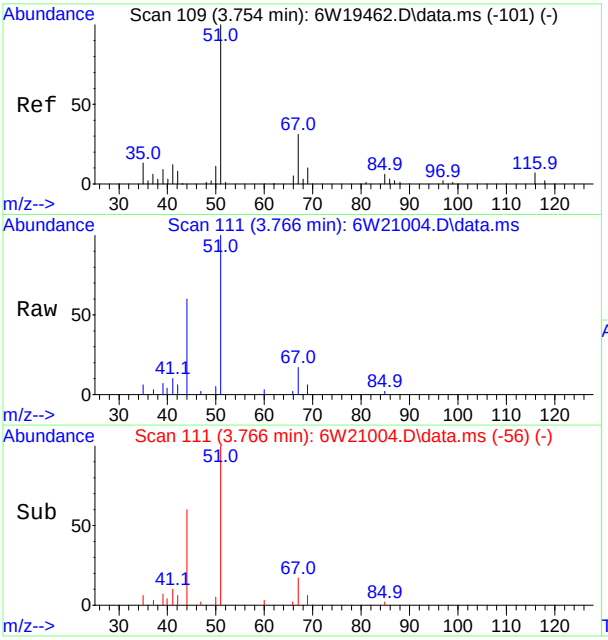


#2
Freon 152A
Concen: 0.59 ppb(v)
RT: 3.729 min Scan# 105
Delta R.T. -0.000 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 65 Resp: 9947

Ion	Ratio	Lower	Upper
65	100		
45	32.7	21.3	39.6

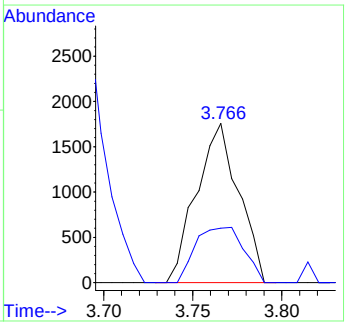


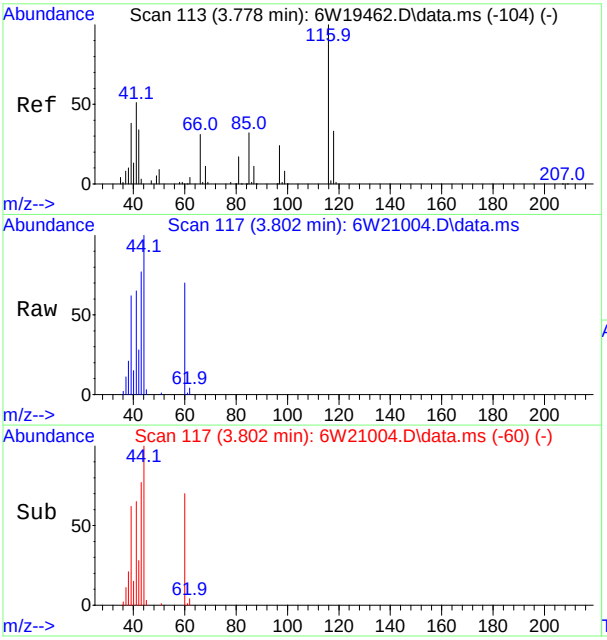


#3
Chlorodifluoromethane
Concen: 0.46 ppb(v)
RT: 3.766 min Scan# 111
Delta R.T. 0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 67 Resp: 2906

Ion	Ratio	Lower	Upper
67	100		
69	34.2	22.9	42.5

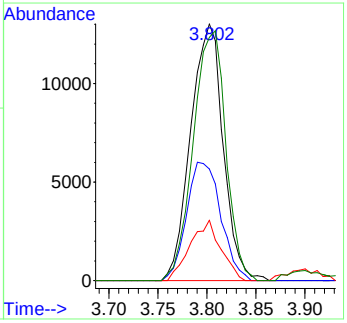


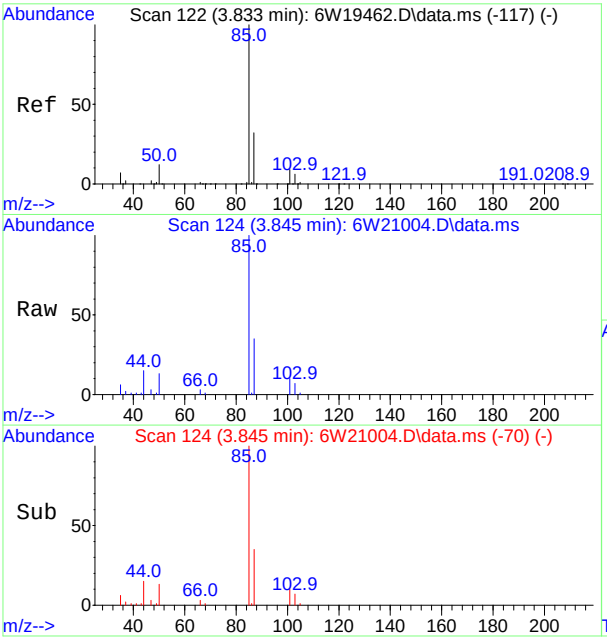


#4
Propene
Concen: 1.38 ppb(v)
RT: 3.802 min Scan# 117
Delta R.T. 0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 41 Resp: 30130

Ion	Ratio	Lower	Upper
41	100		
42	43.5	46.3	85.9#
40	23.5	18.3	34.1
39	94.8	52.8	98.2

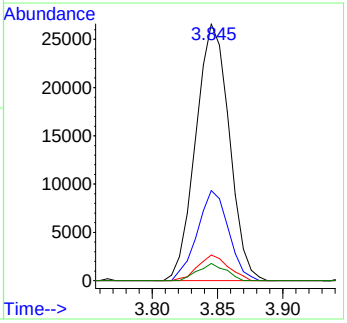


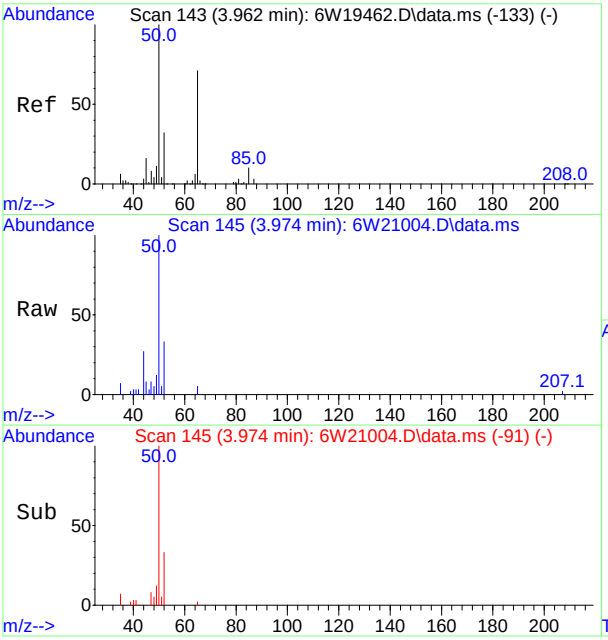


#6
Dichlorodifluoromethane
Concen: 0.67 ppb(v)
RT: 3.845 min Scan# 124
Delta R.T. -0.000 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 85 Resp: 47462

Ion	Ratio	Lower	Upper
85	100		
87	35.1	22.7	42.1
101	10.0	6.3	11.7
103	6.7	4.1	7.5

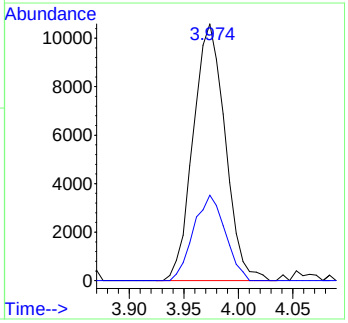


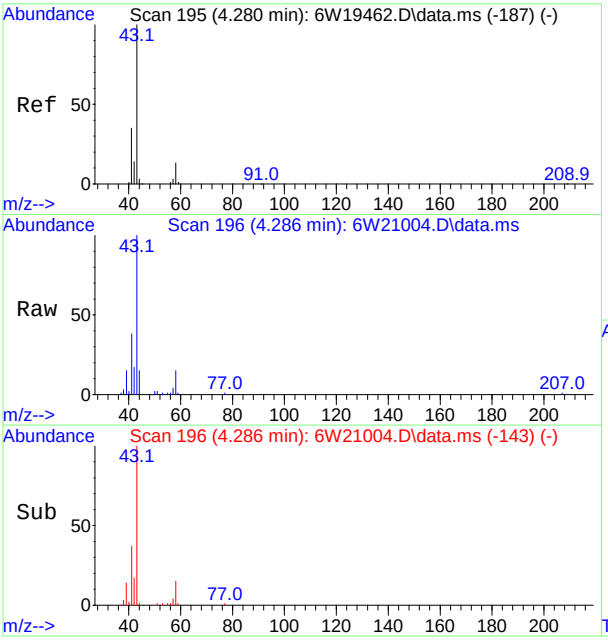


#8
Chloromethane
Concen: 0.94 ppb(v)
RT: 3.974 min Scan# 145
Delta R.T. -0.000 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 50 Resp: 21674

Ion	Ratio	Lower	Upper
50	100		
52	33.3	22.2	41.2

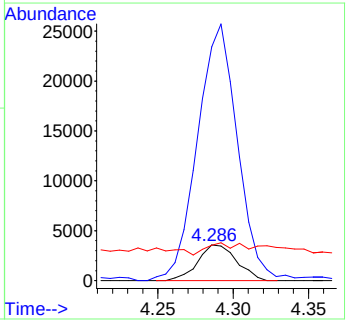


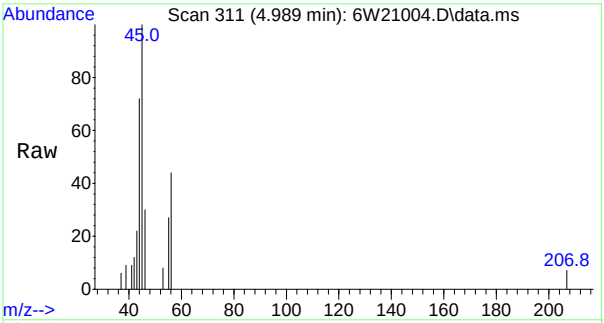


#12
n-Butane
Concen: 1.21 ppb(v)
RT: 4.286 min Scan# 196
Delta R.T. -0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 58 Resp: 6428

Ion	Ratio	Lower	Upper
58	100		
43	653.2	530.8	985.8
44	99.3	22.3	41.5#

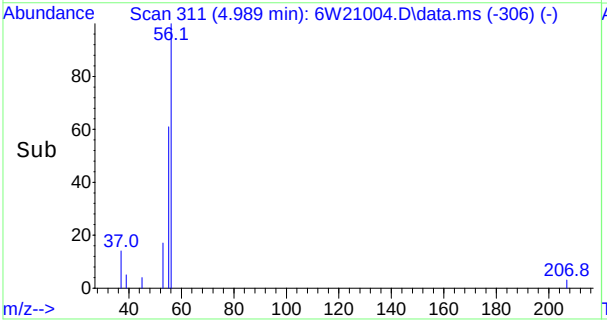


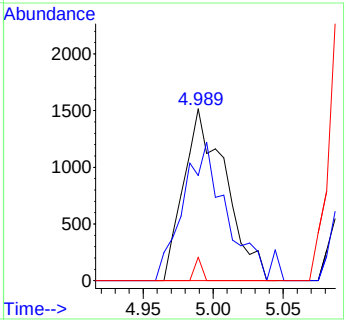


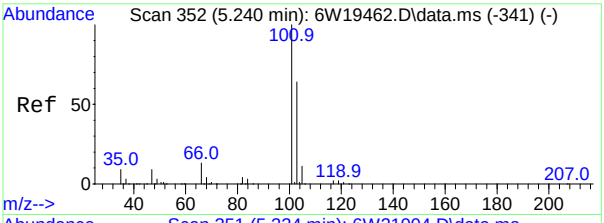
#14
Acrolein
Concen: 0.25 ppb(v)
RT: 4.989 min Scan# 311
Delta R.T. -0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 56 Resp: 3175

Ion	Ratio	Lower	Upper
56	100		
55	85.4	56.9	85.3#
37	0.0	11.8	17.6#



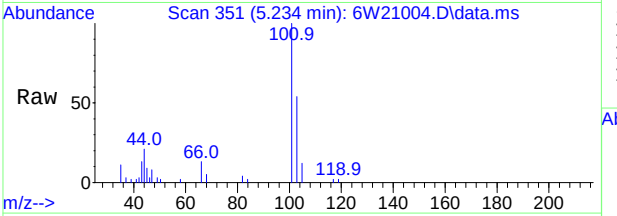


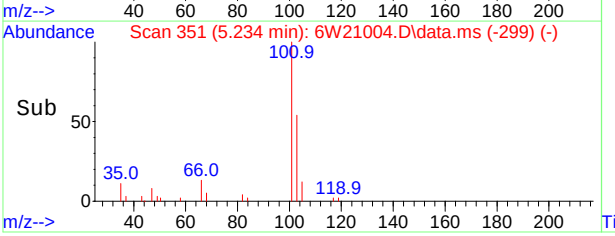


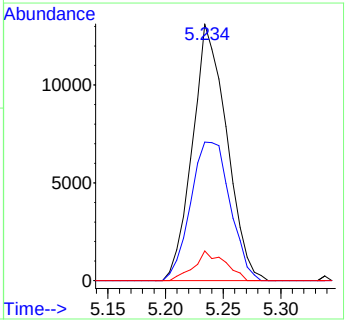
#21
Trichlorofluoromethane
Concen: 0.39 ppb(v)
RT: 5.234 min Scan# 351
Delta R.T. -0.012 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

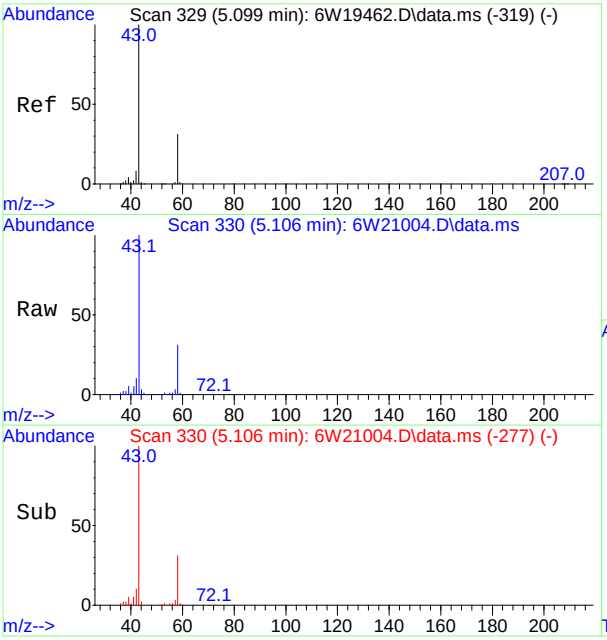
Tgt Ion:101 Resp: 27001

Ion	Ratio	Lower	Upper
101	100		
103	53.9	44.7	83.1
105	11.5	7.3	13.7





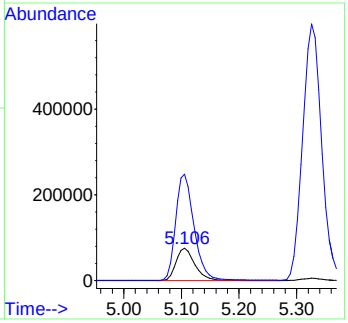


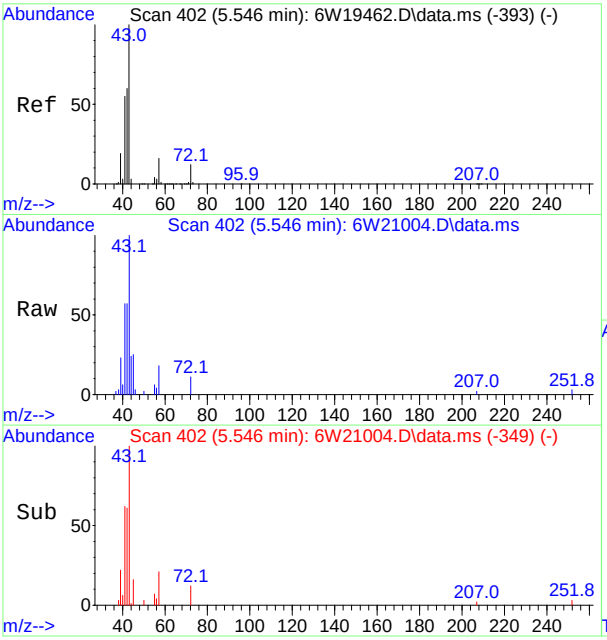


#22
Acetone
Concen: 12.35 ppb(v)
RT: 5.106 min Scan# 330
Delta R.T. -0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 58 Resp: 174446

Ion	Ratio	Lower	Upper
58	100		
43	327.5	228.2	423.8

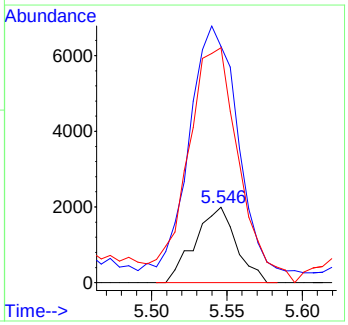


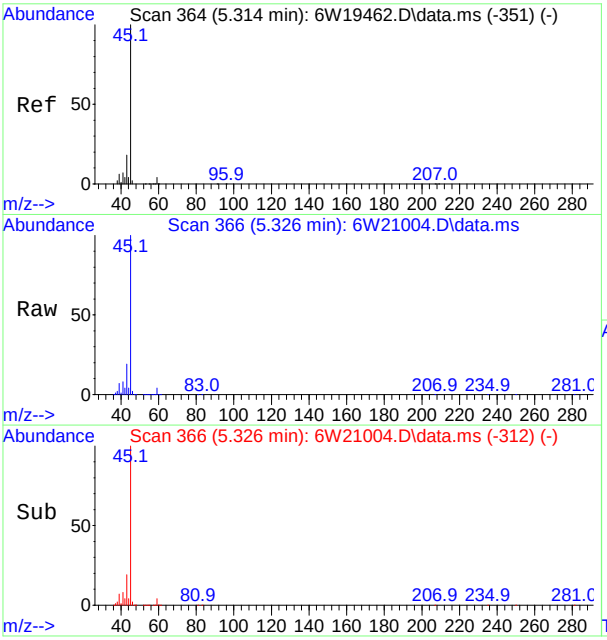


#23
Pentane
Concen: 0.48 ppb(v)
RT: 5.546 min Scan# 402
Delta R.T. -0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 57 Resp: 3794

Ion	Ratio	Lower	Upper
57	100		
42	312.5	256.8	477.0
41	311.0	238.4	442.8

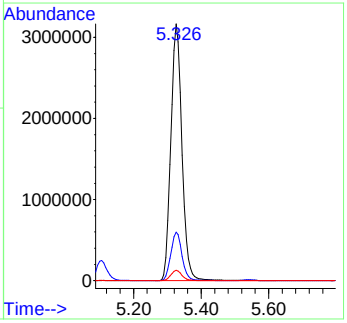


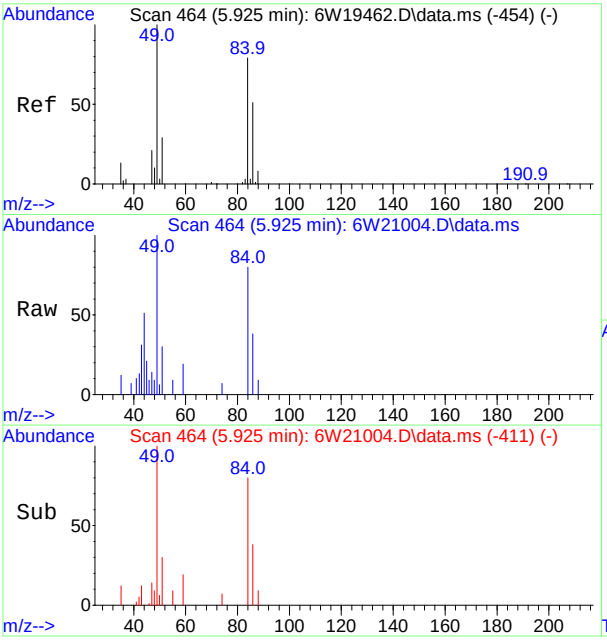


#25
Isopropyl Alcohol
Concen: 125.65 ppb(v)
RT: 5.326 min Scan# 366
Delta R.T. -0.000 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 45 Resp: 7233798

Ion	Ratio	Lower	Upper
45	100		
43	18.9	13.0	24.2
59	4.0	2.9	5.3

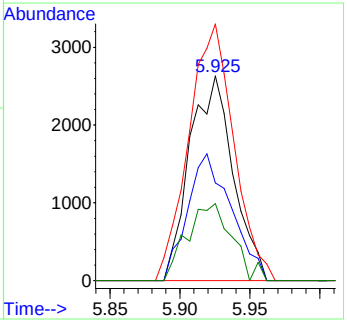


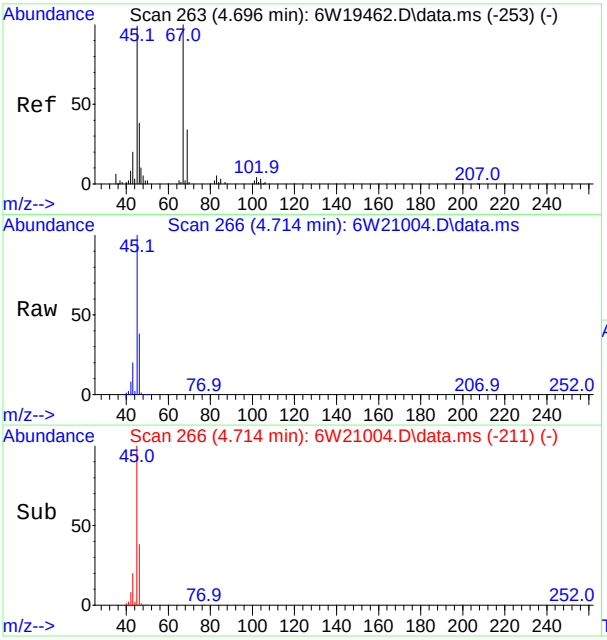


#28
Methylene Chloride
Concen: 0.21 ppb(v)
RT: 5.925 min Scan# 464
Delta R.T. -0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 84 Resp: 5701

Ion	Ratio	Lower	Upper
84	100		
86	47.8	44.9	83.3
49	125.5	89.0	165.2
51	37.7	26.9	50.1

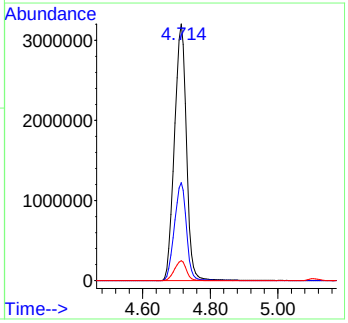


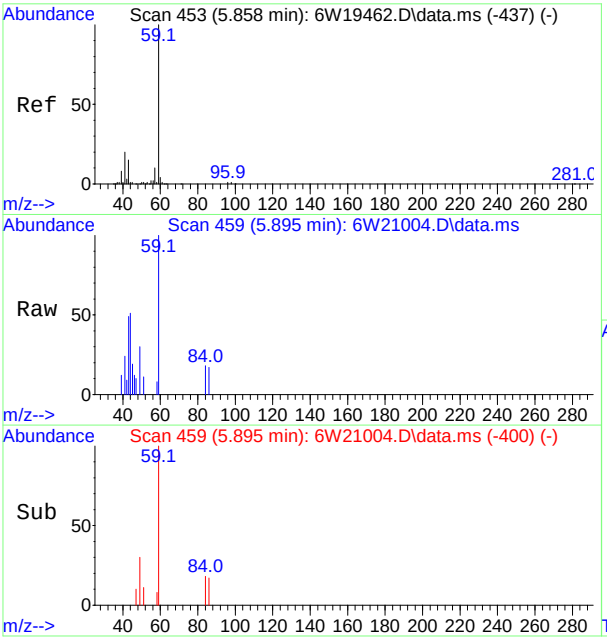


#30
Ethanol
Concen: 704.65 ppb(v)
RT: 4.714 min Scan# 266
Delta R.T. 0.006 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 45 Resp: 7940283

Ion	Ratio	Lower	Upper
45	100		
46	38.1	26.9	50.1
42	7.8	6.0	11.2

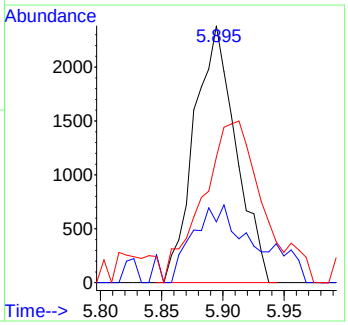


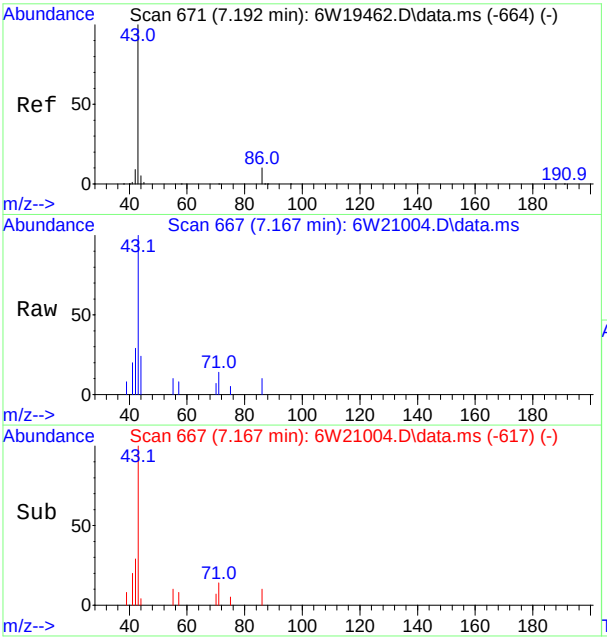


#34
tert-Butyl Alcohol
Concen: 0.10 ppb(v)
RT: 5.895 min Scan# 459
Delta R.T. 0.030 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 59 Resp: 5632

Ion	Ratio	Lower	Upper
59	100		
41	23.7	13.8	25.6
43	48.9	10.4	19.2#

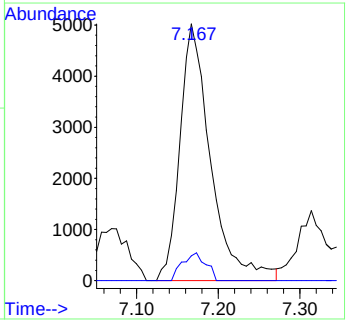


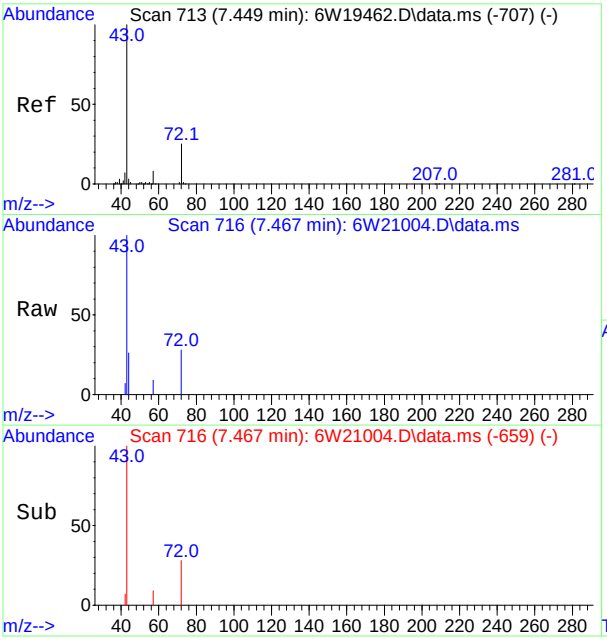


#36
Vinyl Acetate
Concen: 0.18 ppb(v)
RT: 7.167 min Scan# 667
Delta R.T. -0.025 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 43 Resp: 13168

Ion	Ratio	Lower	Upper
43	100		
86	9.6	7.2	13.4

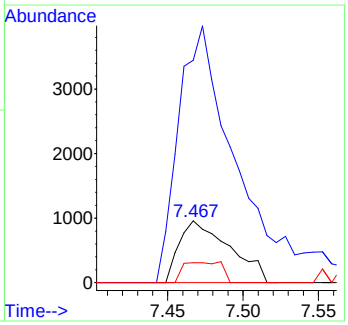


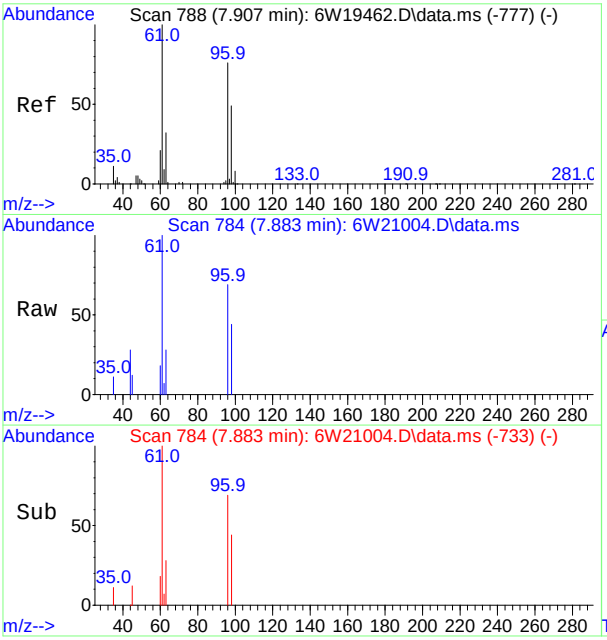


#38
2-Butanone
Concen: 0.17 ppb(v)
RT: 7.467 min Scan# 716
Delta R.T. 0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 72 Resp: 2224

Ion	Ratio	Lower	Upper
72	100		
43	359.5	277.8	516.0
57	32.5	22.3	41.5

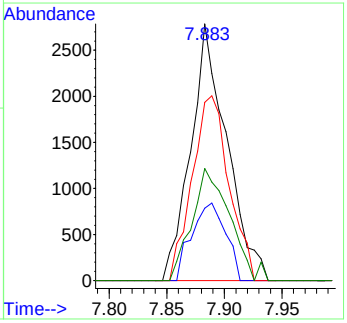


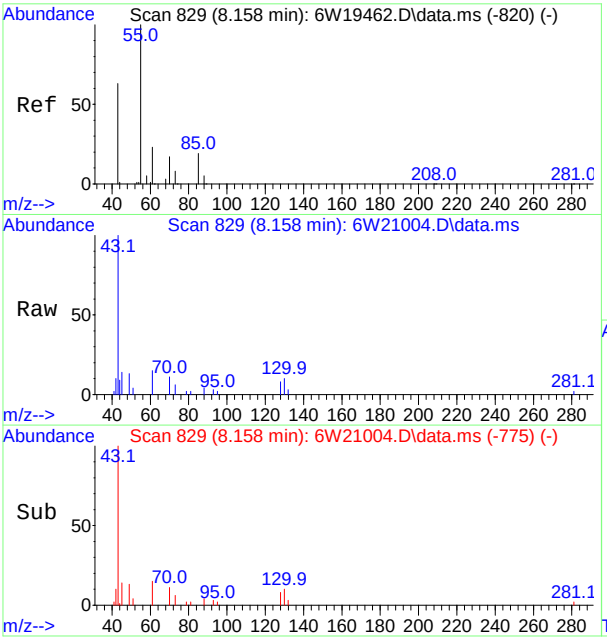


#40
cis-1,2-Dichloroethene
Concen: 0.16 ppb(v)
RT: 7.883 min Scan# 784
Delta R.T. -0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 61 Resp: 6058

Ion	Ratio	Lower	Upper
61	100		
63	28.2	22.6	42.0
96	69.5	53.6	99.6
98	43.7	34.6	64.3

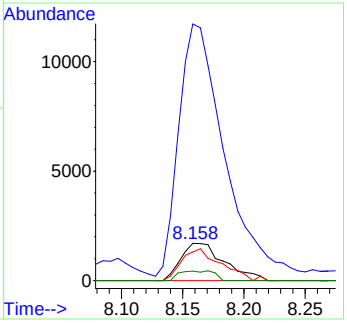


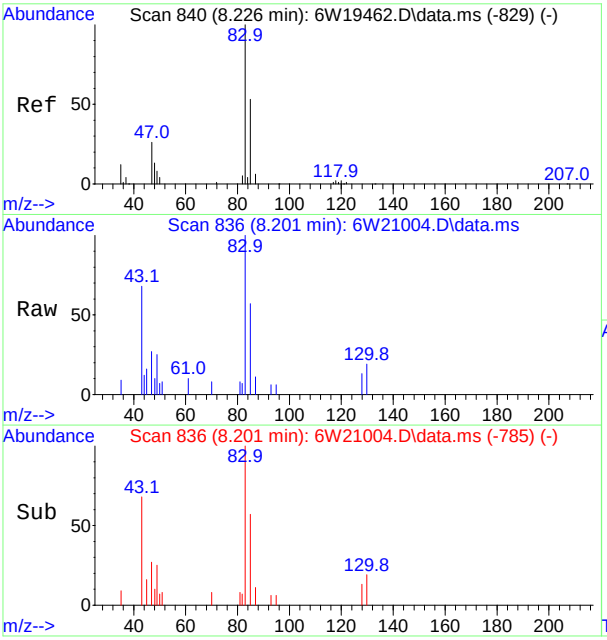


#42
Ethyl Acetate
Concen: 0.46 ppb(v)
RT: 8.158 min Scan# 829
Delta R.T. -0.000 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 61 Resp: 4206

Ion	Ratio	Lower	Upper
61	100		
43	687.7	518.2	962.4
70	76.5	55.3	102.7
88	25.7	21.8	40.6

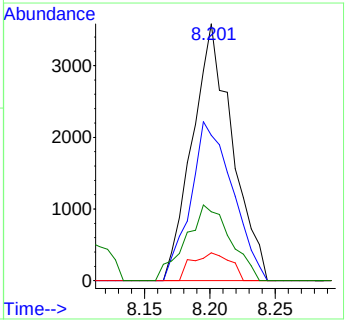


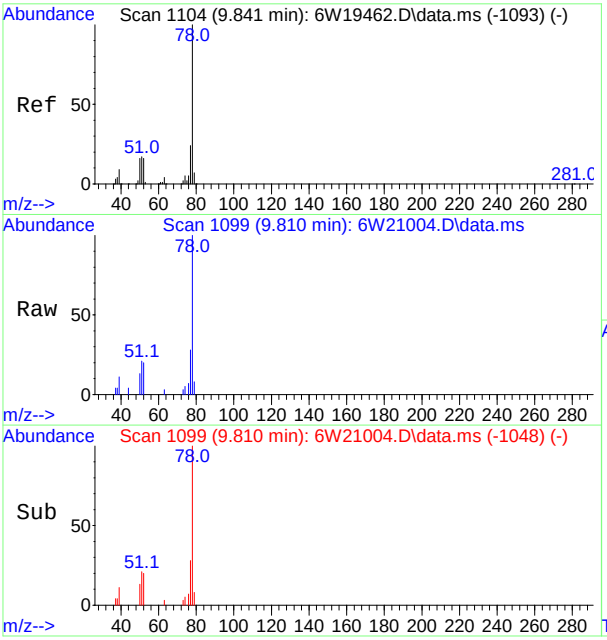


#44
Chloroform
Concen: 0.12 ppb(v)
RT: 8.201 min Scan# 836
Delta R.T. -0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 83 Resp: 7648

Ion	Ratio	Lower	Upper
83	100		
85	56.6	45.8	85.0
87	10.8	7.3	13.7
47	26.8	18.0	33.4

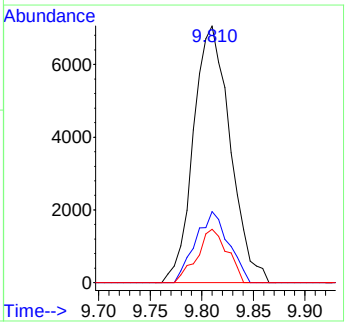


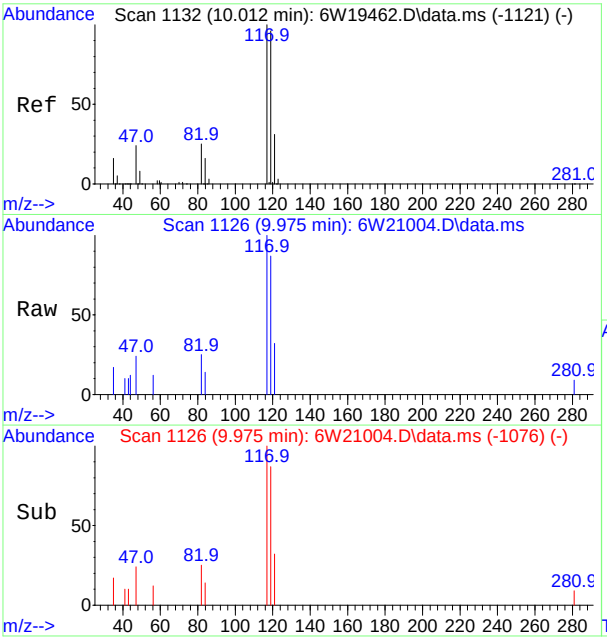


#49
Benzene
Concen: 0.18 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 78 Resp: 17512

Ion	Ratio	Lower	Upper
78	100		
77	27.7	16.7	30.9
51	20.8	12.2	22.6

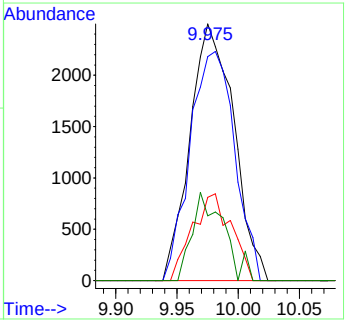


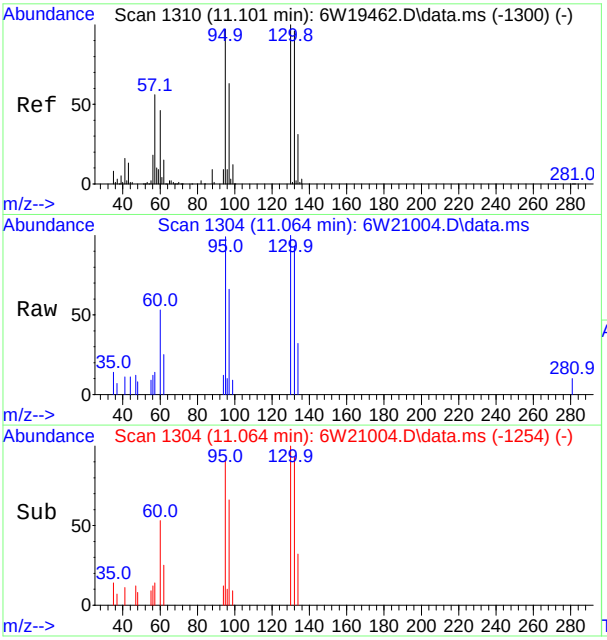


#50
Carbon Tetrachloride
Concen: 0.10 ppb(v)
RT: 9.975 min Scan# 1126
Delta R.T. -0.025 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion:117 Resp: 6211

Ion	Ratio	Lower	Upper
117	100		
119	87.2	67.4	125.2
121	32.5	21.6	40.0
82	25.2	17.4	32.4

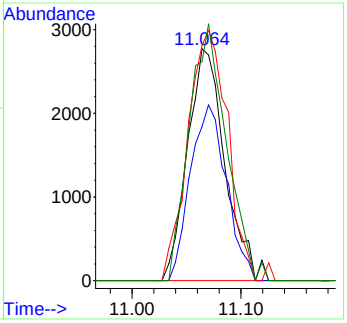


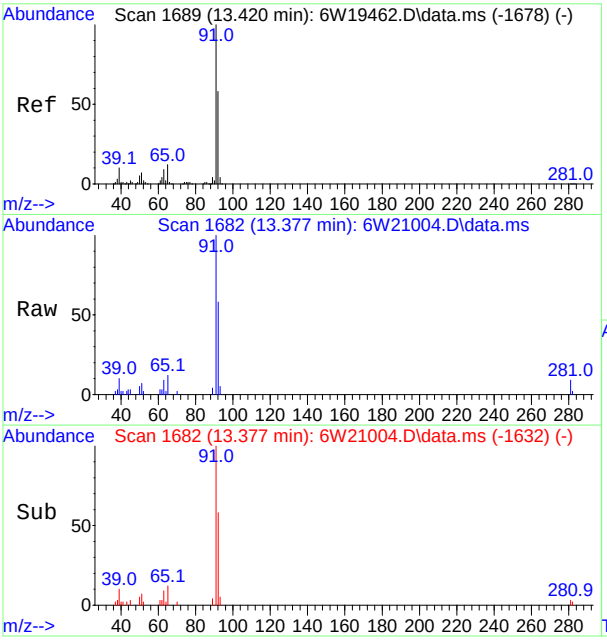


#56
Trichloroethene
Concen: 0.17 ppb(v)
RT: 11.064 min Scan# 1304
Delta R.T. -0.025 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 95 Resp: 6656

Ion	Ratio	Lower	Upper
95	100		
97	66.4	45.5	84.5
130	101.3	72.3	134.3
132	94.4	69.1	128.3

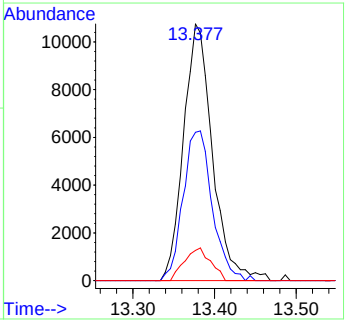


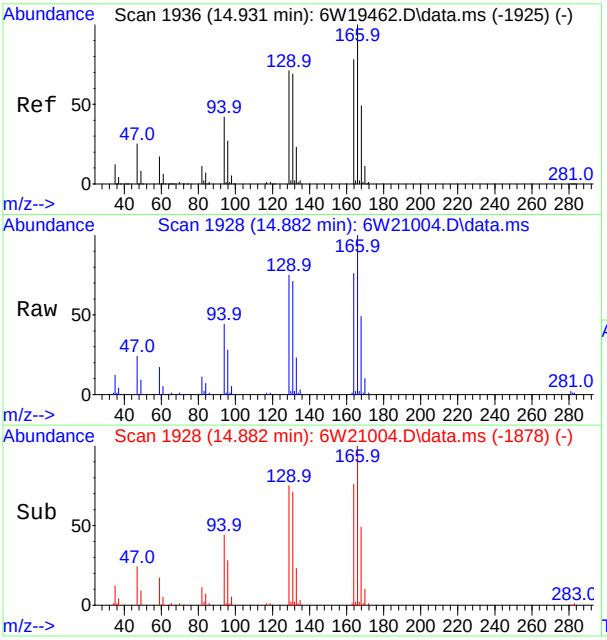


#66
Toluene
Concen: 0.24 ppb(v)
RT: 13.377 min Scan# 1682
Delta R.T. -0.025 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 91 Resp: 26487

Ion	Ratio	Lower	Upper
91	100		
92	57.8	40.9	75.9
65	11.8	8.3	15.3

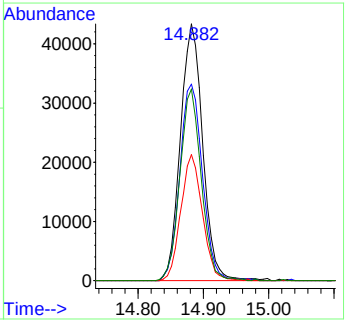


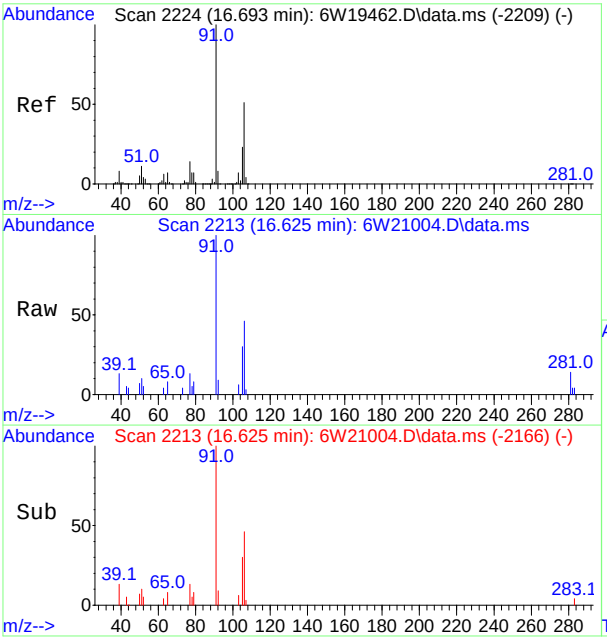


#72
Tetrachloroethene
Concen: 1.82 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.025 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion:166 Resp: 103286

Ion	Ratio	Lower	Upper
166	100		
164	76.5	54.7	101.7
168	49.1	34.1	63.3
129	74.6	50.0	92.8

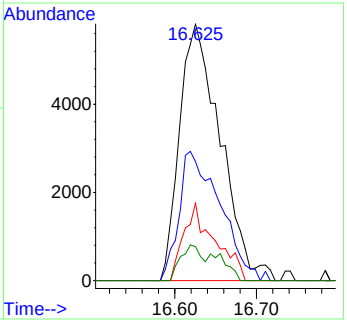


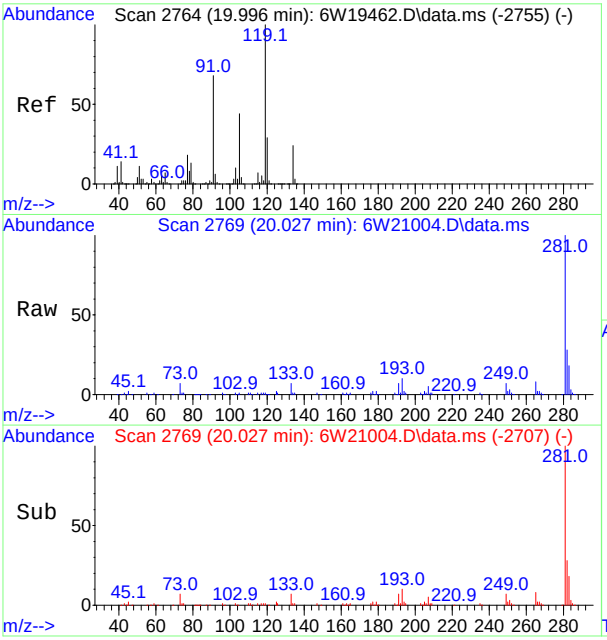


#79
m,p-Xylene
Concen: 0.18 ppb(v)
RT: 16.625 min Scan# 2213
Delta R.T. -0.043 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion: 91 Resp: 20240

Ion	Ratio	Lower	Upper
91	100		
106	46.4	35.4	65.7
105	30.3	16.2	30.0#
77	13.2	9.7	18.1

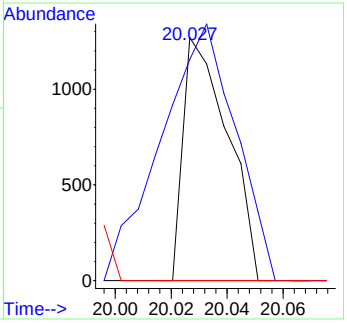


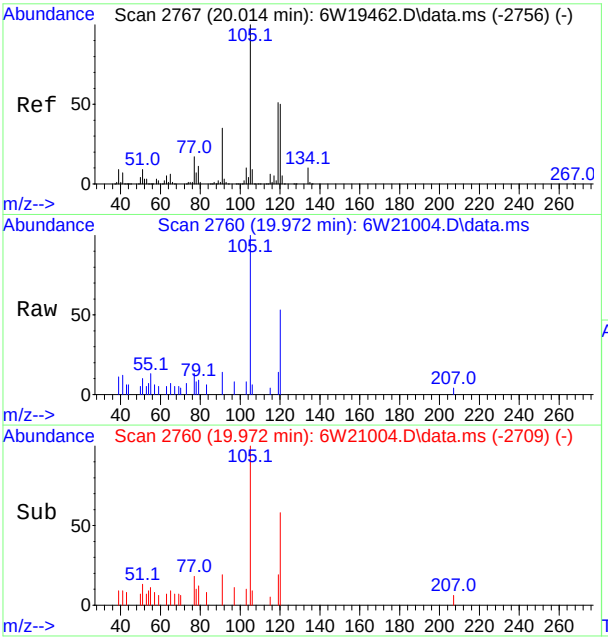


#94
tert-Butylbenzene
Concen: 0.05 ppb(v)
RT: 20.027 min Scan# 2769
Delta R.T. 0.049 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion:134 Resp: 1402

Ion	Ratio	Lower	Upper
134	100		
119	111.3	297.7	552.9#
91	0.0	201.6	374.4#

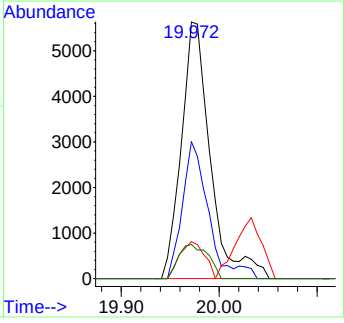




#95
1,2,4-Trimethylbenzene
Concen: 0.11 ppb(v)
RT: 19.972 min Scan# 2760
Delta R.T. -0.018 min
Lab File: 6W21004.D
Acq: 15 Jan 2021 1:54 am

Tgt Ion:105 Resp: 11614

Ion	Ratio	Lower	Upper
105	100		
120	53.3	35.3	65.5
119	14.5	35.8	66.6#
77	13.3	12.0	22.2



7.1.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21005.D
Acq On : 15 Jan 2021 2:56 am
Operator : thomash
Sample : jd18853-5
Misc : MS48294,V6W882,800,,,,2.21
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 21 11:41:28 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

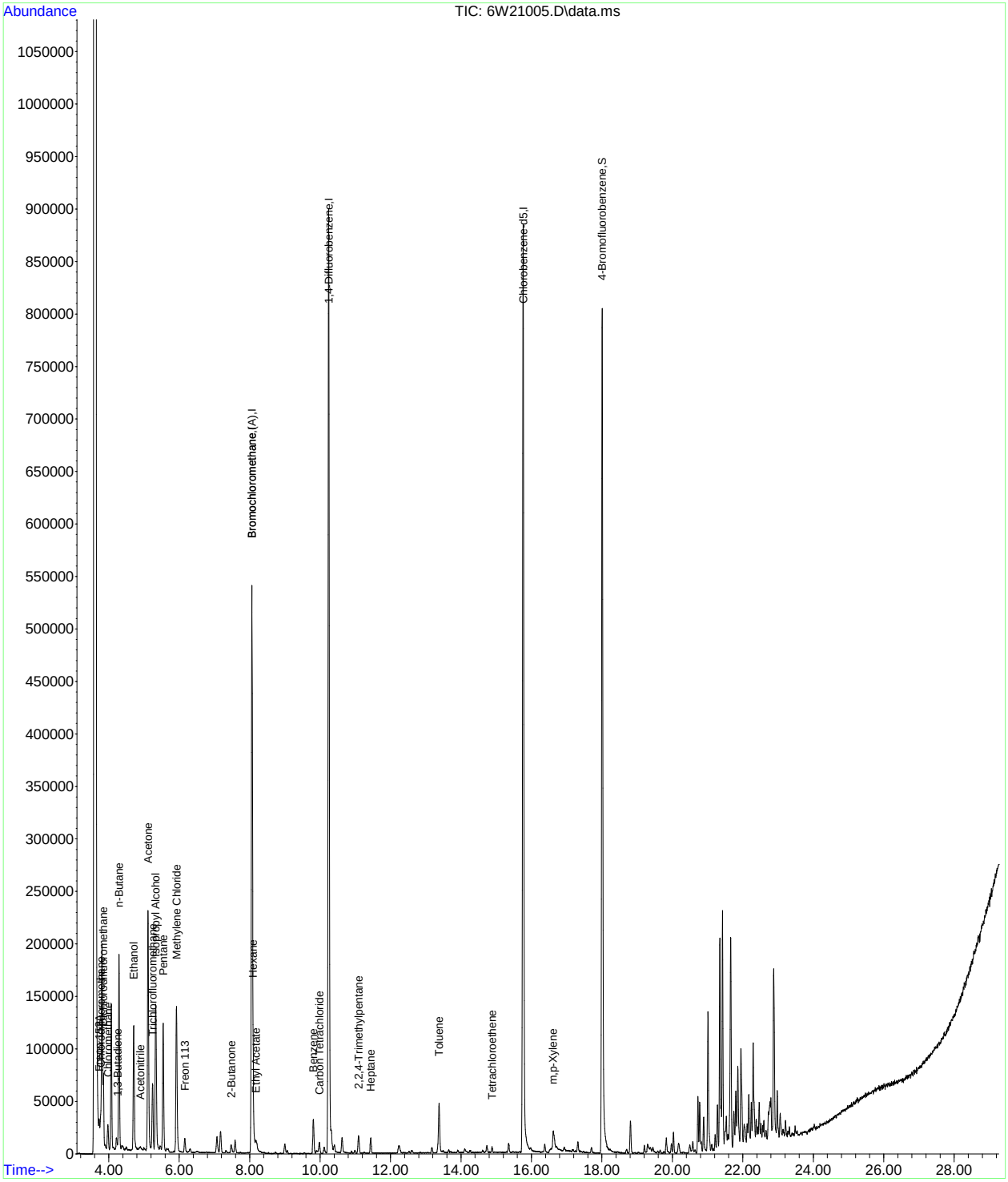
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	263078	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.239	114	936521	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	403862	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	263078	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.002	95	410047	9.24	ppb(v	-0.03
Spiked Amount 10.000	Range 65 - 128		Recovery = 92.40%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	9395	0.54	ppb(v	98
3) Chlorodifluoromethane	3.772	67	5260	0.80	ppb(v	95
6) Dichlorodifluoromethane	3.846	85	65599	0.90	ppb(v	97
8) Chloromethane	3.974	50	24094	1.01	ppb(v	100
11) 1,3-Butadiene	4.255	54	2658	0.13	ppb(v#	79
12) n-Butane	4.292	58	22801	4.15	ppb(v#	94
17) Acetonitrile	4.898	41	5711	0.23	ppb(v#	91
21) Trichlorofluoromethane	5.240	101	59479	0.82	ppb(v	100
22) Acetone	5.112	58	66588	4.55	ppb(v	72
23) Pentane	5.546	57	14203	1.72	ppb(v	97
25) Isopropyl Alcohol	5.332	45	187207	3.14	ppb(v	99
27) Freon 113	6.158	101	6926	0.10	ppb(v	98
28) Methylene Chloride	5.926	84	75134	2.64	ppb(v	98
30) Ethanol	4.702	45	162088	13.89	ppb(v	100
38) 2-Butanone	7.473	72	3263	0.24	ppb(v	88
39) Hexane	8.097	57	23314	0.48	ppb(v#	51
42) Ethyl Acetate	8.177	61	951	0.10	ppb(v#	65
49) Benzene	9.810	78	37538	0.37	ppb(v	97
50) Carbon Tetrachloride	9.982	117	7834	0.12	ppb(v	97
54) 2,2,4-Trimethylpentane	11.095	57	17672	0.12	ppb(v	93
55) Heptane	11.432	71	4347	0.14	ppb(v	94
66) Toluene	13.377	91	45817	0.40	ppb(v	98
72) Tetrachloroethene	14.882	166	2095	0.04	ppb(v	97
79) m,p-Xylene	16.613	91	21659	0.19	ppb(v	94

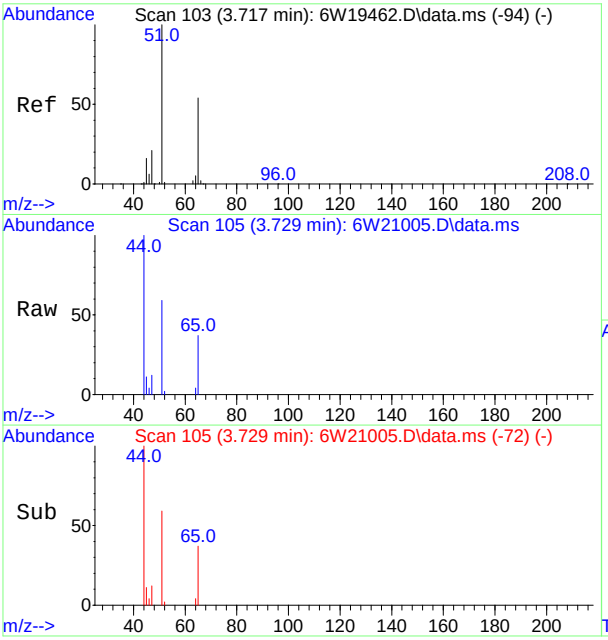
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21005.D
Acq On : 15 Jan 2021 2:56 am
Operator : thomash
Sample : jd18853-5
Misc : MS48294,V6W882,800,,,,2.21
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jan 21 11:41:28 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

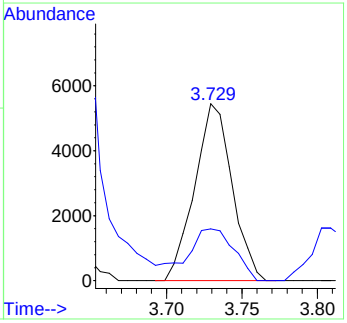


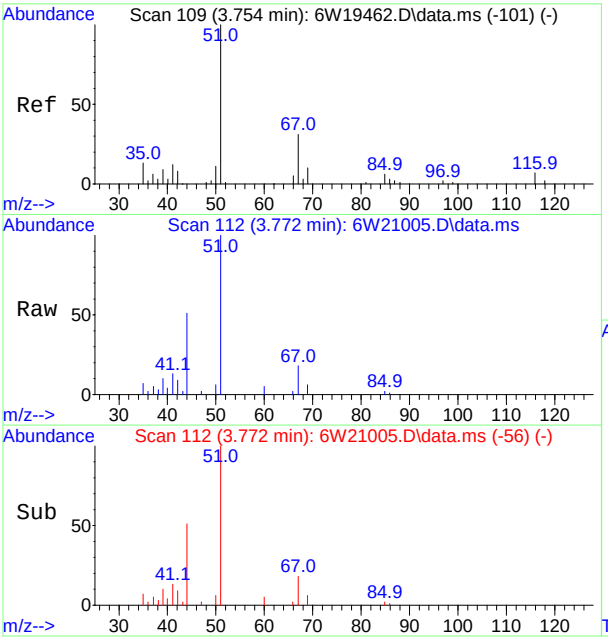


#2
Freon 152A
Concen: 0.54 ppb(v)
RT: 3.729 min Scan# 105
Delta R.T. 0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 65 Resp: 9395

Ion	Ratio	Lower	Upper
65	100		
45	29.2	21.3	39.6

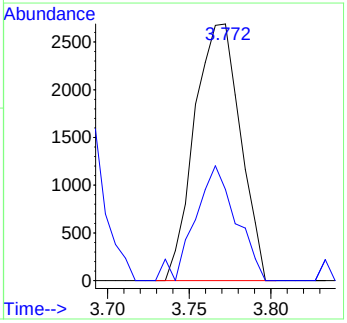


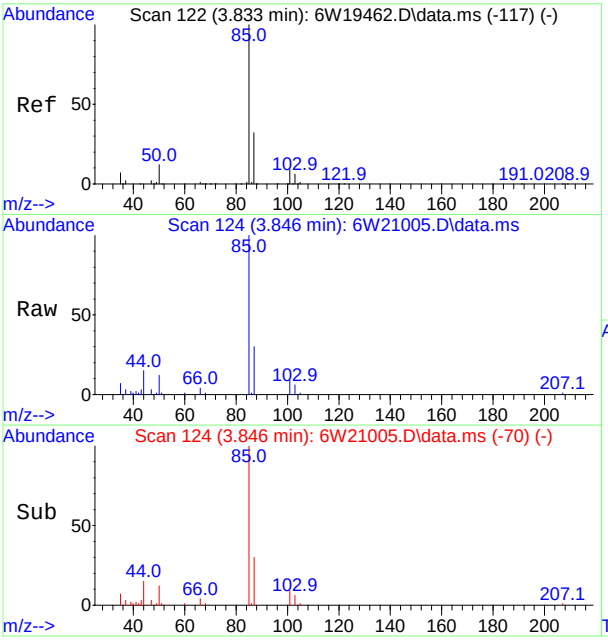


#3
Chlorodifluoromethane
Concen: 0.80 ppb(v)
RT: 3.772 min Scan# 112
Delta R.T. 0.012 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 67 Resp: 5260

Ion	Ratio	Lower	Upper
67	100		
69	35.5	22.9	42.5

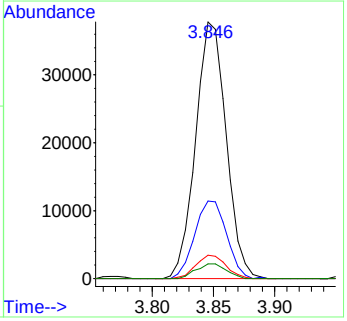


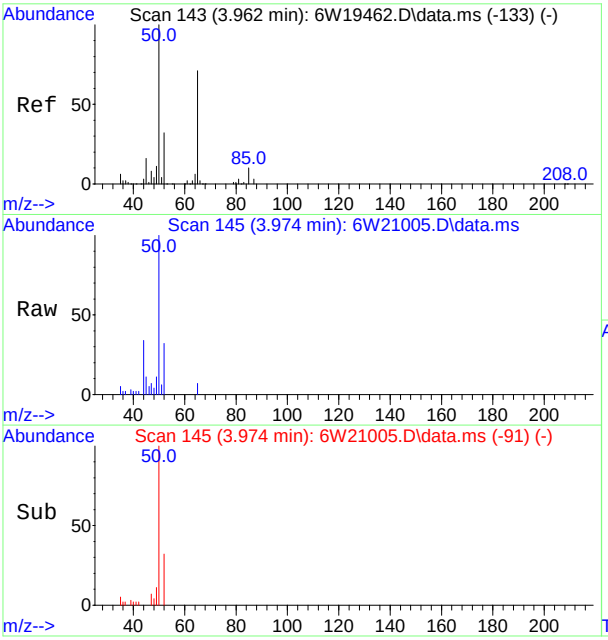


#6
Dichlorodifluoromethane
Concen: 0.90 ppb(v)
RT: 3.846 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 85 Resp: 65599

Ion	Ratio	Lower	Upper
85	100		
87	30.3	22.7	42.1
101	9.1	6.3	11.7
103	5.8	4.1	7.5

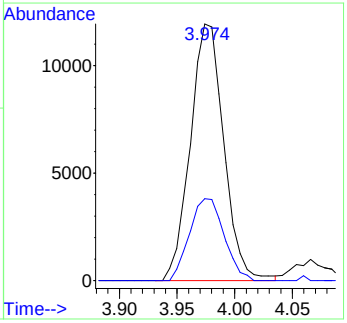


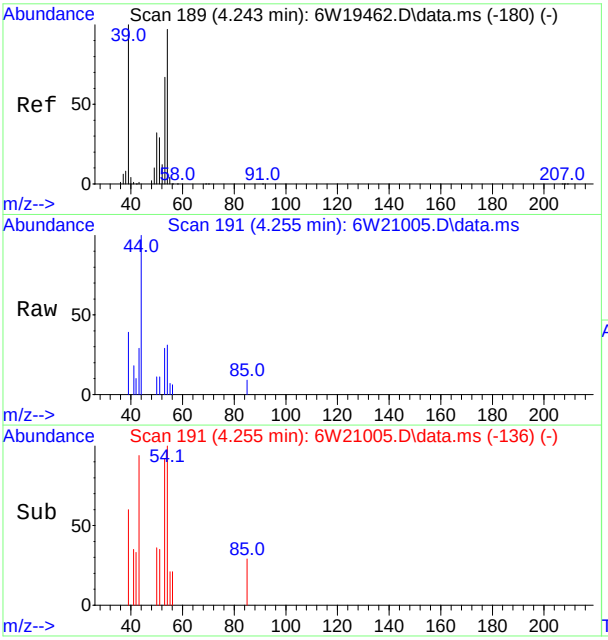


#8
Chloromethane
Concen: 1.01 ppb(v)
RT: 3.974 min Scan# 145
Delta R.T. 0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 50 Resp: 24094

Ion	Ratio	Lower	Upper
50	100		
52	31.9	22.2	41.2

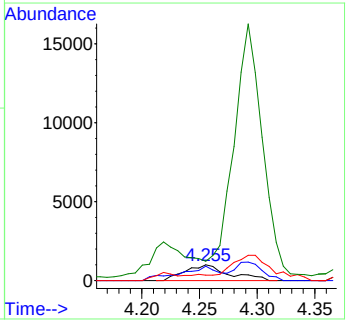


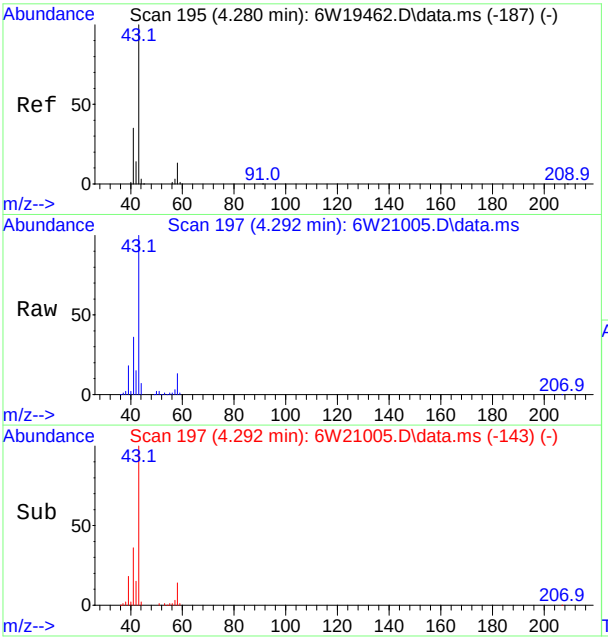


#11
1,3-Butadiene
Concen: 0.13 ppb(v)
RT: 4.255 min Scan# 191
Delta R.T. 0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 54 Resp: 2658

Ion	Ratio	Lower	Upper
54	100		
53	92.5	48.6	90.2#
51	34.5	21.1	39.1
39	123.4	72.6	134.8

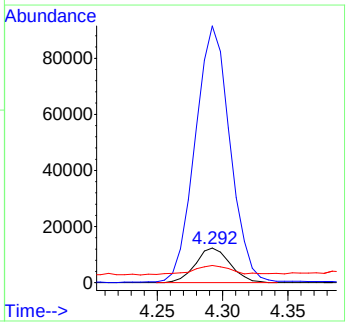


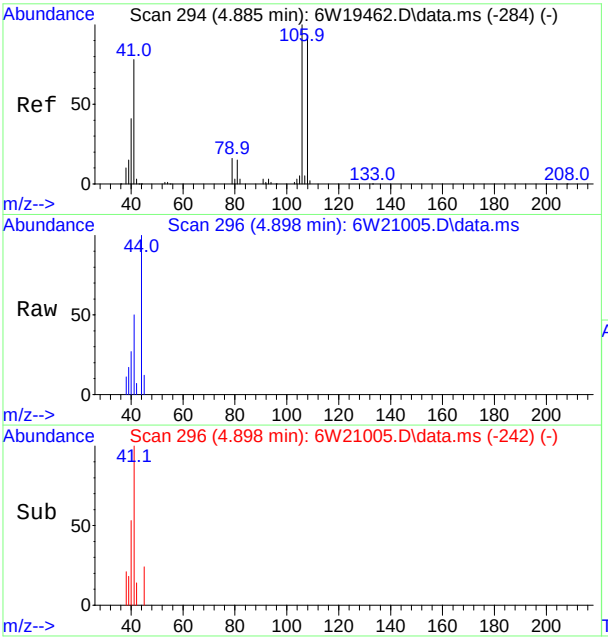


#12
n-Butane
Concen: 4.15 ppb(v)
RT: 4.292 min Scan# 197
Delta R.T. 0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 58 Resp: 22801

Ion	Ratio	Lower	Upper
58	100		
43	741.5	530.8	985.8
44	49.6	22.3	41.5#

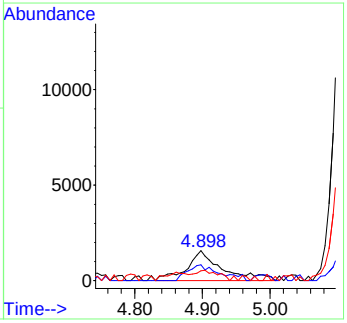


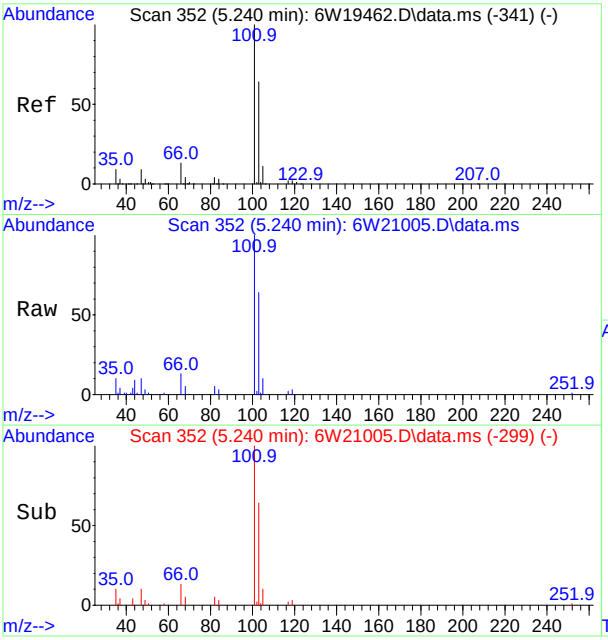


#17
Acetonitrile
Concen: 0.23 ppb(v)
RT: 4.898 min Scan# 296
Delta R.T. -0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 41 Resp: 5711

Ion	Ratio	Lower	Upper
41	100		
40	53.4	36.6	68.0
39	33.0	13.9	25.9#

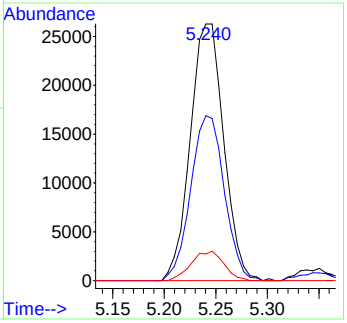


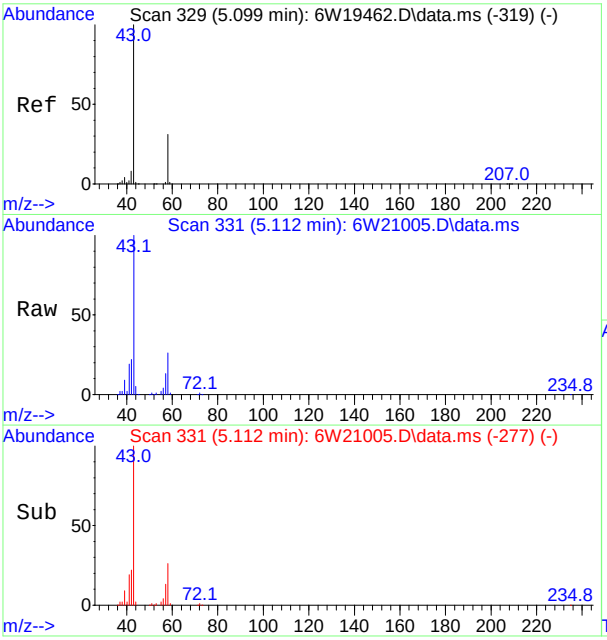


#21
Trichlorofluoromethane
Concen: 0.82 ppb(v)
RT: 5.240 min Scan# 352
Delta R.T. -0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion:101 Resp: 59479

Ion	Ratio	Lower	Upper
101	100		
103	64.3	44.7	83.1
105	10.4	7.3	13.7

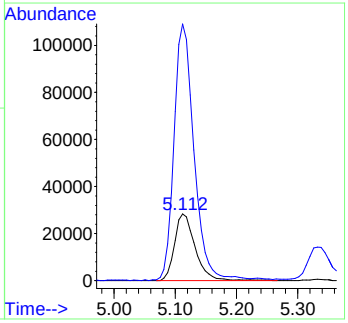


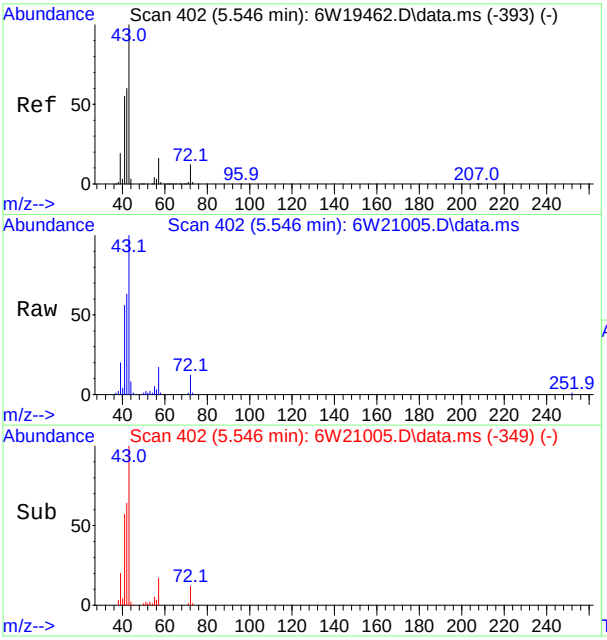


#22
Acetone
Concen: 4.55 ppb(v)
RT: 5.112 min Scan# 331
Delta R.T. 0.000 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 58 Resp: 66588

Ion	Ratio	Lower	Upper
58	100		
43	384.6	228.2	423.8

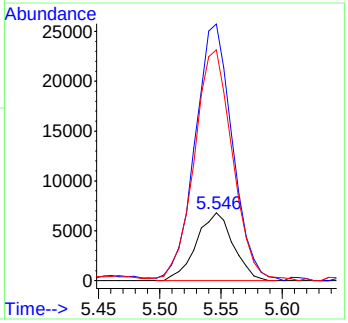


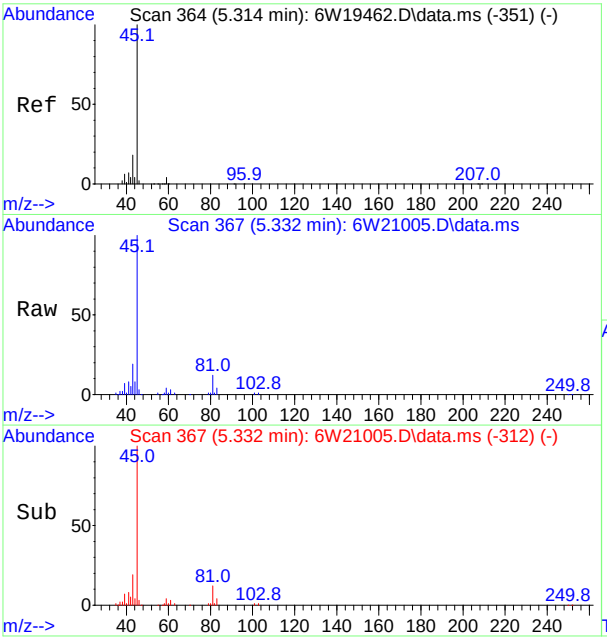


#23
Pentane
Concen: 1.72 ppb(v)
RT: 5.546 min Scan# 402
Delta R.T. -0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 57 Resp: 14203

Ion	Ratio	Lower	Upper
57	100		
42	378.6	256.8	477.0
41	340.1	238.4	442.8

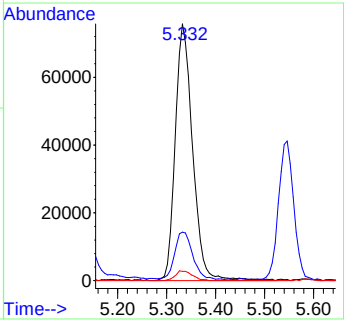


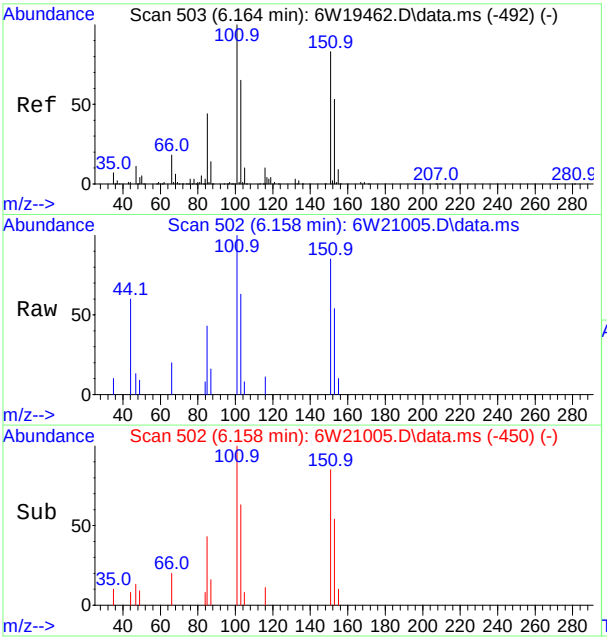


#25
Isopropyl Alcohol
Concen: 3.14 ppb(v)
RT: 5.332 min Scan# 367
Delta R.T. 0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 45 Resp: 187207

Ion	Ratio	Lower	Upper
45	100		
43	18.8	13.0	24.2
59	3.6	2.9	5.3

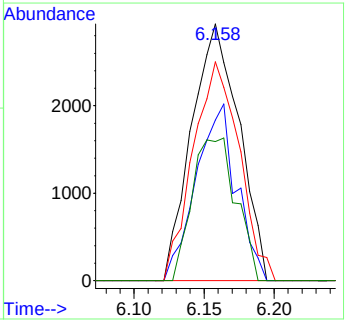


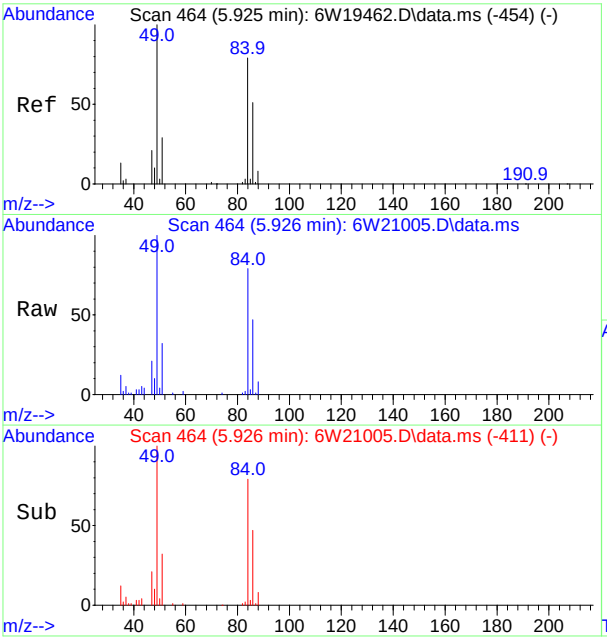


#27
Freon 113
Concen: 0.10 ppb(v)
RT: 6.158 min Scan# 502
Delta R.T. -0.012 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion:101 Resp: 6926

Ion	Ratio	Lower	Upper
101	100		
103	62.6	45.3	84.1
151	85.2	57.9	107.5
153	54.2	37.5	69.6

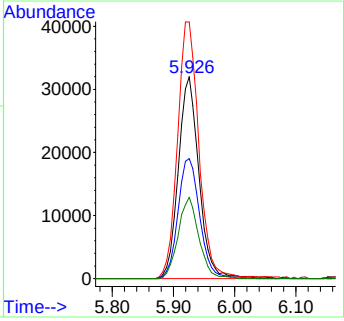


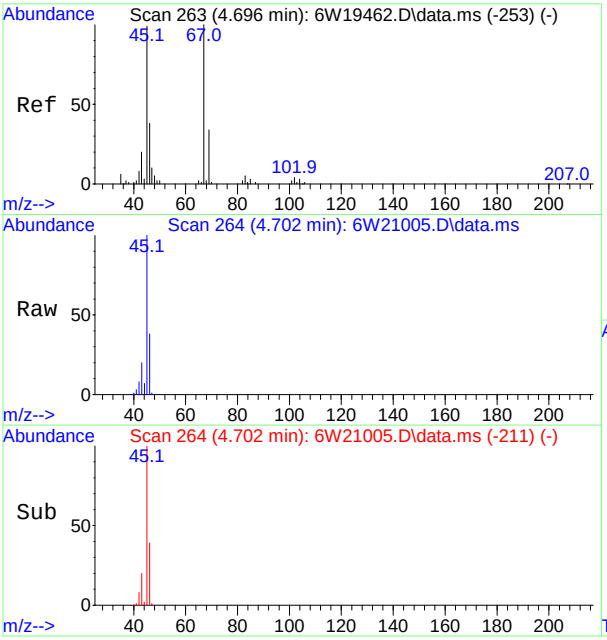


#28
Methylene Chloride
Concen: 2.64 ppb(v)
RT: 5.926 min Scan# 464
Delta R.T. -0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 84 Resp: 75134

Ion	Ratio	Lower	Upper
84	100		
86	59.4	44.9	83.3
49	127.1	89.0	165.2
51	40.4	26.9	50.1

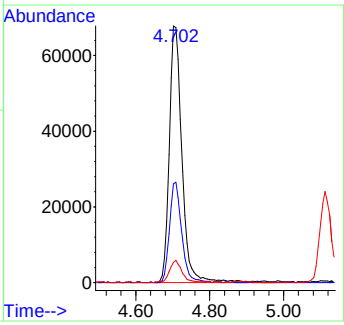


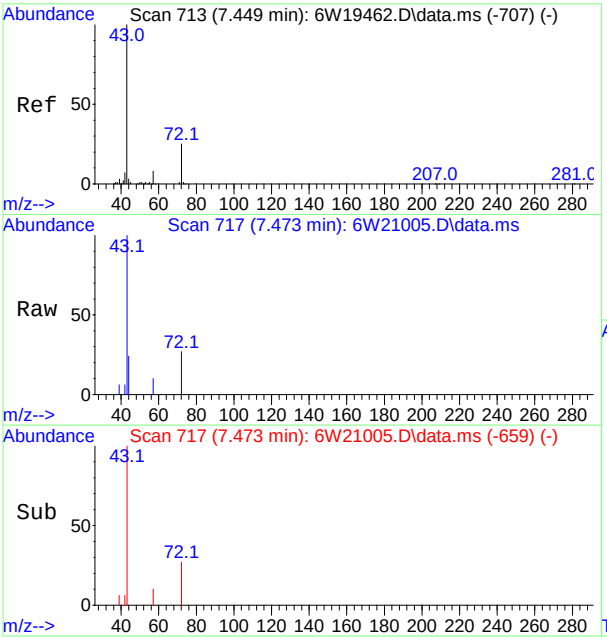


#30
Ethanol
Concen: 13.89 ppb(v)
RT: 4.702 min Scan# 264
Delta R.T. -0.006 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 45 Resp: 162088

Ion	Ratio	Lower	Upper
45	100		
46	38.5	26.9	50.1
42	7.8	6.0	11.2

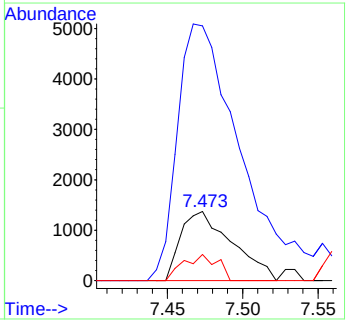


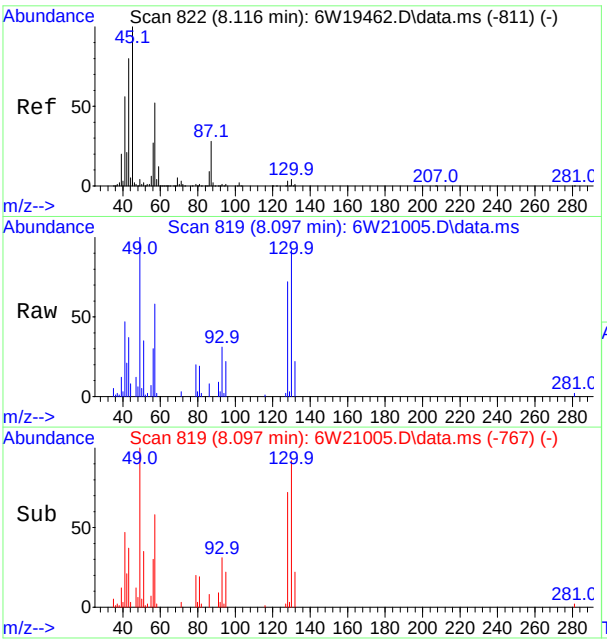


#38
2-Butanone
Concen: 0.24 ppb(v)
RT: 7.473 min Scan# 717
Delta R.T. 0.025 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 72 Resp: 3263

Ion	Ratio	Lower	Upper
72	100		
43	368.3	277.8	516.0
57	37.8	22.3	41.5

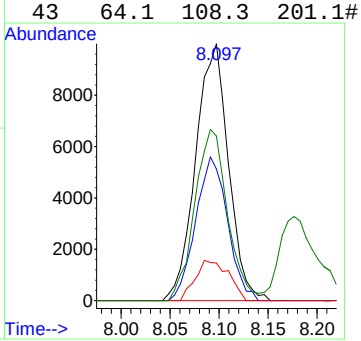


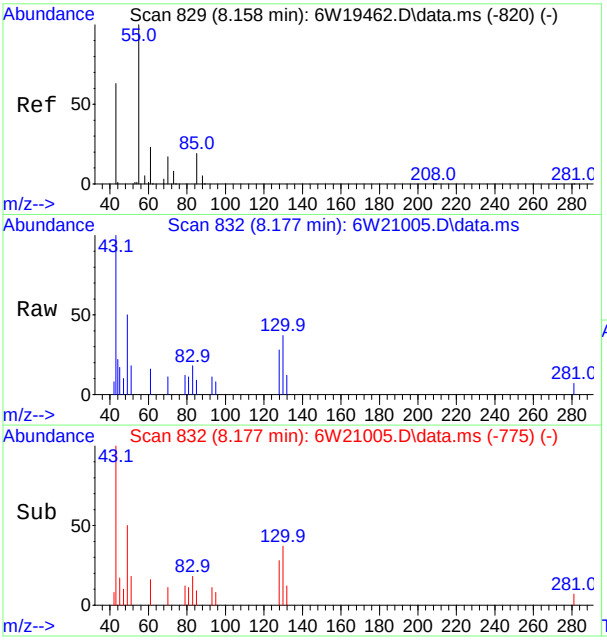


#39
Hexane
Concen: 0.48 ppb(v)
RT: 8.097 min Scan# 819
Delta R.T. -0.012 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 57 Resp: 23314

Ion	Ratio	Lower	Upper
57	100		
56	51.3	35.8	66.6
86	14.7	12.7	23.7
43	64.1	108.3	201.1#

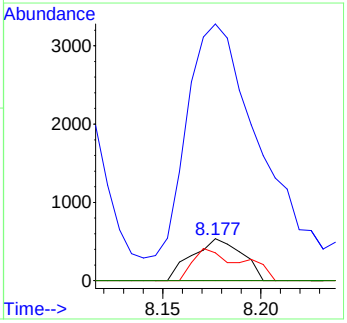


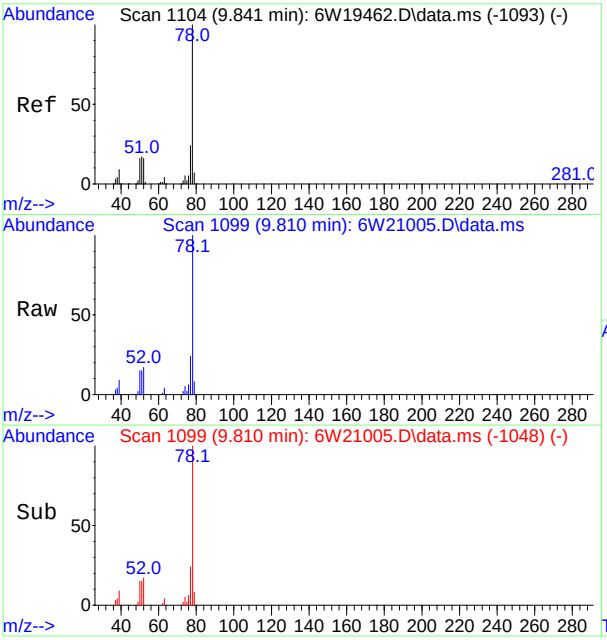


#42
Ethyl Acetate
Concen: 0.10 ppb(v)
RT: 8.177 min Scan# 832
Delta R.T. 0.019 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 61 Resp: 951

Ion	Ratio	Lower	Upper
61	100		
43	609.9	518.2	962.4
70	66.2	55.3	102.7
88	0.0	21.8	40.6#

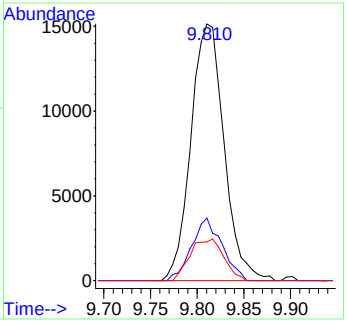


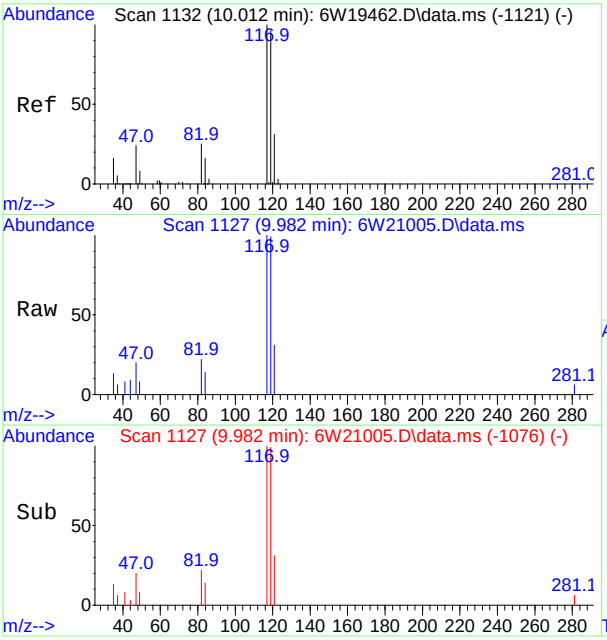


#49
Benzene
Concen: 0.37 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 78 Resp: 37538

Ion	Ratio	Lower	Upper
78	100		
77	24.4	16.7	30.9
51	15.0	12.2	22.6

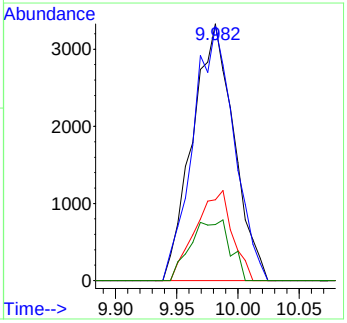


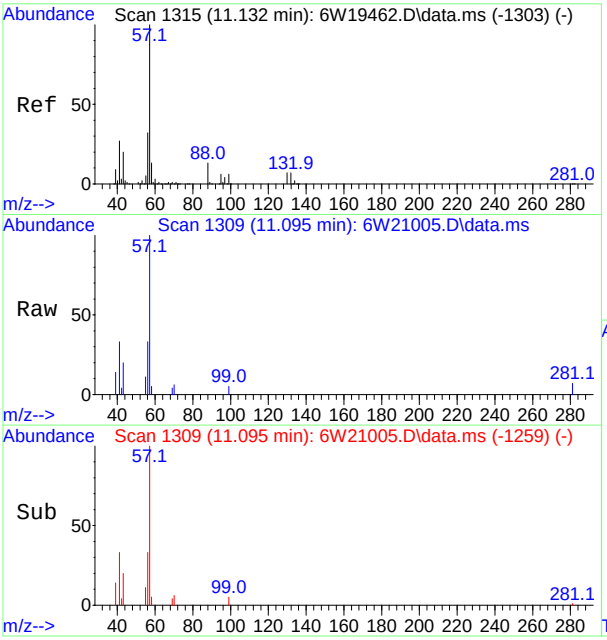


#50
Carbon Tetrachloride
Concen: 0.12 ppb(v)
RT: 9.982 min Scan# 1127
Delta R.T. -0.018 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion:117 Resp: 7834

Ion	Ratio	Lower	Upper
117	100		
119	99.1	67.4	125.2
121	31.5	21.6	40.0
82	21.8	17.4	32.4

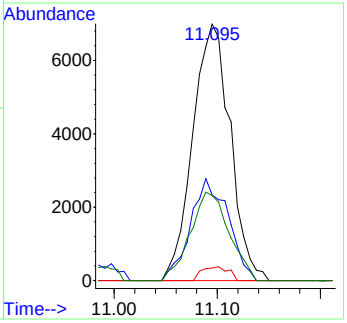


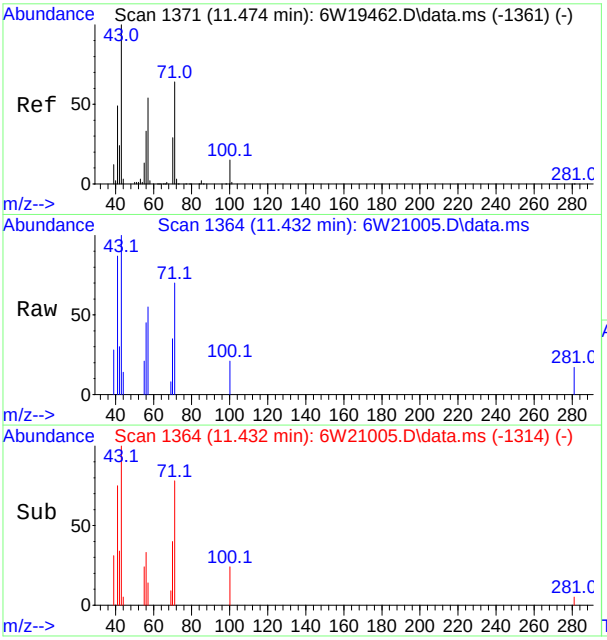


#54
2,2,4-Trimethylpentane
Concen: 0.12 ppb(v)
RT: 11.095 min Scan# 1309
Delta R.T. -0.024 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 57 Resp: 17672

Ion	Ratio	Lower	Upper
57	100		
56	33.4	22.2	41.2
99	4.9	4.4	8.2
41	33.2	19.0	35.2

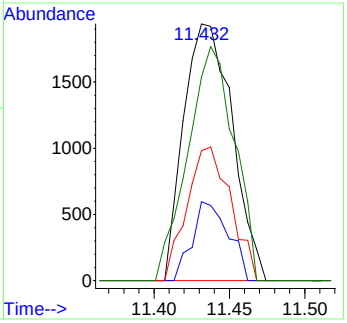


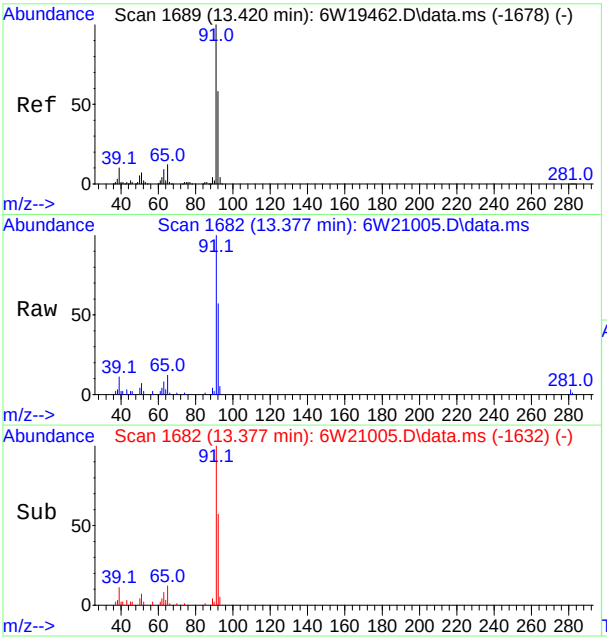


#55
Heptane
Concen: 0.14 ppb(v)
RT: 11.432 min Scan# 1364
Delta R.T. -0.024 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 71 Resp: 4347

Ion	Ratio	Lower	Upper
71	100		
100	30.8	22.3	41.5
70	50.5	32.5	60.3
57	79.3	60.1	111.5

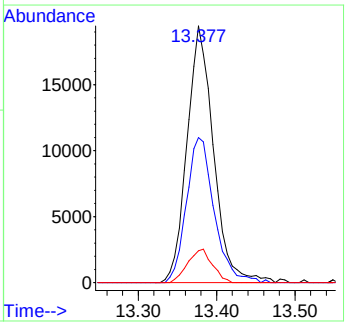


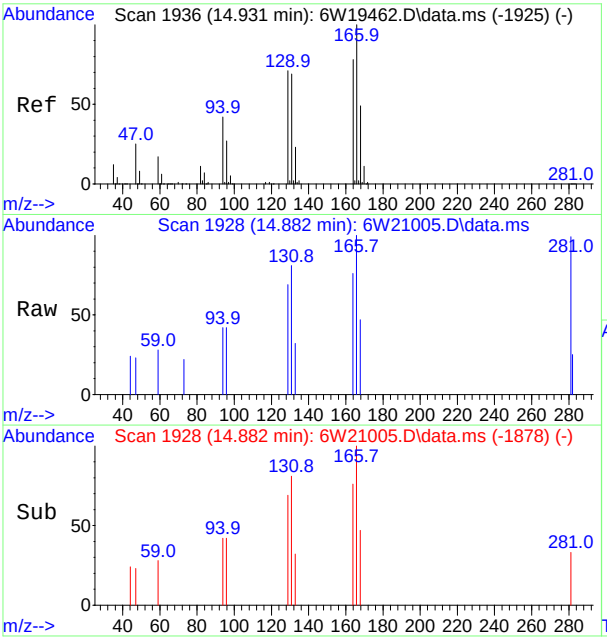


#66
Toluene
Concen: 0.40 ppb(v)
RT: 13.377 min Scan# 1682
Delta R.T. -0.024 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 91 Resp: 45817

Ion	Ratio	Lower	Upper
91	100		
92	56.5	40.9	75.9
65	12.4	8.3	15.3

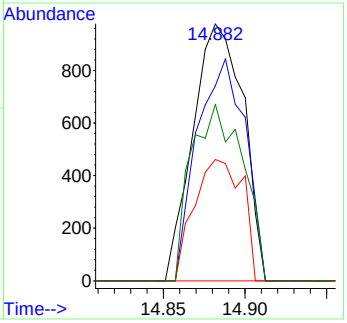


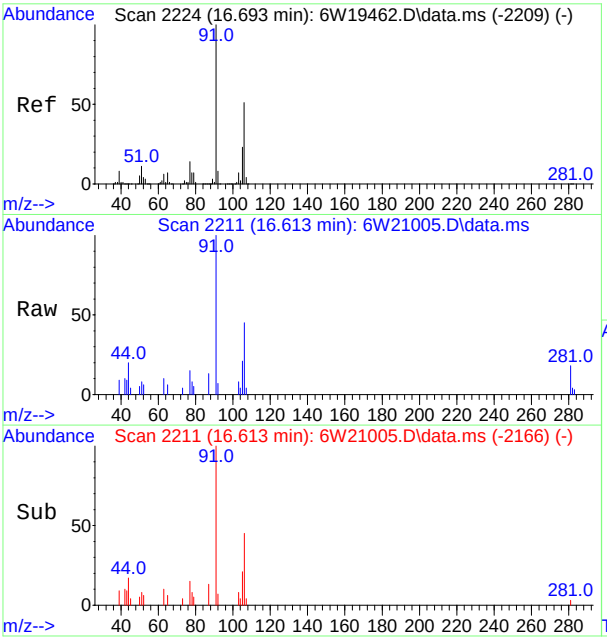


#72
Tetrachloroethene
Concen: 0.04 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion:166 Resp: 2095

Ion	Ratio	Lower	Upper
166	100		
164	75.9	54.7	101.7
168	47.2	34.1	63.3
129	68.7	50.0	92.8

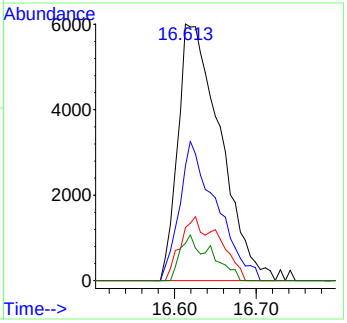




#79
m,p-Xylene
Concen: 0.19 ppb(v)
RT: 16.613 min Scan# 2211
Delta R.T. -0.055 min
Lab File: 6W21005.D
Acq: 15 Jan 2021 2:56 am

Tgt Ion: 91 Resp: 21659

Ion	Ratio	Lower	Upper
91	100		
106	44.6	35.4	65.7
105	20.7	16.2	30.0
77	14.5	9.7	18.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20993.D
Acq On : 14 Jan 2021 4:22 pm
Operator : thomash
Sample : mb
Misc : MS48309,V6W882,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 14 16:53:24 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.060	130	253395	10.00 ppb(v	-0.02
53) 1,4-Difluorobenzene	10.244	114	932763	10.00 ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	350637	10.00 ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	253395	10.00 ppb(v	-0.02
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.008	95	281159	7.30 ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 73.00%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

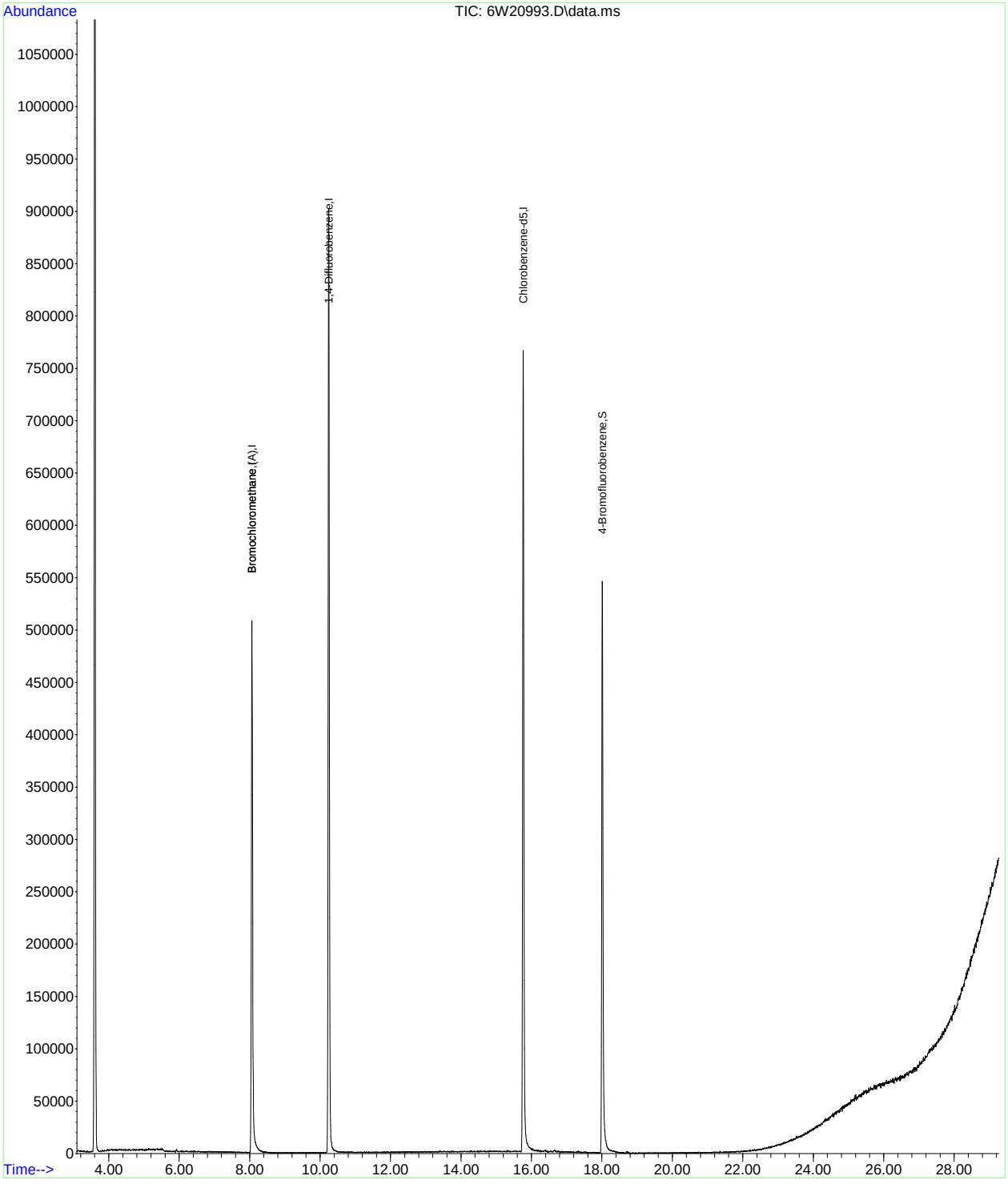
7.2.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20993.D
Acq On : 14 Jan 2021 4:22 pm
Operator : thomash
Sample : mb
Misc : MS48309,V6W882,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 14 16:53:24 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Thu Jan 14 16:55:11 2021 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21013.D
Acq On : 15 Jan 2021 2:14 pm
Operator : danat
Sample : mb
Misc : MS48294,V6W883,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 15 14:58:15 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.060	130	232869	10.00 ppb(v	-0.02
53) 1,4-Difluorobenzene	10.238	114	852377	10.00 ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	322189	10.00 ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	232869	10.00 ppb(v	-0.02
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.008	95	258590	7.31 ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 73.10%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

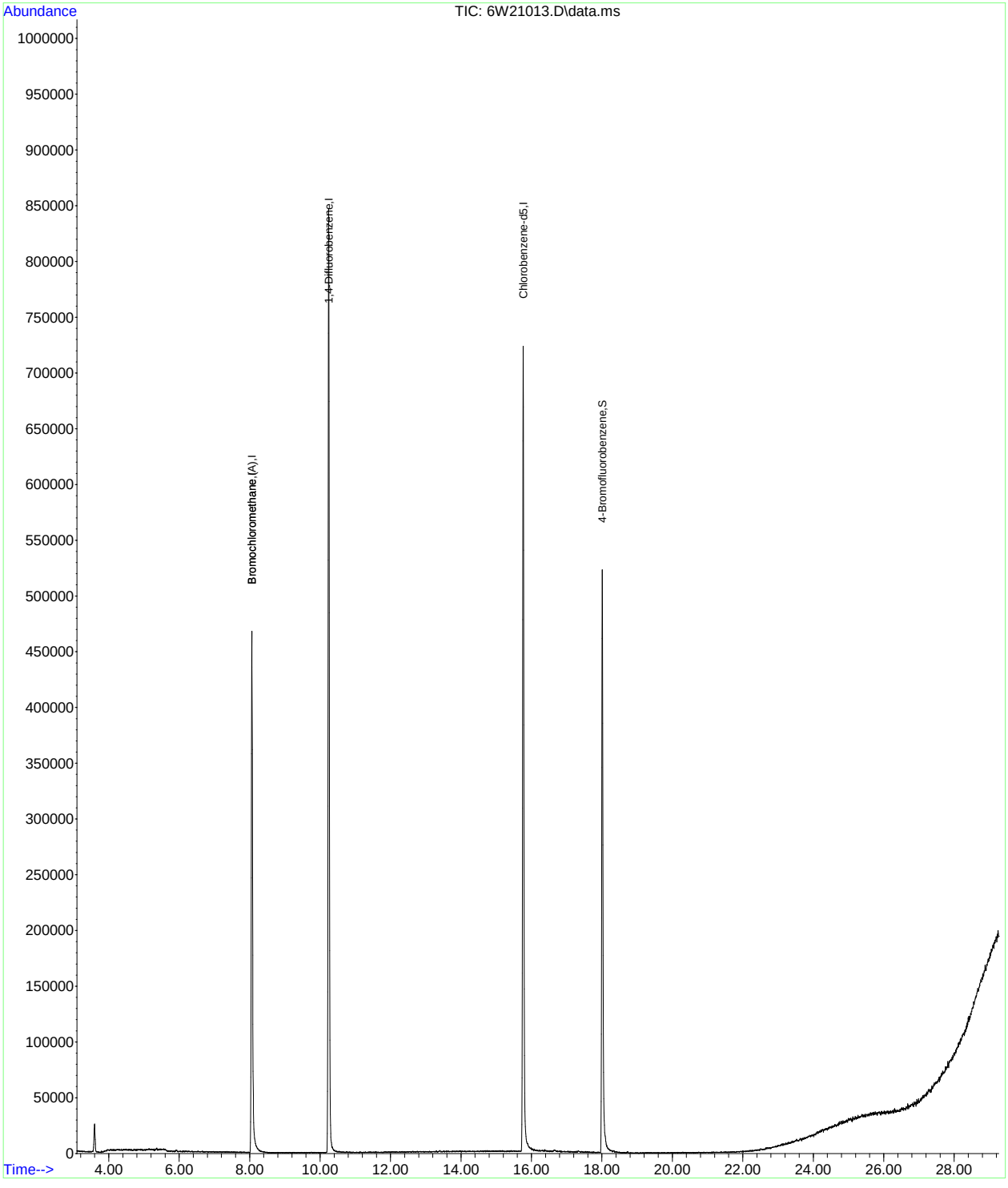
7.2.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21013.D
Acq On : 15 Jan 2021 2:14 pm
Operator : danat
Sample : mb
Misc : MS48294,V6W883,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jan 15 14:58:15 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20311.D
Acq On : 27 Nov 2020 7:09 pm
Operator : danat
Sample : mb
Misc : MS47250,V6W854,400,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 15 16:25:48 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	173198	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	633949	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	239223	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	173279	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.026	95	238807	9.09	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 90.90%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

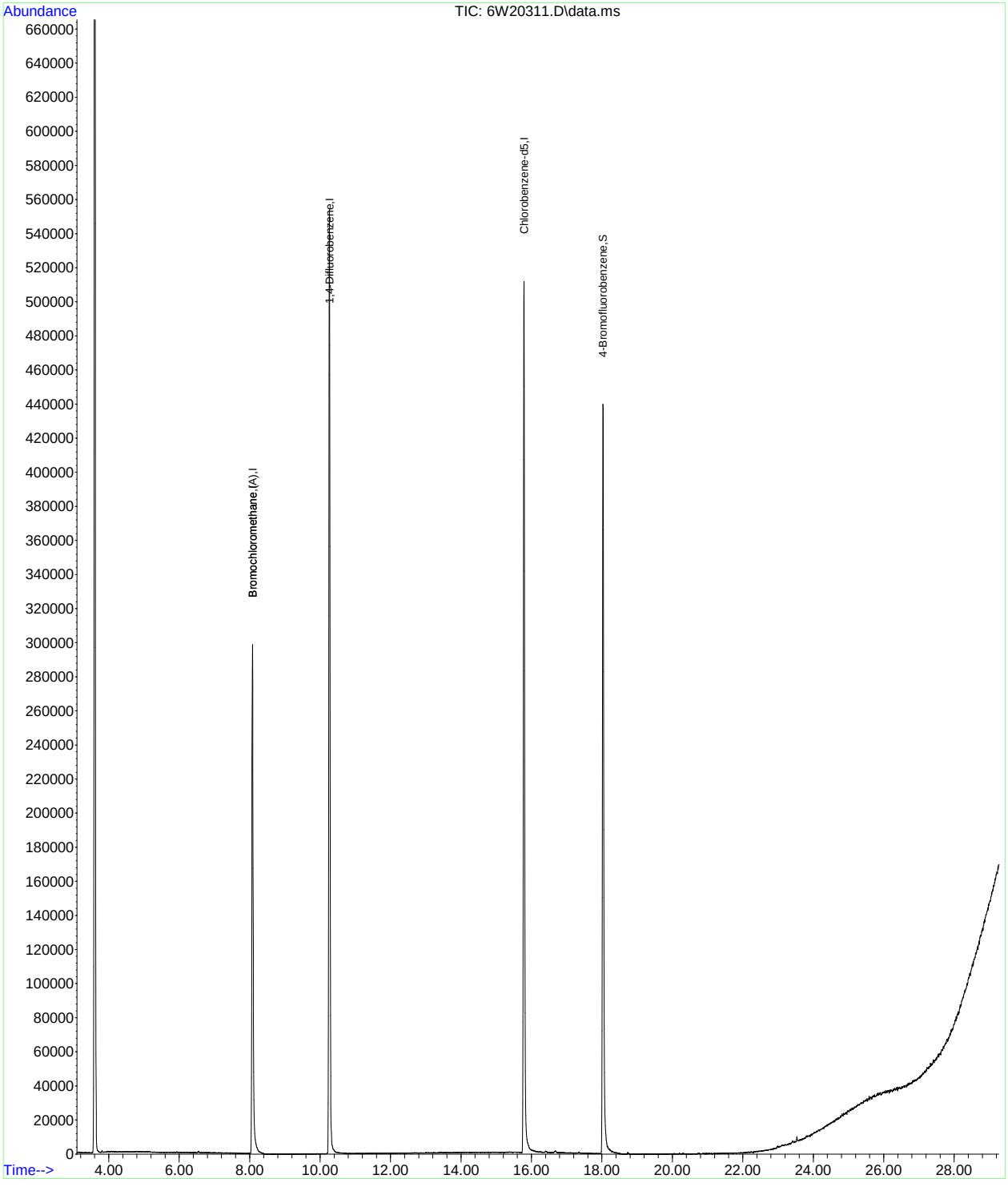
7.2.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20311.D
Acq On : 27 Nov 2020 7:09 pm
Operator : danat
Sample : mb
Misc : MS47250,V6W854,400,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 15 16:25:48 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20410.D
Acq On : 3 Dec 2020 2:41 pm
Operator : thomash
Sample : mb
Misc : MS47355,V6W859,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 03 15:17:19 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	298286	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.257	114	1134542	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	453184	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	301091	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.026	95	438956	8.82	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 88.20%			

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

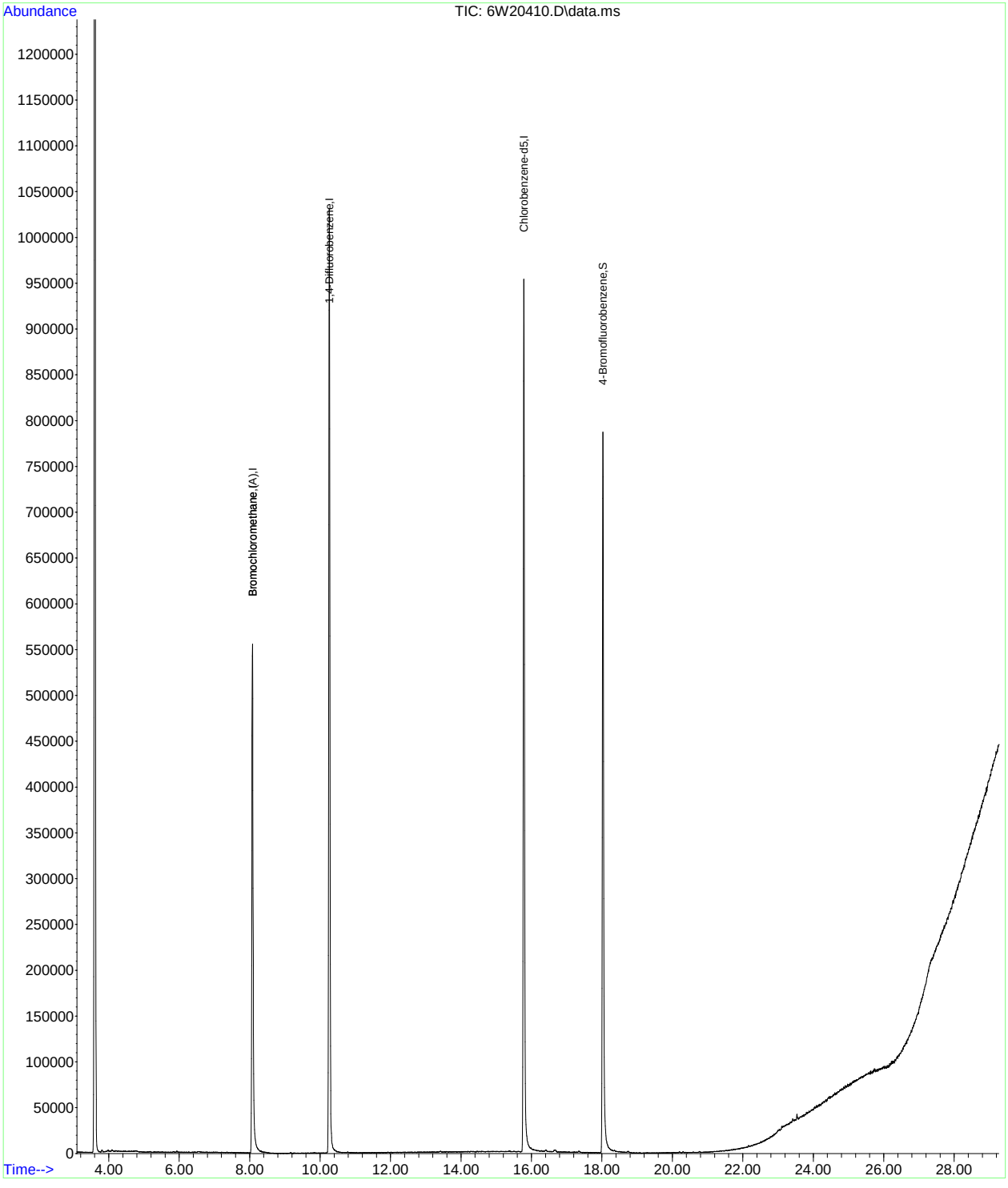
7.2.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20410.D
Acq On : 3 Dec 2020 2:41 pm
Operator : thomash
Sample : mb
Misc : MS47355,V6W859,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Dec 03 15:17:19 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Thu Dec 03 15:17:29 2020 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20990.D
Acq On : 14 Jan 2021 1:55 pm
Operator : thomash
Sample : bs
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:28:36 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	267740	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	1008828	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.769	82	484669	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	267740	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	578066	10.86	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 108.60%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	194501	10.96	ppb(v	97
3) Chlorodifluoromethane	3.766	67	93281	13.97	ppb(v	98
4) Propene	3.790	41	257736	11.20	ppb(v	97
5) Chlorotrifluoroethene	3.797	116	457575	10.25	ppb(v	98
6) Dichlorodifluoromethane	3.845	85	884762	11.94	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	735941	14.19	ppb(v	99
8) Chloromethane	3.974	50	277906	11.45	ppb(v	98
9) Dichlorotetrafluoroethane	4.047	85	897172	12.07	ppb(v	95
10) Vinyl Chloride	4.145	62	321185	11.69	ppb(v	100
11) 1,3-Butadiene	4.249	54	239732	11.58	ppb(v	98
12) n-Butane	4.286	58	60378	10.79	ppb(v	100
13) Bromomethane	4.469	94	300635	10.97	ppb(v	99
14) Acrolein	4.989	56	133647	10.14	ppb(v#	98
15) Chloroethane	4.604	64	157274	11.33	ppb(v	97
16) Dichlorofluoromethane	4.677	67	730605	11.16	ppb(v	99
17) Acetonitrile	4.885	41	247511	9.99	ppb(v	99
18) Freon 123	5.014	83	713722	9.74	ppb(v	99
19) Freon 123A	5.063	117	421305	9.96	ppb(v	96
20) Bromoethene	4.892	106	302806	10.21	ppb(v	98
21) Trichlorofluoromethane	5.240	101	886730	12.02	ppb(v	100
22) Acetone	5.106	58	139729	9.39	ppb(v	92
23) Pentane	5.540	57	81034	9.67	ppb(v	92
24) Iodomethane	5.736	142	774283	8.85	ppb(v	94
25) Isopropyl Alcohol	5.314	45	592604	9.77	ppb(v	97
26) 1,1-Dichloroethene	5.803	61	504288	10.82	ppb(v	95
27) Freon 113	6.152	101	635683	9.30	ppb(v	99
28) Methylene Chloride	5.919	84	258518	8.92	ppb(v	94
29) Carbon Disulfide	6.195	76	870164	9.45	ppb(v	100
30) Ethanol	4.702	45	119605	10.07	ppb(v	99
31) Acrylonitrile	5.509	53	238150	11.07	ppb(v	99
32) 3-Chloropropene	6.023	76	139914	10.01	ppb(v	80
33) trans-1,2-Dichloroethene	6.813	61	447148	10.58	ppb(v	93
34) tert-Butyl Alcohol	5.858	59	665115	10.93	ppb(v	97
35) Methyl tert-Butyl Ether	7.082	73	884675	9.81	ppb(v	98
36) Vinyl Acetate	7.173	43	850191	11.19	ppb(v	96
37) 1,1-Dichloroethane	7.014	63	538281	10.08	ppb(v	99
38) 2-Butanone	7.437	72	139554	10.08	ppb(v	87
39) Hexane	8.091	57	481326	9.80	ppb(v	95
40) cis-1,2-Dichloroethene	7.883	61	424439	10.43	ppb(v	93
41) Di-isopropyl Ether	8.103	87	268853	9.32	ppb(v	84
42) Ethyl Acetate	8.140	61	103533	10.84	ppb(v	82
43) Methyl Acrylate	8.128	55	575668	10.97	ppb(v	98
44) Chloroform	8.201	83	675410	10.29	ppb(v	98
45) 2,4-Dimethylpentane	9.064	57	567199	9.74	ppb(v	97
46) Tetrahydrofuran	8.648	72	141759	10.41	ppb(v	87
47) 1,1,1-Trichloroethane	9.284	97	687113	10.45	ppb(v	98
48) 1,2-Dichloroethane	9.009	62	456722	12.72	ppb(v	98
49) Benzene	9.810	78	886151	8.63	ppb(v	99
50) Carbon Tetrachloride	9.982	117	728317	11.34	ppb(v	99
51) Cyclohexane	10.116	56	473302	9.40	ppb(v	94
52) 2,3-Dimethylpentane	10.410	71	205468	9.04	ppb(v	93
54) 2,2,4-Trimethylpentane	11.095	57	1574545	9.99	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20990.D
Acq On : 14 Jan 2021 1:55 pm
Operator : thomash
Sample : bs
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:28:36 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

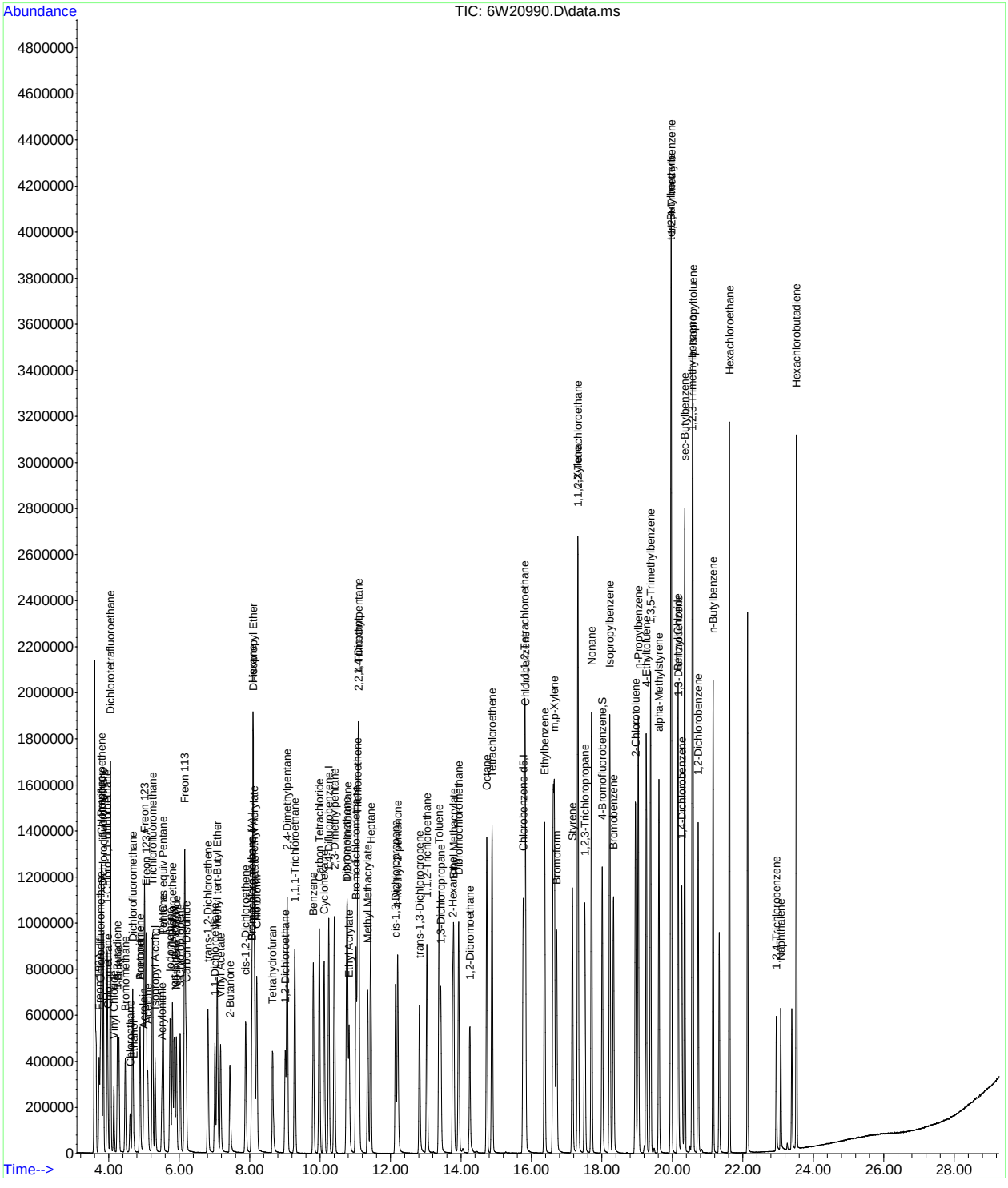
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.438	71	323391	9.36	ppb(v	95
56)	Trichloroethene	11.064	95	417184	9.59	ppb(v	97
57)	1,2-Dichloropropane	10.777	63	343622	9.50	ppb(v	97
58)	Dibromomethane	10.752	174	397513	8.94	ppb(v	98
59)	Ethyl Acrylate	10.820	55	673907	10.58	ppb(v	98
60)	Methyl Methacrylate	11.346	69	344208	10.48	ppb(v	89
61)	1,4-Dioxane	11.089	88	204160	9.07	ppb(v	84
62)	Bromodichloromethane	11.022	83	723769	11.05	ppb(v	99
63)	cis-1,3-Dichloropropene	12.141	75	542555	10.16	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	286688	11.55	ppb(v	89
65)	trans-1,3-Dichloropropene	12.820	75	485801	10.98	ppb(v	98
66)	Toluene	13.377	91	1041586	8.52	ppb(v	98
67)	1,1,2-Trichloroethane	13.028	97	361856	9.33	ppb(v	98
68)	1,3-Dichloropropane	13.426	76	523814	10.11	ppb(v	92
69)	2-Hexanone	13.768	58	340437	10.88	ppb(v	90
70)	Ethyl Methacrylate	13.793	69	535491	10.17	ppb(v	98
71)	Dibromochloromethane	13.934	129	701609	11.35	ppb(v	99
72)	Tetrachloroethene	14.882	166	546810	8.87	ppb(v	99
73)	1,2-Dibromoethane	14.252	107	522482	9.33	ppb(v	98
74)	Octane	14.729	43	760957	10.32	ppb(v	92
75)	1,1,1,2-Tetrachloroethane	15.806	131	491683	10.00	ppb(v	99
77)	Chlorobenzene	15.824	112	800415	8.10	ppb(v	97
78)	Ethylbenzene	16.375	91	1401098	8.79	ppb(v	100
79)	m,p-Xylene	16.650	91	2344705	17.23	ppb(v	99
80)	Styrene	17.164	104	766327	9.48	ppb(v	99
81)	Nonane	17.708	43	945595	12.24	ppb(v	95
82)	o-Xylene	17.317	91	1171842	9.38	ppb(v	98
83)	Bromoform	16.717	173	626628	11.07	ppb(v	97
84)	1,1,2,2-Tetrachloroethane	17.323	83	836727	9.91	ppb(v	99
85)	1,2,3-Trichloropropane	17.512	75	647045	10.95	ppb(v	98
86)	Isopropylbenzene	18.228	105	1761485	9.63	ppb(v	98
87)	Bromobenzene	18.332	156	446611	9.54	ppb(v	99
88)	2-Chlorotoluene	18.956	126	395516	10.00	ppb(v	95
89)	n-Propylbenzene	19.030	120	447883	10.81	ppb(v	96
91)	4-Ethyltoluene	19.262	105	1496469	10.80	ppb(v	99
92)	1,3,5-Trimethylbenzene	19.384	105	1419330	10.07	ppb(v	100
93)	alpha-Methylstyrene	19.617	118	603566	11.07	ppb(v	100
94)	tert-Butylbenzene	19.959	134	355793	9.85	ppb(v	96
95)	1,2,4-Trimethylbenzene	19.972	105	1401086	11.03	ppb(v#	81
96)	1,3-Dichlorobenzene	20.168	146	638243	10.87	ppb(v	99
97)	Benzyl Chloride	20.155	91	719340	10.66	ppb(v	98
98)	1,4-Dichlorobenzene	20.265	146	579008	10.29	ppb(v	100
99)	sec-Butylbenzene	20.351	134	436465	10.34	ppb(v	91
100)	1,2,3-Trimethylbenzene	20.565	105	1442261	10.68	ppb(v	99
101)	p-Isopropyltoluene	20.584	134	458639	10.80	ppb(v	93
102)	1,2-Dichlorobenzene	20.730	146	654957	10.72	ppb(v	98
103)	n-Butylbenzene	21.159	134	322912	11.52	ppb(v	96
104)	Hexachloroethane	21.624	201	612749	12.77	ppb(v	100
105)	1,2,4-Trichlorobenzene	22.951	180	200158	7.94	ppb(v	98
106)	Naphthalene	23.073	128	492151	7.65	ppb(v	100
107)	Hexachlorobutadiene	23.520	225	600842	11.11	ppb(v	99
109)	TVHC as equiv Pentane	5.540	TIC	2019665	11.46	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20990.D
Acq On : 14 Jan 2021 1:55 pm
Operator : thomash
Sample : bs
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:28:36 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20991.D
Acq On : 14 Jan 2021 2:42 pm
Operator : thomash
Sample : bsd
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:29:13 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.060	130	299943	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	1091005	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	548471	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	299943	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	623497	10.35	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 103.50%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	221414	11.14	ppb(v	94
3) Chlorodifluoromethane	3.760	67	100666	13.46	ppb(v	98
4) Propene	3.784	41	290492	11.27	ppb(v	97
5) Chlorotrifluoroethene	3.790	116	520121	10.40	ppb(v	98
6) Dichlorodifluoromethane	3.845	85	989925	11.92	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	811782	13.97	ppb(v	99
8) Chloromethane	3.974	50	333497	12.27	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	1017512	12.22	ppb(v	95
10) Vinyl Chloride	4.145	62	376422	12.23	ppb(v	99
11) 1,3-Butadiene	4.249	54	266728	11.50	ppb(v	97
12) n-Butane	4.292	58	65728	10.49	ppb(v	100
13) Bromomethane	4.469	94	329574	10.74	ppb(v	100
14) Acrolein	4.989	56	137712	9.32	ppb(v#	97
15) Chloroethane	4.604	64	171801	11.05	ppb(v	99
16) Dichlorofluoromethane	4.677	67	780969	10.65	ppb(v	100
17) Acetonitrile	4.885	41	256579	9.24	ppb(v	99
18) Freon 123	5.014	83	754182	9.19	ppb(v	98
19) Freon 123A	5.063	117	446607	9.42	ppb(v	94
20) Bromoethene	4.885	106	320266	9.64	ppb(v	99
21) Trichlorofluoromethane	5.240	101	917865	11.11	ppb(v	100
22) Acetone	5.106	58	147486	8.84	ppb(v	94
23) Pentane	5.540	57	86380	9.20	ppb(v	97
24) Iodomethane	5.736	142	845516	8.63	ppb(v	95
25) Isopropyl Alcohol	5.314	45	612017	9.01	ppb(v	97
26) 1,1-Dichloroethene	5.803	61	541342	10.36	ppb(v	97
27) Freon 113	6.152	101	694879	9.08	ppb(v	100
28) Methylene Chloride	5.919	84	283432	8.73	ppb(v	96
29) Carbon Disulfide	6.195	76	965932	9.37	ppb(v	99
30) Ethanol	4.702	45	129254	9.72	ppb(v	99
31) Acrylonitrile	5.509	53	245746	10.20	ppb(v	99
32) 3-Chloropropene	6.023	76	154724	9.88	ppb(v	82
33) trans-1,2-Dichloroethene	6.812	61	499208	10.55	ppb(v	94
34) tert-Butyl Alcohol	5.858	59	716896	10.51	ppb(v	98
35) Methyl tert-Butyl Ether	7.082	73	983642	9.74	ppb(v	99
36) Vinyl Acetate	7.173	43	952174	11.18	ppb(v	97
37) 1,1-Dichloroethane	7.014	63	600242	10.03	ppb(v	99
38) 2-Butanone	7.436	72	160665	10.36	ppb(v	92
39) Hexane	8.091	57	533678	9.70	ppb(v	95
40) cis-1,2-Dichloroethene	7.889	61	471913	10.35	ppb(v	94
41) Di-isopropyl Ether	8.103	87	294655	9.12	ppb(v	83
42) Ethyl Acetate	8.140	61	115401	10.79	ppb(v	87
43) Methyl Acrylate	8.128	55	630221	10.72	ppb(v	98
44) Chloroform	8.201	83	737453	10.03	ppb(v	100
45) 2,4-Dimethylpentane	9.064	57	622611	9.55	ppb(v	97
46) Tetrahydrofuran	8.654	72	159335	10.44	ppb(v	92
47) 1,1,1-Trichloroethane	9.284	97	742257	10.07	ppb(v	99
48) 1,2-Dichloroethane	9.009	62	484296	12.04	ppb(v	98
49) Benzene	9.810	78	980265	8.52	ppb(v	98
50) Carbon Tetrachloride	9.981	117	777730	10.81	ppb(v	99
51) Cyclohexane	10.116	56	520814	9.23	ppb(v	95
52) 2,3-Dimethylpentane	10.410	71	224291	8.81	ppb(v	90
54) 2,2,4-Trimethylpentane	11.095	57	1622299	9.52	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20991.D
Acq On : 14 Jan 2021 2:42 pm
Operator : thomash
Sample : bsd
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:29:13 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

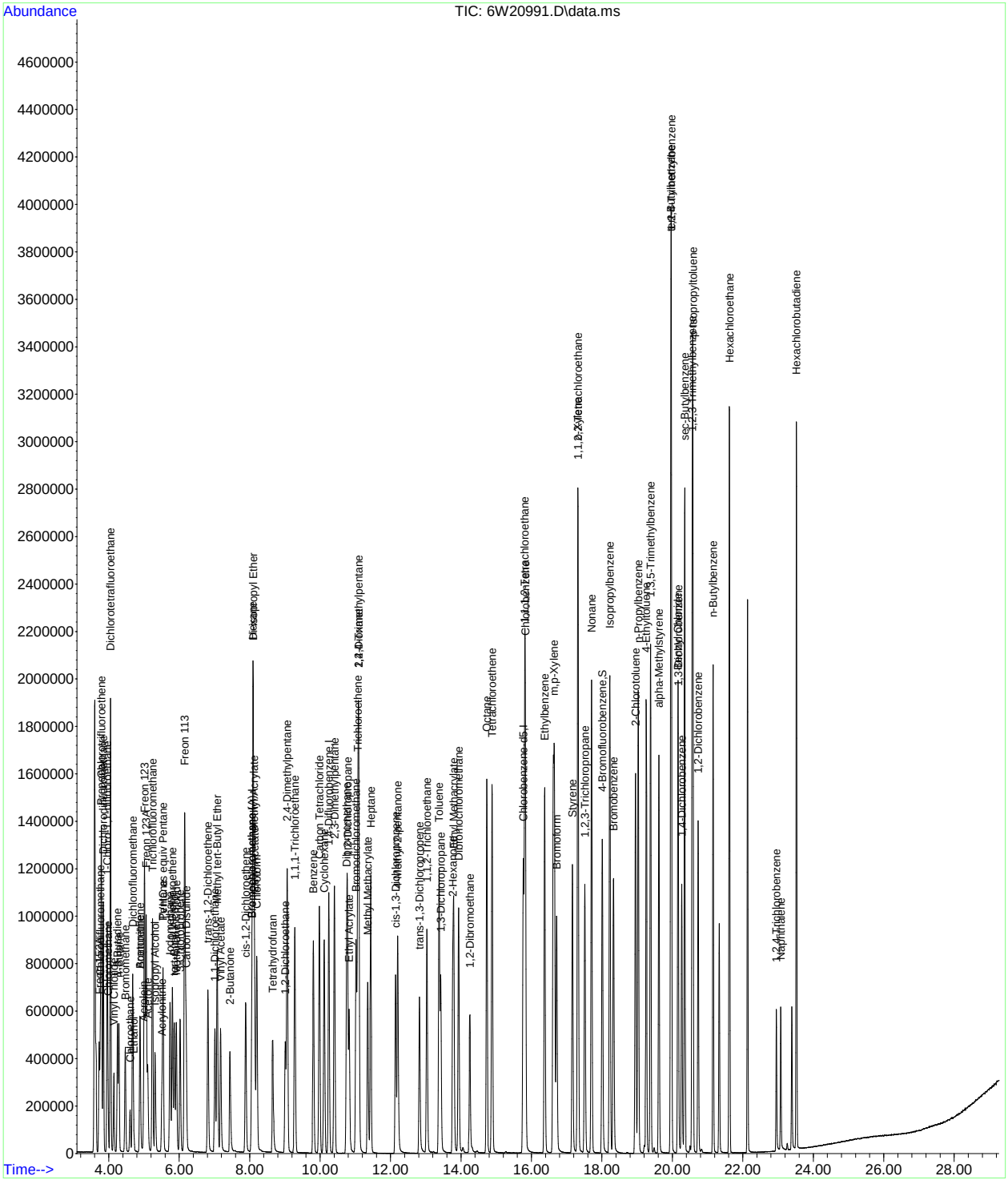
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.437	71	338841	9.07	ppb(v	95
56)	Trichloroethene	11.070	95	418366	8.89	ppb(v	98
57)	1,2-Dichloropropane	10.777	63	384346	9.83	ppb(v	99
58)	Dibromomethane	10.752	174	408908	8.50	ppb(v	94
59)	Ethyl Acrylate	10.820	55	732374	10.64	ppb(v	98
60)	Methyl Methacrylate	11.352	69	354645	9.99	ppb(v	90
61)	1,4-Dioxane	11.095	88	207626	8.53	ppb(v	76
62)	Bromodichloromethane	11.021	83	737189	10.40	ppb(v	99
63)	cis-1,3-Dichloropropene	12.147	75	583681	10.11	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	304256	11.33	ppb(v	91
65)	trans-1,3-Dichloropropene	12.820	75	510336	10.66	ppb(v	98
66)	Toluene	13.377	91	1107492	8.38	ppb(v	97
67)	1,1,2-Trichloroethane	13.028	97	382395	9.12	ppb(v	98
68)	1,3-Dichloropropane	13.426	76	560268	10.00	ppb(v	94
69)	2-Hexanone	13.768	58	376815	11.14	ppb(v	94
70)	Ethyl Methacrylate	13.793	69	587583	10.32	ppb(v	98
71)	Dibromochloromethane	13.933	129	724789	10.84	ppb(v	99
72)	Tetrachloroethene	14.882	166	603936	9.06	ppb(v	98
73)	1,2-Dibromoethane	14.252	107	561913	9.28	ppb(v	99
74)	Octane	14.729	43	886556	11.12	ppb(v	91
75)	1,1,1,2-Tetrachloroethane	15.806	131	551718	10.38	ppb(v	98
77)	Chlorobenzene	15.824	112	908287	8.13	ppb(v	98
78)	Ethylbenzene	16.374	91	1493839	8.28	ppb(v	100
79)	m,p-Xylene	16.644	91	2323606	15.09	ppb(v	99
80)	Styrene	17.164	104	816850	8.93	ppb(v	98
81)	Nonane	17.708	43	975053	11.15	ppb(v	94
82)	o-Xylene	17.317	91	1252432	8.86	ppb(v	98
83)	Bromoform	16.717	173	663363	10.36	ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.323	83	878296	9.20	ppb(v	99
85)	1,2,3-Trichloropropane	17.512	75	675786	10.11	ppb(v	99
86)	Isopropylbenzene	18.228	105	1871329	9.04	ppb(v	99
87)	Bromobenzene	18.332	156	481080	9.08	ppb(v	99
88)	2-Chlorotoluene	18.956	126	419540	9.37	ppb(v	99
89)	n-Propylbenzene	19.030	120	475498	10.14	ppb(v	98
91)	4-Ethyltoluene	19.256	105	1568624	10.00	ppb(v	99
92)	1,3,5-Trimethylbenzene	19.384	105	1490493	9.34	ppb(v	99
93)	alpha-Methylstyrene	19.617	118	625402	10.13	ppb(v	97
94)	tert-Butylbenzene	19.959	134	358369	8.77	ppb(v	93
95)	1,2,4-Trimethylbenzene	19.972	105	1395314	9.71	ppb(v#	80
96)	1,3-Dichlorobenzene	20.167	146	634861	9.55	ppb(v	99
97)	Benzyl Chloride	20.155	91	695663	9.11	ppb(v	99
98)	1,4-Dichlorobenzene	20.265	146	573553	9.01	ppb(v	100
99)	sec-Butylbenzene	20.351	134	441409	9.24	ppb(v	94
100)	1,2,3-Trimethylbenzene	20.565	105	1439059	9.42	ppb(v	99
101)	p-Isopropyltoluene	20.583	134	462410	9.62	ppb(v	96
102)	1,2-Dichlorobenzene	20.730	146	648203	9.38	ppb(v	99
103)	n-Butylbenzene	21.159	134	325552	10.27	ppb(v	99
104)	Hexachloroethane	21.623	201	617797	11.38	ppb(v	97
105)	1,2,4-Trichlorobenzene	22.951	180	206773	7.24	ppb(v	98
106)	Naphthalene	23.073	128	499391	6.86	ppb(v	100
107)	Hexachlorobutadiene	23.520	225	599105	9.79	ppb(v	99
109)	TVHC as equiv Pentane	5.540	TIC	2129749	10.79	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20991.D
Acq On : 14 Jan 2021 2:42 pm
Operator : thomash
Sample : bsd
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 16:29:13 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21010.D
Acq On : 15 Jan 2021 11:36 am
Operator : danat
Sample : bs
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 12:06:43 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.060	130	274112	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	1031584	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	480469	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	274112	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	562550	10.66	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 106.60%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	183367	10.09	ppb(v	97
3) Chlorodifluoromethane	3.766	67	87901	12.86	ppb(v	97
4) Propene	3.790	41	238509	10.12	ppb(v	98
5) Chlorotrifluoroethene	3.796	116	436661	9.55	ppb(v	98
6) Dichlorodifluoromethane	3.845	85	853551	11.25	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.955	65	716240	13.49	ppb(v	99
8) Chloromethane	3.974	50	264012	10.63	ppb(v	97
9) Dichlorotetrafluoroethane	4.047	85	864826	11.36	ppb(v	94
10) Vinyl Chloride	4.145	62	307910	10.95	ppb(v	99
11) 1,3-Butadiene	4.249	54	231299	10.91	ppb(v	99
12) n-Butane	4.292	58	57983	10.12	ppb(v	93
13) Bromomethane	4.469	94	299689	10.68	ppb(v	100
14) Acrolein	4.989	56	127916	9.48	ppb(v#	98
15) Chloroethane	4.604	64	152140	10.71	ppb(v	99
16) Dichlorofluoromethane	4.677	67	715286	10.67	ppb(v	99
17) Acetonitrile	4.885	41	239918	9.46	ppb(v	97
18) Freon 123	5.014	83	720539	9.60	ppb(v	99
19) Freon 123A	5.063	117	423844	9.79	ppb(v	94
20) Bromoethene	4.891	106	302511	9.96	ppb(v	97
21) Trichlorofluoromethane	5.240	101	884050	11.71	ppb(v	99
22) Acetone	5.106	58	136799	8.98	ppb(v	94
23) Pentane	5.540	57	78623	9.16	ppb(v	88
24) Iodomethane	5.736	142	787650	8.79	ppb(v	94
25) Isopropyl Alcohol	5.314	45	573982	9.24	ppb(v	98
26) 1,1-Dichloroethene	5.803	61	502613	10.53	ppb(v	96
27) Freon 113	6.158	101	648443	9.27	ppb(v	99
28) Methylene Chloride	5.919	84	259103	8.73	ppb(v	94
29) Carbon Disulfide	6.195	76	905406	9.61	ppb(v	99
30) Ethanol	4.702	45	118127	9.72	ppb(v	99
31) Acrylonitrile	5.509	53	232514	10.56	ppb(v	99
32) 3-Chloropropene	6.023	76	141366	9.88	ppb(v	83
33) trans-1,2-Dichloroethene	6.812	61	486928	11.26	ppb(v	95
34) tert-Butyl Alcohol	5.858	59	653846	10.49	ppb(v	99
35) Methyl tert-Butyl Ether	7.082	73	944965	10.23	ppb(v	99
36) Vinyl Acetate	7.173	43	903148	11.61	ppb(v	96
37) 1,1-Dichloroethane	7.014	63	577122	10.55	ppb(v	100
38) 2-Butanone	7.430	72	149223	10.53	ppb(v	89
39) Hexane	8.091	57	490510	9.76	ppb(v	97
40) cis-1,2-Dichloroethene	7.883	61	437717	10.50	ppb(v	94
41) Di-isopropyl Ether	8.103	87	267059	9.04	ppb(v	85
42) Ethyl Acetate	8.140	61	99029	10.13	ppb(v	89
43) Methyl Acrylate	8.128	55	560443	10.43	ppb(v	99
44) Chloroform	8.201	83	642278	9.56	ppb(v	99
45) 2,4-Dimethylpentane	9.064	57	558686	9.37	ppb(v	98
46) Tetrahydrofuran	8.648	72	138788	9.95	ppb(v	89
47) 1,1,1-Trichloroethane	9.284	97	696949	10.35	ppb(v	99
48) 1,2-Dichloroethane	9.009	62	450774	12.27	ppb(v	98
49) Benzene	9.810	78	917173	8.72	ppb(v	100
50) Carbon Tetrachloride	9.975	117	757058	11.51	ppb(v	99
51) Cyclohexane	10.110	56	486504	9.44	ppb(v	95
52) 2,3-Dimethylpentane	10.404	71	211190	9.07	ppb(v	91
54) 2,2,4-Trimethylpentane	11.095	57	1595245	9.90	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21010.D
Acq On : 15 Jan 2021 11:36 am
Operator : danat
Sample : bs
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 12:06:43 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

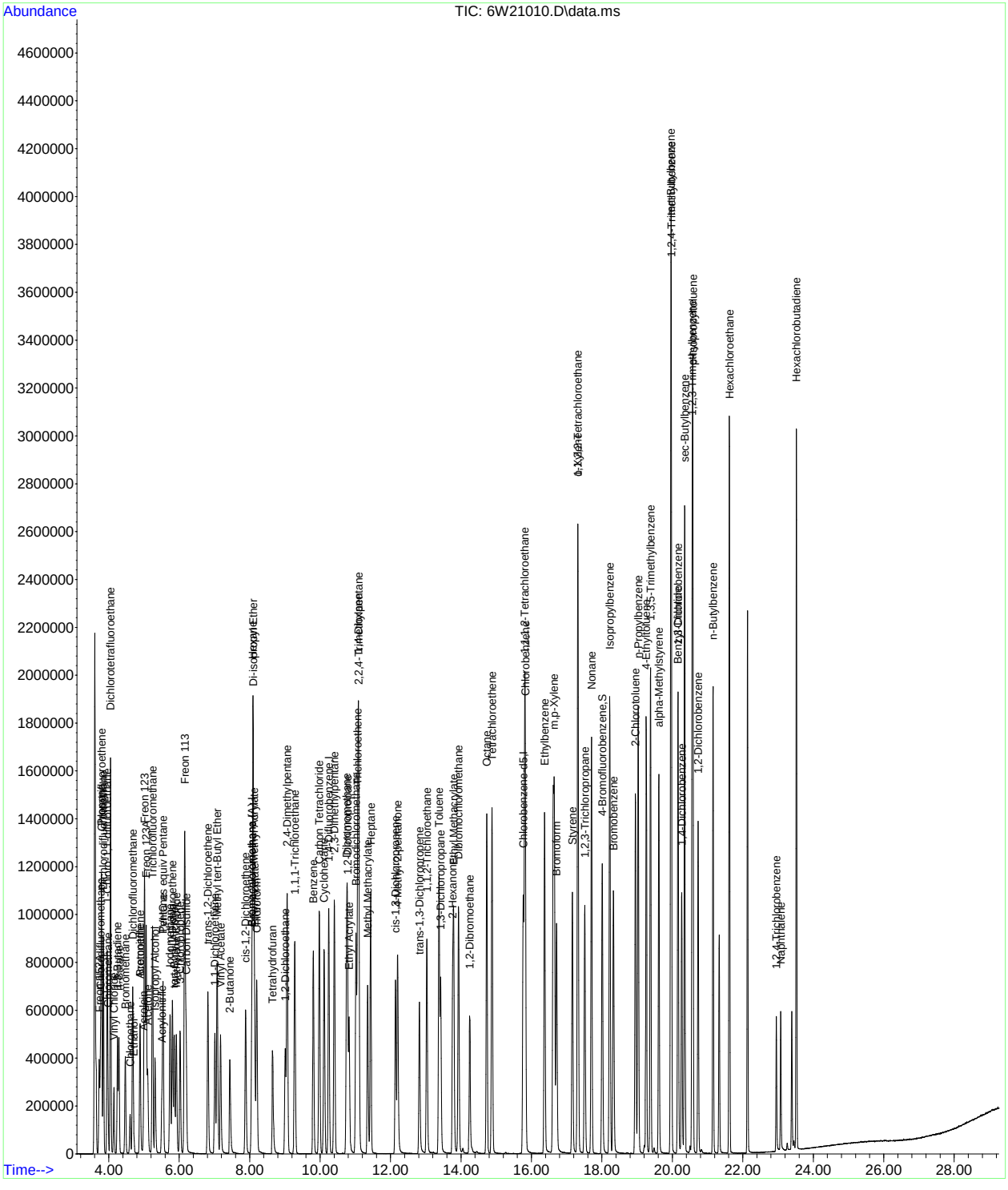
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.437	71	319507	9.05	ppb(v	98
56)	Trichloroethene	11.064	95	424033	9.53	ppb(v	98
57)	1,2-Dichloropropane	10.777	63	357965	9.68	ppb(v	98
58)	Dibromomethane	10.752	174	409727	9.01	ppb(v	98
59)	Ethyl Acrylate	10.820	55	693536	10.65	ppb(v	98
60)	Methyl Methacrylate	11.346	69	340252	10.13	ppb(v	90
61)	1,4-Dioxane	11.089	88	208076	9.04	ppb(v	85
62)	Bromodichloromethane	11.021	83	744106	11.10	ppb(v	100
63)	cis-1,3-Dichloropropene	12.141	75	541848	9.92	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	282502	11.13	ppb(v	97
65)	trans-1,3-Dichloropropene	12.820	75	484294	10.70	ppb(v	98
66)	Toluene	13.377	91	1079843	8.64	ppb(v	98
67)	1,1,2-Trichloroethane	13.028	97	369236	9.31	ppb(v	98
68)	1,3-Dichloropropane	13.420	76	535496	10.11	ppb(v	95
69)	2-Hexanone	13.762	58	355768	11.12	ppb(v	91
70)	Ethyl Methacrylate	13.793	69	570430	10.59	ppb(v	98
71)	Dibromochloromethane	13.927	129	725647	11.48	ppb(v	99
72)	Tetrachloroethene	14.882	166	555110	8.81	ppb(v	98
73)	1,2-Dibromoethane	14.245	107	549532	9.60	ppb(v	99
74)	Octane	14.729	43	788293	10.45	ppb(v	93
75)	1,1,1,2-Tetrachloroethane	15.805	131	509628	10.14	ppb(v	98
77)	Chlorobenzene	15.824	112	815990	8.33	ppb(v	99
78)	Ethylbenzene	16.368	91	1358103	8.59	ppb(v	99
79)	m,p-Xylene	16.644	91	2129823	15.79	ppb(v	99
80)	Styrene	17.164	104	737665	9.20	ppb(v	99
81)	Nonane	17.708	43	847111	11.06	ppb(v	95
82)	o-Xylene	17.317	91	1149581	9.28	ppb(v	100
83)	Bromoform	16.711	173	627201	11.18	ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.317	83	797688	9.53	ppb(v	99
85)	1,2,3-Trichloropropane	17.512	75	613827	10.48	ppb(v	99
86)	Isopropylbenzene	18.222	105	1737372	9.58	ppb(v	99
87)	Bromobenzene	18.332	156	440534	9.49	ppb(v	100
88)	2-Chlorotoluene	18.950	126	393433	10.03	ppb(v	98
89)	n-Propylbenzene	19.030	120	441590	10.75	ppb(v	96
91)	4-Ethyltoluene	19.256	105	1467210	10.68	ppb(v	99
92)	1,3,5-Trimethylbenzene	19.384	105	1391498	9.96	ppb(v	99
93)	alpha-Methylstyrene	19.617	118	597541	11.05	ppb(v	98
94)	tert-Butylbenzene	19.959	134	349584	9.76	ppb(v	94
95)	1,2,4-Trimethylbenzene	19.972	105	1359038	10.80	ppb(v#	84
96)	1,3-Dichlorobenzene	20.161	146	618887	10.63	ppb(v	99
97)	Benzyl Chloride	20.155	91	682542	10.20	ppb(v	98
98)	1,4-Dichlorobenzene	20.265	146	555633	9.96	ppb(v	99
99)	sec-Butylbenzene	20.351	134	426607	10.20	ppb(v	92
100)	1,2,3-Trimethylbenzene	20.565	105	1405988	10.51	ppb(v	99
101)	p-Isopropyltoluene	20.583	134	451054	10.71	ppb(v	95
102)	1,2-Dichlorobenzene	20.730	146	635262	10.49	ppb(v	99
103)	n-Butylbenzene	21.158	134	313788	11.30	ppb(v	98
104)	Hexachloroethane	21.623	201	593371	12.48	ppb(v	97
105)	1,2,4-Trichlorobenzene	22.951	180	193619	7.74	ppb(v	99
106)	Naphthalene	23.073	128	472005	7.40	ppb(v	99
107)	Hexachlorobutadiene	23.520	225	581705	10.85	ppb(v	100
109)	TVHC as equiv Pentane	5.540	TIC	1976035	10.95	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21010.D
Acq On : 15 Jan 2021 11:36 am
Operator : danat
Sample : bs
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 12:06:43 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21011.D
Acq On : 15 Jan 2021 12:24 pm
Operator : danat
Sample : bsd
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 13:00:47 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	279746	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	938502	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	499715	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	279746	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	538921	9.82	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 98.20%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	173259	9.35	ppb(v	99
3) Chlorodifluoromethane	3.766	67	85550	12.26	ppb(v	99
4) Propene	3.790	41	222094	9.24	ppb(v	99
5) Chlorotrifluoroethene	3.797	116	421166	9.03	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	817913	10.56	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	700450	12.92	ppb(v	99
8) Chloromethane	3.974	50	254051	10.02	ppb(v	96
9) Dichlorotetrafluoroethane	4.047	85	853123	10.98	ppb(v	93
10) Vinyl Chloride	4.145	62	305557	10.65	ppb(v	99
11) 1,3-Butadiene	4.249	54	230362	10.65	ppb(v	99
12) n-Butane	4.286	58	58008	9.92	ppb(v	98
13) Bromomethane	4.469	94	298805	10.44	ppb(v	99
14) Acrolein	4.989	56	126943	9.22	ppb(v#	95
15) Chloroethane	4.604	64	153156	10.56	ppb(v	96
16) Dichlorofluoromethane	4.677	67	717868	10.49	ppb(v	100
17) Acetonitrile	4.885	41	237886	9.19	ppb(v	98
18) Freon 123	5.014	83	718445	9.38	ppb(v	99
19) Freon 123A	5.063	117	428136	9.69	ppb(v	90
20) Bromoethene	4.892	106	303431	9.79	ppb(v	99
21) Trichlorofluoromethane	5.240	101	888975	11.54	ppb(v	99
22) Acetone	5.106	58	137023	8.81	ppb(v	99
23) Pentane	5.540	57	77925	8.90	ppb(v	91
24) Iodomethane	5.736	142	794994	8.70	ppb(v	94
25) Isopropyl Alcohol	5.314	45	574280	9.06	ppb(v	98
26) 1,1-Dichloroethene	5.803	61	509701	10.46	ppb(v	97
27) Freon 113	6.152	101	670384	9.39	ppb(v	98
28) Methylene Chloride	5.919	84	268714	8.87	ppb(v	93
29) Carbon Disulfide	6.195	76	921598	9.58	ppb(v	99
30) Ethanol	4.702	45	117319	9.46	ppb(v	100
31) Acrylonitrile	5.503	53	233002	10.37	ppb(v	98
32) 3-Chloropropene	6.023	76	146650	10.04	ppb(v	86
33) trans-1,2-Dichloroethene	6.813	61	482699	10.94	ppb(v	94
34) tert-Butyl Alcohol	5.858	59	675441	10.62	ppb(v	98
35) Methyl tert-Butyl Ether	7.076	73	951636	10.10	ppb(v	99
36) Vinyl Acetate	7.173	43	900036	11.33	ppb(v	95
37) 1,1-Dichloroethane	7.014	63	580453	10.40	ppb(v	99
38) 2-Butanone	7.437	72	150310	10.39	ppb(v	89
39) Hexane	8.091	57	499777	9.74	ppb(v	96
40) cis-1,2-Dichloroethene	7.883	61	443995	10.44	ppb(v	96
41) Di-isopropyl Ether	8.103	87	281337	9.33	ppb(v	86
42) Ethyl Acetate	8.140	61	108592	10.88	ppb(v	88
43) Methyl Acrylate	8.128	55	587658	10.72	ppb(v	98
44) Chloroform	8.201	83	705422	10.29	ppb(v	99
45) 2,4-Dimethylpentane	9.064	57	579956	9.54	ppb(v	98
46) Tetrahydrofuran	8.648	72	147105	10.33	ppb(v	91
47) 1,1,1-Trichloroethane	9.284	97	714398	10.40	ppb(v	99
48) 1,2-Dichloroethane	9.009	62	455973	12.16	ppb(v	98
49) Benzene	9.810	78	869277	8.10	ppb(v	99
50) Carbon Tetrachloride	9.975	117	702493	10.47	ppb(v	99
51) Cyclohexane	10.116	56	452547	8.60	ppb(v	96
52) 2,3-Dimethylpentane	10.410	71	194693	8.20	ppb(v	89
54) 2,2,4-Trimethylpentane	11.095	57	1506572	10.28	ppb(v	99

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21011.D
Acq On : 15 Jan 2021 12:24 pm
Operator : danat
Sample : bsd
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 13:00:47 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

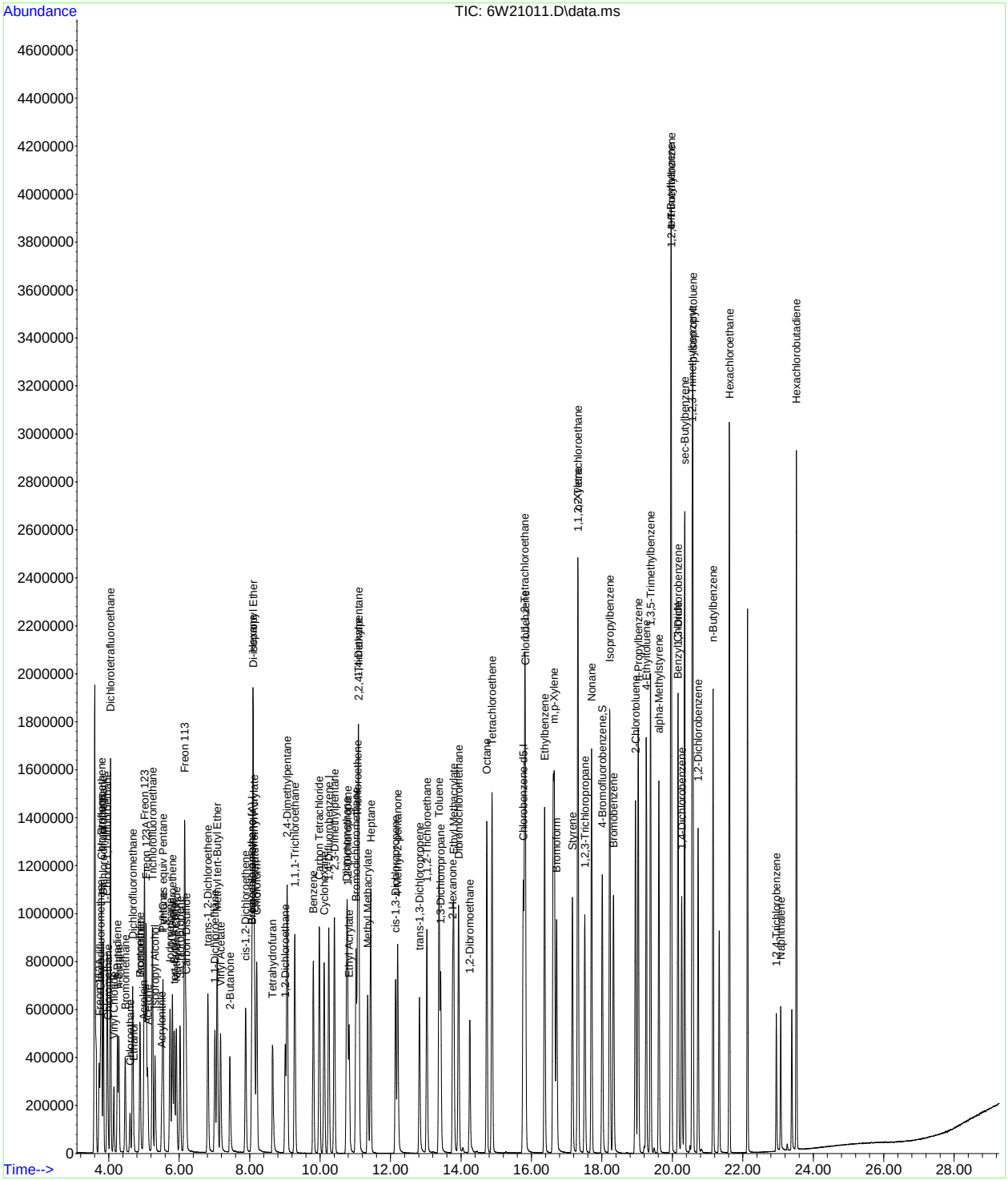
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.438	71	325890	10.14 ppb(v	97
56) Trichloroethene	11.064	95	395805	9.78 ppb(v	99
57) 1,2-Dichloropropane	10.777	63	332787	9.89 ppb(v	98
58) Dibromomethane	10.752	174	373459	9.03 ppb(v	97
59) Ethyl Acrylate	10.820	55	641834	10.83 ppb(v	99
60) Methyl Methacrylate	11.346	69	325526	10.65 ppb(v	90
61) 1,4-Dioxane	11.089	88	195123	9.32 ppb(v	84
62) Bromodichloromethane	11.022	83	698123	11.45 ppb(v	99
63) cis-1,3-Dichloropropene	12.141	75	552056	11.11 ppb(v	98
64) 4-Methyl-2-pentanone	12.202	58	288400	12.48 ppb(v	95
65) trans-1,3-Dichloropropene	12.820	75	492538	11.96 ppb(v	98
66) Toluene	13.377	91	1116109	9.82 ppb(v	98
67) 1,1,2-Trichloroethane	13.028	97	380473	10.55 ppb(v	98
68) 1,3-Dichloropropane	13.420	76	555398	11.52 ppb(v	95
69) 2-Hexanone	13.762	58	364476	12.52 ppb(v	92
70) Ethyl Methacrylate	13.793	69	577973	11.80 ppb(v	98
71) Dibromochloromethane	13.934	129	742410	12.91 ppb(v	99
72) Tetrachloroethene	14.882	166	579997	10.12 ppb(v	99
73) 1,2-Dibromoethane	14.246	107	534428	10.26 ppb(v	98
74) Octane	14.729	43	758589	11.06 ppb(v	93
75) 1,1,1,2-Tetrachloroethane	15.806	131	527894	11.55 ppb(v	99
77) Chlorobenzene	15.824	112	847738	8.33 ppb(v	98
78) Ethylbenzene	16.375	91	1411123	8.58 ppb(v	100
79) m,p-Xylene	16.644	91	2335405	16.65 ppb(v	99
80) Styrene	17.164	104	705763	8.47 ppb(v	99
81) Nonane	17.708	43	805870	10.11 ppb(v	95
82) o-Xylene	17.317	91	1121252	8.70 ppb(v	99
83) Bromoform	16.711	173	640361	10.98 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.323	83	763113	8.77 ppb(v	100
85) 1,2,3-Trichloropropane	17.512	75	585078	9.61 ppb(v	100
86) Isopropylbenzene	18.222	105	1698225	9.00 ppb(v	98
87) Bromobenzene	18.332	156	447687	9.27 ppb(v	98
88) 2-Chlorotoluene	18.956	126	387648	9.51 ppb(v	100
89) n-Propylbenzene	19.030	120	429609	10.06 ppb(v	97
91) 4-Ethyltoluene	19.262	105	1427306	9.99 ppb(v	99
92) 1,3,5-Trimethylbenzene	19.384	105	1381006	9.50 ppb(v	100
93) alpha-Methylstyrene	19.617	118	585385	10.41 ppb(v	98
94) tert-Butylbenzene	19.959	134	346952	9.32 ppb(v	97
95) 1,2,4-Trimethylbenzene	19.972	105	1338864	10.23 ppb(v#	83
96) 1,3-Dichlorobenzene	20.161	146	608847	10.06 ppb(v	98
97) Benzyl Chloride	20.155	91	668976	9.61 ppb(v	99
98) 1,4-Dichlorobenzene	20.265	146	543098	9.36 ppb(v	99
99) sec-Butylbenzene	20.351	134	424766	9.76 ppb(v	97
100) 1,2,3-Trimethylbenzene	20.565	105	1386051	9.96 ppb(v	99
101) p-Isopropyltoluene	20.584	134	444396	10.15 ppb(v	93
102) 1,2-Dichlorobenzene	20.730	146	623153	9.89 ppb(v	99
103) n-Butylbenzene	21.159	134	313395	10.85 ppb(v	99
104) Hexachloroethane	21.624	201	594061	12.01 ppb(v	96
105) 1,2,4-Trichlorobenzene	22.951	180	197291	7.59 ppb(v	99
106) Naphthalene	23.073	128	485411	7.32 ppb(v	99
107) Hexachlorobutadiene	23.520	225	573047	10.27 ppb(v	99
109) TVHC as equiv Pentane	5.540	TIC	1987411	10.79 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21011.D
Acq On : 15 Jan 2021 12:24 pm
Operator : danat
Sample : bsd
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 13:00:47 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Fri Jan 15 13:56:00 2021 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20308.D
Acq On : 27 Nov 2020 4:42 pm
Operator : danat
Sample : bs
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:18:28 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	172348	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	643855	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	281489	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	172348	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	332992	10.77	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 107.70%			
Target Compounds						Qvalue
2) Freon 152A	3.723	65	116269	10.18	ppb(v	90
3) Chlorodifluoromethane	3.760	67	47270	11.00	ppb(v	99
4) Propene	3.784	41	132427	8.94	ppb(v	96
5) Chlorotrifluoroethene	3.790	116	287861	10.01	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	493011	10.33	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	366398	10.97	ppb(v	97
8) Chloromethane	3.974	50	134470	8.61	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	460359	9.62	ppb(v	91
10) Vinyl Chloride	4.145	62	159614	9.03	ppb(v	99
11) 1,3-Butadiene	4.249	54	114409	8.58	ppb(v	95
12) n-Butane	4.292	58	29826	8.28	ppb(v	78
13) Bromomethane	4.469	94	160717	9.11	ppb(v	100
14) Acrolein	4.996	56	60710	7.15	ppb(v	99
15) Chloroethane	4.604	64	79810	8.93	ppb(v	98
16) Dichlorofluoromethane	4.677	67	373125	8.85	ppb(v	99
17) Acetonitrile	4.892	41	109427	6.86	ppb(v	97
18) Freon 123	5.020	83	388030	8.23	ppb(v	98
19) Freon 123A	5.063	117	240673	8.84	ppb(v	89
20) Bromoethene	4.892	106	167095	8.75	ppb(v	99
21) Trichlorofluoromethane	5.246	101	479347	10.10	ppb(v	99
22) Acetone	5.112	58	81927	8.55	ppb(v	83
23) Pentane	5.552	57	48219	8.94	ppb(v	89
24) Iodomethane	5.748	142	557427	9.90	ppb(v	96
25) Isopropyl Alcohol	5.320	45	308138	7.89	ppb(v	100
26) 1,1-Dichloroethene	5.815	61	290473	9.68	ppb(v	93
27) Freon 113	6.164	101	419792	9.54	ppb(v	96
28) Methylene Chloride	5.932	84	175497	9.41	ppb(v	92
29) Carbon Disulfide	6.207	76	572296	9.66	ppb(v	100
30) Ethanol	4.708	45	54206	7.09	ppb(v	100
31) Acrylonitrile	5.516	53	138846	10.03	ppb(v	99
32) 3-Chloropropene	6.036	76	93227	10.36	ppb(v	86
33) trans-1,2-Dichloroethene	6.825	61	265628	9.77	ppb(v	97
34) tert-Butyl Alcohol	5.864	59	390780	9.97	ppb(v	96
35) Methyl tert-Butyl Ether	7.094	73	543680	9.37	ppb(v	96
36) Vinyl Acetate	7.186	43	457896	9.36	ppb(v	97
37) 1,1-Dichloroethane	7.027	63	321720	9.36	ppb(v	99
38) 2-Butanone	7.449	72	91739	10.29	ppb(v	78
39) Hexane	8.110	57	287602	9.10	ppb(v	91
40) cis-1,2-Dichloroethene	7.902	61	250076	9.54	ppb(v	94
41) Di-isopropyl Ether	8.116	87	176920	9.53	ppb(v	88
42) Ethyl Acetate	8.152	61	64937	10.56	ppb(v	84
43) Methyl Acrylate	8.140	55	342994	10.16	ppb(v	99
44) Chloroform	8.220	83	413792	9.80	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	339490	9.06	ppb(v	99
46) Tetrahydrofuran	8.666	72	91798	10.47	ppb(v	88
47) 1,1,1-Trichloroethane	9.302	97	412416	9.74	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	237524	10.28	ppb(v	99
49) Benzene	9.829	78	599701	9.07	ppb(v	96
50) Carbon Tetrachloride	10.000	117	445605	10.78	ppb(v	99
51) Cyclohexane	10.134	56	289701	8.94	ppb(v	97
52) 2,3-Dimethylpentane	10.428	71	133666	9.13	ppb(v	96
54) 2,2,4-Trimethylpentane	11.119	57	944340	9.39	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20308.D
Acq On : 27 Nov 2020 4:42 pm
Operator : danat
Sample : bs
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:18:28 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

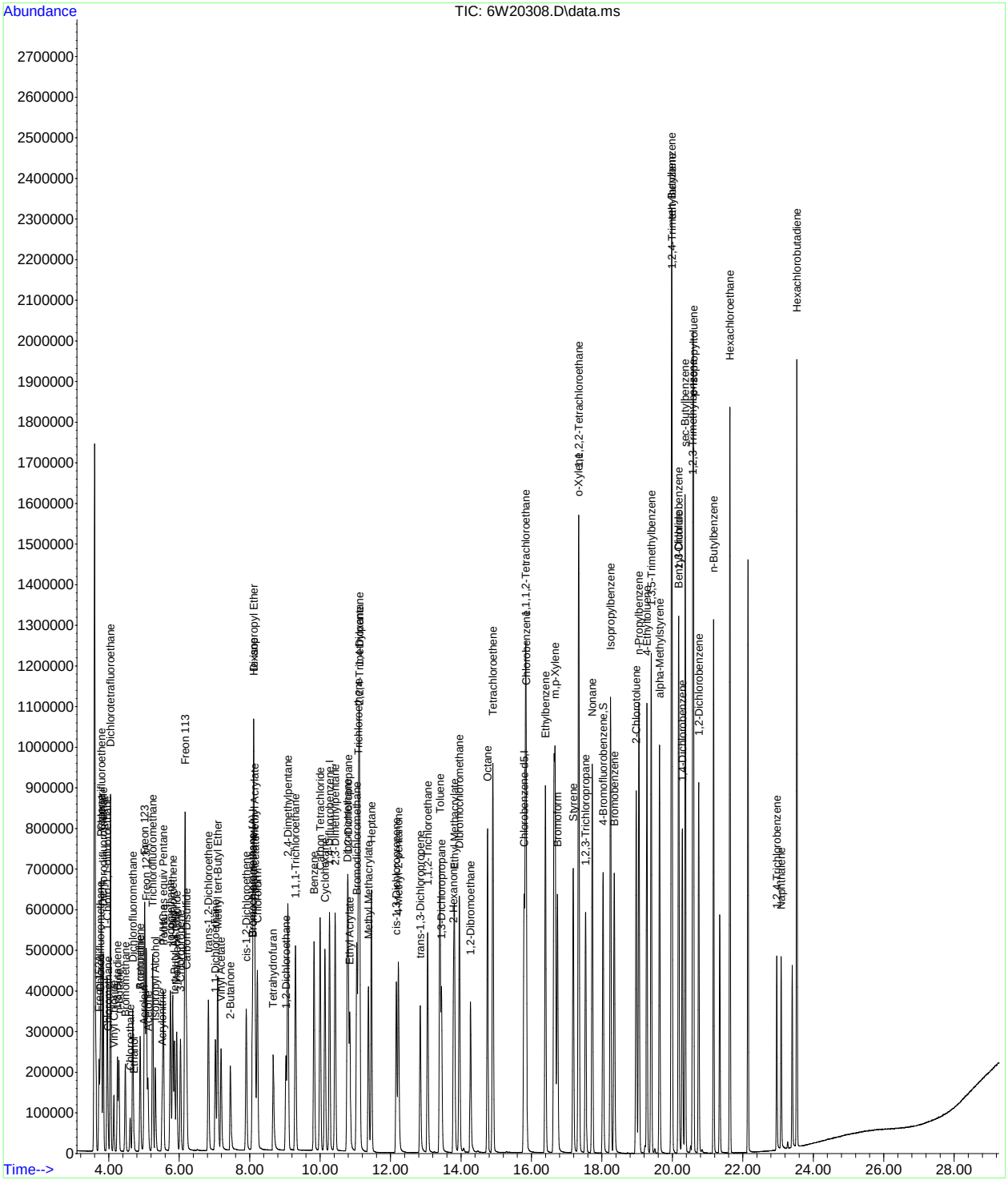
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.456	71	214755	9.74 ppb(v	99
56) Trichloroethene	11.089	95	274755	9.90 ppb(v	95
57) 1,2-Dichloropropane	10.795	63	216871	9.39 ppb(v	99
58) Dibromomethane	10.771	174	291528	10.27 ppb(v	92
59) Ethyl Acrylate	10.838	55	410354	10.10 ppb(v	99
60) Methyl Methacrylate	11.370	69	222843	10.63 ppb(v	92
61) 1,4-Dioxane	11.113	88	136877	9.53 ppb(v	97
62) Bromodichloromethane	11.040	83	441453	10.56 ppb(v	99
63) cis-1,3-Dichloropropene	12.166	75	344386	10.11 ppb(v	98
64) 4-Methyl-2-pentanone	12.221	58	173107	10.92 ppb(v	91
65) trans-1,3-Dichloropropene	12.845	75	302579	10.71 ppb(v	98
66) Toluene	13.401	91	715647	9.18 ppb(v	99
67) 1,1,2-Trichloroethane	13.053	97	244881	9.90 ppb(v	99
68) 1,3-Dichloropropane	13.444	76	340864	10.31 ppb(v	93
69) 2-Hexanone	13.787	58	215178	10.78 ppb(v	92
70) Ethyl Methacrylate	13.817	69	366790	10.91 ppb(v	99
71) Dibromochloromethane	13.952	129	476515	12.08 ppb(v	99
72) Tetrachloroethene	14.906	166	410777	10.44 ppb(v	98
73) 1,2-Dibromoethane	14.270	107	370067	10.35 ppb(v	99
74) Octane	14.753	43	426760	9.07 ppb(v	96
75) 1,1,1,2-Tetrachloroethane	15.830	131	336870	10.74 ppb(v	97
77) Chlorobenzene	15.848	112	568672	9.91 ppb(v	97
78) Ethylbenzene	16.393	91	910526	9.83 ppb(v	99
79) m,p-Xylene	16.668	91	1493911	18.90 ppb(v	99
80) Styrene	17.188	104	513231	10.93 ppb(v	97
81) Nonane	17.727	43	438725	9.78 ppb(v	98
82) o-Xylene	17.335	91	728938	10.04 ppb(v	98
83) Bromoform	16.735	173	442100	13.45 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.341	83	517225	10.55 ppb(v	99
85) 1,2,3-Trichloropropane	17.531	75	372530	10.86 ppb(v	97
86) Isopropylbenzene	18.247	105	1080109	10.17 ppb(v	98
87) Bromobenzene	18.351	156	320000	11.76 ppb(v	93
88) 2-Chlorotoluene	18.975	126	254306	11.07 ppb(v	95
89) n-Propylbenzene	19.048	120	284485	11.82 ppb(v	97
91) 4-Ethyltoluene	19.280	105	951636	11.82 ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	877092	10.71 ppb(v	99
93) alpha-Methylstyrene	19.635	118	401546	12.68 ppb(v	98
94) tert-Butylbenzene	19.978	134	223006	10.63 ppb(v	96
95) 1,2,4-Trimethylbenzene	19.990	105	859662	11.66 ppb(v#	88
96) 1,3-Dichlorobenzene	20.180	146	463087	13.58 ppb(v	97
97) Benzyl Chloride	20.174	91	483728	12.34 ppb(v	98
98) 1,4-Dichlorobenzene	20.284	146	437752	13.40 ppb(v	96
99) sec-Butylbenzene	20.363	134	276343	11.28 ppb(v	97
100) 1,2,3-Trimethylbenzene	20.577	105	881914	11.25 ppb(v	98
101) p-Isopropyltoluene	20.602	134	292173	11.84 ppb(v	98
102) 1,2-Dichlorobenzene	20.749	146	468090	13.19 ppb(v	97
103) n-Butylbenzene	21.171	134	222127	13.65 ppb(v	94
104) Hexachloroethane	21.636	201	381949	13.71 ppb(v	92
105) 1,2,4-Trichlorobenzene	22.963	180	172322	11.76 ppb(v	99
106) Naphthalene	23.086	128	401422	10.74 ppb(v	100
107) Hexachlorobutadiene	23.532	225	398135	12.67 ppb(v	99
109) TVHC as equiv Pentane	5.546	TIC	1118067	9.85 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20308.D
Acq On : 27 Nov 2020 4:42 pm
Operator : danat
Sample : bs
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:18:28 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20309.D
Acq On : 27 Nov 2020 5:29 pm
Operator : danat
Sample : bsd
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:59:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.079	130	173973	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	644628	10.00 ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	292995	10.00 ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	173973	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.026	95	355718	11.05 ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 110.50%		
Target Compounds					Qvalue
2) Freon 152A	3.729	65	123576	10.72 ppb(v	88
3) Chlorodifluoromethane	3.766	67	48959	11.28 ppb(v	98
4) Propene	3.790	41	141484	9.46 ppb(v	96
5) Chlorotrifluoroethene	3.797	116	303540	10.46 ppb(v	98
6) Dichlorodifluoromethane	3.852	85	509337	10.58 ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	374438	11.11 ppb(v	97
8) Chloromethane	3.974	50	141115	8.95 ppb(v	100
9) Dichlorotetrafluoroethane	4.054	85	475094	9.84 ppb(v	89
10) Vinyl Chloride	4.145	62	164255	9.20 ppb(v	99
11) 1,3-Butadiene	4.255	54	116463	8.66 ppb(v	95
12) n-Butane	4.292	58	30529	8.40 ppb(v	80
13) Bromomethane	4.476	94	164852	9.26 ppb(v	99
14) Acrolein	4.996	56	60974	7.12 ppb(v	99
15) Chloroethane	4.610	64	82204	9.11 ppb(v	97
16) Dichlorofluoromethane	4.684	67	378150	8.89 ppb(v	99
17) Acetonitrile	4.898	41	109919	6.83 ppb(v	99
18) Freon 123	5.020	83	394654	8.29 ppb(v	99
19) Freon 123A	5.069	117	259293	9.43 ppb(v	90
20) Bromoethene	4.898	106	170774	8.86 ppb(v	98
21) Trichlorofluoromethane	5.246	101	477935	9.97 ppb(v	98
22) Acetone	5.112	58	83009	8.58 ppb(v	83
23) Pentane	5.552	57	47809	8.78 ppb(v	88
24) Iodomethane	5.748	142	564840	9.93 ppb(v	96
25) Isopropyl Alcohol	5.326	45	306251	7.77 ppb(v	99
26) 1,1-Dichloroethene	5.815	61	290899	9.60 ppb(v	94
27) Freon 113	6.170	101	423980	9.55 ppb(v	96
28) Methylene Chloride	5.932	84	175674	9.33 ppb(v	92
29) Carbon Disulfide	6.207	76	579313	9.68 ppb(v	100
30) Ethanol	4.714	45	54088	7.01 ppb(v	99
31) Acrylonitrile	5.522	53	138822	9.93 ppb(v	99
32) 3-Chloropropene	6.042	76	94223	10.37 ppb(v	84
33) trans-1,2-Dichloroethene	6.831	61	266070	9.69 ppb(v	96
34) tert-Butyl Alcohol	5.864	59	385310	9.74 ppb(v	95
35) Methyl tert-Butyl Ether	7.094	73	548239	9.36 ppb(v	96
36) Vinyl Acetate	7.192	43	459532	9.31 ppb(v	97
37) 1,1-Dichloroethane	7.033	63	323735	9.33 ppb(v	99
38) 2-Butanone	7.449	72	92616	10.29 ppb(v	79
39) Hexane	8.110	57	286411	8.98 ppb(v	91
40) cis-1,2-Dichloroethene	7.902	61	249645	9.44 ppb(v	95
41) Di-isopropyl Ether	8.116	87	177439	9.46 ppb(v	87
42) Ethyl Acetate	8.159	61	65120	10.50 ppb(v	75
43) Methyl Acrylate	8.140	55	342569	10.05 ppb(v	98
44) Chloroform	8.220	83	419775	9.84 ppb(v	97
45) 2,4-Dimethylpentane	9.082	57	339106	8.96 ppb(v	98
46) Tetrahydrofuran	8.666	72	93344	10.54 ppb(v	87
47) 1,1,1-Trichloroethane	9.303	97	413688	9.68 ppb(v	99
48) 1,2-Dichloroethane	9.027	62	238252	10.22 ppb(v	99
49) Benzene	9.829	78	599420	8.98 ppb(v	97
50) Carbon Tetrachloride	10.000	117	448480	10.75 ppb(v	98
51) Cyclohexane	10.135	56	290589	8.88 ppb(v	97
52) 2,3-Dimethylpentane	10.428	71	135094	9.15 ppb(v	94
54) 2,2,4-Trimethylpentane	11.113	57	950557	9.44 ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20309.D
Acq On : 27 Nov 2020 5:29 pm
Operator : danat
Sample : bsd
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:59:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

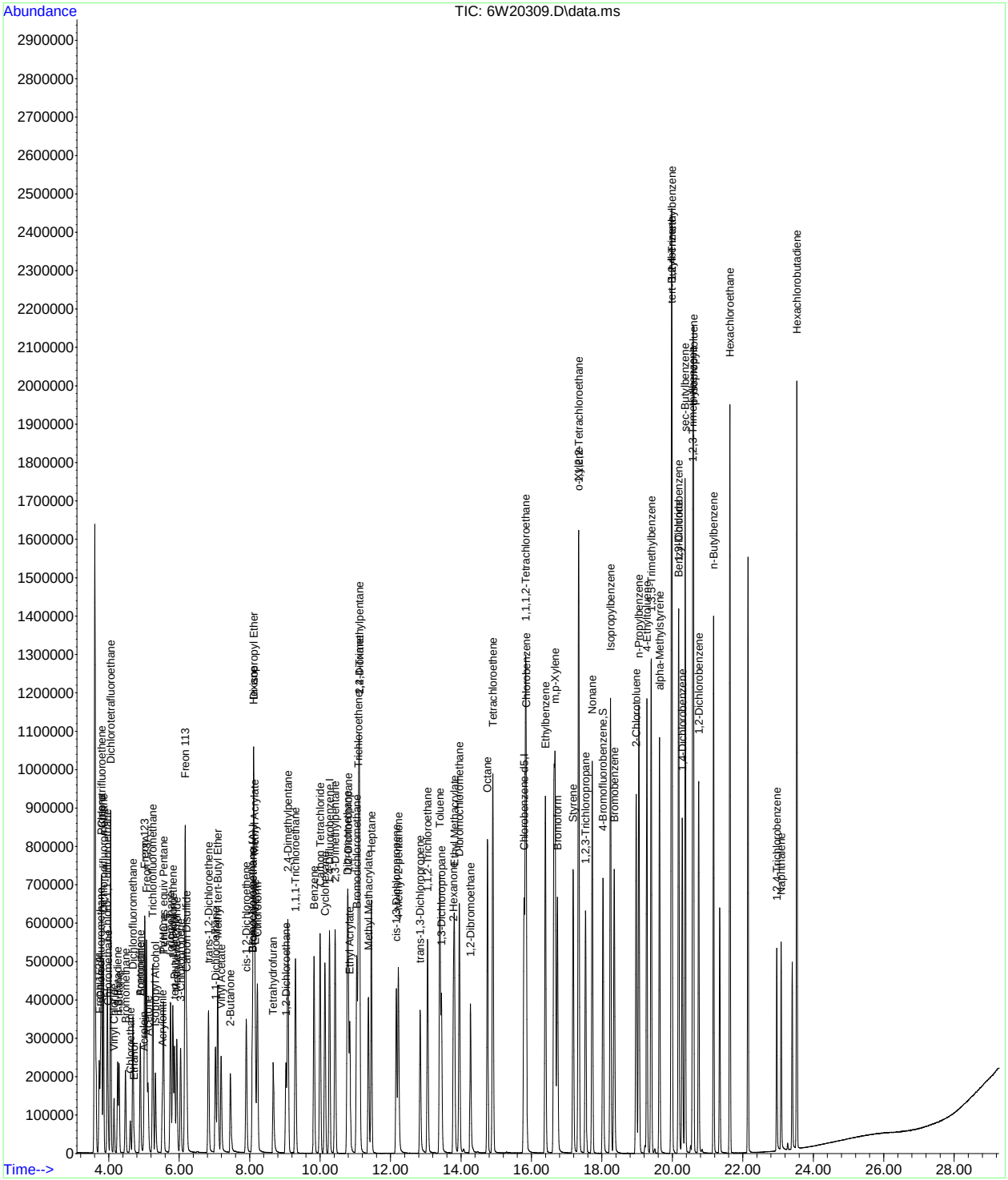
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.456	71	217596	9.86 ppb(v	99
56) Trichloroethene	11.089	95	278762	10.03 ppb(v	95
57) 1,2-Dichloropropane	10.795	63	217011	9.39 ppb(v	100
58) Dibromomethane	10.771	174	296884	10.45 ppb(v	92
59) Ethyl Acrylate	10.838	55	412328	10.13 ppb(v	99
60) Methyl Methacrylate	11.370	69	227388	10.84 ppb(v	89
61) 1,4-Dioxane	11.113	88	140195	9.75 ppb(v	96
62) Bromodichloromethane	11.040	83	444653	10.62 ppb(v	98
63) cis-1,3-Dichloropropene	12.166	75	353275	10.35 ppb(v	99
64) 4-Methyl-2-pentanone	12.221	58	177977	11.22 ppb(v	90
65) trans-1,3-Dichloropropene	12.839	75	310128	10.97 ppb(v	97
66) Toluene	13.395	91	734890	9.41 ppb(v	99
67) 1,1,2-Trichloroethane	13.047	97	251891	10.17 ppb(v	99
68) 1,3-Dichloropropane	13.444	76	352590	10.65 ppb(v	92
69) 2-Hexanone	13.787	58	224875	11.25 ppb(v	91
70) Ethyl Methacrylate	13.811	69	376528	11.19 ppb(v	99
71) Dibromochloromethane	13.952	129	490551	12.42 ppb(v	100
72) Tetrachloroethene	14.906	166	425460	10.80 ppb(v	98
73) 1,2-Dibromoethane	14.270	107	385763	10.78 ppb(v	99
74) Octane	14.747	43	435852	9.25 ppb(v	96
75) 1,1,1,2-Tetrachloroethane	15.830	131	349712	11.14 ppb(v	96
77) Chlorobenzene	15.848	112	592415	9.92 ppb(v	97
78) Ethylbenzene	16.393	91	946890	9.82 ppb(v	99
79) m,p-Xylene	16.668	91	1482816	18.03 ppb(v	98
80) Styrene	17.182	104	546684	11.19 ppb(v	97
81) Nonane	17.727	43	464037	9.93 ppb(v	97
82) o-Xylene	17.335	91	765191	10.13 ppb(v	98
83) Bromoform	16.736	173	461012	13.48 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.341	83	541761	10.62 ppb(v	100
85) 1,2,3-Trichloropropane	17.531	75	395402	11.07 ppb(v	98
86) Isopropylbenzene	18.247	105	1141007	10.32 ppb(v	98
87) Bromobenzene	18.351	156	338597	11.96 ppb(v	93
88) 2-Chlorotoluene	18.975	126	268877	11.25 ppb(v	94
89) n-Propylbenzene	19.048	120	301159	12.03 ppb(v	100
91) 4-Ethyltoluene	19.274	105	1008780	12.04 ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	932172	10.94 ppb(v	98
93) alpha-Methylstyrene	19.635	118	426870	12.95 ppb(v	98
94) tert-Butylbenzene	19.978	134	237163	10.86 ppb(v	97
95) 1,2,4-Trimethylbenzene	19.990	105	914979	11.92 ppb(v#	89
96) 1,3-Dichlorobenzene	20.180	146	495245	13.95 ppb(v	98
97) Benzyl Chloride	20.174	91	520601	12.76 ppb(v	98
98) 1,4-Dichlorobenzene	20.278	146	471639	13.87 ppb(v	98
99) sec-Butylbenzene	20.363	134	294279	11.54 ppb(v	95
100) 1,2,3-Trimethylbenzene	20.577	105	941697	11.54 ppb(v	97
101) p-Isopropyltoluene	20.602	134	308127	12.00 ppb(v	96
102) 1,2-Dichlorobenzene	20.749	146	493047	13.35 ppb(v	97
103) n-Butylbenzene	21.171	134	236906	13.98 ppb(v	98
104) Hexachloroethane	21.636	201	401450	13.84 ppb(v	95
105) 1,2,4-Trichlorobenzene	22.963	180	189904	12.45 ppb(v	99
106) Naphthalene	23.086	128	451513	11.61 ppb(v	99
107) Hexachlorobutadiene	23.532	225	411275	12.58 ppb(v	99
109) TVHC as equiv Pentane	5.552	TIC	1106523	9.66 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20309.D
Acq On : 27 Nov 2020 5:29 pm
Operator : danat
Sample : bsd
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 17:59:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20407.D
Acq On : 3 Dec 2020 12:09 pm
Operator : thomash
Sample : bs
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 12:48:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	306956	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1165196	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	559626	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	306956	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.026	95	640817	10.43	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 104.30%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	237781	11.69	ppb(v	87
3) Chlorodifluoromethane	3.766	67	86767	11.33	ppb(v	100
4) Propene	3.790	41	307099	11.64	ppb(v	95
5) Chlorotrifluoroethene	3.797	116	513281	10.03	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	891650	10.49	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	652877	10.98	ppb(v	97
8) Chloromethane	3.974	50	329681	11.85	ppb(v	98
9) Dichlorotetrafluoroethane	4.053	85	940784	11.04	ppb(v	97
10) Vinyl Chloride	4.151	62	371779	11.81	ppb(v	99
11) 1,3-Butadiene	4.255	54	278699	11.74	ppb(v	95
12) n-Butane	4.298	58	72637	11.32	ppb(v	91
13) Bromomethane	4.476	94	333709	10.62	ppb(v	99
14) Acrolein	5.002	56	166933	11.04	ppb(v#	98
15) Chloroethane	4.610	64	186878	11.74	ppb(v	98
16) Dichlorofluoromethane	4.684	67	775711	10.33	ppb(v	99
17) Acetonitrile	4.898	41	313108	11.02	ppb(v	98
18) Freon 123	5.020	83	851041	10.13	ppb(v	99
19) Freon 123A	5.069	117	468416	9.66	ppb(v	97
20) Bromoethene	4.898	106	350327	10.30	ppb(v	97
21) Trichlorofluoromethane	5.253	101	824588	9.75	ppb(v	99
22) Acetone	5.112	58	178185	10.44	ppb(v	78
23) Pentane	5.558	57	104488	10.88	ppb(v	90
24) Iodomethane	5.754	142	974198	9.71	ppb(v	93
25) Isopropyl Alcohol	5.320	45	685739	9.86	ppb(v	97
26) 1,1-Dichloroethene	5.815	61	587743	11.00	ppb(v	98
27) Freon 113	6.170	101	783806	10.00	ppb(v	98
28) Methylene Chloride	5.932	84	345475	10.40	ppb(v	100
29) Carbon Disulfide	6.207	76	1149875	10.89	ppb(v	100
30) Ethanol	4.708	45	142748	10.49	ppb(v	98
31) Acrylonitrile	5.516	53	304864	12.36	ppb(v	97
32) 3-Chloropropene	6.042	76	186474	11.64	ppb(v	88
33) trans-1,2-Dichloroethene	6.825	61	547774	11.31	ppb(v	98
34) tert-Butyl Alcohol	5.858	59	804468	11.53	ppb(v	96
35) Methyl tert-Butyl Ether	7.088	73	1059515	10.25	ppb(v	98
36) Vinyl Acetate	7.186	43	1040974	11.95	ppb(v	99
37) 1,1-Dichloroethane	7.027	63	672256	10.98	ppb(v	99
38) 2-Butanone	7.443	72	191996	12.10	ppb(v	98
39) Hexane	8.109	57	619352	11.00	ppb(v	97
40) cis-1,2-Dichloroethene	7.901	61	511804	10.97	ppb(v	99
41) Di-isopropyl Ether	8.116	87	339782	10.27	ppb(v	93
42) Ethyl Acetate	8.152	61	136579	12.48	ppb(v	90
43) Methyl Acrylate	8.140	55	731291	12.16	ppb(v	99
44) Chloroform	8.220	83	769876	10.23	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	728800	10.92	ppb(v	98
46) Tetrahydrofuran	8.666	72	189229	12.12	ppb(v	95
47) 1,1,1-Trichloroethane	9.302	97	723205	9.59	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	445861	10.83	ppb(v	99
49) Benzene	9.829	78	1187315	10.09	ppb(v	97
50) Carbon Tetrachloride	10.000	117	758172	10.30	ppb(v	99
51) Cyclohexane	10.134	56	625916	10.84	ppb(v	96
52) 2,3-Dimethylpentane	10.428	71	274774	10.54	ppb(v	95
54) 2,2,4-Trimethylpentane	11.113	57	2040643	11.21	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20407.D
Acq On : 3 Dec 2020 12:09 pm
Operator : thomash
Sample : bs
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 12:48:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

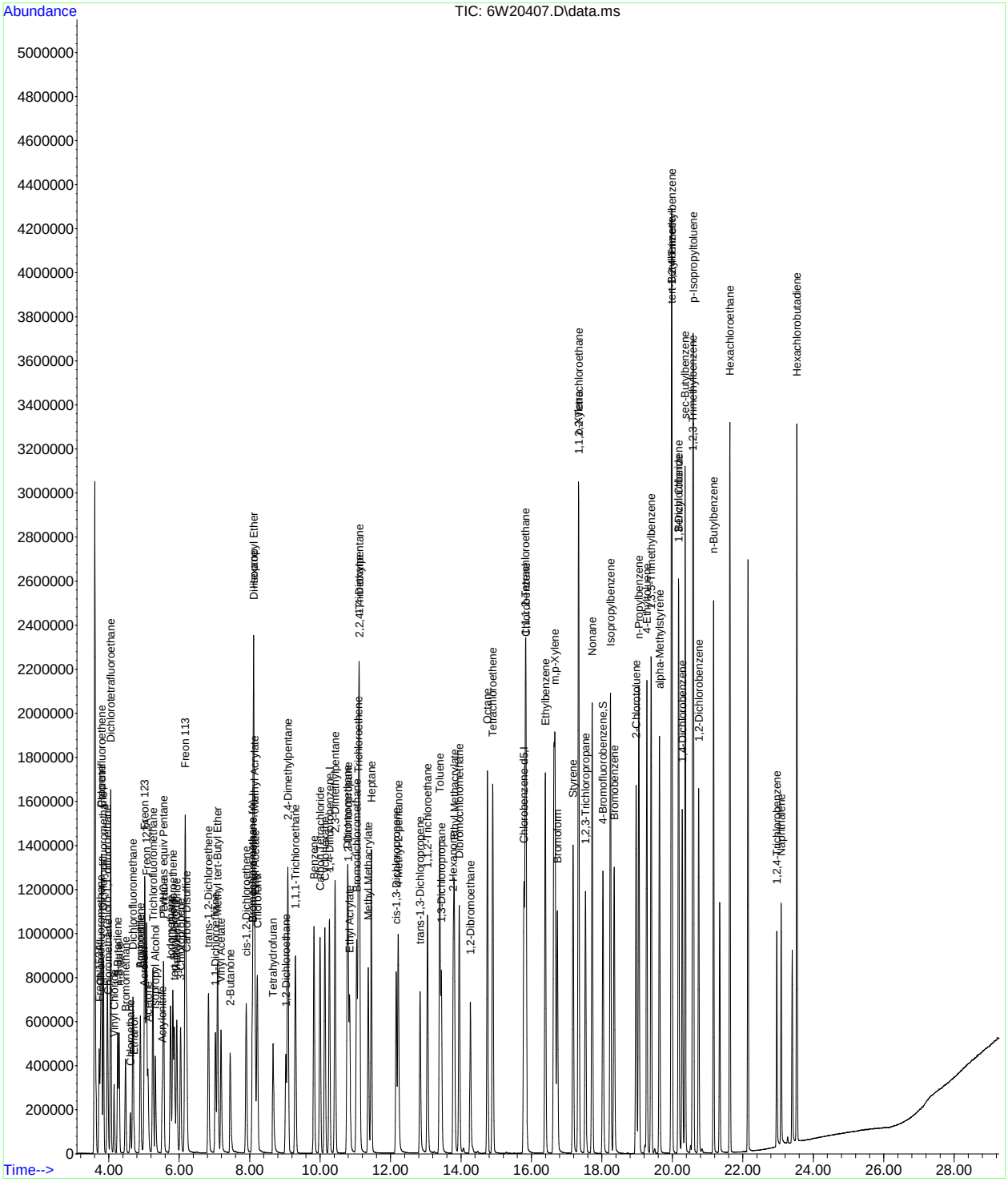
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.456	71	436642	10.95	ppb(v	97
56)	Trichloroethene	11.083	95	514103	10.23	ppb(v	99
57)	1,2-Dichloropropane	10.795	63	465203	11.13	ppb(v	94
58)	Dibromomethane	10.771	174	491219	9.56	ppb(v	99
59)	Ethyl Acrylate	10.838	55	887458	12.07	ppb(v	99
60)	Methyl Methacrylate	11.364	69	461081	12.16	ppb(v	96
61)	1,4-Dioxane	11.107	88	273563	10.52	ppb(v	98
62)	Bromodichloromethane	11.040	83	829511	10.96	ppb(v	100
63)	cis-1,3-Dichloropropene	12.159	75	697022	11.30	ppb(v	99
64)	4-Methyl-2-pentanone	12.221	58	381536	13.30	ppb(v	95
65)	trans-1,3-Dichloropropene	12.838	75	607520	11.89	ppb(v	99
66)	Toluene	13.395	91	1396054	9.89	ppb(v	99
67)	1,1,2-Trichloroethane	13.046	97	477029	10.65	ppb(v	98
68)	1,3-Dichloropropane	13.438	76	691224	11.55	ppb(v	96
69)	2-Hexanone	13.781	58	491188	13.59	ppb(v	95
70)	Ethyl Methacrylate	13.811	69	749825	12.33	ppb(v	98
71)	Dibromochloromethane	13.952	129	845935	11.85	ppb(v	99
72)	Tetrachloroethene	14.900	166	698884	9.82	ppb(v	98
73)	1,2-Dibromoethane	14.270	107	709116	10.96	ppb(v	99
74)	Octane	14.747	43	986674	11.58	ppb(v	97
75)	1,1,1,2-Tetrachloroethane	15.824	131	601769	10.60	ppb(v	98
77)	Chlorobenzene	15.842	112	1083011	9.50	ppb(v	100
78)	Ethylbenzene	16.393	91	1750682	9.51	ppb(v	100
79)	m,p-Xylene	16.662	91	2684058	17.08	ppb(v	99
80)	Styrene	17.182	104	987815	10.58	ppb(v	98
81)	Nonane	17.727	43	1016124	11.39	ppb(v	98
82)	o-Xylene	17.335	91	1385104	9.60	ppb(v	98
83)	Bromoform	16.735	173	754946	11.55	ppb(v	100
84)	1,1,2,2-Tetrachloroethane	17.341	83	1037556	10.65	ppb(v	99
85)	1,2,3-Trichloropropane	17.531	75	752475	11.03	ppb(v	98
86)	Isopropylbenzene	18.247	105	2018499	9.56	ppb(v	99
87)	Bromobenzene	18.351	156	563325	10.42	ppb(v	100
88)	2-Chlorotoluene	18.975	126	466104	10.21	ppb(v	99
89)	n-Propylbenzene	19.048	120	523545	10.95	ppb(v	93
91)	4-Ethyltoluene	19.274	105	1785764	11.16	ppb(v	98
92)	1,3,5-Trimethylbenzene	19.397	105	1607560	9.88	ppb(v	99
93)	alpha-Methylstyrene	19.635	118	741403	11.77	ppb(v	99
94)	tert-Butylbenzene	19.978	134	399733	9.58	ppb(v	97
95)	1,2,4-Trimethylbenzene	19.990	105	1586997	10.82	ppb(v	92
96)	1,3-Dichlorobenzene	20.180	146	847006	12.49	ppb(v	99
97)	Benzyl Chloride	20.174	91	1014701	13.02	ppb(v	99
98)	1,4-Dichlorobenzene	20.278	146	810502	12.48	ppb(v	98
99)	sec-Butylbenzene	20.363	134	492668	10.11	ppb(v	88
100)	1,2,3-Trimethylbenzene	20.577	105	1622762	10.41	ppb(v	98
101)	p-Isopropyltoluene	20.596	134	517704	10.55	ppb(v	93
102)	1,2-Dichlorobenzene	20.749	146	827161	11.73	ppb(v	97
103)	n-Butylbenzene	21.171	134	399868	12.36	ppb(v	92
104)	Hexachloroethane	21.636	201	645787	11.66	ppb(v	97
105)	1,2,4-Trichlorobenzene	22.963	180	341182	11.71	ppb(v	98
106)	Naphthalene	23.086	128	892262	12.01	ppb(v	100
107)	Hexachlorobutadiene	23.532	225	637479	10.21	ppb(v	99
109)	TVHC as equiv Pentane	5.552	TIC	2483611	12.29	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20407.D
Acq On : 3 Dec 2020 12:09 pm
Operator : thomash
Sample : bs
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 12:48:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20408.D
Acq On : 3 Dec 2020 12:56 pm
Operator : thomash
Sample : bsd
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 13:27:47 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	310661	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1173121	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	572002	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	310661	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.026	95	654942	10.43	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 104.30%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	244441	11.87	ppb(v	88
3) Chlorodifluoromethane	3.766	67	89128	11.50	ppb(v	97
4) Propene	3.790	41	315893	11.83	ppb(v	96
5) Chlorotrifluoroethene	3.797	116	525355	10.14	ppb(v	98
6) Dichlorodifluoromethane	3.852	85	917136	10.67	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	667776	11.09	ppb(v#	97
8) Chloromethane	3.980	50	341361	12.12	ppb(v	98
9) Dichlorotetrafluoroethane	4.053	85	969187	11.24	ppb(v	98
10) Vinyl Chloride	4.151	62	383188	12.02	ppb(v	99
11) 1,3-Butadiene	4.255	54	290095	12.07	ppb(v	95
12) n-Butane	4.298	58	74741	11.51	ppb(v	90
13) Bromomethane	4.476	94	343237	10.79	ppb(v	99
14) Acrolein	5.002	56	172272	11.26	ppb(v	99
15) Chloroethane	4.610	64	193731	12.03	ppb(v	97
16) Dichlorofluoromethane	4.684	67	798140	10.51	ppb(v	99
17) Acetonitrile	4.898	41	324395	11.28	ppb(v	99
18) Freon 123	5.020	83	878932	10.34	ppb(v	98
19) Freon 123A	5.069	117	480312	9.79	ppb(v	97
20) Bromoethene	4.898	106	356562	10.36	ppb(v	97
21) Trichlorofluoromethane	5.253	101	842302	9.84	ppb(v	98
22) Acetone	5.112	58	184270	10.67	ppb(v	82
23) Pentane	5.558	57	107154	11.02	ppb(v	90
24) Iodomethane	5.754	142	996820	9.82	ppb(v	94
25) Isopropyl Alcohol	5.320	45	713511	10.14	ppb(v	96
26) 1,1-Dichloroethene	5.821	61	603364	11.15	ppb(v	97
27) Freon 113	6.170	101	806075	10.16	ppb(v	97
28) Methylene Chloride	5.932	84	353830	10.52	ppb(v	99
29) Carbon Disulfide	6.213	76	1179895	11.05	ppb(v	99
30) Ethanol	4.714	45	146623	10.64	ppb(v	99
31) Acrylonitrile	5.522	53	313087	12.54	ppb(v	98
32) 3-Chloropropene	6.042	76	192226	11.85	ppb(v	86
33) trans-1,2-Dichloroethene	6.831	61	566584	11.56	ppb(v	99
34) tert-Butyl Alcohol	5.858	59	827070	11.71	ppb(v	96
35) Methyl tert-Butyl Ether	7.088	73	1093477	10.45	ppb(v	98
36) Vinyl Acetate	7.186	43	1083889	12.29	ppb(v	98
37) 1,1-Dichloroethane	7.033	63	693647	11.19	ppb(v	100
38) 2-Butanone	7.443	72	197291	12.28	ppb(v	95
39) Hexane	8.109	57	643457	11.29	ppb(v	96
40) cis-1,2-Dichloroethene	7.901	61	529246	11.21	ppb(v	99
41) Di-isopropyl Ether	8.116	87	349541	10.44	ppb(v	90
42) Ethyl Acetate	8.152	61	141018	12.73	ppb(v	85
43) Methyl Acrylate	8.140	55	756923	12.43	ppb(v	99
44) Chloroform	8.220	83	787939	10.35	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	753148	11.15	ppb(v	98
46) Tetrahydrofuran	8.666	72	196241	12.41	ppb(v	94
47) 1,1,1-Trichloroethane	9.302	97	747384	9.79	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	460320	11.05	ppb(v	99
49) Benzene	9.829	78	1223615	10.27	ppb(v	98
50) Carbon Tetrachloride	10.000	117	777697	10.44	ppb(v	99
51) Cyclohexane	10.134	56	651799	11.15	ppb(v	96
52) 2,3-Dimethylpentane	10.428	71	285291	10.82	ppb(v	99
54) 2,2,4-Trimethylpentane	11.113	57	2109212	11.51	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20408.D
Acq On : 3 Dec 2020 12:56 pm
Operator : thomash
Sample : bsd
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 13:27:47 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

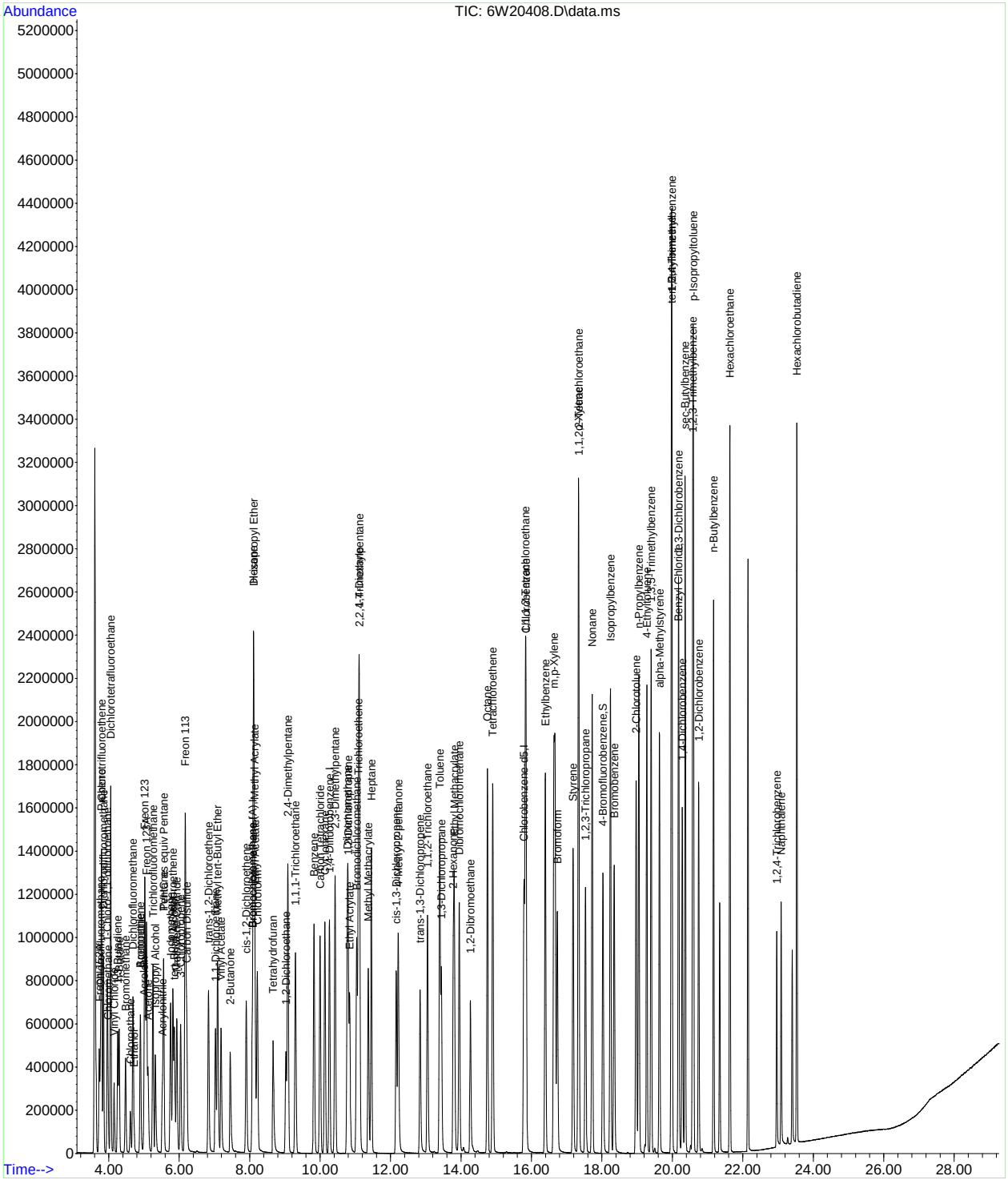
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55)	Heptane	11.456	71	449878	11.20 ppb(v	97
56)	Trichloroethene	11.083	95	532752	10.53 ppb(v	100
57)	1,2-Dichloropropane	10.795	63	482309	11.47 ppb(v	94
58)	Dibromomethane	10.771	174	501654	9.70 ppb(v	98
59)	Ethyl Acrylate	10.838	55	914589	12.35 ppb(v	99
60)	Methyl Methacrylate	11.364	69	472464	12.37 ppb(v	95
61)	1,4-Dioxane	11.107	88	280854	10.73 ppb(v	96
62)	Bromodichloromethane	11.040	83	854465	11.21 ppb(v	100
63)	cis-1,3-Dichloropropene	12.159	75	716744	11.54 ppb(v	99
64)	4-Methyl-2-pentanone	12.221	58	392397	13.59 ppb(v	95
65)	trans-1,3-Dichloropropene	12.838	75	626521	12.18 ppb(v	99
66)	Toluene	13.395	91	1439066	10.13 ppb(v	99
67)	1,1,2-Trichloroethane	13.046	97	492428	10.92 ppb(v	98
68)	1,3-Dichloropropane	13.438	76	710399	11.79 ppb(v	96
69)	2-Hexanone	13.781	58	508174	13.97 ppb(v	96
70)	Ethyl Methacrylate	13.811	69	773339	12.63 ppb(v	97
71)	Dibromochloromethane	13.952	129	864866	12.03 ppb(v	99
72)	Tetrachloroethene	14.900	166	715299	9.98 ppb(v	99
73)	1,2-Dibromoethane	14.270	107	721855	11.08 ppb(v	100
74)	Octane	14.747	43	1025461	11.96 ppb(v	97
75)	1,1,1,2-Tetrachloroethane	15.824	131	618564	10.82 ppb(v	98
77)	Chlorobenzene	15.842	112	1111725	9.54 ppb(v	99
78)	Ethylbenzene	16.393	91	1816395	9.65 ppb(v	99
79)	m,p-Xylene	16.644	91	2764154	17.21 ppb(v	99
80)	Styrene	17.182	104	1015100	10.64 ppb(v	98
81)	Nonane	17.727	43	1053320	11.55 ppb(v	99
82)	o-Xylene	17.335	91	1424527	9.66 ppb(v	99
83)	Bromoform	16.735	173	766223	11.47 ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.341	83	1066357	10.71 ppb(v	100
85)	1,2,3-Trichloropropane	17.531	75	774923	11.12 ppb(v	99
86)	Isopropylbenzene	18.247	105	2076842	9.62 ppb(v	98
87)	Bromobenzene	18.351	156	576511	10.43 ppb(v	99
88)	2-Chlorotoluene	18.975	126	476643	10.21 ppb(v	98
89)	n-Propylbenzene	19.048	120	536051	10.96 ppb(v	92
91)	4-Ethyltoluene	19.274	105	1830749	11.19 ppb(v	98
92)	1,3,5-Trimethylbenzene	19.397	105	1647706	9.90 ppb(v	100
93)	alpha-Methylstyrene	19.635	118	761965	11.84 ppb(v	98
94)	tert-Butylbenzene	19.978	134	410905	9.64 ppb(v	97
95)	1,2,4-Trimethylbenzene	19.990	105	1626270	10.85 ppb(v	94
96)	1,3-Dichlorobenzene	20.180	146	864765	12.48 ppb(v	99
97)	Benzyl Chloride	20.167	91	1035842	13.01 ppb(v	98
98)	1,4-Dichlorobenzene	20.278	146	826092	12.44 ppb(v	99
99)	sec-Butylbenzene	20.363	134	501435	10.07 ppb(v	91
100)	1,2,3-Trimethylbenzene	20.577	105	1675682	10.52 ppb(v	98
101)	p-Isopropyltoluene	20.596	134	530533	10.58 ppb(v	93
102)	1,2-Dichlorobenzene	20.749	146	846412	11.74 ppb(v	98
103)	n-Butylbenzene	21.171	134	411899	12.45 ppb(v	93
104)	Hexachloroethane	21.636	201	659170	11.64 ppb(v	96
105)	1,2,4-Trichlorobenzene	22.963	180	344052	11.56 ppb(v	99
106)	Naphthalene	23.086	128	920056	12.12 ppb(v	99
107)	Hexachlorobutadiene	23.532	225	643069	10.07 ppb(v	100
109)	TVHC as equiv Pentane	5.558	TIC	2567368	12.55 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20408.D
Acq On : 3 Dec 2020 12:56 pm
Operator : thomash
Sample : bsd
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 13:27:47 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Thu Dec 03 15:17:44 2020 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20997.D
Acq On : 14 Jan 2021 7:32 pm
Operator : thomash
Sample : jd18950-3dup
Misc : MS48382,V6W882,100,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 15 10:18:20 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

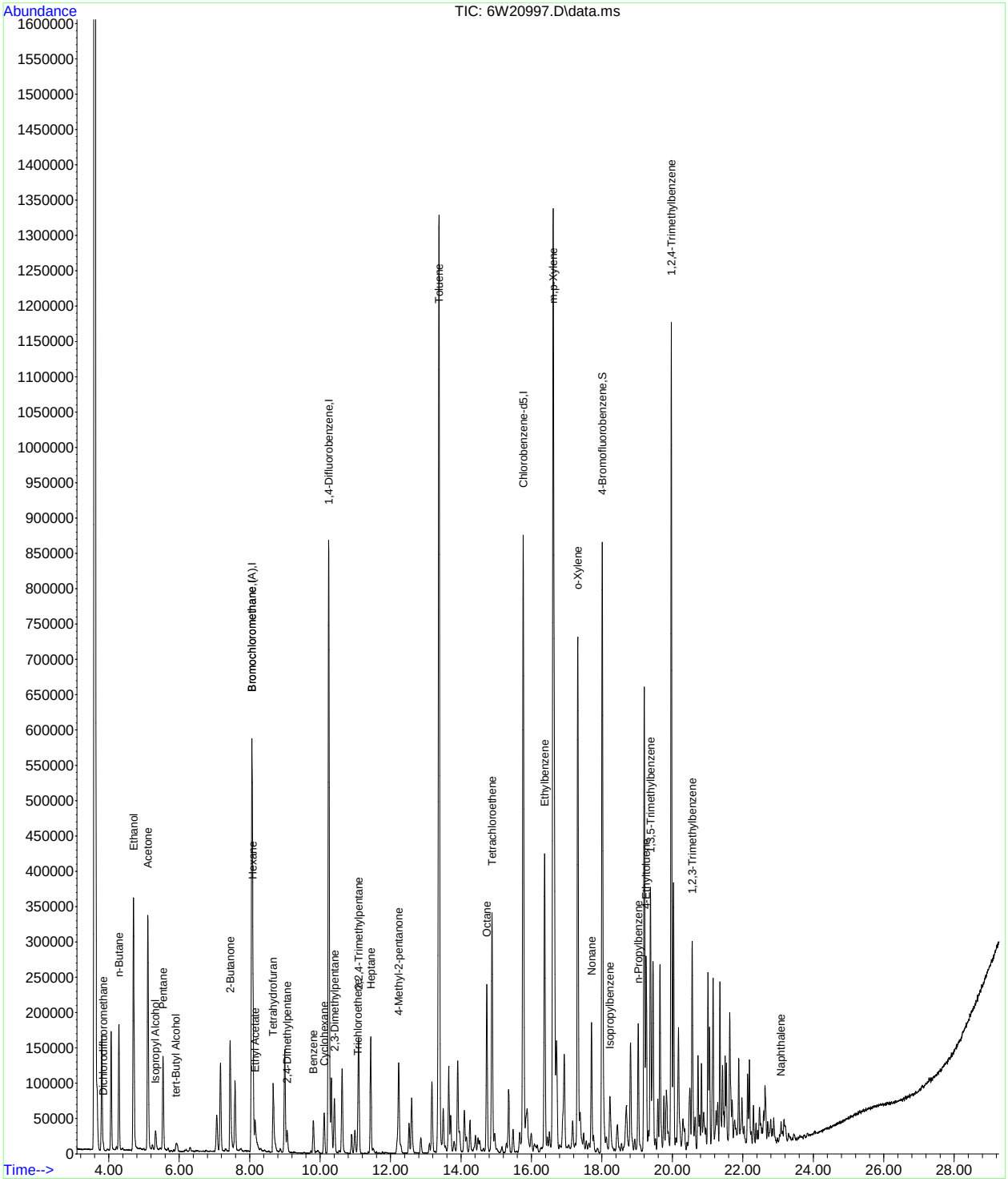
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	266393	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	886485	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	401532	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	266563	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	423639	9.61	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 96.10%			
Target Compounds						Qvalue
6) Dichlorodifluoromethane	3.845	85	9984	0.14	ppb(v	99
12) n-Butane	4.292	58	21949	3.94	ppb(v	88
22) Acetone	5.106	58	62396	4.21	ppb(v#	24
23) Pentane	5.540	57	15207	1.82	ppb(v	88
25) Isopropyl Alcohol	5.326	45	42935	0.71	ppb(v	95
30) Ethanol	4.702	45	487664	41.28	ppb(v	100
34) tert-Butyl Alcohol	5.907	59	5790	0.10	ppb(v#	66
38) 2-Butanone	7.443	72	60662	4.40	ppb(v	98
39) Hexane	8.091	57	104022	2.13	ppb(v#	50
42) Ethyl Acetate	8.158	61	7743	0.81	ppb(v	97
45) 2,4-Dimethylpentane	9.064	57	16272	0.28	ppb(v	92
46) Tetrahydrofuran	8.666	72	32884	2.43	ppb(v	82
49) Benzene	9.810	78	53409	0.52	ppb(v	96
51) Cyclohexane	10.116	56	31596	0.63	ppb(v	95
52) 2,3-Dimethylpentane	10.410	71	14920	0.66	ppb(v	90
54) 2,2,4-Trimethylpentane	11.095	57	152869	1.10	ppb(v#	86
55) Heptane	11.438	71	45439	1.50	ppb(v	97
56) Trichloroethene	11.070	95	2319	0.06	ppb(v	88
64) 4-Methyl-2-pentanone	12.233	58	10545	0.48	ppb(v	84
66) Toluene	13.377	91	1246294	11.61	ppb(v	98
72) Tetrachloroethene	14.882	166	132291	2.44	ppb(v	99
74) Octane	14.729	43	126627	1.95	ppb(v	90
78) Ethylbenzene	16.368	91	420402	3.18	ppb(v	99
79) m,p-Xylene	16.619	91	1383615	12.27	ppb(v	98
81) Nonane	17.708	43	99278	1.55	ppb(v	97
82) o-Xylene	17.317	91	582731	5.63	ppb(v	98
86) Isopropylbenzene	18.228	105	54125	0.36	ppb(v	97
89) n-Propylbenzene	19.036	120	40604	1.18	ppb(v	88
91) 4-Ethyltoluene	19.256	105	210863	1.84	ppb(v	99
92) 1,3,5-Trimethylbenzene	19.384	105	219625	1.88	ppb(v	98
95) 1,2,4-Trimethylbenzene	19.972	105	732237	6.96	ppb(v#	73
100) 1,2,3-Trimethylbenzene	20.565	105	171017	1.53	ppb(v#	76
106) Naphthalene	23.080	128	12255	0.23	ppb(v#	91

(#) = qualifier out of range (m) = manual integration (+) = signals summed

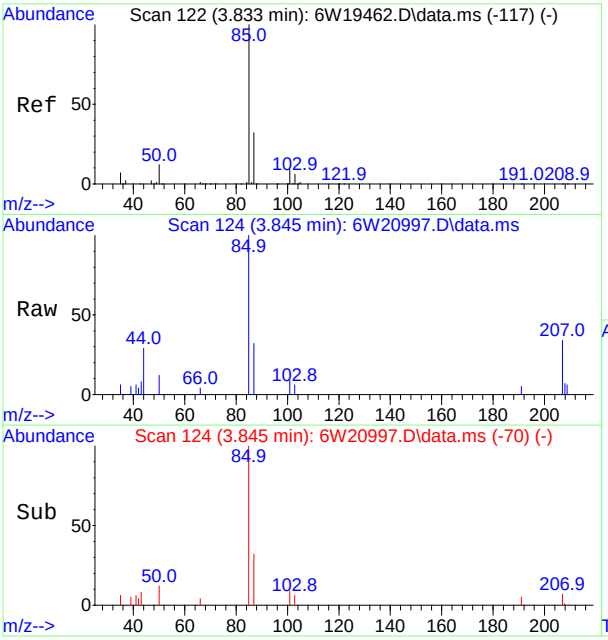
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20997.D
Acq On : 14 Jan 2021 7:32 pm
Operator : thomash
Sample : jd18950-3dup
Misc : MS48382,V6W882,100,,,,1
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jan 15 10:18:20 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



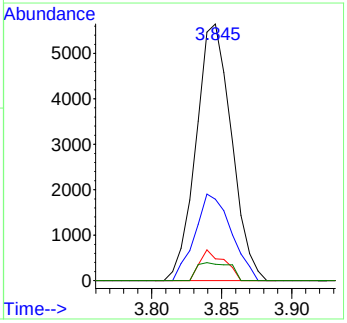
m6w848.M Fri Jan 15 10:18:24 2021 Page: 2

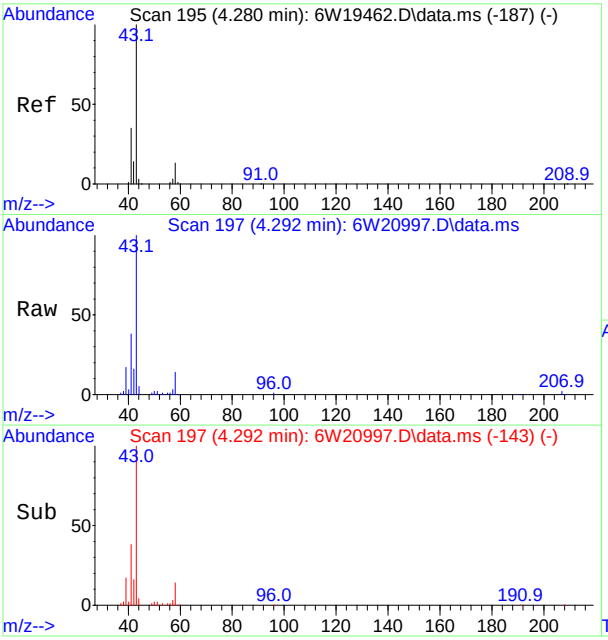


#6
Dichlorodifluoromethane
Concen: 0.14 ppb(v)
RT: 3.845 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 85 Resp: 9984

Ion	Ratio	Lower	Upper
85	100		
87	31.7	22.7	42.1
101	8.6	6.3	11.7
103	6.4	4.1	7.5

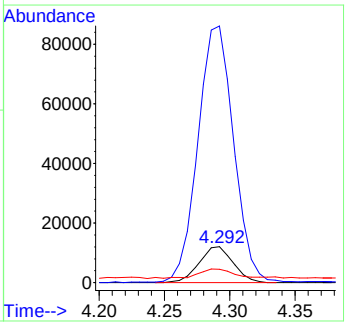




#12
n-Butane
Concen: 3.94 ppb(v)
RT: 4.292 min Scan# 197
Delta R.T. 0.000 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

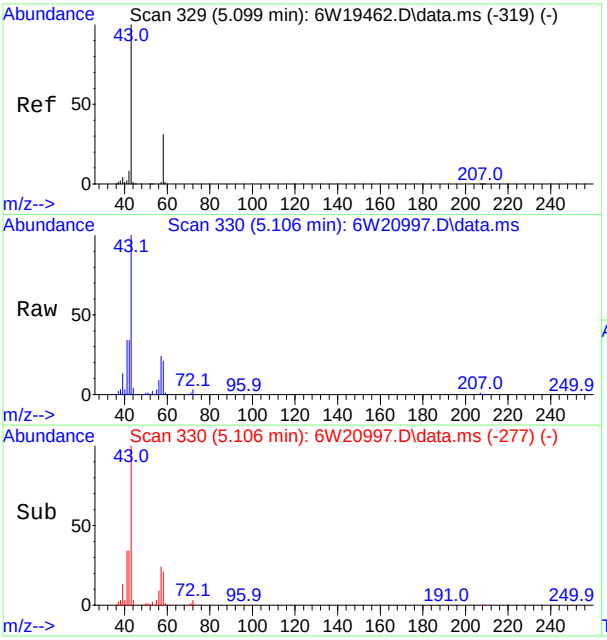
Tgt Ion: 58 Resp: 21949

Ion	Ratio	Lower	Upper
58	100		
43	714.3	530.8	985.8
44	37.0	22.3	41.5



7.4.1

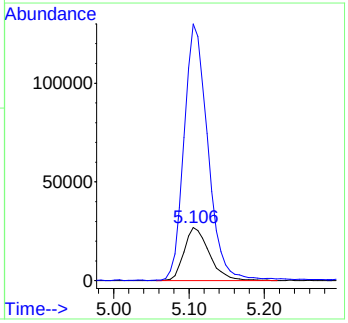
7

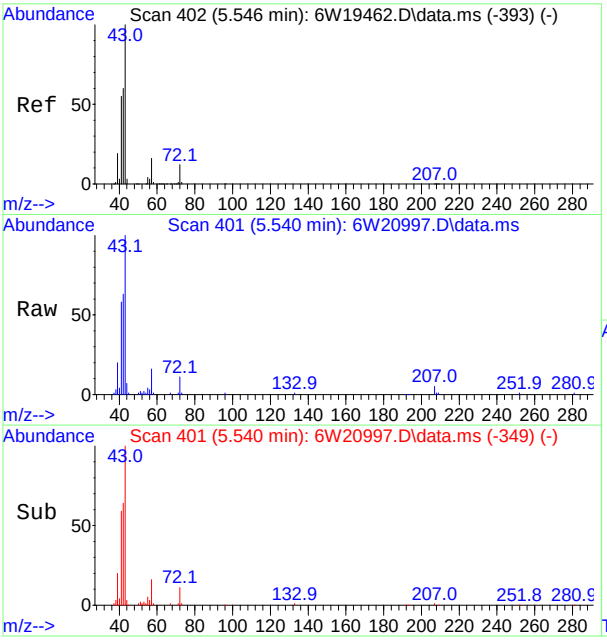


#22
Acetone
Concen: 4.21 ppb(v)
RT: 5.106 min Scan# 330
Delta R.T. -0.006 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 58 Resp: 62396

Ion	Ratio	Lower	Upper
58	100		
43	483.2	228.2	423.8#

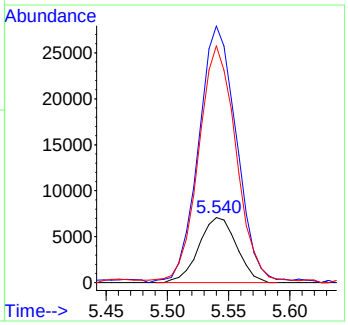


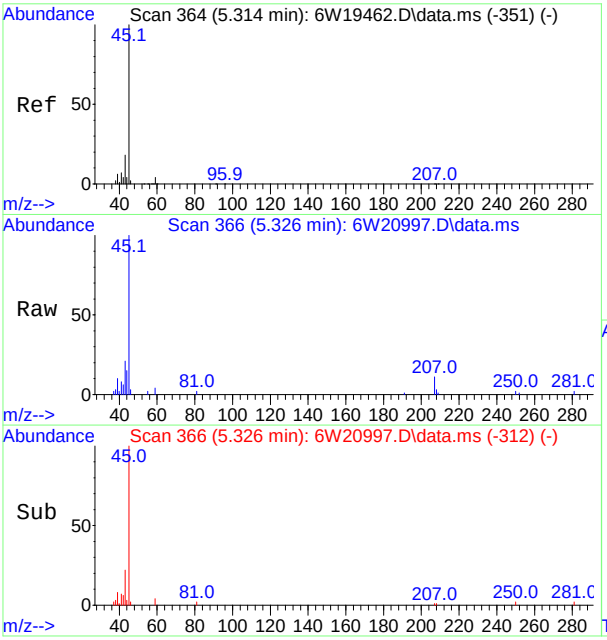


#23
Pentane
Concen: 1.82 ppb(v)
RT: 5.540 min Scan# 401
Delta R.T. -0.012 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 57 Resp: 15207

Ion	Ratio	Lower	Upper
57	100		
42	395.2	256.8	477.0
41	364.5	238.4	442.8

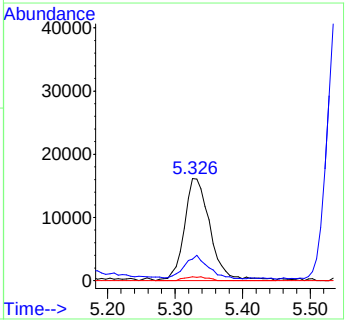


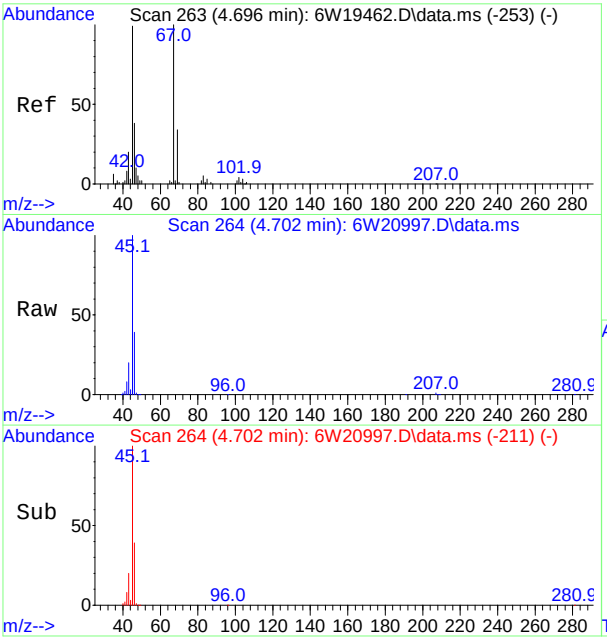


#25
Isopropyl Alcohol
Concen: 0.71 ppb(v)
RT: 5.326 min Scan# 366
Delta R.T. 0.000 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 45 Resp: 42935

Ion	Ratio	Lower	Upper
45	100		
43	21.1	13.0	24.2
59	3.8	2.9	5.3

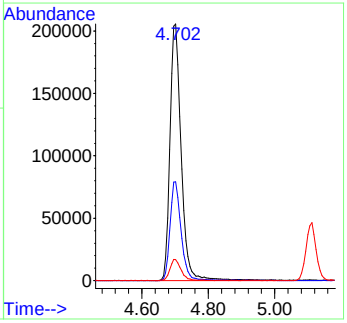


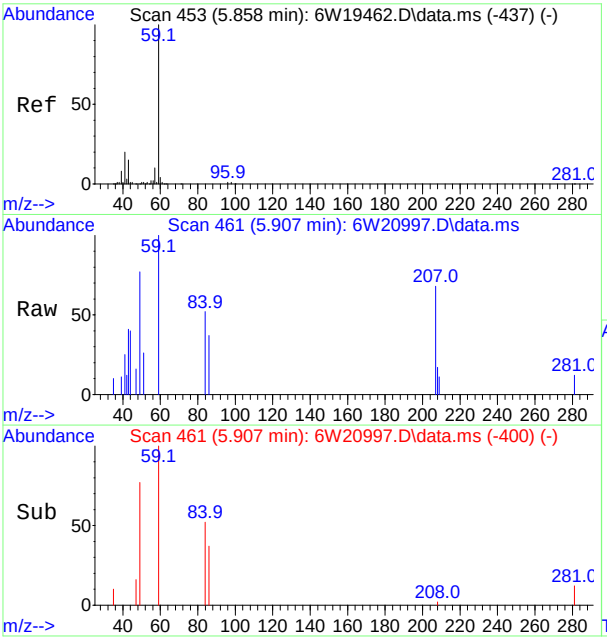


#30
Ethanol
Concen: 41.28 ppb(v)
RT: 4.702 min Scan# 264
Delta R.T. -0.006 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 45 Resp: 487664

Ion	Ratio	Lower	Upper
45	100		
46	38.5	26.9	50.1
42	8.1	6.0	11.2

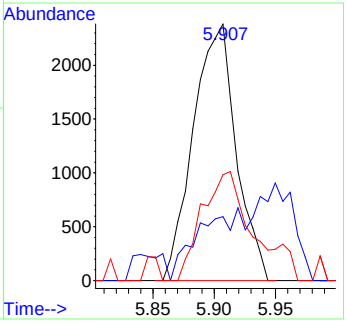


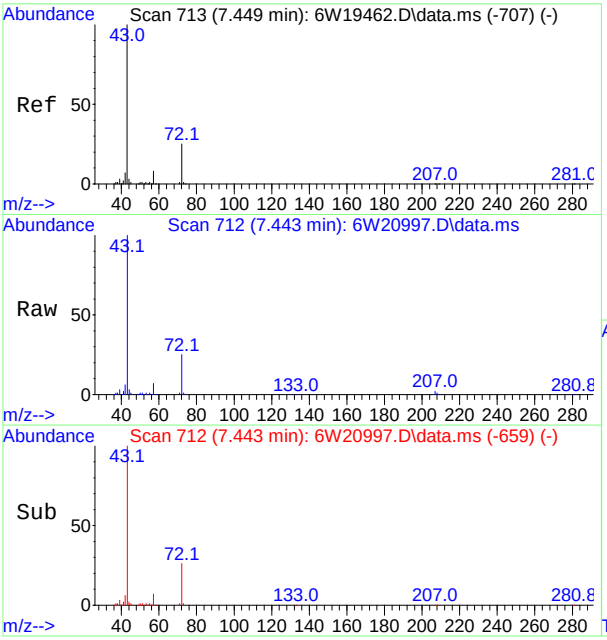


#34
tert-Butyl Alcohol
Concen: 0.10 ppb(v)
RT: 5.907 min Scan# 461
Delta R.T. 0.043 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 59 Resp: 5790

Ion	Ratio	Lower	Upper
59	100		
41	24.9	13.8	25.6
43	41.2	10.4	19.2#

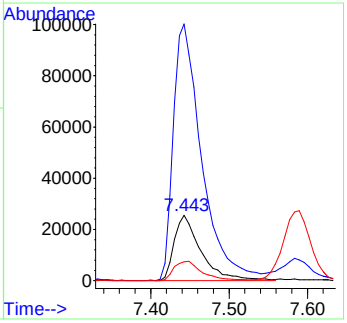




#38
2-Butanone
Concen: 4.40 ppb(v)
RT: 7.443 min Scan# 712
Delta R.T. -0.006 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

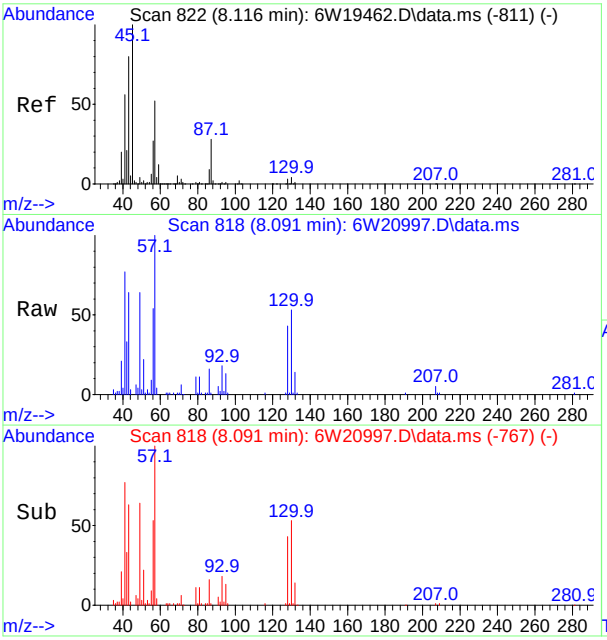
Tgt Ion: 72 Resp: 60662

Ion	Ratio	Lower	Upper
72	100		
43	393.4	277.8	516.0
57	28.7	22.3	41.5



7.4.1

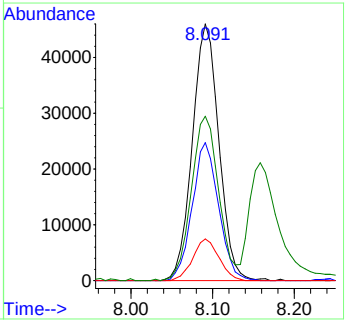
7

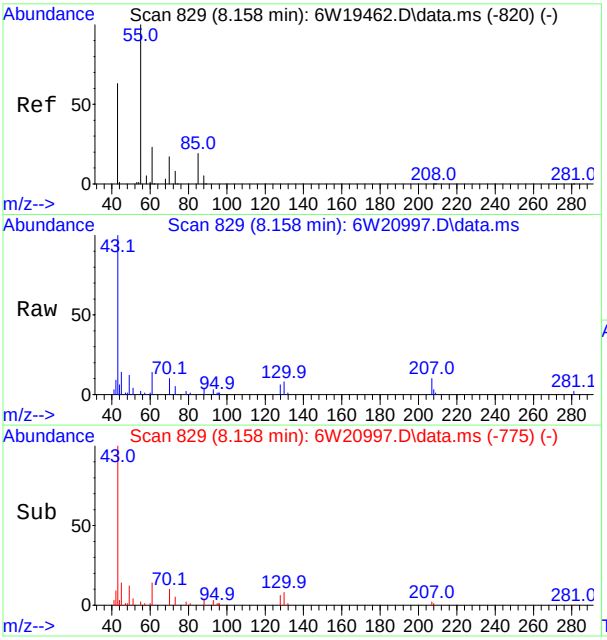


#39
Hexane
Concen: 2.13 ppb(v)
RT: 8.091 min Scan# 818
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 57 Resp: 104022

Ion	Ratio	Lower	Upper
57	100		
56	53.7	35.8	66.6
86	16.3	12.7	23.7
43	64.0	108.3	201.1#

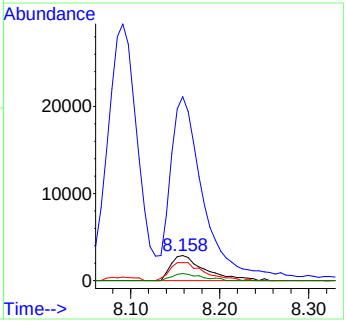


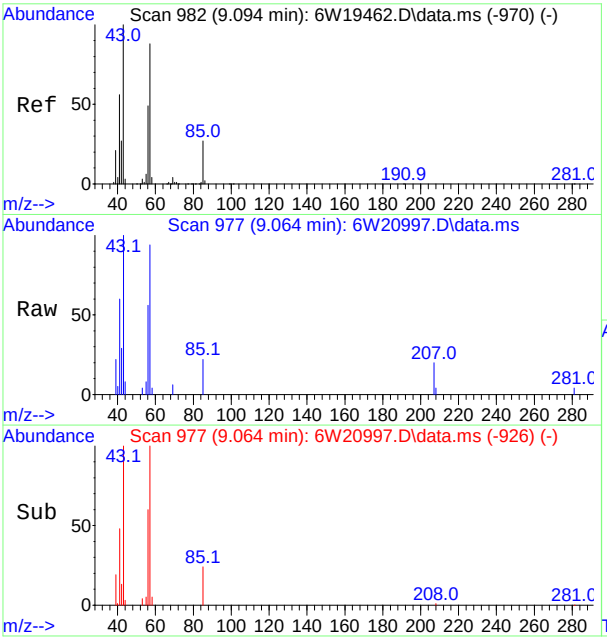


#42
Ethyl Acetate
Concen: 0.81 ppb(v)
RT: 8.158 min Scan# 829
Delta R.T. 0.000 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 61 Resp: 7743

Ion	Ratio	Lower	Upper
61	100		
43	730.7	518.2	962.4
70	71.5	55.3	102.7
88	28.7	21.8	40.6

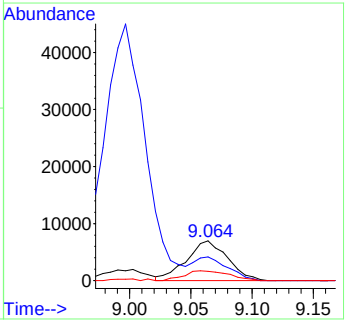


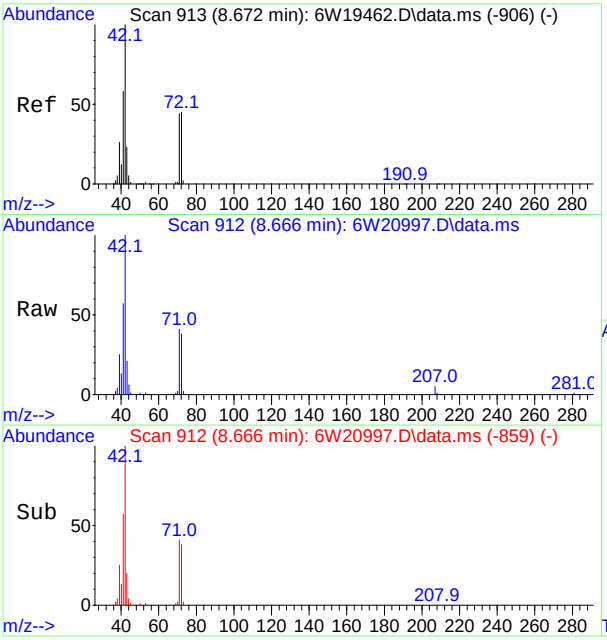


#45
2,4-Dimethylpentane
Concen: 0.28 ppb(v)
RT: 9.064 min Scan# 977
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 57 Resp: 16272

Ion	Ratio	Lower	Upper
57	100		
56	59.6	39.0	72.4
85	23.7	21.6	40.2

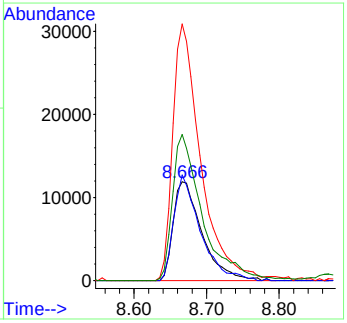


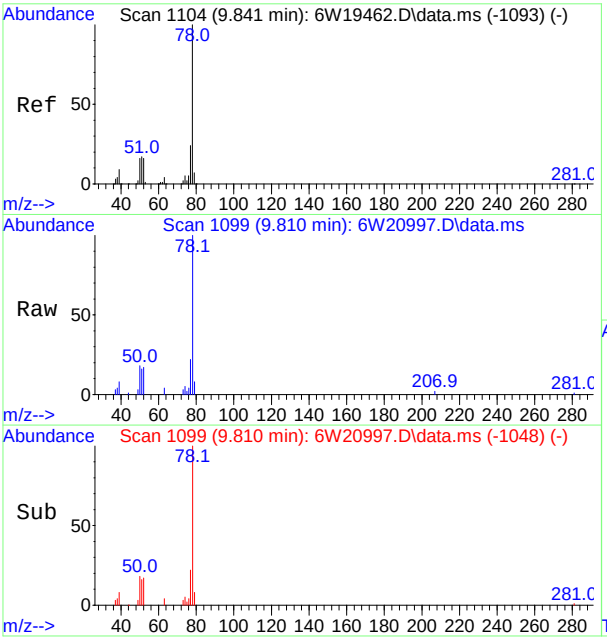


#46
Tetrahydrofuran
Concen: 2.43 ppb(v)
RT: 8.666 min Scan# 912
Delta R.T. -0.006 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 72 Resp: 32884

Ion	Ratio	Lower	Upper
72	100		
71	106.9	68.3	126.9
42	260.0	155.6	289.0
41	148.0	90.4	167.8

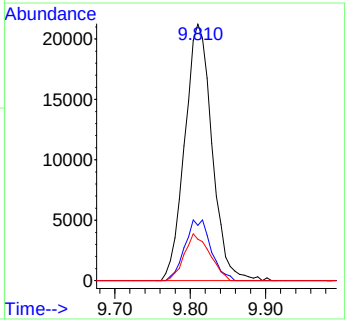


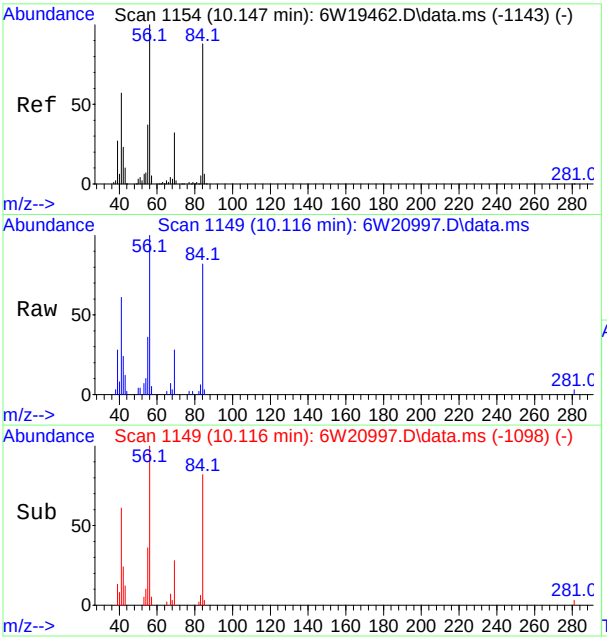


#49
Benzene
Concen: 0.52 ppb(v)
RT: 9.810 min Scan# 1099
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 78 Resp: 53409

Ion	Ratio	Lower	Upper
78	100		
77	21.5	16.7	30.9
51	16.1	12.2	22.6

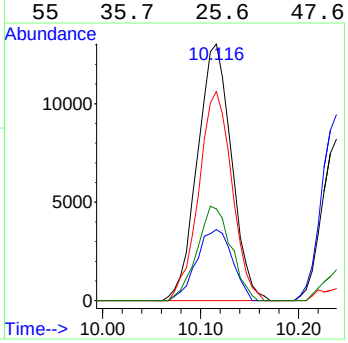


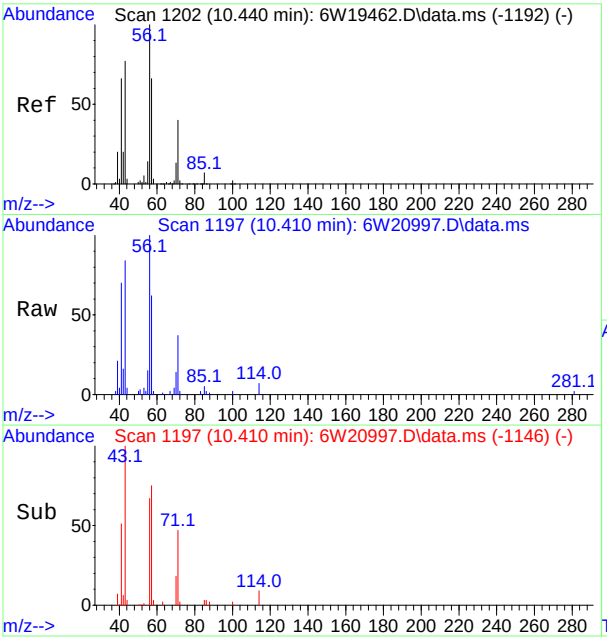


#51
Cyclohexane
Concen: 0.63 ppb(v)
RT: 10.116 min Scan# 1149
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 56 Resp: 31596

Ion	Ratio	Lower	Upper
56	100		
69	27.7	22.3	41.3
84	81.6	61.2	113.8
55	35.7	25.6	47.6

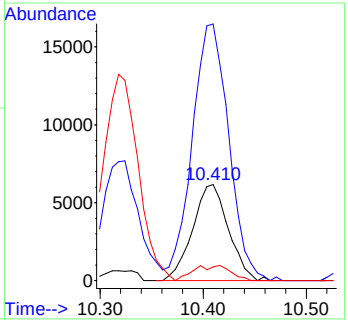


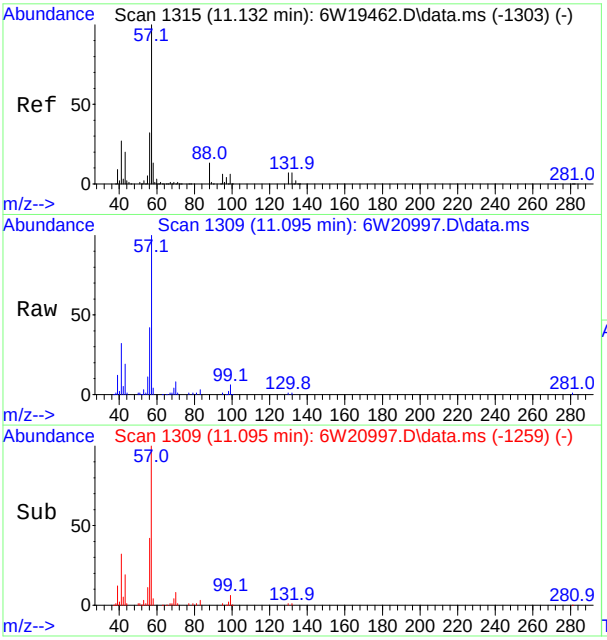


#52
2,3-Dimethylpentane
Concen: 0.66 ppb(v)
RT: 10.410 min Scan# 1197
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 71 Resp: 14920

Ion	Ratio	Lower	Upper
71	100		
56	267.4	174.5	324.1
85	14.3	11.6	21.6

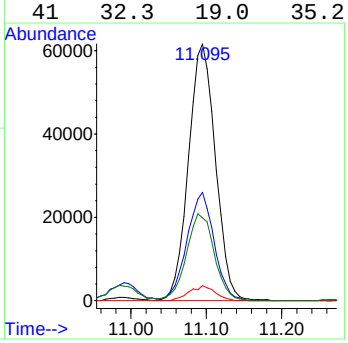


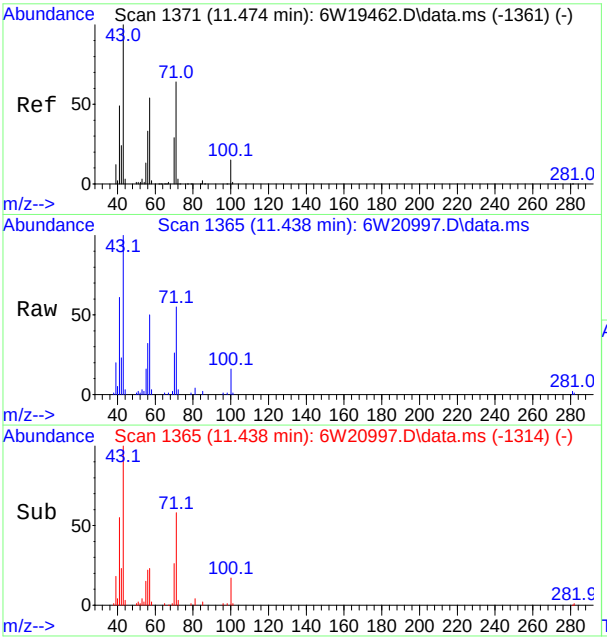


#54
2,2,4-Trimethylpentane
Concen: 1.10 ppb(v)
RT: 11.095 min Scan# 1309
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 57 Resp: 152869

Ion	Ratio	Lower	Upper
57	100		
56	42.2	22.2	41.2#
99	5.9	4.4	8.2
41	32.3	19.0	35.2

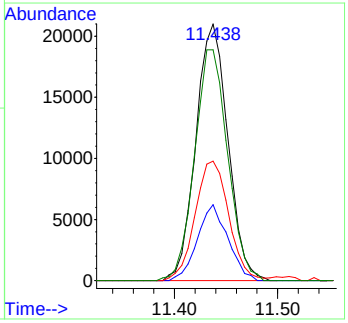


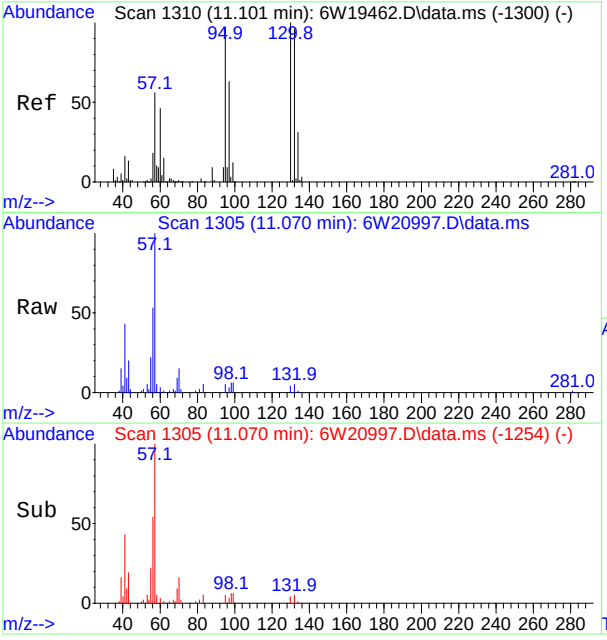


#55
Heptane
Concen: 1.50 ppb(v)
RT: 11.438 min Scan# 1365
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 71 Resp: 45439

Ion	Ratio	Lower	Upper
71	100		
100	29.6	22.3	41.5
70	46.6	32.5	60.3
57	89.8	60.1	111.5

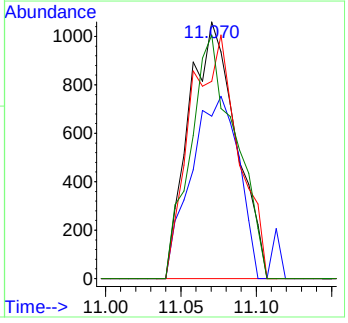


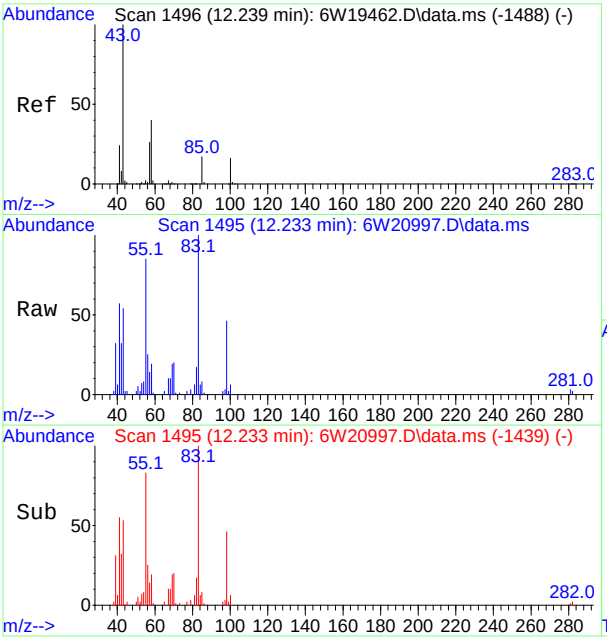


#56
Trichloroethene
Concen: 0.06 ppb(v)
RT: 11.070 min Scan# 1305
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 95 Resp: 2319

Ion	Ratio	Lower	Upper
95	100		
97	63.3	45.5	84.5
130	76.9	72.3	134.3
132	94.9	69.1	128.3

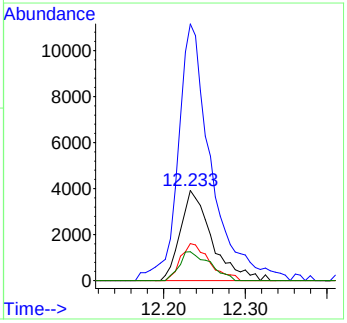


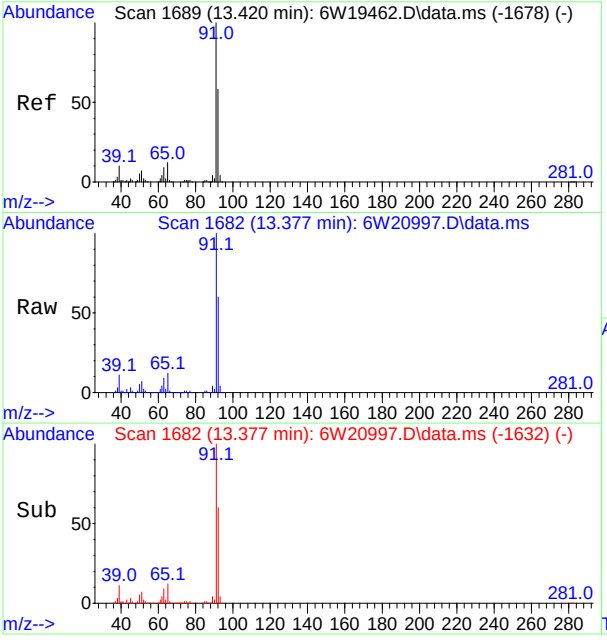


#64
4-Methyl-2-pentanone
Concen: 0.48 ppb(v)
RT: 12.233 min Scan# 1495
Delta R.T. 0.012 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 58 Resp: 10545

Ion	Ratio	Lower	Upper
58	100		
43	285.3	176.5	327.7
85	41.3	31.5	58.5
100	32.2	27.9	51.7

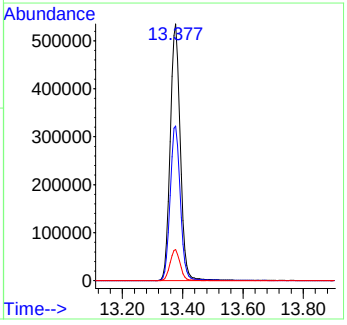




#66
Toluene
Concen: 11.61 ppb(v)
RT: 13.377 min Scan# 1682
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 91 Resp: 1246294

Ion	Ratio	Lower	Upper
91	100		
92	60.2	40.9	75.9
65	12.2	8.3	15.3



7.4.1

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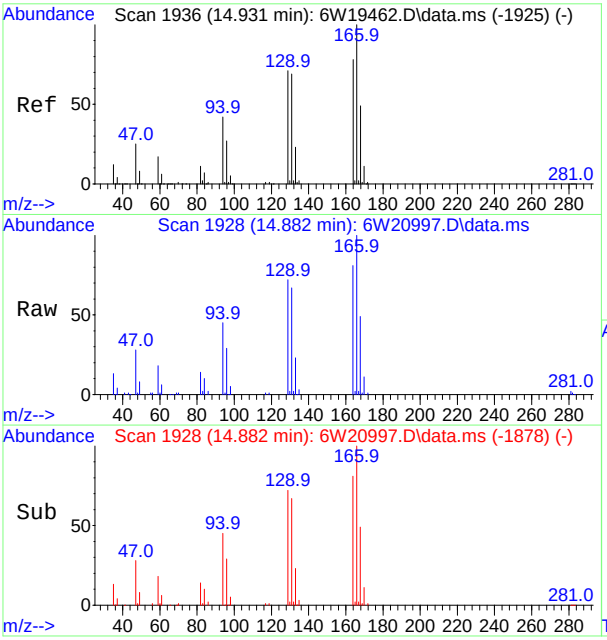
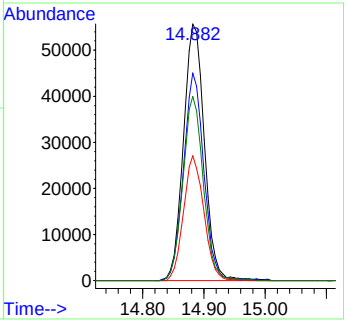
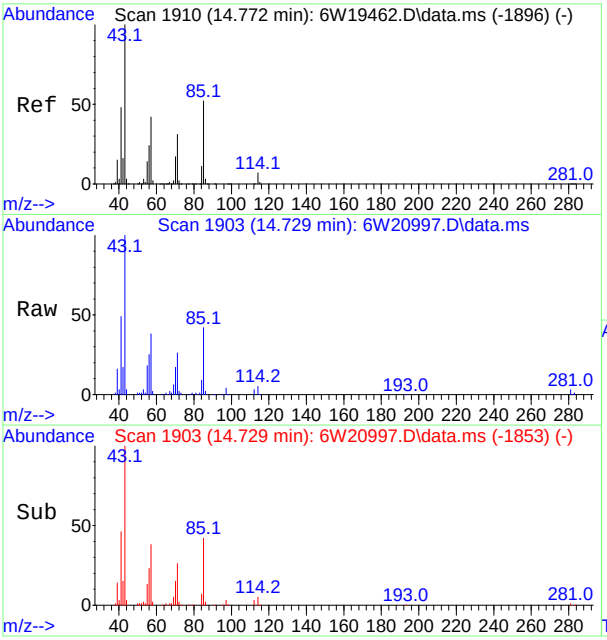


#72
Tetrachloroethene
Concen: 2.44 ppb(v)
RT: 14.882 min Scan# 1928
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:166 Resp: 132291

Ion	Ratio	Lower	Upper
166	100		
164	80.8	54.7	101.7
168	48.6	34.1	63.3
129	71.8	50.0	92.8

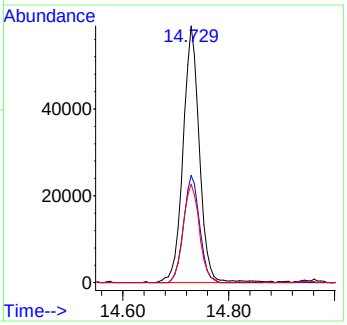


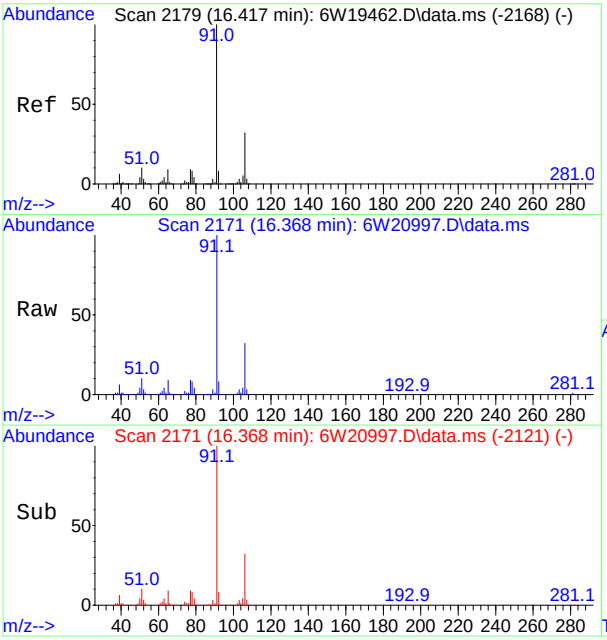


#74
Octane
Concen: 1.95 ppb(v)
RT: 14.729 min Scan# 1903
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 43 Resp: 126627

Ion	Ratio	Lower	Upper
43	100		
85	41.8	36.2	67.2
57	38.4	29.5	54.7

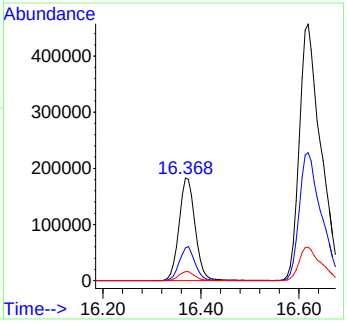


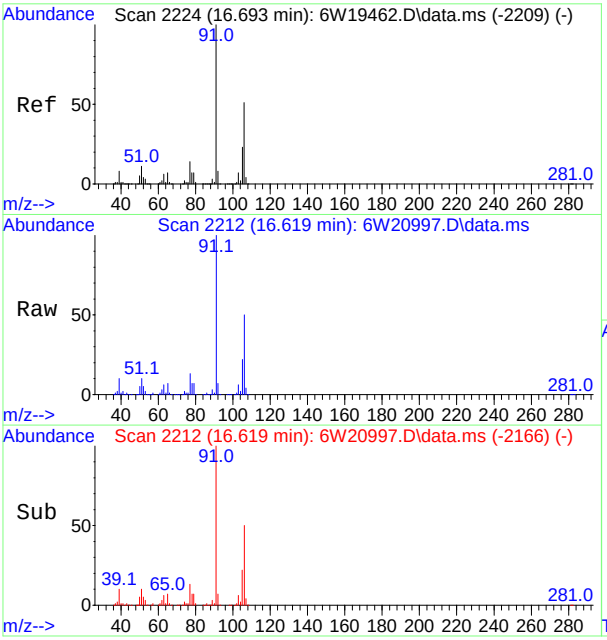


#78
Ethylbenzene
Concen: 3.18 ppb(v)
RT: 16.368 min Scan# 2171
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 91 Resp: 420402

Ion	Ratio	Lower	Upper
91	100		
106	31.9	22.5	41.9
77	8.7	6.2	11.6

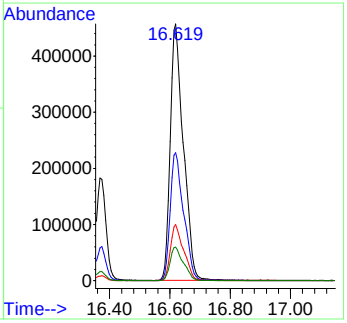


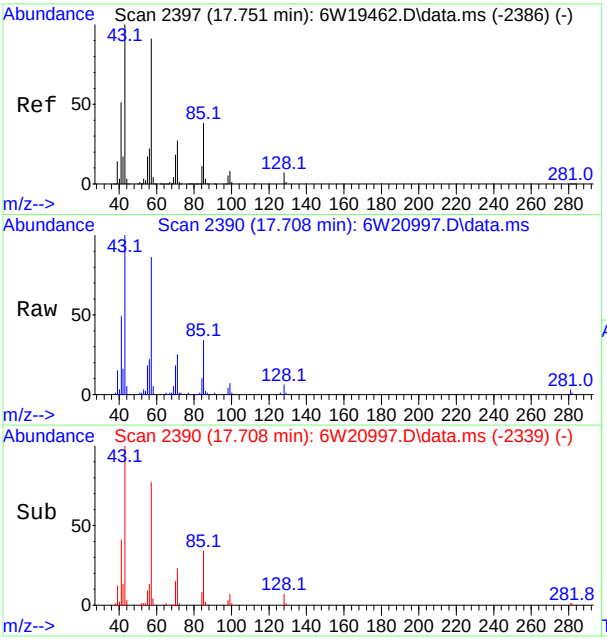


#79
m,p-Xylene
Concen: 12.27 ppb(v)
RT: 16.619 min Scan# 2212
Delta R.T. -0.049 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 91 Resp: 1383615

Ion	Ratio	Lower	Upper
91	100		
106	49.8	35.4	65.7
105	21.8	16.2	30.0
77	13.0	9.7	18.1

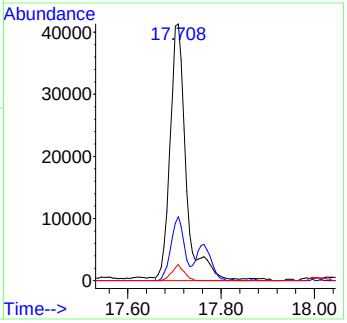


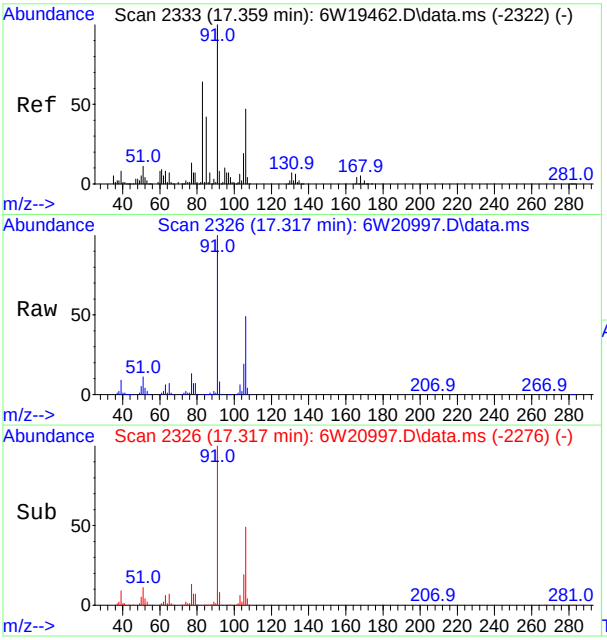


#81
Nonane
Concen: 1.55 ppb(v)
RT: 17.708 min Scan# 2390
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 43 Resp: 99278

Ion	Ratio	Lower	Upper
43	100		
71	24.9	18.7	34.7
128	6.3	5.0	9.2

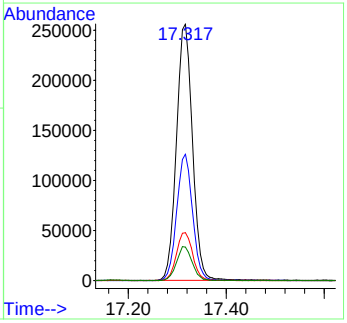


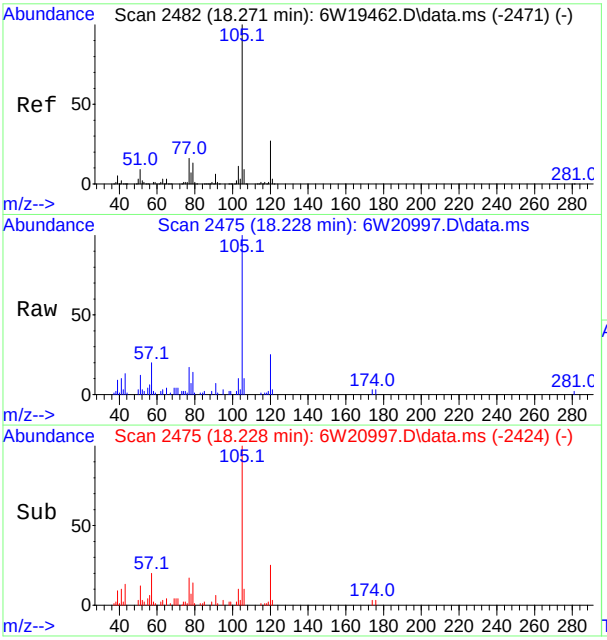


#82
o-Xylene
Concen: 5.63 ppb(v)
RT: 17.317 min Scan# 2326
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion: 91 Resp: 582731

Ion	Ratio	Lower	Upper
91	100		
106	49.3	33.0	61.2
105	18.6	13.6	25.2
77	13.0	9.2	17.0

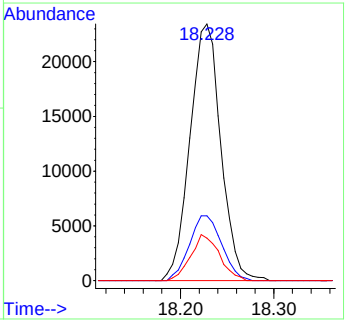


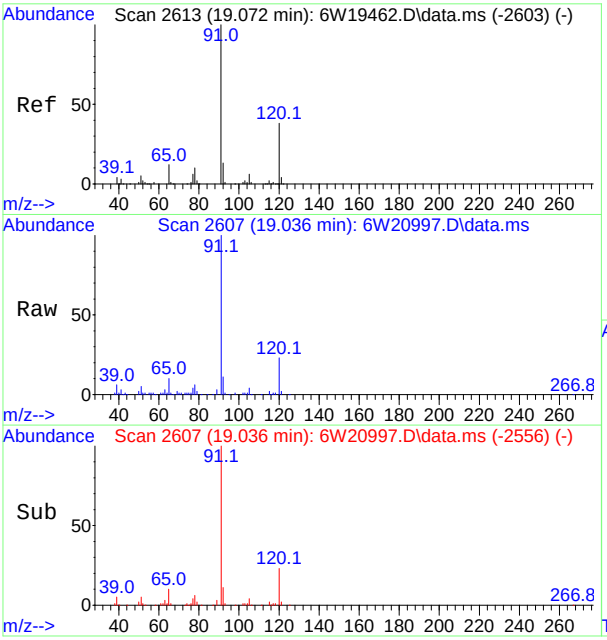


#86
Isopropylbenzene
Concen: 0.36 ppb(v)
RT: 18.228 min Scan# 2475
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:105 Resp: 54125

Ion	Ratio	Lower	Upper
105	100		
120	25.3	19.2	35.6
77	16.6	11.1	20.5

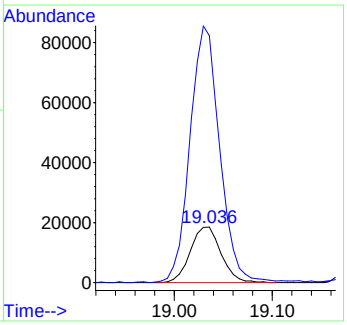


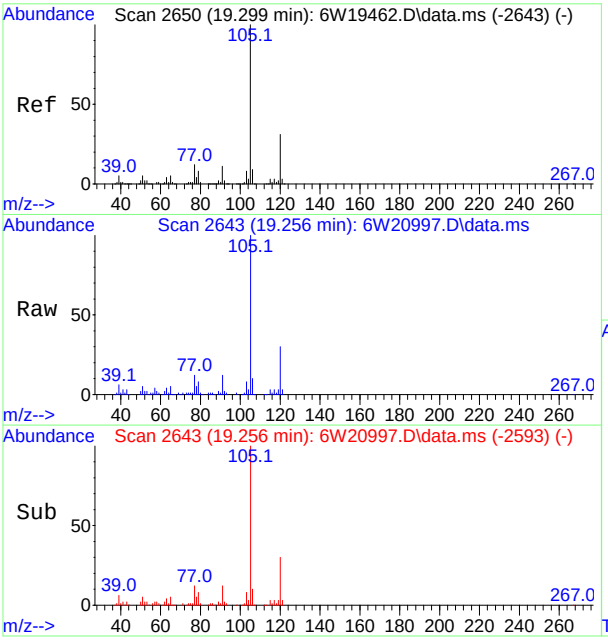


#89
n-Propylbenzene
Concen: 1.18 ppb(v)
RT: 19.036 min Scan# 2607
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:120 Resp: 40604

Ion	Ratio	Lower	Upper
120	100		
91	443.9	290.6	539.8

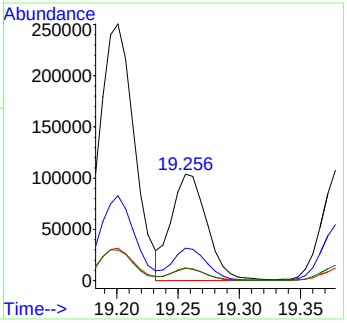


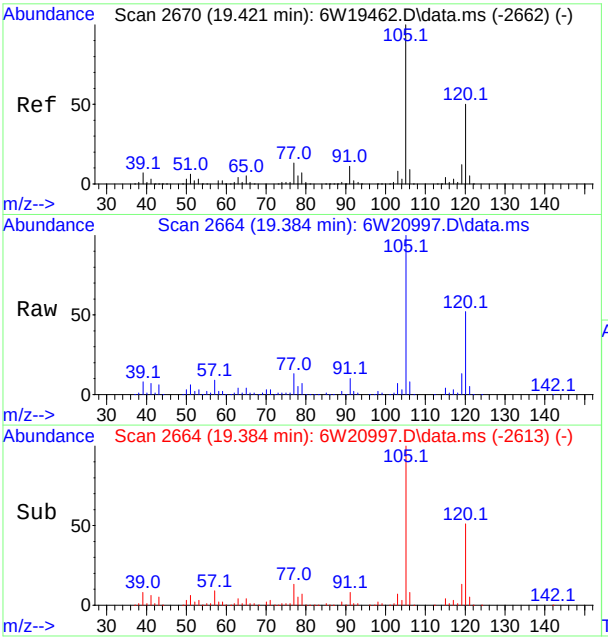


#91
4-Ethyltoluene
Concen: 1.84 ppb(v)
RT: 19.256 min Scan# 2643
Delta R.T. -0.024 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:105 Resp: 210863

Ion	Ratio	Lower	Upper
105	100		
120	30.3	21.4	39.8
91	11.6	7.8	14.6
77	11.9	8.3	15.3

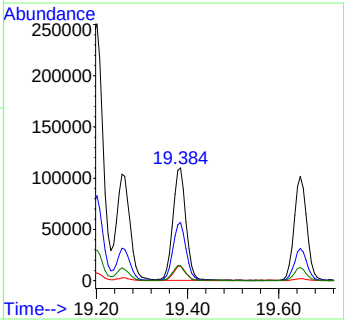


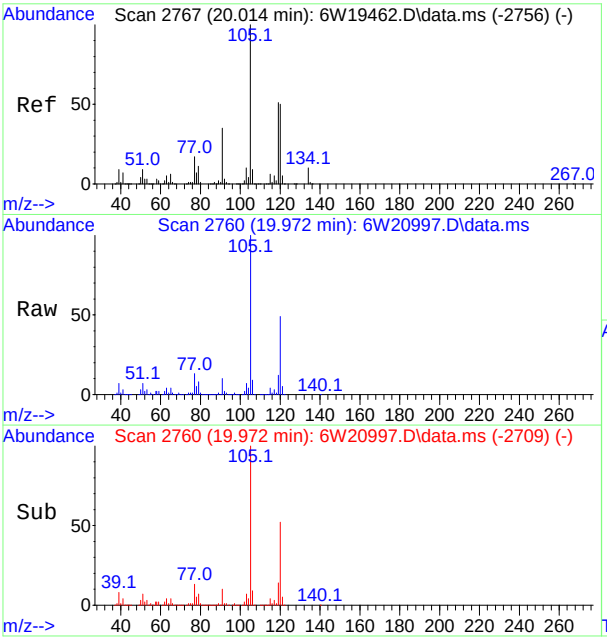


#92
1,3,5-Trimethylbenzene
Concen: 1.88 ppb(v)
RT: 19.384 min Scan# 2664
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:105 Resp: 219625

Ion	Ratio	Lower	Upper
105	100		
120	51.7	35.1	65.1
119	13.1	8.7	16.1
77	13.1	9.2	17.2

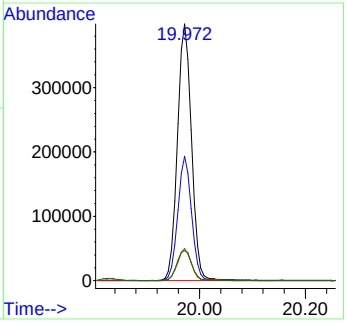


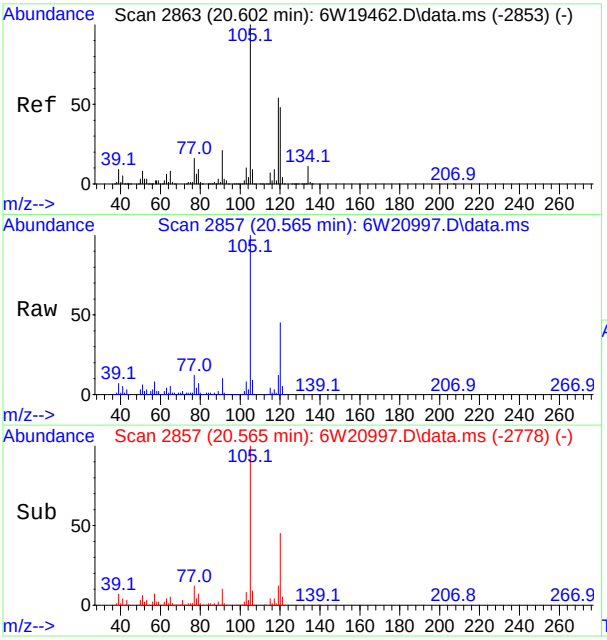


#95
1,2,4-Trimethylbenzene
Concen: 6.96 ppb(v)
RT: 19.972 min Scan# 2760
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:105 Resp: 732237

Ion	Ratio	Lower	Upper
105	100		
120	48.5	35.3	65.5
119	11.7	35.8	66.6#
77	12.5	12.0	22.2

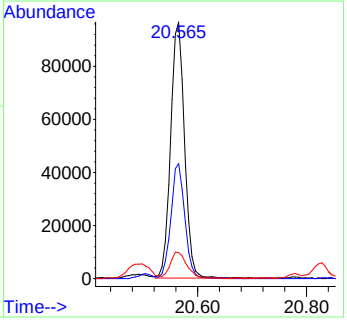


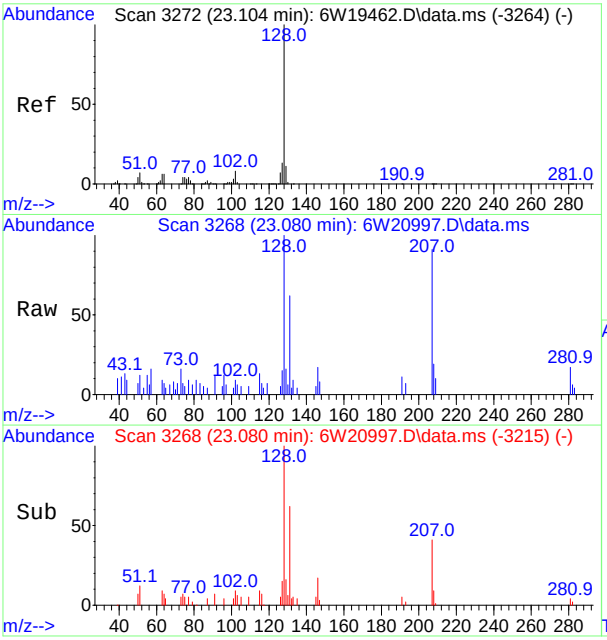


#100
1,2,3-Trimethylbenzene
Concen: 1.53 ppb(v)
RT: 20.565 min Scan# 2857
Delta R.T. -0.018 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:105 Resp: 171017

Ion	Ratio	Lower	Upper
105	100		
120	45.1	42.6	64.0
91	12.5	30.4	45.6#

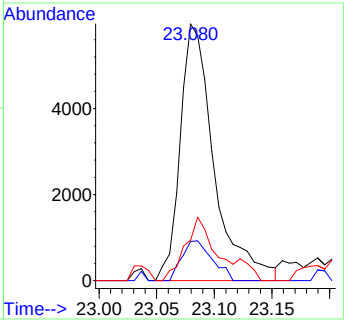




#106
Naphthalene
Concen: 0.23 ppb(v)
RT: 23.080 min Scan# 3268
Delta R.T. -0.006 min
Lab File: 6W20997.D
Acq: 14 Jan 2021 7:32 pm

Tgt Ion:128 Resp: 12255

Ion	Ratio	Lower	Upper
128	100		
127	15.3	9.0	16.8
129	15.9	7.6	14.2#



7.4.1

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21016.D
Acq On : 15 Jan 2021 4:51 pm
Operator : danat
Sample : jd18873-1dup
Misc : MS48290,V6W883,100,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 19 12:25:07 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.067	130	216429	10.00	ppb(v	-0.01
53) 1,4-Difluorobenzene	10.245	114	761897	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	304756	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.067	130	216429	10.00	ppb(v	-0.01
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	272409	8.14	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 81.40%			
Target Compounds						Qvalue
5) Chlorotrifluoroethene	3.797	116	29485	0.82	ppb(v	97
6) Dichlorodifluoromethane	3.845	85	8684	0.14	ppb(v	92
15) Chloroethane	4.604	64	1228	0.11	ppb(v#	69
19) Freon 123A	5.069	117	34935	1.02	ppb(v	98
22) Acetone	5.124	58	10086	0.84	ppb(v	89
25) Isopropyl Alcohol	5.338	45	52460	1.07	ppb(v	97
27) Freon 113	6.158	101	251227	4.55	ppb(v	99
30) Ethanol	4.708	45	122937	12.81	ppb(v	99
37) 1,1-Dichloroethane	7.021	63	13811	0.32	ppb(v#	92
40) cis-1,2-Dichloroethene	7.889	61	31275	0.95	ppb(v	94
42) Ethyl Acetate	8.165	61	1864	0.24	ppb(v#	60
44) Chloroform	8.207	83	7207	0.14	ppb(v	95
47) 1,1,1-Trichloroethane	9.290	97	13257	0.25	ppb(v	94
56) Trichloroethene	11.071	95	128632	3.92	ppb(v	98
72) Tetrachloroethene	14.888	166	1404548	30.18	ppb(v	99
79) m,p-Xylene	16.619	91	8929	0.10	ppb(v	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

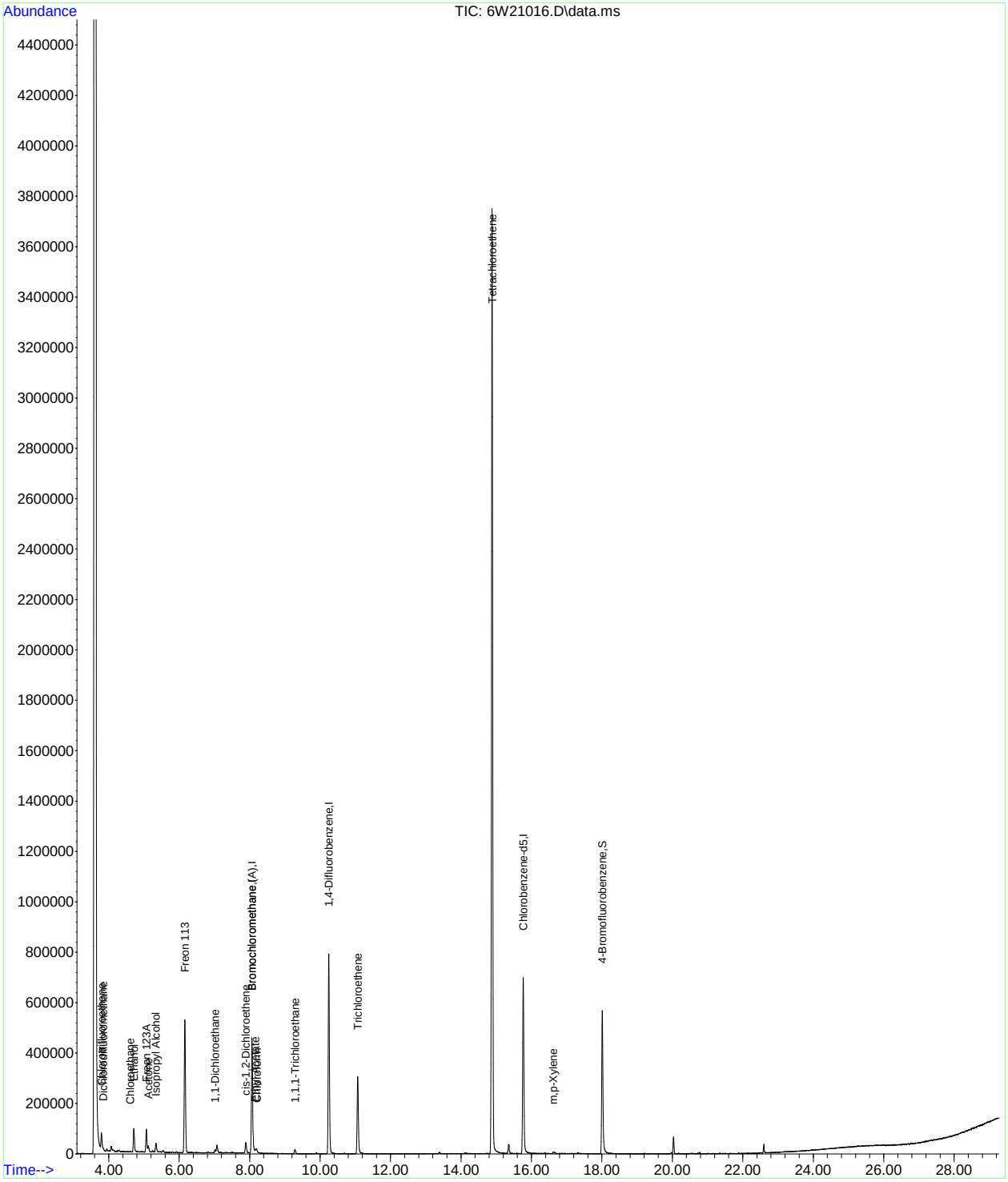
7.4.2

7

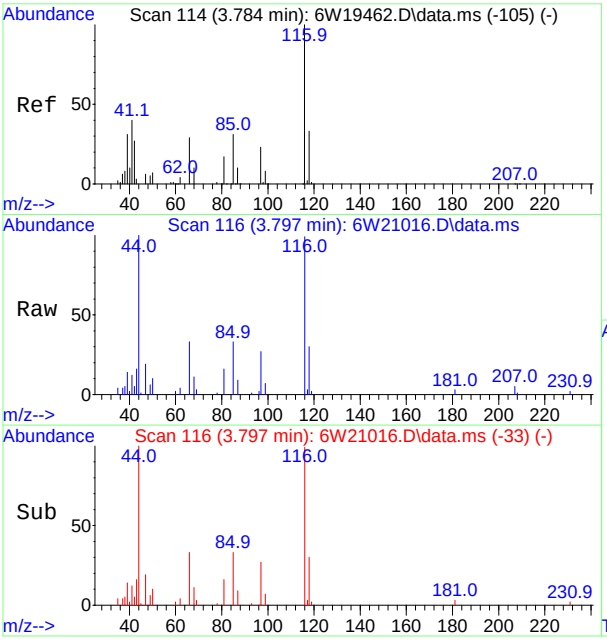
Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21016.D
Acq On : 15 Jan 2021 4:51 pm
Operator : danat
Sample : jd18873-1dup
Misc : MS48290,V6W883,100,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jan 19 12:25:07 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



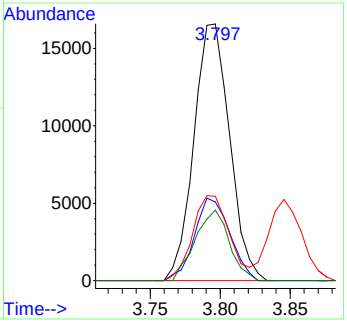
m6w848.M Tue Jan 19 12:31:47 2021 Page: 2

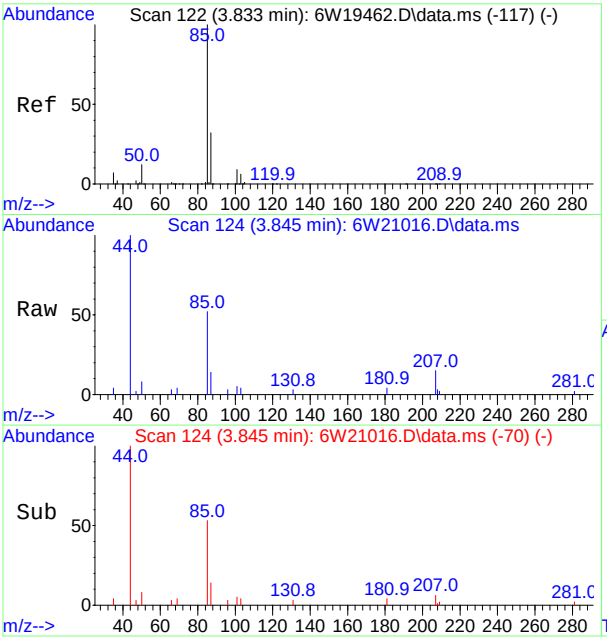


#5
Chlorotrifluoroethene
Concen: 0.82 ppb(v)
RT: 3.797 min Scan# 116
Delta R.T. 0.006 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion:116 Resp: 29485

Ion	Ratio	Lower	Upper
116	100		
118	31.9	26.2	39.4
85	34.3	26.9	40.3
97	26.2	18.7	28.1

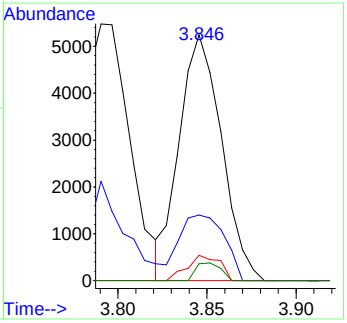


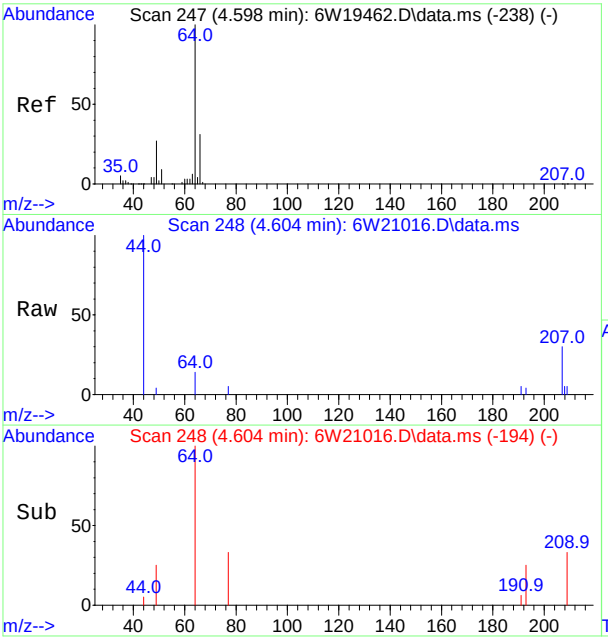


#6
Dichlorodifluoromethane
Concen: 0.14 ppb(v)
RT: 3.845 min Scan# 124
Delta R.T. 0.000 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 85 Resp: 8684

Ion	Ratio	Lower	Upper
85	100		
87	26.7	22.7	42.1
101	10.4	6.3	11.7
103	6.8	4.1	7.5

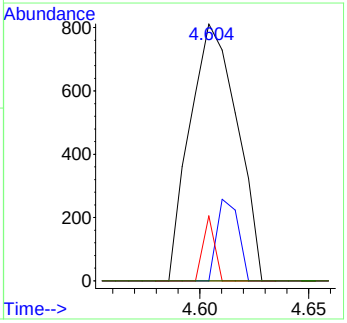


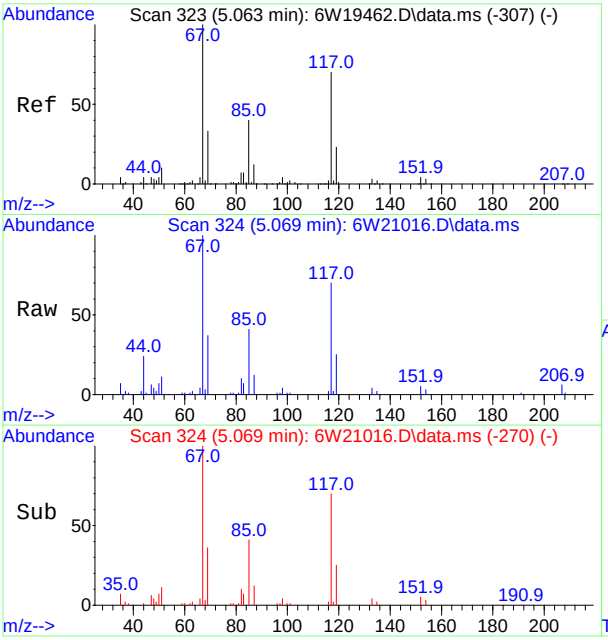


#15
Chloroethane
Concen: 0.11 ppb(v)
RT: 4.604 min Scan# 248
Delta R.T. 0.000 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 64 Resp: 1228

Ion	Ratio	Lower	Upper
64	100		
66	0.0	21.8	40.4#
49	25.2	18.6	34.5
51	0.0	6.1	11.3#

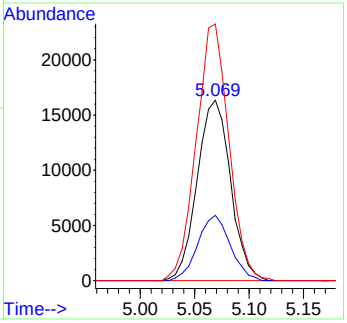




#19
Freon 123A
Concen: 1.02 ppb(v)
RT: 5.069 min Scan# 324
Delta R.T. 0.000 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

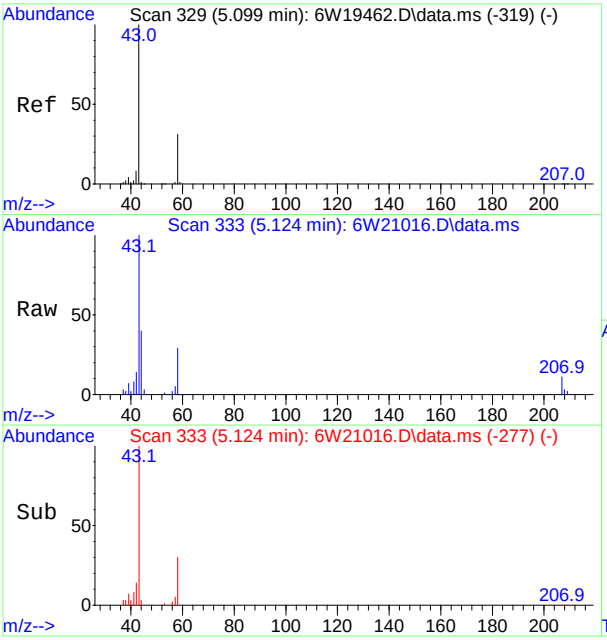
Tgt Ion:117 Resp: 34935

Ion	Ratio	Lower	Upper
117	100		
119	36.2	22.8	42.4
67	142.2	100.4	186.4



7.4.2

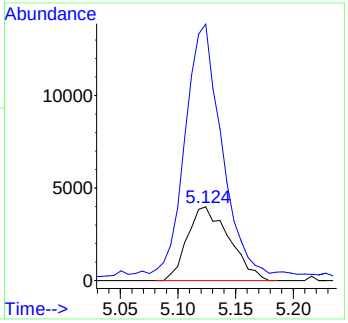
7

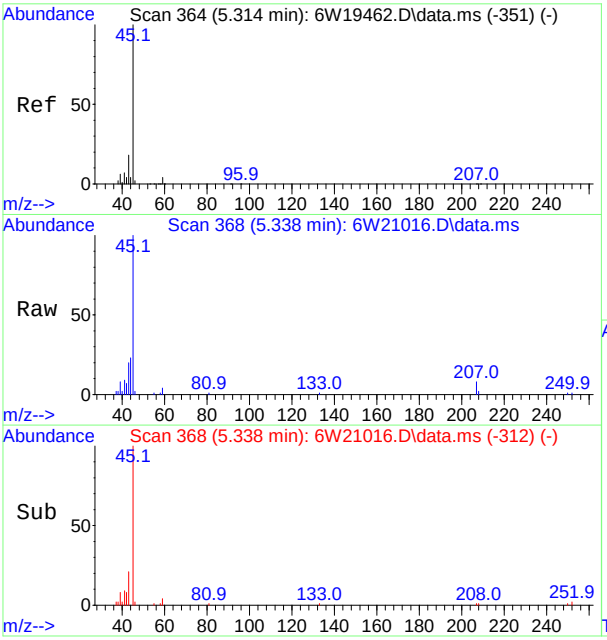


#22
Acetone
Concen: 0.84 ppb(v)
RT: 5.124 min Scan# 333
Delta R.T. 0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 58 Resp: 10086

Ion	Ratio	Lower	Upper
58	100		
43	348.1	228.2	423.8

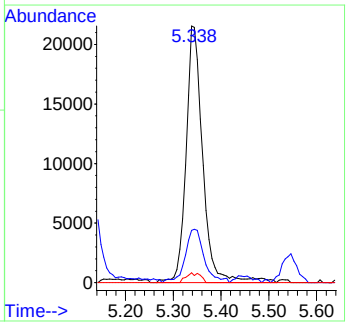


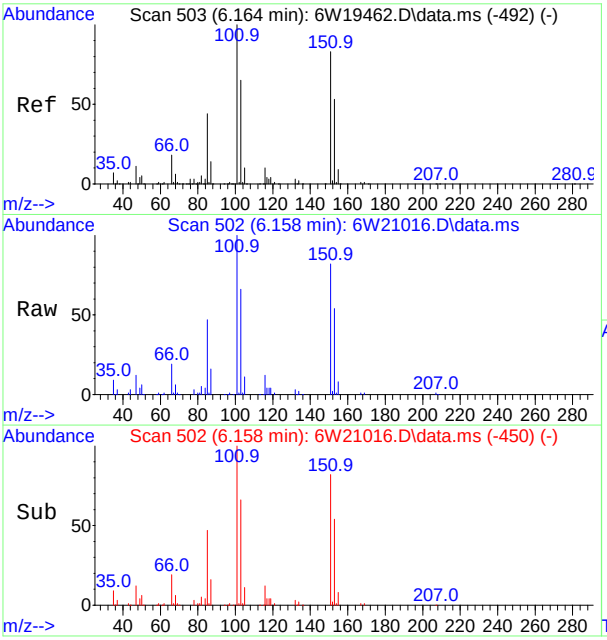


#25
Isopropyl Alcohol
Concen: 1.07 ppb(v)
RT: 5.338 min Scan# 368
Delta R.T. 0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 45 Resp: 52460

Ion	Ratio	Lower	Upper
45	100		
43	20.3	13.0	24.2
59	3.9	2.9	5.3

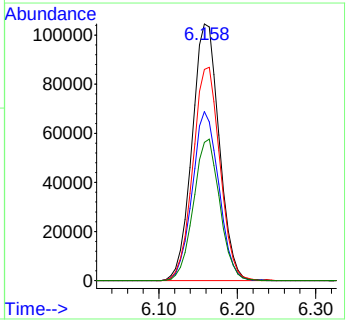


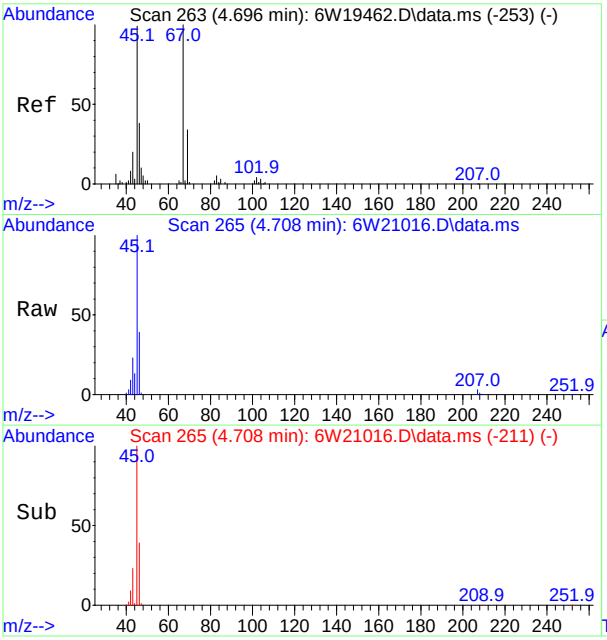


#27
Freon 113
Concen: 4.55 ppb(v)
RT: 6.158 min Scan# 502
Delta R.T. -0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion:101 Resp: 251227

Ion	Ratio	Lower	Upper
101	100		
103	65.8	45.3	84.1
151	82.3	57.9	107.5
153	53.9	37.5	69.6

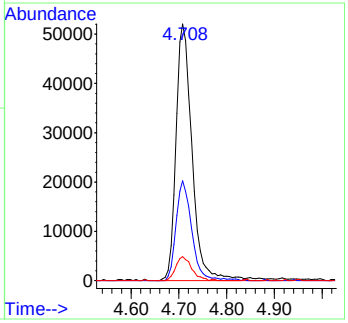




#30
Ethanol
Concen: 12.81 ppb(v)
RT: 4.708 min Scan# 265
Delta R.T. 0.000 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

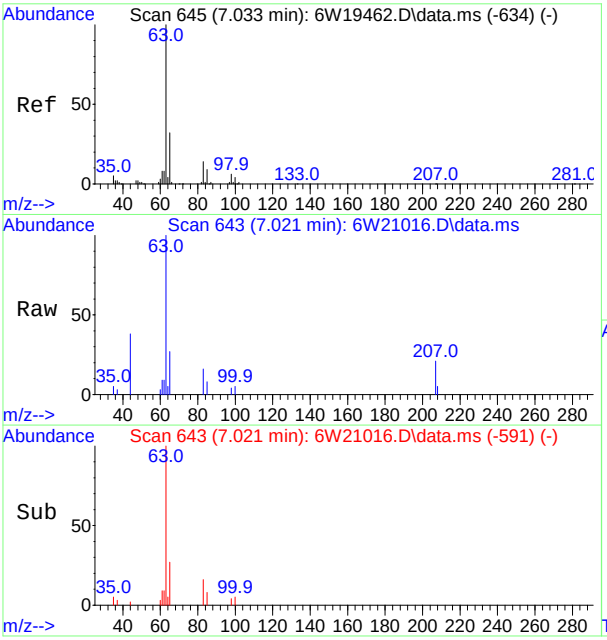
Tgt Ion: 45 Resp: 122937

Ion	Ratio	Lower	Upper
45	100		
46	38.9	26.9	50.1
42	9.3	6.0	11.2



7.4.2

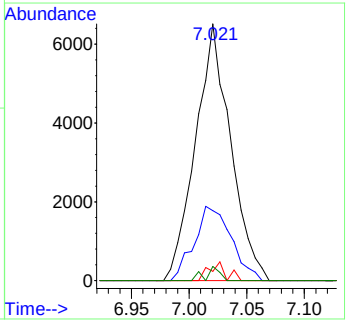
7

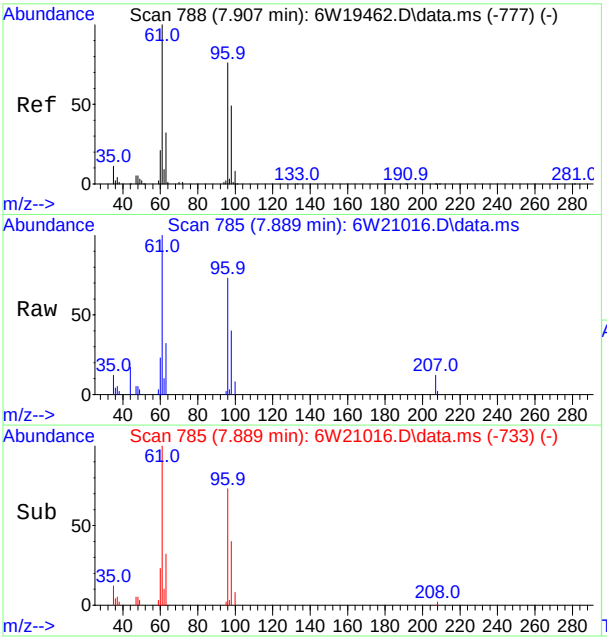


#37
1,1-Dichloroethane
Concen: 0.32 ppb(v)
RT: 7.021 min Scan# 643
Delta R.T. -0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 63 Resp: 13811

Ion	Ratio	Lower	Upper
63	100		
65	27.3	22.4	41.6
98	3.7	4.5	8.5#
100	5.5	2.8	5.2#

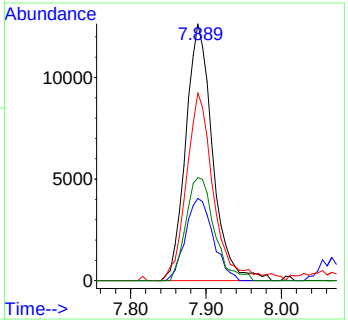


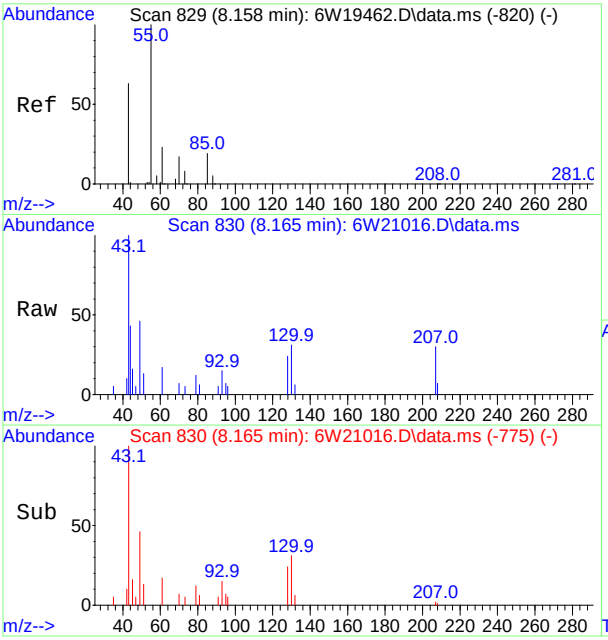


#40
cis-1,2-Dichloroethene
Concen: 0.95 ppb(v)
RT: 7.889 min Scan# 785
Delta R.T. -0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 61 Resp: 31275

Ion	Ratio	Lower	Upper
61	100		
63	32.0	22.6	42.0
96	73.2	53.6	99.6
98	40.1	34.6	64.3

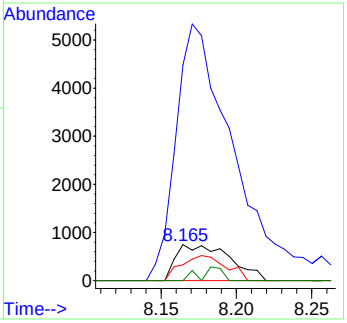


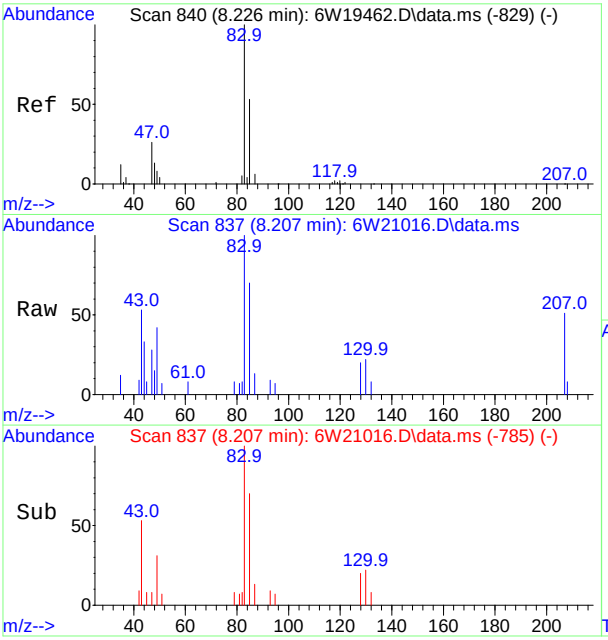


#42
Ethyl Acetate
Concen: 0.24 ppb(v)
RT: 8.165 min Scan# 830
Delta R.T. 0.006 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 61 Resp: 1864

Ion	Ratio	Lower	Upper
61	100		
43	599.7	518.2	962.4
70	44.1	55.3	102.7#
88	0.0	21.8	40.6#

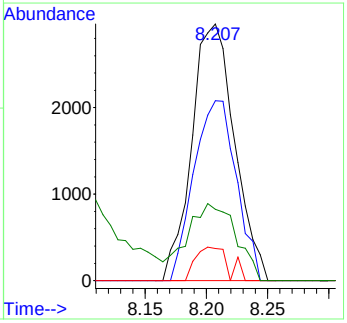


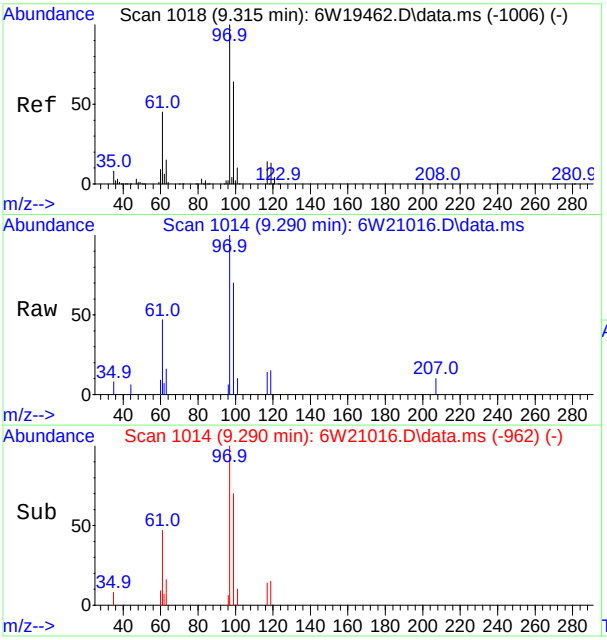


#44
Chloroform
Concen: 0.14 ppb(v)
RT: 8.207 min Scan# 837
Delta R.T. -0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 83 Resp: 7207

Ion	Ratio	Lower	Upper
83	100		
85	70.1	45.8	85.0
87	12.5	7.3	13.7
47	27.8	18.0	33.4

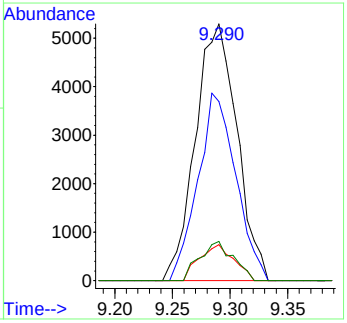


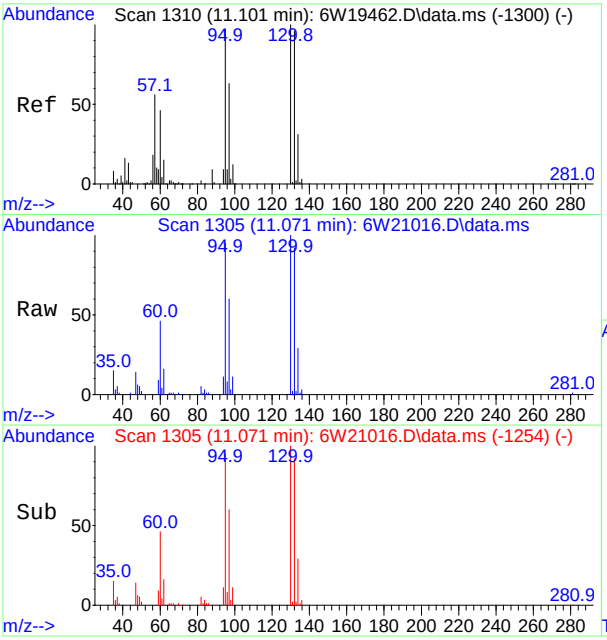


#47
1,1,1-Trichloroethane
Concen: 0.25 ppb(v)
RT: 9.290 min Scan# 1014
Delta R.T. -0.012 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 97 Resp: 13257

Ion	Ratio	Lower	Upper
97	100		
99	69.7	45.1	83.9
117	14.0	9.5	17.7
119	15.3	9.2	17.2

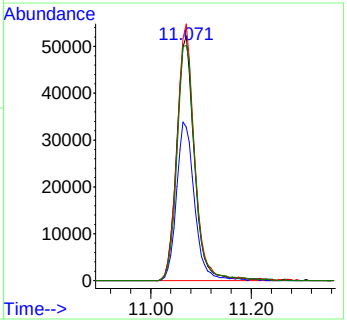




#56
Trichloroethene
Concen: 3.92 ppb(v)
RT: 11.071 min Scan# 1305
Delta R.T. -0.018 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

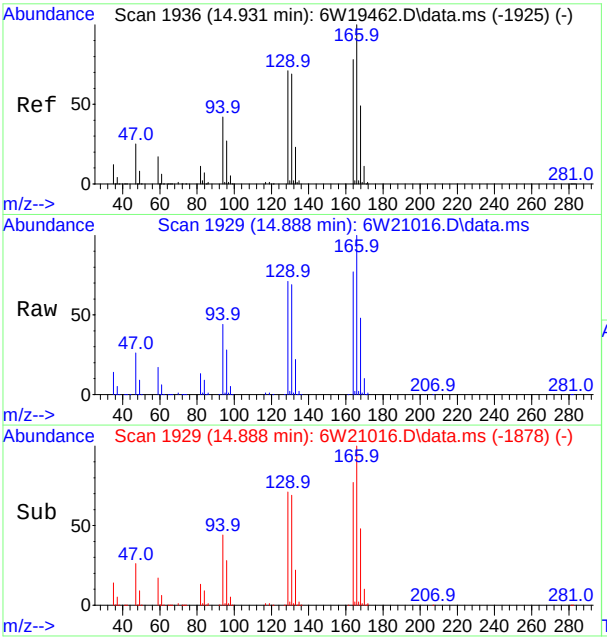
Tgt Ion: 95 Resp: 128632

Ion	Ratio	Lower	Upper
95	100		
97	62.7	45.5	84.5
130	105.0	72.3	134.3
132	96.1	69.1	128.3



7.4.2

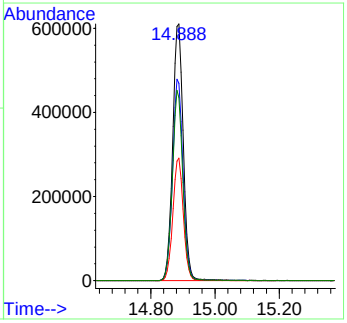
7

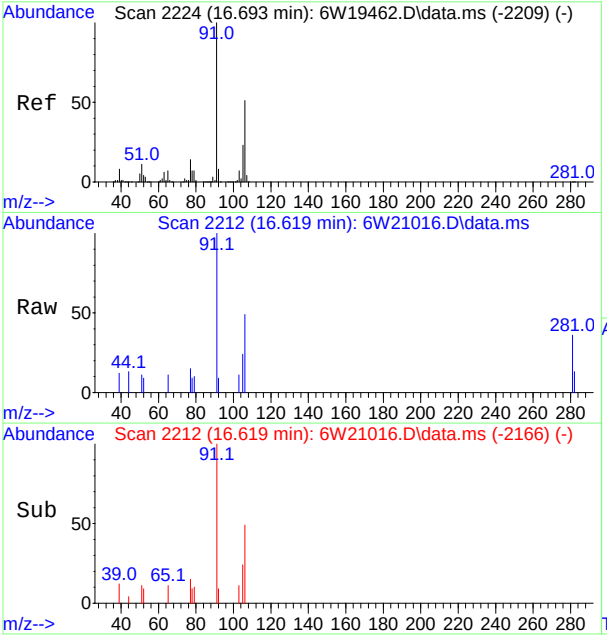


#72
Tetrachloroethene
Concen: 30.18 ppb(v)
RT: 14.888 min Scan# 1929
Delta R.T. -0.018 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion:166 Resp: 1404548

Ion	Ratio	Lower	Upper
166	100		
164	76.9	54.7	101.7
168	47.8	34.1	63.3
129	71.2	50.0	92.8

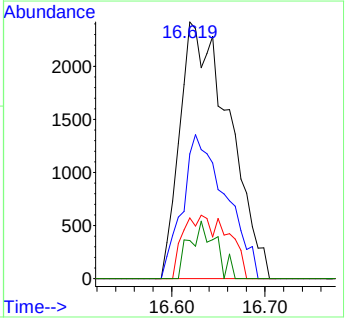




#79
m,p-Xylene
Concen: 0.10 ppb(v)
RT: 16.619 min Scan# 2212
Delta R.T. -0.049 min
Lab File: 6W21016.D
Acq: 15 Jan 2021 4:51 pm

Tgt Ion: 91 Resp: 8929

Ion	Ratio	Lower	Upper
91	100		
106	48.6	35.4	65.7
105	23.6	16.2	30.0
77	14.9	9.7	18.1



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20313.D
Acq On : 27 Nov 2020 8:54 pm
Operator : danat
Sample : scc (a004), cp10957
Misc : MS47250,V6W854,400,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 15 16:26:53 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.079	130	162202	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	589321	10.00 ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	222197	10.00 ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	162201	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.026	95	212566	8.71 ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 87.10%		

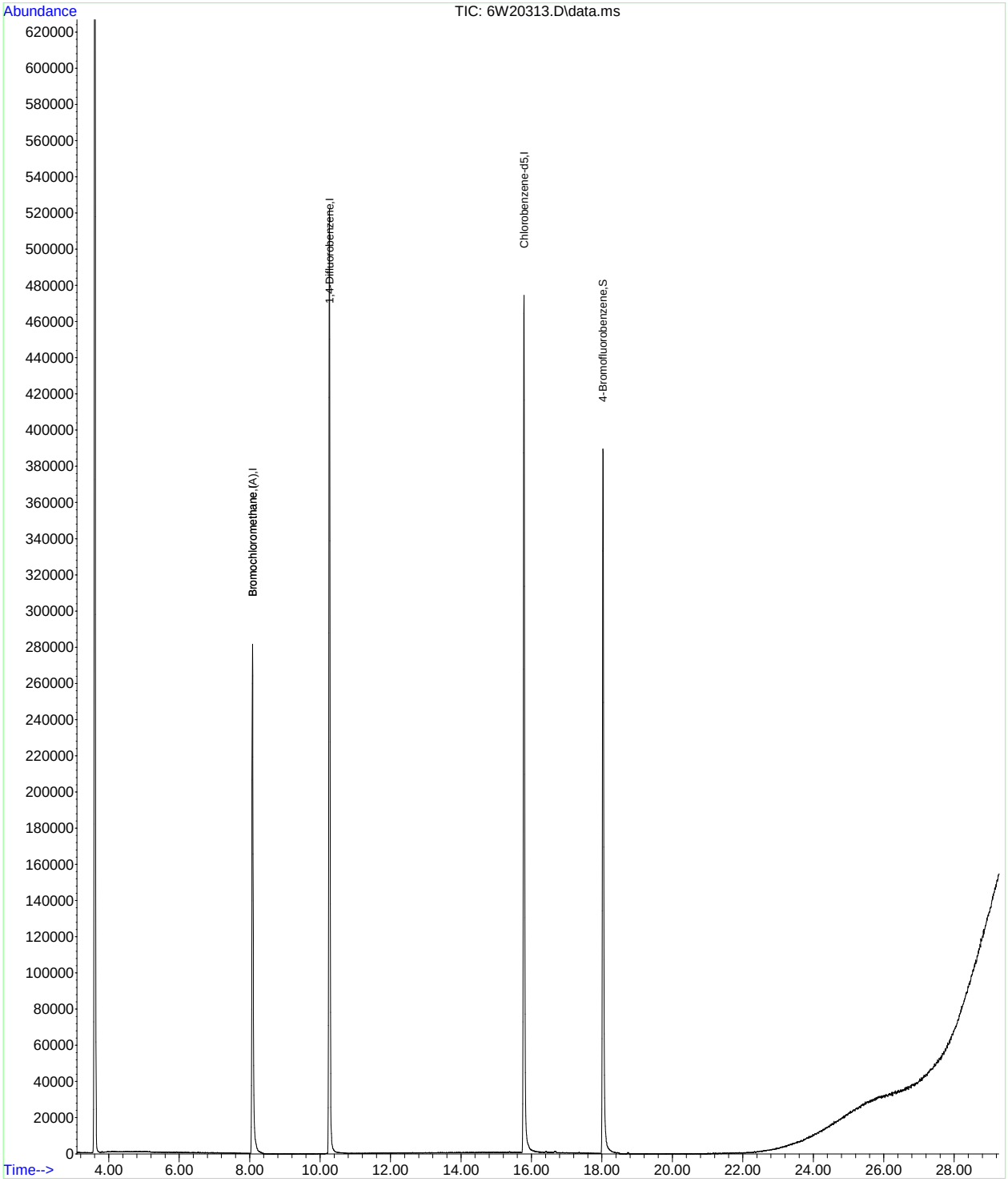
Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20313.D
Acq On : 27 Nov 2020 8:54 pm
Operator : danat
Sample : scc (a004), cp10957
Misc : MS47250,V6W854,400,,,,1
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Dec 15 16:26:53 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20414.D
Acq On : 3 Dec 2020 6:23 pm
Operator : thomash
Sample : scc(m167),cp10958
Misc : MS47361,V6W859,,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 14 17:35:50 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.079	130	267410	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.257	114	1003701	10.00 ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	396967	10.00 ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	268831	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.026	95	374252	8.58 ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 85.80%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

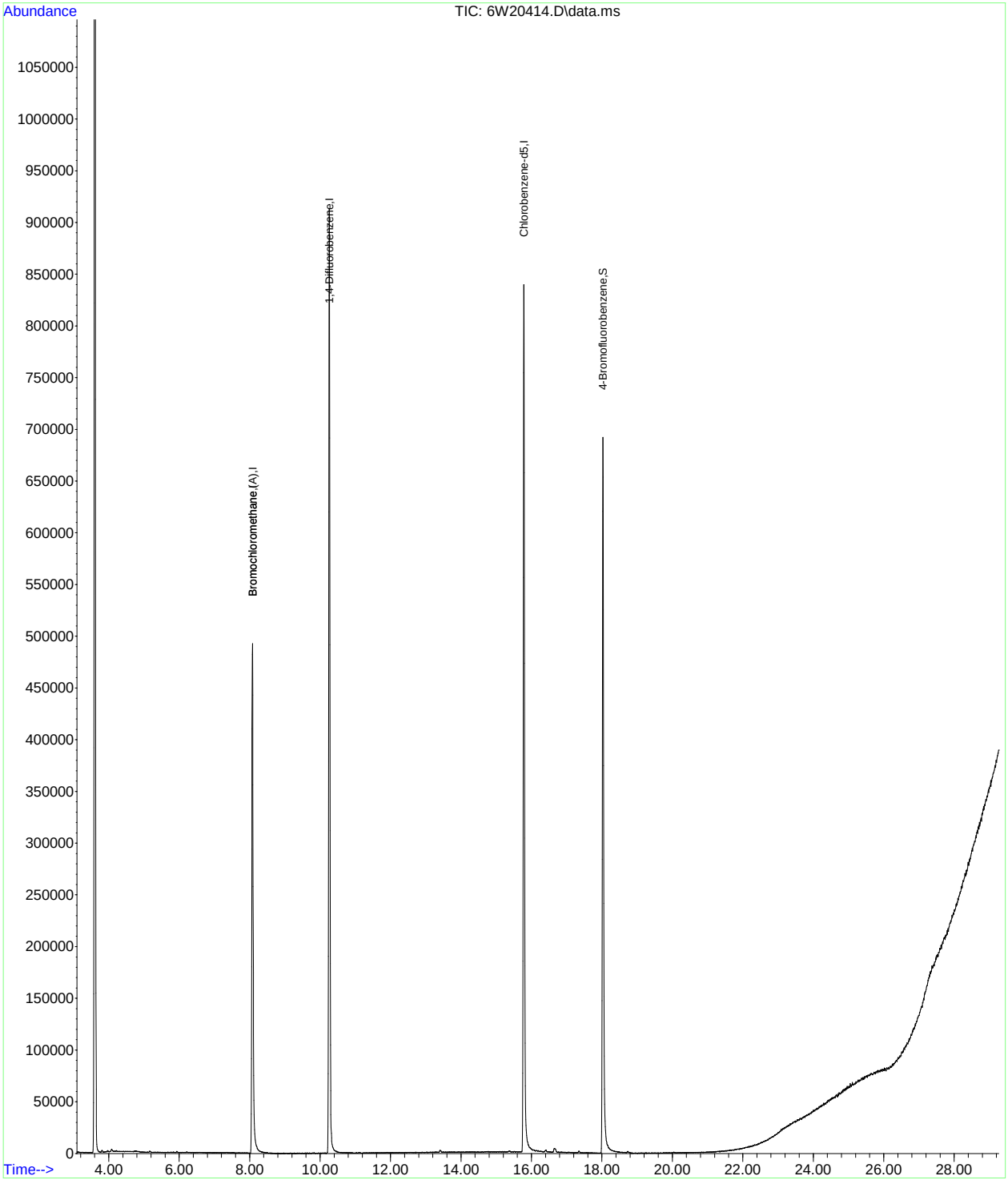
7.5.2

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20414.D
Acq On : 3 Dec 2020 6:23 pm
Operator : thomash
Sample : scc(m167),cp10958
Misc : MS47361,V6W859,,,,,1
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Dec 14 17:35:50 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Mon Dec 14 17:36:51 2020 Page: 2

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20415.D
Acq On : 3 Dec 2020 7:16 pm
Operator : thomash
Sample : scc(a758),cp10963
Misc : MS47361,V6W859,,,,,1
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Dec 14 17:36:34 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.079	130	264427	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.257	114	988603	10.00 ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	393763	10.00 ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	266068	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.026	95	374746	8.67 ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 86.70%		

Target Compounds Qvalue

(#) = qualifier out of range (m) = manual integration (+) = signals summed

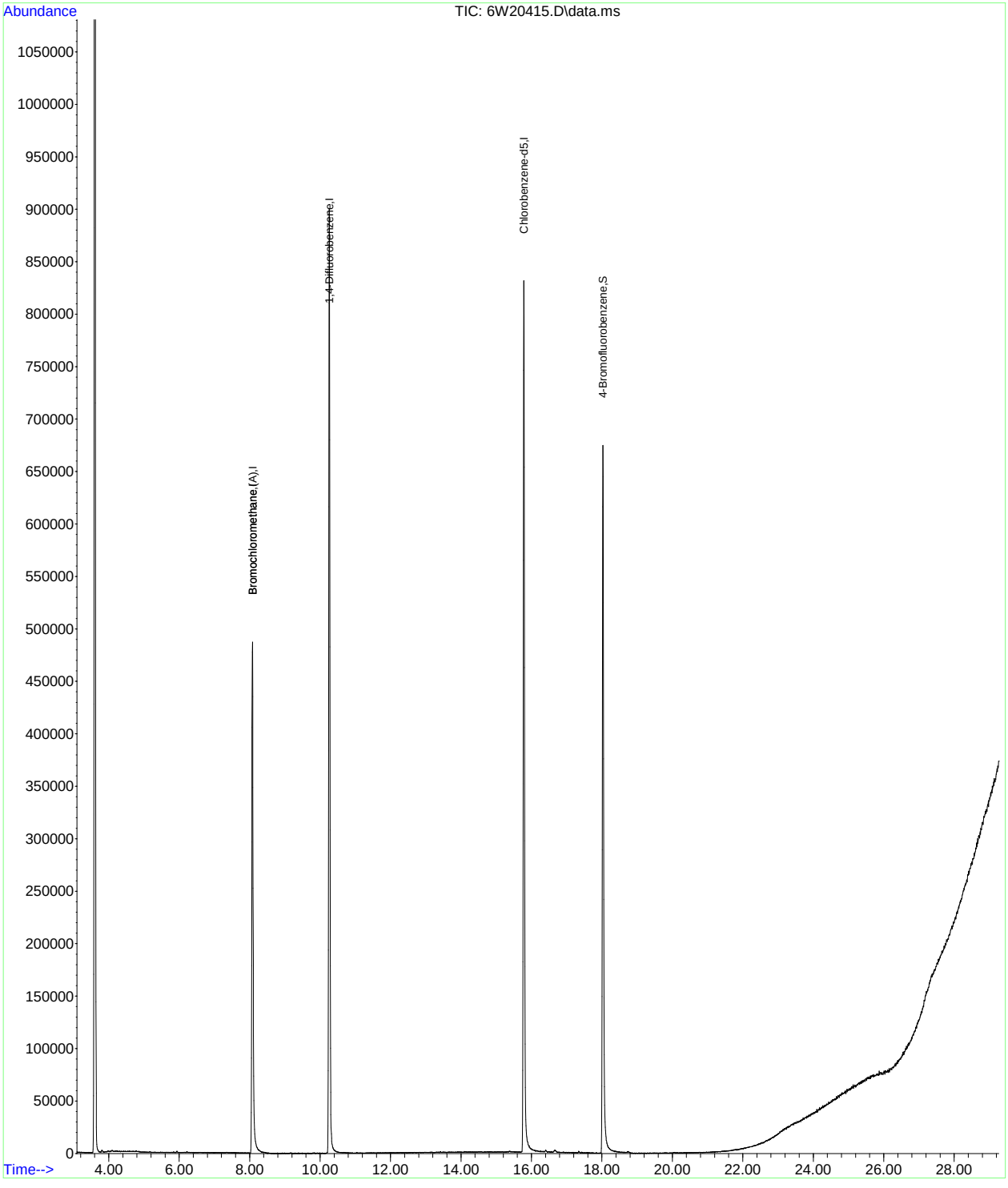
7.5.3

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20415.D
Acq On : 3 Dec 2020 7:16 pm
Operator : thomash
Sample : scc(a758),cp10963
Misc : MS47361,V6W859,,,,,1
ALS Vial : 8 Sample Multiplier: 1

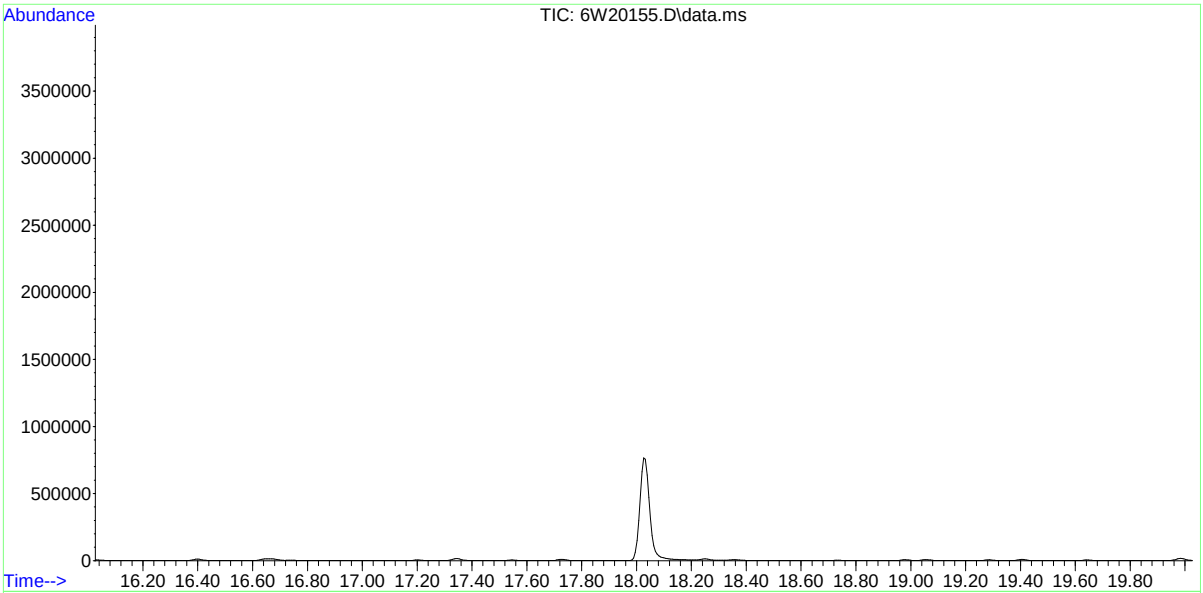
Quant Time: Dec 14 17:36:34 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

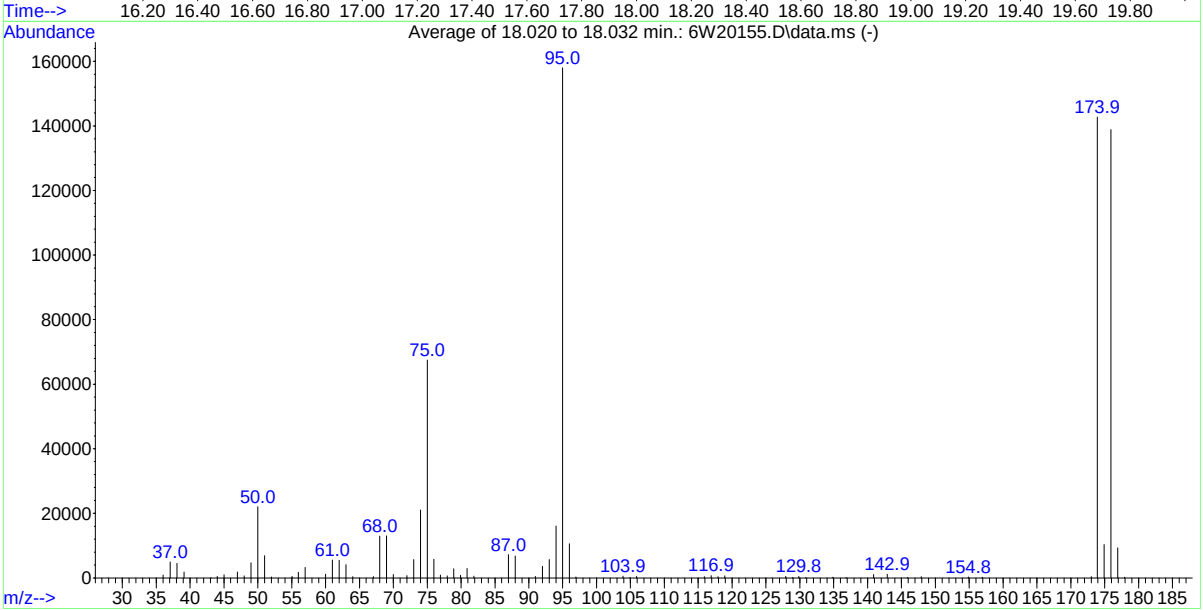


BFB

Data File : C:\msdchem\1\data\6W20155.D Vial: 1
Acq On : 18 Nov 2020 1:23 pm Operator: thomash
Sample : bfb Inst : GCMS6W
Misc : MS47175,V6W848,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode





AutoFind: Scans 2441, 2442, 2443; Background Corrected with Scan 2431

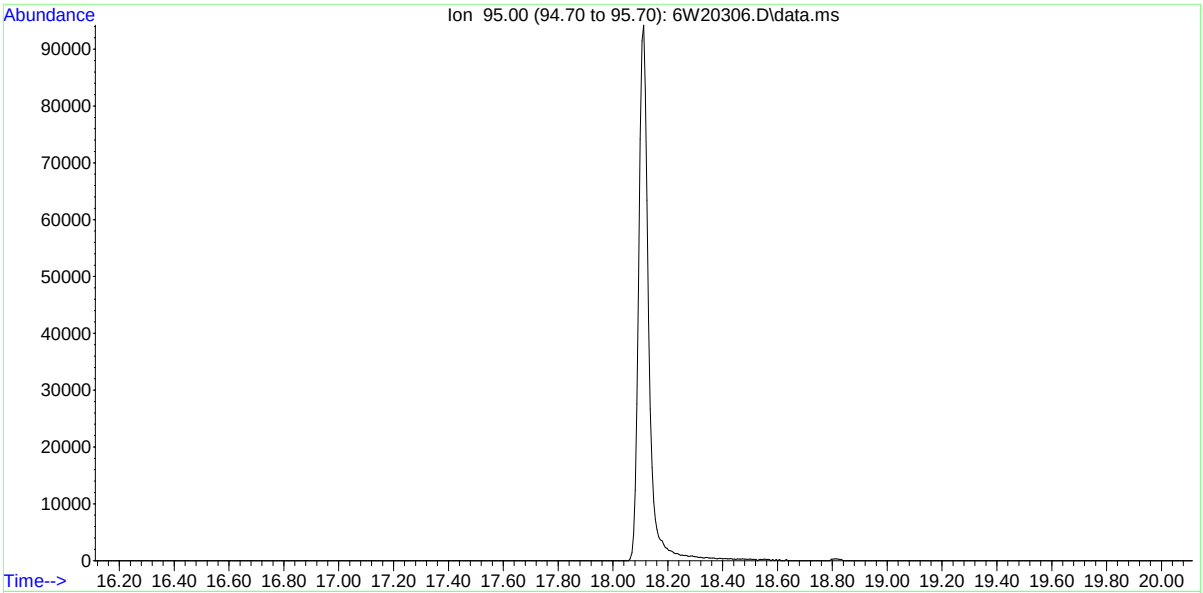
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	14.0	22069	PASS
75	95	30	66	42.7	67475	PASS
95	95	100	100	100.0	157995	PASS
96	95	5	9	6.7	10546	PASS
173	174	0.00	2	0.3	408	PASS
174	95	50	120	90.4	142781	PASS
175	174	4	9	7.2	10339	PASS
176	174	93	101	97.3	138891	PASS
177	176	5	9	6.7	9297	PASS

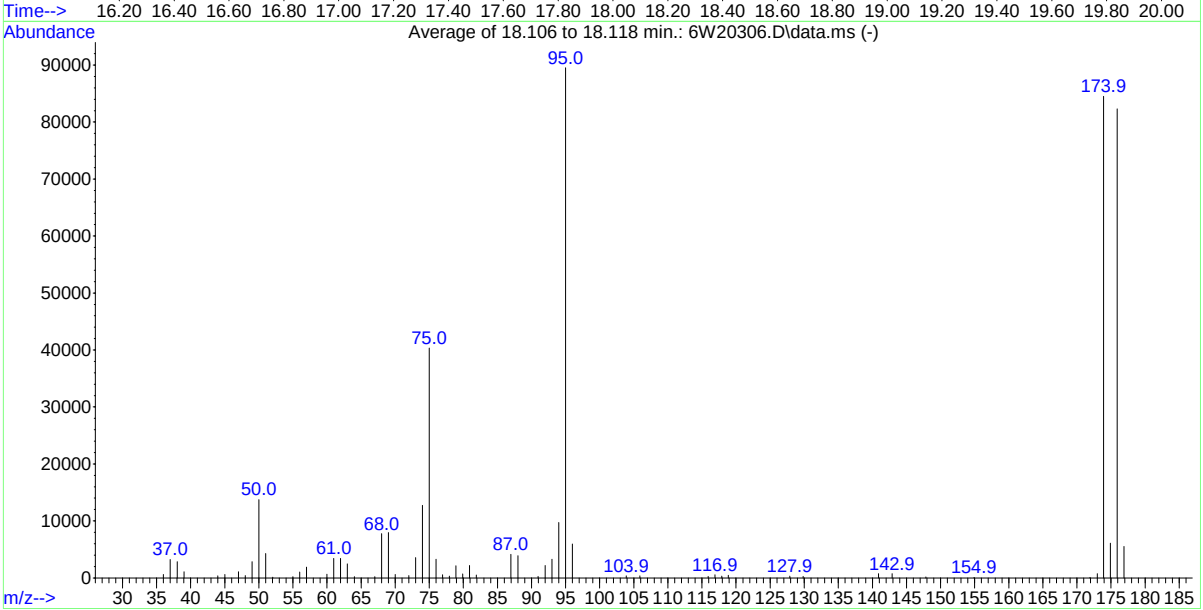
6W20155.D m6w848.M Thu Nov 19 12:33:50 2020

BFB

Data File : C:\msdchem\1\data\6W20306.D Vial: 1
Acq On : 27 Nov 2020 3:23 pm Operator: danat
Sample : bfb Inst : GCMS6W
Misc : MS47250,V6W854,400,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode





AutoFind: Scans 2455, 2456, 2457; Background Corrected with Scan 2445

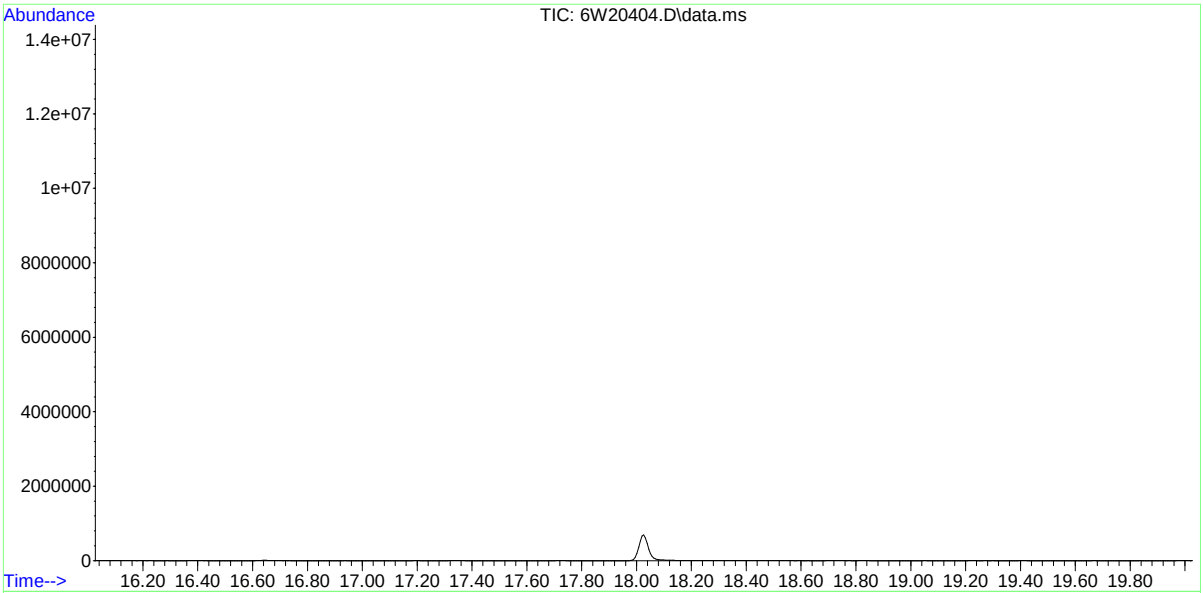
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	15.4	13757	PASS
75	95	30	66	45.0	40312	PASS
95	95	100	100	100.0	89517	PASS
96	95	5	9	6.7	5956	PASS
173	174	0.00	2	0.9	757	PASS
174	95	50	120	94.4	84496	PASS
175	174	4	9	7.2	6087	PASS
176	174	93	101	97.4	82336	PASS
177	176	5	9	6.7	5510	PASS

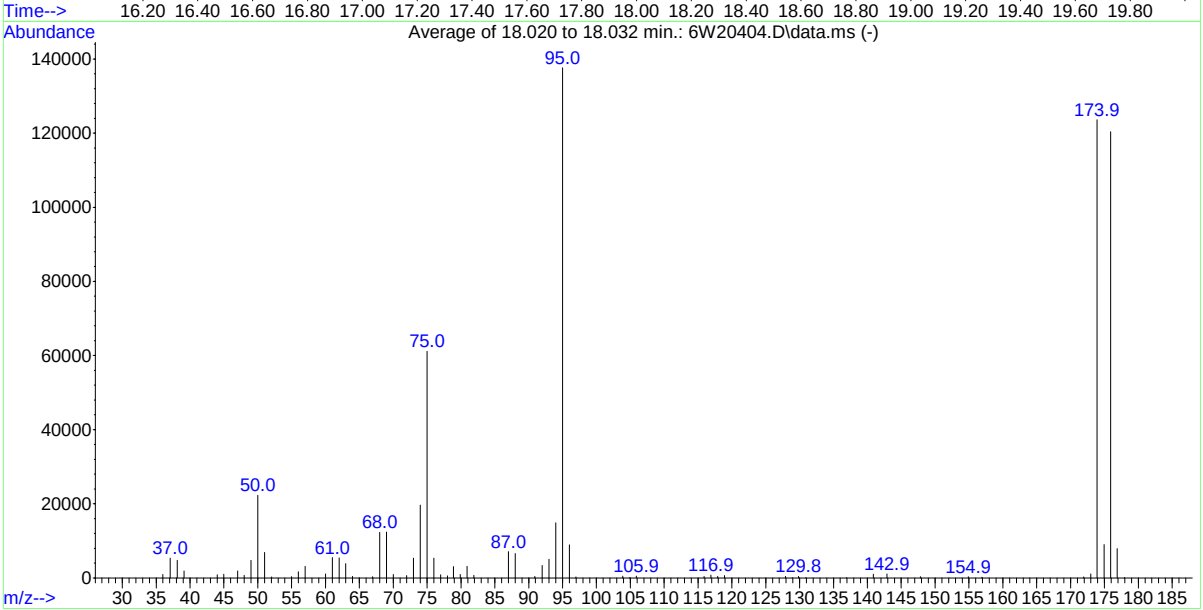
6W20306.D m6w848.M Tue Dec 15 16:24:23 2020

BFB

Data File : C:\msdchem\1\data\6W20404.D Vial: 1
Acq On : 3 Dec 2020 9:33 am Operator: thomash
Sample : bfb Inst : GCMS6W
Misc : MS47355,V6W859,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode





AutoFind: Scans 2441, 2442, 2443; Background Corrected with Scan 2431

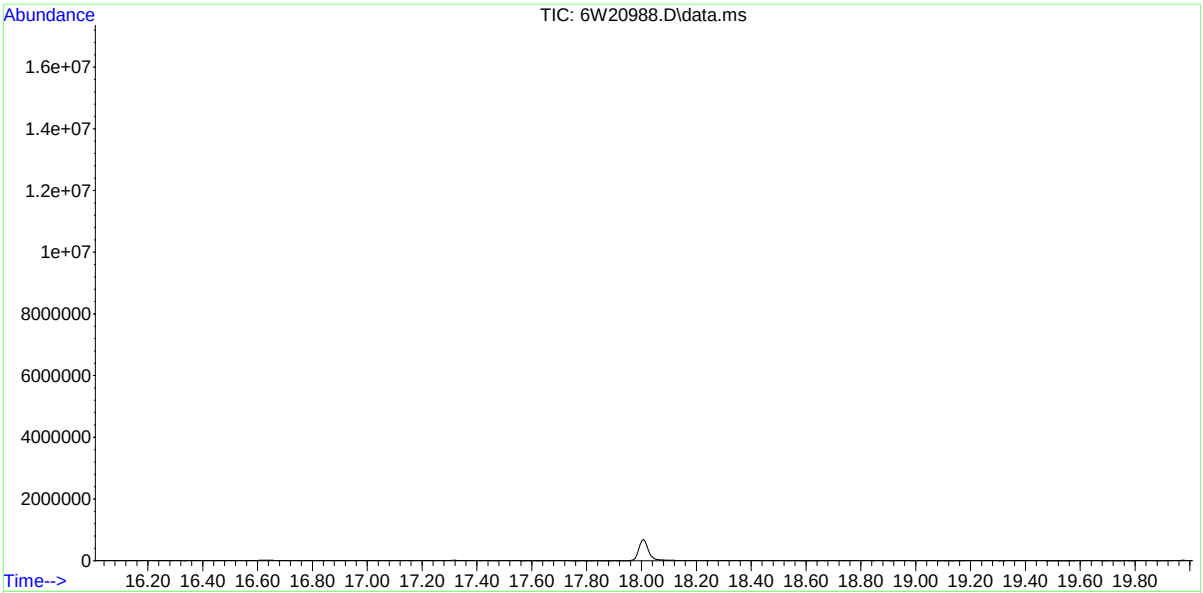
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	16.2	22259	PASS
75	95	30	66	44.4	61123	PASS
95	95	100	100	100.0	137619	PASS
96	95	5	9	6.5	8901	PASS
173	174	0.00	2	0.8	1038	PASS
174	95	50	120	89.8	123600	PASS
175	174	4	9	7.3	8990	PASS
176	174	93	101	97.4	120411	PASS
177	176	5	9	6.5	7877	PASS

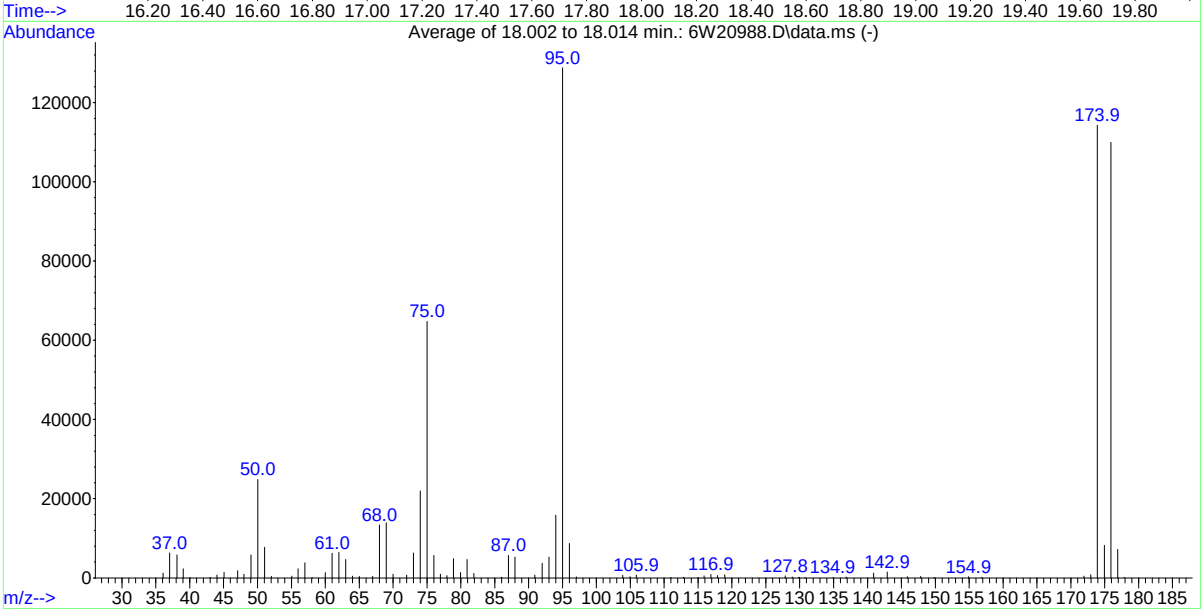
6W20404.D m6w848.M Thu Dec 03 15:15:14 2020

BFB

Data File : C:\msdchem\1\data\6W20988.D Vial: 1
Acq On : 14 Jan 2021 12:20 pm Operator: thomash
Sample : bfb Inst : GCMS6W
Misc : MS48309,V6W882,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode





AutoFind: Scans 2438, 2439, 2440; Background Corrected with Scan 2428

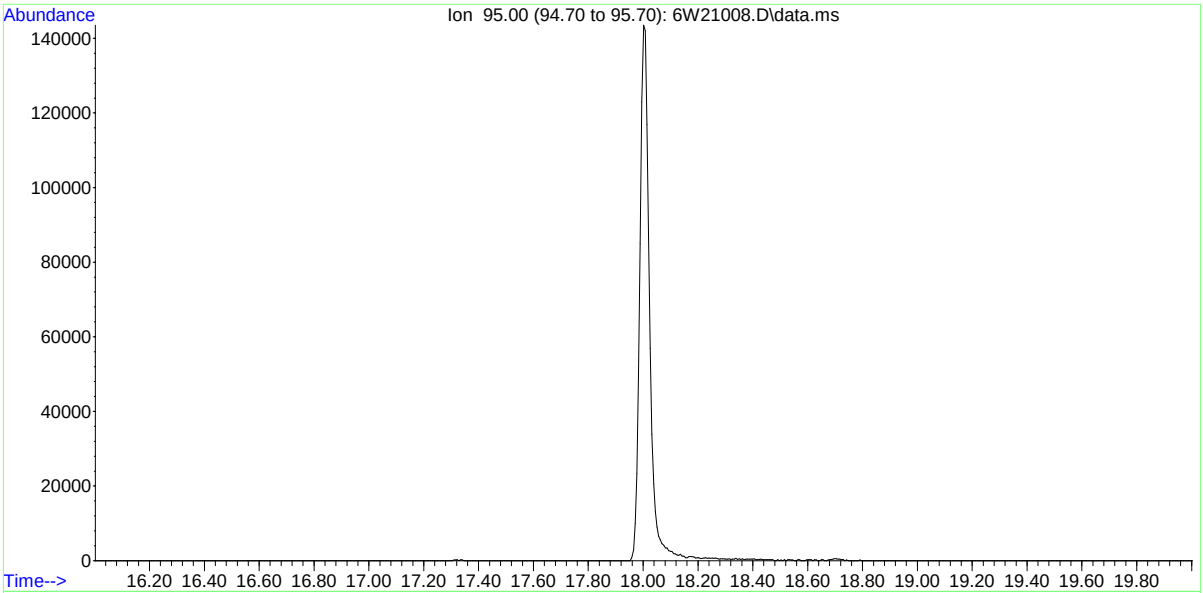
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.3	24824	PASS
75	95	30	66	50.3	64784	PASS
95	95	100	100	100.0	128779	PASS
96	95	5	9	6.7	8668	PASS
173	174	0.00	2	0.7	824	PASS
174	95	50	120	88.8	114304	PASS
175	174	4	9	7.2	8184	PASS
176	174	93	101	96.2	109963	PASS
177	176	5	9	6.5	7167	PASS

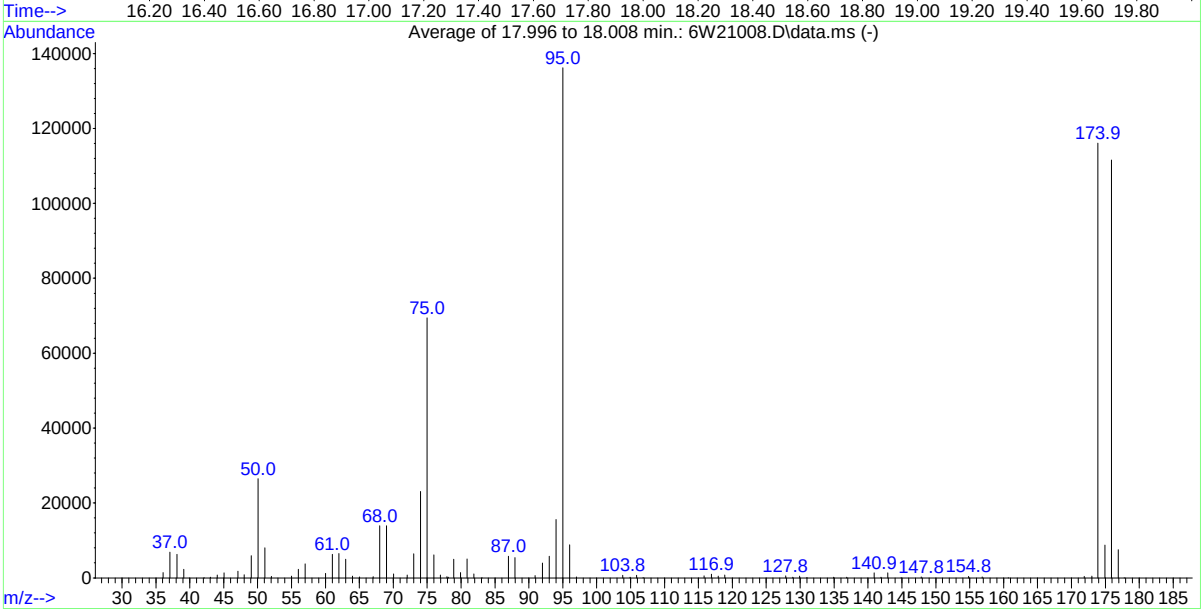
6W20988.D m6w848.M Thu Jan 14 16:24:55 2021

BFB

Data File : C:\msdchem\1\data\6W21008.D Vial: 1
Acq On : 15 Jan 2021 9:45 am Operator: danat
Sample : bfb Inst : GCMS6W
Misc : MS48294,V6W883,,,,,1 Multiplr: 1.00
MS Integration Params: Rteint.p

Method : C:\msdchem\1\methods\m6w848.M (RTE Integrator)
Title : TO-15 Full Scan Mode





AutoFind: Scans 2437, 2438, 2439; Background Corrected with Scan 2428

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	8	40	19.5	26512	PASS
75	95	30	66	51.0	69443	PASS
95	95	100	100	100.0	136184	PASS
96	95	5	9	6.5	8829	PASS
173	174	0.00	2	0.4	476	PASS
174	95	50	120	85.2	116064	PASS
175	174	4	9	7.6	8772	PASS
176	174	93	101	96.2	111597	PASS
177	176	5	9	6.7	7506	PASS

6W21008.D m6w848.M Fri Jan 15 13:54:52 2021

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20156.D
Acq On : 18 Nov 2020 2:11 pm
Operator : thomash
Sample : ic848-0.04
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:24:45 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.079	130	273510	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1044761	10.00 ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	399013	10.00 ppb(v	-0.02
108) Bromochloromethane (A)	8.079	130	274763	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.032	95	397101	8.20 ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 82.00%		
Target Compounds					Qvalue
2) Freon 152A	3.729	65	874	0.04 ppb(v#	44
5) Chlorotrifluoroethene	3.803	116	2333	0.04 ppb(v#	90
6) Dichlorodifluoromethane	3.851	85	3918	0.04 ppb(v#	96
7) 1-Chloro-1,1-difluoroe...	3.955	65	2773	0.04 ppb(v#	1
8) Chloromethane	3.980	50	1429	0.04 ppb(v	89
9) Dichlorotetrafluoroethane	4.053	85	4141	0.05 ppb(v#	86
10) Vinyl Chloride	4.151	62	1364	0.04 ppb(v#	91
12) n-Butane	4.292	58	287	0.04 ppb(v#	1
13) Bromomethane	4.476	94	1606	0.05 ppb(v#	65
18) Freon 123	5.026	83	3982	0.05 ppb(v	95
19) Freon 123A	5.069	117	2156	0.05 ppb(v	89
20) Bromoethene	4.898	106	1585	0.05 ppb(v#	89
21) Trichlorofluoromethane	5.252	101	3912	0.05 ppb(v#	92
22) Acetone	5.155	58	804	0.05 ppb(v	96
23) Pentane	5.564	57	477	0.05 ppb(v#	56
24) Iodomethane	5.754	142	4545	0.05 ppb(v	92
25) Isopropyl Alcohol	5.375	45	3596	0.05 ppb(v#	81
26) 1,1-Dichloroethene	5.821	61	2243	0.04 ppb(v#	78
27) Freon 113	6.176	101	3432	0.04 ppb(v	95
29) Carbon Disulfide	6.219	76	4490	0.04 ppb(v#	75
32) 3-Chloropropene	6.048	76	504	0.03 ppb(v#	87
33) trans-1,2-Dichloroethene	6.831	61	1924	0.04 ppb(v#	84
34) tert-Butyl Alcohol	5.938	59	2941	0.04 ppb(v#	73
35) Methyl tert-Butyl Ether	7.149	73	4943	0.04 ppb(v	94
37) 1,1-Dichloroethane	7.033	63	2643	0.04 ppb(v#	95
39) Hexane	8.116	57	2581	0.04 ppb(v#	55
40) cis-1,2-Dichloroethene	7.908	61	2033	0.04 ppb(v#	77
41) Di-isopropyl Ether	8.158	87	1431	0.04 ppb(v	74
44) Chloroform	8.226	83	3459	0.04 ppb(v#	88
45) 2,4-Dimethylpentane	9.082	57	3039	0.04 ppb(v	98
47) 1,1,1-Trichloroethane	9.315	97	3502	0.04 ppb(v#	89
48) 1,2-Dichloroethane	9.039	62	1541	0.03 ppb(v#	88
49) Benzene	9.841	78	5526	0.05 ppb(v	93
50) Carbon Tetrachloride	10.006	117	2978	0.03 ppb(v	90
51) Cyclohexane	10.134	56	2601	0.04 ppb(v	95
52) 2,3-Dimethylpentane	10.428	71	1138	0.04 ppb(v#	88
54) 2,2,4-Trimethylpentane	11.119	57	8307	0.04 ppb(v#	95
55) Heptane	11.462	71	1768	0.04 ppb(v	99
56) Trichloroethene	11.095	95	2240	0.04 ppb(v	96
57) 1,2-Dichloropropane	10.813	63	1859	0.04 ppb(v#	92
58) Dibromomethane	10.783	174	2330	0.04 ppb(v	99
60) Methyl Methacrylate	11.425	69	1165	0.03 ppb(v#	77
61) 1,4-Dioxane	11.223	88	822	0.03 ppb(v#	48
62) Bromodichloromethane	11.046	83	3092	0.04 ppb(v#	90
63) cis-1,3-Dichloropropene	12.190	75	2370	0.04 ppb(v#	76
65) trans-1,3-Dichloropropene	12.875	75	1646	0.03 ppb(v#	75
66) Toluene	13.413	91	7227	0.05 ppb(v	95
67) 1,1,2-Trichloroethane	13.065	97	1828	0.04 ppb(v	97
68) 1,3-Dichloropropane	13.462	76	2239	0.03 ppb(v#	80
70) Ethyl Methacrylate	13.866	69	2095	0.03 ppb(v#	62
71) Dibromochloromethane	13.964	129	2484	0.03 ppb(v#	93
72) Tetrachloroethene	14.906	166	3100	0.04 ppb(v	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20156.D
Acq On : 18 Nov 2020 2:11 pm
Operator : thomash
Sample : ic848-0.04
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:24:45 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

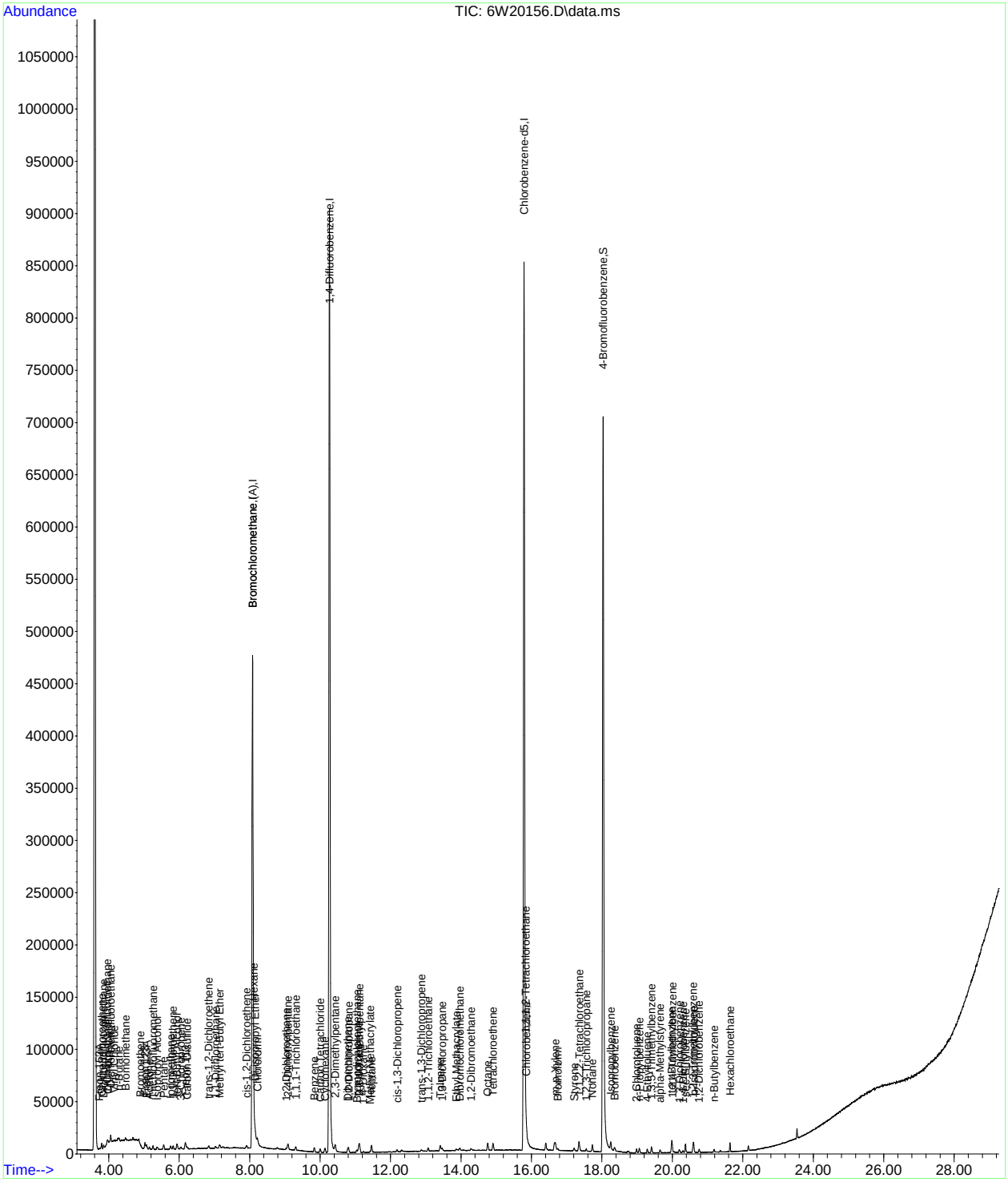
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) 1,2-Dibromoethane	14.282	107	2343	0.03	ppb(v#	96
74) Octane	14.753	43	4290	0.05	ppb(v	93
75) 1,1,1,2-Tetrachloroethane	15.830	131	2249	0.04	ppb(v#	1
77) Chlorobenzene	15.854	112	4164	0.05	ppb(v	97
79) m,p-Xylene	16.674	91	14630	0.13	ppb(v	98
80) Styrene	17.213	104	2982	0.04	ppb(v	91
81) Nonane	17.726	43	3660	0.06	ppb(v#	93
83) Bromoform	16.748	173	1610	0.03	ppb(v#	96
84) 1,1,2,2-Tetrachloroethane	17.359	83	3471	0.05	ppb(v#	90
85) 1,2,3-Trichloropropane	17.555	75	2049	0.04	ppb(v	93
86) Isopropylbenzene	18.253	105	7919	0.05	ppb(v	99
87) Bromobenzene	18.363	156	1536	0.03	ppb(v	87
88) 2-Chlorotoluene	18.981	126	1432	0.04	ppb(v	98
89) n-Propylbenzene	19.060	120	1435	0.04	ppb(v	97
91) 4-Ethyltoluene	19.286	105	5065	0.04	ppb(v	97
92) 1,3,5-Trimethylbenzene	19.409	105	6001	0.05	ppb(v	97
93) alpha-Methylstyrene	19.647	118	1685	0.03	ppb(v	96
94) tert-Butylbenzene	19.984	134	1401	0.05	ppb(v	91
95) 1,2,4-Trimethylbenzene	20.002	105	5063	0.04	ppb(v	95
96) 1,3-Dichlorobenzene	20.198	146	1674	0.03	ppb(v	95
98) 1,4-Dichlorobenzene	20.302	146	1486	0.02	ppb(v	97
99) sec-Butylbenzene	20.375	134	1683	0.05	ppb(v	89
100) 1,2,3-Trimethylbenzene	20.583	105	5543	0.05	ppb(v	97
101) p-Isopropyltoluene	20.608	134	1645	0.05	ppb(v	100
102) 1,2-Dichlorobenzene	20.755	146	1898	0.03	ppb(v	94
103) n-Butylbenzene	21.183	134	721	0.03	ppb(v	91
104) Hexachloroethane	21.642	201	1297	0.03	ppb(v	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20156.D
Acq On : 18 Nov 2020 2:11 pm
Operator : thomash
Sample : ic848-0.04
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:24:45 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20157.D
Acq On : 18 Nov 2020 2:58 pm
Operator : thomash
Sample : ic848-0.1
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:20:10 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.085	130	262490	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1009111	10.00 ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	393092	10.00 ppb(v	-0.02
108) Bromochloromethane (A)	8.085	130	263194	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.032	95	386017	8.09 ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 80.90%		
Target Compounds					Qvalue
2) Freon 152A	3.735	65	1892	0.09 ppb(v	94
3) Chlorodifluoromethane	3.772	67	686	0.07 ppb(v#	42
4) Propene	3.797	41	3289	0.12 ppb(v	96
5) Chlorotrifluoroethene	3.797	116	4831	0.09 ppb(v	98
6) Dichlorodifluoromethane	3.846	85	7973	0.08 ppb(v	97
7) 1-Chloro-1,1-difluoroe...	3.956	65	5785	0.08 ppb(v#	62
8) Chloromethane	3.980	50	2637	0.09 ppb(v	100
9) Dichlorotetrafluoroethane	4.054	85	8412	0.10 ppb(v	92
10) Vinyl Chloride	4.151	62	3000	0.09 ppb(v#	97
11) 1,3-Butadiene	4.255	54	2656	0.10 ppb(v	93
12) n-Butane	4.292	58	617	0.10 ppb(v#	29
13) Bromomethane	4.482	94	3008	0.10 ppb(v#	84
14) Acrolein	5.020	56	1586	0.11 ppb(v#	67
15) Chloroethane	4.616	64	1596	0.09 ppb(v#	70
16) Dichlorofluoromethane	4.684	67	9927	0.12 ppb(v#	92
18) Freon 123	5.026	83	8020	0.11 ppb(v	99
19) Freon 123A	5.069	117	4560	0.11 ppb(v	91
20) Bromoethene	4.898	106	3112	0.10 ppb(v	98
21) Trichlorofluoromethane	5.253	101	7829	0.09 ppb(v#	93
22) Acetone	5.149	58	1737	0.10 ppb(v	80
23) Pentane	5.558	57	896	0.09 ppb(v	82
24) Iodomethane	5.754	142	9285	0.10 ppb(v	91
25) Isopropyl Alcohol	5.375	45	7224	0.10 ppb(v#	90
26) 1,1-Dichloroethene	5.822	61	5005	0.09 ppb(v	89
27) Freon 113	6.176	101	7331	0.09 ppb(v	97
28) Methylene Chloride	5.938	84	3644	0.11 ppb(v	92
29) Carbon Disulfide	6.219	76	9453	0.09 ppb(v	96
31) Acrylonitrile	5.558	53	2009	0.07 ppb(v	82
32) 3-Chloropropene	6.054	76	1408	0.09 ppb(v#	69
33) trans-1,2-Dichloroethene	6.837	61	4265	0.08 ppb(v#	83
34) tert-Butyl Alcohol	5.932	59	6320	0.08 ppb(v	93
35) Methyl tert-Butyl Ether	7.143	73	9644	0.09 ppb(v	98
36) Vinyl Acetate	7.229	43	8736	0.09 ppb(v	99
37) 1,1-Dichloroethane	7.039	63	5551	0.09 ppb(v#	93
38) 2-Butanone	7.528	72	1064	0.06 ppb(v#	75
39) Hexane	8.116	57	5246	0.09 ppb(v#	52
40) cis-1,2-Dichloroethene	7.908	61	4070	0.08 ppb(v#	75
41) Di-isopropyl Ether	8.152	87	3084	0.09 ppb(v	82
44) Chloroform	8.220	83	7003	0.09 ppb(v#	91
45) 2,4-Dimethylpentane	9.088	57	6262	0.09 ppb(v	100
46) Tetrahydrofuran	8.764	72	1026	0.06 ppb(v	95
47) 1,1,1-Trichloroethane	9.303	97	7039	0.09 ppb(v	95
48) 1,2-Dichloroethane	9.046	62	3616	0.07 ppb(v#	89
49) Benzene	9.835	78	10913	0.10 ppb(v	97
50) Carbon Tetrachloride	10.000	117	6411	0.08 ppb(v	98
51) Cyclohexane	10.141	56	5390	0.09 ppb(v	95
52) 2,3-Dimethylpentane	10.428	71	2352	0.09 ppb(v#	74
54) 2,2,4-Trimethylpentane	11.119	57	16703	0.09 ppb(v	98
55) Heptane	11.462	71	3513	0.09 ppb(v#	91
56) Trichloroethene	11.095	95	4461	0.09 ppb(v	95
57) 1,2-Dichloropropane	10.807	63	3775	0.09 ppb(v	95
58) Dibromomethane	10.783	174	4586	0.09 ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20157.D
Acq On : 18 Nov 2020 2:58 pm
Operator : thomash
Sample : ic848-0.1
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:20:10 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

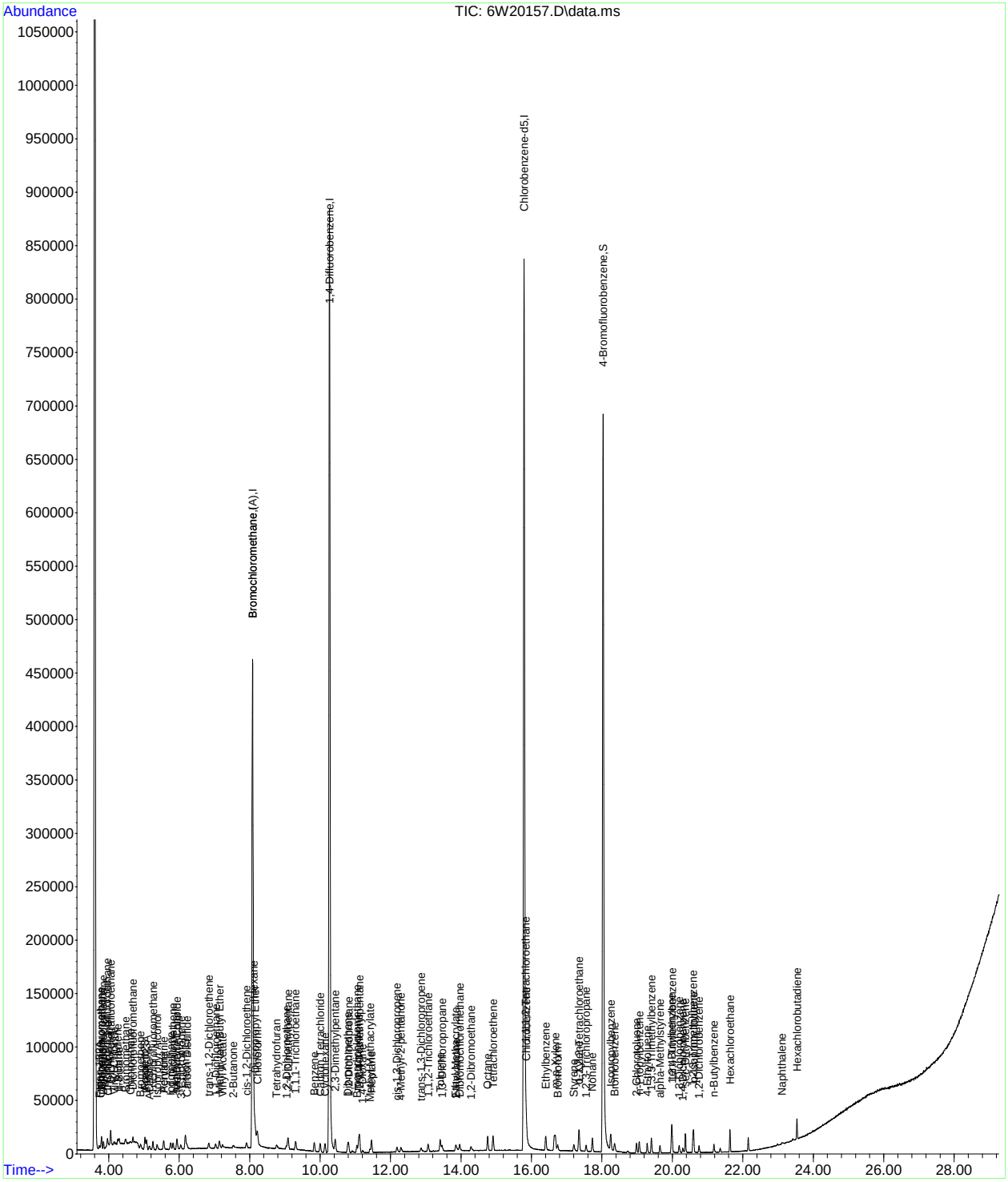
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
60)	Methyl Methacrylate	11.413	69	3094	0.07 ppb(v	93
61)	1,4-Dioxane	11.199	88	2532	0.09 ppb(v#	34
62)	Bromodichloromethane	11.046	83	6595	0.08 ppb(v	99
63)	cis-1,3-Dichloropropene	12.178	75	5284	0.08 ppb(v	98
64)	4-Methyl-2-pentanone	12.288	58	1787	0.06 ppb(v	98
65)	trans-1,3-Dichloropropene	12.869	75	4021	0.08 ppb(v#	90
66)	Toluene	13.407	91	13308	0.09 ppb(v	95
67)	1,1,2-Trichloroethane	13.065	97	3900	0.09 ppb(v	97
68)	1,3-Dichloropropane	13.463	76	5121	0.08 ppb(v	97
69)	2-Hexanone	13.866	58	1863	0.04 ppb(v#	84
70)	Ethyl Methacrylate	13.848	69	4803	0.07 ppb(v#	92
71)	Dibromochloromethane	13.964	129	5548	0.07 ppb(v#	97
72)	Tetrachloroethene	14.912	166	6379	0.09 ppb(v	97
73)	1,2-Dibromoethane	14.282	107	5399	0.08 ppb(v#	90
74)	Octane	14.753	43	7854	0.09 ppb(v	95
75)	1,1,1,2-Tetrachloroethane	15.836	131	4886	0.08 ppb(v#	1
77)	Chlorobenzene	15.848	112	8809	0.10 ppb(v	96
78)	Ethylbenzene	16.405	91	16639	0.12 ppb(v	97
79)	m,p-Xylene	16.674	91	25435	0.23 ppb(v	96
80)	Styrene	17.200	104	6377	0.08 ppb(v	97
81)	Nonane	17.727	43	6673	0.10 ppb(v	99
82)	o-Xylene	17.341	91	12987	0.12 ppb(v	96
83)	Bromoform	16.748	173	3779	0.07 ppb(v	96
84)	1,1,2,2-Tetrachloroethane	17.353	83	7112	0.10 ppb(v#	99
85)	1,2,3-Trichloropropane	17.549	75	5041	0.09 ppb(v	96
86)	Isopropylbenzene	18.253	105	15913	0.11 ppb(v	99
87)	Bromobenzene	18.357	156	3674	0.08 ppb(v	94
88)	2-Chlorotoluene	18.981	126	3180	0.09 ppb(v	95
89)	n-Propylbenzene	19.060	120	3078	0.08 ppb(v	96
91)	4-Ethyltoluene	19.287	105	10565	0.08 ppb(v	99
92)	1,3,5-Trimethylbenzene	19.409	105	12145	0.10 ppb(v	97
93)	alpha-Methylstyrene	19.648	118	3631	0.07 ppb(v	99
94)	tert-Butylbenzene	19.978	134	3338	0.12 ppb(v	88
95)	1,2,4-Trimethylbenzene	19.996	105	10366	0.09 ppb(v#	88
96)	1,3-Dichlorobenzene	20.192	146	3794	0.06 ppb(v	97
98)	1,4-Dichlorobenzene	20.290	146	3753	0.06 ppb(v	96
99)	sec-Butylbenzene	20.369	134	3557	0.10 ppb(v	98
100)	1,2,3-Trimethylbenzene	20.584	105	11423	0.10 ppb(v	98
101)	p-Isopropyltoluene	20.602	134	3403	0.10 ppb(v	93
102)	1,2-Dichlorobenzene	20.755	146	4195	0.07 ppb(v	99
103)	n-Butylbenzene	21.177	134	1724	0.06 ppb(v	95
104)	Hexachloroethane	21.642	201	3321	0.08 ppb(v	87
106)	Naphthalene	23.104	128	3477	0.05 ppb(v#	69
107)	Hexachlorobutadiene	23.538	225	4727	0.11 ppb(v	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20157.D
Acq On : 18 Nov 2020 2:58 pm
Operator : thomash
Sample : ic848-0.1
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 12:20:10 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Manual Integrations APPROVED (compounds with "m" flag)
Dana Tryon
11/20/20 15:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 10:02:25 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	260791	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	998760	10.00	ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	387833	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.079	130	261707	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	386840	8.21	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 82.10%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	3259	0.16	ppb(v	86
3) Chlorodifluoromethane	3.766	67	1289	0.14	ppb(v	86
4) Propene	3.797	41	5008	0.19	ppb(v	94
5) Chlorotrifluoroethene	3.797	116	8514	0.17	ppb(v	98
6) Dichlorodifluoromethane	3.845	85	14164	0.15	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	10041	0.14	ppb(v#	83
8) Chloromethane	3.980	50	4705	0.15	ppb(v	91
9) Dichlorotetrafluoroethane	4.047	85	14158	0.17	ppb(v	94
10) Vinyl Chloride	4.151	62	5192	0.16	ppb(v#	97
11) 1,3-Butadiene	4.255	54	4209	0.17	ppb(v	96
12) n-Butane	4.292	58	1221	0.19	ppb(v#	57
13) Bromomethane	4.476	94	5236	0.17	ppb(v#	86
14) Acrolein	5.020	56	2512	0.18	ppb(v#	74
15) Chloroethane	4.610	64	2786	0.16	ppb(v#	92
16) Dichlorofluoromethane	4.684	67	13667	0.17	ppb(v	94
17) Acetonitrile	4.916	41	7156	0.22	ppb(v	94
18) Freon 123	5.026	83	14082	0.19	ppb(v	98
19) Freon 123A	5.075	117	8144	0.19	ppb(v	90
20) Bromoethene	4.898	106	5699	0.19	ppb(v	96
21) Trichlorofluoromethane	5.253	101	13953	0.17	ppb(v	97
22) Acetone	5.142	58	3009	0.18	ppb(v	78
23) Pentane	5.558	57	1576	0.17	ppb(v	76
24) Iodomethane	5.754	142	16495	0.17	ppb(v	92
25) Isopropyl Alcohol	5.363	45	13357	0.19	ppb(v	99
26) 1,1-Dichloroethene	5.815	61	8972	0.15	ppb(v	92
27) Freon 113	6.176	101	13165	0.17	ppb(v	98
28) Methylene Chloride	5.938	84	6021	0.19	ppb(v	90
29) Carbon Disulfide	6.219	76	17437	0.17	ppb(v	98
30) Ethanol	4.726	45	2898m	0.19	ppb(v	
31) Acrylonitrile	5.546	53	3876	0.14	ppb(v	96
32) 3-Chloropropene	6.042	76	2657	0.16	ppb(v	83
33) trans-1,2-Dichloroethene	6.837	61	7735	0.15	ppb(v	89
34) tert-Butyl Alcohol	5.919	59	11337	0.15	ppb(v	96
35) Methyl tert-Butyl Ether	7.131	73	16384	0.15	ppb(v	99
36) Vinyl Acetate	7.216	43	15282	0.16	ppb(v	96
37) 1,1-Dichloroethane	7.033	63	10056	0.16	ppb(v#	97
38) 2-Butanone	7.516	72	2451	0.14	ppb(v	91
39) Hexane	8.110	57	9109	0.16	ppb(v#	48
40) cis-1,2-Dichloroethene	7.908	61	7657	0.16	ppb(v	84
41) Di-isopropyl Ether	8.146	87	5349	0.16	ppb(v	86
42) Ethyl Acetate	8.207	61	1399	0.12	ppb(v#	70
43) Methyl Acrylate	8.189	55	9318m	0.14	ppb(v	
44) Chloroform	8.220	83	12239	0.16	ppb(v	98
45) 2,4-Dimethylpentane	9.088	57	10843	0.16	ppb(v	99
46) Tetrahydrofuran	8.746	72	2408	0.15	ppb(v	89
47) 1,1,1-Trichloroethane	9.309	97	12523	0.16	ppb(v	97
48) 1,2-Dichloroethane	9.039	62	6793	0.14	ppb(v#	94
49) Benzene	9.835	78	19453	0.17	ppb(v	96
50) Carbon Tetrachloride	10.000	117	11870	0.15	ppb(v	96
51) Cyclohexane	10.141	56	9546	0.17	ppb(v	98
52) 2,3-Dimethylpentane	10.434	71	4238	0.17	ppb(v	95
54) 2,2,4-Trimethylpentane	11.119	57	30723	0.16	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 10:02:25 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

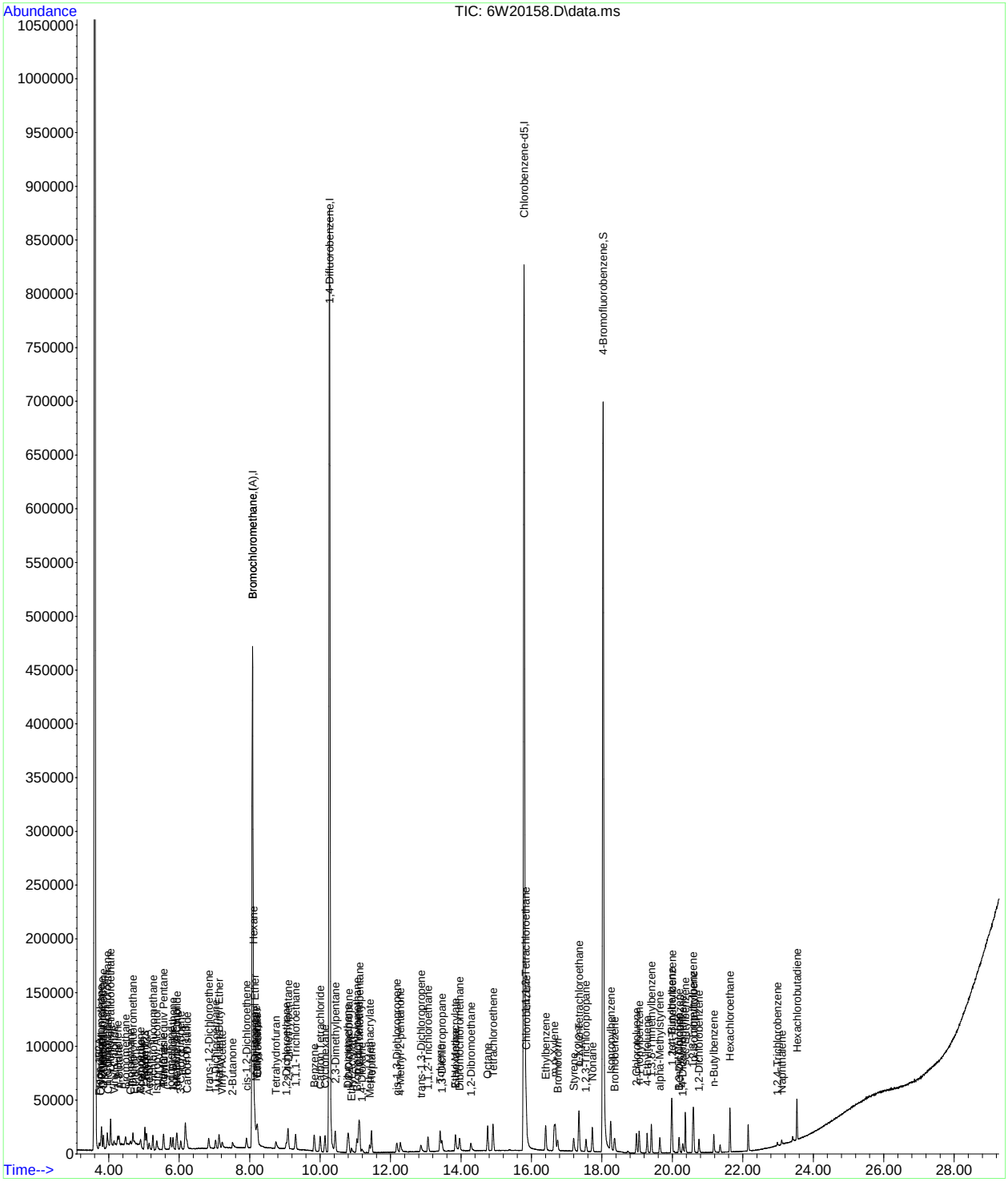
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.462	71	6498	0.16 ppb(v	95
56) Trichloroethene	11.095	95	8223	0.16 ppb(v	99
57) 1,2-Dichloropropane	10.807	63	6998	0.17 ppb(v	96
58) Dibromomethane	10.783	174	8371	0.17 ppb(v	93
59) Ethyl Acrylate	10.893	55	11970	0.14 ppb(v#	95
60) Methyl Methacrylate	11.407	69	6101	0.15 ppb(v	92
61) 1,4-Dioxane	11.187	88	4863	0.18 ppb(v#	30
62) Bromodichloromethane	11.046	83	12057	0.14 ppb(v	99
63) cis-1,3-Dichloropropene	12.178	75	9746	0.16 ppb(v	96
64) 4-Methyl-2-pentanone	12.276	58	4348	0.14 ppb(v	91
65) trans-1,3-Dichloropropene	12.863	75	7831	0.15 ppb(v	97
66) Toluene	13.407	91	22679	0.16 ppb(v	98
67) 1,1,2-Trichloroethane	13.059	97	7121	0.16 ppb(v	98
68) 1,3-Dichloropropane	13.456	76	9406	0.15 ppb(v	98
69) 2-Hexanone	13.848	58	5271	0.12 ppb(v	88
70) Ethyl Methacrylate	13.836	69	9374	0.14 ppb(v#	97
71) Dibromochloromethane	13.958	129	10149	0.13 ppb(v	99
72) Tetrachloroethene	14.912	166	11579	0.16 ppb(v	97
73) 1,2-Dibromoethane	14.282	107	10175	0.16 ppb(v#	97
74) Octane	14.753	43	13712	0.16 ppb(v	98
75) 1,1,1,2-Tetrachloroethane	15.830	131	8918	0.15 ppb(v#	1
77) Chlorobenzene	15.848	112	15524	0.18 ppb(v	99
78) Ethylbenzene	16.405	91	27372	0.20 ppb(v	98
79) m,p-Xylene	16.650	91	41641	0.39 ppb(v	99
80) Styrene	17.200	104	11070	0.15 ppb(v	95
81) Nonane	17.733	43	11539	0.18 ppb(v	99
82) o-Xylene	17.341	91	21698	0.21 ppb(v	98
83) Bromoform	16.742	173	7287	0.14 ppb(v	96
84) 1,1,2,2-Tetrachloroethane	17.353	83	13339	0.18 ppb(v	97
85) 1,2,3-Trichloropropane	17.543	75	8827	0.16 ppb(v	98
86) Isopropylbenzene	18.253	105	28575	0.20 ppb(v	98
87) Bromobenzene	18.357	156	6404	0.15 ppb(v	95
88) 2-Chlorotoluene	18.981	126	5683	0.16 ppb(v	97
89) n-Propylbenzene	19.054	120	5814	0.16 ppb(v	95
91) 4-Ethyltoluene	19.287	105	19282	0.15 ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	21720	0.18 ppb(v	99
93) alpha-Methylstyrene	19.641	118	6955	0.13 ppb(v	94
94) tert-Butylbenzene	19.978	134	5859	0.21 ppb(v	91
95) 1,2,4-Trimethylbenzene	19.996	105	18899	0.17 ppb(v	92
96) 1,3-Dichlorobenzene	20.192	146	7417	0.12 ppb(v	96
97) Benzyl Chloride	20.186	91	6485	0.09 ppb(v#	91
98) 1,4-Dichlorobenzene	20.290	146	7159	0.11 ppb(v	94
99) sec-Butylbenzene	20.369	134	6358	0.19 ppb(v	97
100) 1,2,3-Trimethylbenzene	20.584	105	20734	0.18 ppb(v	98
101) p-Isopropyltoluene	20.602	134	6371	0.18 ppb(v	96
102) 1,2-Dichlorobenzene	20.755	146	8106	0.13 ppb(v	96
103) n-Butylbenzene	21.177	134	3479	0.13 ppb(v	92
104) Hexachloroethane	21.636	201	6759	0.17 ppb(v	95
105) 1,2,4-Trichlorobenzene	22.982	180	1907	0.07 ppb(v	95
106) Naphthalene	23.104	128	7943	0.12 ppb(v	97
107) Hexachlorobutadiene	23.538	225	8695	0.21 ppb(v	96
109) TVHC as equiv Pentane	5.552	TIC	34876m	0.15 ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 10:02:25 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Manual Integration Approval Summary

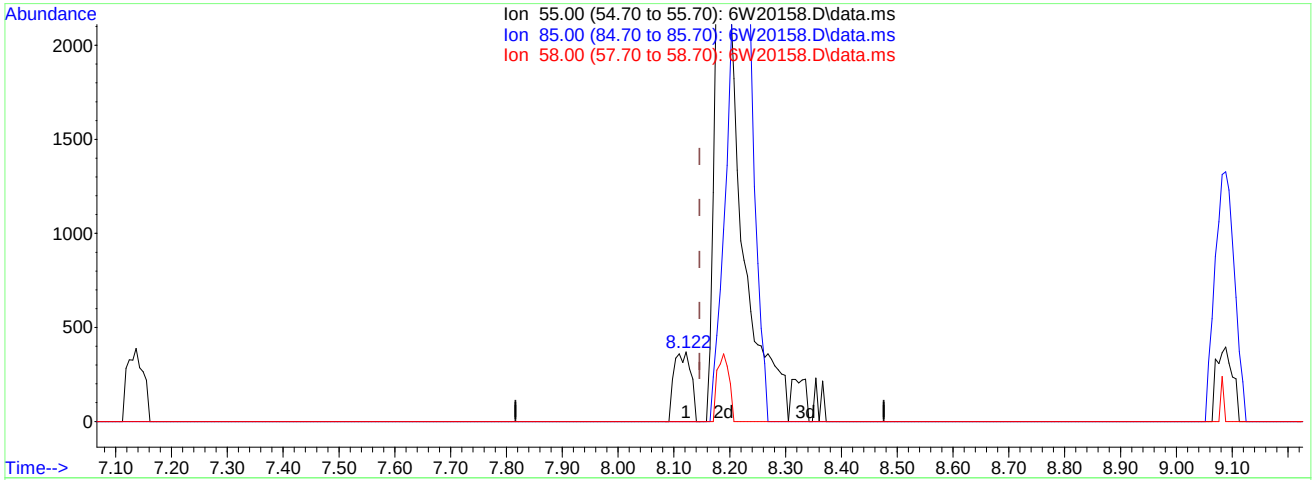
Sample Number:	V6W848-IC848	**Method:**	TO-15
Lab FileID:	6W20158.D	**Analyst approved:**	11/19/20 12:36 Thomas Hilbig
Injection Time:	11/18/20 15:44	**Supervisor approved:**	11/20/20 15:49 Dana Tryon

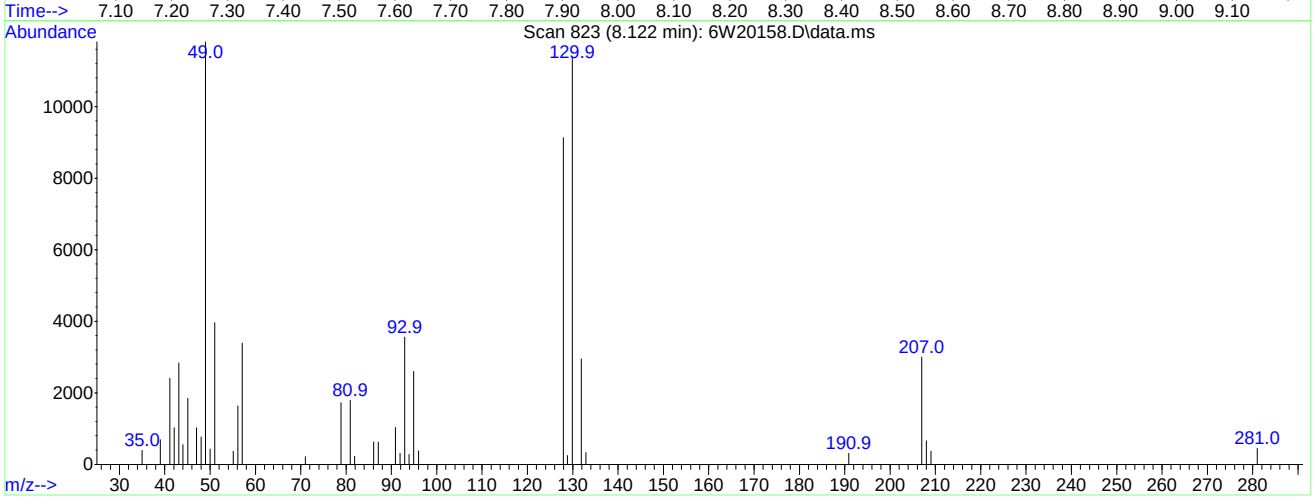
Parameter	CAS	Sig#	R.T. (min.)	Reason
Ethanol	64-17-5		4.73	Poorly defined baseline
TVHC As Equiv Pentane			5.55	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:33:53 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration





TIC: 6W20158.D\data.ms

(43) Methyl Acrylate

8.122min (-0.024) 0.01ppb(v)

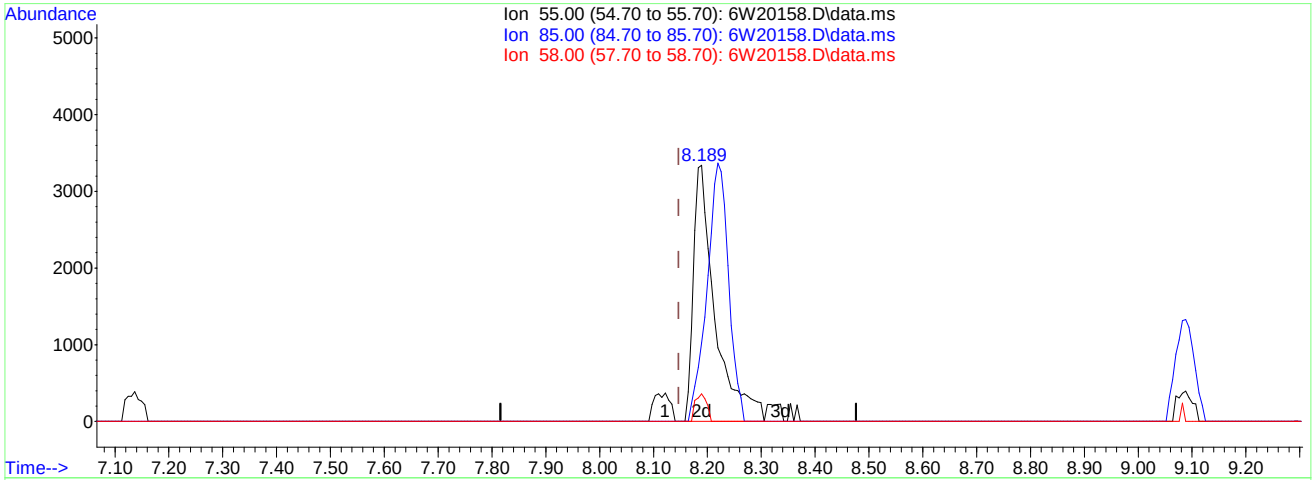
response 773

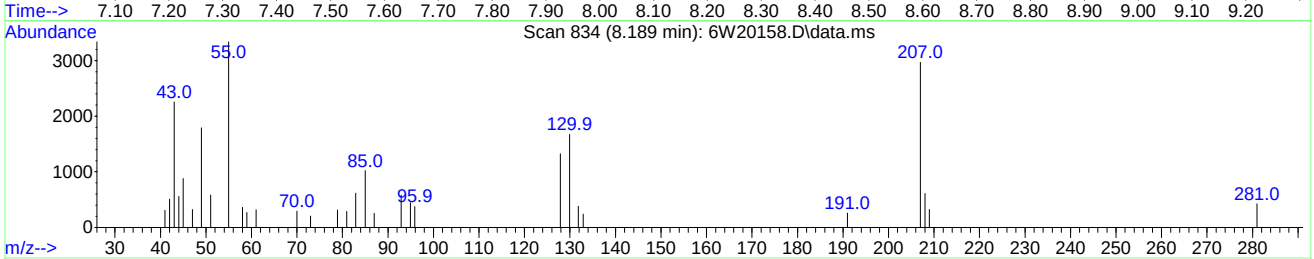
Ion	Exp%	Act%
55.00	100	100
85.00	17.70	0.00#
58.00	10.20	0.00#
0.00	0.00	0.00

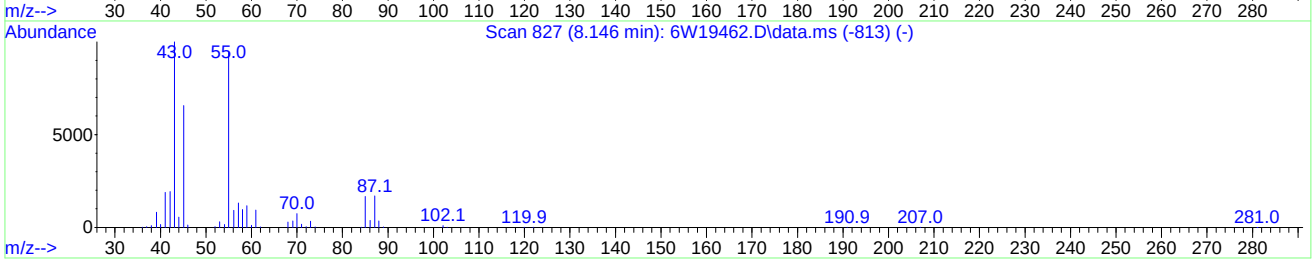
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:33:53 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration







TIC: 6W20158.D\data.ms

(43) Methyl Acrylate

8.189min (+0.043) 0.14ppb(v) m

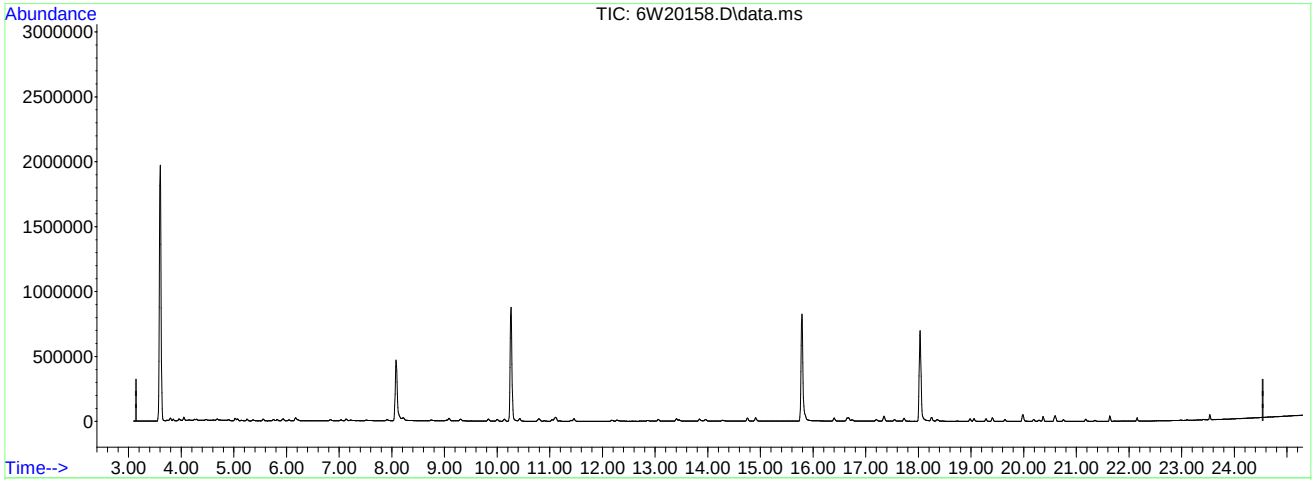
response 9318

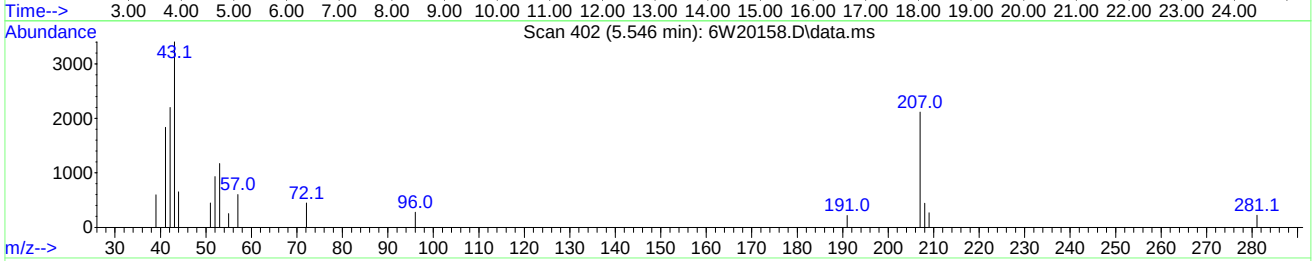
Ion	Exp%	Act%
55.00	100	100
85.00	17.70	30.60#
58.00	10.20	10.75
0.00	0.00	0.00

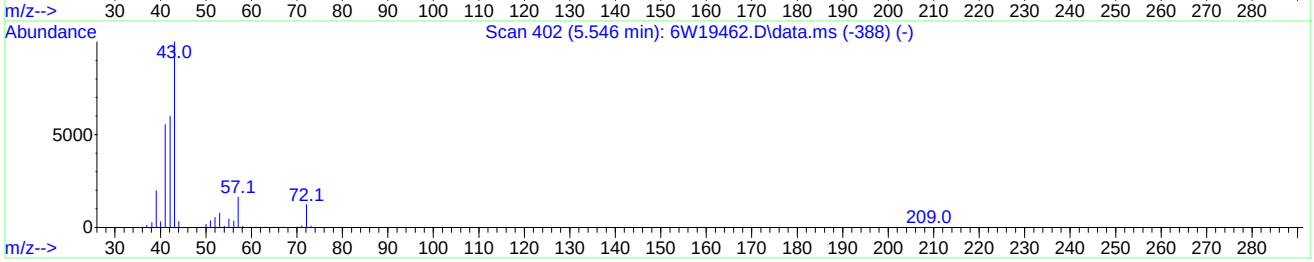
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:33:53 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration







TIC: 6W20158.D\data.ms

(109) TVHC as equiv Pentane

5.546min (-5.546) 0.00ppb(v)

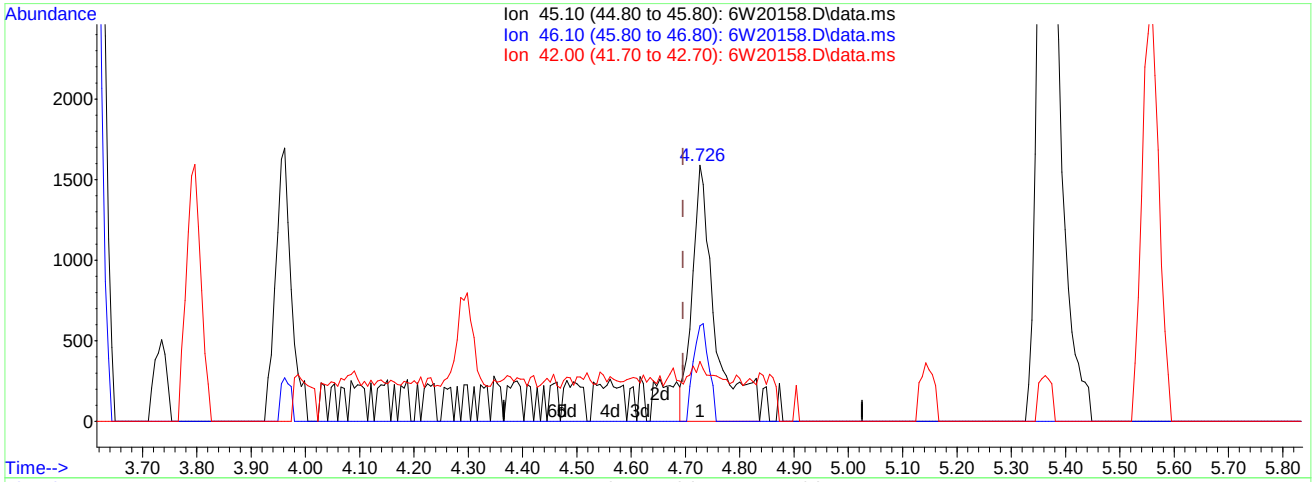
response 0

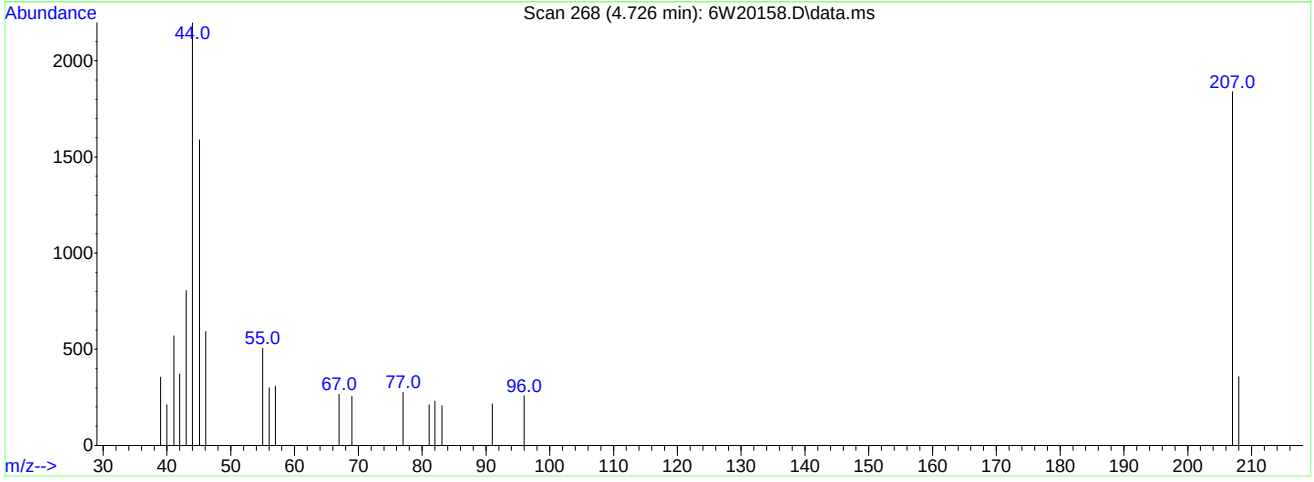
Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:42:44 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration





TIC: 6W20158.D\data.ms

(30) Ethanol

4.726min (+0.031) 0.31ppb(v)

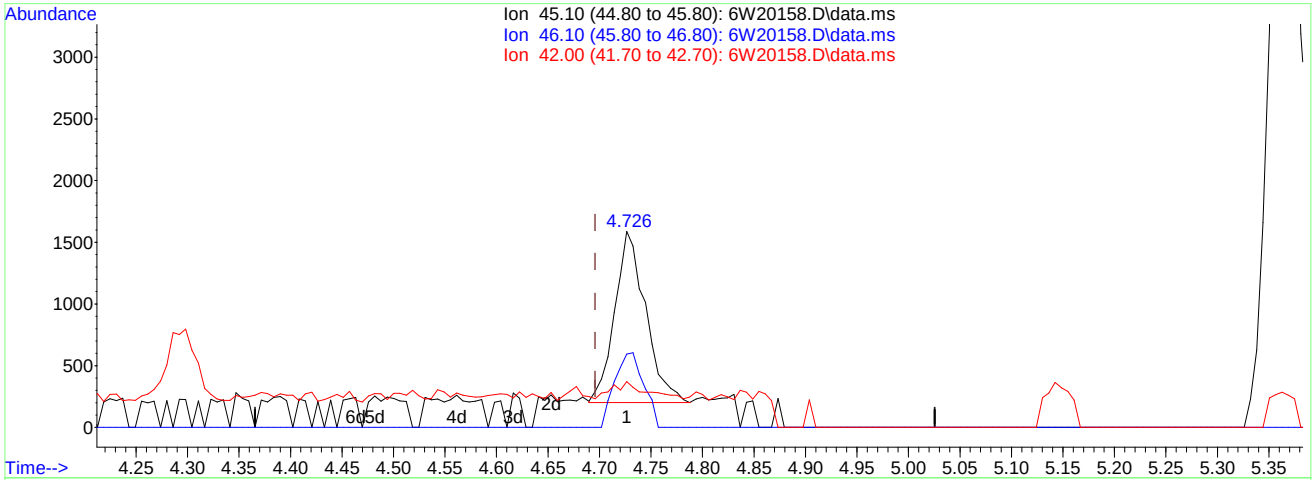
response 4697

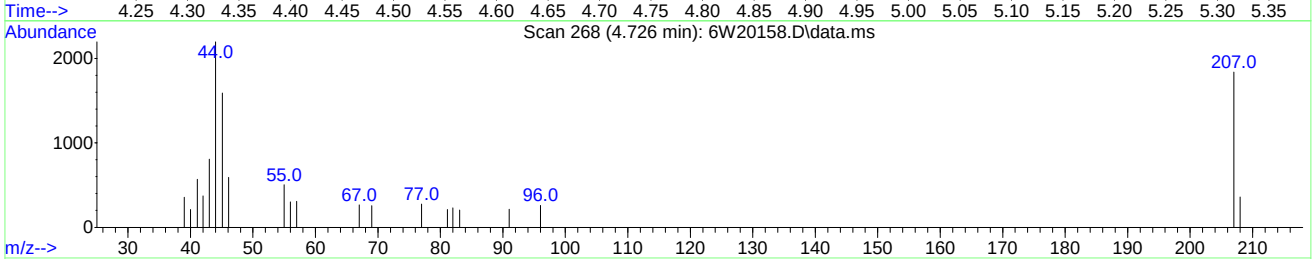
Ion	Exp%	Act%
45.10	100	100
46.10	38.50	37.32
42.00	8.60	23.41#
0.00	0.00	0.00

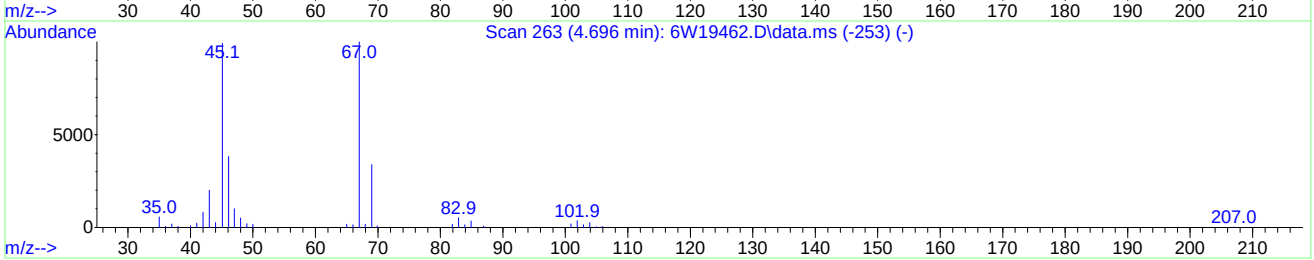
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:42:44 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration







TIC: 6W20158.D\data.ms

(30) Ethanol

4.726min (+0.031) 0.19ppb(v) m

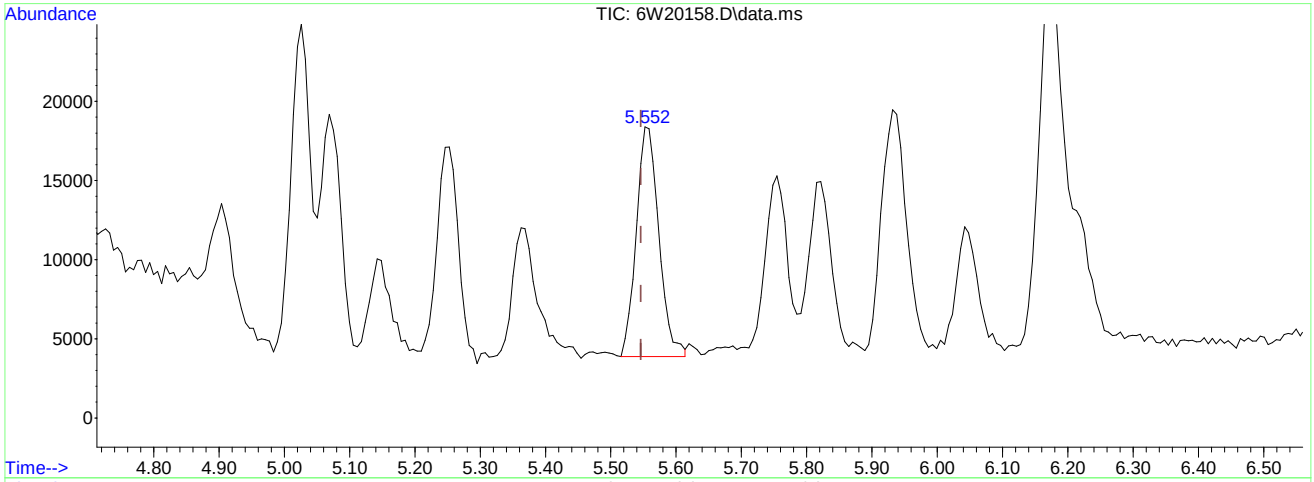
response 2898

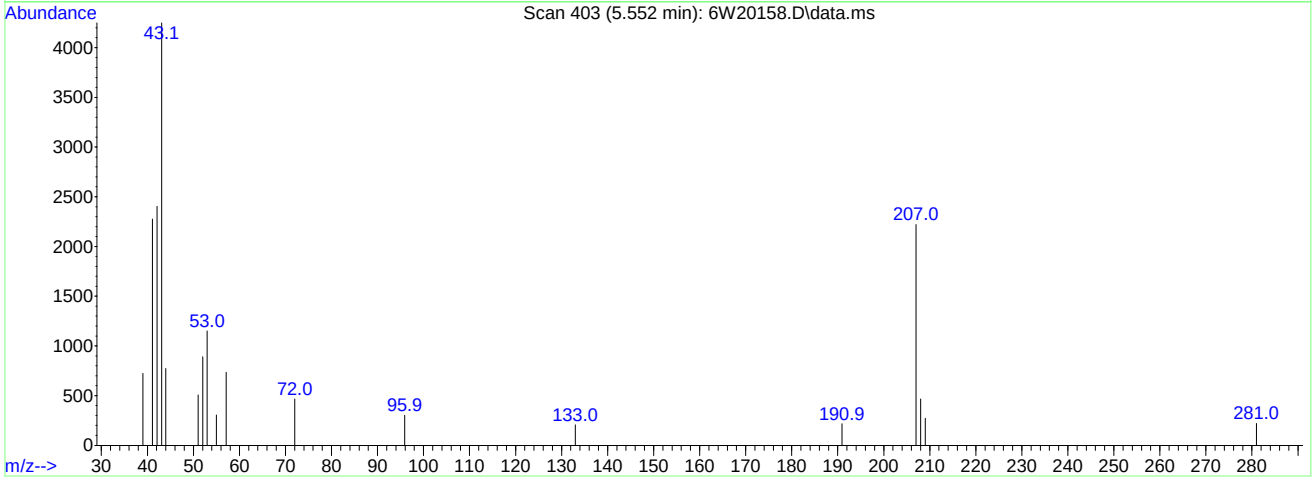
Ion	Exp%	Act%
45.10	100	100
46.10	38.50	37.32
42.00	8.60	23.41#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20158.D
Acq On : 18 Nov 2020 3:44 pm
Operator : thomash
Sample : ic848-0.2
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 10:02:25 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration





TIC: 6W20158.D\data.ms

(109) TVHC as equiv Pentane

5.552min (+0.006) 0.15ppb(v) m

response 34876

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Manual Integrations APPROVED (compounds with "m" flag)
Dana Tryon
11/20/20 15:49

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20159.D
Acq On : 18 Nov 2020 4:33 pm
Operator : thomash
Sample : ic848-0.5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:44:22 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	255044	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	980543	10.00	ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	385771	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.079	130	256260	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	422095	9.01	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 90.10%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	8066	0.40	ppb(v	92
3) Chlorodifluoromethane	3.766	67	3103	0.34	ppb(v	96
4) Propene	3.796	41	10288	0.40	ppb(v	94
5) Chlorotrifluoroethene	3.796	116	20023	0.40	ppb(v	98
6) Dichlorodifluoromethane	3.845	85	33186	0.36	ppb(v	98
7) 1-Chloro-1,1-difluoroe...	3.955	65	22850	0.32	ppb(v#	92
8) Chloromethane	3.980	50	10821	0.36	ppb(v	98
9) Dichlorotetrafluoroethane	4.053	85	32863	0.39	ppb(v	93
10) Vinyl Chloride	4.145	62	12518	0.39	ppb(v#	98
11) 1,3-Butadiene	4.255	54	9473	0.38	ppb(v	93
12) n-Butane	4.292	58	2526	0.41	ppb(v#	76
13) Bromomethane	4.475	94	11941	0.40	ppb(v	97
14) Acrolein	5.014	56	5998	0.43	ppb(v#	93
15) Chloroethane	4.610	64	6398	0.39	ppb(v	96
16) Dichlorofluoromethane	4.683	67	29896	0.38	ppb(v	96
17) Acetonitrile	4.916	41	14799	0.47	ppb(v	96
18) Freon 123	5.026	83	32466	0.45	ppb(v	98
19) Freon 123A	5.075	117	19117	0.46	ppb(v	92
20) Bromoethene	4.898	106	13269	0.46	ppb(v#	97
21) Trichlorofluoromethane	5.252	101	32911	0.41	ppb(v	98
22) Acetone	5.142	58	7073	0.43	ppb(v	74
23) Pentane	5.558	57	3656	0.39	ppb(v	82
24) Iodomethane	5.754	142	38961	0.42	ppb(v	92
25) Isopropyl Alcohol	5.356	45	31014	0.44	ppb(v	99
26) 1,1-Dichloroethene	5.821	61	20866	0.37	ppb(v	93
27) Freon 113	6.170	101	30426	0.39	ppb(v	98
28) Methylene Chloride	5.938	84	13090	0.41	ppb(v	91
29) Carbon Disulfide	6.213	76	41399	0.41	ppb(v	99
30) Ethanol	4.726	45	9269	0.63	ppb(v#	94
31) Acrylonitrile	5.546	53	10132	0.37	ppb(v	96
32) 3-Chloropropene	6.048	76	6464	0.41	ppb(v	86
33) trans-1,2-Dichloroethene	6.831	61	18904	0.37	ppb(v	96
34) tert-Butyl Alcohol	5.913	59	27259	0.36	ppb(v	99
35) Methyl tert-Butyl Ether	7.118	73	38819	0.36	ppb(v	98
36) Vinyl Acetate	7.210	43	32878	0.35	ppb(v	96
37) 1,1-Dichloroethane	7.033	63	23953	0.39	ppb(v	99
38) 2-Butanone	7.498	72	7009	0.42	ppb(v	77
39) Hexane	8.115	57	21742	0.39	ppb(v#	65
40) cis-1,2-Dichloroethene	7.907	61	18034	0.38	ppb(v	93
41) Di-isopropyl Ether	8.140	87	12685	0.39	ppb(v	93
42) Ethyl Acetate	8.189	61	4465	0.41	ppb(v	72
43) Methyl Acrylate	8.171	55	25034	0.38	ppb(v	98
44) Chloroform	8.219	83	28777	0.38	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	25457	0.38	ppb(v	99
46) Tetrahydrofuran	8.721	72	6355	0.40	ppb(v	88
47) 1,1,1-Trichloroethane	9.308	97	28643	0.36	ppb(v	98
48) 1,2-Dichloroethane	9.033	62	16094	0.33	ppb(v	97
49) Benzene	9.835	78	45270	0.41	ppb(v	97
50) Carbon Tetrachloride	10.000	117	27996	0.35	ppb(v	97
51) Cyclohexane	10.134	56	22432	0.40	ppb(v	99
52) 2,3-Dimethylpentane	10.428	71	10127	0.41	ppb(v	97
54) 2,2,4-Trimethylpentane	11.119	57	72128	0.39	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20159.D
Acq On : 18 Nov 2020 4:33 pm
Operator : thomash
Sample : ic848-0.5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:44:22 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Heptane	11.456	71	15532	0.39	ppb(v	98
56) Trichloroethene	11.089	95	19628	0.40	ppb(v	98
57) 1,2-Dichloropropane	10.801	63	16246	0.39	ppb(v	95
58) Dibromomethane	10.783	174	19913	0.40	ppb(v	90
59) Ethyl Acrylate	10.875	55	29960	0.36	ppb(v	98
60) Methyl Methacrylate	11.388	69	15374	0.38	ppb(v	91
61) 1,4-Dioxane	11.168	88	12458	0.47	ppb(v#	32
62) Bromodichloromethane	11.046	83	29321	0.36	ppb(v	98
63) cis-1,3-Dichloropropene	12.171	75	23377	0.38	ppb(v	98
64) 4-Methyl-2-pentanone	12.257	58	11562	0.39	ppb(v	90
65) trans-1,3-Dichloropropene	12.857	75	20033	0.39	ppb(v	96
66) Toluene	13.401	91	52365	0.36	ppb(v	100
67) 1,1,2-Trichloroethane	13.059	97	17217	0.39	ppb(v	99
68) 1,3-Dichloropropane	13.456	76	23228	0.38	ppb(v	95
69) 2-Hexanone	13.829	58	16001	0.38	ppb(v	87
70) Ethyl Methacrylate	13.829	69	23304	0.36	ppb(v	99
71) Dibromochloromethane	13.958	129	25778	0.34	ppb(v	100
72) Tetrachloroethene	14.906	166	27550	0.40	ppb(v	96
73) 1,2-Dibromoethane	14.276	107	25227	0.39	ppb(v	99
74) Octane	14.753	43	32284	0.39	ppb(v	97
75) 1,1,1,2-Tetrachloroethane	15.830	131	21953	0.37	ppb(v#	7
77) Chlorobenzene	15.848	112	37672	0.45	ppb(v	98
78) Ethylbenzene	16.399	91	64233	0.47	ppb(v	100
79) m,p-Xylene	16.668	91	101655	0.95	ppb(v	98
80) Styrene	17.194	104	29132	0.40	ppb(v	96
81) Nonane	17.726	43	28857	0.45	ppb(v	95
82) o-Xylene	17.341	91	51835	0.50	ppb(v	99
83) Bromoform	16.741	173	19835	0.39	ppb(v	100
84) 1,1,2,2-Tetrachloroethane	17.347	83	32014	0.45	ppb(v	98
85) 1,2,3-Trichloropropane	17.543	75	22367	0.40	ppb(v	99
86) Isopropylbenzene	18.246	105	71765	0.51	ppb(v	98
87) Bromobenzene	18.356	156	17563	0.40	ppb(v	94
88) 2-Chlorotoluene	18.980	126	15096	0.44	ppb(v	94
89) n-Propylbenzene	19.054	120	14764	0.40	ppb(v	93
91) 4-Ethyltoluene	19.280	105	49595	0.39	ppb(v	99
92) 1,3,5-Trimethylbenzene	19.403	105	54620	0.46	ppb(v	99
93) alpha-Methylstyrene	19.641	118	18673	0.36	ppb(v	98
94) tert-Butylbenzene	19.978	134	14673	0.53	ppb(v	91
95) 1,2,4-Trimethylbenzene	19.990	105	47215	0.43	ppb(v#	69
96) 1,3-Dichlorobenzene	20.186	146	19613	0.32	ppb(v	98
97) Benzyl Chloride	20.180	91	18824	0.28	ppb(v	99
98) 1,4-Dichlorobenzene	20.290	146	18916	0.30	ppb(v	98
99) sec-Butylbenzene	20.369	134	16129	0.48	ppb(v	98
100) 1,2,3-Trimethylbenzene	20.583	105	51643	0.46	ppb(v	97
101) p-Isopropyltoluene	20.602	134	16140	0.47	ppb(v	98
102) 1,2-Dichlorobenzene	20.755	146	21559	0.35	ppb(v	94
103) n-Butylbenzene	21.177	134	9452	0.35	ppb(v	99
104) Hexachloroethane	21.636	201	18366	0.46	ppb(v	100
105) 1,2,4-Trichlorobenzene	22.975	180	7153	0.27	ppb(v	99
106) Naphthalene	23.098	128	23769	0.37	ppb(v	99
107) Hexachlorobutadiene	23.538	225	21137	0.50	ppb(v	98
109) TVHC as equiv Pentane	5.558	TIC	82645m	0.37	ppb(v	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

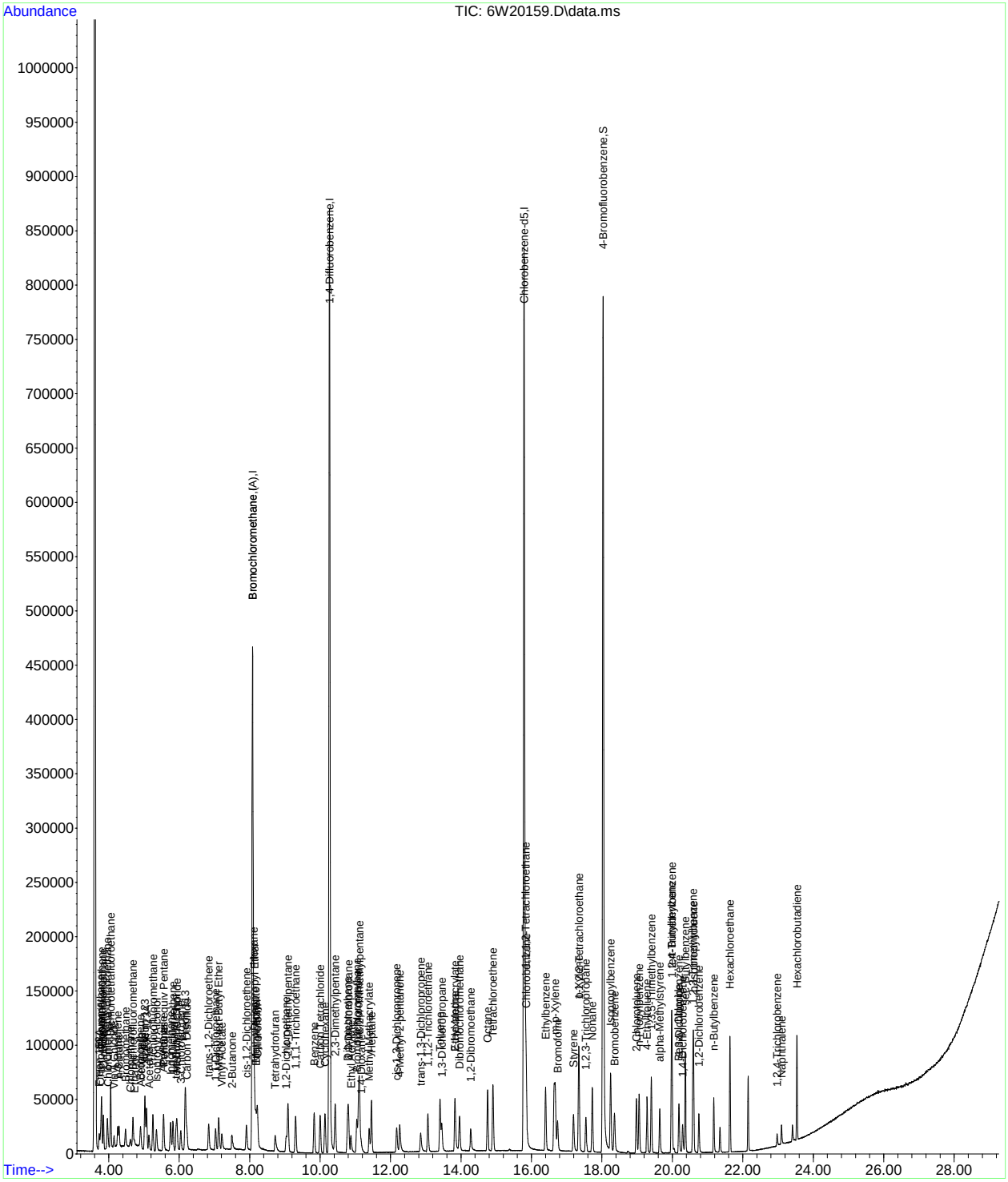
7.7.4

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20159.D
Acq On : 18 Nov 2020 4:33 pm
Operator : thomash
Sample : ic848-0.5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:44:22 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Manual Integration Approval Summary

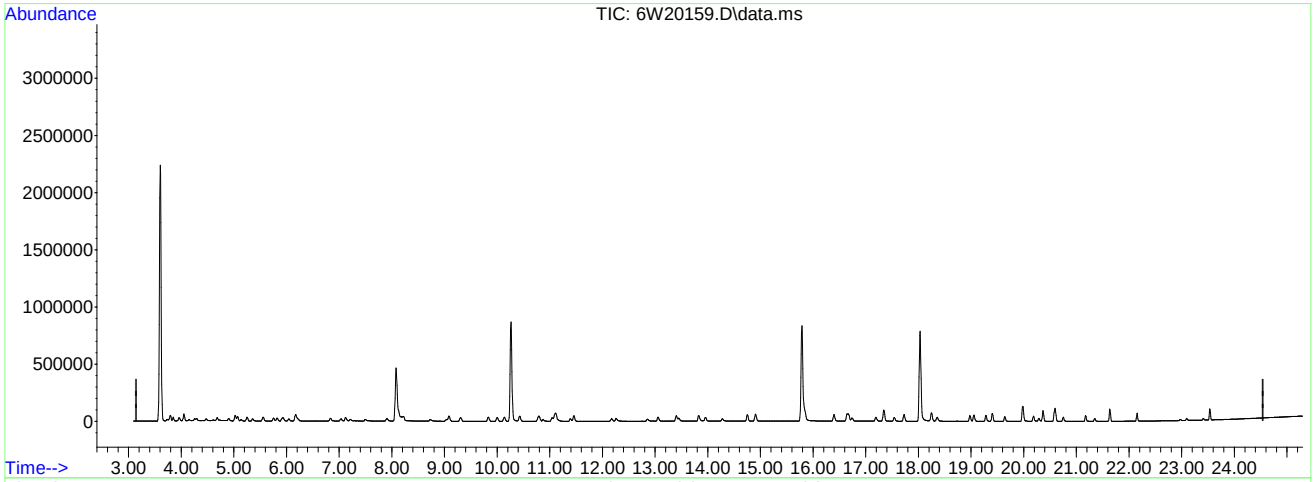
Sample Number:	V6W848-IC848	**Method:**	TO-15
Lab FileID:	6W20159.D	**Analyst approved:**	11/19/20 12:36 Thomas Hilbig
Injection Time:	11/18/20 16:33	**Supervisor approved:**	11/20/20 15:49 Dana Tryon

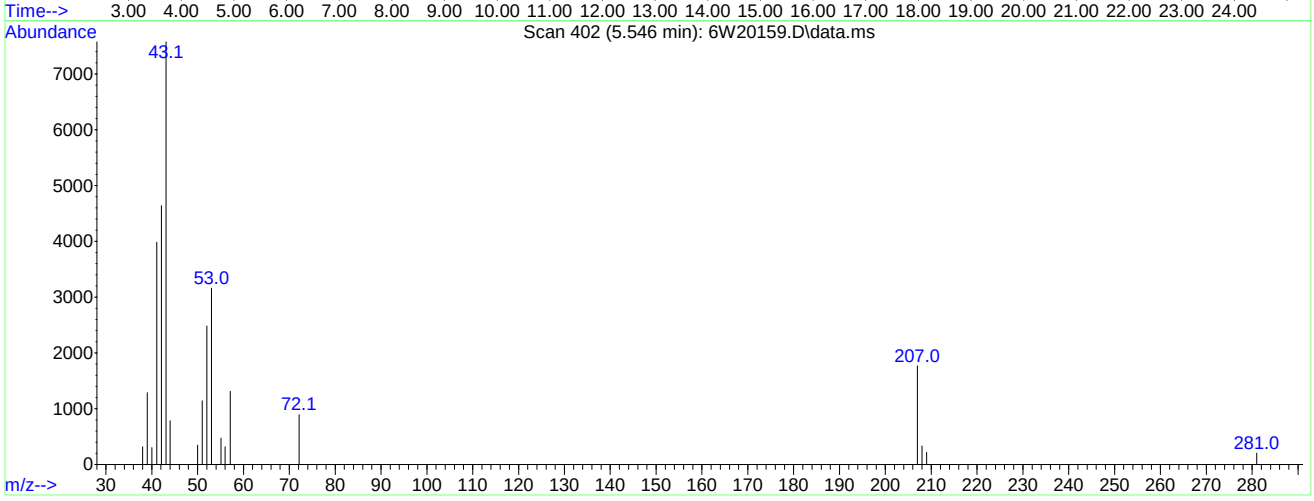
Parameter	CAS	Sig#	R.T. (min.)	Reason
TVHC As Equiv Pentane			5.56	Missed peak

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20159.D
Acq On : 18 Nov 2020 4:33 pm
Operator : thomash
Sample : ic848-0.5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:34:04 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration





TIC: 6W20159.D\data.ms

(109) TVHC as equiv Pentane

5.546min (-5.546) 0.00ppb(v)

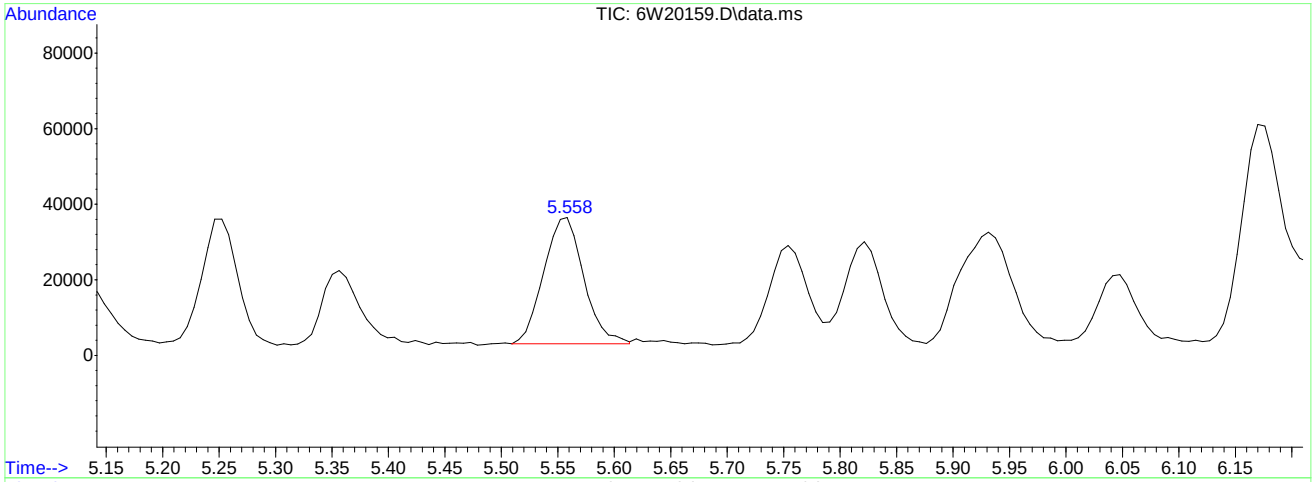
response 0

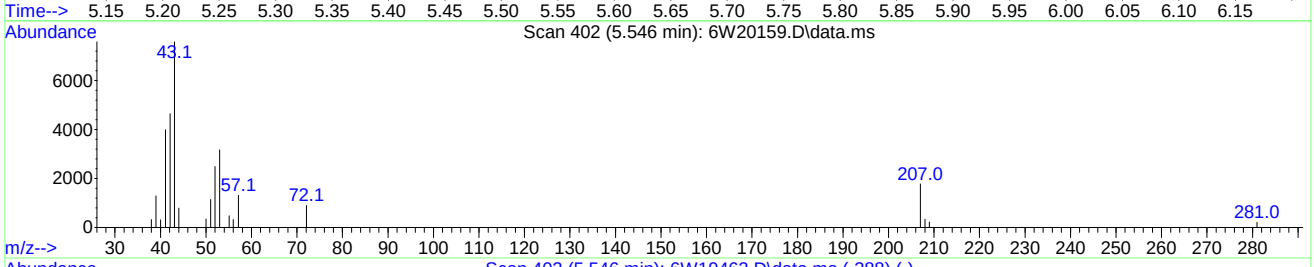
Signal	Exp%	Act%
TIC	100	0.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

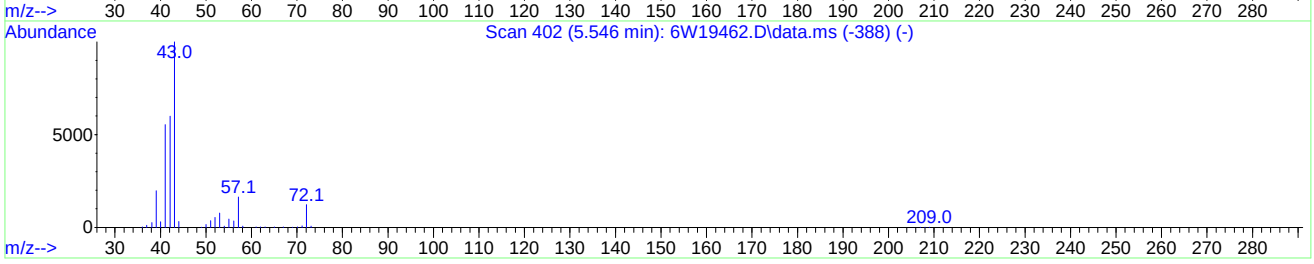
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\
Data File : 6W20159.D
Acq On : 18 Nov 2020 4:33 pm
Operator : thomash
Sample : ic848-0.5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Nov 19 08:34:04 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration







TIC: 6W20159.D\data.ms

(109) TVHC as equiv Pentane

5.558min (+0.012) 0.37ppb(v) m

response 82645

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20160.D
Acq On : 18 Nov 2020 5:19 pm
Operator : thomash
Sample : ic848-5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:13 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.085	130	256610	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	985299	10.00	ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	426169	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.085	130	256610	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	501726	9.69	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 96.90%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	86971	4.24	ppb(v	89
3) Chlorodifluoromethane	3.766	67	34347	3.77	ppb(v	99
4) Propene	3.790	41	106555	4.07	ppb(v	97
5) Chlorotrifluoroethene	3.796	116	213351	4.28	ppb(v	98
6) Dichlorodifluoromethane	3.851	85	353981	3.77	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.955	65	246430	3.38	ppb(v	96
8) Chloromethane	3.974	50	111638	3.73	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	352093	4.19	ppb(v	98
10) Vinyl Chloride	4.145	62	132902	4.16	ppb(v#	98
11) 1,3-Butadiene	4.255	54	99772	3.98	ppb(v	92
12) n-Butane	4.292	58	25877	4.16	ppb(v	84
13) Bromomethane	4.475	94	126495	4.20	ppb(v	99
14) Acrolein	5.002	56	64263	4.60	ppb(v	98
15) Chloroethane	4.610	64	69118	4.16	ppb(v	97
16) Dichlorofluoromethane	4.683	67	294768	3.73	ppb(v	99
17) Acetonitrile	4.898	41	102882	3.26	ppb(v	99
18) Freon 123	5.026	83	343756	4.76	ppb(v	98
19) Freon 123A	5.069	117	201044	4.82	ppb(v	93
20) Bromoethene	4.898	106	144694	4.99	ppb(v	96
21) Trichlorofluoromethane	5.252	101	353092	4.36	ppb(v	98
22) Acetone	5.118	58	64760	3.95	ppb(v	83
23) Pentane	5.558	57	38696	4.14	ppb(v	92
24) Iodomethane	5.754	142	422087	4.49	ppb(v	94
25) Isopropyl Alcohol	5.326	45	238434	3.37	ppb(v	98
26) 1,1-Dichloroethene	5.821	61	226542	3.97	ppb(v	93
27) Freon 113	6.170	101	329696	4.23	ppb(v	98
28) Methylene Chloride	5.938	84	137507	4.31	ppb(v	93
29) Carbon Disulfide	6.213	76	453111	4.45	ppb(v	100
30) Ethanol	4.714	45	48829	3.29	ppb(v	99
31) Acrylonitrile	5.522	53	111704	4.08	ppb(v	97
32) 3-Chloropropene	6.042	76	72719	4.55	ppb(v	87
33) trans-1,2-Dichloroethene	6.831	61	211582	4.15	ppb(v	96
34) tert-Butyl Alcohol	5.870	59	293100	3.88	ppb(v	95
35) Methyl tert-Butyl Ether	7.100	73	425994	3.93	ppb(v	97
36) Vinyl Acetate	7.192	43	364306	3.86	ppb(v	98
37) 1,1-Dichloroethane	7.033	63	260120	4.23	ppb(v	100
38) 2-Butanone	7.455	72	72823	4.37	ppb(v	83
39) Hexane	8.109	57	234784	4.17	ppb(v	86
40) cis-1,2-Dichloroethene	7.907	61	199107	4.17	ppb(v	95
41) Di-isopropyl Ether	8.122	87	139675	4.27	ppb(v	89
42) Ethyl Acetate	8.158	61	51653	4.67	ppb(v	85
43) Methyl Acrylate	8.146	55	271562	4.14	ppb(v	98
44) Chloroform	8.220	83	314763	4.10	ppb(v	97
45) 2,4-Dimethylpentane	9.082	57	277283	4.16	ppb(v	99
46) Tetrahydrofuran	8.678	72	73858	4.59	ppb(v	90
47) 1,1,1-Trichloroethane	9.302	97	309888	3.91	ppb(v	99
48) 1,2-Dichloroethane	9.033	62	183015	3.77	ppb(v	98
49) Benzene	9.835	78	485482	4.36	ppb(v	97
50) Carbon Tetrachloride	10.000	117	317597	3.98	ppb(v	99
51) Cyclohexane	10.134	56	238560	4.25	ppb(v	99
52) 2,3-Dimethylpentane	10.428	71	109942	4.42	ppb(v	98
54) 2,2,4-Trimethylpentane	11.119	57	772315	4.17	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20160.D
Acq On : 18 Nov 2020 5:19 pm
Operator : thomash
Sample : ic848-5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:13 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.456	71	172341	4.34 ppb(v	99
56) Trichloroethene	11.089	95	218245	4.43 ppb(v	97
57) 1,2-Dichloropropane	10.801	63	178807	4.31 ppb(v	96
58) Dibromomethane	10.777	174	221807	4.45 ppb(v	93
59) Ethyl Acrylate	10.844	55	325655	3.93 ppb(v	99
60) Methyl Methacrylate	11.370	69	179839	4.40 ppb(v	91
61) 1,4-Dioxane	11.119	88	107864	4.07 ppb(v	98
62) Bromodichloromethane	11.040	83	335335	4.05 ppb(v	99
63) cis-1,3-Dichloropropene	12.165	75	277686	4.55 ppb(v	99
64) 4-Methyl-2-pentanone	12.227	58	137643	4.57 ppb(v	92
65) trans-1,3-Dichloropropene	12.844	75	239640	4.59 ppb(v	98
66) Toluene	13.401	91	579463	4.01 ppb(v	99
67) 1,1,2-Trichloroethane	13.052	97	198304	4.45 ppb(v	99
68) 1,3-Dichloropropane	13.444	76	271633	4.44 ppb(v	93
69) 2-Hexanone	13.793	58	169865	4.06 ppb(v	92
70) Ethyl Methacrylate	13.817	69	283823	4.36 ppb(v	99
71) Dibromochloromethane	13.952	129	335875	4.42 ppb(v	99
72) Tetrachloroethene	14.906	166	306866	4.38 ppb(v	99
73) 1,2-Dibromoethane	14.270	107	294125	4.55 ppb(v	99
74) Octane	14.753	43	354205	4.26 ppb(v	96
75) 1,1,1,2-Tetrachloroethane	15.830	131	254242	4.32 ppb(v	97
77) Chlorobenzene	15.848	112	445237	4.79 ppb(v	99
78) Ethylbenzene	16.393	91	719069	4.78 ppb(v	99
79) m,p-Xylene	16.668	91	1140266	9.67 ppb(v	98
80) Styrene	17.188	104	392626	4.82 ppb(v	96
81) Nonane	17.726	43	351985	4.98 ppb(v	97
82) o-Xylene	17.341	91	570541	4.95 ppb(v	97
83) Bromoform	16.735	173	296378	5.21 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.341	83	391652	4.93 ppb(v	100
85) 1,2,3-Trichloropropane	17.537	75	282948	4.60 ppb(v	98
86) Isopropylbenzene	18.246	105	839150	5.36 ppb(v	99
87) Bromobenzene	18.357	156	231785	4.83 ppb(v	94
88) 2-Chlorotoluene	18.974	126	194106	5.09 ppb(v	96
89) n-Propylbenzene	19.054	120	210926	5.16 ppb(v	96
91) 4-Ethyltoluene	19.280	105	681517	4.89 ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	647378	4.93 ppb(v	98
93) alpha-Methylstyrene	19.635	118	286257	5.02 ppb(v	98
94) tert-Butylbenzene	19.978	134	168954	5.48 ppb(v	91
95) 1,2,4-Trimethylbenzene	19.990	105	611228	5.01 ppb(v#	82
96) 1,3-Dichlorobenzene	20.186	146	301773	4.43 ppb(v	97
97) Benzyl Chloride	20.174	91	315734	4.19 ppb(v	98
98) 1,4-Dichlorobenzene	20.284	146	284148	4.06 ppb(v	97
99) sec-Butylbenzene	20.369	134	202523	5.43 ppb(v	98
100) 1,2,3-Trimethylbenzene	20.583	105	634128	5.09 ppb(v	97
101) p-Isopropyltoluene	20.602	134	207253	5.42 ppb(v	98
102) 1,2-Dichlorobenzene	20.749	146	309428	4.59 ppb(v	97
103) n-Butylbenzene	21.171	134	149550	5.00 ppb(v	99
104) Hexachloroethane	21.636	201	258695	5.81 ppb(v	97
105) 1,2,4-Trichlorobenzene	22.963	180	112611	3.81 ppb(v	99
106) Naphthalene	23.092	128	284908	3.96 ppb(v	100
107) Hexachlorobutadiene	23.532	225	241489	5.21 ppb(v	99
109) TVHC as equiv Pentane	5.552	TIC	901983	3.98 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

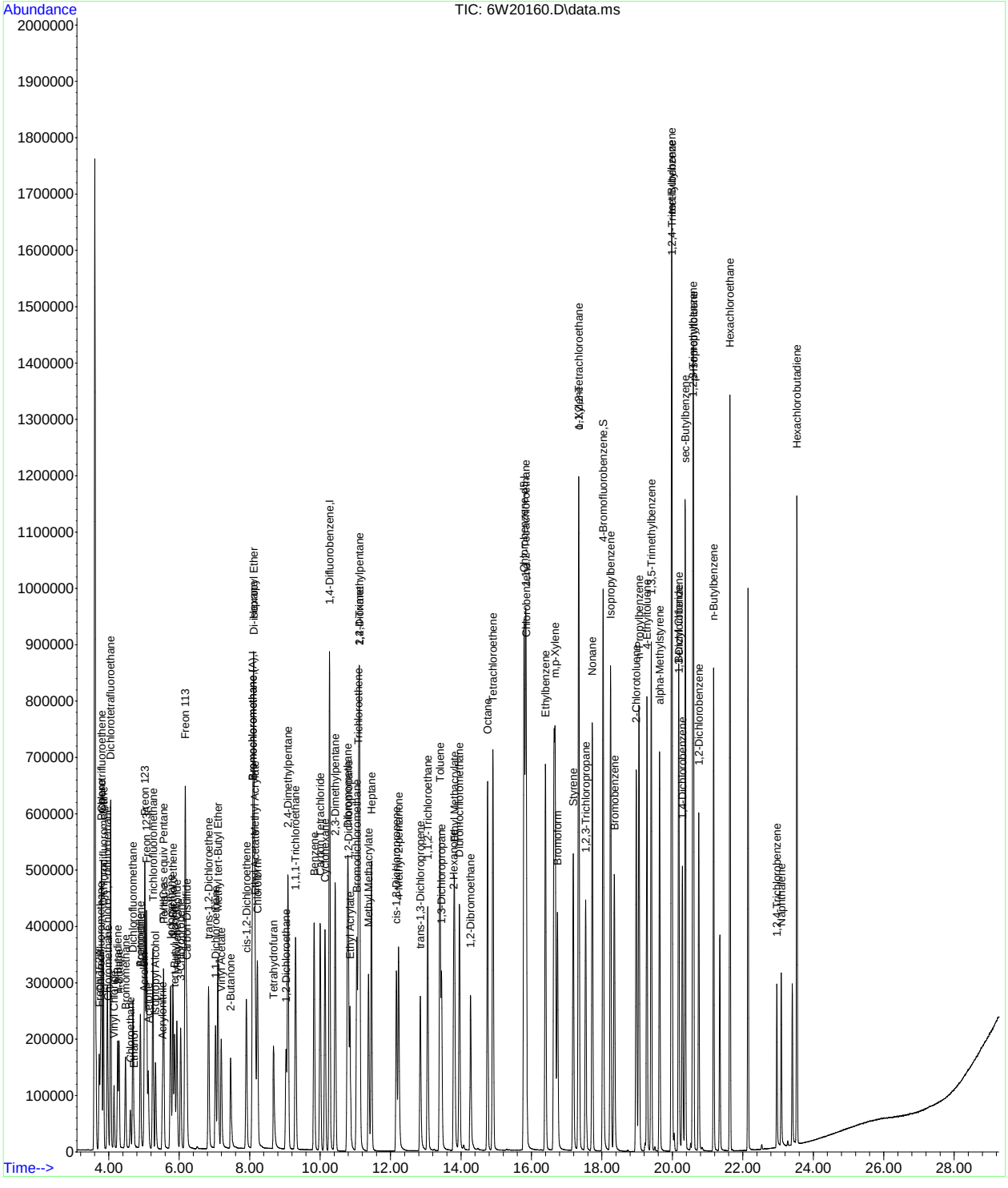
7.7.5

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20160.D
Acq On : 18 Nov 2020 5:19 pm
Operator : thomash
Sample : ic848-5
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:13 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20161.D
Acq On : 18 Nov 2020 6:05 pm
Operator : thomash
Sample : icc848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	265262	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1026480	10.00	ppb(v	-0.01
76) Chlorobenzene-d5	15.787	82	461985	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.079	130	265262	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	552281	9.84	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 98.40%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	168515	7.94	ppb(v	88
3) Chlorodifluoromethane	3.760	67	66926	7.12	ppb(v	99
4) Propene	3.784	41	200611	7.42	ppb(v	97
5) Chlorotrifluoroethene	3.790	116	418068	8.12	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	689276	7.09	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.955	65	474307	6.29	ppb(v#	95
8) Chloromethane	3.974	50	214963	6.95	ppb(v	98
9) Dichlorotetrafluoroethane	4.047	85	673850	7.76	ppb(v	94
10) Vinyl Chloride	4.145	62	258824	7.83	ppb(v#	99
11) 1,3-Butadiene	4.249	54	192161	7.41	ppb(v	92
12) n-Butane	4.292	58	50308	7.81	ppb(v	80
13) Bromomethane	4.469	94	246410	7.92	ppb(v	99
14) Acrolein	4.995	56	126630	8.77	ppb(v	98
15) Chloroethane	4.604	64	134288	7.82	ppb(v	97
16) Dichlorofluoromethane	4.677	67	565673	6.93	ppb(v	99
17) Acetonitrile	4.898	41	193639	5.93	ppb(v	99
18) Freon 123	5.020	83	669866	8.97	ppb(v	98
19) Freon 123A	5.069	117	393767	9.14	ppb(v	91
20) Bromoethene	4.898	106	262289	8.75	ppb(v	96
21) Trichlorofluoromethane	5.246	101	687845	8.21	ppb(v	99
22) Acetone	5.112	58	127431	7.51	ppb(v	82
23) Pentane	5.552	57	75576	7.82	ppb(v	89
24) Iodomethane	5.748	142	827635	8.52	ppb(v	93
25) Isopropyl Alcohol	5.326	45	470056	6.43	ppb(v	97
26) 1,1-Dichloroethene	5.815	61	442436	7.51	ppb(v	94
27) Freon 113	6.170	101	643158	7.98	ppb(v	98
28) Methylene Chloride	5.931	84	268091	8.13	ppb(v	92
29) Carbon Disulfide	6.207	76	878634	8.35	ppb(v	100
30) Ethanol	4.708	45	93343	6.09	ppb(v	99
31) Acrylonitrile	5.522	53	220175	7.78	ppb(v	97
32) 3-Chloropropene	6.042	76	143499	8.69	ppb(v	84
33) trans-1,2-Dichloroethene	6.831	61	415710	7.88	ppb(v	95
34) tert-Butyl Alcohol	5.864	59	585747	7.50	ppb(v	94
35) Methyl tert-Butyl Ether	7.094	73	839368	7.49	ppb(v	97
36) Vinyl Acetate	7.192	43	725677	7.43	ppb(v	97
37) 1,1-Dichloroethane	7.033	63	508241	8.00	ppb(v	100
38) 2-Butanone	7.449	72	145087	8.42	ppb(v	84
39) Hexane	8.109	57	458907	7.89	ppb(v	89
40) cis-1,2-Dichloroethene	7.901	61	389321	7.90	ppb(v	95
41) Di-isopropyl Ether	8.116	87	274699	8.13	ppb(v	91
42) Ethyl Acetate	8.158	61	101596	8.89	ppb(v	77
43) Methyl Acrylate	8.140	55	535924	7.90	ppb(v	99
44) Chloroform	8.220	83	614943	7.75	ppb(v	97
45) 2,4-Dimethylpentane	9.082	57	540878	7.86	ppb(v	100
46) Tetrahydrofuran	8.672	72	146123	8.79	ppb(v	88
47) 1,1,1-Trichloroethane	9.302	97	607200	7.41	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	358243	7.13	ppb(v	98
49) Benzene	9.828	78	945929	8.21	ppb(v	97
50) Carbon Tetrachloride	10.000	117	634374	7.68	ppb(v	99
51) Cyclohexane	10.134	56	465960	8.02	ppb(v	98
52) 2,3-Dimethylpentane	10.428	71	215417	8.37	ppb(v	97
54) 2,2,4-Trimethylpentane	11.119	57	1507032	7.82	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20161.D
Acq On : 18 Nov 2020 6:05 pm
Operator : thomash
Sample : icc848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

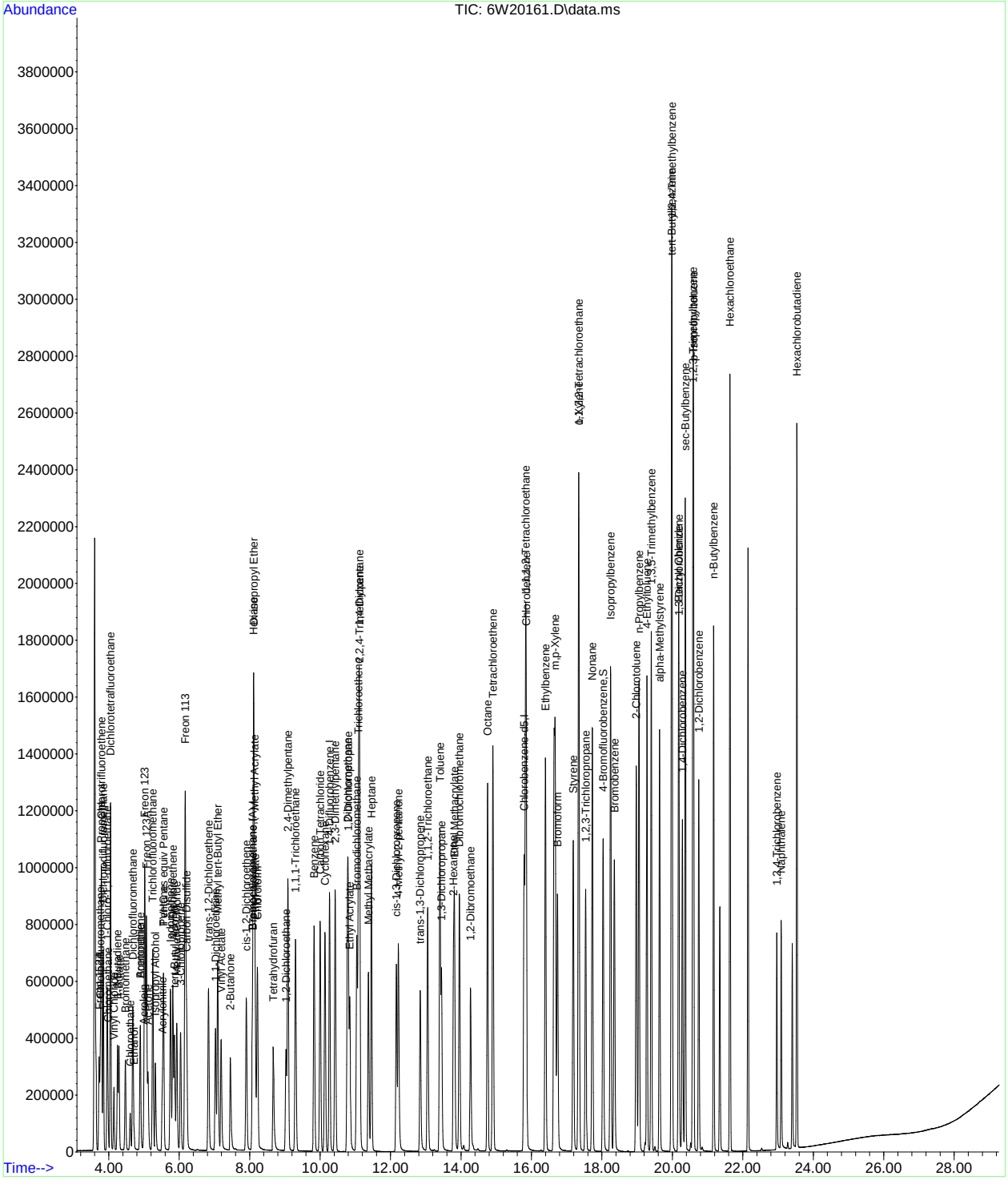
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55) Heptane	11.456	71	339215	8.21	ppb(v	99
56) Trichloroethene	11.089	95	430090	8.38	ppb(v	97
57) 1,2-Dichloropropane	10.795	63	348862	8.08	ppb(v	96
58) Dibromomethane	10.777	174	435390	8.39	ppb(v	93
59) Ethyl Acrylate	10.838	55	655413	7.60	ppb(v	99
60) Methyl Methacrylate	11.370	69	359237	8.44	ppb(v	90
61) 1,4-Dioxane	11.113	88	214710	7.77	ppb(v	97
62) Bromodichloromethane	11.040	83	665522	7.72	ppb(v	99
63) cis-1,3-Dichloropropene	12.165	75	554621	8.71	ppb(v	98
64) 4-Methyl-2-pentanone	12.220	58	275401	8.77	ppb(v	91
65) trans-1,3-Dichloropropene	12.838	75	486897	8.96	ppb(v	98
66) Toluene	13.401	91	1132837	7.53	ppb(v	98
67) 1,1,2-Trichloroethane	13.053	97	394118	8.49	ppb(v	100
68) 1,3-Dichloropropane	13.444	76	540856	8.49	ppb(v	93
69) 2-Hexanone	13.787	58	350096	8.04	ppb(v	92
70) Ethyl Methacrylate	13.817	69	571474	8.44	ppb(v	99
71) Dibromochloromethane	13.952	129	692488	8.75	ppb(v	99
72) Tetrachloroethene	14.906	166	609361	8.35	ppb(v	99
73) 1,2-Dibromoethane	14.270	107	593018	8.80	ppb(v	97
74) Octane	14.753	43	693912	8.01	ppb(v	95
75) 1,1,1,2-Tetrachloroethane	15.830	131	510024	8.31	ppb(v	99
77) Chlorobenzene	15.848	112	904762	8.97	ppb(v	97
78) Ethylbenzene	16.393	91	1431952	8.77	ppb(v	99
79) m,p-Xylene	16.668	91	2291705	17.93	ppb(v	98
80) Styrene	17.188	104	817939	9.26	ppb(v	97
81) Nonane	17.726	43	699502	9.12	ppb(v	97
82) o-Xylene	17.341	91	1119542	8.95	ppb(v	97
83) Bromoform	16.735	173	641881	10.41	ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.341	83	790003	9.18	ppb(v	100
85) 1,2,3-Trichloropropane	17.537	75	580273	8.71	ppb(v	97
86) Isopropylbenzene	18.246	105	1665577	9.81	ppb(v	99
87) Bromobenzene	18.357	156	485229	9.32	ppb(v	93
88) 2-Chlorotoluene	18.974	126	395598	9.58	ppb(v	97
89) n-Propylbenzene	19.054	120	435706	9.84	ppb(v	95
91) 4-Ethyltoluene	19.280	105	1424301	9.42	ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	1292869	9.07	ppb(v	98
93) alpha-Methylstyrene	19.635	118	603920	9.77	ppb(v	98
94) tert-Butylbenzene	19.978	134	331331	9.91	ppb(v	94
95) 1,2,4-Trimethylbenzene	19.990	105	1241350	9.39	ppb(v#	80
96) 1,3-Dichlorobenzene	20.186	146	659409	8.94	ppb(v	97
97) Benzyl Chloride	20.174	91	732512	8.96	ppb(v	98
98) 1,4-Dichlorobenzene	20.284	146	622878	8.21	ppb(v	97
99) sec-Butylbenzene	20.369	134	401069	9.92	ppb(v	99
100) 1,2,3-Trimethylbenzene	20.583	105	1277978	9.47	ppb(v	97
101) p-Isopropyltoluene	20.602	134	423896	10.22	ppb(v	98
102) 1,2-Dichlorobenzene	20.749	146	653018	8.94	ppb(v	98
103) n-Butylbenzene	21.171	134	327415	10.09	ppb(v	97
104) Hexachloroethane	21.636	201	538186	11.15	ppb(v	99
105) 1,2,4-Trichlorobenzene	22.963	180	279187	8.71	ppb(v	99
106) Naphthalene	23.086	128	691710	8.88	ppb(v	100
107) Hexachlorobutadiene	23.532	225	529711	10.55	ppb(v	99
109) TVHC as equiv Pentane	5.552	TIC	1755498	7.50	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20161.D
Acq On : 18 Nov 2020 6:05 pm
Operator : thomash
Sample : icc848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:23 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20164.D
Acq On : 18 Nov 2020 8:35 pm
Operator : thomash
Sample : ic848-40
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.085	130	273967	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.269	114	1057898	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.793	82	557828	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.085	130	273967	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	637155	9.41	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 94.10%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	650728	29.70	ppb(v	88
3) Chlorodifluoromethane	3.766	67	255458	26.30	ppb(v	99
4) Propene	3.790	41	754438	27.02	ppb(v	96
5) Chlorotrifluoroethene	3.797	116	1573051	29.57	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	2591750	25.82	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	1783482	22.89	ppb(v#	95
8) Chloromethane	3.974	50	802880	25.12	ppb(v	98
9) Dichlorotetrafluoroethane	4.047	85	2446313	27.29	ppb(v	96
10) Vinyl Chloride	4.145	62	982067	28.76	ppb(v#	99
11) 1,3-Butadiene	4.255	54	724214	27.04	ppb(v	92
12) n-Butane	4.292	58	187222	28.16	ppb(v	78
13) Bromomethane	4.476	94	922746	28.71	ppb(v	99
14) Acrolein	4.996	56	497703	33.36	ppb(v#	97
15) Chloroethane	4.610	64	508510	28.65	ppb(v	97
16) Dichlorofluoromethane	4.684	67	2109974	25.03	ppb(v	99
17) Acetonitrile	4.898	41	820603	24.34	ppb(v	98
18) Freon 123	5.026	83	2562281	33.22	ppb(v	98
19) Freon 123A	5.069	117	1532481	34.43	ppb(v	93
20) Bromoethene	4.898	106	1094908	35.36	ppb(v	96
21) Trichlorofluoromethane	5.253	101	2638519	30.49	ppb(v	99
22) Acetone	5.112	58	505038	28.83	ppb(v	78
23) Pentane	5.558	57	299196	29.96	ppb(v	85
24) Iodomethane	5.754	142	3127710	31.18	ppb(v	96
25) Isopropyl Alcohol	5.326	45	1868377	24.76	ppb(v	97
26) 1,1-Dichloroethene	5.821	61	1724256	28.34	ppb(v	93
27) Freon 113	6.170	101	2481781	29.80	ppb(v	98
28) Methylene Chloride	5.938	84	1047520	30.74	ppb(v	92
29) Carbon Disulfide	6.213	76	3449297	31.72	ppb(v	99
30) Ethanol	4.708	45	343320	21.70	ppb(v	99
31) Acrylonitrile	5.522	53	883511	30.24	ppb(v	97
32) 3-Chloropropene	6.042	76	574577	33.68	ppb(v	82
33) trans-1,2-Dichloroethene	6.831	61	1660272	30.47	ppb(v	97
34) tert-Butyl Alcohol	5.864	59	2321580	28.79	ppb(v	94
35) Methyl tert-Butyl Ether	7.094	73	3303621	28.55	ppb(v	97
36) Vinyl Acetate	7.192	43	2961357	29.35	ppb(v	96
37) 1,1-Dichloroethane	7.033	63	1994208	30.39	ppb(v	99
38) 2-Butanone	7.449	72	590421	33.18	ppb(v	77
39) Hexane	8.116	57	1775427	29.55	ppb(v	92
40) cis-1,2-Dichloroethene	7.908	61	1550387	30.45	ppb(v	95
41) Di-isopropyl Ether	8.122	87	1082420	31.03	ppb(v	83
42) Ethyl Acetate	8.158	61	397153	33.63	ppb(v	74
43) Methyl Acrylate	8.146	55	2087551	29.81	ppb(v	98
44) Chloroform	8.226	83	2378055	29.02	ppb(v	97
45) 2,4-Dimethylpentane	9.088	57	2142936	30.13	ppb(v	99
46) Tetrahydrofuran	8.660	72	590761	34.41	ppb(v	88
47) 1,1,1-Trichloroethane	9.309	97	2394938	28.31	ppb(v	99
48) 1,2-Dichloroethane	9.033	62	1413734	27.25	ppb(v	98
49) Benzene	9.835	78	3713825	31.23	ppb(v	97
50) Carbon Tetrachloride	10.006	117	2543839	29.83	ppb(v	99
51) Cyclohexane	10.141	56	1854696	30.93	ppb(v	98
52) 2,3-Dimethylpentane	10.434	71	857724	32.28	ppb(v	96
54) 2,2,4-Trimethylpentane	11.126	57	5770818	29.05	ppb(v	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20164.D
Acq On : 18 Nov 2020 8:35 pm
Operator : thomash
Sample : ic848-40
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration

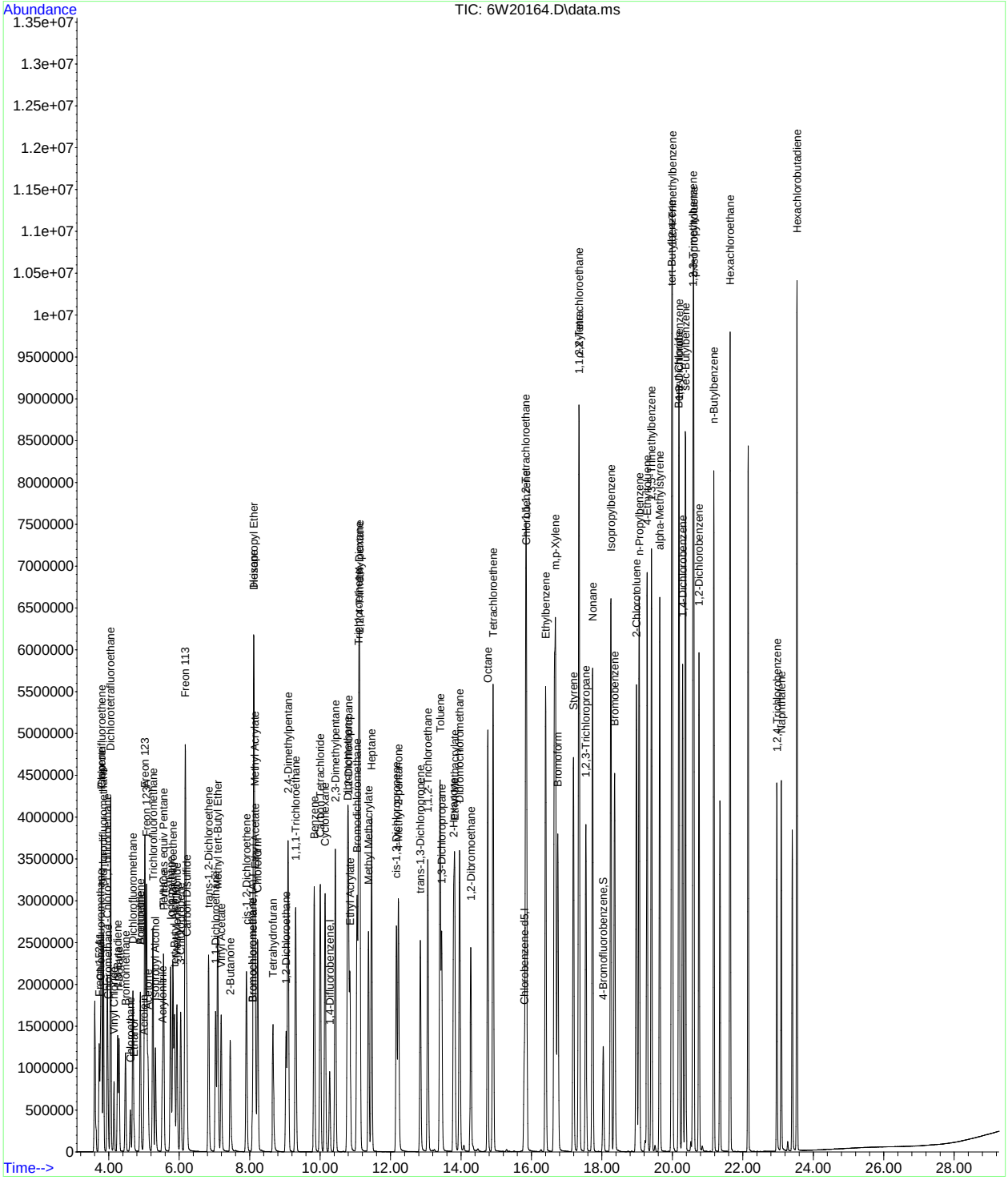
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.462	71	1353715	31.78 ppb(v	99
56) Trichloroethene	11.095	95	1657903	31.35 ppb(v	98
57) 1,2-Dichloropropane	10.801	63	1387207	31.18 ppb(v	96
58) Dibromomethane	10.777	174	1690347	31.59 ppb(v	98
59) Ethyl Acrylate	10.844	55	2676186	30.11 ppb(v	99
60) Methyl Methacrylate	11.370	69	1427370	32.55 ppb(v	89
61) 1,4-Dioxane	11.107	88	855665	30.05 ppb(v#	67
62) Bromodichloromethane	11.046	83	2655491	29.88 ppb(v	99
63) cis-1,3-Dichloropropene	12.166	75	2256549	34.40 ppb(v	99
64) 4-Methyl-2-pentanone	12.221	58	1144512	35.35 ppb(v	89
65) trans-1,3-Dichloropropene	12.845	75	2012118	35.92 ppb(v	97
66) Toluene	13.407	91	4505314	29.07 ppb(v	98
67) 1,1,2-Trichloroethane	13.053	97	1586291	33.15 ppb(v	99
68) 1,3-Dichloropropane	13.450	76	2183232	33.25 ppb(v	92
69) 2-Hexanone	13.793	58	1496954	33.35 ppb(v	88
70) Ethyl Methacrylate	13.823	69	2360642	33.81 ppb(v	98
71) Dibromochloromethane	13.958	129	2853471	35.00 ppb(v	99
72) Tetrachloroethene	14.912	166	2393333	31.82 ppb(v	99
73) 1,2-Dibromoethane	14.282	107	2393261	34.46 ppb(v	99
74) Octane	14.759	43	2703771	30.28 ppb(v	93
75) 1,1,1,2-Tetrachloroethane	15.836	131	2000842	31.63 ppb(v	98
77) Chlorobenzene	15.855	112	3633085	29.84 ppb(v	100
78) Ethylbenzene	16.399	91	5773415	29.29 ppb(v	99
79) m,p-Xylene	16.680	91	8836835	57.28 ppb(v	98
80) Styrene	17.194	104	3524994	33.06 ppb(v	97
81) Nonane	17.739	43	2732304	29.51 ppb(v	93
82) o-Xylene	17.347	91	4326774	28.66 ppb(v	97
83) Bromoform	16.748	173	2787098	37.44 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.353	83	3143411	30.25 ppb(v	99
85) 1,2,3-Trichloropropane	17.543	75	2457550	30.54 ppb(v	97
86) Isopropylbenzene	18.259	105	6523388	31.82 ppb(v	98
87) Bromobenzene	18.363	156	2090966	33.26 ppb(v	95
88) 2-Chlorotoluene	18.981	126	1637145	32.83 ppb(v	92
89) n-Propylbenzene	19.060	120	1811977	33.90 ppb(v	90
91) 4-Ethyltoluene	19.287	105	5995011	32.84 ppb(v	99
92) 1,3,5-Trimethylbenzene	19.409	105	5199783	30.22 ppb(v	99
93) alpha-Methylstyrene	19.641	118	2680922	35.90 ppb(v	99
94) tert-Butylbenzene	19.984	134	1237667	30.66 ppb(v	94
95) 1,2,4-Trimethylbenzene	20.002	105	4837880	30.32 ppb(v	98
96) 1,3-Dichlorobenzene	20.192	146	3036564	34.08 ppb(v	98
97) Benzyl Chloride	20.180	91	3789135	38.40 ppb(v	98
98) 1,4-Dichlorobenzene	20.290	146	3045572	33.26 ppb(v	98
99) sec-Butylbenzene	20.375	134	1599255	32.78 ppb(v	92
100) 1,2,3-Trimethylbenzene	20.590	105	4971288	30.50 ppb(v	98
101) p-Isopropyltoluene	20.608	134	1613140	32.22 ppb(v	96
102) 1,2-Dichlorobenzene	20.755	146	2991512	33.91 ppb(v	98
103) n-Butylbenzene	21.177	134	1487625	37.97 ppb(v	91
104) Hexachloroethane	21.642	201	2131932	36.57 ppb(v	94
105) 1,2,4-Trichlorobenzene	22.969	180	1544451	39.91 ppb(v	100
106) Naphthalene	23.092	128	3690053	39.22 ppb(v	100
107) Hexachlorobutadiene	23.538	225	2226955	36.72 ppb(v	98
109) TVHC as equiv Pentane	5.552	TIC	6895738	28.53 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20164.D
Acq On : 18 Nov 2020 8:35 pm
Operator : thomash
Sample : ic848-40
Misc : MS47175,V6W848,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 19 08:34:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Tue Oct 06 11:26:48 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20167.D
Acq On : 19 Nov 2020 9:23 am
Operator : thomash
Sample : ic848-20
Misc : MS47175,V6W848,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 09:55:18 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 08:58:48 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	272997	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1047738	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	510022	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	272997	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	613446	11.10	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 111.00%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	337358	18.47	ppb(v	87
3) Chlorodifluoromethane	3.766	67	131647	19.23	ppb(v	99
4) Propene	3.790	41	394205	16.36	ppb(v	97
5) Chlorotrifluoroethene	3.796	116	815236	17.64	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	1356403	17.69	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.955	65	932752	17.34	ppb(v#	95
8) Chloromethane	3.974	50	424174	16.80	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	1318040	17.07	ppb(v	96
10) Vinyl Chloride	4.145	62	509175	17.95	ppb(v	99
11) 1,3-Butadiene	4.255	54	376537	17.52	ppb(v	93
12) n-Butane	4.292	58	98220	16.88	ppb(v	80
13) Bromomethane	4.469	94	478826	16.79	ppb(v	99
14) Acrolein	4.995	56	250147	18.40	ppb(v#	97
15) Chloroethane	4.610	64	260056	18.13	ppb(v	96
16) Dichlorofluoromethane	4.677	67	1100124	16.01	ppb(v	99
17) Acetonitrile	4.891	41	404613	15.40	ppb(v	99
18) Freon 123	5.020	83	1316926	17.33	ppb(v	98
19) Freon 123A	5.069	117	776544	17.75	ppb(v	93
20) Bromoethene	4.898	106	535222	17.41	ppb(v	96
21) Trichlorofluoromethane	5.246	101	1347273	17.66	ppb(v	99
22) Acetone	5.112	58	258685	16.69	ppb(v	78
23) Pentane	5.552	57	151910	17.50	ppb(v	87
24) Iodomethane	5.748	142	1621863	17.95	ppb(v	95
25) Isopropyl Alcohol	5.320	45	959645	15.03	ppb(v	97
26) 1,1-Dichloroethene	5.815	61	879727	18.31	ppb(v	94
27) Freon 113	6.170	101	1268704	17.97	ppb(v	98
28) Methylene Chloride	5.931	84	529920	17.63	ppb(v	93
29) Carbon Disulfide	6.207	76	1759039	18.57	ppb(v	100
30) Ethanol	4.708	45	181587	15.01	ppb(v	97
31) Acrylonitrile	5.515	53	444701	20.32	ppb(v	99
32) 3-Chloropropene	6.042	76	289855	20.39	ppb(v	85
33) trans-1,2-Dichloroethene	6.825	61	842686	19.50	ppb(v	98
34) tert-Butyl Alcohol	5.858	59	1185296	18.97	ppb(v	94
35) Methyl tert-Butyl Ether	7.088	73	1676667	18.01	ppb(v	97
36) Vinyl Acetate	7.186	43	1505340	19.33	ppb(v	98
37) 1,1-Dichloroethane	7.033	63	1015039	18.46	ppb(v	99
38) 2-Butanone	7.443	72	295796	21.12	ppb(v	81
39) Hexane	8.109	57	919018	18.14	ppb(v	93
40) cis-1,2-Dichloroethene	7.901	61	785088	18.77	ppb(v	95
41) Di-isopropyl Ether	8.116	87	549458	18.50	ppb(v	89
42) Ethyl Acetate	8.152	61	203943	21.15	ppb(v	79
43) Methyl Acrylate	8.140	55	1073067	20.07	ppb(v	98
44) Chloroform	8.220	83	1219464	18.00	ppb(v	97
45) 2,4-Dimethylpentane	9.082	57	1091813	18.19	ppb(v	99
46) Tetrahydrofuran	8.660	72	297781	21.70	ppb(v	90
47) 1,1,1-Trichloroethane	9.302	97	1219406	17.95	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	713778	19.43	ppb(v	98
49) Benzene	9.828	78	1885534	17.76	ppb(v	97
50) Carbon Tetrachloride	10.000	117	1290899	19.67	ppb(v	99
51) Cyclohexane	10.134	56	938696	18.06	ppb(v	98
52) 2,3-Dimethylpentane	10.428	71	435809	18.64	ppb(v	94
54) 2,2,4-Trimethylpentane	11.113	57	3024115	18.28	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20167.D
Acq On : 19 Nov 2020 9:23 am
Operator : thomash
Sample : ic848-20
Misc : MS47175,V6W848,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 09:55:18 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 08:58:48 2020
Response via : Initial Calibration

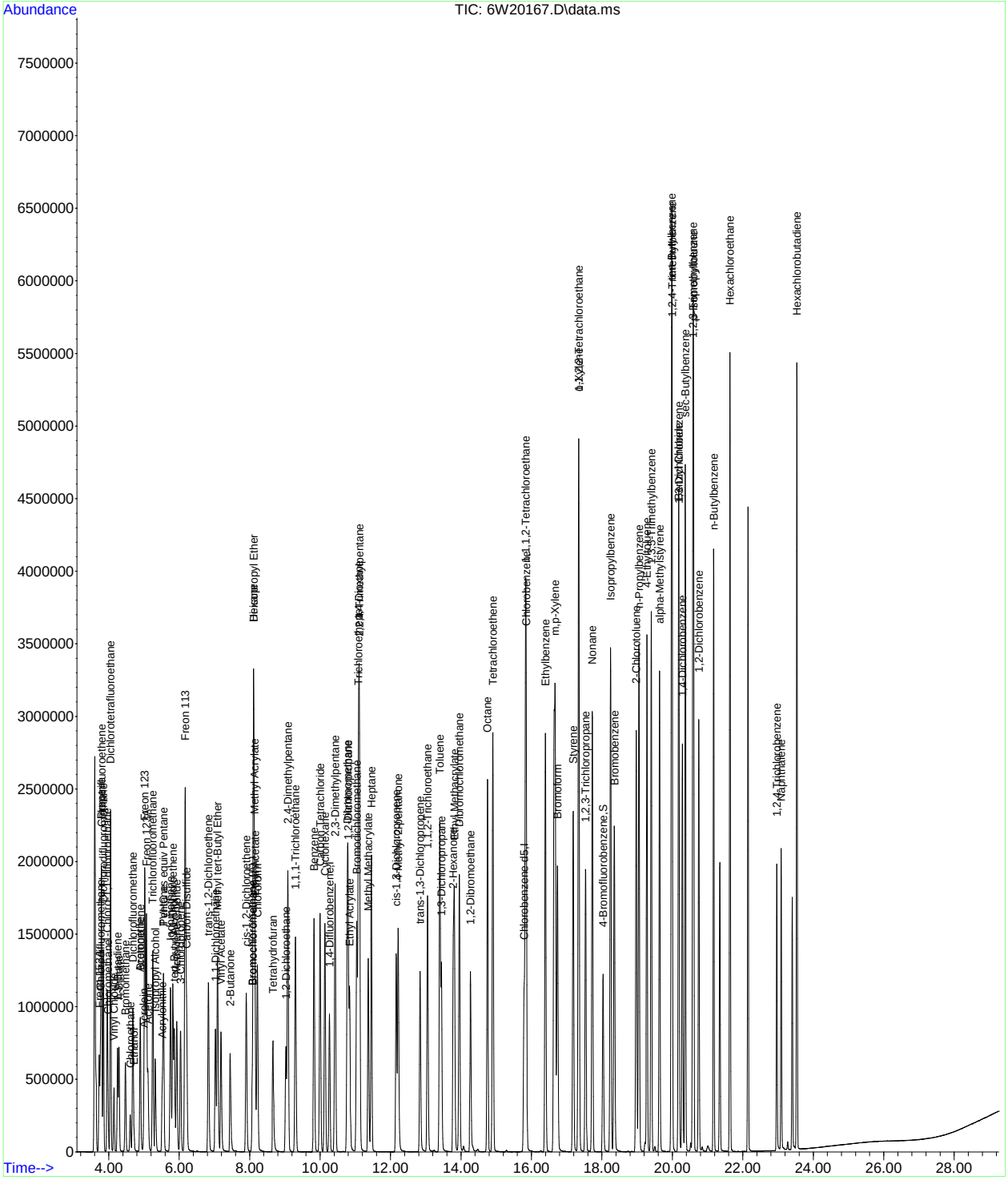
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.456	71	681473	18.86 ppb(v	99
56) Trichloroethene	11.089	95	848983	18.63 ppb(v	95
57) 1,2-Dichloropropane	10.795	63	706517	18.65 ppb(v	96
58) Dibromomethane	10.771	174	870155	18.69 ppb(v	96
59) Ethyl Acrylate	10.838	55	1351318	20.52 ppb(v	99
60) Methyl Methacrylate	11.364	69	728486	21.57 ppb(v	90
61) 1,4-Dioxane	11.101	88	438610	18.60 ppb(v#	75
62) Bromodichloromethane	11.040	83	1351164	19.83 ppb(v	99
63) cis-1,3-Dichloropropene	12.159	75	1134427	20.52 ppb(v	99
64) 4-Methyl-2-pentanone	12.214	58	574612	22.71 ppb(v	91
65) trans-1,3-Dichloropropene	12.838	75	1005708	22.18 ppb(v	98
66) Toluene	13.395	91	2291298	17.81 ppb(v	98
67) 1,1,2-Trichloroethane	13.046	97	800430	19.86 ppb(v	99
68) 1,3-Dichloropropane	13.444	76	1103180	20.58 ppb(v	92
69) 2-Hexanone	13.780	58	747309	23.59 ppb(v	90
70) Ethyl Methacrylate	13.811	69	1182293	21.87 ppb(v	99
71) Dibromochloromethane	13.952	129	1453978	23.08 ppb(v	99
72) Tetrachloroethene	14.906	166	1234922	19.20 ppb(v	99
73) 1,2-Dibromoethane	14.270	107	1218059	21.08 ppb(v	98
74) Octane	14.747	43	1391395	17.93 ppb(v	96
75) 1,1,1,2-Tetrachloroethane	15.830	131	1037700	20.38 ppb(v	98
77) Chlorobenzene	15.848	112	1857061	17.60 ppb(v	98
78) Ethylbenzene	16.393	91	2930160	17.10 ppb(v	98
79) m,p-Xylene	16.668	91	4457560	30.18 ppb(v	98
80) Styrene	17.188	104	1758604	20.77 ppb(v	96
81) Nonane	17.726	43	1418014	17.12 ppb(v	96
82) o-Xylene	17.341	91	2265229	16.84 ppb(v	97
83) Bromoform	16.735	173	1400506	24.13 ppb(v	100
84) 1,1,2,2-Tetrachloroethane	17.341	83	1641835	18.29 ppb(v	100
85) 1,2,3-Trichloropropane	17.531	75	1224182	19.65 ppb(v	98
86) Isopropylbenzene	18.246	105	3377530	17.24 ppb(v	98
87) Bromobenzene	18.357	156	1042445	21.33 ppb(v	92
88) 2-Chlorotoluene	18.974	126	821770	19.71 ppb(v	95
89) n-Propylbenzene	19.054	120	913645	21.10 ppb(v	93
91) 4-Ethyltoluene	19.280	105	3046664	21.03 ppb(v	98
92) 1,3,5-Trimethylbenzene	19.403	105	2674960	17.78 ppb(v	98
93) alpha-Methylstyrene	19.635	118	1331916	23.75 ppb(v	99
94) tert-Butylbenzene	19.978	134	667726	17.27 ppb(v	94
95) 1,2,4-Trimethylbenzene	19.996	105	2592726	19.32 ppb(v	98
96) 1,3-Dichlorobenzene	20.186	146	1532161	25.67 ppb(v	97
97) Benzyl Chloride	20.173	91	1812677	27.02 ppb(v	98
98) 1,4-Dichlorobenzene	20.284	146	1479177	25.91 ppb(v	97
99) sec-Butylbenzene	20.369	134	830381	18.53 ppb(v	98
100) 1,2,3-Trimethylbenzene	20.583	105	2632573	18.34 ppb(v	98
101) p-Isopropyltoluene	20.602	134	861389	19.17 ppb(v	98
102) 1,2-Dichlorobenzene	20.749	146	1488226	23.68 ppb(v	98
103) n-Butylbenzene	21.177	134	733953	25.79 ppb(v	88
104) Hexachloroethane	21.636	201	1126215	22.68 ppb(v	100
105) 1,2,4-Trichlorobenzene	22.963	180	694619	27.89 ppb(v	99
106) Naphthalene	23.086	128	1694996	26.14 ppb(v	100
107) Hexachlorobutadiene	23.532	225	1137533	19.98 ppb(v	99
109) TVHC as equiv Pentane	5.552	TIC	3520074	19.50 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20167.D
Acq On : 19 Nov 2020 9:23 am
Operator : thomash
Sample : ic848-20
Misc : MS47175,V6W848,,,,,1
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Nov 19 09:55:18 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 08:58:48 2020
Response via : Initial Calibration



m6w848.M Fri Nov 20 15:35:50 2020 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20169.D
Acq On : 19 Nov 2020 11:15 am
Operator : thomash
Sample : icv848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 19 12:02:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.085	130	266704	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	1015003	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	463118	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.085	130	266704	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	552817	10.87	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 108.70%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	174894	9.89	ppb(v	88
3) Chlorodifluoromethane	3.766	67	66564	10.01	ppb(v	100
4) Propene	3.790	41	205870	8.98	ppb(v	96
5) Chlorotrifluoroethene	3.797	116	427737	9.62	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	708364	9.60	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	487771	9.44	ppb(v#	95
8) Chloromethane	3.974	50	220518	9.12	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	685379	9.26	ppb(v	96
10) Vinyl Chloride	4.145	62	259447	9.48	ppb(v	99
11) 1,3-Butadiene	4.255	54	190419	9.23	ppb(v	92
12) n-Butane	4.292	58	49287	8.84	ppb(v	80
13) Bromomethane	4.476	94	246816	9.04	ppb(v	99
14) Acrolein	5.002	56	85339	6.50	ppb(v	97
15) Chloroethane	4.610	64	134994	9.76	ppb(v	96
16) Dichlorofluoromethane	4.684	67	557018	8.54	ppb(v	99
17) Acetonitrile	4.898	41	200291	8.11	ppb(v	99
18) Freon 123	5.026	83	696586	9.54	ppb(v	98
19) Freon 123A	5.069	117	434303	10.31	ppb(v	93
20) Bromoethene	4.898	106	286328	9.69	ppb(v	97
21) Trichlorofluoromethane	5.253	101	693805	9.44	ppb(v	100
22) Acetone	5.112	58	133082	8.97	ppb(v	81
23) Pentane	5.558	57	77159	9.24	ppb(v	88
24) Iodomethane	5.754	142	827535	9.49	ppb(v	93
25) Isopropyl Alcohol	5.326	45	482628	7.99	ppb(v	97
26) 1,1-Dichloroethene	5.821	61	444701	9.57	ppb(v	93
27) Freon 113	6.170	101	635168	9.33	ppb(v	98
28) Methylene Chloride	5.938	84	263802	9.14	ppb(v	92
29) Carbon Disulfide	6.213	76	838840	9.15	ppb(v	100
30) Ethanol	4.714	45	99197	8.39	ppb(v	98
31) Acrylonitrile	5.522	53	219013	10.22	ppb(v	97
32) 3-Chloropropene	6.042	76	145881	10.48	ppb(v	84
33) trans-1,2-Dichloroethene	6.831	61	409506	9.73	ppb(v	97
34) tert-Butyl Alcohol	5.864	59	540482	8.91	ppb(v	95
35) Methyl tert-Butyl Ether	7.094	73	845290	9.41	ppb(v	97
36) Vinyl Acetate	7.192	43	719986	9.51	ppb(v	97
37) 1,1-Dichloroethane	7.033	63	517566	9.73	ppb(v	99
38) 2-Butanone	7.449	72	148913	10.80	ppb(v	84
39) Hexane	8.109	57	474451	9.70	ppb(v	88
40) cis-1,2-Dichloroethene	7.901	61	393951	9.72	ppb(v	95
41) Di-isopropyl Ether	8.122	87	278093	9.68	ppb(v	89
42) Ethyl Acetate	8.158	61	102922	10.82	ppb(v	77
43) Methyl Acrylate	8.146	55	533648	10.21	ppb(v	98
44) Chloroform	8.220	83	605425	9.26	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	555518	9.58	ppb(v	99
46) Tetrahydrofuran	8.672	72	145310	10.71	ppb(v	91
47) 1,1,1-Trichloroethane	9.302	97	607177	9.27	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	358824	10.04	ppb(v	98
49) Benzene	9.835	78	955262	9.34	ppb(v	97
50) Carbon Tetrachloride	10.000	117	642098	10.04	ppb(v	98
51) Cyclohexane	10.134	56	476966	9.51	ppb(v	99
52) 2,3-Dimethylpentane	10.434	71	220665	9.74	ppb(v	96
54) 2,2,4-Trimethylpentane	11.119	57	1543208	9.73	ppb(v	96

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20169.D
Acq On : 19 Nov 2020 11:15 am
Operator : thomash
Sample : icv848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 19 12:02:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

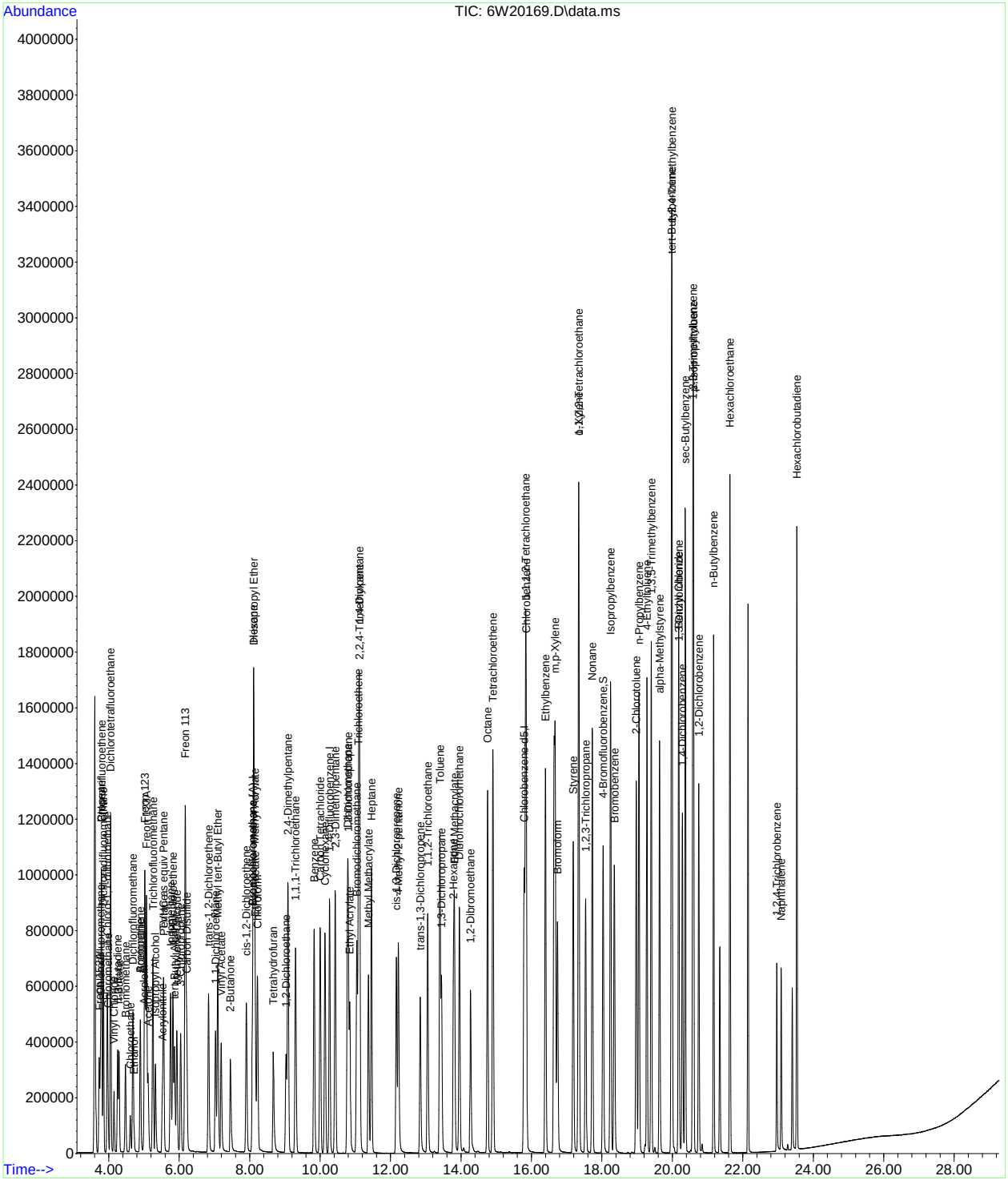
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.456	71	346634	9.98	ppb(v	98
56)	Trichloroethene	11.089	95	433589	9.91	ppb(v	96
57)	1,2-Dichloropropane	10.795	63	355094	9.76	ppb(v	96
58)	Dibromomethane	10.777	174	441945	9.88	ppb(v	94
59)	Ethyl Acrylate	10.838	55	659766	10.30	ppb(v	99
60)	Methyl Methacrylate	11.370	69	361245	10.93	ppb(v	90
61)	1,4-Dioxane	11.113	88	218043	9.63	ppb(v	97
62)	Bromodichloromethane	11.040	83	667856	10.13	ppb(v	99
63)	cis-1,3-Dichloropropene	12.166	75	589149	10.97	ppb(v	99
64)	4-Methyl-2-pentanone	12.221	58	285824	11.44	ppb(v	91
65)	trans-1,3-Dichloropropene	12.845	75	477873	10.73	ppb(v	98
66)	Toluene	13.401	91	1147403	9.33	ppb(v	99
67)	1,1,2-Trichloroethane	13.053	97	393507	10.09	ppb(v	99
68)	1,3-Dichloropropane	13.444	76	543031	10.42	ppb(v	93
69)	2-Hexanone	13.787	58	361310	11.48	ppb(v	90
70)	Ethyl Methacrylate	13.817	69	568942	10.74	ppb(v	99
71)	Dibromochloromethane	13.952	129	676787	10.88	ppb(v	100
72)	Tetrachloroethene	14.906	166	624549	10.07	ppb(v	99
73)	1,2-Dibromoethane	14.270	107	592958	10.52	ppb(v	99
74)	Octane	14.753	43	709890	9.57	ppb(v	96
75)	1,1,1,2-Tetrachloroethane	15.830	131	512989	10.37	ppb(v	100
77)	Chlorobenzene	15.848	112	910932	9.65	ppb(v	98
78)	Ethylbenzene	16.393	91	1436465	9.43	ppb(v	100
79)	m,p-Xylene	16.668	91	2294555	17.65	ppb(v	98
80)	Styrene	17.188	104	829414	10.74	ppb(v	96
81)	Nonane	17.727	43	715222	9.69	ppb(v	97
82)	o-Xylene	17.341	91	1133474	9.49	ppb(v	97
83)	Bromoform	16.735	173	588213	10.88	ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.341	83	792432	9.83	ppb(v	100
85)	1,2,3-Trichloropropane	17.537	75	575181	10.19	ppb(v	98
86)	Isopropylbenzene	18.247	105	1655111	9.47	ppb(v	99
87)	Bromobenzene	18.357	156	482401	10.78	ppb(v	93
88)	2-Chlorotoluene	18.975	126	386939	10.24	ppb(v	94
89)	n-Propylbenzene	19.054	120	436146	11.02	ppb(v	94
91)	4-Ethyltoluene	19.280	105	1454439	10.98	ppb(v	98
92)	1,3,5-Trimethylbenzene	19.403	105	1304168	9.68	ppb(v	98
93)	alpha-Methylstyrene	19.635	118	601510	11.54	ppb(v	98
94)	tert-Butylbenzene	19.978	134	331426	9.60	ppb(v	96
95)	1,2,4-Trimethylbenzene	19.990	105	1261707	10.40	ppb(v#	82
96)	1,3-Dichlorobenzene	20.186	146	692506	12.34	ppb(v	97
97)	Benzyl Chloride	20.174	91	625813	9.70	ppb(v	98
98)	1,4-Dichlorobenzene	20.284	146	668634	12.44	ppb(v	97
99)	sec-Butylbenzene	20.369	134	404421	10.03	ppb(v	99
100)	1,2,3-Trimethylbenzene	20.583	105	1265691	9.81	ppb(v	97
101)	p-Isopropyltoluene	20.602	134	412891	10.17	ppb(v	98
102)	1,2-Dichlorobenzene	20.749	146	668940	11.46	ppb(v	98
103)	n-Butylbenzene	21.171	134	324637	12.12	ppb(v	97
104)	Hexachloroethane	21.636	201	491655	10.72	ppb(v	99
105)	1,2,4-Trichlorobenzene	22.963	180	250299	10.38	ppb(v	100
106)	Naphthalene	23.086	128	575642	9.37	ppb(v	100
107)	Hexachlorobutadiene	23.532	225	466595	9.03	ppb(v	99
109)	TVHC as equiv Pentane	5.552	TIC	1768402	10.07	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20169.D
Acq On : 19 Nov 2020 11:15 am
Operator : thomash
Sample : icv848-10
Misc : MS47175,V6W848,,,,,1
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 19 12:02:40 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



m6w848.M Fri Nov 20 15:35:52 2020 Page: 3

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20307.D
Acq On : 27 Nov 2020 4:03 pm
Operator : danat
Sample : cc848-10
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 16:33:27 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.079	130	178920	10.00	ppb(v	0.00
53) 1,4-Difluorobenzene	10.263	114	669832	10.00	ppb(v	0.00
76) Chlorobenzene-d5	15.787	82	296451	10.00	ppb(v	0.00
108) Bromochloromethane (A)	8.079	130	178920	10.00	ppb(v	0.00
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.032	95	336668	10.34	ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 103.40%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	105556	8.90	ppb(v	91
3) Chlorodifluoromethane	3.766	67	44290	9.92	ppb(v	100
4) Propene	3.790	41	124600	8.10	ppb(v	98
5) Chlorotrifluoroethene	3.796	116	264908	8.88	ppb(v	99
6) Dichlorodifluoromethane	3.845	85	459796	9.28	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.955	65	357544	10.31	ppb(v	97
8) Chloromethane	3.974	50	135539	8.36	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	454639	9.15	ppb(v	94
10) Vinyl Chloride	4.145	62	162650	8.86	ppb(v	99
11) 1,3-Butadiene	4.255	54	118593	8.57	ppb(v	97
12) n-Butane	4.292	58	31661	8.47	ppb(v	83
13) Bromomethane	4.475	94	163318	8.92	ppb(v	99
14) Acrolein	4.995	56	63286	7.18	ppb(v	99
15) Chloroethane	4.610	64	83478	9.00	ppb(v	98
16) Dichlorofluoromethane	4.683	67	384976	8.80	ppb(v	99
17) Acetonitrile	4.898	41	118287	7.14	ppb(v	98
18) Freon 123	5.020	83	401900	8.21	ppb(v	100
19) Freon 123A	5.069	117	262536	9.29	ppb(v	94
20) Bromoethene	4.898	106	169079	8.53	ppb(v	99
21) Trichlorofluoromethane	5.246	101	492483	9.99	ppb(v	99
22) Acetone	5.112	58	87791	8.83	ppb(v	88
23) Pentane	5.552	57	50731	9.06	ppb(v	92
24) Iodomethane	5.754	142	561212	9.60	ppb(v	96
25) Isopropyl Alcohol	5.326	45	324849	8.01	ppb(v	99
26) 1,1-Dichloroethene	5.815	61	304916	9.79	ppb(v	95
27) Freon 113	6.170	101	435181	9.53	ppb(v	97
28) Methylene Chloride	5.931	84	182479	9.42	ppb(v	94
29) Carbon Disulfide	6.207	76	603119	9.80	ppb(v	100
30) Ethanol	4.708	45	56980	7.18	ppb(v	99
31) Acrylonitrile	5.522	53	148733	10.35	ppb(v	98
32) 3-Chloropropene	6.042	76	96984	10.38	ppb(v	86
33) trans-1,2-Dichloroethene	6.831	61	279637	9.90	ppb(v	96
34) tert-Butyl Alcohol	5.864	59	402643	9.90	ppb(v	96
35) Methyl tert-Butyl Ether	7.094	73	559416	9.28	ppb(v	98
36) Vinyl Acetate	7.192	43	488267	9.61	ppb(v	98
37) 1,1-Dichloroethane	7.033	63	340817	9.55	ppb(v	99
38) 2-Butanone	7.449	72	94842	10.25	ppb(v	85
39) Hexane	8.109	57	303458	9.25	ppb(v	91
40) cis-1,2-Dichloroethene	7.901	61	259803	9.55	ppb(v	94
41) Di-isopropyl Ether	8.122	87	179825	9.33	ppb(v	94
42) Ethyl Acetate	8.158	61	68055	10.67	ppb(v	79
43) Methyl Acrylate	8.146	55	359470	10.25	ppb(v	99
44) Chloroform	8.219	83	428696	9.78	ppb(v	98
45) 2,4-Dimethylpentane	9.082	57	354299	9.11	ppb(v	100
46) Tetrahydrofuran	8.672	72	94757	10.41	ppb(v	91
47) 1,1,1-Trichloroethane	9.302	97	419412	9.54	ppb(v	99
48) 1,2-Dichloroethane	9.027	62	245656	10.24	ppb(v	99
49) Benzene	9.835	78	620535	9.04	ppb(v	97
50) Carbon Tetrachloride	10.000	117	454423	10.59	ppb(v	99
51) Cyclohexane	10.134	56	304231	9.04	ppb(v	99
52) 2,3-Dimethylpentane	10.428	71	138479	9.12	ppb(v	98
54) 2,2,4-Trimethylpentane	11.119	57	992710	9.49	ppb(v	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20307.D
Acq On : 27 Nov 2020 4:03 pm
Operator : danat
Sample : cc848-10
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 16:33:27 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

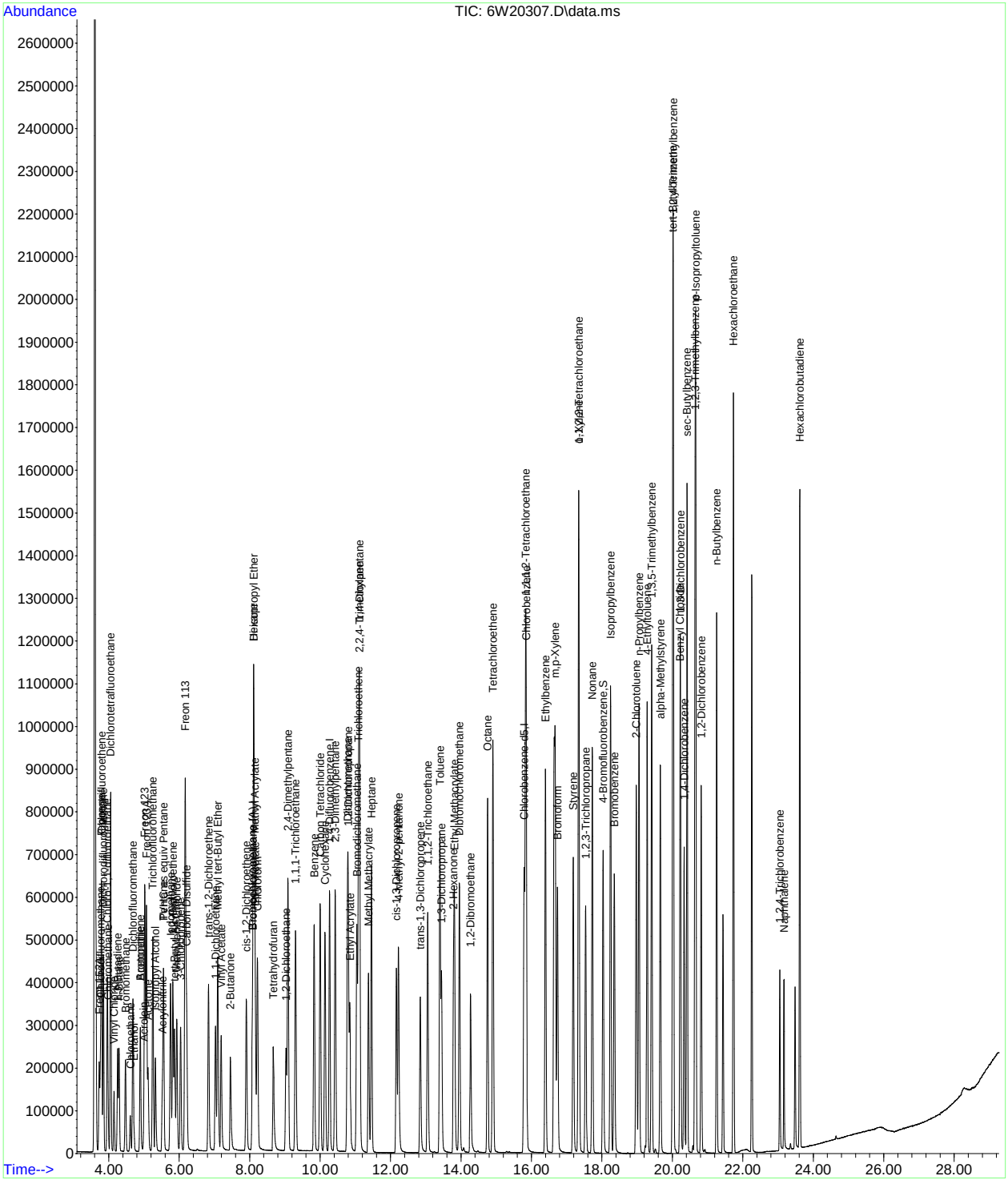
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55) Heptane	11.462	71	221531	9.66 ppb(v	99
56) Trichloroethene	11.089	95	282993	9.80 ppb(v	96
57) 1,2-Dichloropropane	10.795	63	227003	9.45 ppb(v	97
58) Dibromomethane	10.777	174	291769	9.88 ppb(v	91
59) Ethyl Acrylate	10.844	55	422555	9.99 ppb(v	99
60) Methyl Methacrylate	11.370	69	228684	10.49 ppb(v	92
61) 1,4-Dioxane	11.113	88	139322	9.32 ppb(v	99
62) Bromodichloromethane	11.046	83	454141	10.44 ppb(v	99
63) cis-1,3-Dichloropropene	12.165	75	353623	9.97 ppb(v	99
64) 4-Methyl-2-pentanone	12.227	58	178024	10.80 ppb(v	94
65) trans-1,3-Dichloropropene	12.844	75	305454	10.40 ppb(v	98
66) Toluene	13.401	91	736733	9.08 ppb(v	98
67) 1,1,2-Trichloroethane	13.052	97	252930	9.82 ppb(v	99
68) 1,3-Dichloropropane	13.444	76	351572	10.22 ppb(v	94
69) 2-Hexanone	13.787	58	225159	10.84 ppb(v	94
70) Ethyl Methacrylate	13.817	69	368013	10.52 ppb(v	99
71) Dibromochloromethane	13.952	129	477383	11.63 ppb(v	99
72) Tetrachloroethene	14.906	166	410780	10.04 ppb(v	99
73) 1,2-Dibromoethane	14.270	107	371837	10.00 ppb(v	99
74) Octane	14.753	43	448045	9.15 ppb(v	98
75) 1,1,1,2-Tetrachloroethane	15.830	131	338487	10.37 ppb(v	98
77) Chlorobenzene	15.848	112	570487	9.44 ppb(v	97
78) Ethylbenzene	16.393	91	907843	9.31 ppb(v	99
79) m,p-Xylene	16.668	91	1399935	16.82 ppb(v	99
80) Styrene	17.188	104	494607	10.00 ppb(v	97
81) Nonane	17.726	43	440530	9.32 ppb(v	98
82) o-Xylene	17.341	91	720564	9.43 ppb(v	99
83) Bromoform	16.735	173	431540	12.47 ppb(v	99
84) 1,1,2,2-Tetrachloroethane	17.341	83	509204	9.86 ppb(v	99
85) 1,2,3-Trichloropropane	17.537	75	360736	9.99 ppb(v	98
86) Isopropylbenzene	18.246	105	1048672	9.37 ppb(v	99
87) Bromobenzene	18.350	156	303134	10.58 ppb(v	93
88) 2-Chlorotoluene	18.974	126	245465	10.15 ppb(v	97
89) n-Propylbenzene	19.054	120	273806	10.81 ppb(v	96
91) 4-Ethyltoluene	19.286	105	910015	10.74 ppb(v	99
92) 1,3,5-Trimethylbenzene	19.415	105	865309	10.03 ppb(v	98
93) alpha-Methylstyrene	19.660	118	382320	11.46 ppb(v	98
94) tert-Butylbenzene	20.014	134	226827	10.27 ppb(v	95
95) 1,2,4-Trimethylbenzene	20.027	105	854787	11.01 ppb(v#	79
96) 1,3-Dichlorobenzene	20.229	146	430058	11.97 ppb(v	98
97) Benzyl Chloride	20.216	91	474573	11.50 ppb(v	99
98) 1,4-Dichlorobenzene	20.333	146	401281	11.66 ppb(v	97
99) sec-Butylbenzene	20.418	134	278180	10.78 ppb(v	98
100) 1,2,3-Trimethylbenzene	20.645	105	884030	10.71 ppb(v	98
101) p-Isopropyltoluene	20.663	134	294317	11.33 ppb(v	97
102) 1,2-Dichlorobenzene	20.816	146	447457	11.97 ppb(v	98
103) n-Butylbenzene	21.256	134	221622	12.93 ppb(v	98
104) Hexachloroethane	21.733	201	377730	12.87 ppb(v	98
105) 1,2,4-Trichlorobenzene	23.049	180	147925	9.59 ppb(v	100
106) Naphthalene	23.171	128	345736	8.79 ppb(v	100
107) Hexachlorobutadiene	23.618	225	339013	10.25 ppb(v	99
109) TVHC as equiv Pentane	5.552	TIC	1204857	10.23 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20307.D
Acq On : 27 Nov 2020 4:03 pm
Operator : danat
Sample : cc848-10
Misc : MS47250,V6W854,100,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 27 16:33:27 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20406.D
Acq On : 3 Dec 2020 11:21 am
Operator : thomash
Sample : cc848-10
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 15:15:33 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Bromochloromethane	8.073	130	302470	10.00 ppb(v	0.00
53) 1,4-Difluorobenzene	10.257	114	1135226	10.00 ppb(v	0.00
76) Chlorobenzene-d5	15.781	82	538110	10.00 ppb(v	0.00
108) Bromochloromethane (A)	8.073	130	302470	10.00 ppb(v	0.00
System Monitoring Compounds					
90) 4-Bromofluorobenzene	18.026	95	609591	10.31 ppb(v	0.00
Spiked Amount 10.000	Range 65 - 128		Recovery = 103.10%		
Target Compounds					Qvalue
2) Freon 152A	3.729	65	220541	11.00 ppb(v	86
3) Chlorodifluoromethane	3.766	67	80872	10.72 ppb(v	99
4) Propene	3.790	41	279648	10.76 ppb(v	95
5) Chlorotrifluoroethene	3.797	116	487089	9.66 ppb(v	98
6) Dichlorodifluoromethane	3.846	85	830905	9.92 ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	614696	10.49 ppb(v#	97
8) Chloromethane	3.974	50	302495	11.03 ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	888567	10.58 ppb(v	99
10) Vinyl Chloride	4.145	62	344986	11.12 ppb(v	98
11) 1,3-Butadiene	4.255	54	257609	11.01 ppb(v	96
12) n-Butane	4.292	58	66855	10.58 ppb(v	93
13) Bromomethane	4.476	94	317147	10.24 ppb(v	99
14) Acrolein	4.996	56	156073	10.48 ppb(v#	97
15) Chloroethane	4.610	64	175820	11.21 ppb(v	97
16) Dichlorofluoromethane	4.684	67	735219	9.94 ppb(v	99
17) Acetonitrile	4.892	41	290898	10.39 ppb(v	99
18) Freon 123	5.020	83	807982	9.76 ppb(v	99
19) Freon 123A	5.069	117	449444	9.40 ppb(v	99
20) Bromoethene	4.898	106	332867	9.93 ppb(v	97
21) Trichlorofluoromethane	5.247	101	788947	9.47 ppb(v	99
22) Acetone	5.112	58	166851	9.92 ppb(v	79
23) Pentane	5.552	57	97025	10.25 ppb(v	91
24) Iodomethane	5.748	142	939629	9.51 ppb(v	94
25) Isopropyl Alcohol	5.320	45	639066	9.33 ppb(v	97
26) 1,1-Dichloroethene	5.815	61	552255	10.48 ppb(v	97
27) Freon 113	6.164	101	750579	9.72 ppb(v	98
28) Methylene Chloride	5.932	84	328253	10.02 ppb(v	98
29) Carbon Disulfide	6.207	76	1092394	10.50 ppb(v	100
30) Ethanol	4.708	45	133388	9.94 ppb(v	99
31) Acrylonitrile	5.516	53	286196	11.78 ppb(v	96
32) 3-Chloropropene	6.036	76	177867	11.26 ppb(v	88
33) trans-1,2-Dichloroethene	6.825	61	521984	10.94 ppb(v	99
34) tert-Butyl Alcohol	5.858	59	754252	10.97 ppb(v	96
35) Methyl tert-Butyl Ether	7.088	73	1004269	9.86 ppb(v	98
36) Vinyl Acetate	7.186	43	974556	11.35 ppb(v	99
37) 1,1-Dichloroethane	7.027	63	633123	10.49 ppb(v	99
38) 2-Butanone	7.443	72	182164	11.65 ppb(v	95
39) Hexane	8.110	57	584221	10.53 ppb(v	99
40) cis-1,2-Dichloroethene	7.895	61	484618	10.54 ppb(v	99
41) Di-isopropyl Ether	8.110	87	322473	9.89 ppb(v	91
42) Ethyl Acetate	8.152	61	131303	12.17 ppb(v	87
43) Methyl Acrylate	8.134	55	689865	11.64 ppb(v	99
44) Chloroform	8.214	83	730526	9.85 ppb(v	97
45) 2,4-Dimethylpentane	9.082	57	685498	10.42 ppb(v	98
46) Tetrahydrofuran	8.660	72	180314	11.72 ppb(v	94
47) 1,1,1-Trichloroethane	9.296	97	693862	9.34 ppb(v	99
48) 1,2-Dichloroethane	9.021	62	425529	10.49 ppb(v	99
49) Benzene	9.829	78	1128193	9.73 ppb(v	98
50) Carbon Tetrachloride	9.994	117	726307	10.01 ppb(v	99
51) Cyclohexane	10.135	56	587467	10.33 ppb(v	97
52) 2,3-Dimethylpentane	10.422	71	260220	10.13 ppb(v	97
54) 2,2,4-Trimethylpentane	11.113	57	1910055	10.77 ppb(v	95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20406.D
Acq On : 3 Dec 2020 11:21 am
Operator : thomash
Sample : cc848-10
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 15:15:33 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

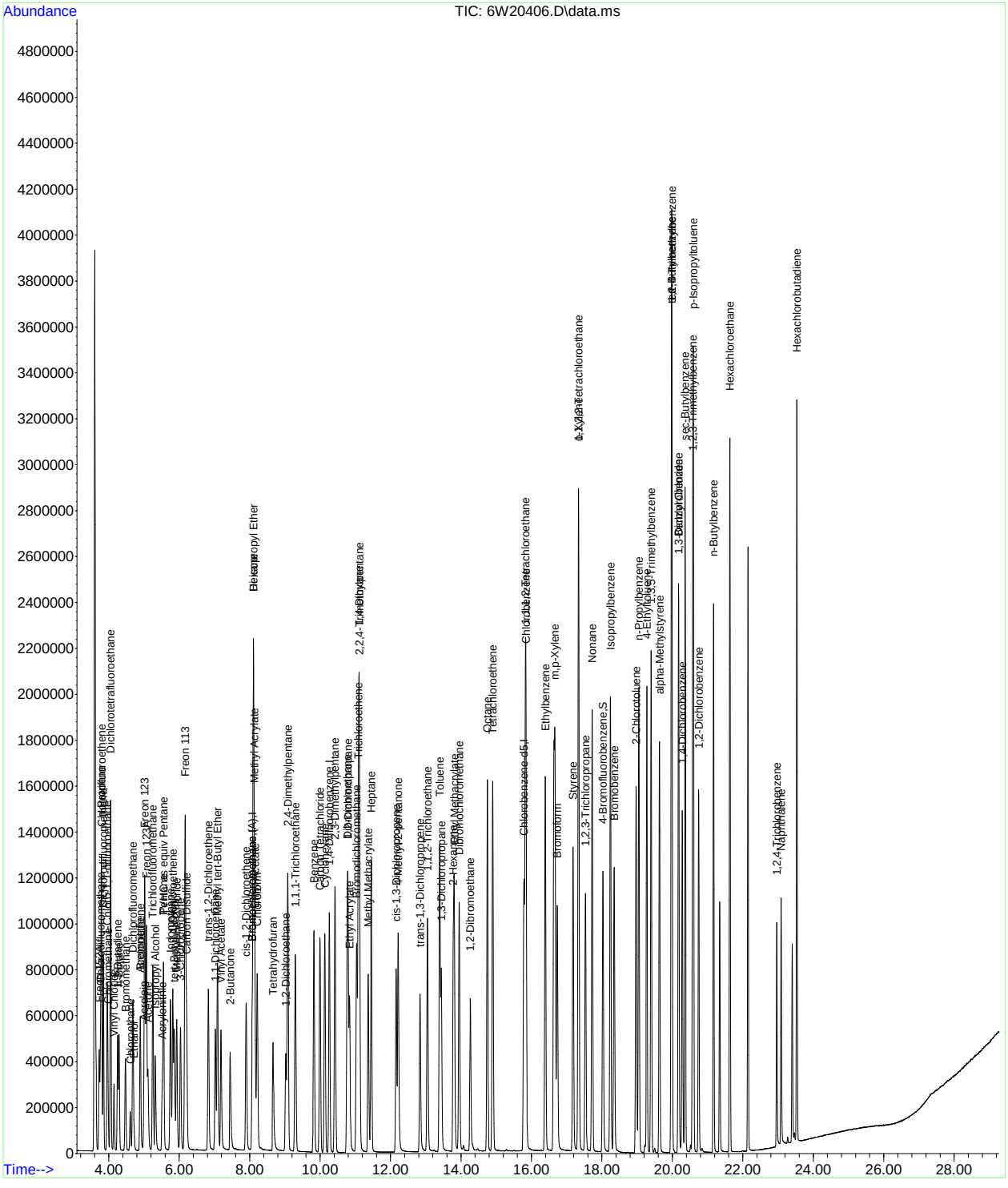
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
55)	Heptane	11.450	71	412510	10.61 ppb(v	97
56)	Trichloroethene	11.083	95	491538	10.04 ppb(v	98
57)	1,2-Dichloropropane	10.789	63	438550	10.77 ppb(v	94
58)	Dibromomethane	10.771	174	476747	9.53 ppb(v	98
59)	Ethyl Acrylate	10.832	55	836749	11.68 ppb(v	99
60)	Methyl Methacrylate	11.364	69	434063	11.75 ppb(v	96
61)	1,4-Dioxane	11.107	88	258716	10.22 ppb(v	95
62)	Bromodichloromethane	11.034	83	790609	10.72 ppb(v	99
63)	cis-1,3-Dichloropropene	12.160	75	660691	11.00 ppb(v	99
64)	4-Methyl-2-pentanone	12.215	58	358602	12.83 ppb(v	94
65)	trans-1,3-Dichloropropene	12.839	75	575455	11.56 ppb(v	99
66)	Toluene	13.395	91	1325741	9.64 ppb(v	100
67)	1,1,2-Trichloroethane	13.047	97	454814	10.42 ppb(v	98
68)	1,3-Dichloropropane	13.438	76	656766	11.26 ppb(v	95
69)	2-Hexanone	13.781	58	470479	13.36 ppb(v	96
70)	Ethyl Methacrylate	13.811	69	712435	12.02 ppb(v	98
71)	Dibromochloromethane	13.946	129	810084	11.64 ppb(v	99
72)	Tetrachloroethene	14.900	166	673891	9.72 ppb(v	99
73)	1,2-Dibromoethane	14.264	107	677623	10.75 ppb(v	99
74)	Octane	14.747	43	923137	11.12 ppb(v	97
75)	1,1,1,2-Tetrachloroethane	15.824	131	577720	10.45 ppb(v	99
77)	Chlorobenzene	15.842	112	1033808	9.43 ppb(v	99
78)	Ethylbenzene	16.393	91	1667874	9.42 ppb(v	99
79)	m,p-Xylene	16.662	91	2556691	16.92 ppb(v	99
80)	Styrene	17.182	104	943421	10.51 ppb(v	98
81)	Nonane	17.727	43	949326	11.06 ppb(v	99
82)	o-Xylene	17.335	91	1310829	9.45 ppb(v	99
83)	Bromoform	16.729	173	731227	11.64 ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.335	83	978847	10.45 ppb(v	99
85)	1,2,3-Trichloropropane	17.531	75	709536	10.82 ppb(v	99
86)	Isopropylbenzene	18.247	105	1917611	9.44 ppb(v	98
87)	Bromobenzene	18.351	156	544559	10.47 ppb(v	99
88)	2-Chlorotoluene	18.975	126	445061	10.14 ppb(v	98
89)	n-Propylbenzene	19.048	120	498611	10.84 ppb(v	94
91)	4-Ethyltoluene	19.274	105	1690121	10.99 ppb(v	98
92)	1,3,5-Trimethylbenzene	19.397	105	1522228	9.72 ppb(v	100
93)	alpha-Methylstyrene	19.635	118	708344	11.70 ppb(v	99
94)	tert-Butylbenzene	19.978	134	381339	9.51 ppb(v	96
95)	1,2,4-Trimethylbenzene	19.990	105	1502332	10.66 ppb(v	93
96)	1,3-Dichlorobenzene	20.180	146	807817	12.39 ppb(v	97
97)	Benzyl Chloride	20.174	91	942045	12.57 ppb(v	99
98)	1,4-Dichlorobenzene	20.278	146	765215	12.25 ppb(v	98
99)	sec-Butylbenzene	20.363	134	466127	9.95 ppb(v	91
100)	1,2,3-Trimethylbenzene	20.577	105	1534719	10.24 ppb(v	98
101)	p-Isopropyltoluene	20.596	134	491460	10.42 ppb(v	94
102)	1,2-Dichlorobenzene	20.749	146	775673	11.44 ppb(v	98
103)	n-Butylbenzene	21.171	134	381887	12.27 ppb(v	92
104)	Hexachloroethane	21.636	201	620467	11.65 ppb(v	97
105)	1,2,4-Trichlorobenzene	22.963	180	332797	11.88 ppb(v	99
106)	Naphthalene	23.086	128	867368	12.14 ppb(v	100
107)	Hexachlorobutadiene	23.532	225	627393	10.45 ppb(v	100
109)	TVHC as equiv Pentane	5.552	TIC	2315041	11.63 ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20406.D
Acq On : 3 Dec 2020 11:21 am
Operator : thomash
Sample : cc848-10
Misc : MS47355,V6W859,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Dec 03 15:15:33 2020
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20989.D
Acq On : 14 Jan 2021 1:07 pm
Operator : thomash
Sample : cc848-10
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 14:21:08 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	258622	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	961438	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	471646	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	258622	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	518157	10.00	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 100.00%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	169834	9.91	ppb(v	100
3) Chlorodifluoromethane	3.766	67	86799	13.46	ppb(v	99
4) Propene	3.790	41	236347	10.63	ppb(v	97
5) Chlorotrifluoroethene	3.797	116	388425	9.00	ppb(v	98
6) Dichlorodifluoromethane	3.846	85	786646	10.99	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.956	65	678945	13.55	ppb(v	100
8) Chloromethane	3.974	50	253759	10.82	ppb(v	98
9) Dichlorotetrafluoroethane	4.047	85	812267	11.31	ppb(v	97
10) Vinyl Chloride	4.145	62	291359	10.98	ppb(v#	99
11) 1,3-Butadiene	4.249	54	223480	11.17	ppb(v	97
12) n-Butane	4.292	58	57234	10.59	ppb(v	98
13) Bromomethane	4.470	94	281285	10.63	ppb(v	99
14) Acrolein	4.990	56	124301	9.76	ppb(v#	98
15) Chloroethane	4.604	64	148588	11.08	ppb(v	98
16) Dichlorofluoromethane	4.678	67	709243	11.22	ppb(v	99
17) Acetonitrile	4.886	41	238518	9.96	ppb(v	99
18) Freon 123	5.014	83	691426	9.77	ppb(v	99
19) Freon 123A	5.063	117	401587	9.83	ppb(v	98
20) Bromoethene	4.892	106	284966	9.95	ppb(v	98
21) Trichlorofluoromethane	5.240	101	863163	12.12	ppb(v	99
22) Acetone	5.106	58	133267	9.27	ppb(v	90
23) Pentane	5.540	57	75054	9.27	ppb(v	80
24) Iodomethane	5.742	142	736203	8.71	ppb(v	92
25) Isopropyl Alcohol	5.314	45	575602	9.82	ppb(v	96
26) 1,1-Dichloroethene	5.803	61	484886	10.77	ppb(v	95
27) Freon 113	6.152	101	615217	9.32	ppb(v	99
28) Methylene Chloride	5.919	84	248751	8.88	ppb(v	94
29) Carbon Disulfide	6.195	76	853851	9.60	ppb(v	100
30) Ethanol	4.702	45	117179	10.22	ppb(v	99
31) Acrylonitrile	5.510	53	223856	10.77	ppb(v	99
32) 3-Chloropropene	6.030	76	133990	9.92	ppb(v	78
33) trans-1,2-Dichloroethene	6.813	61	434739	10.65	ppb(v	94
34) tert-Butyl Alcohol	5.858	59	644592	10.96	ppb(v	98
35) Methyl tert-Butyl Ether	7.082	73	853749	9.80	ppb(v	98
36) Vinyl Acetate	7.174	43	830432	11.31	ppb(v	95
37) 1,1-Dichloroethane	7.015	63	521040	10.10	ppb(v	99
38) 2-Butanone	7.437	72	135750	10.15	ppb(v	90
39) Hexane	8.091	57	458480	9.67	ppb(v	96
40) cis-1,2-Dichloroethene	7.883	61	404685	10.29	ppb(v	94
41) Di-isopropyl Ether	8.103	87	251525	9.02	ppb(v	79
42) Ethyl Acetate	8.140	61	95945	10.40	ppb(v	81
43) Methyl Acrylate	8.128	55	547038	10.79	ppb(v	98
44) Chloroform	8.201	83	649228	10.24	ppb(v	100
45) 2,4-Dimethylpentane	9.064	57	532944	9.48	ppb(v	98
46) Tetrahydrofuran	8.648	72	135033	10.26	ppb(v	90
47) 1,1,1-Trichloroethane	9.284	97	672821	10.59	ppb(v	98
48) 1,2-Dichloroethane	9.009	62	439937	12.69	ppb(v	99
49) Benzene	9.810	78	867312	8.74	ppb(v	99
50) Carbon Tetrachloride	9.982	117	720973	11.62	ppb(v	99
51) Cyclohexane	10.116	56	458345	9.42	ppb(v	95
52) 2,3-Dimethylpentane	10.410	71	197466	8.99	ppb(v	87
54) 2,2,4-Trimethylpentane	11.095	57	1521048	10.13	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20989.D
Acq On : 14 Jan 2021 1:07 pm
Operator : thomash
Sample : cc848-10
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 14:21:08 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.438	71	313658	9.53	ppb(v	96
56)	Trichloroethene	11.064	95	401603	9.69	ppb(v	98
57)	1,2-Dichloropropane	10.777	63	334195	9.69	ppb(v	97
58)	Dibromomethane	10.752	174	381879	9.01	ppb(v	96
59)	Ethyl Acrylate	10.820	55	655865	10.81	ppb(v	98
60)	Methyl Methacrylate	11.352	69	329276	10.52	ppb(v	90
61)	1,4-Dioxane	11.095	88	196480	9.16	ppb(v	81
62)	Bromodichloromethane	11.022	83	708980	11.35	ppb(v	99
63)	cis-1,3-Dichloropropene	12.147	75	521711	10.25	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	276367	11.68	ppb(v	93
65)	trans-1,3-Dichloropropene	12.820	75	463716	11.00	ppb(v	99
66)	Toluene	13.377	91	1019859	8.76	ppb(v	99
67)	1,1,2-Trichloroethane	13.028	97	348096	9.42	ppb(v	99
68)	1,3-Dichloropropane	13.426	76	506255	10.25	ppb(v	92
69)	2-Hexanone	13.768	58	336946	11.30	ppb(v	92
70)	Ethyl Methacrylate	13.793	69	535940	10.68	ppb(v	98
71)	Dibromochloromethane	13.934	129	687753	11.67	ppb(v	99
72)	Tetrachloroethene	14.882	166	544196	9.27	ppb(v	99
73)	1,2-Dibromoethane	14.252	107	515122	9.65	ppb(v	98
74)	Octane	14.729	43	760901	10.83	ppb(v	92
75)	1,1,1,2-Tetrachloroethane	15.806	131	488216	10.42	ppb(v	98
77)	Chlorobenzene	15.824	112	778145	8.10	ppb(v	97
78)	Ethylbenzene	16.375	91	1291036	8.32	ppb(v	98
79)	m,p-Xylene	16.650	91	2038098	15.39	ppb(v	98
80)	Styrene	17.164	104	683738	8.69	ppb(v	98
81)	Nonane	17.708	43	803529	10.69	ppb(v	94
82)	o-Xylene	17.317	91	1082273	8.90	ppb(v	98
83)	Bromoform	16.717	173	602953	10.95	ppb(v	99
84)	1,1,2,2-Tetrachloroethane	17.323	83	744037	9.06	ppb(v	100
85)	1,2,3-Trichloropropane	17.512	75	571844	9.95	ppb(v	99
86)	Isopropylbenzene	18.228	105	1580361	8.88	ppb(v	98
87)	Bromobenzene	18.332	156	407167	8.93	ppb(v	98
88)	2-Chlorotoluene	18.956	126	343478	8.92	ppb(v	95
89)	n-Propylbenzene	19.030	120	391521	9.71	ppb(v	92
91)	4-Ethyltoluene	19.262	105	1330170	9.86	ppb(v	98
92)	1,3,5-Trimethylbenzene	19.384	105	1278056	9.32	ppb(v	99
93)	alpha-Methylstyrene	19.617	118	530443	9.99	ppb(v	99
94)	tert-Butylbenzene	19.960	134	315074	8.96	ppb(v	93
95)	1,2,4-Trimethylbenzene	19.972	105	1249846	10.11	ppb(v#	80
96)	1,3-Dichlorobenzene	20.168	146	575061	10.06	ppb(v	99
97)	Benzyl Chloride	20.155	91	623426	9.49	ppb(v	99
98)	1,4-Dichlorobenzene	20.265	146	518069	9.46	ppb(v	99
99)	sec-Butylbenzene	20.351	134	383941	9.35	ppb(v	89
100)	1,2,3-Trimethylbenzene	20.565	105	1298193	9.88	ppb(v	100
101)	p-Isopropyltoluene	20.584	134	404144	9.78	ppb(v	91
102)	1,2-Dichlorobenzene	20.730	146	586001	9.86	ppb(v	99
103)	n-Butylbenzene	21.159	134	284900	10.45	ppb(v	95
104)	Hexachloroethane	21.624	201	569625	12.20	ppb(v	96
105)	1,2,4-Trichlorobenzene	22.951	180	176924	7.21	ppb(v	99
106)	Naphthalene	23.073	128	425640	6.80	ppb(v	99
107)	Hexachlorobutadiene	23.520	225	554169	10.53	ppb(v	99
109)	TVHC as equiv Pentane	5.540	TIC	1951822	11.46	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

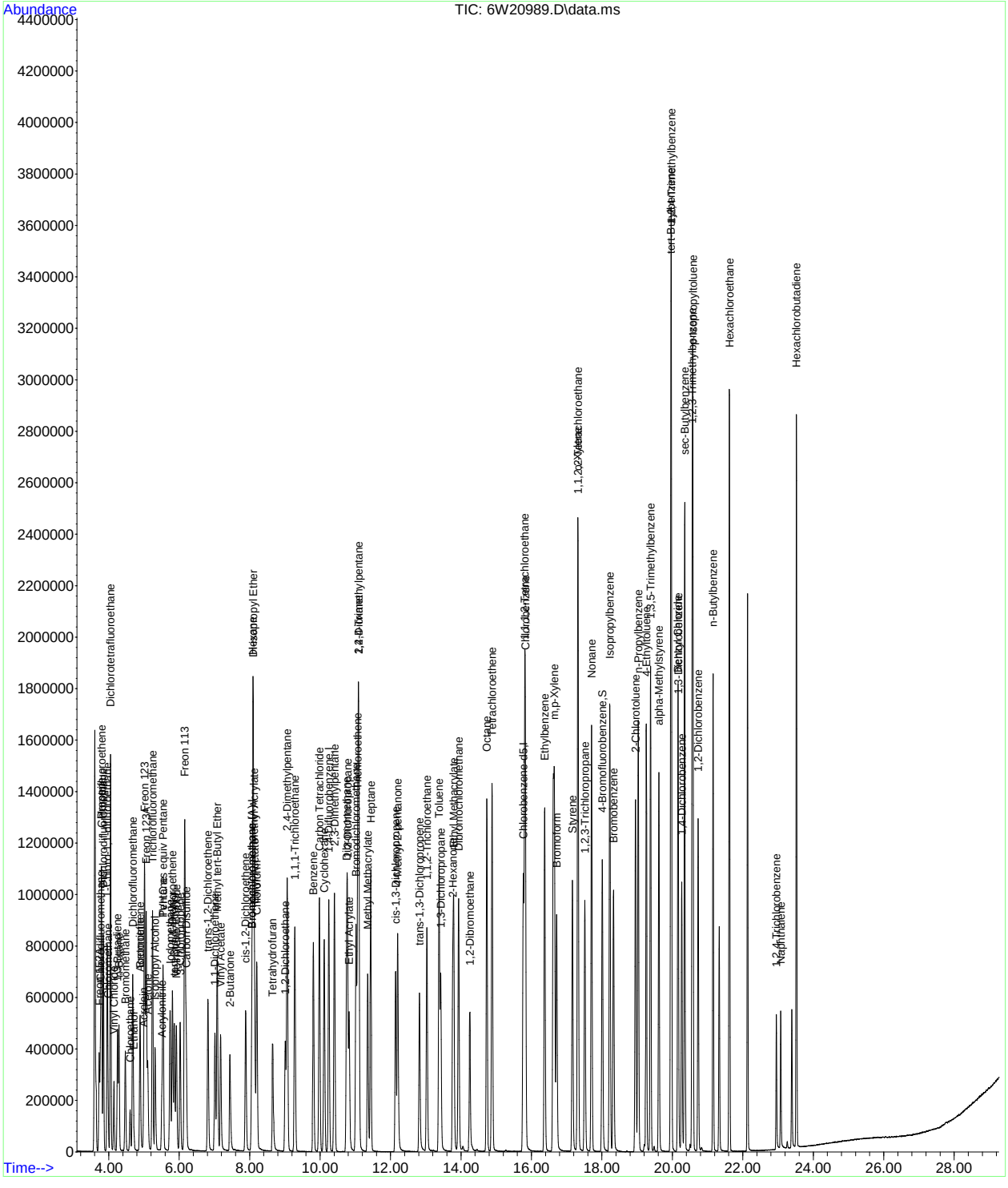
7.7.12

7

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W20989.D
Acq On : 14 Jan 2021 1:07 pm
Operator : thomash
Sample : cc848-10
Misc : MS48309,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 14 14:21:08 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21007.D
Acq On : 15 Jan 2021 4:31 am
Operator : thomash
Sample : ecc848-10
Misc : MS48294,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 09:16:01 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.061	130	261872	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.245	114	971378	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	484124	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.061	130	261872	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	544806	10.25	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 102.50%			
Target Compounds						Qvalue
2) Freon 152A	3.729	65	199671	11.51	ppb(v	97
3) Chlorodifluoromethane	3.766	67	94337	14.44	ppb(v	96
4) Propene	3.790	41	279275	12.41	ppb(v	98
5) Chlorotrifluoroethene	3.797	116	448538	10.27	ppb(v	98
6) Dichlorodifluoromethane	3.846	85	882396	12.17	ppb(v	100
7) 1-Chloro-1,1-difluoroe...	3.956	65	703697	13.87	ppb(v	99
8) Chloromethane	3.974	50	265316	11.18	ppb(v	99
9) Dichlorotetrafluoroethane	4.047	85	816869	11.23	ppb(v	97
10) Vinyl Chloride	4.145	62	293643	10.93	ppb(v#	99
11) 1,3-Butadiene	4.249	54	220245	10.87	ppb(v	97
12) n-Butane	4.292	58	56377	10.30	ppb(v	95
13) Bromomethane	4.470	94	286906	10.70	ppb(v	100
14) Acrolein	4.990	56	124089	9.62	ppb(v#	98
15) Chloroethane	4.604	64	150704	11.10	ppb(v	99
16) Dichlorofluoromethane	4.678	67	702957	10.98	ppb(v	100
17) Acetonitrile	4.886	41	235668	9.72	ppb(v	98
18) Freon 123	5.014	83	694134	9.68	ppb(v	99
19) Freon 123A	5.063	117	411905	9.95	ppb(v	94
20) Bromoethene	4.892	106	290428	10.01	ppb(v	99
21) Trichlorofluoromethane	5.240	101	867406	12.03	ppb(v	99
22) Acetone	5.106	58	133494	9.17	ppb(v	87
23) Pentane	5.540	57	77938	9.51	ppb(v	92
24) Iodomethane	5.742	142	760655	8.89	ppb(v	93
25) Isopropyl Alcohol	5.314	45	562113	9.47	ppb(v	97
26) 1,1-Dichloroethene	5.803	61	486811	10.67	ppb(v	96
27) Freon 113	6.152	101	621531	9.30	ppb(v	99
28) Methylene Chloride	5.919	84	250487	8.84	ppb(v	95
29) Carbon Disulfide	6.195	76	842728	9.36	ppb(v	100
30) Ethanol	4.702	45	115139	9.91	ppb(v	98
31) Acrylonitrile	5.510	53	226825	10.78	ppb(v	100
32) 3-Chloropropene	6.030	76	133604	9.77	ppb(v	82
33) trans-1,2-Dichloroethene	6.813	61	431904	10.45	ppb(v	95
34) tert-Butyl Alcohol	5.858	59	633635	10.64	ppb(v	98
35) Methyl tert-Butyl Ether	7.082	73	860677	9.76	ppb(v	98
36) Vinyl Acetate	7.174	43	808790	10.88	ppb(v	95
37) 1,1-Dichloroethane	7.014	63	518894	9.93	ppb(v	99
38) 2-Butanone	7.437	72	132191	9.76	ppb(v	92
39) Hexane	8.091	57	457748	9.53	ppb(v	94
40) cis-1,2-Dichloroethene	7.883	61	407726	10.24	ppb(v	95
41) Di-isopropyl Ether	8.103	87	255157	9.04	ppb(v	84
42) Ethyl Acetate	8.140	61	99098	10.61	ppb(v	94
43) Methyl Acrylate	8.128	55	544415	10.61	ppb(v	98
44) Chloroform	8.201	83	657583	10.25	ppb(v	98
45) 2,4-Dimethylpentane	9.064	57	533440	9.37	ppb(v	98
46) Tetrahydrofuran	8.654	72	137424	10.31	ppb(v	94
47) 1,1,1-Trichloroethane	9.284	97	671018	10.43	ppb(v	100
48) 1,2-Dichloroethane	9.009	62	438689	12.50	ppb(v	98
49) Benzene	9.810	78	875151	8.71	ppb(v	99
50) Carbon Tetrachloride	9.982	117	725522	11.55	ppb(v	99
51) Cyclohexane	10.110	56	455033	9.24	ppb(v	94
52) 2,3-Dimethylpentane	10.410	71	198946	8.95	ppb(v	94
54) 2,2,4-Trimethylpentane	11.095	57	1523164	10.04	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21007.D
Acq On : 15 Jan 2021 4:31 am
Operator : thomash
Sample : ecc848-10
Misc : MS48294,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 09:16:01 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

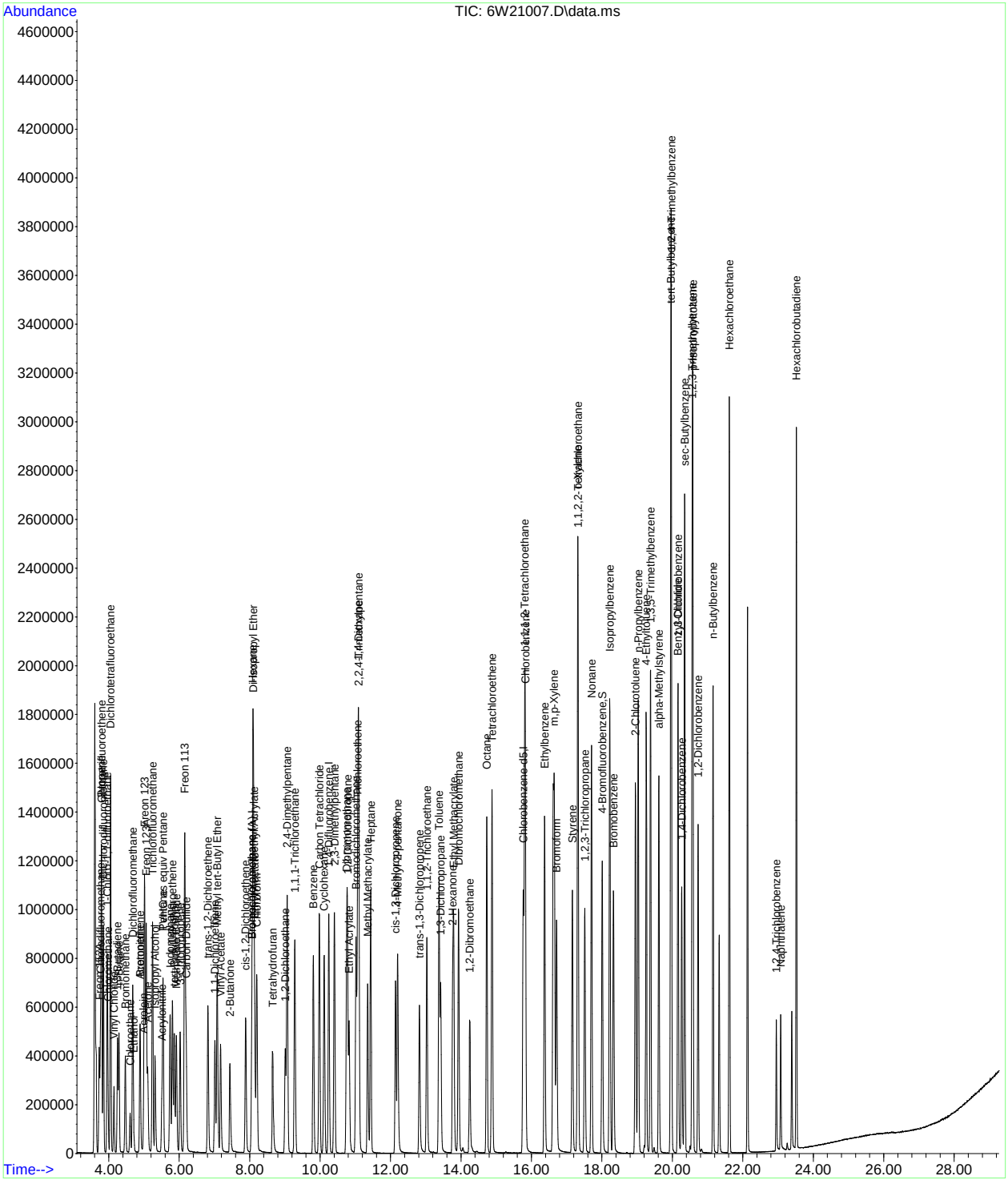
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.438	71	315233	9.48	ppb(v	97
56)	Trichloroethene	11.064	95	403525	9.64	ppb(v	99
57)	1,2-Dichloropropane	10.777	63	335558	9.63	ppb(v	98
58)	Dibromomethane	10.752	174	393543	9.19	ppb(v	98
59)	Ethyl Acrylate	10.820	55	653015	10.65	ppb(v	98
60)	Methyl Methacrylate	11.346	69	329659	10.42	ppb(v	88
61)	1,4-Dioxane	11.089	88	199906	9.22	ppb(v	86
62)	Bromodichloromethane	11.022	83	711805	11.28	ppb(v	99
63)	cis-1,3-Dichloropropene	12.141	75	523738	10.19	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	273533	11.44	ppb(v	95
65)	trans-1,3-Dichloropropene	12.820	75	467246	10.97	ppb(v	98
66)	Toluene	13.377	91	1039837	8.84	ppb(v	99
67)	1,1,2-Trichloroethane	13.028	97	358490	9.60	ppb(v	99
68)	1,3-Dichloropropane	13.420	76	519109	10.41	ppb(v	95
69)	2-Hexanone	13.762	58	336072	11.15	ppb(v	91
70)	Ethyl Methacrylate	13.793	69	542808	10.70	ppb(v	98
71)	Dibromochloromethane	13.934	129	699366	11.75	ppb(v	99
72)	Tetrachloroethene	14.882	166	573259	9.66	ppb(v	99
73)	1,2-Dibromoethane	14.246	107	519139	9.63	ppb(v	99
74)	Octane	14.729	43	752532	10.60	ppb(v	94
75)	1,1,1,2-Tetrachloroethane	15.806	131	507903	10.73	ppb(v	96
77)	Chlorobenzene	15.824	112	808798	8.20	ppb(v	99
78)	Ethylbenzene	16.368	91	1330169	8.35	ppb(v	98
79)	m,p-Xylene	16.644	91	2097034	15.43	ppb(v	99
80)	Styrene	17.164	104	717930	8.89	ppb(v	99
81)	Nonane	17.708	43	811492	10.51	ppb(v	97
82)	o-Xylene	17.317	91	1118590	8.96	ppb(v	99
83)	Bromoform	16.711	173	614336	10.87	ppb(v	98
84)	1,1,2,2-Tetrachloroethane	17.323	83	769838	9.13	ppb(v	100
85)	1,2,3-Trichloropropane	17.512	75	589340	9.99	ppb(v	100
86)	Isopropylbenzene	18.222	105	1692902	9.27	ppb(v	98
87)	Bromobenzene	18.332	156	444005	9.49	ppb(v	96
88)	2-Chlorotoluene	18.950	126	394064	9.98	ppb(v	95
89)	n-Propylbenzene	19.030	120	447308	10.81	ppb(v	98
91)	4-Ethyltoluene	19.256	105	1461297	10.56	ppb(v	99
92)	1,3,5-Trimethylbenzene	19.384	105	1390685	9.88	ppb(v	100
93)	alpha-Methylstyrene	19.617	118	588200	10.80	ppb(v	97
94)	tert-Butylbenzene	19.960	134	344552	9.55	ppb(v	92
95)	1,2,4-Trimethylbenzene	19.972	105	1350514	10.65	ppb(v#	86
96)	1,3-Dichlorobenzene	20.161	146	615034	10.48	ppb(v	99
97)	Benzyl Chloride	20.155	91	664003	9.85	ppb(v	99
98)	1,4-Dichlorobenzene	20.265	146	555549	9.89	ppb(v	98
99)	sec-Butylbenzene	20.351	134	425077	10.09	ppb(v	97
100)	1,2,3-Trimethylbenzene	20.565	105	1389952	10.31	ppb(v	99
101)	p-Isopropyltoluene	20.584	134	446040	10.51	ppb(v	96
102)	1,2-Dichlorobenzene	20.730	146	625161	10.24	ppb(v	98
103)	n-Butylbenzene	21.159	134	309314	11.05	ppb(v	98
104)	Hexachloroethane	21.617	201	588086	12.27	ppb(v	95
105)	1,2,4-Trichlorobenzene	22.951	180	185020	7.34	ppb(v	99
106)	Naphthalene	23.073	128	448906	6.99	ppb(v	100
107)	Hexachlorobutadiene	23.520	225	572985	10.60	ppb(v	100
109)	TVHC as equiv Pentane	5.540	TIC	1955983	11.35	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21007.D
Acq On : 15 Jan 2021 4:31 am
Operator : thomash
Sample : ecc848-10
Misc : MS48294,V6W882,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 09:16:01 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21009.D
Acq On : 15 Jan 2021 10:32 am
Operator : danat
Sample : cc848-10
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 11:15:25 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Bromochloromethane	8.060	130	262387	10.00	ppb(v	-0.02
53) 1,4-Difluorobenzene	10.244	114	974181	10.00	ppb(v	-0.02
76) Chlorobenzene-d5	15.763	82	477060	10.00	ppb(v	-0.02
108) Bromochloromethane (A)	8.060	130	262387	10.00	ppb(v	-0.02
System Monitoring Compounds						
90) 4-Bromofluorobenzene	18.008	95	526958	10.06	ppb(v	-0.02
Spiked Amount 10.000	Range 65 - 128		Recovery = 100.60%			
Target Compounds						Qvalue
2) Freon 152A	3.735	65	171031	9.84	ppb(v	99
3) Chlorodifluoromethane	3.766	67	85918	13.13	ppb(v	96
4) Propene	3.790	41	232626	10.31	ppb(v	99
5) Chlorotrifluoroethene	3.796	116	402313	9.19	ppb(v	98
6) Dichlorodifluoromethane	3.851	85	803440	11.06	ppb(v	99
7) 1-Chloro-1,1-difluoroe...	3.955	65	683810	13.45	ppb(v	99
8) Chloromethane	3.974	50	252210	10.60	ppb(v	100
9) Dichlorotetrafluoroethane	4.053	85	812060	11.15	ppb(v	95
10) Vinyl Chloride	4.145	62	292258	10.86	ppb(v#	99
11) 1,3-Butadiene	4.255	54	222939	10.99	ppb(v	97
12) n-Butane	4.292	58	56721	10.35	ppb(v	96
13) Bromomethane	4.469	94	288729	10.75	ppb(v	100
14) Acrolein	4.989	56	125748	9.73	ppb(v#	96
15) Chloroethane	4.604	64	149138	10.96	ppb(v	99
16) Dichlorofluoromethane	4.677	67	709475	11.06	ppb(v	100
17) Acetonitrile	4.891	41	236794	9.75	ppb(v	98
18) Freon 123	5.014	83	703535	9.80	ppb(v	99
19) Freon 123A	5.063	117	414846	10.01	ppb(v	95
20) Bromoethene	4.891	106	292484	10.06	ppb(v	97
21) Trichlorofluoromethane	5.240	101	880803	12.19	ppb(v	99
22) Acetone	5.106	58	135996	9.32	ppb(v	88
23) Pentane	5.540	57	75278	9.17	ppb(v	86
24) Iodomethane	5.742	142	766220	8.94	ppb(v	93
25) Isopropyl Alcohol	5.314	45	572643	9.63	ppb(v	99
26) 1,1-Dichloroethene	5.803	61	495043	10.83	ppb(v	94
27) Freon 113	6.158	101	628641	9.39	ppb(v	99
28) Methylene Chloride	5.925	84	254018	8.94	ppb(v	97
29) Carbon Disulfide	6.195	76	860853	9.54	ppb(v	99
30) Ethanol	4.702	45	117227	10.07	ppb(v	99
31) Acrylonitrile	5.509	53	227321	10.78	ppb(v	99
32) 3-Chloropropene	6.029	76	137530	10.04	ppb(v	82
33) trans-1,2-Dichloroethene	6.812	61	440690	10.64	ppb(v	93
34) tert-Butyl Alcohol	5.858	59	643357	10.78	ppb(v	98
35) Methyl tert-Butyl Ether	7.082	73	870626	9.85	ppb(v	98
36) Vinyl Acetate	7.173	43	820221	11.01	ppb(v	97
37) 1,1-Dichloroethane	7.014	63	531934	10.16	ppb(v	98
38) 2-Butanone	7.436	72	138348	10.20	ppb(v	89
39) Hexane	8.091	57	460705	9.57	ppb(v	95
40) cis-1,2-Dichloroethene	7.883	61	413416	10.36	ppb(v	93
41) Di-isopropyl Ether	8.103	87	259773	9.19	ppb(v	87
42) Ethyl Acetate	8.140	61	98641	10.54	ppb(v	84
43) Methyl Acrylate	8.128	55	553712	10.77	ppb(v	99
44) Chloroform	8.201	83	668733	10.40	ppb(v	99
45) 2,4-Dimethylpentane	9.064	57	540934	9.48	ppb(v	97
46) Tetrahydrofuran	8.648	72	134929	10.11	ppb(v	91
47) 1,1,1-Trichloroethane	9.284	97	685906	10.64	ppb(v	99
48) 1,2-Dichloroethane	9.009	62	447174	12.71	ppb(v	99
49) Benzene	9.810	78	894159	8.89	ppb(v	99
50) Carbon Tetrachloride	9.981	117	744279	11.83	ppb(v	99
51) Cyclohexane	10.116	56	463693	9.40	ppb(v	95
52) 2,3-Dimethylpentane	10.410	71	201926	9.06	ppb(v	89
54) 2,2,4-Trimethylpentane	11.095	57	1546009	10.16	ppb(v	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21009.D
Acq On : 15 Jan 2021 10:32 am
Operator : danat
Sample : cc848-10
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 11:15:25 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration

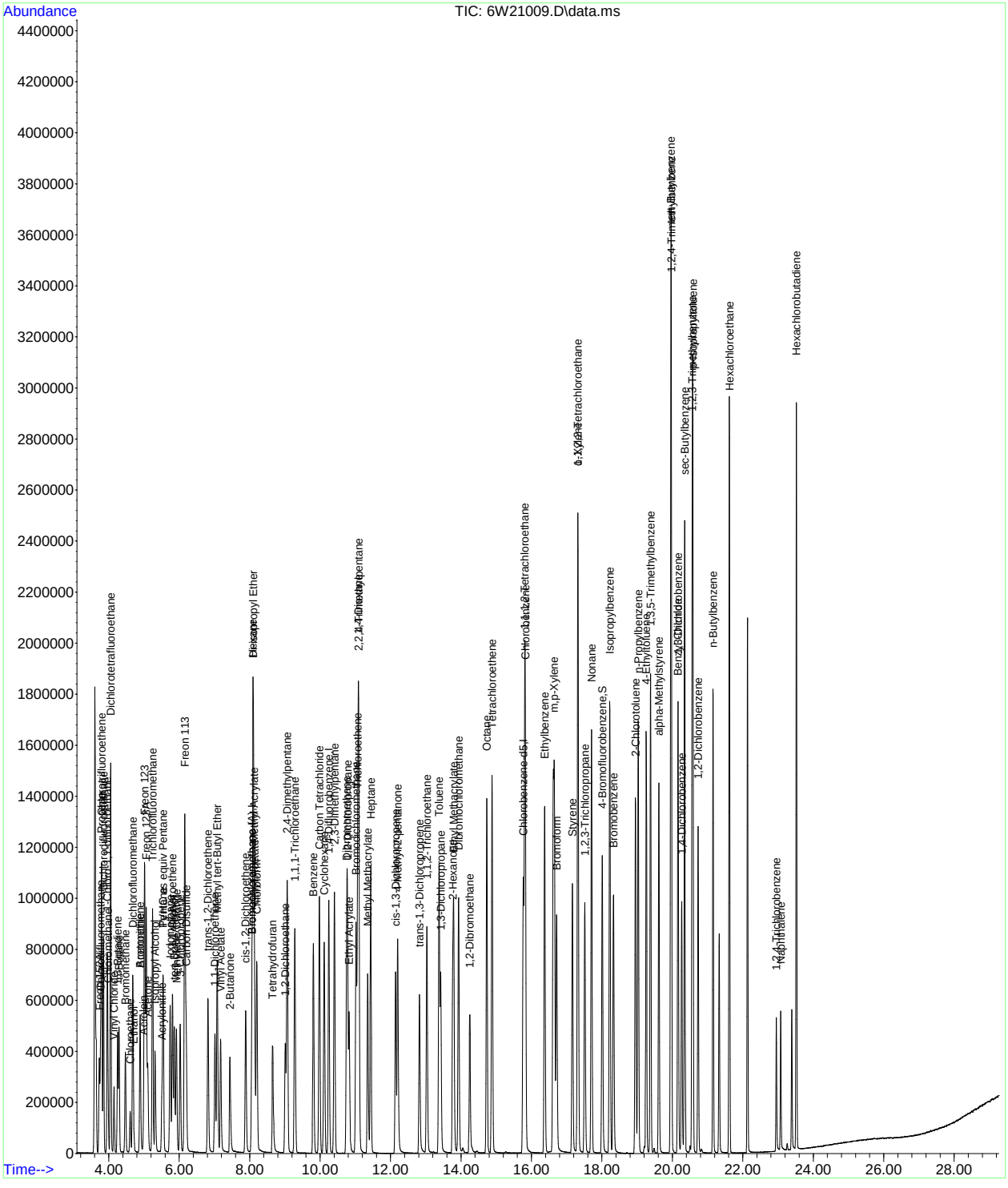
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
55)	Heptane	11.437	71	323049	9.69	ppb(v	96
56)	Trichloroethene	11.064	95	414249	9.86	ppb(v	99
57)	1,2-Dichloropropane	10.777	63	342941	9.82	ppb(v	97
58)	Dibromomethane	10.752	174	395853	9.22	ppb(v	98
59)	Ethyl Acrylate	10.820	55	660348	10.74	ppb(v	98
60)	Methyl Methacrylate	11.346	69	338709	10.68	ppb(v	87
61)	1,4-Dioxane	11.089	88	201577	9.27	ppb(v	90
62)	Bromodichloromethane	11.021	83	724727	11.45	ppb(v	100
63)	cis-1,3-Dichloropropene	12.147	75	535651	10.39	ppb(v	98
64)	4-Methyl-2-pentanone	12.202	58	279052	11.64	ppb(v	94
65)	trans-1,3-Dichloropropene	12.820	75	477552	11.18	ppb(v	97
66)	Toluene	13.377	91	1042305	8.83	ppb(v	99
67)	1,1,2-Trichloroethane	13.028	97	360476	9.63	ppb(v	98
68)	1,3-Dichloropropane	13.426	76	521593	10.43	ppb(v	94
69)	2-Hexanone	13.768	58	335992	11.12	ppb(v	94
70)	Ethyl Methacrylate	13.793	69	545213	10.72	ppb(v	97
71)	Dibromochloromethane	13.933	129	700568	11.73	ppb(v	98
72)	Tetrachloroethene	14.882	166	569577	9.57	ppb(v	99
73)	1,2-Dibromoethane	14.245	107	521924	9.65	ppb(v	98
74)	Octane	14.729	43	752357	10.57	ppb(v	93
75)	1,1,1,2-Tetrachloroethane	15.805	131	507439	10.69	ppb(v	98
77)	Chlorobenzene	15.824	112	801937	8.25	ppb(v	98
78)	Ethylbenzene	16.374	91	1319643	8.41	ppb(v	98
79)	m,p-Xylene	16.644	91	2077897	15.52	ppb(v	98
80)	Styrene	17.164	104	702438	8.83	ppb(v	99
81)	Nonane	17.708	43	800928	10.53	ppb(v	96
82)	o-Xylene	17.317	91	1103996	8.98	ppb(v	99
83)	Bromoform	16.717	173	614408	11.03	ppb(v	97
84)	1,1,2,2-Tetrachloroethane	17.317	83	754307	9.08	ppb(v	99
85)	1,2,3-Trichloropropane	17.512	75	575088	9.89	ppb(v	100
86)	Isopropylbenzene	18.222	105	1606361	8.92	ppb(v	98
87)	Bromobenzene	18.332	156	420838	9.13	ppb(v	98
88)	2-Chlorotoluene	18.956	126	354170	9.10	ppb(v	99
89)	n-Propylbenzene	19.029	120	395202	9.69	ppb(v	91
91)	4-Ethyltoluene	19.256	105	1340993	9.83	ppb(v	99
92)	1,3,5-Trimethylbenzene	19.384	105	1284961	9.26	ppb(v	98
93)	alpha-Methylstyrene	19.617	118	528668	9.85	ppb(v	98
94)	tert-Butylbenzene	19.959	134	322716	9.08	ppb(v	91
95)	1,2,4-Trimethylbenzene	19.972	105	1256973	10.06	ppb(v#	83
96)	1,3-Dichlorobenzene	20.161	146	562265	9.73	ppb(v	98
97)	Benzyl Chloride	20.155	91	601773	9.06	ppb(v	99
98)	1,4-Dichlorobenzene	20.265	146	503270	9.09	ppb(v	98
99)	sec-Butylbenzene	20.351	134	390819	9.41	ppb(v	95
100)	1,2,3-Trimethylbenzene	20.565	105	1301782	9.80	ppb(v	100
101)	p-Isopropyltoluene	20.583	134	411961	9.85	ppb(v	93
102)	1,2-Dichlorobenzene	20.730	146	578858	9.63	ppb(v	100
103)	n-Butylbenzene	21.158	134	287352	10.42	ppb(v	98
104)	Hexachloroethane	21.623	201	566547	12.00	ppb(v	94
105)	1,2,4-Trichlorobenzene	22.951	180	178197	7.18	ppb(v	97
106)	Naphthalene	23.073	128	426225	6.73	ppb(v	99
107)	Hexachlorobutadiene	23.520	225	565656	10.62	ppb(v	99
109)	TVHC as equiv Pentane	5.540	TIC	1963997	11.37	ppb(v	100

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\
Data File : 6W21009.D
Acq On : 15 Jan 2021 10:32 am
Operator : danat
Sample : cc848-10
Misc : MS48294,V6W883,,,,,1
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jan 15 11:15:25 2021
Quant Method : C:\msdchem\1\methods\m6w848.M
Quant Title : TO-15 Full Scan Mode
QLast Update : Thu Nov 19 10:03:02 2020
Response via : Initial Calibration



SGS

TO-15

Batch ID: V6W848

Date: 11/18/20

Analyst Signature:

Columns: RTX-1 60mx0.32mm 1.5um

Method: 6W7015.M

Seq. File: 6W20201118.S

Initial Cal. Method: M6W848.M

AS Data

Method: 7015. STD

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS8842	Int/Surr	100ppbv
AS8979	7015 STD (A971)	40ppbv
AS9000	7015 STD (A964)	100ppbv
AS8977	7015 LCS (A977)	40ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crite of SGS SOP EQA044.

Supervisor Signature: Date: 11/19/20

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comment
1	6W20155	BFB		A964	20					ok	1:23 pm
1	6W20156	IC848-0.04		A964	16			✓	✓	ok	
1	6W20157	IC848-0.1		A964	40			✓	✓	ok	
1	6W20158	IC848-0.2		A964	80			✓	✓	ok	
1	6W20159	IC848-0.5		A964	200			✓	✓	ok	
2	6W20160	IC848-5		A971	50			✓	✓	ok	
2	6W20161	IC848-10		A971	100			✓	✓	ok	
2	6W20162	IC848-20		A971	200					RR	bad injection
3	6W20163	IB		A959	100					—	
2	6W20164	IC848-40		A971	400			✓	✓	ok	
3	6W20165	IB		A959	100					—	
4	6W20166	ICV848-10		A977	100					RR	
2	6W20167	IC848-20		A971	200			✓	✓	ok	
3	6W20168	IB		A959	100					—	
4	6W20169	ICV848-10		A977	100			✓	✓	ok	

TH 11/19/20

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

SGS

TO-15

Batch ID: V6W854

Date: 11/27/20

Analyst Signature: Prashant B Shah

Columns: RTX1 60mx0.32mmx1

Method: 6W TO15

Seq. File: 6W 20201127.S

Initial Cal. Method: M 6W Sub

AS Data

Method: TO15 CTD3

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS8842	Int/Surr	100 ppbv
AS8999	TO15 Std (A971)	100 ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crit of SGS SOP EQA044.

Supervisor Signature: [signature] Date: 11/28/2020

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comment
1	6W20306	BFB		open	100						
2	6W20307	CL 848-10		A971	100			✓	✓	ok	3:23 PM
2	6W20308	BS		A971	100			✓	✓	ok	
2	6W20309	BSD		A971	100			✓	✓	ok	
3	6W20310	IB		A959	100			✓	✓	ok	
3	6W20311	MB		A959	100			—	—	—	
4	6W20312	SCL CP10953		A265	100	1		✓	✓	ok	
5	6W20313	SCL CP10957		A004	100	1		✓	✓	ok	
6	6W20314	SCL CP10956		A214	100	1		✓	✓	ok	
7	6W20315	SCL CP10964		A1101	100	1		✓	✓	ok	
8	6W20316	SCL CP10936		M007	100	1		✓	✓	ok	
9	6W20317	SCL CP10960		A790	100	1		✓	✓	ok	
10	6W20318	SCL CP10962		A808	100	1		✓	✓	ok	
11	6W20319	SCL CP10961		A588	100	1		✓	✓	ok	

[signature] 11/28/20

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

SGS

TO-15

Batch ID: V6W859

Date: 12/3/20

Analyst Signature:

Columns: RTX-1 60m×0.32mm×1.0

Method: 6W TO15.M

Seq. File: 6W20201203.S

Initial Cal. Method: M6W848.M

AS Data

Method: TO15.CTD3

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS8842	Int/Surr.	100ppbv
AS9004	TO15 STD (A971)	40ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crit of SGS SOP EQA044.

Supervisor Signature: Date: 12/4/20

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Commen
1	6W20403 4	BFB		open position	400					OK	
2	6W20403 5	CC848-10		A971	100					RR	head injection RT shift
2	6W20406	CC848-10		A971	100			✓	✓	OK	
2	6W20407	BS		A971	100			✓	✓	OK	
2	6W20408	BSD		A971	100			✓	✓	OK	
3	6W20409	IB		A959	100					—	
3	6W20410	MB		A959	400			✓	✓	OK	
4	6W20411	JD16597-8	STD M547361	A1160	100	1		✓	✓	OK/OK	
5	6W20412	see CP10967		A410	100					NG	TCE hit Reclean
6	6W20413	see CP10968		A1220	100					NG	xylenes hit reclean
7	6W20414	see CP10958		A167	400						
8	6W20415	see CP10963		A758	400						
9	6W20416	JD16439-1	STD MA47242	A272, TBAG	400	115				RR	Up peak's not enough with methyl iodide / Reclean hit
10	6W20417	JD16439-4	STD MS47242	A234	155	1.55				RR	
11	6W20418	JD16493-1	STD MS47242	A1121	100	1		✓	✓	OK	
11	6W20419	JD16493-1DUP	✓	A1121	100	1		✓	✓	OK	
12	6W20420	JD16719-1	STD MS47413	TBAG, TBAG	50	1000				RR	too dilute
13	6W20421	JD16719-2	✓	TBAG, TBAG	80	100				RR	too dilute
14	6W20422	JD16719-3	✓	TBAG	20	1				RR	too dilute
15	6W20423	JD16560-1	STD MS47367	A1252	100	1					
16	6W20424	JD16560-2	✓	A1224	100	1					
1	6W20425	JD16560-3	✓	A1225	100	1					
2	6W20426	JD16560-4	✓	A328	100	1					
3	6W20427	JD16560-5	✓	A595	100	1					
4	6W20428	JD16560-6	✓	A407	100	1					
5	6W20429	JD16560-7	✓	A726	100	1					

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

SGS

TO-15

Batch ID: V6W882

Date: 1/14/21

Analyst Signature: [signature]

Columns: RTX-1 60m x 0.32mm x 1.0µm
Method: 6WJ015.M
Seq. File: 6W20210114.S
Initial Cal. Method: M6W848.M

AS Data

Method: J015, CD3

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS8842	Int/Surr	100ppbv
AS8839	J015 STD (A971)	40ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crite of SGS SOP EQA044.

Supervisor Signature: [signature] Date: 1/19/21

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comment
1	6W20985	BFB		open position	400					RR	
2	6W20986	CC 848-10		A971	100					RR	
2	6W20987	CC 848-10		A971	100					RR	
1	6W20988	BFB		open position	400					OK	12:20pm
2	6W20989	CC 848-10		A971	100			✓	✓	OK	
2	6W20990	BS		A971	100			✓	✓	OK	
2	6W20991	BSD		A971	100			✓	✓	OK	
3	6W20992	IB		A959	100					—	
3	6W20993	MB		A959	400			✓	✓	OK	
4	6W20994	JD18950-1	SL MS48382	A1252	100	1		✓	✓	OM	
5	6W20995	JD18950-2	✓	A1252	100	1		✓	✓	OM	
6	6W20996	JD18950-3	✓	A1224	100	1		✓	✓	OM	
6	6W20997	JD18950-3DUP	✓	A1224	100	1		✓	✓	OM	
7	6W20998	JD18775-1	STD MS48294	A810, TRAC	400	1100		✓	✓	OK	
8	6W20999	JD18775-2	✓	M026	100	1		✓	✓	OK	
9	6W21000	JD18852-1	✓	M162	400	1		✓	✓	OK	
10	6W21001	JD18853-1	MSL MS48350	A1074	592	1.48		✓	✓	OK/DL	pm 4X, tetrahydr found
11	6W21002	JD18853-2	✓	A837	740	1.48		✓	✓	OK	
12	6W21003	JD18853-3	✓	A768	400	1		✓	✓	OK	
13	6W21004	JD18853-4	✓	A300	760	1.52		✓	✓	OK	
14	6W21005	JD18853-5	✓	A873	800	2.21		✓	✓	OK	
3	6W21006	IB		A959	100					—	
2	6W21007	ECC 848-10		A971	100			✓	✓	OK	
								TH 1/18/21			

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

SGS

TO-15

Batch ID: 6W 883

Analyst Signature:

Date: 1/18/21

Columns: Rtx-1 60mx0.32mmx1.0

Method: 6WTO15.m

Seq. File: 6W20210115.s

Initial Cal. Method: 6W848.m

AS Data

Method: TO15.CT03

Standard Data

Lot #	Description	Conc.

Standard Data

Lot #	Description	Conc.
AS8842	Int/Surr	100 ppbv
AS8039	TO15 Std (A971)	40 ppbv

(M) Manually integrated chromatographic peaks in the following reportable file have been reviewed and verified to comply with the crite of SGS SOP EQA044.

Supervisor Signature: Date: 1/20/21

AS #	Data File	Sample ID	TEST	Canister Serial #	Vol Sample	Dil Fact	TICS	Int. STD Areas	Surr	Status Data	Comment
1	6W21008	BFB		Open	400					OK	tune 945
2	6W21009	CC848-10		A971	100			✓	✓	OK	no ref
2	6W21010	BS		A971	100			✓	✓	OK	
2	6W21011	BSD		A971	100			✓	✓	OK	
3	6W21012	IB		A959	100						
3	6W21013	MB		A959	400			✓	✓	OK	
4	6W21014	0018853-1	TO15MSVOC MS48350	A1074	100	1		✓	✓	OK/DL	
5	6W21015	0018872-1	TO15STD	A1018	100	1		✓	✓	OK	
5	6W21016	0018873-1	MS48349	A1018	100	1		✓	✓	OK	
6	6W21017	0018873-2		A196	100	1					
7	6W21018	0018873-3		A271	170	1.7					F113 ↑ RR 10mL
8	6W21019	0018873-4		A824	100	1					
9	6W21020	0018873-5		A227	148	1.48					[illegible]
10	6W21021	0018873-6		A298	190	1.9		3↓		RR	~~[illegible]~~ RR ~~[illegible]~~ TH possible c/o
11	6W21022	0019064-1	TO15STD	A212	400	1		3↓		RR	possible c/o
12	6W21023	0019064-2	MS48428	A148	400	1		3↓		RR	possible c/o
13	6W21024	0019064-3		A298	400	1		3↓		RR	possible c/o
14	6W21025	0019064-4		A272	400	1		✓	✓	OK	
15	6W21026	0019064-5		A1033	400	1		✓	✓	OK	
16	6W21027	0019064-6		A872	400	1		✓	✓	OK	
1	6W21028	0019064-7		A351	400	1		3↓		RR	
2	6W21029	0019065-1		A257	400	1		✓	✓	OK	
3	6W21030	0019065-2		A280	720	1.8		✓	✓	OK	
4	6W21031	0019065-3		A646	400	1		✓	✓	OK	
5	6W21032	0019065-4		A906	400	1		✓	✓	OK	
										TH 1/18/21	

All strikeouts must be initial and dated. Comment is require for anything other than a transcription error.

Appendix E – Data Usability Summary Report

RemVēr

Quality Assessment
Data Usability Summary Report

			RemVēr Project #2020-GE-01 Client Project # 1102707-02-210
Site:	Orangetown Shopping Center	**Site #:**	C344066
Client:	GES, Inc.	**Site Owner:**	UB Orangeburg, LLC (UBO)
Sample Delivery Group (SDG)	JD18853		
Sample Matrix:	☐ Drinking water ☐ Groundwater ☐ Surface water ☐ Soil ☐ Sediment ☒ Air ☐ Biota (tissue, type: _____) ☐ Other: _____		

Introduction

RemVēr performed a data quality assessment (DQA) on analytical data reported in Sample Delivery Group (SDG) #JD18853 for air samples. The DQA evaluated the performance of the analytical procedures and the quality of the resulting data. RemVēr followed the requirements of the New York State Department of Environmental Conservation (NYSDEC) Data Usability Summary Report (DUSR) guidelines for an Analytical Services Protocol (ASP) Category B Data Deliverable. This report includes a narrative discussion of sample results qualified during the DQA. Table 1 describes qualification flags applied to the data either by SGS or during the DQA process.

Reported Methods

- ☐ Method 1311 TCLP
- ☐ Method 1312 SPLP
- ☐ Method 6010A, B & C / 6020 Trace Metals
- ☐ Method 7000 Metals
- ☐ Method 7196 Hexavalent Chromium (other:_____)
- ☐ Method 7470A or 7471 Mercury
- ☐ Method 8021 Volatile Organic Compounds (VOCs) GC
- ☐ Method 8081B Pesticides
- ☐ Method 8082 PCBs
- ☐ Method 8151 Chlorinated Herbicides
- ☐ Method 8260C VOCs GC/MS
- ☐ Method 8270D Semi-VOCs (sVOCs) GC/MS
- ☐ Method 9010/9012/9014 Cyanides (_____)
- ☐ Method TO-13A PAHs (air)
- ☒ Method TO-14A / -15 VOCs (air, summa) (_____)
- ☐ Method TO-17 VOCs (air, sorbent)
- ☐ Extractable Petroleum Hydrocarbons (EPH)
- ☐ Volatile Petroleum Hydrocarbons (VPH) Method
- ☐ EPH-total
- ☐ Other Methods:
  - Method 9060A Total Organic Carbon
  - Method MCAWW 300.0 Anions (IC)
  - Method RSK-175 Dissolved Gases
  - Method SM4500 Nitrite
  - Method 353 Nitrite & Nitrate

Quality Control Requirements Summary

- ☒ Duplicate (internal)
- ☐ Matrix Spike [MS] / Matrix Spike Duplicate [MSD]
- ☐ Trip Blank(s)
- ☐ Equipment, Method, &/or Rinsate Blank
- ☒ Other Field QC: Field notes regarding sampling
- ☐ Special QAPP Requirements: _____

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Intended Use of Data under Review

The client collected air samples during a two-consecutive day collection event beginning December 10, 2019 at the referenced New York State Brownfields site. The site is under a Site Management Plan (SMP) that requires several kinds of monitoring. The sampling event provided ambient and sub-slab/soil vapor monitoring (see §3.3 of Kleinfelder, 2011).

Significant Data Usability Issues Identified for SDG: #JD18853

Of the five samples (two soil gas, two indoor ambient air, and one outdoor ambient) discussed herein, RemVēr rejected no results, but flagged certain analytes as estimated due to the quality of the analysis and the results are acceptable for use. Some analytes had quality issues associated with results falling beyond the calibrated range requiring qualifier flagging. Please refer to the Lab Results and Data Usability Narrative section for further detail.

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Detailed Quality Review

Field Notes Review

	Y	N	NA	COMMENTS
Sampling notes	☒	☐	☐	Field Notes & COC sheets
Field meteorological data	☐	☐	☒	No review required under QAPP
Associated sampling location and plan included	☒	☐	☐	See RAP/QAPP
Associated drilling logs available, reviewed	☐	☐	☒	No review required under QAPP
Identification of QC samples in notes	☒	☐	☐	
Sampling instrument decontamination records	☐	☐	☒	No review required under QAPP
Sampling instrument calibration logs	☐	☐	☒	No review required under QAPP
Chain of custody included	☒	☐	☐	With analytical report
Notes include communication logs	☐	☒	☐	
Any corrective action (CA) reports	☐	☒	☐	If so, CA documentation of results required.
Any deviation from methods noted? If so, explain	☐	☒	☐	None
Any electronic data deliverables	☒	☐	☐	See Attachment #4
Sampling Report (by Field Team Leader)	☒	☐	☐	

Lab Report Contents (SGS SDG Report: #JD18853)

- ☒ SDG Narrative
- ☒ Contract Lab Sample Information Sheets
- ☒ Data Package Summary Forms
- ☒ Chain-of-Custody (COC) Forms
- ☒ Test Results (no tentatively identified compounds [TICs])
- ☒ Calibration standards
- ☒ Surrogate recoveries
- ☒ Blank results
- ☒ Spike recoveries
- ☒ Duplicate results
- ☒ Confirmation (lab check/QC) samples
- ☒ Internal standard area & retention time summary
- ☒ Chromatograms
- ☒ Raw data files
- ☒ Other specific information

The SDG reported on the following samples:

Sample ID	SDG #JD18853–Sample #	Matrix	Sampled	Received
VP–5-SV	#-1	SV	01/07/21	01/11/21
VP–5-A	#-2	IA	01/07/21	01/11/21
VP–6-SV	#-3	SV	01/07/21	01/11/21
VP–6-A	#-4	IA	01/07/21	01/11/21
Outdoor Ambient	#-5	OA	01/07/21	01/11/21

NOTES: SV = Soil Gas (Vapor) IA = Indoor Ambient Air OA = Outdoor Ambient Air

All samples associated with SDG #JD18853 were analyzed using USEPA Method TO-15.

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Is the data package complete as defined under the requirements for the NYSDEC ASP Category B?		
Laboratory Report	**Complete (Y/N)**	**Comments**
JD18853	Y	Yes

Sample Preservation Requirements & Holding Times Met?			
Laboratory Report	**Hold Times (Y/N)**	**Preservation (Y/N)**	**Exception Comment**
JD18853	Y	Y	None

Do all QC data fall within the protocol required limits and specifications? *(1) blanks, (2) instrument tunings, (3) calibration standards, (4) calibration verifications, (5) surrogate recoveries, (6) spike recoveries, (7) replicate analyses, (8) laboratory controls, and (9) sample data*									
SDG	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**
JD18853	☐	☐	☐	☐	☐	☐	☒	☐	☒
The narrative section, below, discusses these deficiencies in detail, see Attachments 2 and 3 as well.									

Were the data generated using established and agreed upon analytical protocols?		
Laboratory Report	**Protocols (Y/N)**	**Exception Comment**
JD18853	Y	None

Do the raw data confirm the results provided in the data summary sheets and quality control verification forms?		
Laboratory Report	**Confirmation (Y/N)**	**Exception Comment**
JD18853	Y	None

Were correct data qualifiers used and are they consistent with the most current guidance?		
Laboratory Report	**Qualifiers (Y/N)**	**Comment**
JD18853	Y	The laboratory generally applied appropriate qualifiers. To prepare the DUSR, it was necessary to apply additional qualifications or adjust qualifications to certain results as shown in Attachments 2, 3, and 4.

Were quality control (QC) exceedances specifically noted in this DUSR and the corresponding QC summary sheets from the data packages referenced?		
Laboratory Report	**QC Exceedances Documented (Y/N)**	**Comment**
JD18853	Y	Several data qualifications were applied as described below

Data Quality and Usability Narrative

Field Notes Inspection

The air samples came from a collection event on January 7, 2021. GES provided air sampling field notes related to the effort together with the COC.

Laboratory Report Inspection

The laboratory produced SDG report #JD18853. The original report was issued on 27Dec2019 and a full ASP Category B report issued 22Jan2021. The final report contained the required data and information.

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Chain of Custody (COC) Evaluation

GES produced one COC for the referenced fieldwork (#JD18853, single, one-page COC). The laboratory noted no quality issues.

Sample Preservation & Holding Time Evaluation

Laboratory received the canister samples on 1/11/2021 @ 10:30 (designated as SDG-JD18853) in proper condition. Holding times and preservation requirements were met. There were no issues noted with either the canisters or flow controllers.

Analytical

The laboratory ran the samples in two batches:

Sample	V6W882	V6W883
#-1 SV	X	X
#-2 IA	X	
#-3 SV	X	
#-4 IA	X	
#-5 OA	X	

The second batch served to confirm certain elevated results from the first run. Each batch included the required method blank, lab duplicate, and associated QA/QC samples and calibration checks.

Calibration Standards and Continuing Calibration Verification (CCV)

Calibration standard (external or internal) were acceptable in both batches for all analytes, with the following exceptions:

- The laboratory flagged certain results (Ethanol and Isopropyl Alcohol) for Sample(s) JD18853-2, JD18853-3, JD18853-4 as "E," indicating it is estimated and exceeding calibration range. Thus, RemVēr flagged these results with E J+.

CCV were acceptable in both batches for all analytes.

Blank Evaluation

There were no associated blanks, other than the ambient indoor and outdoor air samples. All laboratory method blanks performed within acceptable parameters.

Laboratory Control Samples (LCS)

The various LCS' were within the acceptable range for their particular analyses in SDG JD18853.

Surrogates

Surrogates added to a sample allow testing of preparatory and instrument behavior resulting in recoveries within appropriate method ranges for all analytes. The surrogate 4-Bromofluorobenzene performed within acceptable parameters across all Method TO-15 batches and sample runs in SDG JD18853.

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Site-Specific Matrix Spikes and Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) runs were required for the analyses per TO-15 Method.

Duplicates

The laboratory used internal and Sample #-3 for duplicates for these analytes; most duplicate analytes met the RPD performance criteria of <25% with exceptions. Only Styrene was the exception with a relative percent difference above the upper control limit, therefore, requiring a UJ or J-flag, as appropriate, in their batch as estimated results due to the lack of analytical precision. The resultant high RPD was due to low analyte concentrations.

Tentatively Identified Compounds (TICs)

This SDG had no analysis of TICs.

Sample Result and Usability Evaluation

All samples were run in one batch, while Sample #-1 was also run in a second batch to confirm certain analytical results due to high concentrations. Due to certain sample issues or laboratory performance some results were qualified, however, the data are usable. No data received an R (rejected) flag. If an analyte was above the MDL but below the RL, then it was flagged as “UJ”.

RemVēr modified SGS’s laboratory electronic data reports by adding quality flags (see Attachment #4 [separate file]: SDG-#JD18853_EquaNysdec.xls [EXCEL file]).

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References

Kleinfelder, 2011, *Site Management Plan, Orangetown Shopping Center, 1-45 Orangetown Shopping Center, Orangeburg, NY, NYSDEC Site #C344066*, Final, 21-November, 250p

NYSDEC, 2010, *Technical Guidance for Site Investigation and Remediation*, "DER-10," Division of Environmental Remediation: Albany, NY, May, 232p

NYSDEC, 2010, *Guidance for Data Deliverables and the Development of Data Usability Summary Reports*, Appendix 2B IN *Technical Guidance for Site Investigation and Remediation*, Division of Environmental Remediation: Albany, NY, May, 232p

USEPA, 2008, *Contract Laboratory Program National Functional Guidelines for Organic Data Review*, OSWER 9240.1-48, USEPA-540-R-08-01, Office of Superfund Remediation and Technology Innovation: Washington, DC, June, 225p

USEPA, 2010, *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*, OSWER 9240.1-51, USEPA-540-R-10-011, Office of Superfund Remediation and Technology Innovation: Washington, DC, January, 110p

USEPA, 2012, *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846*, Current Online Revision: http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/index.htm, accessed April 2012

Tables

1. Qualifier Flags

Attachments

1. Data Usability Reviewer Qualifications
2. DQA Detail Worksheet
3. DQA Non-Conformance Summary Workheet
4. Separate EXCEL File: SDG-#JD18853_EquaNysdec.xls [NOTE: RemVēr modified the SGS work products by adding quality flags]

Prepared by: Kurt A. Frantzen, PhD, CHMM
January 29, 2021

GES PO# #1113630

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Table 1
Qualifier Flags

Qualifier	Quality Implication
U	Analyte analyzed for, but not detected above the sample's reported quantitation limit
J	Analyte positively identified at a numerical value that is the approximate concentration of the analyte in the sample
J +	Sample likely to have a high bias
J –	Sample likely to have a low bias
UJ	Analyte not detected above the sample quantitation limit; the associated quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample
N	The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification."
NJ	The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.
R	Sample result rejected due to serious deficiency in ability to analyze sample and meet quality control criteria; the presence or absence of the analyte cannot be confirmed. This qualifier also may apply when more than one sample result is generated for a target analyte (*i.e.*, dilutions or re-analyses), the most technically acceptable result is considered acceptable.
B | EB **TB | BB**	An analyte identified in method blank (B), aqueous equipment (EB), trip (TB), or bottle blanks (BB) used to assess field contamination associated with soil or sediment samples mandates these qualifiers for only soil and sediment sample results.
P	Use professional judgment based on data use. It usually has an "M" with it, which indicates that a manual check should be made if the data that are qualified with the "P" are important to the data user. In addition, "PM" also means a decision is necessary from the Project Manager (or a delegate) concerning the need for further review of the data (*see below*).
PM	A manual review of the raw data is recommended to determine if the defect affects data use, as in "R" above. This review should include consideration of potential affects that could result from using the "P" qualified data. For example, in the case of holding-time exceedance, the Project Manager or delegate can decide to use the data with no qualification when analytes of interest are known not to be adversely affected by holding-time exceedances. Another example is the case where soil sample duplicate analyses for metals exceed the precision criteria; because this is likely due to sample non-homogeneity rather than contract laboratory error, then the manager or delegate must decide how to use the data.

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Attachment 1
Data Usability Reviewer: Kurt A. Frantzen, PhD

Experience

2013-Present	d/b/a RemVēr	Owner
2014-2019	AECC	Senior EHS Consultant
2011-2012	RemVēr, Inc.	President
2006-2011	Kleinfelder	Senior Principal Scientist
2005	Kleinfelder	Principal Scientist, Part-Time/On Call
2004-2006	d/b/a Environmental Risk Group	Owner
2004-2006	RemVēr, Inc., Larchmont, NY	Founder, President
1999-2004	VHB, Inc.	ERM Director & Associate
1997-1998	GEI Consultants, Inc.	Senior Project Manager
1992-1997	Ecology and Environment, Inc.	Technical Chief
1991-1992	EA Engineering, Science, & Technology, Inc.	Project Manager III
1990-1991	Ecology and Environment, Inc.	Technical Group Manager
1986-1990	Ecology and Environment, Inc.	Senior Environmental Scientist

Education

Am Cancer Soc. Post-Doctoral Fellow, U Washington 1985-1986

PhD—Life Sci. / Biochem, NU—Lincoln	1985
MS—Plant Pathology, Kansas State Univ.	1980
BS—Biology, NU—Omaha	1978

Professional Affiliations

Society Risk Analysis ('09 & '11 Chair, Eco-Risk Assessment)
Am. Chemistry Society
Am. Assoc. Advance Science
NY Academy of Science
Am. Institute of Biological Sciences
LSP Association

Other

- CERCLA & RCRA experience, as well as DOD (Air Force & Army) & DOE (INEL)
- NE Regional Experience—NY BCP; Mass MCP; & various sites in CT, RI & NH
- National Experience: NE, SE, Gulf & West Coast, Mid-west, Inter-mountain, California, Alaska
- International: Germany, Israel, Kuwait, Australia
- Selected Publications
    - *Using Risk Appraisals to Manage Environmentally Impaired Properties*, 2000, VHB Site Works, Report 108
    - *Risk-Based Analysis for Environmental Managers*, 2001, CRC/Lewis
    - Chapter 7 Risk Assessment, *Managing Hazardous Materials*, 2002 & 2009, IHMM
    - Chapter 22 Cleanup Goals, *Brownfields Law & Practice*, 2004-Present, Lexis/Nexis
    - *Use of Risk Assessment in Risk Management of Contaminated Sites*, 2008, ITRC
- 61 Conference Papers & Invited Professional Presentations
    - 1999-2021, Visiting Lecturer, Brownfields Program & Open Studio, Harvard Graduate School of Design
    - 2010-2013, Invited Lecturer, Pace University Law School

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Attachment 2
DQA Detail Worksheet

BLANKS	>RL?	Compounds	Notes
Method Blank: VOCs	No	—	No Comment
—	—	—	—

LCS	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—		No Comment
—	—	—	—	—	—

SURROGATES	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	Compound(s)	Notes
VOCs	—	—	—	4-Bromofluorobenzene	No Comment
—	—	—	—	—	—

MS/MSDs	SV <10%	Low Bias > 10% & < LCL	High Bias >UCL	QC Source	RPDs	Notes
VOCs	—	—	—	—	—	No Comment, none required
—	—	—	—	—	—	—

FIELD DUPLICATES RPDs	QC Source	Soil RPD > 50%	Air RPD > 25%	Compounds	Notes
N/A	N/A	N/A	N/A	N/A	N/A
N/A		N/A	N/A	N/A	N/A
LAB DUPLICATES					
Batch V6W882	#-3	N/A	X	Styrene	Flag Analytes UJ / J
Batch V6W883	#-1	N/A	—	—	No Comment

Reasonable Confidence Achieved Not Applicable
Requested Reporting Limits Achieved ☒ Y ☐ N
Holding Time Requirements Met ☒ Y ☐ N
Significant QC Variances Noted ☒ Y ☐ N
Preservation Requirements Met ☒ Y ☐ N

Abbreviations:
RL = Reporting Limit LCS = Laboratory Control Sample SV = Significant QC Variance
RPD = Relative Percent Difference LCL= RCP Lower Control Limit UCL= RCP Upper Control Limit
VOCs = Volatile Organic Compounds SVOCs = Semi-volatile Organic Compounds Pest = Pesticides
EPH = Extractable Petroleum Hydrocarbons VPH = Volatile Petroleum Hydrocarbons ETPH = EPH-Total
PCBs = Polychlorinated Biphenyls N/A = Not Applicable N/C = Not Collected -- = nothing to report
Notes: * Typical lab contaminants, not site-related

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Attachment 3
DQA Non-Conformance Summary Worksheet

Only Flagged Results Shown Below

Sample Number(s)	Compound(s)	QC Non-Conformance	% Recovery	% RPD †	High or Low Bias ‡	Comments
All	Any	Not Detected	—	—	—	Flag U
	Any	MDL > result < RDL	—	—	—	Validator Flag UJ Interpreted Flag U
	Any	Calibration	—	—	Hi	Flag E J+
All	Styrene	Duplicate	—	>UCL	—	Flag UJ or J

Notes: † RPD—Relative Percent Difference
‡ Bias High—Reported result may be lower, Reporting Limit (RL) is acceptable as reported. Bias Low—Reported results may be higher, RL may be higher than reported.

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Appendix F – NYSDOH Guidance for Evaluating Soil Vapor Intrusion in the State of New York

Soil Vapor/Indoor Air Matrix A

May 2017

Analytes Assigned:
Trichloroethene (TCE), *cis*-1,2-Dichloroethene (*c*12-DCE), 1,1-Dichloroethene (11-DCE), Carbon Tetrachloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 to < 1	1 and above
< 6	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	4. No further action	5. MONITOR	6. MITIGATE
60 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX A

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix B

May 2017

Analytes Assigned:
Tetrachloroethene (PCE), 1,1,1-Trichloroethane (111-TCA), Methylene Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)		
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 3	3 to < 10	10 and above
< 100	1. No further action	2. No Further Action	3. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
100 to < 1,000	4. No further action	5. MONITOR	6. MITIGATE
1,000 and above	7. MITIGATE	8. MITIGATE	9. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX B

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 1 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.

Soil Vapor/Indoor Air Matrix C

May 2017

Analytes Assigned:
Vinyl Chloride

	INDOOR AIR CONCENTRATION of COMPOUND (mcg/m^3)	
SUB-SLAB VAPOR CONCENTRATION of COMPOUND (mcg/m^3)	< 0.2	0.2 and above
< 6	1. No further action	2. IDENTIFY SOURCE(S) and RESAMPLE or MITIGATE
6 to < 60	3. MONITOR	4. MITIGATE
60 and above	5. MITIGATE	6. MITIGATE

No further action: No additional actions are recommended to address human exposures.

Identify Source(s) and Resample or Mitigate: We recommend that reasonable and practical actions be taken to identify the source(s) affecting the indoor air quality and that actions be implemented to reduce indoor air concentrations to within background ranges. For example, if an indoor or outdoor air source is identified, we recommend the appropriate party implement actions to reduce the levels. In the event that indoor or outdoor sources are not readily identified or confirmed, resampling (which might include additional sub-slab vapor and indoor air sampling locations) is recommended to demonstrate that SVI mitigation actions are not needed. Based on the information available, mitigation might also be recommended when soil vapor intrusion cannot be ruled out.

Monitor: We recommend monitoring (sampling on a recurring basis), including but not necessarily limited to sub-slab vapor, basement air and outdoor air sampling, to determine whether concentrations in the indoor air or sub-slab vapor have changed and/or to evaluate temporal influences. Monitoring might also be recommended to determine whether existing building conditions (e.g., positive pressure heating, ventilation and air-conditioning systems) are maintaining the desired mitigation endpoint and to determine whether changes are needed. The type and frequency of monitoring is determined based on site-, building- and analyte-specific information, taking into account applicable environmental data and building operating conditions. Monitoring is an interim measure required to evaluate exposures related to soil vapor intrusion until contaminated environmental media are remediated.

Mitigate: We recommend mitigation to minimize current or potential exposures associated with soil vapor intrusion. The most common mitigation methods are sealing preferential pathways in conjunction with installing a sub-slab depressurization system and changing the pressurization of the building in conjunction with monitoring. The type, or combination of types, of mitigation is determined on a building-specific basis, taking into account building construction and operating conditions. Mitigation is considered a temporary measure implemented to address exposures related to soil vapor intrusion until contaminated environmental media are remediated.

These general recommendations are made with consideration being given to the additional notes on page 2.

ADDITIONAL NOTES FOR MATRIX C

This matrix summarizes actions recommended to address current and potential exposures related to soil vapor intrusion. To use the matrix appropriately as a tool in the decision-making process, the following should be noted:

[1] The matrix is generic. As such, it may be appropriate to modify a recommended action to accommodate analyte-specific, building-specific conditions (e.g., dirt floor in basement, crawl spaces, thick slabs, current occupancy, etc.), and/or factors provided in Section 3.2 of the guidance (e.g., current land use, environmental conditions, etc.). For example, collection of additional samples may be recommended when the matrix indicates "no further action" for a particular building, but the results of adjacent buildings (especially sub-slab vapor results) indicate a need to take actions to address exposures related to soil vapor intrusion. Mitigation might be recommended when the results of multiple contaminants indicate monitoring is recommended. Proactive actions may be proposed at any time. For example, the party implementing the actions may decide to install sub-slab depressurization systems on buildings where the matrix indicates "no further action" or "monitoring." Such an action might be undertaken for reasons other than public health (e.g., seeking community acceptance, reducing costs, etc.). However, actions implemented *in lieu* of sampling will typically be expected to be captured in the final engineering report and site management plan, and might not rule out the need for post-implementation sampling (e.g., to document effectiveness or to support terminating the action).

[2] Actions provided in the matrix are specific to addressing human exposures. Implementation of these actions does not preclude investigating possible sources of soil vapor contamination, nor does it preclude remediating contaminated soil vapor or the source of soil vapor contamination.

[3] Appropriate care should be taken during all aspects of sample collection to ensure that high quality data are obtained. Since the data are being used in the decision-making process, the laboratory analyzing the environmental samples must have current Environmental Laboratory Approval Program (ELAP) certification for the appropriate analyte and environmental matrix combinations. Furthermore, samples should be analyzed by methods that can achieve a minimum reporting limit of 0.20 microgram per cubic meter for indoor and outdoor air samples. For sub-slab vapor samples and dirt floor soil vapor samples, a minimum reporting limit of 1 microgram per cubic meter is recommended.

[4] Sub-slab vapor and indoor air samples are typically collected when the likelihood of soil vapor intrusion is considered to be the greatest (i.e., worst-case conditions). If samples are collected at other times (typically, samples collected outside of the heating season), then resampling during worst-case conditions might be appropriate to verify that actions taken to address exposures related to soil vapor intrusion are protective of human health.

[5] When current exposures are attributed to sources other than soil vapor intrusion, the agencies should be given documentation (e.g., applicable environmental data, completed indoor air sampling questionnaire, digital photographs, etc.) to support a proposed action other than that provided in the matrix box and to support agency assessment and follow-up.

[6] The party responsible for implementing the recommended actions will differ depending upon several factors, including but not limited to the following: the identified source of the volatile chemicals, the environmental remediation program, and analyte-specific, site-specific and building-specific factors.